Liverpool Development Control Plan 2008
Part 1

General Controls for all development

~~28 February 2024~~
July 2024

Part 1 must be read for all development

Check if other Parts are also needed for the particular development

LIVERPOOL CITY COUNCIL

LIVERPOOL THE GREAT SOUTH WEST

Liverpool Development Control Plan 2008
Part 1 General Controls for all Development

Table of Contents

1. Preliminary 5
2. Tree Preservation 10
3. Landscaping and Incorporation of Exiting Trees 12
4. Bushland and Fauna Habitat Preservation 16
5. Bushfire Risk 18
6. Water Cycle Management 21
7. Development near a watercourse 31
8. Erosion and Sediment Control 32
9. Flooding Risk 35
10. Contaminated Land Risk 52
11. Salinity Risk 56
12. Acid Sulfate Soils Risk 59
13. Weeds 62
14. Demolition of Existing Developments 63
15. On-Site Sewage Management Systems (OSMS) 65
16. Aboriginal Archaeology 71
17. Heritage and Archaeological Sites 72
18. Repealed 78
19. Used Clothing Bins 79
20. Car Parking and Access 82
21. Subdivision of Land and Buildings ..... 10~~2~~3
22. Energy Conservation ..... 11~~0~~1
23. Reflectivity ..... 11~~1~~2
24. Landfill ..... 11~~2~~3
25. Waste Disposal & re-use Facilities ..... 11~~3~~4
26. Outdoor Advertising and Signage ..... 1~~19~~20
27. Social Impact Assessment ..... 1~~29~~30
28. Shopping Trolleys ..... 13~~2~~3
29. Safety and Security ..... 13~~3~~4
30. Additional Uses ..... 13~~4~~5

Appendix 1 – Definitions ..... 14~~1~~2

Appendix 2 – Recommended Plant Species List for Landscaping ..... 1~~49~~50

Appendix 3 – List of Noxious Plants for Liverpool LGA ..... 15~~1~~2
Appendix 4 – Flood Compatible Materials ..... 15~~4~~5

Table of Figures

Figure 1 Retention of Trees 13
Figure 2 Key Components of an APZ (NSW Rural Fire Service 2002) 19
Figure 3 Discharging to a creek system 24
Figure 4 Flow chart for the determination of flood risk 37
Figure 5 Map for identification of relevant floodplains 42
Figure 6 Moorebank Floodway 43
Figure 7 Model for Contaminated Lands Investigation 54
Figure 8 How development can impact on landscape functions as well as how development may be impacted upon salinity processes 56
Figure 9 Model for how salinity assessment, investigation and management strategies should be undertaken (Adapted from WSROC 2003) 57
Figure 10 Model for how acid sulfate soils assessment, investigation and management strategies should be undertaken (adapted from Acid Sulfate Soil Manual 1998) 60
Figure 11 Example of a proposed subdivision with a total of 1200m^2 of available effluent disposal area demonstrated on each lot 70
Figure 12 Repealed .....
Figure 13 Car Parking Layout ..... 9~~3~~4
Figure 14 Driveway Gradients ..... 9~~4~~5
Figure 15 Internal Driveway widths ..... 9~~5~~6
Figure 16 Locations of Driveway Crossings ..... ~~99~~100
Figure 17 Tree Guard and Planting Details ..... 10~~6~~7
Figure 18 Types of Supported Signs ..... 12~~0~~1
Figure 19 Types of Unsupported Signs ..... 12~~1~~2
Figure 20 Permissible area for pole or pylon sign at the ingress to ~~Industrial~~ E4 and E5 Zones development ..... 12~~6~~7
Figure 21 Indicative Outdoor Seating Zones ..... 13~~8~~9

List of Tables

Table 1 Plans for stormwater soils management 32
Table 2 Nepean River Floodplains (includes South Creek, Kemps Creek, Bonds Creek and other tributaries of the Nepean River) 44
Table 3 Cabramatta Creek and all other Floodplains (includes Hinchinbrook Creek, Maxwells Creek, Brickmakers Creek, upper parts of Anzac Creek and other tributaries) 45
Table 4 Georges River Floodplain (includes Harris Creek and Williams Creek

Lower parts of Anzac Creek but not Cabramatta Creek) 46
Table 5 Local Overland Flooding 47
Table 6 Explanation of Development Controls 47
Table 7 Controls applicable to the Moorebank Floodway 51
Table 8 Minimum setbacks for effluent disposal areas 67
Table 9 Repealed .....
Table 10 Repealed .....
Table 11 Car Parking, Servicing & Loading Provision 85
Table 12 Disabled Car Parking Provision 89
Table 13 Bicycle Parking Provision 91
Table 14 Dimensions of off street car parking for bays at 90° 92
Table 15 Internal driveway widths ..... 9~~4~~5
Table 16 Car Parking spaces served by the Driveway type ..... 10~~0~~1
Table 17 Driveway Crossing width ..... 10~~0~~1
Table 18 Minimum lot widths ..... 10~~5~~6
Table 19 Frontage width ..... 10~~7~~8
Table 20 Hatchet allotment access handle ..... 10~~8~~9
Table 21 Waste Generation ..... 11~~4~~5
Table 22 Maximum daytime luminance of illuminated signs (not including digital signs) ..... 12~~3~~4
Table 23 Luminance levels for digital signs ..... 12~~4~~5
Table 24 Types of development for which a social impact assessment is required ..... 13~~0~~1

1. Preliminary

Applies to

This plan applies to all land in Liverpool Local Government Area (LGA). The plan is known as *Liverpool Development Control Plan 2008*.

Structure of Liverpool Development Control Plan 2008

Part 1 General Controls for all Development

Part 2 Locality Specific Controls

- Part 2.1 Green Valley (Subdivision of land)
- Part 2.2 Hoxton Park, Carnes Hill and Prestons (Subdivision of land)
- Part 2.3 Georges Fair Moorebank (Subdivision of land and residential development)
- Part 2.4 Moorebank Defence Lands (Subdivision of land and industrial development)
- Part 2.5 Middleton Grange (Subdivision of land and residential development)
- Part 2.6 Holsworthy Station Area (Subdivision of land and residential development)
- Part 2.7 Greenway Views (Subdivision of land and residential development)
- Part 2.8 Voyager Point (Subdivision of land and residential development)
- Part 2.9 Former Hoxton Park Airport (Subdivision of land)
- Part 2.10 Moorebank East (Subdivision of land and residential development)
- Part 2.11 Edmondson Park (Subdivision of land and residential development)
- Part 2.12 Repealed
- Part 2.13 Pleasure Point (Subdivision of land)
- Part 2.14 Elizabeth Hills (Subdivision of land and residential development)
- Part 2.15 New Brighton Golf Course (Subdivision of land, residential and golf course development)

Part 3 Development in Residential Zones

- Part 3.1 Dwelling houses in the R5 Zone
- Part 3.2 Dwelling houses on lots greater than 400sqm in the R2, R3 & R4 zones
- Part 3.3 Dwelling houses on Hatchet Shaped Lots
- Part 3.4 Semi-Detached and Attached Dwellings in the R2 and R3 zones
- Part 3.5 Dwelling houses on lots less than 400sqm
- Part 3.6 Multi Dwelling Housing in the R3 & R4 zones
- Part 3.7 Residential Flat Buildings in the R4 zones
- Part 3.8 Non Residential Development in Residential Zones
- Part 3.9 Boarding House Development

Part 4 Liverpool City Centre

Part 5 Development in Rural and ~~E3~~ C3 Zones

Part 6 Development in ~~Business~~ E1, E2, MU1 and E3 Zones

Part 7 Development in ~~Industrial~~ E4 and E5 Zones

Adoption of Plan

This plan was made under Section 74C of the Environmental Planning and Assessment Act 1979 and Part 3 of the Environmental Planning and Assessment Regulation 2000.

The plan was adopted by Council on 28 July 2008. The plan came into force on 29 August 2008.

This plan was subsequently amended as follows:

Amendment No.	Trim Container	Date of amendment	Part(s) Amended
1	2008/1477	8 July 2009	Part 1.1, 1.2, 2.2, 2.5, 2.10, 2.11, 2.13, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 4, 5, 6 & 7
2	2008/0171	9 June 2010	Part 1.1 & 2.14
3	2009/1725	15 September 2010	Part 1.1, 1.2, 2.2, 2.3, 2.5, 2.7, 2.8, 2.9, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 4, 5, 6 & 7
4	2010/0769	15 September 2010	Part 1.1 & 6
5	2010/1253	8 December 2010	Part 1.1 & 5
6	2011/6089	11 April 2012	Part 1.1, 1.2, 2.2, 2.3, 2.5, 2.8, 2.9, 2.10, 2.11, 2.14, 3.2, 3.3, 3.4, 3.5 & 6
7	RZ-9/2011	19 April 2013	Insertion of Part 2.15
Reformatted as part of Amendment No 10			
10	2012/3187	19 February 2014	Merging of Parts 1.1 and 1.2, 2.3, 2.11, 3.3, 3.6 and 7.
9	2012/1606	4 April 2014	Part 3.1 and Part 5
16	2013/2409	18 June 2014	Part 5 and Part 7
13	2014/0925	2 July 2014	Part 1
12	2013/3913	25 July 2014	Part 1, Part 4 and Part 6
15	2014/1149	3 September 2014	Parts 2.2, 2.3, 2.5, 2.14, 3.1 and 7
14	2014/0929	12 November 2014	Part 2.11
17	2014/1508	1 April 2015	Part 5
20	2014/3813	26 May 2015	Part 1
21	2015/1066	8 July 2015	Part 1
18	2014/3695	19 August 2015	Part 2.11
19	2015/1050	9 September 2015	Part 1
22	RZ-4/2015	20 April 2016	Part 2.11
23	2016/1961	2 November 2016	Part 1
26	2014/1947	22 February 2017	Part 8
24	2016/3822	8 March 2017	Part 1.27
27	2017/0584	23 August 2017	Part 1.15
29	2016/1769	18 April 2018	Part 2.11
30	2006/0610	21 November 2018	Part 1.20
31	2018/3364	6 March 2019	Insertion of Part 3.9
32	2018/4071	20 March 2019	Part 1
33	2018/4049	17 April 2019	Parts 1, 4 and 7
34	2019/0942	11 October 2019	Part 1
25	2016/2714	6 May 2020	Parts 1 and 4
35	RZ-2/2019	12 May 2020	Part 2.11

36	2016/1517	1 February 2021	Part 1
37	2023/1712	28 February 2024	Part 1

Background

Council's Corporate Plan provides an overview of its Strategy for the Liverpool LGA. It also provides a framework for the objectives of this plan. The Corporate Plan is divided into the following strategic areas:

- The regional city for south west Sydney
- Neighbourhoods and villages
- the land between two rivers, where city and country meet
- Communities and governments working together
- A place for people
- Sustainability
- Improved organisational management and development

Liverpool Local Environmental Plan 2008

The *Liverpool Local Environmental Plan (LEP) 2008* provides the broad land use controls for Liverpool LGA. It covers most of the Liverpool LGA. In some cases land will be covered by other planning controls such as a *State Environmental Planning Policy* or a *Regional Environmental Plan*. It is advisable to check the zoning of land prior to the use of the DCP.

Some planning controls are contained in the *Liverpool LEP 2008* rather than in the DCP. These are not part of the DCP for the purpose of the *Environmental Planning and Assessment Act 1979*.

State and Regional Planning Provisions

In some cases a *State Environmental Planning Policy* or *Regional Environmental Plan* may also apply to land. It is advisable to check the impact of this prior to use of the DCP.

Contributions

Council requires contributions from development to fund infrastructure needed to support that development. Part 2 of the DCP includes a number of new areas where land is converted from rural to urban. The maps that accompany each chapter in Part 2 show public infrastructure needed to support development in the area. Much of this public infrastructure is to be funded from contributions from development.

The extent and anticipated staging of development in an area, the scope and cost of infrastructure required to service it, and the cost to development for the infrastructure is embodied in the contributions plans, which is a companion document to the DCP and LEP.

For details on current contribution rates, please refer to Council's web page at, www.liverpool.nsw.gov.au.

Standards in the Liverpool Development Control Plan 2008

Any variation to the standards in the DCP that will apply to a development will need to be justified before Council can consider any variation.

1.1 The Vision of Liverpool Development Control Plan 2008

Background

Liverpool Directions provides the background for Council's Management Plan, *Liverpool Local Environmental Plan 2008* and forms the framework for the vision for *Liverpool Development Control Plan 2008*.

The NSW Government's Sub Regional Plan for South West Sydney provides the context for Council's guiding document *Liverpool Directions*.

Change

Liverpool will experience significant growth as a result of Sydney's growth. This will involve creation of new suburbs as well as redevelopment in existing suburbs.

Some areas in Liverpool will experience substantial change over a short period. These include the new residential suburbs that were previously rural areas. Areas around Liverpool City Centre and some other centres will also experience substantial change with redevelopment. Other areas will also experience more gradual redevelopment, which will nevertheless bring change.

Liverpool Development Control Plan 2008, in conjunction with *Liverpool Local Environmental Plan 2008* aims to manage this change so that any change, which is inevitable, will make Liverpool a better place.

The Vision

Liverpool – A highly connected and vibrant City, with a strong City Centre supported by a hierarchy of neighbourhood and local centres. Identified as one of five Regional Cities for Sydney, Liverpool will experience rapid population and employment growth.

Liverpool Development Control Plan 2008 will guide this growth to ensure high quality and sympathetic urban development outcomes are achieved, significant environmental land is protected, appropriate open space is provided and the rural character outside the Growth Centres will be maintained and enhanced.

The Future

1. There will be new suburbs in Liverpool. These will have leading urban design outcomes for both individual developments and public areas that will be created.
2. Some existing localities, particularly Liverpool City Centre, will experience significant change through substantial redevelopment, although largely within the existing street pattern. There will be increased development that will result in a different but improved urban design outcome for the locality, which enhances the local amenity. It will also create opportunities for improved public spaces.
3. Other suburbs will experience more gradual redevelopment. New development will have an urban outcome that will be compatible with existing development.
4. Liverpool City Centre will be the Regional Centre for employment, health, education, recreation and cultural life.
5. High quality medium and high density infill development will occur in a targeted manner along public transport routes near shops, which will provide greater choice for all people as to what type of housing that they want, and enable greater access to public transportation.
6. There will be a concentration of activities such as shops, community, health, high density housing around local centres in new and existing suburbs. Local centres will be enhanced with shop-top housing, which are apartments above these shops.
7. Local centres in new and existing suburbs will have active and attractive street frontages, including out of hours.
8. Centres in new suburbs will be designed to be public transport user friendly. Centres in existing suburbs will become more public transport user friendly as they redevelop.
9. New suburbs will have attractive landscaped streetscapes while existing areas will have improved streetscapes as development takes place.

10. New suburbs and redevelopment in existing suburbs will be compatible with adjoining creeks, parkland and major transport corridors.
11. There will less development that is subject to risks such as flooding, salinity etc.
12. Development in new and existing suburbs will assist in making creeks and rivers attractive and clean.
13. Development in new and existing suburbs will preserve attractive natural areas.
14. Development in new and existing suburbs will contribute to a clean and sustainable environment.
15. Development in new suburbs will provide attractive and easily accessible open space.
16. There will continue to be open space linked along creek networks.
17. New development near the Georges River will allow access to the foreshore.
18. Development in new suburbs will have attractive and efficient transport corridors. Redevelopment in existing suburbs will improve the attractiveness and efficiency of existing transport corridors.
19. Development in new and existing suburbs will allow for good safe access to cycle and pedestrian ways.
20. There will be a sense of community.
21. Conflict between land uses will be minimised.
22. New industrial areas will be attractive. Redevelopment in existing industrial areas will improve the amenity of these areas.
23. Industrial/Employment areas will provide employment and provide sufficient space for local and start-up industry with some ancillary land uses to service the local workforce.
24. New industrial areas will be easily serviced and accessible. Redevelopment in existing industrial areas will improve the serviceability and accessibility of these areas.
25. Rural areas will keep a high level of rural amenity, with new development sympathetic and appropriate to the locality.

1.2 The Objectives of Liverpool Development Control Plan 2008

The objectives of this DCP are:

a) To provide more detailed provisions for regulating the carrying out of development.

b) To protect and improve the natural environment in the City of Liverpool.

c) To protect and improve the amenity of the City of Liverpool.

d) To protect personal safety and to minimise the risk of damage to areas subject to environmental hazards, particularly flooding.

e) To promote a high standard of urban and environmental design.

f) To conserve, protect and enhance the environmental heritage of the City of Liverpool.

g) To encourage a diversity of housing to meet the needs of the residents of the City of Liverpool.

h) To facilitate development that is environmentally sustainable.

There are also additional specific objectives for each section of each part of the DCP.

2. Tree Preservation

Applies to

This section applies to applications to remove trees with or without a development application for a development and involves:

a) Any perennial plant that has a:

- Height greater than 3.5m and/or
- Canopy spread of greater than 4m and/or
- Primary trunk diameter greater than 400mm when measured 1m above the existing ground level of the tree.

b) Any tree that forms part of a heritage item or is situated within a heritage conservation area.

This section does not apply to:

a) Any species, populations or communities listed under the provisions of the *Threatened Species Conservation Act (TSC) 1995;* or their habitats.

b) Any plant that is on the Noxious Weeds Register for Liverpool City Council or listed in Appendix 3. (These plants must be removed, and destroyed in a way to ensure that they do not spread. It can be an offence to leave a noxious weed on a site.)

Background

Trees provide a natural amenity and appeal to urban environments. They are an integral part of built and natural landscapes and perform a key role in recycling oxygen, energy and important soil nutrients within ecological systems. They provide many benefits by reducing climatic extremes, improving air quality and providing habitat, which supports much of life on earth. Insects, birds, frogs and mammals and including familiar wildlife such as parrots and possums are attracted to the areas where we live.

Consequently, tree preservation is an important consideration for urban dwellers and Council. This DCP and Council's Tree Preservation Policy will help ensure these values are preserved for the future. The DCP overrides any inconsistency between these two documents.

Any proposal to prune or remove a tree located on private property requires development consent from Council. Legal action may be taken against any person in either the Local Court or Land and Environment Court who fails to obtain consent prior to pruning or removing a tree.

Objectives

a) To ensure the protection of trees that are contributing to the ecological and aesthetic values of the Liverpool LGA.

b) To protect the integrity of heritage items through preservation of all trees occurring within the heritage place, precinct or land.

c) To ensure trees are maintained in an appropriate manner as not to cause harm or damage to the tree or community.

d) To ensure that construction works and the ultimate design treatments protect the identified trees.

e) To ensure that trees that provide high ecological or amenity benefits are protected wherever possible.

Controls

1. Any approvals to remove or prune trees issued with a development consent shall lapse when the development consent lapses or becomes invalid or void.

2. An application to remove a tree may be refused by Council if the tree:
   - Form(s) a prominent part of the streetscape.
   - Stands alone and is thus of more significant than if it were part of a group of trees.
   - Is of historic or cultural significance or is/are registered on any Council register of significant trees.
   - Is prominent due to its height, size, position or age.
   - Is a locally indigenous, rare or endangered species.
   - Provides a significant visual screen.
   - Is part of an important habitat for wildlife.
   - Is part of remnant or riparian vegetation.
   - Can be effectively treated by applying appropriate remedial treatment such as pruning of branches, pruning of roots and removal of deadwood or by other appropriate action as recommended by an arborist.
   - Is listed under the provisions of the *Threatened Species Conservation Act 1995*. (Listed as a threatened species, is habitat to a threatened species or is part of a threatened ecological community).

   Note: Council may refuse an application to remove a tree(s) but may give conditional consent for the appropriate remedial "branch or root pruning" for that tree(s).
3. An application to remove a tree may be consented to by Council if the tree:
   - Has sustained severe damage, e.g. from wind, lightning, flood or impact from a vehicle, and cannot respond to remedial treatment.
   - Causes or is likely to cause structural damage to property including any building or pipeline, only if the damage cannot be contained by appropriate pruning of the tree's roots and installation of a root barrier.
   - Is causing an allergic reaction in any local resident, and the reaction has been certified in writing by a medical allergy specialist.
   - Causes considerable overshadowing to dwellings (restricts potential sunlight penetration to habitable rooms to under three hours per day).
   - Obstructs the line-of-sight for motorists and presents dangerous traffic conditions.
   - Is essential to mitigate a fire hazard.
   - Is dead, dying, or has become dangerous.
4. Applications for trees that have Aboriginal markings and/or constitute an item of Aboriginal significance shall be referred to the *NSW Department of Environment and Climate Change (DECC)*. Intensive management options such, as fencing or buffer provisions will be considered to ensure adequate preservation.
5. Any pruning shall be undertaken in accordance with *AS 4373/2007* – Pruning of amenity Trees.
6. All existing indigenous trees shall be retained or replaced. Where approval is given to remove trees, appropriate replacement planting will be required.
7. Significant trees that are identified as having habitat value shall not be relocated or removed.

3. Landscaping and Incorporation of Existing Trees

Applies to

This section applies to land, which will need to provide landscaping or retain existing trees as part of a development.

Background

Vegetation is an integral part of the environment, with the type and quantity of vegetation provided being one of the key influences in determining the quality and character of Liverpool's urban and rural environments. Many urban and even rural environments have been largely cleared of trees and shrubs. The provision of landscaping is a step to reintroduce vegetation into these environments in a way that complements the built environment.

Landscaping provides visual interest and amenity, provides recreation areas, and assists in managing the climate of the built environment. The use of existing vegetation assists with the provision of landscaping. In particular native trees in urban and rural environments have many valuable functions:

- Soften the visual impact of large-scale developments and increased densities.
- Assist in managing the climate of the built environment.
- Supports native plants and animals by providing habitat.
- Add to aesthetic and environmental values.
- Serve as a natural screen to the sun, wind and noise.

Good design recognises that landscape and buildings operate together as an integrated system, resulting in greater aesthetic quality and amenity for the occupants, neighbours and the public domain. Landscape design builds on the existing site's natural and cultural features to contribute to a development's positive relationship to its context and site.

Objectives

a) Promote landscape planning and design as part of a fully integrated approach to site development.

b) Assist in improving the climate of the local environment.

c) Retain as many existing trees as possible.

d) To provide habitat for locally indigenous plants and animals and contribute to biodiversity.

e) To encourage landscaping that is appropriate to the natural, cultural, built and heritage characteristics of its locality.

f) Improve the amenity of developments and adjoining areas by ensuring proposals adequately complement the proposed building forms and surrounding streetscape.

g) Ensure that the proposed landscape designs provide functional attributes such as privacy, shade and wind protection, while discouraging the opportunity for crime and vandalism.

3.1 Retention of existing on site trees

Controls

1. Existing trees and native vegetation are to be retained, protected and incorporated into the development proposal. This is particularly important for vegetation which forms part of a ridgeline tree canopy and in foreshore and riparian areas (with the exception of weed species).
2. Prior to the commencement of the design of a development existing trees should be identified. The design of a development should consider options to retain existing trees.
3. Existing indigenous trees within any building setback should be retained where possible, as an integral component of the site's landscaping, and to protect local habitats.
4. It is important that all plans accompanying the development application including engineering and hydraulics plans are consistent with the landscape plan. This is particularly important where trees are to be retained. For example storm water lines and excavation should not be within the drip line of trees to be retained.

Note: Where trees are located outside the normal building envelope for a development, Council will give particular attention to the retention of those trees.

The following shows some ideas for retention of existing on site trees.

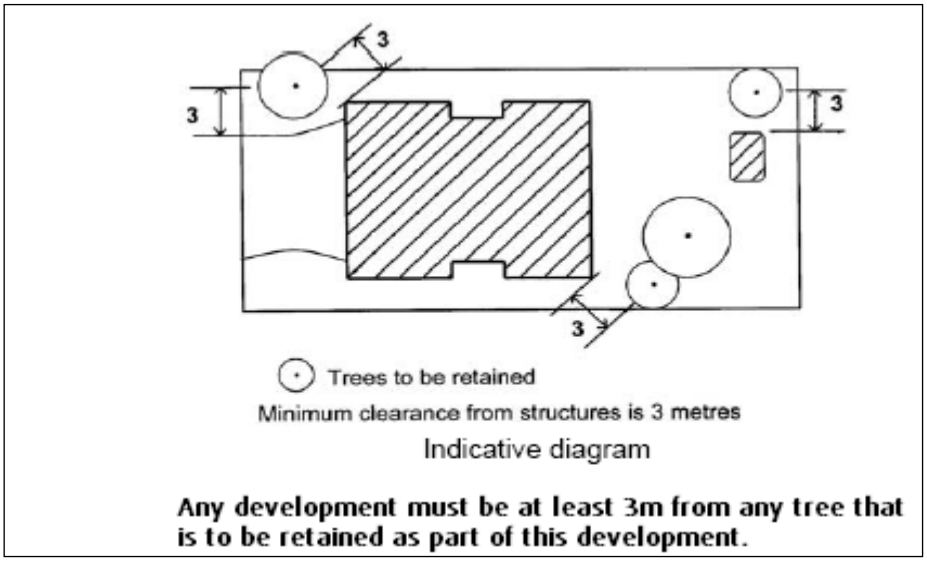


Figure 1 Retention of trees

3.2 Retention of existing street trees

Controls

1. Prior to the commencement of the design of a development existing street trees should be identified. The design of a development should consider options to retain existing street trees.
2. The design and location of access driveways should wherever possible be located to avoid removal of any existing street trees.

3.3 Protection of existing trees during construction

Controls

1. Trees nominated for protection must be enclosed within a 1.8m high protection fence that is installed to conform to a Tree Protection Zone (TPZ) that is consistent with current Arboriculture industry standards.
2. A report which outlines the condition, dimensions and species of existing trees contained within a development site is to be included as part of any development application documents and is to be accompanied by a Tree Retention Management Plan which shows the dimension of any proposed TPZs and outlines any other protection/enhancement methods that are appropriate to encourage the viable retention of trees.
3. All reports pertaining to trees on development sites are to be prepared by a suitably qualified person.

3.4 Landscape Specifications

Controls

1. Landscape planting should be principally comprised of native species to provide an integrated streetscape appearance. Species selected in environmentally sensitive areas should be indigenous to the locality. However, Council will consider the use of deciduous trees in small private open space areas such as courtyards for control of local microclimate and to improve solar access. Environmental and noxious weeds in Liverpool shall not be used in the landscape design
2. The landscaping shall contain an appropriate mix of canopy trees, shrubs and groundcovers. Avoid medium height shrubs (0.6 – 1.8m) especially along paths and close to windows and doors.
3. Landscaping in the vicinity of a driveway entrance must not obstruct visibility for the safe ingress and egress of vehicles and pedestrians.
4. Trees, which are planted around high use facilities such as car parking areas, children's, play areas and walkways should have clean trunks to a height of 1.8m.
5. All topsoil used shall be sourced from a recognized commercial topsoil supplier. Site topsoil will only be considered suitable where the material has a high organic content. The consultant shall inspect and approve all top soiling prior to commencement of planting and application of mulch. An imported light and free draining topsoil mix is to be used in all planters.
6. The following minimum topsoil and mulch depths are to apply:
   - Garden beds 300mm
   - Turfed areas 100mm
   - Planters on structure 750mm
   - Mulch over garden beds 75mm
7. Trees shall be planted well clear of underground services or overhead wires. Trees shall be planted in general accordance with the following minimum distances from buildings:
   - Small trees less than 6m mature height 2m
   - Medium trees 6 – 15m mature height 3m
   - Large trees more than 15m mature height 4m

   Refer to Appendix 2 for the Preferred Species.

8. To maintain tree health, all trees in lawn areas are to have a 75mm deep x 1m diameter layer of mulch around its base. The mulch layer is to be reduced in depth directly around the base of the stem to form a shallow watering dish. The tree is to be staked well clear of the root ball and tied using Hessian ties as required.
9. All approved landscaping must be maintained at all times to the satisfaction of Council.
10. All trees are to be planted at not less than 45 litre pot size.
11. Use low water/low maintenance plant selection by selecting drought tolerant species.
12. Applicants need to demonstrate that plant selection is suitable for the particular soil type of the site and comply with any site constraints such as Bushfire Prone Land.
13. Where possible, all landscaping designs should incorporate permeable paving options. Permeable paving includes the use of porous paving units, ornamental gravel and paving on a compacted sand bed. Permeable paving ensures that air and water is made available to tree roots while providing a safe and stable pedestrian surface and around trees. Benefits include:
14. Ensuring that air and water are available to tree roots to ensure healthy and secure growth.
15. Assisting in the protection of established trees where the root system extends beyond the drip line.
16. Reducing the amount of surface water runoff entering the stormwater system.
17. Maintaining the existing natural drainage patterns.
18. All landscaping should consider soil salinity. Sites identified as having moderate to high levels of salinity shall incorporate the following measures in the landscape plan:
19. Selection of salt tolerant plant species (generally natives).
20. Use mulch in all gardens beds.
21. Minimise large areas of lawn, as this requires large quantities of irrigation.
22. Use “water-wise” garden and landscape design.
23. Plant large native trees and shrubs.

4. Bushland and Fauna Habitat Preservation

Applies to

This section applies to:

a) All land, which contains or is adjacent to bushland.

b) All land that contains known or potential habitat for threatened species, populations or communities.

c) Any Land zoned:

- W1 – Natural Waterways
- SP1 – Drainage
- Land shown on the Environmental Significant Land Maps of the *Liverpool LEP 2008*.
- ~~E2~~ C2 – Environmental Conservation
- ~~E3~~ C3 – Environmental Management
- Any land under the definition of a waterbody in the *Liverpool LEP 2008*.

d) Development that has potential to directly or indirectly destroy or adversely affect bushland.

Background

Bushland provides a variety of positive values to an urban area, including education, conservation, scientific and aesthetic values. It consists of native groundcovers, shrubs and trees that combine to produce a community that provides habitat for fauna. In many areas only a small number of native species remain and their health and existence are increasingly threatened by urban development.

As well the positive contributions at a local level to the urban and rural environments, bushland preservation contributes to total catchment health and preservation of biodiversity.

Objectives

a) To protect and manage natural assets in association with the development of land.

b) To conserve the natural heritage of Liverpool.

c) To maintain and improve the amenity and scenic qualities of Liverpool.

d) To maintain and enhance the biodiversity and natural ecology of Liverpool.

Controls

1. Bushland, particularly that identified as a threatened community or habitat for a threatened species shall be substantially retained and incorporated within a development. Clearing of bushland in association with any development shall be limited to the extent necessary to facilitate the safe and orderly use of the land.

2. Where impacts on threatened biodiversity are unavoidable, offsetting utilising the NSW Government BioBanking Scheme will be required where practicable.

3. Where bushfire management measures are required that involve clearance or alteration to bushland, details of proposed measures shall be submitted. Clearing for the purposes of bushfire management involving a substantial loss of bushland shall not be permitted.

4. Prior to the commencement of the design of a development, existing bushland and fauna habitat should be identified. The design of the development should consider retention of this bushland and fauna habitat.

5. Development shall not adversely impact on the long term viability of bushland. Existing connectivity and contiguity of bushland stands and fauna corridors shall be retained.
6. Where a proposal is likely to adversely impact on bushland, a Vegetation Management Plan (VMP) for the conservation of the bushland shall be submitted. The VMP shall be undertaken in accordance with pertinent NSW Office of Water Guidelines.
7. Any imported soils and/or mulches used shall be purchased from an appropriate supplier and be free of contaminants, seeds, propagules of weeds and undesirable species. Mulch shall not be used on flood liable land and/or areas where it is likely to be washed away.
8. Any proposed re-vegetation shall:
   - Augment remaining bushland.
   - Consist predominately of species which occur naturally on the site or are of local provenance.
   - Reflect the structure of natural bushland.
   - Be undertaken in accordance with a vegetation management plan which forms part of the consent.
9. Any proposed re-vegetation, seed collection and weed removal to be undertaken as part of the implementation of the approved vegetation management plan shall be undertaken by an appropriately qualified and licensed bushland restoration contractor.
10. Council may require measures to restrict access to bushland areas where it considers necessary, to ensure the conservation of bushland.
11. A flora and fauna assessment is required where a site is identified as containing native vegetation or habitat for threatened flora or fauna. The flora and fauna assessment shall consider all impacts associated with the development on the habitat, including the impacts of APZ's and water management practices. Flora and Fauna Assessments should be prepared in accordance with pertinent NSW Office of Environment and Heritage survey and assessment guidelines. The assessment must be prepared by a suitably qualified person.

.

5. Bush Fire Risk

Applies to

This section applies to:

1. Land identified as being Bushfire Prone Land or designated as Bushfire Prone Lands Buffer Zones on Liverpool City Council Bushfire Prone Land Maps.
2. All land that requires bushfire hazard reduction (burning).

Background

The desire to live close to nature means that many homes are built in areas that are at risk of bush fire. The *NSW Rural Fire Service* advises that 80% of homes destroyed by bushfire are built within 100m of bushland.

Council maintains many areas of bushland and reserves systems. As development continues to expand throughout the southwest there is an increasing number of developments encroaching or in close proximity to areas of bushland and are subsequently placed at bushfire risk.

Adequate planning and construction provisions need to be implemented and maintained to ensure the protection of developments in bushfire prone areas. Bushfire hazard maps have been developed by Bush Fire Risk Management Committees to assist in identifying areas of low, moderate and high bushfire hazard, based upon the surrounding vegetation and topography of the area.

It should be noted that despite planning and construction provisions to protect developments from bushfire risk, these would not guarantee the lifetime safety of the development though it will assist in minimising the severity of the risk.

Objectives

a) To reduce the possible loss of life or property in the event of a bushfire and provide a safer environment.

b) To ensure that development in bushfire prone areas is accessible by emergency services at all times.

c) To ensure that development in bushfire prone areas is designed to enhance the survivability of the building and is prepared for its defence in the event of a bushfire.

d) Implement an ongoing maintenance regime to manage surrounding vegetation and asset protection zones to reduce possible bushfire fronts and protect the development.

e) To ensure that Asset Protection Zones (APZ) do not have a significant impact upon biodiversity.

Controls

1. Construction of single dwellings on or adjacent to bushfire prone land is to be carried out in accordance NSW Rural Fire Service's Single Dwelling Application Kit.
2. All development shall comply with provisions of the Rural Fires and Assessment Act 2002 and *Planning for Bushfire Protection 2006*.
3. Asset Protection Zones shall be provided within the boundary of the land on which a development is proposed but may include public streets located between the land and bushland.
4. Development controls which shall be addressed to ensure bushfire risk is reduced include the following.

- Clearing for the purposes of bushfire management shall not be permitted where loss of bushland is deemed to be unacceptable by Council in terms of quantitative and qualitative aspects.
- Where development requires bushfire management measures involving clearance or other alteration to bushland, details of proposed measures shall be submitted with a development application.
- Asset Protection Zones are to be placed primarily within the Residential zones. APZs shall not be located on land in the ~~E1, E2 or E3~~ C1, C2 or C3 zones, particularly where altering these lands to create an APZ may conflict with the LEP objectives. Key aspects of an APZs are illustrated below.

5. The key components of APZs are illustrated below in Figure 2.

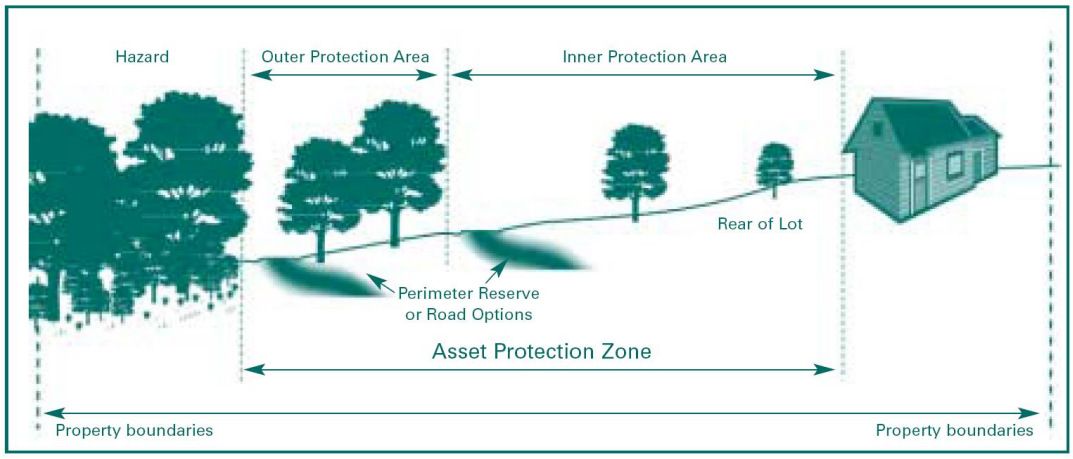


Figure 2 Key Components of an APZ (*NSW Rural Fire Service 2002)*

6. The APZs are to be placed as restrictions on the burdened allotments. No habitable or storage structures are permitted within those zones. Developments permitted in these zones include cycleways, footpaths, children's playgrounds and gas barbeques.
7. APZs shall be combined with active recreational uses where possible.
8. APZs may be landscaped with native grassland species that occur naturally on the site or on surrounding lands.
9. Minimal quantities of combustible materials shall be stored within inner protection zone.
10. New subdivisions in bushfire interface areas shall include a perimeter road.
11. A perimeter fire trail instead of a perimeter road may be acceptable where:
    - The perimeter fire trail is located on an east facing slope.
    - A small subdivision is being added to an existing urban area, where the pattern of development does not allow for a perimeter road.
    - Adequate arrangements are provided for ongoing maintenance of the perimeter trail.
12. Development shall be located to minimise the risk of loss of life and property from bushfire.
13. Development applications relating to land identified on the Bushfire Prone Land Map shall be accompanied by a bushfire hazard assessment report prepared by a suitably qualified professional.
14. Any development in a bushfire interface area shall not reduce the effectiveness of any existing APZ.

15. The APZ shall be located and designed to allow ongoing maintenance to be readily carried out by the responsible landowners or occupiers.
16. Hazard reduction (burning or mechanical) proposals shall be in accordance with the *Liverpool Bush Fire Risk Management Plan* and the Bush Fire Environmental Assessment Code. Landowners wishing to undertake hazard reduction shall contact the *NSW Rural Fire Service* (NSWRFS) for any requirements. Applications to undertake hazard reduction will be assessed by the NSWRFS.
17. Guidelines for hazard reduction include:
    - As far as possible, the frequency, time of year and intensity of any hazard reduction burning in native vegetation is to approximate the natural regime.
    - Periodic weed monitoring and control shall be undertaken after bushfires and hazard reduction burning, and appropriate action taken as necessary.
    - All Asset Protection Zones shall be provided within the boundary of the subject land. National Parks, Crown Reserves, water catchments, easements, Council managed reserves and riparian corridors shall not be considered as part of Asset Protection Zones.

6. Water Cycle Management

Applies to

This section applies to all developments, which involve additional buildings or hard surface areas.

It does not involve on site disposal of sewage. Refer to Section 15 – On Site Sewage Disposal.

Background

Stormwater has the potential to cause loss of life, serious property damage, erosion and sedimentation. The management of stormwater is however part of a larger management of the water cycle. This management not only includes managing stormwater events, the quality of rainwater runoff, erosion and sedimentation but also the use of rainwater to supplement reticulated water supplies. The management of the water cycle has its impacts on the design of developments.

Objectives

a) To ensure that there is no adverse impact from stormwater runoff on downstream properties as a result of development in the catchment for all storm events up to and including a 100-year ARI event.

b) To collect and use rainwater from roof tops to reduce town water consumption.

c) To ensure adequate drainage is provided for developments.

d) To protect properties from localised flooding.

e) To prevent contaminated run-off from entering watercourses.

f) To minimise erosion and reduce the volume of waste water entering waterways.

g) To minimise sedimentation and pollution in waterways and drainage systems.

h) To maintain and enhance the quality of natural water bodies such as creeks, rivers and groundwater.

i) To reduce cost of providing and maintaining water infrastructure.

6.1 Gravity Drainage to Council's drainage system

Applies to

This sub-section applies to development, which drains to a drainage system constructed by or on behalf of Council. This includes drainage to the pipe system, constructed drains, detention basins and constructed swales.

Controls

Stormwater runoff shall be connected to Council's drainage system by gravity means. Mechanical means (i.e. pump) for disposal of stormwater runoff will not be permitted except for basement car parks. Charged systems will not be permitted.

Pumped stormwater including seepage water from basement carpark shall be disposed by providing appropriate infiltration system within the site or shall be connected to the nearest stormwater pit. Pumped water is not permitted to connect to kerb of the street.

Easements to drain stormwater

1. The acquisition of drainage easements over downstream properties will be required where direct access is not possible to Council's drainage system (i.e. street kerb and gutter, piped system or open channels and watercourses).
2. All costs associated with the value of land and easement creation are to be borne by the developer.
3. Written consent for the piping and acquisition of an easement is to be obtained from adjoining owners and provided to Council at the time of lodging the Development Application. Inability to provide a gravity stormwater drainage system and easement to drain water in favour of the development site will prevent the granting of Development Consent. Creation of easement(s) shall be completed prior to the issue of the Construction Certificate.
4. Where negotiations between a developer and a downstream property owner have failed to obtain an easement, an easement may be granted via the Land and Environment Court.
5. Exception to acquiring an easement may be given for sites that do not drain to the street, only where extensions to an existing residential building or replacement of an existing house or dual occupancy is proposed, and genuine attempts at acquiring a downstream easement have failed. Written documentation of these attempts, including reasonable financial consideration, must be included for any application for exemption. If an exception is granted an alternative drainage system may be considered by Council.

Stormwater Drainage Concept Plan (SDCP)

For developments that require construction of stormwater drainage, a SDCP shall be submitted with the Development Application demonstrating the feasibility of the proposed drainage system within the site and connection to Council's system. Early consultation between engineers and architects is required to reduce possible conflicts in the final plan.

Visual impact

All drainage structures and storage areas are to be designed to be visually unobtrusive and sympathetic with the environment. This requirement is necessary to help ensure that future occupants do not adjust or remove facilities for aesthetic reasons without understanding the functional impact of such actions.

Surface flow Paths

1. Surface flow paths, including the provision of an emergency overflow to cater for blockage of the system or flows in excess of the 100-year ARI storm flow must be provided.
2. The flow route must be capable of carrying the flows generated by a 100-year ARI storm with a freeboard of 300mm to the adjacent habitable floor levels of the development site and adjoining properties.
3. Development must not cause any adverse impact on adjoining or any other properties. This includes maintaining surface flow paths and not increasing water levels in these flow paths. Diverting flows from one catchment to another will not be permitted.

Runoff from adjacent properties

Surface runoff from upstream properties shall not be allowed to enter OSD systems. On Site Detention systems must not be located in overland flow paths, which convey catchment flows through the site.

Floor and Ground Levels

All habitable floor levels are to be a minimum of 300mm and garage/non habitable floor levels to be a minimum of 150mm above the maximum design storage water surface level and flow path levels.

On-Site Stormwater Detention

1. On-Site Detention (OSD) systems provide temporary storage of stormwater runoff from developments and restrict discharge from the site at a rate which council's existing drainage system is capable of accommodating.
2. OSD may only be used where:
   - The existing or proposed stormwater pipe system that is unable to cater for the increase in discharge due to development.
   - The development will involve an increase in impervious area on the site.
   - It is intended to connect stormwater directly to the street kerb and gutter only and the discharge exceeds 20 litres per second for the 10-year ARI.
3. OSD will not be required where:
   - The increased discharge for all storms up to and including a 100-year ARI can be accommodated by the existing stormwater pipe system.
   - A building addition or internal alteration is within the footprint (plan area) of the existing building.
   - The additional impervious surfaces (e.g. roof, driveway, paving) total is less than 30sqm in plan area. (NOTE: the designer is advised to confirm with council engineer first to ensure the cumulative total of previous and future additions still remain less than 30sqm, otherwise OSD will apply).
   - The sub-division of an existing development does not change the buildings or the impervious areas of the site.
   - Sites substantially inundated by flooding.
   - The development contributes funds to a major basin strategy that mitigates the impact of the increased impervious area and there are no other local drainage issues requiring OSD.
4. Calculations shall account for the total development site area.

Refer to Council's *On Site Stormwater Detention Policy and Design Specification.*

6.2 Gravity drainage to a creek system

Applies to

This sub-section applies to development, which drains to a natural creek or river. It does not apply to development, which drains to a constructed swale or other similar drainage work.

Controls

All buildings shall be setback a minimum of 40m from the top of the bank of a creek or river, subject limitations imposed by flooding or Foreshore Building Lines.

Nutrient loading/effluent

Depending on the proposed use there may be a need to provide a permanent water quality basin to minimise any contaminated runoff.

Erosion protection of creek banks

All outlet structures discharging to a creek system shall provide scour protection and energy dissipaters.

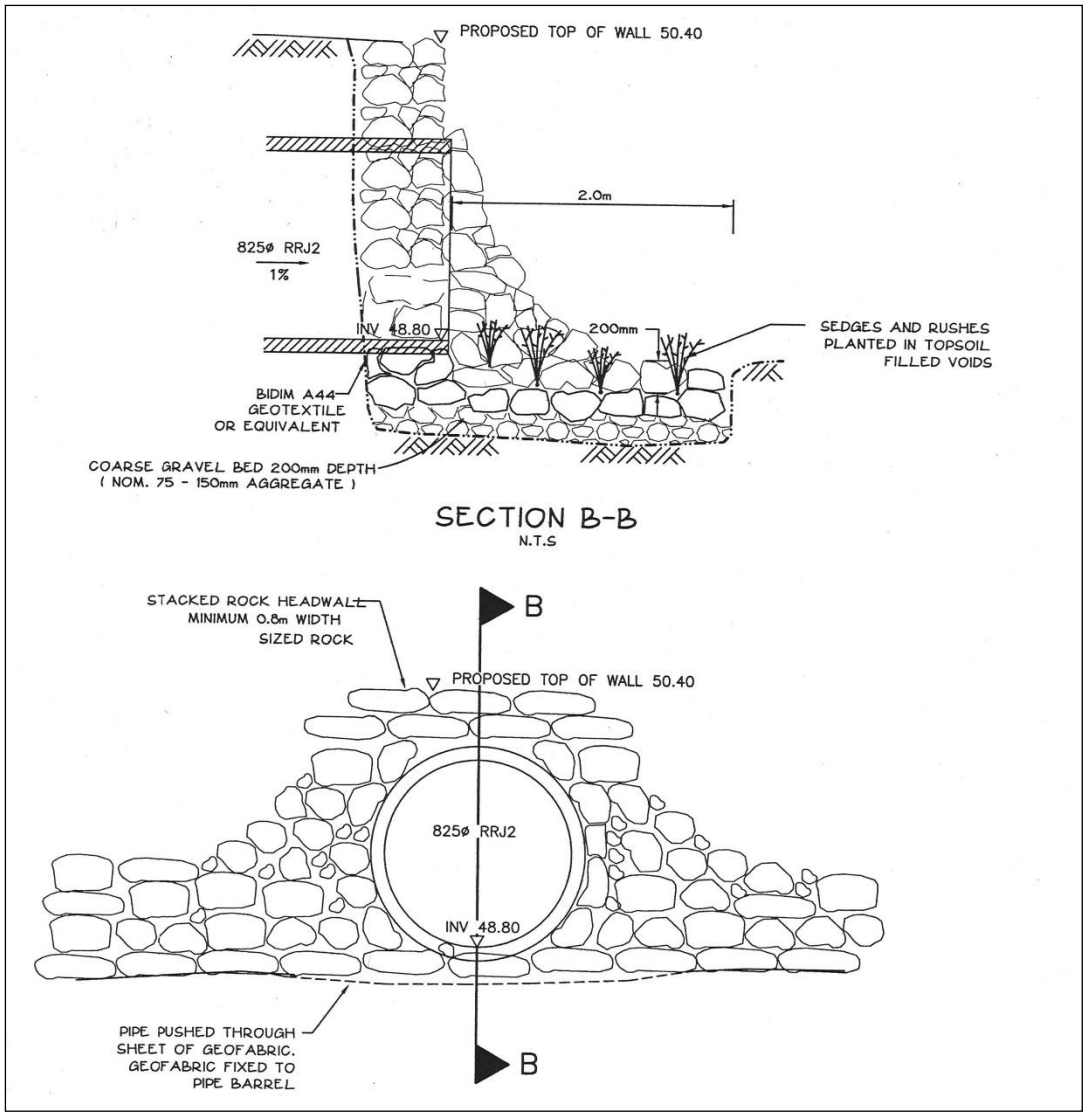


Figure 3 Discharging to a creek system

For more information on water cycle management please refer to *Council's Stormwater Design Specification.*

6.3 Gross Pollutant Traps

Applies to

This sub-section applies to:

a) Development on land within an ~~Business or Industrial~~ Employment zone.

b) Development on private land that includes the construction of car parks or other significant impervious areas where there is a potential for the generation of gross pollutants.

c) Locations where gross pollutant traps are required elsewhere in this DCP

Background

Stormwater runoff has the potential to mobilise significant quantities of gross pollutants or sediment from a development and deposit this pollution in local waterways. This pollution can significantly impact on waterways in terms of aesthetics, damaging plants, destroying the environment / habitats and introducing chemical water quality pollutants.

Objectives

a) To prevent the transportation of gross pollutants and sediment from a site by stormwater runoff during the operational stages of a development.

b) To install gross pollutant traps or utilise equivalent water sensitive urban design treatment train prior to discharge of stormwater from a site.

c) To require developments to capture or prevent the generation of gross pollutants and sediment on site and at their own cost.

d) Ensure that any gross pollutant traps on Council land are installed in accordance with a master plan or water cycle management plan to the satisfaction of Council.

Controls

1. A minimum of one gross pollutant trap shall be required between the last downstream stormwater pit or pollution source and prior to discharge from the site.
2. Gross pollutant traps shall not be located within the banks of watercourses or within riparian zones.
3. Where a valve is required to isolate a site during a pollution spill, consideration shall be given to the location of the valve in relation to gross pollutant traps.
4. The design of the gross pollutant trap shall comply with Council's drainage design specifications.
5. Details of the proposed gross pollutant trapping system, performance and compliance with Council's drainage design specifications shall be included in the Stormwater Drainage Concept Plan.

Note: The impact of the device and cleaning activities on adjacent areas shall be considered.

6.4 Stormwater Runoff Quality

Applies to

This sub-section applies to residential development on sites up to 2000sqm, except for development applications for single dwelling houses and dual occupancy housing.

Background

Waterbodies in urban or agricultural areas usually, suffer from decreased water quality. This adversely impacts on the biodiversity of the waterbody and the use of watercourses by humans.

Objectives

a) To ensure that stormwater runoff is of suitable quality to protect the aquatic ecosystems of waterbodies within Liverpool and downstream receiving catchments.

b) To protect the aquatic environment of the Georges River catchment and the Hawkesbury Nepean River catchment.

c) To maintain and enhance freshwater and estuarine ecosystems, including biodiversity, relative abundance and ecological processes.

Controls

1. The post development stormwater runoff quality shall be improved to achieve the following reduction targets when compared to pre development levels:
   - 45% reduction in the baseline annual pollutant load of total nitrogen (TN);
   - 65% reduction in the baseline annual pollutant load of total phosphorus (TP);
   - 85% reduction in the baseline annual pollutant load of total suspended solids (TSS); and
   - 90% reduction in the baseline annual pollutant load of litter and vegetation larger than 5mm, through provision of GPT.

1. In the case of areas were council has adopted a master plan or in Part 2 specifying water quality targets, the requirements of those documents shall be utilised in preference to the targets listed above.

2. In the case of green field developments where Council has not adopted a master plan or is not included in Part 2 of the DCP specifying water quality targets the above targets shall be utilised by comparing post development water quality with that of a conventional stormwater drainage design without water quality treatment for an urbanised development.

6.5 Stormwater Quality Management

Applies to

This sub-section applies to the following development applications.

a) Residential development greater than 2,000sqm;

b) Commercial, retail, industrial, and / or mixed use development involving new or additional gross floor area of greater than 100sqm; and

c) Any development that involves the construction or designation of 10 or more uncovered car parking spaces.

Background

The Liverpool Local Government Area (LGA) is traversed by two major river systems, the Georges River and the Nepean River, and many of their tributary creeks and waterways systems. Waterways are under pressure from past and ongoing developments, catchment disturbance and hydrological modification, land use transformation and large-scale vegetation changes. Stormwater runoff has the potential to mobilise significant quantities of gross pollutants and sediments as well as nutrients from a development site and dispose into the local waterways. These pollutants will have significant adverse impact on the aesthetics and ecological health of waterways and the riparian corridor.

In June 2016, Council adopted the Water Management Policy that aims to integrate and coordinate Council's water management initiatives to achieve its strategic target to improve ecological health of all waterways within the LGA. The Policy seeks to provide a proactive response to the development pressures and aims to protect the aquatic

ecosystems, the water resources and minimise the impacts of urban development to the urban water cycle through the necessary improvements to the quality of stormwater discharged to the waterways.

The Policy requires the design and construction of water quality improvement devices considering a sequence of water quality treatment train to effectively improve water quality to desirable level while also offering substantial short and long-term ecological, environmental, and economic benefits. The water quality treatment train generally comprises of gross pollutant traps (GPT), bio retention basins, bio swales and raingardens.

The GPTs provide the primary treatment to stormwater runoff that use physical processes to capture and retain gross pollutants such as litter and coarse sediment from stormwater runoff. The fine sediments are removed and chemical pollutants are treated through the provisions of bio swales, raingardens and bio retention basins.

Objectives

The objectives of the stormwater quality management DCP provision is to provide necessary control to set standards for post development stormwater runoff in a way that:

a) Ensures a holistic and coordinated catchment based approach across all areas of Council in managing water;

b) Enables achievement of Council's water quality targets for its major creeks and rivers;

c) Ensures that stormwater runoff is of suitable quality to protect the aquatic ecosystems of receiving waterbodies and downstream catchments;

d) Harvest rainwater and urban stormwater run-off for use where appropriate;

e) Maintains and enhances freshwater and estuarine ecosystems, including biodiversity, relative abundance and ecological processes;

f) Control hydrological impacts of development on receiving surface and ground water systems by controlling the frequency, magnitude and duration of flows to preserve, as far as practicable, pre-development groundwater and surface water regimes and interactions; and

g) Promotes community participation to encourage source control to reduce pollutants reaching its major creeks and rivers.

Controls

1. The post development stormwater runoff quality shall be improved to achieve the following reduction targets when compared to pre development levels:
   - 45% reduction in the baseline annual pollutant load of total nitrogen (TN);
   - 65% reduction in the baseline annual pollutant load of total phosphorus (TP);
   - 85% reduction in the baseline annual pollutant load of total suspended solids (TSS); and
   - 90% reduction in the baseline annual pollutant load of litter and vegetation larger than 5mm, through provision of GPT.
2. Developments that this subsection applies to, including residential development of land area greater than 2,000m^2, are to submit a stormwater quality management assessment demonstrating that necessary water quality improvement targets are achieved.

The stormwater quality management assessment is to be prepared by suitably qualified professionals with experience in water sensitive urban design (WSUD). Water quality modelling is to be undertaken with the Model for Urban Stormwater Improvement

Conceptualisation (MUSIC) model in accordance with the Liverpool City Council WSUD Technical Guideline.

The documentation submitted is required to meet the following requirements:

a) Water quality treatment works shall be designed using MUSIC modelling software and the water quality treatment system performance shall be verified using Council's MUSIC link.

b) Plans showing details of the water quality treatment devices including gross pollutant traps (GPT), bio-retention basins, bio swales and rain gardens.

c) Analysis showing the least present value cost option is considered through the lifecycle cost assessment of all possible alternative options. The lifecycle cost assessment shall consider capital cost and ongoing operation and maintenance cost of the treatment system for minimum of 20 years.

6.6 Sewage Treatment Plant

Objectives

a) To ensure that development near the sewage treatment plant does not encroach on the buffer zoning.

Controls

1. Development within 400m of the Scrivener Street Sewage Treatment Plant needs to be referred to Sydney Water for assessment.

6.7 Environmental Flows

Applies to

This sub-section applies to all development except for development applications for dwelling houses, semi detached dwellings, attached dwellings and dual occupancy housing.

Background

Urbanisation of catchments can increase the frequency and size of smaller stormwater runoff events. This has a significant impact on channel morphology, bed and bank stability as well as significantly influencing aquatic ecosystems. Furthermore, excessive harvesting of stormwater may reduce the water available to support aquatic ecosystems.

Objectives

a) To ensure that development does not adversely impact on flow patterns from that of a natural undeveloped catchment.

b) Prevent bed and bank erosion and instability of waterways.

c) Provide sufficient environmental flows to support aquatic environments and ecological processes.

Controls

1. The peak runoff for the 1-year ARI post development does not exceed that of an undeveloped catchment.

2. The peak runoff for the 1-year ARI post development is not less than 50% from that of an undeveloped catchment.

6.8 Water Conservation

Applies to

This section applies to all development involving the use of water.

Background

Building design can contribute to environmental sustainability by integrating measures for improved water quality and efficiency of use. Water can be conserved in a number of ways, including; reducing water demand from the mains and re-using water, which would otherwise be lost as run off or waste water.

By integrating water use efficiency, water collection and water reuse measures into building and associated infrastructure design development can contribute to environmentally sustainable outcomes.

All mains water is treated to drinking water standard. However, only about 1% of domestic water consumption is actually used for drinking.

Uses such as toilet flushing, laundry and outdoor uses do not require water to be treated to such a high standard. Such uses can be satisfactorily supplied using rainwater collected from roofs and stored in tanks. Benefits include significant water cost savings and substantial reductions in stormwater discharges.

Objectives

a) To reduce per-capita mains consumption of potable water.

b) To harvest rainwater and urban stormwater runoff for use.

c) To reduce wastewater discharge.

d) To capture, treat and reuse wastewater where appropriate.

e) To safeguard the environment by improving the quality of water run-off.

f) To ensure infrastructure design is complementary to current and future water use.

Controls

Residential

New dwellings, including a residential component within a mixed-use building and serviced apartments intended or capable of being strata titled, are to demonstrate compliance with *State Environmental Planning Policy – Building Sustainability Index (BASIX*).

Non-Residential

1. A comprehensive Water Management Plan must be submitted with all non-residential development to address the following criteria.
2. Installed water fixtures (shower heads, taps, toilets, urinals, etc) must be Wells 3 Star or better rated.
3. Installed appliances (dishwashers, clothes washers etc) are to be Wells 3 Star or better rated with respect to water use efficiency. Demonstrate, if necessary, how these requirements will be achieved for replacement appliances, appliances not installed at construction, or bought in by occupants following construction.
4. Install stormwater runoff control, capture and reuse, including water quality management in accordance with Council guidelines.
5. Select water efficient plants and/or, indigenous vegetation for landscape in accordance with Council's recommendations.
6. Use non-potable water for watering gardens and landscape features.

7. For development of more than $1 million construction cost, consideration of separate pipe-work for the utilisation of recycled stormwater for non-potable purposes should be considered.

8. Submit operating details for swimming pools and water features including filling, draining and maintenance activities. Covers must be included in the building design and operational aspects of swimming pool installations.

9. Any development that contains a rainwater tank must satisfy the following criteria:

   - Rainwater is to be sourced only from roof structures via a tank storage system, the tank capacity, or combined tank capacity, must be at least 5,000L.
   - Tanks may be connected to toilets and garden/outdoor taps (the common tanks in residential flat buildings are to be connected to common outdoor taps only).
   - Tanks may be connected to laundry taps with suitable filters, the system is to be fitted with an effective first flush device for removing roof surface contamination.
   - The system must contain a facility for periodic desludging.
   - Tanks must be connected to main water to top them up during times of low rainfall with supplemental inflow not taking places until the tank is 80% empty.
   - Alternatives to the above water savings methods can be presented to Council and they will be assessed on merit.

7. Development near a Watercourse

Applies to

This section applies to:

a) Development within 40m of a watercourse, creek or river except where separated from the watercourse, creek or river by land in an

- RE1 – Public Recreation zone ,
- ~~E2~~ C2 – Environmental Conservation zone,
- ~~E3~~ C3 – Environmental Management zone or
- W1 – Natural Waterways zone.

b) Development that may impact upon, bed, banks or stream flow of a watercourse.

c) Development, which involves removal of riparian vegetation.

Background

Waterfront areas are often compromised due to lack of awareness and planning resulting in degradation of their environmental value.

Waterfront areas, including riparian zones represent the interface between land and watercourses. These areas are continually under threat from development pressures. These pressures have the potential to trigger the following impacts:

- Increases in sedimentation;
- Modification of flow regimes;
- Destruction of riparian vegetation;
- Visual impacts;
- Bank instability;
- Loss of biodiversity through destruction of habitat.

Waterfront areas are significant in ensuring protection of the aquatic environment through their role in acting as a bio-filter to reduce polluted surface runoff, excessive sedimentation and erosion. Therefore it is important to ensure that adequate controls are in place to maintain and enhance the environmental significance of these areas.

Objectives

a) To protect, restore and maintain ecological processes, natural systems and biodiversity in wetlands and waterfront areas.

b) To maintain watercourse bed and bank stability.

c) To minimise sedimentation and pollution of watercourses and wetlands.

d) Ensure conservation and long term maintenance of existing native vegetation in waterfront areas.

e) To maintain lateral connectivity between waterways and riparian vegetation.

f) To protect the visual amenity of the water and land interface.

Controls

1. If any works are proposed near a water course, the Water Management Act 2000 may apply, and you may be required to seek controlled activity approval from the NSW Office of Water. Please consult with the NSW Office of Water regarding your proposal. Section 4 Bushland and Fauna Habitat Preservation of this DCP should also be addressed when pertinent.

8. Erosion and Sediment Control

Applies to

This section applies to all development, which may involve:

a) Clearing, levelling, shaping, excavation of the existing soil surface and or vegetation on any site or the placement of any material stockpiles on that site;

b) Placement of any fill upon a site; and

c) Changes in the rate and or volume or course of runoff entering a waterbody, or overland flow.

Background

The excavation of land removes ground cover and often results in stockpiling of loose soil. This has the potential to create erosion of soils on site and sedimentation downstream from a development site. The sedimentation can result not just on adjoining land or streets but on creek and river systems quite some distance away. The impact on the ecosystem of creeks and rivers can be very significant.

Objectives

a) To avoid soil erosion through the use of effective erosion and sediment control measures both during and following any works.

b) To reduce pollution by avoiding land degradation and disturbance of vegetation on site, hence reducing pollution impact to downstream areas and receiving waters and their ecosystem.

c) To minimise costs involved in unblocking drains and water bodies, cleaning of roads and compensating for the loss of topsoil through improved sedimentation and erosion control.

d) To improve water quality by reducing sedimentation.

Controls

1. The development application shall be accompanied by either a Soil and Water Management Plan (SWMP) or an Erosion and Sediment Control Plan (ESCP) as shown in Table 1.

Table 1 Plans for stormwater soils management

Plan Required	Area of Disturbance
ESCP	Up to 2,500sqm
SWMP	Greater than 2,500sqm and/or where development consent is required.

2. These plans shall be prepared in accordance with *Managing Urban Stormwater Soils and Construction,* also known as the *Blue Book* (current edition) produced by the *NSW Department of Housing*. The plans should form part of the engineering design drawings and be documented in the construction plans.

3. The SWMP and ESCP are to include the following:

   - A set of plans drawn to scale which show the layout of appropriate sedimentation and erosion control in accordance with the requirements of this DCP;

   - Outline of appropriate sedimentation and erosion control measures;

   - Proposed control of erosion and sedimentation shall be prepared by referencing and incorporating the requirements of Council's *Specification for Control of Erosion and Sedimentation.*

4. The matters to be considered in the preparation of SWMP and ESCP are detailed in the “Blue Book”. These include but are not limited to:
   - Slope and soil characteristics.
   - Conservation of topsoil and consideration of ecologically sustainable principles and measures.
   - Location and details of proposed control measures.
   - Control of stockpiles and re-use of material on site.
   - All weather access to the site.
   - Location of existing vegetation and vegetation to be removed.
   - Proposed method of protection of vegetation.
   - Water bodies, dams and other drainage structures.
   - Soil and water implications.
   - Re-stabilisation/revegetation details.
   - Construction site location/disturbed area boundaries.
   - Clean up of downstream sedimentation resulting from breach of erosion and sedimentation controls.
   - Order of works based upon construction and stabilisation of all culverts and surface drainage works at the earliest practical stage.
   - Proposed time schedules for construction of structures and implementation of control measures and details of proposed maintenance, inspection and corrective action.
   - Where practical, all runoff from areas up slope is to be diverted away from the disturbed areas. Diverted stormwater should be discharged onto stable areas and should not be diverted into neighbouring properties unless written permission is obtained from the land owner(s). Avoid directing stormwater towards the site’s access and egress.

8.1 Sediment Basins

Applies to

This sub-section applies to development, which involves the provision of a sediment basin.

Background

The conversion of a sediment basin into a permanent water feature would significantly disturb any flora or fauna in and around the basin. There would be a need to remove accumulated sediment. Typical issues with retaining sediment basins include:

a) Remobilisation of nutrients from sediment trapped during subdivision causing problems such as algal growth.

b) Inappropriate design features such as bank treatments causing public safety issues as well as promoting growth and propagation of weeds.

c) Inappropriate treatment train design promoting the accumulation of gross pollutants, weed infestation and algae growth.

Objectives

a) To ensure that temporary sediment basins are removed when no longer needed.

b) To ensure that temporary sediment basins are constructed in a way that there is no long-term adverse environmental impact.

Controls

1. A Sediment Basin shall not be retained as a permanent facility unless required by:
   - Part 2 of the DCP
   - Total Catchment Management Study
   - Floodplain Management Plan
2. A Sediment Basin shall not be located within core riparian areas, land in public ownership or land that is intended to be transferred to public ownership.
3. A Sediment Basin shall have no substantial impact on a natural water body or wetland.
4. A Sediment Basin shall be designed and managed to prevent the establishment of native fauna within the basin.
5. Any approval for the installation of a temporary basin must include approval for removal of that basin and site remediation.
6. Any approval for the installation of a temporary sediment basin must include a plan outlining actions to be undertaken for removal of the basin and a timeline for its removal.
7. Suitable fencing shall be installed and maintained to prevent persons from gaining access to the basin.

9. Flooding Risk

Applies to

This section applies to land identified as at or below the flood planning level.

Background

1. In 1984, the State Government introduced its current flood prone land policy applicable to New South Wales. The first Floodplain Development Manual was published in 1986, providing guidelines for the implementation of the government's flood prone land policy and the merit approach, which underpins its application. Revised guidelines were released in 2005 and are now embodied in the *Floodplain Development Manual, April 200*5. The revised *Floodplain Development Manual* continues to support the NSW Government's Flood Prone Land Policy. The primary objective of the policy is:

"To reduce the impact of flooding and flood liability on individual owners and occupiers of flood prone property, and to reduce private and public losses resulting from floods, utilising ecologically positive methods wherever possible."

2. To achieve this objective the *Floodplain Development Manual* acknowledges a broad risk management hierarchy of:
   - Avoidance of flood risk;
   - Minimisation of flood risk using appropriate planning controls; and
   - Flood risk mitigation.
3. Flood risk mitigation is not always the preferred option, being costly and most likely to adversely affect the natural environment. Avoidance and minimisation of flood risk are the options most likely to be acceptable and are primarily reliant on land use planning and development control for implementation. These planning and development controls are reflected in this Section.
4. Local Government is the primary authority responsible for both flood risk management and land use planning in New South Wales. The NSW Government's flood policy provides for a flexible merit based approach to be followed by local government when dealing with planning, development and building matters on flood prone land. For Council to fully carry out its responsibilities for management of flood prone land, it is necessary to prepare local Floodplain Risk Management Plans.
5. The *Floodplain Development Manual* requires that Councils prepare Floodplain Risk Management Studies as a prelude to the formulation of a Floodplain Risk Management Plan that, among other things, would control development and other activity within the floodplain. This Section of the DCP is consistent with Council's and State Government's "Flood Prone Land Policy" and the *Floodplain Development Manual.*
6. This Section of the DCP is an application of the State Policy, which reflects local circumstances, as identified for some floodplains, through the preparation of Floodplain Risk Management Plans.

Objectives

a) To minimise the potential impact of development and other activity upon the aesthetic, recreational and ecological value of the waterway corridors.

b) To ensure essential services and land uses are planned in recognition of all potential floods.

c) To reduce the risk to human life and damage to property caused by flooding through controlling development on land affected by potential floods.

d) To ensure that the economic and social costs which may arise from damage to property due to flooding is minimised and is not greater than that which can be reasonably managed by the property owner and general community.

e) To limit developments with high sensitivity to flood risk (e.g. critical public utilities) to land with minimal risk from flooding.

f) To prevent intensification of inappropriate use of land within high flood risk areas or floodways.

g) To permit development with a lower sensitivity to the flood hazard to be located within the floodplain, subject to appropriate design and siting controls.

h) To ensure that development should not detrimentally increase the potential flood affectation on other development or properties either individually or in combination with the cumulative impact of development that is likely to occur in the same floodplain.

i) To ensure that development does not prejudice the economic viability of any Voluntary Acquisition Scheme.

9.1 Determining Relevant Controls

Controls

The controls vary depending on:

1. Sensitivity of a land use to flooding
2. Severity of flood impact on site
3. Specific Floodplain in which a site is located

Follow these steps determine the relevant controls.

Step 1. Identify Flood Risk Category (degree of flooding risk). See Section 9.2.

Step 2. Identify Land Use Risk Category. See Section 9.3.

Step 3. Identify relevant Floodplain. See Section 9.4.

Step 4. Identify relevant Floodplain Controls. See Section 9.5 and 9.6.

The following figure summarises this consideration process.

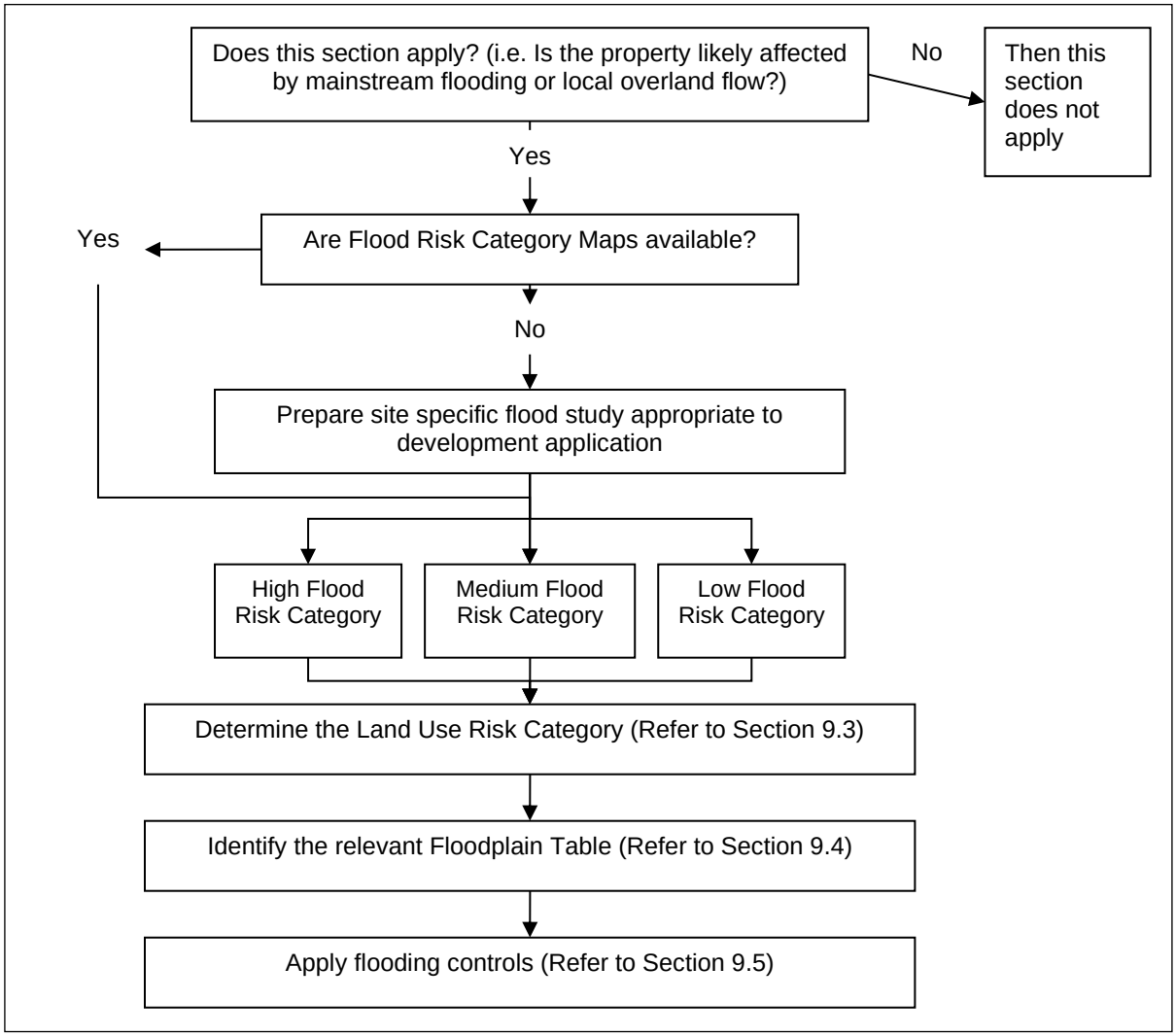


Figure 4 Flow chart for the determination of flood risk

9.2 Step 1 Identify the Flood Risk Category

Controls

1. Flood liable land is categorised according to the levels of potential flood risk as outlined below.

   High Flood Risk Category means land below the 1% AEP flood that is either subject to a high hydraulic hazard or where there are significant evacuation difficulties.

   Note: The high flood risk Category is where high flood damages potential risk to life evacuation problems would be anticipated or development would significantly and adversely affect flood behaviour. Most development should be restricted in this Category. In this Category there would be a significant risk of flood damages without compliance with flood related building and planning controls.

   Medium Flood Risk Category means land below the 1% AEP flood that is not subject to a high hydraulic hazard and where there are no significant evacuation difficulties.

Note: In this Category there would still be a significant risk of flood damage, but these damages can be minimised by the application of appropriate development controls.

Low Flood Risk Category means all other land within the floodplain (i.e. within the extent of the probable maximum flood) but not identified within either the High Flood Risk or the Medium Flood Risk Category.

Note: The Low Flood Risk Category is where the risk of damages is low for most land uses. The Low Flood Risk Category is that area above the 1% AEP flood and most land uses would be permitted within this Category.

No Flood Risk Mapping means that there has not yet been any risk Categories determined for this area.

Note: Flood Risk Category Maps are not available for all Flood Prone Land. Applicants may be required to undertake a flood study to determine the flood extent and Flood Risk Categories in order to apply appropriate controls required by this Development Control Plan.

2. Council has prepared flood risk mapping for the majority of the floodplains within the Liverpool LGA through a number of Floodplain Risk Management Studies and Plans adopted by Council and this information is available from Council.
3. It should be noted that the flood risk mapping prepared by Council has been developed at a broad scale for the purpose of undertaking Floodplain Risk Management Studies. This mapping is considered preliminary and can be subject to refinement as part of the assessment of individual proposals. Furthermore, works consistent with the flooding provisions of this DCP and acceptable to Council could be undertaken to alter the flood risk category of land.
4. If the peak flow rate of an overland flow path, during the 1% AEP flood, exceeds 5 cubic metres per second then the overland flow path shall be treated as mainstream flooding and the development controls for mainstream flooding shall be applied.

9.3 Step 2 Identify Land Use Risk Category

Land use is categorised into 8 Land Use Risk Categories according to the sensitivity of each land use to flooding. The definitions of each land use are based on the *Liverpool LEP 2008*, are categorised as follows.

Critical uses and Facilities

Community facility which may provide an important contribution to the notification or evacuation of the community during flood events

Hospitals

Residential care facility

Sensitive Uses and Facilities

Educational establishments

Schools

Hazardous or offensive industry or storage establishment

Liquid fuel depot

Seniors housing

Utility installations or Public utility undertakings (including generating works) undertakings which are essential to evacuation during periods of flood or if affected would unreasonably affect the ability of the community to return to normal activities after flood events

Telecommunications facility

Waste disposal land fill operation

Group home

Subdivision

Subdivision of land, which involves the creation of new allotments, with potential for further development

Residential

Attached dwelling

Backpackers' accommodation

Bed and breakfast premises

Boarding houses

Canal estate development

Caravan Park

Child care centre

Dual occupancy

Dwelling

Dwelling house

Exhibition home

Exhibition village

Family day care centre

Health consulting rooms

Home-based child care service

Home business

Home occupation

Hostel

Information and education facility

Moveable dwelling

Multi dwelling housing

Residential accommodation

Residential flat building

Rural workers' dwelling

Secondary dwelling

Semi-detached dwelling

Serviced apartments

Shop top housing

Utility installations or Public utility undertakings (other than critical utilities)

Tourist and visitor accommodation

Commercial or Industrial

Agricultural produce industry
Amusement Centre
Animal boarding or training establishment
Boat repair facility
Boat shed
Bulky goods premises
Business premises
Cemetery
Charter and tourism boating facility
Commercial port facility
Crematorium
Depot
Electricity generating works
Entertainment facility
Freight transport facility
Function Centre
Funeral chapel
Funeral home
Heavy Industry
Heliport
Hotel accommodation
Industry
Kiosk
Light Industry
Materials recycling or recovery centre
Medical centre
Mortuary
Neighbourhood shop
Office premises
Passenger transport terminal
Place of public worship
Public administration building
Recreation facility (indoor)
Recreation facility (major)
Registered club
Restaurant
Retail premises
Roadside stall
Rural industry
Sawmill or log processing works
Service station
Sex service premises
Transport depot
Take away food or drink premises
Tank based aquaculture
Truck depot
Vehicle body repair workshop
Vehicle repair station
Vehicle showroom
Veterinary hospital
Warehouse or distribution centre

Recreation or Non-urban Uses

Agriculture
Aquaculture
Dam
Environmental facility
Extractive industry
Feedlot
Helipads
Horticulture
Intensive livestock agriculture
Landscape and garden supplies
Marina
Recreation facility (outdoor)
Stock and sale yard
Turf farming

Concessional Development

1. In the case of residential development:
   - An addition or alteration to an existing dwelling of not more than 30sqm or 10% (whichever is the lesser) of the habitable floor area which existed at 1 December 1987. (The date of adoption of the first *Liverpool City Council Floodplain Management Plan*); or
   - The construction of an outbuilding with a maximum floor area of 20sqm (or 50sqm for land zoned for non urban purposes); or
   - Rebuilding dwellings in a manner which substantially reduces the flood risk having regard to property damage and personal safety when compared to the existing building.
2. In the case of other development:
   - An addition to existing premises of not more than 10% of the floor area which existed at 1 December 1987. (The date of adoption of the first *Liverpool City Council Floodplain Management Plan*); or
   - Rebuilding of a development in a manner which substantially reduces the flood risk having regard to property damage and personal safety when compared to the existing development; or
   - A change of use, which does not increase flood risk having regard to property damage and personal safety; or
   - Subdivision that does not involve the creation of new allotments with potential for further development.

9.4 Step 3 Identify relevant Floodplain

Identify the relevant Floodplain on Figures 5 & 6.

9.5 Step 4 Identify relevant Floodplain Controls

1. Each floodplain area has two sets of controls. These are:
   - Mainstream Flooding Controls, identified in Tables 2 – 4 and Section 9.6.
   - Local Overland Flooding Controls, identified in Table 5.
2. Development on flood prone land will be required to comply with either or both of these.
3. An explanation of these controls is in Table 6.

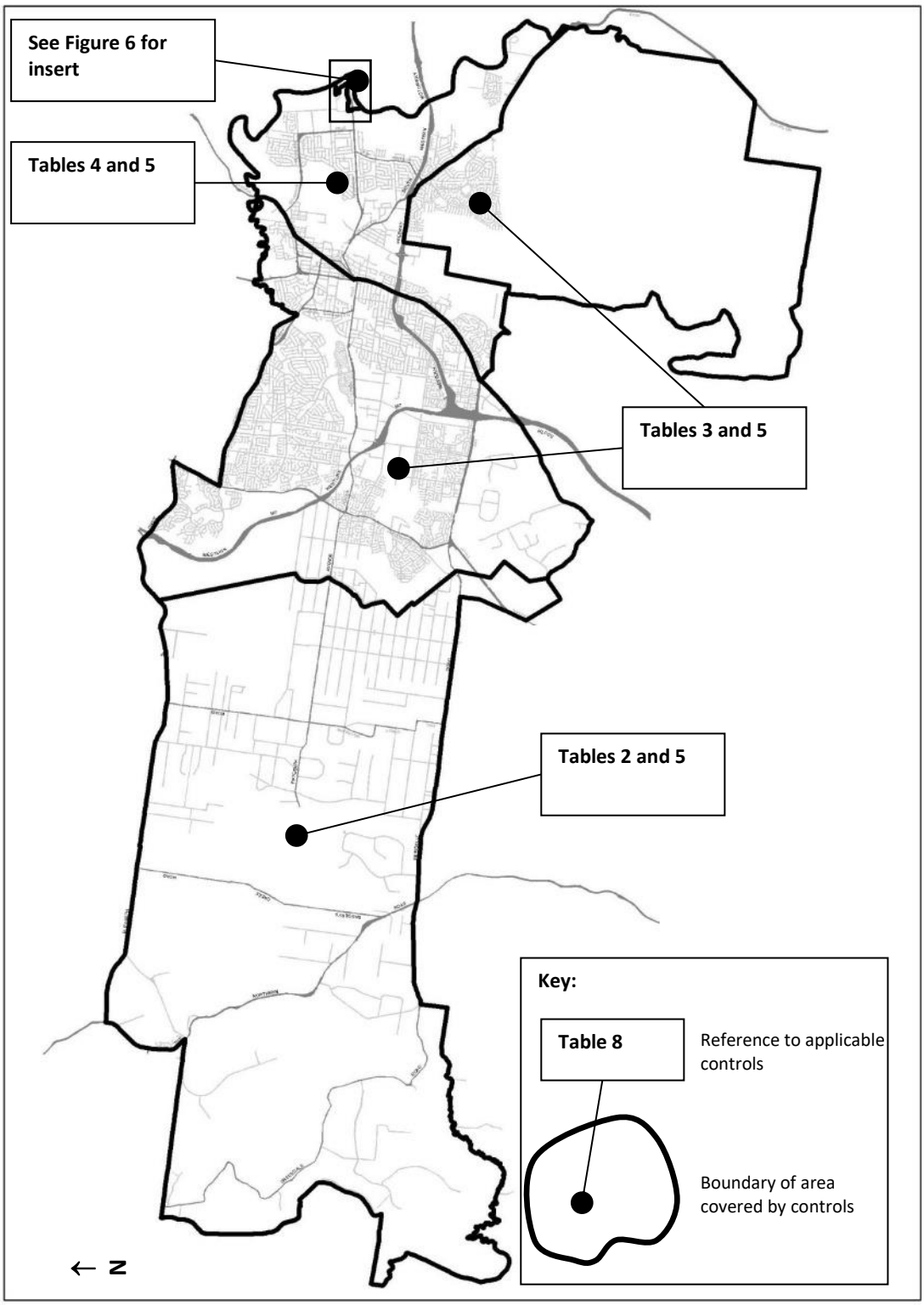


Figure 5 Map for identification of relevant floodplains

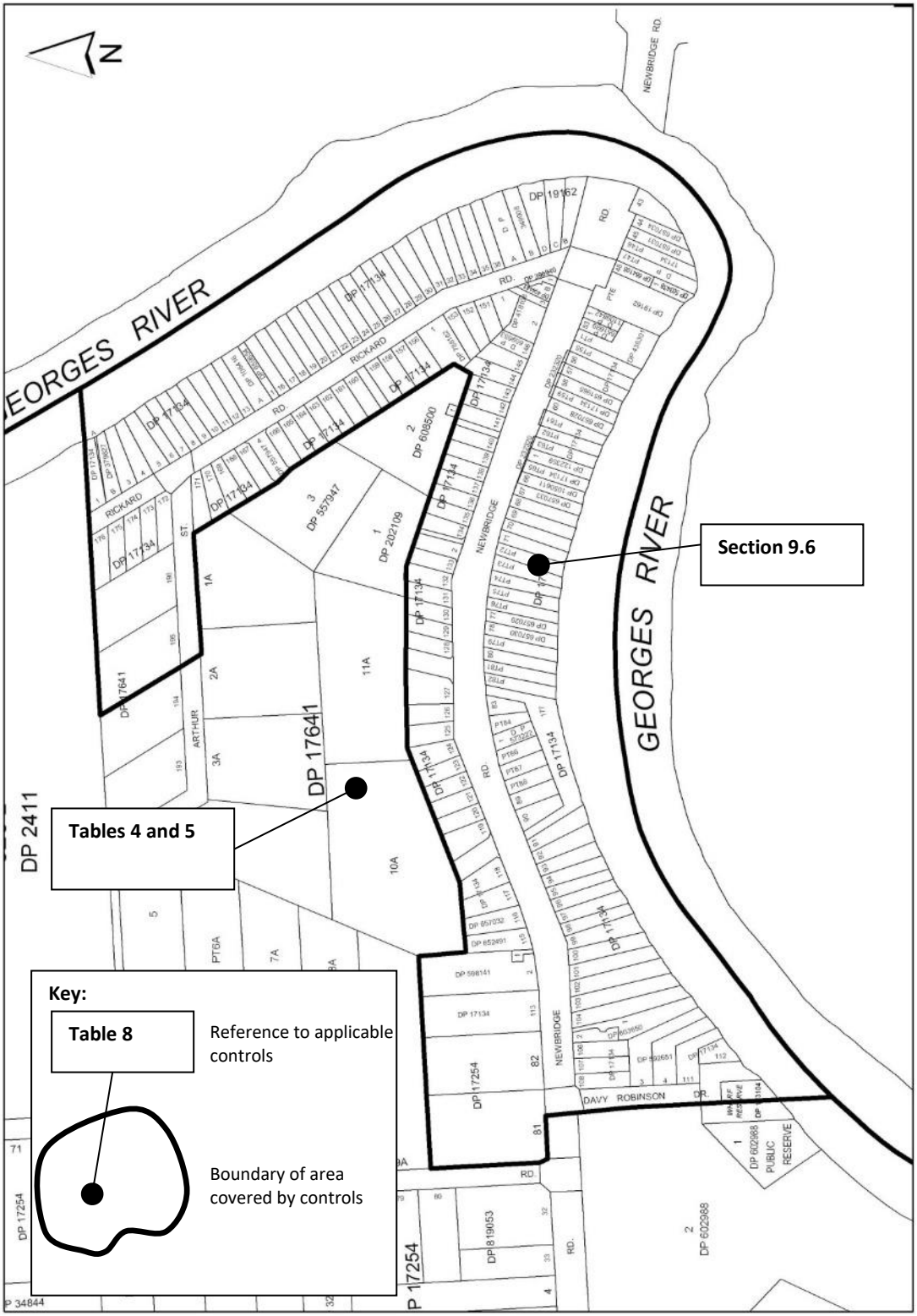


Figure 6 Moorebank Floodway

Table 2 Nepean River Floodplains (Includes South Ck, Kemps Ck, Bonds Ck and other tributaries of the Nepean River)

Flood Risk Category	Land Use Risk Category	Planning Controls							
		Floor Level	Building Components	Structural Soundness	Flood Effects	Car Parking & Driveway Access	Evacuation	Management & Design	Fencing
Low Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities	12	4	4	2, 4, 5	2, 3, 6, 7, 8	2, 6, 8	4, 5	
	Subdivision				2, 4, 5			1, 6	
	Residential (++)	2, 6	3	3		2, 3, 6, 7, 8	2, 6		
	Commercial & Industrial	2, 6	3	3	2, 4, 5	2, 3, 6, 7, 8	1, 6	2, 3, 5	
	Tourist Related Development	1, 6, 15	3	3	2, 4, 5	2, 3, 6, 7, 8	2, 6	2, 3, 5	
	Recreation & Non-Urban	1, 9, 15	3	3		1, 5, 7, 8	6, 8	2, 3, 5	
	Concessional Development	14	3	3		1, 3, 5, 7, 8, 9	2, 6	2, 3, 5	
Medium Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities								
	Subdivision				1, 4, 5			1	1, 2, 3
	Residential	2, 6, 15	3	1	2, 4, 5	2, 3, 6, 7, 8	2, 6		1, 2, 3
	Commercial & Industrial	2, 6, 15	3	1	2, 4, 5	2, 3, 6, 7, 8	1, 6	2, 3, 5	1, 2, 3
	Tourist Related Development	1, 6, 15	3	1	2, 4, 5	2, 3, 6, 7, 8	2, 6	2, 3, 5	1, 2, 3
	Recreation & Non-Urban	1, 9, 15	3	1	2, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	1, 2, 3
	Concessional Development	1, 14, 15	3	1	2, 4, 5	1, 3, 5, 7, 8, 9	2, 8	2, 3, 5	1, 2, 3
High Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities								
	Subdivision								
	Residential								
	Commercial & Industrial								
	Tourist Related Development								
	Recreation & Non-Urban	1, 9, 15	3	1	1, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	1, 2, 3
	Concessional Development	1, 14, 15	3	1	1, 4, 5	1, 3, 5, 7, 8, 9	2, 6	2, 3, 5	1, 2, 3

Key:

	Not Relevant
	Unsuitable Land Use
1, 2, 3	Control reference number relevant to the particular planning consideration. (see Table 6)
(++)	Attached dwellings, Dwelling houses, dual occupancies, multi unit dwelling housing, residential flat buildings (not including development for the purpose of group homes or seniors housing), Secondary dwellings and Semi-detached dwellings are exempt from these controls.

Table 3 Cabramatta Creek and all other Floodplains (Includes Hinchinbrook Creek, Maxwells Creek, Brickmakers Creek, upper parts of Anzac Ck, and other tributaries)

Flood Risk Category	Land Use Risk Category	Planning Controls							
		Floor Level	Building Components	Structural Soundness	Flood Effects	Car Parking & Driveway Access	Evacuation	Management & Design	Fencing
Low Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities	13	4	4	2, 4, 5	2, 3, 6, 7, 8	3, 6, 8	4, 5	
	Subdivision				2, 4, 5			1, 6	
	Residential (++)	2, 6	3	3		2, 3, 7	3, 6		
	Commercial & Industrial	2, 11, 15	3	3	2, 4, 5	2, 3, 6, 7, 8	(3 or 4), 6	2, 3, 5	
	Tourist Related Development	2, 6, 15	3	3	2, 4, 5	2, 3, 6, 7, 8	3, 6	2, 3, 5	
	Recreation & Non-Urban	2, 7	3	3	2, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	
	Concessional Development	14, 15	3	3	2, 4, 5	1, 7, 8, 9	3, 6	2, 3, 5	
Medium Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities								
	Subdivision				1, 4, 5			1, 6	1, 2, 3
	Residential	2, 6, 15	3	1	2, 4, 5	2, 3, 6, 7, 8	3, 6		1, 2, 3
	Commercial & Industrial	11, 15	3	1	2, 4, 5	2, 3, 6, 7, 8	4, 6	2, 3, 5	1, 2, 3
	Tourist Related Development	2, 6, 15	3	1	2, 4, 5	2, 3, 6, 7, 8	3, 6	2, 3, 5	1, 2, 3
	Recreation & Non-Urban	2, 7	3	1	2, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	1, 2, 3
	Concessional Development	14, 15	3	1	2, 4, 5	1, 7, 8, 9	3, 8	2, 3, 5	1, 2, 3
High Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities								
	Subdivision								
	Residential								
	Commercial & Industrial								
	Tourist Related Development								
	Recreation & Non-Urban	2, 7	3	1	1, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	1, 2, 3
	Concessional Development	14, 15	3	1	1, 4, 5	1, 7, 8, 9	3, 6	2, 3, 5	1, 2, 3

Key:

	Not Relevant
	Unsuitable Land Use
1, 2, 3	Control reference number relevant to the particular planning consideration. (see Table 6)
(++)	Attached dwellings, Dwelling houses, dual occupancies, multi unit dwelling housing, residential flat buildings (not including development for the purpose of group homes or seniors housing), Secondary dwellings and Semi-detached dwellings are exempt from these controls.

Table 4 Georges River Floodplain (Includes Harris Ck and Williams Ck, lower parts of Anzac Ck, but not Cabramatta Creek)

Flood Risk Category	Land Use Risk Category	Planning Controls							
		Floor Level	Building Components	Structural Soundness	Flood Effects	Car Parking & Driveway Access	Evacuation	Management & Design	Fencing
Low Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities	13	4	4	2, 4, 5	2, 3, 6, 7, 8	6, 8, 9	2, 4	
	Subdivision				2, 4, 5			1	
	Residential (++)	2, 6	2	3	2, 4, 5	2, 3, 6, 7, 8	6, 9		
	Commercial & Industrial	4, 8, 15	2	3	2, 4, 5	2, 3, 6, 7, 8	(4 or 9), 6	2, 3, 5	
	Tourist Related Development	2, 6, 15	2	3	2, 4, 5	2, 3, 6, 7, 8	6, 9	2, 3, 5	
	Recreation & Non-Urban	2, 7	2	3	2, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	
	Concessional Development	14, 15	2	3	2, 4, 5	1, 7, 8, 9	6, 9	2, 3, 5	
Medium Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities								
	Subdivision				1, 4, 5			1	1, 2, 3
	Residential	2, 6, 15	2	2	2, 4, 5	2, 3, 6, 7, 8	6, 9		1, 2, 3
	Commercial & Industrial	8, 4, 15	2	2	2, 4, 5	2, 3, 6, 7, 8	4, 6	2, 3, 5	1, 2, 3
	Tourist Related Development	2, 6, 15	2	2	2, 4, 5	2, 3, 6, 7, 8	6, 9	2, 3, 5	1, 2, 3
	Recreation & Non-Urban	2, 7	2	2	2, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	1, 2, 3
	Concessional Development	14, 15	2	2	2, 4, 5	1, 7, 8, 9	8, 9	2, 3, 5	1, 2, 3
High Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities								
	Subdivision								
	Residential								
	Commercial & Industrial								
	Tourist Related Development								
	Recreation & Non-Urban	2, 7	2	2	1, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	1, 2, 3
	Concessional Development	14, 15	2	2	1, 4, 5	1, 7, 8, 9	6, 9	2, 3, 5	1, 2, 3

Key:

	Not Relevant
	Unsuitable Land Use
1, 2, 3	Control reference number relevant to the particular planning consideration. (see Table 6)
(++)	Attached dwellings, Dwelling houses, dual occupancies, multi unit dwelling housing, residential flat buildings (not including development for the purpose of group homes or seniors housing), Secondary dwellings and Semi-detached dwellings are exempt from these controls.

Table 5 Local Overland Flooding

Flood Risk Category	Land Use Risk Category	Planning Controls							
		Floor Level	Building Components	Structural Soundness	Flood Effects	Car Parking & Driveway Access	Evacuation	Management & Design	Fencing
Local Overland Flood Risk	Critical Uses & Facilities	13	4	5	3	4, 7, 8	7	3, 5	2, 4
	Sensitive Uses & Facilities	13	4	5	3	4, 7, 8	7	3, 5	2, 4
	Subdivision				3		5	1	2, 4
	Residential	3, 5	1	6	3	4, 7, 8	5		2, 4
	Commercial & Industrial	10	1	6	3	4, 7, 8	5	3, 5	2, 4
	Tourist Related Development	3, 5	1	6	3	4, 7, 8	5	3, 5	2, 4
	Recreation & Non-Urban	3, 5	1	6	3	4, 7, 8	5	3, 5	2, 4
	Concessional Development	14	1	6	3	4, 7, 8	5	3, 5	2, 4

Key:

	Not Relevant
1, 2, 3	Control reference number relevant to the particular planning consideration.

Table 6 Explanation of Development Controls

Ref No	Controls
Floor level	
1	All floor levels to be as high as practical but not less than the 20% AEP flood level.
2	Non habitable floor levels to be as high as practical but no less than the 5% AEP flood level.
3	Non-habitable floor levels to be not less than the 1% AEP flood.
4	The level of Non-habitable and general Industrial floor areas to be as high as practical but not less than the 2% AEP flood. Where this is impractical for single lot developments within an existing developed area, the floor shall be as high as practical but no less than the 5% AEP flood.
5	Habitable floor levels to be equal to or greater than the 1% AEP flood level plus 300mm freeboard.
6	Habitable floor levels to be equal to or greater than the 1% AEP flood level plus 500mm freeboard.
7	Habitable floor levels to be no lower than the 1% AEP flood plus 500mm freeboard unless justified by site specific assessment.
8	Habitable and general commercial floor levels to be as high as practical but no lower than the 1% AEP flood plus 500mm freeboard unless justified by site specific assessment.
9	The level of habitable floor areas to be equal to or greater than the 1% AEP flood level plus 500mm freeboard. If this level is impractical a lower floor level may be considered provided the floor level is as high as possible but no less than the 5% AEP flood level.
10	All floor levels to be equal to or greater than the 1% AEP flood level plus 300mm freeboard. Freeboard may be reduced if justified by site specific assessment.
11	All floor levels to be no lower than the 1% AEP flood plus 500mm freeboard. Freeboard may be reduced if justified by site specific assessment.
12	All floor levels to be equal to or greater than the PMF level. If this level is impractical a lower floor level may be considered provided the floor level is as high as possible but no less than the 1% AEP flood level plus 500mm freeboard.

Ref No	Controls
13	Floor levels to be no lower than the PMF level unless justified by a site specific assessment.
14	Floor levels to be equal to or greater than the minimum requirements normally applicable to this type of development. Where this is not practical due to compatibility with the height of adjacent buildings, or compatibility with the floor level of existing buildings, or the need for access for persons with disabilities, a lower floor level may be considered. In these circumstances, the floor level is to be as high as practical, and, when undertaking alterations or additions no lower than the existing floor level.
15	A restriction is to be placed on the title of the land, pursuant to S.88B of the *Conveyancing Act*, where the lowest habitable floor area is elevated more than 1.5m above finished ground level, confirming that the undercroft area is not to be enclosed.
Building Components & Method	
1	All structures to have flood compatible building components below the 1% AEP flood level plus 300mm freeboard.
2	All structures to have flood compatible building components below the 1% AEP flood level plus 500mm freeboard.
3	All structures to have flood compatible building components below the 1% AEP flood level plus 500mm freeboard or a PMF if required to satisfy evacuation criteria (see below).
4	All structures to have flood compatible building components below the PMF level.
Structural Soundness	
1	Applicant to demonstrate that the structure can withstand the forces of floodwater, debris and buoyancy up to and including a 1% AEP flood plus 500mm freeboard or a PMF if required to satisfy evacuation criteria (see below). An engineer's report may be required.
2	Engineer's report to certify that the structure can withstand the forces of floodwater, debris and buoyancy up to and including a 1% AEP flood plus 500mm freeboard.
3	Applicant to demonstrate that the structure can withstand the forces of floodwater, debris and buoyancy up to and including a 1% AEP flood plus 500mm freeboard.
4	Applicant to demonstrate that any structure can withstand the forces of floodwater, debris and buoyancy up to and including a PMF. An engineer's report may be required.
5	Applicant to demonstrate that any structure can withstand the forces of floodwater, debris and buoyancy up to and including a PMF.
6	Applicant to demonstrate that the structure can withstand the forces of floodwater, debris and buoyancy up to and including a 1% AEP flood plus 300mm freeboard.
Flood Effects	
1	Engineers report required to certify that the development will not increase flood effects elsewhere, having regard to: (I) loss of flood storage; (ii) changes in flood levels, flows and velocities caused by alterations to flood flows; and (iii) the cumulative impact of multiple similar developments in the floodplain.
2	The flood impact of the development to be considered to ensure that the development will not increase flood effects elsewhere, having regard to: (i) loss of flood storage; (ii) changes in flood levels and velocities caused by alterations to the flood conveyance; and (iii) the cumulative impact of multiple potential developments in the floodplain. An engineer's report may be required.
3	The flood impact of the development to be considered to ensure that the development will not increase flood affectation elsewhere having regard to changes in flood levels and velocities caused by alteration of conveyance of flood waters. An engineer's report may be required if Council considers a significant

Ref No	Controls
	affectation is likely. The unmitigated obstruction, concentration or diversion of overland flow paths to adjacent property shall not be permitted.
4	A floodway or boundary of significant flow may have been identified in this catchment. This area is the major conveyance area for floodwaters through the floodplain and any structures placed within it are likely to have a significant impact on flood behaviour. Within this area no structures other than concessional development, open type structures or small non habitable structures (not more than 30sqm) to support agricultural uses will normally be permitted. Development outside the Boundary of Significant flow may still increase flood effects elsewhere and therefore be unacceptable
5	Any filling within the 1% AEP flood will normally be considered unacceptable unless compensatory excavation is provided to ensure that there is no net loss of floodplain storage volume below the 1% AEP flood.
Car Parking and Driveway Access	
1	The minimum surface level of open car parking spaces, carports or garages, shall be as high as practical.
2	The minimum surface level of a car parking space, which is not enclosed (e.g. open car parking space or carport) shall be as high as practical, but no lower than the 5% AEP flood level or the level of the crest of the road at the highest point were the site can be accessed. In the case of garages, the minimum surface level shall be as high as practical, but no lower than the 5% AEP flood.
3	Garages capable of accommodating more than 3 vehicles on land zoned for urban purposes, or basement car parking, must be protected from inundation by floods equal to or greater than the 1% AEP flood plus 0.1m freeboard.
4	Basement car parking shall be protected from inundation by the 1% AEP flood.
5	The driveway providing access between the road and car parking space shall be as high as practical and generally rising in the egress direction.
6	The level of the driveway providing access between the road and car parking space shall be no lower than 0.3mbelow the 1% AEP flood or such that depth of inundation during a 1% AEP flood is not greater than either the depth at the road or the depth at the car parking space. A lesser standard may be accepted for single detached dwelling houses where it can be demonstrated that risk to human life would not be compromised.
7	Basement car parking or car parking areas accommodating more than 3 vehicles (other than on Rural zoned land) with a floor level below the 5% AEP flood or more than 0.8m below the 1% AEP flood level; shall have adequate warning systems, signage and exits.
8	Barriers to be provided to prevent floating vehicles leaving a site during a 1% AEP flood.
9	Driveway and car parking space levels shall be no lower than the minimum requirements normally applicable to this type of development. Where this is not practical, a lower level may be considered. In these circumstances, the level is to be as high as practical and, when undertaking alterations or additions no lower than the existing level.
Evacuation	
1	Reliable access for pedestrians required during a 1% AEP flood.
2	Reliable access for pedestrians or vehicles is required from the building, commencing at a minimum level equal to the lowest habitable floor level to an area of refuge above the PMF level, or a minimum of 20% of the habitable floor area is above the PMF.
3	Reliable access for pedestrians or vehicles is required from the building to an area of refuge above the PMF level, or a minimum of 20% of the habitable floor area is above the PMF
4	Reliable access for pedestrians or vehicles required during a 1% AEP flood to a publicly accessible location above the PMF.

Ref No	Controls
5	The evacuation requirements of the development during flooding shall be considered.
6	The development is to be consistent with any relevant flood evacuation strategy or similar plan.
7	The evacuation requirements of the development are to be considered up to the PMF level.
8	The evacuation requirements of the development are to be considered. An engineer's report will be required if circumstances are possible where the evacuation of persons might not be achieved within the effective warning time.
9	Adequate flood warning is available to allow safe and orderly evacuation without increased reliance upon the SES or other authorised emergency services personnel.
Management and Design	
1	Applicant to demonstrate that potential development as a consequence of a subdivision proposal can be undertaken in accordance with this DCP.
2	Site Emergency Response Flood Plan required where floor levels are below the design floor level, (except for single dwelling-houses).
3	Applicant to demonstrate that area is available to store goods above the 1% AEP flood level plus 500mmfreeboard.
4	Applicant to demonstrate that area is available to store goods above the PMF level.
5	No storage of materials below the design floor level which may cause pollution or be potentially hazardous during any flood.
6	Finished land levels in new release areas shall be not less than the 1% AEP flood unless justified by site specific assessment. A surveyor's certificate will be required upon completion certifying that the final levels are not less than the required level.
Fencing	
1	Fencing within a High Flood Risk area, Boundary of Significant Flow or floodway will not be permitted except for permeable open type fences.
2	Fencing is to be constructed in a manner that does not obstruct the flow of floodwaters so as to have an adverse impact on flooding.
3	Fencing shall be constructed to withstand the forces of floodwaters or collapse in a controlled manner so as not to obstruct the flow of water, become unsafe during times of flood or become moving debris.
4	Fencing shall be constructed to withstand the forces of floodwaters.

9.6 Controls Applicable to the Moorebank Floodway

1. Notwithstanding any other provision where a property is identified within the Moorebank Voluntary Acquisition Scheme area, Council will only consent to further development as noted in Table 7.

Table 7 Controls applicable to the Moorebank Floodway

	Control
Development	Development is only for minor works such as small awnings over existing first floor balconies or in-ground swimming pools
	The capital investment shall not materially increase the acquisition costs of the property.

Council will not permit any type of development which would be inconsistent with the objective of discouraging further development in areas of high risk and with Council's commitment to the Moorebank Voluntary Acquisition Scheme.

10. Contaminated Land Risk

Applies to

This section applies to:

a) Land that is identified as being potentially or actually contaminated in accordance with the relevant guidelines.

b) Land which has past or current land use of the following:

Agricultural/ horticultural activities

Airports

Asbestos production/disposal

Batteries manufacture and recycling

Chemicals such as use or manufacture of acid/alkali products, adhesives/ resins, dyes, explosives, fertiliser, flocculants, foam production, fungicides, herbicides, paints, pesticides, pharmaceuticals, Service stations and fuel storage facilities

Defence work

Drum reconditioning

Dry cleaning

Electrical

Engine works such as mechanics and air conditioning repairers

Foundries

Gas works

Iron and steel works

Landfill sites

Marinas

Metal treatments

Mining and extractive industries

Photography, rubber manufacture and solvents

Power stations

Printing shops

Railway yards

Scrap yards

Sheep and cattle dips

Smelting and refineries

Tanning and associated trades

Water and sewage treatment plants

Wood preservation

Background

Land contamination is most often the result of past uses. It can arise from activities that took place on or adjacent to a site and be the result of improper chemical handling or disposal practices, or accidental spillages or leakages of chemicals during manufacturing or storage. Activities not directly related to the site may also cause contamination; for example, from diffuse sources such as polluted groundwater migrating under a site or dust settling out from industrial emissions.

The impacts of land contamination can include increased risk to human health, detrimental effects on the biophysical environment and adverse impacts on the safety of existing and new structures. A decision will need to be made as to whether the land should be remediated, or its use of the land restricted, in order to reduce the risk.

Objectives

a) To identify the presence of contamination at an early stage of the development process and to manage the issues of land contamination to ensure protection of the environment and that of human health is maintained.

b) Ensure that proposed developments or changes of land use will not increase the risk to human health or the environment;

c) Avoid inappropriate restrictions on land use;

d) Ensure that all stakeholders are aware of their responsibilities for the ongoing management of contaminated land.

Controls

Preliminary Contamination Investigation

If the initial evaluation by Council finds insufficient information available, or sufficient information is available, which indicates that contamination is an issue for the site, a Preliminary Contamination Investigation (Stage 1) shall be undertaken.

Detailed Contamination Investigation

If the Preliminary Site Contamination Investigation (Stage 1) indicates a potential for contamination and that the land may not be suitable for the proposed use, a Detailed Contamination Investigation (Stage 2) shall be undertaken.

Remedial Action Plan

1. If the Detailed Contamination Investigation (Stage 2) indicates that the site is not suitable for the proposed use a Remedial Action Plan shall be prepared.
2. If the Remedial Action Plan proposes to undertake Category 1 Remediation:
   - Additional consent may be required. Council shall be consulted for a determination on the appropriate course of action that is whether an additional development application is required.
   - Approval of the application shall be subject to satisfactory remediation. A notice of completion of Category 1 Remediation works shall be provided to Council within thirty (30) days of completion of the works.
   - A validation and/or monitoring report shall be prepared and approved by Council prior to works commencing.
   - A Site Audit Statement may be requested by Council to be prepared and submitted to Council.
3. If the Remedial Action Plan proposes to undertake Category 2 Remediation, Council shall be notified within 30 days upon commencement and completion of remedial works. Documentation associated with or in support of the Remedial Action Plan shall be submitted to Council.
4. Any remedial works shall be undertaken in accordance with the Remedial Action Plan.

5. Any investigations, Remedial Action Plans or reports shall be undertaken or prepared by an appropriately qualified professional with experience in preliminary and detailed investigations, the preparation of Remedial Action Plans as well as validation and/or monitoring reports for contaminated lands.

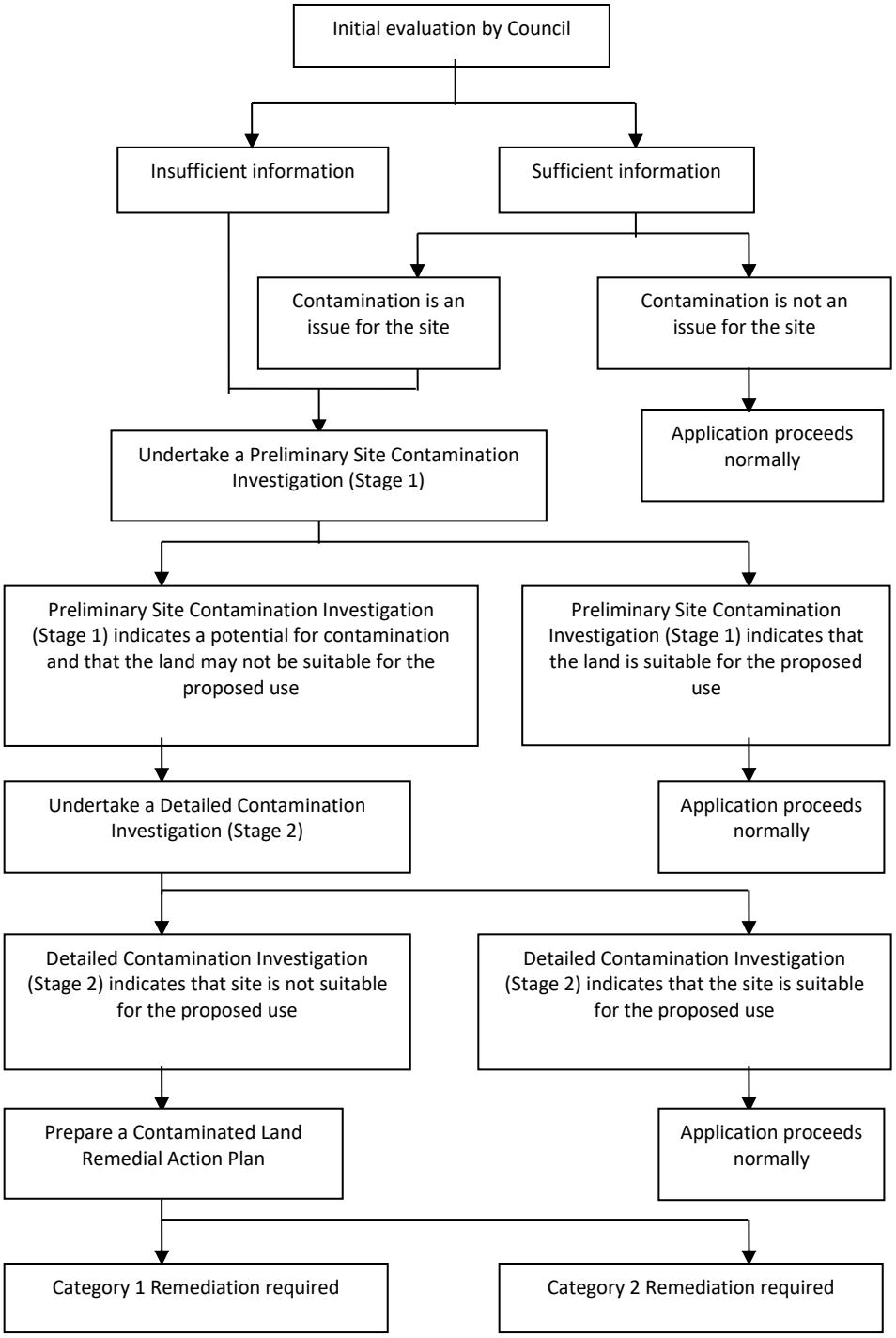


Figure 7 Model for Contaminated Lands Investigation and Management Strategies that should be undertaken. (Adapted from Managing Contaminated Lands, 1998)

11. Salinity Risk

Applies to

This section applies to all development, which:

a) Is located in an area coloured yellow, orange or red on State Government issued salinity potential maps or

b) Is in existing or proposed urban areas that may affect the processes of salinisation. or

c) Involves lands affected by groundwater salinity.

Background

Salinity is the accumulation of salt in the soil and is one of the major issues facing the NSW landscape. The problem affects both urban and rural landscapes. While salt occurs naturally in our landscape, activities such as land clearing and inefficient water use can exacerbate the problem. This impacts on soil, native vegetation, biodiversity, crops and water quality.

The four main types of salinity are:

1. Dryland: This involves the build up of salts in the soil surface and groundwater in non-irrigated areas.
2. Irrigation: This involves the rise in saline groundwater and the build up of salt in the soil surface in irrigated areas.
3. Industrial: Effluent from rural villages, intensive agriculture and rural industry can contain high levels of salt.
4. Urban: This is mainly caused by rising groundwater bringing salts to the land surface. Towns are often located in areas prone to salinity (such as plains, valleys, or at the foot of a ridge). Urban development can lead to localised salinity because of clearing of native vegetation, over-watering of gardens, parks and sporting fields, water leaking from pipes, drains and tanks, seepage from sullage pits and blocking or changing natural drainage paths (such as by building roads).

Salinity can cause physical damage to buildings, roads and water pipes. Some building methods may also contribute to the development of salinity. Compacted surfaces can restrict groundwater flow and concentrate salt in one area. By cutting into slopes to build, groundwater or saline soil may be intercepted and exposed. Fill used to build up an area may be a source of salt, or it may be less permeable, preventing good drainage.

Salinity can render farming land unproductive and sports grounds and recreation areas unusable. Salinity can also damage wetlands and rivers and affect native vegetation, causing the disappearance of native flora and fauna and poor downstream water quality.

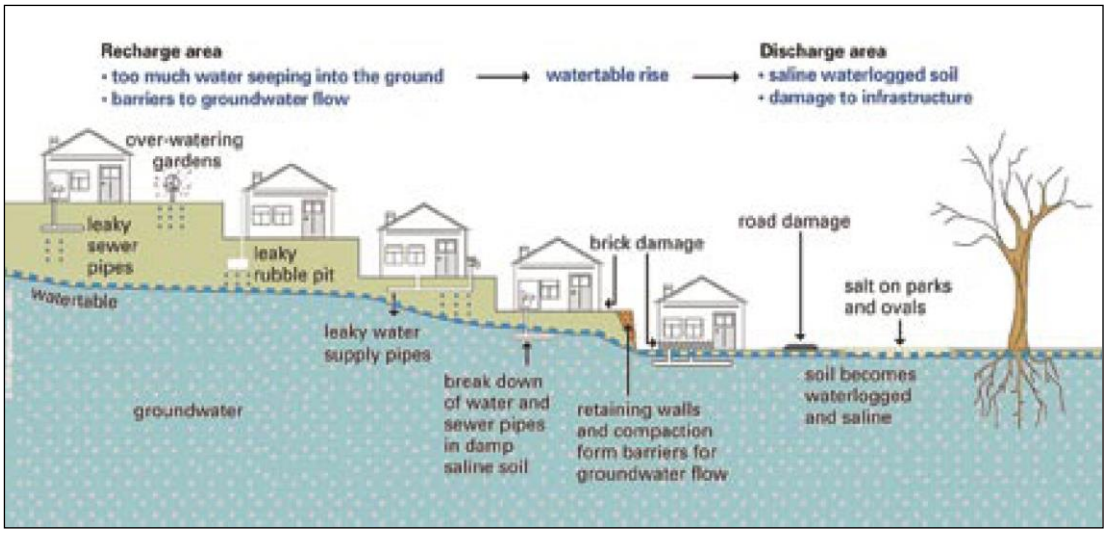


Figure 8 Illustration showing how development can impact on landscape functions as well as how development may be impacted upon salinity processes

Objectives

a) To prevent further spread of urban salinity and remedy, where possible, existing areas of salinity.

b) To minimise disturbance to natural hydrological systems as a result of development and appropriately manage land uses affecting land salinisation and/or those affected by salinity.

c) To ensure that land is used and developed in a manner that does not significantly increase water infiltration to groundwater systems and does not significantly increase salt loads in waterways, wetlands drainage lines, or soils.

d) To control the impact of a development on prevailing and potential soil or groundwater salinity in the urban environment as well as ensure that soil or groundwater salinity does not impact on the structural integrity of a development.

e) To ensure that consideration is given to any physical limitations of land, including soil salinity and the impacts of that salinity, to minimise the potential for future adverse economic impacts arising from development.

Controls

1. The following flowchart shall be used to determine an appropriate course of action for salinity investigation and management for single or multi-lot developments.

Note: **Where it is difficult to decide between colours it should be assumed that the salinity potential is denoted by the colour for the higher salinity potential.*

Note: ***Salinity risk activities are those activities which are considered to have a greater risk associated with them in area of salinity potential, based on level of ground disturbance, water-use, and the potential to alter hydrological conditions and/or salt concentrations. This may include, but is not limited to: quarrying, intensive agriculture, activities involving high levels of irrigation, large scale artificial waterbodies, infiltration into the soil or groundwater, waste water re-use or treatment systems or major landscape reshaping.*

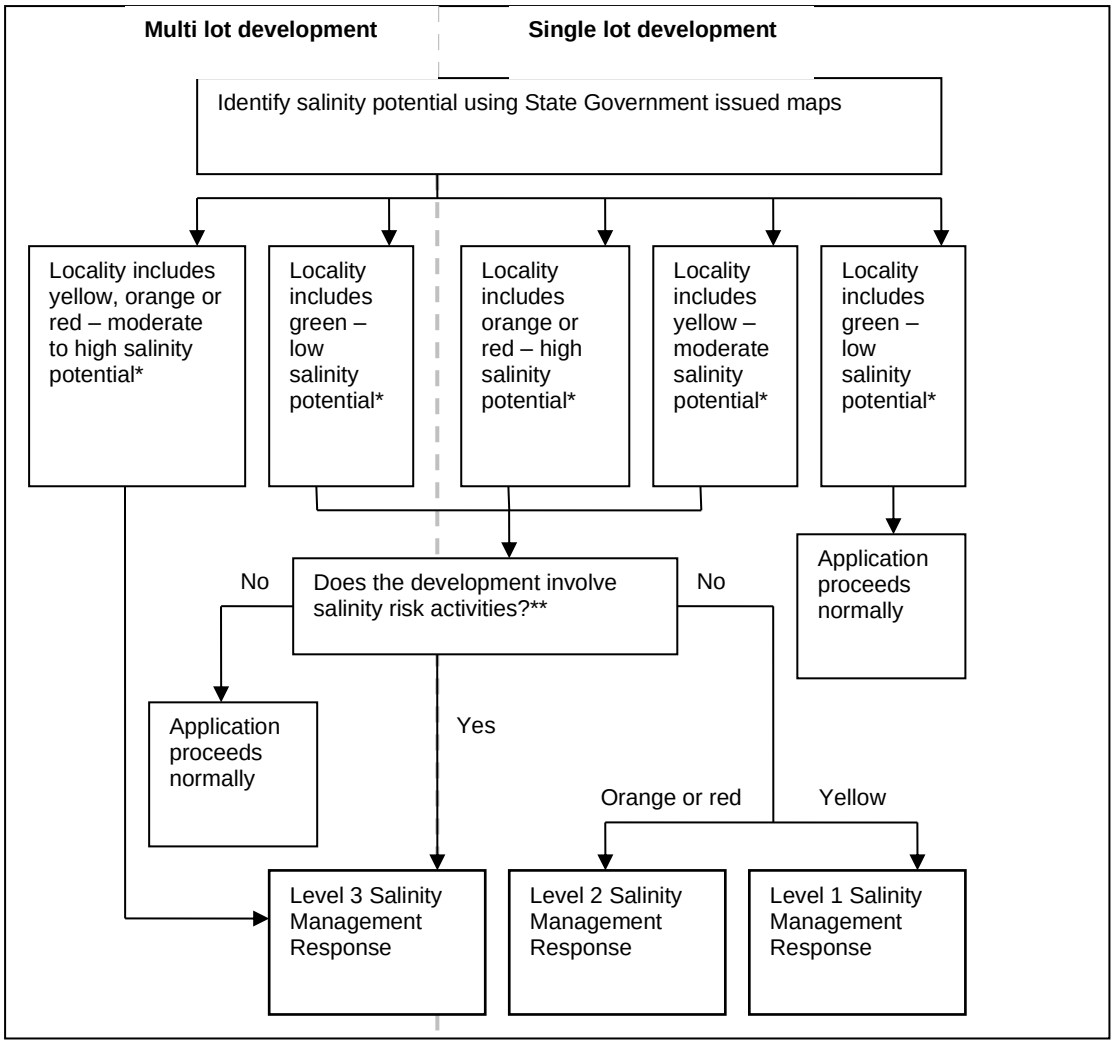


Figure 9 Model for how salinity assessment, investigation and management strategies should be undertaken (Adapted from WSROC 2003)

2. If a Level 1 or 2 Salinity Management Response is required the applicant shall use the Salinity Management Response Checklists to determine appropriate measures to prevent salinity. These measures shall be detailed in the Statement of Environmental Effects or equivalent. These measures shall be approved by Council prior to the issuing of Development Consent.
3. Level 3 Salinity Management Response shall be:
   - Approved by Council prior to the issuing of Development Consent.
   - Integrated into a Total Water-cycle Management Plan for the site for developments where such a plan is required.
4. The Salinity Management Response shall be based on site conditions and the proposed development. It shall include controls to protect buildings and also strategies to protect infrastructure, including roads and underground services and to manage the water cycle. A Response shall assume worst-case scenario for salinity on the site.
5. Salinity investigations shall be undertaken by an appropriately qualified professional with experience in salinity investigations and management.

6. Management strategies for salinity shall be developed in accordance with the approved Guidelines. This includes general management strategies for all sites and salinity processes and strategies including, but not limited to, the following:
   - Building requirements
   - Vegetation and landscaping
   - Roads and pavements
   - Soil landscapes with a shale geology
   - Localised concentrations of salinity
   - Deeply weathered soils
   - Salinity in groundwater.
7. To ensure appropriate measures or management strategies are employed Council may require monitoring reports to be submitted.
8. For developments involving the construction or removal of dams, artificial wetlands or stormwater retention ponds a Level 3 Salinity Management Response is required.
9. For developments involving the construction or removal of dams, artificial wetlands or stormwater retention ponds, water sensitive urban design (WSUD) principles shall be applied.
10. Development shall have minimal impact on the water table.
11. For areas with a moderate to high salinity potential development shall demonstrate no net increase in hydrologic load or water inputs and shall maintain the natural water balance.

12. Acid Sulfate Soils Risk

Applies to

This section applies to

a) Any development that is located in an area identified as having an acid sulfate soil potential within the *Liverpool LEP 2008.*

b) Any development involving drainage or excavation, which has the potential to result in the formation of acid sulfate soils.

Background

Acid sulfate soils are sediments deposited under estuarine conditions (that is close to sea level), and which contain the sulfidic mineral pyrite. Acid sulfate soils are found underlying many coastal floodplains, in coastal wetlands, and as bottom sediments in coastal estuaries.

As long as acid sulfate soils are not disturbed or drained, these materials are relatively harmless and are termed potential acid sulfate soils. However, if the sediments are exposed to air, the pyrite is oxidised and sulfuric acid is generated. When the rate of acid production exceeds the neutralising capacity of the soil, actual acid sulfate soils are formed. As a result, soil pH may become highly acidic.

Acid sulfate soils can have considerable effects on:

- Engineering and landscaping works including affecting the type of concrete or steel required for construction, the design of roads, buildings, embankment and drainage system, extractive materials specifications, maintenance programs for drains, water and sewage pipelines and other structures.
- Agricultural management practices including choice of crops, liming practices, fertiliser requirements and drainage practices.
- Aquaculture management practices including choice of site, pond design and management practices
- The management of contaminated soil particularly in relation to mobility of metals
- The conservation of biodiversity and protection of wetlands as well as shallow freshwater systems including degradation of water quality and habitat, killing or disease of fish and other aquatic organisms.

Acid sulfate soils underlie significant areas of coastal Australia including parts of the Liverpool LGA. The cost of testing, treating and monitoring of acid sulfate substantially increase the cost of development.

The impacts of actual acid sulfate soils are one of the most significant water-based environmental problems in coastal areas of NSW. Certain environmental effects of actual acid sulfate soils can last for hundreds or even thousands of years

Appropriate planning and management of urban and agricultural land to prevent damage associated with acid sulfate soils is now recognised as an extremely important issue. A well informed understanding of acid sulfate soils and their distribution is critical for sustainable land use.

Objectives

a) To provide regulation on the procedures involved in the assessment and management of activities within areas affected by acid sulfate soils.

b) To identify areas of acid sulfate soil risk to prevent any unnecessary impact to the environment.

c) To ensure that preliminary acid sulfate soil assessment is undertaken prior to development consent being granted to determine the level of risk proposed by the activity/development.

d) To ensure that acid sulfate soil management plans are prepared when an activity or development is associated with an acid sulfate soil risk.

e) To provide effective management of areas where acid sulfate soils are identified.

Controls

The following flowchart shall be used for investigation and assessment of acid sulfate soil potential as well as any management responses, which may be required.

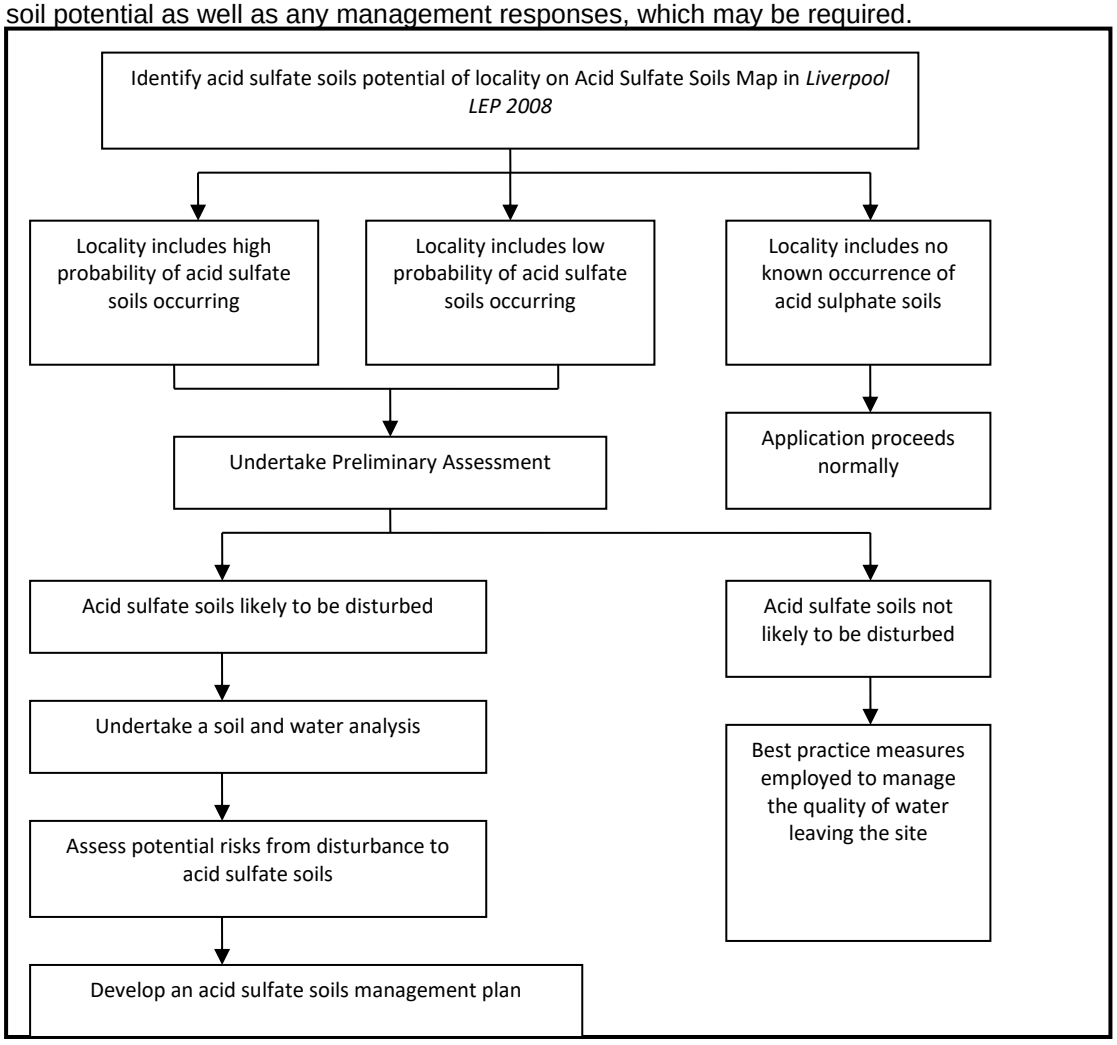


Figure 10 Model for how acid sulfate soils assessment, investigation and management strategies should be undertaken (adapted from *Acid Sulfate Soil Manual 1998*).

1. If acid sulfate soils are present and not likely to be disturbed, best practice measures employed to manage the quality of water leaving the site shall be detailed in the SEE or equivalent.

2. If acid sulfate soils are present and likely to be disturbed a soil and water analysis and an assessment of the potential risk from disturbance of the acid sulfate soils

shall be undertaken. The analysis and assessment shall be approved by Council prior to the issuing of development consent.

3. If acid sulfate soils are present and likely to be disturbed an acid sulfate soils management plan shall be prepared in accordance with the guidelines. The acid sulfate soils management plan shall be approved by Council prior to the issuing of development consent.
4. Any acid sulfate soils analysis, assessments and management plans shall be undertaken or prepared by an appropriately qualified professional with experience in acid sulfate soils analysis and assessments as well as the preparation of acid sulphate soils management plans.
5. Council may require monitoring reports on the implementation of an acid sulfate soils management plan to be submitted.

13. Weeds

Applies to

This section applies to land where noxious weeds are found.

Background

Noxious weeds have the potential to have an adverse impact on the biodiversity and economic use of land. Some species compete with native tree and shrub species and have the potential to dominate entire landscapes altering their natural condition. Some species are particularly effective at penetrating areas of bushland, others choke waterways and riverbanks, some are toxic and others cause allergic reactions in humans.

Objectives

To remove noxious weeds in conjunction with the development of land.

Controls

1. Where the site analysis identifies noxious weeds on the site, a Weed Management Strategy (WMS) shall be submitted with any development application. A WMS shall be prepared by a suitably qualified professional and shall include:
2. A complete list of all noxious and environmental weeds on the site;
3. A site plan displaying actual weed infestation densities shown as percentages and grouped into cover classes as follows:

   R = (Rare): less than 1% cover

   O = (Occasional): between 1 and 5% cover

   F = (Frequent) between 5 and 20% cover

   A = (Abundant) between 20 and 40% cover

   D = (Dominant) between 40 and 100% cover
4. A treatment program for each weed species identified.
5. The treatment program for each weed species shall detail the following:
   - The method(s) of treatment of weeds e.g. mechanical removal or herbicide application.
   - The herbicide product name (if used), the proposed rates and method(s) of application.
   - The timing of all treatments and control method(s) to be applied.
   - An ongoing maintenance program detailing methods of follow up treatments to ensure all weed infestations present are contained and/or controlled.
   - Details of any weed material disposal methods (i.e. if weed material is to be removed from the development site.)
6. It is an offence to knowingly remove any weed material that is classified as a W1 noxious weed under section 28 of the *Noxious Weeds Act 1993*.
7. Plants that have been declared noxious are listed in Appendix 2.

14. Demolition of Existing Developments

Applies to

This section applies to development, which involves the demolition of an existing building.

Background

The demolition of buildings can have environmental impacts, particularly involving older buildings, which may contain toxic materials. There is also the potential to recycle materials and minimise waste going to land fill.

Objectives

b) To minimise waste generation and disposal to landfill.

c) To ensure efficient storage and collection of wastes and recyclables during demolition and construction stages.

d) To minimise adverse impact on adjoining premises; and

e) To minimise release of contaminated materials.

Controls

Demolition

1. All demolition work must comply with the *Australian Standard AS2601 - 1991*, *The Demolition of Structures*.
2. Security fencing such as hoardings must be provided around the perimeter of the demolition site prior to work commencing to prevent access by unauthorised persons at all times during the demolition period. Approval of the fencing by Council must be received prior to erection.
3. Demolition must not be conducted in high winds to ensure dust does not spread beyond the site boundaries. High winds are identified as either a strong breeze (39-49km/hr), or near gale (50-61km/hr) under the Beaufort Scale.
4. All lead contaminated materials identified in the building must be handled and disposed of in accordance with the *NSW Environment Protection Authority's* requirements.
5. Dust Controls must be implemented on site prior to and during demolition.
6. Asbestos, if identified in the building, must be removed and disposed of in accordance with the requirements of Work Cover. Where the amount or type of asbestos materials to be removed requires a licensed asbestos contractor to undertake the removal and disposal, both Council and the Principle Certifying Authority must be advised in writing of the name, address and asbestos license details of the contractor undertaking that work and the name and address of the facility to which the materials will be taken.
7. All trucks/trailers entering or leaving the site must have their loads adequately covered. A sign indicating this should be placed at the entry to and exit from the site.
8. Temporary toilet facilities must be provided on the site until all demolition work is completed.
9. Demolition activities on site must be limited to the following hours:
   - Monday to Friday 7:00am to 6:00pm
   - Saturday 8:00am to 1:00pm
   - No work on Sunday and Public Holidays

10. Sound pressure levels emanating from the site must not exceed levels established by the *NSW Environment Protection Authority*.
11. A Waste Management Plan (WMP) is to be submitted with the Development Application. The WMP must include realistic estimates of the volume or area of all types of waste material to be generated from the demolition and excavation activities. Details of how each of those materials will be re-used, recycled or disposed of is to be provided, including the locations to which the materials will be taken.
12. The waste management plan together with proof of lawful disposal for all waste that is disposed of, or otherwise recycled from the site must be retained on site. Proof is to include a log book with associated receipt/invoices, waste classification, and site validation certificate. All entries must include:

    - Time and Date
    - Description and size of waste
    - Waste facility used
    - Vehicle registration and company name

    Both the log book and the associated recepts must be made available for inspection by authorised Council Officer at any time during site works.
13. Where subdivision works are proposed, relevant sections of the WMP must be completed. If the destination for excavation material is not a licensed waste facility, it must have development consent to receive such material.
14. A Dilapidation Report for any demolition within the zone of influence of any other building.
15. Where demolition work includes the removal of air-conditioning or refrigeration units, all refrigerants that remain within those units must be extracted by a licensed air-conditioning technician. The recovered refrigerant must be forwarded for destruction to Refrigerant Reclaim Australia (RRA), or other facility approved to destroy refrigerants in an environmentally friendly manner.
16. All construction and demolition waste must be inspected, graded and sorted in accordance with current EPA standards. Once sorted, it must be either recycled or disposed of according to its classification.

15. On-site Sewage Management Systems (OSMS)

Applies to

This section applies to:

- Development of land that does not have access to a reticulated sewerage system.
- All existing and proposed On-site Sewage Management Systems and Greywater reuse systems.

Background

The rural areas and rural villages of Liverpool are generally not connected to a reticulated sewerage system. Disposal of waste water must take place on site which places limitations on the scope of development that is possible on the site and the extent of the area that can be developed. Disposal of wastewater on site also has potential public health and environmental impacts which must be addressed and minimised.

Application for approval to operate an OSMS

Where a new OSMS is to be installed or an existing OSMS altered, an application under Section 68 of the *Local Government Act 1993* for approval to install or alter an OSMS must be submitted and the prescribed fee paid.

Prior to the operation of an OSMS an application under Section 68 of the Local Government Act 2003 for approval to operate must be submitted along with certification of the installation and commissioning of the system. Approval to operate the OSMS will be granted upon successful installation and certification of the system and this approval will be automatically renewed on an annual basis or at a frequency determined by Council.

Council officers may inspect the OSMS from time to time to ensure that the conditions of approval are being met and that the system is operated and maintained in accordance with the required performance standards set out in the Local Government (General) Regulation 2005.

Council may modify, revoke or withhold an approval or renewal of approval should the system not comply with the conditions of that approval or be found to be inadequately performing or operated in an inappropriate manner.

Objectives

To ensure that the disposal of wastewater and reuse of greywater:

a) Is carried out in a manner which is economically and environmentally sustainable

b) Protects the quality of public and environmental health.

Controls

Application Requirements

1. Applications for development of land to which this part applies must be accompanied by an application under s68 of the *Local Government Act 1993* for the installation, alteration and operation of an OSMS. Development consent will not be issued until Council is satisfied that the s68 application can be approved.
2. All development proposals relying on an OSMS or impacting on an existing OSMS must be accompanied by a wastewater report demonstrating that the site can sustainably accept all wastewater generated on the site. This includes the modification of existing developments such as additions/modifications to a dwelling or commercial activity.

3. When a proposed development increases the potential wastewater flow on an existing property, the treatment capacity of the existing system must be reviewed. A new system must be installed where the existing system does not have adequate treatment capacity for all potential flows. A wastewater report will be required to detail the capacity of the existing or proposed system and propose a new or modified effluent irrigation area.
4. All wastewater reports must be prepared by a suitably qualified and experienced person and must contain the following as a minimum:

Plan

The report must include a plan, to scale, showing the location of:

- The sewage management facility proposed to be installed or constructed on the premises,
- Any related effluent application areas,
- Any buildings or facilities existing on, and any environmentally sensitive areas of, any land located within 100 metres of the sewage management facility or related effluent application areas, and
- Any related drainage lines or pipework (whether natural or constructed).

Specifications

The report must include full specifications of the sewage management facility proposed to be installed or constructed on the premises concerned.

Site assessment

The report must include details of the climate, geology, hydrogeology, topography, soil composition and vegetation of any related effluent disposal areas together with an assessment of the site in the light of those details.

Statement

The report must include a statement of:

- The number of persons residing, or probable number of persons to reside, on the premises, and
- Such other factors as are relevant to the capacity of the proposed sewage management facility.

Operation and maintenance

The report must include details of:

- The operation and maintenance requirements for the proposed sewage management facility,
- The proposed operation, maintenance and servicing arrangements intended to meet those requirements, and
- The action to be taken in the event of a breakdown in, or other interference with, its operation.

Standards and guidelines

The report must demonstrate that a system can be installed in accordance with the requirements of the documents listed in control 5 of this section.

Wastewater Flows

The report must consider all potential wastewater flows on the property including all proposed and existing flows.

Specifications

5. Design OSMSs in accordance with:

    a) Local Government (General) Regulation 2005;

    b) Australian/New Zealand Standard 1547:2012, On-site Domestic Wastewater Management, or any updated standard which supersedes AS1547:2012.

    c) Sydney Catchment Authority 2012, Designing and Installing On-site Wastewater Systems.

    d) NSW Health 2001, Septic Tank and Collection Well Accreditation Guideline

    e) Department of Local Government 1998, On-site Sewage Management for Single Households.

    f) Any other relevant guideline documents adopted by Council after the issue of this DCP.

Types of systems not supported

6. Development or subdivision proposals relying on pump-out systems will not be approved by Council.

    Pump-out systems are not considered to be economically or environmentally sustainable systems due to the high costs associated with the removal of effluent which can result in unauthorised discharge into the environment.

Connection to reticulated sewer

7. Proposals relying on on-site sewage management will not be approved where a reticulated sewerage service is available within 75m of any property boundary.

8. Decommission OSMSs when a reticulated sewerage service becomes available within 75m of any property boundary, and connect the development to the service.

    NOTE: This requirement may also be a condition of development consent and/or be included on the 88b certificate.

Location requirements

9. Locate OSMS tanks a minimum of 1.5m from any building and outside of any overland flow paths or depressions in the land.

10. Setback effluent disposal areas associated with OSMSs with setbacks in accordance with Table 8.

Table 8 Minimum Setbacks for Effluent Disposal Areas

System	Setbacks	
All land application systems	100m	to permanent surface waters (river, stream, lake etc.)
	250m	to domestic groundwater well
	40m	to other waters (farm dams, intermittent waterways and drainage channels)
Surface spray irrigation	6m	if area up-gradient of driveways and property boundaries
	3m	if area down-gradient of driveways and property boundaries
	15m	to dwellings
	3m	to paths and walkways
	6m	to swimming pools
	6m	if area up-gradient of swimming pools, driveways, property boundaries and buildings

Surface drip and trickle irrigation	3m	if area down-gradient of swimming pools, driveways, property boundaries and buildings
Sub-surface irrigation	6m	if area up-gradient of swimming pools, driveways, property boundaries and buildings
	3 m	if area down -gradient of swimming pools, driveways, property boundaries and buildings
Absorption system	12m	if area up-gradient of property boundaries
	6m	if area down-gradient of property boundaries
	6m	if area up-gradient of swimming pools, driveways, and buildings
	3m	if area down -gradient of swimming pools, driveways, and buildings

11. New or replacement systems for horticulture (as defined in Liverpool LEP 2008) must comply with the following:
    a) A minimum buffer distance of 20m if disposal area is up-gradient and 10m if disposal area is down-gradient of any market garden/igloo.
    b) The related Effluent Disposal Area is required to be fenced to prevent access of vehicles, animals and any heavy vehicles.
    c) Fruit and/or Vegetables are not to be grown on top or within the designated related Effluent Disposal Area(s) and associated buffer zones.
12. Exclude any proposed or existing areas designated for effluent disposal from calculations for private open space.
13. Locate the lid to OSMS tanks or holding tanks and all associated electrical components such as motors, blowers and non-submergible pumps etc. above the 1% AEP flood contour.
14. Irrigate only effluent treated to a secondary standard by an Aerated Wastewater Treatment System (AWTS) on land below the 1% flood contour.
15. Do not locate any portion of the Effluent Disposal Area on land within the 5% AEP contour.

Systems no longer in use

16. Remove or reuse any redundant septic tank, collection well or aerated wastewater treatment system in accordance with *NSW Health Advisory Note 3 – May 2006 – Destruction Removal or Reuse of Septic Tanks, Collection Wells, Aerated Wastewater Treatment Systems and other Sewage Management Facility Vessels*.

    Note: Demolition of tanks (Methods 1 & 5 of the advisory note) is not permissible.

Design wastewater flow rates - domestic

17. Calculate the design wastewater flow for domestic systems based on the following:
    a) Two people per bedroom for the first three bedrooms and;
    b) One person for each additional bedroom.

    NOTE: Rooms which are easily converted into a bedroom without the need for structural modification are to be included in this calculation e.g. studies, sewing rooms and other rooms of a similar size and location to a typical bedroom.

    The daily wastewater flow volume must be calculated at the following rate:

    c) 150L per person when serviced by a reticulated water supply.
    d) 120L per person when serviced by on-site rainwater tanks.

    Example: The design wastewater flow rate for a five bedroom equivalent dwelling (four bedrooms and one study) serviced by a reticulated water supply must be 1200L per day based on the following;

    - Two people per bedroom for the first three bedrooms = 6 people

- One person for each additional bedroom, including the study = 2 people
- 150L per person for a total of 8 people = 1200L per day.

18. Consider each dwelling separately for the purpose of the calculation listed in control 17 of this section when the design wastewater flow is calculated for multiple dwellings on any premises.

    Example: The design wastewater flow rate for a five bedroom equivalent dwelling (four bedrooms and one study) and a 2 bedroom granny flat serviced by a reticulated water supply must be 1800L per day based on the following;

    Primary dwelling;

    - Two people per bedroom for the first three bedrooms = 6 people
    - One person for each additional bedroom, including the study = 2 people
    - 150L per person for a total of 8 people = 1200L per day.

    Granny Flat;

    - Two people per bedroom = 4 people
    - 150L per person for a total of 4 people = 600L per day

Minimum irrigation area requirements for residential subdivision

Where residential subdivision relying on an OSMS is proposed:

19. Provide an area sufficient to accommodate an effluent disposal area of at least 1,200sqm on each lot. This must be demonstrated in the wastewater report.

20. Locate proposed effluent disposal areas to meet the minimum setback distances listed in table 8 considering a potential building envelope representing a dwelling of typical size for the local area on each lot.

    Example: Figure 11 shows an example subdivision plan demonstrating the required effluent disposal areas on each lot.

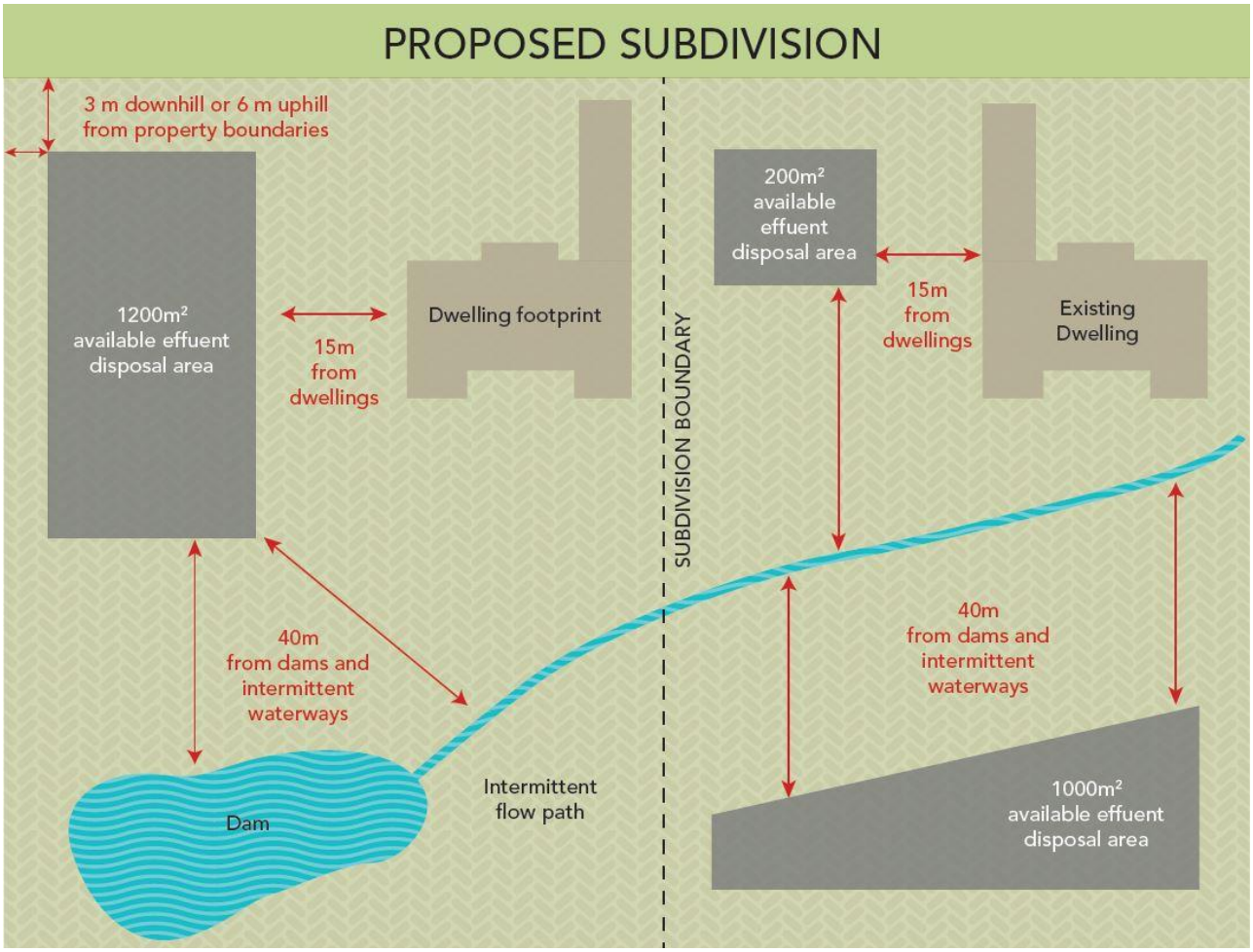


Figure 11: Example of a proposed subdivision with a total of 1200sqm of available effluent disposal area demonstrated on each lot.

16. Aboriginal Archaeology

Applies to

This section applies to land:

1. In which Aboriginal sites, places or relics have been previously identified.
2. Within an identified cultural landscape.
3. That has not been cleared.

Background

The Liverpool LGA was occupied by Aboriginal people prior to European settlement. Relics of this still remain.

Objectives

To identify and where possible preserve relics of the occupation of the land by Aboriginal communities.

Controls

Initial Investigation

An initial investigation must be carried out to determine if the proposed development or activity occurs on land potentially containing an item of aboriginal archaeology. If any of the above features apply then the relevant Aboriginal community must be consulted, as part of the initial investigation to ensure that the potential for the land to contain Aboriginal sites, places or relics has not been overlooked by previous studies.

Detailed Investigation

1. If any of the features apply, then an Aboriginal Heritage Impact Assessment (AHIA) must be prepared in accordance with the *NSW Department of Environment and Climate Change Draft Guidelines for Aboriginal Heritage Impact Assessment* and submitted with the initial investigation report.
2. An AHIA will also be required if the relevant local Aboriginal community provides sufficient information to the Council that leads it to conclude that the site may have Aboriginal heritage significance.
3. Once the AHIA is submitted, the Council will send copies to representatives of the relevant local Aboriginal communities and the *NSW Department of Environment and Climate Change* for comment.

17. Heritage and Archaeological Sites

Applies to

This section applies to development affecting a heritage item, land in a heritage conservation area or an archaeological site as identified in the Liverpool Local Environmental Plan 2008, as well as land in the vicinity of a heritage item.

Background

The City of Liverpool local government area has a long and diverse history. The Liverpool area was originally the home of the Cabrogal group of the Darug people. The European settlement of the area began in the early 19th century and was formalised with the founding of the Town of Liverpool by Governor Macquarie in 1810. The buildings, sites and elements of our landscape illustrate the history of our local government area. Places identified as heritage items and heritage conservation areas contribute to forming our living historic environment which enriches the character of the local government area. Heritage places give identity to our neighbourhoods and help make the City of Liverpool an attractive and interesting place to live and work.

Development that affects places of heritage significance needs to be carefully designed to minimise negative impacts on heritage significance. Negative impacts may occur due to actions such as the removal of original fabric, loss of important design features, loss of important views, the removal of important vegetation, unsympathetic bulk and scale of new development and inappropriate selection of materials.

Liverpool Local Environmental Plan 2008 identifies a range of heritage items and heritage conservation areas and provides objectives and provisions for the conservation of Liverpool's heritage. This portion of the DCP provides additional objectives, controls and guidance for regulating development affecting these heritage items and heritage conservation areas.

Conservation Philosophy

The aim of heritage conservation is to ensure that the cultural significance of heritage items and heritage conservation areas is maintained over time. While changes may be necessary to adapt heritage buildings to new uses or modern living standards, it is important to ensure that these changes do not compromise the heritage significance of the item.

The underlying philosophy of the controls for regulating development affecting heritage items and heritage conservation areas is derived from The Burra Charter: The Australia International Council on Monuments and Sites (ICOMOS) Charter for Places of Cultural Significance, 1999 (Burra Charter). The Burra Charter is widely accepted as an industry standard for heritage conservation in Australia.

The Burra Charter advocates a cautious approach to change: do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained.

Objectives

a) to conserve the heritage significance of heritage items and heritage conservation areas of Liverpool including associated fabric, setting, curtilage and views;

b) to conserve archaeological sites;

c) to facilitate the implementation of the objectives and provisions relating to heritage conservation contained in the Liverpool LEP 2008;

d) to promote and encourage heritage conservation and the consideration of the heritage context in development;

e) to encourage the retention and appropriate development of significant items;

f) to encourage a high standard of contemporary design in the heritage context;

g) to encourage the preservation of culturally significant vegetation;

h) to enhance the amenity and heritage values of the Liverpool local government area;

i) to enable appropriate and expert consideration of proposed development to be made by applicants and the Council; and

j) to encourage and promote public awareness, appreciation and knowledge of heritage conservation.

Development Application Requirements

In addition to the general requirement for development applications the following additional details are required for applications relating to heritage items, places within a heritage conservation area or in the vicinity of a heritage item:

- a Statement of Heritage Impact prepared in accordance with guidelines set out in the NSW Heritage Branch publication titled *Statements of Heritage Impact* and available at their website, www.heritage.nsw.gov.au;
- measured drawings of the existing building including elevations, and clearly indicating existing walls and building elements to be retained and those proposed for removal or alteration;
- details of the materials, finishes and colour schemes;
- a streetscape elevation showing the proposed development within the context of the existing streetscape;
- Additional submission requirements which may include:
    - **Structural Report** – major alterations may also require a report from a structural engineer verifying that the proposed works will not have a detrimental impact on the structural stability of the building, on significant building elements, or on neighbouring properties;
    - **Archaeological Assessment Report** – where there is a likelihood of disturbance of significant archaeology, an Archaeological Assessment will be required;
    - **Interpretation Strategy** – major alterations to a heritage item may also require the production of an interpretation strategy, detailing how the significant aspects and uses of the building may be publicly interpreted;
    - **Demolition Report** – whilst the demolition of heritage items and places within heritage conservation areas is not supported, if there is a proposal to demolish a heritage place this may require the production of a Demolition Report which details the heritage significance of the building and area and the contribution of the building or building element to that significance; the structural stability of the building in the form of a structural engineer's report; and/or a pest inspection report.

In the case of an item listed on the State Heritage Register, an Integrated Development Application or Section 60 Approval from the NSW Heritage Branch may need to be submitted. Exemptions from this requirement are detailed on the NSW Heritage Branch website at www.heritage.nsw.gov.au.

You are advised to contact Liverpool City Council prior to submitting a development application for development affecting a heritage item, heritage conservation area or in the vicinity of a heritage item to clarify what the submission requirements will be for your particular development proposal.

Guidelines for preparing Heritage Impact Statements

A Statement of Heritage Impact is a document which assesses the impact of any proposed development on the heritage significance of a building, site, streetscape, or area. The Statement of Heritage Impact should clearly identify each of the proposed works and should incorporate all development application drawings.

The statement should include options that have been considered for the proposal and document reasons for choosing the preferred option. These should include proposals to minimise the impact of the development on the heritage significance of the building, site, streetscape or area. The statement should also consider compliance with any recommended management policies contained in Council's Heritage Inventory or any Conservation Management Plan available for the place.

The NSW Heritage Branch have produced guidelines for the preparation of Statements of Heritage Impact which are available on their website at www.heritage.nsw.gov.au

A Statement of Heritage Impact must be submitted with any applications for development to:

- Heritage items;
- Properties in the vicinity of heritage items where the works may impact upon the item;
- Properties within heritage conservation areas, including applications for demolition; and
- Fire upgrading of heritage items and buildings in heritage conservation areas.

Where a building has a current Conservation Management Plan, the Statement of Heritage Impact Statement will need to demonstrate compliance with the plan.

Demolition and Demolition Reports

The demolition of heritage items and places within heritage conservation areas is not supported. The onus is on the applicant to demonstrate why the building cannot be retained, taking into consideration:

- The heritage significance of the item or contribution of the building or building elements to the heritage significance of the heritage conservation area; and
- A Demolition Report.

A Demolition Report is a document which should include consideration of:

- The heritage significance of the building and area and the contribution of the building or building element to that significance;
- The structural stability of the building in the form of a structural engineer's report; and/or
- A pest inspection report.

If the application proposes demolition of a structure of heritage significance, the applicant must:

- Submit a Demolition Report demonstrating that the structure is not reasonably capable of retention;
- Submit a factual statement as to why the structure needs to be demolished, including a statement from an appropriately qualified structural engineer; and
- If demolition is recommended primarily on economic grounds, submit a statement from a quantity surveyor comparing the cost of demolition and cost of retention.

The above requirements may be waived in the event of an emergency or danger to the public.

Submitting the necessary reports or justifications in no way implies that the consent authority will agree to the proposed demolition. Liverpool City Council may obtain independent structural engineering advice. Where possible and reasonable, built heritage should be retained.

Where demolition is allowed, a photographic record of the building must be submitted to Council prior to the commencement of the demolition works.

Heritage Inventory

Liverpool City Council maintains the Liverpool State Heritage Inventory database which lists all heritage items and heritage conservation areas within the local government area. Each listing contains an inventory sheet that includes a physical description of the heritage item or heritage conservation area and a statement of significance. The inventory will be considered by the consent authority as part of its assessment of development applications.

Limited information on the inventory sheet does not mean that the item is not significant. Where insufficient detail is available, information provided with the development application may be used to update the database.

Liverpool State Heritage Inventory sheets are available by contacting Council or online through the NSW Heritage Office at: www.heritage.nsw.gov.au

Controls

Development of heritage items

1. Where a proposal involves a heritage item, it will be necessary to lodge a Statement of Heritage Impact;
2. All development of heritage items must be designed by a Registered Architect;
3. All development of heritage items must be designed to respect the heritage significance of these places in terms of:
    - Setting;
    - Scale;
    - Form;
    - Materials and colours;
    - Fenestration;
    - Fencing;
    - Landscaping.
4. Original fabric and landscape elements that contribute to the significance of a heritage item should be retained;
5. Outbuildings should be located to the rear of heritage items and outside important view corridors to or from the place;
6. Additions should maintain the integrity of the heritage item by retaining the significant fabric and form of the place and should be smaller in height and scale than the existing building to maintain views and vistas to the heritage item;
7. Modern technologies (e.g. solar electricity collectors, TV aerials or satellite dishes) are to be located on roof slopes facing the rear yard of heritage items and should not be visible from the public domain nor intrude into significant view corridors to or from the place;
8. Garages and carports should be located as far behind the front building alignment as possible and should not be incorporated into the front façade of a heritage item.

Development in heritage conservation areas

9. Where a proposal involves development within a heritage conservation area, it will be necessary to lodge a Statement of Heritage Impact;

10. All development within heritage conservation areas must be designed to respect the heritage significance of the area in terms of:
    - Character;
    - Setting and views;
    - Scale;
    - Form;
    - Setbacks;
    - Materials and colours;
    - Fenestration;
    - Fencing;
    - Carparking;
    - Landscaping.

11. 11. Modern technologies (e.g. solar electricity collectors, TV aerials or satellite dishes) are to be located on roof slopes outside primary view corridors to or from the place and should not be visible from the public domain nor intrude into significant view corridors to or from the place.

Development in the vicinity of a heritage item

12. Development in the vicinity of a heritage item shall be designed to respect and complement the heritage item in terms of:
    - Scale;
    - Materials, colours and finishes;
    - Building and street alignment;
    - Landscaping and fencing.

13. Development in the vicinity of heritage items is to minimise the impact on the setting of the heritage item by:
    - Retaining and respecting significant views to and from the heritage item;
    - Retaining original or significant landscaping (especially plantings associated with the heritage item);
    - Providing an adequate area around the place to allow interpretation of the heritage item.

Development of Archaeological Sites

14. The Council may grant consent to carry out development involving the excavation or filling of land or the erection (involving disturbance of land) or demolition of buildings on land which is an archaeological site that has non-Aboriginal significance or a potential archaeological site that is reasonably likely to have non-Aboriginal significance only if:
    - It has been considered an archaeological report; and
    - It is satisfied that any necessary excavation permit required by the Heritage Act 1977 has been granted.

Subdivision

15. Subdivision of an allotment that includes a heritage item should not be allowed unless it can be demonstrated that an adequate curtilage of the heritage item is retained and important views corridors conserved.

Signage

16. The significant architectural detailing of a heritage item, or places within a heritage conservation area, is not to be obscured by commercial signage;

17. The façade of a heritage item should not be painted in a corporate colour scheme, especially where the colour is inappropriate in the heritage context or when the façade is traditionally unpainted;

18. Backlit signs and neon signs should only be allowed for under-awning signs on commercial buildings that are heritage items or within heritage conservation areas;
19. Advertising structures should not obstruct or dominate important views to or from a heritage item or within a heritage conservation area.

Adaptive Reuse

20. Adaptive reuse of a heritage item or places within a heritage conservation area should involve minimal change to the significant fabric of the place, particularly features that contribute to the streetscape;
21. Adaptive reuse of a heritage item or places within a heritage conservation area should consider significant associations and meanings of the place.

18. Repealed

19. Used Clothing Bins

Applies to

This section applies to charity bins located on either private or Council land.

Background

Used clothing bins are considered beneficial for the local community as they provide a means for residents to dispose of unneeded clothing items whilst providing an avenue for charities to obtain clothing donations from the public to provide goods, services and financial relief for disadvantaged people. Furthermore, clothing bins have the capacity to divert a substantial amount of recyclable material from landfill, thus ensuring the continued protection of the environment. The use of clothing bins is important as it supports both charitable causes and local residents in need.

Objectives

a) To recognise used clothing bins form a legitimate and appropriate means of social support while encouraging the recycling of unneeded clothing.

b) To allow for the operation of used clothing bins in a manner which limits adverse impacts upon visual amenity, health amenity, existing landscaping and the safety of pedestrians and vehicles.

c) To control the number and location of used clothing bins within the Liverpool LGA.

d) To regulate the size, appearance and maintenance of used clothing bins.

e) To provide Council with legal protection from issues that may arise with regard to the placement and operation of used clothing bins.

General controls for all Used Clothing Bins

1. Used clothing bins are permitted in ~~all business~~ E1,E2, MU1 and E3 zones, the private recreation zone and on compatible sites such as educational establishments and places of public worship.
2. A used clothing bin is permitted on RE1 zoned land, only if the land adjoins a ~~business~~ E1, E2, MU1 and E3 zone and Council permission is obtained.
3. A maximum of 8 square metres must be identified in each development application for retail/shopping centre, schools and places of public worship for the future placement of used clothing bins.
4. A maximum of 2 used clothing bins are permitted on each shopping centre site. The bins at each shopping centre location/or other site are to be operated by the one charity organisation. Council reserves the right to use its discretion in determining whether additional bins are appropriate, and whether the site is considered suitable.
5. A used clothing bin must clearly display the name and telephone number of the operator and not exceed the following dimensions:
   - Width: 1.2 metres
   - Depth: 1.3 metres
   - Height: 1.9 metres
6. The used clothing bin is to be placed on a concrete slab to allow all weather use.
7. The organisation owning the clothing bin will maintain the bin and its immediate surroundings in a neat and tidy condition at all times and operate it in such a manner so as to minimise any form of nuisance. The bin itself should be kept free of graffiti.

8. Illegally dumped materials within a 5 metre radius of a used clothing bin must be removed by the organisation owning the bin within 24 hours of being informed by Council.
9. A used clothing bin must be emptied at least twice every week or within 24 hours of being notified by Council of the necessity to do so.
10. Used clothing bin should be readily accessible and are not to be located in a designated car parking space and manoeuvring areas, nor in such a way that contravenes any condition of development consent applicable to the site.
11. Used clothing bin proposed to be placed on privately owned land must be supported by a letter giving the consent of the owner of that land.
12. A used clothing bin must not be located in a position where it could cause an obstruction to pedestrian and cycle paths, affect vehicular sightlines, on a road verge or in a manner which contributes to a potentially dangerous situation.
13. At no time will a used clothing bin be permitted on Council's footpaths, cyclepaths or nature strips.
14. Council reserves the right to direct the replacement of a used clothing bin that has become damaged or dilapidated.
15. A used clothing bin will not be permitted in a particular location if, in the opinion of Council, the bin will result in an unacceptably adverse visual impact upon the surrounding area.
16. Each used clothing bin is to be left in the approved location and if moved by accident, or by any other persons, it is to be relocated to the correct position by the owner of the bin within 48 hours of being notified by Council.
17. The owner of a charity bin shall be responsible for compliance with any conditions imposed by the NSW Department of Gaming and Racing and the Charitable Fundraising Act 1991.
18. Breaches of conditions of any development consent granted can lead to the service of Order by the Council or a prosecution or any other action under the provisions of the Environmental Planning and Assessment Act 1979.

Additional controls for Used Clothing Bins on Council owned land

19. An application for the placement of a used clothing bin must be in writing and must address the following criteria:
    a. The name of the company which will be operating the bin, and the name and contact details of a designated contact person within that company who has control of locating and servicing their bins.
    b. Proof of membership with the National Association of Charitable Recycling Organisations. An application for the placement of a charity bin will only be approved if the owner of the bin is registered with the National Association of Charitable Recycling Organisation (NACRO). Approved bins are to at all times carry a label, as issued by NACRO, identifying that the owner is a member of that organisation.
    c. A copy of the current insurance policy which indemnifies Council against any claims that could arise from the operation of the bin.
    d. A detailed map which shows:
        1. The location of the proposed bin,
        2. The location of any other bins located within 500 metres of the proposed location,
        3. The location of any other bins controlled by the applicant/operator that are located within the Liverpool LGA,
        4. Details of the bins dimensions, signage, materials and method of installation,

5. Details of the maintenance arrangements for the bin itself (including removal of graffiti) and the area around the bin (including the removal of excess clothing and general waste),
6. Details of the frequency and method with which the bin will be emptied.

20. The organisation owning the used clothing bin shall carry public liability insurance providing cover against third party injury or damage. The owner of the bin must submit written evidence of public liability insurance naming Liverpool City Council as an additional insured party and providing a limit of indemnity not less than $20 million. Details of the insurance cover are to be lodged with Council at the time of making the application for approval.
21. The siting of used clothing bins on Council land is permitted only with the written consent of Council.
22. The cost of any necessary improvements to Council owned land is to be borne by the bin owner.
23. Approval to place a used clothing bin on Council land is conditional on:
    - There being no detrimental impact to the amenity of the area where the charity bin is proposed to be located,
    - Any other condition considered appropriate by Council.
24. The applicant will comply with the criteria endorsed by NACRO in relation to the use and operation of the used clothing bin.
25. The owner of any charity bin placed on Council property without Council's permission or not carrying a NACRO membership label will be given a written direction to remove the bin.
26. Council will review the location of the bin after an initial period of twelve (12) months and may require removal/relocation if the bin and surrounds is not managed appropriately.
27. Council will retain the authority to require that any bin, approved or otherwise, shall be removed at any time after reasonable notification.

20. Car Parking and Access

Applies to

This section applies to development, which generates the need to provide car parking and loading facilities, generates vehicle and pedestrian movement and potentially generates the need for public transport.

Background

Most development generates vehicle and pedestrian movements. There is a need to achieve a balance between the need to minimise adverse impacts on the immediate neighbourhood, the street network and adjoining developments. Some developments, due to their scale may require changes to the transport networks.

Good design integrates vehicle access and car parking into the development concept so that it is convenient for the users and safe for pedestrians and vehicles. Access and car parking needs to be carefully considered so that it is balanced with landscape elements and does not dominate the appearance or character of a development.

Objectives

a) To ensure that adequate parking space and service facilities are conveniently located on site to satisfy the reasonable demand created by the development.

b) To ensure that access is designed to accommodate the size and volume of vehicles likely to visit the site.

c) To ensure that loading facilities are provided for vehicles likely to service the site.

d) To ensure where appropriate that car parking and the manoeuvring of commercial vehicles are separated in the interest of safety and amenity.

e) To ensure that adequate landscaping/tree planting is provided to improve amenity and reduce visual impact of car parking and loading areas.

f) To ensure that car parking and driveways do not interfere unreasonably with the amenity of the neighbourhood.

g) To ensure the provision of the appropriate car parking depending on location.

h) To ensure that where a development generates the need to augment the local transport network that the development contributes to that work.

i) To provide highly accessible end-of-trip facilities for bicycle riders, and to provide a network of cycleways which encourages active travel.

j) To provide safe facilities by ensuring adequate manoeuvring space, and separation where appropriate, between bicycles and motor vehicles in parking areas.

k) To ensure pedestrian and vehicle safety.

l) To ensure the adoption of sustainable transportation practices by the integration of electric vehicle charging infrastructure in all new dwellings.

Controls

The controls for Car Parking and Access are contained within clause 20.1 through 20.7. Bicycle parking, facilities, and infrastructure requirements are contained within this section for all development.

20.1 Overall Design Considerations

The layout of a car parking area shall consider the entire facility, including car parking modules, landscaping, circulation aisles and roadways, access driveways and, if necessary,

frontage road access as an integrated coordinated design. The management of traffic within a car parking facility should take into account:

1. The need for traffic to move to and from the frontage road with minimum disruption to passing traffic and maximum pedestrian safety.
2. Provision of adequate capacity in circulation roadways and aisles to handle peak hour movements without congestion.
3. Avoid as far as practicable conflicts between intersecting streams of circulating traffic.
4. Minimum length travel paths between entry/exit points and car parking spaces.
5. Safe treatment of points of conflict with pedestrians and other road users.

20.2 Vehicular Access Arrangement and Manoeuvring Areas

Background

The location, type and design of vehicular access points to a development can have significant impacts on the streetscape, the site layout and the building façade design.

The design and location of vehicular access to developments should minimise traffic impacts, including pedestrians and vehicles conflicts, on footpaths, particularly along pedestrian priority places, and visual intrusion and disruption of streetscape continuity.

Objectives

a) To ensure all driveways and access points are designed to Australian Standards

b) To minimise any negative impacts of vehicular access points on the public footpath

c) To ensure efficient traffic flow.

d) To minimise impact of driveway crossovers on pedestrian safety and streetscape amenity.

e) To minimise stormwater runoff from uncovered driveways and parking areas.

Controls

1. If driveways are proposed from a classified road approval is required from the Roads and Maritime Services (RMS).
2. Vehicular egress and entrances must be integrated into the building design so they are visually recessive. This can be achieved by locating the opening a small distance behind the front façade.
3. Where practicable, adjoining buildings are to share or amalgamate vehicle access points. Internal on site signal equipment is to be used to allow shared access. Where appropriate, new buildings should provide vehicular access points so that they are capable of shared access at a later date.
4. Access ways to underground parking should be sited to minimise noise impacts on adjacent habitable rooms, particularly bedrooms.
5. Vehicular access may not be required or may be denied to some heritage buildings.
6. Vehicle access ramps parallel to the street frontage will not be permitted;
7. Doors to vehicular access points are to be roller shutters or tilting doors set back from the building façade; and
8. Vehicular entries are to have high quality finishes to walls and ceilings as well as high standard detailing. No service ducts or pipes are to be visible from the street.

20.3 On-Site Car Parking Provision and Service Facilities by Land Use

Background

On-site parking includes underground (basement), surface (at grade) and above ground parking, including parking stations.

Objectives

a) To facilitate an appropriate level of on-site parking provision to cater for a mix of development types.

b) To minimise the visual impact of on-site parking.

c) To provide for adequate space for parking and manoeuvring of vehicles including service vehicles and bicycles.

d) To enable the conversion of above ground parking to other future uses.

e) To recognise the complementary use and benefit of public transportation and non-motorised modes of transport such as bicycles and walking.

Controls

1. Where a proposed use is, in the opinion of Council, unusual and not appropriately dealt with by the parking rates, the RMS guidelines to Parking rates may be used to guide the required parking rate.
2. Basements cannot extend out of the ground more than 700mm at the street front of a site and 1200mm at the rear unless site conditions are such that minor variations are require.
3. Provide natural ventilation to underground parking areas, where possible. Ventilation grills must be:
   - integrated into the overall façade and landscape design of the development;
   - only located on the secondary streets and service lanes; and
   - oriented away from windows of habitable rooms and private open space areas.
4. Tables 11, 12 and 13 outline the number of car parking spaces and any other facilities required for the accommodation of vehicles on site for each land use type. In proposals where calculations of car parking requirements result in fractions of spaces being required, the fraction will be rounded up to the nearest whole space. Where developments comprise separately defined facilities, for example a hotel with a restaurant; the relevant requirements of each facility must be satisfied.
5. For Development Applications that propose composite developments such as shopping malls, retail plazas (and the like) the common or shared areas (e.g. toilets, corridors) are excluded from the LFA.

Car Parking Provision in Liverpool City Centre

Off-street car parking shall be provided in Liverpool City Centre in accordance with Clause 7.3 of Liverpool Local Environmental Plan (LLEP) 2008, Car parking in Liverpool city centre (where the land is zoned B3 — Commercial Core or B4 — Mixed Use) and Section 4.4.2 of Part 4 LDCP 2008.

Off-Street - Car Parking Provision other than Liverpool City Centre

Off street car parking provision and service and loading provision shall be provided in accordance with Table 11.

Table 11 Car Parking, Servicing and Loading Provision

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
Boarding houses	1 space per, 2 bedrooms or 1 space per 3 beds, whichever is the greater	Servicing facilities for 1 small rigid vehicle
Bulky Goods Premises (in the B5 zone)	Developments of LFA < 600sqm: 1 space per 30sqm LFA, Developments of LFA 600 to 3,000sqm: 1 space per 90sqm LFA, Developments of LFA > 3,000sqm: 1 space per 150sqm LFA	Developments of LFA < 600sqm require occasional access for an articulated vehicle and service facilities for a heavy rigid vehicle Developments of LFA > 3,000sqm require service facilities for an occasional articulated vehicle
Caravan Parks and Camping Areas	1 space per unit/site plus 1 space per employee	Waste collection vehicle service access Loading space for a coach
Child care centres		
Residential & industrial (E4 and E5) zones	1 space per staff member and 1 space per 10 children (Stack parking of employees cars, maximum 2 deep, will be considered if there is good design for flow-through of short term car parking) Pick up and set down of children must address their safety	Service facilities for a van
~~Business~~ Employment (E1, E2, MU1 and E3) zones	1 space per 35sqm of LFA	Service facilities for a van
Drive-in food Outlets For type definitions refer to Appendix 1 in Part 1	Type 1 - 1 space per 8sqm of LFA Type 2 - 1 space per 8sqm of LFA plus 1 space per 5 seats Type 3 - 1 space per 6 seats plus queuing area for 10 cars	Waste collection vehicle service access Service facilities for a heavy rigid vehicle
Drive-in Liquor Stores	Parking while browsing is provided for without interfering with through traffic Internal roadway: Two parallel lanes, minimum 3m wide, with queuing min. length 30m. Entry & exit driveways min 4m wide & minimum 1m apart	Waste collection vehicle service access Heavy rigid vehicle service facilities
Dwelling houses	2 spaces	
Educational establishments		

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
Rural, Residential & Industrial (E4 and E5) zones	1 space per 1 staff member, plus 1 space per 30 students Car parking is to be convenient to the distribution of destinations on campus A traffic and car parking report will be required, as these uses are land intensive, including student car traffic generation	Loading facilities for a coach
~~Business~~ Employment (E1, E2, MU1 and E3) zones	1 space per 35sqm of LFA A traffic and car parking report will be required, as these uses are land intensive, including student car traffic generation	
Entertainment facility	1 space per 10sqm LFA of audience area or per 6 seats whichever is the greater OR subject to traffic report (at the applicant's expense) if required by Council, due to the scope of a particular development	Service access for a small rigid vehicle
Exhibition home Exhibition villages	5 spaces per dwelling used for exhibition purposes Temporary car parking can use the front setback area	
Group homes - (transitional & permanent	1 Space per employee, plus 1 space per 4 bedrooms	
Health consulting rooms & veterinary hospitals	3 spaces per consulting room or health care professional, whichever is greater, plus 1 space per person employed on the premises, plus any residential requirement	Service access for an occasional small rigid vehicle
Home business Home occupation Home industry	1 space per employee not resident on the site plus the residential requirements	Service access for an occasional small rigid vehicle
Hospitals	A traffic and car parking report will be required to define the need and demonstrate its fulfilment Car parking is to be convenient to the distribution of destinations on site	Service facilities for a heavy rigid vehicle Facilities are designed for waste collection
Hotel accommodation (Reductions available if peaks of facilities do not coincide)	1 space per room/unit plus 1 space per 2 employees engaged in accommodation For developments exceeding 200 bedrooms, provision must be made for short-term lay by for a tourist coach, couriers and taxis	Waste collection vehicle service access Loading facilities detailed in Sub Section 4

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
Industry	1 space per 35sqm of office LFA 1 space per 75sqm factory/warehouse LFA or 1 space per 2 employees, whichever is the greater Warehouse developments of GFA >1000sqm: 1 space per 250sqm in GFA	Developments of LFA > 1,000sqm require occasional access for an articulated vehicle Service Facilities detailed in Section 4
Landscape and garden supplies	Minimum 15 spaces plus 1 space per 200sqm of nursery site area	Service access for a heavy rigid vehicle
Markets	2.5 spaces per stall	Occasional access for an articulated vehicle (to transport temporary structures) Loading facilities to be convenient to stalls
Materials recycling or recovery centre	Traffic Report Required	
Medical centres	1 space per 25sqm of LFA for typical situation Traffic report required where specialised services are provided	Developments > 2,000sqm LFA require waste collection vehicle service access
Multi dwelling housing and residential flat buildings		
Residential & ~~Business~~ Employment (E1, E2, MU1 and E3) zones	1 space per small dwelling (< 65sqm) or 1 bedroom 1.5 spaces per medium dwelling (65 - 110sqm) or 2 bedrooms 2 spaces per large dwelling (> 110sqm) or 3 or more bedrooms 1 visitor car space for every 4 dwellings or part thereof	Service access for removalists and garbage servicing
Office premises		
~~Business~~ Employment (E1, E2, MU1 and E3) zones	1 space per 35sqm of LFA	Developments of LFA > 2,000sqm require waste collection vehicle service facilities
Place of Public Worship		
Rural, Residential & Recreation zones	1 space per 5sqm LFA or 1 space per 6 seats, whichever is the greater OR subject to traffic report (at the applicant's expense) if required by Council, due to the scope of a particular development	Service access for a small rigid vehicle
~~Business~~ Employment (E1, E2, MU1 and E3) zones	1 space per 35sqm of LFA	Service access for a small rigid vehicle
Industrial (E4 and E5) zones	1 space per 70sqm of LFA	Service access for a small rigid vehicle
Recreation facilities		

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
Industrial (E4 and E5) & Recreation zones	Gymnasia, Fitness Centres and Indoor Cricket 1 space per 22sqm of LFA Tennis or Squash Court & Bowling Alleys - 3 spaces per court/alley Bowling Green 30 spaces for first green and 15 spaces for each additional green Other sports subject to traffic report	Service access for a small rigid vehicle
~~Business~~ Employment (E1, E2, MU1 and E3) zones	1 space per 20sqm of LFA For major or large recreation facilities a traffic report may be required.	Service access for a small rigid vehicle
Registered club		
All areas	1 space per 5sqm of LFA of uses under license OR a traffic report	Service access for a small rigid vehicle Waste collection vehicle service access
Restaurant		
Residential zones (where permitted)	1 space per 7sqm of LFA of uses under license OR 1 space per 3 seats, whichever is the greater	Waste collection vehicle service access
~~Business~~ Employment (E1, E2, MU1 and E3) zones	1 space per 20sqm of LFA	Waste collection vehicle service access
Industrial (E4 and E5) zones	1 space per 7sqm of LFA of uses under license OR 1 space per 3 seats, whichever is the greater	Waste collection vehicle service access
Retail premises		
~~Business~~ Employment (E1, E2, MU1 and E3) zones	Developments of LFA < 12,000sqm: 1 space per 20sqm LFA, Developments of LFA 12,000 to 30,000sqm: 1 space per 25sqm of LFA, Developments of LFA > 30,000sqm: 1 space per 30sqm LFA	Developments of LFA < 4,400sqm require service access for an articulated vehicle Service Facilities as per Section 4
Transport depot	Traffic Report Required	
Roadside stalls	4 spaces per stall	Occasional access for an articulated vehicle (to transport temporary structures) Loading facilities to be convenient to stalls
Service station	2 spaces per fuel outlet plus 3 spaces per service bay plus1 spaces per employee 1 space per 20sqm of LFA of any convenience store	Service access for an articulated vehicle Service facilities for a heavy rigid vehicle

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
Serviced apartments	1 space per bedroom/suite plus 1 space per 2 employees	Service access and facilities for an occasional heavy rigid vehicle (e.g. Furniture van)
Sex service premises (in Industrial Areas) (E4 and E5 zones)	1 space per 70sqm of LFA or 1.5 car spaces per employee, whichever is the greater	
Vehicle Repair Station		
~~Business~~ Employment (E1, E2, MU1 and E3) zones	1 space per 70sqm of LFA	Service access for a small rigid vehicle
Industrial (E4 and E5) zones	1 space per 70sqm of LFA	Service access for a small rigid vehicle
Vehicle showroom	1 space per 130sqm	
Veterinary hospital	1 space per 35sqm of LFA	
~~Business~~ Employment (E1, E2, MU1 and E3) zones	1 space per 20sqm LFA	Service access for a small rigid vehicle
Warehouses	1 space per 35sqm of office LFA 1 space per 75sqm factory/warehouse LFA or 1 space per 2 employees, whichever is the greater Where it can be shown that employee numbers will be significantly less than the required car parking provision, some of the car spaces may be set aside as unformed car parking Warehouse developments of GFA >1000sqm: 1 space per 250sqm in GFA	Developments of LFA > 1,000sqm require occasional access for an articulated vehicle Service Facilities detailed in Section 4

Disabled Off-Street Car Parking

Disabled car parking shall be provided in accordance with Table 12 for car parking areas over 20 spaces:

Table 12 Disabled Car Parking Provision

No of spaces	Land Use
1 per 100 spaces	Retail, Commercial, Industry or Transport
2 per 100 spaces	Community, Recreation, Accommodation or Education
3 per 100 spaces	Entertainment or Health

Bicycle Parking and Cycling Facilities

1. Bicycle parking and cycling facilities shall be provided in accordance with Table 13 below.

2. Bicycle parking and cycling facilities shall be clearly signposted and located in an area that is convenient to access from within the building(s) and from the street/public path.
3. In multi-storey developments, bicycle parking and cycling facilities for residents and staff shall be located on the ground floor, or first basement level close to entry/exit points, to ensure they are secure and easily accessible by staff and tenants. The design of buildings must ensure:
    - areas between bicycle parking and the street have a courtesy ramp, if stairs are the primary means of access,
    - paths between the entry point and bike parking and cycling facilities shall be wide enough to accommodate a person walking a bike (particularly around corners)
    - paths adjacent to a driveway are visually or physically separated and marked,
    - bike cages or lockers within basement car parks are not located in, or create, concealed spaces.
4. Any bicycle parking for visitors or customers shall be located adjacent to the main entry point. In developments with multiple entry/exit points, the share of bicycle parking can be divided between each entry point, as per expected demand and design of the development.
5. End-of-trip facilities (showers and change rooms) are to be provided at the rate of 1 per 10 employee bicycle spaces. Where less than 4 facilities are proposed, they should be unisex. End-of-trip facilities are optional for residential uses or for visitors to other developments.
6. Where shower facilities and change rooms are provided, they should be located adjacent to the employee bicycle parking. This may be near the main entrance/lobby of the building, or in some instances the service entry.
7. At least one personal locker is to be provided for each Class 1 or 2 bicycle parking space.

Note: Bicycle parking facilities have the same classification as Cycling Aspects of Austroads Guidelines and are classified as:

- Class 1. High security facilities are suitable for all-day or night parking. This includes fully enclosed individual lockers. Refer to AS 2890.2
- Class 2. Medium security facilities are appropriate for all-day parking in many areas. These facilities include a lockable shelter/enclosure fitted with Class 3 facilities. Refer to AS 2890.2
- Class 3. Low security facilities are appropriate for short-medium stay parking in highly visible areas. This includes bicycle rails/racks where the wheels and frame can be locked to the rack (traditional ‘toaster’ racks where the front wheel only is secured is not an appropriate facility).

Table 13 Bicycle Parking Provision

Land Use	Employee/Resident Parking Spaces (Class 1 or 2 facility)	Visitor/Customer Parking Spaces (Class 3 facilities)
Residential		
Residential Flat Buildings, Multi-Dwelling Housing	1 per 2 units, or 1 for every 4 bedrooms (whichever is greater).*	1 per 10 units.
Boarding Houses, Hostels & Group homes	1 per 10 beds.	1 per 10 units/rooms.
Seniors Housing	1 per 10 staff & 1 per 20 units	2 per centre
Caravan Parks, Tourist & Visitor Accommodation	1 per 10 staff.	1 per 20 bedrooms/sites.
Commercial		
Bulky Goods Premises, Garden Centres, Hardware and Building Supplies premises, Industrial Retail Outlets, and Rural Supplies.	1 per 1000sqm GFA or 1 per 10 staff (whichever is greater)	1 per 1000sqm GFA
Cellar Door premises, Kiosks, Roadside Stalls and Timber Yards.	Not Applicable	Not Applicable
Office Premises	1 per 200sqm of GFA.	1 per 750sqm GFA
Other Retail and Business Premises (>500sqm GFA)	1 per 10 staff or 1 per 200sqm GFA (whichever is greater)	2 plus 1 per 100sqm GFA
Shopping Centres	1 per 300sqm LFA	1 per 500sqm LFA
Industry, Depots, Warehouses & Distribution Centres	1 per 10 staff (or 1 per 10 car spaces if staff numbers are undetermined)	Nil
Rural Industry (Fixed Location)	Not Applicable	Not Applicable
Community/Other		
Medical Centres and Health Consulting Rooms	1 per 10 staff	2 per centre, plus 1 for every 5th consulting room
Educational Facilities	1 per 10 staff	1 per 10 students
Child Care Centres	1 per 10 staff	2 per centre
Community Centre/Museums	1 per 10 staff	2, plus 1 per 1500sqm GFA
Places of Public Worship	1 per 10 staff	1 per 20 seats
Libraries	1 per 10 staff	4 plus 1 per 200sqm GFA
Registered Club & Function Centres	1 per 10 staff	1 per 140sqm GFA
Recreational Facilities		
Major Facilities	1 per 1500 spectator places	1 per 250 spectator places
Swimming Pools	1 per 10 staff	1 per 15sqm of pool
Other Indoor Facilities	1 per 10 staff	2 plus 1 per 100sqm GFA

*The storage of bicycles for a unit in a residential flat building or multi-dwelling housing may be combined with a unit's allocated basement storage area. The bicycle parking space may also be combined with a storage room within the dwelling. The area for bicycle parking must be larger than a Class 1 locker. If the storage room is in a basement it must satisfy control 3 above.

Bike Paths and Facilities

The Liverpool Bike Plan provides for new on-road and off-road bicycle routes to be provided across Liverpool. In an effort to avoid instances of providing 'tack-on' widenings or reconstruction of new footpaths, new developments must consider any proposed routes in the Bike Plan.

1. Any development which would otherwise be required to rehabilitate, or provide a new footpath, shall provide a shared-path (or other facility as specified) if it forms part of a route in the bike plan.
2. In addition to control 1 above, any developments involving more than 10 dwellings may be required to join any shared paths (or other facilities) required as part of the development with that of other nearby facilities if the paths would not meet.
3. Shared paths shall be at-least 2.5m wide, and designed in accordance with any applicable Council paving policy, the Cycling Aspects of Austroads Guidelines and NSW Bicycle Guidelines (RTA).
4. In an effort to reduce streetscape clutter, regulatory shared-path signage should not be installed until a reasonable portion of the route has been constructed (e.g. a length of approximately 50m or more, such as an uninterrupted length between two streets).

Electric Vehicle Charging Provisions for Dwelling Houses

1. Any new dwelling house shall be provided with a dedicated 32-amp circuit provided in the electricity distribution board for the purpose of vehicle charging, and:

    a. a minimum of one (1) 7 kW (32 A) type 2 electric vehicle charger located in the garage, carport or other parking area, Or

    b. That the electrical distribution board is adjacent to the garage, carport or other parking area, Or

    c. In instances where the electrical distribution board is not on the wall adjacent to a garage, carport or other parking area, an electrical conduit, pull-string and cover-plate is provided between the electrical distribution board and the vehicle parking area in a manner which permits a vehicle charger to be installed without penetrating any wall, ceiling or floor.

20.4 Car Parking Design

Car Space Dimensions

Table 14 Dimensions of Off-Street Car parking for bays at 90°

Land use types	Width	Length 1	Length 2	Aisle Width
Tenant, employee and commuter car parking, universities (generally all day car parking)	2.4m	5.4m	4.8m	6.2m
Long-term city and town centre car parking, sport facilities, entertainment centres, hotels, motels, airport visitors (generally medium term car parking)	2.5m	5.4m	4.8m	5.8m
Short-term city and town centre car parking, shopping centres, department stores, supermarkets, hospitals and medical centres (generally short term car parking and where children and goods can be expected to be loaded into vehicles)	2.6m	5.4m	4.8m	5.8m
Car parking for people with disabilities (see next section)	3.2m	5.4m	4.8m	5.8m

1. Length 1 - Where car parking is to a wall to high kerb not allowing any overhang.
2. Length 2 - Where car parking is controlled by wheel-stops or a kerb no higher than 100mm, which allows 600mm overhang.
3. Refer to *AS 2890.1: 2004* for more details.

4. *Adjacent Obstruction* - If the side boundary of a space is a wall or fence, or if there are obstructions such as columns placed so as to restrict door opening, 300mm shall be added to width required for the space.

5. *Blind Aisles* - The end spaces shall be made 1m wider than the remaining spaces. In car parks open to the public, the maximum length of a blind aisle shall be equal to the width of six, 90-degree spaces unless provision is made for cars to turn around at the end and drive out forwards.

Landscaping within car parking areas

An outdoor car park with 20 or more car parking spaces must include at least 1 tree per 10 car parking spaces to the following specifications:

1. A tree must be a single trunk species to allow a minimum visibility clearance of 1.5m measured above natural ground level; and

2. A tree must be planted in an island bed that is a minimum 2m in width and 4m in length.

Layout for car parking spaces

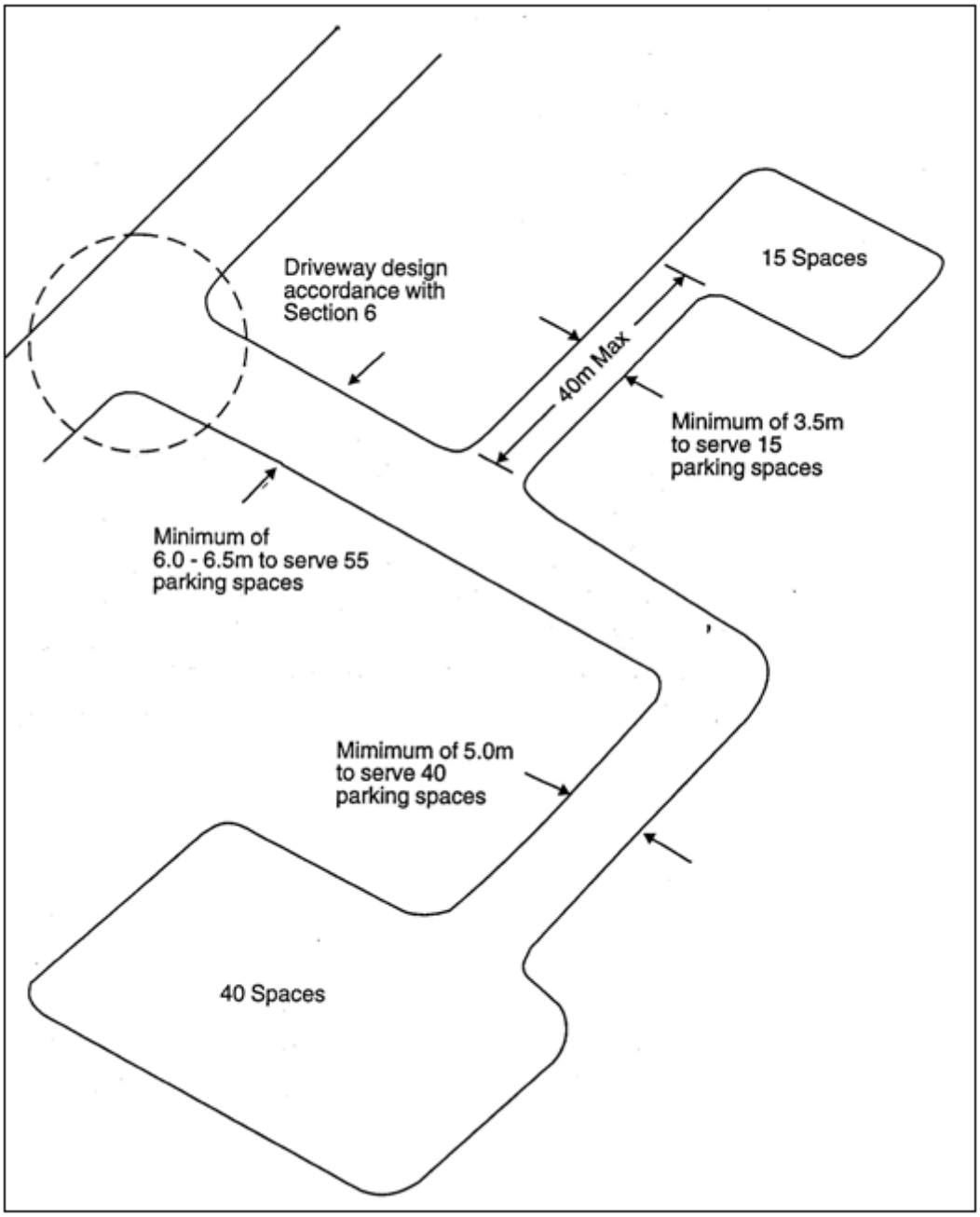


Figure 13 Car parking layout

20.5 Internal Driveways

Gradient

1. Driveways are to be in accordance with the relevant Australian Standard. The maximum change in gradient is to be as shown in the “Maximum Gradients of Internal Driveway” diagram (See Figure 3).
2. Measured parallel to the angle of car parking 1 in 20 (5%); and
3. Measured at 90° to the angle of car parking – 1 in 16 (6.25%).

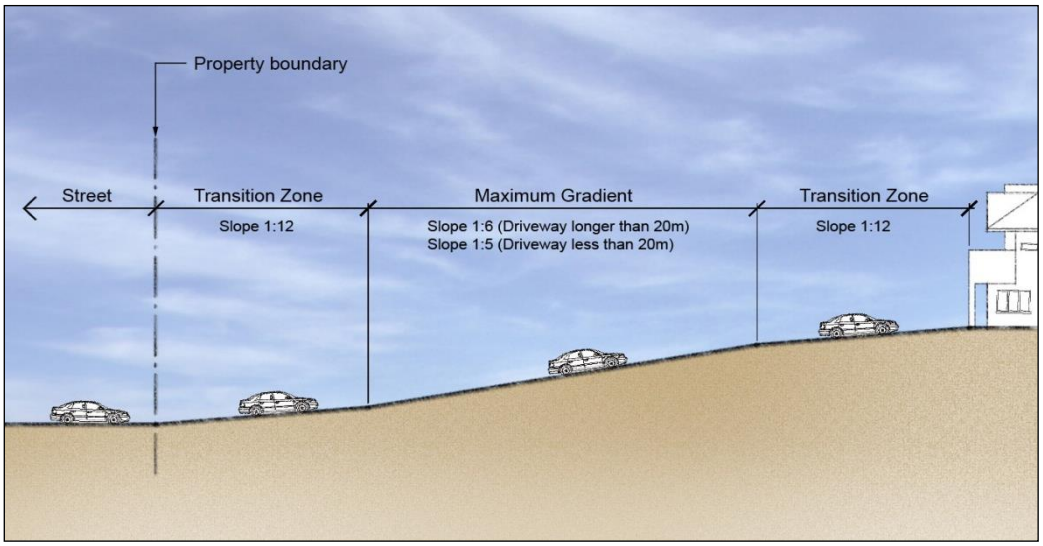


Figure 14 Driveway gradients

Widths

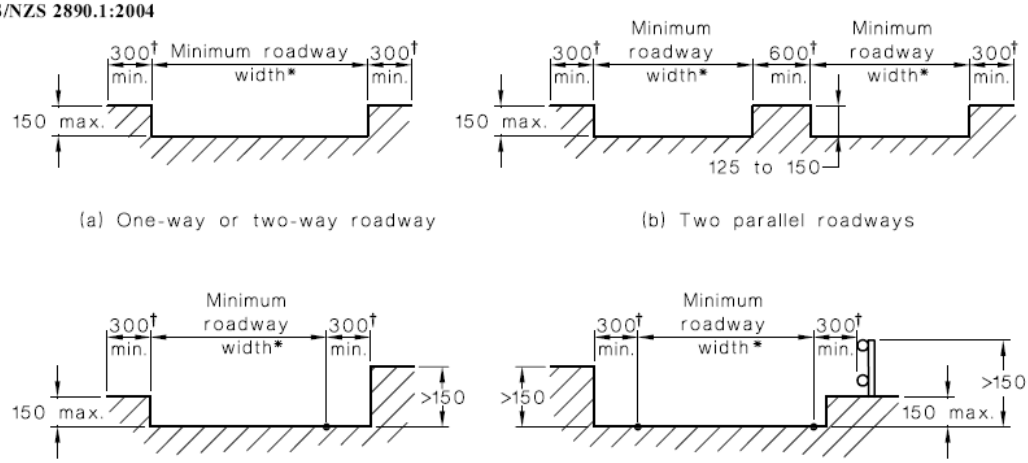
1. For internal driveways between the access driveway and the car parking area the minimum carriageway width depends on the number of car parking spaces and service bays served.
2. Consideration should be given to increase these widths where high levels of heavy vehicles usage are anticipated.
3. By definition circulation driveways should not have car parking on them.
4. The minimum internal driveway widths are to be provided in accordance with Table 4.

Table 15 Internal driveway widths

	Number of Car Parking Spaces / Service Bays		
	1 - 15 spaces and length not exceeding 40m	15 - 40 spaces	Over 40 spaces
Width	3.5m	5m	6 - 6.5m

The following illustrates this table.

AS/NZS 2890.1:2004



* Minimum roadway width: One-way roadway—3000 mm
Two-way roadway—5500 mm
On curve—see Table 2.2

† Increase clearance to 500 mm if on the outside of a curve.

DIMENSIONS IN MILLIMETRES

MINIMUM ROADWAY WIDTHS ON CURVED ROADWAYS AND RAMPS

metres

Turn radius R_o (Note 1)	Single lane		Two-way, no separator All cases (Note 3)
	Public facilities	Domestic property	
7.6 to 11.9	3.9	3.6	—
12.0 to 19.9	3.4	3.1	6.7 (Note 4)
20.0 to 50.0	3.2	3.0	6.3
>50.0	3.0	3.0	5.5

Figure 15 Internal driveway widths

Design

1. Locate and design car-parking areas so they can be observed by adjoining uses.
2. Minimise the number of pedestrian and vehicular entry and exit points, and ensure they are in close proximity to each other and to nearby active uses.
3. Staff car parking areas should be separated and secured.
4. Provide surveillance measures such as security cameras or devices and security guards where possible.
5. Underground car parking areas should provide security grilles in the roofs or upper walls to allow some street surveillance.
6. Lighting must comply with relevant Australian Standards, with brighter lighting located at entrances and pedestrian path or accessways. Lighting should be placed to sufficiently illuminate car parking bays as well as the driveways. Light fittings should be vandal resistant and easily maintained to ensure continued compliance with the Australian Standard.
7. Clear directional signs must be provided to stairs, lifts, and exits to shops or businesses, as well as signs to advise users of security measures in place.
8. Pedestrian pathways should be integrated into the design and allow for maximum safety, especially for people with a disability and people using prams. Pathways should be clearly marked and well lit.
9. Internal driveway should be designed for a low speed environment.

Loading Facilities

1. Adequate facilities for servicing developments shall be provided on-site to ensure loading/unloading activities do not occur on street and compromise the safety, amenity and capacity of the public road system.
2. Provision for loading facilities shall be provided for development in accordance with *AS 2890.2 – 2002.*
3. Service facilities shall be conveniently located close to service entrances (or other building entrances) to discourage loading/unloading in other than the designated areas.
4. Areas where heavy vehicles are manoeuvring shall be separated from areas of car parking or pedestrian movement with safety being the over-riding consideration.

20.7 Driveway Crossings

Location of Driveway Crossings

1. Driveway Crossings shall be located a minimum distance from the following items:
   - 0.5m from all drainage structures on the kerb and gutter;
   - 1.0m from side property boundaries;
   - 6m from a kerb tangent point of a street corner.
2. Driveway Crossings should avoid the need to remove existing street trees and any replacement tree (species determined by Council) is to be at the development's cost.
3. Driveway Crossings should avoid changes to existing public utility infrastructure including drainage and any relocation of such shall be the development's expense.
4. Where a development site has frontage to a Classified Road, the Driveway Crossings should be located on an alternative street.
5. Where a Driveway Crossing is proposed directly from a Classified Road, a deceleration lane may be required.
6. Locate the entrance at the first Driveway Crossing from the adjacent kerbside lane.
7. Avoid a driveway layout, which may result in on-street queuing.
8. All vehicles must enter and leave the property in a forward direction (except in the case of dwelling houses and Attached dwellings and Semi detached dwellings).
9. Locate each Driveway Crossing so that it is clear of all obstructions, e.g. poles, trees, which may prevent drivers from having a timely view of pedestrians.

Design of Driveway Crossings

1. Design each Driveway Crossing so that it is relatively level within 6m of the site boundary or any pedestrian way, the recommended maximum gradient is 5%.
2. Signpost each Driveway Crossing with appropriate entry, exit and keep left signs.
3. Decorative Driveway Crossings over the footpath area will only be permitted if it is compatible with the amenity of the locality.
4. In ~~business~~ Employment (E1, E2, MU1 and E3) zones any Driveway Crossing shall be compatible with the existing and future paving pattern.

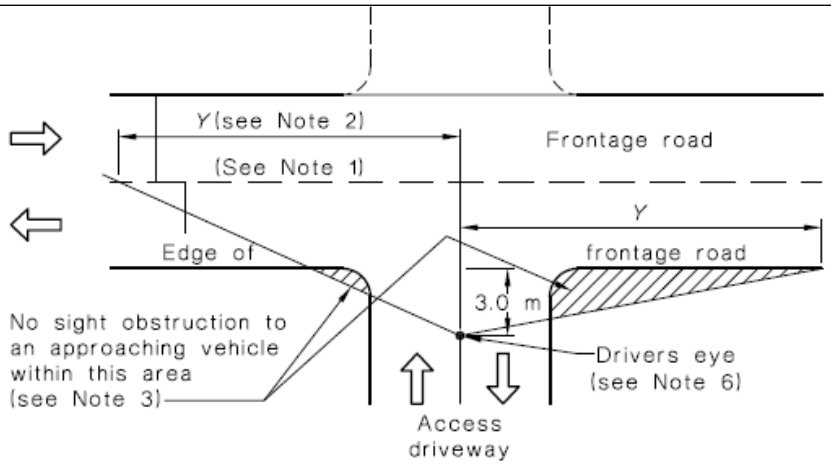
Second Driveways (for Residential Dwellings)

1. A second Driveway Crossing for dwelling houses, attached dwellings and semi-detached dwellings are to be consistent with the relevant Australian Standards and all other provisions in the DCP, specifically:
   - Minimum distances from public domain infrastructure, including drainage structures, street signage, bus stops, kiosks, lighting, power poles and the like;
   - Minimum distances from property boundaries and kerb tangent points;
   - Minimum and maximum driveway widths;
   - Cut and fill of the land (including any associated retaining wall);
   - Minimum landscaping requirements for the site, as indicated in the relevant DCP provision; and
   - Removal of existing vegetation, including street trees.
2. Second driveways will only be considered in instances where:
   - The lot width, measured at the lot boundary which faces the road, is greater than 15 metres;

- The combined driveway width between the lot boundary and the face of the dwelling is not more than 50% of the total lot frontage, or 12m, whichever is the lesser;
- There is at least a 6m space between driveway crossings, to allow for an on-street parking space;
- The existing driveway cannot be augmented;
- The second driveway will not involve the net loss of any street tree;
- The second driveway will not reasonably invoke obstruction of a footpath (or area outside the property boundary) due to vehicle overhang;
- The second driveway will not decrease pedestrian and other road user safety due to poor visibility to/from the driveway;
- There is a demonstrated lack of available on-street parking for registered vehicles; and
- The existing driveway, and any garages or carports, approved by Council, have not been converted for other uses which reduces the availability of on-site parking

3. An application for an additional driveway must include a dimensioned plan of the site, which shows:
    - Location of dwelling;
    - Location of the existing and proposed driveway, including any garage, or carport;
    - Width of the property frontage;
    - Distance between existing and proposed layback;
    - Dimensions of the proposed and existing driveways;
    - The area of impervious surfaces and pervious surfaces within the front setback;
    - The area of landscaped area on the site as a whole; and
    - Indication of any vegetation to be removed

The following illustrates the requirements for the location of Driveway Crossings.



Frontage road speed (Note 4) km/h	Distance (Y) along frontage road (Note 5) m	
	5 s gap	8 s gap
40	55	89
50	69	111
60	83	133
70	97	156
80	111	178
90	125	200
100	139	222
110	153	244

NOTES:

1 Centre-line or centre of roadway (undivided road), or right hand edge of right hand through lane (divided road).

2 A check to the left is not required at a divided road where the median is wide enough to shelter a vehicle leaving the driveway.

3 Parking on this side of the frontage road may need to be restricted on either side of the driveway so that the sight distance required by the above table to an approaching vehicle is not obstructed.

4 This is the posted or general speed limit unless the 85th percentile speed is significantly higher.

5 These distances are equivalent to minimum gap sight distance (MGSD) for an exiting vehicle. The minimum requirement is a 5 second gap. A right turn exit into a six lane road may require up to an 8 second gap, unless the median is wide enough to shelter a vehicle leaving the driveway.

6 When checking sight distance the height of the object (approaching vehicle) is to be taken as 1.15 m above the road surface. The driver's eye height is to be taken as any height in the range 1.15 m to 2.5 m, to cater for both car and commercial vehicle drivers.

Figure 16 Locations of Driveway Crossings

Width of Driveway Crossings

1. Driveway crossing widths shall be in accordance with tables 5 and 6.

Table 16 Car Parking Spaces served by the Driveway Type

Street Frontage	Number of Car Parking Spaces served by the Driveway Type					
	Less than 25	25-100	101-300	301-600	More than 600	Heavy Vehicles
Major	1-2	2-3	3-4	4	5	7
Minor	1	1-2	2-3	3-4	4	6

2. Major Street Frontage includes Classified Roads and Sub Arterial Roads under Council's Road Hierarchy.

- Maximum for residential: 6m.

Table 17 Driveway crossing widths

Type	Entry Width	Exit Width	Minimum separation of driveways	Splay at kerb line	Kerb return turnout radius
	W	W		S	R
1	3 – m	Combined	NA	0.5m	-
2	6 – 9m	Combined	NA	1m	-
3	6m	4 – 6 m	1 - 3m	1m	2 – 9m
4	6 – 8m	6 – 8 m	1 - 3m	1m	2 – 9m
5	Direct feed from a controlled intersection via a public street				
6	8 – 10m	8 –10m	3m	1m	2 – 9m
7	10 –12m	10 –12m	3m	1m	2 – 9m

Cost of Driveway Crossing Works

The cost of any adjustment to a public road, including kerb and gutter, road shoulder and deceleration lane shall be borne by the development.

20.8 Pavement requirements

Access driveways, internal driveways and car parking spaces are to be paved to a standard to carry the anticipated loadings, unless otherwise specified elsewhere in the DCP. Porous paving materials will be considered, provided that sufficient detail is provided to show that such paving is sustainable. Driveway material must not be allowed to spill or be carried onto road pavement.

20.9 Transport Impact

Transport Management Plan

For major developments a Transport Management Plan shall be submitted with the development application. The Transport Management Plan shall address the following:

1. The existing traffic environment.
2. Traffic generation anticipated from the proposed development.
3. The cumulative impact of traffic in the locality.
4. The need for traffic improvements in the locality.
5. The need for public transport works on site and in the locality.
6. Proposed traffic egress/ingress to Classified/Sub Arterial Roads.
7. Sight distance and other safety issues.

Construction Transport Plan

A Construction Transport Plan may also be required where it is likely that the construction phase of a development will have a significant impact on traffic movement in the locality. A Construction Transport Plan shall address the following:

1. The existing traffic environment.
2. Traffic generation anticipated from the construction of the proposed development.
3. The impact on traffic in the locality.
4. Proposed heavy vehicle routes.
5. The need for transport management and hours of operation and access in the locality.
6. Sight distance and other safety issues.

Cost of Transport Impact Works

The cost of any works directly attributable to the development, including dedication and or construction of road works, traffic management facilities or any public transport facilities either on site or off site shall be borne by the development.

21. Subdivision of Land and Buildings

Applies to

This section applies to development, which involves subdivision of land or buildings.

Background

The subdivision of land has a major impact on the use of land in terms of density and type of development, impacts on adjoining development, impact on the natural environment, demands on public infrastructure, usability of land, access to roads and future development potential. The subdivision of buildings also has impacts on the future management of buildings and on the adjoining areas.

Objectives

a) To provide a functional, attractive and safe environment for residents that are consistent with community standards and needs.

b) To minimise adverse effects on the natural environment.

c) To provide for the needs of future users of the land in respect to building requirements vehicular and pedestrian access, provision of services and an amenity appropriate to the zoning of the land.

d) Provide for the economic utilisation of the land resource of the area.

e) To achieve a balance between the development / subdivision of residential, commercial and industrial land and the amenity of existing occupants.

f) To provide for an equitable and efficient distribution of public amenities and services.

g) To minimise Council's future maintenance costs for roads, services and open spaces.

Controls

21.1 Specifications

Subdivision works shall be carried out in accordance the Council Subdivision Specification.

Splay corners

Minimum 6 x 6m splays for all subdivisions involving creation of a road junction.

21.2 Rural Zones – RU1 and RU4

Minimum lot sizes

Refer to *Liverpool LEP 2008* written statement and the maps for the minimum allotment sizes in the RU1 and RU4 zones. Note that this varies depending on the location.

Minimum Lot Width

The minimum lot width in the RU1 and RU4 zone is 24m.

Street widths

All new streets shall be a minimum 20m wide, unless specified elsewhere in a Locality Part of the DCP.

All Weather Roads

Development involving the creation of new streets in RU1 and RU4 zones will be required to provide an all-weather road system to provide a functional and safe vehicular access to each allotment or development.

Sealing of Roads

1. Bitumen sealing of the road system will be required on all new roads and existing roads, which will be an extension of existing sealed roads unless specified otherwise by Council.
2. Council will not approve the development/subdivision of lands proposing non- dedicated road access (e.g. private road systems). However consideration will be given to the creation of a right-of-way to serve allotments having the minimum dedicated road frontage but not having road access.
3. Such right-of-way is to link directly to an existing or proposed dedicated road and constructed in accordance with Councils standards.
4. Minor subdivisions in isolated rural areas require a reasonable standard of all-weather access road suitable for all year round access for essential services, i.e. school bus, ambulance etc.
5. Each proposal will be considered on its merits in accordance with the following guidelines:
   - The status of the road.
   - Existing road surface condition.
   - Cost of upgrading.
   - Flooding frequency and hazards of creek or river crossings.
   - Potential population catchment.
   - Bush Fire Hazard.

Electricity

1. The extension of electricity mains to each allotment within the subdivision is required.
2. Subdivisions in areas remote from electricity mains may be relieved of this requirement, if special circumstances prevail and details of such circumstances are submitted to Council, together with the written agreement from *Integral Energy*.

Sewerage

1. Effluent disposal will normally be by way of appropriate on-site disposal.
2. Where the development is in near proximity to an existing sewered area or where, in the opinion of the *NSW Department of Health* or Council, the land is unsuitable for site disposal of effluent, connection to sewerage will be required.
3. A geotechnical report to support sewerage treatment proposals is to accompany an application for onsite sewage management this type of the development.

Street signage

1. Street name and information signs shall be provided to facilitate accessibility and mobility.
2. Approval for the naming of all new streets shall be obtained from Council prior to the erection of any new street signage.

21.3 Rural Zone – RU2 and Residential Zone – R5

Minimum lot sizes

Refer to *Liverpool LEP 2008* written statement and the maps for the minimum allotment sizes in the RU2 and R5 zones. Note that this varies depending on the location.

Minimum Lot Width

The minimum lot width in the RU2 and R5 zone is 24m.

Street widths

All new streets shall be a minimum 20m wide, unless specified elsewhere in a Locality Part of the DCP.

Kerb & Gutter

1. Development involving the creation of new streets in RU2 and R5 zones shall require kerb and guttering and underground stormwater drainage where specified in Council's standards.
2. Concrete lined table drains shall be required where scour velocities are exceeded and/or the soils are susceptible to erosion from stormwater.

Sewerage

1. Effluent disposal will normally be by way of appropriate on-site disposal.
2. Where the development is in near proximity to an existing sewered area or where, in the opinion of the *NSW Department of Health* or Council, the land is unsuitable for site disposal of effluent, connection to sewerage will be required.
3. A geotechnical report to support sewerage treatment proposals is to accompany an application for onsite sewage management this type of the development.

Natural Features

1. The configuration of the subdivision is to have consideration for natural features such as rivers, creeks, topography of the land, tree groupings and prominent natural features.
2. The design should also consider buffers for conflicting land uses, watercourses, etc.

Street signage

1. Street name and information signs shall be provided to facilitate accessibility and mobility.
2. Approval for the naming of all new streets shall be obtained from Council prior to the erection of any new street signage.

Street lights

Street lighting is to be provided in accordance with AS1158.

21.4 Residential Zones (Except R5)

Minimum lot sizes

Refer to *Liverpool LEP 2008* written statement and the maps for the minimum allotment sizes in the Residential Zones. Note that this varies depending on the location.

Minimum Lot Width

1. Subdivision of land shall meet the minimum lot width requirements as set out in Table 18.
2. Subdivision of land involving the creation of lots less than 300sqm or less than 10m lot width shall include the dwelling house as part of the development application.
3. The subdivision plan will not be released until the dwelling which was approved in conjunction with the subdivision is completed to above ground floor level.

Table 18 Minimum Lot Widths

Zones	Minimum Lot Size (as per LLEP 2008 minimum lot size map)	Minimum lot Width
R4	Any lot size shown on the Lot Size Map greater than 300sqm	24m
R1, R2	600-1000sqm	20m
R2	450sqm	15m
R1, R3	450sqm	12m
R1, R2	400sqm	11m
R1, R2	300sqm	9m
R1, R2	300sqm (Area 3)	9m
R1, R2, R3	300sqm (Area 2)	8m
R1, R4	300sqm (Area 1)	7m

Note: Minor variations may be considered if the average width of the lot is greater than the Minimum Lot Width as stated in Table 18.

Road widths

All new streets shall be a minimum 18m wide, unless specified elsewhere in Part 2 of this DCP.

Road works

1. Development involving the creation of new streets in Residential Zones will be required to provide fully serviced subdivisions including the provision of a sealed road system with drainage, and kerb and gutter, to adequately and safely provide both vehicular and pedestrian access to each allotment.
2. Development in established residential areas shall meet the full cost of kerb and guttering across all existing street frontages of any development/subdivision except where direct vehicular access is restricted.
3. Streets adjoining a public reserve shall provide kerb and gutter to adequately and safely provide both vehicular and pedestrian access. Footpaths may also be required.

Stormwater

Legal easements of width as determined by the Council Codes and Specifications are to be provided over stormwater drains and watercourses.

Water and Sewerage

New development will be required to extend augment and meet the full cost of water and sewerage reticulations, as arranged with *Sydney Water* within developments / subdivisions plus the cost of connecting to existing services.

Electricity

1. Electricity services are to be extended to the development / subdivision and in accordance with the requirements of Integral Energy and at full cost to the development.
2. Underground electricity services will be required except where it can be shown that it is not appropriate.

Street lighting

Street lighting shall be designed by the applicant to *AS1158* and the development will be required to meet the full cost of street lighting installation.

Telephone

The development will be required to provide for telephone facilities within the design. Where underground electricity is used, underground telephone facilities are also to be provided by the development.

Stormwater Runoff

Urban stormwater runoff will need to be assessed in terms of satisfactory performance both within the development and external to the development to a legal point of discharge.

Street Tree Planting

1. Street trees shall be required to be planted in conjunction with the creation of a new street or the extension of an existing street.
2. One street tree shall be planted for each allotment created.
3. The street trees shall be planted prior to the release of the subdivision certificate.
4. The trees shall be provided with protection to ensure their survival during the construction of buildings in the street. Refer to Figure 17 for details.

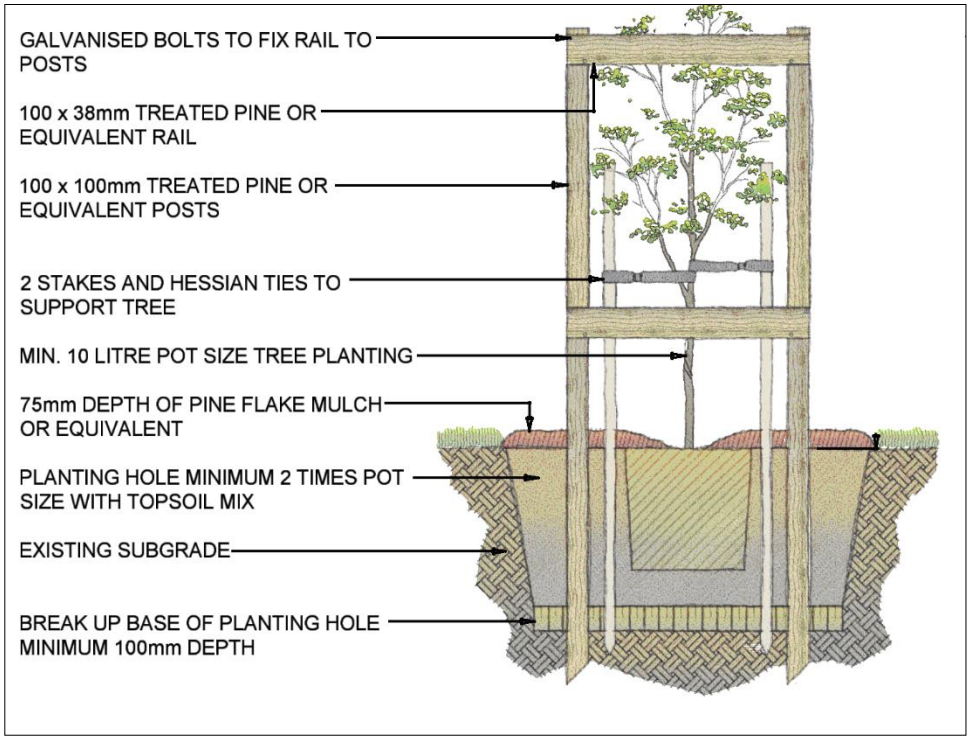


Figure 17 Tree Guard and Planting Details

Street signage

1. Street name and information signs shall be provided to facilitate accessibility and mobility.
2. Approval for the naming of all new streets shall be obtained from Council prior to the erection of any new street signage.

21.5 ~~Industrial and Business~~ Employment Zones

Road widths

All new streets shall be a minimum 20m wide, unless specified elsewhere in Part 2.

Minimum Lot Width

B1 and B2 zones

The minimum lot width in the B1 and B2 zones is 20m.

B6 Zone (Enterprise Corridor)

1. Development shall not be permitted for a new building (other than a maximum 10% addition to an existing structure) in the B6 zone unless the site has a frontage width to the Classified road of at least:
   - 30 m, where the site also has frontage to a local street that intersects with and would permit access to and from the classified road; or
   - 90m otherwise.
2. Development for a new building (other than a maximum 10% addition to an existing structure) in the B6 zone must not leave adjacent land such that it cannot achieve either:
   - A site frontage with of at least 30m (where the site also has frontage to a local street that intersects with and would permit access to and from the Classified Road): or
   - 90m otherwise.

~~IN 1, IN 2 and IN 3 Zones (Industrial)~~ E4 and E5 Zones (Industrial)

The minimum frontage for new lots shall be in accordance with Table 19.

Table 19 Frontage Width

Street	Width of Frontage
Classified Roads, Bernera Road, Kurrajong Road and Moorebank Avenue	65m
Other streets	30m
Cowpasture Road (Site adjacent to future link road across Hinchinbrook Creek to former Hoxton Park Airport)	120m

Road works

1. Development involving the creation of new streets in ~~Industrial and Business Zones~~ Employment will be required to provide fully serviced subdivisions including the provision of a sealed road system with drainage, and kerb and gutter, to adequately and safely provide both vehicular and pedestrian access to each allotment.
2. Development in established areas shall meet the full cost of kerb and guttering across all existing street frontages of any development/subdivision except where direct vehicular access is restricted.
3. Streets adjoining a public reserve shall provide kerb and gutter to adequately and safely provide both vehicular and pedestrian access. Footpaths may also be required.

Street Lighting

Provide Street lighting to *AS1158.*

Pavement for Heavy Traffic

Engineering Road Design and Pavement Design will need to provide for heavy traffic conditions as specified by Council.

Water and Sewerage

New development will be required to extend augment and meet the full cost of water and sewerage reticulations, as arranged with *Sydney Water* within developments / subdivisions plus the cost of connecting to existing services.

Electricity

Electricity services are to be extended to the developments/subdivision and in accordance with the requirements of Integral Energy at full cost to the development. Integral Energy will make determination of the maximum loading of the electricity service, and whether the service is provided above ground or underground.

Telephone

Developments will be required to provide for telephone facilities. Where underground electricity is used, underground telephone facilities are also to be provided by the development.

Street Tree Planting

1. Street trees shall be required to be planted in conjunction with the creation of a new street or the extension of an existing street.
2. One street tree shall be planted for every 20m of street frontage.
3. The street trees shall be planted prior to the release of the subdivision certificate.
4. The trees shall be provided with protection to ensure their survival during the construction of buildings in the street. Refer to Figure 17 for details.

Street signage

1. Street name and information signs shall be provided to facilitate accessibility and mobility.
2. Approval for the naming of all new streets shall be obtained from Council prior to the erection of any new street signage.

21.6 Hatchet shaped Allotments

1. The minimum width of the accessway to a hatchet shaped allotment shall be as shown in Table 20.

Table 20 Hatchet allotment access handle

No of Allotments	Rural and Residential zones	~~Industrial and Business zones~~ Employment
One allotment	5m	7m
Two allotments	5m	7m

2. There shall be a maximum of 2 allotments from any access way in the Residential, ~~Business and Industrial~~ Employment zones.
3. Where 2 allotments are proposed to be created having an adjacent access ways to a public street, the access ways shall have reciprocal rights of way created over each of the access ways in order to minimise separate driveway access points.

4. Where traffic generation from use of a hatchet shaped allotment is likely to be significant an additional width for the access way may be required.

21.7 Strata subdivision

Applications for strata subdivision of buildings, space or land will need to ensure that the strata plan is consistent with the development consent particularly the allocation of private and common property. In particular visitor or customer car parking identified in a development consent shall remain as common property.

There must be a minimum requirement of three buildings, spaces, or land parcels for strata subdivision.

22. Energy Conservation

Applies to

This section applies to development involving the use of energy.

Background

The ability of development to optimise thermal performance, thermal comfort and day lighting will contribute to the energy efficiency of the buildings, provide increased amenity to occupants and reduce greenhouse emissions and, with them, the cost of supplying energy.

Objectives

a) To reduce the necessity for mechanical heating and cooling.

b) To minimise greenhouse gas emissions.

c) To provide thermal comfort by minimising temperature variations within buildings.

Controls

Residential

New dwellings, including multi-unit development within a mixed use building and serviced apartments intended or capable of being strata titled, are to demonstrate compliance with *State Environmental Planning Policy – Building Sustainability Index (BASIX).* A complying BASIX report is to be submitted with all development applications containing residential activities.

Non-Residential

1. All Class 5 to 9 non-residential developments are to comply with the Building Code of Australia energy efficiency provisions.
2. Improve the control of mechanical space heating and cooling by designing heating/ cooling systems to target only those spaces which require heating or cooling, not the whole building.
3. Encourage passive solar designed dwellings.
4. Improve the efficiency of hot water systems by:
   - Insulating hot water systems.
   - Installing water saving devices, such as flow regulators, 3 stars rated shower heads, dual flush toilets and tap aerators.
5. Reduce artificial lighting and design lighting systems to target only those spaces which required lighting at any particular ‘off-peak’ time, not the whole building.
6. Maximise natural light to reduce reliance on artificial lighting and utilise energy efficient lamps, reflectors and fittings to reduce requirements for artificial lighting.
7. For all commercial office development over $5 million, provide an Energy Efficiency Report from a suitably qualified consultant to accompany any development application for a new commercial office development. The report is to demonstrate that the building can achieve no less than 4 stars under the Australian Building Greenhouse Rating Scheme.

23. Reflectivity

Background

Reflective materials used on the exterior of buildings can result in undesirable glare for pedestrians and potentially hazardous glare for motorists. Where installed on tall buildings, reflective materials may be also a hazard for aircraft. Reflective materials can also impose additional heat load on other buildings. The excessive use of highly reflective glass is discouraged. Buildings with a glazed roof, facade or awning should be designed to minimise hazardous or uncomfortable glare arising from reflected sunlight.

Objectives

a) To restrict the reflection of sunlight from buildings to surrounding areas and buildings.

Controls

1. New buildings and facades must not result in glare that causes discomfort or threatens safety of pedestrians or drivers.
2. Visible light reflectivity from building materials used on the facades of new buildings must not exceed 20%.
3. Subject to the extent and nature of glazing and reflective materials used, a Reflectivity Report that analyses potential solar glare from the proposed development on pedestrians, motorists or aircraft may be required.

24. Landfill

Applies to

This section applies to development, which involves cutting and or filling of land. It does not involve land cut and filling in conjunction with a development application for a building(s).

Background

The cutting and filling of land has the potential to have significant environmental and visual impacts on the environment.

Objectives

a) To minimise any land cut and filling.

b) To minimise any adverse impact of land cut or filling on adjoining or nearby lands.

Controls

1. All fill applied should be Virgin Excavated Natural Material (VENM), as defined by the *NSW Department of Environment and Climate Change*. Any fill involving material other than VENM is subject to referral to the State Government as potential Integrated Development or contaminated land assessment.
2. All filling in the vicinity of native vegetation must be local material (in order to minimise the spread of weeds).
3. Any excavation within the zone of influence of any other building will require a Dilapidation Report.
4. Refer to the section on Salinity if cutting greater 500mm is to be undertaken.
5. No retaining wall structures will be permitted within any easements such as drainage easements. Retaining walls located on the boundary of two allotments or boundary to a public street or public reserve shall be of masonry construction. Other types of retaining wall structure may be permitted if the structure is located wholly within the property.

25. Waste Disposal and Re-use Facilities

Applies to

This section applies to all applications that propose:

1. Subdivision and excavation of land.
2. Demolition of an existing building.
3. Construction of any development including alterations and additions.
4. Any development that requires a waste bay or the like.

Background

The construction and demolition of buildings and excavations generates the need for waste disposal and opportunities to minimise waste disposal and maximise recovery of resources from those activities. For new buildings, the occupation of those buildings generates an ongoing need for waste disposal and recycling. There are potential environmental and human health impacts associated with waste generation, storage and disposal. Under current waste legislation there is a need to minimise disposal of waste to landfill and recover resources to minimise depletion of natural resources.

Objectives

a) To minimise waste produced during demolition and construction of new development and maximise resource recovery.

b) To ensure waste management for the end use of the development is designed to provide satisfactory amenity for occupants and provide appropriately designed collection systems.

c) To minimise ongoing waste to landfill and maximise recycling of ongoing waste.

Controls

Non-residential development

Note: Council does not provide waste services to non-residential premises. Owners and operators of non-residential premises must engage a private commercial waste contractor to remove and legally dispose of the waste their premises generates.

1. Development applications for all non-residential development must be accompanied by a waste management plan that addresses:
   - best practice recycling and reuse of construction and demolition materials,
   - use of sustainable building materials that can be reused or recycled at the end of their life,
   - handling methods and location of waste storage areas, such that handling and storage has no negative impact on the streetscape, building presentation or amenity of occupants and pedestrians, and
   - procedures for the on-going sustainable management of green and putrescible waste, garbage, glass, containers and paper, including estimated volumes, required bin capacity and on-site storage requirements.
2. The waste management plan is to be prepared by a specialist waste consultant and is subject to approval by Council

Residential development

1. Provision must be made for the following waste generation shown in Table 21.

Table 21 Waste Generation

Type of Waste	Dwellings (including housing, attached and semi dwellings and dual occupancy)	Medium and High Density Residential Development
General Waste	**140 litres/week/dwelling**	110 litres/week/dwelling
Recycling	**120 litres/week/dwelling**	110 litres/week/dwelling
Green Waste	**120 litres/week/dwelling**	Shared 240 litre bins can be provided by Council. Numbers of bins will be assessed on a case by case basis and require provision of adequate storage.

2. In dwellings not exceeding six (6) dwellings, individual waste storage facilities may be permitted. In a development of more than six dwellings or where the topography, or distance to the street makes access difficult for individual occupants, a collection and storage area is required. The storage area must be located in a position which is:
   - Not visible from the street
   - Easily accessible to dwelling occupants
   - Accessible by collection vehicles (or adequately managed by the body corporate to permit relocation of bins to an approved collection point),
   - Has water and drainage facilities for cleaning and maintenance; and
   - Does not immediately adjoin private open space, windows or clothes drying areas.
3. Wherever a rear lane is present, the rear lane is to be used for the removal of waste provided that it complies as follows:
   - Provides an area of kerbside where the placement of waste bins will not obstruct the passage of vehicles; and
   - Has sufficient dimensions for the Council's contractor's collection vehicles to be able to empty waste bins safely and without damage to property.
4. Subject to Council collection policy, common waste storage areas are to be sized to accommodate the number and size of waste bins that are required, plus enough space for the bins to be accessed, manoeuvred in and out for emptying and rotated as necessary. Minimum dimensions of the bins can be found in the Council fact sheet, 'Waste Management Services for Residential Flat Buildings and Multi Dwelling Housing
5. The size and number of the waste bins shall be determined having regard to the number of dwellings to be serviced, the space available for the presentation of the bins for emptying and the need for either on-site access by the waste contactor's collection vehicle or the requirement for bins to be wheeled to the street for collection by the contractor. If transferred to the street for collection, the body corporate or a caretaker must be responsible for the movement of bins to their collection point and return to their place of storage within the time set in Council's Domestic Waste Policy. If bins are being collected from within a development, they are to be presented for emptying to the approved collection point by agents of the body corporate and then returned back into the storage area by those agents afterwards.

Waste Management Plan

1. A Waste Management Plan (WMP) shall be submitted with a Development Application for any relevant activities generating waste. The WMP is provided in three sections:

- Demolition;
- Construction; and
- On-going waste management.

2. The WMP shall show:

   - Estimated volumes of waste generated according to type; and
   - Details of whether each type of waste material that will be produced on site are to be reused, recycled or disposed of and the recycling or waste facilities to which those materials will be taken.

3. The WMP must then be implemented on site throughout the development process, demolition, construction and use of the development. During demolition and construction the WMP together with proof of lawful disposal for all waste that is disposed of or otherwise recycled from the site must be retained onsite in a Waste Data File. Proof is to include a log book with associated receipt/invoices, waste classification and site validation certificate.

   All entries in the Waste Data File must include:

   - Time and Date
   - Description and size of waste
   - Waste facility used
   - Vehicle registrations and Company name

4. The Waste Data File must be made available for inspection by any authorised Council Officer at any time during site works and at the conclusion of site works should be retained by the person responsible and made available for inspection by authorised Council Officers.

5. A copy of the final Waste Data File shall be submitted by the PCA to Council with a copy of the occupation certificate.

Waste Management Facilities

1. Waste management facilities shall be provided for in all new buildings (except dwelling houses, Attached dwellings, Semi-Detached Dwellings and Dual Occupancy). These shall be designed to ensure that the storage and collection of waste and recyclables is user friendly for both the occupant and the waste collection contractor.

2. Where a communal Waste Management Facility for Multi dwelling housing and Residential flat buildings is required, on site storage details are to be submitted on the plans and set out as below:

   - Location of space within the dwelling for the separation and temporary storage of waste, recyclables and compost with sufficient capacity for a minimum of one days waste or recycling
   - Location and design of the Waste Storage and Recycling Area (Bin bay) on the premises. This must be readily accessible for both residents and waste and recycling contractors.
   - Where applicable design details of any Volume Reduction Equipment. The use of volume reduction equipment (to compact waste materials) may be appropriate where space is a problem. In normal circumstances there will not be a reduction in area requirements where such equipment is proposed, to accommodate future variations to development management and waste disposal options. Volume reduction equipment should not be used on recyclables; removing contaminants from compacted recyclables is almost impossible and compacted contaminated loads will be rejected by end markets.

- For buildings more than three (3) storeys, or where elevator access is required for dwellings on the upper levels a waste service room, or compartment must be provided on each floor of the building for the intermediate storage of garbage and/or recycling. Sufficient space must be allocated for access by residents, storage of bins, and easy manoeuvring of bins.
- The area must be suitably located on premises in terms of accessibility for both the occupants and the waste and recycling contractor. The system for waste management must be compatible with available collection services – collection occurs at the front of the land.
- Measures for protecting bins and any associated waste equipment from theft or damage are to be indicated within the WMP.

3. Provision of ongoing waste management facilities shall include:
   - In the case of multi dwelling housing of 8 or fewer dwellings individual 240L waste bins are to be provided and stored within the courtyard of each dwelling. If such storage is not possible an easily accessible garbage bin bay is to be provided.
   - In the case of multi dwelling housing of 9 or more dwellings and residential flat buildings one or more garbage and recycling enclosures (bin bays) are to be provided within the site.
   - Bin bays are to be well ventilated and screened to a minimum height of 1.5m by a structure and landscaping. Construction materials are to be compatible with the proposed development and adjoining development.
   - Bin bays or waste service rooms are to be sufficiently open and well lit to allow safe use after dark
   - A hose cock for hosing the garbage bin bay and a sewered drainage point are to be provided in or adjacent to the bin storage area. The drainage point should have a fine grade drain cover sufficient to prevent coarse pollutants from entering the sewer. If the hose cock is located inside the bin storage bay it is not to protrude into the space indicated for the placement of bins. Responsibility for cleaning of all waste storage areas should be determined when designing the system and clearly stated in the waste management plan. Frequency of cleaning to eliminate odour and pests should also be indicated on the WMP.
   - Sufficient space must be allocated within the bin bays to allow for access to all required bins by residents and waste collectors, as well as manoeuvring of bins within the bay and for the removal and return of bins by the waste collector.
   - The agreed numbers of bins that will require storage are given as a consent condition.
   - In the case of secure developments where garbage and recycling bins are stored within the secure area, the WMP needs to indicate:
     - Arrangements for supervised access by Council Contractors to collect waste must be shown to the satisfaction of Council; or
     - Arrangements for delivery of bins to kerbside and removal when emptied to within the development must be shown.
     - Council waste and recycling contractors are not to be provided with keys, pass keys, or other mechanical or electronic means of entry to secure developments.

Access to waste and recycling storage

1. Bin bays are to be adjacent to a street frontage, or if not possible then at a designated point adjacent to the common access driveway provided sufficient level areas (<5% grade) is available for bin collection to be carried out, away from vehicle ramps and steps. The bin bay is to be located so that distance from bin bay to the nearest waste

collection point accessible by the collection vehicle is no further than 15m. The bin bay shall be positioned so as to minimise noise impacts on residents from the usage of bins and waste or recycling collection.

2. The access routes should be highlighted on the plan. Access must be made available by wheelchair for occupants. Bin bays should allow for bins to be wheeled by to the street kerb over flat or ramped surfaces with a maximum grade of 7% and not over steps, gutters, or landscape edging. The need for manual handling by collection staff should be kept to a minimum.
3. Residents should not be required to carry waste or recyclables more than 30m to a waste storage area such as a bin bay, or in the case of a residential flat building greater than three storeys, a waste service room for interim storage of waste and/or recyclables. Recycling bins are not to be stored in isolation, but in close proximity to garbage bins or chutes.
4. Waste service rooms or compartments where provided, shall be enclosed and of design compatible with the proposed development. Adequate ventilation shall be provided for the room or compartment. Suitable arrangements for transfer of any interim storage to the main bin bay are to be indicated in the WMP.
5. Waste and recycling collection vehicles should be able to service the development efficiently and effectively and with no need to reverse. Current collection vehicles are fitted with a left side lifter for handling MGBs, with a minimum height clearance of 3.6 m when lifting and 4.7m width when lifting.
6. Council and waste collection contractor vehicles will not enter private property including driveways to collect waste or recycling.

Other Waste Considerations

1. In the case of multi dwelling housing or residential flat buildings of more than 25 dwellings, a designated space reflecting the number of dwellings shall be provided for temporary storage of disposed bulky items awaiting Council clean up or contracted removal. The minimum allocated space must be 6sqm, with a minimum height of 2m. The space shall be signed as to its purpose.
2. No waste incineration devices are permitted.
3. Council will consider applications for buildings more than three (3) storeys or where elevator access is required for dwellings on the upper levels that utilise garbage chutes as a means of transferring waste from each level to a centralised garbage room, with the following criteria:
   - Garbage chute access can only be located within a waste service room or compartment.
   - Recycling chutes are not permitted. Recycling bins for interim storage are to be proved in each waste service room.
   - Garbage chutes are not to be situated adjacent to habitable rooms
   - Applications must state the material the chute is to be made from, how the chute is to be cleaned, how often the chute will be cleaned, how any blockages will be removed and any fire protection measures to be used.
   - The waste collection system that the chute feeds into must be stated (compactor, carousel, open bin) and suitable for the number of dwellings in the development.
4. Signage should be in English, and consideration given to other languages reflective of the most recent demographics of Liverpool LGA. Illustrative graphics will form a minimum 50% of the area of the signage. Council can provide appropriate bin bay usage signs if required. Signage is to be prominently posted in each bin bay, or waste service room indicating that:

- Garbage is to be placed wholly within the garbage bins provided.
- Only recyclable materials accepted by Council shall be placed within the recycling bins.
- The area is to be kept tidy.
- A telephone number for arranging the disposal of bulky items.
- Should garbage chutes be incorporated, signage on how to use the chutes is to be located prominently next to the chute itself.

26. Outdoor Advertising and Signage

Applies to

This section applies to applications for Outdoor Advertising and Signage on any land where “Building identification signs”, “Business identification signs” or “Signage” is permissible with consent under the Liverpool Local Environmental Plan (LLEP 2008) or SEPP 64.

Background

The provision of signage is an integral part of any business to identify it’s presence to potential customers. Depending on the size, quantity and location, signage may have a substantial visual impact on a locality. It is important for Council to strike an appropriate balance between allowing businesses to identify themselves and minimising the visual impact of signage.

Exemptions

Signage types as described in Part 2 Division 2 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 and in Schedule 2 of the Liverpool Local Environment Plan 2008 are exempt development and do not require Council consent. Exempt or complying signage is to be designed in accordance with the requirements identified within each of these planning instruments.

Definitions

Signs described in this section are defined as below. Note that a sign can fit within multiple categories, and if so should comply with all relevant controls. Signage that is not explicitly defined will be assessed on a merit basis.

A-Frame (Sandwich Board) Sign – Freestanding, portable sign consisting of either two advertising boards supporting each other in an ‘A’ configuration or one board supported by one or more posts in an ‘A’ configuration.

Above Awning Sign – Sign attached to the upper side of an awning, other than the fascia or return end.

Digital Sign – Signs which use digital technology to display electronic images. This includes variable message signs and dot matrix display signs, whether or not included in any other class of sign.

Dynamic Digital Sign – Digital sign that displays animations or videos, flashes, or has active display changes.

Fascia Sign – Sign attached to the fascia or return of an awning.

Flashing Sign – Sign illuminated in any part of the advertising area at frequent intervals by an internal or external source of artificial light, whether or not included in any other class of sign.

Flush Wall Sign – Sign attached to the wall of a building (other than the transom of a doorway or display window) and not projecting more than 300mm from the wall)

Freestanding Sign – A sign that is erected or mounted directly into the ground, separately from a building or structure.

High Wall Sign – Flush Wall Sign located such that any part of it is 10m above ground level.

Illuminated Sign – Sign illuminated by an artificial source, whether or not included in any other class of sign.

Illuminated Street Name Sign – Freestanding pole sign comprising an internally illuminated sponsor panel and up to two internally illuminated street name cabinets erected within a road reservation.

Inflatable Sign – Signs that are inflated and placed outside a premises, or on the roof of a building.

Interactive Signage – A form of dynamic signage that includes an interactive function between the sign and pedestrians.

Moving Sign – A sign that involves some form of movement of the sign structure, whether or not included in any other class of sign.

Parapet Sign – Sign attached to or painted on the parapet of a building, but not extending above the parapet.

Projecting Wall Sign – Sign attached to the wall of a building (other than the transom of a doorway or display window) and projecting more than 300mm.

Pylon (Pole) Sign – Sign erected on a pole or pylon independent of any building or other structure.

Roof (Sky) Sign – Sign erected at the roof line that projects above the roof or parapet of a building.

Static Digital Sign – Digital sign that display static images presented successively at intervals only.

Street Sign - Sign erected on public road which include guide signs, warning signs, temporary warning signs, regulatory signs, car parking signs, hazardous markers and service symbols as defined under *AS 1742.*

Top Hamper Sign – Sign attached to the transom of a doorway or display window of a building.

Under Awning Sign – Sign attached to the underside of an awning other than the fascia or return end that is orientated adjacent to the street kerb.

Window Sign – Sign attached to, or displayed on, the shop window.

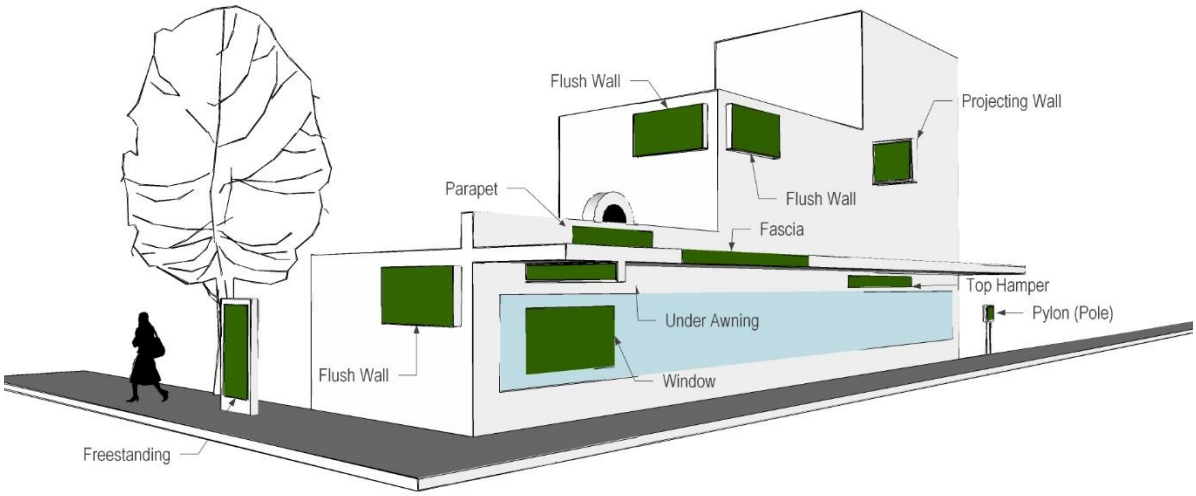


Figure 18 Types of Supported Signs

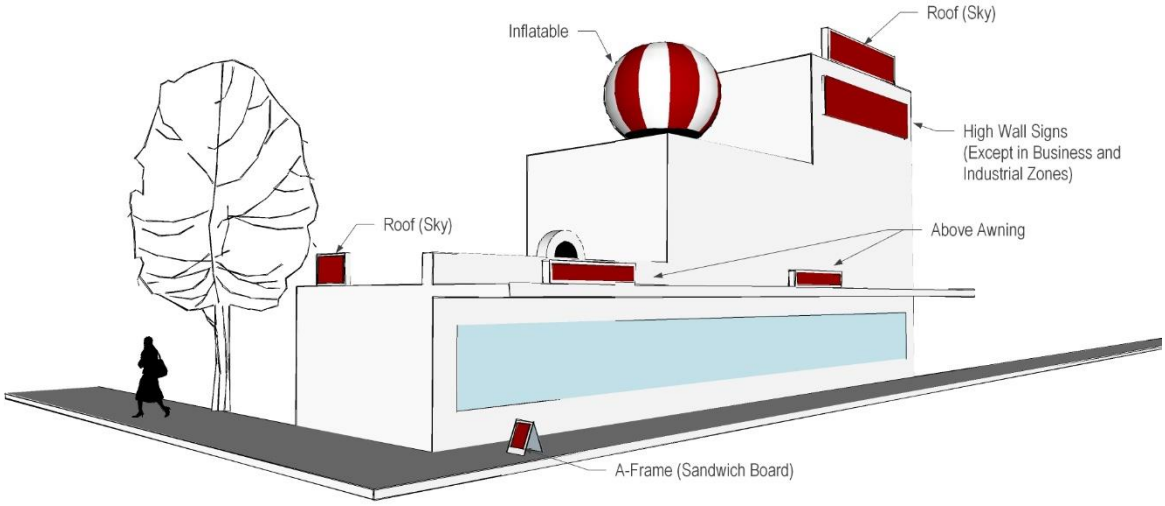


Figure 19 Types of Unsupported Signs

(note: not all signage illustrated is appropriate for a single development)

Objectives

a) To ensure that outdoor advertising signage is complementary to and compatible with the development on which it is displayed and the character of the surrounding locality.

b) To encourage the rationalisation of existing and proposed advertising signs to minimise the extent of visual clutter caused by the proliferation of signs.

c) To provide guidelines for the display of outdoor advertising to ensure that they communicate effectively and contribute positively to the urban and rural environment.

d) To ensure that outdoor advertisements are designed and located so that they do not adversely affect the safety of motorists and pedestrians.

e) To ensure advertising signs express the character of commercial and entertainment environments where appropriate, creating a lively daytime and evening atmosphere.

f) To ensure that outdoor advertising is designed and located in a manner which preserves and enhances areas of environmental significance.

g) To guide signage that achieves clear, attractive and visually clean identification of businesses and buildings.

Controls

26.1 General Controls

Note: As well as these DCP controls, signs must also be merit assessed against the assessment criteria in Schedule 1 of the *State Environmental Planning Policy No 64 – Advertising and Signage*.

1. Signage design, materials, colours, and placement should be visually compatible with the building, nearby signage, and the surrounding locality.
2. The scale of signage must be consistent with the scale of the building or the property on which it is located.

3. Signs must not display offensive content, be reflective, or result in glare.
4. Signage should complement natural features and not result in the removal, trimming or damage of trees and other vegetation.
5. Signage is to be constructed and secured in accordance with the relevant Australian Standards.
6. New and replacement signage should be designed and located in a manner that avoids the intensification of visual clutter caused by the cumulative effect of signage within the streetscape.
7. Signage displays must not contain/use:
    - Flashing lights;
    - Animated display, moving parts or simulated movement;
    - Complex displays that hold a driver's attention beyond glance appreciation;
    - Displays resembling traffic signs or signals, or giving instruction to traffic by using colours and shapes that imitate a prescribed traffic control device or words such as 'halt' or 'stop'; or
    - A method of illumination that distracts or dazzles.
8. Signage shall not hinder driver sightlines to critical road infrastructure.
9. Signage shall not distract a driver from or reduce the visibility and effectiveness of directional signs, traffic signals, other traffic control devices, regulatory signs or advisory signs, or to obscure information about the road alignment.
10. Advertising signage along transport corridors should meet location criteria set out in 'Section 3.2 Sign Location Criteria' of the *Transport Corridor Outdoor Advertising and Signage Guidelines* for assessing development applications under SEPP 64.
11. Signage must not obstruct pedestrian/bicycle paths.
12. Signage must not create trip hazards.

26.2 Signage Controls by Type

Unsupported Signage Types

A-Frame Signs

Above Awning Signs

High Wall Signs (Except in ~~Business and Industrial~~ Employment Zones)

Inflatable Signs

Dynamic Digital Signs

Flashing Signs

Illuminated Street Name Signs

Moving Signs

Roof (Sky) Signs

Static digital signs (Except in B3 Commercial Core and B4 Mixed Use)

Controls for Supported Signage Types

Fascia Signs

1. Not to project above or below the fascia or return end of the awning to which it is attached.
2. Not to extend more than 0.3m from the face of the fascia or return end of the awning.

Flush Wall Signs

1. Not to project above, horizontally or below the wall to which it is attached;
2. Where it is illuminated, it must be at least 2.6m above the ground level.
3. Not to extend more than 0.3m from the face of the wall to which it is attached.

High Wall Signs

1. Supported within the ~~Business and Industrial~~ Employment zones only.
2. Multiple high wall signs are not supported on a single building elevation.
3. Signage area on a building elevation must not exceed 20% of that building elevation that is visible from a public space.
4. Must not project above or horizontally from the wall to which it is attached.
5. Must not face residences or open space.
6. Must not extend more than 0.3m from the face of the wall to which it is attached.

Illuminated Signs

1. The display should be energy efficient.
2. For night-time use, illumination must not cast shadows on areas that were previously lit and that have a special lighting requirements, such as pedestrian crossings.
3. Daytime luminance levels are to comply with the Transport Corridor Outdoor Advertising and Signage Guidelines, as outlined below. Night-time luminance levels are to be one-quarter of the daytime luminance levels.

Illuminated Area (sqm)	**~~B3 and B4~~ E2 and MU1 zones**	**~~Industrial Zones and all other Business~~ E1, E3, E4 and E5 Zones**	**Residential and Rural Zones**
Up to 0.5	2,900cd/sqm	2,000cd/sqm	1,000cd/sqm
0.5-2.0	2,300cd/sqm	1,600cd/sqm	800cd/sqm
2.0-5.0	2,000cd/sqm	1,200cd/sqm	600cd/sqm
5.0-10.0	1,500cd/sqm	1,000cd/sqm	600cd/sqm
Over 10.0	1,200cd/sqm	800cd/sqm	400cd/sqm

Table 22 Maximum daytime luminance of illuminated signs (not including digital signs).

Pole or Pylon Signs

1. The height of pole or pylon signs from the ground level are to be in proportion with the scale of the subject and surrounding development.
2. A minimum clearance of 2.6m from ground level to the underside of the sign.

Projecting Wall Signs

1. Not to project above the top of the wall to which it is attached;
2. Not to project more than 1.2m from the wall to which it is attached;
3. A minimum clearance of 2.6m from the ground level to the underside of the sign;

4. A minimum of 0.6m clearance inside the kerb.

Static Digital Signs

1. Static digital signs are supported within the B3 Commercial Core and B4 Mixed Use zones only.
2. The display screen is not to be split to display multiple advertisements simultaneously.
3. In the event of a malfunction, the display must default to a blank black screen.
4. Signs are not be positioned at the end of a terminating street.
5. The display should be energy efficient.
6. In the case where the content changes:
   a) Each advertisement is to be displayed for a minimum of 10 seconds where the speed limit is below 80km/h and a minimum of 25 seconds for areas where the speed limit is 80km/h or above.
   b) Each change of content shall be completed within 0.1 of a second.
7. Luminance levels are to comply with the Transport Corridor Outdoor Advertising and Signage Guidelines, as outlined below.

Lighting Condition	~~Business and Industrial~~ Employment Zones	Residential and Rural Zones
Day time luminance	6,000cd/sqm	6,000cd/sqm
Morning, evening, twilight and inclement weather	700cd/sqm	500cd/sqm
Night time	350cd/sqm	150cd/sqm

Table 23 Luminance levels for digital signs

Top Hamper Signs

1. Not to extend more than 0.2m beyond any building alignment;
2. Not to extend below the head of the doorway or window above which it is attached.
3. Not to extend across more than 50% of the business frontage.

Under Awning Signs

1. Maximum size not to exceed 2.5m in length and 0.5m in height.
2. Erected horizontally to the ground and a minimum clearance of 2.6m from the ground level to the underside of the sign.
3. A minimum of 0.6m clearance inside the kerb.
4. Not to project beyond the awning.

Window Signs

1. Must not occupy more than 25% of the area of the window area.

26.2 Signage Controls by Type

Rural Zones

Controls

1. One pole or pylon sign with a maximum area of 2sqm and a maximum overall height of 2m above the ground per lot.
2. One additional sign with a maximum area of 0.75sqm is permitted on the face of a building in an architecturally compatible manner where the business is carried out.
3. Additional signs for the purposes of tourist facilities may be permitted if compatible with the use of the site and the character and rural amenity of the area.

Residential Zones

Controls

1. One sign with a maximum area of 0.75sqm is permitted per business operation or activity.
2. Maximum height of a free standing sign is 2m above ground level.
3. Signs are not permitted on walls facing adjoining residences.
4. Illuminated signs, except for health consulting rooms and veterinary hospitals, are not supported.

~~Business~~ Employment (E1, E2, MU1 and E3) Zones

Controls

1. The cumulative area of all signs is not to exceed 1sqm of advertising area per 1m length of street frontage.
2. One under awning sign is permitted on each shop or commercial premises. For premises with wide frontages, under awning signs are permissible at a maximum rate of one sign per 8m of frontage.
3. Under-awning signs are to be at least 6m apart to provide adequate visibility.
4. One projecting wall sign is permitted per building elevation.
5. One flush wall sign is permitted per building elevation.
6. Signs painted on awning blinds or window blinds are not supported.
7. Signs in excess of a total of 50sqm in area are generally unsupported and are to be considered on their merits.
8. Signs must not be present on walls facing adjoining residences.
9. For development in the B6 Enterprise Corridor zone, pole signs are limited to a maximum of one pole sign per development. Applications for additional pole signs will be considered on individual merit.

Note: For signage in the Liverpool City Centre, applications will be referred to Council's City Design and Public Domain Department for assessment.

Industrial (E4 and E5) Zones

Controls

1. A maximum of one freestanding, pole or pylon sign per building or site applies (including directory board for multiple occupancies). The sign, not exceeding 5sqm in area and 5m in height, is to be located within an area of 5mx3m on either side of the ingress to the premises, as shown in Figure 3.

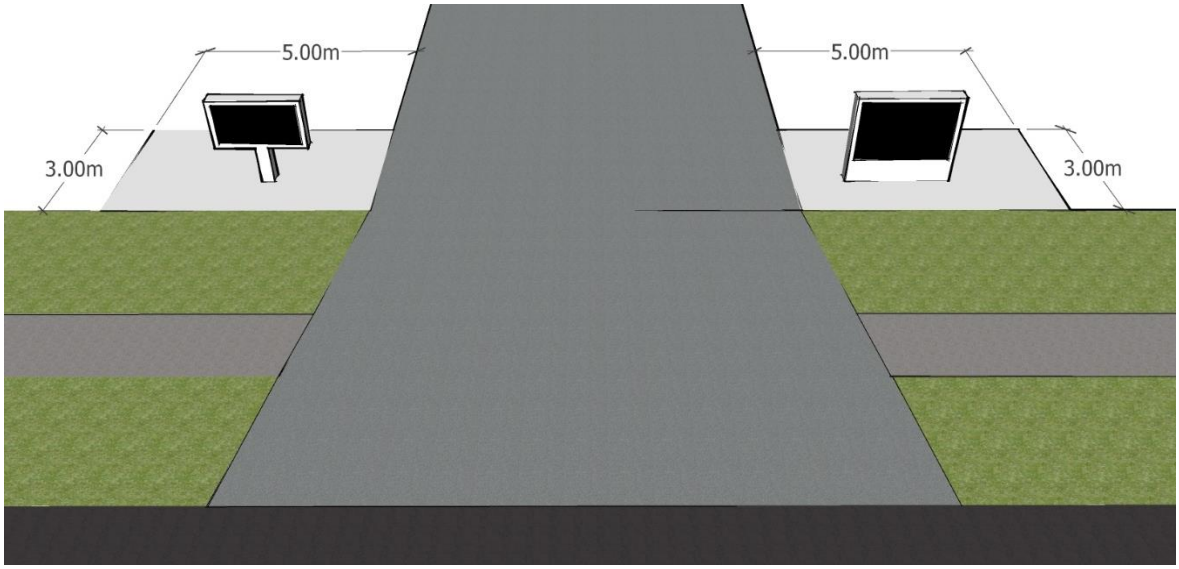


Figure 20 Permissible area for pole or pylon sign at the ingress to Industrial E4 and E5 Zone development.

2. For multiple occupancy development, one company identification sign with a maximum area of 2 x 0.6m is supported at the entrance to each occupied unit. Such signs are to be of a uniform shape, size and general presentation.
3. For single user development, additional company identification signage is supported at the maximum rate of 1sqm of advertising area per 3m of street frontage or a maximum of 50sqm whichever is the less. (Corner lots will be assessed on the length of the main presentation frontage of the building only.)
4. Signs in excess of a total of 50sqm in area are generally unsupported and are to be considered on their merits.

Signage on Heritage Items or within Heritage Areas

Controls

1. Signage should be located in areas of the building which have been traditionally used for signage. If such areas do not exist, new signage locations will be assessed on a merit basis.
2. Signage will not be supported if it blocks views to or from the item, covers any existing features or detracts from the building.
3. Signage will not be supported if it requires unsympathetic additions to a building, or results in irreparable damage.
4. The content of a sign approved for a heritage building is restricted to the name of the business, address and contact details. No other content will be supported.
5. Window signage should be discreet in size and designed to avoid detracting from the heritage qualities of the building.
6. Illuminated signage is not supported, unless it replaces an existing illuminated sign and the method of illumination is discrete.
7. Any proposed signage should not adversely impact on the heritage significance of the item which includes the material and visual form of the item.

Note: Signs on heritage items or within heritage areas will be referred to Council's Heritage Officer for assessment.

Recreation Zones

Controls

1. Pole or pylon signs are limited to a maximum rate of one pole sign per vehicular entry point to the recreational facility.
2. Each pole sign is not to exceed 10sqm in area and not more than 7m in height from ground level.
3. Signs in sports grounds may be situated on the perimeter fencing of the play area and on scoreboards and must face the play area only.

26.4 Signage Controls for specific Developments

Service Stations

Controls

1. Only pole or pylon signs, canopy fascia signs, and top hamper signs are supported.
2. One pole or pylon sign is permitted per street frontage.
3. One additional pole or pylon sign with a maximum height of 2.5m from ground level for the display of prices of fuels is permitted at the rate of one sign per ingress point to the development.
4. The total signage area for a development should not exceed 50sqm.

Exhibition Home and Exhibition Village

Controls

1. One pole or pylon sign with a maximum area of 2.5sqm and a maximum height of 3m from ground level is appropriate for an exhibition home that is not within an exhibition village.
2. Advertising signs within exhibition villages must have a uniform shape, size and general presentation.
3. For each exhibition home within an exhibition village, one pole or pylon sign with a maximum area of 2.5sqm and a maximum height of 5m from ground level is appropriate.
4. Signs for ancillary uses such as sales offices, home financing and materials display require additional consent.
5. Illuminated signs are not supported.

26.5 Third Party Advertising

Third party advertising signage is permissible only on land zoned B3 Commercial Core or B4 Mixed Use and may only be erected if approved by a Development Application.

Objectives

a) To minimise visual clutter and adverse amenity impacts caused by the cumulative impact of signage and advertising.

b) To ensure that third party advertising does not dominate the view from open space and along Macquarie Street in the Liverpool City Centre.

c) To ensure that third party advertising signage does not dominate the public realm within centres.

Controls

1. Third party advertising:

a) is limited to a maximum of one third party advertising sign per land allotment frontage.

b) is limited to a maximum advertising area of 50sqm. Proposals for signage larger than 50sqm are to be merit assessed and permitted in exceptional circumstances only where architectural excellence and public benefit is demonstrated.

c) must not terminate the view down any street.

d) must not obscure an existing sign.

2. Signage used for third party advertising must be included when calculating the overall signage allowance of a site, as detailed in Section 26.2 above.

3. Third party advertising signage must respect pedestrian focused areas and must not dominate the views of surrounding buildings.

4. Third party advertising signage within Macquarie Street must respect the fine-grained and retail focused character of the street by avoiding visually dominant and disruptive signage design.

5. Third party advertising on stand-alone structures is discouraged, and will only be permitted where it contributes to a demonstrated civic benefit to those who will view it.

27. Social Impact Assessment

Applies to

This section applies to applications for the types of development listed in Table 1, and any other types of development if notified in writing by Council. This section does not apply to development that is otherwise permitted without consent.

Background

Social impacts include the intended and unintended effects of a change or activity on the well-being of a community, families and individuals. Demand for a greater focus on social impacts has been driven by:

- a changing demographic profile and pressures arising from the growth and positioning of Liverpool as the regional city for South Western Sydney;
- increasing awareness of planning authorities to apply social criteria in making decisions about development and land use;
- increasing emphasis by Council and the community in considering social issues.

Council has a statutory obligation under Section 79C of the Environmental Planning and Assessment Act 1979 to consider the social impacts of development applications. The Liverpool Local Environmental Plan 2008 aims to "foster economic, environmental and social well-being so that Liverpool continues to develop as a sustainable and prosperous place to live, work and visit".

Social impact assessment is a process that aims to identify and manage the potential positive and negative consequences of development to optimise social outcomes, consistent with Council's objectives for the community. Council is committed to the process of social impact assessment as a means of considering social issues more comprehensively and consistently in its planning and decision making. Council requires a social impact assessment to be submitted with development applications for specific types of development. In addition, Council may, at its discretion, require a social impact assessment for other types of development.

Objectives

a) To ensure distributional equity of positive and negative social impacts of development, to help build healthier communities where people want to live and work;

b) To apply a precautionary approach to, and encourage effective community engagement and participation in, planning and development decisions that may have significant impact;

c) To ensure social impact assessments are undertaken in a consistent and transparent manner, by an appropriately trained person, and contain the information required to enable objective evaluation of potential impacts by Council.

Controls

1. A social impact assessment shall be submitted with a development application for all types of development listed in Table 21. The social impact assessment shall take the form of a Social Impact Comment or a Comprehensive Social Impact Assessment, as specified in Table 21.

2. Council may, at its discretion, alter the requirements for social impact assessment at any stage of the development assessment process, if it deems a proposal to foreseeably generate or contribute to social impacts that are substantially less or more significant than envisaged in Table 21. This discretion rests with the

Executive Management Team, with consideration of recommendations made by Council staff.

3. A social impact assessment shall be submitted for any types of development not listed in Table 21 if, at any stage of the development assessment process, Council deems the proposal to foreseeably generate or contribute to significant social impacts. The social impact assessment shall take the form of a Social Impact Comment or a Comprehensive Social Impact Assessment.

4. Any social impact assessment shall be prepared in accordance with Council's Social Impact Assessment Policy.

Note:
Applicants are advised to consult with Council before lodging a development assessment, to discuss Council's specific requirements relating to social impact assessment. Council will notify applicants in writing of any changes to requirements for social impact assessment.

Table 24 Types of development for which a social impact assessment is required

Type of development	Social Impact Comment	Comprehensive Social Impact Assessment
Residential development	Applications for development of, or major changes to: - Residential flat buildings **greater than 20 units** - Multi-dwelling housing **greater than 20 dwellings** - Residential subdivision **greater than 20 dwellings** - Affordable housing, within the meaning of SEPP (Affordable Rental Housing) 2009 – excluding secondary dwellings - Housing for seniors or people with a disability, within the meaning of SEPP (Housing for Seniors or People with a Disability) 2004 - Student housing - Caravan parks	Application for development of, or major changes to: - Residential flat buildings **greater than 250 units** - Development that results in a reduction of affordable housing

Commercial development	Applications for development of, or major changes to: - Entertainment facilities - Amusement centres - Function centres (greater than 100 persons capacity) - Retail centres and other commercial development, including tattoo parlours	Applications for development of, or major changes to: - Packaged liquor outlets - Hotels (bars, pubs, taverns), nightclubs and registered clubs - Applications for liquor licences and gaming machines* - Extension of trading hours for licensed premises - Gaming outlets - Restricted premises (e.g. sex shops) - Sex services premises (e.g. brothels) - Gun shops
Other types of development	Applications for development of, or major changes to: - Childcare centres (more than 20 places) - Places of public worship (greater than 200 persons capacity) - Educational establishments - Health consulting rooms - Council-owned community facilities, including community centres, libraries, childcare centres and recreation facilities - Community land, as classified by the Local Government Act 1993	Applications for development of, or major changes to: - Drug rehabilitation services – including methadone clinics and safe injecting rooms - Hospitals, medical centres and community health service facilities - Freight transport facilities - Major public transport facilities

28. Shopping Trolleys

Applies to

This section applies to any development that will provide shopping trolleys for customers.

Background

Abandoned shopping trolleys are a major problem throughout the Liverpool LGA as they tend to end up in streets, parks and waterbodies.

Objectives

To minimise the abandonment of shopping trolleys.

Controls

1. A management plan is required for all businesses that offer the use of trolleys to their customers. At a minimum the management plan must contain the following elements:
   - A list of contacts for the store/premises (including phone numbers).
   - A statement verifying that trolley management will be undertaken in accordance with the relevant consent (the consent is to be attached as an addendum once issued).
   - Methods for identifying shopping trolleys that belong to a specific business (e.g. serial numbers, company logo, tracking device etc.).
   - A schedule for the daily collection of abandoned shopping trolleys, including details of trolley collection routes.
   - Details of a trolley containment system which restricts the removal of trolleys from the premises.
   - Measures to ensure that any trolleys reported as posing a risk or nuisance, are collected immediately upon notification (this may require an “after hours” collection service).
   - A register of all trolleys that have been reported or collected (including instances where the trolley was not found at the reported location).
   - Methods for warning customers about the consequences of abandoning or removing trolleys from the premises.
   - A site plan of the premises showing the location of trolley bays and exit points.

   Note:

   Council must be notified of any updates to the plan of management.

2. A trolley containment system must be provided for businesses with 20 or more trolleys. Such examples include:
   - Coin/token operated system with refund
   - Trolleys with wheel locks activated by a radio signal or magnetic strip
   - Radio signal transmitters on trolleys

29. Safety and Security

29.1 Safety and Security

Background

The design of buildings and public spaces has an impact on perceptions of safety and security, as well as actual opportunities for crime. A safe and secure environment encourages activity, vitality and viability, enabling a greater level of security.

Objectives

a) To ensure developments are safe and secure for pedestrians.

b) To reduce opportunities for crime through environmental design.

c) To contribute to the safety of the public domain.

d) To encourage a sense of ownership over public and communal open spaces.

Controls

1. Address 'Safer-by-Design' principles in the design of public and private domain, and in all developments including the NSW Police 'Safer by Design' Crime Prevention Though Environmental Design (CPTED) principles.
2. Submit a 'Safer by Design' assessment in accordance with the CPTED principles from a qualified consultant for retail and commercial development with a gross floor area of more than 5000sqm.

29.2 Pedestrian Access and Mobility

Background

New development must be designed to ensure that safe and equitable access is provided to all, including mobility impaired people.

Objectives

a) To provide safe and easy access to buildings.

b) To ensure buildings and places are accessible to people with a disability.

c) To provide a safe and accessible public domain.

Controls

1. Main building entry points should be clearly visible from primary street frontages and enhanced as appropriate with awnings, building signage and high quality architectural detail.
2. The design of facilities (including car parking requirements) for disabled persons must comply with the relevant Australian Standard (AS 1428 Pt 1 and 2, or as amended) and the Disability Discrimination Act 1992 (as amended).
3. Barrier free access is to be provided to not less than 20% of dwellings in each multi-dwelling development and associated common areas.
4. One main pedestrian entrance is to be provided with convenient barrier free access in all multi-dwelling developments to the ground floor.
5. Pedestrian access ways, entry paths and lobbies must use durable materials commensurate with the standard of the adjoining public domain (street) with appropriate slip resistant materials, tactile surfaces and contrasting colours.

30. Additional Uses

30.1 Restricted Premises

Background

Liverpool LEP 2008 permits restricted premises within the ~~business~~ E1, E2, MU1 and E3 zones. The following provisions are provisions for that particular land use.

Objectives

a) To ensure that the design and external appearance of restricted premises, including colour scheme and lighting, does not have an adverse impact on the architectural character of the surrounding built environment and streetscape appearance.

b) To ensure that the safety of all staff and visitors to restricted premises is maintained when approaching, entering and leaving the premises.

c) To ensure that restricted premises are provided with appropriate facilities in accordance with the relevant occupational health and safety provisions.

d) To ensure that adequate and suitable facilities are provided within restricted premises to ensure the privacy, comfort, safety and security of staff and patrons.

e) To ensure that advertising and signage associated with restricted premises is discreet, does not draw attention to the use and does not result in visual clutter or other adverse visual impacts on the surrounding area.

f) To minimise the potential for the operation of a restricted premises to cause a disturbance in the surrounding area because of its size, location, hours of operation, number of employees or clients, or proximity to other restricted premises or sex services premises.

g) To ensure the safe and adequate storage, handling and disposal of contaminated waste.

Controls

Siting of Premises

1. Restricted premises shall not be located within 150m of any land zoned residential or any place of worship, school, community facility, child care centre, hospital, rail station, bus stop, taxi stand, licensed premises (i.e. hotel, club, restaurant), or any place regularly frequented by children for recreational or cultural pursuits.
2. Restricted premises shall not be located within 150m of any land for which a consent for the uses listed in item 1 above exists.
3. In determining an application to carry out development for the purpose of restricted premises, the consent authority must consider the following matters:
   - whether the operation of the restricted premises will be likely to cause a disturbance in the neighbourhood because of its size, location, hours of operation, clients or the number of employees and other people working in it;
   - whether the operation of the restricted premises will be likely to interfere with the amenity of the area; and
   - whether the operation of the restricted premises will be likely to cause a disturbance in the neighbourhood when taking into account other businesses operating in the neighbourhood offering similar goods and services and involving similar hours of operation.

Design of Premises

1. No part of the premises (other than an access corridor to the premises) shall be located at ground floor level, mezzanine, sub-basement level or street level or be visible from a public place.
2. Restricted premises must be designed so that there is only one visible pedestrian entrance to the premises from the primary street frontage. In instances where there is no front access and/or front access is impractical, Council will consider a side or rear pedestrian access where adequate attention has been given to safety and security matters.
3. Rear or side pedestrian access is to be limited to one only, unless it can be demonstrated to Council's satisfaction that more than one access contributes to the amenity and functional efficiency of the restricted premises and surrounding uses and does not result in safety and security concerns or visual clutter via the need for additional signage.
4. The external appearance of restricted premises must respect the character and appearance of the streetscape, such that they do not become a prominent feature in the street. In this regard, the external colour scheme of these premises is to be consistent with surrounding colour schemes. Vivid and/or ostentatious colour schemes will not be permitted unless it can be demonstrated that the proposed colour scheme would be in keeping with the existing streetscape.
5. All entrances and exits of restricted premises must have appropriate lighting to ensure the safety of all staff and visitors as they arrive and leave the premises. Any flashing, intermittent etc. lighting used in conjunction with a restricted premises must not be visible from a public place.
6. No merchandising display relating to the sex services premises shall be erected, displayed or exhibited in any location which is visible from a public place or in an access corridor (including any stairwell to the premises).

Signage

1. Signage is to be discreet and is limited to a combination of the business name, address and phone number.
2. There is to be one sign, not exceeding 1.m2 area, per premises. A second sign may be permitted where pedestrian access is provided at the side or rear of the site.
3. The content, illumination and shape of the sign must not interfere with the amenity of the locality. In this regard, signs are not to include suggestive or offensive material, or include colours or designs that may distract passing motorists. Illumination of signs must not cause nuisance to any adjoining premises or interfere with the amenity of the area.
4. In addition to a business identification sign, a clearly visible street number is to be displayed on the premises.

Note: In addition to the above controls, applications for restricted premises must comply with the requirements of the Crimes Act 1900 Section 578 (e) and Classification (Publications, Films and Computer Games) Enforcement Act 1995.

30.2 Non Business Uses

Background

Liverpool LEP 2008 permits a range of Non Business land uses within the ~~business~~ E1, E2, MU1 and E3 zones. These Non-Business land uses may involve using an existing industrial development or construction of a new development. The following

provisions are additional provisions for particular land uses. These land uses shall also comply with the other provisions of the DCP.

Objectives

a) Ensure that the Non Business developments are compatible with the Business environment.

b) Ensure that the Non Business developments do not unnecessarily restrict the operation of Business and related uses in ~~Business areas~~ E1, E2, MU1 and E3 zones.

c) Ensure that Non Business developments are designed to operate without adverse impact from Business developments.

Controls

Site Planning

1. Site planning for a Non Business development shall give consideration to how minimise the impact of uses on the site and how to ensure that a proposed use would not unduly impose restrictions on existing or future nearby business uses.

Building Appearance, Streetscape and Layout

2. All developments in ~~a business area~~ E1, E2, MU1 and E3 zones shall present a shop front to the street. Closing in of windows or painting over windows shall not be permitted.

Amenity and Environmental Impact

3. Where the hours of operation are after sunset, the car parking areas and any other public areas shall be provided with lighting to provide a safe environment for users of the premises after hours; and

4. A Noise Impact Assessment Statement prepared by a qualified Acoustics Engineer may be required to be submitted with the application depending on the scale and location of the proposed use to show that the use can operate satisfactorily in the business area.

30.3 Restaurants/Outdoor Cafes

Background

There is an increasing trend to have outdoor eating in conjunction with restaurants and cafes. This contributes to the activity in ~~business area~~ E1, E2, MU1 and E3 zones. There is however a potential conflict between the users of outdoor eating areas and users of the footpath areas.

Objectives

a) Ensure that outdoor cafes enhance the economic viability for centres.

b) Ensure that outdoor cafes enhance the streetscape to create attractive and vibrant surroundings.

c) Preserve or enhance public amenity, safety and access.

Controls

These controls apply to outdoor eating areas on public footpaths. Other than Hours of operation, these controls do not apply to outdoor eating areas may also take place on private land.

Streetscape and Layout

General Requirements

1. A minimum width of 2.5m of footpath shall be available for pedestrians thoroughfare at all times.
2. There shall be no increase in the number of chairs and tables at each individual cafe site without further approval from Council.
3. Outdoor furniture shall remain at least 3m away from a corner, pedestrian crossing, bus stop, taxi stand or anywhere pedestrians often congregate to cross the road or wait for services.
4. Outdoor furniture shall remain at an appropriate distance from any pedestrian crossing, disabled parking spaces, post box, public telephone, street sign, street tree or other street structure to ensure that these facilities remain accessible and/ or retain function. An appropriate distance will be determined by Council officers.

Controls for footpaths greater than 6m

5. Outdoor furniture must be located at least 2.5m away from the shop front. This leaves an appropriate width to ensure there is unobstructed pedestrian thoroughfare. See Figure 42.
6. Outdoor seating shall be arranged to ensure a minimum of a 1m clearance is retained from the back of the kerb to the furniture. This ensures that passengers in vehicles can enter and exit vehicles safely.
7. In some instances Council may require more than 1m width from the back of the kerb.

Controls for footpaths less than 6m

8. Outdoor furniture shall be located abutting the building frontage/shop front. This provides an appropriate width for safe pedestrian passage.

Written Consent

9. A standard letter of consent must be provided by the owner of the building from which the associated business operates. However in the event that permission is withheld without due cause and Council judges this to be unreasonable consideration will be given to proceeding without it. The owner will be informed by letter of the development application at the commencement of the public exhibition.
10. A standard letter of consent must also be provided by neighbouring tenants on each side of the associated business. However in the event that permission is withheld without due cause and Council judges this to be unreasonable consideration will be given to proceeding without it. The neighbouring tenants will be informed by letter of the development application at the commencement of the public exhibition.

Car Parking and Access

11. No additional car parking is required for any outdoor eating area.

Amenity and Environmental Impact

12. The hours of operation shall be restricted to between 7:00 to 10:00 pm, unless otherwise varied by Council.

Site Services

13. If any of Council's street furniture or other items such as garbage bins, seats and planter boxes has to be removed for the installation of outdoor cafe seating, then that removal and any subsequent re-erection in the vicinity shall be at the permit holder's expense and shall be completed to Council's satisfaction;
14. Any additional lighting to normal street lighting shall be provided at the applicant's expense and shall be completed to the satisfaction of Council; and

15. Any illuminations shall be appropriately managed during operations of the premises.

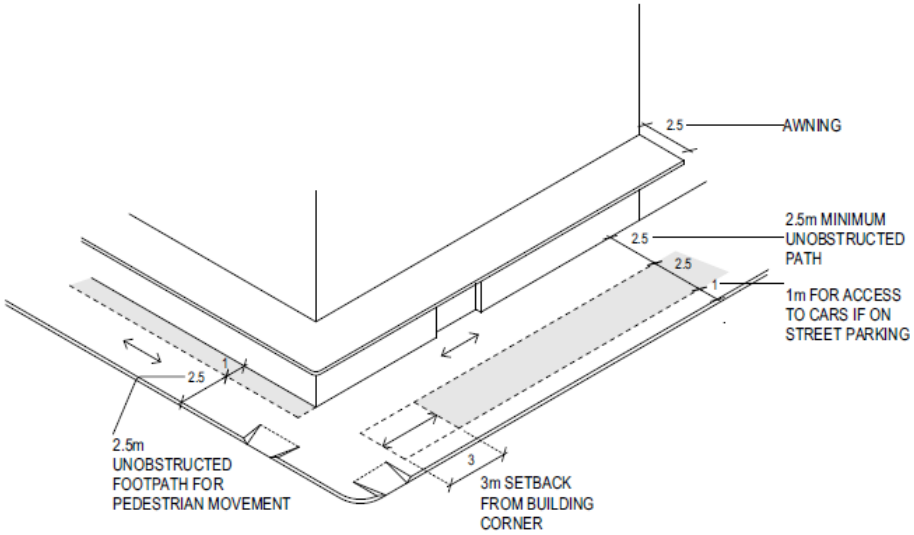


Figure 21 Indicative Outdoor Seating Zones

30.4 Child Care Centres

Background

There is an increasing need to have child care centres in close proximity to work places and places of residence. The need to locate child care centres in close proximity to work places and places of residence in ~~business centres~~ E1, E2, MU1 and E3 zones is balanced by the need to ensure that other business uses do not adversely affect the operation of a child care centre and vice versa.

The State Environmental Planning Policy (Educational Establishments and child Care Facilities) 2017 includes planning provisions for the development of centre-based child care facilities. The Child Care Planning Guideline 2017 provides additional guidance that must be addressed by any centre-based child care facility development application.

Provider and Service Approval

In order to operate a child care centre, the applicant needs to obtain the following:

1. Development consent from Council under the *Environmental Planning and Assessment Act 1979*.
2. Provider and service approval to operate from the NSW Department of Education.

Objectives

a) Ensure that Child Care Centres are compatible with the business environment.

b) Minimise any adverse impact of Child Care Centres on surrounding properties.

c) Locate childcare centres where they would not have an adverse impact on the safety and health of children.

It is strongly recommended that applicants arrange a meeting with Council prior to submitting a development application to ensure that all the pre-requisite documentation is in order. This will save time and money for the applicant.

Building Appearance

Objectives

a) Encourage designs that will enhance the character of the City Centre.

b) Ensure high visibility of entrances when the child care facility is located in a multi storey building.

c) Ensure child care buildings address all street frontages.

d) Ensure that the building design, detailing colour and finish shall add visual interest to the street and shall complement the street.

Controls

1. The building shall be designed so:
   - That it is in character with the surrounding residential area in terms of bulk, scale, size and height; and
   - That it employs passive solar and energy saving techniques where possible.
2. The front pedestrian entrance must be visible from the street.
3. Buildings that face two street frontages or a street and public space must address both frontages by the use of verandas, balconies, windows or similar modulating elements.

Landscaping

1. A landscape plan must be submitted to Council with the development application. Refer to Part 1 of the DCP.
2. Areas of grass are to be limited to play areas. Other landscaped areas are to be planted.
3. Trees adjacent to/or within the play area, are to provide shade and allow winter sun entry. Trees adjacent to private open space areas and living rooms should provide summer shade and allow winter sun entry.
4. Landscaping species must be appropriate to prevent injury to children. No toxic, spiky or other hazardous plant species.
5. If there are setback areas these are to be utilised for canopy tree planting. The landscape design for all development must include canopy trees that will achieve a minimum 8m height at maturity within front and rear setback areas. Any tree with a mature height over 8m should be planted a minimum distance of 3m from the building or utility services.
6. Landscape planting should principally comprise of native species to maintain the character of Liverpool and provide an integrated streetscape appearance. Council will consider the use of deciduous trees in small private open space areas such as courtyards for control of local microclimate and to improve solar access.
7. Tree and shrub planting alongside and rear boundaries should assist in providing effective screening to adjoining properties. The minimum height of screening to be provided is 2.5m to 3m at maturity.
8. Landscaping on any podium level or planter box shall be appropriately designed and irrigated. See ADG Planting on Structures.

Car Parking and Access

Access for the disabled including those with prams is to be provided from the car parking area to the building.

Amenity and Environmental Impact

1. Child Care Centres shall be designed and operated so that noise generated by the centre does not impact significantly upon adjoining properties.
2. Child Care Centres shall not be constructed on sites that are contaminated.
3. All buildings, whether to be built, extended, renovated or converted to a Child Care Centre shall not contain any material or substance that will cause lead or asbestos or other contamination or poisoning.

Appendix 1 - Definitions

The following list of definitions used in the DCP which are not defined in *Liverpool LEP 2008* or the *Environmental Planning and Assessment Act 1979*. Please refer to these for the appropriate definition.

Access Driveway	A roadway extending from the edge of the frontage to the property boundary to connect with the first ramp, circulation roadway or aisle encountered, and carrying one or two-way traffic.
Active Frontage	A street frontage that is characterised by lively pedestrian activity.
Adaptable Housing	The definition as contained within *Adaptable Housing Australian Standard AS 4299 (1995).*
Adaptation or adaptive reuse	means the modification of a heritage place to a new use that conserves its heritage values. Adaptation may involve the introduction of new services, or a new use, or changes to safeguard a heritage item. A good adaptation is one that is sympathetic to the existing building and its historic context, and inserts new work, or makes changes that enhance and complement the heritage values of the heritage item.
Adjoining land	Land, which abuts the land, which is the subject of an application, or is separated from it only by a pathway, driveway or similar thoroughfare.
Affected person means a person:	(a) who owns or occupies land that adjoins a site which is the subject of an application in which their enjoyment may be detrimentally affected by a proposed development; or (b) who owns or occupies neighbouring land.
ANZECC	(*Australian New Zealand Environmental Conservation* Council) Guidelines for the Assessment and Management of Contaminated Sites.
Annual Exceedance Probability (AEP)	Is the probability of a flood of a given or larger size occurring in any one year, usually expressed as a percentage. For example, if a peak flood discharge of 500m^3/s has an AEP of 1%, it means that there is a 1% probability (that is one-in-100 chance) of a peak flood of 500m^3/s or larger occurring in any one year (see average recurrence interval).
Apron	The area in front of the loading dock including the service bay.
Arborist	A person who is qualified in arboriculture or tree surgery.
Atrium	A void intersecting all building levels that brings light (and sometimes air) into a building core.
Australian Height Datum (AHD)	A common national plain of level corresponding approximately to mean sea level.
Australian Noise Exposure Forecast (ANEF) contour	A contour marked on a map to determine a level of noise exposure by aircraft. Certain restrictions apply to development within these contours.
Average Recurrence Interval (ARI)	The long-term average number of years between the occurrences of a flood as big as, or larger than, the selected event. For example, floods with a discharge as great as, or greater than, the 20 year ARI flood event will occur on average once every 20 years. ARI is another way of expressing the likelihood of occurrence of a flood event.
Basement car parking	Car parking areas generally below ground level, or above natural ground level and enclosed by bunding, where inundation of the surrounding areas may raise water levels above the entry level to the basement, resulting in rapid inundation of the basement to depths greater than 0.8m. Basement car parks are areas where the means of drainage of accumulated water in the car park has an outflow discharge capacity significantly less than the potential inflow capacity.
Batter	The slope of a dam embankment wall.

Berm	Soil piled against the length of a wall at an angle to reduce the exposure of surface area to solar radiation and to assist in the maintenance of equilibrium between subsoil ground temperature and the building's thermal mass. Berms also provide insulation against noise.
Borrow pit	An area from which excavated soil is taken to construct the embankment of a dam.
Buffer zone	An area of land, set aside to minimise the impacts of land uses on each other.
Building footprint	The area of the site occupied by buildings and includes other structures attached to the main building such as decks, verandas, garages and carports.
Bushland	means land on which there is vegetation which is either a remainder of the native plants of the land or, if altered, is still representative of the structure and floristics of the natural vegetation.
Canopy	That part of the tree above the main stem comprising primarily branches and foliage.
Car Space	The area of pavement required to park one car, and is usually delineated.
Character	is defined by the combination of the particular characteristics or qualities of a place.
Collector street	A non-Classified Road, which collects and distributes traffic in an area, as well as servicing the abutting property.
Commercial Vehicle	The trucks and vans used for commercial purposes. Cars, station wagons and utilities may also be used for commercial purposes but are, by definition, not included because they become submerged in the large number of such vehicles, which are used for private purposes. Dimensions of typical commercial vehicles are found in Section 4 of this document.
Compatible use	means a use that involves no change to the culturally significant fabric, changes which are substantially reversible or changes which require a minimal impact.
Composting	The breakdown of organic matter by microbial action.
Conservation	means all the processes of looking after a place so as to retain its cultural significance. It includes maintenance, and may according to circumstance, include preservation, restoration, reconstruction and adaptation and will commonly be a combination of more than one of these.
conservation management plan	means a document prepared in accordance with the NSW Heritage Branch guidelines which establish the heritage significance of an item, place or heritage conservation area, and identify conservation policies and management mechanisms that are appropriate to enable that significance to be retained.
Contaminated soil	Soil that contains a concentration of chemical substances that are likely to pose an immediate or long-term hazard to human health or the environment.
Council	The Council of the City of Liverpool.
cultural significance	means aesthetic, historic, scientific, or social value for past, present or future generations.
dB(A)	Decibels of the 'A-scale' – a set frequency-weighted scale of noise which allows for lack of sensitivity of the ear to sound at very high and very low frequencies.
Design floor level	The minimum floor level that would apply to development if it was not categorised as Concessional Development. The floor level standards specified for the relevant land use category (excluding Concessional Development) in the low flood risk precinct are to be applied.
Drip Line	The area directly beneath the outer canopy of the tree.
Demolish a building	To wholly or partly dismantle the building.

Drive-in Food Outlets	One of three types of drive-in facilities: 1. Where customers park on site and walk to the food outlet, with no seating for the onsite consumption of food. 2. Similar to 1 but with seating for onsite food consumption. 3. With the features of 1 and/or 2 plus a drive through service for customers not wishing to consume food on the premises.
Effective warning time	The time available after receiving advice of an impending flood and before the floodwaters prevent appropriate flood response actions being undertaken. The effective warning time is typically used to move farm equipment, move stock, raise furniture, evacuate people and transport their possessions.
Embankment	The low permeability earth fill wall of a dam comprising crest, batter slopes and foundation.
Extreme flood	An estimate of the probable maximum flood, which is the largest flood that could conceivably occur at a particular location.
fabric	means all the physical material of the place.
Fenestration	The disposition of glazing on a facade.
Flood	A relatively high stream flow, which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or local overland flooding, associated with major drainage as defined by the FMM before entering a watercourse.
Flood awareness	An appreciation of the likely effects of flooding and knowledge of the relevant flood warning and evacuation procedures.
Flood compatible building components	A combination of measures incorporated in the design and/or construction and alteration of individual buildings or structures subject to flooding, and the use of flood compatible materials for the reduction or elimination of flood damage.
Flood compatible materials	Materials used in building which are resistant to damage when inundated. A list of flood compatible materials is attached in Appendix 3.
Flood evacuation strategy	The proposed strategy for the evacuation of areas within effective warning time during periods of flood as specified within any policy of Council, the FRMP, the relevant State government disaster plan, by advices received from the *State Emergency Services (SES)* or as determined in the assessment of individual proposals.
Flood hazard	The potential for damage to property or persons due to flooding.
Flood storage	Parts of the floodplain that are important for the temporary storage of floodwaters during the passage of a flood.
Floodplain	The portion of a river valley, adjacent to the river channel, which is covered with water when the river overflows during floods.
Floodplain Development Manual (FDM)	Refers to the document dated April 2005, published by the New South Wales Government and entitled *"Floodplain Development Manual: the management of flood liable land"*.
Floodplain Risk Management Plan (FRMP)	A plan prepared for one or more floodplains in accordance with the requirements of the FDM or its predecessor.
Floodplain Risk Management Study (FRMS)	A study prepared for one or more floodplains in accordance with the requirements of the FDM or its predecessor.
Floodways	Areas where a significant volume of water flows during floods. They are often aligned with obvious naturally defined channels. Floodways are areas, which, even if only partially blocked, would cause a significant redistribution of flood flow, which may in turn adversely affect other areas. They are often, but not necessarily, the areas of deeper flow or the areas where higher velocities occur.

Form	means the overall shape and volume and the arrangement of its parts.
Freeboard	A factor of safety expressed as the height above the design flood level. Freeboard provides a factor of safety to compensate for uncertainties in the estimation of flood levels across the floodplain, such as wave action, localised hydraulic behaviour and impacts that are specific event related, such as levee and embankment settlement, and other effects such as "greenhouse" and climate change.
Frontage	The width of an allotment at the street boundary.
Full supply level	The top water level of a dam, equivalent to the spillway intake level.
Greenhouses / Igloos / Market Gardening	A free - standing outbuilding covered in plastic / fabric / or other rigid coverings such as glass or poly-carbonate used to provide a controlled environment and improved crop production rates associated with the cultivation / propagation or growth of vegetables, flowers, mushrooms and other agricultural products.
Habitable floor area	means: (a) in a **residential situation**: a living or working area, such as a lounge room, dining room, rumpus room, kitchen, bedroom or workroom; (b) in an **industrial or commercial situation:** an area used for offices or to store valuable possessions susceptible to flood damage in the event of a flood.
Habitable room	A main living room, such as a living room, dining room, family room or bedroom.
Hatchet shaped allotment	A lot which has frontage to a public street by only an access way.
Height	In relation to a building, means the vertical distance measured between ground level at any point at which the building is sited, and the ceiling of the topmost floor of the building above that point.
Hazard	A source of potential harm or a situation with a potential to cause loss. In relation to this plan, the hazard is flooding which has the potential to cause harm or loss to the community.
High hazard	Possible danger to life and limb; evacuation by trucks difficult; potential for structural damage; social disruption and financial losses could be high.
In the vicinity	means surroundings, context, environment or vicinity of a heritage item
Item	means a place, building, work, relic, movable object or precinct.
LEP	Local Environmental Plan
Leasable Floor Area (LFA)	Means the sum of the areas of each floor of a building where the area of each floor is taken to be the area within the outer face of the external enclosure walls as measured at a height of 1400 millimetres above each floor level, excluding: - Columns, fin walls, sun control devices, awnings and any other elements, projections or works outside the general lines of the outer face of the external wall; and - Lift towers, cooling towers, machinery and plant rooms, ancillary storage space and air conditioning ducts; and - Car parking needed to meet any requirements of the Council and any internal designated vehicular or pedestrian access thereto; and - Space for loading and unloading of goods; and - Internal public arcades and thoroughfares, terraces and balconies with outer walls less than 1400 millimetres high and the like.
LGA	Local Government Area

Loading Dock	The specific area set aside for loading and unloading of a commercial vehicle. Commonly the operation is carried out from a raised platform to which the vehicle is backed. Loading and unloading can, however take place from the side and/or ground level.
Local overland flooding	The inundation by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.
Local street	A road or street used primarily for access to abutting properties.
Loft	The gross floor area contained within the roof space of a dwelling where: (a) the pitch of the roof creating the space does not exceed 35 degrees; and (b) the external enclosing walls do not exceed a height of 300mm measured vertically from the floor level of the loft (not including gabled end walls); and (c) there is no balcony, terrace, and the like forming part of the loft; and (d) the floor space of the loft does not exceed 60% of the footprint of the storey immediately below; and (e) one or more dormers may form part of the loft.
Lopping	The incomplete removal of branches leaving stumps attached to the tree.
Low hazard	Should it be necessary, people and their possessions could be evacuated by trucks. Able-bodied adults would have little difficulty wading.
m	Metre
Merit approach	An approach, the principles of which are embodied in the Floodplain Development Manual which weighs social, economic and ecological impacts of land use options for different flood prone areas together with flood damage, hazard and behaviour implications, environmental protection and wellbeing of the State's rivers and floodplains.
Natural ventilation	A range of techniques that combine natural airflow with building design characteristics to induce fresh air into a building and exhaust stale air. Natural ventilation is also sometimes used as a means to reduce the temperature of a building's thermal mass.
Neighbouring land	Any land, other than adjoining land, which in the opinion of Council, may be detrimentally affected by a proposed development (and may include properties in a neighbouring Local Government area).
Notified Development	Where Council writes to those people identified as requiring notification advising of the submission of an application.
Number of Employees	The number of persons anticipated to be working for re-numeration at a given development site, whether for salary or wages, part time or full time at the time of day, day of the week, which is being assessed. It should not be confused with employment which is the expected number of persons registered as working and which is thus equal to or greater than the number of employees on site at any given time.
Outbuilding	A building, which is ancillary to a principal residential building and includes sheds, garages, car ports and similar buildings**.**
Outdoor cafes	An area that exhibits these characteristics: (a) Food and drink are provided for public consumption. (b) Items of furniture, such as tables and chairs, are provided for use by cafe patrons. (c) The site is accessible, out-of-doors and available for public use. (d) There is an adjacent associated business such as a cafe, coffee bar, milk bar, restaurant, ice-cream parlour, dining hall, food court or sandwich shop. *(e)* The associated business extends its supervised activities within the outdoor cafe location.

Outdoor Markets	Places or temporary structures / stalls for the purpose of retailing goods able to be carried away by the purchaser. Stalls are combined on suitable sites to form an outdoor market place.
Permeable ceiling	A false ceiling that allows air to come in direct contact with a slab above it.
Place	means an area of land, with or without improvements.
Potential koala habitat	Areas of native vegetation where the trees of the types listed in Schedule 2 of the *State Environmental Planning Policy No 44 - Koala Habitat Protection* constitute at least 15% of the total number of trees in the upper or lower strata of the tree component.
Poultry	All forms of farmed bird including chickens, waterfowl, turkeys, ostriches, quail, squab and emus.
Poultry farming	Birds such as domestic fowls, turkeys, ducks geese, game birds, squab, quail and emus, whether as meat birds, layers or breeders and whether as free range or shedded birds.
Poultry processing plants	Poultry abattoirs and plants for the further processing of poultry (e.g. cutting up, filleting etc.), packaging and dispatch.
Probable maximum flood (PMF)	The largest flood that could conceivably occur at a particular location, usually estimated from probable maximum precipitation.
Probable maximum precipitation (PMP)	The greatest depth of precipitation for a given duration meteorologically possible over a given size storm area at a particular location at a particular time of the year, with no allowance made for long-term climatic trends (World Meteorological Organisation, 1986). It is the primary input to the estimation of the probable maximum flood.
Probability	A statistical measure of the expected chance of flooding (see ARI).
Private open space	An open area of land or building attached to a dwelling (e.g. balcony or roof garden) intended for the exclusive use of the occupants of the dwelling, being located and designed so as to offer maximum privacy to occupants and neighbours.
Primary frontage	means: (a) the single frontage where an allotment has a single frontage to the street; or (b) the shortest frontage where an allotment has two or more frontages to the street; or (c) the two frontages where an allotment (not including a corner allotment) runs between two streets.
Prune	To remove some of the branches or roots of a tree.
Ramp	The circulation roadway, which connects an access driveway to an off-street car park, or service facility on a substantially different level, or which, connects two levels in a multi-level development.
Rebuilt dwelling	Refers to the construction of a new dwelling on an allotment where an existing dwelling is demolished.
Reliable access	*During a flood* means the ability for people to safely evacuate an area subject to flooding, having regard to the depth and velocity of flood waters, the suitability of the evacuation route, and without a need to travel through areas where water depths increase.
Remnant vegetation	Any patch of native vegetation around which most or all of the native vegetation has been removed. Remnant vegetation can range in size from a few plants to a very large group of plants.
REP	Regional Environmental Plan
Ridgeline	The highest point at which upward angled roof planes meet.

Ring barking	Cutting through the bark and sapwood of the tree so as to stop the flow of water and nutrients between roots and leaves.
Riparian Corridor	That component of land (including floodplains) adjacent to creeks.
Riparian vegetation	Any vegetation, which is adjacent to a water body and is reliant upon and contributes to the hydrological regime and ecology of that water body.
Risk	The chance of something happening that will have an impact. It is measured in terms of consequences and probability (likelihood). In the context of this plan, it is the likelihood of consequences arising from the interaction of floods, communities and the environment.
Road	A public thoroughfare used for the passage of vehicles or animals.
Root plate	The volume of roots of a mature tree.
Run-off	The amount of water that actually ends up as storm flow.
Rural shed	A building or structure erected on a rural zoned property for uses associated with agriculture or other permissible rural land uses on the site. This does not include buildings for the keeping of poultry or intensive horticultural activities.
Scale	means the size of a building and its relationship with its surrounding buildings or landscape.
Secondary frontage	means: (a) the longer frontages where an allotment has two or more frontages to the street; or (b) the frontage that adjoins a lane where an allotment (not including a corner allotment) runs between a street and a lane. A lane is a roadway that is 6mwide or less.
Sensitive populations	Population groups that include Childcare centres, Hospitals, Education facilities and Retirement villages.
Separation distance	The distance between the point of generation of an environmental impact and a receptor sensitive to that impact that will allow for the effects to be minimised.
SEPP	State Environmental Planning Policy
Service Aisles	The roadways, which connect, service areas with driveways and the street system. They may be part of the internal circulation road system. Required widths for straight sections of service aisles are 4.5mon way and 6.5mtwo-way. The width of curved sections should be determined by the swept path of the largest, relevant design vehicle.
Service Bay/Area	The service bay/area is the specific area delineated for a commercial vehicle to stand within a service area.
Service Facility	The service facility is the area in a development set aside for the manoeuvring lay-by, loading and unloading of commercial vehicles, together with shelter and equipment, which might be provided for the receipt and dispatch of freight. Normally included among the facilities is the storage of waste (garbage), prior to its removal by a special purpose vehicle.
Setback	The horizontal distance measured from an external enclosing wall (including an above ground deck, balcony, and the like), a window, or the eaves of a building, to the: (a) allotment boundary; or (b) a window to a bedroom or living area of another dwelling.
Setting	means the area around a heritage item that contributes to its heritage significance. It may include views to and from the heritage item. The listing boundary of a heritage item does not always include the whole of its setting
Shopping Trolley	A basket, frame or flat base on wheels (or castors), usually of metal construction that is provided by a business for customers to transport items within the store and within any car parking area allocated for use by customers of the store.

Side Boundary	The boundary between adjacent properties
Site Emergency Response Flood Plan	A management plan that demonstrates the ability to move goods above the flood level within the available warning time, and includes a strategy to safely evacuate persons.
Spillway	The earth swale (or pipe) used to divert water from a dam.
sqm	Square metre
Stacked Car Parking	The car parking, which may require the removal of other vehicles in order to gain access
Street sign	A street name sign or a sign under *Australian Standard AS 1742* being (a) guide sign; (b) warning sign; (c) temporary warning sign; (d) regulatory sign; (e) parking sign; (f) hazardous markers; (g) service symbol; (h) which is on a public road.
Survey plan	A plan prepared by a registered surveyor, which shows the information required for the assessment of an application in accordance with the provisions of this Policy.
The Act	The *Environmental Planning and Assessment Act 1979*.
The Plan	This *Development Control Plan*.
Third party advertising	The content of the advertisement is not related to the land, building or premises or goods sold on the land, building or premises to which the advertisement is attached.
Threatened species, population or community	means any species, population or ecological community which is scheduled under the Threatened Species Conservation Act 1995.
Topping	The removal of the top portion of a tree including a section of trunk.
Vegetative screening	Naturally occurring or purpose planted vegetation (preferably species native to an area) to lessen the impacts of a development on the surrounding area.
Waste Data File	A File or Folder containing the Waste Management Plan together with records (waste receipts or dockets) of disposal and/ or recycling of demolition and construction materials. The Waste Data File is to be retained by the person responsible for the site.
Waste Management Plan or WMP	An outline of any waste or recycling materials to be produced during (a) Demolition (b) Construction and (c) Future Use for a particular demolition and/ or construction project. It is to include estimates of volumes or weights of waste produced as well as a description of reuse, recycling and final destination. A blank Waste Management Plan is shown in Appendix 4.

Appendix 2 - Recommended Plant Species List for Landscaping

1. The following plant list is a guide only. It is a list of shrub and tree species known to grow well in the heavy clay soils of Liverpool. The list is a substitute for independent Landscape Architectural advice. It is recommended that a qualified Landscape Architect shall prepare all Landscape Plans submitted for Council approval.

Tall Evergreen Shrubs up to 3m high

Botanic Name	Common Name	Yr 1	Yr 2	Maturity
Westringia fruticosa	Coast Rosemary	0.5 m	1 m	1.5 m
Westringia longifolia	Westringia	0.5 m	1 m	1.5 m
Grevillea 'Robyn Gordon'	Grevillea 'Robyn Gordon'	0.5 m	1.5 m	1.5 m
Grevillea rosmarinifolia	Rosemary Gevillea	0.5 m	2 m	2 m
Melaleuca hypericifolia	Hillock Bush	0.5 m	1 m	2 m
Callistemon 'Captain Cook'	Bottlebrush	0.5 m	1 m	2 m
Grevillea 'Sandra Gordon'	Grevillea 'Sandra Gordon'	0.5 m	1.5 m	3 m
Banksia ericifolia	Heath Banksia	0.5 m	2 m	3 m
Leptospermum laevigatum	Coast Tea Tree	0.5 m	2 m	3 m
Melaleuca ericifolia	Melaleuca ericifolia	0.5 m	2 m	3 m
Melaleuca nesophyla	Melaleuca nesophyla	0.5 m	2 m	3 m
Hakea salicifolia	Silky Hakea	0.5 m	2 m	3 m
Doryanthes excelsa	Gymea Lily	0.5 m	2 m	3 m
Leptospermum spp.	Tea tree	0.5 m	2 m	3 m
Baekea spp.	Heath Myrtle	0.5 m	2 m	3 m
Pittosporum tenuifolium	New Zealand Pittosporum	0.5 m	2 m	3 m
Michelia figo	Port Wine Magnolia	0.5 m	2 m	3 m

Small Trees less than 9m high (D) = Deciduous

Botanic Name	Common Name	Yr 1	Yr 3	Maturity
Planted a minimum of 1.5mfrom the building				
Callistemon hannah ray	Hannah Ray Bottlebrush	2 m	3 m	4 - 5 m
Callistemon citrinus	Lemon Scented Bottlebrush	2 m	3 m	4 - 5 m
Leptospermum petersonii	Lemon-scented Tea tree	1.5 m	3 m	4 - 6.m
Acacia floribunda	Gossamer Wattle	2 m	3.m	4 - 6.m
Acacia baileyana	Cootamundra Wattle	2 m	3 m	5 - 8.m
Ceratopelum gummiferum	NSW Christmas Bush	2 m	4 m	5 - 8 m
Elaeocarpus reticulatus	Blueberry Ash	1.5 m	2 m	6 - 8 m
Banksia integrifolia	Coast Banksia	2 m	5 m	6 - 8 m
Tristaniopsis laurina	Water Gum	2 m	3 m	6 - 8 m

Medium Sized Trees 9 - 15m high

Botanic Name	Common Name	Yr 1	Yr 3	Maturity
Planted a minimum of 3mfrom the building				
Melaleuca bracteata	Melaleuca bracteata	3 m	5 m	8 - 10 m
Melaleuca decora	White Cloud Tree	3 m	5 m	6 - 12 m
Melia azedarch	White Cedar (D)	2 m	4 m	8 - 12 m
Brachychiton acerifolium	Illawarra Flame Tree (D)	2 m	4 m	8 - 12 m
Hymenosporum flavum	Native Frangipani	2 m	4 m	8 - 12 m
Melaleuca quinquenervia	Broad-leaved Paper bark	3 m	5 m	8 - 15 m
Eucalyptus scoparia	Willow Gum	3 m	5 m	8 - 15 m
Angophora bakeri	Narrow leaved Apple	2 m	4 m	9 - 15 m
Brachychiton populneus	Kurrajong	2 m	4 m	9 - 15 m

Large Trees greater than 15m Tall

Native

Botanic Name	Common Name	Yr 1	Yr 3	Maturity
Planted a minimum of 4.0mfrom the building				
Acacia elata	Cedar Wattle	2 m	5 m	10 –18 m
Casuarina glauca	Swamp She Oak	3 m	5 m	10 –18 m
Casuarina littoralis	Black She Oak	3 m	5 m	10 –18 m
Callistemon viminalis	Weeping Bottlebrush	3 m	5 m	10 –18 m
Planted a minimum of 5.0mfrom the building				
Eucalyptus molucanna	Grey Box	3 m	5 m	12 -18 m
Eucalyptus crebra	Narrow Leaved Ironbark	3 m	5 m	12 -18 m
Eucalyptus fibrosa	Broad Leaved Ironbark	3 m	5 m	12 -18 m
Eucalyptus sclerophylla	Hard Leaved Scribbly	3 m	5 m	12 -18 m
Eucalyptus haemastoma	Scribbly Gum	3 m	5 m	12 -18 m
Planted a minimum of 6.0mfrom the building				
Eucalyptus microcorys	Tallow-wood	3 m	5 m	15 - 20 m
Eucalyptus botryoides	Bangalay Tree	3 m	5 m	15 - 20 m
Eucalyptus tereticornis	River Red Gum	3 m	5 m	15 - 20 m
Eucalyptus sideroxylon	Red Ironbark	3 m	5 m	15 - 20 m
Syncarpia glomulifera	Turpentine	2 m	4 m	15 - 20 m
Casuarina cunninghamiana	River She Oak	3 m	5 m	15 - 20 m

Appendix 3 - List of Noxious Plants for Liverpool LGA

The following weeds are declared noxious in the Liverpool LGA:

Weed	Class	Legal requirements
African feathergrass [Pennisetum macrourum]	5	1
African turnipweed [Sisymbrium runcinatum]	5	1
African turnipweed [Sisymbrium thellungii]	5	1
Alligator weed [Alternanthera philoxeroides]	3	2
Anchored water hyacinth [Eichhornia azurea]	1	3
Annual ragweed [Ambrosia artemisiifolia]	5	1
Arrowhead [Sagittaria montevidensis]	5	1
Artichoke thistle [Cynara cardunculus]	5	1
Athel pine [Tamarix aphylla]	5	1
Bear-skin fescue [Festuca gautieri]	5	1
Bitou bush [Chrysanthemoides monilifera subspecies rotundata]	3	4
Black knapweed [Centaurea nigra]	1	3
Blackberry [Rubus fruticosus aggregate species] except cultivars Black satin, Chehalem, Chester Thornless, Dirksen Thornless, Loch Ness, Murrindindi, Silvan, Smoothstem, Thornfree	4	5
Boneseed [Chrysanthemoides monilifera subspecies monilifera]	3	4
Bridal creeper [Asparagus asparagoides]	5	1
Broomrapes [Orobanche species] Includes all Orobanche species except the native O. cernua variety australiana and O. minor	1	3
Burr ragweed [Ambrosia confertiflora]	5	1
Cabomba [Cabomba caroliniana]	5	1
Castor oil plant [Ricinus communis]	4	5
Cayenne snakeweed [Stachytarpheta cayennensis]	5	1
Chilean needle grass [Nassella neesiana]	4	5
Chinese violet [Asystasia gangetica subspecies micrantha]	1	3
Clockweed [Gaura lindheimeri]	5	1
Clockweed [Gaura parviflora]	5	1
Corn sowthistle [Sonchus arvensis]	5	1
Dodder [Cuscuta species] Includes All Cuscuta species except the native species C. australis, C. tasmanica and C. victoriana	5	1
East Indian hygrophila [Hygrophila polysperma]	1	3
Espartillo [Achnatherum brachychaetum]	5	1
Eurasian water milfoil [Myriophyllum spicatum]	1	3
Fine-bristled burr grass [Cenchrus brownii]	5	1
Fountain grass [Pennisetum setaceum]	5	1
Gallon's curse [Cenchrus biflorus]	5	1
Glaucous starthistle [Carthamus glaucus]	5	1

Weed	Class	Legal requirements
Golden thistle [Scolymus hispanicus]	5	1
Green cestrum [Cestrum parqui]	3	2
Harrisia cactus [Harrisia species]	4	5
Hawkweed [Hieracium species]	1	3
Horsetail [Equisetum species]	1	3
Hygrophila [Hygrophila costata]	2	3
Hymenachne [Hymenachneamplexicaulis]	1	3
Karoo thorn [Acacia karroo]	1	3
Kochia [Bassia scoparia] except Bassia scoparia subspecies trichophylla	1	
Lagarosiphon [Lagarosiphon major]	1	3
Lantana [Lantana species]	4	6
Lantana [Lantana species]	5	1
Leafy elodea [Egeria densa]	5	1
Long-leaf willow primrose [Ludwigia longifolia]	3	2
Long-leaf willow primrose [Ludwigia longifolia]	5	1
Ludwigia [Ludwigia peruviana]	3	2
Mexican feather grass [Nassella tenuissima]	1	3
Mexican poppy [Argemone mexicana]	5	1
Miconia [Miconia species]	1	3
Mimosa [Mimosa pigra]	1	3
Mossman River grass [Cenchrus echinatus]	5	1
Onion grass [Romulea species] Includes all Romulea species and varieties except R. rosea var. australis	5	1
Oxalis [Oxalis species and varieties] Includes all Oxalis species and varieties except the native species O. chnoodes, O. exilis, O. perennans, O. radicosa, O. rubens, and O. thompsoniae	5	1
Pampas grass [Cortaderia species]	3	2
Parthenium weed [Parthenium hysterophorus]	1	3
Pellitory [Parietaria judaica]	4	6
Pond apple [Annona glabra]	1	3
Prickly acacia [Acacia nilotica]	1	3
Prickly pear [Cylindropuntia species]	4	5
Prickly pear [Opuntia species except O. ficus-indica]	4	5
Red rice [Oryza rufipogon]	5	1
Rhus tree [Toxicodendron succedaneum]	4	6
Rubbervine [Cryptostegia grandiflora]	1	3
Sagittaria [Sagittaria platyphylla]	5	1
Salvinia [Salvinia molesta]	2	3

Weed	Class	Legal requirements
Sand oat [Avena strigosa]	5	1
Senegal tea plant [Gymnocoronis spilanthoides]	1	3
Serrated tussock [Nassella trichotoma]	4	5
Siam weed [Chromolaena odorata]	1	3
Smooth-stemmed turnip [Brassica barrelieri subspecies oxyrrhina]	5	1
Soldier thistle [Picnomon acarna]	5	1
Spotted knapweed [Centaurea maculosa]	1	3
St. John's wort [Hypericum perforatum]	4	6
Texas blueweed [Helianthus ciliaris]	5	1
Water caltrop [Trapa species]	1	3
Water hyacinth [Eichhornia crassipes]	2	3
Water lettuce [Pistia stratiotes]	1	3
Water soldier [Stratiotes aloides]	1	3
Willows [Salix species] Includes all Salix species except S. babylonica, S. x reichardtii, S. x calodendron	5	1
Witchweed [Striga species] Includes all Striga species except native species and Striga parviflora	1	3
Yellow burrhead [Limnocharis flava]	1	3
Yellow nutgrass [Cyperus esculentus]	5	1

1 The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with.

2 The plant must be fully and continuously suppressed and destroyed

3 The plant must be eradicated from the land and the land must be kept free of the plant

4 The plant must be fully and continuously suppressed and destroyed

5 The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed

6 The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority

7 except B.scoparia subspecies trichophylla
The plant must be eradicated from the land and the land must be kept free of the plant

Appendix 4 - Flood Compatible Materials

Building Component	Flood compatible material	Building Component	Flood compatible material
Flooring and Sub-floor	Concrete slab-on-ground monolith construction	**Doors**	Solid panel with water proof adhesives
Structure	Suspension reinforced concrete slab.		Flush door with marine ply filled with closed cell foam
			Painted metal construction
			Aluminium or galvanised steel frame
Floor Covering	Clay tiles	**Wall and Ceiling Linings**	Fibro-cement board
	Concrete, precast or in situ		Brick, face or glazed
	Concrete tiles		Clay tile glazed in waterproof mortar
	Epoxy, formed-in-place		Concrete
	Mastic flooring, formed-in-place		Concrete block
	Rubber sheets or tiles with chemical-set adhesives		Steel with waterproof applications
	Silicone floors formed-in-place		Stone, natural solid or veneer, waterproof grout
	Vinyl sheets or tiles with chemical-set adhesive		Glass blocks
	Ceramic tiles, fixed with mortar or chemical-set adhesive		Glass
	Asphalt tiles, fixed with water resistant adhesive		Plastic sheeting or wall with waterproof adhesive
Wall Structure	Solid brickwork, block work, reinforced, concrete or mass concrete	**Insulation**	Foam (closed cell types)
		Windows	Aluminium frame with stainless steel rollers or similar corrosion and water resistant material.
Roofing Structure (for Situations Where the Relevant Flood Level is Above the Ceiling)	Reinforced concrete construction	**Nails, Bolts, Hinges and Fittings**	Brass, nylon or stainless steel
	Galvanised metal construction		Removable pin hinges
			Hot dipped galvanised steel wire nails or similar

Article II. Electrical and Mechanical Equipment **Article III.** For dwellings constructed on land to which this DCP applies, the electrical and mechanical materials, equipment and installation should conform to the following requirements.	**Heating and Air Conditioning Systems** **Article IV.** Heating and air conditioning systems should, to the maximum extent possible, be installed in areas and spaces of the house above the relevant flood level. When this is not feasible every precaution should be taken to minimise the damage caused by submersion according to the following guidelines.
Main power supply **Article V.** Subject to the approval of the relevant authority the incoming main commercial power service equipment, including all metering equipment, shall be located above the relevant flood level. Means shall be available to easily disconnect the dwelling from the main power supply.	**Fuel** **Article VI.** Heating systems using gas or oil as a fuel should have a manually operated valve located in the fuel supply line to enable fuel cut-off.
Wiring Article VII. All wiring, power outlets, switches, etc., should, to the maximum extent possible, be located above the relevant flood level. All electrical wiring installed below the relevant flood level should be suitable for continuous submergence in water and should contain no fibrous components. Earth core linkage systems (or safety switches) are to be installed. Only submersible-type splices should be used below the relevant flood level. All conduits located below the relevant designated flood level should be so installed that they will be self-draining if subjected to flooding.	**Installation** **Article VIII.** The heating equipment and fuel storage tanks should be mounted on and securely anchored to a foundation pad of sufficient mass to overcome buoyancy and prevent movement that could damage the fuel supply line. All storage tanks should be vented to an elevation of 600mmabove the relevant flood level.
Equipment **Article IX.** All equipment installed below or partially below the relevant flood level should be capable of disconnection by a single plug and socket assembly.	**Ducting** **Article X.** All ductwork located below the relevant flood level should be provided with openings for drainage and cleaning. Self-draining may be achieved by constructing the ductwork on a suitable grade. Where ductwork must pass through a watertight wall or floor below the relevant flood level, the ductwork should be protected by a closure assembly operated from above relevant flood level.
Reconnection **Article XI.** Should any electrical device and/or part of the wiring be flooded it should be thoroughly cleaned or replaced and checked by an approved electrical contractor before reconnection.	**Article XII.**

LIVERPOOL CITY COUNCIL

LIVERPOOL THE GREAT SOUTH WEST

LIVERPOOL CITY COUNCIL

Ground Floor, 33 Moore Street,
Liverpool NSW 2170

1300 36 2170

www.liverpool.nsw.gov.au

lcc@liverpool.nsw.gov.au

NRS 133 677 (for hearing and speech impaired callers only)

Liverpool city council
creating our future together

Liverpool Development Control Plan 2008

Part 2.2

Carnes Hill, Hoxton Park & Prestons Residential Release Areas

Includes Carnes Hill Centre and Inghams land

~~3 September 2014~~
May 2024

Part 2.2 must be read in conjunction with Part 1

Refer to Parts 3.2 – 3.6 and 3.8 for Development in Residential Zones

Refer to Part 6 for Development in ~~Business~~ E1, E2, MU1 and E3 Zones

Liverpool Development Control Plan 2008

Part 2.2 Carnes Hill, Hoxton Park & Prestons Residential Release Areas

Table of Contents

1. Preliminary 5
2. Controls for Public Domain 7
   - 2.1 Street Network 7
   - 2.2 Open Space 18
   - 2.3 Street Tree Planting 18
3. Sites 20
   - 3.1 Horningsea Park Heritage Area 20
   - 3.2 Carnes Hill Centre 22
   - 3.3 Bushland Preservation 24
4. Controls for Residential Development for land adjacent Carnes Hill Shopping Centre 25
   - 4.1 Land to which this Chapter applies 25
   - 4.2 Site Planning 26
   - 4.3 Setbacks 28
   - 4.4 Landscaped Area and Private Open Space 30
   - 4.5 Cut and Fill, Building Design, Streetscape and Layout 32
   - 4.6 Landscaping and Fencing 37
   - 4.7 Car Parking and Access 39
   - 4.8 Amenity and Environmental Impact 39
   - 4.9 Site Services 41
   - 4.10 Secondary dwellings (Granny Flats) 37
   - 4.6 Landscaping and Fencing 42

Appendix 1 Street and Landscape Design 43

Appendix 2 Drainage and Open Space Landscape Design 59

Table of Figures

Figure 1 Land to which this Part applies 6
Figure 2 Street Network 8
Figure 3 Classified Road Landscaping..... 9
Figure 4 Landscaping..... 10
Figure 5 Subdivision of land near classified road 10
Figure 6 Trunk Collector Streets 11
Figure 7 Trunk Collector Street and Collector Street..... 12
Figure 8 Collector Streets..... 13
Figure 9 Intersection of Access and Collector Streets..... 14
Figure 10 Traffic Calming Measures 15
Figure 11 Example of Traffic Calming Device 13
Figure 12 Appropriate Subdivision Patterns..... 17
Figure 13 Tree Guard and Planting Details..... 19
Figure 14 Land to which Chapter 4 applies..... 25
Figure 15 Example of a site analysis plan..... 26
Figure 16 Zero Lot Lines 28
Figure 17 An example of Landscaped Area and Private Open Space 30
Figure 18 Cut and Fill requirements 32
Figure 19 Example of Building Appearance 33
Figure 20 Maximum total first floor wall length of a two storey dwelling 34
Figure 21 Fence treatments on secondary frontage..... 37
Figure 22 Privacy and Amenity 38
Figure 23 Typical Classified Road Grade..... 43
Figure 24 Elevated Classified roads..... 44
Figure 25 Classified roads in cutting 45
Figure 26 Trunk Collector Street in Cutting 46
Figure 27 Drainage of road 47
Figure 28 Intersections..... 48
Figure 29 Typical collector streets..... 49
Figure 30 Landscape speed control device..... 50
Figure 31 Tree Islands in roads..... 51
Figure 32 Speed control device..... 52
Figure 33 Roundabout 53
Figure 34 Signage..... 54
Figure 35 Signage..... 55
Figure 36 Signage..... 56

1. Preliminary

Applies to

1. Part 2.2 applies to the land, shown in Figure 1.
2. Part 1 and Parts 3.3 - 3.6 applies to the land except as stated in point 3 below.
3. Part 1 and Chapter 4 of this Part (2.2) applies to the land shown in Figure 14.
4. Part 3.8 also applies for non residential development on the land.

Background

These release areas form parts of the Hoxton Park Stage 2 Release Areas Structure Plan. Hoxton Park was rezoned under Liverpool LEP No. 236 (Precinct 1) on 15 May 1992. Prestons was rezoned under Liverpool LEP 238 (Precinct 5) on 15 May 1992. Carnes Hill was rezoned under Liverpool LEP No. 237 (Precinct 4) on 10 July 1992. The area was originally subject to Liverpool Development Control Plan No 31, which adopted on 10 December 1995 and came into force on 11 March 1996.

A number of planning studies were undertaken prior to the preparation of the plan and form the basis of the controls in this plan. These studies included the following: Drainage / Flooding, Traffic, Retailing, Heritage, Archaeology, Open Space / Recreation and Vegetation

Objectives

a) A high quality standard of subdivision is carried out.

b) The subdivision of the many land parcels in the release areas is co-ordinated.

c) A framework for a high quality amenity and character for new neighbourhoods is set.

d) The requirements relating to development are clarified.

e) Greater certain outcomes for both applicants and the community are provided.

f) The environmental integrity of the area is protected.

g) The subdivision that facilitates solar design of residential development is encouraged.

h) High quality landscaped areas in public spaces are provided and maintained.

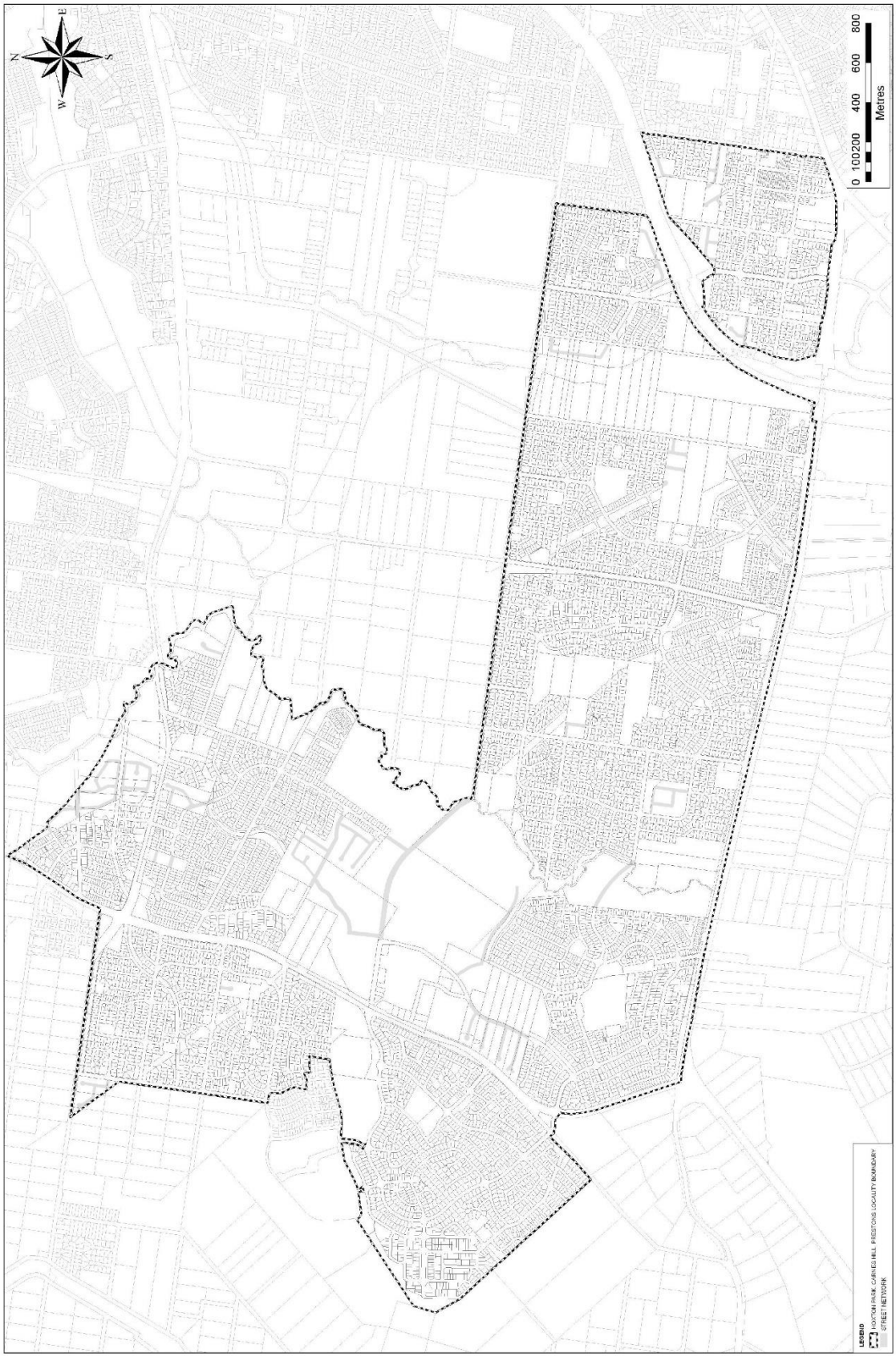


Figure 1 Land to which this Part applies

2. Controls for Public Domain

2.1 Street Network

Objectives

a) To provide an attractive residential street environment.

b) To provide for the safe and efficient circulation of traffic.

c) To provide for the safe and efficient movement of pedestrians with particular regard to the provision of clear and safe access routes for people who have a disability

d) To provide for efficient movement of local bus services and direct pedestrian access for all members of the community including those with disabilities.

e) To minimise the amount of through traffic in residential areas.

Controls

1. All applications to subdivide and/or develop land shall be consistent with the street network shown on Figure 2 unless a variation can be justified.
2. The design of the street network has generally been based on the *Australian Model Code for Residential Development 1990*, referred to in this plan as the "Model Code".
3. Any development of Lot B DP 418231 shall ensure vehicular access is provided to Lot 100 DP 1126218.

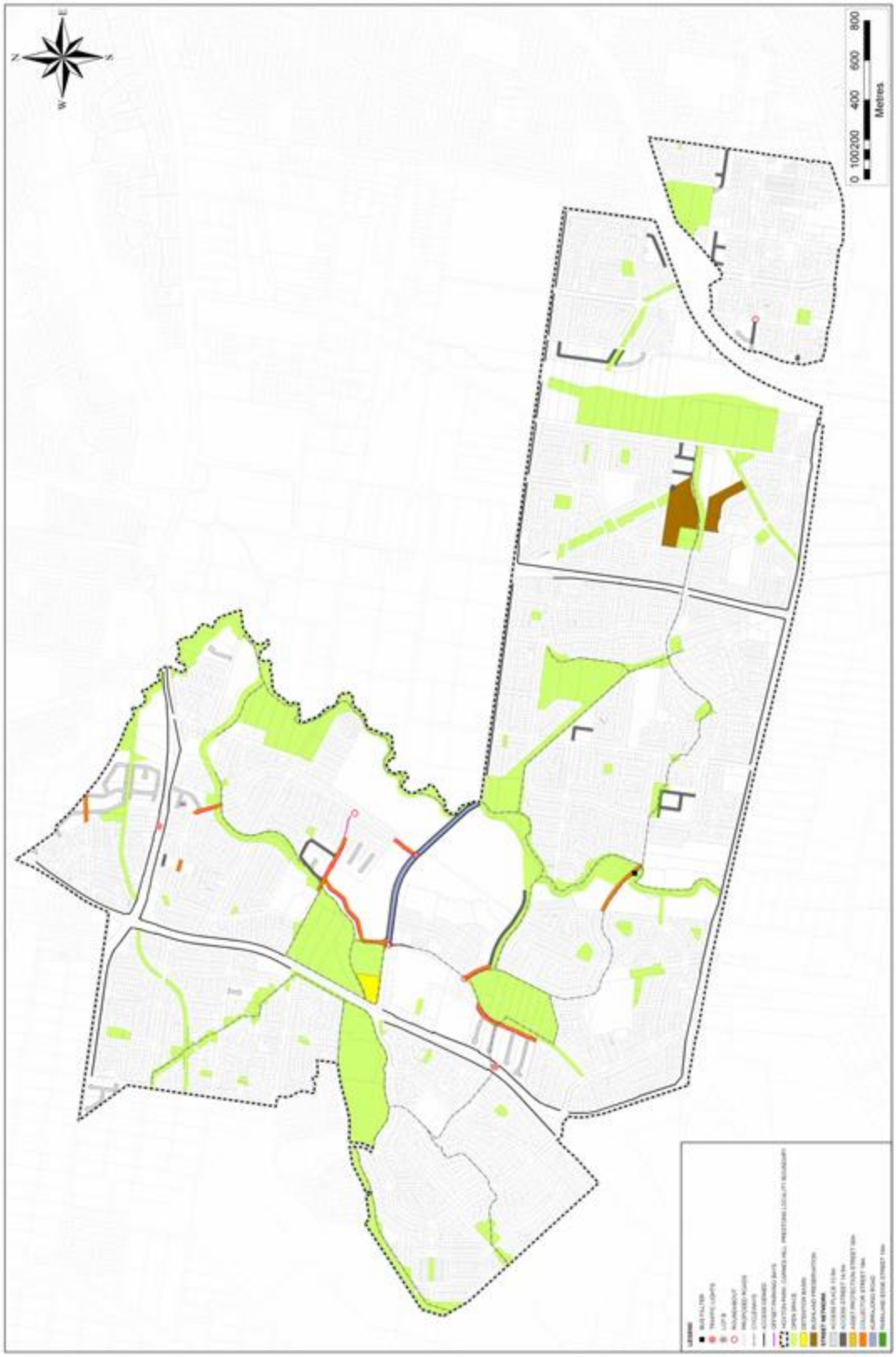


Figure 2 Street Network

Sub-Arterial Roads

Objectives

a) To minimise the impact of development on traffic capacity and safety, of the classified road and sub-arterial road.

b) To minimise the impact of a classified road or sub-arterial road on adjoining development.

c) To provide an attractive landscaped streetscape.

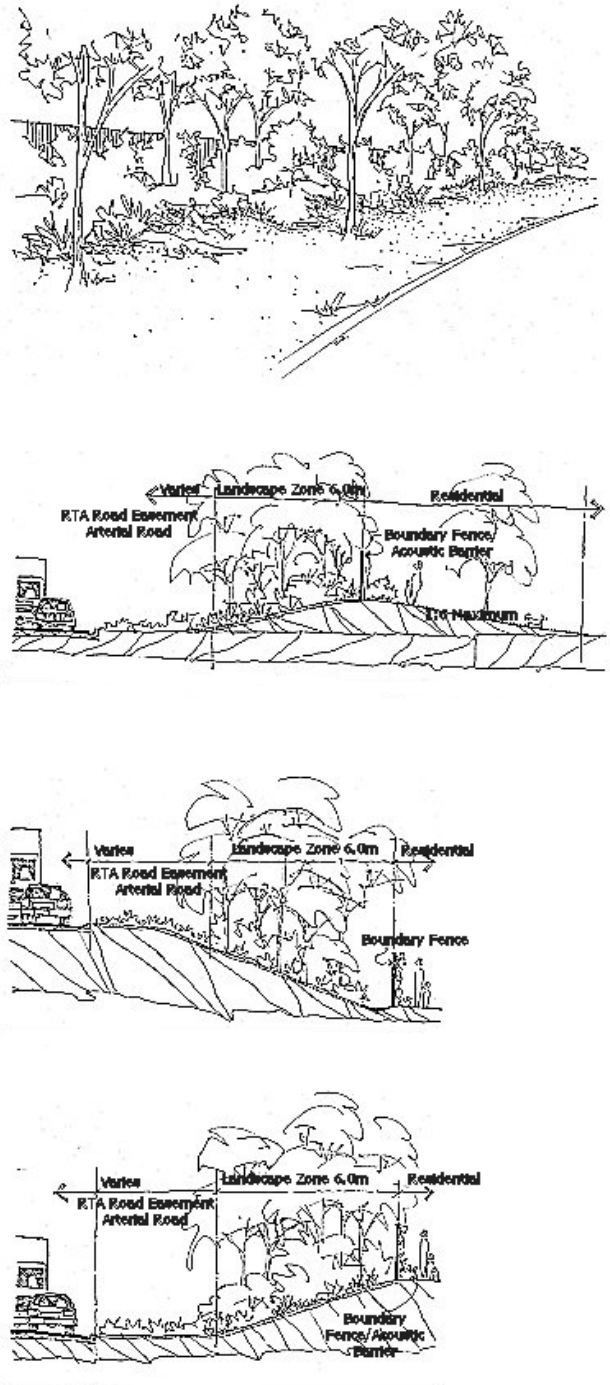


Figure 3 Classified Road Landscaping.

Controls

1. A 3m wide landscaped area and noise attenuation barrier shall be provided along the frontage to a sub- arterial road in accordance with the details give in drawing A4, A5 and Appendix 1.
2. No access will be permitted from land to a classified road.
3. No access will be permitted to a sub-arterial road from residential development.
4. Where land has an existing access from a Classified or sub-arterial road, any proposed subdivision shall provide access to that land from an alternate street and remove the existing access.

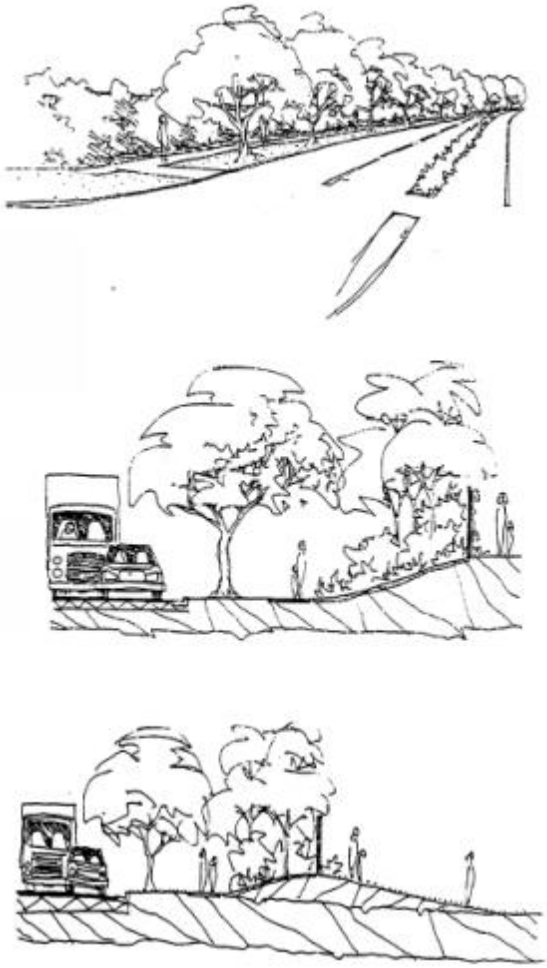


Figure 4 Landscaping

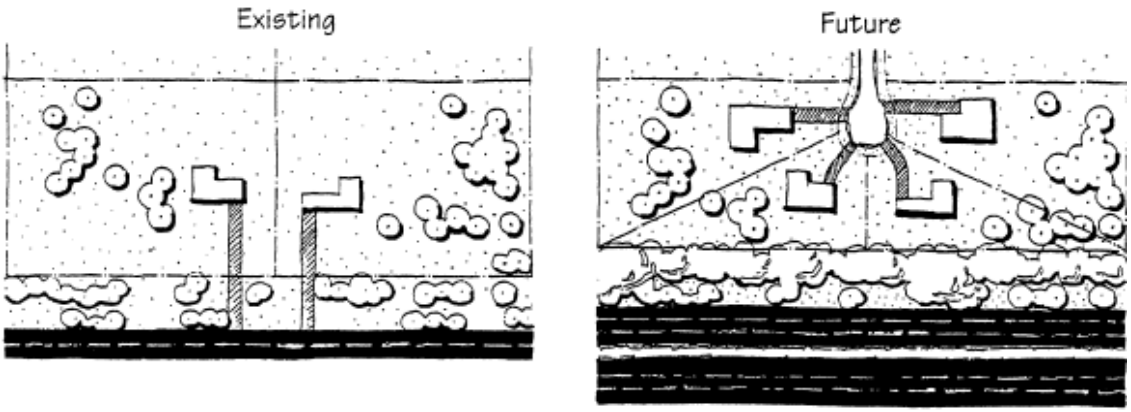


Figure 5 Subdivision of Land near Classified Road

Details of landscaping and the noise attenuation barrier shall be provided with the engineering plans.

Trunk Collector Streets

Objectives

a) To provide a controlled connection between traffic signals or roundabout, residential streets and the classified road system.

b) To concentrate local traffic to an outlet, but not to attract through traffic.

c) To form a gateway to the residential areas.

Controls

1. Access to Trunk Collector Streets is denied to residential lots.
2. All applications to subdivide and/or develop land shall be consistent with the street network shown on the maps, which show:
   - location and width of trunk collector streets;
   - width of landscaped area; and
   - location of entrance signage.
3. Trunk collector streets shall be constructed and landscaped in accordance with the details given in drawings A4, A5, A13 and A14 in Appendix 1.

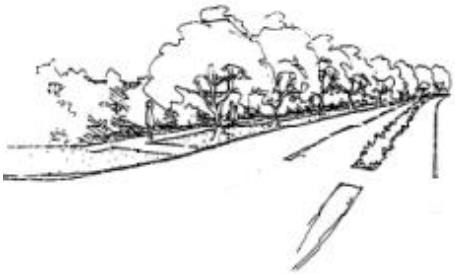
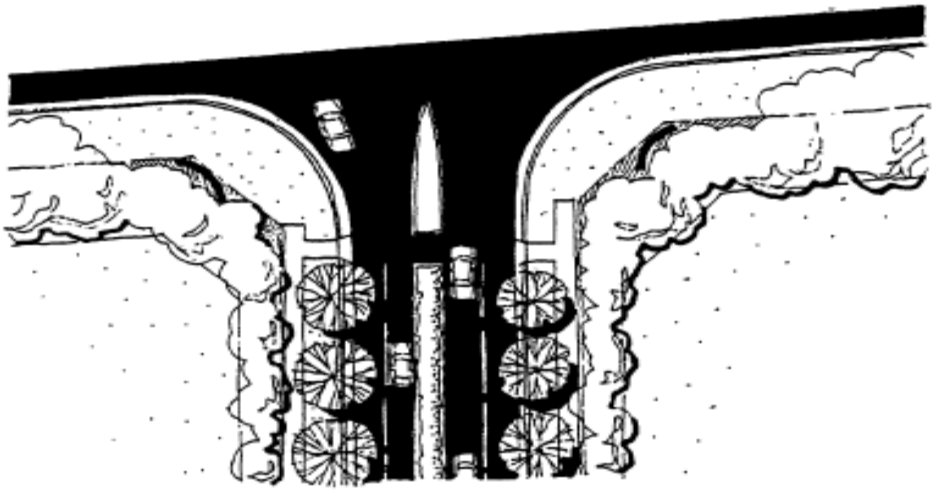
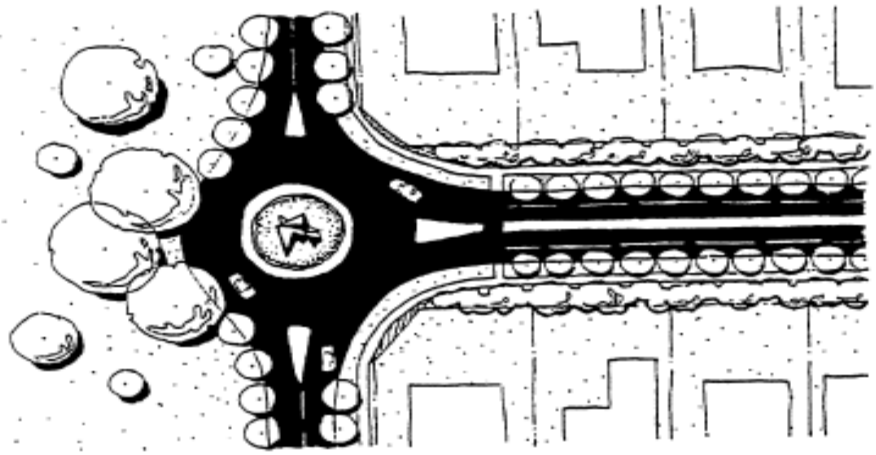


Figure 6 Trunk Collector Streets



Typical plan of intersection at Trunk Collector Street and Arterial Road



Typical plan of intersection at Trunk Collector Street and Collector Street

Figure 7 Trunk Collector Street and Collector Street

Collector Streets

Objectives

a) To provide the principal streets within residential areas, which collect and distribute traffic and provide for a bus route.

b) To provide an attractive streetscape.

c) To be visually prominent.

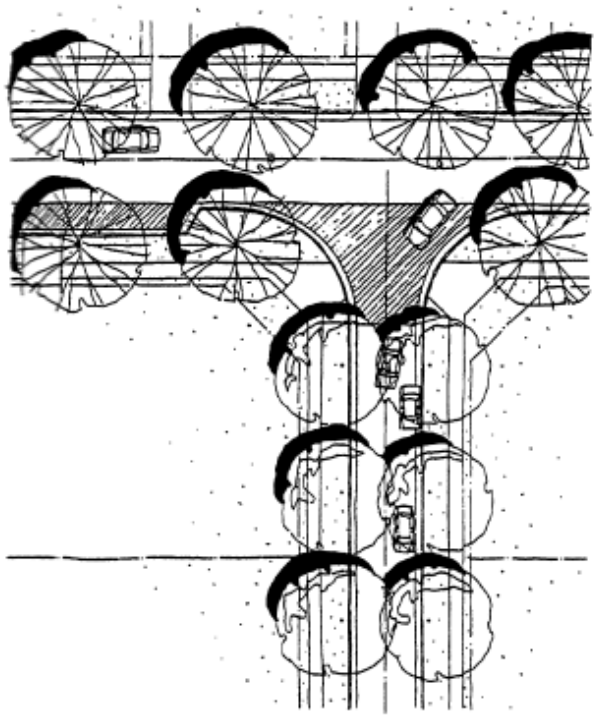
d) To maintain residential amenity and safety.

Figure 8 Collector Streets

Controls

1. All applications to subdivide and/or develop land shall be consistent with the street network shown on the maps, which show:-
   - location and width of collector streets;
   - variation in alignment of travelling lanes and car parking bays;
   - roundabouts; and
   - landscaped speed control devices.
2. Collector streets shall be constructed and landscaped in accordance with details as given in drawings A6, A7, A9-A12 in Appendix 1, which incorporates the following features:-
   - a 7.5m wide travelling carriageway;
   - distinctive pavement treatment at the entrance to all streets which intersect with collector streets;
   - a landscaped speed control device at each transition point between;
   - car parking bay location;
   - a tree island at approximately every 50m along the car parking bay; and
   - a distinctive pavement treatment for car parking bays.

Please note: Variations to the collector street network (other than minor variations to the
actual location of a collector street), are unlikely to be supported.



Typical plan of intersection at
Collector Street
and Access Street

Figure 9 Intersection of Access and Collector Streets

Access Streets and Access Places

Objectives

a) To create a low vehicle speed environment using the physical characteristics and geometry of the street layout and construction.

b) To provide a carriageway width and variation in alignment to help produce a low speed environment.

c) To provide innovative, cost effective designs in accordance with the spirit of the Model Code, except as amended by this Part.

For more information, refer to the Model Code. Some of the main points to be noted for these streets include:

Access Streets

- vehicle speeds are to be controlled by street length, speed control devices at intervals of 100m and / or alignment;
- speeds are to less than 30km/h for streets carrying less than 1000 vehicles per day (100 dwellings), with a carriageway width of 6.5m; and
- speeds are to less than 40km/h for streets carrying less than 2000 vehicles per day (200 dwellings), with a travelling carriageway width of 6.5 to 7.5m.

Access Places

- vehicle speeds are to controlled by street length and / or alignment;
- if they are a cul-de-sac they serve less than 30 dwellings;
- generally a uniform 6.5m width carriageway is preferred.

This is a variation of the Model Code proposed very narrow meandering carriageway with indented car parking and landscaping.

Controls

All applications to subdivide and / or develop land shall be consistent with the street network shown on the maps.

On some existing large allotments not all streets are shown. Where an application is submitted for part of the land, it will be necessary to submit an overall plan showing how the application relates to the rest of the land and the adjacent properties.

1. Speed control devices shall be constructed at intervals of generally 100m, subject to final lot layouts.
2. Access Streets shall be constructed and landscaped in accordance with the details given in drawings A6 and A8 in Appendix 1.
3. Pedestrian access between Kydra Close and Quamma Close, Prestons is to be maintained.

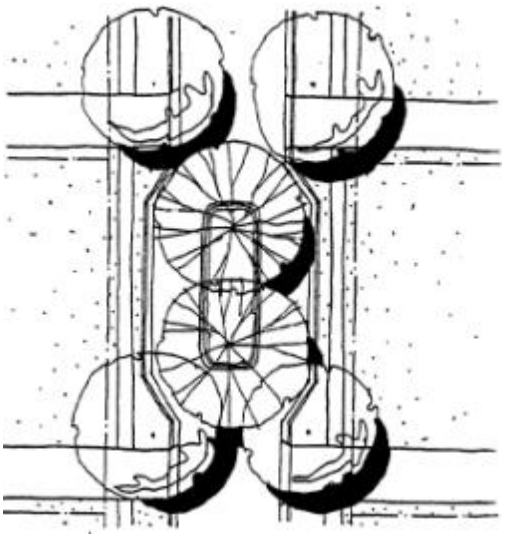


Figure 10 Traffic Calming Measures

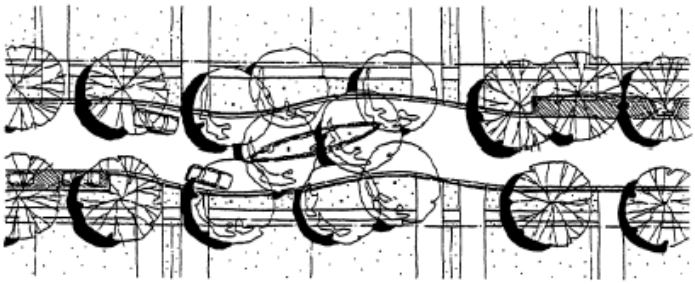


Figure 11 Example of Traffic Calming Device

Variation to Street Layout

Objective

To provide a degree of flexibility in the location of streets.

Council may consider applications, which do not conform to the street layout on the maps without the need to exhibit an amendment to the DCP, depending on the scale of the change.

The general location and layout of collector and trunk collector streets is fixed. The location and layout of the other streets (called access streets and access places) is more flexible. (See Appendix 2, which outlines how the overall street layout was determined).

Controls

1. Applications, which do not conform, to the street layout on the map shall provide justification for the variation. Refer to submission requirements in Part 1 for details.
2. Although traffic volumes on local streets may not be large, the impact of directing additional traffic onto a street designed as an access place may have a detrimental affect on pavement, traffic and residential amenity.
3. Applications, which vary the location and layout of, access streets or access places or vary the location of a collector street or trunk collector street to a minor extent, can be determined by Council without the need to exhibit an amendment the DCP.
4. Applications, which involve more major changes to the street layout, would require amendment to the DCP prior to Council determining the application. This will include exhibition of the changes to the DCP.

Subdivisions Adjoining Open Space

Objectives

a) To maximise public exposure to public open space.

b) To improve security and care of public open space.

Controls

1. Where land adjoins open space it shall be developed in one of the following ways:
   - Hatchet shaped allotments or multiple dwelling developments, which is oriented to the open space.
   - A street between the open space and the dwellings.
   - Cul-de-sacs, which are connected to open space.

Development, which is not oriented toward the open space, is unlikely to be permitted. Refer to Appendix 2 for details on how open space shall be developed.

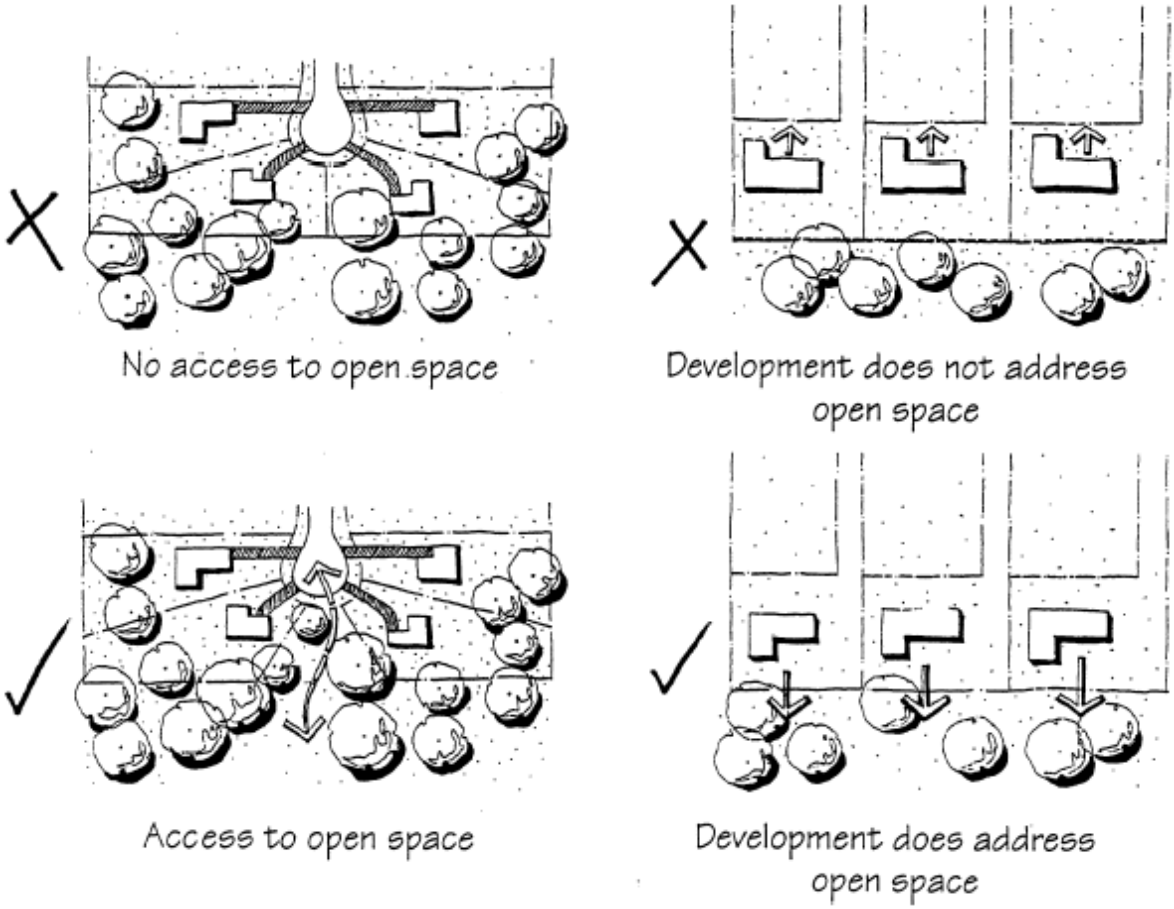


Figure 12 Appropriate subdivision patterns

Bikeways

Objective

To provide for the needs of cyclists within the release area.

It is proposed to have a network of bikeways throughout the release areas.

Controls

All applications to subdivide and / or develop land shall be consistent with the bikeway network shown on the maps. Where these are shown on proposed streets, they shall be constructed as an off-road shared pedestrian - bikeway on the side of the street shown.

1. Shared pedestrian - bikeways shall be constructed a minimum of 0.5m from the kerb and shall have a minimum width of 2.5m. Refer to Appendix 2 for details.
2. Where it is proposed to embellish land which is to be dedicated as public open space in conjunction with a proposed development, this shall take into account any proposed bikeways on the open space. Refer to Appendix 2 for details. A landscape plan shall be submitted in conjunction with the engineering plans.

2.2 Open Space

Objectives

a) To ensure adequate provision and distribution of public open space to meet the needs of the residents.

b) To provide links between major open space, community and retail facilities.

c) To preserve native bushland.

Controls

1. The provision of open space shall be consistent with the maps, which show:
   - size and location of major open space areas for active recreation and the retention of native bushland;
   - location of open space along the creek systems;
   - notional location of neighbourhood open space.
2. Where it is proposed to embellish land, which is to be, dedicated as public open space in conjunction with a proposed development, this shall be carried out in accordance with details in Appendix 2. A landscape plan shall be submitted with the engineering plans.

2.3 Street Tree Planting

1. Street trees shall be required to be planted in conjunction with the creation of a new street or the extension of an existing street.
2. One street tree shall be planted for each allotment created.
3. The street trees shall be planted prior to the release of the subdivision certificate.
4. The trees shall be provided with protection to ensure their survival during the construction of buildings in the street. Refer to Figure 12 for details.

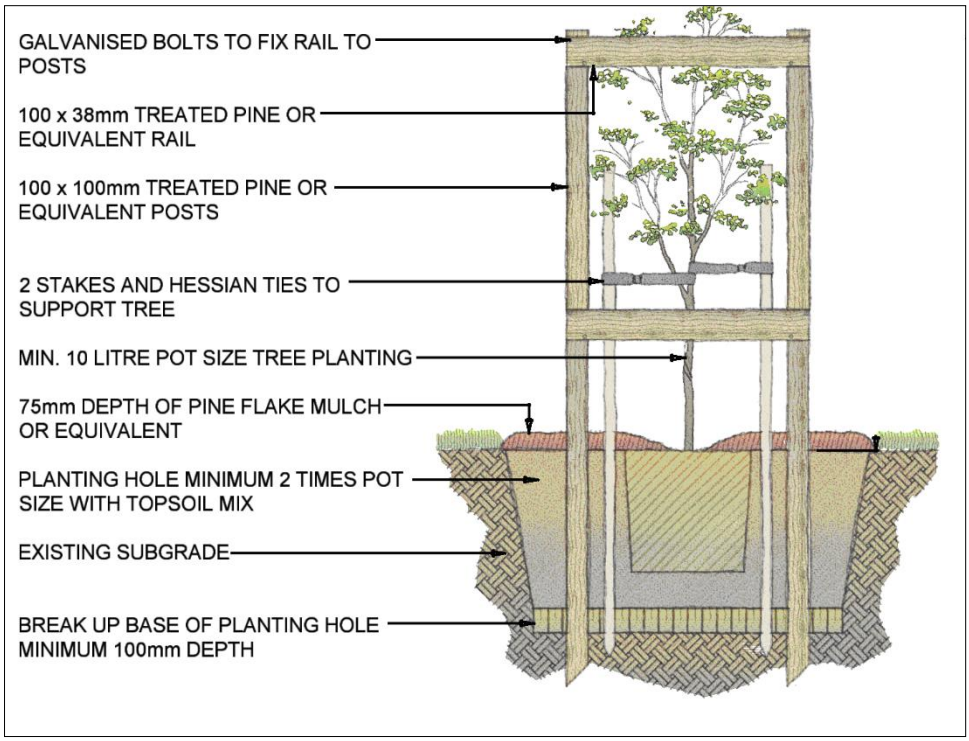


Figure 13 Tree Guard and Planting Details

3. Sites

3.1 Horningsea Park Heritage Area

Objectives

a) To ensure that new development in the vicinity of the Horningsea Park House site is undertaken in a manner sympathetic to, and does not detract from, the heritage significance of the Homestead and its cartilage.

b) To establish a minimum curtilage for the house, which protects its cultural significance.

c) To retain the cultural significance and character of the existing driveway, which connects the house with Camden valley Way.

d) To retain the visual axis to the house from Camden Valley Way.

e) To ensure the long-term conservation and use of the historic house.

f) To ensure the long-term conservation of the total cultural resource of the property.

g) To maximise the extent of open space around the main house, thereby retaining its semi rural setting.

h) To retain the visual prominence and identity of the large historic house in the locality.

i) To reduce the overall visual impact of the housing near the historic property.

The Horningsea Park property is subject to a permanent Conservation Order, issued under the NSW Heritage Act. As such the Heritage Council must give its approval prior to any consent being issued by Council. It is also included in the Register of the National Estate and has been classified by the National Trust of Australia (NSW).

Controls

Development in the vicinity of the Horningsea Park House shall be carried out in accordance with the following requirements.

Minimum Curtilage

1. The minimum curtilage for the historic house shall be as shown on the map. There shall be no development within this curtilage that is unrelated to the conservation and use of the house.
2. The existing, white painted fence shall be retained for the length of existing driveway that is retained.
3. The open grassed nature of the inner curtilage, with limited numbers of exotic and indigenous trees, shall be retained. The existing trees shall generally be retained, subject to a horticulturalist's report. If existing trees need to be removed because of their age or condition, they shall be replaced with specimens, which match the existing species.
4. Any new residential roads shall generally be located along the outer alignment of the landscaped margins. New housing shall then be located with frontage to such roads, facing into the landscaped open space. No new residential properties shall have their rear boundaries facing the landscaped margins.

Driveway

1. The semi rural nature of the driveway, with its gravel surface shall be retained to the greatest extent possible.
2. The visibility of the house from the main road shall be retained.
3. Any acoustic barriers constructed along the main road frontage, on either side of the identified curtilage, shall not be carried across the frontage of the curtilage. If required, they should be turned to follow the outer edges of the curtilage margins.

Homestead

1. The historic house shall be retained and conserved in accordance with contemporary heritage practice and with the requirements of the Heritage Council of NSW.
2. Any additions or new outbuildings associated with either the existing or new uses shall be designed in ways, which respect the historic significance of the place.
3. Alternative uses for the house shall not detract from the heritage significance of the place. Any proposed change of use of the main Horningsea Park House or alterations or additions to the house or new outbuildings within the curtilage shall be accompanied by a Conservation Plan prepared in accordance with The Burra Charter and Guidelines, issued by Australia ICOMOS. In addition, the Conservation Plan shall address the following issues:
   - The impact of any such change of use on the existing internal spatial organisation of the house.
   - The impact of any such change of use on the external form, mass and traditional architectural character of the main house.
   - The impact of any proposed new buildings or other structures on the traditional architectural character of the main house, in particular the dominance of its form and identity in the landscape.
   - The impact of any proposed site works, roadways, parking areas, signage and landscaping on the traditional architectural character of the main house and its setting, in particular the visual dominance of its form and identity in the landscape.

Site Elements

1. Sites of potential archaeological value, associated with former outbuildings, should be identified and investigated by documentary means. An Excavation Permit shall be applied for under the Heritage Act, if any disturbance is planned in their vicinity.
2. The alignment of existing or traditional fences, paths and gardens should be maintained and utilised as a basis for any replanting or reconstruction of the landscaping around the house.
3. The large exotic trees, in particular the Bunya Pines, Moreton Bay Figs and Peppercorn trees, shall be retained and conserved, subject to their age and health. Any new planting of this nature shall be limited in extent and should aim to achieve a long-term continuity of the existing landscape, not to supplement it.

Visual Prominence of the House

1. The maximum ridge height of any buildings to be erected on land between the existing Horningsea Park House and Cabramatta Creek or on the northern side of the curtilage is to be limited to RL 54 AHD, thus preserving the dominance of Horningsea Park House. Buildings shall also have a maximum ridge height of: 6m where the building is on land between RL 46 and RL 54 AHD and 8m where the building is on land below RL 46 AHD.
2. New housing within the above area shall be generally be designed with maximum roof pitches of 30 degrees, with roof materials of dark colours. Colour selections for brickwork and external wall cladding for any individual house or other building shall be from a limited colour range.
3. Future school buildings shall be located as far to the northwest and west of the proposed school site as possible. School buildings shall be generally of single storey design to minimise penetration into the visual catchment of the house.
4. Any new development on the existing golf course to the north of the Horningsea Park property shall be screened by a landscaped buffer zone of a minimum of 25m width from any road along the northern boundary of the property. There shall be no new buildings on land above RL 46 AHD in this vicinity.
5. New landscaping in the areas which surround the historic property, particularly in open spaces, school grounds and road reservations shall be selected from suitable or remnant native species in the locality and where possible should include Eucalyptus moluccana and Eucalyptus tereticornis.
6. Landscaping along the boundary of the curtilage shall be carried out in accordance with the Horningsea Park Revised Conservation Strategy approved by the Heritage Council on 6th July 1995.
7. The density of new trees in the school property and adjoining open space shall take account of the need to retain views from new public roads towards the historic house.

3.2 Carnes Hill Centre

Objectives

a) To identify land required for commercial and retail purposes to serve Carnes Hill and the Stage 2 Release Area generally.

b) To provide an attractive, accessible central focus for retail, commercial, recreation, community facilities and public transport in the Hoxton Park Stage 2 Release Area.

Controls

The shopping centre shall be designed to achieve the following:

1. Compatibility with adjoining residential area.
2. Capability to permit individual shops to trade out of normal business hours.
3. Car parking area and surrounds being landscaped to Council's satisfaction.
4. Design and location of loading area to minimise adverse impact on amenity of the adjoining residential area.
5. Convenient access from the adjacent bus routes.

6. The principles of the location and layout of this centre are as follows:
   - It is adjacent to sub-arterial roads but does not disrupt traffic movement by having direct frontage to these roads.
   - There is controlled access from the sub-arterial roads and collector streets to the centre.
   - It is accessible to likely bus routes.
   - It is adjacent to district sporting facilities and bikeways.
   - It incorporates district community facilities.
   - It incorporates a town square.
   - It provides for a shopping complex in various configurations.
   - It provides for retail uses, which rely on passing traffic without disrupting traffic on sub-arterial roads.
   - It provides a main street for the centre.
   - It provides a convenient location for a bus stop.

Pad Sites - Carnes Hill District Centre

PAD sites in general refer to commercial/retail sites located adjacent to Classified and sub-arterial roads or at gateway locations.

Controls

1. A minimum 2m wide landscape strip is required along the PAD site frontages to enhance streetscape. Further landscaping is required to screen building bulk and loading docks, and to soften expanses of hard paved areas as appropriate.
2. The building character, scale and bulk of PAD site developments are to reflect human scale by:
   - In the case of flat roofs, variations are required in parapet walls to provide relief in the massing of elevations. Articulation can be achieved by the incorporation of detail including stepping, landscaping, and increased fenestration.
   - Protruding elements such as porches, verandahs or canopy type structures shall be used to reinforce entry to the buildings.
   - For PAD sites adjacent to pedestrian and bikeway links the site's design shall address that link.
3. Signage for PAD site developments is to be part of an overall concept that provides for consistency.
4. A pole or pylon sign not exceeding 5m in height from the ground level is permitted at the rate of not more than one sign per PAD site. The sign is not to exceed 5sqm in area. The sign is to be located within an area of 5m (frontage dimension) by 3m (depth dimension) on either side of the ingress/egress points, subject to compliance with site distance requirements.
5. Signs are not permitted at locations where they are hazardous to traffic.

6. Roof signs or fins above the roofline are prohibited.
7. Signage is not to extend laterally beyond or vertically above the top of the wall to which it is attached and is not to cover any windows or architectural features.

Land on the southern side of Main Street and south of the Marketplace

1. Development of these sites should address the street with shop fronts directly to the public streets.
2. Car parking shall be provided at the side of the building, the rear or underneath the building.
3. Development should be generally in accordance with Part 6 of the DCP.

3.3 Bushland Preservation

Objectives

a) To protect and manage natural assets in association with the development of land.

b) To conserve the natural heritage of bushland in the Liverpool LGA.

c) To maintain and improve the amenity and scenic qualities of land within the Liverpool LGA.

d) To maintain and enhance the biodiversity and natural ecology of land within the Liverpool LGA.

Controls

1. Land shown on the map as Bushland Preservation has been identified as Endangered Ecological Communities, listed under the *Threatened Species Conservation Act (1995)*. The land shown, as Bushland Preservation shall not be cleared or disturbed for any purpose and shall be retained as bushland.
2. Development applications for land parcels, which include land shown on the map as Bushland Preservation shall be accompanied by a Plan of Management showing how the bushland shall be properly managed to maintain the bushland once residential subdivision takes place adjoining the land. Development in the vicinity of the bushland will need to comply with *"Planning for Bushfire Protection"* published by the *NSW Rural Fire Service*.
3. The *Department of Environment and Climate Change* has determined that Council may assume concurrence for those developments carried out in accordance with this Development Control Plan, provided that the following conditions are met:
   - The land identified in the DCP as reserves is transferred to Council ownership and managed as community land, designated as bushland, under the *Local Government Act 1993*.
   - A management plan is prepared and implemented for the land.
5. Accordingly development, which proposes to dedicate the land shown on the map as Bushland Preservation free of charge to Council will not be required to be referred to the *Department of Environment and Climate Change* under the *Threatened Species and Conservation Act (1995).*
6. Those developments, which include the land shown as Bushland Preservation and are not in accordance with these conditions, and which will have a significant effect on threatened species or ecological communities, will require the preparation of an SIS and the concurrence of the Director-General of the *Department of Environment and Climate Change*.

4. Controls for Residential Development for the areas as shown in Figure 14.

4.1 Land to which this chapter applies

This chapter applies to the land as shown in Figure 14.

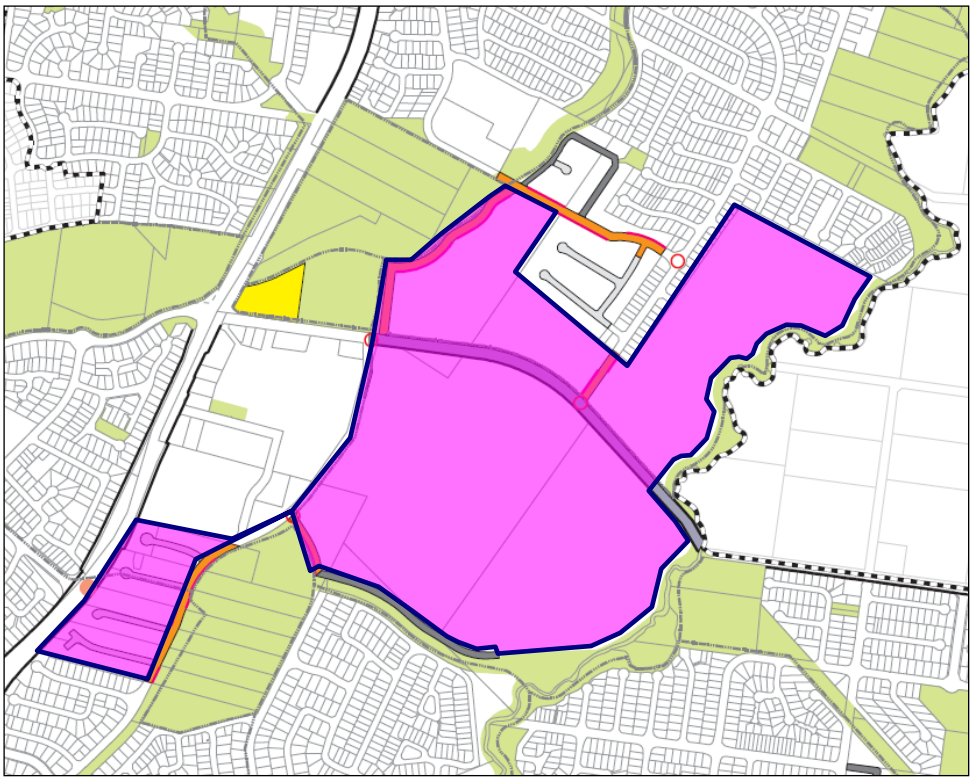


Figure 14 Land to which Chapter 4 applies

4.2 Site Planning

Objectives

a) To ensure that the dwelling house is sensitive to site attributes, such as streetscape character, natural landform, drainage, existing vegetation, land capability, slope, solar access and if relevant, heritage items.

b) To ensure privacy for residents and neighbours.

Controls

1. The dwelling layout must be designed around the site attributes such as slope, existing vegetation, land capability and / or solar access (See Figure 14).
2. There must be a direct link from at least one living area to the principal private open space.
3. The siting of windows of habitable rooms on the first floor shall minimise overlooking to the private open space of neighbouring properties.
4. Stormwater from the site must be able to be drained satisfactorily. Where the site falls away from the street, it may be necessary to obtain an easement over adjoining property to drain water satisfactorily to a Council stormwater system. Where stormwater drains directly to the street, there may also be a need to

incorporate on-site detention of stormwater where street drainage is inadequate. Refer to Water cycle management in Part 1.

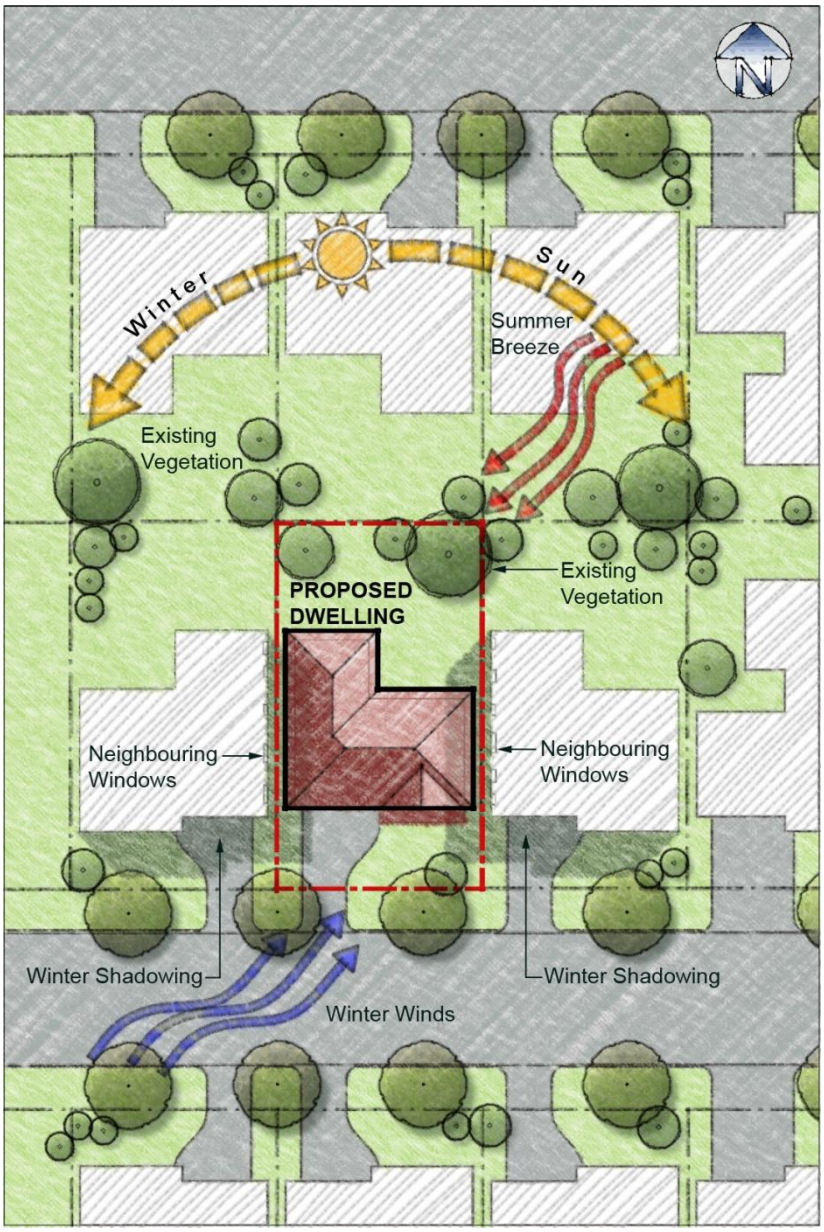


Figure 15 Example of a site analysis plan

4.3 Setbacks

Objectives

a) To set dwellings back from the street and adjacent properties to provide reasonable space for landscaping, private open space and solar access;

b) To set dwellings back from each other to provide visual and acoustic privacy;

c) To create a streetscape that provides a desirable and safe environment;

d) To establish a streetscape of a scale and sense of enclosure appropriate to the locality;

e) To provide an appropriate area capable of allowing the growth of trees and shrubs.

f) To discourage vehicular parking across street verges and footpaths

Controls

Front and Secondary Setbacks

1. Dwelling houses, semi detached dwellings, attached dwellings and Multi Dwelling Housing shall be setback in accordance with Table 1.

Table 1 Front and Secondary Setbacks

Height	Front Setback	Secondary Setback	Secondary Setback
		Lots under 450m^2	Lots 450m^2 and over
Ground floor	4.5m	2.0m*	2.5m
First floor	4.5m	2.0m*	2.5m

* The dwelling setback may be reduced to 1m for a maximum length of 4m.

2. For dwellings fronting RE1 Public Recreation, the front setback may be reduced to 3m. A front verandah, porch or patio may be built to within 1.8m of the front boundary. The garage setback is to be maintained at a minimum of 5.5m.

3. Verandahs, balconies, eaves and other sun control devices may only encroach on the minimum front and secondary setback by up to 1m.

4. On the secondary setback encroachments must not be constructed within 1m from the property boundary.

5. The secondary setback is the longest length boundary.

6. Garages must be set back a minimum of 1m behind the main face of the dwelling. (The main face is the first wall of a habitable room)

7. Garages that address the secondary frontage must be setback 1m or 5.5m and greater. Garages are not permitted to be setback between 1 – 5.5m

8. Corner sites shall provide a frontage to both streets and should articulate their corner location with an architectural feature such as a wrap around verandah, bay window, corner entry or roof feature.

Side and Rear Setbacks

1. Buildings shall be setback from the side and rear boundaries in accordance with Table2.

Table2 Side and Rear Setbacks

Item	Side Setback	Rear Setback
Single storey dwelling houses	0.9 m	4.0 m
Second storey component of dwelling houses	1.2 m	7.0 m
Living room doors (including family rooms and rumpus rooms)	4.0 m	4.0 m

Note: Building encroachments may only occur if it is seen as beneficial for open space, solar access and the internal layout of the dwelling. The dwellings living areas should open out to open space.

Zero lot lines

1. Walls are generally to be 180mm clear of the side boundary to allow for gutter and eaves overhang.
2. The length of a zero lot line wall is limited to 50% of the adjacent side wall boundary.
3. No windows are permitted in a zero lot line wall.
4. A maintenance easement of at least 900mm shall be provided on the adjoining boundary. Refer to figure 15.

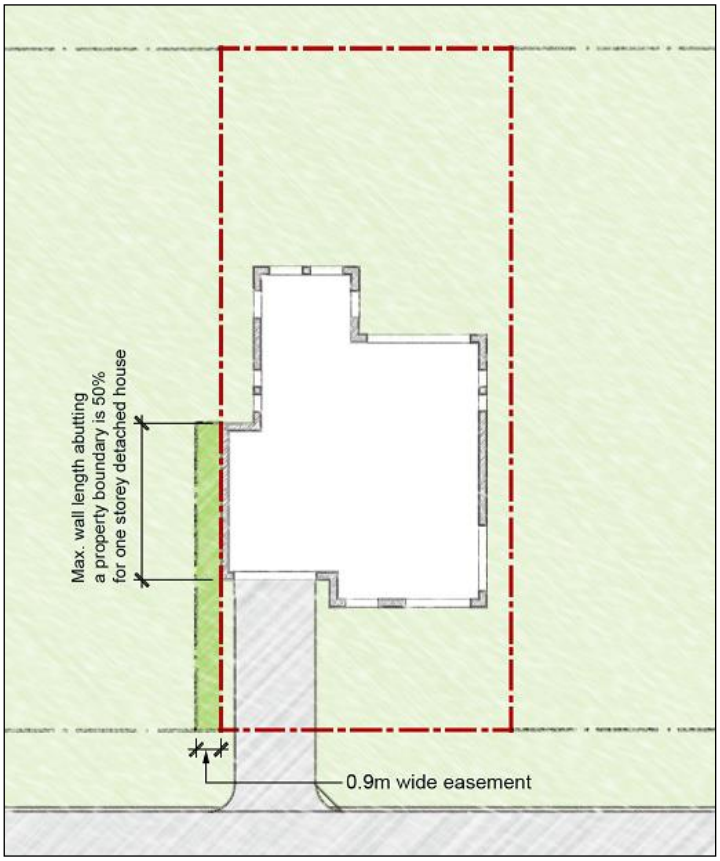


Figure 16 Zero Lot Lines

4.4 Landscaped Area and Private Open Space

Landscaped area is defined in *Liverpool LEP 2008.*

Private open space is an area within the site (usually at the rear) that is set aside for outdoor activities. Clotheslines, BBQ areas, pergola (unroofed structure), patio, garden sheds and pools can be included in the private open space.

Principal Private open space is an area that is directly accessible from at least one living room and is included in the private open space calculations (the principal private open space area may be paved or sealed).

Landscaped Area

Objectives

a) To provide an area to allow vegetation to mature.

b) To reduce the impact to neighbouring properties and natural waterways from stormwater runoff.

c) To reduce the amount of impervious areas.

d) To enhance the existing streetscape and soften the visual appearance of the dwelling.

e) To maximise the amount of landscaped area within the front setback of the dwelling.

f) Note: All proposed developments require a landscape plan prepared by a suitably qualified person to be submitted with the development application.

Controls

1. A minimum of 25% of the site area shall consist of Landscaped Area, this may include lawn, deep rooted trees, garden beds and mulched areas.
2. A minimum unincumbered area of 4 x 6m shall be provided in rear setback to accommodate deep rooted trees.
3. A minimum of 50% of the front setback area shall be Landscaped Area.
4. A minimum unincumbered area of 3 x 3m shall be provided in front setback to accommodate deep rooted trees.

Private Open Space

Objectives

a) To ensure that a minimum amount of Private Open Space is provided for outdoor activities.

b) To ensure that Private Open Space is clearly defined for private use.

c) To ensure that Private Open Space is private, landscaped, screened from overlooking and receives an adequate amount of solar access.

Controls

1. Each dwelling must provide a minimum of 50sqm of Private Open Space.
2. Areas less than 2.5m in width does not qualify as Private Open Space.
3. Private Open Space areas are not permitted within the primary street setbacks.
4. Private Open Space must have an area for clothes drying with at least 2 hours of full sun between 9.00am and 5.00pm at 21 June.
5. The Private Open Space shall include the Principal Private Open Space of 25sqm, which is directly accessible from the main living area and has a minimum dimension of 4m.

6. The Principal Private Open Space must receive 3 hours of sunlight to at least 50% of the area between 9:00am and 5:00pm on 21 June.
7. Where the Principal Private Private Open has a predominately northen aspect Clause 6 (above) does not apply.

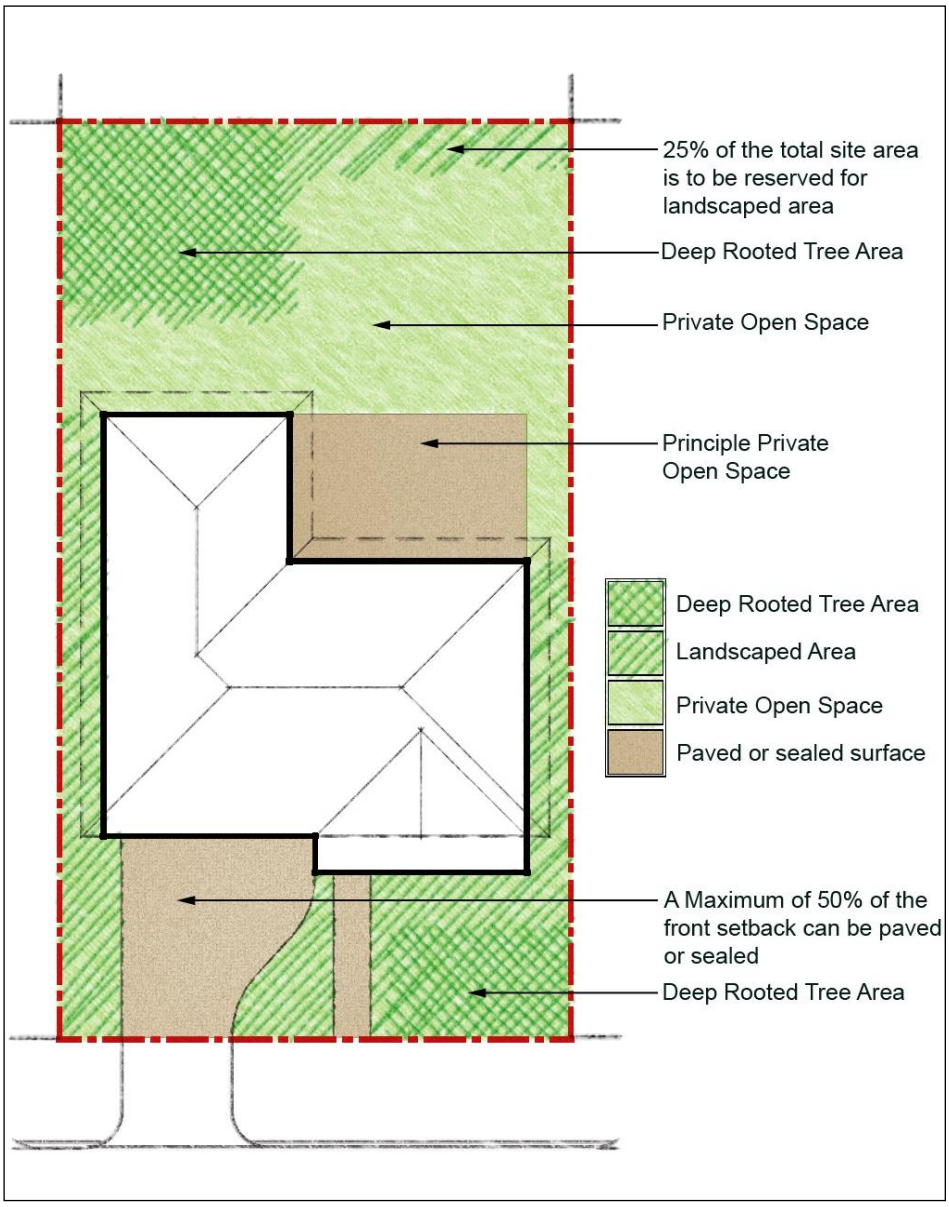


Figure 17 An example of Landscaped Area and Private Open Space

4.5 Cut and Fill, Building Design, Streetscape and Layout

Cut and Fill of Land

Objectives

a) To reduce the incidence of change in natural ground levels.

b) To encourage the architectural designs of dwellings which suit the contours of the land.

c) To provide controls for cut and fill of land designed to minimise the incidence of soil erosion and subsequent sedimentation of waterways.

d) To ensure that development on adjoining properties is not threatened or prejudiced by proposed cut and fill practices.

e) To discourage and eliminate, where possible, the construction of retaining walls on allotment boundaries.

f) To minimise overshadowing of neighbouring dwellings, their private open space or any solar panelling.

Controls

1. The maximum cut on a site must not exceed 600mm.

2. All retaining wall structures shall be masonry construction and designed by a suitably qualified person, or constructed as specified by the manufacturer of the product. The retaining wall shall be constructed wholly inside (within) the boundary of the site.

3. All slab constructions for dwellings that are above natural ground level are to be constructed using dropped edge beams to retain fill. The maximum fill within the confines of the slab must not exceed 1m. All fill must be contained within the dwelling footprint. Refer to Figure 24.

4. Contaminated fill, either imported or found on site is not permitted.

   Note: In the event of approval being granted to the erection of retaining wall(s) to contain proposed cut, Council will require the completion of such retaining wall(s) PRIOR TO the release of the occupation certificate.

5. Where an applicant considers that an allotment has characteristics which warrant exemption from this policy, an application for exemption may be made by the submission of a development application to Council for consideration. In addition to normal requirements the submission should include:

   - A plan showing existing contours (at 0.5m intervals) of the subject site and all adjoining sites.
   - A plan showing future contours (after proposed cut and fill) of the subject site and all adjoining sites.
   - Full details of any proposed retaining wall(s).

   Note: In the event of approval being granted to the erection of retaining wall(s) to contain proposed cut and fill, Council will require the completion of such retaining wall(s) PRIOR TO the commencement of any building works.

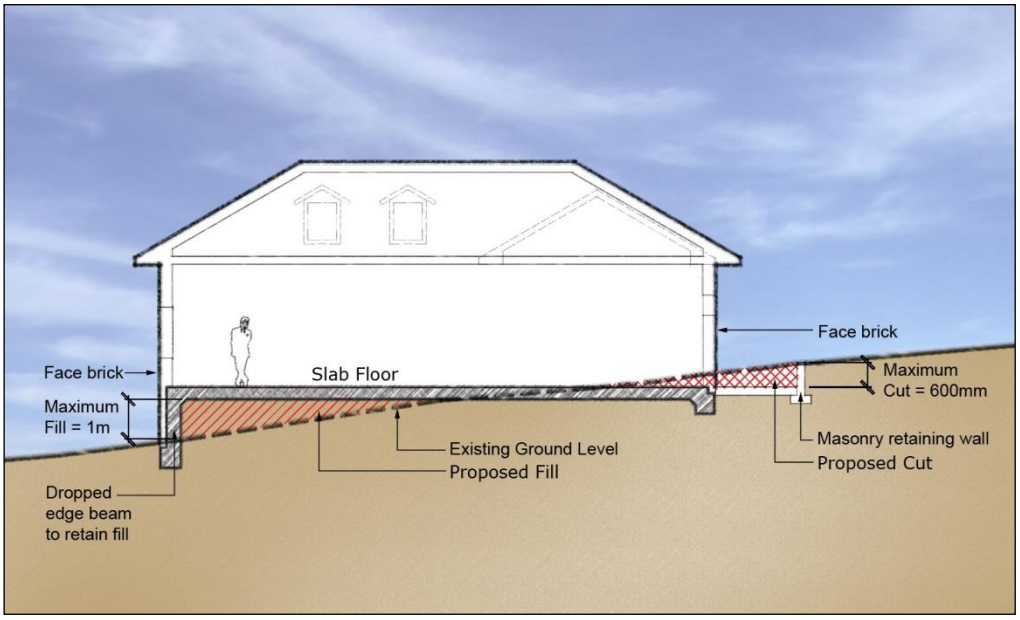


Figure 18 Cut and Fill requirements

Building Envelopes

Background

The orientation and site cover of a building has significant implications for residential amenity. Building envelopes determine the orientation and footprint of a dwelling, as well as the total volume of the dwelling.

Objectives

a) To facilitate the efficient use of the site area.

b) To maximise private amenity within the building.

c) To minimise the impacts of development on neighbouring properties in regard to views, privacy and overshadowing.

d) To ensure that buildings are sited so as to provide for solar access and both visual and acoustic privacy.

e) To provide an acceptable scale of development.

Controls

1. The building footprint for single detached dwellings is not to occupy more than 55% of the site and the total impervious area is not to exceed 75% of the total site area. A minimum of 25% of the site area must be pervious surfaces.

2. The building footprint for denser development (i.e. attached/zero lot housing, terrace, townhouse or villa development) is not to occupy more than 60% of the site and the total impervious area is not to exceed 75% of the total site area. A minimum of 25% of the total site area must be pervious surfaces.

Building Design and Appearance

Objectives

a) To encourage designs that will enhance the character of the neighbourhood.

b) To promote variation of building facade and design.

c) To ensure that the building enhances the streetscape through the use of suitable built form design and landscaping.

d) To ensure buildings address all street frontages.

e) To discourage garages and in particular garage doors, from visually dominating the streetscape.

f) To ensure that the building design, detailing, colour and finish shall add visual interest to the street and shall compliment the street.

g) To ensure habitable rooms address the street.

h) To encourage balconies over garages on two storey dwellings.

Controls

1. All dwelling houses are to be orientated to the street (See Figure 18).
2. The front pedestrian entrance must be visible from the street.
3. The front building facades shall be articulated, this articulation may include front porches, entries, wall indents, changes in finishes, balconies and/or verandahs.
4. Eave overhang must provide for sun shading and protect windows and doors. Eaves should have a minimum overhang of 400mm and be provided to a minimum of 70% of the dwelling.
5. Dwelling houses that face two street frontages or a street and public space shall address both frontages by the use of verandahs, balconies, windows or similar modulating elements.

Two storey dwellings

1. To break up the bulk of two storey dwellings balconies built above garages are encouraged (See Figure 18).
2. The maximum total length of the side walls of the first floor component of a dwelling shall be a maximum of 30m as measured from any point within 3m of that side wall (for example 12m + 18m = 30m) (See Figure 19).

Figure 19 Example of Building Appearance (Indicative Only – Not to Scale)

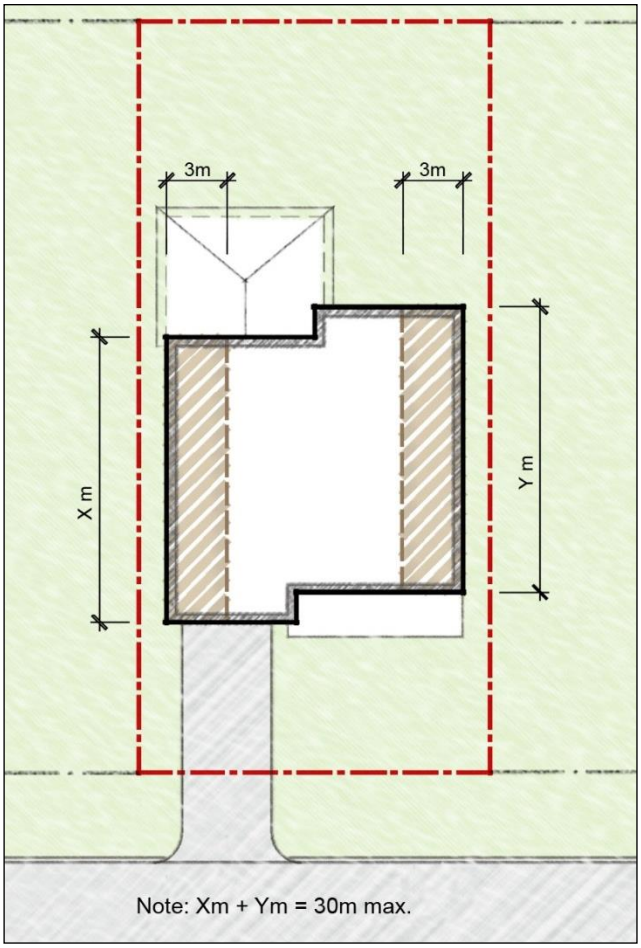


Figure 20 Maximum total first floor wall length of a two storey dwelling

Garages and Carports

1. The maximum width of garage doors or carports must be no greater than 50% of the building frontage width.
2. Garages and carports must be designed to be the minor element of the façade
3. Garage roofs shall be incorporated into the roof design of the house. Separate roofs for garages are discouraged, unless actually separated from the dwelling.
4. Garages and carports are to be compatible with the building design in terms of height, roof form, detail, materials and colours.
5. Carports may be built in front of the garage *only if* the carport is:
   - No larger than 5.5 x 6m.
   - Built of a similar colour and materials of the house.
   - Setback 2m from the front property boundary.
   - Compatible with the local streetscape.
6. The conversion of garages to living space may only be permitted if:
   - At least one car parking space is provided behind the front setback.
   - The additional living area does not result in the building exceeding the maximum permitted floor space ratio.

Internal Design of Dwellings

Objectives

a) The internal design must contribute to personal safety and to the protection of property by permitting casual surveillance of public spaces from private windows and entries.

b) To provide passive surveillance from rooms addressing the street or any adjoining open space.

c) To encourage the internal design of the dwelling to take advantage of cross ventilation.

d) To locate amenity rooms (such as laundries, bathrooms, toilets) to the side and rear of the development.

e) To ensure that each dwelling shall provide a sufficient amount of storage for elements such as garden and sports equipment.

Controls

1. All dwellings shall have habitable rooms located to the front of the dwelling for security and surveillance to the street.
2. Living rooms should take advantage of northern aspects.
3. Access to private open space must be from at least one living room.
4. The internal layout of the dwelling is encouraged to incorporate cross ventilation.
5. Bathrooms, ensuites, laundries and walk in wardrobes should be located to the side or rear of the dwelling.
6. Each dwelling must provide a minimum storage area of $8m^3$.
7. Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).
8. Dwelling entries must be oriented to the street.

4.6 Landscaping and Fencing

Landscaping

Objectives

a) To retain existing mature trees within the site in a way which ensures their ongoing health and vitality.

b) To provide privacy, summer shade and allow winter sun.

c) To enhance the existing streetscape and visual appearance of dwellings.

d) To encourage landscaping that is appropriate to the natural, cultural and heritage characteristics of its locality.

e) To ensure the visual impact of development is minimised and integrated into the streetscape.

Controls

1. A minimum of one tree is to be provided within the front setback area of every residential dwelling. This may include existing trees that are to be retained within the front setback area. Newly planted trees are to have a minimum pot size of five litres.
2. Trees planted on the northern side of private open space and habitable rooms are to be deciduous.

3. Planting of vegetation at the front of higher density development must consider the need for passive surveillance. Excessively dense vegetation that creates a visual barrier must be avoided.
4. Any tree with a mature height over 8 m should be planted a minimum distance of 3 m from the building or utility services.
5. A landscape plan must be lodged with all Das, and is to provide the following details
   - The location of any existing trees on the property, specifying those to be retained and those to be removed.
   - The location of any trees on adjoining properties that is likely to be damaged as a result of excavations of other site works.
   - The position of each shrub and tree species proposed to be planted. Each plant is to be identified by a code referring to a plant schedule on the plan.

Fencing

Objectives

a) To provide a clear transition between public and private areas.

b) To provide a visual element within the streetscape.

c) To ensure fencing enhances the streetscape.

Controls

1. Wall finishes must have low reflectivity.
2. Where noise insulation is required, consider the installation of double-glazing or other noise attenuation measures at the front of the building rather than construction of a high solid form fence.

Primary Frontage

3. The maximum height of a front fence is 1.2m.
4. Fences should not prevent surveillance by the dwelling's occupants of the street or communal areas.
5. The front fence must be 30% transparent. (See Figure 20)
6. Front fences shall be constructed in masonry, timber and/or vegetation and must be compatible with the proposed design of the dwelling.

Secondary Frontage

7. Side fences and walls must be a maximum of 1.8m in height, and constructed of masonry, timber and/or landscaped (see Figure 20).
8. For side walls or fences along the secondary frontage, a maximum height of 1.2m is required for the first 9m measured from the front boundary, the remaining fence / wall may then be raised to a maximum of 1.8m (see Figure 20). The secondary setback is the longest length boundary.
9. Side fencing facing a public street or open space must not be constructed of sheet metal.

Boundary Fences

10. The maximum height of side boundary fencing within the setback to the street is 1.2m.
11. Internal boundary fences shall be lapped and capped timber or metal sheeting.

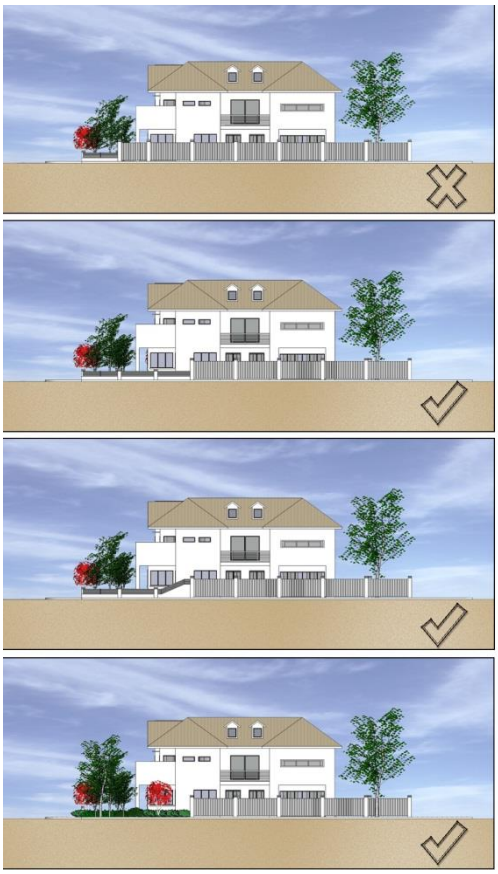


Figure 21 Fence treatments on secondary frontage

4.7 Car Parking and Access

Objectives

a) To provide car parking facilities on site that are convenient, safe and have sufficient space for vehicular manoeuvrability, whilst being visually unobtrusive.

b) To minimise the need for on-street car parking from new dwellings.

Controls

1. Two car parking spaces shall be provided for each dwelling.
2. At least one car parking space must be provided behind the front setback.
3. A car parking space is to have a minimum dimension of 2.5 x 5.5m.
4. A single garage is to be a minimum of 3m wide internally and unobstructed.
5. All parking spaces for adaptable housing units shall comply with AS 2890:1 for disabled car parking.

4.8 Amenity and Environmental Impact

Overshadowing

Objective

To minimise overshadowing of neighbouring dwellings and their private open space.

Controls

1. Adjoining properties must receive a minimum of three hours of sunlight between 9am and 5pm on 21 June to at least:

- One living room, rumpus room or the like.
- 50% of the private open space.

Privacy

Objective

To site and design buildings in a manner which protects the visual privacy of adjoining dwellings and their private open space.

Controls

1. Habitable room windows facing side boundaries are to be offset by at least 1m from any habitable room windows in an adjoining dwelling (See Figure 21).
2. Habitable room windows on the first floor that face the side boundary are to avoid unreasonable overlooking by having a minimum sill height of 1.5 m, except where they face a street or public open space (See Figure 21).
3. Building siting, window location, balconies and fencing must consider the importance of the privacy of on site and adjoining buildings and private open spaces.
4. Landscaping should be used where possible to increase visual privacy between dwellings and adjoining properties.

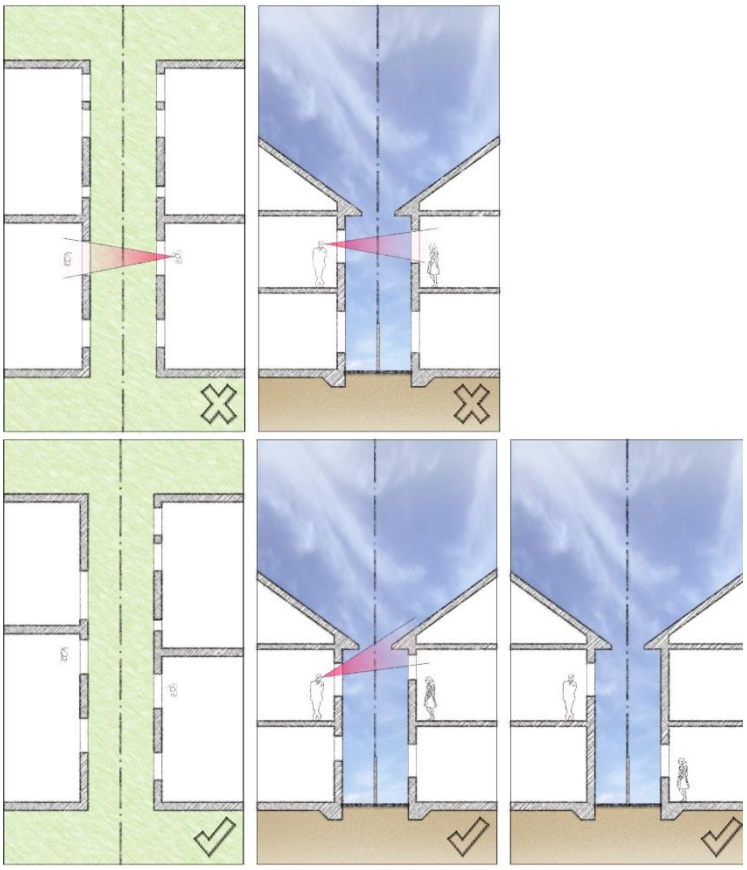


Figure 22 Privacy and Amenity

Acoustic Privacy

Objective

To ensure appropriate noise and vibration attention measures are incorporated into residential development.

Controls

1. Noise attenuation measures should be incorporated into building design to ensure acoustic privacy between on-site and adjoining buildings.
2. Developments in areas adversely impacted upon by traffic related noises must incorporate the appropriate noise and vibration mitigation measures into the design in terms of the site layout, building materials and design, orientation of the buildings and location of sleeping and recreation areas.
3. Where party walls are provided they must be carried to the underside of the roof covering and be constructed in accordance with Part F5 of the *Building Code of Australia*.
4. The proposed buildings must comply with the Department of Environment and Climate Change criteria and the current relevant Australian Standards for noise and vibration and quality assurance.

4.9 Site Services

Objectives

a) To ensure that the required services are provided.

b) To ensure that the services provided are easily protected or maintained.

Controls

Letterboxes

1. Letterboxes shall to be provided for each dwelling on site, easily accessible from the street, able to be securely locked and provided in accordance with Australia Post's requirements.
2. Freestanding letterbox structures should be designed and constructed of materials that relate to the main building.
3. Residential numbering should be attached to the letterbox so that it is clearly visible from the street frontage. Numbers should be 75 mm in height, reflective and in contrast to the backing material.

Frontage works and damage to Council infrastructure

4. Where a footpath, road shoulder or new or enlarged access driveway is required to be provided this shall be provided at no cost to Council.
5. Council must be notified of any works that may threaten Council assets. Council will assess any applications for works involving Council infrastructure.
6. Where there are no existing street trees in front of the site it may be a condition of consent that street trees be provided in the footpath area immediately in front of the site.

Electricity Sub Station

In some cases it may be necessary to provide an electricity sub station at the front of the development adjacent to the street frontage. This will involve dedication of the area as a public road to allow access by the electricity provider. The front boundary treatment used elsewhere on the street frontage.

4.10 Secondary dwellings (Granny Flats)

Objective

To provide housing choice within a standard residential lot for the use of a separate dwelling within the existing title.

Controls

1. A Secondary dwelling can be a maximum of one storey high, unless the granny flat is above the garage facing a rear laneway, where the granny flat must be one storey high above the garage.
2. A Secondary dwelling should be attached to the main dwelling, as provided by Part 2 of the DCP. However, Council may consider applications for detached granny flats on a merit base.
3. A Secondary dwelling should compliment the main dwelling design by using the same style of construction and a similar colour.

Note: Secondary dwellings are included in the overall floor space ratio of a property, and only one Secondary dwelling is permitted per lot.

Appendix 1 Street & Landscape Design

The following information assists developers in the detailed design layout of streets and adjacent landscaping. The guidelines are seen as the minimum acceptable standard. Developers may wish to exceed these standards to may wish to provide an alternative, subject to approval from Council.

The landscaping proposed reflects a road hierarchy. The Classified roads provide a native bushland appearance. The sub-arterial roads and trunk collector streets provide an "avenue" appearance consisting of street trees, and feature landscaped strips alongside the street.

It is advisable to consult Integral Energy regarding clearances to any existing or proposed electricity power lines.

Landscape Specifications

Sub arterial roads, trunk collector streets & access streets

- Where there are existing weed infestations in the landscape zone, spray weeds with a glyphosphate based herbicide (such as Roundup), in accordance with manufacturers specifications. Sprayed areas are to remain undisturbed for a period of two (2) weeks during the summer and four (4) weeks during winter.
- Remove large stones, building debris, rubbish or any material that may restrict the growth of plants.
- Apply gypsum at a rate of 300 kg/ha and cultivate it into the surface to a depth of 150mm.
- Place and consolidate a layer of clean imported topsoil to create a profile, as shown on the subsequent pages.
- Where applicable, install CCA treated timber edging to locations as shown on
- The subsequent pages.
- Plant trees and shrubs in all landscape zones in accordance with planting recommendations. Refer to the following section on Planting in mulched landscape areas and medians, and Street Tree Planting.
- Apply a continuous 75mm layer of organic mulch to the whole garden bed area.
- Provide continuous maintenance to all landscape zones for a period to 12 months to ensure plant establishment. Refer to section on Maintenance.

Planting

Planting in mulched landscaped areas & medians:

- Trees and shrubs are to be planted in a random fashion at a density of approximately:
- 1 tree for every 10sqm of landscaped zone minimum pot size 35L.
- 1 tree at every 8m interval within the median, (One species only with a minimum pot size 35L).
- 1 shrub for every 1sqm of landscaped zone with a minimum pot size of 150mm.
- 2 groundcovers for every 1sqm of median landscape.

Species List, for landscaped areas (excluding median)

Plant Name	% of total quantities to be planted	Plant Name	% of total quantities to be planted
Trees		**Shrubs**	
Eucalyptus tereticornis	15%	Acacia decurrens	10%
Eucalyptus moluccana	20%	Acacia falcata	10%
Eucalyptus crebra	20%	Acacia parramattenisis	5%
Eucalyptus maculata	30%	Melaleuca armillaris	10%
Angophora floribunda	5%	Melaleuca hypericifolia	5%
Casuarina glauca	10%	Melaleuca linariifolia	10%
		Pultenaea villosa	5%
		Banksia spinulosa	5%
		Lomondra longifolia	5%
		Leptospermum juniperinum	10%
		Hakea sericea	10%
		Kunzea ambigua	5%
		Kunzea baxteri	5%
		Indigophera australis	5%

Street Tree Planting

Provide street tree planting to locations and sizes as detailed below:-

- 100 litre trees at 10m intervals along both sides of Sub-Arterial Roads and Trunk Collector Streets.
- Trees are to be planted 600mm back from the kerb line.

Maintenance

Maintenance of mulched landscaped areas shall include the following activities:

- Topping of the mulch to maintain a continuous 75mm layer.
- Maintaining soil moisture levels during dry periods.
- Weeding and treating pest and disease infestations with the appropriate horticultural methods.
- Replacement of any container grown plants, which are dead or dying.

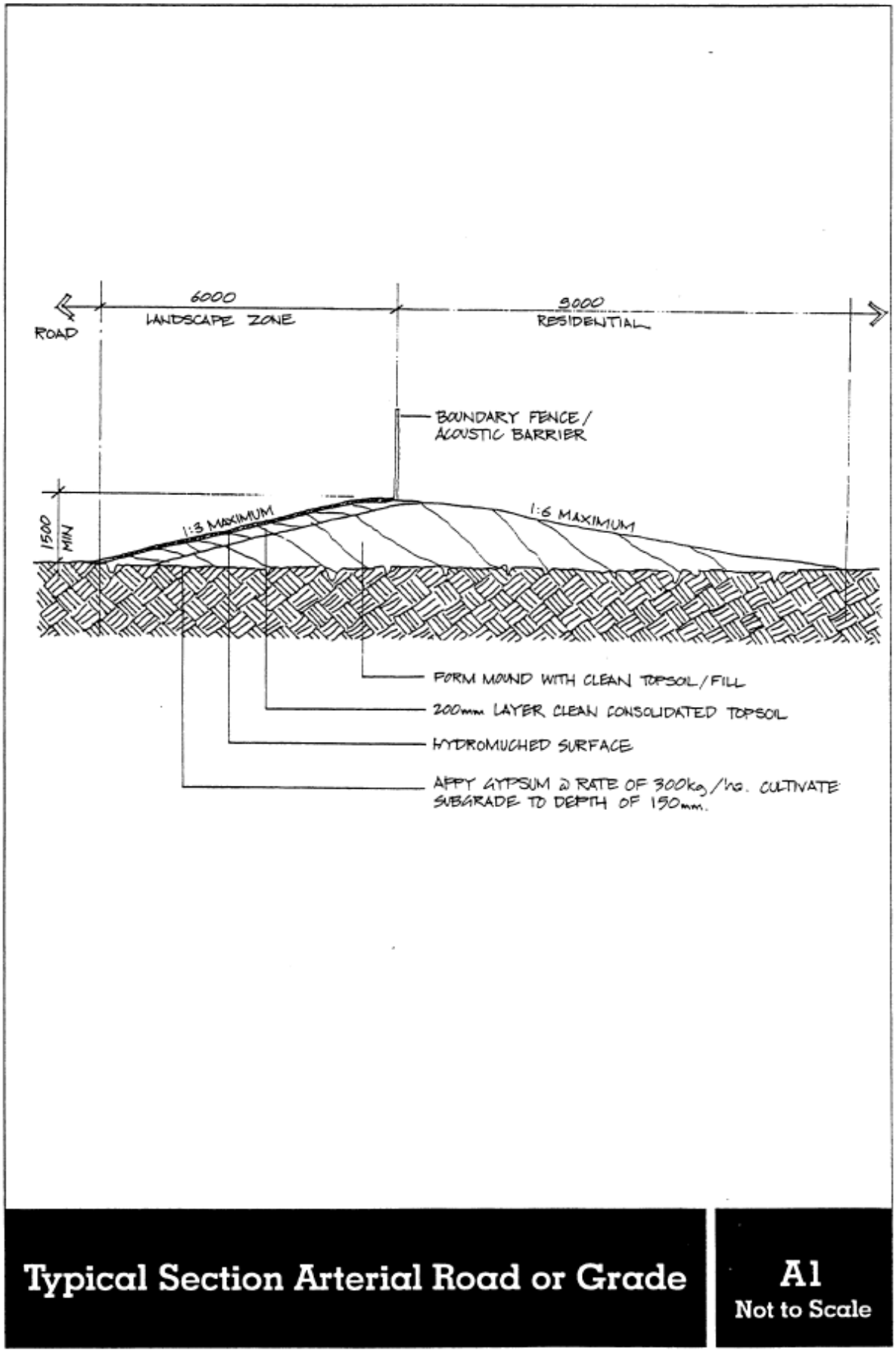
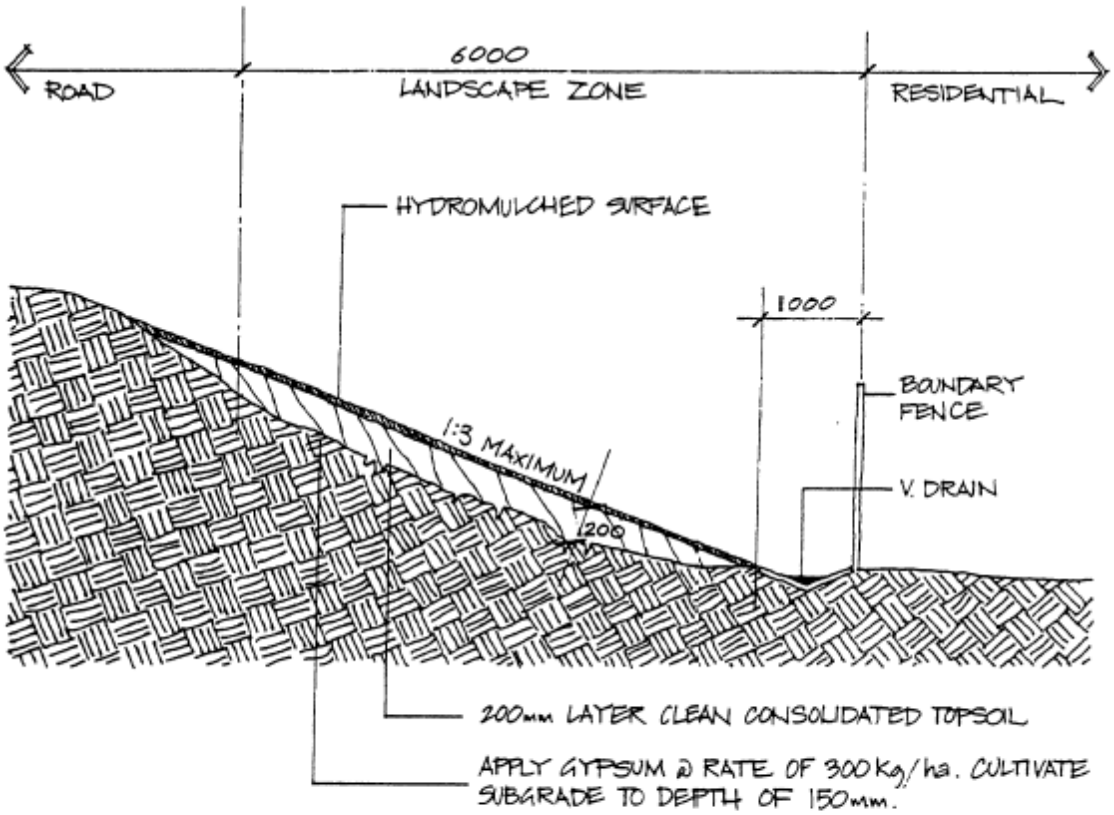


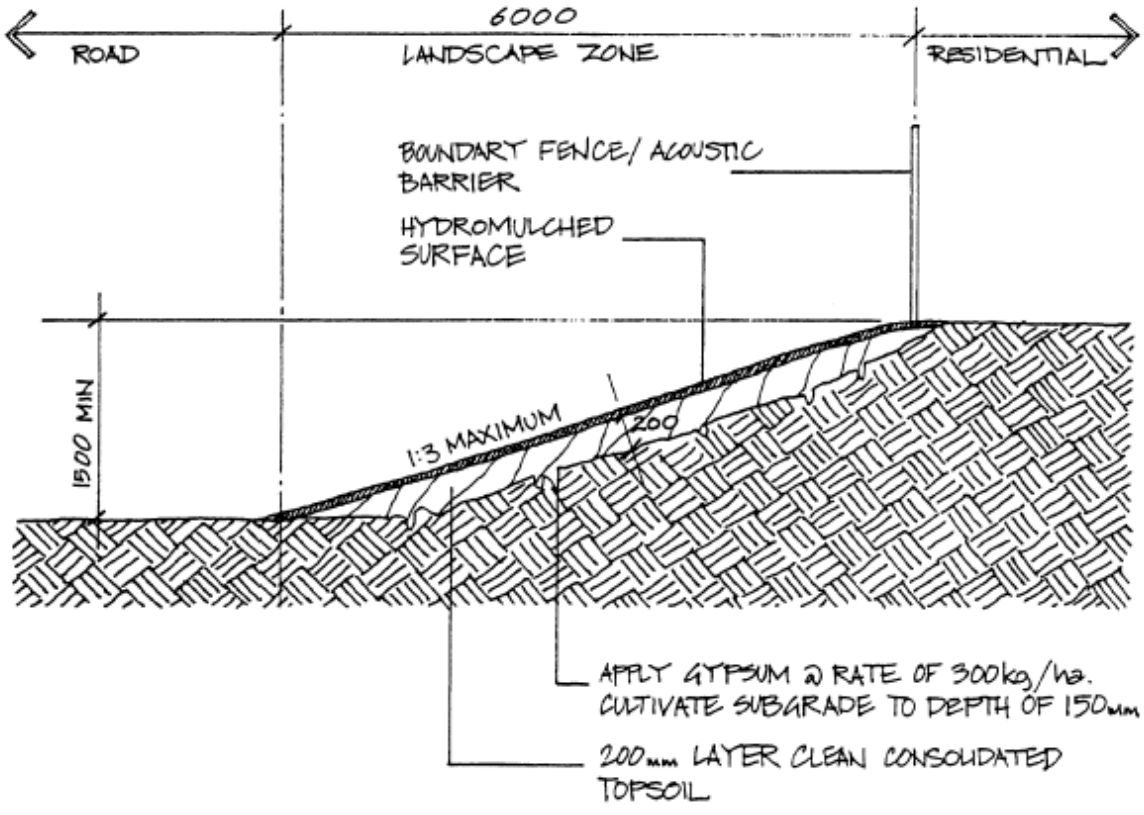
Figure 22 Typical Classified Road Grade



Typical Section Elevated Arterial Road

A2
Not to Scale

Figure 23 Elevated Classified roads



Typical Section Arterial Road in Cut | **A3** Not to Scale

Figure 24 Classified roads in cutting

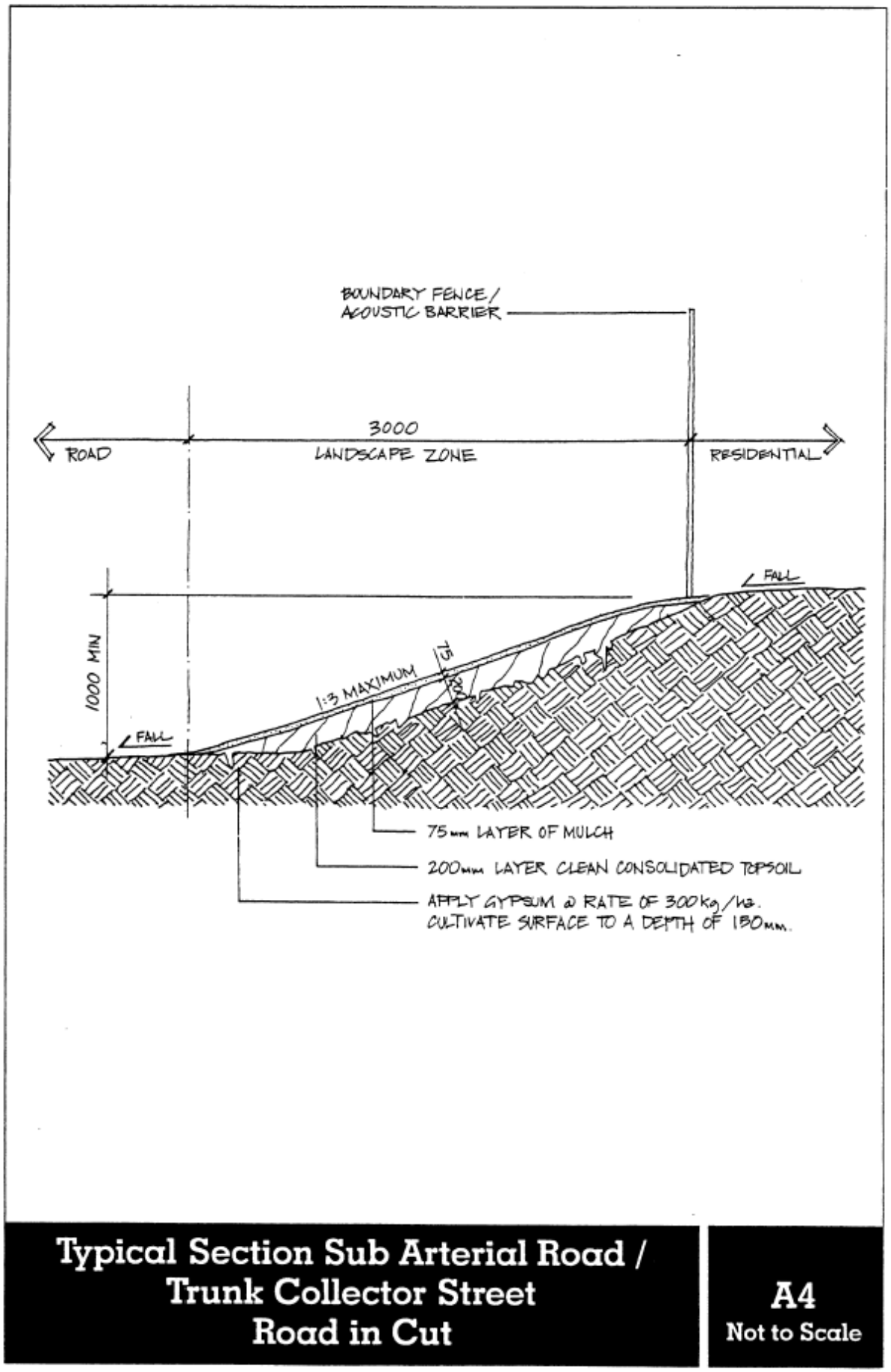
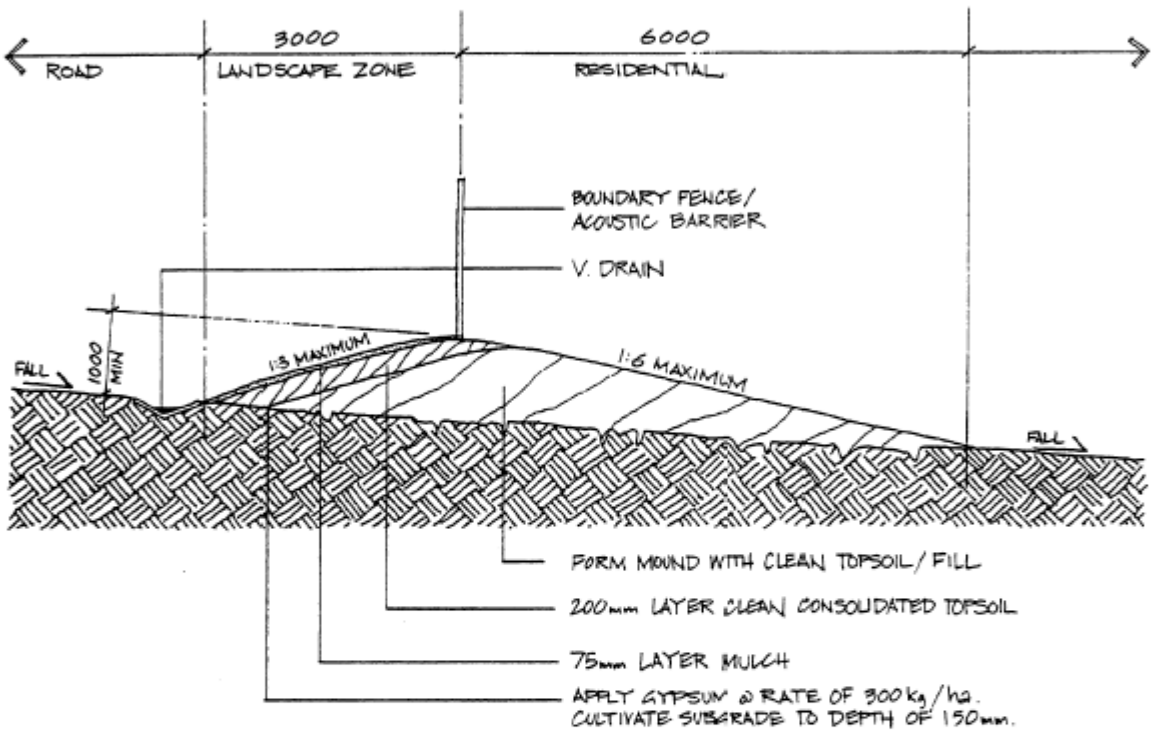


Figure 25 Trunk Collector Street in Cutting



Typical Section Sub Arterial Road / Trunk Collector Street Drainage Falls Away Grade

A5
Not to Scale

Figure 26 Drainage of road

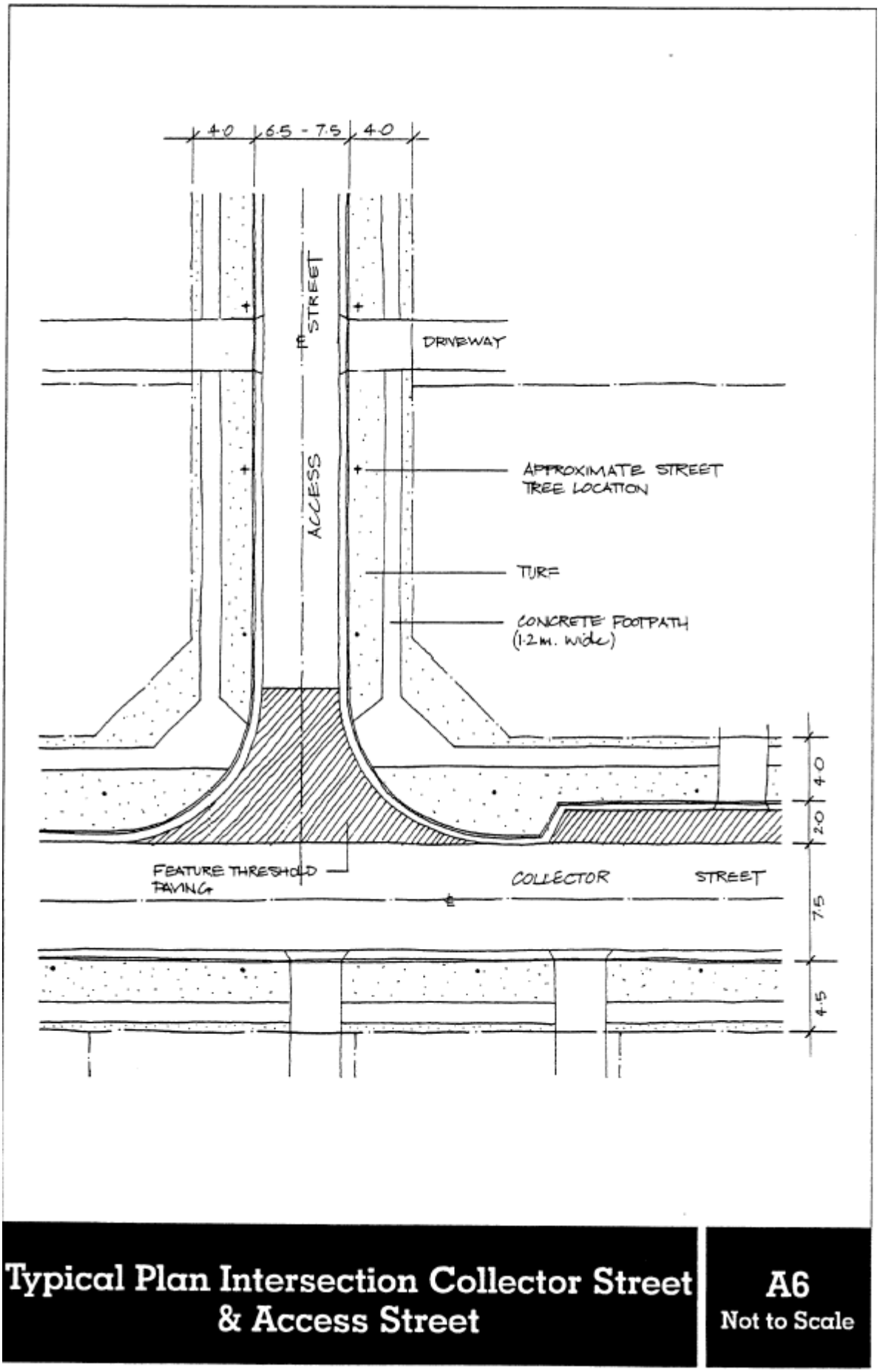


Figure 27 Intersections

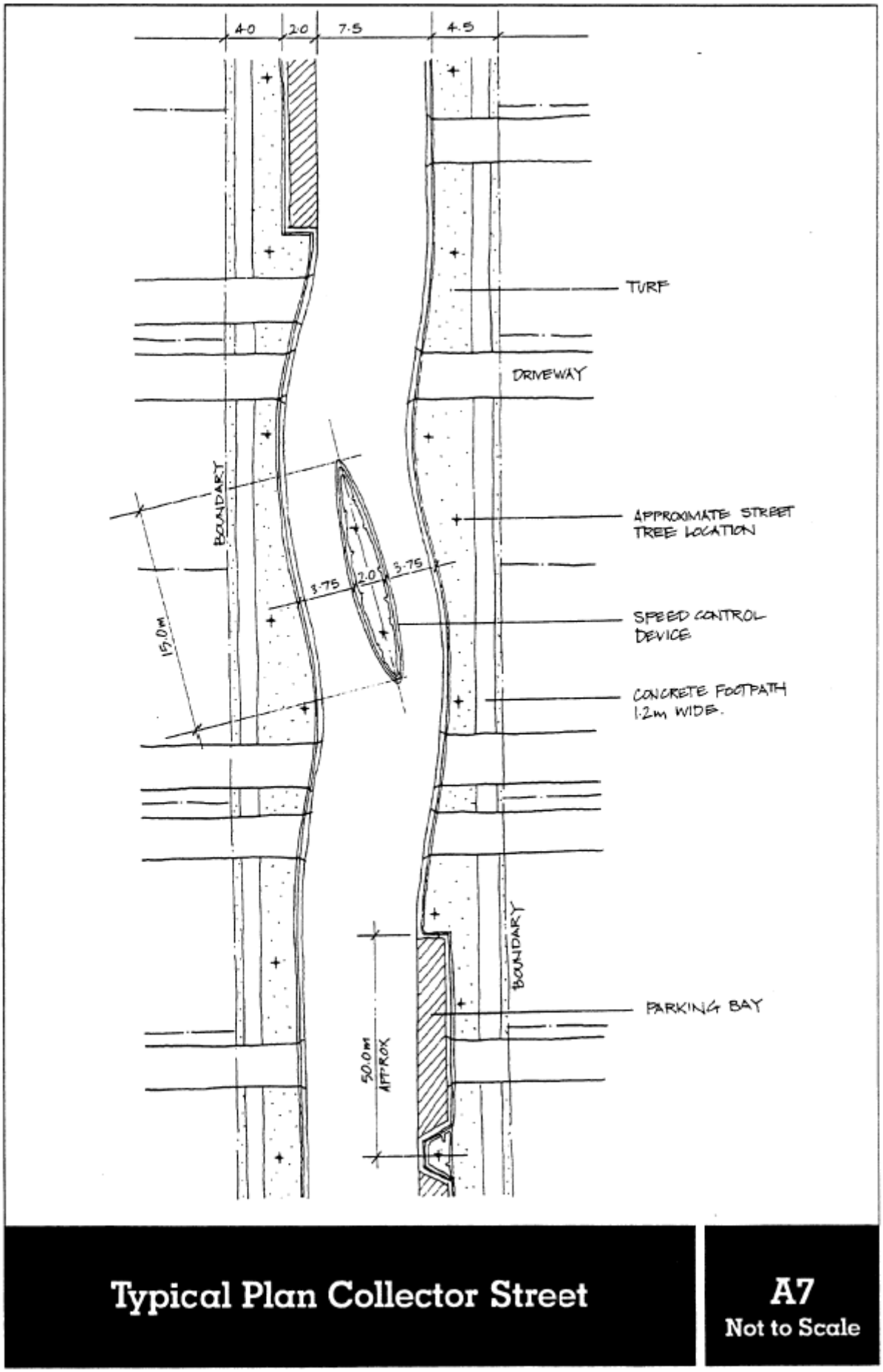
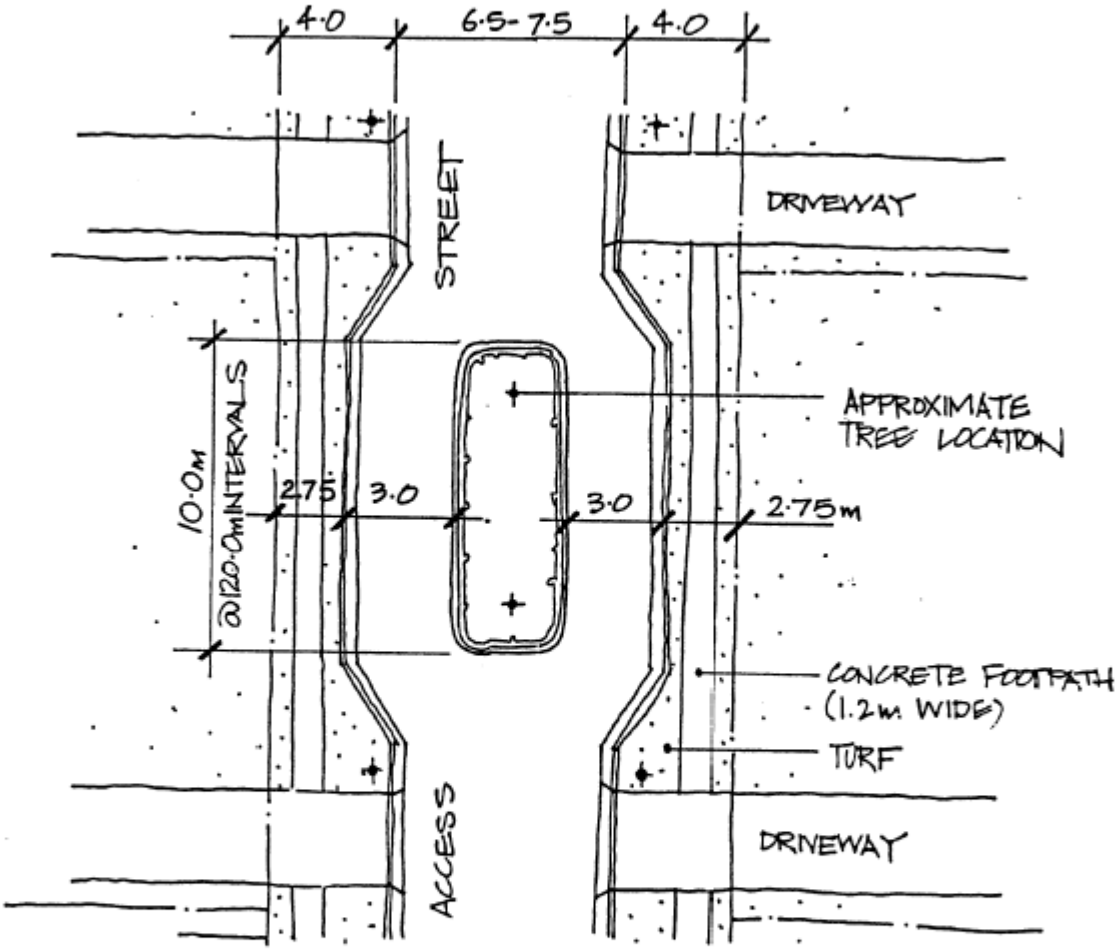


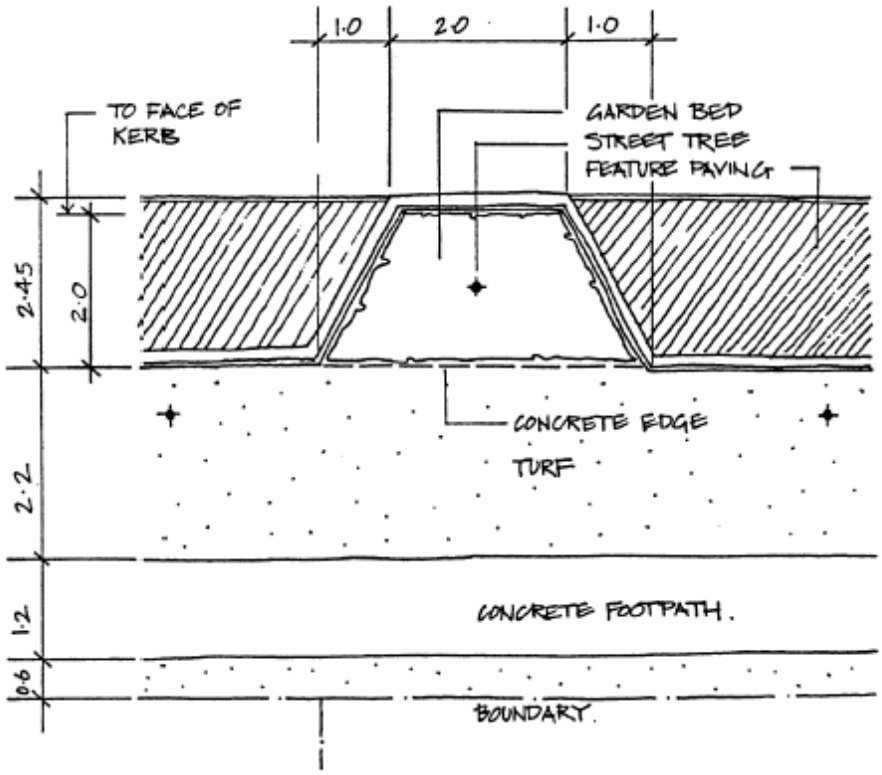
Figure 28 Typical collector streets



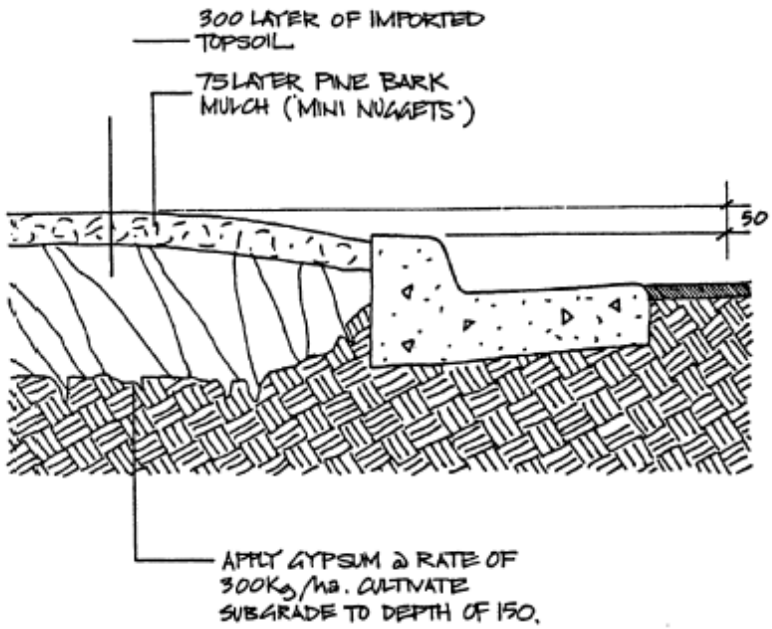
Typical Plan Access Street Landscaped Speed Control Device

A8
Not to Scale

Figure 29 Landscape speed control device



Detailed Plan Tree Island on Collector Street — **A9** Not to Scale



Detailed Section of Tree Island — **A10** Not to Scale

Figure 30 Tree Islands in roads

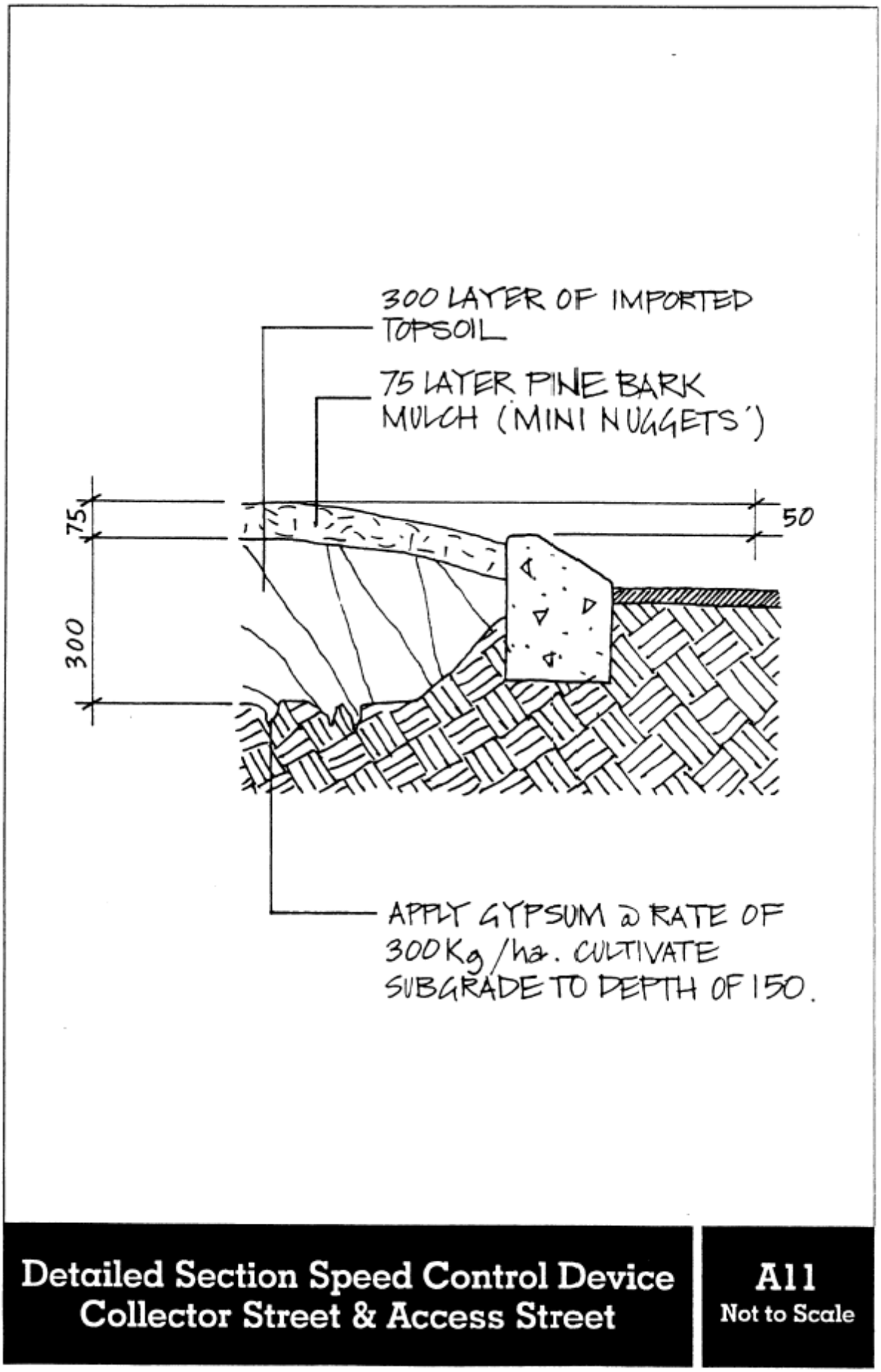
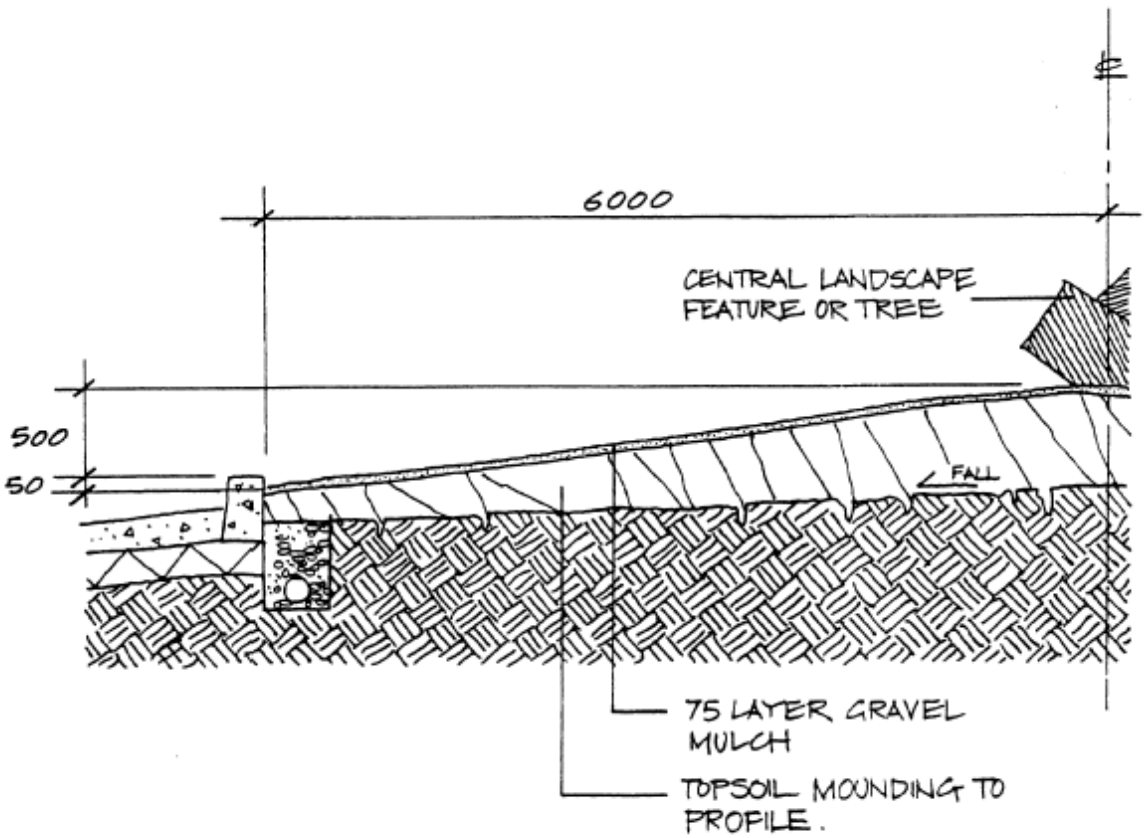


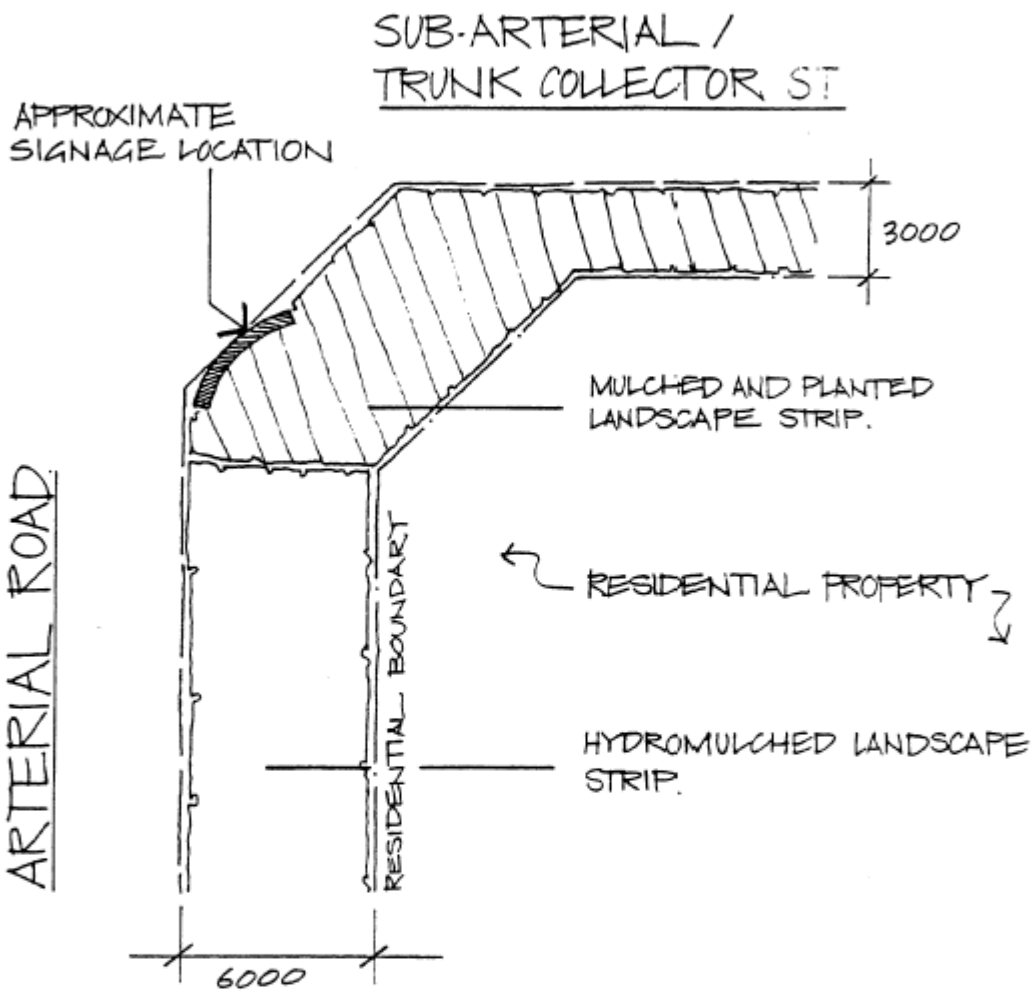
Figure 31 Speed control device



Detailed Section Roundabout

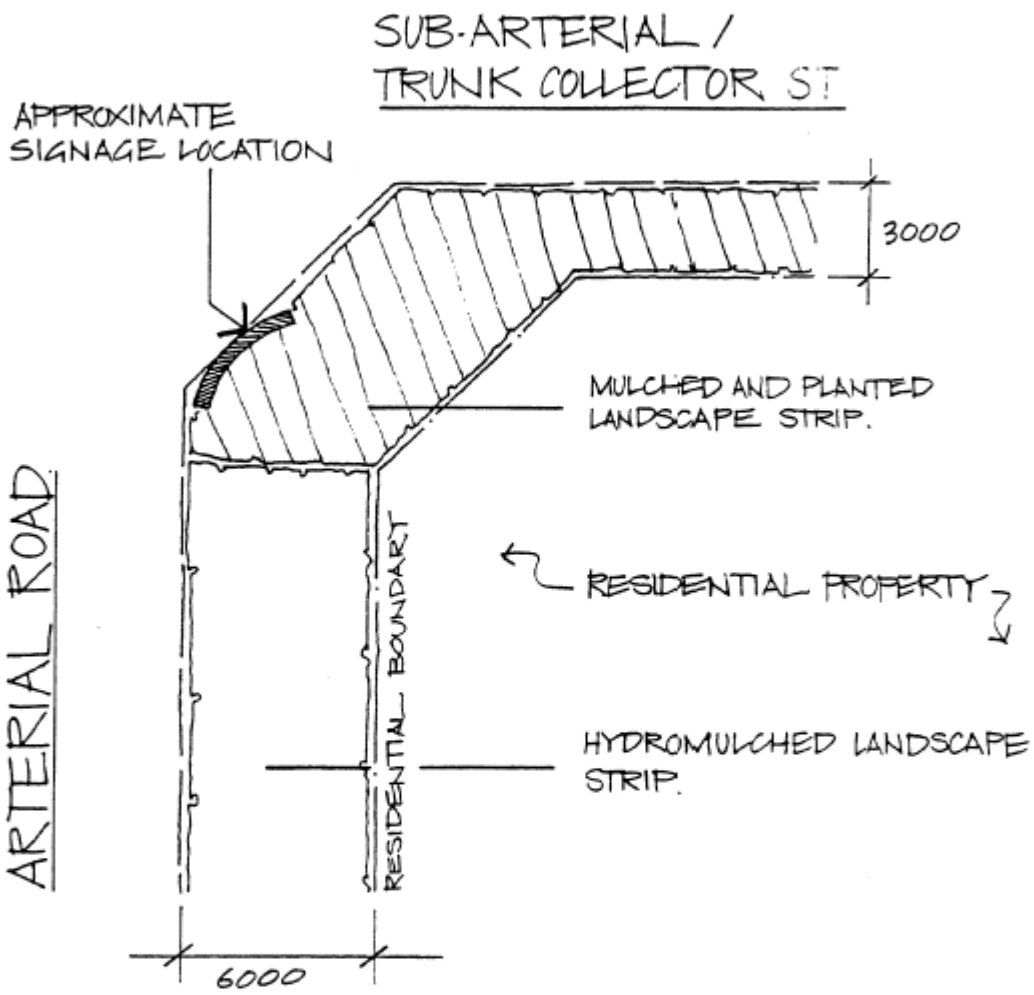
A12
Not to Scale

Figure 32 Roundabout



Detailed Plan Signage Location | **A13** Not to Scale

Figure 33 Signage



Detailed Plan Signage Location | **A13** Not to Scale

Figure 34 Signage

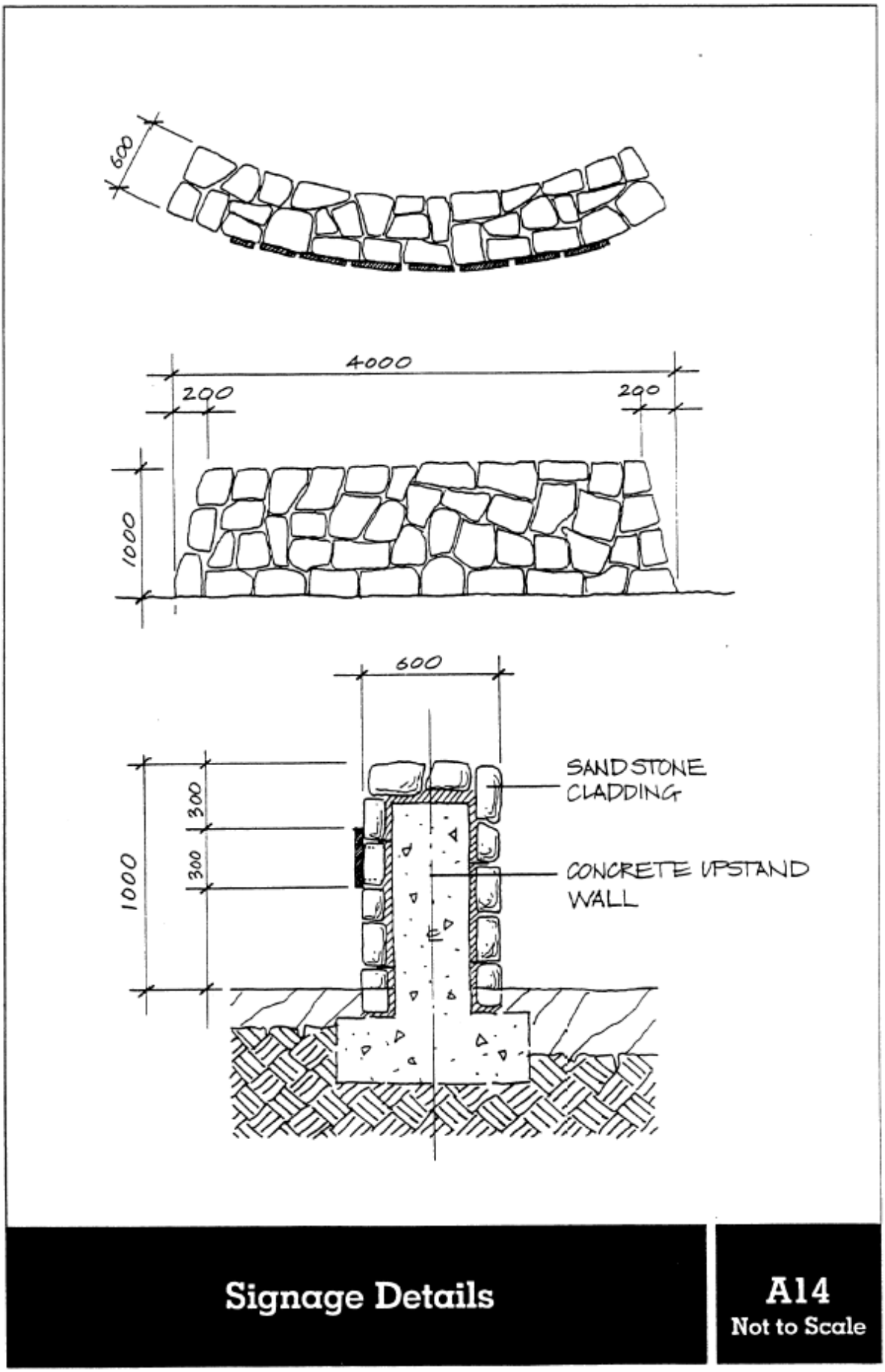


Figure 35 Signage

Appendix 2 Drainage and Open Space Landscape Design

The following assists developers in the detailed design and layout of drainage and open space. The guidelines are seen as the minimum acceptable standard. Developers may wish to exceed these standards or may wish to provide an alternative subject to approval from Council.

Applicants must seek advice from Council prior to the lodgement of any landscape plans (Landscape Plans are to be lodged in conjunction with the engineering plans). Applicants are also advised to consider following relevant design parameters prior to the preparation of any landscape plans:

Pedestrian and Bicycle Paths

Shared pedestrian and bicycle paths within open space areas must be designed in accordance with the guidelines as outlined in the document prepared by Austroads - Guide to Traffic Engineering Practice,

Underground Service Easements

Tree planting directly over underground service easements may cause future maintenance problems. Trees must not be planted closer than 3m to any underground easement.

Grasses Areas

Layout

Narrow strips of grassed areas are difficult to maintain and should be avoided where possible. Grassed areas should not be narrower than 3m. Areas less then 3m should be constructed as mulched garden beds planted with shrubs or groundcovers.

Gradients

Grassed embankments must not be steeper than 1:6.

All grassed areas are to finish level with adjoining surfaces. All grassed areas are to be detailed in the following way:

- Turf from recognised turf grower.
- 100 layer clean free draining topsoil.
- 100 depth cultivated sub grade.

Edging

To prevent the encroachment of grassed areas into garden beds, all grassed areas are to be edges with a suitable material.

Mounding

Grassed mounds must not be steeper than 1:6.

Planter beds

Gradients

Planter bed areas must not be steeper than 1:4.

Construction

All garden bed areas are to be detailed in the following way:

- 75mm layer mulch.

- 300mm layer, clean free draining topsoil mix.
- Gypsum at a rate of 300 grams/m^2 to sub grade and cultivate to a depth of 150mm.

Tree and Shrub Planting

General

Trees and shrubs should generally be planted in mulched garden bed areas and in sufficient densities to achieve a full coverage of the bed within two years of planting. Specimen trees planted in lawn areas are to be mulched around their bases to a depth of 75mm and appropriately protected from maintenance vehicles with the installation of a robust tree guard.

Selection

Tree and shrub selection should ensure the following:

- Suitability to the local environmental conditions.
- Low maintenance requirements.
- Drought resistance.
- Screen undesirable views i.e. rear fences.
- Provide seasonal interest.
- Maintain solar access to adjoining properties.
- Linear Open Space Corridors (along Creeks).
- Tree and shrub selection to be predominantly indigenous to the local area.
- Transmission Easements (including transmission lines in road reserves):
- Tree and shrub planting within transmission easements must be carried out in accordance with the guidelines set out by the appropriate/relevant electricity transmission authority, (either Integral Energy or Trans Grid).

Drainage corridors

- Tree planting within drainage corridors must not reduce the capacity of the drainage system.
- Minor Drainage links between streets.
- Tree planting within minor drainage links between streets is to be assessed on its merits.

Facilities/Furniture/Lighting

Applicants are advised to discuss the provision of public facilities, furniture and lighting with Council's Parks and Recreation assessment officers prior to the preparation of any landscape plans.

Maintenance

Applicants are required to provide a minimum of 12 months maintenance upon satisfactory completion of the landscape works. Maintenance will include all works necessary to promote the establishment of the plant material and grassed surface. This includes watering, weeding, mowing, treating pests and diseases and the replacement of any failed, stolen plants.

Liverpool city council
creating our future together

Council Administration Centre Level 2, 33 Moore Street, Liverpool NSW 2170

Postal Address Locked Bag 7064, Liverpool BC NSW 1871

Customer Contact Centre 1300 36 2170

Fax 02 9821 9333

NRS (National Relay Service) 133 677

Email lcc@liverpool.nsw.gov.au

Website www.liverpool.nsw.gov.au

Liverpool city council
creating our future together

Liverpool Development Control Plan 2008

Part 2.3

Subdivision of land and Residential development in

Georges Fair Moorebank

~~3 September 2014~~
May 2024

Part 2.3 must be read in conjunction with Part 1

Refer to Part 3.8 for non residential development in residential zones

Liverpool Development Control Plan 2008

Part 2.3 Georges Fair Moorebank

Table of Contents

1. Preliminary 4
2. Controls for Public Domain 7
   - 2.1 Street Network 7
   - 2.2 Pedestrian and Cyclist Networks 11
   - 2.3 Streetscape and Street Trees 12
   - 2.4 Open Space 13
   - 2.5 Water Cycle Management 15
3. Controls for the Private Domain 16
   - 3.1 Subdivision, Frontage and Allotment Size 16
   - 3.2 Site Planning 19
   - 3.3 Setbacks 21
   - 3.4 Landscaped Area and Private Open Space 23
   - 3.5 Cut and Fill, Building Design, Streetscape and Layout 25
   - 3.6 Landscaping and Fencing 30
   - 3.7 Car Parking and Access 33
   - 3.8 Amenity and Environmental Impact 36
   - 3.9 Site Services 38
   - 3.10 Secondary dwellings (Granny Flats) 39

Table of Figures

Figure 1 Land to which this Part applies 4
Figure 2 Preferred key street network for the site 8
Figure 3 Preferred Street Sections 9
Figure 4 Potential Bus Routes 10
Figure 5 Location of potential walking and cycle ways 12
Figure 6 Tree Guard and Planting Details 13
Figure 7 Indicative locations of local open space areas 15
Figure 8 Highest density generally located in accessible places with highest amenity 17
Figure 9 Lot Orientation 17
Figure 10 Interface Areas 18
Figure 11 Private open space considerations on an east-west lot 18
Figure 12 Site Analysis 20
Figure 13 An example of zero lot line with Maintenance Easement 23
Figure 14 Landscaped Area 25
Figure 15 Cut and Fill requirements for a dwelling 26
Figure 16 View Sharing 27
Figure 17 Example of Building Appearance 30
Figure 18 Fence types 32
Figure 19 Examples of Internal Driveways 34
Figure 20 Private Driveway Options 35
Figure 21 Privacy and Amenity 37

List of Tables

Table 1 Front and Secondary Setback 21
Table 2 Side and Rear Setbacks 22

1. Preliminary

Applies to

1. Part 2.3 applies to the land, shown in Figure 1.
2. Part 1 also applies to the land shown in Figure 1.
3. Part 3.8 also applies for non residential development on the land.
4. Parts 3.1 – 3.7 do not apply to the land.

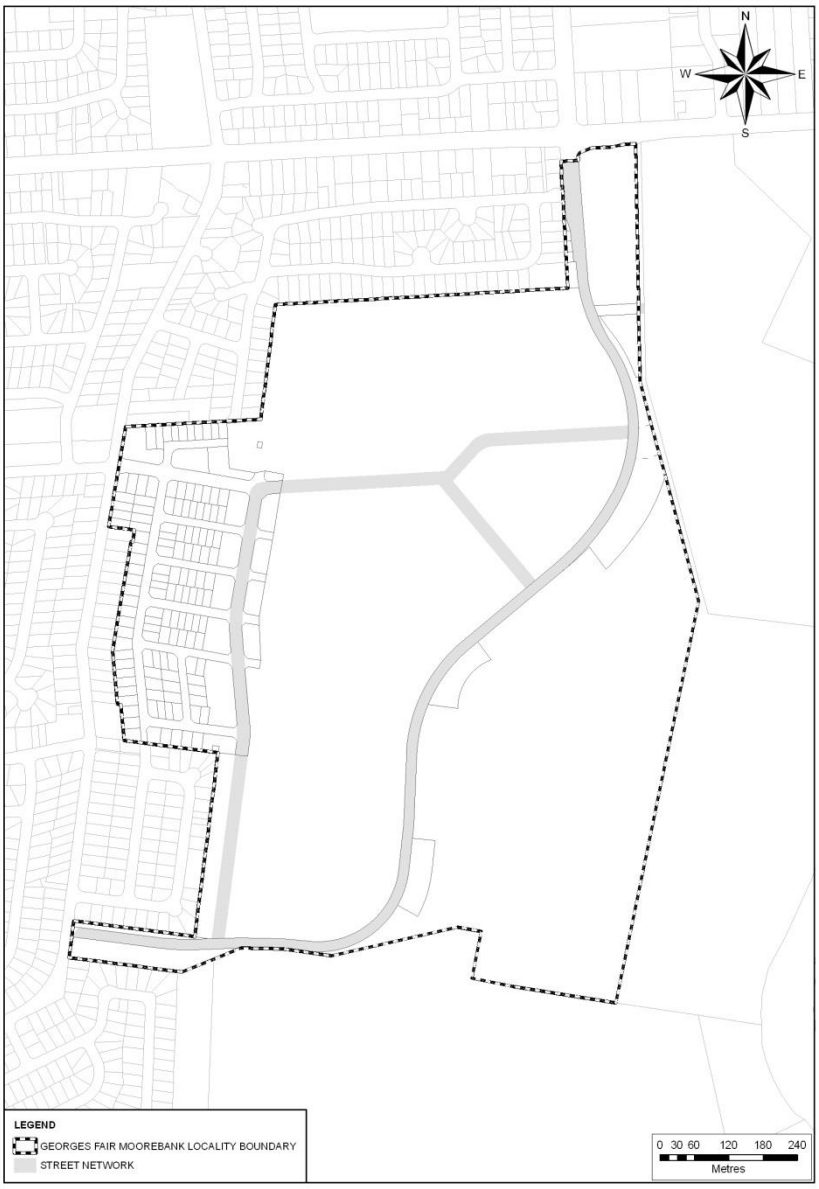


Figure 1 Land to which this Part applies

Background

The Georges Fair Moorebank Land was rezoned under Liverpool LEP 1997 Amendment No. 75 on 9 July 2004. The area was originally subject to Liverpool DCP No. 50, which came into force on 22 September 2003. There is still area that is not yet developed and is accordingly incorporated into this DCP.

A Site Structure Plan has been prepared as a conceptual guide to future development of the site (see Figure 2). It illustrates the areas to be developed for housing, potential location and function of streets, and local and district open space areas.

It has been determined having regard for the land form, environmental conditions of the site, surrounding local street network, and the relationship with adjoining residential areas.

The site is subject to a Developer Deed for the provision of the infrastructure at particular thresholds in the development process. Development shall be carried out in accordance with the Developer Deed.

Objectives

Accessibility

To ensure a clear relationship between accessibility and land use by:

a) Promoting a movement system that gives appropriate priority to: walking, cycling, public transport, and private vehicles.

b) Guaranteeing a movement system that relates accessibility demand to location of development type.

c) Ensuring that servicing is able to be carried out appropriately.

d) Ensuring movement priorities, traffic speeds and street and road designs are appropriate to the location and give priority to pedestrians and children.

e) Guaranteeing adequate accessibility for emergency vehicles.

f) Building upon existing movement patterns and infrastructure by utilising the existing street layout.

g) Providing safe access during flooding events.

Social Benefits

To establish affordable and accessible facilities and resources that allow people to maintain wellbeing, live and recreate by ensuring that development creates a ‘people place’ by giving priority to people and human relationships through housing mix and safety.

Environmental Benefits

To ensure a clean, safe and healthy environment that builds on existing resources and produces quality built and natural assets by:

a) Establishing appropriate drainage management that, contributes positively to the area.

b) Developing solutions to manage environmental issues on-site.

c) Ensuring that waste disposal is effective and efficient and that recycling is utilised at every opportunity.

d) Ensuring a high standard of water and air pollution management and water quality.

e) Maintaining and enhancing the quality of the natural environment.

f) Connecting and enhancing vegetation corridors and providing links between the Georges River and Holsworthy.

g) Promoting the development of place and a quality built environment with people and human relationships as a central consideration.

Economic Benefits

a) To ensure appropriate accessibility to employment.

b) To ensuring infrastructure is sufficient to meet current and predicted need.

2. Controls for Public Domain

2.1 Street Network

Background

The Georges Fair Moorebank area is to be an accessible place linked to its surroundings with streets, pedestrian and cyclist pathways and public transport. Good transport linkages contribute to a connected, vibrant and mobile community where all are able to safely and conveniently access services and facilities, and where dependence on private vehicles is minimised.

Objectives

a) To provide an attractive residential street environment.

b) To provide for the safe and efficient circulation of traffic.

c) To provide for the safe and efficient movement of pedestrians with particular regard to the provision of clear and safe access routes for people who have a disability.

d) To provide for efficient movement of local bus services and direct pedestrian access for all members of the community including those with disabilities.

e) To form a system of permeable, compact and walkable neighbourhoods within a highly connected area.

f) To provide safe, legible and efficient access based on the street network and augmented by connections through public open space.

g) To link the site with its surroundings by connecting to external road networks, pedestrian and cycle paths, public transport routes and public open space networks.

h) To create a new link road to provide alternative route for through traffic between Nuwarra Road and Newbridge Road.

i) To increase the environmental sustainability of development by:

- Reducing local vehicle trips, travel distances and speeds.
- Maximising public transport effectiveness,.
- Encouraging walking and cycling.
- Enabling the operation of viable bus routes.

j) To guarantee adequate accessibility for emergency vehicles.

k) To ensure appropriate accessibility to employment.

l) To ensure servicing is able to be carried out appropriately.

Controls

1. The street network is to retain a predominantly grid-like form, facilitating walking and cycling and enabling direct local vehicle trips within the neighbourhood.
2. The street network is to embody the principles illustrated in the key street structure shown at Figure 2.
3. All streets are to be legibly signposted with street names and property numbers.
4. Street layouts at key locations are to be designed to ensure pedestrian safety.
5. Provide a new link road between Nuwarra and Newbridge Roads within a 30m wide road reserve from the north for the first 220m narrowing to 18m, designed in consultation with RTA and Council.

6. The link road shall be provided in accordance with the Developer Deed.
7. 3.5 m landscape strip (including footpath) located on east side of the new link road with up to 6m landscape strip on the western side adjacent to existing dwellings near Newbridge Road.
8. All streets are to be designed and constructed having regard to the cross-sections illustrated at Figure 3.
9. All intersections are to be designed generally in accordance with the RTA Austroads Road Design Guide.

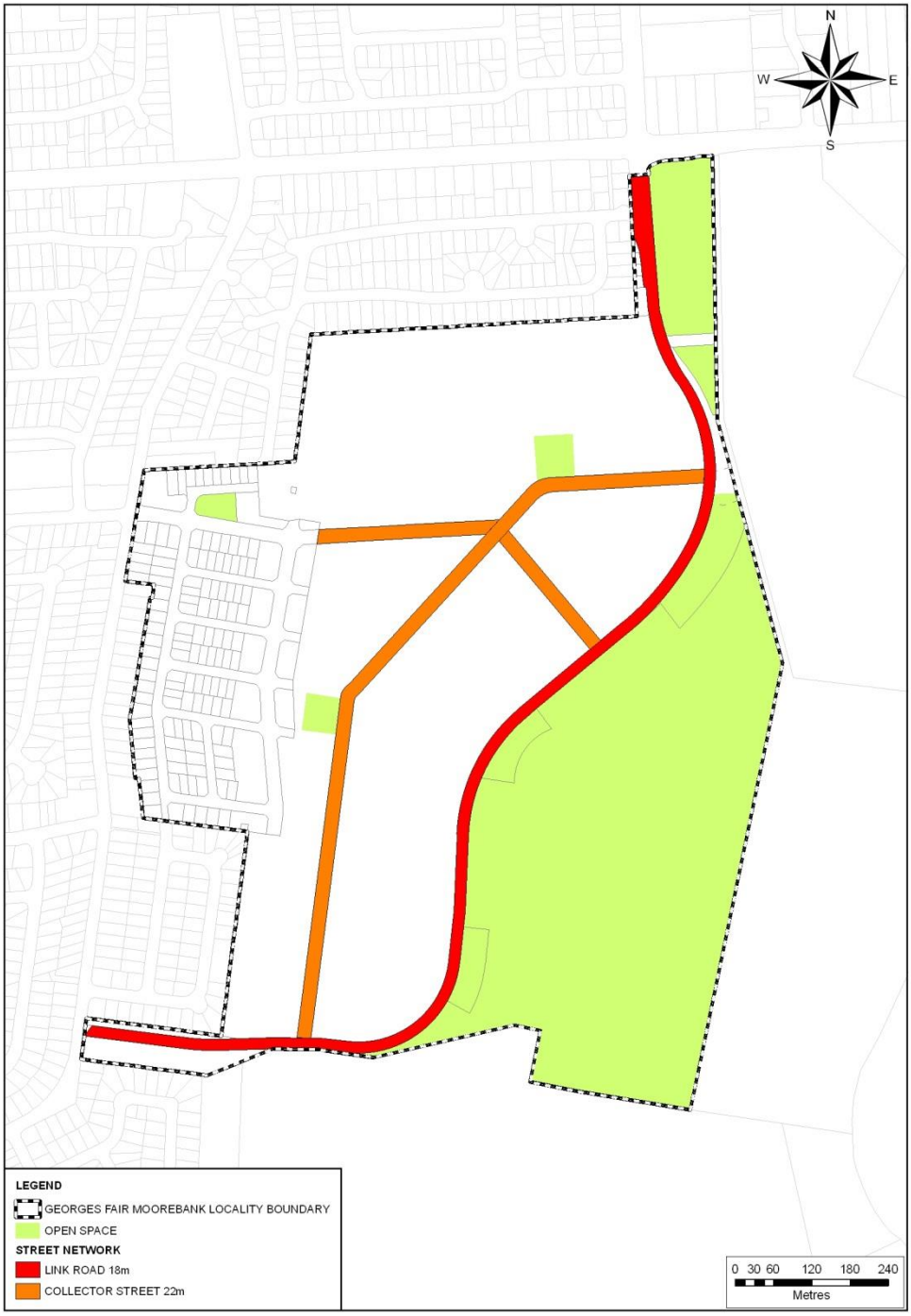


Figure 2 Preferred key street network for the site

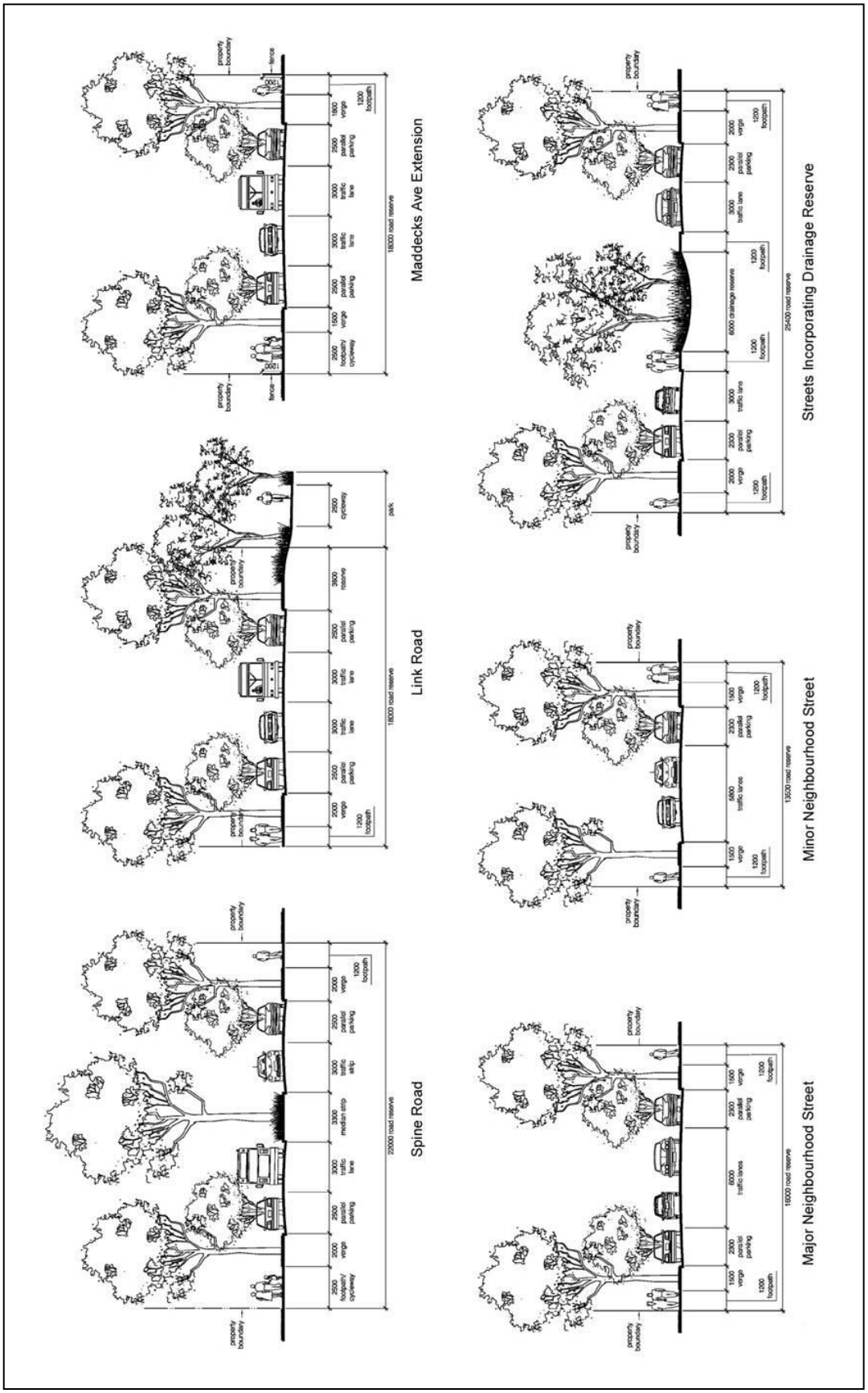


Figure 3 Preferred Street Sections

Public Transport

Placing bus stops at points of higher density and potential community uses will encourage people to use the system.

Objectives

a) To facilitate usage of public transport.

b) To provide bus routes and stops along collector streets.

c) To locate higher density development close to public transport.

Controls

1. Bus stops are to be located on key streets, and the main pedestrian routes. Figure 4 illustrates potential locations for bus stops.
2. Bus stops are to provide shelter and seating for passengers, and all are to display a bus timetable. Shelters are to be in accordance with the Council's usual style of bus shelter and are to be designed in accordance with *AS 1428:1 - 4*.
3. The design of signage for bus stops is to be consistent throughout the site.
4. Barrier kerb shall be installed for the entire length of bus zones and for 10m on the approach of the bus stop.

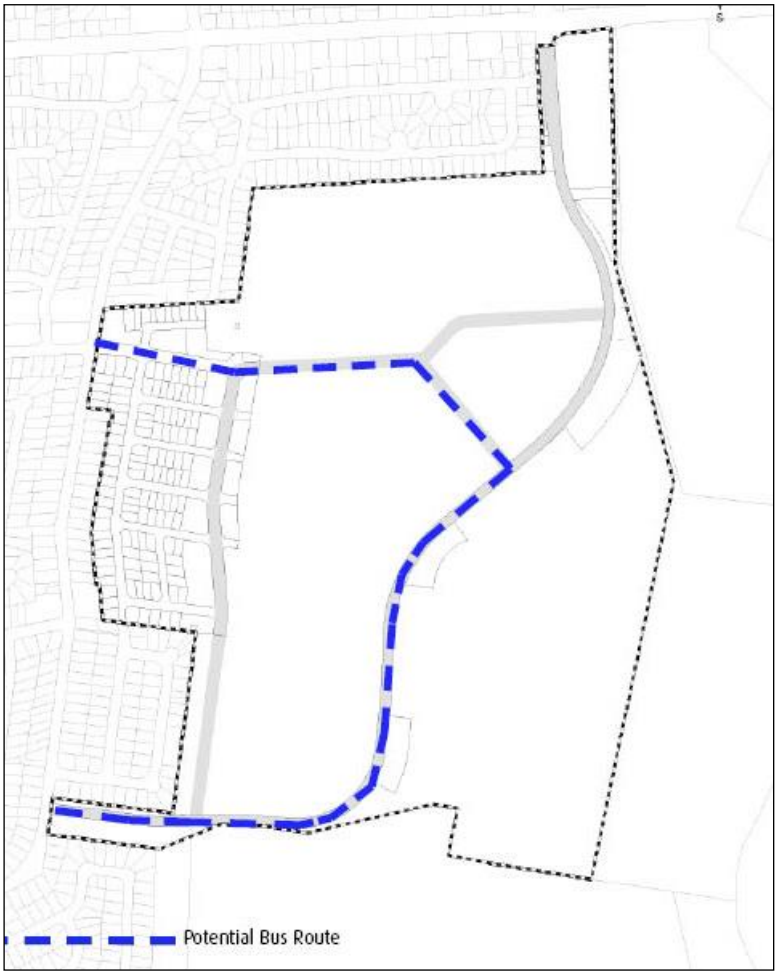


Figure 4 Potential Bus Routes

2.2 Pedestrian and Cyclist Networks

Background

Pedestrian and cycle facilities in public spaces are to be safe, clearly defined, functional and accessible to all. They should provide linkages to social and cultural activities and educational facilities, and should be characterised by excellence of design appropriate to the area.

Vehicle crossings over footpaths need to be managed and minimised to ensure that they do not detract from the quality of the public domain, disrupt pedestrian or cycle movement, or threaten user safety.

Objectives

a) To encourage walking and cycling as opposed to the use of private vehicles for local trips.

b) To provide a permeable and interconnected network of streets and pathways that gives safe, convenient and legible access both within and beyond the site.

c) To minimise and prevent, where possible, vehicular crossings over a pedestrian or cyclist pathway.

Controls

1. Vehicle access to developments is to be designed and located to minimise conflicts with pedestrians and cyclists on footpaths, particularly along high volume pedestrian streets.
2. Wherever practicable, vehicle access to developments is to be a single crossing, perpendicular to the kerb alignment.
3. Where practical, pedestrian and cycle paths in open space areas should be located close to streets on the edge of open spaces to take advantage of street lighting and allow casual surveillance by residents and drivers. Where this is not practical, paths should be well-lit and visible from the road.
4. Pedestrian and cycle paths are to link the key facilities within and outside the area, such as the open space network.
5. Shared pedestrian/cycle links, cycle ways, public roads and lanes are to be clearly and frequently signposted to indicate their shared status.
6. Designated cycle lanes on streets are to be clearly indicated by line-markings on the road surface and/or by signs beside the road.
7. Pedestrian routes and cycle paths are to be designed and located having regard to the principles illustrated in Figure 5.
8. Shared pedestrian and cycle paths are to be a minimum 2.5m wide.
9. Designated pedestrian-only paths are to be a minimum of 1.5m wide and provided to both sides of each street / road.
10. Pedestrian and cycle facilities in public spaces are to be safe, well lit, clearly defined, functional and accessible to all.
11. Pedestrian and cycle paths, and pedestrian refuge islands are to be designed to be fully accessible by all in terms of access points and gradients, in accordance with *AS 1428:1 - 4*.

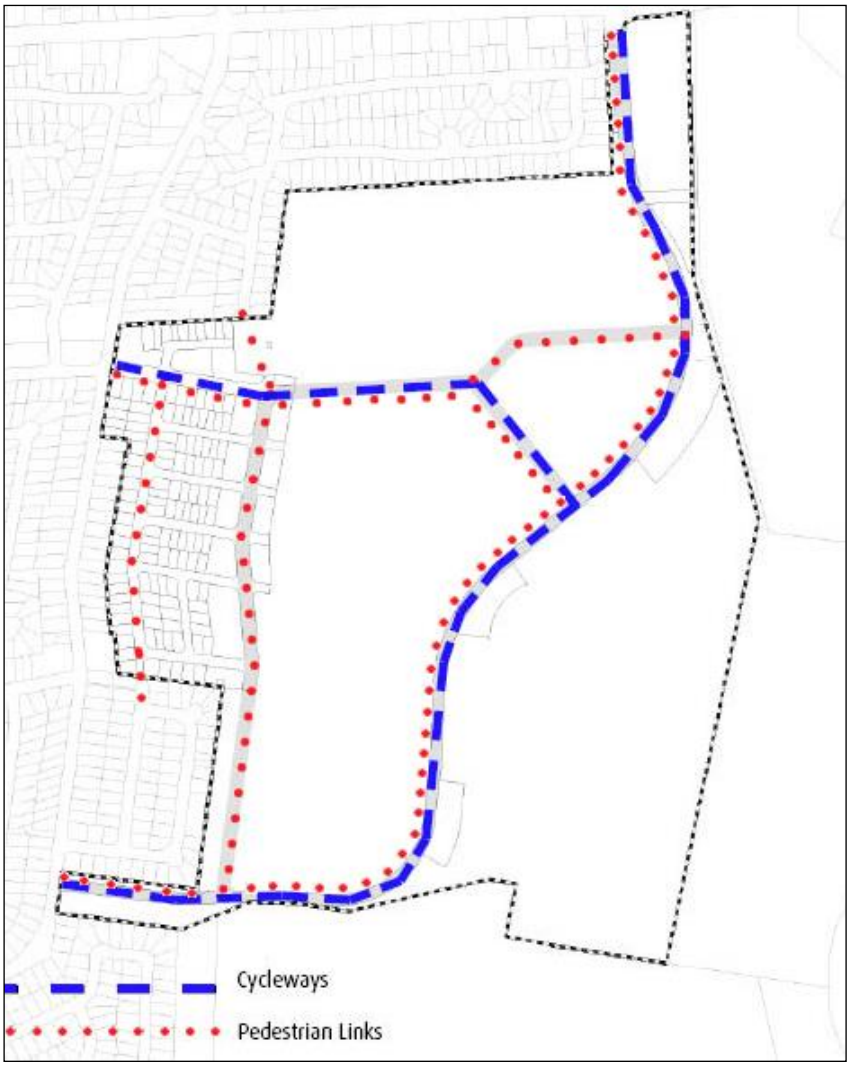


Figure 5 Location of potential walking and cycle ways

2.3 Streetscape and Street Trees

Background

Street furniture should maximise pedestrian comfort, convenience and amenity, create visual harmony and be used to define spaces, streets, paths and gateways. Opportunities for public art in significant public domain locations should be explored as part of the development process.

Objectives

a) To create a sense of identity for the area.

b) To enhance public spaces so that they are vibrant, safe and welcoming.

c) To facilitate cultural identity through art and design in public places.

d) To create quality streetscapes that is visually attractive and integrates with surrounding street layout.

Controls

1. Street furniture is to be incorporated into the design of all public spaces and should be consistent in design and style.

2. Street furniture is to be located so as not to impede mobility, generally in accordance with *AS 1428:1 - 4*.
3. The location and detailing of all proposed street furniture is to be indicated on the Landscape Plan, to be submitted with the DA.

Street Tree Planting

1. Street trees shall be required to be planted in conjunction with the creation of a new street or the extension of an existing street.
2. One tree is to be provided for every dwelling facade. These are to reach at least 4 m at mature height.
3. The street trees shall be planted prior to the release of the subdivision certificate.
4. The trees shall be provided with protection to ensure their survival during the construction of buildings in the street. Refer to Figure 6 for details.
5. Trees and shrubs on individual streets must be of a uniform species. On streets adjacent to bushland, species indigenous to the area must be planted.

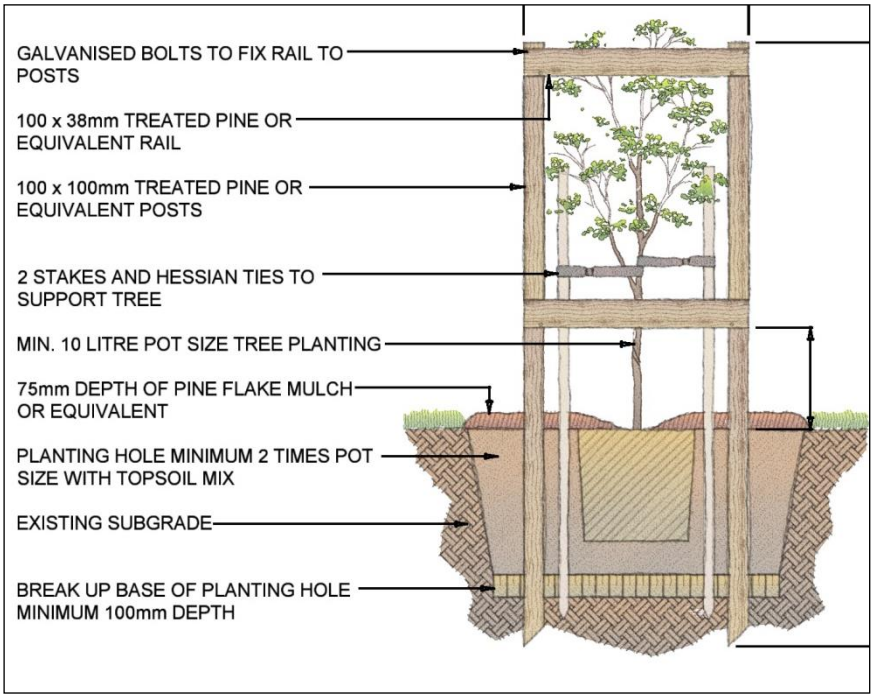


Figure 6 Tree Guard and Planting Details

2.4 Open Space

Background

Public spaces can be designed to promote vibrant social interaction, civic pride and a sense of public ownership and belonging. Landscaped areas and open space within the public domain play a major role in setting the character of the locality. These areas should make the neighbourhood pleasant and welcoming and be convenient to the needs of the community, especially in higher density areas.

Objectives

a) To ensure adequate provision and distribution of public open space to meet the needs of the residents.

b) To retain and integrate existing landscape elements, such as vegetation and topographic features, in the design of new development.

c) To provide links between the open space areas and community and retail facilities.

d) To create a variety of public spaces which fulfil functional requirements as well as create attractive and memorable places.

e) To retain and integrate existing landscape elements, such as vegetation and topographic features, in the design of new development; integrate landscaping with water cycle management across the development area.

Controls

1. The locality is to provide a variety of parks with a distinct landscape character. Subdivision of land shall provide open space as shown in Figure 7.
2. The provision of Open Space is to be in accordance with the Developer Deed.
3. Neighbourhood and playground parks are to create a precinct focus.
4. Public open spaces are to be designed and landscaped so as to minimise the need for maintenance. This is to be achieved through the use of appropriate native species (refer to Appendix 2 in Part 1). The Landscape Plan submitted with the DA must demonstrate how the proposed landscaping will minimise maintenance.
5. Public open space should be bounded by public streets with buildings oriented towards the open space.
6. Significant existing trees, tree stands and vegetation are to be retained, relocated or replaced by the same species.
7. Pedestrian and cycle paths must be provided as part of parks and recreation areas.
8. Street name and information signs are to be designed to reinforce the distinct identity of the locality and to facilitate accessibility and mobility.
9. The design of fences must be consistent throughout the public domain, parks and open space.
10. A Landscape Plan must be lodged with all DAs.

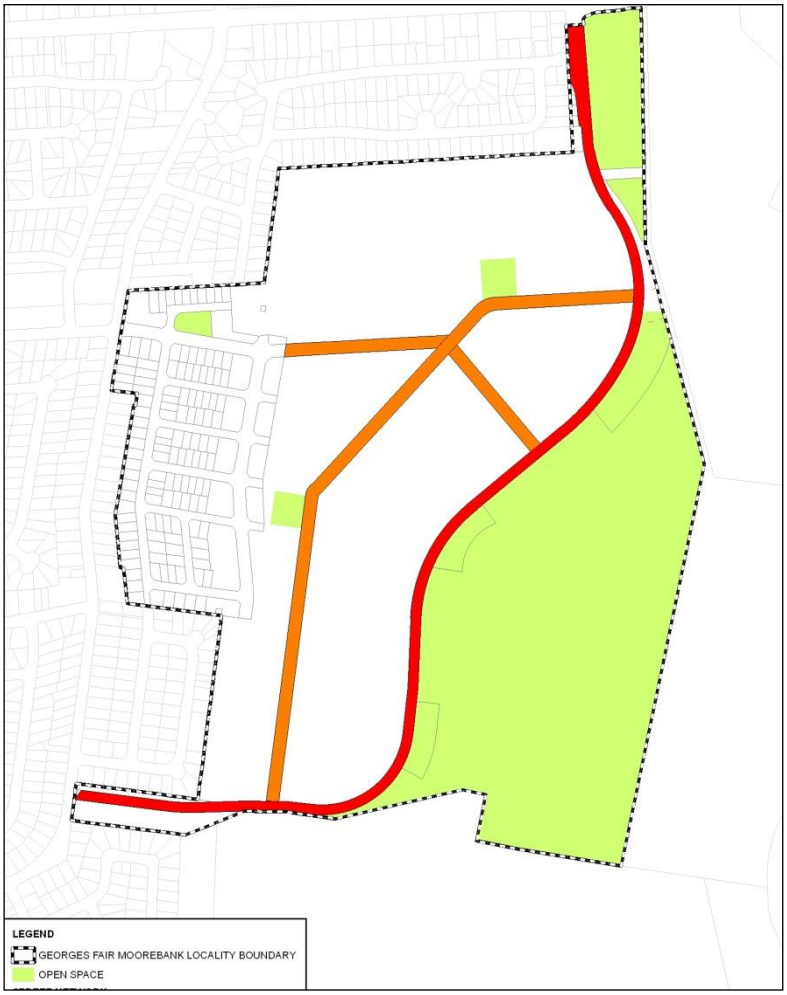


Figure 7 Indicative locations of local open space areas

2.5 Water Cycle Management

Objectives

a) To integrate water management measures with innovative urban design.

b) To ensure that there are no adverse impact on existing flood regimes in the surrounding areas, as a result of the proposed development.

Controls

1. Consider the use of bio-retention swales in road verges and maximise runoff flow onto grassed areas where feasible.
2. Use gross pollutant traps and water quality control ponds to remove suspended sediment, nutrients and bacteria. The gross pollutant traps and water quality control ponds are to be located in the areas zoned R3 - Medium Density Residential or before discharging into land zoned ~~E3~~ C3 - Environmental Management.
3. Where feasible, divert excess run-off from southern section of the Georges Fair Moorebank Land to New Brighton Golf Course for irrigation, subject to the agreement of the Golf Club.
4. The provision of Drainage works shall be provided in accordance with the Developer Deed.

3. Controls for the Private Domain

3.1 Subdivision, Frontage and Allotment Size

Background

The main objective is to provide choice through a mix of housing types and high quality open space. Opportunities for higher density are provided in places of greatest amenity.

The orientation of lots should be designed to maximise solar access to reduce household energy consumption and to make best use of the land available.

Objectives

a) To provide a range and mix of lot sizes to suit a variety of dwellings types distributed throughout the area.

b) To locate higher density in places of greatest amenity, such as near parks, other open spaces and along transport nodes.

c) To ensure that the density of development and siting of dwellings maintain a high standard of privacy.

d) To ensure lots are oriented to optimise solar access to facilitate micro-climate management, including the application of energy conservation principles.

e) To ensure all dwellings address the street.

f) To ensure that lot size and dimensions take into consideration the physical characteristics of the land, in a way which promotes retention of existing vegetation and reduces the incidence of damaging earthworks and retaining wall construction.

g) To ensure passive surveillance of public space through the effective and functional layout designs of new developments.

h) To ensure that the dwelling siting minimises impacts on views from adjacent existing residential development.

Controls

1. Subdivision, lot sizes and orientation are to address the principles in Figures 8 and 9.
2. Lot sizes and dimensions are to take into account the slope of the land to minimise earthworks/retaining wall construction and the retention of existing trees.
3. Minimum allotment width is 8 m.
4. Any application for subdivision creating allotments of 10m width must be accompanied by an application for a dwelling house on each of those allotments.
5. On east-west lots, houses and private open space are to be sited generally in accordance with Figure 11.

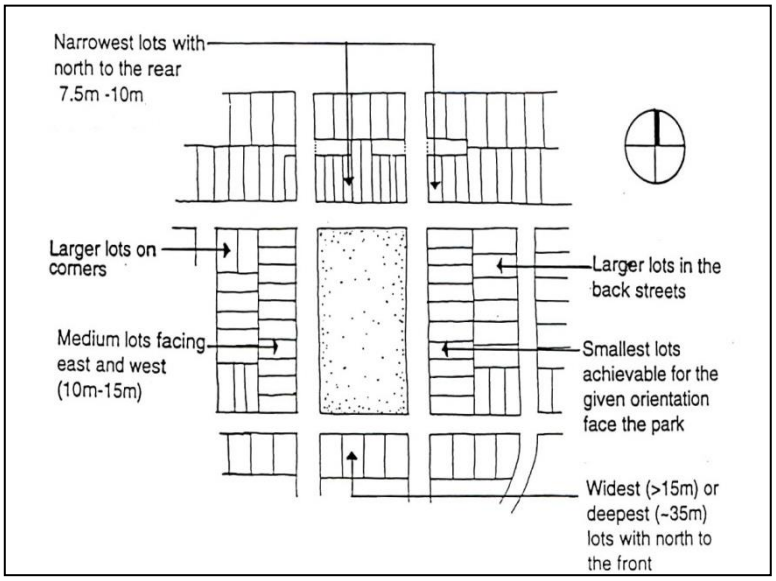


Figure 8 Highest density generally located in accessible places with highest amenity

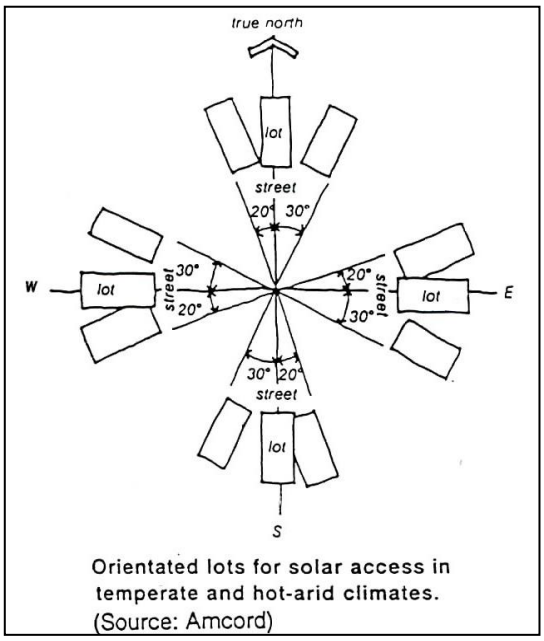


Figure 9 Lot Orientation

Interface areas

1. Only detached dwelling houses are permitted in the interface areas.
2. No new dwelling should fully obstruct views from living areas of existing neighbouring dwellings (see Figure 10).
3. Refer to Liverpool LEP 2008 for the minimum allotment size in the interface area.

Figure 10 Interface Areas

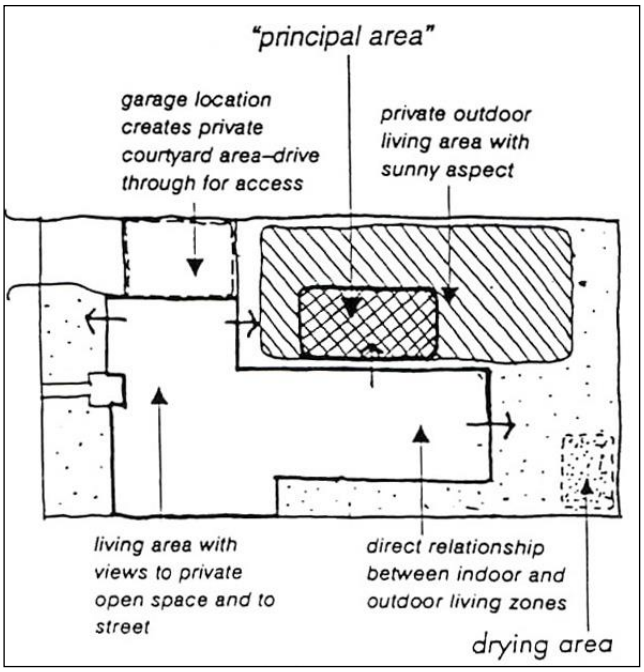


Figure 11 Private open space considerations on an east-west lot

3.2 Site Planning

Objectives

a) To ensure that the dwelling house is sensitive to site attributes, such as streetscape character, natural landform, drainage, existing vegetation, land capability, slope, solar access and if relevant, heritage items.

b) To ensure privacy for residents and neighbours.

Controls

1. The dwelling layout must be designed around the site attributes such as slope, existing vegetation, land capability and/or solar access (See Figure 12).
2. There must be a direct link from at least one living area to the principal private open space.
3. The siting of windows of habitable rooms on the first floor shall minimise overlooking to the principal private open space of neighbouring properties.
4. Stormwater from the site must be able to be drained satisfactorily. Where the site falls away from the street, it may be necessary to obtain an easement over adjoining property to drain water satisfactorily to a Council stormwater system. Where stormwater drains directly to the street, there may also be a need to incorporate on-site detention of stormwater where street drainage is inadequate. Refer to Water cycle management in Part 1.

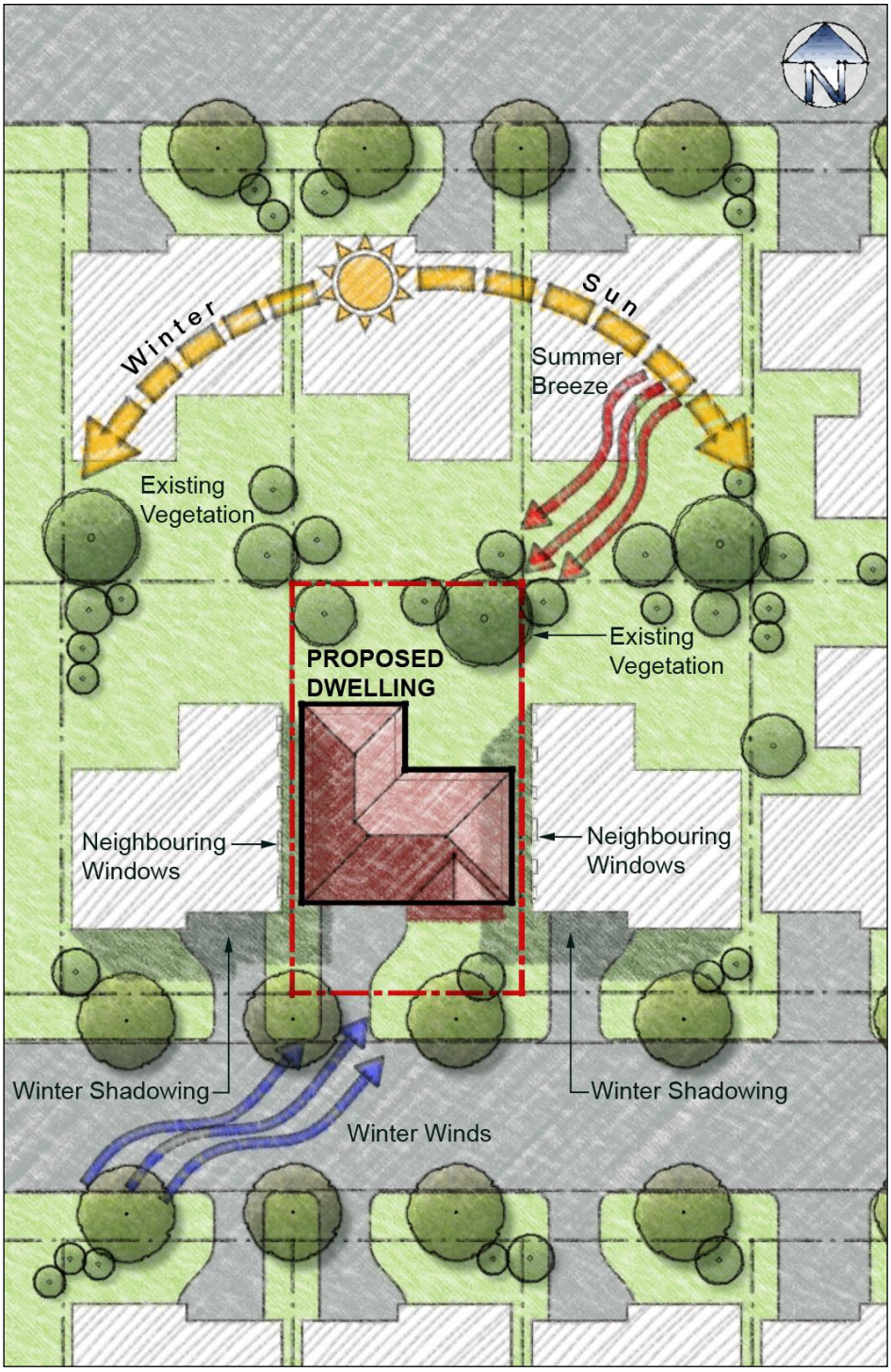


Figure 12 Site Analysis

3.3 Setbacks

Front and Secondary Setbacks

Objectives

a) To ensure appropriate front setbacks.

b) To contribute to the creation of attractive and memorable streetscapes that has a consistent character.

c) To reduce the potential visual effects of garages on dwelling facades and streetscapes.

d) To provide adequate space for landscaping or open space.

Controls

1. Dwelling houses shall be setback in accordance with Table 1.

Table 1 Front and Secondary Setback

Height	Front Setback	Secondary Setback
Ground floor	4.0 m	2.5 m
First floor	4.0 m	2.5 m

2. Garages must be set back a minimum of 1 m behind the main face of the dwelling. (The main face is the first wall of a habitable room)

3. A front verandah, porch, patio, pergola or similar can be built to within 2.5 m of the front boundary.

4. Street setback for all garages is a minimum of 5.5 m.

5. Corner sites shall provide a frontage to both streets and should articulate their corner location with an architectural feature such as a wraparound verandah, bay window, corner entry or roof feature. A minimum setback of 1 m is required for the splay corner.

Side and Rear Setbacks

Objectives

a) To maximise private amenity within the building.

b) To minimise the impacts of development on neighbouring properties in regard to views, privacy and overshadowing.

c) To ensure that buildings are sited so as to provide for solar access and both visual and acoustic privacy.

Controls

Buildings shall be setback from the side and rear boundaries in accordance with Table 2.

Table 2 Side and Rear Setbacks

Item	Side Setback	Rear Setback
Single storey dwelling houses	0.9 m	5.0 m
Second storey component of dwelling houses	1.2 m	5.0 m
Side walls containing windows to habitable rooms	1.2 m	N/A
Dwellings in interface area (shown on Figure 10)	As above	10.0 m

Notes: Elements such as fascias, gutters, downpipes, eaves (up to 450mm wide), chimneys, flues and pipes may encroach into the side setback.

Council may consider a variation (outside of the interface areas only) if justification can be provided for a better design outcome for the proposed dwelling and neighbouring dwellings.

- Building encroachments may only occur if it is seen as beneficial for open space, solar access and the internal layout of the dwelling. The dwellings living areas should open out to open space.
- A patio / outdoor eating area may extend into the rear setback provided a minimum setback of 1m to the rear and side boundary are maintained; and
  - The patio area may have a maximum area of 20sqm.
  - The patio area cannot have solid or masonry walls.

Zero lot lines

1. Walls are generally to be 180mm clear of the side boundary to allow for gutter and eaves overhang.
2. The length of a zero lot line wall is limited to 50% of the adjacent side wall boundary.
3. No windows are permitted in a zero lot line wall.
4. A maintenance easement of at least 900mm shall be provided on the adjoining boundary. Refer to Figure 13.

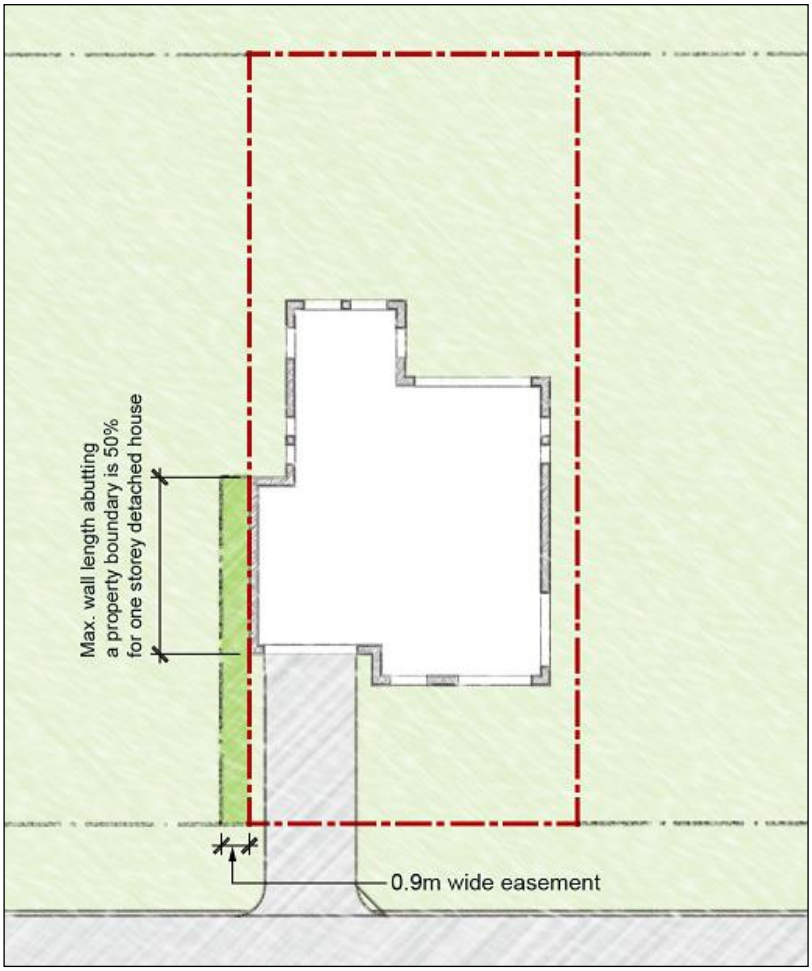


Figure 13 An example of zero lot line with Maintenance Easement

3.4 Landscaped Area and Private Open Space

Landscaped area is defined in Liverpool LEP 2008.

Private open space is an area within the site (usually at the rear) that is set aside for outdoor activities. Clotheslines, BBQ areas, pergola (unroofed structure), patio, garden sheds and pools can be included in the private open space.

Principal Private open space is an area that is directly accessible from at least one living room and is included in the private open space calculations (the principal private open space area may be paved or sealed).

Landscaped Area

Objectives

a) To provide an area to allow vegetation to mature.

b) To reduce the impact to neighbouring properties and natural waterways from stormwater runoff.

c) To reduce the amount of impervious areas.

d) To enhance the existing streetscape and soften the visual appearance of the dwelling.

e) To maximise the amount of landscaped area within the front setback of the dwelling.

Note: All proposed developments require a landscape plan to be submitted with the development application.

Controls

1. A minimum of 25% of the site area shall consist of Landscaped Area, this may include lawn, deep rooted trees, garden beds and mulched areas.
2. A minimum of 50% of the front setback area shall be Landscaped Area.
3. A minimum unincumbered area of 3 x 3m shall be provided in the front setback to accommodate deep rooted trees.

Private Open Space

Objectives

a) To ensure that a minimum amount of Private Open Space is provided for outdoor activities.

b) To ensure that Private Open Space is clearly defined for private use.

c) To ensure that Private Open Space is private, landscaped, screened from overlooking and receives an adequate amount of solar access.

Controls

1. Each dwelling must provide a minimum of 50sqm of Private Open Space.
2. Areas less than 2.5m in width does not qualify as Private Open Space.
3. Private Open Space areas are not permitted within the primary street setbacks.
4. Private Open Space must have an area for clothes drying with at least 2 hours of full sun between 9.00am and 5.00pm at 21 June.
5. The Private Open Space shall include the principal private open space of 25sqm, which is directly accessible from the main living area and has a minimum dimension of 4m.
6. The Principal Private Open Space must receive a minimumk of 3 hours of sunlight between to at least 50% of the area between 9:00am and 5:00pm on 21 June.
7. Where the Principal Private Private Open has a predominately northen aspect Clause 6 (above) does not apply.

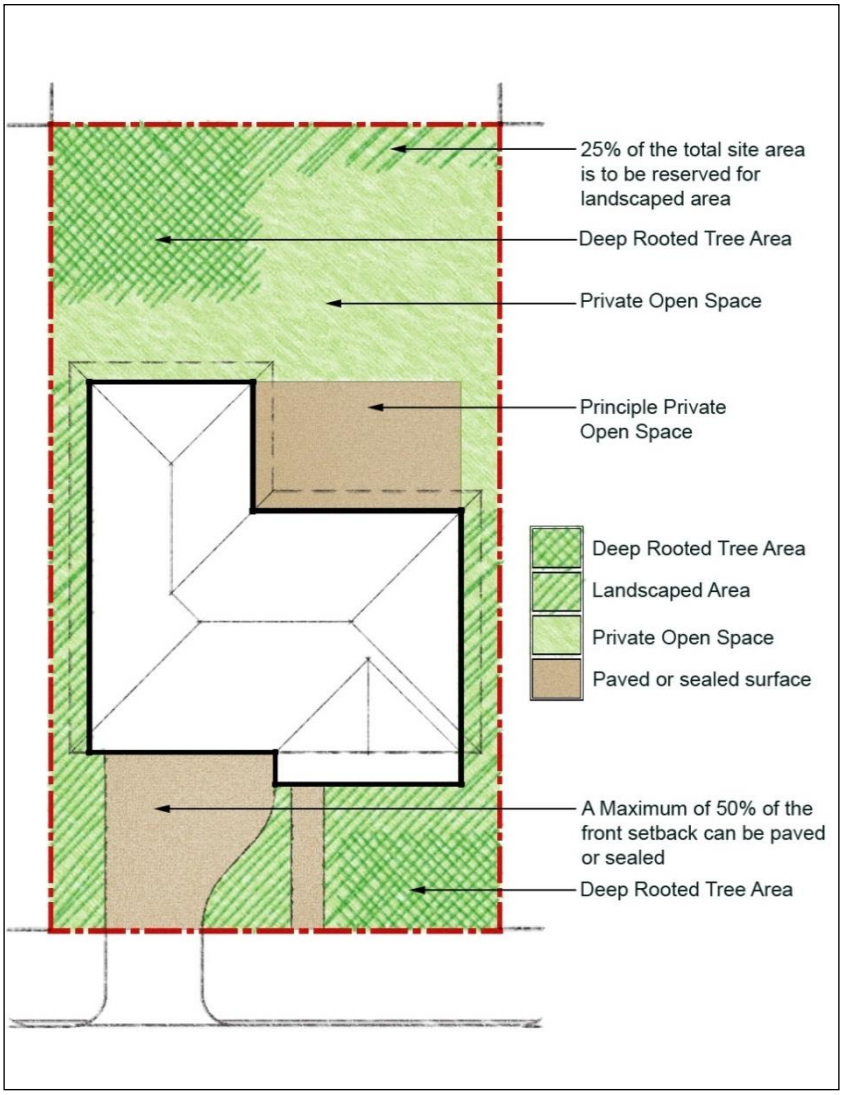


Figure 14 Landscaped Area

3.5 Cut and Fill, Building Design, Streetscape and Layout

Cut and Fill of Land

Objectives

a) To reduce the incidence of change in natural ground levels.

b) To encourage the architectural designs of dwellings which suit the contours of the land.

c) To provide controls for cut and fill of land designed to minimise the incidence of soil erosion and subsequent sedimentation of waterways.

d) To ensure that development on adjoining properties is not threatened or prejudiced by proposed cut and fill practices.

e) To discourage and eliminate, where possible, the construction of retaining walls on allotment boundaries.

f) To minimise overshadowing of neighbouring dwellings, their private open space or any solar panelling.

Controls

1. The maximum cut on a site must not exceed 600 mm.
2. All retaining wall structures shall be masonry construction and designed by a suitably qualified person, or constructed as specified by the manufacturer of the product. The retaining wall shall be constructed wholly inside (within) the boundary of the site.
3. All slab constructions for dwellings that are above natural ground level are to be constructed using dropped edge beams to retain fill. The maximum fill within the confines of the slab must not exceed 1 m. All fill must be contained within the dwelling footprint. Refer to Figure 15.
4. Contaminated fill, either imported or found on site is not permitted.

   Note: In the event of approval being granted to the erection of retaining wall(s) to contain proposed cut, Council will require the completion of such retaining wall(s) PRIOR TO the release of the occupation certificate.
5. Where an applicant considers that an allotment has characteristics which warrant exemption from this policy, an application for exemption may be made by the submission of a development application to Council for consideration. In addition to normal requirements the submission should include:

   - A plan showing existing contours (at 0.5 m intervals) of the subject site and all adjoining sites.
   - A plan showing future contours (after proposed cut and fill) of the subject site and all adjoining sites.
   - Full details of any proposed retaining wall(s).

   Note: In the event of approval being granted to the erection of retaining wall(s) to contain proposed cut and fill, Council will require the completion of such retaining wall(s) PRIOR TO the commencement of any building works.

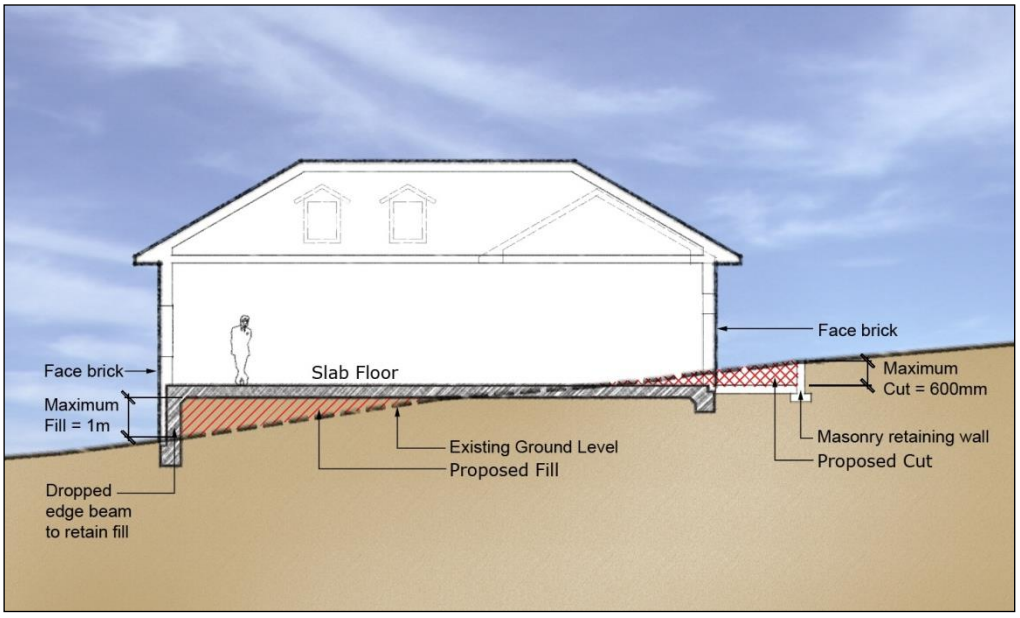


Figure 15 Cut and Fill requirements for a dwelling

Interface areas

Background

The areas identified in Figure 11 are interface areas. These areas are particularly sensitive due to their relationship to existing dwellings on the perimeter of the site and local topography.

Objectives

To provide housing types that relate to existing housing.

Controls

1. Only dwelling houses are permitted in the interface areas.
2. No new dwelling should fully obstruct views from living areas of existing neighbouring dwellings (see Figure 16).

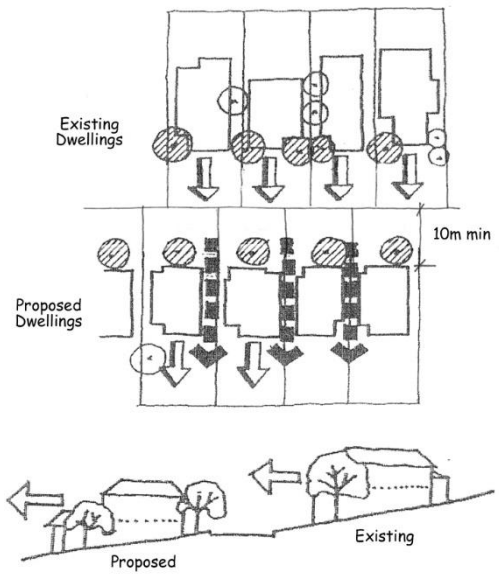


Figure 16 View Sharing

Building Design and Appearance

Objectives

a) To encourage designs that will enhance the character of the neighbourhood.

b) To promote variation of building facade and design.

c) The building enhances the streetscape through the use of suitable built form design and landscaping.

d) To ensure buildings address all street frontages.

e) To discourage garages and in particular garage doors, from visually dominating the streetscape.

f) To ensure that the building design, detailing, colour and finish shall add visual interest to the street and shall compliment the street.

g) To ensure habitable rooms address the street.

h) To encourage balconies over garages in two storey dwellings.

Controls

Dwellings

1. All dwellings are to be orientated to the street (See Figure 17).
2. The front pedestrian entrance must be visible from the street.
3. The front Building facades shall be articulated, this articulation may include front porches, entries, wall indents, changes in finishes, balconies and/or verandahs.
4. For two storey developments, the side walls shall be articulated if the wall has a continuous length of over 10m.
5. Eave overhang must provide for sun shading and protect windows and doors. Eaves should have a minimum overhang of 400mm and be provided to a minimum of 70% of the dwelling.
6. Dwellings that face two street frontages or a street and public space must address both frontages by the use of verandahs, balconies, windows or similar modulating elements.

Two storey dwellings

7. To break up the bulk of two storey dwellings balconies built above garages are encouraged (See Figure 17).

Garages and Carports

8. The maximum width of garage doors or carports must be no greater than 50% of the building frontage width.
9. Garages and carports must be designed to be the minor element of the façade.
10. Garage roofs shall be incorporated into the roof design of the house. Separate roofs for garages are discouraged, unless actually separated from the dwelling.
11. Garages and carports are to be compatible with the building design in terms of height, roof form, detail, materials and colours.
12. Carports may be built in front of the garage only if the carport is:
    - No larger than 5.5 x 6m.
    - Built of a similar colour and materials of the house.
    - Setback 2m from the front property boundary.
    - Compatible with the local streetscape.
13. The conversion of garages to living space may only be permitted if:
    - At least one car parking space is provided behind the front setback.
    - The additional living area does not result in the building exceeding the maximum permitted floor space ratio.

Figure 17 Example of Building Appearance (Indicative Only – Not to Scale)

Internal Design of Dwellings

Objectives

a) The internal design must contribute to personal safety and to the protection of property by permitting casual surveillance of public spaces from private windows and entries.

b) To provide passive surveillance from rooms addressing the street or any adjoining open space.

c) To locate amenity rooms (such as laundries, bathrooms, toilets) to the side and rear of the development.

d) To encourage the internal design of the dwelling to take advantage of cross ventilation.

e) That each dwelling shall provide a sufficient amount of storage for elements such as garden and sports equipment.

Controls

1. All dwellings shall have habitable rooms located to the front of the dwelling for security and surveillance to the street.
2. Living rooms should take advantage of northern aspects.
3. Access to private open space must be from at least one living room.
4. The internal layout of the dwelling is encouraged to incorporate cross ventilation.
5. Bathrooms, ensuites, laundries and walk in wardrobes should be located to the side or rear of the dwelling.
6. Each dwelling must provide a minimum storage area of $8m^3$.
7. Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).
8. The main living area must receive at least 3 hours of sunlight between 9.00am and 5.00pm on 21 June.

3.6 Landscaping and Fencing

Objectives

a) To retain existing mature trees within the site in a way which ensures their ongoing health and vitality.

b) To provide privacy, summer shade and allow winter sun.

c) To enhance the existing streetscape and visual appearance of dwellings.

d) To encourage landscaping that is appropriate to the natural, cultural and heritage characteristics of its locality.

e) To ensure the visual impact of development is minimised and integrated into the streetscape.

Controls

1. A minimum of one tree is to be provided within the front setback area of every residential dwelling. This may include existing trees that are to be retained within the front setback area. Newly planted trees are to have a minimum pot size of five litres.
2. Trees planted on the northern side of private open space and habitable rooms are to be deciduous.

3. Planting of vegetation at the front of higher density development must consider the need for passive surveillance. Excessively dense vegetation that creates a visual barrier must be avoided.
4. Any tree with a mature height over 8 m should be planted a minimum distance of 3 m from the building or utility services.
5. A landscape plan must be lodged with all Development Applications, and is to provide the following details:
    - The location of any existing trees on the property, specifying those to be retained and those to be removed.
    - The location of any trees on adjoining properties that are likely to be damaged as a result of excavations of other site works.
    - The position of each shrub and tree species proposed to be planted. Each plant is to be identified by a code referring to a plant schedule on the plan.

Fencing

Objectives

a) To provide a clear transition between public and private areas.

b) To provide a visual element within the streetscape.

c) To ensure fencing enhances the streetscape.

Controls

1. Wall finishes must have low reflectivity.
2. Where noise insulation is required, consider the installation of double-glazing or other noise attenuation measures at the front of the building rather than construction of a high solid form fence.

Primary Frontage

1. The maximum height of a front fence is 1.2m.
2. Fences should not prevent surveillance by the dwelling's occupants of the street or communal areas.
3. The front fence must be 30% transparent. (see Figure 18)
4. Front fences shall be constructed in masonry, timber and/or vegetation and must be compatible with the proposed design of the dwelling.
5. The maximum height of the front fence is 1.2 m.

Secondary Frontage

1. Side fences and walls must be a maximum of 1.8 m in height, and constructed of masonry, timber and/or landscaped (see Figure 18).
2. For side walls or fences along the secondary frontage, a maximum height of 1.2 m is required for the first 9 m measured from the front boundary, the remaining fence / wall may then be raised to a maximum of 1.8 m (see Figure18). The secondary setback is the longest length boundary.
3. Side fencing facing a public street or open space must not be constructed of sheet metal.

Boundary Fences

1. The maximum height of side boundary fencing within the setback to the street is 1.2 m.
2. Boundary fences shall be lapped and capped timber or metal sheeting.

Figure 18 Fence types

3.7 Car Parking and Access

Car Parking

Background

The provision of on-site parking is required for all residential allotments. On-site parking is to be provided in a way that does not compromise the appearance of dwellings from the street.

Objectives

a) To provide sufficient and convenient parking for residents and visitors.

b) To ensure that parked vehicles do not create traffic or pedestrian hazards, and do not degrade landscaped areas such as grass verges.

c) To reduce the visual impact of garages, carports and parking areas on the streetscape and improve dwelling presentation.

Controls

1. Two car parking spaces shall be provided for each dwelling.
2. At least one car parking space must be provided behind the front setback.
3. A car parking space is to have a minimum dimension of 2.5 x 5.5m.
4. A single garage is to be a minimum of 3 m wide internally and unobstructed.
5. All parking spaces for adaptable housing units shall comply with *AS 2890:1* for disabled car parking.

Internal Driveways

Background

Where private driveways are used they are designed to minimise their impact on the streetscape and on the environment.

Objectives

a) To provide safe and convenient access to garages, carports and parking areas.

b) To create a pleasant, low maintenance place.

c) To ensure clearly defined public and private spaces, such that driveways are for the sole use of residents.

d) To ensure casual surveillance of private driveways from dwellings and from the street

e) To minimise conflict between pedestrians and vehicles at the junction of driveways and footpaths.

Controls

1. The driveway crossing the verge between the property boundary and the kerb is to have a maximum width of 5.5m.
2. Driveways are to have soft landscaped areas on either side, suitable for infiltration.
3. Private driveways are to have the smallest configuration possible to serve the required parking facilities and vehicle turning movements.
4. Private driveways are to be constructed as one of three general types, depending on block geometry and garages to be accessed. (See Figure 19).

5. Higher density development fronting to collector streets is to have rear access through laneways, car courts and the like. Developers are to identify opportunities for rear lanes parallel to collector streets.
6. Corner lots on collector streets are to have access from the street perpendicular to the collector street.
7. At the street entry, the driveway is to be landscaped to have low visual impact and be clearly distinguishable as private access only.
8. Landscaping at driveways should not block lines of sight for pedestrians, cyclists and vehicles.

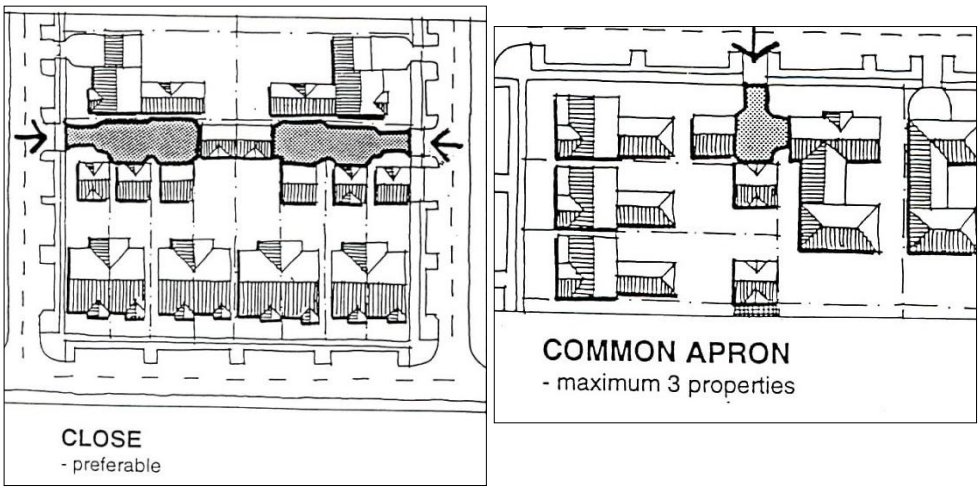


Figure 19 Examples of Internal Driveways

Private Driveways

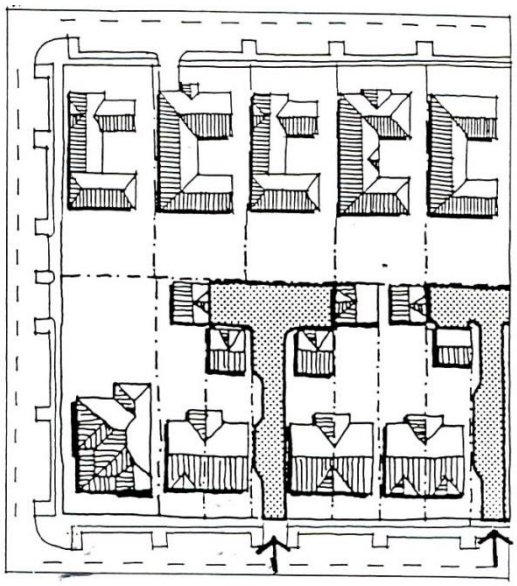
Objectives

a) To provide safe and convenient access to garages, carports and parking areas.

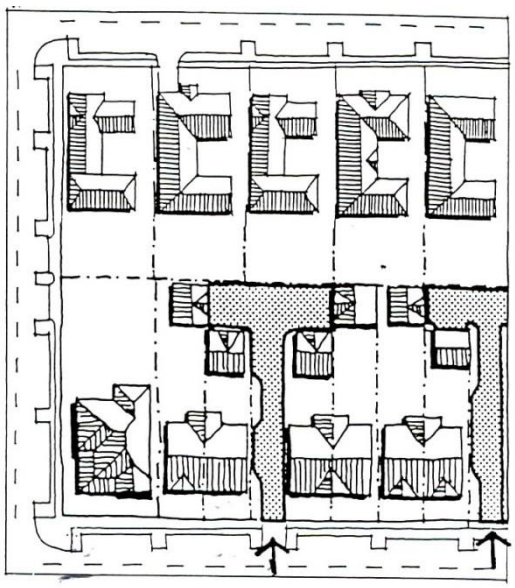
b) To clearly define public and private spaces, such that driveways are for the sole use of residents.

Controls

1. Private driveways shall have the smallest configuration possible to serve the required parking facilities and vehicle turning movements.
2. Private driveways shall be constructed as one of three general types, depending on block geometry and garages to be accessed, as in Figure 20.
3. Higher density development fronting to collector streets shall have rear access through laneways, car courts and the like.
4. Development on corner lots on collector streets shall have access from the street perpendicular to the collector street.



2 T-SHAPED
- driveway should be from the frontage road of the narrow lot dwellings
- use where block geometry or available road frontage precludes 'close'



2 T-SHAPED
- driveway should be from the frontage road of the narrow lot dwellings
- use where block geometry or available road frontage precludes 'close'

TYPE 2 – T-SHAPED
- **Driveway should be from frontage road of the narrow lot dwellings**
- **Use where block geometry or available road frontage precludes "close".**

Figure 20 Private Driveway Options

3.8 Amenity and Environmental Impact

Overshadowing

Objective

To minimise overshadowing of neighbouring dwellings and their private open space.

Controls

1. Adjoining properties must receive a minimum of three hours of sunlight between 9am and 5pm on 21 June to at least:
   - One living room, rumpus room or the like.
   - 50% of the private open space.

Privacy

Objective

To site and design buildings in a manner which protects the visual privacy of adjoining dwellings and their private open space.

Controls

1. Habitable room windows facing side boundaries are to be offset by at least 1 m from any habitable room windows in an adjoining dwelling (See Figure 21).
2. Habitable room windows on the first floor that face the side boundary are to avoid unreasonable overlooking by having a minimum sill height of 1.5m, except where they face a street or public open space (See Figure 21).
3. Building siting, window location, balconies and fencing must consider the importance of the privacy of onsite and adjoining buildings and private open spaces.
4. Landscaping should be used where possible to increase visual privacy between dwellings and adjoining properties.

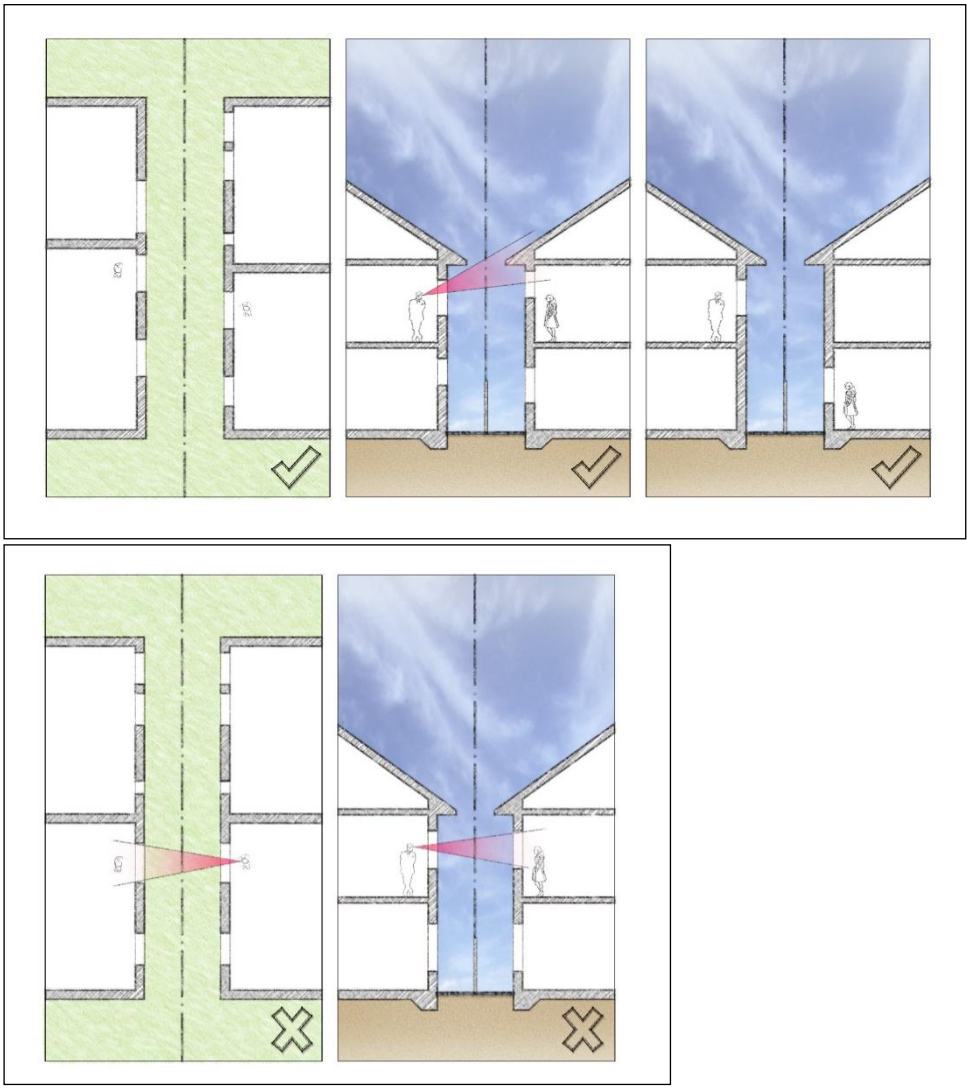


Figure 21 Privacy and Amenity

Acoustic Privacy

Objective

To ensure appropriate noise and vibration attention measures are incorporated into residential development.

Controls

1. Noise attenuation measures should be incorporated into building design to ensure acoustic privacy between on-site and adjoining buildings.
2. Developments in areas adversely impacted upon by traffic related noises must incorporate the appropriate noise and vibration mitigation measures into the design in terms of the site layout, building materials and design, orientation of the buildings and location of sleeping and recreation areas.
3. Where party walls are provided they must be carried to the underside of the roof and be constructed in accordance with *Part F5* of the *Building Code of Australia*.
4. The proposed buildings must comply with the *Environment Protection Authority* criteria and the current relevant Australian Standards for noise and vibration and quality assurance.

3.9 Site Services

Objectives

a) To ensure that the required services are provided.

b) To ensure that the services provided are easily protected or maintained.

Controls

Letterboxes

1. Letterboxes shall to be provided for each dwelling on site, easily accessible from the street, able to be securely locked and provided in accordance with Australia Post's requirements.
2. Freestanding letterbox structures should be designed and constructed of materials that relate to the main building.
3. Residential numbering should be attached to the letterbox so that it is clearly visible from the street frontage. Numbers should be 75mm in height, reflective and in contrast to the backing material.

Waste management

1. Waste disposal facilities shall be provided for development involving residential flat buildings or shop top housing. These shall be located adjacent to the driveway entrance to the site or at the rear if a rear lane is provided.
2. Any structure involving waste disposal facilities shall be located as follows:

- Setback 1 m from the front boundary to the street.
- Landscaped between the structure and the front boundary and adjoining areas to minimise the impact on the streetscape.
- Not be located adjacent to an adjoining residential property.
- Details of the design of waste disposal facilities are shown in Part 1.

Frontage works and damage to Council infrastructure

1. Where a footpath, road shoulder or new or enlarged access driveway is required to be provided this shall be provided at no cost to Council.
2. Council must be notified of any works that may threaten Council assets. Council must give approval for any works involving Council infrastructure.
3. Where there are no existing street trees in front of the site and contributions have not been collected for street tree planting it may be a condition of consent that street trees be provided in the footpath area immediately in front of the site.

Electricity Sub Station

In some cases it may be necessary to provide an electricity substation at the front of the development adjacent to the street frontage. This will involve dedication of the area as a public road to allow access by the electricity provider. The front boundary treatment used elsewhere on the street frontage

3.10 Secondary dwellings (Granny Flats)

Objective

To provide housing choice within a standard residential lot for the use of a separate dwelling within the existing title.

Controls

1. A Secondary dwelling can be a maximum of one storey high, unless the granny flat is above the garage facing a rear laneway, where the granny flat must be one storey high above the garage.
2. A Secondary dwelling should be attached to the main dwelling. However, Council may consider applications for detached granny flats on a merit base.
3. A Secondary dwelling should compliment the main dwelling design by using the same style of construction and a similar colour.

Note: Secondary dwelling will be included in the overall floor space ratio of a property, and only one Secondary dwelling is permitted per lot.

Liverpool city council
creating our future together

Council Administration Centre Level 2, 33 Moore Street, Liverpool NSW 2170

Postal Address Locked Bag 7064, Liverpool BC NSW 1871

Customer Contact Centre 1300 36 2170

Fax 02 9821 9333

NRS (National Relay Service) 133 677

Email lcc@liverpool.nsw.gov.au

Website www.liverpool.nsw.gov.au

Liverpool Development Control Plan 2008

Part 2.6

Development in the

Holsworthy Local Centre

Part 2.6 must be read in conjunction with Part 1

Refer to Part 6 for Development in ~~Business Areas~~ E1 Local Centre

LIVERPOOL CITY COUNCIL

LIVERPOOL THE GREAT SOUTH WEST

Liverpool Development Control Plan 2008

Part 2.6 Holsworthy Local Centre

Table of Contents

1. Preliminary……3

2. Controls for Public Domain……..……4

   2.1 Streets and Pathways.....4

   2.2 Public Open Spaces……...……..……...……5

3. Controls for Private Domain…….…6

   3.1 Site Planning.....6

   3.2 Building Design…….…...8

   3.3 Setbacks……....10

   3.4 Car Parking and Access…….……..….11

   3.5 Landscaping…….....11

   3.6 Security and privacy……....12

4. State Agency Consultation…….…...13

   4.1 APA Group…….…..….13

   4.2 Department of Defence…….……..14

1. Preliminary

Applies to

1. This Part applies to land identified in **Figure 1**, being the Holsworthy Local centre.
2. Part 1 (General controls for all development) also applies.
3. Controls on Non ~~Business~~ commercial development within ~~Business~~ the Local Centre Zone ~~in this locality~~ are in Part 6.

Background

The Holsworthy Station Area was rezoned under Liverpool LEP 1997 Amendment No 45. The area was originally subject to Liverpool DCP No. 43, which came into force on 27th February 2002. A portion of the site was developed between 2002 and 2008. The Holsworthy Local Centre is the remaining area that is not yet developed and is accordingly incorporated into this DCP.

Objectives

To ensure that:

a) A high quality standard of development is carried out.

b) Traffic mitigation measures are implemented.

c) Design responds to Security of the Holsworthy Army Base

d) Sufficient visual privacy to residential development in the vicinity of the development is provided.

e) Waste mitigation measures are implemented and protect the amenity of the area.

f) The development of land parcels is co-ordinated.

g) A framework for a high quality amenity and character for the new neighbourhood is set.

h) The environmental integrity of the area is protected.

i) High quality landscaped areas are provided in public spaces.

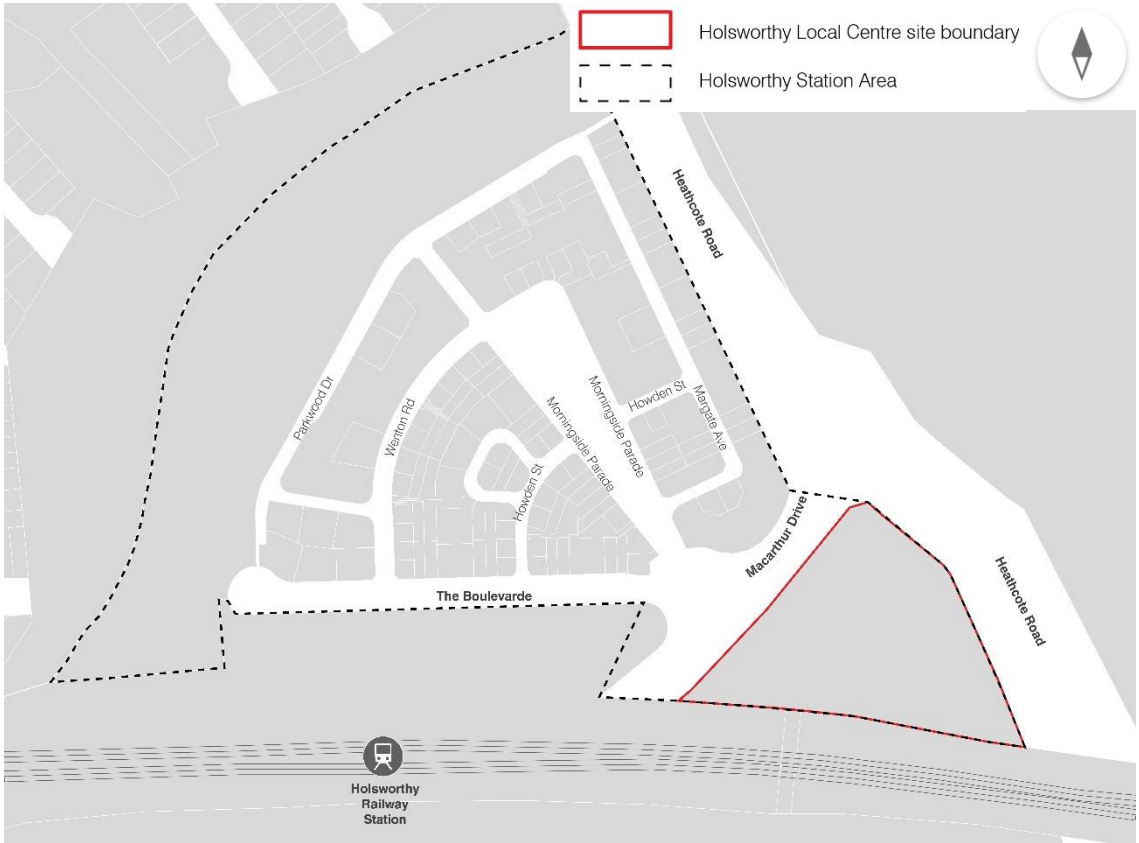


Figure 1 – Land to which this Part applies

2. Controls for Public Domain

2.1 Streets and Pathways

Objectives

a) To provide for the safe and efficient circulation of traffic including visitors, occupants, emergency vehicles, waste vehicles and loading/unloading commercial vehicles.

b) To provide for the safe, efficient and prioritised movement of pedestrians with particular regard to the provision of clear and safe access routes for people who have a disability.

c) To provide for efficient movement of local bus services and direct pedestrian access for all members of the community including those with disabilities.

d) The town centre development shall provide for a strong visual connection with the Holsworthy station precinct to provide and encourage adequate pedestrian circulation.

e) To provide connectivity in the street layout.

f) To provide for the safe and efficient movement of cyclists.

g) Encourage Water Sensitive Urban Design (WSUD) and provide a dedicated allocated space for vegetation/planting along the streets.

h) To provide streets that prioritise pedestrians, cyclists and use of public transport.

i) To ensure streets and pathways are activated and embellished.

Controls

Pedestrian

1. Streets other than those shown in **Figure 1** shall be located and designed to the satisfaction of Council and informed by the Western Sydney Street Design Guidelines.

2. A pedestrian accessibility and safety plan shall be prepared with any development application for the local centre, clearly showing how pedestrians and cyclists can connect safely and efficiently between the town centre and Holsworthy station.

3. The pedestrian/cyclist pathway shall have clear sight lines and incorporate CPTED principles.

4. Activate the street edge to encourage activity and safety with the street and pedestrian network including footpaths, seating, shelter, drinking facilities for both humans and animals and planting.

5. Ensure that street trees and other plantings within the road reserve integrates with the pedestrian network and do not obstruct pedestrian or vehicular sight lines.

Roads

1. Road access to the Holsworthy Local Centre shall be clear, legible and generally in accordance with **Figure 3**.

2. The future intersection treatment of the existing Macarthur Drive roundabout shall be designed to meet expected traffic flow to ensure the safe and efficient operation of the road network.

3. Transport for NSW shall be consulted prior to determination for any development application regarding any intersection treatment for the local centre.

2.2 Public Open Space

Objectives

a) To ensure adequate provision and distribution of public open space to meet the needs of the residents, workers and visitors.

b) To provide primary active retail frontages along Macarthur Drive centred around a new public plaza.

c) To provide links between the open space areas and community and retail facilities.

d) To ensure public art is integrated into the design of public open spaces.

Controls

1. A new central plaza shall be provided along Macarthur Drive which must:

    i. Be a minimum size of 1,000sqm;

    ii. Be provided with a minimum of 50% of direct sunlight for a minimum of 2 hours between 9am and 3pm on 21 June (mid winter);

    iii. Include a combination of soft and hard landscaping with tree plantings for shading and cooling;

    iv. Be activated with retail uses overlooking and facing the plaza including direct pedestrian access.

v. Be visible and accessible from Macarthur Drive and the station precinct;

vi. Include universal design provisions; and

vii. Include passive irrigation measures for tree planting and vegetation within the public domain.

2. Public art is to be proposed and integrated onto any blank wall facades or electrical substations within any proposed public space as an option for activating public spaces. Public art may be proposed elsewhere in addition to blank walls and electrical substations.

3. Trees shall be planted which screen views to Holsworthy Army Base.

3. Controls for Private Domain

3.1 Site Planning

Objective

a) To provide an attractive, accessible mixed-use centre providing for retail, commercial, residential, recreation, community facilities and public transport adjacent to Macarthur Drive, Holsworthy.

b) To function as a local centre that allows for a range of uses including retail, commercial, residential, community and recreation uses to support the existing and future community.

c) To reduce visual, built form on neighbouring low scale residential properties to the west.

d) To minimise traffic impacts upon the locality including to visitors, the commuter carpark, residents, emergency vehicles and waste collection vehicles.

Controls

1. The location of the centre shall be as shown in **Figure 2**.

2. Development shall incorporate elements as shown in the key principles diagram in **Figure 3.**

3. Development shall generally be consistent with the building height and layout as shown in **Figure 4**

4. Development through its design shall encourage pedestrian and cycling access from the development to the railway station.

Figure 2 – Location of Holsworthy Local Centre (site boundary in red)

Figure 3 – Holsworthy Local Centre Principles

Figure 4 – Site overview and building layout/height

3.2 Building Design

Objectives

a) To promote high architectural quality on the site.

b) To ensure that new developments have facades which define and enhance the public domain and desired street character.

c) To ensure that building elements are integrated into the overall building form and facade design.

d) To allow for generous lobbies with good access to the retail at ground and to Holsworthy station.

e) To minimise visual impact to adjoining residential uses.

f) To maximise solar access to the site and surrounding land uses.

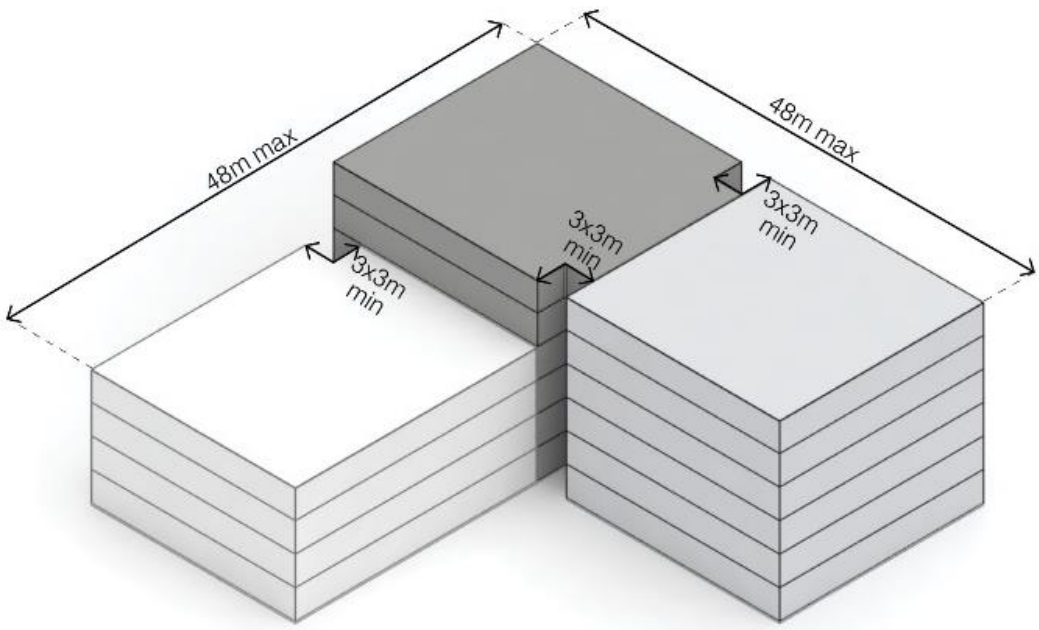
Controls

1. Blank facades are to be avoided on the Macarthur Drive frontage and minimised on the Heathcote Road frontage.
2. Buildings are to be designed to minimise overlooking of defence lands to the south from the commercial and residential component of development on the subject site. Refer to 3.6 (Security and Privacy).
3. Non-residential uses are to provide primary active retail frontages along Macarthur Drive and centred around a new public plaza.

4. The main entry points to any retail premise on the ground level along Macarthur Drive shall be provided at street level and not require the use of stairs or a ramp to enter the commercial premises.
5. The design of developments shall comply with Disability (Access to buildings- Premise-Buildings) Standards 2010.
6. Design buildings to comply with Australian Standards (SS1428 Parts 1 & 2) Design for Access and mobility*).*
7. The minimum floor to floor height for ground floor commercial development is to be 4.5m.
8. The maximum height of any podium is to be 8m above ground level.
9. The following controls are illustrated in **Figure 5** and apply to the tower component above the podium level.

    i. The maximum permissible street frontage length of a residential building shall be 48m, after which a separation distance of minimum 6m shall be required between buildings.

    ii. If the building length exceeds 35m, it should be broken into two or more components, so no length is longer than 35m, before which a minimum 3x3m inset is to be provided for all levels.



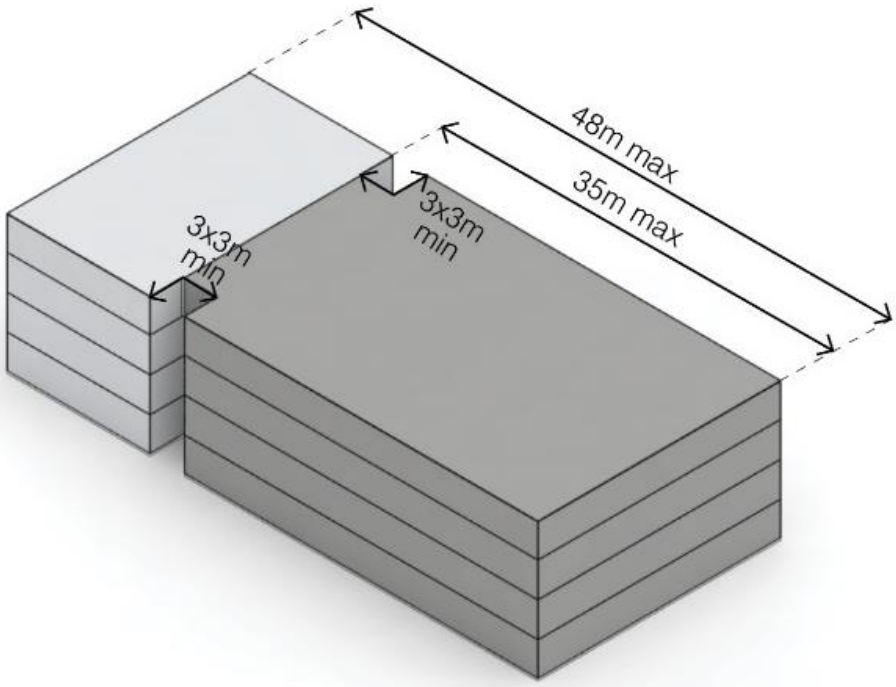


Figure 5 Maximum building dimensions

3.3 Setbacks

Objectives

a) To provide adequate space for landscaping and public domain works.

b) To ensure that the development is sensitive to adjoining development.

c) To provide adequate separation between different land uses.

d) To maintain an effective landscape buffer along Heathcote Road and the rail corridor to protect against noise impacts.

e) To allow for a high-quality built form and landscaping treatment that reflects the unique gateway location of the site into the Liverpool Local Government Area as viewed from the rail corridor and Heathcote Road.

f) To ensure that streetscape amenity is achieved along Macarthur Drive.

g) To ensure an adequate level of security is maintained to Holsworthy Army Base.

Controls

1. Minimum 6m landscape setback from the boundary along the Heathcote Road frontage, as per the Holsworthy Local Centre Design Principles diagram at **Figure 3**.

2. Minimum 2m built form setback from the boundary along Macarthur Drive to provide public domain works.
3. Residential tower component to be setback a further 3m to provide separation from retail uses at ground level.
4. An average building setback of 3m is to be achieved along the southern boundary adjacent to the railway line, with no more than 45% of the building mass being located on the boundary line. Screen tree planting is to occur within the southern boundary setback with a mature tree height a minimum of 15m to obscure views to Holsworthy Army Base.

3.4 Car Parking and Access

Objectives

a) To provide convenient, accessible, and safe onsite car parking for residents and visitors.

b) To ensure that car parking and pedestrian access is integrated into the development.

c) To ensure that street character, landscaping, pedestrian amenity, and safety are not compromised.

Controls

1. Direct public pedestrian access is to be provided between the public space along Macarthur Drive, the station, existing residential neighbourhoods to the northwest and future connections to the east.
2. Vehicular and servicing access is to be provided off Macarthur Drive in the southwestern corner of the site.
3. Carparking is to be provided below ground or wholly integrated into the design of the development while ensuring deep soil planting can be achieved.
4. The development shall nominate and incorporate street level drop off and pick up locations which are easily identifiable on Macarthur Drive or on site at street level, for use by private vehicles and public transport including ride sharing and taxi's as well as a bicycle parking area.

3.5 Landscaping

Objectives

a) To reduce the amount of impervious areas.
b) To enhance the existing streetscape and soften the visual appearance of the development.
c) Assist in improving the climate of the local environment.

Controls

1. Extensive planting is to be provided within the setback along Heathcote Road (subject to the agreement of TfNSW) and along the southern/southwestern elevation adjoining the railway corridor.
2. Deep soil zones should be incorporated on the site and integrated in the building design and car parking layout.

3. High quality landscaping is to be provided between the road carriageway and the site, along Macarthur Drive. *Note: this includes land off site and is to be discussed with Council.* Landscaping on Macarthur Drive should include the following:

    i. Canopy trees, terrace planting and lawn areas. *Note: Street trees and open space planting should provide generous shade for pedestrians during summer and allow adequate sunlight during winter'*

    ii. Paved areas for through site access and passive recreation.

    iii. Footpath, shelter, seating areas to be provided.

3.6 Security and privacy

Objectives

a) To provide privacy for residents and neighbouring development.

b) To ensure that the development is sensitive to adjoining development.

c) To minimise overlooking of Holsworthy Army Base.

Controls

1. No surveillance or communication equipment or products including drones, cameras, listing devices or the like are to be installed without prior approval from Department of Defence and are only to be proposed on the ground floor including commercial premises or public open space. Internal cameras on all levels may be proposed.

2. Any habitable floor area of apartments orientated towards the southern/southwest boundary (adjacent to the railway and not obstructed by another building), shall incorporate design features on windows, balconies, decks and other features that prevent overlooking into the Army Base. These measures may include (but not limited to) fixed screen/lourves, glass bocks, frosted glass, blade, vertical fins, offset vent windows and the like. These design measures to prevent overlooking are to be provided in future DAs.

3. Any external communal open space, either public or private, orientated towards the southern/south-western boundary (Railway line), above ground level, is to incorporate fixed screening devices, or other similar measures to prevent overlooking into the Army base. Any external area accessible by the public including open space/ communal areas are to be located on the commercial level or ground residential level only.

4. No external staircase is to be provided on the south/southwestern elevation.

5. No public access is to be provided to areas of buildings which provide a vantage point to overlook Defence lands to the south. This includes limiting roof access to authorised maintenance staff only, no opening windows for windows which are south facing and not obstructed by another building and no public access to external structures such as platforms, staircases or balconies that would allow for the installation of listening devices or provide views overlooking Defence lands to the south and south/west.

4. External agency consultation

Objectives

a) To ensure external agency consultation occurs.

b) To ensure that the development is designed to the satisfaction of relevant state agencies.

Controls

1. As per or in addition to external referrals required in accordance with any Stare Environmental Planning Policy, Environmental Planning and Assessment Act 1979 and Environmental Planning and Assessment Regulation 2021, external referrals for any development application must occur to Transport for New South Wales, Bankstown Airport, NSW Rural Fire Service, Sydney Water, APA Group (Gorodok Pty Ltd) and the Department of Defence.

4.1 APA Group (Gorodok Pty Ltd)

Gorodok Pty Ltd (APA) has one pipeline located APA has one pipeline located adjoining the southern boundary of the subject site being the Moomba to Sydney Ethane Pipeline

Objectives.

a) To ensure that the development is notified to APA Group (Gorodok Pty Ltd).

Controls

1. APA seeks to limit sensitive uses from establishing within the ML so as to retain a high level of compliance with applicable safety standards. AS2885 defines a sensitive use.

2. A Safety Management Study (SMS) is required as per AS2885. The purpose of an SMS is to assess the risk associated with a change in land use, including both construction risks and ongoing land use risks. The SMS will also develop appropriate controls to reduce risks to ‘as low as reasonably practicable’ (ALARP). The cost of undertaking an SMS is to be borne by the proponent.

3. APA’s pipeline and associated easement are located along the southern boundary of the site and within Railway land. Any proposed works or earthworks within the easement must be approved prior to works occurring, by APA.

4.2 Department of Defence

The Liverpool Military Area (LMA), including Holsworthy Barracks, is a primary Defence facility and a significant contributor to Australia's long term Defence capabilities and national security. The Government is committed to retaining Holsworthy as an ongoing base for significant Special Operations capabilities. Holsworthy Barracks is also the staging location for all domestic operations.

The LMA is a major operational and support hub for Army acting as the primary east-coast base for consolidated special operations capabilities and related training. Holsworthy Training Area, which adjoins Holsworthy Barracks.

Objectives.

a) To ensure that the development is designed to minimise overlooking upon the operations of Holsworthy army base.

b) To ensure any development application is notified to the Department of Defence.

Controls

1. Any development application on the subject site must take into consideration the noise impacts from flight operations associated with current and future operations out of the Liverpool Military Area. Given the nature of Defence capabilities using the airfield there is a greater likelihood of night flying operations; these typically increase noise impacts.

   A Noise Impact Assessment Report is to be submitted with any development application which incorporates strict recommendations beyond a minimum standard. The Noise Impact Assessment Report is to determine the impact of noise and vibration resulting from Defence activities to the south. The building should be designed to incorporate appropriate acoustic treatments to mitigate the anticipated level of noise and vibration.

2. The consent authority is to be satisfied that the development will meet the indoor design sound levels shown in Table 3.3 (Indoor Design Sound Levels for Determination of Aircraft Noise Reduction) in AS 2021—2015, Acoustics—Aircraft noise intrusion—Building siting and construction as applicable.

3. Any development application is to adequately demonstrate mitigation measures through design to ensure potential consequences from residential and commercial development being within close proximity to a working military establishment are mitigated.

4. A development application form is to be submitted to Airservices Australia for their assessment and coordinate with aviation and local stakeholders (6AVN, DASA, Pol Air, NSW RFS, Toll Ambulance, Sydney Airport (SACL), Aerial Management (Bankstown and Camden Airports)).

5. The developer is to install and maintain approved red obstacle lighting (if required) to delineate tall structures within the proximity of an active aerodrome.

LIVERPOOL CITY COUNCIL

LIVERPOOL THE GREAT SOUTH WEST

LIVERPOOL CITY COUNCIL

Ground Floor, 33 Moore Street,
Liverpool NSW 2170

1300 36 2170

www.liverpool.nsw.gov.au

lcc@liverpool.nsw.gov.au

NRS 133 677 (for hearing and speech impaired callers only)

Liverpool City Council
creating our future together

Liverpool Development Control Plan 2008

Part 2.10

Development in

Moorebank East

~~19 February 2014~~
May 2024

Part 2.10 must be read in conjunction with Part 1

Refer to Part 6 for development in ~~Business Zones~~ the E1, E2, MU1 or E3 zone.

Liverpool Development Control Plan 2008

Part 2.10 Moorebank East

Table of Contents

1. Preliminary 5
2. Controls for Public Domain 8
   - 2.1 Street Network 8
   - 2.2 Pedestrian and Cyclist Amenity 13
   - 2.3 Streetscape and Street Trees 14
   - 2.4 Open Space 13
   - 2.5 Views and View Sharing 16
   - 2.6 Foreshore Access 16
   - 2.7 Drainage 17
3. Controls for Private Domain 19
   - 3.1 Subdivision, Frontage and Allotment Size 19
   - 3.2 Site Planning 21
   - 3.3 Setbacks 23
   - 3.4 Landscaped Area and Private Open Space 24
   - 3.5 Cut and Fill, Building Design, Streetscape and Layout 26
   - 3.6 Landscaping and Fencing 29
   - 3.7 Car Parking and Access 31
   - 3.8 Amenity and Environmental Impact 33
   - 3.9 Site Services 35
   - 3.10 Secondary dwellings (Granny Flats) 36

Table of Figures

Figure 1 Land to which this plan applies 5
Figure 2 Street Network 10
Figure 3 Collector Street 11
Figure 4 Local Street 12
Figure 5 Tree Protection 15
Figure 6 Area of fill to be removed 18
Figure 7 Highest density generally located in accessible places with highest amenity 20
Figure 8 Lot Orientation 20
Figure 9 Private open space considerations on an east-west lot 21
Figure 10 Site Analysis 22
Figure 11 Landscaped Area 25
Figure 10 Cut and Fill requirements for a dwelling 27
Figure 11 Example of Building Appearance 28
Figure 12 Fence types 31
Figure 14 Private Driveway Options 33
Figure 15 Privacy and Amenity 34

List of Tables

Table 1 Setbacks 23
Table 2 Side and Rear Setbacks 24

1. Preliminary

Applies to

1. Part 2.10 applies to the land, shown in Figure 1.
2. Part 1 applies to the land shown in Figure 1.
3. Part 3.8 also applies for non residential development on the land.
4. Parts 3.1 – 3.7 do not apply to the land.
5. Controls on land zoned ~~within the Business Zone~~ E1, E2, MU1 or E3 in this locality are in Part 6.

Figure 1 Land to which this plan applies

Background

The site currently consists of a landscape and garden supplies business and sand extraction industry adjoining the Georges River.

The sand extraction industry has reached the end of its economic life. Landfill has been placed over some of the site to a level above the 1% flood on the Georges River. It is proposed to be redeveloped for residential and business uses with possibly private recreation along the foreshore.

The landscape and garden supplies business is proposed to redevelop.

Voluntary Planning Agreement

Two Voluntary Planning Agreements also apply to the site.

Objectives

Accessibility

To ensure a clear relationship between accessibility and land use by:

a) Promoting a movement system that gives appropriate priority to: walking, cycling, public transport, and private vehicles.

b) Guaranteeing a movement system that relates accessibility demand to location of development type.

c) Ensuring that servicing can be carried out appropriately.

d) Ensuring movement priorities, traffic speeds and street and road designs are appropriate to the location and give priority to pedestrians and children.

e) Guaranteeing adequate accessibility for emergency vehicles.

f) Building upon existing movement patterns and infrastructure by utilising the existing street layout.

g) Providing safe access during flooding events.

Social Benefits

To establish affordable and accessible facilities and resources that allow people to maintain wellbeing, live and recreate by:

a) Ensuring that development creates a 'people place' by giving priority to people and human relationships through housing mix and safety.

b) To increase the range of housing opportunities available.

Environmental Benefits

To ensure a clean, safe and healthy environment that builds on existing resources and produces quality built and natural assets by:

a) Establishing appropriate drainage and floodplain management that contributes positively to the area.

b) Developing solutions to manage environmental issues on-site.

c) Ensuring that waste disposal is effective and efficient and that recycling is utilised at every opportunity.

d) Ensuring a high standard of water and air pollution management and water quality.

e) Maintaining and enhancing the quality of the natural environment.

f) Connecting and enhancing vegetation corridors and providing links between the Western Sydney regional parkland and the Hinchinbrook Creek Corridor.

g) Promoting the conservation of flora and fauna, including the retention of Cumberland Plain Woodland.

h) Promoting the development of place and a quality built environment with people and human relationships as a central consideration.

i) To ensure that future development will not detract from the level of residential amenity and environmental quality enjoyed by residents of adjoining properties

j) To ensure that future residents and occupants of the site will enjoy a high standard of residential amenity and environmental quality

k) To ensure that future development responds sympathetically to existing streetscape, riverscape and townscape values

l) To provide a possible location for a commercial centre and recreational facilities

Economic Benefits

To establish economic capital that is accessible and meets the needs of the community by:

a) Ensuring appropriate accessibility to employment.

b) Ensuring infrastructure is sufficient to meet current and predicted need.

2. Controls for Public Domain

2.1 Street Network

Background

It is envisaged that Moorebank East will an accessible place with a clearly identifiable hierarchy of streets. There will be a network of footpaths and cycleway that will help connect the precinct to the immediate surrounding areas. The proposed precinct is to comprise a network and hierarchy of streets that link the site with the surrounding urban fabric. A road link from Brickmakers Drive is proposed to link to Davy Robinson Drive, although this is not envisaged to be a short cut from Newbridge Road.

Objectives

a) To provide for attractive residential and commercial street environments

b) To ensure safe, efficient and direct access to commercial, residential and recreational areas

c) To provide for an efficient circulation of bus services and convenient pedestrian access

d) To minimise the amount of through traffic in residential areas

e) To ensure safety for pedestrians

f) To guarantee adequate accessibility for emergency vehicles

g) To integrate development with the surrounding public transport network.

Controls

1. Subdivision of the land shall be in accordance with Figure 2.
2. Subdivision of the land shall incorporate a link road between Brickmakers Drive and Davy Robinson Drive as shown on Figure 2. The link road shall be a minimum 20m wide and be able to accommodate a bus route.
3. Street sections are to comply with Figures 3 – 4.
4. Flood free access via a road bridge from Brickmakers Drive shall be provided prior to any subdivision of Lot 7 DP 1065574.
5. The street network is to be clearly legible with signposts showing street names and property numbers.
6. Street layouts at key locations are to be designed to ensure pedestrian safety.
7. Kerb ramps are required at all intersections where footpaths are provided
8. Footpaths must be provided along at least one side of every street.
9. A street network plan is to be submitted for all subdivision applications showing street and intersection types and any other proposed street treatments.
10. Local streets shall front open space and avoid back fences to open space and other public areas.
11. All plans must indicate street types and intersection treatments.
12. A direct road connection is to be provided from the Road Bridge through the Residential to the private open space.
13. A pedestrian access shall be provided from land in the R3 zone through the B6 zone through to Newbridge Road.

14. Barrier kerbs shall be used:
    - On any street frontage to open space.
    - At all intersections (between the potential driveway location on one frontage to the potential driveway location on the alternative street frontage). Driveways are not to be located with 6m of the tangent point of any intersection.
    - Barrier kerb shall be installed for the entire length of bus zones and for 10m on the approach of the bus stop.
15. Roll kerbs may be used in other locations to the above.

Street Types

The following streets are provided:

Collector Street (Link Road)

This street provides a connection between Brickmakers Drive and Davy Robinson Drive.

Local Streets

These streets are designed for slow residential traffic. The road reserve is 15m wide.

Figure 2 Street Network

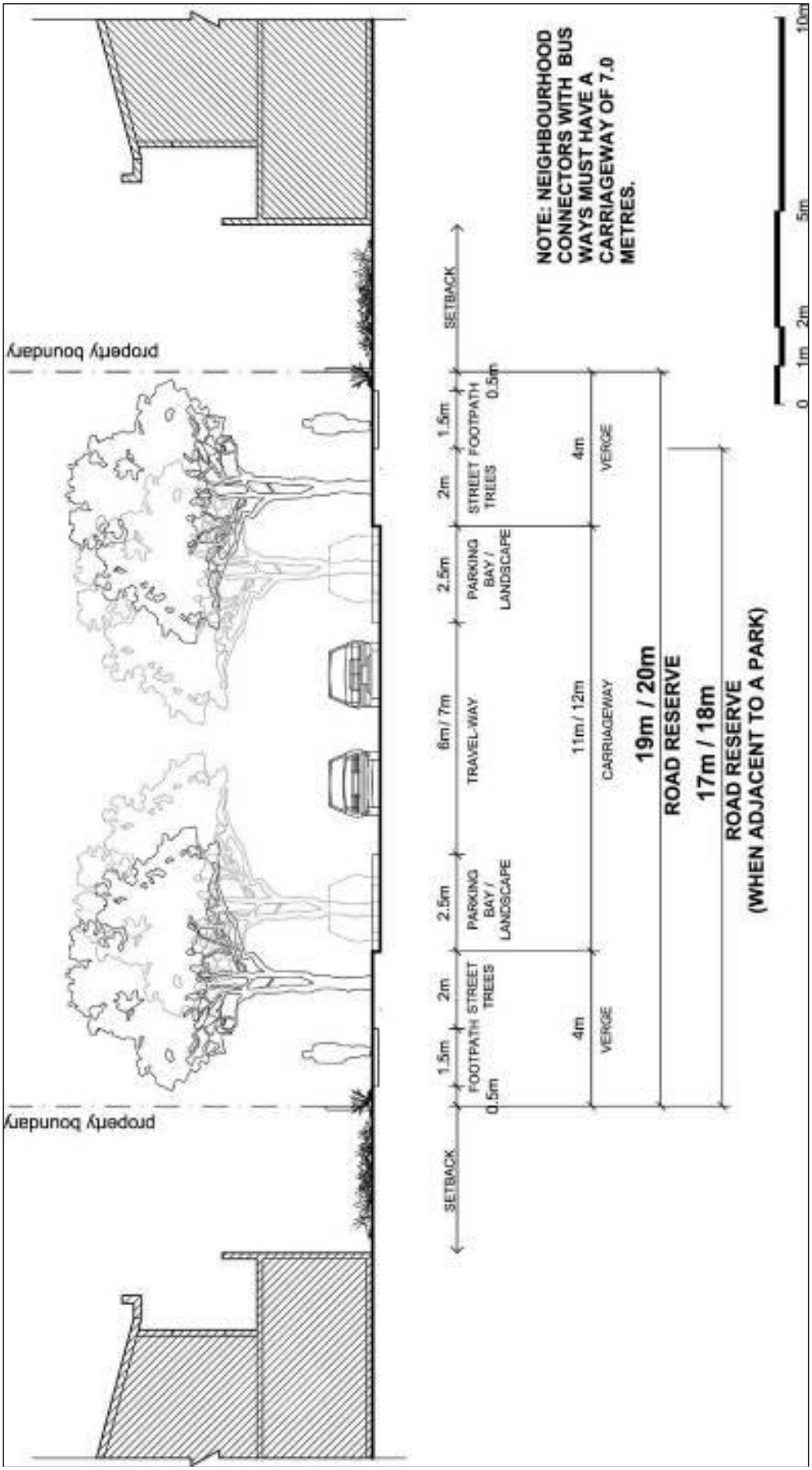


Figure 3 Collector Street

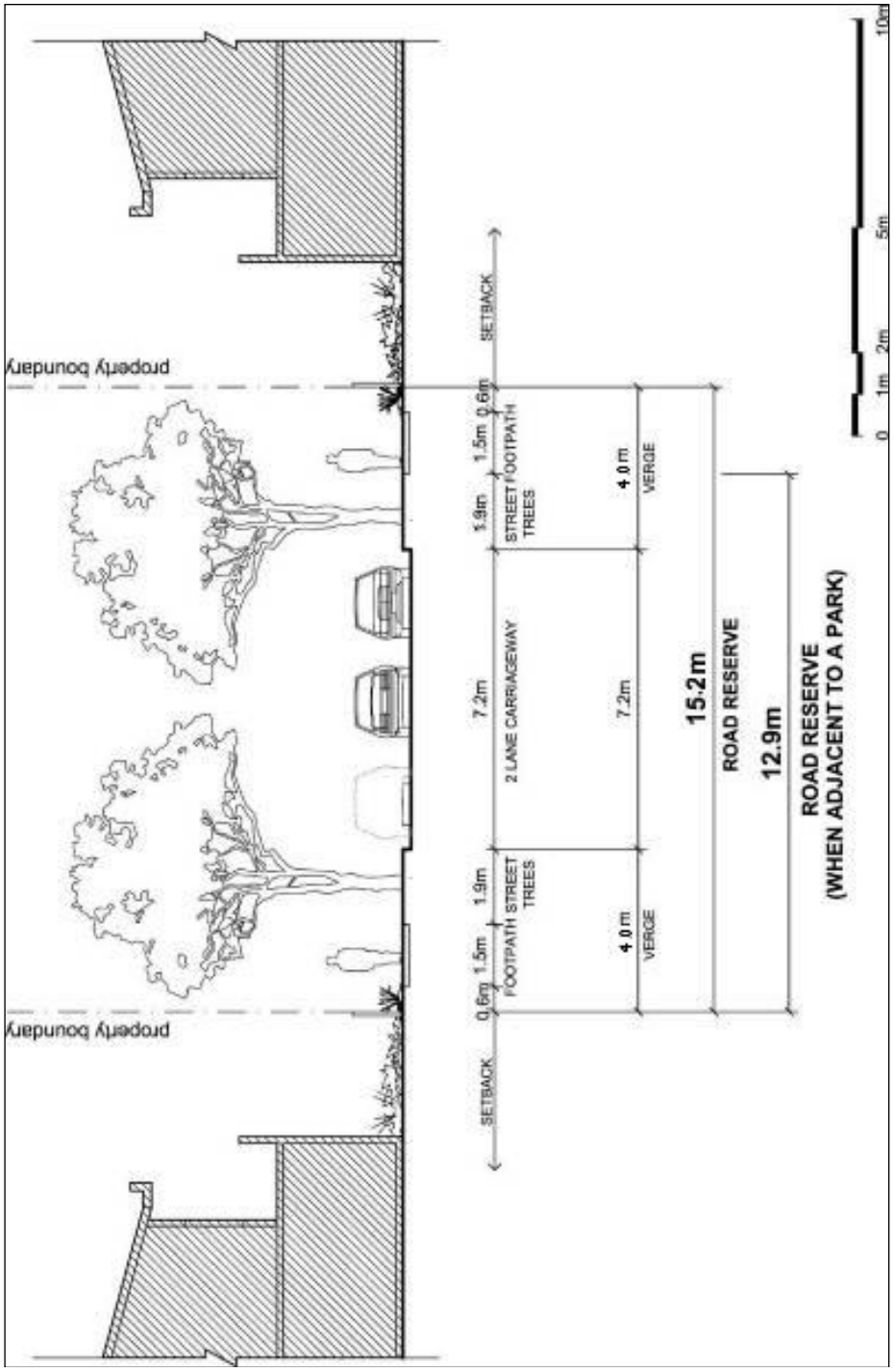


Figure 4 Local Street

2.2 Pedestrian and Cyclist Amenity

Background

Pedestrian and Cycle facilities in public spaces provide for linkages to social and cultural activities and educational facilities, and should be characterised by excellence of design appropriate to the area.

Vehicle crossings over footpaths need to be managed and minimised to ensure that they do not detract from the quality of the public domain, disrupt pedestrian or cycle movement, or threaten user safety.

Objectives

a) To encourage walking and cycling as opposed to the use of private vehicles for local trips

b) To provide a permeable and interconnected network of streets and pathways that gives safe, convenient and legible access both within and beyond the site

c) To minimise and prevent, where possible, vehicular crossings over a pedestrian or cyclist pathways

Controls

1. Vehicle access to developments is to be designed and located to minimise conflicts with pedestrians and cyclists on footpaths, particularly along high volume pedestrian streets.
2. Wherever practicable, vehicle access to developments is to be a single crossing, perpendicular to the kerb alignment.
3. Where practical, pedestrian and cycle paths in open space areas should be located close to streets on the edge of open spaces to take advantage of street lighting and allow for casual surveillance by residents and drivers. Where this is not practical, paths should be well - lit and visible from the road.
4. Pedestrian and cycle paths are to link the key facilities within and outside the area, such as the open space network.
5. Shared pedestrian/cycle links, cycle ways public roads and lanes are to be clearly and frequently signposted to indicate their shared status.
6. Designated cycle lanes on streets are to be clearly indicated by line – markings on the road surface and/or by signs beside the road.
7. Shared pedestrian and cycle paths are to be a minimum of 2.5m wide.
8. Designated pedestrian – only paths are to be a minimum of 1.5m wide.
9. Pedestrian and Cycle facilities in public spaces are to be safe, well lit, clearly defined, functional and accessible to all. An appropriate level of pedestrian lighting to ensure security and contribute to the legibility of streets.
10. Pedestrian and cycle paths, and pedestrian refuge islands are to be designed to be fully accessible by all in terms of access points and gradients, in accordance with *AS 1428:1 – 4*.

2.3 Streetscape and Street Trees

Background

Street furniture should maximise pedestrian comfort, convenience and amenity, create visual harmony and be used to define spaces, streets, paths and gateways. Opportunities for public art in significant public domain locations should be explored as part of the development process.

Objectives

a) To create a sense of identity for the area.

b) To enhance public spaces so that they are vibrant, safe and welcoming.

c) To facilitate cultural identity through art and design in public places.

d) To create quality streetscapes that is visually attractive and integrates with surrounding street layout.

Controls

1. Street furniture is to be incorporated into the design of all public spaces and should be consistent in design and style.
2. Street furniture is to be located so as not to impede mobility in accordance with *AS 1428:1 - 4.*
3. The location and detailing of all proposed street furniture is to be indicated on the Landscape Plan, to be submitted with the DA.

Street Tree Planting

1. Street trees shall be required to be planted in conjunction with the creation of a new street or the extension of an existing street.
2. One street tree shall be planted for each residential dwelling created.
3. The street trees shall be planted prior to the release of the subdivision certificate.
4. The trees shall be provided with protection to ensure their survival during the construction of buildings in the street. Refer to Figure 5 for details.
5. Trees and shrubs on individual streets must be of a uniform species. On streets adjacent to bushland, species indigenous to the area must be planted.
6. Intensive planting shall be provided along the Link Road between the R3 and B6 zones.

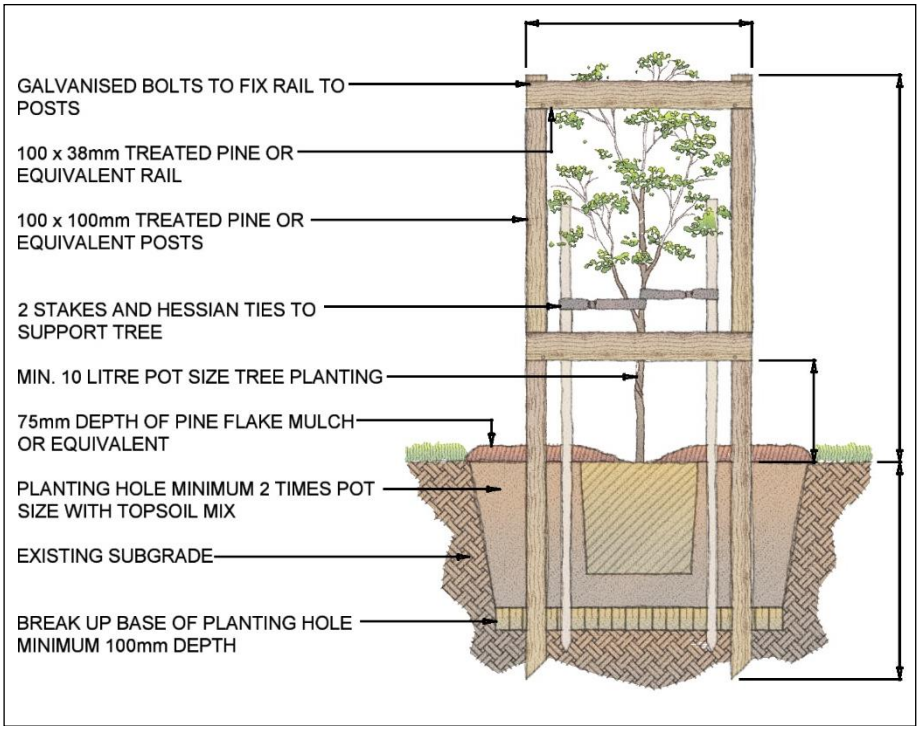


Figure 5 Tree Protection

2.4 Open Space

Background

Public Open Spaces can play an important role in meeting recreational and social needs. Public Open Space at Moorebank East should include continuous foreshore access and pedestrian and cycle connections throughout the precinct.

Public spaces should be designed to promote vibrant social interaction, civic pride and a sense of public ownership and belonging. Landscaped areas and open space within the public domain play a major role in setting the character of the locality. These areas should make the neighbourhood pleasant and welcoming to be convenient to the needs of the community, especially in higher density areas.

Objectives

a) To provide public access to the Georges River Foreshore for residents.

b) To ensure adequate provision and distribution of public space to meet the need of the residents.

c) To provide for adequate links between major open space, community, recreational, and retail facilities.

Controls

1. Direct public access (pedestrian/ bicycle) should be provided from the residential zone east through the private recreation zone, to the Georges River Foreshore reserve.
2. A shared pedestrian/cycleway access should also be provided, along the western boundary of the RE2 zone, to the Georges River foreshore reserve.
3. Local parks provided within the residential area, should be a focal point for development and activity.
4. Ensure that development which surrounds open space is orientated towards the park to offer casual surveillance.

5. Perimeter streets should be provided to all parks on at least three sides of the park. Where a street frontage is not provided the development must front the park to provide surveillance.
6. Sufficient lighting to be provided within local parks

2.5 Views and View Sharing

Background

The Moorebank East Precinct has several viewpoints, and potential views to the Georges River. It is important to ensure that there are equitable opportunities for lots with potential views.

Objectives

a) To provide for equitable view sharing.

b) To provide for a subdivision pattern that maximises view points.

c) That view points should be located prior to subdivision.

Controls

1. Higher Density lots should be located to best utilise potential view.
2. View corridors out of or into the site should be identified, maintained and improved where possible.
3. Buildings along the southern and eastern edge of the residential zone must be no wider than 35m and separated from other buildings by at least 10m.

2.6 Foreshore Access

Objective

To provide access to land in the RE1 zone along the Georges River foreshore for residents and Council maintenance equipment.

Controls

1. A 10m wide access shall be dedicated free of charge to Council to link a public road with the land in the RE1 zone along the Georges River foreshore at the northern end of Lot 7 DP 1065574 to permit access by the public and Council maintenance vehicles.
2. A right of way access shall be provided free of charge to Council to link a public road with the land in the RE1 zone along the Georges River foreshore at the southern end of Lot 7 DP 1065574 to permit access by Council maintenance vehicles.

2.7 Drainage

Objective

To provide appropriate on-site stormwater system which can be economically maintained.

Controls

1. The site should be generally drained east toward the Georges River, rather than to the drain on the western side of the site.
2. An onsite detention basin is required to avoid any increase in peak stormwater discharge from the drain on the western boundary of the property.
3. Use gross pollutant traps and water quality control ponds to remove suspended sediment, nutrients and bacteria.

2.8 Removal of Fill

Any Development Application on Corner Lot 2 DP 602988 is to include provisions for the removal of 35,000m^3 of fill from the area indicated in Figure 6.

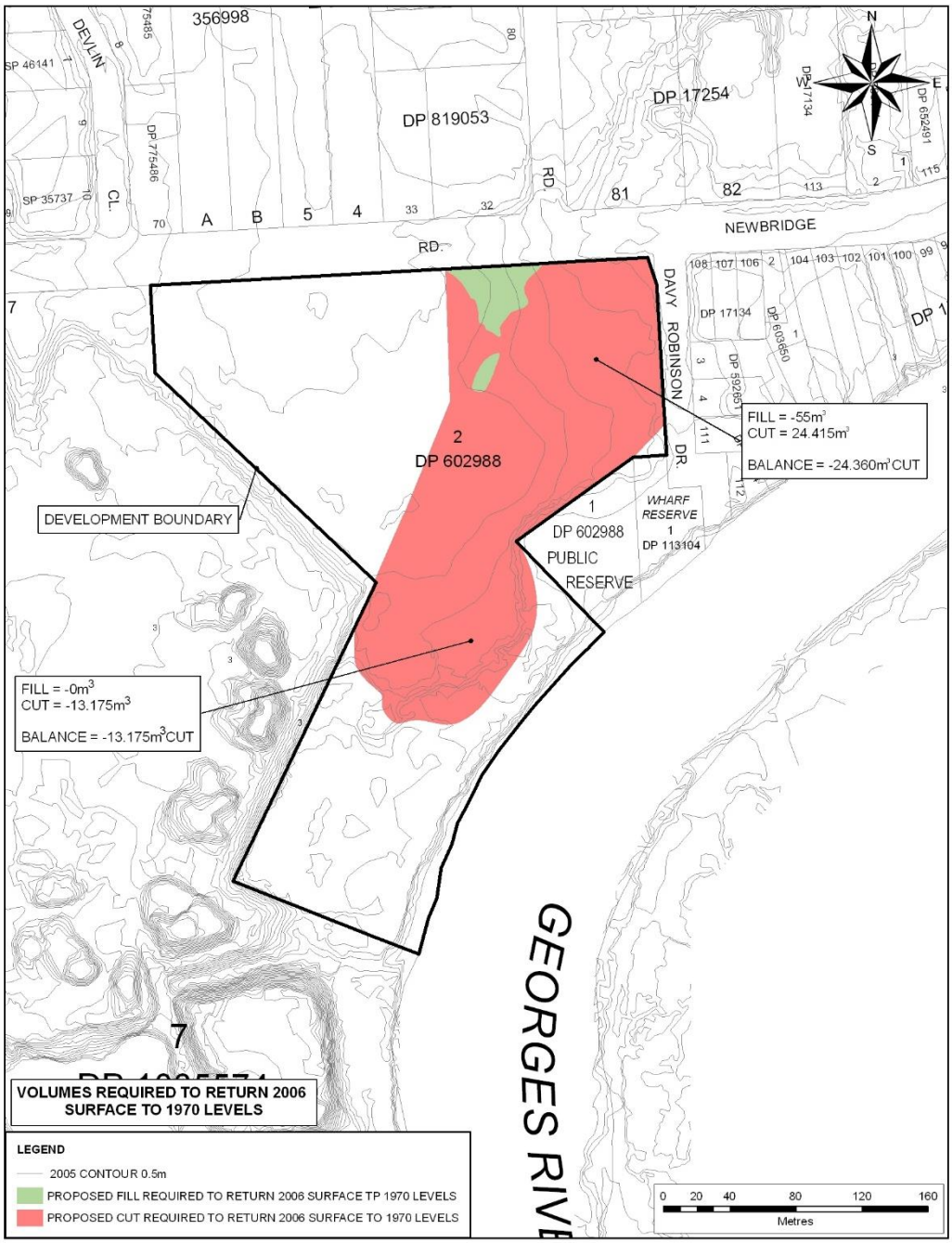


Figure 6 Area of fill to be removed

3. Controls for Private Domain

3.1 Subdivision, Frontage and Allotment Size

Objectives

a) To provide a range and mix of lot sizes to suit a variety of dwellings types distributed throughout the area.

b) To locate higher density in places of greatest amenity, such as near parks, other open spaces and along transport nodes.

c) To ensure that the density of development and siting of dwellings maintain a high standard of privacy.

d) To ensure lots are oriented to optimise solar access to facilitate micro-climate management, including the application of energy conservation principles.

e) To ensure all dwellings address the street.

f) To ensure that lot size and dimensions take into consideration the physical characteristics of the land, in a way, which promotes retention of existing vegetation and reduces the incidence of damaging earthworks and retaining wall construction.

g) To ensure passive surveillance of public space through the effective and functional layout designs of new developments.

h) To ensure that the dwelling siting minimises impacts on views from adjacent existing residential development.

Controls

1. 25% of lots must be 300sqm or greater
2. At least 25% of lots must be less than 300sqm
3. Any lot greater than 400sqm should have a frontage of at least 12m.
4. All development needs to be in accordance with Council's adopted residential subdivision design principles.

Dwelling Mix

Objectives

a) To ensure development provides a mix of apartment types and sizes to accommodate a range of household types and needs

b) To provide for a variety of residential unit mix, sizes and layouts within each residential development

Controls

1. A maximum of 216 Dwellings are permitted on the site.
2. Subdivision, lot sizes and orientation are to address the principles in Figures 7 and 8.

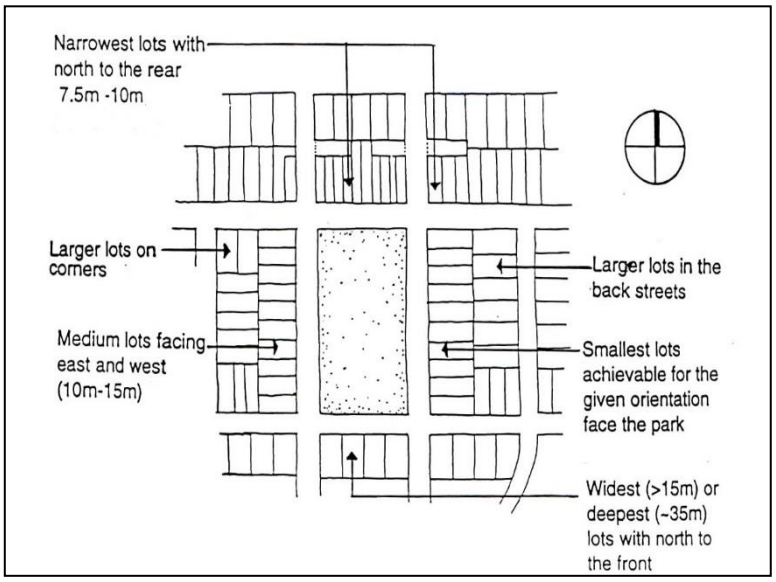


Figure 7 Highest density generally located in accessible places with highest amenity

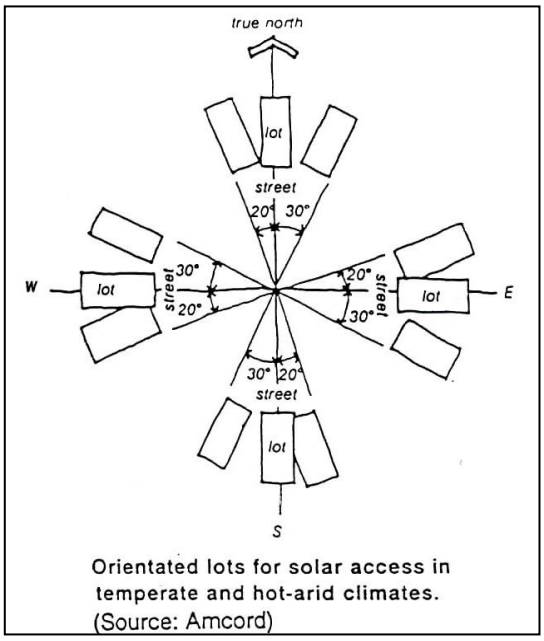


Figure 8 Lot Orientation

1. Lot sizes and dimensions are to take into account the slope of the land to minimise earthworks/retaining wall construction and the retention of existing trees.
2. Minimum allotment width is 6m.
3. Any application for subdivision creating allotments of 6m width must be accompanied by an application for a dwelling house on each of those allotments.
4. On east-west lots, houses and private open space are to be sited generally in accordance with Figure 9.

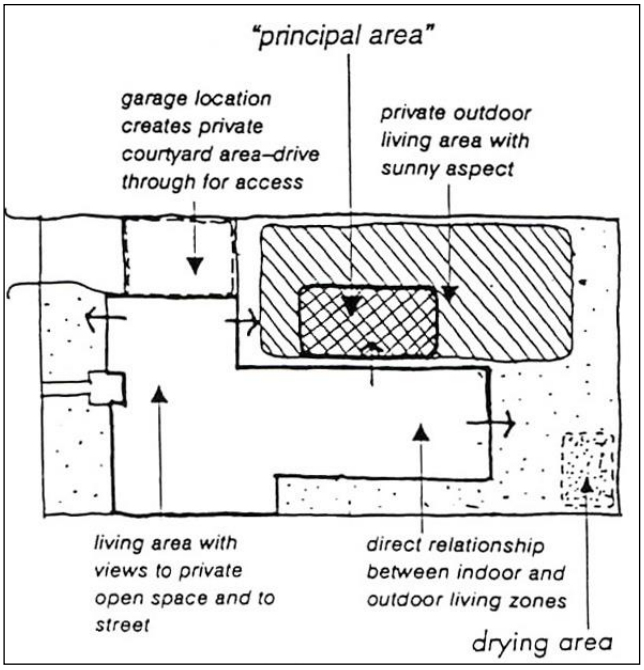


Figure 9 Private open space considerations on an east-west lot

3.2 Site Planning

Objectives

a) To ensure that the dwelling house is sensitive to site attributes, such as streetscape character, natural landform, drainage, existing vegetation, land capability, slope, solar access and if relevant, heritage items.

b) To ensure privacy for residents and neighbours.

Controls

1. The dwelling layout must be designed around the site attributes such as slope, existing vegetation, land capability and/or solar access (See Figure 10).
2. There must be a direct link from at least one living area to the principal private open space.
3. The siting of windows of habitable rooms on the first floor shall minimise overlooking to the principal private open space of neighbouring properties.
4. Stormwater from the site must be able to be drained satisfactorily. Where the site falls away from the street, it may be necessary to obtain an easement over adjoining property to drain water satisfactorily to a Council stormwater system. Where stormwater drains directly to the street, there may also be a need to incorporate on-site detention of stormwater where street drainage is inadequate. Refer to Water cycle management in Part 1.

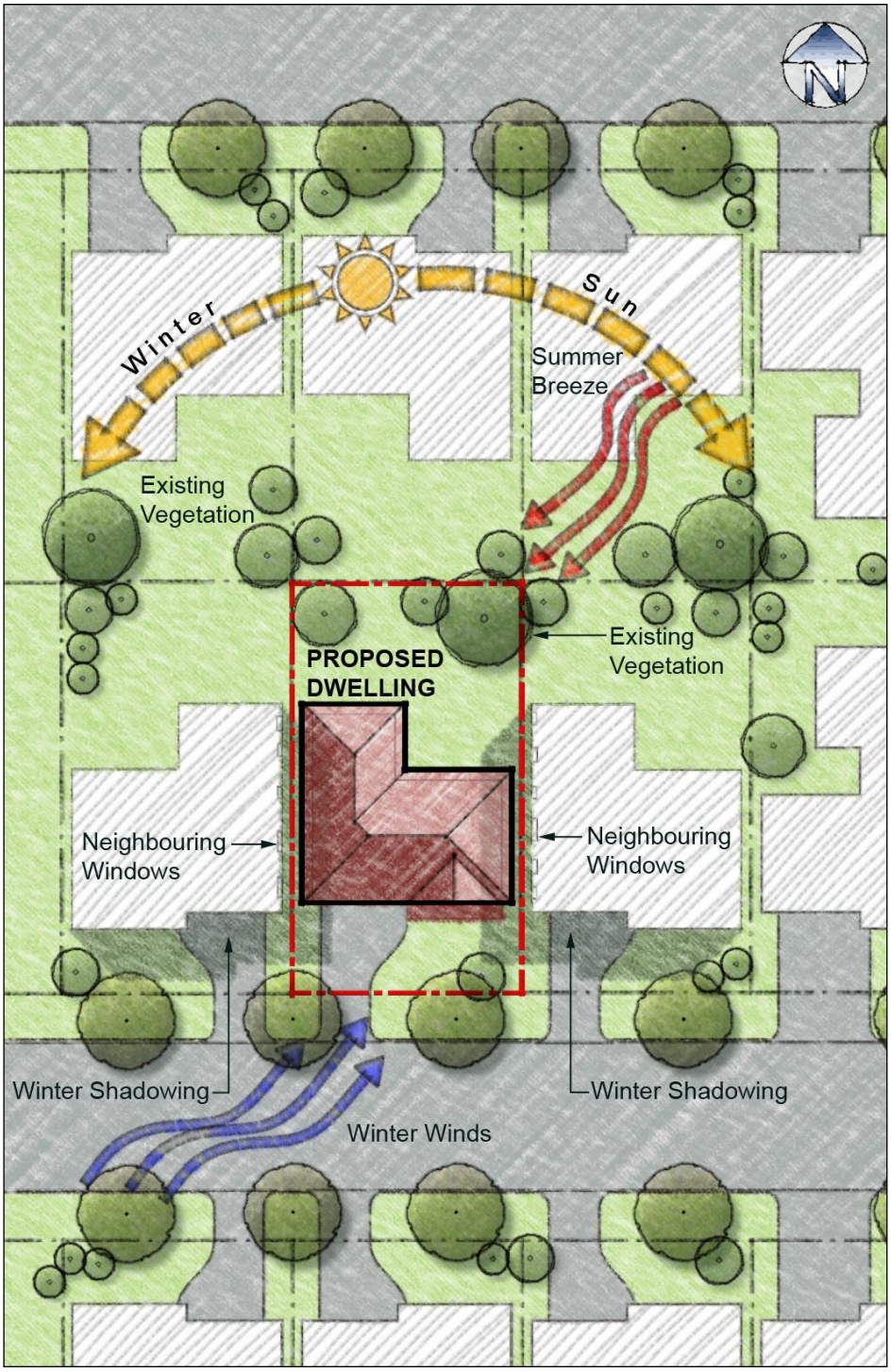


Figure 10 Site Analysis

3.3 Setbacks

Front and Secondary Setbacks

Objectives

a) To ensure appropriate front setbacks.

b) To contribute to the creation of attractive and memorable streetscapes that has a consistent character.

c) To reduce the potential visual effects of garages on dwelling facades and streetscapes.

d) To provide adequate space for landscaping or open space.

Controls

1. Dwelling houses shall be setback in accordance with Table 1.

Table 1 Setbacks

Height	Front Setback	Secondary Setback
Ground floor	4.5m	2.5m
First floor	5.5m	2.5m

2. Garages must be set back a minimum of 1m behind the main face of the dwelling. (The main face is the first wall of a habitable room)

3. Verandahs, balconies, eaves and other sun control devices may encroach on the minimum front and secondary setback by up to 1m.

4. The secondary setback is the longest length boundary.

5. Garages that address the secondary frontage must a have minimum setback of 5.5m.

6. Corner sites shall provide a frontage to both streets and should articulate their corner location with an architectural feature such as a wrap around verandah, bay window, corner entry or roof feature.

Side and Rear Setbacks

Objectives

a) To maximise private amenity within the building.

b) To minimise the impacts of development on neighbouring properties in regard to views, privacy and overshadowing.

c) To ensure that buildings are sited so as to provide for solar access and both visual and acoustic privacy.

Controls

Buildings shall be setback from the side and rear boundaries in accordance with Table 2.

Table 2 Side and Rear Setbacks

Item	Side Setback	Rear Setback
Single storey dwelling houses	0.9m	5.0m
Second storey component of dwelling houses	1.2m	8.0m
Living room doors (including family rooms and rumpus rooms)	4.0m	5.0m

Note: Building encroachments may only occur if it is seen as beneficial for open space, solar access and the internal layout of the dwelling. The dwellings living areas should open out to open space.

Zero lot lines

1. Walls are generally to be 180mm clear of the side boundary to allow for gutter and eaves overhang.
2. The length of a zero lot line wall is limited to 50% of the adjacent side wall boundary.
3. No windows are permitted in a zero lot line wall.
4. A maintenance easement of at least 700 mm shall be provided on the adjoining boundary.

3.4 Landscaped Area and Private Open Space

Landscaped area is defined in Liverpool LEP 2008.

Private open space is an area within the site (usually at the rear) that is set aside for outdoor activities. Clotheslines, BBQ areas, pergola (unroofed structure), patio, garden sheds and pools can be included in the private open space.

Principal Private open space is an area that is directly accessible from at least one living room and is included in the private open space calculations (the principal private open space area may be paved or sealed).

Landscaped Area

Objectives

a) To provide an area to allow vegetation to mature.

b) To reduce the impact to neighbouring properties and natural waterways from stormwater runoff.

c) To reduce the amount of impervious areas.

d) To enhance the existing streetscape and soften the visual appearance of the dwelling.

e) To maximise the amount of landscaped area within the front setback of the dwelling.

f) Note: All proposed developments require a landscape plan to be submitted with the development application.

Controls

1. A minimum of 20% of the site area shall consist of Landscaped Area, this may include lawn, deep rooted trees, garden beds and mulched areas.
2. A minimum unincumbered area of 5 x 6m shall be provided in rear setback to accommodate deep rooted trees.
3. A minimum of 50% of the front setback area shall be landscaped area.

4. A minimum unincumbered area of 3 x 5m shall be provided in front setback to accommodate deep rooted trees.

Private Open Space

Objectives

a) To ensure that a minimum amount of Private Open Space is provided for outdoor activities.

b) To ensure that Private Open Space is clearly defined for private use.

c) To ensure that Private Open Space is private, landscaped, screened from overlooking and receives an adequate amount of solar access.

Controls

1. Each dwelling must provide a minimum of 50 m^2 of Private Open Space.
2. Areas less than 2.5m in width does not qualify as Private Open Space.
3. Private open space areas are not permitted within the primary street setbacks.
4. The Private Open Space shall include the principal private open space, which is directly accessible from the main living area of a dwelling with a minimum dimension of 4 x 6 m
5. The Principal Private Open Space must receive 3 hours of sunlight to at least 50% of the area between 9:00am and 5:00pm on 21 June.

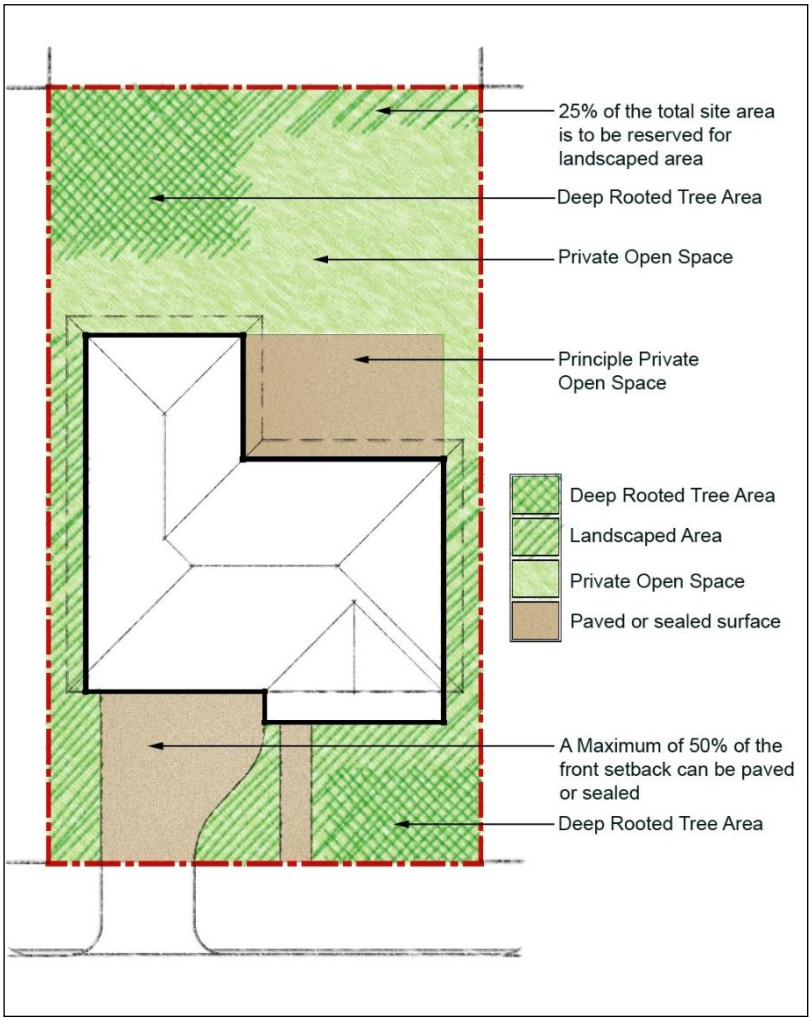


Figure 11 Landscaped Area

3.5 Cut and Fill, Building Design, Streetscape and Layout

Cut and Fill of Land

Objectives

a) To reduce the incidence of change in natural ground levels.

b) To encourage the architectural designs of dwellings which suit the contours of the land.

c) To provide controls for cut and fill of land designed to minimise the incidence of soil erosion and subsequent sedimentation of waterways.

d) To ensure that development on adjoining properties is not threatened or prejudiced by proposed cut and fill practices.

e) To discourage and eliminate, where possible, the construction of retaining walls on allotment boundaries.

f) To minimise overshadowing of neighbouring dwellings, their private open space or any solar panelling.

Controls

1. The maximum cut on a site must not exceed 600mm.

2. All retaining wall structures shall be masonry construction and designed by a suitably qualified person, or constructed as specified by the manufacturer of the product. The retaining wall shall be constructed wholly inside (within) the boundary of the site.

3. All slab constructions for dwellings that are above natural ground level are to be constructed using dropped edge beams to retain fill. The maximum fill within the confines of the slab must not exceed 1 m. All fill must be contained within the dwelling footprint.

4. Contaminated fill, either imported or found on site is not permitted.

   Note: In the event of approval being granted to the erection of retaining wall(s) to contain proposed cut, Council will require the completion of such retaining wall(s) PRIOR TO the release of the occupation certificate.

5. Where an applicant considers that an allotment has characteristics which warrant exemption from this policy, an application for exemption may be made by the submission of a development application to Council for consideration. In addition to normal requirements the submission should include:

   - A plan showing existing contours (at 0.5m intervals) of the subject site and all adjoining sites.
   - A plan showing future contours (after proposed cut and fill) of the subject site and all adjoining sites.
   - Full details of any proposed retaining wall(s).

   Note: In the event of approval being granted to the erection of retaining wall(s) to contain proposed cut and fill, Council will require the completion of such retaining wall(s) PRIOR TO the commencement of any building works.

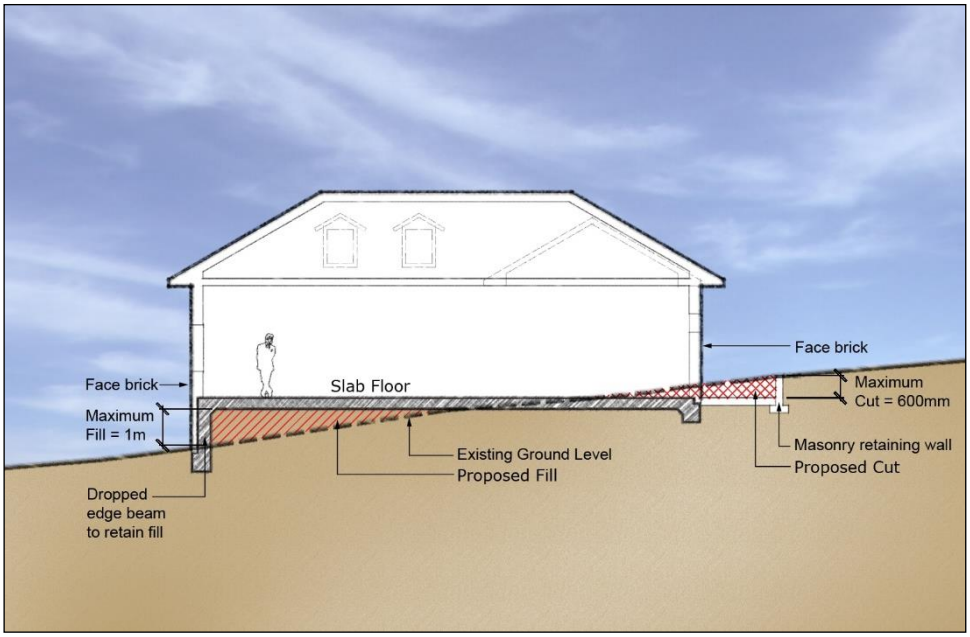


Figure 12 Cut and Fill requirements for a dwelling

Building Design and Appearance

Objectives

a) To encourage designs that will enhance the character of the neighbourhood.

b) To promote variation of building facade and design.

c) The building enhances the streetscape through the use of suitable built form design and landscaping.

d) To ensure buildings address all street frontages.

e) To discourage garages and in particular garage doors, from visually dominating the streetscape.

f) To ensure that the building design, detailing, colour and finish shall add visual interest to the street and shall compliment the street.

g) To ensure habitable rooms address the street.

h) To encourage balconies over garages in two storey dwellings.

Controls

Dwellings

1. All dwellings are to be orientated to the street (See Figure 13).
2. The front pedestrian entrance must be visible from the street.
3. The front Building facades shall be articulated, this articulation may include front porches, entries, wall indents, changes in finishes, balconies and/or verandahs.
4. For two storey developments, the side walls shall be articulated if the wall has a continuous length of over 10m.
5. Eave overhang must provide for sun shading and protect windows and doors. Eaves should have a minimum overhang of 400 mm and be provided to a minimum of 70% of the dwelling.
6. Dwellings that face two street frontages or a street and public space must address both frontages by the use of verandahs, balconies, windows or similar modulating elements.

7. Balconies facing the street on two storey dwellings are encouraged (See Figure 13).

Two storey dwellings

To break up the bulk of two storey dwellings balconies built above garages are encouraged

Garages and Carports

1. The maximum width of garage doors or carports must be no greater than 50% of the building frontage width.
2. Garages and carports must be designed to be the minor element of the façade.
3. Garage roofs shall be incorporated into the roof design of the house. Separate roofs for garages are discouraged, unless actually separated from the dwelling.
4. Garages and carports are to be compatible with the building design in terms of height, roof form, detail, materials and colours.
5. Carports may be built in front of the garage *only if* the carport is:
   - No larger than 5.5 x 6m.
   - Built of a similar colour and materials of the house.
   - Setback 2m from the front property boundary.
   - Compatible with the local streetscape.
6. The conversion of garages to living space may only be permitted if:
   - At least one car parking space is provided behind the front setback.
   - The additional living area does not result in the building exceeding the maximum permitted floor space ratio.

Figure 13 Example of Building Appearance (Indicative Only – Not to Scale)

Internal Design of Dwellings

<u>Objectives</u>

a) The internal design must contribute to personal safety and to the protection of property by permitting casual surveillance of public spaces from private windows and entries.

b) To provide passive surveillance from rooms addressing the street or any adjoining open space.

c) To locate amenity rooms (such as laundries, bathrooms, toilets) to the side and rear of the development.

d) To encourage the internal design of the dwelling to take advantage of cross ventilation.

e) That each dwelling shall provide a sufficient amount of storage for elements such as garden and sports equipment.

Controls

1. All dwellings shall have habitable rooms located to the front of the dwelling for security and surveillance to the street.
2. Living rooms should take advantage of northern aspects.
3. Access to private open space must be from at least one living room.
4. The internal layout of the dwelling must incorporate cross ventilation.
5. Bathrooms, ensuites, laundries and walk in wardrobes should be located to the side or rear of the dwelling.
6. Each dwelling must provide a minimum storage area of $8m^3$.
7. Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).
8. The main living area must receive at least 3 hours of sunlight between 9.00am and 5.00pm on 21 June.

3.6 Landscaping and Fencing

Objectives

a) To retain existing mature trees within the site in a way which ensures their ongoing health and vitality.

b) To provide privacy, summer shade and allow winter sun.

c) To enhance the existing streetscape and visual appearance of dwellings.

d) To encourage landscaping that is appropriate to the natural, cultural and heritage characteristics of its locality.

e) To ensure the visual impact of development is minimised and integrated into the streetscape.

Controls

1. A minimum of one tree is to be provided within the front setback area of every residential dwelling. This may include existing trees that are to be retained within the front setback area. Newly planted trees are to have a minimum pot size of five litres.
2. Trees planted on the northern side of private open space and habitable rooms are to be deciduous.
3. Planting of vegetation at the front of higher density development must consider the need for passive surveillance. Excessively dense vegetation that creates a visual barrier must be avoided.
4. Any tree with a mature height over 8 m should be planted a minimum distance of 3 m from the building or utility services.
5. A landscape plan must be lodged with all Das, and is to provide the following details
    - The location of any existing trees on the property, specifying those to be retained and those to be removed.
    - The location of any trees on adjoining properties that are likely to be damaged as a result of excavations of other site works.

- The position of each shrub and tree species proposed to be planted. Each plant is to

Fencing

Objectives

b) To provide a clear transition between public and private areas.

c) To provide a visual element within the streetscape.

d) To ensure fencing enhances the streetscape.

Controls

1. Wall finishes must have low reflectivity.
2. Where noise insulation is required, consider the installation of double-glazing or other noise attenuation measures at the front of the building rather than construction of a high solid form fence.

Primary Frontage

1. The maximum height of a front fence is 1.2m.
2. Fences should not prevent surveillance by the dwelling's occupants of the street or communal areas.
3. The front fence must be 30% transparent.
4. Front fences shall be constructed in masonry, timber, metal picket fencing and/or vegetation and must be compatible with the proposed design of the dwelling.
5. The maximum height of the front fence is 1.2m.

Secondary Frontage

1. Side fences and walls must be a maximum of 1.8m in height, and constructed of masonry, timber and/or landscaped (see Figure 13).
2. For side walls or fences along the secondary frontage, a maximum height of 1.2m is required for the first 9m measured from the front boundary, the remaining fence / wall may then be raised to a maximum of 1.8m (see Figure 12). The secondary setback is the longest length boundary.
3. Side fencing must not be constructed of sheet metal.

Boundary Fences

1. The maximum height of side boundary fencing within the setback to the street is 1.2m.
2. Boundary fences shall be lapped and capped timber or metal sheeting.

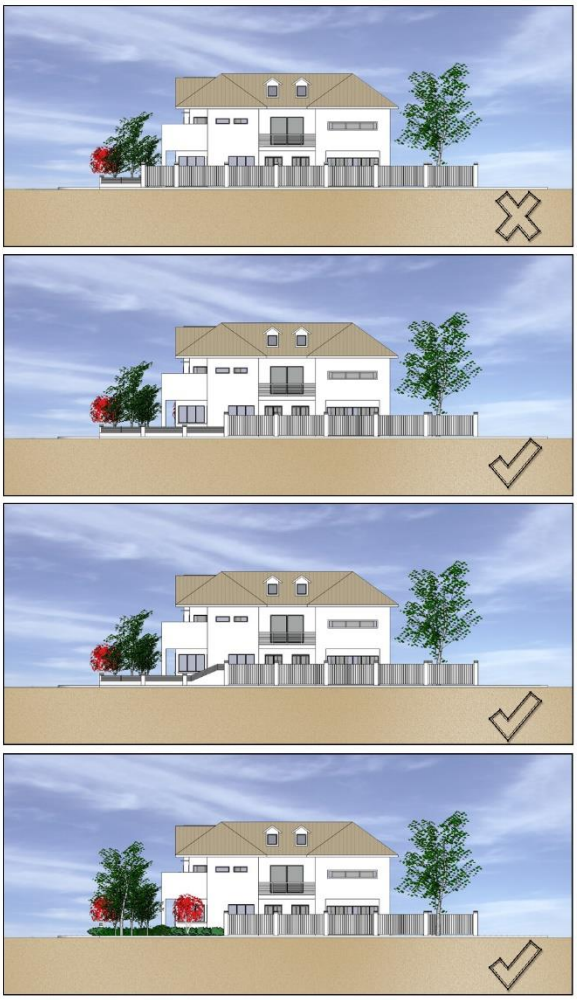


Figure 13 Fence types

3.7 Car Parking and Access

Car Parking

Background

The provision of on-site parking is required for all residential allotments. On-site parking is to be provided in a way that does not compromise the appearance of dwellings from the street.

Objectives

a) To provide sufficient and convenient parking for residents and visitors.

b) To ensure that parked vehicles do not create traffic or pedestrian hazards, and do not degrade landscaped areas such as grass verges.

c) To reduce the visual impact of garages, carports and parking areas on the streetscape and improve dwelling presentation.

Controls

1. Two car parking spaces shall be provided for each dwelling.
2. At least one car parking must be provided behind the front setback.
3. A car parking space is to have a minimum dimension of 2.5 x 5.5m.
4. A single garage is to be a minimum of 3m wide internally and unobstructed.

5. All parking spaces for adaptable housing units shall comply with *AS 2890:1* for disabled car parking.

Internal Driveways

Background

Where private driveways are used they are designed to minimise their impact on the streetscape and on the environment.

Objectives

a) To provide safe and convenient access to garages, carports and parking areas.

b) To create a pleasant, low maintenance place.

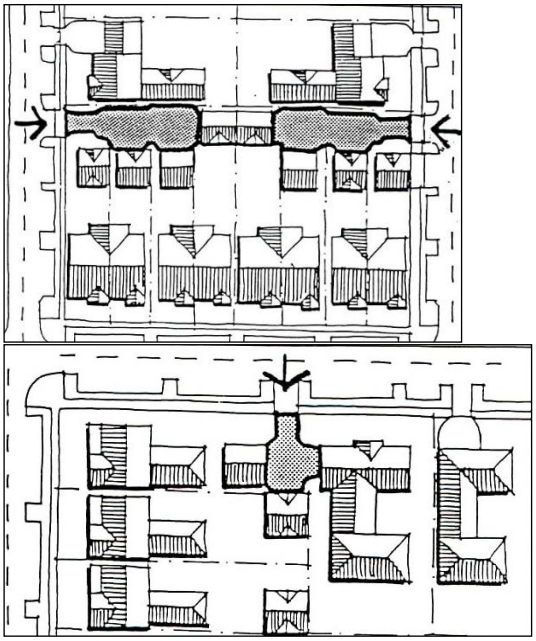
c) To ensure clearly defined public and private spaces, such that driveways are for the sole use of residents.

d) To ensure casual surveillance of private driveways from dwellings and from the street

e) To minimise conflict between pedestrians and vehicles at the junction of driveways and footpaths.

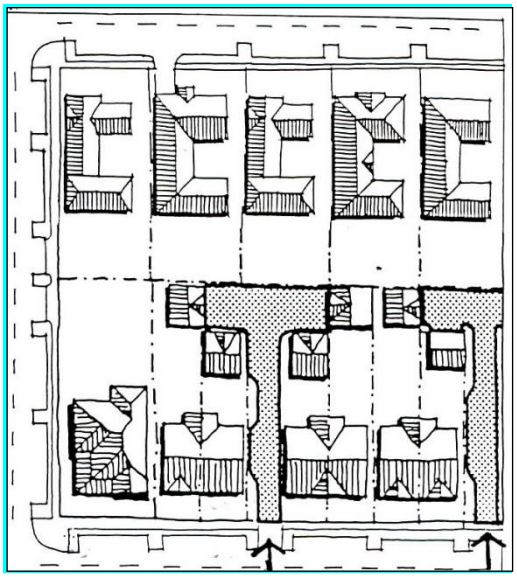
Controls

1. The driveway crossing the verge between the property boundary and the kerb is to have a maximum width of 5.5m.
2. Driveways are to have soft landscaped areas on either side, suitable for infiltration.
3. Private driveways are to have the smallest configuration possible to serve the required parking facilities and vehicle turning movements.
4. Private driveways are to be constructed as one of three general types, depending on block geometry and garages to be accessed. (See Figure 13).
5. Higher density development fronting to collector streets is to have rear access through laneways, car courts and the like. Developers are to identify opportunities for rear lanes parallel to collector streets.
6. Corner lots on collector streets are to have access from the street perpendicular to the collector street.
7. At the street entry, the driveway is to be landscaped to have low visual impact and be clearly distinguishable as private access only.
8. Landscaping at driveways should not block lines of sight for pedestrians, cyclists and vehicles.



TYPE 1 – CLOSE
- **Preferable**

Figure 14 Private Driveways



TYPE 2 – T-SHAPED
- **Driveway should be from frontage road of the narrow lot dwellings**
- **Use where block geometry or available road frontage precludes "close".**

Figure 15 Private Driveway Options

3.8 Amenity and Environmental Impact

Overshadowing

Objective

To minimise overshadowing of neighbouring dwellings and their private open space.

Controls

Adjoining properties must receive a minimum of three hours of sunlight between 9am and 5pm on 21 June to at least:

- One living room, rumpus room or the like.
- 50% of the private open space.

Privacy

Objective

To site and design buildings in a manner which protects the visual privacy of adjoining dwellings and their private open space.

Controls

1. Habitable room windows facing side boundaries are to be offset by at least 1m from any habitable room windows in an adjoining dwelling (See Figure 16).
2. Habitable room windows on the first floor that face the side boundary are to avoid unreasonable overlooking by having a minimum sill height of 1.5m, except where they face a street or public open space (See Figure 16).
3. Building siting, window location, balconies and fencing must consider the importance of the privacy of on site and adjoining buildings and private open spaces.
4. Landscaping should be used where possible to increase visual privacy between dwellings and adjoining properties.

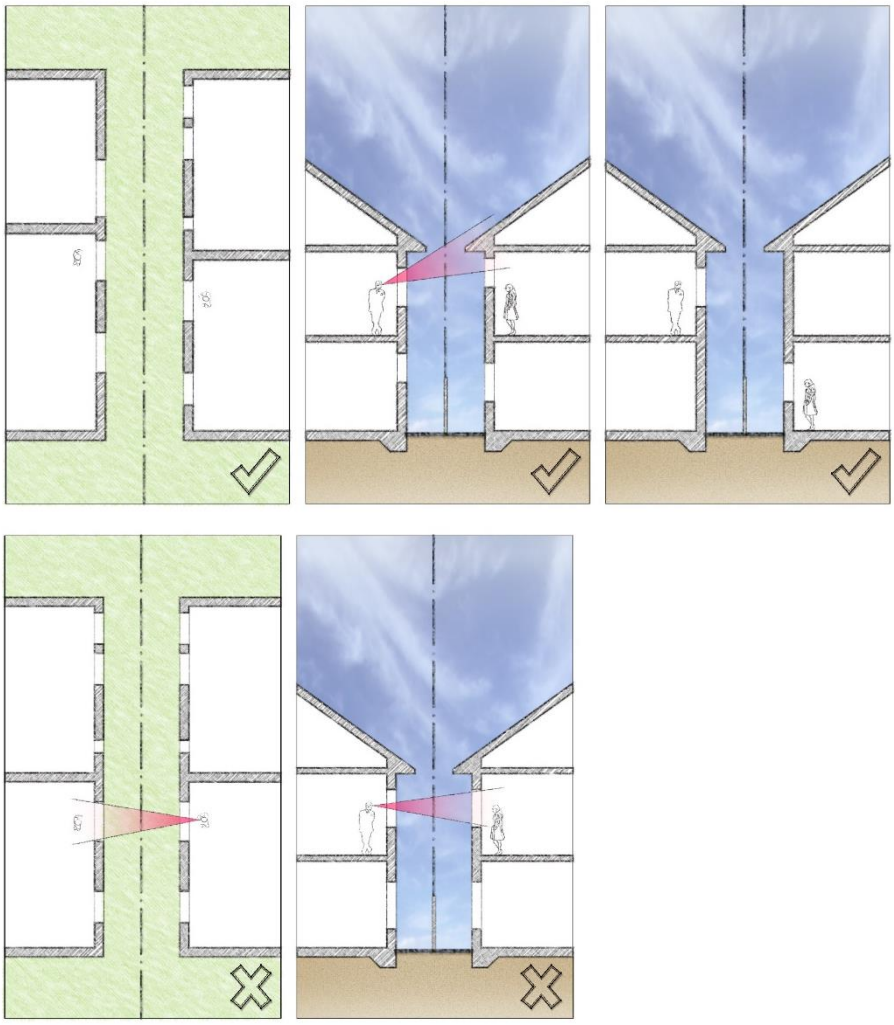


Figure 16 Privacy and Amenity

Acoustic Privacy

Objective

To ensure appropriate noise and vibration attention measures are incorporated into residential development.

Controls

1. Noise attenuation measures should be incorporated into building design to ensure acoustic privacy between on-site and adjoining buildings.
2. Developments in areas adversely impacted upon by traffic related noises must incorporate the appropriate noise and vibration mitigation measures into the design in terms of the site layout, building materials and design, orientation of the buildings and location of sleeping and recreation areas.
3. Where party walls are provided they must be carried to the underside of the roof and be constructed in accordance with Part F5 of the *Building Code of Australia*.
4. The proposed buildings must comply with the Environment Protection Authority criteria and the current relevant Australian Standards for noise and vibration and quality assurance.

3.9 Site Services

Objectives

a) To ensure that the required services are provided.

b) To ensure that the services provided are easily protected or maintained.

Controls

Letterboxes

1. Letterboxes shall to be provided for each dwelling on site, easily accessible from the street, able to be securely locked and provided in accordance with Australia Post's requirements.
2. Freestanding letterbox structures should be designed and constructed of materials that relate to the main building.
3. Residential numbering should be attached to the letterbox so that it is clearly visible from the street frontage. Numbers should be 75mm in height, reflective and in contrast to the backing material.

Waste management

1. Waste disposal facilities shall be provided for development involving residential flat buildings or shop top housing. These shall be located adjacent to the driveway entrance to the site or at the rear if a rear lane is provided.
2. Any structure involving waste disposal facilities shall be located as follows:

- Setback m from the front boundary to the street.
- Landscaped between the structure and the front boundary and adjoining areas to minimise the impact on the streetscape.
- Not be located adjacent to an adjoining residential property.
- Details of the design of waste disposal facilities are shown in Part 1.

Frontage works and damage to Council infrastructure

1. Where a footpath, road shoulder or new or enlarged access driveway is required to be provided this shall be provided at no cost to Council.
2. Council must be notified of any works that may threaten Council assets. Council must give approval for any works involving Council infrastructure.
3. Where there are no existing street trees in front of the site and contributions have not been collected for street tree planting it may be a condition of consent that street trees be provided in the footpath area immediately in front of the site.

Electricity Sub Station

In some cases it may be necessary to provide an electricity sub station at the front of the development adjacent to the street frontage. This will involve dedication of the area as a public road to allow access by the electricity provider. The front boundary treatment used elsewhere on the street frontage

3.10 Secondary Dwellings (Granny Flats)

Objective

To provide housing choice within a standard residential lot for the use of a separate dwelling within the existing title.

Controls

1. A Secondary dwelling can be a maximum of one storey high, unless the granny flat is above the garage facing a rear laneway, where the Secondary dwelling must be one storey high above the garage.
2. A Secondary dwelling should be attached to the main dwelling, as provided by Part 2 of the DCP. However, Council may consider applications for detached granny flats on a merit base.
3. A Secondary dwelling should compliment the main dwelling design by using the same style of construction and a similar colour.

Note: Secondary dwellings are included in the overall floor space ratio of a property, and only one Secondary dwelling is permitted per lot.

Liverpool city council
creating our future together

Council Administration Centre Level 2, 33 Moore Street, Liverpool NSW 2170

Postal Address Locked Bag 7064, Liverpool BC NSW 1871

Customer Contact Centre 1300 36 2170

Fax 02 9821 9333

NRS (National Relay Service) 133 677

Email lcc@liverpool.nsw.gov.au

Website www.liverpool.nsw.gov.au

Liverpool Development Control Plan 2008
Part 2.11
Land Subdivision and Development in Edmondson Park

~~May 2020~~

May 2024

Part 2.11 must be read in conjunction with Part 1

LIVERPOOL CITY COUNCIL

LIVERPOOL THE GREAT SOUTH WEST

Liverpool Development Control Plan 2008

Part 2.11 Edmondson Park

Table of Contents

1. Preliminary 7

1.1 Indicative Layout 9
1.2 Development within Sub Precincts 10
1.3 Hierarchy of Centres 13
1.4 Character Area Statements 13
1.5 Public Transport 17

2. Controls for the Public Domain 19

2.1 Street Network and Access 19
2.2 Pedestrian and Cycleway Network 40
2.3 Streetscape and Street Trees 43
2.4 Open Space 44
2.5 Environmental Management 49
2.6 Water Cycle Management 52
2.7 Contamination 55

3. Controls for Residential Development in Urban areas (28 Dwellings/Hectare) and Residential Flat Buildings 56

3.1 Preliminary 56
3.2 Site Planning 56
3.3 Setbacks 58
3.4 Landscaped Area and Private Open Space 61
3.5 Building Design and Streetscape 62
3.6 Car Parking and Access 75
3.7 Amenity and Environmental Impact 77
3.8 Site Services 79
3.9 Residential Choice and Mix for Apartment Buildings 80
3.10 Studio dwellings 81

4. Controls for Residential Development Urban Transition areas (17&21 Dwellings/Hectare) 83

4.1 Preliminary 83
4.2 Site Planning 83
4.3 Setbacks 85
4.4 Landscaped Area and Private Open Space 89
4.5 Cut and Fill, Building Design and Streetscape 90
4.6 Car Parking and Access 98
4.7 Landscaping and Fencing 100
4.8 Amenity and Environmental Impact 103
4.9 Site Services 104
4.10 Studio dwellings 105

5. Controls for Residential Development in Suburban areas (14 Dwellings/Hectare) 107

5.1 Preliminary 107
5.2 Site Planning 107
5.3 Setbacks 108

5.4 Landscaped Area and Private Open Space 110
5.5 Cut and Fill, Building Design, Streetscape and Layout 112
5.6 Car Parking and Access 117
5.7 Landscaping and Fencing 118
5.8 Amenity and Environmental Impact 120
5.9 Site Services 123
5.10 Studio Dwellings 123

6. Controls on Land in the R3 Zone "The Village Centres" 126

6.1 Preliminary 126
6.2 Subdivision, Frontage and Allotment Size 126
6.3 Site Planning 127
6.4 Setbacks 127
6.5 Landscaped Areas and Pedestrian Areas 128
6.6 Building Form, Streetscape and Layout 128
6.7 Landscaping and Fencing 136
6.8 Car Parking and Access 136
6.9 Amenity and Environmental Impact 137
6.10 Site Services 138

7. Controls for Land in the ~~B6 Zone – Enterprise Corridor~~ E3 – Productivity Support Zone (Area A only) 139

7.1 Site Planning 139
7.2 Setbacks 139
7.3 Landscaped Areas and Pedestrian Areas 140
7.4 Building Form, Streetscape and Layout 140
7.5 Landscaping and Fencing 143
7.6 Car Parking and Access 145
7.7 Amenity and Environmental Impact 145
7.8 Site Services 146

8. Controls for Certain Sites 147

8.1 North of Maxwell's Creek urban park 147
8.2 Lots backing onto Camden Valley Way and the Rail Corridor 148

Table of Figures

Figure 1: Land to which this part applies 7
Figure 2: Indicative Edmondson Park Layout Plan 10
Figure 3: Sub-precincts 12
Figure 4: Artistic view of Village Centre 14
Figure 5: Locations of Character Areas 16
Figure 6: Possible Public Transport Routes..... 18
Figure 7: Fixed Roads 20
Figure 8: Street Types..... 24
Figure 9: Camden Valley Way..... 25
Figure 10: Camden Valley Way Intersection and Service Road Treatment..... 26
Figure 11: Bus Priority Corridor 27
Figure 12: Buchan Ave/Rynan Ave..... 28
Figure 13: Collector Street..... 29
Figure 14: Park Street 30
Figure 15: Local Street 31
Figure 16: Residential Laneway 32
Figure 17: Former Asset Protection Road 33
Figure 18: Pedestrian Access Way..... 34
Figure 19: Artistic views of street types 35
Figure 20: Communal Driveways..... 37
Figure 21: Garage Location and Access..... 39
Figure 22: Bicycle Network..... 42
Figure 23: Tree Guard and Planting Details..... 44
Figure 24: Open Space Network 46
Figure 25: Areas which may be filled with Council Consent..... 54
Figure 26: Contamination 55
Figure 27: Example of a Site Analysis Plan 57
Figure 28: Front Setback Line 59
Figure 29: Zero Lot Lines 60
Figure 30: Examples of variable attached building design 66
Figure 31: Cross Ventilation 71
Figure 32: Car parking at ground level..... 76
Figure 33: Screening and lower level balconies..... 78
Figure 34: Example of a Site Analysis Plan 84
Figure 35: Small lot housing corner lot articulation 85
Figure 36: Front Setback..... 86
Figure 37: Lot orientation principles..... 87
Figure 38: Zero Lot Line 88
Figure 39: An example of Cut and Fill 91
Figure 40: Garage and Driveway design 99
Figure 41: Fence treatments on secondary frontage 102
Figure 42: Example of a Site Analysis Plan 108
Figure 43: Front Setback.....109
Figure 44: An example of Cut and Fill 113
Figure 45: Example of Building Appearance.....116
Figure 46: Fence treatments on secondary frontage 120
Figure 47: Privacy and Amenity Privacy 122
Figure 48: Landscaping around a Local Centre 144
Figure 49: Design guidelines for development to the n'th of Maxwell's Creek Park 148

List of Tables

Table 1: Setbacks within the 28 dw / ha area 58
Table 2: Side and Rear setbacks within the 28 dw / ha area 58
Table 3: Private open space in the 28 dw / ha area for all other dwellings..... 62
Table 4: Setbacks within the 17 dw/ha area 85
Table 5: Side and rear setbacks within the 17 & 21 dw/ha areas..... 86
Table 6: Private open space in the 17 & 21 dw/ha area..... 90
Table 7: Setbacks within the 14 dw/ha area 109
Table 8: Side and rear setbacks within the 14 dw/ha area.....109
Table 9: Private open space in the 14 dw / ha area.....111

1. Preliminary

Applies to

1. Part 2.11 applies to the land, shown in Figure **1**.
2. Part 1 also applies to the land shown in Figure **1**.
3. Part 3.8 also applies for non-residential development on the land.
4. Parts 3.1 – 3.7 do not apply to the land.

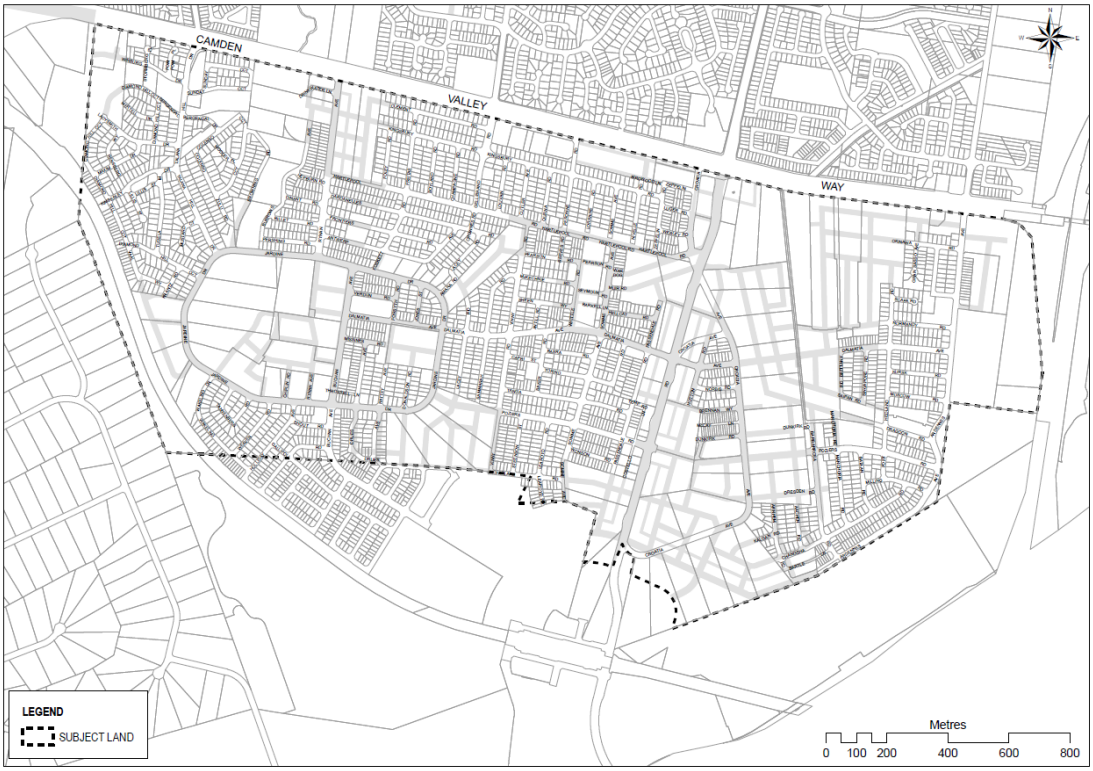


Figure 1: Land to which this part applies

Background

1. Edmondson Park has been master planned to achieve current public policy objectives in terms of meeting the future housing needs for the changing community, reducing the environmental impact and enabling greater social interaction. The proposed development will be characterised by a greater mix of housing types, higher residential densities, vibrant communities, active streets and environmentally responsible development.

2. The vision of Edmondson Park is to create a primarily residential neighbourhood located and focused around neighbourhood centres or the Town Centre. The neighbourhood centres will provide a central node and will accommodate a mix of convenience retail, limited commercial uses and residential development. The Town Centre will be located centrally within the release area, supported by the Edmondson Park train station, part of the South West Rail Link. The Town Centre will provide a full range of retail, commercial and high density residential uses and development will be orientated around a main street. This vibrant development is to be set in a context of high value natural habitat, which is both a visual backdrop and a usable open space amenity to the residents.

3. A primary precursor to success of the development, as an attractive and vibrant place to live, will be the controls of the built form and the consideration given to safety and security, the quality of the public open space and the provision of public transport services, both bus and rail.

4. The need to respond to the potential for integrated uses, higher residential densities and higher public transport use at this location and at this time is a critical responsibility when considered in the context of:

   - Limited land resources;
   - Minimisation of the development footprint; and
   - The environmental damage caused to water systems, ecological communities and decreasing air quality by current suburban development.

5. The specific qualities of Edmondson Park provide the opportunity to create an environment that addresses future community needs while being sustainable and urban.

Objectives

a) To facilitate urban design that responds to the physical, cultural and urban heritage of the area;

b) To facilitate urban development that meets environmental sustainability objectives;

c) To ensure all development achieves a high standard of urban and architectural design quality;

d) To ensure housing density targets are met through the provision of a range of housing types that offer greater diversity and affordability;

e) To create walkable neighbourhoods, with good access to public transport;

f) To ensure vehicular, pedestrian and cycle ways link efficiently within and between all land uses;

g) To accommodate access for all people throughout Edmondson Park;

h) To maximise opportunities for local employment and business in appropriate locations;

i) To create a compact, vibrant and successful town and village centres;

j) To provide cultural, recreational and social infrastructure that is flexible, adaptable and accessible;

k) To protect and enhance riparian corridors, significant trees and vegetation;

l) To ensure the timely delivery of critical infrastructure and efficient use of land and existing infrastructure;

m) To deliver quality places of learning to service the future educational demands of the precinct; and

n) To provide opportunities to reduce water consumption and manage stormwater runoff.

1.1 Indicative Layout

The Indicative Layout Plan (ILP) at Figure 2 illustrates the broad level development outcomes for Edmondson Park. It outlines the development footprint, land uses, density ranges, open space and riparian corridors, heritage areas, major transport linkages and location of community facilities and schools.

Objectives

a) To ensure that development of the precinct is undertaken in a co-ordinated manner consistent with the South West Structure Plan and the DCP.

Controls

1. All development is to be undertaken generally in accordance with the Indicative Layout Plan at Figure 2 subject to compliance with the objectives and development controls set out in this Part;
2. Where variation from the ILP is proposed, the applicant is to demonstrate that the proposed development is consistent with the Vision and Development Objectives for the precinct set out within this Part.

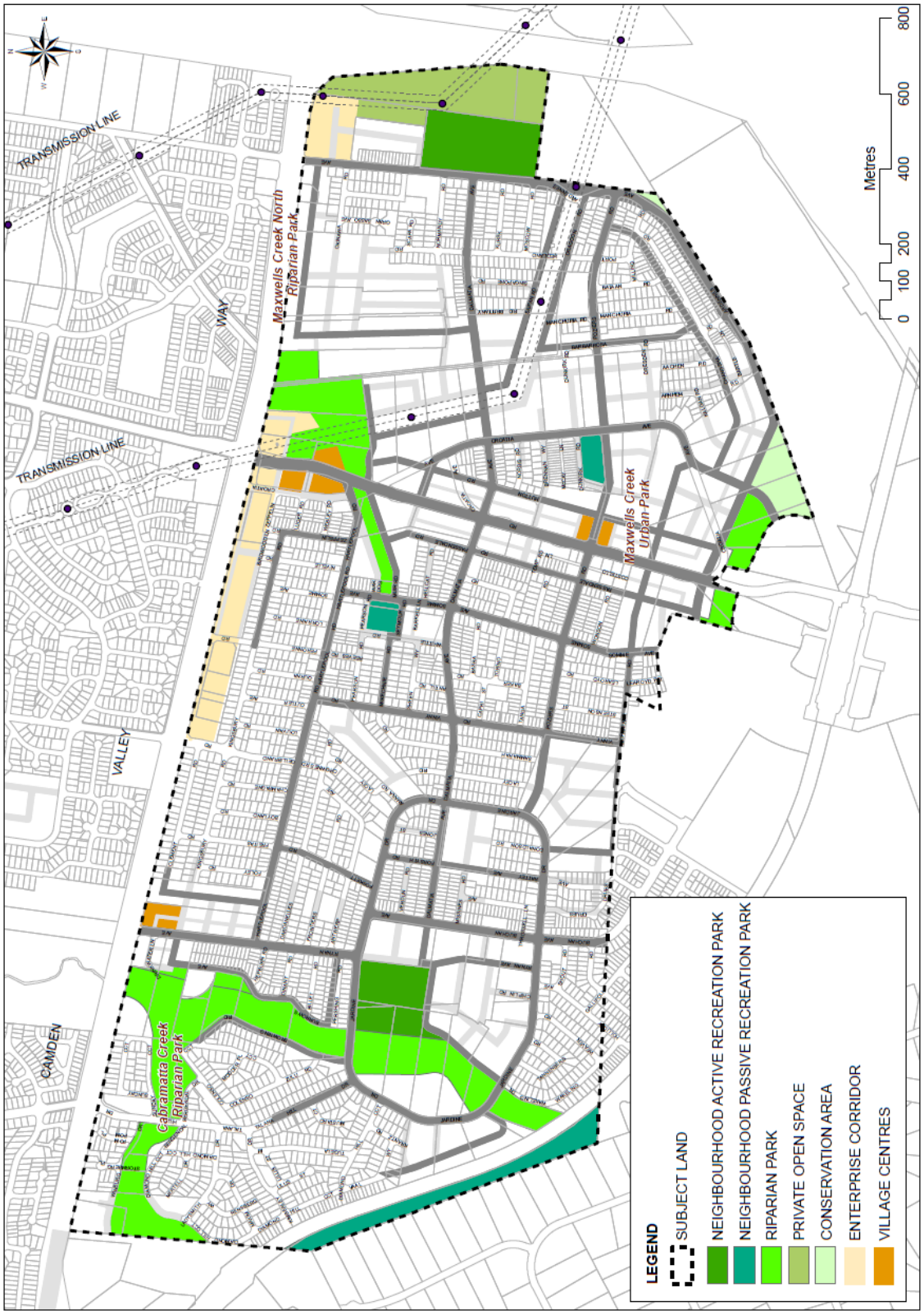


Figure 2: Indicative Edmondson Park Layout Plan

1.2 Development within Sub Precincts

Sub-Precincts are defined by the main fixed streets as show in Figure 3**.** While the boundary streets to the sub-precincts are fixed, there is flexibility to make layout

changes to the internal streets except those identified as 'Fixed Roads' in Figure 7, subject to meeting the Objectives and Controls below.

Objectives

a) To allow departure from the Indicative Layout Plan should a demonstrated development and community benefit be achieved; and

b) To ensure that access, drainage and servicing is appropriately provided

Controls

An applicant may depart from the subdivision layout within a sub-precinct provided that it is demonstrated that:

1. The block layout and subdivision objectives and controls outlined in Figure 3 are met.
2. The level of access to fixed roads is retained.
3. The provision of drainage and service infrastructure is retained.
4. There is no adverse impact on adjoining sub-precincts.

Figure 3 also shows an indicative staging of development based on the location of existing infrastructure. Development can proceed outside of this indicative staging should access to services, drainage & roads be resolved to the satisfaction of Council.

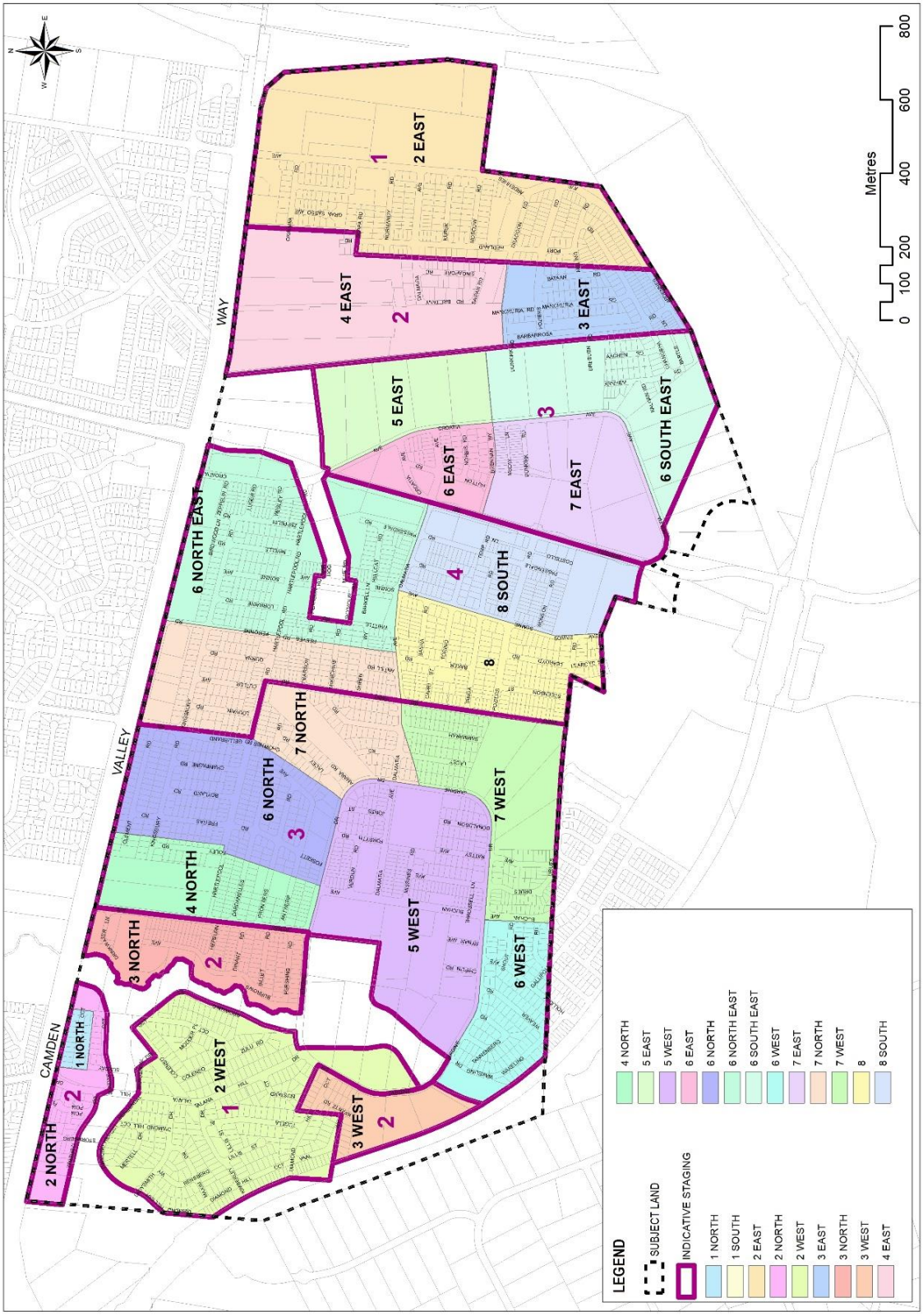


Figure 3: Sub-precincts

1.3 Hierarchy of Centres

Objectives

a) To ensure an appropriate supply, distribution, and mix of retail, commercial and employment floor space across the precinct.

b) To ensure that the retail floor space within Edmondson Park does not undermine the potential of existing and proposed centres within the region.

c) To create a compact, vibrant and successful town centre and village centres.

d) To encourage the early investment and delivery of employment generating development and retail uses to serve the population.

Controls

Development is to be consistent with the characteristics detailed as follows.

Edmondson Park Town Centre

1. Development in the Edmondson Park Town Centre is facilitated by the SEPP (State Significant Precincts) 2005 and is not subject to this Part.

Village Centres

1. Village Centres (up to 1000sqm of retail space) are not intended to act competitively with the proposed Edmondson Park Precinct town centre. Rather they provide a convenient alternative for residents who would otherwise have to invest more time and money to visit a larger centre.
2. The following criteria have been used to determine the location of the village centres:
   - 750 - 1,000 housing lots within a 500m catchment of the village centre.
   - The proximity of key destinations such as parks, water bodies and schools.
3. It is envisaged that Edmondson Park will have 3 mixed-use village centres that respond to various qualities of the site, such as environmental amenities or access routes. The character envisaged for the village centres are described in Section 6.

1.4 Character Area Statements

As the Edmondson Park Release Area will create a new town centre with large areas of surrounding residential neighbourhoods and village centres. It is important that there is variety, diversity and choice in living, working and recreational environments. There is more to development than land use and density. It is important that the built form, layout, style and public domain reinforce the desired character for each area, and gives an identity and sense of place to different areas within Edmondson Park. The character areas are:

- The Town Centre,
- Village Centres,
- Enterprise Corridor,
- Urban,
- Urban Transition,
- Suburban, and
- Residential Large Lot.

The character areas are loosely tied to the minimum dwelling density maps (LLEP 2008), refer to Figure 5 for the locations of Character Areas.

Town Centre

1. The Edmondson Park Town Centre is situated on land in Edmondson Park South and is not subject to this Part. For development controls relating to the Edmondson Park Town Centre refer to the Edmondson Park South DCP 2012.

Village Centres (Zone R3)

1. The Village Centres will form a **node** within a walkable and cycling catchment of the majority of new and existing residents. The centres will provide for daily conveniences within a pedestrian friendly setting and have a maximum of 1,000sqm of retail space. The centres are located at the confluence of community facilitates to enhance the village experience and life of the centre. The Village Centre will contain small businesses at ground level that encourage a mix of small scale convenience retail uses with shop-top housing above. Medium density attached housing and apartments surrounding the village centres will reinforce the urban character.
2. The **urban form** of the villages will be compact with narrow shopfronts. Architecturally, the buildings will be urban in character reflecting the character of traditional village centres. Convenience retail uses are to front directly onto the footpath. It is envisaged that there will be a number of small shops of less than 80sqm gross floor area each. Total retail/commercial gross floor space will be 1,000sqm max. per village centre.
3. The Rynan Avenue village centre is characterised by 2 - 3 storey attached buildings. The village centre at the intersection of Camden Valley Way and the Bus Priority Corridor (Bernera Road) is characterised by 3 - 4 storey attached buildings, while the village centre at the intersection of the Bus Priority Corridor and Poziers Road is characterised by 4 - 6 storey attached buildings with a large component of shop-top housing.
4. The **public domain** of the centres is to be characterised by formal and well framed streetscapes containing formally and regularly spaced, 6 – 8m apart, large deciduous trees in hard verges and tree wells, street furniture and wide paved footpaths capable of holding outdoor café seating. Ease of pedestrian and cyclist movement and access is to be prioritised over vehicle movement, and the streetscape is to be designed to incorporate subtle urban design led traffic calming elements.

Figure 4: Artistic view of Village Centre – Neighbourhood park and community facilities

~~Enterprise Corridor (Zone B6)~~ E3 – Productivity Support Zone (Area A only)

1. The Enterprise Corridor character area is located at the northern end of the locality along Camden Valley Way and at the northern end of Ardennes Avenue. It will service passing trade travelling along Camden Valley Way. A service road will run

parallel to Camden Valley Way with 45 degree parking to provide access to all properties and businesses fronting Camden Valley Way. Rear lane access is to be provided to service these businesses. The area is characterised by up to 2 storey retail and commercial premises built to the street alignment. To maximise active frontages and to minimise the scale of individual buildings, each retail unit will have a maximum street frontage of 30m and a maximum gross floor area of 1,000 sqm.

Urban (Zone R1, 28dw/Ha)

1. The Urban Character Area is a **dense, urban, but predominately residential** zone that provides a transition between the Town Centre and the medium to lower density residential areas. The character area helps define the main avenue, the Bus Priority Corridor, that leads into the Town Centre and helps frame the Urban Parkland and Maxwell's Creek Urban Park.
2. Housing types that reinforce the urban character and need for well-located higher densities predominate including apartment buildings and small lot/attached housing. A minimum net residential density of **28 dwellings per hectare is required**. Building setbacks are relatively shallow, and there is a close interaction of buildings to the surrounding streets.
3. Taller buildings are encouraged to frame the Bus Priority Corridor and the Maxwells Creek Urban Park. Buildings are predominantly between 3 - 6 storeys and massed towards the public realm.
4. The **public streetscape** is formal in arrangement consisting of wide footpaths, large deciduous trees spaced evenly every 8m max., placed in a hard landscaped verge and forming a large street canopy. To minimise the visual and physical impact of vehicle access to properties on the public streetscape, including footpath crossovers and garages, vehicle access and servicing is via side/secondary streets or rear lanes.

Urban Transition (Zone R1, 17 & 21dw/Ha)

1. The Urban Transition Character Area is a predominantly **residential zone** that provides a transition between the more urban higher density and the more suburban lower density character areas. Urban Transition reinforces the legibility and structure of Edmondson Park through the framing of the secondary routes, village centres and parkland.
2. It comprises a range of housing to cater for varying household needs including low rise apartments, attached, semi-detached and detached housing. A minimum net residential density of **17 or 21 dwellings per hectare** is required. Lots for detached residential dwellings are typically between 250 and 400sqm.
3. Buildings are predominantly 2 storeys, with potential for 3 storeys along parks, adjacent to 'Urban' Character Area, and to reinforce corners. Buildings will contain medium setbacks and good landscaping.
4. The **public streetscape** is formal in arrangement and transitional in character, containing large trees in soft verges spaced 8m apart.

Suburban (Zone R1, 14dw/Ha)

1. This predominantly **low density residential** area is characterised by 1 - 2 storey detached and semi-detached homes in a rich landscaped setting. A minimum net residential density of **14 dwellings per hectare** is required. Housing typically features verandahs fronting onto the street, overhanging eaves. Lots are typically between 400 and 700sqm.
2. The public and private domain features informal native and non-native planting that requires little watering, and attracts native flora and fauna. Verges in the public streetscape are soft landscaped, containing low level ground cover and multiple tree species spaced 8 – 12m apart.

Residential Large Lot

1. Residential Large Lot zoned land is situated on land in Edmondson Park South and is not subject to this Part. For development controls relating to the Residential Large Lot zoned land refer to the Edmondson Park South DCP 2012.

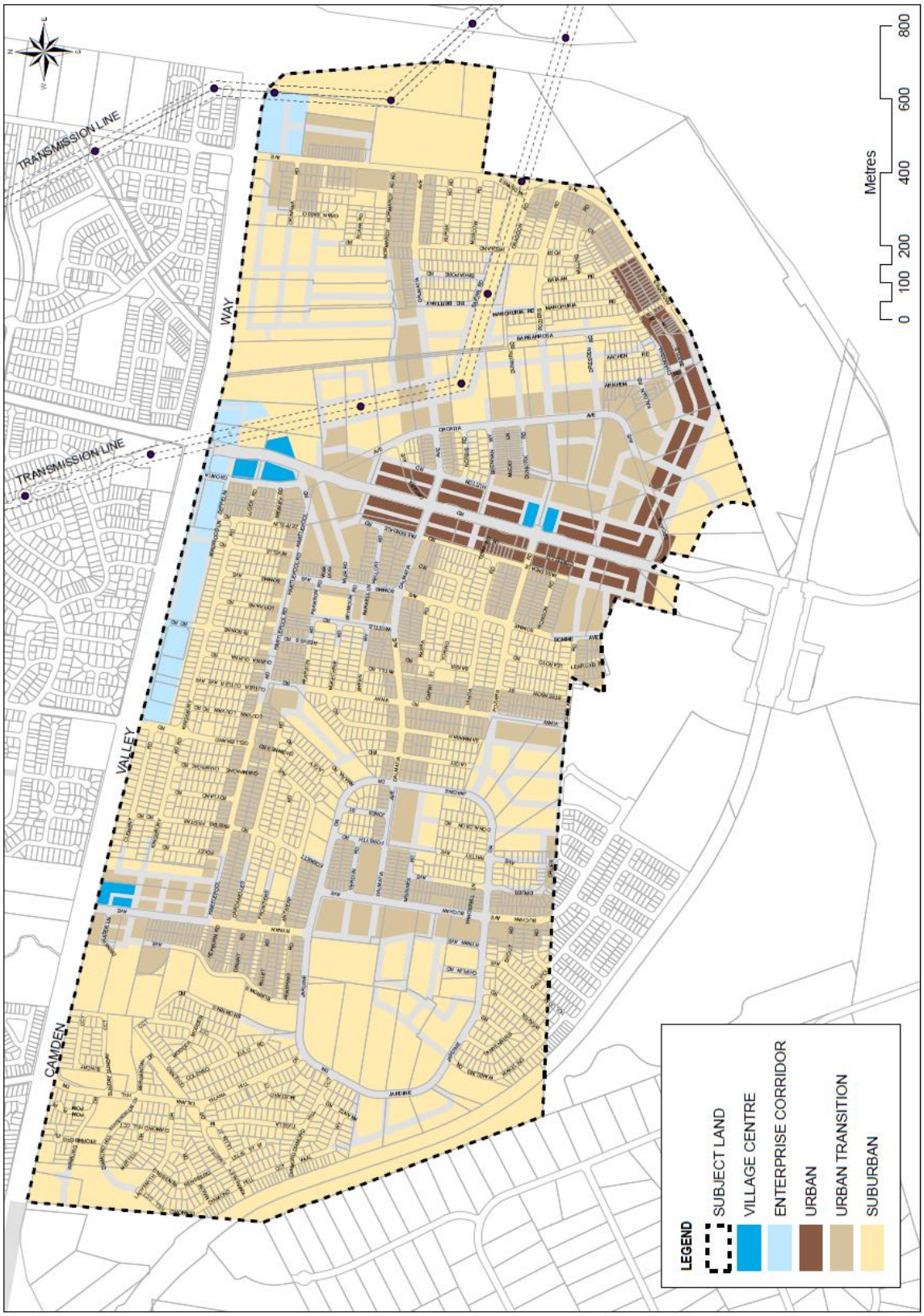


Figure 5: Locations of Character Areas

1.5 Public Transport

The construction of the train station and the bus priority corridor will provide an opportunity to integrate public transport with residential areas and the town centre in order to promote public transport usage.

Placing bus stops and providing a frequent bus service where there is a concentration of retail, commercial activity, medium density residential development, schools and community centres will encourage people to use the public transport system.

Increased availability of public transport reduces car dependency. A convenient and safe pedestrian network and the provision of attractive facilities are central to encouraging public transport use.

Objectives

a) To provide and promote public transport that is accessible to all residents and village or town centre users and visitors.

b) To locate public transport stops close to retail, offices, community facilities, schools, community facilities and areas of medium density residential development.

c) To ensure clear, safe pedestrian links to all public transport stops.

Controls

1. Optimal distances between bus stops outside the town centre will be determined in consultation with the relevant bus service provider (stops in the order of every 400m).
2. Ensure bus stops and mixed use activities are co-located to provide security and activity.
3. Provide two local feeder bus routes through the release area as indicated in Figure 6. The location of feeder bus stops will serve people's travel patterns and be located in consultation with the bus service provider.
4. Public transport is to be easily accessible and located close to focal points (i.e. parks, schools, village centres etc).
5. Bus shelters are to be located at every bus stop (except within the village centres where bus stops are incorporated into the built form of the buildings, by elements such as covered walkways and awnings).
6. All roads that are bus routes are to have a minimum carriageway width of 7m.

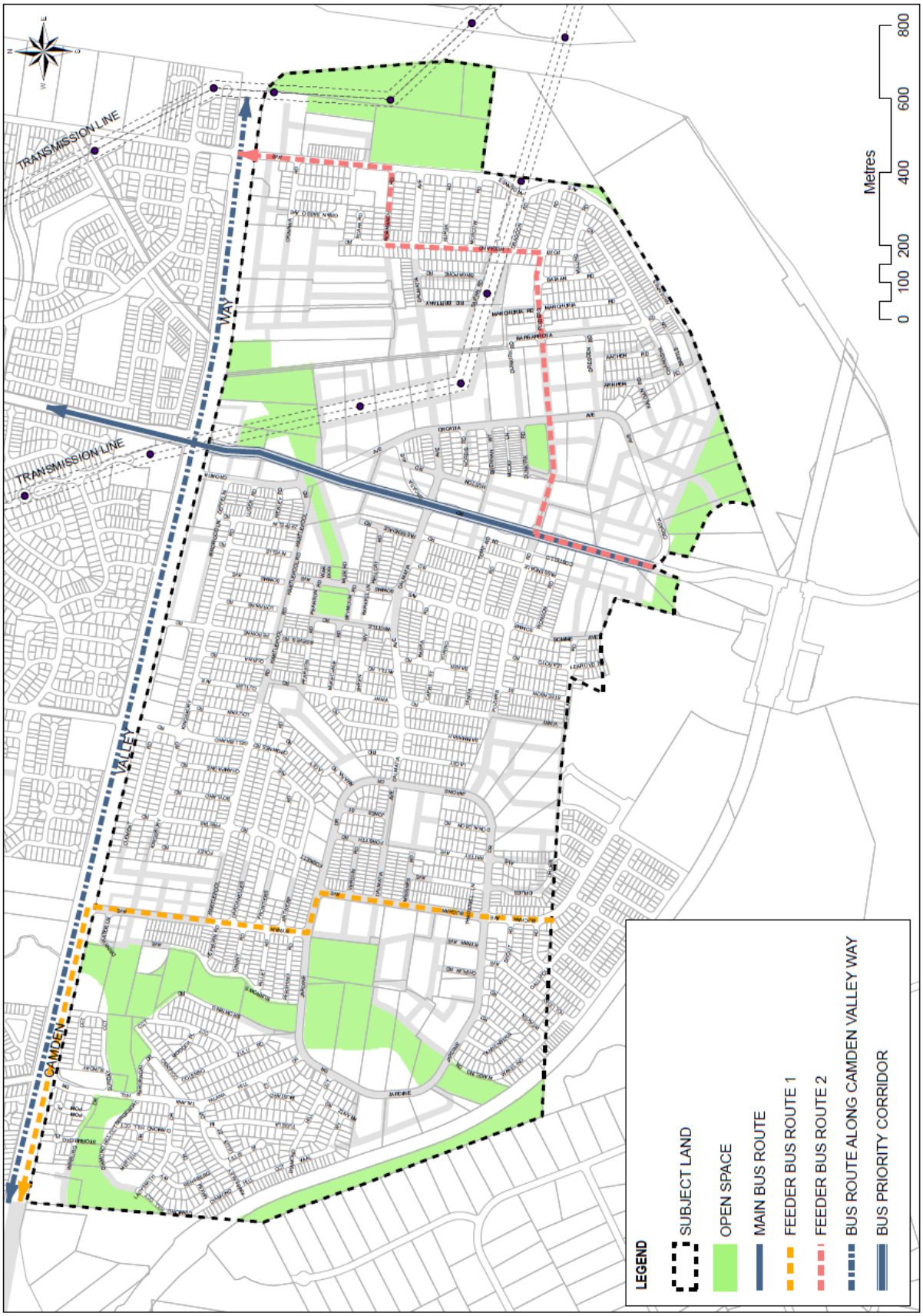


Figure 6: Possible Public Transport Routes

2. Controls for the Public Domain

The controls in this part relate to the subdivision of land. Controls on land within allotments created in this locality are located in Section 3 and 4 of this chapter.

The public domain is the part of the release area which is not privately owned and which is accessible to the public.

The design, management and safety of elements within the public domain such as public streets, parks and spaces, paving, street furniture, street trees, and gardens should be coordinated so that the character and image of the location is enhanced.

2.1 Street Network and Access

Objectives

a) To provide an attractive residential street environment.

b) To provide for the safe and efficient circulation of traffic.

c) To provide for the safe and efficient movement of pedestrians with particular regard to the provision of clear and safe access routes for people who have a disability.

d) To provide for efficient movement of local bus services and direct pedestrian access for all members of the community including those with disabilities.

e) To provide regional district and local transport access with clear vehicular, pedestrian and cycle connections to the surrounding areas.

f) To integrate the development with bus priority corridor and the South-West Rail Link.

g) To ensure safe efficient and direct access to retail and commercial areas.

h) To improve air quality by reducing local vehicular trips.

Controls

Regional Network Connections

1. Left and right in-out turns to and from Edmondson Park will be provided at the signalised intersections shown in Figure 7.
2. In addition to these intersections, a left in-out turn is permitted from Edmondson Park onto Camden Valley Way as indicated in Figure 7.

Local Street Network

1. With applicable Development Applications, a subdivision plan is to be submitted highlighting the street network. All plans must indicate street types and intersection treatments.
2. Council may require additional traffic calming measures to be incorporated into four-way intersections where traffic volumes necessitate controls in addition to signage. Measures may include roundabouts, carriageway narrowing or realignment, pedestrian islands or raised platforms. In circumstances where traffic volumes require traffic calming measures in excess to that provided in the section 94 plan, these are to be provided by the developer.
3. Subdivision plans are required to comply with the fixed roads identified in Figure 7.
4. The proposed local street networks detailed within Figure 8 are to provide a clear hierarchy for roads in the form of a modified grid road pattern.
5. Retain and incorporate existing streets into the road network where possible and practical.
6. Provide a grid-like street network pattern to facilitate walking and cycling and enable direct local vehicle trips within the neighbourhood. Cul-de-sacs will not be supported other than where alternative street patterns are not achievable.

7. Design safe pedestrian crossing points to the satisfaction of Council.
8. All intersections are to be designed in accordance with the RMS Austroads standards.
9. Street sections are to comply with Chapters 2.2 and 2.3 of this Part.
10. Streets planned to accommodate bus routes are to have a minimum carriageway width of 7m.

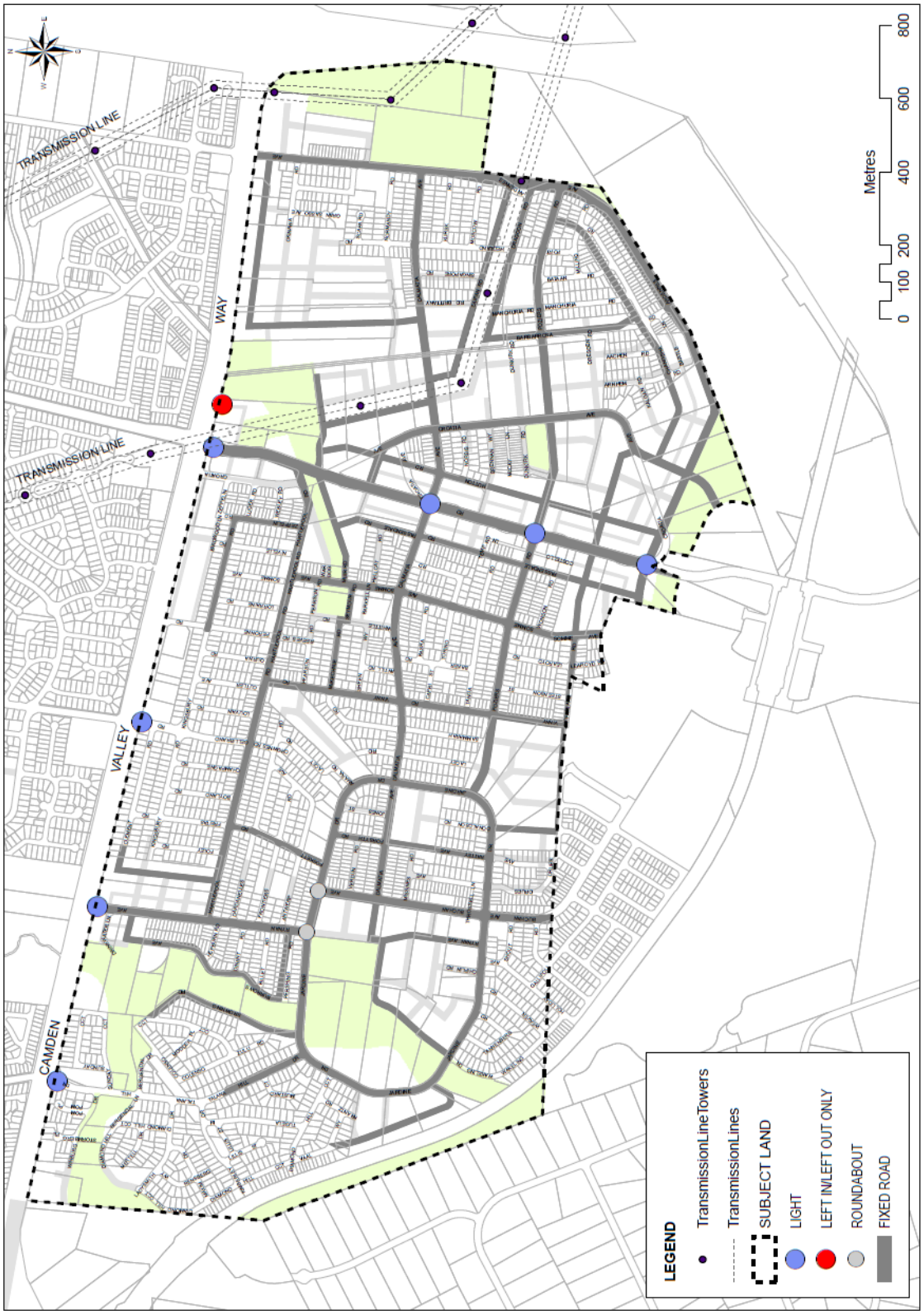


Figure 7: Fixed Roads

Street Types

Background

The proposed development comprises a network and hierarchy of streets that link the site with the surrounding urban fabric.

The location of the train line and the bus priority corridor connection to the Liverpool - Parramatta Bus Transit Way provides a good opportunity to increase the accessibility of the site through the public transport system.

A pedestrian and cycle network linking residential areas, villages and the town centre provides the opportunity to discourage the use of private vehicles and promotes exercise and enjoyment of the environment.

Objectives

a) To encourage a low-speed traffic environment.
b) To develop a comprehensive street network that links the site to the surrounding residential, commercial and employment areas.
c) To provide a comprehensive pedestrian and cycle network linking residential areas with parks, recreation areas, and town and village centres.
d) To create a high quality safe environment for walking and cycling.
e) To provide dignified and equitable disabled access to public places, streets, public / commercial buildings and residential areas.
f) To enhance the existing landscape character of Campbelltown Road.
g) To improve the landscape character of Camden Valley Way.
h) To provide highly accessible neighbourhoods with clear linkages to employment, retail and recreation areas both within and external to the suburb.
i) To provide access to bus and rail services from commercial, residential and neighbouring areas.

Controls

1. Two main streets are to link the town centre with Camden Valley Way.
2. The extension of Bernera Road generally along a realigned Croatia Avenue will provide the main road based public transport access. This road will have a bus priority corridor linking with the train station at an interchange in the south and the Liverpool – Parramatta Bus Transitway in the north; and
3. Buchan Avenue, a diagonal north-west spine road linking the western part of the site to the town centre.
4. Edmondson Park must provide:
   - A secondary system of north-south streets, linking Camden Valley Way with the villages and the town centre,
   - A secondary system of east-west streets, and
   - A former asset protection road following the northern boundary of the conservation area. Refer to Figure 8.
5. Curved roads are to be provided along the Maxwell's Creek Riparian Park.
6. All central road medians are to be low maintenance.
7. The street network is to retain a predominantly grid-like form, facilitating walking and cycling and enabling direct local vehicle trips within the neighbourhood.
8. All streets are to be legibly signposted with streets names and property numbers.
9. All intersections are to be designed in accordance with the RMS Austroads Road Design Guide.
10. There is to be no vehicular access to properties directly from Camden Valley Way or Campbelltown Road. Access to these lots will be from a service road or alternative road.
11. Footpaths are to be provided on both sides of all streets.

12. All Development Applications for subdivision are to detail the proposed kerb type.
13. Barrier kerbs are to be used:
    - On all streets within the ~~B6 Enterprise Corridor~~ E3 – Productivity Support Zone (Area A only) or R3 Medium Density Residential.
    - Along The Bus Propriety Corridor, Rynan Avenue, and the Park Avenues.
    - In all areas with a density of 28 dw / ha.
    - On any street frontage to open space.
    - On any street that is a bus route.
    - Along and adjacent to schools and community facilities.
    - At all intersections (between the potential driveway location on one frontage to the potential driveway location on the alternative street frontage). Driveways are not to be located within 6m of the tangent point of any intersection.
    - Barrier kerb shall be installed for the entire length of bus zones and for 10m on the approach of the bus stop.
14. Roll kerbs may be used in other locations to the above.

Street Hierarchy

The following types of streets are provided in Edmondson Park.

Camden Valley Way

Access to businesses along Camden Valley Way on the Edmondson Park side is via a service road located parallel to Camden Valley Way within the development area. Refer to Figure 10.

Bus Priority Corridor (Bernera Road)

This road provides the main public transport access through Edmondson Park to the train station. The road will follow Bernera Road (formally known as Croatia Avenue) into the town centre. The width of this corridor gives definition to the high density larger scale development (potentially 3 to 6 storey buildings) located on both sides of the corridor. The Bus Priority Corridor has a 3m median strip allowing for tree planting and a dedicated bus lane at the intersections with Camden Valley Way and Campbelltown Road. Access to properties along the corridor should be primarily from side streets or rear laneways. Refer to Figure 11**.**

Buchan Avenue/Rynan Avenue

This is a main neighbourhood street that links the north-western access of Edmondson Park to the town centre. Medium density developments are encouraged along this street. Refer to Figure 12.

Collector Streets

These streets connect the outlying localities to the town centre. These streets will have a 19 / 20m wide road reserve. Some Collector Streets may have a 7m wide travel-way for buses with restricted parking and narrow verges. Refer to Figure 13.

Park Streets

This network of streets allows for pedestrian links to neighbourhood parks, schools, riparian and conservation areas. These streets have an off-road cycleway located at the edge of the verge. Refer to Figure 14.

Local Streets

These streets are designed for slow residential traffic. The road reserve is 15.2m wide. Refer to Figure 15**.**

Former Asset Protection Road

This road is situated between the proposed urban areas and adjoining conservation areas that may be prone to bush fires. Pedestrian and cycle paths will encourage

recreational use in what will be a scenic environment. The Former Asset protection roads will have a road reserve of 20.5m, 11.2m of which is taken by the carriageway. Refer to Figure 17**.**

Residential Laneways

Lanes assist in providing service vehicle access in residential areas. These are two-way carriageways 5.5m wide, with a 0.3m verge on one side and 1.2 m verge on the other side (to support street-lighting and services) with setbacks to rear garages. Small splays will be needed to cater for vehicle manoeuvring needs. Refer to Figure 16.

Pedestrian Access Way

All pedestrian access ways are to be designed in accordance with the 10m wide access way detailed in Figure 18. Any other through site links, pedestrian access paths or overland flow paths that continue the desire line of a road corridor are to be the same width of that corridor.

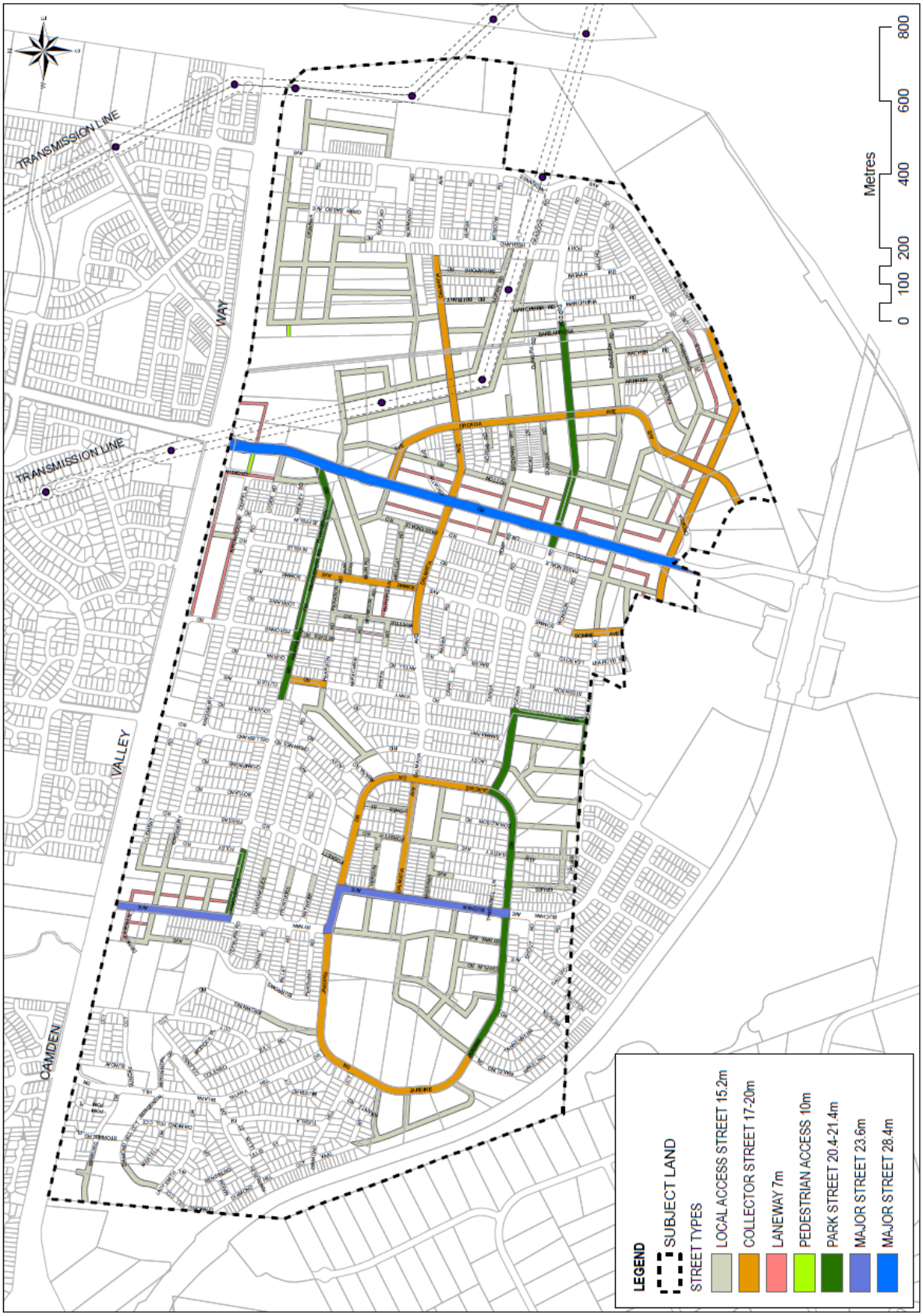


Figure 8: Street Types

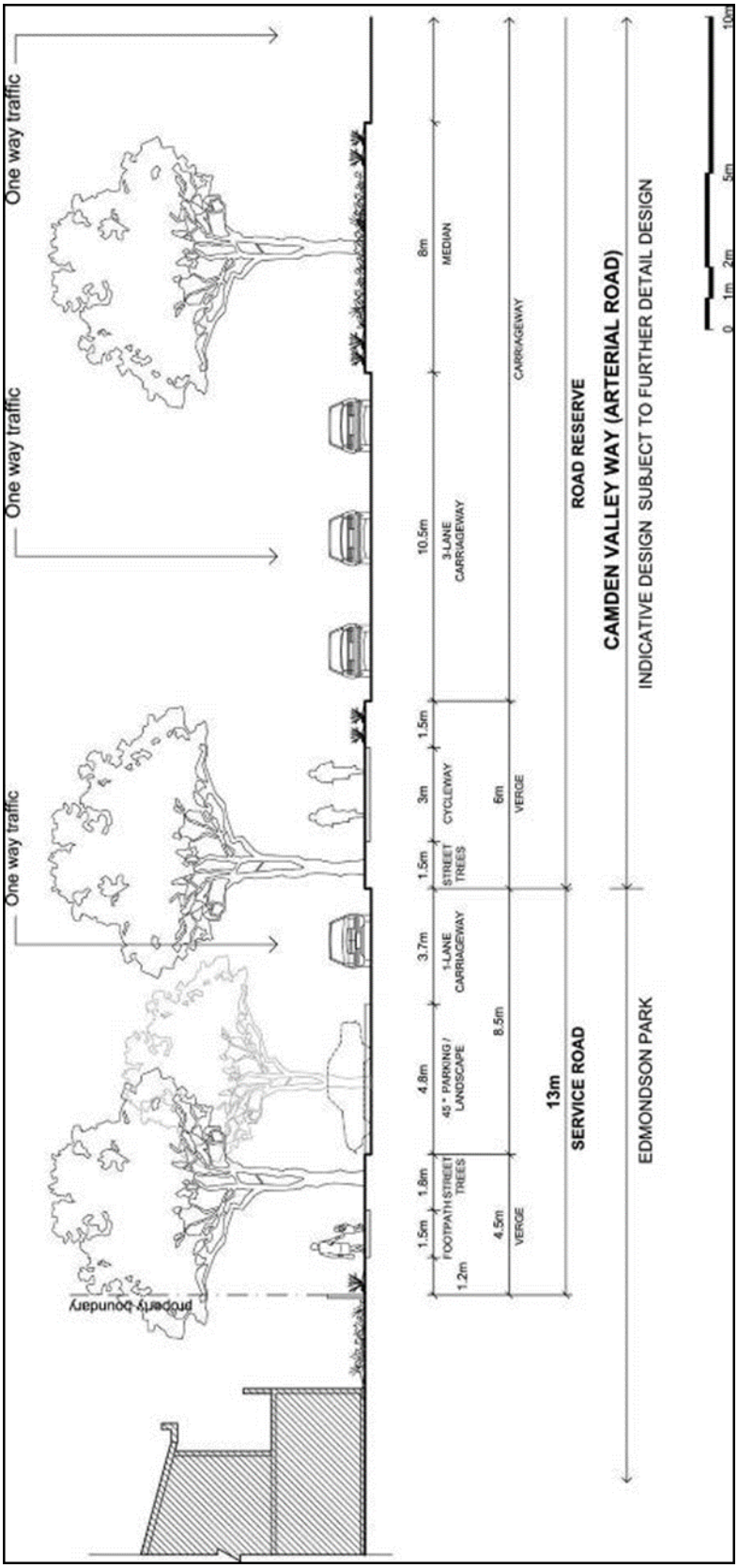


Figure 9: Camden Valley Way

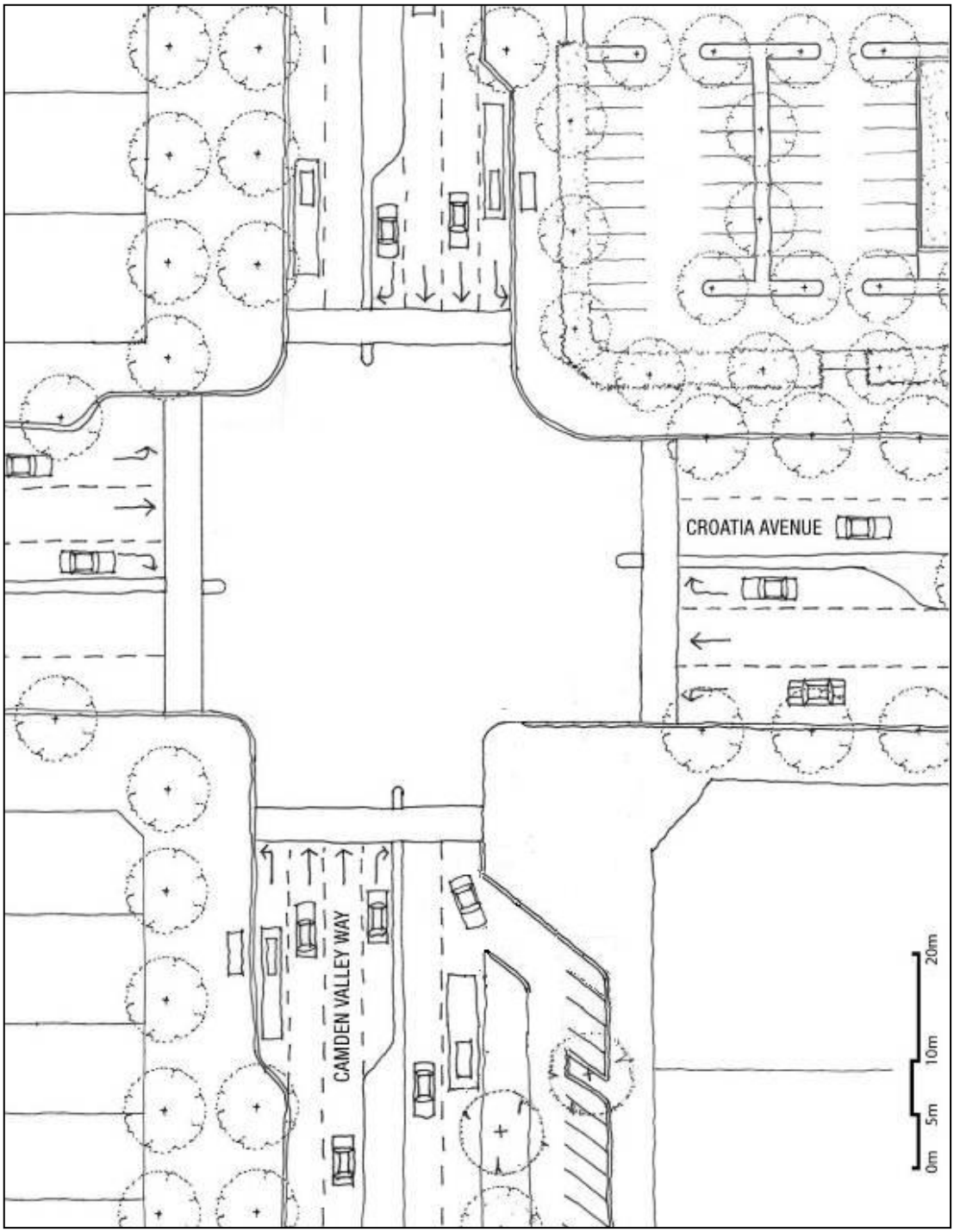


Figure 10: Camden Valley Way – Indicative Intersection and Service Road Treatment

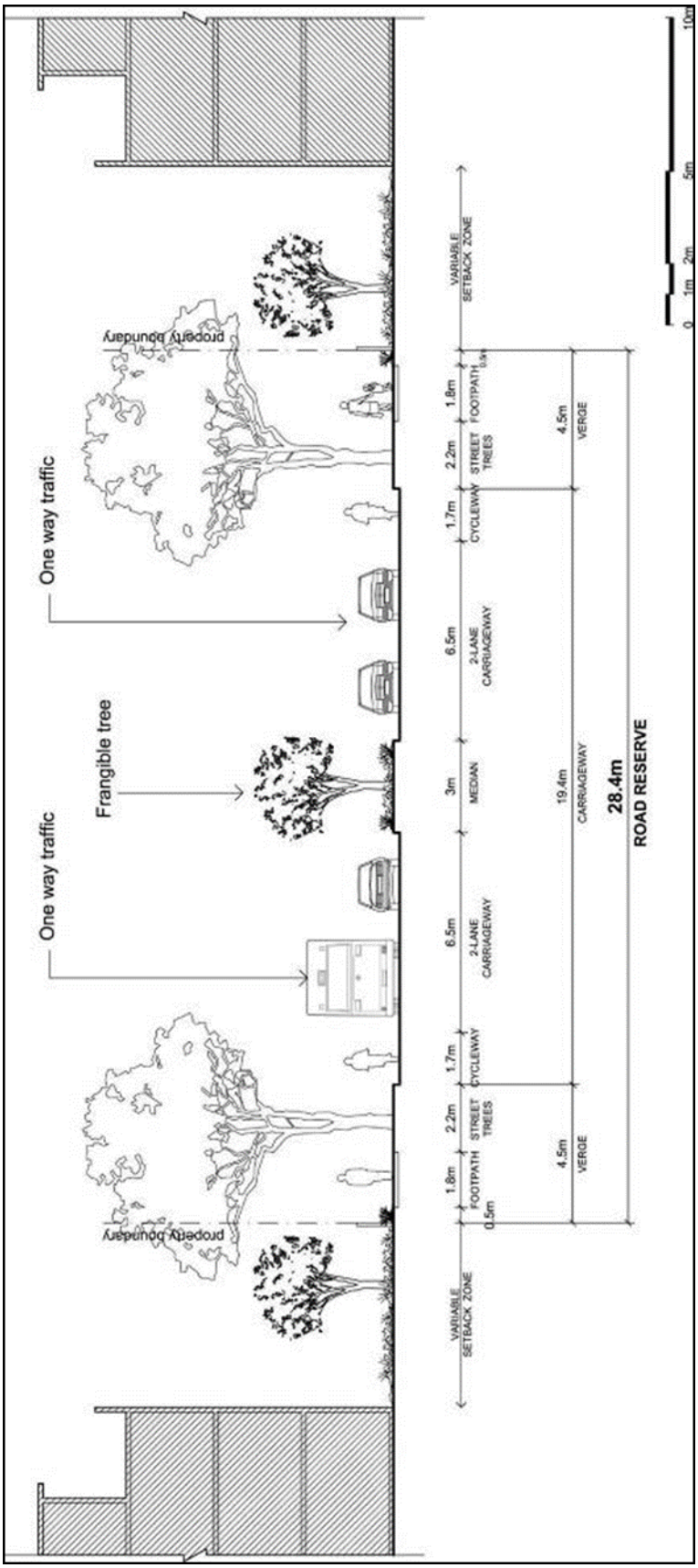


Figure 11: Bus Priority Corridor

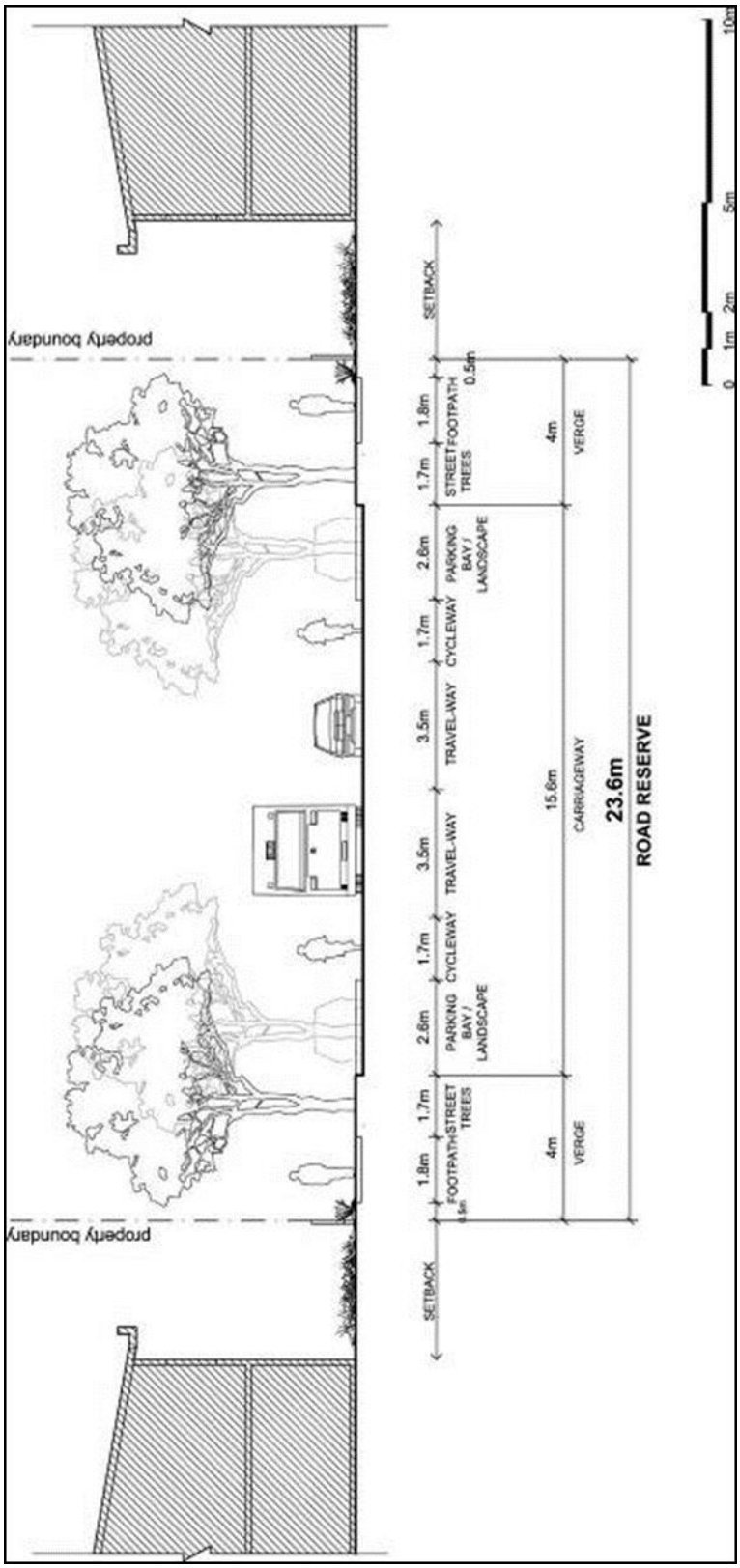


Figure 12: Buchan Ave/Rynan Ave

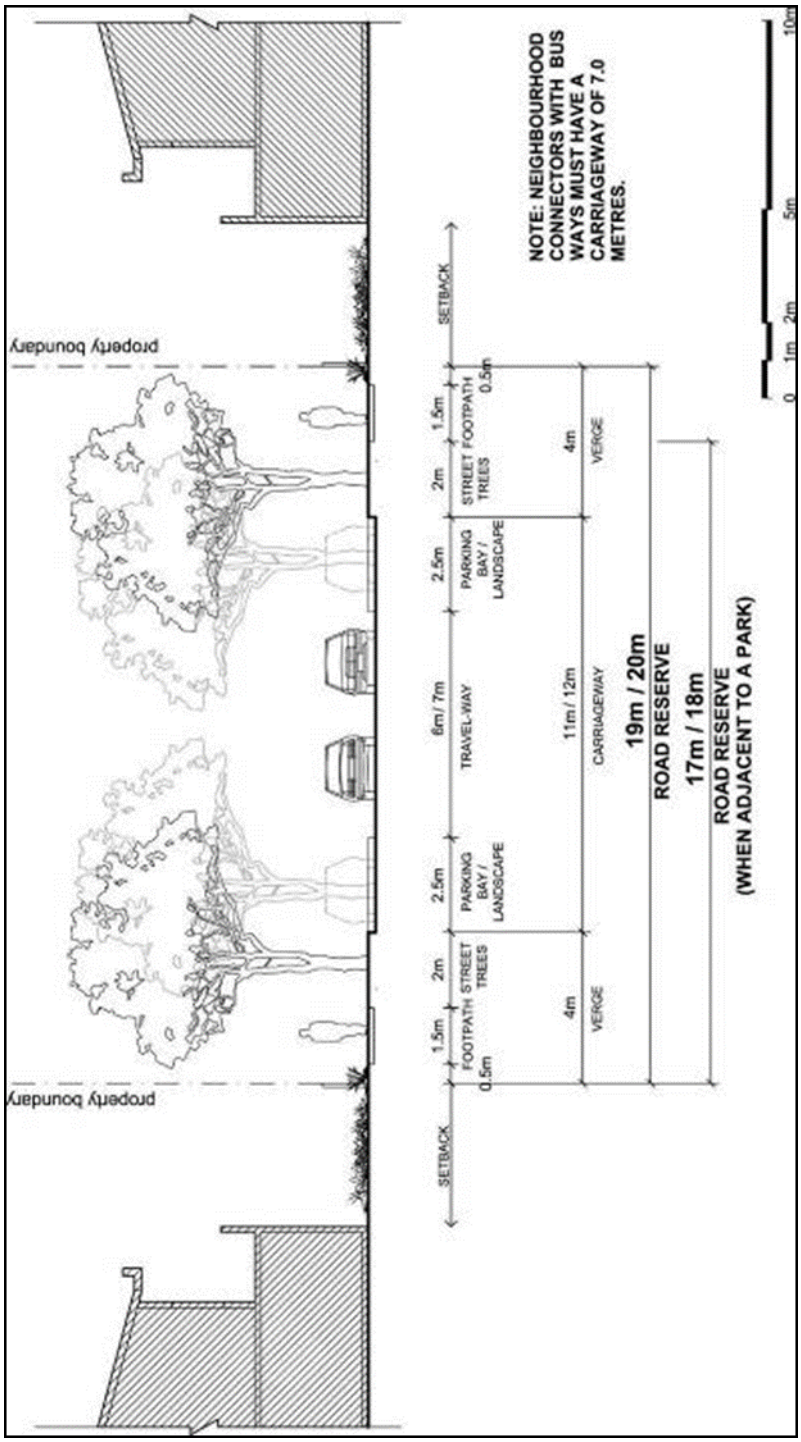


Figure 13: Collector Street

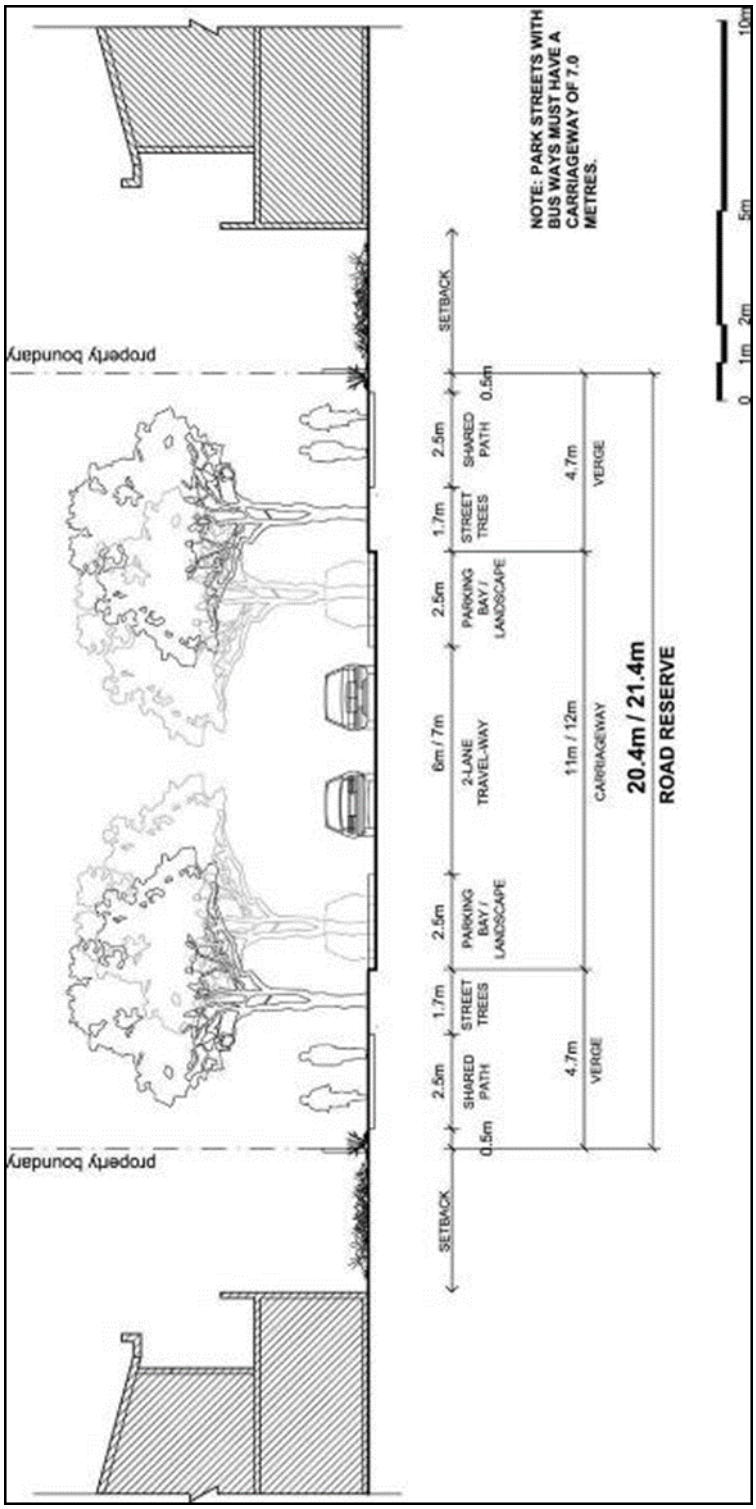


Figure 14: Park Street

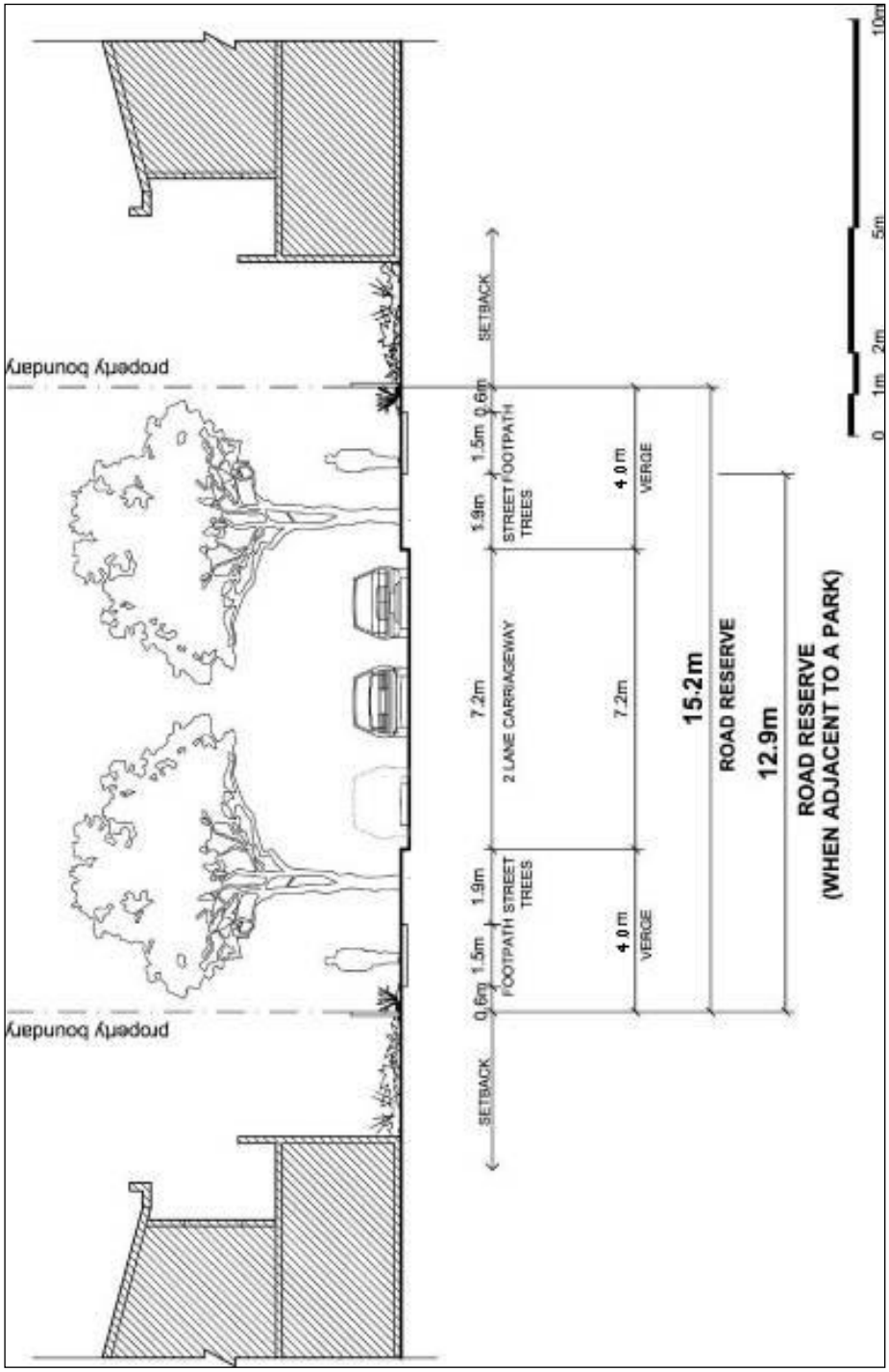


Figure 15: Local Street

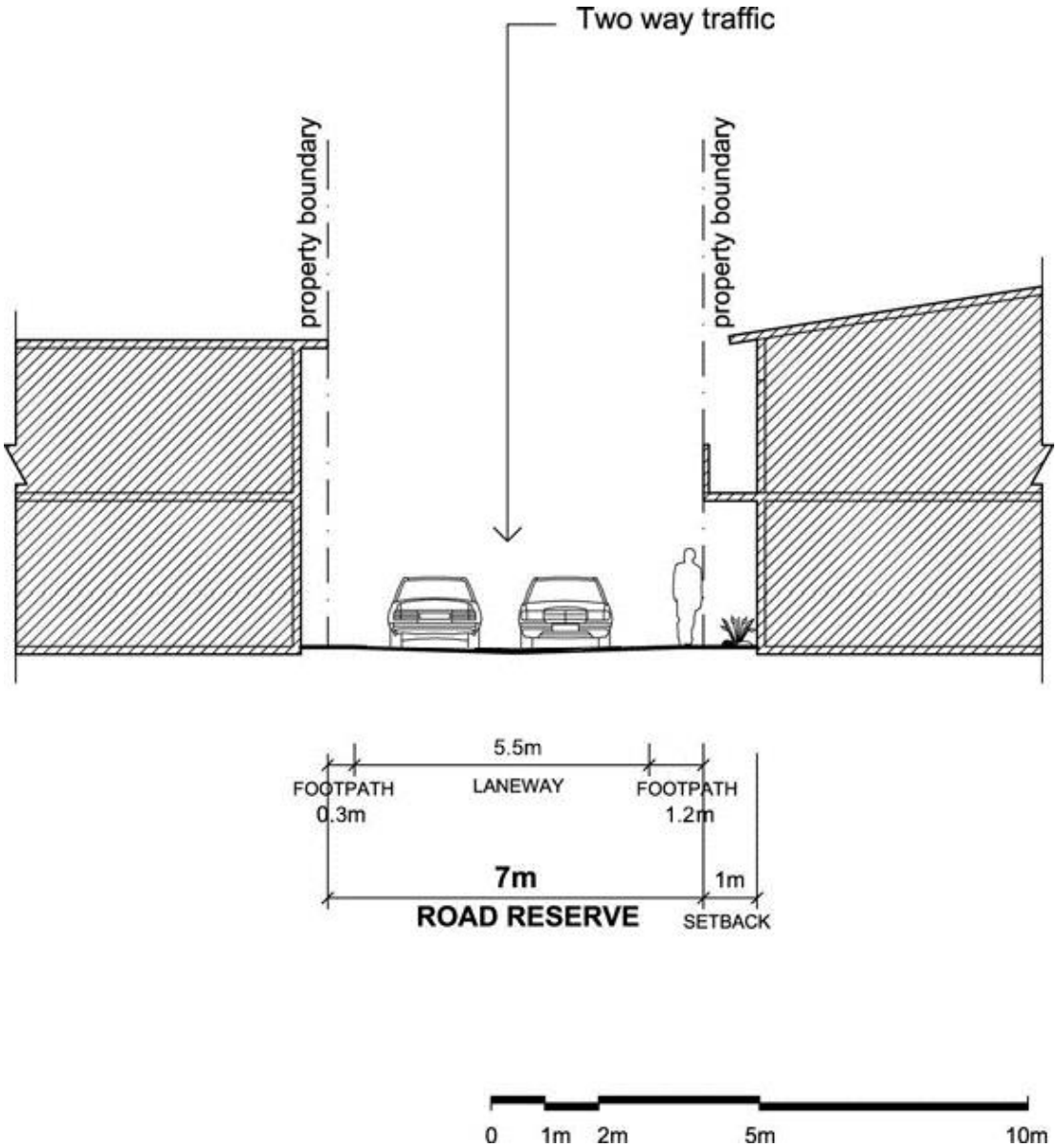


Figure 16: Residential Laneway

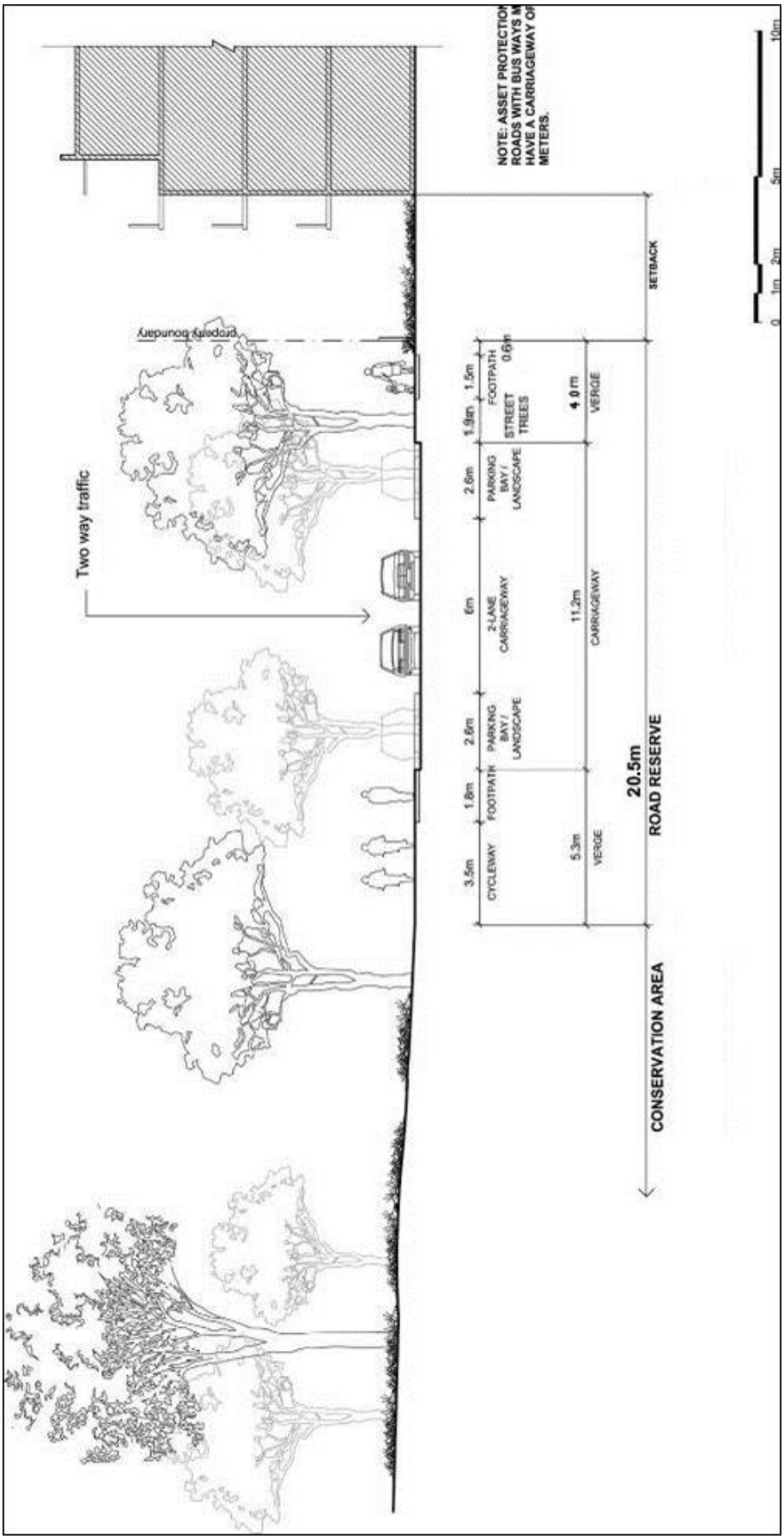


Figure 17: Former Asset Protection Road

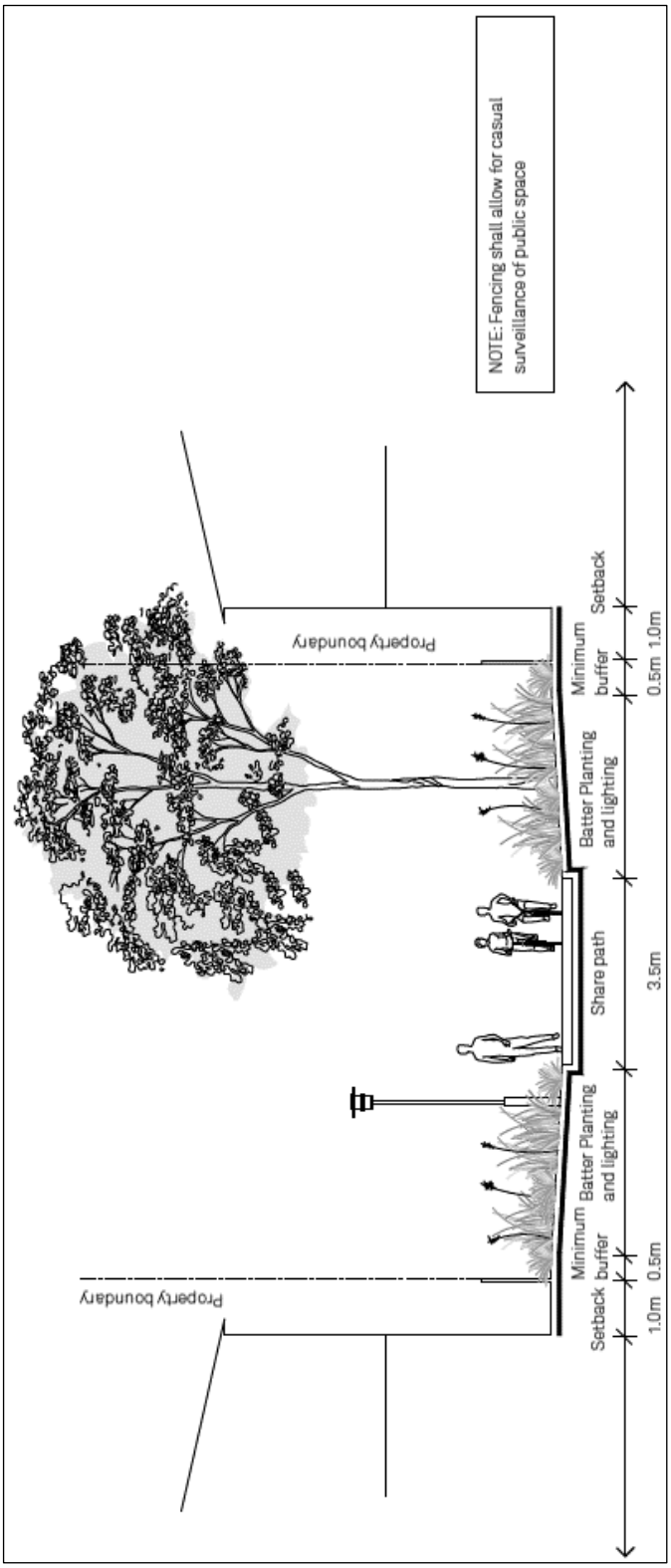


Figure 18: Pedestrian Access Way

Bus Priority Corridor

Former Asset Protection Street

Residential Street

Figure 19: Artistic views of street types

Laneways and Garage Connections

The location, type and design of vehicle access points to dwellings can have significant impacts on the streetscape, the site layout and the building façade design.

Objectives

a) To minimise the impact of vehicle access points on the quality of the public domain.

b) To minimise the impact of driveway crossovers on pedestrian safety and streetscape amenity.

c) To provide safe and convenient access to garages, carports and parking areas.

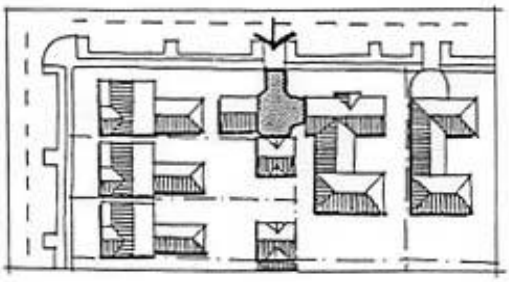
d) To clearly define public and private spaces, such that driveways are for the sole use of residents.

e) To permit casual surveillance of private driveways from dwellings and from the street.

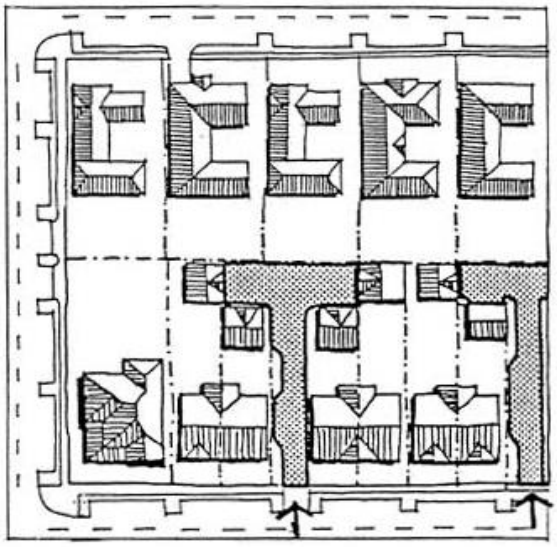
f) To minimise conflict between pedestrians and vehicles at the junction of driveways and footpaths.

Controls

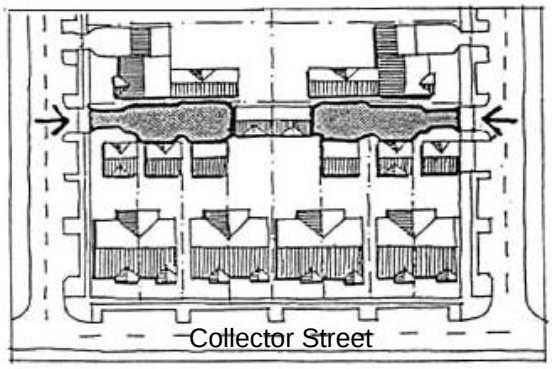
1. Where possible, vehicular access is be integrated with site planning from the earliest stages of the project to eliminate or to reduce potential conflicts with the streetscape requirements and traffic patterns and to minimise potential conflicts with pedestrians.
2. The driveway crossing the verge between the property boundary and the kerb is to have a maximum width of 2.7m.
3. Private driveways are to have the smallest configuration possible to serve the required parking facilities and vehicle turning movements.
4. Communal driveways are to be constructed as one of three general types, depending on block geometry and garages to be accessed. Refer to Figure 20.
5. Access to allotments in the vicinity of roundabouts and associated splinter islands shall not be provided within 10m of the roundabout.
6. On corner allotments, driveways are not to be within 6m of the tangent to the kerb return.
7. Driveways are not to be within 0.5m of any drainage facilities on the kerb and gutter.
8. Where possible, medium and higher density developments fronting Buchan Avenue, Rynan Avenue, the Park Streets or the Collector Streets are to have vehicular access via the side streets, rear laneways, or communal driveways.
9. Rear lane access is to be provided for dwellings as indicated on the Indicative Layout Plan, including dwellings in Character Area 'Urban' and adjacent to Village Centres.
10. Where possible, rear lane access it to be provided to dwellings that front parks.
11. Corner lots on collector streets are to have access from the street perpendicular to the collector street.
12. Planting and walls adjacent to driveways must not block lines of sight for pedestrians, cyclists and vehicles.
13. Driveways are to have soft landscaped areas on either side, suitable for infiltration.
14. Driveways must be in accordance with the relevant Australian Standards for vehicular turning circles, visibility distances and gradients.



Common Apron: Maximum 3 Properties



T- Shaped: Driveway must be from the frontage street of the narrow lot dwellings. Use where block geometry or available street frontage precludes use of a 'close'.



Close: When development fronts a collector street driveways may be accessed off side streets into a close.

Figure 20: Communal Driveways

Carports and Garages

The provision of on-site parking is required for all residential allotments. Carports and garages are to be visually recessive and must not compromise the appearance of the dwellings from the street.

Objectives

a) To provide sufficient and convenient parking for residents and visitors.

b) To ensure that parked vehicles do not create traffic hazards.

c) To reduce the visual impact of garages, carports and parking areas on the streetscape and improve dwelling presentation.

Controls

1. Minimise the visual impact of garages, as illustrated in Figure 21.
2. Front access double garages (6m max. width) are generally only permitted on lots with a street frontage* of 15m and above. Front access double garages may be considered on lots 12m or above subject to meeting all of the following criteria in addition to the primary objectives and controls:
   - Garages are not to exceed 45% of the building frontage width.
   - Garage doors are to be visually recessive and made of high quality materials such as treated timber.
   - Garages are to be designed as an integral part of the architecture of the dwelling, and must be well articulated with features such overhanging verandahs and pergolas etc.
   - The dwelling frontage is to contain a front door and a window to a habitable room, in addition to the garage.
   - No more than three dwellings in a row can have a double garage on the narrower lots (12 m+).
   - The total number of narrower lot dwellings (12.5 m+) with double garages are not to exceed 40% of any street / block frontage.
3. The maximum width of a front access garage on lots with a street frontage below 15m is 3m (a single garage). Additional parking may be provided in carports or in hard stand areas. Stacked or tandem car parking spaces are acceptable, provided that at least one space is located 5.5m min. from the front property boundary.
4. Garages and carport entries are to be setback a min. of 1m from front setback.
5. Garage design, form and materials must be compatible with the dwelling character. Garage dominance can be reduced by use of shadows, setbacks, coloured porticos or entry roof features.
6. All parking spaces for adaptable housing units are to comply with AS 2890:1 for disabled parking.

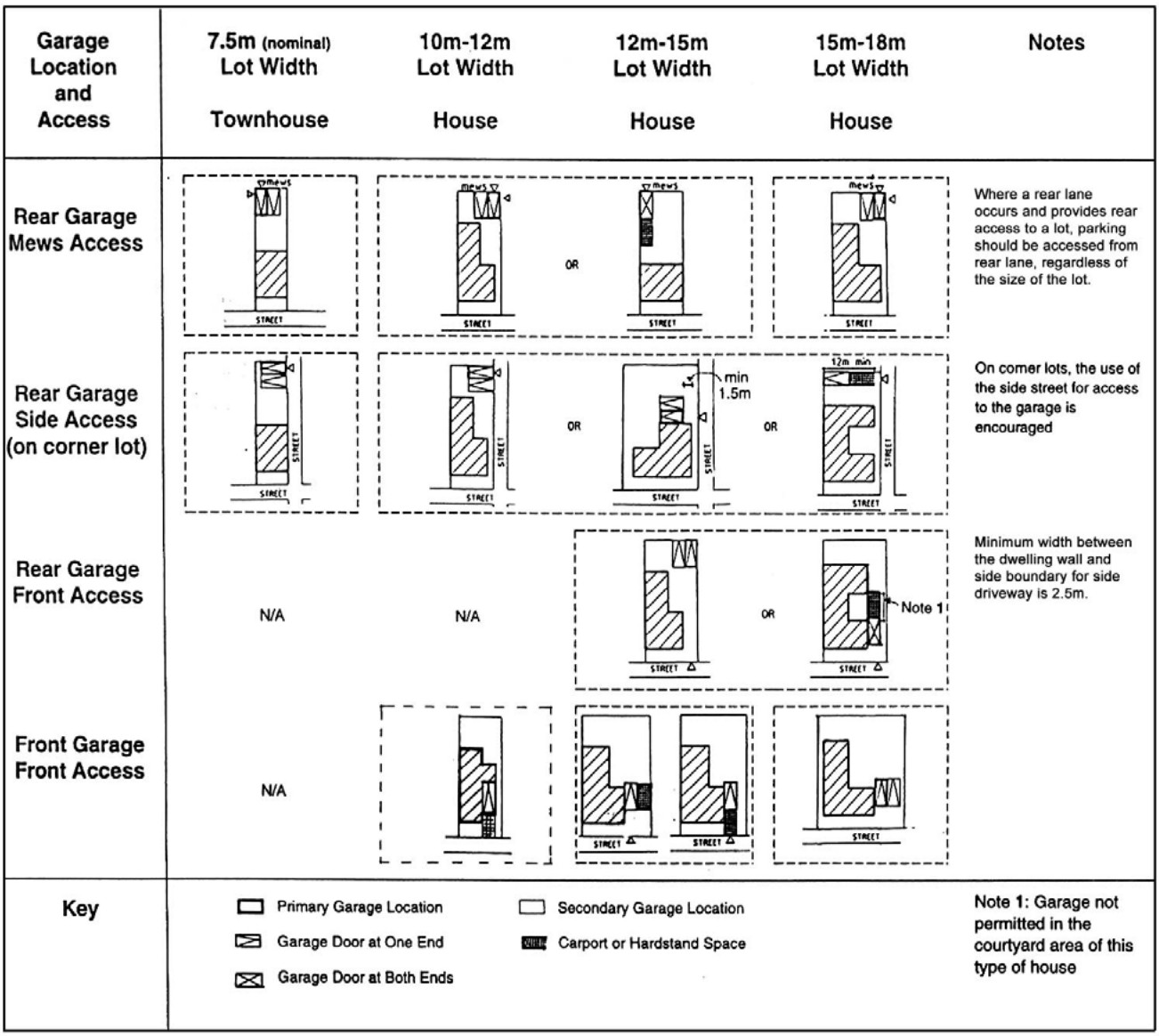


Figure 21: Garage Location and Access

Private Driveways

Objectives

a) To provide safe and convenient access to garages, carports and parking areas.

b) To clearly define public and private spaces, such that driveways are for the sole use of residents.

Controls

1. Private driveways shall have the smallest configuration possible to serve the required parking facilities and vehicle turning movements.
2. Private driveways shall be constructed as one of three general types, depending on block geometry and garages to be accessed, as in Figure 21.
3. Higher density development fronting to collector streets shall have rear access through laneways, car courts and the like.
4. Development on corner lots on collector streets shall have access from the street perpendicular to the collector street.

2.2 Pedestrian and Cycleway Network

The aim is to establish a non-vehicular (pedestrian and cyclist) system, which connects major activities and open spaces in a direct, safe and legible manner. Pedestrian and cycle ways should provide links from predominantly residential areas to social and cultural activities and educational facilities.

Objectives

a) To provide a clear pedestrian and cycle way system that provides links between:
   - Residential areas,
   - Open spaces and conservation areas,
   - Educational facilities,
   - Social and cultural facilities, and
   - Town centre and the villages.

b) To create an interconnected pedestrian and cycle network comprising streets and paths that are clear, safe, legible, and comfortable.

Controls

Location

1. The pedestrian and cycle way circulation system must provide linkages between major activity areas and streets within as well as outside the release area, such as schools, the town centre, and the open space network.
2. Provide cycle ways as illustrated in Figure 22**.**
3. Provide designated cycle lanes on streets in the form of on-street cycle lanes as illustrated in Figure 22.
4. Pedestrian and cycle paths must be provided as part of parks and recreation areas. However these should be provided outside the core riparian corridor areas where practical.

Safety

1. Ensure designated cycle lanes are clearly identified on streets by line-markings / surface treatment on the street surface and / or by signs beside the street.
2. Design and locate vehicular access to all developments to minimise conflicts with pedestrians and cyclists.
3. Ensure a high level of activities and surveillance is provided to off-street pathways.
4. Ensure pedestrian and cycle facilities in public spaces are safe, well lit, clearly defined, functional and accessible to all users.
5. Locate pedestrian paths and cycle ways in open spaces close to the streets to take advantage of street lighting to allow casual surveillance by residents and motorists. Where this is not practical, paths must be well lit and visible from the street.
6. Wherever practicable, provide single vehicle access to developments, perpendicular to the kerb alignment.
7. Clearly and frequently signpost shared pedestrian / cycle links, as well as cycle lanes on public streets and lanes to indicate their shared status.

Design

1. Provide shared pedestrian paths and cycle ways to a minimum of 2.5m wide. Refer to Figure 22.
2. Provide designated pedestrian pathways with a minimum width of 1.5 m, or greater as indicated in relevant street sections, on both sides of all streets.
3. Design pedestrian and cycle ways, as well as pedestrian refuge islands so that they are fully accessible by all users in terms of access points and gradients, in accordance with AS 1428 (Part 1 to 4 Design for access and mobility).

4. Pedestrian footpaths along the main school frontage are to be full verge width. Pedestrian footpaths along secondary school frontages are to be a minimum of 2.5m wide.
5. Pedestrian footpaths within the village centres are to be full verge width and paved with a Council approved paver.
6. Pram ramps are to be provided at all street corners.

Provision

1. Bicycle racks shall be provided in appropriate numbers at villages, sporting grounds, parks, community facilities and schools.

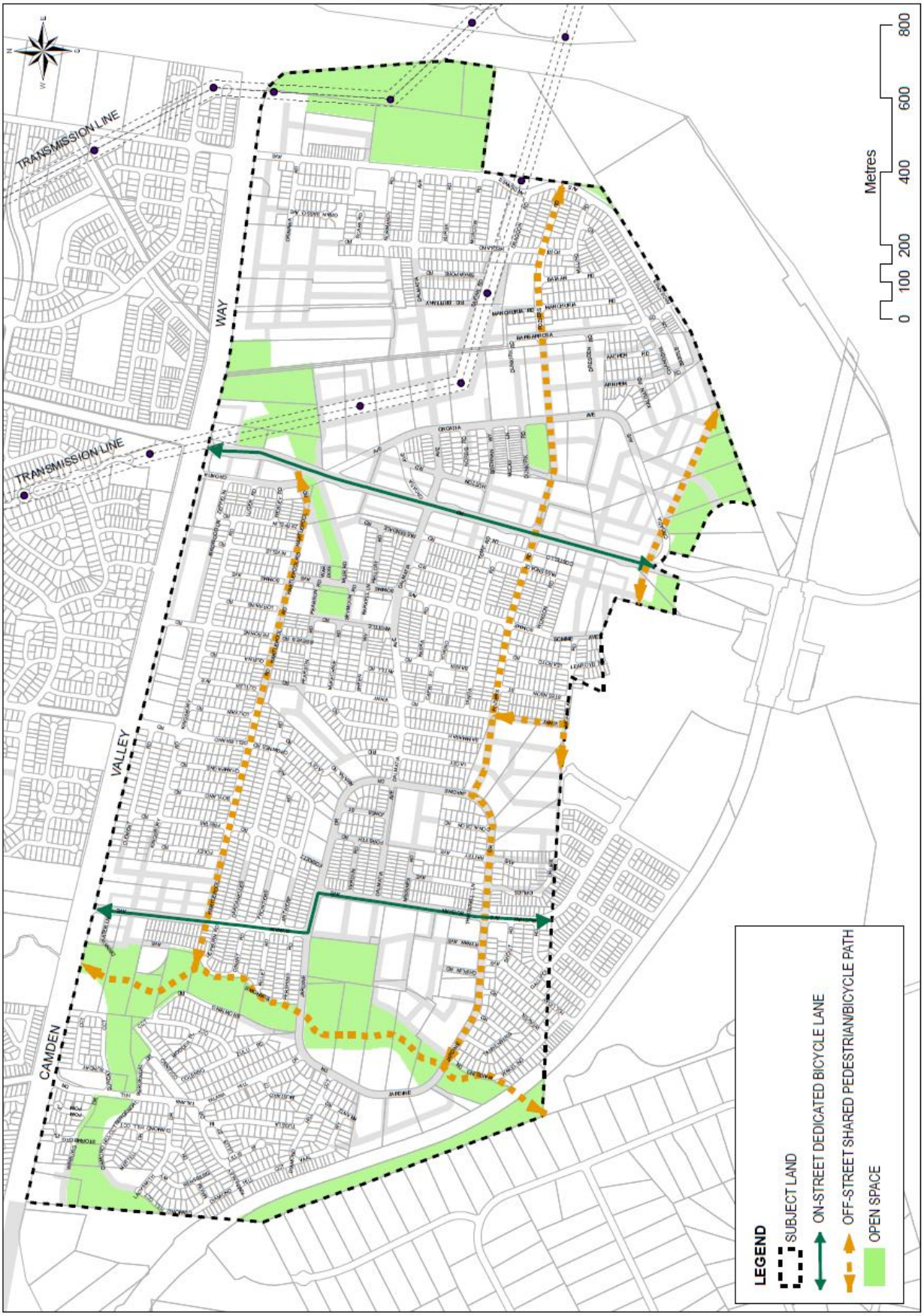


Figure 22: Bicycle Network

2.3 Streetscape and Street Trees

Background

Street furniture should maximise pedestrian comfort, convenience and amenity, create visual harmony and be used to define spaces, streets, paths and gateways. Opportunities for public art in significant public domain locations should be explored as part of the development process.

Objectives

a) To create a sense of identity for the area.

b) To enhance public spaces so that they are vibrant, safe and welcoming.

c) To facilitate cultural identity through art and design in public places.

d) To create quality streetscapes that are visually attractive and integrate with surrounding street layout.

Controls

Street Furniture

1. Street furniture is to be incorporated into the design of all public spaces and should be consistent in design and style.
2. Street furniture is to be located so as not to impede mobility, generally in accordance with AS 1428:1 - 4.
3. The location and detailing of all proposed street furniture is to be indicated on the Landscape Plan, to be submitted with the DA.

Street Tree Planting

1. Street trees shall be required to be planted in conjunction with the creation of a new street or the extension of an existing street.
2. A minimum of two trees is to be provided for every 6m of street frontage. These are to reach at least 4m at mature height.
3. The street trees shall be planted prior to the release of the subdivision certificate.
4. The trees shall be provided with protection to ensure their survival during the construction of buildings in the street. Refer to Figure 23 for details.
5. Trees and shrubs on individual streets must be of a uniform species. On streets adjacent to bushland, species indigenous to the area must be planted.

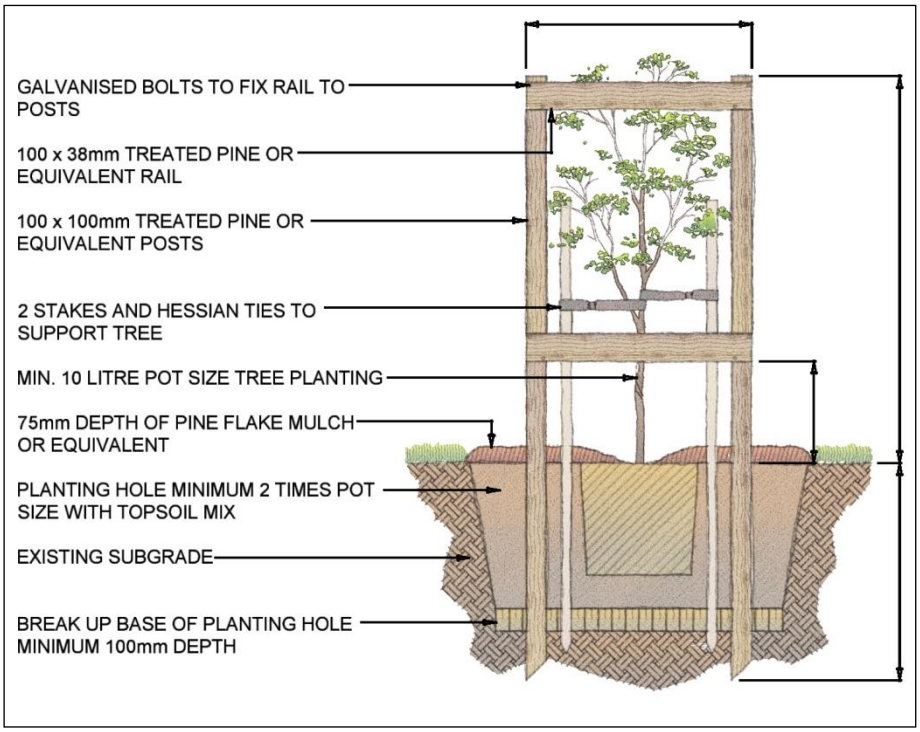


Figure 23: Tree Guard and Planting Details

2.4 Open Space

Background

1. A key element of this Part is to ensure the provision of an open space system which caters for and supports the development of Edmondson Park. Edmondson Park provides for three levels of open space plus pocket parks and conservation areas. These include:
   - Level 1 – District Park,
   - Level 2 – Neighbourhood Parks (passive and active),
   - Level 3 – Passive Parks (Riparian Parks and asset protection zones), and
   - Conservation Areas.
2. Each level of open space provides various recreational facilities for the community. Level 1 open space is centrally located and provides civic uses and active and passive recreation for the release area. Level 2 open space is neighbourhood orientated and facilitates active and passive recreation. Level 3 parks comprise Riparian Parks and asset protection zones and serve as passive recreational areas. Additionally, conservation areas of approximately 150 hectares contain areas of significant Cumberland Plain Woodland vegetation. Access to the conservation areas for passive recreational activities is an essential component of the strategy.
3. It is predicted that a higher proportion of small lot / attached housing is likely to attract first home buyers, young renters and older members of the community, hence an increased proportion of the population in the 0 - 4 year, 25 - 34 year age and in the over 50s groups is predicted.
4. Recreation requirements for the 0 - 4 year age group is predominantly private garden area, which is familiar, safe and secure and either communal open space or small parks close to the home. For the 25 - 34 year olds and the over 50s age groups, involvement in organised sports becomes less important, and there is a greater emphasis on family orientated activities and watching sports.

5. The open space provision for Edmondson Park has therefore been designed to cater for these predicted demographics. Importantly, it is intended that the Edmondson Park Release Area be seen as a whole entity, and that people from both Campbelltown and Liverpool LGAs can share facilities. Furthermore, it is envisaged that there will be a co-use of the school playing fields, to maximise the use of these facilities and encourage a community feeling for the area.

Objectives

a) To ensure adequate provision and distribution of public open space to meet the needs of the residents.

b) To retain and integrate existing landscape elements, such as vegetation and topographic features, in the design of new development.

c) To provide links between the open space areas and community and retail facilities.

d) To establish open spaces as an interconnected network incorporating conservation areas, parks, squares and streets, rather than a series of unrelated, unconnected spaces.

e) To provide centrally located open space with a range of uses and activities in each village, which will assist in casual surveillance and promote user safety.

f) To incorporate environmentally sensitive areas such as riparian land, bushland, and archeologically sensitive sites into the open space network and provide appropriate protection and management mechanisms.

g) To ensure that open space is of a high quality and promotes local character and identity.

h) To ensure that open space design is flexible and responds to changes in demand and opportunity.

i) To ensure that the location of open space promotes equality of access and opportunity and is readily accessible by a range of transport modes.

Controls

1. The open space network for Edmondson Park must be provided in accordance with Figure 24.
2. Link the open spaces using streets, riparian corridors, pedestrian paths and cycle ways.
3. Parks within villages are to be a focal point for development and community activities.
4. Provide a street frontage on all sides of parks within the village centres.
5. Ensure the design of parks can accommodate the desired activities and that they can be adapted for a variety of potential future uses.
6. Ensure that development which surrounds open space is orientated towards the park to offer casual surveillance.
7. Perimeter streets should be provided to all parks on at least three sides of the park. Where a street frontage is not provided the development must front the park to provide surveillance.

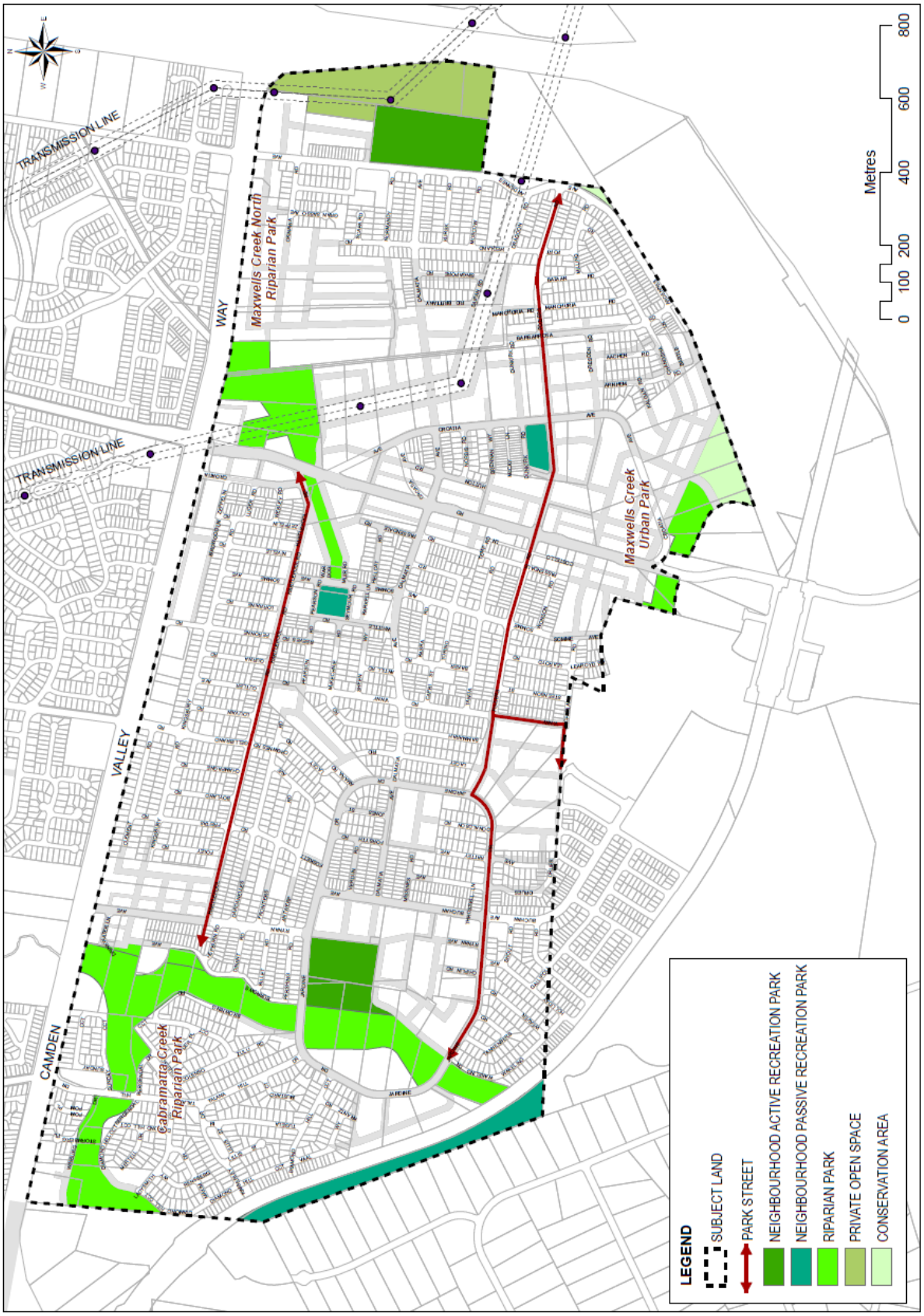


Figure 24: Open Space Network

Conservation areas

There are 3 conservation areas within Edmondson Park, which are located within Edmondson Park South. These areas are not subject to this Part.

Riparian Parks

Riparian parks provide for stormwater drainage and flood storage areas. By being enhanced and retained in a natural state they also protect native vegetation and archaeological sites, and act as natural habitat corridors outside the conservation areas. Access to watercourses, patches of high quality vegetation and any archaeological sites will be controlled in these areas. Riparian parks will have water quality swales as part of their landscape design.

There are three riparian parks in the Edmondson Park (Refer to Figure 24):

- Cabramatta Creek Riparian Park: This comprises the corridor along Cabramatta Creek north of the rail line and the tributary that runs eastward and joins Cabramatta Creek. The riparian park joins with an active recreation neighbourhood park west of Rynan Avenue.
- Maxwells Creek North Riparian Park: This park is located in the northern area adjacent to Camden Valley Way along the tributary of Maxwells Creek. The riparian park joins with a passive recreation neighbourhood park west of the Bus Priority Corridor.
- Maxwells Creek Urban Park: This park is the main landscape feature at the northern end of the town centre. The park will be a more formally landscaped urban park reflecting its relationship with the town centre and higher density residential areas.

Objectives

a) To integrate stormwater detention basins and water quality detention basins as part of the landscape of the open space network.
b) To manage, protect and enhance ecosystems and their biodiversity, including water quality, soil stability, fauna habitat and aquatic habitat.
c) To ensure that important watercourses are integrated into the open space network.
d) To maintain and promote the regeneration of native vegetation adjacent to creek lines.
e) To protect and enhance native vegetation, archaeological and cultural values.
f) To restore and enhance the degraded riparian remnant vegetation.
g) To provide a landscaped passive open space area associated with riparian areas that improves amenity and provides a focus to surrounding development where appropriate.
h) To encourage a sense of ownership over the riparian parks.
i) To encourage educational, social and cultural opportunities and interpretation within riparian corridors.

Controls

1. Development, other than low impact recreational facilities and detention basins, is to be excluded from the CRC, including buildings, streets and car parks. Low impact recreational facilities include pathways, picnic shelters, seating, educational and interpretative features. Special attention is to be given to the location and type of facility in the core riparian corridor to minimise impact on existing vegetation and the ecological integrity.
2. Provide access to the water course at locations where the ecological integrity of the existing riparian vegetation and stream bed and bank stability will not be significantly compromised.
3. Provide educational and interpretative features and information in riparian corridors at key locations.
4. Retain aquatic connectivity through use of crossing structures consistent with the NSW Department of Primary Industries – Fisheries guidelines.

5. Remnant vegetation along the creeks is to be protected and enhanced.
6. Perimeter streets are to be provided between riparian parks and development.
7. Outer asset protection areas may be located within riparian parks. Inner protection areas must be located fully outside of riparian parks. Refer to Figure 17.

Neighbourhood Parks

Neighbourhood parks have been designed for either passive or active recreational uses.

Neighbourhood passive recreation parks are small in scale in order to create intimate spaces adjacent to residential areas. Edmondson Park has three neighbourhood passive recreation parks, two located in close proximity to the village centres, and one to the west of Maxwell's Creek North Riparian Park and Croatia Avenue.

Active recreation parks contain a mix of competition standard sporting fields and passive recreation spaces. Edmondson Park has two neighbourhood active recreation parks, one to the east of Ash Road adjacent to Maxwell's Creek North Conservation Area, and one to the west of Rynan Avenue adjacent to Cabramatta Creek Riparian Park.

Objectives

a) To provide open space areas for the enjoyment of the local population.
b) To ensure that open space is of a high quality and, where appropriate, promotes local character and identity.
c) To provide open space which can be used by a range of users, linked with other activities and services.

Controls

1. Neighbourhood parks are to be provided as illustrated in Figure 24.
2. Neighbourhood active recreation parks are to have a mix of the following activities:
   - Car parking,
   - Collection of competition standard specialised playing fields,
   - Kick-about areas,
   - Informal recreation areas,
   - Play equipment,
   - Footpaths and cycle ways,
   - Electric or gas BBQ facilities,
   - Planting / formal gardens, and
3. Retain, wherever possible and practical, existing endemic vegetation.

District Park

The Edmondson Park Release Area includes a district park which is located in Edmondson Park South and not subject to this Part.

Safety and Security

For Edmondson Park to be a desirable place to live, work and visit, it will need to be perceived as a safe place. A safe and secure environment encourages activity, vitality and therefore viability. Two major principles are involved in achieving a secure environment, casual surveillance of public space and the avoidance of physical threats to safety.

Objectives

a) To provide personal and property security for residents and visitors in the public domain.
b) To enhance perceptions of community safety.
c) To provide pedestrians with safe, clear and direct routes of travel.

d) To provide clear views of the street by adjoining buildings and passing traffic, providing a high level of passive surveillance.

Controls

Design

1. Landscape planting should not obscure visibility, and should avoid opportunities for concealment.
2. Appropriate evening and night-time lighting is to be provided in all streets, public spaces and parks, particularly along pedestrian and cyclist routes.
3. In parks, provide pedestrian pathways that are direct with clear sightlines. This will be particularly important to join the residential areas across Maxwell's Creek Urban Park to the town centre.
4. Provide adequate signage describing pathways and facilities.
5. The design of streets and location of street furniture is to allow adequate sight lines for motorists.
6. The design and maintenance of paving and other ground plane treatments is to ensure the avoidance of trip hazards and be approved by Council.
7. Driveway entry-exits are to provide adequate sight lines to adjacent footpaths, streets and cycle ways. Shared driveways are to be used wherever possible.

Casual Surveillance

1. All public spaces including streets, parks, squares and plazas must be directly overlooked by adjacent development.
2. Active uses must be orientated to streets in commercial or mixed-use areas. In residential areas, living rooms, verandahs and / or kitchens are encouraged to be orientated to the street.
3. Locate perimeter streets to each neighbourhood park. Where a street frontage is not provided the development is to front the park to provide surveillance.

2.5 Environmental Management

Vegetation within Riparian Corridors

1. Provide for the protection of the riparian environment, including water quality, soil stability and creek bed habitat.
2. Regenerate vegetation using local provenance Alluvial Woodland and Shale Plains Woodland species.
3. Bush fire asset protection zones to be incorporated into boundary street design and outside the conservation areas and riparian zones. Refer to Figure 17.
4. Maximise opportunities for the public to experience remnant native bushland.

Vegetation in Developable Areas

1. Require that canopy trees where possible and some saplings are retained through the Development Application process.
2. Avoid tree root damage to retained trees throughout development.
3. Avoid the removal of existing trees in the following zones:
   - R5 – Large Lot Residential
   - RE1 - Recreation - Public,
   - RE2 - Recreation - Private,
   - W1 – Natural Waterways
   - ~~E1~~ C1– National Parks and Nature Reserves, and
   - ~~E2~~ C2– Environmental Conservation.

Core Riparian Corridors

Core Riparian Corridors (CRCs) are areas of protected land along both sides of a creek that allows for the protection of riparian vegetation, water quality and bed and bank stability.

To create an interface between the CRCs and developable areas, it is necessary to provide an additional buffer area which forms the outer protection zone part of the Asset Protection Zone.

Objectives

The objectives of this Part with regard to Core Riparian Corridor (CRC) management are:

a) To maximise opportunities for stream / creek restoration and enhancement that mimics natural stream processes.

b) To conserve, protect and enhance riparian corridors and biological connectivity through the provision of continuous, vegetated riparian protection zones along either side of the creeks.

c) To enable existing watercourses to contribute to and be enhanced by a coordinated approach to development within the area.

d) To provide for appropriate traffic cycle and pedestrian circulation throughout the release area while providing for the protection of the riparian zone and its environmental functions.

e) To ensure the rehabilitation of creek corridors is integrated into floodplain management planning.

f) To encourage a sense of ownership over riparian corridors.

g) To encourage educational, social and cultural opportunities and interpretation within riparian corridors.

Controls

Stream and Riparian Management Plan

1. A Stream and Riparian Management Plan (SRMP) is to be prepared as part of the Water Cycle Management Plan and submitted with the subdivision Development Application for the full extent of each creek corridor within the subdivision being developed. These SRMPs are to be prepared in consultation with Council and Department of Natural Resources, and require the approval of Council.
2. The SRMPs are to include the following:
   - Plans showing, in detail, the existing creek channels, riparian vegetation (including remnant native vegetation), geomorphic features and aquatic habitats (reed beds, snags etc).
   - Detailed plans of any channel modification and stabilisation works.
   - A longitudinal stream survey section (if stream works are proposed) of the existing and proposed creek channel bed in sufficient detail to identify changes in bed level and hydraulic features (i.e. pools and riffles).
   - Details on the staging and sequencing of any works within the riparian zone.
   - Recommendations on how to address the modified drainage system and reaches.
   - A vegetation management plan is to be incorporated into the SRMP for the establishment of riparian corridors. It must use natural and assisted regeneration and planting of locally native vegetation (trees, shrubs and groundcover species).
3. Proposed crossings to creeks must be designed to facilitate the movement of aquatic and terrestrial species, and are to incorporate features that allow for light penetration beneath the structure.
4. The design of the 3 structures crossing Cabramatta Creek and Maxwell's Creek are to ensure the following:
   - 1% AEP flood conveyance.

- Flora and fauna connectivity.
- Scour protection.

Core Riparian Corridors in Edmondson Park Creeks

Controls

1. The following describes the Core Riparian Corridor (CRC) and inner protection zone to be provided for each creek. The CRC will be measured from the top of the existing creek's embankment as identified by appropriate survey plans. The minimum requirements to be provided adjacent to each creek.

   Cabramatta Creek:

   - Provide an average 20m wide CRC on each side of the creek (measured from the top of the bank).
   - Provide a minimum 10m wide buffer from the CRC to developable land. This area can include the outer protection zone.

   North western tributary to Cabramatta Creek:

   - Provide an average 20m wide CRC on each side of the creek (measured from the top of the bank),
   - Provide a minimum 10m wide Inner Protection Zone from the CRC to developable land.

   Maxwell's Creek:

   - Provide a 20m wide CRC on each side of the western tributary of Maxwell's Creek (measured from the top of the embankment).
   - Provide a 10m wide buffer zone from the CRC to developable land.
   - Develop a formal urban park open space for passive and active recreational use by the adjacent residents and workers from the town centre.
   - Drainage channel to be re-engineered. Soft engineering solutions are preferred. Stream bed and bank stabilisation to be utilised as appropriate. Permanent water bodies to be "off stream" where possible.

   Northern tributary of Maxwell's Creek:

   - Establish an urban drainage corridor within the zoned open space,
   - Re-engineer the entire corridor to Camden Valley Way. Soft engineering solutions are preferred. Stream bed and bank stabilisation to be utilised as appropriate, and
   - Locate water quality treatment facilities "off stream" but within the open space zoned corridor.

2. All remnant vegetation along the CRC must be protected and enhanced unless required to be removed as part of the re-engineering works to improve the system.

3. Development, other than low impact recreational facilities and detention basins, is to be excluded from the CRC, including buildings, streets and car parks. Low impact recreational facilities include pathways, picnic shelters, seating, educational and interpretative features. Special attention is to be given to the location and type of facility in the core riparian corridor to minimise impact on existing vegetation and the ecological integrity.

4. Provide access to the water course at locations where the ecological integrity of the existing riparian vegetation and stream bed and bank stability will not be significantly compromised.

5. Provide educational and interpretative features and information in riparian corridors at key locations.

6. Any bank stabilisation measures are to use soft engineering techniques that promote sustainability and naturalness.

7. Perimeter streets are to be provided between the riparian corridor and residential / commercial development.
8. Any assessment of flood impacts and flood modelling must take into account the establishment of a fully structured vegetated riparian corridor along the CRCs. The Manning "n" roughness coefficients are to be such that they represent a diverse and fully structured riparian corridor (trees, shrubs and groundcover) for discharge determinations.
9. Any hydraulic assessment must consider not only the initial vegetation density in CRCs but also the final growth, with due allowance for debris build up before and during flooding.
10. Service utilities can only be provided within CRC's if no other practical or feasible opportunity exists to cross the corridor at designated crossing points, such as streets and pedestrian crossings.

2.6 Water Cycle Management

The stormwater quantity and quality management seeks to reduce the impact of rapid stormwater conveyance on streams and wetlands, remove pollutants to improve water quality, retain habitats, conserve water, integrate landscape and recreational opportunities and protect downstream development from inundation. Water quality detention / bio-retention basins will be an integral part of stormwater management.

Objectives

a) To integrate water management measures with innovative urban design.
b) To ensure that there are no adverse impact on existing flood regimes in the surrounding areas, as a result of the proposed development.
c) To provide an urban water management system for both stormwater quantity and quality
d) To minimise hydrological impacts on the environment.
e) To protect and enhance the natural water systems and water quality.
f) To ensure no net increase in peak discharges.
g) To mitigate flood damage to the built environment, inundation of dwellings and stormwater damage to properties.
h) To provide for urban water management through multiple use systems where feasible and where efficient use of urban land and structuring principles are met.
i) To ensure that the quality of stormwater discharge from the site complies with the Georges River Stormwater Management Plan and the Growth Centres Commission Development Code.
j) To provide an urban water management system that will be economically maintained and to ensure that arrangements are in place for on-going maintenance.

Controls

1. Provide off line water quality control bio-retention systems to trap pollutants and fine sediment.
2. Provide structural water quality management devices, including, gross pollutant and sediment traps and litter management devices.
3. Provide bio-retention systems in accordance with the Water Sensitive Urban Design Strategy. Provision of swales, buffer strips, storage tanks, and rooftop planting is also encouraged where appropriate.
4. Encourage areas of deep soil planting in the design of external areas and landscaping.
5. Create water efficient landscape design through the selection of tolerant plant species and efficient irrigation technology.

6. Where any construction adjacent to a creek, natural watercourse, drainage depression, or an enclosed drainage system is proposed, the DA should be consistent with the SRMP and is to be accompanied by a full hydrologic and hydraulic assessment. The assessment is to include:
   - External and internal catchment hydrology for rainfall events including the 1.5, 5, 20 and 100 year ARI (Average Recurrence Interval) design event.
   - An estimation of the capacity of the existing drainage system.
   - Predicted extents of flood inundation, depths, and velocities of predicted flood flows to allow effective hazard categorisation.
7. The trunk drainage system shall be designed to convey the 1% AEP flood. Streets adjacent to trunk drains or utilised as part of the drainage system shall meet the safety requirements of the current flood plain development manual for vehicles and pedestrians (normally depth x velocity < 0.4). Where the street system is used as part of the drainage system a minimum of 3.5m of the width of the street shall be above the 1% flood level.
8. Native vegetation is preferred, particularly in saline areas where deep-rooted vegetation can assist with salinity hazard reduction.
9. Where drainage routes pass through a property, adequate provision must be made for the passage of stormwater runoff with adequate freeboard to building floor levels. In the event of Council being requested to approve the location of a piece of infrastructure on its land, it will require:
   - Documentation that such an activity will not prejudice the use of the land for the purpose for which it exists.
   - A possible preparation or amendment to the Plan of Management for the land, and if this action is necessary a fee may be required.
10. Fill is permitted with Council consent in flood plains in the areas shown in Figure 25.

Figure 25: Areas which may be filled with Council Consent

2.7 Contamination

In the consideration of any Development Application, Council must consider whether the land is likely to be contaminated. Refer to Contaminated Land Risk in Part 1 for controls. Refer to Figure 26.

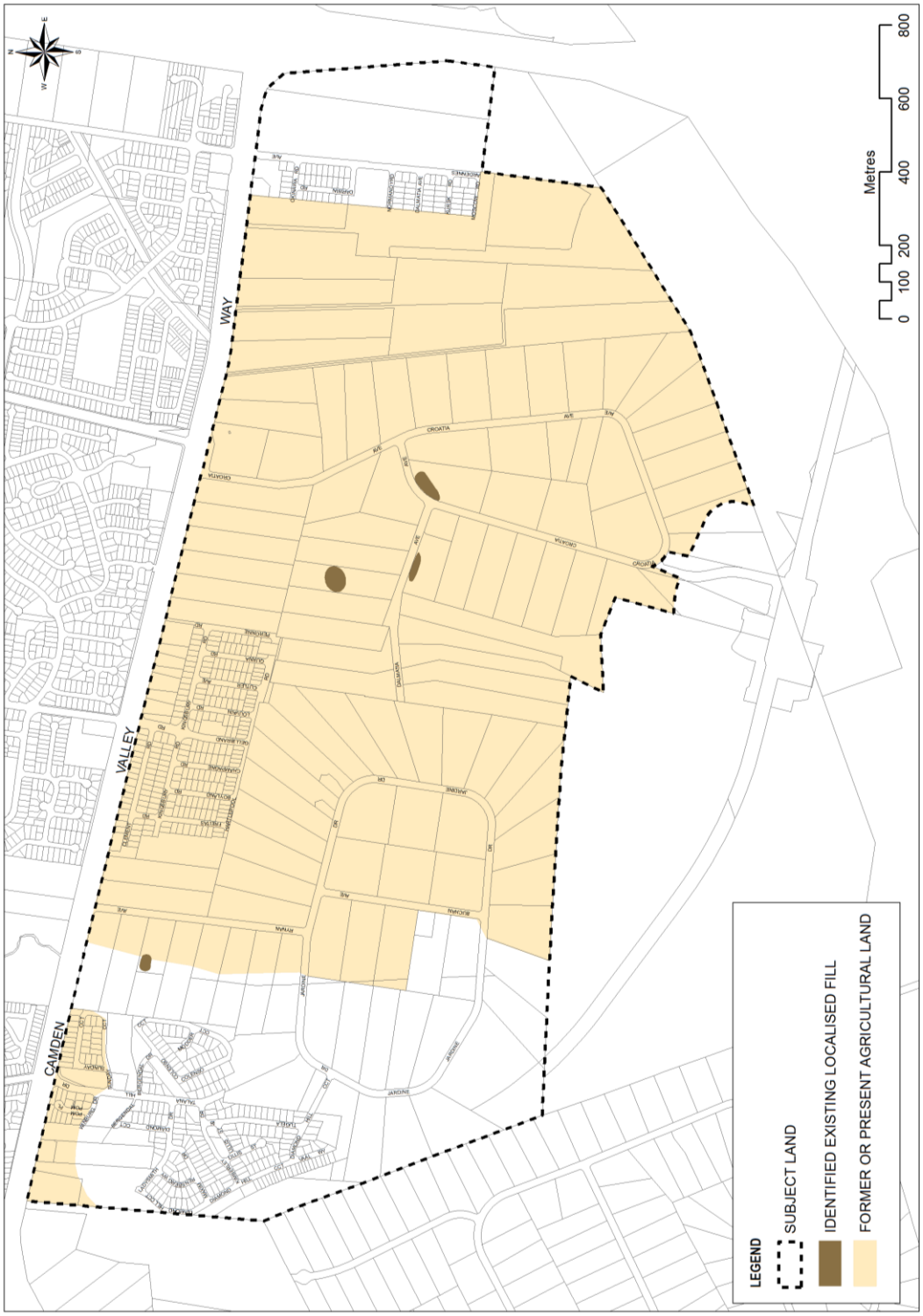


Figure 26: Contamination

3. Controls for Residential Development in Urban areas (28 Dwellings/Hectare) and Residential Flat Buildings

3.1 Preliminary

Applies to

This section applies to land identified in Liverpool LEP 2008 Dwelling Density Map as having a minimum density of 28 Dwellings / Hectare.

Background

Development within the 28 dwellings/hectare area is primarily intended for the Residential Flat Buildings and Multi Dwelling Housing. Development for detached dwellings is strongly discouraged within this area. However detached dwellings are permitted if desired on lots that do not front or back onto the bus priority corridor, any parks or parkland (the ~~E1, E2, E3,~~ C1, C2, C3, RE1 or RE2 zones).

3.2 Site Planning

Objectives

a) To ensure that the residential flat buildings or dwellings(s) are sensitive to site attributes, such as streetscape character, natural landform, drainage, existing vegetation, land capability, slope, solar access and if relevant, heritage items.

b) To ensure privacy for residents and neighbours.

Controls

1. The dwelling layout must be designed around the site attributes such as slope, existing vegetation, land capability and/or solar access (See Figure 27 for a site analysis plan).
2. Basement car parking (if applicable) should be unobtrusive and blend into the general façade of the building.
3. There must be a direct link from at least one living area to the principal private open space, which for residential flat buildings is the balcony or terrace.
4. The siting of windows of habitable rooms on the first floor shall minimise overlooking to the principal private open space of neighbouring properties.
5. Stormwater from the site must be able to be drained satisfactorily. Where the site falls away from the street, it may be necessary to obtain an easement over adjoining property to drain water satisfactorily to a Council stormwater system. Where stormwater drains directly to the street, there may also be a need to incorporate on-site detention of stormwater where street drainage is inadequate. Refer to Water cycle management in Part 1.

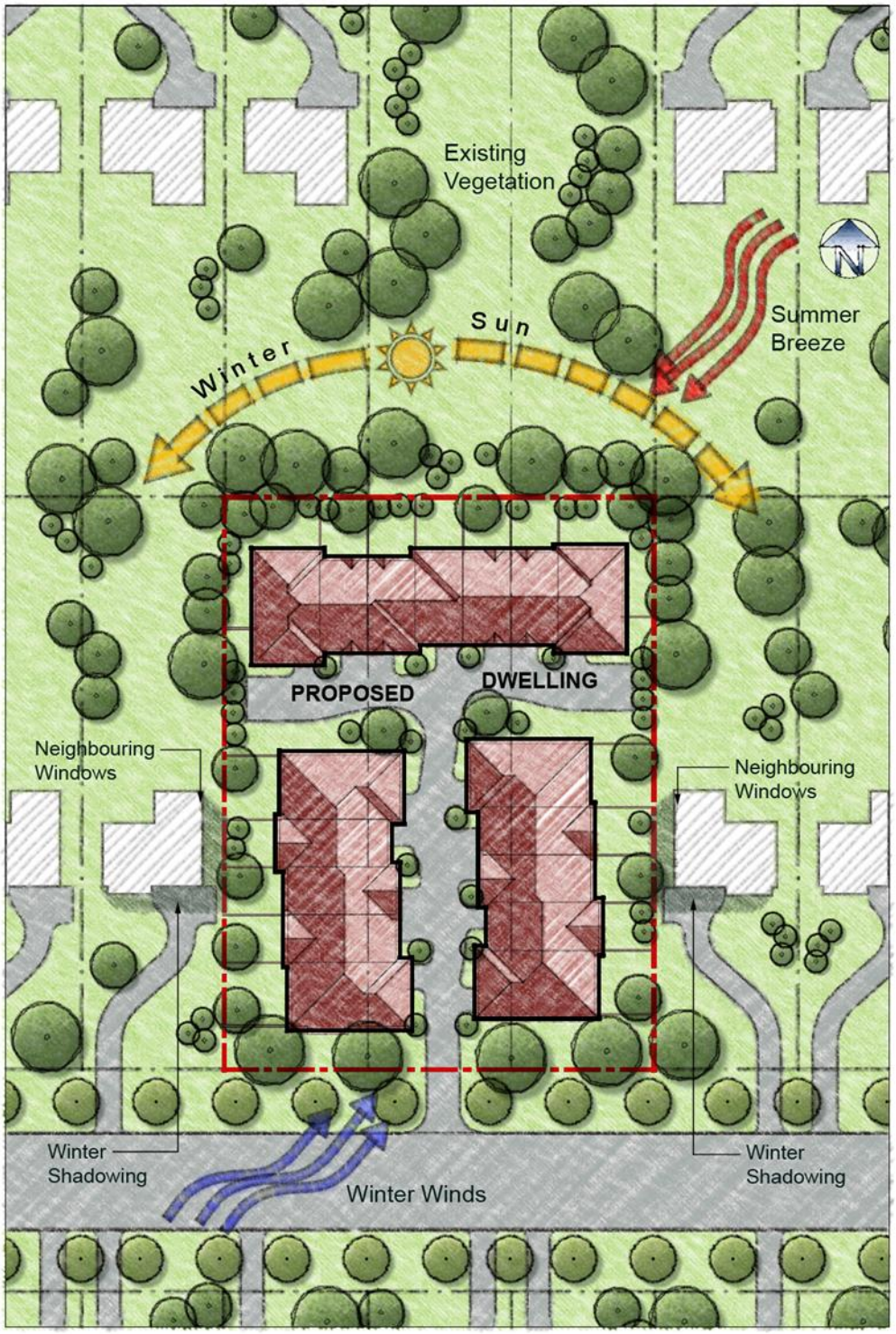


Figure 27: Example of a Site Analysis Plan

3.3 Setbacks

Objectives

a) To set dwellings back from the street and adjacent properties to provide reasonable space for landscaping, private open space and solar access.

b) To set dwellings back from each other to provide visual and acoustic privacy.

c) To create a streetscape that provides a desirable and safe environment.

d) To establish a streetscape of a scale and sense of enclosure appropriate to the locality.

e) To maximise the amount of area capable of allowing the growth of trees and shrubs.

Controls

Front and Secondary Setbacks

1. Buildings shall be setback in accordance with Table 1.

Table 1: Setbacks within the 28 dw / ha area

Front Setback	Secondary Setback
4.5 m	2.5 m

2. For lots containing a dwelling house, the secondary setback is generally along the longest length boundary. For multi-dwelling housing or residential flat buildings, the secondary setback faces the secondary road, which is likely to be the shorter boundary(s).

3. Garages shall be setback 5.5m from any street frontage, or 1.0m from a secondary boundary when consistent with a typology shown in Figure 21.

4. Articulation features such as verandahs, eaves and other sun control devices may encroach on the front and secondary setback by up to 1m.

5. Corner sites shall provide a frontage to both streets and should articulate their corner location with an architectural feature such as a wraparound verandah, bay window, corner entry or roof feature. The maximum distance for articulation is 1m.

Side and Rear Setbacks

1. Buildings shall be setback from the side and rear boundaries in accordance with Table 2.

Table 2: Side and Rear setbacks within the 28 dw / ha area

Item	Side Setback			Rear Setback		
	Residential Flat Building	Multi Dwelling Housing	Dwelling house Attached dwelling Semi-detached dwelling	Residential Flat Building	Multi Dwelling Housing	Dwelling house Attached dwelling Semi-detached dwelling
Party Wall	0m	0 m	0 m	n/a	n/a	n/a
1 storey	3 m	0.9 m	0.9 m	6 m	4 m	4 m

2 storey	3 m	1.2 m	1.2 m	6 m	6 m	6 m
3 storeys and above	Refer to Apartment Design Guide (or equivalent)	1.4 m	1.4 m	Refer to Apartment Design Guide (or equivalent)	7 m	6 m

Note: In a terrace style attached dwelling development the upper storey setbacks do not apply to the terraces unless by having the zero lot line will create unreasonable solar shading - (that the adjacent lot's dwelling will not receive the minimum 3 hours sunlight to 50% between 9am and 3pm on the 21st June)

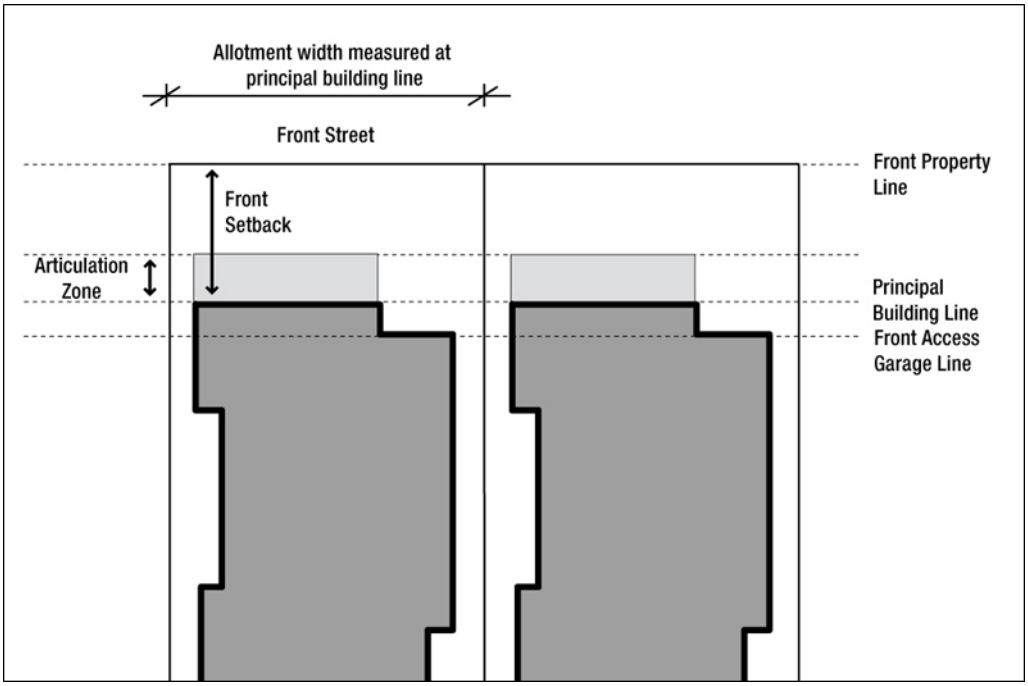


Figure 28: Front Setback Line

Zero lot lines for attached and semi-detached dwellings

This zero lot line control only applies to the end dwellings, in a multi-zero lot line multi dwelling development, such as terraces. It also applies to dwellings that have a zero lot lines. It does not apply to Residential flat buildings.

1. Walls are generally to be 180 mm clear of the side boundary to allow for gutter and eaves overhang.
2. The length of a zero lot line wall is limited to 50% of the lot length.
3. No windows are permitted in a zero lot line wall.
4. A maintenance easement of at least 0.9m shall be provided on the adjoining boundary. This is shown in Figure 29.

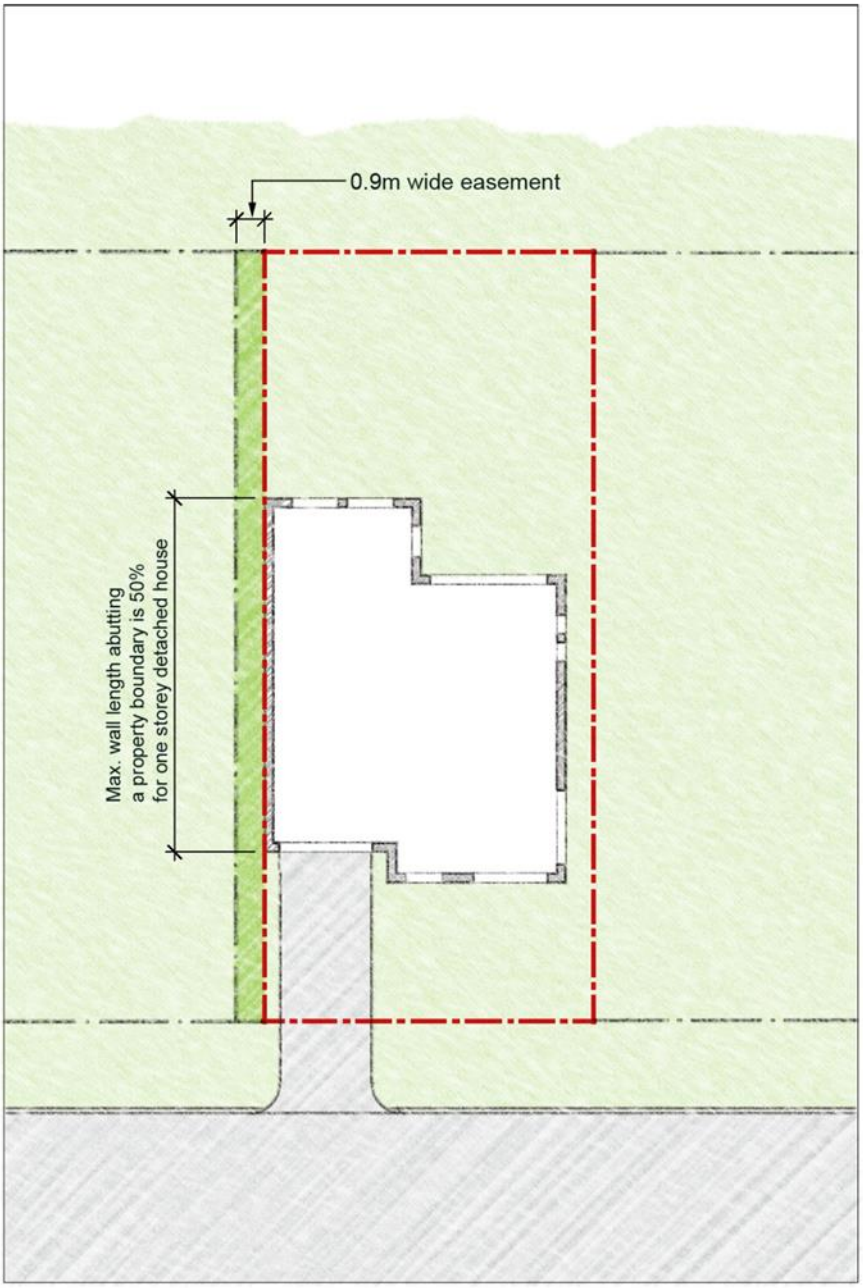


Figure 29: Zero Lot Lines

3.4 Landscaped Area and Private Open Space

Landscaped area is defined in Liverpool LEP 2008.

Landscaped Area (deep soil area)

Objectives

a) To provide an area to allow vegetation to mature.

b) To assist with management of the water table.

c) To assist with management of water quality.

d) To enhance the existing streetscape and soften the visual appearance of the buildings.

Controls

1. A minimum of 20% of the site area shall be landscaped area.
2. Optimise the provision of consolidated landscaped area within a site by:
   - The design of basement and sub-basement car parking, so as not to fully cover the site.
   - The use of side and rear setbacks.
   - Optimise the extent of landscaped area beyond the site boundaries by locating them contiguous with the landscaped area of adjacent properties.
3. Promote landscape health by supporting for a rich variety of vegetation type and size.
4. Increase the permeability of paved areas by limiting the area of paving and/or using pervious paving materials.

Open Space

Open space includes Landscaped Areas and hard paved areas such as footpaths and barbeque areas. It does not include driveways, drying areas or waste storage areas.

Objectives

a) To provide residents with passive and active recreational opportunities.

b) To provide an area on site that enables soft landscaping and deep soil planting.

c) To ensure that communal open space is consolidated, configured and designed to be useable and attractive.

d) To provide a pleasant outlook.

Controls

1. Provide communal open space, which is appropriate and relevant to the context and the building's setting.
2. Where communal open space is provided, facilitate its use for the desired range of activities by:
   - Locating it in relation to buildings to optimise solar access to dwellings.
   - Consolidating open space on the site into recognisable areas with reasonable space, facilities and landscape.
   - Designing its size and dimensions to allow for the range of uses it will contain.
   - Minimising overshadowing.
   - Carefully locating ventilation duct outlets from basement car parking.
3. Locate open space to increase the potential for residential amenity.

Private Open Space

Objective

a) To ensure that private open space is clearly defined, usable and meets user requirements for privacy, solar access, outdoor activities, accessibility and landscaping.

b) To provide all dwellings with private open space.

Controls

1. Private open space for residential flat buildings shall be consistent with the Apartment Design Guide (or equivalent document).

2. Private open space shall be provided for in accordance with Table 3 for Multi Dwelling Housing, Attached dwellings, Semi-detached dwellings and Dwelling houses.

Table 3: Private open space in the 28 dw / ha area for all other dwellings

Dwelling Size	Private Open Space Area	Minimum Width
Less than 65 m^2	30sqm	3m
Between 65 and 100	40sqm	3m
Between 101 and 150	50sqm	4m
Between 151 and 200	60sqm	4m
Greater than 200 m^2	70sqm	4.5m

3. Private open space may be provided as a courtyard for ground floor dwellings or as balconies for dwellings above the ground floor.

4. Private open space areas should be an extension of indoor living areas and be functional in size to accommodate seating and the like.

5. Private open space should be clearly defined for private use.

For balconies refer to Building Design, Streetscape and Layout for controls on their design.

Drying areas

Objective

To provide adequate clothes drying areas for residents.

Controls

1. Clothes drying facilities must be provided. Clothes drying areas should not be visible from a public place.

3.5 Building Design and Streetscape

Dwelling Houses and Dual Occupancies

Building Envelopes

1. A Dwelling House, Semi-detached dwelling or attached dwelling shall have a maximum of three storeys plus an attic.

2. Attics do not constitute a storey if they are included in a roof space and having a roof slope not greater than 36 degrees pitched from the ceiling level of the uppermost floor; provided that:

- All windows face the street.
- Access to the attic must be via permanent stairs.
- Attics are to be provided with skylights, or a dormer window. A dormer window shall be a maximum of 1.5m wide and must maintain the privacy of the adjoining residents.

Building Design

The built form must be uniform in bulk and scale but seek some variety in terms of building elements such as balconies, entrances, carports and roof forms.

The controls aim to ensure that a level of consistency is maintained in those building elements.

Objectives

a) To promote an architectural style that is contemporary and innovative

b) To encourage designs that will enhance the character of the neighbourhood.

c) To promote variation of building facade and design.

d) That the building enhances the streetscape through the use of suitable built form design and landscaping.

e) To ensure buildings address all street frontages.

f) To discourage garages and in particular garage doors, from visually dominating the streetscape.

g) To ensure that the building design, detailing, colour and finish shall add visual interest to the street and shall compliment the street.

h) To ensure habitable rooms address the street.

i) To encourage balconies over garages on two storey dwellings.

Controls

Building Appearance

1. Simply articulated building forms are preferred
2. Dwellings must address the street frontage
3. Mirror imaging of a Semi-detached dwelling is not permitted
4. One building must be set back a minimum of 1m behind the other building in Semi-detached dwellings.
5. Attached dwellings or Semi-detached dwellings are not permitted to zero lot line, except to the other dwelling.
6. Dwellings corner sites must address both street frontages.
7. Use of verandas and balconies are encouraged.
8. Vertically proportioned windows are encouraged.
9. Abutting dwellings within the 28 dwellings / hectare area should provide for a high variety of different building designs, making an eclectic yet coherent streetscape with examples shown in Figure 30.

Building Materials

1. External walls of dwellings can be constructed with the following materials:
   - Face brickwork,
   - Rendered brickwork,
   - Stone,
   - Concrete wall,

- Glass, and
- Lightweight materials such as, weatherboards, timber boarding or fibre cement.

2. External walls are to display a mix of materials.
3. Lightweight materials are only permitted on upper storey external walls.

Retaining Walls

1. Retaining walls can be either built of masonry or sandstone.

Roofs

1. Simple use of gables and pitched and hipped roofs is encouraged.
2. Pitched and hipped roofs are to have a minimum of 450mm eaves unless the dwelling has zero metre side setbacks.
3. Roof pitch must not be lower than 22.5 degrees or higher than 45 degrees.
4. Skillion and vaulted roofs are permitted.
5. Flat roofs must not dominate the built form.
6. Flat roofs must not occupy more than 50% of the total roof area.

Balconies

1. Decks and balconies can be built to form framed porticos or entrances.
2. Balconies should incorporate simple railing and balustrade detailing.

Levels

1. Dwellings are to follow the slope of the land.

Building Depth

Objectives

To achieve the development of working and living environments with good internal amenity and that minimise the need for artificial heating, cooling and lighting.

Controls

Maximum building depths for houses are 16m, unless internal courtyards are provided.

Internal Design of Dwellings

Objectives

a) The internal design must contribute to personal safety and to the protection of property by permitting casual surveillance of public spaces from private windows and entries.

b) To provide passive surveillance from rooms addressing the street or any adjoining open space.

c) To encourage the internal design of the dwelling to take advantage of cross ventilation.

d) To locate amenity rooms (such as laundries, bathrooms, toilets) to the side and rear of the development.

e) To ensure that each dwelling shall provide a sufficient amount of storage for elements such as garden and sports equipment.

Controls

1. All dwellings shall have habitable rooms located to the front of the dwelling for security and surveillance to the street.
2. Living rooms should take advantage of northern aspects.

3. Access to private open space must be from at least one living room.
4. The internal layout of the dwelling must incorporate cross ventilation.
5. Bathrooms, ensuites, laundries and walk in wardrobes should be located to the side or rear of the dwelling.
6. Each dwelling must provide a minimum storage area of $8m^3$.
7. Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).
8. Dwelling entries must be oriented to the street.

Figure 30: Examples of variable attached building design

Multi Dwelling Housing

Building Design

Objectives

a) To encourage designs that will enhance the character of the neighbourhood.

b) To promote variation of building facade and design.

c) That the building enhances the streetscape through the use of suitable built form design and landscaping.

d) To ensure buildings address all street frontages.

e) To discourage garages and in particular garage doors, from visually dominating the streetscape.

f) To ensure that the building design, detailing, colour and finish shall add visual interest to the street and shall compliment the street.

g) To ensure habitable rooms address the street.

h) To encourage balconies over garages in two storey dwellings.

i) To encourage steep or sloping site to build split level or stepped development.

Controls

1. Unit/s with a street frontage shall orientate the main entrance and where possible at least one living area towards the street.
2. Entry points shall be enhanced/emphasised to all dwellings especially those facing the street.
3. The first floor of the townhouse developments must be no greater than two thirds of the ground floor area.
4. Building facades shall be articulated and roof form is to be varied to provide visual variety.
5. Walls shall be a mix of masonry, rendered and or bagged, and painted, lightweight clad and painted and/or flush face brick. Justification will be required for 100% face brick facades or 100% rendered and painted brick and will be assessed on merit.
6. Facades can be articulated by:
   - The use of different materials and detailing.
   - The inclusion of balconies, verandahs, pergolas and landscaped beds.
7. A sidewall must be articulated if the wall has a continuous length of over 10m.
8. The entrance of each dwelling shall be emphasised.
9. Units built at the rear of the allotment must be single storey.
10. Driveways should avoid a ‘gun barrel’ effect by curving and siting of buildings, which create a driveway form with the divided carriageway separated by soft landscaping.
11. Attic floor space may be used when it is contained wholly within the roof pitch and will not be counted as a storey provided that the attic space is part of the dwelling unit.
12. Space used for car parking shall be included as a storey if the ceiling of the car parking level exceeds more than 1m above the natural ground level.
13. The maximum roof pitch shall be 36 degrees.
14. Townhouses built on steep or sloping lots should be built of split-level construction.

15. Row housing dwellings within the 28 dwellings / hectare area should provide for a high variety of different building designs, making an eclectic yet coherent streetscape with examples shown in Figure 30.

Internal Design

Objectives

a) The internal design must contribute to personal safety and to the protection of property by permitting casual surveillance of public spaces from private windows and entries.

b) To provide natural surveillance from a room addressing the street.

c) To encourage the internal design of the dwelling to take advantage of cross ventilation.

d) To locate amenity rooms (such as laundries, bathrooms, toilets) to the side and rear of the development.

e) To ensure that each unit provides a sufficient amount of storage for elements such as garden and sports equipment.

Controls

1. Townhouses and villa's located on street boundaries shall have habitable rooms located to the front of the dwelling for security and surveillance to the street.
2. Living rooms should take advantage of northern aspects where possible.
3. Access to private open space must be from at least one living room.
4. The internal layout of the dwelling must incorporate cross ventilation.
5. Bathrooms, ensuites, laundries and walk in wardrobes should be located to the side and the rear of the development.
6. Each dwelling must provide a minimum storage area of $8m^3$.
7. Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).

Residential Flat Buildings

Building Design

Objectives

a) To ensure an attractive streetscape that is consistent with the environment of residential flat buildings.

b) To promote high architectural quality in residential flat buildings.

c) To ensure that new developments have facades which define and enhance the public domain and desired street character.

d) To ensure that building elements are integrated into the overall building form and facade design.

Controls

1. Residential Flat Buildings shall comply with State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development, and should consider the Apartment Design Guide (ADG) or equivalent.
2. Building facades shall be articulated and roof form is to be varied to provide visual variety.
3. The pedestrian entrance to the building shall be emphasised.
4. A sidewall must be articulated if the wall has a continuous length of over 14m.

5. Driveway walls adjacent to the entrance of a basement car park are to be treated so that their appearance is consistent with the basement or podium walls.
6. Sensitive design of basement car parking areas can assist in ensuring that podiums and vehicle entry areas do not dominate the overall design of the building or the streetscape and optimise areas for deep soil planting.
7. The integration of podium design should be an integral part of the design of the development, and as far as possible should not visibly encroach beyond the building footprint.
8. A master antenna shall be provided for any development of more than three dwellings and be located so that it is not visible from the street or any public open space.
9. Consider the relationship between the whole building form and the facade and / or building elements. The number and distribution of elements across a façade determine simplicity or complexity. Columns, beams, floor slabs, balconies, window openings and fenestrations, doors, balustrades, roof forms and parapets are elements, which can be revealed or concealed and organised into simple or complex patterns.
10. Compose facades with an appropriate scale, rhythm and proportion, which respond to the building's use and the desired contextual character. This may include but are not limited to:
    - Defining a base, middle and top related to the overall proportion of the building.
    - Expressing key datum lines in the context using cornices, a change in materials or building set back.
    - Expressing the internal layout of the building, for example, vertical bays or its structure, such as party wall-divisions.
    - Expressing the variation in floor-to-floor height, particularly at the lower levels.
    - Articulating building entries with awnings, porticos, recesses, blade walls and projecting bays.
    - Selecting balcony types which respond to the street context, building orientation and residential amenity.
    - Cantilevered, partially recessed, wholly recessed, or Juliet balconies will all create different facade profiles.
    - Detailing balustrades to reflect the type and location of the balcony and its relationship to the façade detail and materials.
11. Design facades to reflect the orientation of the site using elements such as sun shading, light shelves and bay windows as environmental controls, depending on the facade orientation.
12. Express important corners by giving visual prominence to parts of the facade, for example, a change in building articulation, material or colour, roof expression or increased height.
13. Co-ordinate and integrate building services, such as drainage pipes, with overall facade and balcony design.
14. Co-ordinate security grills/screens, ventilation louvres and car park entry doors with the overall facade design

Internal design

Objective

To ensure that the internal design of buildings provide a pleasant environment for the occupants and residents of adjoining properties.

Controls

1. All staircases should be internal.
2. Minimise the length of common walls between dwellings.
3. Basement car parking shall be located beneath the building footprint.
4. Where possible natural ventilation shall be provided to basement car parking.
5. Design building layouts to minimise direct overlooking of rooms and private open spaces adjacent to dwellings
6. Minimise the location of noise sensitive rooms such as bedrooms adjoining noisier rooms such as bathrooms or kitchens or common corridors and stairwells.
7. Where a site has boundary to a Classified Road, locate bedrooms away from that boundary.
8. Where common walls are provided they must be carried to the underside of the roof and be constructed in accordance with Part F5 of the Building Code of Australia.
9. Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).

Ground Floor Dwellings

Objectives

a) To contribute to the desired streetscape of an area and to create active safe streets.

b) To increase the housing and lifestyle choices available in dwelling buildings.

Controls

1. Design front gardens or terraces, which contribute to the spatial and visual structure of the street while maintaining adequate privacy for dwelling occupants. This can be achieved by animating the street edge, for example, by promoting individual entries for ground floor dwellings.
2. Create more pedestrian activity along the street and articulate the street edge by:
   - Balancing privacy requirements and pedestrian accessibility.
   - Providing appropriate fencing, lighting and/ or landscaping to meet privacy and safety requirements of occupants while contributing to a pleasant streetscape.
   - Utilising a change in level from the street to the private garden or terrace to minimise site lines from the streets into the dwelling for some dwellings.
   - Increasing street surveillance with doors and windows facing onto the street.
3. Planting along the terrace edge contributes to a quality streetscape.
4. Ground floor dwellings are special because they offer the potential for direct access from the street and on-grade private landscape areas. They also provide opportunities for the dwelling building and its landscape to respond to the streetscape and the public domain at the pedestrian scale. Ground floor dwellings also support housing choice by providing accessibility to the elderly and/or disabled and support families with small children.
5. Optimise the number of ground floor dwellings with separate entries and consider requiring an appropriate percentage of accessible units. This relates to the desired streetscape and topography of the site.
6. Provide ground floor dwellings with access to private open space, preferably as a courtyard.

Natural Ventilation

Objectives

a) To ensure that dwellings are designed to provide all habitable rooms with direct access to fresh air and to assist in promoting thermal comfort for occupants.

b) To provide natural ventilation in non-habitable rooms, where possible.

c) To reduce energy consumption by minimising the use of mechanical ventilation, particularly air conditioning.

Controls

1. Utilise the building layout and section to increase the potential for natural ventilation. Design solutions may include:
   - Facilitating cross ventilation by designing narrow building depths and providing dual aspect dwellings, for example, cross through dwellings and corner dwellings.
   - Facilitating convective currents by designing units, which draw cool air in at lower levels and allow warm air to escape at higher levels, for example, maisonette dwellings and two-storey dwellings.
2. Select doors and windows (that open) to maximise natural ventilation opportunities established by the dwelling layout.
3. Provide narrow building depths to support cross ventilation.
4. Avoid single-aspect dwellings with a southerly aspect.
5. Design the internal dwelling layout to promote natural ventilation by:
   - Minimising interruptions in air flow through an dwelling.
   - Grouping rooms with similar usage together, for example, keeping living spaces together and sleeping spaces together. This allows the dwelling to be compartmentalised for efficient summer cooling or winter heating.
   - Select doors and operable windows to maximise natural ventilation opportunities established by the dwelling layout.

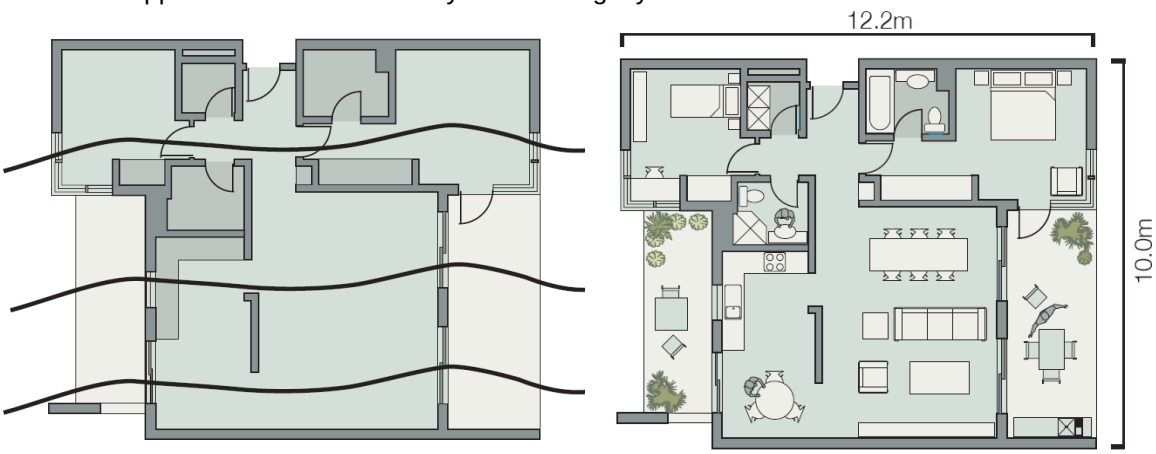


Figure 31: Cross Ventilation

Storage Areas

Objective

To provide for the need of residents to be able to store personal items adjacent to the car parking area.

Controls

1. A secure storage space is to be provided for each dwelling with a minimum volume 8m3 (minimum dimension 2m). This must be set aside exclusively for storage as part of the basement or garage.
2. Storage areas must be adequately lit and secure. Particular attention must be given to security of basement and garage storage areas.

All Residential Development

Roof Design

Objectives

a) To provide quality roof designs, which contribute to the overall design and performance of residential flat buildings.

b) To integrate the design of the roof into the overall facade, building composition and desired contextual response.

c) To increase the longevity of the building through weather protection.

Controls

1. Relate roof design to the desired built form. This may include:
   - Articulating the roof, or breaking down its massing on large buildings, to minimise the apparent bulk or to relate to a context of smaller building forms.
   - Using a similar roof pitch or material to adjacent buildings, particularly in existing special character areas or heritage conservation areas.
   - Minimising the expression of roof forms gives prominence to a strong horizontal datum in the adjacent context, such as an existing parapet line.
   - Using special roof features, which relate to the desired character of an area, to express important corners.
2. Design the roof to relate to the size and scale of the building, the building elevations and three-dimensional building form. This includes the design of any parapet or terminating elements and the selection of roof materials.
3. Design roofs to respond to the orientation of the site, for example, by using eaves and skillion roofs to respond to sun access.
4. Minimise the visual intrusiveness of service elements by integrating them into the design of the roof. These elements include lift over-runs, service plants, chimneys, vent stacks, telecommunication infrastructures, gutters, downpipes and signage.
5. Where habitable space is provided within the roof, optimise residential amenity in the form of attics or penthouse dwellings.

Building Entry

Objectives

a) To create entrances which provide a desirable residential identity for the development.

b) To orient the visitor.

c) To contribute positively to the streetscape and building facade design.

Controls

1. Improve the presentation of the development to the street by:
   - Locating entries so that they relate to the existing street and subdivision pattern, street tree planting and pedestrian access network.
   - Designing the entry as a clearly identifiable element of the building in the street.
   - Utilising multiple entries-main entry plus private ground floor dwelling entries-where it is desirable to activate the street edge or reinforce a rhythm of entries along a street.
2. Provide as direct a physical and visual connection as possible between the street and the entry.
3. Achieve clear lines of transition between the public street, the shared private, circulation spaces and the dwelling unit.
4. Ensure equal access for all.
5. Provide safe and secure access by:
   - Avoiding ambiguous and publicly accessible small spaces in entry areas.
   - Providing a clear line of sight between one circulation space and the next.
   - Providing sheltered well-lit and highly visible spaces to enter the building, meet and collect mail.
6. Generally provide separate entries from the street for:
   - Pedestrians and cars.
   - Different uses, for example, for residential and commercial users in a mixed-use development.
   - Ground floor dwellings, where applicable.
7. Design entries and associated circulation space of an adequate size to allow movement of furniture between public and private spaces.
8. Provide and design letterboxes to be convenient for residents and not to clutter the appearance of the development from the street by:
   - Locating them adjacent to the major entrance and integrated into a wall, where possible.
   - Setting them at 90 degrees to the street, rather than along the front boundary.

Daylight Access

Objectives

a) To ensure that daylight access is provided to all habitable rooms and encouraged in all other areas of residential flat development.

b) To provide adequate ambient lighting and minimise the need for artificial lighting during daylight hours.

c) To provide residents with the ability to adjust the quantity of daylight to suit their needs.

Controls

1. Plan the site so that new dwellings are oriented to optimise northern aspect.
2. Ensure direct daylight access to communal open space between March and September and provide appropriate shading in summer.
3. Optimise the number of dwellings receiving daylight access to habitable rooms and principal windows.

4. Ensure daylight access to habitable rooms and private open space, particularly in winter - use skylights, clerestory windows and fanlights to supplement daylight access.
5. Promote two-storey and mezzanine, ground floor dwellings or locations where daylight is limited to facilitate daylight access to living rooms and private open spaces.
6. Ensure single aspect, single-storey dwellings have a northerly or easterly aspect - locate living areas to the north and service areas to the south and west of the development.
7. Avoid south facing dwellings.
8. Design for shading and glare control, particularly in summer, by:
   - Using shading devices, such as eaves, awnings, colonnades, balconies, pergolas, external louvres and planting.
   - Optimising the number of north-facing living spaces.
   - Providing external horizontal shading to north-facing windows.
   - Providing vertical shading to east or west windows.
9. Consider higher ceilings and higher window heads to allow deeper sunlight penetration.
10. On west facing windows, vertical louvre panels or sliding screens protect from glare and low afternoon sun.
11. On north facing windows, projecting horizontal louvres admit winter sun while shading summer sun.
12. Use high performance glass but minimise external glare off windows, by:
    - Avoiding reflective films.
    - Using a glass reflectance below 20%.
    - Considering reduced tint glass.
13. Limit the use of lightwells as a source of daylight by limiting their use as the primary source of daylight in habitable rooms. Where they are used:
    - Relate lightwell dimensions to building separation, for example, if non-habitable rooms face into a light well less than 12m high, the lightwell should measure 6 x 6m.
    - Conceal building services and provide appropriate detail and materials to visible walls.
    - Ensure light wells are fully open to the sky.
    - A combination of louvres provides shading for different times of the day.

3.6 Car Parking and Access

Residential Flat Buildings

Objectives

a) To provide convenient, accessible and safe on site car parking for residents and visitors.

b) To minimise driveway crossings to maximise on street parking and landscaped nature strips.

c) To integrate the location and design of car parking with the design of the site and building without compromising street character, landscape or pedestrian amenity and safety.

d) To integrate the location and design of car parking with the design of the site and the building.

Controls

1. Visitor car parking shall be clearly identified and may not be stacked or tandem car parking.
2. Visitor car parking shall be located between any roller shutter door and the front boundary.
3. Pedestrian entries and driveways shall be separated.
4. Driveways shall be designed to accommodate removalist vehicles.
5. Where possible vehicular entrances to the basement car parking shall be from the side of the building. As an alternative a curved driveway to an entrance at the front of the building may be considered if the entrance is not readily visible from the street.
6. Give preference to underground parking, whenever possible by:
   - Retaining and optimising the consolidated areas of deep soil zones.
   - Facilitating natural ventilation to basement and sub-basement car parking areas, where possible.
   - Integrating ventilation grills or screening devices of car park openings into the facade design and landscape design.
   - Providing safe and secure access for building users, including direct access to residential dwellings, where possible.
   - Providing a logical and efficient structural grid. There may be a larger floor area for basement car parking than for upper floors above ground. Upper floors, particularly in slender residential buildings, do not have to replicate basement car parking widths.
7. Where above ground enclosed parking cannot be avoided, ensure the design of the development mitigates any negative impact on streetscape and street amenity by:
   - Avoid exposed parking on the street frontage.
   - Hiding car parking behind the building facade. Where wall openings (windows, fenestrations) occur, ensure they are integrated into the overall facade scale, proportions and detail.

Figure 32: Car parking at ground level

Pedestrian Access

Objectives

a) To promote residential flat development and multi dwelling housing that is well connected to the street and contributes to the accessibility of the public domain.

b) To ensure that residents, including users of strollers and wheelchairs and people with bicycles, are able to reach and enter their dwelling and use communal areas via minimum grade ramps, paths, access ways or lifts.

Controls

1. Utilise the site and it's planning to optimise accessibility to the development.
2. Provide high quality accessible routes to public and semi-public areas of the building and the site, including major entries, lobbies, communal open space, site facilities, parking areas, public streets and internal streets.
3. Promote equity by:
   - Ensuring the main building entrance is accessible for all from the street and from car parking areas.
   - Integrating ramps into the overall building and landscape design.
   - Design ground floor dwellings to be accessible from the street, where applicable, and to their associated private open space.
4. Maximise the number of accessible and adaptable dwellings in a building by:
   - Providing more than one accessible entrance where a development contains clusters of buildings.
   - Separating and clearly distinguish between pedestrian accessways and vehicle accessways.
   - Locating vehicle entries away from main pedestrian entries and on secondary frontages.

Dwelling Houses, Attached dwellings or Semi-detached dwellings

Objectives

a) To provide car parking facilities on site that are convenient, safe and have sufficient space for vehicular manoeuvrability, whilst being visually unobtrusive.

b) To minimise the need for on street car parking from new dwellings.

Controls

1. Two car parking spaces shall be provided for each dwelling.
2. At least one car parking must be provided behind the front setback.
3. A car parking space is to have a minimum dimension of 2.5 x 5.5m.
4. A single garage is to be a minimum of 3m wide internally and unobstructed.

3.7 Amenity and Environmental Impact

Overshadowing

Objective

To minimise overshadowing of neighbouring dwellings and their private open space.

Controls

Adjoining properties must receive a minimum of three hours of sunlight between 9am and 5pm on 21 June to at least:

- One living, rumpus room or the like; and
- 50% of the private open space.

Privacy

Objectives

a) To locate and design buildings to meet projected user requirements for visual and acoustic privacy and to protect privacy of nearby residents.

b) To avoid any external impacts of a development, such as overlooking of adjoining sites.

c) To provide reasonable levels of visual privacy externally and internally, during the day and at night.

d) To maximise outlook and views from principal rooms and private open space.

Controls

1. Building siting, window location, balconies and fencing should take account of the importance of the privacy of on site and adjoining buildings and outdoor spaces.
2. Windows to habitable rooms should be located so they do not overlook such windows in adjoining properties, other dwellings within the development or areas of private open space.
3. Landscaping should be used where possible to increase visual privacy between dwellings and adjoining properties.
4. Where possible the ground floor dwellings should be located above ground level to ensure privacy for occupants of the dwellings.

5. Design building layouts to minimise direct overlooking of rooms and private open spaces adjacent to dwellings by:
   - Balconies to screen other balconies and any ground level private open space.
   - Separating communal open space, common areas and access routes through the development from the windows of rooms, particularly habitable rooms.
   - Changing the level between ground floor dwellings with their associated private open space, and the public domain or communal open space.
6. Use detailed site and building design elements to increase privacy without compromising access to light and air by:
   - Offsetting windows of dwellings in new development and adjacent development windows.
   - Recessed balconies and/or vertical fins between adjacent balconies.
   - Solid or semi-solid balustrades to balconies - louvres or screen panels to windows and/or balconies.
   - Fencing.
   - Vegetation as a screen between spaces.
   - Incorporating planter boxes into walls or balustrades to increase the visual separation between areas.
   - Utilising pergolas or shading devises to limit overlooking of lower dwellings or private open space.

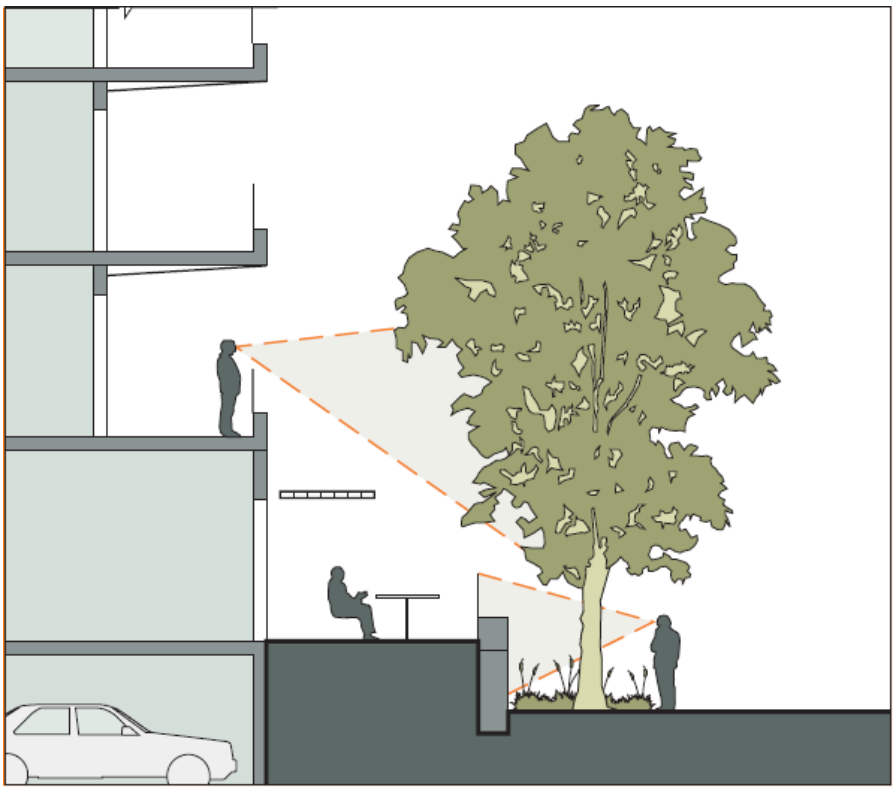


Figure 33: Screening and lower level balconies

Acoustic Impact

Objective

To ensure a high level of amenity by protecting the privacy of residents within residential flat buildings.

Controls

1. Noise attenuation measures should be incorporated into building design to ensure acoustic privacy between on-site and adjoining buildings.
2. Buildings having frontage to a Classified Road or a railway and impacted upon by rail or traffic related noises must incorporate the appropriate noise and vibration mitigation measures into the design in terms of the site layout, building materials and design, orientation of the buildings and location of sleeping and recreation areas.
3. The proposed buildings must comply with the Environment Protection Authority criteria and the current relevant Australian Standards for noise and vibration and quality assurance.
4. Arrange dwellings within a development to minimise noise transition between dwellings by:
   - Locating busy, noisy areas next to each other and quieter areas next to other quiet areas, for example, living rooms with living rooms, bedrooms with bedrooms.
   - Using storage or circulation zones within a dwelling to buffer noise from adjacent dwellings, mechanical services or corridors and lobby areas.
   - Minimising the amount of common walls with other dwellings.
   - Design the internal dwelling layout to separate noisier spaces from quieter spaces by grouping uses within an dwelling - bedrooms with bedrooms and service areas like kitchen, bathroom, and laundry together.

3.8 Site Services

Objectives

a) To ensure that the required services are provided.

b) To ensure that the services provided are easily protected or maintained.

Controls

Letterboxes

1. Letterboxes shall to be provided for each dwelling on site, easily accessible from the street, able to be securely locked and provided in accordance with Australia Post's requirements.
2. Freestanding letterbox structures should be designed and constructed of materials that relate to the main building.
3. Residential numbering should be attached to the letterbox so that it is clearly visible from the street frontage. Numbers should be 75mm in height, reflective and in contrast to the backing material.

Waste management

1. Waste disposal facilities shall be provided for development. These shall be located adjacent to the driveway entrance to the site.
2. Any structure involving waste disposal facilities shall be located as follows:
   - Setback 1m from the front boundary to the street.
   - Landscaped between the structure and the front boundary and adjoining areas to minimise the impact on the streetscape.
   - Not be located adjacent to an adjoining residential property.
   - Details of the design of waste disposal facilities are shown in Part 1 of the DCP.

Frontage works and damage to Council infrastructure

1. Where a footpath, road shoulder or new or enlarged access driveway is required to be provided this shall be provided at no cost to Council.
2. Council must be notified of any works that may threaten Council assets. Council must give approval for any works involving Council infrastructure.
3. Where there are no existing street trees in front of the site and contributions have not been collected for street tree planting it may be a condition of consent that street trees be provided in the footpath area immediately in front of the site.

Electricity Sub Station

1. In some cases it may be necessary to provide an electricity substation at the front of the development adjacent to the street frontage. This will involve dedication of the area as a public street to allow access by the electricity provider. The front boundary treatment used elsewhere on the street frontage.

3.9 Residential Choice and Mix for Apartment Buildings

A mix of apartment types and sizes is proposed to cater for a variety of socio-economic groups. A range of dwelling sizes and types creates a housing mix that will cater for a diverse population, as well as provide for changing use over time.

Objectives

a) To ensure development provides a mix of apartment types and sizes to accommodate a range of household types and needs.

b) To ensure apartment sizes and room proportions are adequate to meet the needs of the occupants and to afford a range of changing activities over time.

c) Ensure a sufficient proportion of dwellings include accessible layouts and features to accommodate changing requirements of residents.

d) Ensure the provision of housing that will, in its adaptable features, meet the access and mobility needs of any occupant.

In addition to the provisions for apartment mix as per Part 4 of the Apartment Design Guide (ADG) or equivalent, the following additional controls apply.

Controls

1. Provide a variety of residential unit mix, sizes, and layouts within each residential development, particularly in larger buildings. It is recognised that the dwelling mixes may not be possible in smaller developments of less than six dwellings.
2. To achieve a mix of living styles, sizes and layouts within each residential development, comply with the following:

- Provide a mix of studio, 1 bedroom, 2 bedroom and 3 bedroom units.
- Studios and 1 bedroom units are not to be greater than 25% and not less than 5% of the total mix of apartments within each development.
- Two bedroom units are not to be more than 75% of the total mix of apartments within each development.

3. Provide apartments that are flexible enough to support a change in their use. The applicant will be required to demonstrate that a studio unit can be combined with other units to enable this to occur.
4. 10% of all apartments are to be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes 'pre-adaptation' design details to ensure visit ability is achieved.
5. Where possible, adaptable dwellings are to be located on the ground floor, for ease of access. Dwellings located above the ground level of a building may only be provided as adaptable dwellings where lift access is available within the building. The lift access must provide access from the basement to allow access for people with disabilities.
6. The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian adaptable Housing Standard (AS 4299-1995).
7. Car parking and garages allocated to adaptable dwellings must comply with the requirements of the relevant Australian Standard for disable parking spaces.

3.10 Studio dwellings

Studio dwelling means a small self-contained dwelling that is erected above a garage facing a rear lane or a secondary road.

For the purpose of definition under the Liverpool Local Environmental Plan 2008, a Type 1 studio dwelling is a secondary dwelling.

For the purpose of definition under the Liverpool Local Environmental Plan 2008, a Type 2 studio dwelling is a dual occupancy or multi-dwelling housing.

Objectives

a) To provide an alternate form of housing in master planned neighbourhoods that include community facilities.

b) To provide for a variety of housing types to cater for varied socio-demographic households.

c) To provide for passive surveillance to laneways and private accessways.

Controls

Type 1 Studio

Type 1 Studios are a room or rooms constructed above a detached garage associated with the main dwelling on the lot. The studio is primarily designed to be used by the occupants of the main dwelling. The studio shall comply with the following:

1. The studio shall be located on corner blocks or addressing secondary streets and on laneway entries and bends to improve surveillance.
2. Located on lots with a minimum size of 300sqm.
3. Must be detached from other studios.
4. Maximum gross floor area: 45sqm.

5. No additional car parking space is required.
6. The studio shall be located above the garage, carport or like structure for the principal dwelling on the land.
7. There may be no subdivision of the studio from the principal dwelling on the land.
8. Windows are not permitted on elevations which directly face the adjoining lots private open space.
9. Garages with studios above are to be constructed 1.5m from the rear boundary and may have a zero lot setback to one side boundary.
10. A studio must have a minimum separation of 4m from the first floor of the principal dwelling on the lot.
11. Studios shall not reduce the minimum required amount of solar access to any dwelling's (adjoining or on the principal dwelling) private open space as stipulated in Section 3.5 of this Part.

Type 2 Studio

Type 2 Studios are a room or rooms constructed above a detached garage that is intended to be separately strata titled to allow for independent living from the principal dwelling on the lot. The studio shall comply with the following:

1. The studio shall be located on corner blocks with laneway vehicle access.
2. Located on lots with a minimum size of 350sqm.
3. Maximum gross floor area: 75sqm.
4. Studio to be located above the garage, carport or like structure for the principal dwelling on the land and are to be detached from other studios.
5. One additional dedicated on-site car parking space is required to be associated with the Type 2 studio.
6. Car parking space is not to be located in front building setback of the principal dwelling.
7. Car parking space is not to be in a stacked configuration.
8. The studio must include provision of a balcony accessed directly off living space having minimum size of 6sqm, plus a minimum 10sqm ground level service yard with space for clothes drying facilities. The balcony shall not protrude over any property boundary.
9. Type 2 studios may be strata subdivided from the principal dwelling, or dwellings on the land.
10. Garages with studios are to be constructed 1.5m from the rear boundary and may have a zero lot setback to one side boundary.
11. A studio must have a minimum separation of 4m from the first floor of the principal dwelling on the lot.
12. Pedestrian access to studios is to be from the street frontage and not the laneway.
13. Provision for separate services and an on-site garbage storage area e.g. separate letter box.
14. Studios shall not reduce the minimum amount of solar access to any dwelling's (adjoining or on the principal dwelling) private open space as stipulated in Section 3.5 of this Part.
15. Windows are not permitted on elevations which directly face the adjoining lots private open space. Windows may be permitted on the elevation facing the principal dwelling on the lot where they have a minimum sill height of 1.7m.

16. Screened access ways (e.g. staircases) for studios to prevent viewing into adjoining private open space areas.

4. Controls for Residential Development Urban Transition areas (17&21 Dwellings/Hectare)

4.1 Preliminary

Applies to

This section applies to land identified in Liverpool LEP 2008 Dwelling Density Map as having a minimum density of 17 or 21 Dwellings / Hectare.

Background

Development within the 17 and 21 dwellings/hectare areas are primarily intended for Multi Dwelling Housing, Semi-detached dwellings and Detached dwellings. Residential Flat Buildings are not preferred in the 17 or 21 dwellings/hectare areas (however, if proposed, they are subject to objectives and controls for the urban 28 dwellings/hectare area).

4.2 Site Planning

Objectives

a) To ensure that the dwelling(s) are sensitive to site attributes, such as streetscape character, natural landform, drainage, existing vegetation, land capability, slope, solar access and if relevant, heritage items.

b) To ensure privacy for residents and neighbours.

Controls

1. The dwelling layout must be designed around the site attributes such as slope, existing vegetation, land capability and/or solar access (See Figure 34 for a site analysis plan).
2. Basement car parking (if applicable) should be unobtrusive and blend into the general façade of the building.
3. There must be a direct link from at least one living area to the principal private open space.
4. The siting of windows of habitable rooms on the first floor shall minimise overlooking to the principal private open space of neighbouring properties.
5. Stormwater from the site must be able to be drained satisfactorily. Where the site falls away from the street, it may be necessary to obtain an easement over adjoining property to drain water satisfactorily to a Council stormwater system. Where stormwater drains directly to the street, there may also be a need to incorporate on-site detention of stormwater where street drainage is inadequate. Refer to Water cycle management in Part 1.

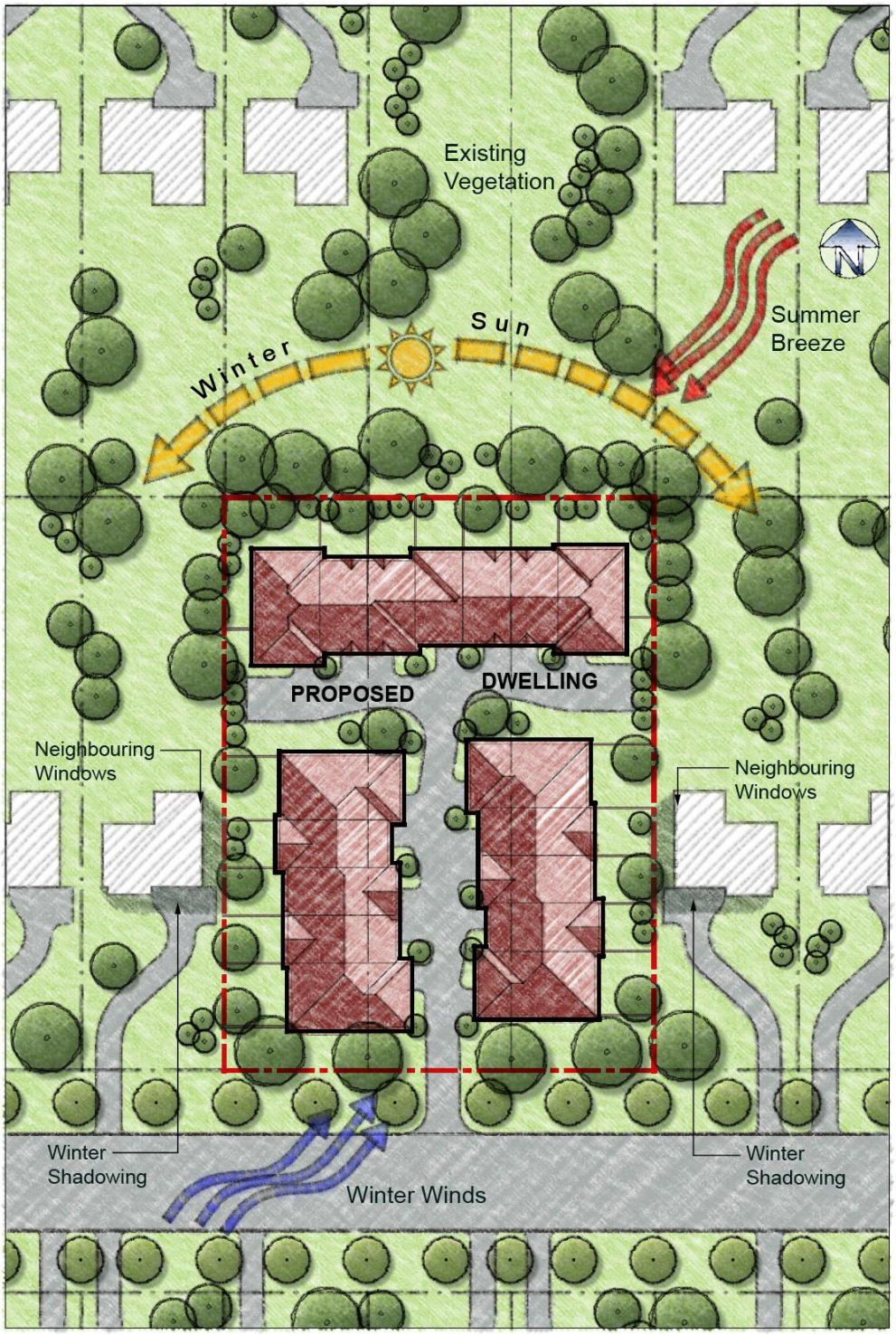


Figure 34: Example of a Site Analysis Plan

4.3 Setbacks

Objectives

a) To set dwellings back from the street and adjacent properties to provide reasonable space for landscaping, private open space and solar access.

b) To set dwellings back from each other to provide visual and acoustic privacy.

c) To create a streetscape that provides a desirable and safe environment.

d) To establish a streetscape of a scale and sense of enclosure appropriate to the locality.

e) To maximise the amount of area capable of allowing the growth of trees and shrubs.

Controls

Front and Secondary Setbacks

1. Buildings shall be setback in accordance with Table 4.

Table 4: Setbacks within the 17 dw/ha area

Front Setback	Secondary Setback
4.5 m	2.5 m

2. For lots containing a dwelling house, the secondary setback is generally along the longest length boundary. For multi-dwelling housing, the secondary setback faces the secondary road, which may be the shorter boundary(s).

3. Garages shall be setback 5.5m from the street frontage, or 1.0m from a secondary boundary when consistent with a typology shown in Figure 21.

4. Articulation features such as verandahs, eaves and other sun control devices may encroach on the front and secondary setback by up to 1m.

5. Corner sites shall provide a frontage to both streets and should articulate their corner location with an architectural feature such as a wraparound verandah, bay window, corner entry or roof feature.

Figure 35: Small lot housing corner lot articulation

Side and Rear Setbacks

1. Buildings shall be setback from the side and rear boundaries in accordance with Table 5.

Table 5: Side and rear setbacks within the 17 & 21 dw/ha areas

Item	Side Setback		Rear Setback	
	Multi Dwelling Housing	Dwelling House, Attached dwelling and Semi-detached dwelling	Multi Dwelling Housing	Dwelling House, Attached dwelling and Semi-detached dwelling
Party Wall	0 m	0 m	n/a	n/a
1 storey	0.9 m	0.9 m	5 m	4 m
2 storey	1.2 m	1.2 m	8 m	8 m
3 storeys and above	1.4 m	1.4 m	8 m	8 m

Note: In a terrace style attached dwelling development the upper storey setbacks do not apply to the terraces unless by having the zero lot line will create unreasonable solar shading - (that the adjacent lot's dwelling will not receive the minimum 3 hours sunlight to 50% between 9am and 3pm on the 21st June)

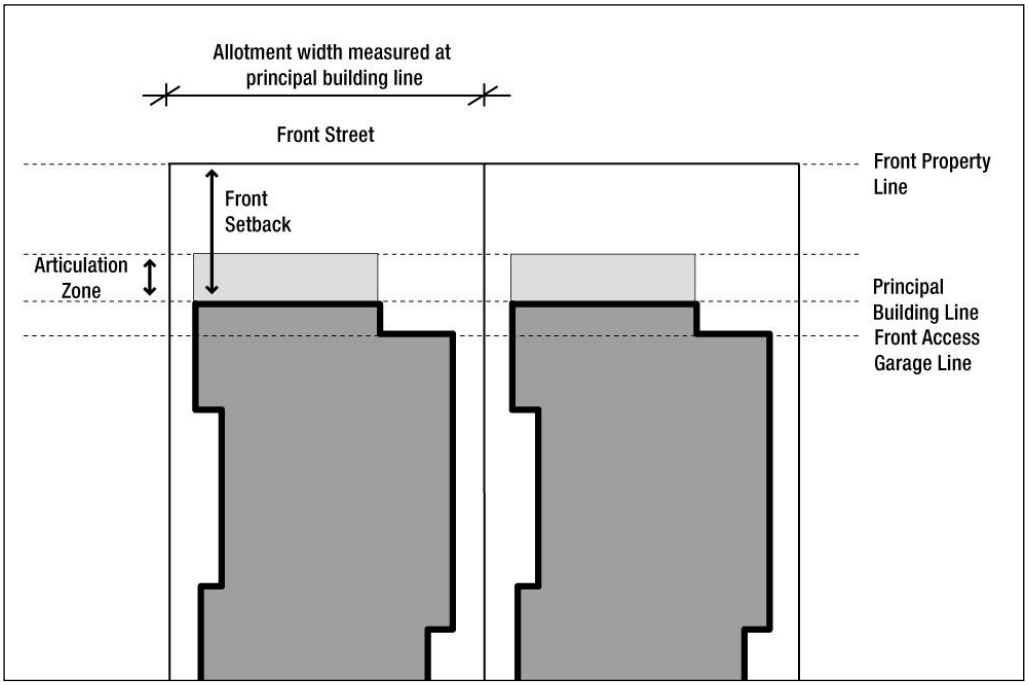


Figure 36: Front Setback

Zero lot lines for attached and semi-detached dwellings

This zero lot line control only applies to the end dwellings, in a multi-zero lot line multi dwelling development, such as terraces. It also applies to dwellings that have a zero lot line.

1. Walls are generally to be 180mm clear of the side boundary to allow for gutter and eaves overhang.
2. The length of a zero lot line wall is limited to 50% of the lot length.

3. No windows are permitted in a zero lot line wall.
4. A maintenance easement of at least 900mm shall be provided on the adjoining boundary.
5. This is shown in Figure 38.

Zero Lot Lines

Objectives

a) To allow flexibility in the distribution of side setbacks in residential areas in order to achieve varying dwelling types and to maximise solar access.

b) To create attractive and cohesive streetscapes and the efficient use of land.

c) To maintain appropriate amenity between dwellings.

Controls

1. Zero lot line dwellings are not permitted on an ad-hoc basis. They must form part of a subdivision plan for at least one complete block/street frontage so that a consistent streetscape is achieved and that the privacy and solar access of adjoining dwellings are not adversely impacted upon.
2. Zero lot line dwellings are to provide a side setback on the non zero lot line side that equals to at least twice the minimum side setback requirement in Table 5 Side Setbacks.
3. Zero lot line development is to follow the lot orientation principles as shown in Figure 37 to maximise solar access.
4. Zero lot line development is not permitted on lots that are 15m wide or greater.
5. An easement for maintenance of the zero lot line walls (and any services along the side of the dwelling) is to be provided on the adjoining property. No overhanging eaves or services will be permitted within the easement. The S88b instrument supporting the maintenance easement is to be worded so that Council is removed from any dispute resolution process.

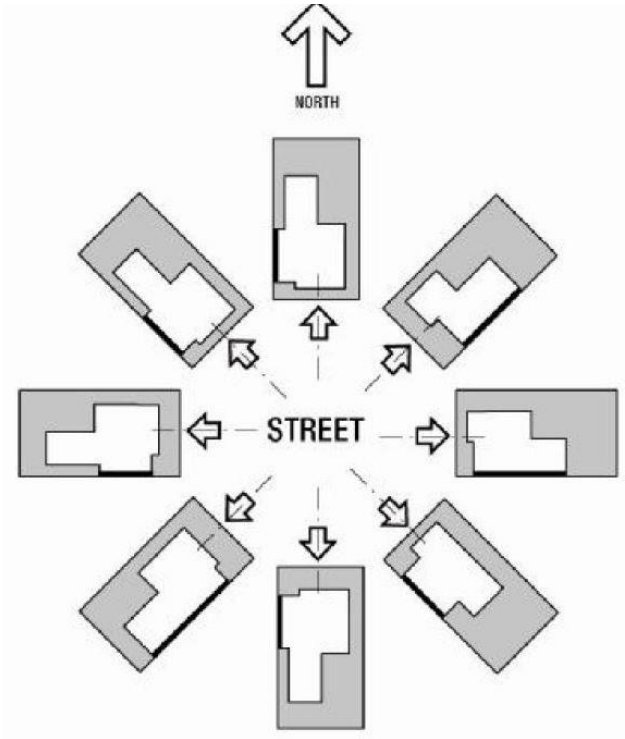


Figure 37: Lot orientation principles

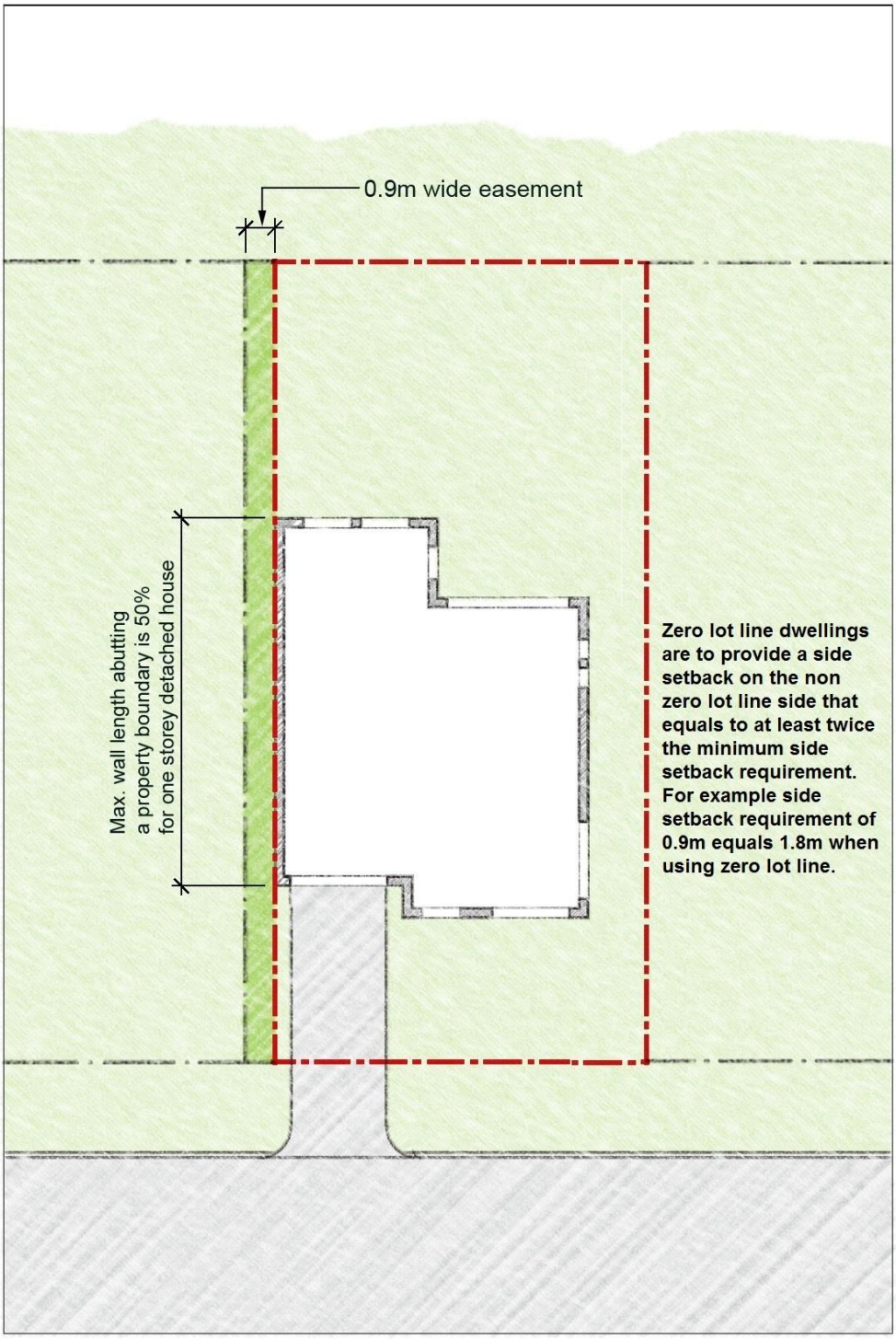


Figure 38: Zero Lot Line

4.4 Landscaped Area and Private Open Space

Landscaped area is defined in Liverpool LEP 2008.

Landscaped Area (deep soil area)

Objectives

a) To provide an area to allow vegetation to mature.

b) To assist with management of the water table.

c) To assist with management of water quality.

d) To enhance the existing streetscape and soften the visual appearance of the buildings.

Controls

1. A minimum of 20% of the site area shall be landscaped area.
2. Optimise the provision of consolidated landscaped area within a site by:
   - The design of basement and sub-basement car parking, so as not to fully cover the site.
   - The use of side and rear setbacks.
   - Optimise the extent of landscaped area beyond the site boundaries by locating them contiguous with the landscaped area of adjacent properties.
3. Promote landscape health by supporting for a rich variety of vegetation type and size.
4. Increase the permeability of paved areas by limiting the area of paving and/or using pervious paving materials.

Open Space

Open space includes Landscaped Areas and hard paved areas such as footpaths and barbeque areas. It does not include driveways, drying areas or waste storage areas.

Objectives

a) To provide residents with passive and active recreational opportunities.

b) To provide an area on site that enables soft landscaping and deep soil planting.

c) To ensure that communal open space is consolidated, configured and designed to be useable and attractive.

d) To provide a pleasant outlook.

Controls

1. Provide communal open space, which is appropriate and relevant to the context and the building's setting.
2. Where communal open space is provided, facilitate its use for the desired range of activities by:
   - Locating it in relation to buildings to optimise solar access to dwellings.
   - Consolidating open space on the site into recognisable areas with reasonable space, facilities and landscape.
   - Designing its size and dimensions to allow for the range of uses it will contain.
   - Minimising overshadowing.
   - Carefully locating ventilation duct outlets from basement car parking.
3. Locate open space to increase the potential for residential amenity.

Private Open Space

Objective

a) To ensure that private open space is clearly defined, usable and meets user requirements for privacy, solar access, outdoor activities, accessibility and landscaping.

b) To provide all dwellings with private open space.

Controls

1. Private open space shall be provided for in accordance with Table 6for Multi Dwelling Housing, Attached dwellings and Semi-detached dwellings and Dwelling houses.

Table 6: Private open space in the 17 & 21 dw/ha area

Dwelling Size	Private Open Space Area	Minimum Width
Less than 65 m^2	30sqm	3m
Between 65 and 100m^2	40sqm	3m
Between 101 and 150m^2	50sqm	4m
Between 151 and 200m^2	60sqm	4m
Greater than 200m^2	70sqm	4.5m

2. Private open space areas should be an extension of indoor living areas and be functional in size to accommodate seating and the like.

3. Private open space should be clearly defined for private use.

Drying areas

Objective

To provide adequate clothes drying area for residents.

Controls

1. Clothes drying facilities must be provided. Clothes drying areas should not be visible from a public place.

4.5 Cut and Fill, Building Design and Streetscape

Cut and Fill of Land

Objectives

a) To reduce the incidence of change in natural ground levels.

b) To encourage the architectural designs of dwellings which suit the contours of the land.

c) To provide controls for cut and fill of land designed to minimise the incidence of soil erosion and subsequent sedimentation of waterways.

d) To ensure that development on adjoining properties is not threatened or prejudiced by proposed cut and fill practices.

e) To discourage and eliminate, where possible, the construction of retaining walls on allotment boundaries.

f) To minimise overshadowing of neighbouring dwellings, their private open space or any solar panelling.

Controls

1. The maximum cut on a site must not exceed 600mm.
2. All retaining wall structures shall be masonry construction and designed by a suitably qualified person, or constructed as specified by the manufacturer of the product. The retaining wall shall be constructed wholly inside (within) the boundary of the site.
3. All slab constructions for dwellings that are above natural ground level are to be constructed using dropped edge beams to retain fill. The maximum fill within the confines of the slab must not exceed 1m. All fill must be contained within the dwelling footprint.
4. Contaminated fill, either imported or found on site is not permitted.

   Note: In the event of approval being granted to the erection of retaining wall(s) to contain proposed cut, Council will require the completion of such retaining wall(s) PRIOR TO the release of the occupation certificate.
5. Where an applicant considers that an allotment has characteristics which warrant exemption from this policy, an application for exemption may be made by the submission of a development application to Council for consideration. In addition to normal requirements the submission should include:
   - A plan showing existing contours (at 0.5m intervals) of the subject site and all adjoining sites.
   - A plan showing future contours (after proposed cut and fill) of the subject site and all adjoining sites.
   - Full details of any proposed retaining wall(s).

   Note: In the event of approval being granted to the erection of retaining wall(s) to contain proposed cut and fill, Council will require the completion of such retaining wall(s) PRIOR TO the commencement of any building works.

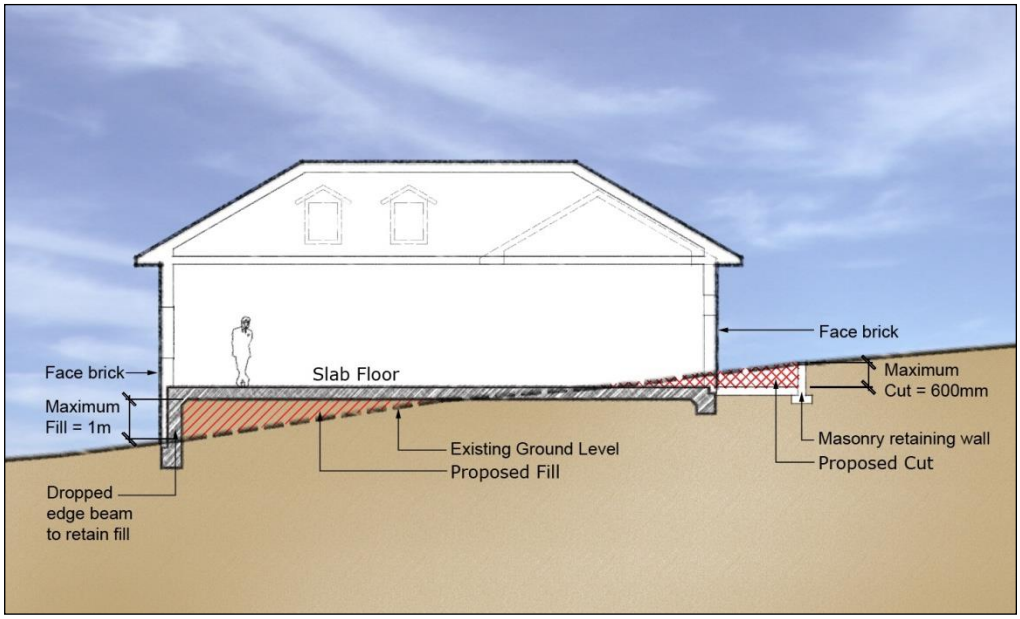


Figure 39: An example of Cut and Fill

Dwelling Houses and Semi-detached dwellings and Detached dwellings

Building Envelopes

1. A Dwelling House, Semi-detached dwellings and attached dwellings may have a maximum of three storeys plus an attic, where building height limits permit.
2. Attics do not constitute a storey if they are included in a roof space and having a roof slope not greater than 36 degrees pitched from the ceiling level of the uppermost floor; provided that:
   - All windows face the street.
   - Access to the attic must be via permanent stairs.
   - Attics are to be provided with skylights, or a dormer window. A dormer window shall be a maximum of 1.5m wide and must maintain the privacy of the adjoining residents.

Building Design

The built form must be uniform in bulk and scale but seek some variety in terms of building elements such as balconies, entrances, carports and roof forms.

The controls aim to ensure that a level of consistency is maintained in those building elements.

<u>Objectives</u>

a) To promote an architectural style that is contemporary and innovative

a) To encourage designs that will enhance the character of the neighbourhood.

b) To promote variation of building facade and design.

c) That the building enhances the streetscape through the use of suitable built form design and landscaping.

d) To ensure buildings address all street frontages.

e) To discourage garages and in particular garage doors, from visually dominating the streetscape.

f) To ensure that the building design, detailing, colour and finish shall add visual interest to the street and shall compliment the street.

g) To ensure habitable rooms address the street.

h) To encourage balconies over garages on two storey dwellings.

<u>Controls</u>

Building Appearance

1. Simply articulated building forms are preferred
2. Dwellings must address the street frontage
3. Mirror imaging of Attached dwellings is not permitted
4. One building must be set back a minimum of 1m behind the other building in an Attached dwelling.
5. Attached dwellings must only be attached to one other dwelling.
6. Dwellings corner sites must address both street frontages.
7. Use of verandas and balconies are encouraged.
8. Vertically proportioned windows are encouraged.

Building Materials

1. External walls of dwellings can be constructed with the following materials:
   - Face brickwork,

- Rendered brickwork,
- Stone,
- Concrete wall,
- Glass, and
- Lightweight materials such as, weatherboards, timber boarding or fibre cement.

2. External walls are to display a mix of materials.
3. Lightweight materials are only permitted on upper storey external walls.

Retaining Walls

Retaining walls can be either built of masonry or sandstone.

Roofs

1. Simple use of gables and pitched and hipped roofs is encouraged.
2. Pitched and hipped roofs are to have a minimum of 450mm eaves unless the dwelling has zero metre side setbacks.
3. Roof pitch must not be lower than 22.5 degrees or higher than 45 degrees.
4. Skillion and vaulted roofs are permitted.
5. Flat roofs must not dominate the built form.
6. Flat roofs must not occupy more than 50% of the total roof area.

Balconies

1. Decks and balconies can be built to form framed porticos or entrances.
2. Balconies should incorporate simple railing and balustrade detailing.

Levels

Dwellings are to follow the slope of the land.

Building Depth

Objectives

To achieve the development of working and living environments with good internal amenity and that minimise the need for artificial heating, cooling and lighting.

Controls

Maximum building depths for houses are 16m, unless internal courtyards are provided.

Internal Design of Dwellings

Objectives

a) The internal design must contribute to personal safety and to the protection of property by permitting casual surveillance of public spaces from private windows and entries.

b) To provide passive surveillance from rooms addressing the street or any adjoining open space.

c) To encourage the internal design of the dwelling to take advantage of cross ventilation.

d) To locate amenity rooms (such as laundries, bathrooms, toilets) to the side and rear of the development.

e) To ensure that each dwelling shall provide a sufficient amount of storage for elements such as garden and sports equipment.

Controls

1. All dwellings shall have habitable rooms located to the front of the dwelling for security and surveillance to the street.
2. Living rooms should take advantage of northern aspects.
3. Access to private open space must be from at least one living room.
4. The internal layout of the dwelling must incorporate cross ventilation.
5. Bathrooms, ensuites, laundries and walk in wardrobes should be located to the side or rear of the dwelling.
6. Each dwelling must provide a minimum storage area of $8m^3$.
7. Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).
8. Dwelling entries must be oriented to the street.

Multi Dwelling Housing

Building Design

Objectives

a) To encourage designs that will enhance the character of the neighbourhood.

b) To promote variation of building facade and design.

c) That the building enhances the streetscape through the use of suitable built form design and landscaping.

d) To ensure buildings address all street frontages.

e) To discourage garages and in particular garage doors, from visually dominating the streetscape.

f) To ensure that the building design, detailing, colour and finish shall add visual interest to the street and shall compliment the street.

g) To ensure habitable rooms address the street.

h) To encourage balconies over garages in two storey dwellings.

i) To encourage steep or sloping site to build split level or stepped development.

Controls

1. Dwellings with a street frontage shall orientate the main entrance and where possible at least one living area towards the street.
2. Entry points shall be enhanced/emphasised to all dwellings especially those facing the street.
3. The first floor of the townhouse developments must be no greater than two thirds of the ground floor area.
4. Building facades shall be articulated and roof form is to be varied to provide visual variety.
5. Walls shall be a mix of masonry, rendered and or bagged, and painted, lightweight clad and painted and/or flush face brick. Justification will be required for 100% face brick facades or 100% rendered and painted brick and will be assessed on merit.
6. Facades can be articulated by:
   - The use of different materials and detailing and / or.
   - The inclusion of balconies, verandahs, pergolas and landscaped beds.
7. A sidewall must be articulated if the wall has a continuous length of over 10m.

8. The entrance of each dwelling shall be emphasised.
9. Dwellings built at the rear of the allotment must be single storey.
10. Driveways should avoid a 'gun barrel' effect by curving and siting of buildings, which create a driveway form with the divided carriageway separated by soft landscaping.
11. Attic floor space may be used when it is contained wholly within the roof pitch and will not be counted as a storey provided that the attic space is part of the dwelling.
12. Space used for car parking shall be included as a storey if the ceiling of the car parking level exceeds more than 1m above the natural ground level.
13. The maximum roof pitch shall be 36 degrees.
14. Multi dwelling housing built on steep or sloping lots should be built of split-level construction.

Internal Design

Objectives

a) The internal design must contribute to personal safety and to the protection of property by permitting casual surveillance of public spaces from private windows and entries.

b) To provide natural surveillance from a room addressing the street.

c) To encourage the internal design of the dwelling to take advantage of cross ventilation.

d) To locate amenity rooms (such as laundries, bathrooms, toilets) to the side and rear of the development.

e) To ensure that each dwelling provides a sufficient amount of storage for elements such as garden and sports equipment.

Controls

1. Townhouses and villa's located on street boundaries shall have habitable rooms located to the front of the dwelling for security and surveillance to the street.
2. Living rooms should take advantage of northern aspects where possible.
3. Access to private open space must be from at least one living room.
4. The internal layout of the dwelling must incorporate cross ventilation.
5. Bathrooms, ensuites, laundries and walk in wardrobes should be located to the side and the rear of the development.
6. Each dwelling must provide a minimum storage area of 8 m^3.
7. Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).

All Residential Development

Roof Design

Objectives

a) To provide quality roof designs, which contribute to the overall design and quality of the subdivision;

b) To integrate the design of the roof into the overall facade, building composition and desired contextual response;

c) To increase the longevity of the building through weather protection.

Controls

1. Relate roof design to the desired built form. This may include:

- Articulating the roof, or breaking down its massing on large buildings, to minimise the apparent bulk or to relate to a context of smaller building forms.
- Using a similar roof pitch or material to adjacent buildings, particularly in existing special character areas or heritage conservation areas.
- Minimising the expression of roof forms gives prominence to a strong horizontal datum in the adjacent context, such as an existing parapet line.
- Using special roof features, which relate to the desired character of an area, to express important corners.

2. Design the roof to relate to the size and scale of the building, the building elevations and three-dimensional building form. This includes the design of any parapet or terminating elements and the selection of roof materials.
3. Design roofs to respond to the orientation of the site, for example, by using eaves and skillion roofs to respond to sun access.
4. Minimise the visual intrusiveness of service elements by integrating them into the design of the roof. These elements include lift over-runs, service plants, chimneys, vent stacks, telecommunication infrastructures, gutters, downpipes and signage.
5. Where habitable space is provided within the roof, optimise residential amenity in the form of attics or penthouse dwellings

Building Entry

Objectives

a) To create entrances which provide a desirable residential identity for the development.

b) To orient the visitor.

c) To contribute positively to the streetscape and building facade design.

Controls

1. Improve the presentation of the development to the street by:
   - Locating entries so that they relate to the existing street and subdivision pattern, street tree planting and pedestrian access network.
   - Designing the entry as a clearly identifiable element of the building in the street.
   - Utilising multiple entries-main entry plus private ground floor dwelling entries-where it is desirable to activate the street edge or reinforce a rhythm of entries along a street.
2. Provide as direct a physical and visual connection as possible between the street and the entry.
3. Achieve clear lines of transition between the public street, the shared private circulation spaces and the dwelling.
4. Ensure equal access for all.
5. Provide safe and secure access by:
   - Avoiding ambiguous and publicly accessible small spaces in entry areas.
   - Providing a clear line of sight between one circulation space and the next.
   - Providing sheltered well-lit and highly visible spaces to enter the building, meet and collect mail.
6. Generally provide separate entries from the street for:
   - Pedestrians and cars.

- Different uses, for example, for residential and commercial users in a mixed-use development.
- Ground floor dwellings, where applicable.

7. Design entries and associated circulation space of an adequate size to allow movement of furniture between public and private spaces.

8. Provide and design letterboxes to be convenient for residents and not to clutter the appearance of the development from the street by:
   - Locating them adjacent to the major entrance and integrated into a wall, where possible.
   - Setting them at 90 degrees to the street, rather than along the front boundary.

Daylight Access

Objectives

a) To ensure that daylight access is provided to all habitable rooms and encouraged in all other areas of the dwelling(s).

b) To provide adequate ambient lighting and minimise the need for artificial lighting during daylight hours.

c) To provide residents with the ability to adjust the quantity of daylight to suit their needs.

Controls

1. Plan the site so that new dwellings are oriented to optimise northern aspect.
2. Ensure direct daylight access to communal open space between March and September and provide appropriate shading in summer.
3. Optimise the number of dwellings receiving daylight access to habitable rooms and principal windows.
4. Ensure daylight access to habitable rooms and private open space, particularly in winter - use skylights, clerestory windows and fanlights to supplement daylight access.
5. Ensure single aspect, single-storey dwellings have a northerly or easterly aspect - locate living areas to the north and service areas to the south and west of the development.
6. Avoid south facing dwellings.
7. Design for shading and glare control, particularly in summer, by:
   - Using shading devices, such as eaves, awnings, colonnades, balconies, pergolas, external louvres and planting.
   - Optimising the number of north-facing living spaces.
   - Providing external horizontal shading to north-facing windows.
   - Providing vertical shading to east or west windows.
8. Consider higher ceilings and higher window heads to allow deeper sunlight penetration.
9. On west facing windows, vertical louvre panels or sliding screens protect from glare and low afternoon sun.

10. On north facing windows, projecting horizontal louvres admit winter sun while shading summer sun.
11. Use high performance glass but minimise external glare off windows, by;
    - Avoiding reflective films.
    - Using a glass reflectance below 20%.
    - Considering reduced tint glass.
12. Limit the use of lightwells as a source of daylight by prohibiting their use as the primary source of daylight in habitable rooms. Where they are used:
    - Relate lightwell dimensions to building separation, for example, if non-habitable rooms face into a light well less than 12m high, the lightwell should measure 6 x 6m.
    - Conceal building services and provide appropriate detail and materials to visible walls.
    - Ensure light wells are fully open to the sky.
    - A combination of louvres provides shading for different times of the day.

4.6 Car Parking and Access

Multi Dwelling Housing

Objectives

a) To provide convenient, accessible and safe on site car parking for residents and visitors.

b) To minimise driveway crossings to maximise on street parking and landscaped nature strips.

c) To integrate the location and design of car parking with the design of the site and building without compromising street character, landscape or pedestrian amenity and safety.

d) To integrate the location and design of car parking with the design of the site and the building.

Controls

1. Visitor car parking shall be clearly identified and may not be stacked or tandem car parking.
2. Visitor car parking shall be located between any roller shutter door and the front boundary.
3. The extent of paved area for driveways shall be kept to a minimum. Driveways abutting dwellings shall be kept to a minimum.
4. Avoid large expanses of driveways, including concentrating double garages adjacent to each other.
5. Land that is unlikely to be used for manoeuvring shall be used for landscaping or for pedestrian areas and be distinguished by different materials and levels.
6. Refer to Figure 40.

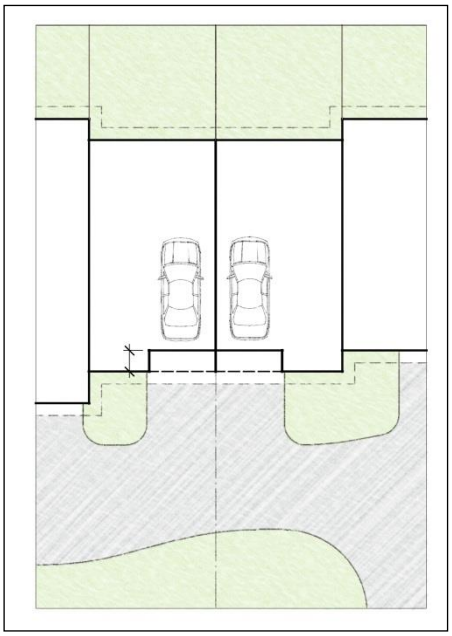


Figure 40: Garage and Driveway design

Basement Car parking

1. Basement car parking is permitted but will be included as a storey if the ceiling is located more than 1m above the natural ground level.
2. On sites that slope away from the street, underground car parking structures that protrude more than 1m above the natural ground level towards the rear will not be included as a storey where topographical features warrant and the streetscape is not adversely affected. The car parking area should be adequately obscured from visible sight by the screen planting.

Access Driveways

1. Driveways to the street shall be kept to a minimum.
2. Driveways may be permitted to individual dwellings provided that the streetscape is not adversely affected and the application complies elsewhere with the DCP.
3. Kerbs shall be provided along the edge of all internal driveways. All traffic must be able to enter and exit the site in a forward direction.

Refer to Part 1 for other controls on Access Driveways

Pedestrian Access

<u>Objectives</u>

a) To promote multi dwelling housing that is well connected to the street and contributes to the accessibility of the public domain.

b) To ensure that residents, including users of strollers and wheelchairs and people with bicycles, are able to reach and enter their dwelling and use communal areas via minimum grade ramps, paths, access ways or lifts.

<u>Controls</u>

1. Utilise the site and it's planning to optimise accessibility to the development.
2. Provide high quality accessible routes to public and semi-public areas of the building and the site, including major entries, lobbies, communal open space, site facilities, parking areas, public streets and internal streets.

3. Promote equity by:
   - Ensuring the main building entrance is accessible for all from the street and from car parking areas.
   - Integrating ramps into the overall building and landscape design.
4. Maximise the number of accessible and adaptable dwellings in a building by:
   - Providing more than one accessible entrance where a development contains clusters of buildings.
   - Separating and clearly distinguish between pedestrian accessways and vehicle accessways.
   - Locating vehicle entries away from main pedestrian entries and on secondary frontages.

Dwelling Houses, Attached dwellings and Semi-detached dwellings

Objectives

a) To provide car parking facilities on site that are convenient, safe and have sufficient space for vehicular manoeuvrability, whilst being visually unobtrusive.

b) To minimise the need for on street car parking from new dwellings.

Controls

1. Two car parking spaces shall be provided for each dwelling.
2. At least one car parking must be provided behind the front setback.
3. A car parking space is to have a minimum dimension of 2.5 x 5.5m.
4. A single garage is to be a minimum of 3m wide internally and unobstructed.

4.7 Landscaping and Fencing

Landscaping

Objectives

a) To retain existing mature trees within the site in a way which ensures their ongoing health and vitality.

b) To provide privacy, summer shade and allow winter sun.

c) To enhance the existing streetscape and visual appearance of dwellings.

d) To encourage landscaping that is appropriate to the natural, cultural and heritage characteristics of its locality.

e) To ensure the visual impact of development is minimised and integrated into the streetscape.

Controls

1. The front and rear setback areas of development are to be utilised for canopy tree planting. The landscape design for all development must include canopy trees that will achieve a minimum 8m height at maturity within the front and rear setback areas.
2. At least one tree shall be planted in the landscaped areas. The tree must reach a mature height of over 8m.
3. Landscape planting should be principally comprised of native species to maintain the character of Liverpool and provide an integrated streetscape appearance. However, Council will consider the use of deciduous trees in small private open space areas such as courtyards for control of local microclimate and to improve solar access.

4. Any tree with a mature height over 8m should be planted a minimum distance of 3m from the building or utility services.

Note: It is important to retain significant vegetation to maintain an existing streetscape and enhance the visual appearance of new dwellings.

Fencing

Objectives

a) To provide a clear transition between public and private areas.

b) To provide a visual element within the streetscape.

c) To ensure fencing enhances the streetscape.

Controls

1. Wall finishes must have low reflectivity.
2. Where noise insulation is required, consider the installation of double-glazing or other noise attenuation measures at the front of the building rather than construction of a high solid form fence.

Primary Frontage

1. The maximum height of a front fence is 1.2m.
2. The front fence may be built to a maximum height of 1.5m if the fence is setback 1m from the front boundary with suitable landscaping in front of the proposed fence.
3. Fences should not prevent surveillance by the dwelling's occupants of the street or communal areas.
4. The front fence must be 30% transparent.
5. Front fences shall be constructed in masonry, timber, metal pickets and/or vegetation and must be compatible with the proposed design of the dwelling.
6. The front fence may be built to a maximum of 1.8m only if:
   - The primary frontage is situated on a Classified Road.
   - The fence is articulated by 1m for 50% of its length and has landscaping in front of the articulated portion.
   - The fence does not impede safe sight lines from the street and from vehicles entering and exiting the site.

Secondary Frontage

1. Side fences and walls must be a maximum of 1.8m in height, and constructed of masonry, timber and/or landscaped (See Figure 41).
2. For side walls or fences along the secondary frontage, a maximum height of 1.2m is required for the first 9m measured from the front boundary, the remaining fence / wall may then be raised to a maximum of 1.8m (See Figure 41). The secondary setback is generally the longest length boundary for detached dwelling houses.
3. Side fencing facing a public street or open space must not be constructed of sheet metal.

Boundary Fences

1. The maximum height of side boundary fencing within the setback to the street is 1.2m.
2. Internal boundary fences shall be lapped and capped timber, masonry or metal sheeting.

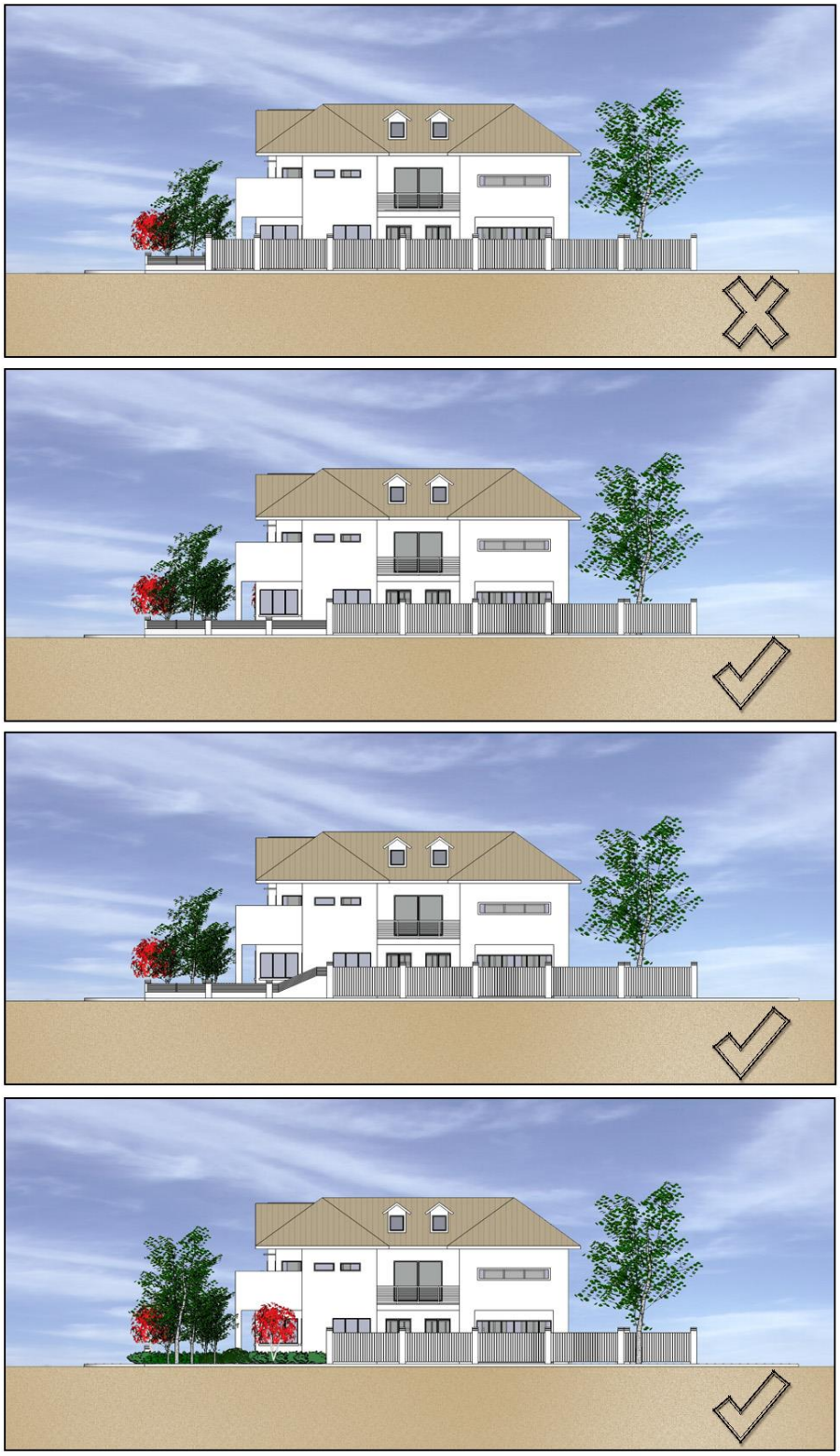


Figure 41: Fence treatments on secondary frontage

4.8 Amenity and Environmental Impact

Overshadowing

Objective

To minimise overshadowing of neighbouring dwellings and their private open space.

Controls

Adjoining properties must receive a minimum of three hours of sunlight between 9am and 5pm on 21 June to at least:

- One living, rumpus room or the like; and
- 50% of the private open space.

Privacy

Objectives

a) To locate and design buildings to meet projected user requirements for visual and acoustic privacy and to protect privacy of nearby residents.

b) To avoid any external impacts of a development, such as overlooking of adjoining sites.

c) To provide reasonable levels of visual privacy externally and internally, during the day and at night.

d) To maximise outlook and views from principal rooms and private open space.

Controls

1. Building siting, window location, balconies and fencing should take account of the importance of the privacy of on site and adjoining buildings and outdoor spaces.
2. Windows to habitable rooms should be located so they do not overlook such windows in adjoining properties, other dwellings within the development or areas of private open space.
3. Landscaping should be used where possible to increase visual privacy between dwellings and adjoining properties.
4. Where possible the ground floor dwellings should be located above ground level to ensure privacy for occupants of the dwellings.
5. Design building layouts to minimise direct overlooking of rooms and private open spaces adjacent to dwellings by:
   - Balconies to screen other balconies and any ground level private open space.
   - Separating communal open space, common areas and access routes through the development from the windows of rooms, particularly habitable rooms.
   - Changing the level between ground floor dwellings with their associated private open space, and the public domain or communal open space.
6. Use detailed site and building design elements to increase privacy without compromising access to light and air by:
   - Offsetting windows of dwellings in new development and adjacent development windows.
   - Recessed balconies and/or vertical fins between adjacent balconies.
   - Solid or semi-solid balustrades to balconies - louvres or screen panels to windows and/or balconies.
   - Fencing.
   - Vegetation as a screen between spaces.

- Incorporating planter boxes into walls or balustrades to increase the visual separation between areas.
- Utilising pergolas or shading devises to limit overlooking of private open space.

4.9 Site Services

Objectives

a) To ensure that the required services are provided.

b) To ensure that the services provided are easily protected or maintained.

Controls

Letterboxes

1. Letterboxes shall to be provided for each dwelling on site, easily accessible from the street, able to be securely locked and provided in accordance with Australia Post's requirements.
2. Freestanding letterbox structures should be designed and constructed of materials that relate to the main building.
3. Residential numbering should be attached to the letterbox so that it is clearly visible from the street frontage. Numbers should be 75mm in height, reflective and in contrast to the backing material.

Waste management

1. Waste disposal facilities shall be provided for development. These shall be located adjacent to the driveway entrance to the site.
2. Any structure involving waste disposal facilities shall be located as follows:
   - Setback 1m from the front boundary to the street.
   - Landscaped between the structure and the front boundary and adjoining areas to minimise the impact on the streetscape.
   - Not be located adjacent to an adjoining residential property.
   - Details of the design of waste disposal facilities are shown in Part 1 of the DCP.

Frontage works and damage to Council infrastructure

1. Where a footpath, road shoulder or new or enlarged access driveway is required to be provided this shall be provided at no cost to Council.
2. Council must be notified of any works that may threaten Council assets. Council must give approval for any works involving Council infrastructure.
3. Where there are no existing street trees in front of the site and contributions have not been collected for street tree planting it may be a condition of consent that street trees be provided in the footpath area immediately in front of the site.

Electricity Sub Station

In some cases it may be necessary to provide an electricity substation at the front of the development adjacent to the street frontage. This will involve dedication of the area as a public street to allow access by the electricity provider. The front boundary treatment used elsewhere on the street frontage.

4.10 Studio dwellings

Studio dwelling means a small self-contained dwelling that is erected above a garage facing a rear lane or a secondary road.

For the purpose of definition under the Liverpool Local Environmental Plan 2008, a Type 1 studio dwelling is a secondary dwelling.

For the purpose of definition under the Liverpool Local Environmental Plan 2008, a Type 2 studio dwelling is a dual occupancy or multi-dwelling housing.

Objectives

a) To provide an alternate form of housing in master planned neighbourhoods that include community facilities.

b) To provide for a variety of housing types to cater for varied socio-demographic households.

c) To provide for passive surveillance to laneways and private accessways.

Controls

Type 1 Studio

Type 1 Studios are a room or rooms constructed above a detached garage associated with the main dwelling on the lot. The studio is primarily designed to be used by the occupants of the main dwelling. The studio shall comply with the following:

1. The studio shall be located on corner blocks or addressing secondary streets and on laneway entries and bends to improve surveillance.
2. Located on lots with a minimum size of 300sqm.
3. Must be detached from other studios.
4. Maximum gross floor area: 45sqm.
5. No additional car parking space is required.
6. The studio shall be located above the garage, carport or like structure for the principal dwelling on the land.
7. There may be no subdivision of the studio from the principal dwelling on the land.
8. Windows are not permitted on elevations which directly face the adjoining lots private open space.
9. Garages with studios above are to be constructed 1.5m from the rear boundary and may have a zero lot setback to one side boundary.
10. A studio must have a minimum separation of 4m from the first floor of the principal dwelling on the lot.
11. Studios shall not reduce the minimum required amount of solar access to any dwelling's (adjoining or on the principal dwelling) private open space as stipulated in Section 4.4 of this Part.

Type 2 Studio

Type 2 Studios are a room or rooms constructed above a detached garage that is intended to be separately strata titled to allow for independent living from the principal dwelling on the lot. The studio shall comply with the following:

1. The studio shall be located on corner blocks with laneway vehicle access.
2. Located on lots with a minimum size of 350sqm.
3. Maximum gross floor area: 75sqm.
4. Studio to be located above the garage, carport or like structure for the principal dwelling on the land and are to be detached from other studios.

5. One additional dedicated on-site car parking space is required to be associated with the Type 2 studio.
6. Car parking space is not to be located in front building setback of the principal dwelling.
7. Car parking space is not to be in a stacked configuration.
8. The studio must include provision of a balcony accessed directly off living space having minimum size of 6sqm, plus a minimum 10sqm ground level service yard with space for clothes drying facilities. The balcony shall not protrude over any property boundary.
9. Type 2 studios may be strata subdivided from the principal dwelling, or dwellings on the land.
10. Garages with studios are to be constructed 1.5m from the rear boundary and may have a zero lot setback to one side boundary.
11. A studio must have a minimum separation of 4m from the first floor of the principal dwelling on the lot.
12. Pedestrian access to studios is to be from the street frontage and not the laneway.
13. Provision for separate services and an on-site garbage storage area e.g. separate letter box.
14. Studios shall not reduce the minimum amount of solar access to any dwelling's (adjoining or on the principal dwelling) private open space as stipulated in Section 3.5 of this Part.
15. Windows are not permitted on elevations which directly face the adjoining lots private open space. Windows may be permitted on the elevation facing the principal dwelling on the lot where they have a minimum sill height of 1.7m.
16. Screened access ways (e.g. staircases) for studios to prevent viewing into adjoining private open space areas.

5. Controls for Residential Development in Suburban areas (14 Dwellings/Hectare)

5.1 Preliminary

Applies to

This section applies to land identified in Liverpool LEP 2008 Dwelling Density Map as having a minimum density of 14 Dwellings / Hectare.

Background

Development within the 14 Dwellings / Hectare area is primarily intended for Dwelling houses, Semi detached dwellings and Attached dwellings. Whilst multi-dwelling housing and residential flat buildings are permitted in the R1 zone, they ae not favoured in the 14 dwellings/Hectare area. Refer to controls in the Urban (28dw/Ha) section for multi-dwelling housing and residential flat buildings

5.2 Site Planning

Objectives

a) To ensure that the dwelling is sensitive to site attributes, such as streetscape character, natural landform, drainage, existing vegetation, land capability, slope, solar access and if relevant, heritage items.

b) To ensure privacy for residents and neighbours.

Controls

1. The dwelling layout must be designed around the site attributes such as slope, existing vegetation, land capability and/or solar access (See Figure 42 for a site analysis plan).
2. Basement car parking (if applicable) should be unobtrusive and blend into the general façade of the building.
3. There must be a direct link from at least one living area to the principal private open space.
4. The siting of windows of habitable rooms on the first floor shall minimise overlooking to the principal private open space of neighbouring properties.
5. Stormwater from the site must be able to be drained satisfactorily. Where the site falls away from the street, it may be necessary to obtain an easement over adjoining property to drain water satisfactorily to a Council stormwater system. Where stormwater drains directly to the street, there may also be a need to incorporate on-site detention of stormwater where street drainage is inadequate. Refer to Water cycle management in Part 1.

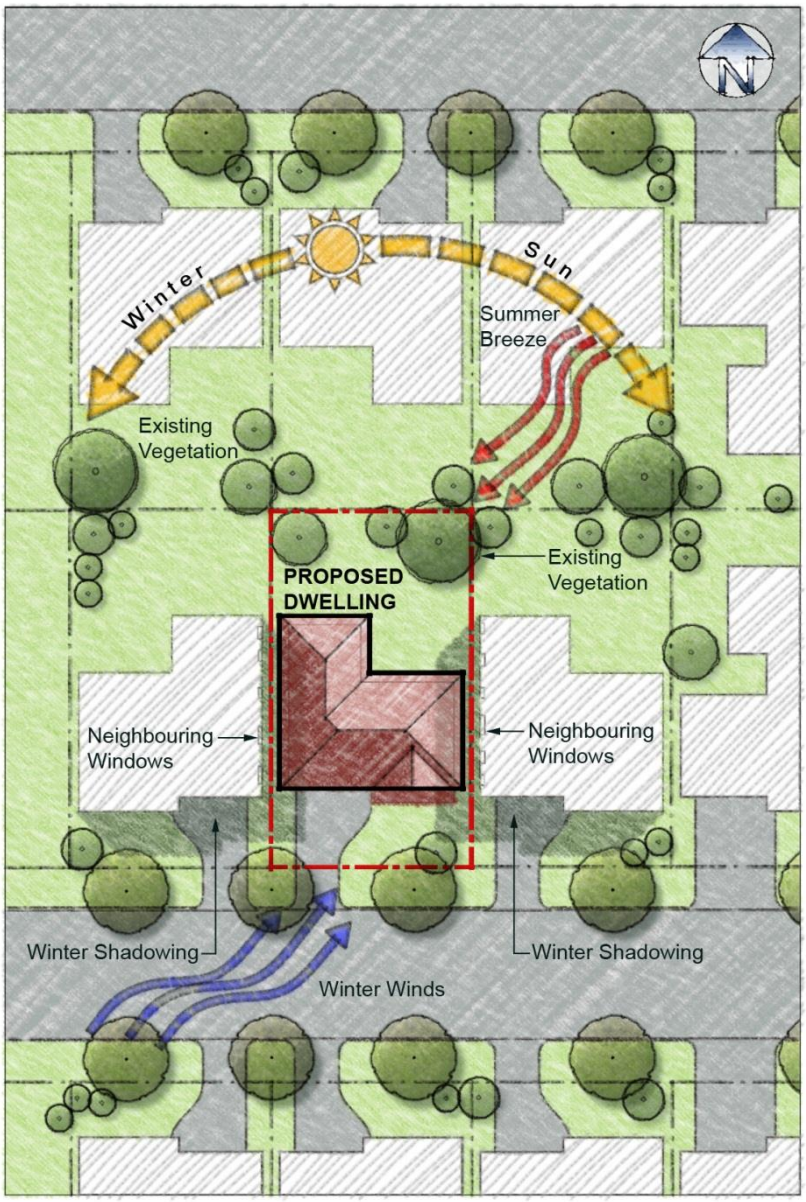


Figure 42: Example of a Site Analysis Plan

5.3 Setbacks

Setbacks

<u>Objectives</u>

a) To set dwellings back from the street and adjacent properties to provide reasonable space for landscaping, private open space and solar access.

b) To set dwellings back from each other to provide visual and acoustic privacy.

c) To create a streetscape that provides a desirable and safe environment.

d) To establish a streetscape of a scale and sense of enclosure appropriate to the locality.

e) To maximise the amount of area capable of allowing the growth of trees and shrubs.

Controls

Front Setbacks

1. Buildings shall be setback in accordance with Table 7.

Table 7: Setbacks within the 14 dw/ha area

Front Setback	Secondary Setback
4.5m	2.5m

2. The secondary setback is along the longest length boundary.
3. Garages shall be setback 5.5m from any frontage, or 1.0m from a secondary boundary when consistent with a typology shown in Figure 21.
4. Articulation features such as verandahs, eaves and other sun control devices may encroach on the front and secondary setback by up to 1m.
5. Corner sites shall provide a frontage to both streets and should articulate their corner location with an architectural feature such as a wraparound verandah, bay window, corner entry or roof feature.

Side and Rear Setbacks

Buildings shall be setback from the side and rear boundaries in accordance with the Table 8.

Table 8: Side and rear setbacks within the 14 dw/ha area

Item	Side Setback	Rear Setback
1 storey	0.9m	4m
2 storey	1.2m	8m

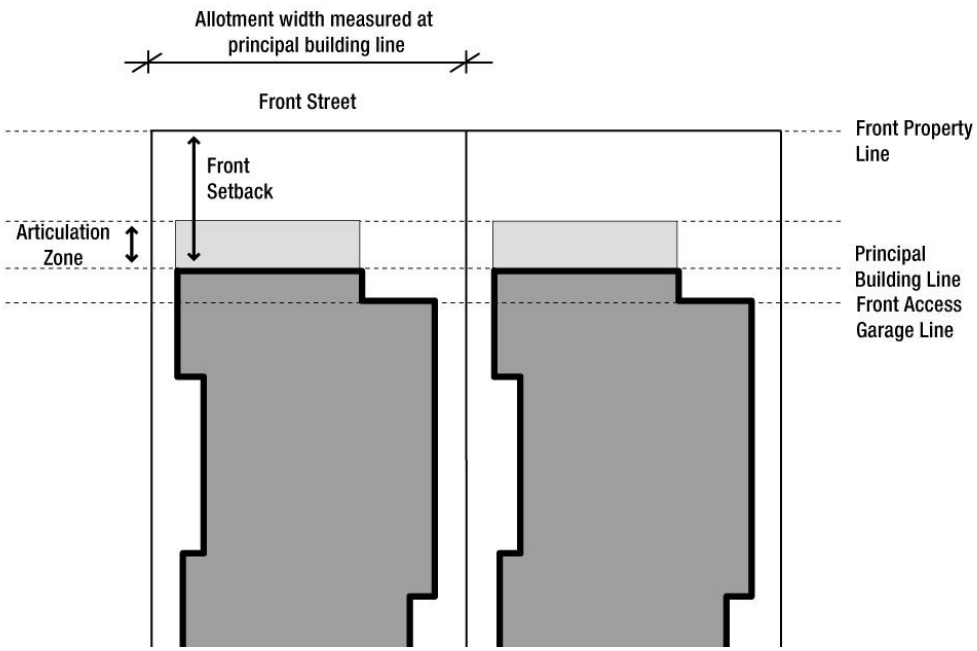


Figure 43: Front Setback

Zero Lot Lines

Objectives

a) To allow flexibility in the distribution of side setbacks in residential areas in order to achieve varying dwelling types and to maximise solar access.

b) To create attractive and cohesive streetscapes and the efficient use of land.

c) To maintain appropriate amenity between dwellings.

Controls

1. Zero lot line dwellings are not permitted on an ad-hoc basis. They must form part of a subdivision plan for at least one complete block/street frontage so that a consistent streetscape is achieved and that the privacy and solar access of adjoining dwellings are not adversely impacted upon.
2. Zero lot line dwellings are to provide a side setback on the non zero lot line side that equals to at least twice the minimum side setback requirement in Table 8 Side Setbacks.
3. Zero lot line development is to follow the lot orientation principles as shown in Figure 37 to maximise solar access.
4. Zero lot line development is not permitted on lots that are 15m wide or greater.
5. An easement for maintenance of the zero lot line walls (and any services along the side of the dwelling) is to be provided on the adjoining property. No overhanging eaves or services will be permitted within the easement. The S88b instrument supporting the maintenance easement is to be worded so that Council is removed from any dispute resolution process.

5.4 Landscaped Area and Private Open Space

Landscaped area is defined in Liverpool LEP 2008.

Landscaped Area (deep soil area)

Objectives

a) To provide an area to allow vegetation to mature.

b) To assist with management of the water table.

c) To assist with management of water quality.

d) To enhance the existing streetscape and soften the visual appearance of the buildings.

Controls

1. A minimum of 20% of the site area shall be landscaped area.
2. Optimise the provision of consolidated landscaped area within a site by:
   - The use of side and rear setbacks.
   - Optimise the extent of landscaped area beyond the site boundaries by locating them contiguous with the landscaped area of adjacent properties.
3. Promote landscape health by supporting for a rich variety of vegetation type and size.
4. Increase the permeability of paved areas by limiting the area of paving and/or using pervious paving materials.

Open Space

Open space includes Landscaped Areas and hard paved areas such as footpaths and barbeque areas. It does not include driveways, drying areas or waste storage areas.

Objectives

a) To provide residents with passive and active recreational opportunities.

b) To provide an area on site that enables soft landscaping and deep soil planting.

c) To ensure that communal open space is consolidated, configured and designed to be useable and attractive.

d) To provide a pleasant outlook.

Controls

1. Provide communal open space, which is appropriate and relevant to the context and the building's setting.
2. Where communal open space is provided, facilitate its use for the desired range of activities by:
   - Locating it in relation to buildings to optimise solar access to dwellings.
   - Consolidating open space on the site into recognisable areas with reasonable space, facilities and landscape.
   - Designing its size and dimensions to allow for the range of uses it will contain.
   - Minimising overshadowing.
   - Carefully locating ventilation duct outlets from basement car parking.
3. Locate open space to increase the potential for residential amenity.

Private Open Space

Objective

a) To ensure that private open space is clearly defined, usable and meets user requirements for privacy, solar access, outdoor activities, accessibility and landscaping.

b) To provide all dwellings with private open space.

Controls

1. Private open space shall be provided for in accordance with Table 9for Multi Dwelling Housing, Attached dwellings, Semi detached dwellings and Dwelling houses.

Table 9: Private open space in the 14 dw / ha area

Dwelling Size	Private Open Space Area	Minimum Width
Less than 65m^2	30sqm	3m
Between 65 and 100m^2	40sqm	3m
Between 101 and 150m^2	50sqm	4m
Between 151 and 200m^2	60sqm	4m
Greater than 200m^2	70sqm	4.5m

2. Private open space may be provided as a courtyard for ground floor dwellings or as balconies for dwellings above the ground floor.
3. Private open space areas should be an extension of indoor living areas and be functional in size to accommodate seating and the like.
4. Private open space should be clearly defined for private use.

For balconies refer to Building Design, Streetscape and Layout for controls on their design.

Drying areas

Objective

To provide adequate clothes drying area for residents.

Controls

1. Clothes drying facilities must be provided. Clothes drying areas should not be visible from a public place.

5.5 Cut and Fill, Building Design, Streetscape and Layout

Cut and Fill of Land

Objectives

a) To reduce the incidence of change in natural ground levels.

b) To encourage the architectural designs of dwellings which suit the contours of the land.

c) To provide controls for cut and fill of land designed to minimise the incidence of soil erosion and subsequent sedimentation of waterways.

d) To ensure that development on adjoining properties is not threatened or prejudiced by proposed cut and fill practices.

e) To discourage and eliminate, where possible, the construction of retaining walls on allotment boundaries.

f) To minimise overshadowing of neighbouring dwellings, their private open space or any solar panelling.

Controls

1. The maximum cut on a site must not exceed 600mm.
2. All retaining wall structures shall be masonry construction and designed by a suitably qualified person, or constructed as specified by the manufacturer of the product. The retaining wall shall be constructed wholly inside (within) the boundary of the site.
3. All slab constructions for dwellings that are above natural ground level are to be constructed using dropped edge beams to retain fill. The maximum fill within the confines of the slab must not exceed 1m. All fill must be contained within the dwelling footprint.
4. Contaminated fill, either imported or found on site is not permitted.

   Note: In the event of approval being granted to the erection of retaining wall(s) to contain proposed cut, Council will require the completion of such retaining wall(s) PRIOR TO the release of the occupation certificate.
5. Where an applicant considers that an allotment has characteristics which warrant exemption from this policy, an application for exemption may be made by the submission of a development application to Council for consideration. In addition to normal requirements the submission should include:
   - A plan showing existing contours (at 0.5m intervals) of the subject site and all adjoining sites.
   - A plan showing future contours (after proposed cut and fill) of the subject site and all adjoining sites.
   - Full details of any proposed retaining wall(s).

Note: In the event of approval being granted to the erection of retaining wall(s) to contain proposed cut and fill, Council will require the completion of such retaining wall(s) PRIOR TO the commencement of any building works.

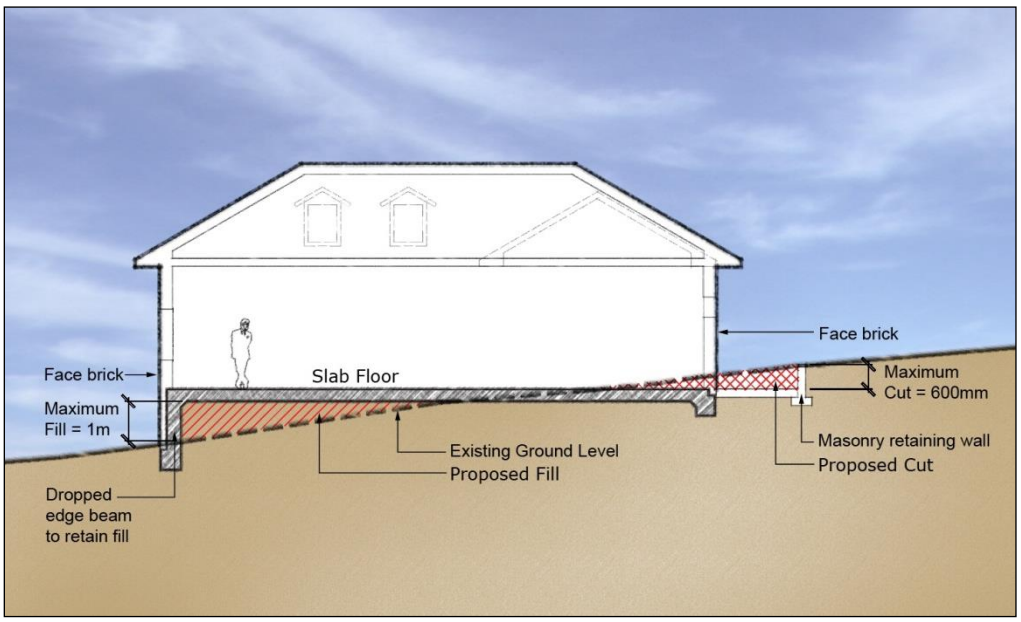


Figure 44: An example of Cut and Fill

Building Envelopes

Background

The orientation and site cover of a building has significant implications for residential amenity. Building envelopes determine the orientation and footprint of a dwelling, as well as the total volume of the dwelling.

Objectives

a) To facilitate the efficient use of the site area.

b) To maximise private amenity within the building.

c) To minimise the impacts of development on neighbouring properties in regard to views, privacy and overshadowing.

d) To ensure that buildings are sited so as to provide for solar access and both visual and acoustic privacy.

Controls

1. The building footprint for detached dwelling houses is not to occupy more than 55% of the site and the total impervious area is not to exceed 70% of the total site area. A minimum of 30% of the site area must be pervious surfaces.

2. The building footprint for denser development is not to occupy more than 60% of the site and the total impervious area is not to exceed 80% of the total site area. A minimum of 20% of the total site area must be pervious surfaces.

Building Height

Objectives

a) To ensure that development minimises the impact on neighbouring properties in terms of building bulk, overshadowing and privacy.

b) To maintain a scale of development, which is compatible with the existing or likely future character of the locality.

Controls

1. A Dwelling House, Attached dwelling or Semi detached dwelling may have a maximum of two storeys plus an attic.
2. Attics do not constitute a storey if they are included in a roof space and having a roof slope not greater than 36 degrees pitched from the ceiling level of the uppermost floor; provided that:
   - All windows face the street.
   - Access to the attic must be via permanent stairs.
   - Attics are to be provided with skylights, or a dormer window. A dormer window shall be a maximum of 1.5m wide and must maintain the privacy of the adjoining residents.
3. For sloping sites the height of a dwelling house must follow the slope of the land.

Building Depth

Objectives

To ensure working and living environments have good internal amenity that minimises the need for artificial heating, cooling and lighting.

Controls

1. Maximum building depths for houses are 16m, unless internal courtyards are provided.

Building Design and Appearance

Objectives

a) To encourage designs that will enhance the character of the neighbourhood.

b) To promote variation of building facade and design.

c) That the building enhances the streetscape through the use of suitable built form design and landscaping.

d) To ensure buildings address all street frontages.

e) To discourage garages and in particular garage doors, from visually dominating the streetscape.

f) To ensure that the building design, detailing, colour and finish shall add visual interest to the street and shall compliment the street.

g) To ensure habitable rooms address the street.

h) To encourage balconies over garages on two storey dwellings.

Controls

1. All dwelling houses, Attached dwellings and Semi detached dwellings are to be orientated to the street (See Figure 45).
2. The front pedestrian entrance must be visible from the street.

3. The front Building facades shall be articulated, this articulation may include front porches, entries, wall indents, changes in finishes, balconies and/or verandahs.
4. For two storey or greater height developments, the side walls shall be articulated if the wall has a continuous length of over 10m.
5. Eave overhang must provide for sun shading and protect windows and doors. Eaves should have a minimum overhang of 400mm and be provided to a minimum of 70% of the dwelling.
6. Dwelling houses, Attached dwellings or Semi detached dwellings that face two street frontages or a street and public space shall address both frontages by the use of verandahs, balconies, windows or similar modulating elements.
7. Balconies facing the street on two or more storey dwellings are encouraged.

Two storey detached or attached dwellings

To break up the bulk of two or more storey dwellings balconies, built above garages are encouraged (See Figure 45).

Garages and Carports

1. The maximum width of garage doors or carports must be no greater than 45% of the building frontage width.
2. Garages and carports must be designed to be the minor element of the façade
3. Garage roofs shall be incorporated into the roof design of the house. Separate roofs for garages are discouraged, unless actually separated from the dwelling.
4. Garages and carports are to be compatible with the building design in terms of height, roof form, detail, materials and colours.
5. Carports may be built in front of the garage only if the carport:
   - Is no larger than 5.5 x 6m.
   - Is built of a similar colour and materials of the house.
   - Is setback 2m from the front property boundary.
   - Is compatible with the local streetscape.
6. The conversion of garages to living space may only be permitted if:
   - At least one car parking space is provided behind the front setback.
   - The additional living area does not result in the building exceeding the maximum permitted floor space ratio.

Figure 45: Example of Building Appearance

Internal Design

Objectives

a) The internal design must contribute to personal safety and to the protection of property by permitting casual surveillance of public spaces from private windows and entries.

b) To provide natural surveillance from a room addressing the street.

c) To encourage the internal design of the dwelling to take advantage of cross ventilation.

d) To locate amenity rooms (such as laundries, bathrooms, toilets) to the side and rear of the development.

e) To ensure that each dwelling provides a sufficient amount of storage for elements such as garden and sports equipment.

Controls

1. Townhouses and villa's located on street boundaries shall have habitable rooms located to the front of the dwelling for security and surveillance to the street.
2. Living rooms should take advantage of northern aspects where possible.
3. Access to private open space must be from at least one living room.
4. The internal layout of the dwelling must incorporate cross ventilation.
5. Bathrooms, ensuites, laundries and walk in wardrobes should be located to the side and the rear of the development.
6. Each dwelling must provide a minimum storage area of $8m^3$.
7. Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).

Roof Design

Objectives

a) To provide quality roof designs, which contribute to the overall design and performance of the dwelling(s);

b) To integrate the design of the roof into the overall facade, building composition and desired contextual response;

c) To increase the longevity of the building through weather protection.

Controls

1. Relate roof design to the desired built form. This may include:
   - Articulating the roof, or breaking down its massing on large buildings, to minimise the apparent bulk or to relate to a context of smaller building forms.
   - Using a similar roof pitch or material to adjacent buildings, particularly in existing special character areas or heritage conservation areas.
   - Minimising the expression of roof forms gives prominence to a strong horizontal datum in the adjacent context, such as an existing parapet line.
   - Using special roof features, which relate to the desired character of an area, to express important corners.
2. Design the roof to relate to the size and scale of the building, the building elevations and three-dimensional building form. This includes the design of any parapet or terminating elements and the selection of roof materials.
3. Design roofs to respond to the orientation of the site, for example, by using eaves and skillion roofs to respond to sun access.
4. Minimise the visual intrusiveness of service elements by integrating them into the design of the roof. These elements include lift over-runs, service plants, chimneys, vent stacks, telecommunication infrastructures, gutters, downpipes and signage.
5. Where habitable space is provided within the roof, optimise residential amenity in the form of attics or penthouse dwellings

Storage Areas

Objective

To provide for the need of residents to be able to store personal items adjacent to the car parking area.

Controls

1. A secure storage space is to be provided for each dwelling with a minimum volume 8m3 (minimum dimension 1sqm). This must be set aside exclusively for storage as part of the basement or garage.
2. Storage areas must be adequately lit and secure. Particular attention must be given to security of basement and garage storage areas.

5.6 Car Parking and Access

Objectives

a) To provide car parking facilities on site that are convenient, safe and have sufficient space for vehicular manoeuvrability, whilst being visually unobtrusive.

b) To minimise the need for on street parking from new dwellings.

Controls

1. Two car parking spaces shall be provided for each dwelling.
2. At least one car parking must be provided behind the front setback.
3. A parking space is to be a minimum of 2.5 x 5.5m.
4. A single garage is to be a minimum of 3m wide internally and unobstructed.
5. Kerbs shall be provided along the edge of all internal driveways.

5.7 Landscaping and Fencing

Landscaping

Objectives

a) To retain existing mature trees within the site in a way which ensures their ongoing health and vitality.

b) To provide privacy, summer shade and allow winter sun.

c) To enhance the existing streetscape and visual appearance of dwellings.

d) To encourage landscaping that is appropriate to the natural, cultural and heritage characteristics of its locality.

e) To ensure the visual impact of development is minimised and integrated into the streetscape.

Controls

1. The front and rear setback areas of development are to be utilised for canopy tree planting. The landscape design for all development must include canopy trees that will achieve a minimum 8m height at maturity within the front and rear setback areas.
2. At least one tree shall be planted in the landscaped areas. The tree must reach a mature height of over 8m.
3. Landscape planting should be principally comprised of native species to maintain the character of Liverpool and provide an integrated streetscape appearance. However, Council will consider the use of deciduous trees in small private open space areas such as courtyards for control of local microclimate and to improve solar access.
4. Any tree with a mature height over 8m should be planted a minimum distance of 3m from the building or utility services.

Note: It is important to retain significant vegetation to maintain an existing streetscape and enhance the visual appearance of new dwellings.

Fencing

Objectives

a) To provide a clear transition between public and private areas.

b) To provide a visual element within the streetscape.

c) To ensure fencing enhances the streetscape.

Controls

1. Wall finishes must have low reflectivity.
2. Where noise insulation is required, consider the installation of double-glazing or other noise attenuation measures at the front of the building rather than construction of a high solid form fence.

Primary Frontage

1. The maximum height of a front fence is 1.2m.
2. The front fence may be built to a maximum height of 1.5m if the fence is setback 1m from the front boundary with suitable landscaping in front of the proposed fence.
3. Fences should not prevent surveillance by the dwelling's occupants of the street or communal areas.
4. The front fence must be 30% transparent.
5. Front fences shall be constructed in masonry, timber, metal pickets and/or vegetation and must be compatible with the proposed design of the dwelling.
6. The front fence may be built to a maximum of 1.8m only if:
   - The primary frontage is situated on a Classified Road.
   - The fence is articulated by 1m for 50% of its length and has landscaping in front of the articulated portion.
   - The fence does not impede safe sight lines from the street and from vehicles entering and exiting the site.

Secondary Frontage

1. Side fences and walls must be a maximum of 1.8m in height, and constructed of masonry, timber and/or landscaped (See Figure 46).
2. For side walls or fences along the secondary frontage, a maximum height of 1.2m is required for the first 9m measured from the front boundary, the remaining fence / wall may then be raised to a maximum of 1.8m (See Figure 46).The secondary setback is the longest length boundary.
3. Side fencing facing a public street or open space must not be constructed of sheet metal.

Boundary Fences

1. The maximum height of side boundary fencing within the setback to the street is 1.2m.
2. Internal boundary fences shall be lapped and capped timber, masonry or metal sheeting.

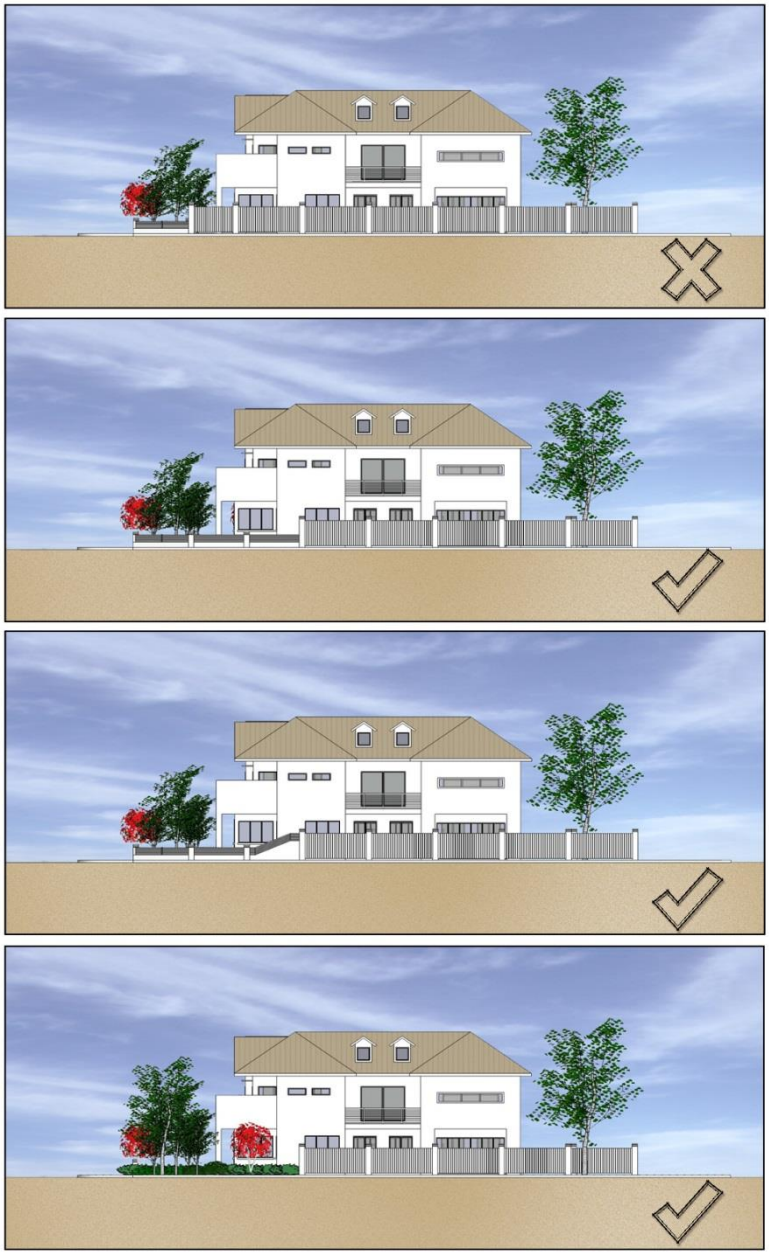


Figure 46: Fence treatments on secondary frontage

5.8 Amenity and Environmental Impact

Overshadowing

<u>Objectives</u>

To minimise overshadowing of neighbouring dwellings and their private open space.

Controls

1. Adjoining properties must receive a minimum of three hours of sunlight between 9am and 5pm on 21 June to at least:
   - One living, rumpus room or the like; and
   - 50 % of the private open space.

Privacy and Amenity Privacy

Objective

To site and design buildings to meet projected user requirements for visual and acoustic privacy and to protect privacy of nearby residents.

Controls

1. Building siting, window location and balconies should take account of the importance of the privacy of on site and adjoining buildings and outdoor spaces.
2. Landscaping should be used where possible to increase visual privacy between dwellings and adjoining properties.
3. Windows of habitable rooms facing side boundaries are to be offset by at least 1m from any adjoining facing window.
4. Except where they face a street or public open space, habitable room windows to the side are to avoid unreasonable overlooking by having a minimum sill height of 1.5m.

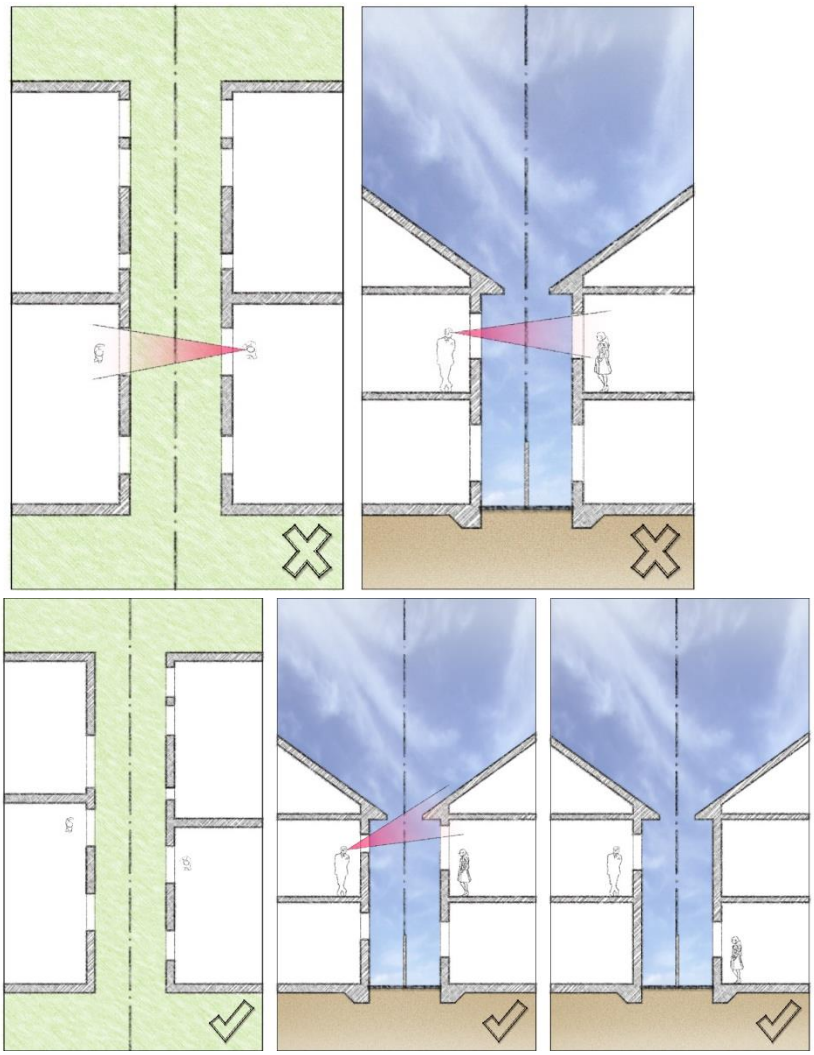


Figure 47: Privacy and Amenity Privacy

Acoustic Privacy

Objective

To ensure appropriate noise and vibration attention measures are incorporated into residential development.

Controls

1. Noise attenuation measures should be incorporated into building design to ensure acoustic privacy between on-site and adjoining buildings.
2. Developments in areas adversely impacted upon by rail or traffic related noises must incorporate the appropriate noise and vibration mitigation measures into the design in terms of the site layout, building materials and design, orientation of the buildings and location of sleeping and recreation areas.
3. Where party walls are provided they must be carried to the underside of the roof and be constructed in accordance with Part F5 of the Building Code of Australia.
4. The proposed buildings must comply with the Environment Protection Authority criteria and the current relevant Australian Standards for noise and vibration and quality assurance.

5.9 Site Services

Objectives

a) To ensure that the required services are provided.

b) To ensure that the services provided are easily protected or maintained.

Controls

Letterboxes

1. Letterboxes shall to be provided for each dwelling on site, easily accessible from the street, able to be securely locked and provided in accordance with Australia Post's requirements.
2. Freestanding letterbox structures should be designed and constructed of materials that relate to the main building.
3. Residential numbering should be attached to the letterbox so that it is clearly visible from the street frontage. Numbers should be 75mm in height, reflective and in contrast to the backing material.

Frontage works and damage to Council infrastructure

1. Where a footpath, road shoulder or new or enlarged access driveway is required to be provided this shall be provided at no cost to Council.
2. Council must be notified of any works that may threaten Council assets. Council must give approval for any works involving Council infrastructure.
3. Where there are no existing street trees in front of the site and contributions have not been collected for street tree planting it may be a condition of consent that street trees be provided in the footpath area immediately in front of the site.

5.10 Studio Dwellings

Studio dwelling means a small self-contained dwelling that is erected above a garage facing a rear lane or a secondary road.

For the purpose of definition under the Liverpool Local Environmental Plan 2008, a Type 1 studio dwelling is a secondary dwelling.

For the purpose of definition under the Liverpool Local Environmental Plan 2008, a Type 2 studio dwelling is a dual occupancy or multi-dwelling housing.

Objectives

a) To provide an alternate form of housing in master planned neighbourhoods that include community facilities.

b) To provide for a variety of housing types to cater for varied socio-demographic households.

c) To provide for passive surveillance to laneways and private accessways.

Controls

Type 1 Studio

Type 1 Studios are a room or rooms constructed above a detached garage associated with the main dwelling on the lot. The studio is primarily designed to be used by the occupants of the main dwelling. The studio shall comply with the following:

1. The studio shall be located on corner blocks or addressing secondary streets and on laneway entries and bends to improve surveillance.

2. Located on lots with a minimum size of 300sqm.
3. Must be detached from other studios.
4. Maximum gross floor area: 45sqm.
5. No additional car parking space is required.
6. The studio shall be located above the garage, carport or like structure for the principal dwelling on the land.
7. There may be no subdivision of the studio from the principal dwelling on the land.
8. Windows are not permitted on elevations which directly face the adjoining lots private open space.
9. Garages with studios above are to be constructed 1.5m from the rear boundary and may have a zero lot setback to one side boundary.
10. A studio must have a minimum separation of 4m from the first floor of the principal dwelling on the lot.
11. Studios shall not reduce the minimum required amount of solar access to any dwelling's (adjoining or on the principal dwelling) private open space as stipulated in Section 5.4 of this Part.

Type 2 Studio

Type 2 Studios are a room or rooms constructed above a detached garage that is intended to be separately strata titled to allow for independent living from the principal dwelling on the lot. The studio shall comply with the following:

1. The studio shall be located on corner blocks with laneway vehicle access.
2. Located on lots with a minimum size of 350sqm.
3. Maximum gross floor area: 75sqm.
4. Studio to be located above the garage, carport or like structure for the principal dwelling on the land and are to be detached from other studios.
5. One additional dedicated on-site car parking space is required to be associated with the Type 2 studio.
6. Car parking space is not to be located in front building setback of the principal dwelling.
7. Car parking space is not to be in a stacked configuration.
8. The studio must include provision of a balcony accessed directly off living space having minimum size of 6sqm, plus a minimum 10sqm ground level service yard with space for clothes drying facilities. The balcony shall not protrude over any property boundary.
9. Type 2 studios may be strata subdivided from the principal dwelling, or dwellings on the land.
10. Garages with studios are to be constructed 1.5m from the rear boundary and may have a zero lot setback to one side boundary.
11. A studio must have a minimum separation of 4m from the first floor of the principal dwelling on the lot.
12. Pedestrian access to studios is to be from the street frontage and not the laneway.
13. Provision for separate services and an on-site garbage storage area e.g. separate letter box.

14. Studios shall not reduce the minimum amount of solar access to any dwelling's (adjoining or on the principal dwelling) private open space as stipulated in Section 3.5 of this Part.
15. Windows are not permitted on elevations which directly face the adjoining lots private open space. Windows may be permitted on the elevation facing the principal dwelling on the lot where they have a minimum sill height of 1.7m.
16. Screened access ways (e.g. staircases) for studios to prevent viewing into adjoining private open space areas.

6. Controls on Land in the R3 Zone "The Village Centres"

6.1 Preliminary

Applies to

This section applies to land in the R3 zone.

Background

The creation of a vibrant centre is essential for the sustainability of the community. The neighbourhood centre shall be a key social focal point and public transport node within the locality. It serves local retail demand without detracting from large nearby centres. The neighbourhood centre incorporates other community facilities such as a primary school, community centre and family and children centre.

The incorporation of appropriate residential uses in commercial/retail developments is desirable.

Objectives

a) To create a lively focal point for the community, which is economically and socially viable.

b) To encourage a mix of uses – residential, retail, commercial and community.

c) To encourage architectural features that creates a distinctive identity and sense of place for the locality.

d) To create an area that by its scale, street relationship, built form, detailed design and materials, contrasts with the surrounding residential area to create an urban focus.

e) To encourage upper floor uses in the form of commercial offices, suites and shop-top apartments.

f) To ensure a uniform approach to signage and street furniture throughout the neighbourhood centre.

g) To encourage the development of active street frontages to provide a pedestrian friendly environment.

6.2 Subdivision, Frontage and Allotment Size

Background

Development in the village centres may also incorporate shop top housing. A site will need to be wide enough to provide for window space for the occupants of the dwellings. The site will also need to be sufficient size to provide an adequate internal layout and private open space for the dwellings.

Objectives

a) To ensure that land in village centres can accommodate the use including the car parking and loading provisions.

b) To ensure that there is sufficient frontage and area for any dwellings in conjunction with the business use.

Controls

Sites must have a minimum street frontage of 20m.

6.3 Site Planning

Objectives

a) To ensure that the development is compatible with amenity to nearby residential areas and open space.

b) To ensure that the development is compatible with the adjoining business development.

c) To ensure that the development reflects the character of the locality and environment.

d) To ensure that the development contributes to the public domain and attractiveness of the centre for its users.

Controls

The siting of buildings and the development should:

1. Provide safe pedestrian, cycle and vehicle access to and from the public street.
2. Be compatible with nearby residential development in terms of appearance, overshadowing, privacy, views, setbacks and height.
3. Address the street and consider its presentation to the public domain.
4. Consider the impact on existing and potential pedestrian links.
5. Stormwater from the site must be able to be drained satisfactorily. Where the site falls away from the street, it may be necessary to obtain an easement over adjoining property to drain water satisfactorily to a Council stormwater system. Refer to Water Cycle Management in Part 1.

6.4 Setbacks

Objectives

a) To ensure the height and scale of a development complements neighbouring development, and/or the desired character of a commercial centre.

b) To ensure a development does not detrimentally affect the amenity of adjoining residential development.

Controls

Street Frontage

Buildings should be built to the front boundary.

Rear Setbacks

1. Where the site has rear lane access the building may be built to the rear boundary, at ground and first floor level. Any floors above the first floor shall be setback equal to the height of the additional floors.
2. Where there is no rear lane access and the site adjoins land that is in a residential zone, the building shall be setback from the rear boundary as follows:
   - 5m for non-residential component of building up to 10m high.
   - 8m otherwise for components of building up to 15m high.

Side Setbacks

1. Where the site adjoins land that is also in a village centres there is no setback requirement.
2. Where the side boundary of the site adjoins land that is in a residential zone, the building may be required to be setback from the side boundary or limited to one storey

near the boundary. Any floors above the ground floor shall be setback equal to the height of the additional floors.

6.5 Landscaped Areas and Pedestrian Areas

Background

Active street and building frontages provide safety and security to a street or shopping centre by enabling casual surveillance. Having access from the street or public areas to as many uses as possible provides active and lively streets and public areas.

Pedestrian areas within the Neighbourhood Centre can provide an attractive meeting place for residents and shoppers. It also has the potential to generate additional business for retailers by providing areas for outdoor eating, display of retailers merchandise and a place for local community group promotions. Public footpaths can also provide a place for outdoor eating.

Objectives

a) To ensure active street frontages on public streets.

b) To encourage provision of attractive pedestrian areas.

c) To encourage linkages between centres and any adjacent public areas such as open space.

Controls

1. Pedestrian areas should minimise any changes in levels and allow wheelchair access to the shops from the car parking area and public footpaths.
2. Pedestrian areas should be separate from loading areas.
3. Sufficient area shall be provided to permit landscaping and tree planting within pedestrian areas and car parking areas.
4. Outdoor Eating Areas may be permitted in public footpath areas. Refer to the section on Outdoor Eating Areas.

6.6 Building Form, Streetscape and Layout

Objectives

a) To ensure the height and scale of a development complements neighbouring development, and/or the desired character of a village centre.

b) To provide adequate amenity to the occupants and residents of a development in terms of solar access, visual and acoustic privacy, and natural ventilation.

c) To ensure a development does not detrimentally affect the amenity of nearby residential development.

d) To ensure a development is integrated with the public domain and contribute to an active pedestrian-orientated environment.

e) To maximise natural surveillance so that people feel safe at all times.

f) To ensure pedestrian entrances and exits are clearly visible from the street.

g) To promote high quality architectural design.

h) To ensure corner sites are developed as visually significant elements in order to promote a strong and legible character.

i) To ensure weather protection to pedestrians.

j) To ensure roof forms contribute to the proposed character of the centre and residential areas.

k) To ensure working and living environments have good internal amenity that minimises the need for artificial heating, cooling and lighting.

Controls

Layout of Village Centres

1. Streets are to be public, and organised and designed in order of descending priority for people, bikes and cars.
2. Streets are to be located on the ground and not above car parking.
3. Streets are to be a suitable width for traffic and pedestrians and are to have pavements of sufficient width for awnings and street tree planting.
4. The street network is to:
   - Form a regular grid with dimension related to the proposed densities and building typologies.
   - Be organised to form a street and block pattern that creates:
     - Regular orthogonal patterns for lots and/or building sites (where the existing street pattern allows).
     - Street blocks, lots and/or building sites that relate to the selected building typologies.
   - Be connected and provide a choice of movement for people and cars.
   - Reveal the topography, have clear sight lines and aid legibility.
   - Connect to the existing street pattern in a seamless transition.
   - Provide views and view corridors where possible to open space, special places and/or significant trees.
   - Provide a street frontage for every building and unobtrusive parking for cars, service vehicles, bikes and scooters.
5. The street network is to be designed so as to enable buildings to be located and sited so that:
   - Positive spaces are created with adjacent and neighbouring buildings.
   - Fronts of buildings can face fronts of buildings (usually across a street).
   - Backs of buildings can face backs of buildings (usually at the rear of a street block).
   - Buildings address open spaces and streets both within the site and adjoining the site.
   - Buildings align with the streets.
6. Any variations should be fully justified and will be assessed on merit against the objectives of the precinct.

Building Appearance and Streetscape

1. Buildings shall be modulated to create a vertical rhythm to the street facade. Modules of around 6m are expected which allow for typical construction techniques. No long, unbroken facades will be permitted.
2. Development adjoining open space shall address the open space and avoid blank walls.
3. All buildings to be designed and built to have upper floors. Buildings shall be a minimum of two storeys in height. Single storey buildings are not permitted.

4. Floor to ceiling heights of the ground floor shall be a minimum of 3.5m to allow for adaptive re-use.
5. All residential and mixed use developments shall be at least two storeys with the lowest habitable floor level at least 500mm above the crown of the road. Alternatively, the ground floor shall be above under croft parking or garages with rear lane or car court access.
6. Shop top housing and Residential Flat Buildings shall comply with State Environmental Planning Policy No 65 Design Quality of Residential Apartment Development and the Apartment Design Guide (ADG) or equivalent..
7. Building facades shall be articulated and roof form is to be varied to provide visual variety.
8. The pedestrian entrance to shop top housing shall be from the front of the site.
9. Driveway walls adjacent to the entrance of a basement car park are to be treated so that their appearance is consistent with the basement or podium walls.
10. A master antenna shall be provided for any development of more than three dwellings and be located so that it is not visible from the street or any public open space.
11. Consider the relationship between the whole building form and the facade and / or building elements. The number and distribution of elements across a façade determine simplicity or complexity. Columns, beams, floor slabs, balconies, window openings and fenestrations, doors, balustrades, roof forms and parapets are elements, which can be revealed or concealed and organised into simple or complex patterns.
12. Compose facades with an appropriate scale, rhythm and proportion, which respond to the building's use and the desired contextual character. This may include but are not limited to:
    - Defining a base, middle and top related to the overall proportion of the building.
    - Expressing key datum lines in the context using cornices, a change in materials or building set back.
    - Expressing the internal layout of the building, for example, vertical bays or its structure, such as party wall-divisions.
    - Expressing the variation in floor-to-floor height, particularly at the lower levels.
    - Articulating building entries with awnings, porticos, recesses, blade walls and projecting bays.
    - Selecting balcony types which respond to the street context, building orientation and residential amenity.
    - Cantilevered, partially recessed, wholly recessed, or Juliet balconies will all create different facade profiles.
    - Detailing balustrades to reflect the type and location of the balcony and its relationship to the façade detail and materials.
13. Design facades to reflect the orientation of the site using elements such as sun shading, light shelves and bay windows as environmental controls, depending on the facade orientation.
14. Express important corners by giving visual prominence to parts of the facade, for example, a change in building articulation, material or colour, roof expression or increased height.
15. Co-ordinate and integrate building services, such as drainage pipes, with overall facade and balcony design.

16. Co-ordinate security grills/screens, ventilation louvres and car park entry doors with the overall facade design.

Entrances

1. Orientate entrances to buildings towards the public street and provide clear lines of sight between entrances, foyers and the street.
2. The common lobby to shop top housing should face the street.
3. Where the ground floor of a business development, mixed-use development, and shop-top housing faces the street, the ground floor must incorporate shopfront style windows with clear glazing so that pedestrians can see into the premises and vice versa.
4. Provide as direct a physical and visual connection as possible between the street and the entry.
5. Achieve clear lines of transition between the public street, the shared private circulation spaces and the dwelling unit.

Street Frontage

1. All developments must address the street and provide a quality street frontage. Retail and commercial developments must have active street frontages and entries fronting the street.
2. Ground floor uses are to be at the same general level as the footpath and be accessible directly from the street.
3. Provide predominately glazed shop fronts to all ground floor retail areas.
4. Developments on corner sites shall address the corner and the secondary street frontage.
5. Avoid blank or solid walls and the use of dark or obscured glass on street frontages.
6. Roller shutters that obscure windows are not permitted.
7. Provide opportunities for table seating along shop frontages.
8. Any Automatic Teller Machine (ATM) must be located at a highly visible location at street level, and must be well lit at night and incorporate mirrors or reflective materials so that users can observe people behind them.
9. The street number of a building must be visible from the street and made of a reflective material to allow visitors and emergency vehicles to easily identify the location of the building.

Awnings

1. Provide continuous street frontage awnings to all new developments.
2. Wrap awnings around corners on street corner buildings.
3. Awnings must be complementary to each other.
4. Canvas blinds along the street edge are permitted.

Roof Forms

1. Minimise the bulk and mass of roofs and the potential for overshadowing from roofs.
2. Provide eaves with a minimum length of 400mm in dwellings with pitched roofs.
3. Where flat roofs are proposed, lift overruns and rooftop plant and machinery are to be obscured from view by parapets or designed to be incorporated within rooftop activities/features.

4. Incorporate lift overruns and service plant etc into the design of the roof.
5. Wherever possible provide landscaped and shaded areas on roofs to serve as communal private open space for residents of the building.

Building Material and Finishes

1. Avoid expanses of any single material.
2. Utilise high quality and durable materials and finishes, such as face brick with / without coloured render; and plain glass windows.
3. Avoid large wall tiles, rough textured render, polished metal and curtain walls or reflective glass.
4. Highly reflective finishes are not permitted above the ground floor.
5. Colour & materials of the buildings shall be consistent with the existing adjoining development.

Balconies

1. A minimum of 12sqm of open space in the form of a balcony shall be provided for each dwelling. Primary balconies for all dwellings shall have a minimum depth of 2m.
2. Private open space areas should be an extension of indoor living areas and be functional in size to accommodate seating and the like.
3. Balustrades must be compatible with the façade of the building.
4. Ensure balconies are not so deep that they prevent sunlight entering the dwelling below.
5. Design balustrades to allow views and casual surveillance of the street.
6. Balustrades on balconies at lower levels shall be of solid construction.
7. Balconies should where possible should be located above ground level to maximise privacy for occupants, particularly from the street.
8. Solid or semi solid louvres are permitted.
9. Primary balconies should be:
   - Located adjacent to the main living areas, such as living room, dining room or kitchen to extend the dwelling living space.
   - Sufficiently large and well-proportioned to be functional and promote indoor/outdoor living. A dining table and two chairs (smaller dwelling) and four chairs (larger dwelling) should fit on the majority of balconies in any development.
10. Consider secondary balconies, including Juliet balconies or operable walls with balustrades, for additional amenity and choice in larger dwellings, adjacent to bedrooms or for clothes drying, site balconies off laundries or bathrooms.
11. Design and detail balconies in response to the local climate and context thereby increasing the usefulness of balconies. This may be achieved by:
    - Locating balconies facing predominantly north, east or west to provide solar access.
    - Utilising sunscreens, pergolas, shutters and operable walls to control sunlight and wind.
12. Design balustrades to allow views and casual surveillance of the street while providing for safety and visual privacy. Design considerations may include:
    - Detailing balustrades using a proportion of solid to transparent materials to address site lines from the street, public domain or adjacent development. Full

glass balustrades do not provide privacy for the balcony or the dwelling's interior, especially at night.

- Detailing balustrades and providing screening from the public, for example, for a person seated looking at a view, clothes drying areas, bicycle storage or air conditioning units.

13. Operable screens increase the usefulness of balconies by providing weather protection, daylight control and privacy screening.

Daylight Access

1. Plan the site so that new shop top housing is oriented to optimise northern aspect.
2. Ensure direct daylight access to communal open space between March and September and provide appropriate shading in summer.
3. Optimise the number of dwellings receiving daylight access to habitable rooms and principal windows.
4. Ensure daylight access to habitable rooms and private open space, particularly in winter use skylights, clerestory windows and fanlights to supplement daylight access.
5. Avoid south facing dwellings.
6. Design for shading and glare control, particularly in summer, by:
   - Using shading devices, such as eaves, awnings, colonnades, balconies, pergolas, external louvres and planting.
   - Optimising the number of north-facing living spaces.
   - Providing external horizontal shading to north-facing windows.
   - Providing vertical shading to east or west windows.
7. Consider higher ceilings and higher window heads to allow deeper sunlight penetration.
8. On west facing windows, vertical louvre panels or sliding screens protect from glare and low afternoon sun.
9. On north facing windows, projecting horizontal louvres admit winter sun while shading summer sun.
10. Use high performance glass but minimise external glare off windows, by;.
    - Avoiding reflective films.
    - Using a glass reflectance below 20%.
    - Considering reduced tint glass.
11. Limit the use of lightwells as a source of daylight by prohibiting their use as the primary source of daylight in habitable rooms. Where they are used:
    - Relate lightwell dimensions to building separation, for example, if non-habitable rooms face into a light well less than 12m high, the lightwell should measure 6 x 6m.
    - Conceal building services and provide appropriate detail and materials to visible walls.
    - Ensure that light wells are fully open to the sky.
    - A combination of louvres provides shading for different times of the day.

Internal design

1. All staircases should be internal.
2. Minimise the length of common walls between dwellings.

3. Basement car parking shall be located beneath the building footprint.
4. Where possible natural ventilation shall be provided to basement car parking.
5. Design building layouts to minimise direct overlooking of rooms and private open spaces adjacent to dwellings.
6. Minimise the location of noise sensitive rooms such as bedrooms adjoining noisier rooms such as bathrooms or kitchens or common corridors and stairwells.
7. Where common walls are provided they must be carried to the underside of the roof and be constructed in accordance with Part F5 of the Building Code of Australia.
8. Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).

Ground Floor Dwellings

1. Design front gardens or terraces, which contribute to the spatial and visual structure of the street while maintaining adequate privacy for dwelling occupants. This can be achieved by animating the street edge, for example, by promoting individual entries for ground floor dwellings.
2. Create more pedestrian activity along the street and articulate the street edge by:
   - Balancing privacy requirements and pedestrian accessibility.
   - Providing appropriate fencing, lighting and/ or landscaping to meet privacy and safety requirements of occupants while contributing to a pleasant streetscape.
   - Utilising a change in level from the street to the private garden or terrace to minimise site lines from the streets into the dwellings.
   - Increasing street surveillance with doors and windows facing onto the street.

Security

1. Entrances to buildings should be orientated towards the front of the site and facing the street.
2. The main entrance to dwellings or other premises should not be from rear lanes and should be designed with clear directions and signage.
3. Reinforce the development boundary to strengthen the distinction between public and private space by:
   - Employing a level change at the site and/or building threshold (subject to accessibility requirements).
   - Signage.
   - Entry awnings.
   - Fences, walls and gates.
   - Change of material in paving between the street and the development.
4. Improve the opportunities for casual surveillance by:
   - Orienting living areas with views over public or communal open spaces, where possible.
   - Using bay windows and balconies, which protrude beyond the main facade and enable a wider angle of vision to the street.
   - Using corner windows, which provide oblique views of the street.
   - Providing casual views of common internal areas, such as lobbies and foyers, hallways, recreation areas and car parks.
5. Minimise opportunities for concealment by:

- Avoiding blind or dark alcoves near lifts and stairwells, at the entrance and within indoor car parks, along corridors and walkways.
- Providing well-lit routes throughout the development.
- Providing appropriate levels of illumination for all common areas.
- Providing graded illumination to car parks and illuminating entrances higher than the minimum acceptable standard.

6. Control access to the development by:
   - Making dwellings inaccessible from the balconies, roofs and windows of neighbouring buildings.
   - Separating the residential component of a development's car parking from any other building use and controlling car park access from public and common areas.
   - Providing direct access from car parks to dwelling lobbies for residents.

Natural Ventilation

1. Utilise the building layout and section to increase the potential for natural ventilation. Design solutions may include:
   - Facilitating cross ventilation by designing narrow building depths and providing dual aspect dwellings, for example, cross through dwellings and corner dwellings.
   - Facilitating convective currents by designing units, which draw cool air in at lower levels and allow warm air to escape at higher levels, for example, maisonette dwellings and two-storey dwellings.
2. Select doors and windows (that open) to maximise natural ventilation opportunities established by the dwelling layout.
3. Provide narrow building depths to support cross ventilation.
4. Avoid single-aspect dwellings with a southerly aspect.
5. Design the internal dwelling layout to promote natural ventilation by:
   - Minimising interruptions in air flow through a dwelling.
   - Grouping rooms with similar usage together, for example, keeping living spaces together and sleeping spaces together. This allows the dwelling to be compartmentalised for efficient summer cooling or winter heating.
   - Selecting doors and openable windows to maximise natural ventilation opportunities established by the dwelling layout.

Building Depth

1. Maximum building depths for ground floor uses is 20m in the neighbourhood centres. Speciality retail shops should not exceed 15m in depth from the street frontage.
2. All points on an office floor should be no more than 12.5m from a source of daylight (e.g. window, atria or light wells).
3. Maximum building depths for houses are 16m, unless internal courtyards are provided.
4. For apartment development, see Apartment Design Guide (ADG) or equivalent for building depth guidance.

Storage Areas

1. A secure storage space is to be provided for each dwelling with a minimum volume 8m3 (minimum dimension 1sqm). This must be set aside exclusively for storage as part of the basement or garage.

2. Storage areas must be adequately lit and secure. Particular attention must be given to security of basement and garage storage areas.

Adjoining Residential Areas

1. Development should minimise impact of the privacy of adjoining and nearby dwellings.
2. Development should be compatible with any adjoining and nearby dwellings.

6.7 Landscaping and Fencing

Objectives

a) To ensure appropriate landscaping in village centres.

b) To ensure the protection of existing trees on neighbouring residential zoned land.

c) To ensure the visual impact of development is minimised and integrated into the streetscape.

d) To improve the amenity of commercial centres.

Controls

1. Where trees are planted around high use facilities such as car park areas, children's play areas and walkways, they should have clean trunks to height of 1.8m.
2. Landscaping on any podium level or planter box shall be appropriately designed and irrigated.
3. Where landscaping is to be provided a detailed landscape plan shall accompany a development application. A suitably qualified Landscape architect must prepare all Landscape Plans submitted with the development application. Refer to Part 1 for requirements for Detailed Landscape Plans.
4. Landscaped areas within the Village Centres shall generally involve the provision of trees and shrubs in mulched garden beds around car parking areas and where pedestrian areas are provided. In particular the landscaping shall involve the following:
   - Mulched garden beds shall incorporate ground covers that will cover the ground area.
   - Large shrubs shall be used as screen planting where there is a need to screen certain areas such as outside storage.
   - Shrubs shall only be planted in mulched garden beds.

6.8 Car Parking and Access

Objectives

a) To ensure the provision of appropriate off-street parking for village centres.

b) To ensure car parking and loading facilities are in the most appropriate location given the urban design needs for the centre.

c) To ensure that car parking areas are attractive and don't dominate the streetscape.

d) To locate loading in appropriate locations.

e) To provide convenient, accessible and safe on-site car parking for residents and visitors.

f) To minimise driveway crossings to maximise on street parking and landscaped nature strips.

g) To integrate the location and design of car parking with the design of the site and building without compromising street character, landscape or pedestrian amenity and safety.

h) To integrate the location and design of car parking with the design of the site and the building.

Controls

1. Car parking and loading areas shall be located at the rear of buildings or in laneways.
2. Visitor car parking shall be clearly identified and may not be stacked or tandem car parking.
3. Visitor car parking shall be located between any roller shutter door and the front boundary.
4. Pedestrian ways and driveways shall be separated.
5. Driveways shall be designed to accommodate removalist vehicles.
6. Give preference to underground parking, whenever possible by:
   - Facilitating natural ventilation to basement and sub-basement car parking areas, where possible.
   - Integrating ventilation grills or screening devices of car park openings into the facade design and landscape design.
   - Providing safe and secure access for building users, including direct access to residential dwellings, where possible.
7. Where above ground enclosed parking cannot be avoided, ensure the design of the development mitigates any negative impact on streetscape and street amenity by:
   - Avoiding exposed parking on the street frontage.
   - Hiding car parking behind the building facade. Where wall openings (windows, fenestrations) occur, ensure they are integrated into the overall facade scale, proportions and detail.

6.9 Amenity and Environmental Impact

Objectives

a) To provide adequate amenity to the occupants of buildings and to neighbouring residential development in terms of solar access, and visual and acoustic privacy.

b) To ensure buildings and businesses provide safe and easy access for people.

Controls

Lighting

External lighting to a development must give consideration to the impact of glare on the amenity of adjoining and nearby residents.

Safety

1. Where the hours of operation are after sunset, the car parking areas and any other public areas shall be provided with lighting to provide a safe environment for users of the premises after hours.
2. A Noise Impact Assessment Statement prepared by a qualified Acoustics Engineer may be required to be submitted with the application depending on the scale and location of the proposed use to show that the use can operate satisfactorily in the neighbourhood centre.

6.10 Site Services

Objectives

a) To ensure that the required services are provided.

b) To ensure that the services provided are easily protected or maintained.

Controls

Letterboxes and House Numbering

1. A common letterbox structure must be located close to the main pedestrian entrance of a building.
2. The street number of a building must be visible from the street and made of a reflective material to allow visitors and emergency vehicles to easily identify the location of the building.

Frontage works and damage to Council assets

1. All verges within the neighbourhood centre shall be paved by the developer for the full verge width.

Electricity Sub Station

In some cases it may be necessary to provide an electricity substation at the front of the development adjacent to the street frontage. This will involve dedication of the area as a public street to allow access by the electricity provider. The front boundary treatment used elsewhere on the street frontage shall be used at the side and rear of the area.

Waste management

1. Development involving dwellings shall provide at least two waste storage areas to separately cater for the dwellings and non-residential uses on an allotment.
2. A development must provide a waste storage area inside every food premises, and inside any shop that is capable of accommodating a food premises.
3. A development must locate a waste storage area inside the building, or adjacent to a lane where it is convenient and safe for residents, tenants, and waste collection trucks to access the waste storage area and the location and floor level are to the satisfaction of Council.

7. Controls for Land in the ~~B6 Zone – Enterprise Corridor~~ E3 – Productivity Support Zone (Area A only)

7.1 Site Planning

Applies to

This section applies to land in the E3 – Productivity Support Zone (Area A only).

Objectives

a) To ensure that the development is compatible with amenity to nearby residential areas and open space.

b) To ensure that the development is compatible with the adjoining business development.

c) To ensure that the development reflects the character of the locality and environment.

d) To ensure that the development contributes to the public domain and attractiveness of the centre for its users.

Controls

The siting of buildings and the development should:

1. Provide safe pedestrian, cycle and vehicle access to and from the public street.
2. Be compatible with nearby residential development in terms of appearance, overshadowing, privacy, views, setbacks and height.
3. Address the street and consider its presentation to the public domain.
4. Consider the impact on existing and potential pedestrian links.
5. Stormwater from the site must be able to be drained satisfactorily. Where the site falls away from the street, it may be necessary to obtain an easement over adjoining property to drain water satisfactorily to a Council stormwater system. Refer to Water Cycle Management in Part 1.
6. Be compatible with existing business development in terms of scale, bulk, setbacks, materials and visual amenity.
7. Address the street and consider its presentation to the Classified road environment

7.2 Setbacks

Objectives

a) To ensure the height and scale of a development complements neighbouring development, and/or the desired character of a commercial centre.

b) To ensure a development does not detrimentally affect the amenity of adjoining residential development.

Controls

Rear Setbacks

1. Where the site has rear lane access the building may be built to the rear boundary, at ground and first floor level. Any floors above the first floor shall be setback equal to the height of the additional floors.
2. Where there is no rear lane access and the site adjoins land that is in a residential zone, the building may be required to be setback from the rear boundary or limited to one storey near the boundary. Any floors above the ground floor shall be setback equal to the height of the additional floors.

Side Setbacks

1. Where the site adjoins land that is also in ~~a business zone~~ the E3 – Productivity Support Zone (Area A only) there is no setback requirement.
2. Where the side boundary of the site adjoins land that is in a residential zone, the building may be required to be setback from the side boundary or limited to one storey near the boundary. Any floors above the ground floor shall be setback equal to the height of the additional floors.

Front Setbacks

1. The minimum setback from the front boundary is 10m for the ground floor and 7.5m for the first floor.
2. Any floors above the ground floor shall be setback equal to the height of the additional floors.

7.3 Landscaped Areas and Pedestrian Areas

Objectives

a) To ensure active street frontages on public streets.

b) To encourage provision of attractive pedestrian areas.

c) To encourage linkages between centres and any adjacent public areas such as open space.

Controls

1. Pedestrian areas should minimise any changes in levels and allow wheelchair access to the shops from the car parking area and public footpaths.
2. Pedestrian areas should link all major activity areas of the centre.
3. Pedestrian areas should be separate from loading areas.
4. Separate pedestrian access should be provided to adjoining public footpaths, community facilities and open space.
5. Sufficient area shall be provided to permit landscaping and tree planting within pedestrian areas and car parking areas.

7.4 Building Form, Streetscape and Layout

Achieving a high amenity of urban design is greatly dependent on the design and appearance of individual buildings. Well-designed new buildings not only enhance character and appearance, but also contribute to the coherence of the public domain. In particular:

- Building corners are important both in terms of “way finding” and “place making”. They are often used as markers or signs that contribute to place making and or marking an important intersection.

- The relative consistency in roof height and form assists in defining streets. A range of roof forms and parapets contribute to the skyline.
- The palette of materials contributes to the perceived image of the built environment and assists in creating a unified and memorable streetscape.

Objectives

a) To ensure that new buildings contribute positively to the streetscape and public domain by means of high quality architecture and robust selection of materials and finishes.

b) To address the streetscape by providing a consistent and appropriate street frontage in the town and neighbourhood centres.

c) To ensure corner sites are developed as visually significant elements in order to promote a strong and legible character.

d) To ensure working and living environments have good internal amenity that minimises the need for artificial heating, cooling and lighting.

Controls

1. External walls are to be constructed of high quality and durable materials and finishes, with low maintenance costs.
2. Articulate facades so that they address and add visual interest. Buildings four storeys and above are to be articulated to differentiate between base, middle and top in design.
3. Buildings on corner sites are to be designed to address the two adjacent streets in a similar way.
4. Limit opaque or blank walls for ground floor uses to 20% of the street frontage.
5. Highly reflective finishes and curtain wall glazing are not permitted above the ground floor.
6. Incorporate changes in level within retail development and civic facilities such that they are accessible to the people with disabilities.
7. Maximise glazing for retail uses, but break glazing into sections to avoid large expanses of glass.

Roof Forms

1. Minimise the bulk and mass of roofs and the potential for overshadowing from roofs.
2. Roof top structures, such as air conditioning, life motor rooms and the like are to be incorporated into the architectural design of the building and to be screened from public view.
3. Communication towers, such as mobile phone towers and the like, are not to be located on buildings with a residential component.

Material and Finishes

1. Avoid expanses of any single material.
2. Utilise high quality and durable materials and finishes.
3. The following materials are preferred:
   - Face brick with / without coloured render; and
   - Plain glass windows.
4. The following materials must be avoided:
   - Large wall tiles,
   - Rough textured render,
   - Polished metal and curtain walls, and
   - Reflective glass.

Building Depth

1. Maximum building depths for ground floor uses are 40m for Enterprise Corridor. Speciality retail shops should not exceed 15m in depth from the street frontage.
2. All points on an office floor should be no more than 12.5m from a source of daylight (e.g. window, atria or light wells).

7.5 Landscaping and Fencing

Objectives

a) To ensure appropriate landscaping in commercial centres; and

b) To ensure the protection of existing trees on neighbouring residential zoned land.

c) To ensure the visual impact of development is minimised and integrated into the streetscape.

d) To improve the amenity of commercial centres.

Controls

1. Where trees are planted around high use facilities such as car park areas, children's play areas and walkways, they should have clean trunks to height of 1.8m.
2. Landscaping on any podium level or planter box shall be appropriately designed and irrigated.
3. Where landscaping is to be provided a detailed landscape plan shall accompany a development application. A suitably qualified Landscape architect must prepare all Landscape Plans submitted with the development application. Refer to Part 1 for requirements for Detailed Landscape Plans.
4. Landscaped areas within Business Development shall generally involve the provision of trees and shrubs in mulched garden beds. In particular the landscaping shall involve the following:
   - The trees shall provide a canopy for the streetscape and soften the appearance of the Enterprise Corridor environment, without unduly concealing approved site signage.
   - Mulched garden beds shall incorporate ground covers that will cover the ground area.
   - Shrubs shall be used to soften appearance of the area but still allow viewing between the street and the development.
   - Large shrubs shall be used as screen planting where there is a need to screen certain areas such as outside storage.
   - Shrubs shall only be planted in mulched garden beds.
   - Grassed areas may be considered in limited areas in conjunction with mulched garden beds.
   - Trees shall only be planted in grass where there is a border around the tree separating it from the grassed area.
   - Figure 48 illustrates these requirements.

Figure 48: Landscaping around a Local Centre

7.6 Car Parking and Access

Background

Car parking and safe access provision is fundamental for all sites in the business areas. The layout of car parking areas may in the case of Local Centres may reflect the street environment. Refer to Part 1 for additional information about car parking and access requirements.

Objectives

a) To ensure the provision of appropriate off-street parking for business areas.

b) To ensure car parking and loading facilities are in the most appropriate location given the urban design needs for the centre.

c) To ensure that car parking areas that are attractive and don't dominate the streetscape.

d) To locate loading in appropriate locations.

Controls

1. Car parking shall generally be located toward the front of the site.
2. Car Parking must meet the requirements of Part 1 of this DCP.

7.7 Amenity and Environmental Impact

Background

Business Areas are centres of activity for residents, workers and visitors. The level of activity varies depending on size, location and land uses in the centre. This activity may take for long periods of the day each day of the week. They are also increasingly the location of residential development. While this presents opportunities to add to activity it also presents some potential amenity issues and impacts on transport.

Objectives

a) To provide adequate amenity to the occupants of buildings and to neighbouring residential development in terms of solar access, and visual and acoustic privacy.

b) To ensure buildings and businesses provide safe and easy access for people.

c) To provide useable private open space for dwellings.

Controls

Privacy

Development shall be designed to minimise overlooking of adjoining and nearby residential development.

Access to sunlight

Dwellings above shops shall be designed to maximise solar access.

Acoustic privacy

1. Where an allotment adjoins a Classified Road, dwellings must comply with the requirements of the SEPP (Infrastructure).
2. Dwellings should be located to minimise the impact of noise from car parking and loading areas.

Lighting

External lighting to a development must give consideration to the impact of glare on the amenity of adjoining and nearby residents

7.8 Site Services

Objectives

a) To ensure that the required services are provided.

b) To ensure that the services provided are easily protected or maintained.

Controls

Letterboxes and House Numbering

1. A common letterbox structure must be located close to the main pedestrian entrance of a building.
2. The street number of a building must be visible from the street and made of a reflective material to allow visitors and emergency vehicles to easily identify the location of the building.

Frontage works and damage to Council assets

1. Where a footpath, road shoulder, new or enlarged access driveway or is required to be provided this shall be provided at no cost to Council.
2. Council must be notified of any works that may threaten Council assets. Council must give approval for any works involving Council infrastructure.

Electricity Sub Station

1. In some cases it may be necessary to provide an electricity substation at the front of the development adjacent to the street frontage. This will involve dedication of the area as a public street to allow access by the electricity provider. The front boundary treatment used elsewhere on the street frontage shall be used at the side and rear of the area.

Waste management

1. Development involving dwellings shall provide at least two waste storage areas to separately cater for the dwellings and non-residential uses on an allotment.
2. A development must provide a waste storage area inside every food premises, and inside any shop that is capable of accommodating a food premises.
3. A development must locate a waste storage area inside the building, or adjacent to a lane where it is convenient and safe for residents, tenants, and waste collection trucks to access the waste storage area and the location and floor level are to the satisfaction of Council and Part 1.

Storage Facilities

1. A multi-unit development must provide a minimum storage area of 8m3 to each dwelling. The storage area may be attached to the car parking space or spaces to each dwelling.

8. Controls for Certain Sites

8.1 North of Maxwell's Creek urban park

Background

Two gateway style buildings are proposed to the northern edge of Maxwell's Creek Urban Park along Bernera Road. Due to the sensitive and highly visible location, special design guidelines are to apply to any buildings proposed on these sites in addition to the applicable objectives and controls already contained in this Plan. It is envisaged that two apartment buildings are proposed, one on each site flanking Bernera Road. A small corner café or other active use will be encouraged on the corner of the parkland and Bernera Road.

Objectives

a) To provide surveillance over Maxwell's Creek Urban Park and to increase the perception of safety and security in the area.

b) To shorten the walking distance and increase connections between the Urban and Town Centre Character Areas.

c) To provide a built form and architectural quality that reflects the special gateway location and parkland setting.

Controls

1. Buildings are to address the Bernera Avenue section of the Bus Priority Corridor, Maxwell's Creek Urban Park and the street running to the north of the site. Site servicing and vehicular access is to be provided from:
   - The western or north-western edge of the site for the western building, or
   - The eastern or north-eastern edge of the site for the eastern building. Refer to Figure 49.
2. The gateway buildings are to provide a strong contemporary urban form and be of architectural merit.
3. Minimum street wall heights are 4 storeys. Additional storeys may be set back behind the primary building line up to a maximum height of 6 storeys.
4. Car-parking and servicing is to be predominantly located underground or in semi-basements. Any surface parking areas are to be well integrated into the landscape treatment and be made of semi-pervious paving materials.
5. Sub-basement parking areas are not permitted to be raised greater than 750mm above existing ground level to maximise opportunities for ground floor interface between the public and the private domain and to minimise the negative visual impact of exposed parking and ventilation structures.
6. Landscape features such as terraced planter beds, wall and fence treatments up to 1.2m high are to be used to define the public and private domain.
7. Additional communal open space will be encouraged on the roof top.

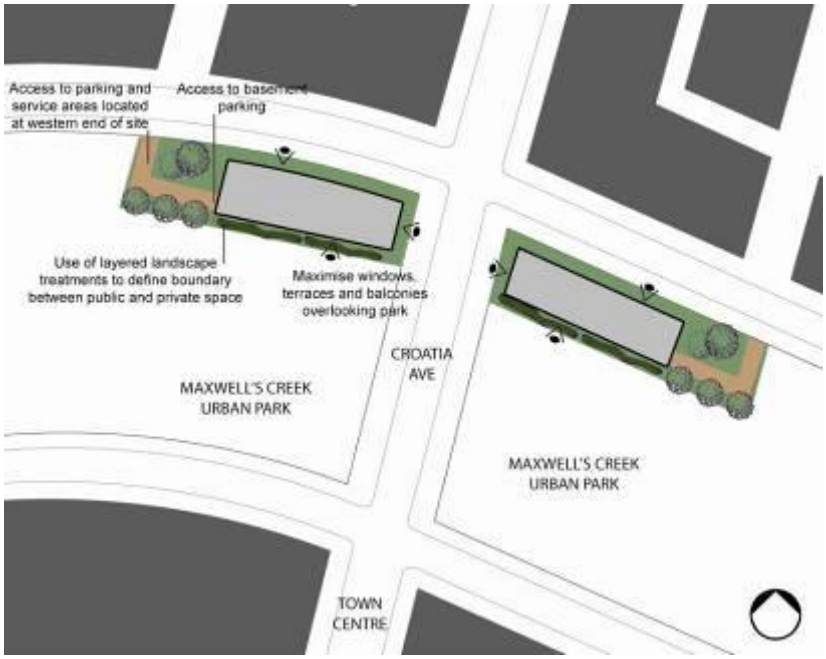


Figure 49: Design guidelines for development to the north of Maxwell's Creek Urban Park

8.2 Lots backing onto Camden Valley Way and the Rail Corridor

Background

As a number of properties will back onto Camden Valley Way and the South West Rail Link (SWRL) corridor, the presentation of the back of the lot to the public domain and the travelling public, as well as the amenity of the lot resident, is important to the overall quality of the precinct.

As part of the detailed design for the SWRL, and in accordance with the Conditions of Consent, the Transport Infrastructure Development Corporation (TIC) has investigated all reasonable and feasible noise mitigation options for existing and planned future receivers.

Objectives

a) To ensure that a high quality, low maintenance, solid and consistent rear boundary treatment to lots backing onto Camden Valley Way and the rail corridor.

b) To minimise the noise impacts to lots backing onto Camden Valley Way and the rail corridor.

c) To provide security and privacy to the rear of lots backing onto Camden Valley Way and the rail corridor.

d) To encourage a high quality architectural treatment to the rear façade of the property as visible to the public domain and travelling public.

Controls

1. Lots are to have a minimum depth of 30m.
2. An 8m minimum setback is required from the back of the lot to the rear, or side, façade of the dwelling.

3. Architecturally the rear façade of the building (and side façade if visible from the public domain) are to be articulated and modulated to reduce the bulk of the dwelling and to add visual interest.
4. Internal dwelling layouts should be designed to minimise noise in living and sleeping areas.
5. Double glazed windows are to be used on the rear façade of the dwelling to minimise noise impacts.
6. Where naturally ventilated (windows open) conditions cannot be achieved, due to noise levels, mechanical ventilation or air-conditioning systems are to be provided compliant with AS1668 and the National Construction Code.

Lots backing onto Camden Valley Way only

1. All allotments with a boundary to Camden Valley Way are to provide a wall to limit noise along that boundary. Walls are to be 2m high, of solid masonry construction, and provided along the length of all lots backing or siding onto Camden Valley Way.
2. Rear walls are to be vertically modulated at least every 5m on the side facing Camden Valley Way.
3. A coping is to be provided along the rear wall with a drip edge on the Camden Valley Way side (10 degree slope to coping).
4. The walls and footings are to be constructed on the boundary or entirely within the lot boundary.

LIVERPOOL CITY COUNCIL

LIVERPOOL THE GREAT SOUTH WEST

LIVERPOOL CITY COUNCIL

Ground Floor, 33 Moore Street,
Liverpool NSW 2170

1300 36 2170

www.liverpool.nsw.gov.au

lcc@liverpool.nsw.gov.au

NRS 133 677 (for hearing and speech impaired callers only)

Liverpool city council
creating our future together

Liverpool Development Control Plan 2008

Part 2.13

Land Subdivision in

Pleasure Point

~~19 February 2014~~
May 2024

Part 2.13 must be read in conjunction with Part 1

Refer to Part 3.8 for non residential development in residential zones

Liverpool Development Control Plan 2008

Part 2.13 Pleasure Point

Table of Contents

1. Preliminary **4**

2. Controls for Public Domain **6**

2.1 Street Network 6

2.2 Pedestrian and Cyclist Paths 12

2.3 Streetscape and Street Trees 12

2.4 Open Space 12

2.5 Views and View Sharing 14

2.6 Bushfire Protection 12

2.7 Creek Corridors 17

2.8 Stormwater Quantity and Quality Management 17

Table of Figures

Figure 1 Land to which this part applies 4
Figure 2 Street Network 7
Figure 3 Collector Street 9
Figure 4 Local Street 10
Figure 5 Asset Protection Road 11
Figure 6 Tree Protection 13
Figure 7 View Sharing 14
Figure 8 Land to which a 25 metre setback applies 16
Figure 9 Bushfire Trail 16

1. Preliminary

Applies to

1. This Part applies to land identified on Figure 1.
2. Part 1 also applies to the land identified in Figure 1.
3. The controls in this part relate to the subdivision of land in Figure 1.
4. Controls on development in Residential Zones in this locality are in Parts 3.1, 3.2, 3.3, 3.4 and 3.8.

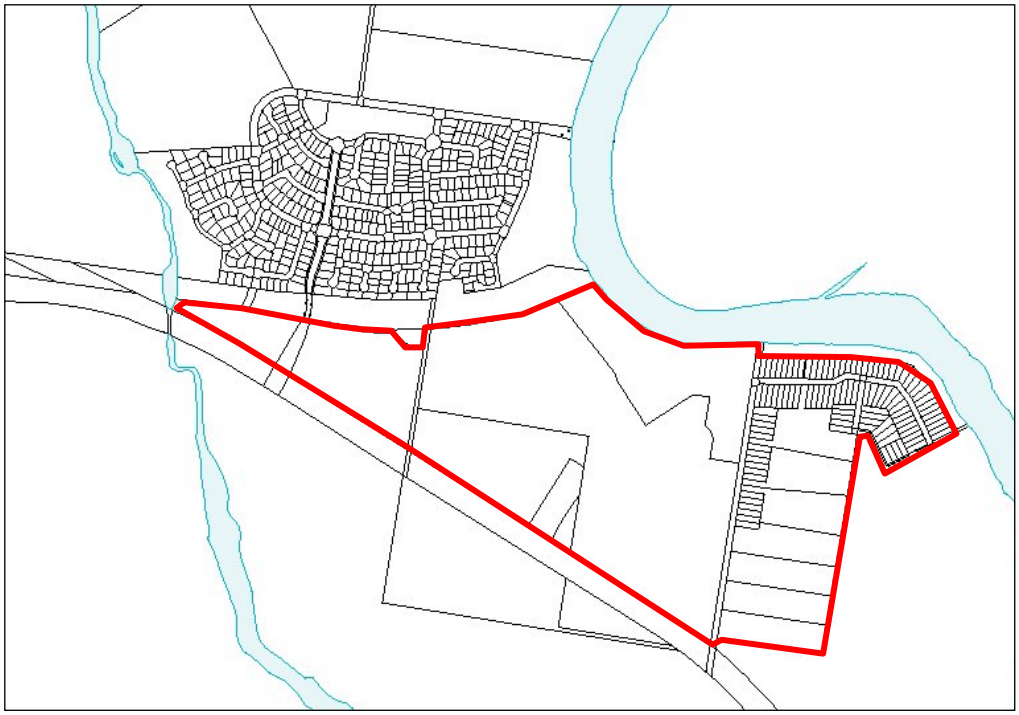


Figure 1 Land to which this part applies

Background

The Pleasure Point area currently consists of a small amount of residential development east of Pleasure Point Road and is adjacent to the residential area of Voyager Point. The development of the land between these two areas will provide a contiguous residential area. Road access to the combined residential area will remain using The Avenue and Pleasure Point Road. It is appropriate to link these two areas to minimise the need to use Heathcote Road to travel between the two areas. It wall also facilitate pedestrian access to East Hills Station. A through road linking The Avenue and Pleasure Point Road will also provide a more efficient bus route through the locality.

Objectives

Accessibility

To ensure a clear relationship between accessibility and land use by:

a) Promoting a movement system that gives appropriate priority to: walking, cycling, public transport, and private vehicles.

b) Guaranteeing a movement system that relates accessibility demand to location of development type.

c) Ensuring that servicing is able to be carried out appropriately.

d) Ensuring movement priorities, traffic speeds and street and road designs are appropriate to the location and give priority to pedestrians and children.

e) Guaranteeing adequate accessibility for emergency vehicles.

f) Building upon existing movement patterns and infrastructure by utilising the existing street layout.

g) Providing safe access during flooding events.

Social Benefits

To establish affordable and accessible facilities and resources that allow people to maintain wellbeing, live and recreate by ensuring that development creates a 'people place' by giving priority to people and human relationships through housing mix and safety.

Environmental Benefits

To ensure a clean, safe and healthy environment that builds on existing resources and produces quality built and natural assets by:

a) Establishing appropriate drainage management that, contributes positively to the area.

b) Developing solutions to manage environmental issues on-site.

c) Ensuring that waste disposal is effective and efficient and that recycling is utilised at every opportunity.

d) Ensuring a high standard of water and air pollution management and water quality.

e) Maintaining and enhancing the quality of the natural environment.

f) Connecting and enhancing vegetation corridors and providing links between the Georges River and Holsworthy.

g) Promoting the development of place and a quality built environment with people and human relationships as a central consideration.

Economic Benefits

a) To ensure appropriate accessibility to employment.

b) To ensure infrastructure is sufficient to meet current and predicted need.

2. Controls for Public Domain

2.1 Street Network

The development of the locality will involve new residential development south of the East Hills railway line, which will provide a contiguous residential area. Road access to the combined residential area will remain using The Avenue and Pleasure Point Road. It is appropriate to link these 2 areas to minimise the need to use Heathcote Road to travel between the 2 areas or for development at Pleasure Point to have pedestrian access to East Hills Railway Station.

This link should be capable of carrying public transport.

In addition to these links there will be a local street network. Detailed street sections are provided in Section 2.2.

Internal Link road

Objectives

a) To provide an internal link, which joins the various residential precincts.

b) To minimise the need to use Heathcote Road to travel between the 2 areas or for development at Pleasure Point to have pedestrian access to East Hills Railway Station.

c) To provide a for a more efficient bus route through the locality.

d) To provide safe, legible and efficient access within the locality.

e) To promote a movement system that, where appropriate, gives priority to walking, cycling and public transport.

Controls

The internal road link shall be provided in accordance with Figure 2.

Local Street Network

Objectives

a) To encourage a low-speed traffic environment.

b) To develop a comprehensive street network that links the site to the surrounding residential, commercial and employment areas.

c) To provide a comprehensive pedestrian and cycle network linking residential areas with parks, recreation areas.

d) To create a high quality safe environment for walking and cycling.

Controls

1. Subdivision plans are required to comply with the fixed streets identified in Figure 2.
2. Provide a grid-like street network pattern to facilitate walking and cycling and enable direct local vehicle trips within the neighbourhood. Cul-de-sacs will only be supported other than where alternative street patterns are not achievable.
3. Design safe pedestrian crossing points.
4. All intersections are to be designed in accordance with the RTA Austroads standards.
5. Street sections are to comply with Figures 3, 4 and 5.

6. The internal link road shall have a minimum travel-way width of 7m to accommodate a bus route.
7. Local streets shall front open space and avoid back fences to open space and other public areas.
8. All streets are to be legibly signposted with streets names and property numbers
9. 1.5m footpaths are to be provided on both sides of all streets.
10. All Development Applications for subdivision are to detail the proposed kerb type.
11. Barrier kerbs are to be used:
    - On any street frontage to open space.
    - At all intersections (between the potential driveway location on one frontage to the potential driveway location on the alternative street frontage). Driveways are not to be located within 6m of the tangent point of any intersection.
12. Roll kerbs may be used in other locations to the above.

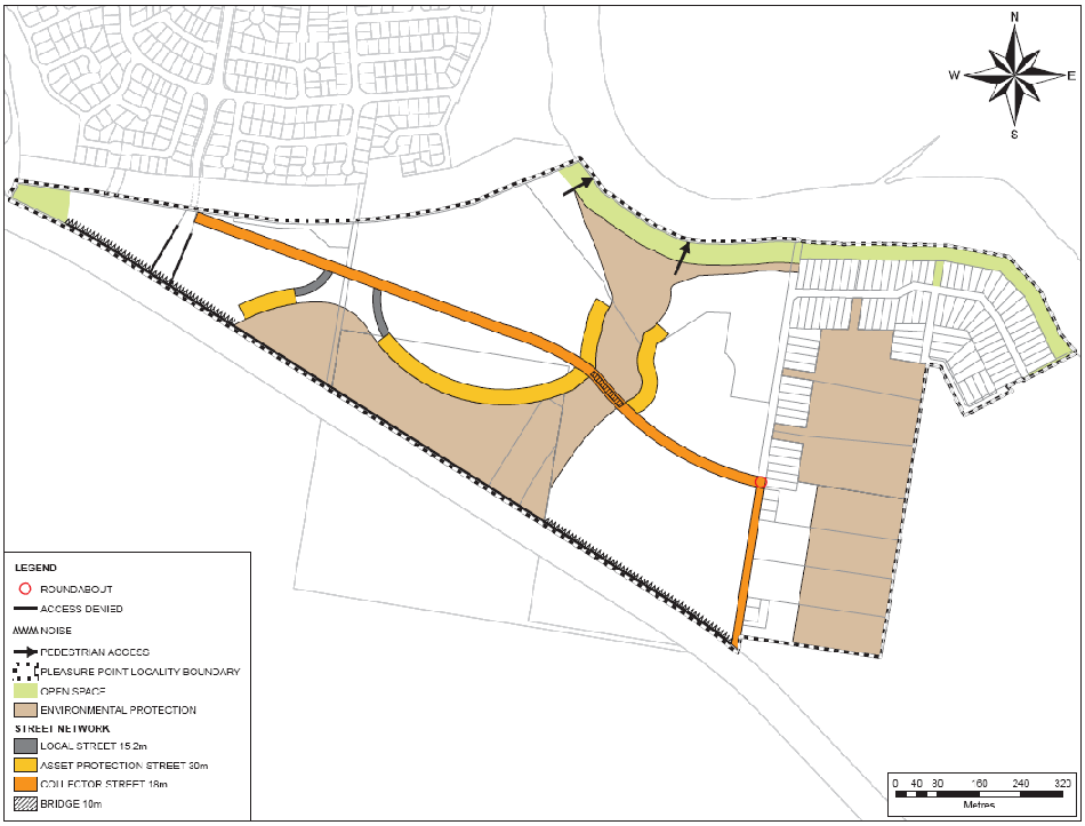


Figure 2 Street Network

Street Types

The following types of streets are provided:

Collector (Internal Link Road)

This street provides a connection from The Avenue to Pleasure Point Road. It will also be the public transport route. Refer to Figure 3.

Local Streets

These streets are designed for slow residential traffic. The road reserve is 15m wide. Refer to Figure 4.

Asset Protection Road:

This road is situated between the proposed urban areas and adjoining conservation areas that may be prone to bush fires. Pedestrian and cycle paths will encourage recreational use in what will be a scenic environment. Appropriate night lighting is important on this road to allow for incidental surveillance along the bushland fringe. Asset protection roads will have a road reserve of 30m, 20m of which is taken by the carriageway, road verges and a dedicated cycleway. The remaining 10m is proposed to be grassland and scattered trees and may serve a passive recreation purpose. Refer to Figure 5.

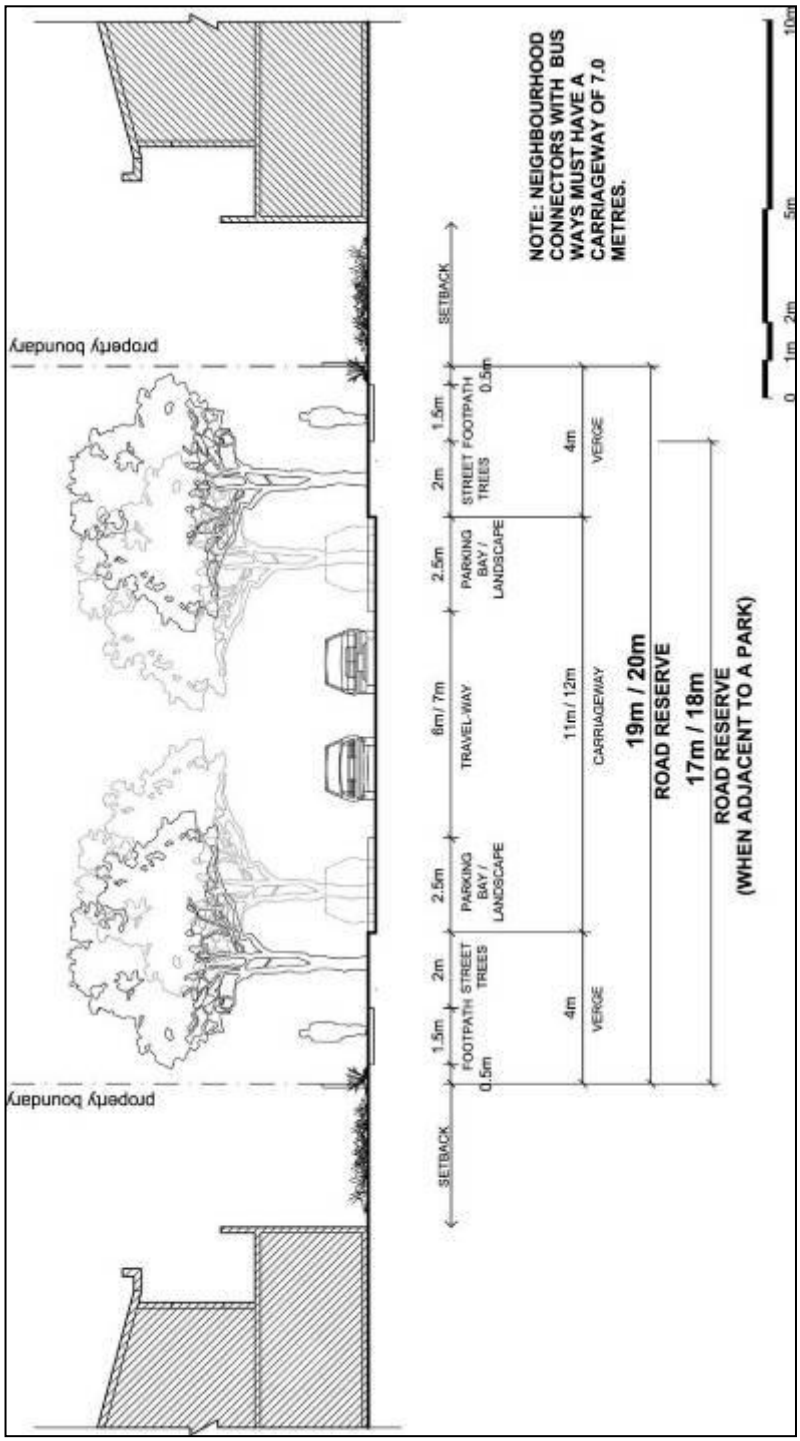


Figure 3 Collector Street

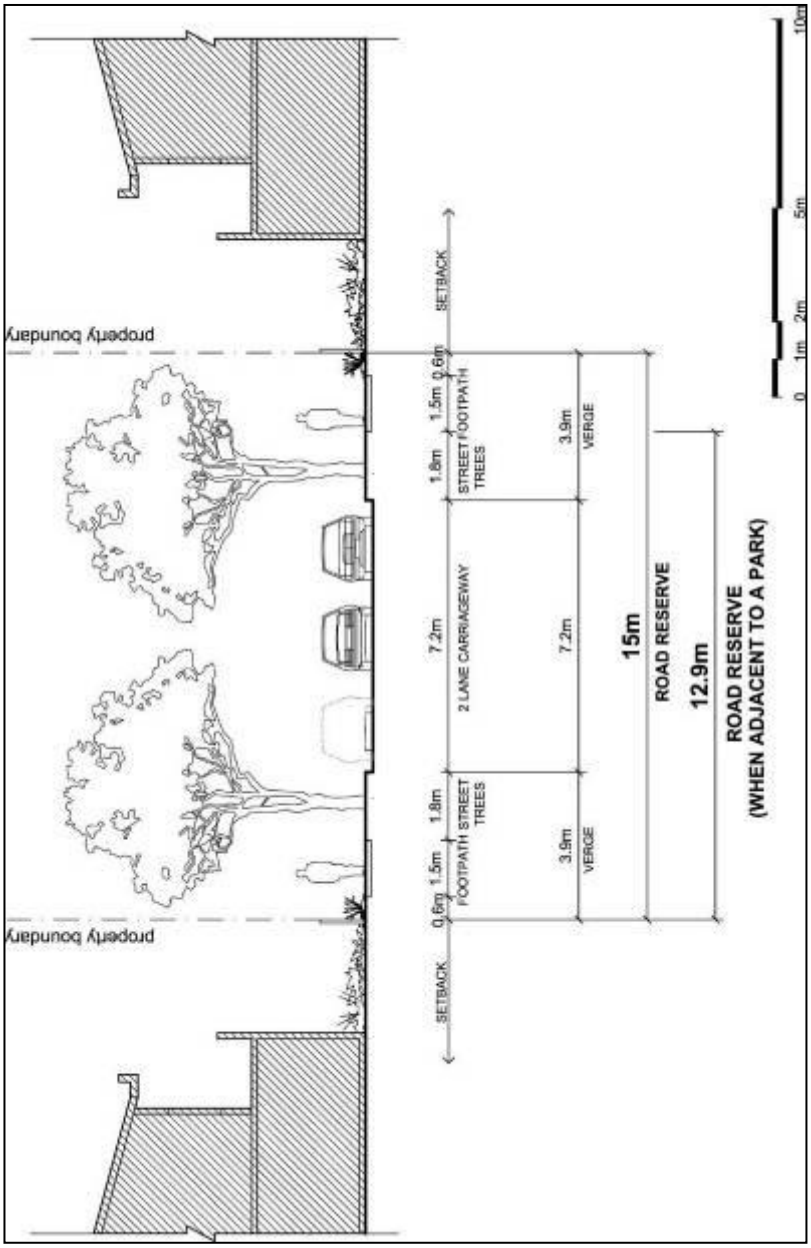


Figure 4 Local Street

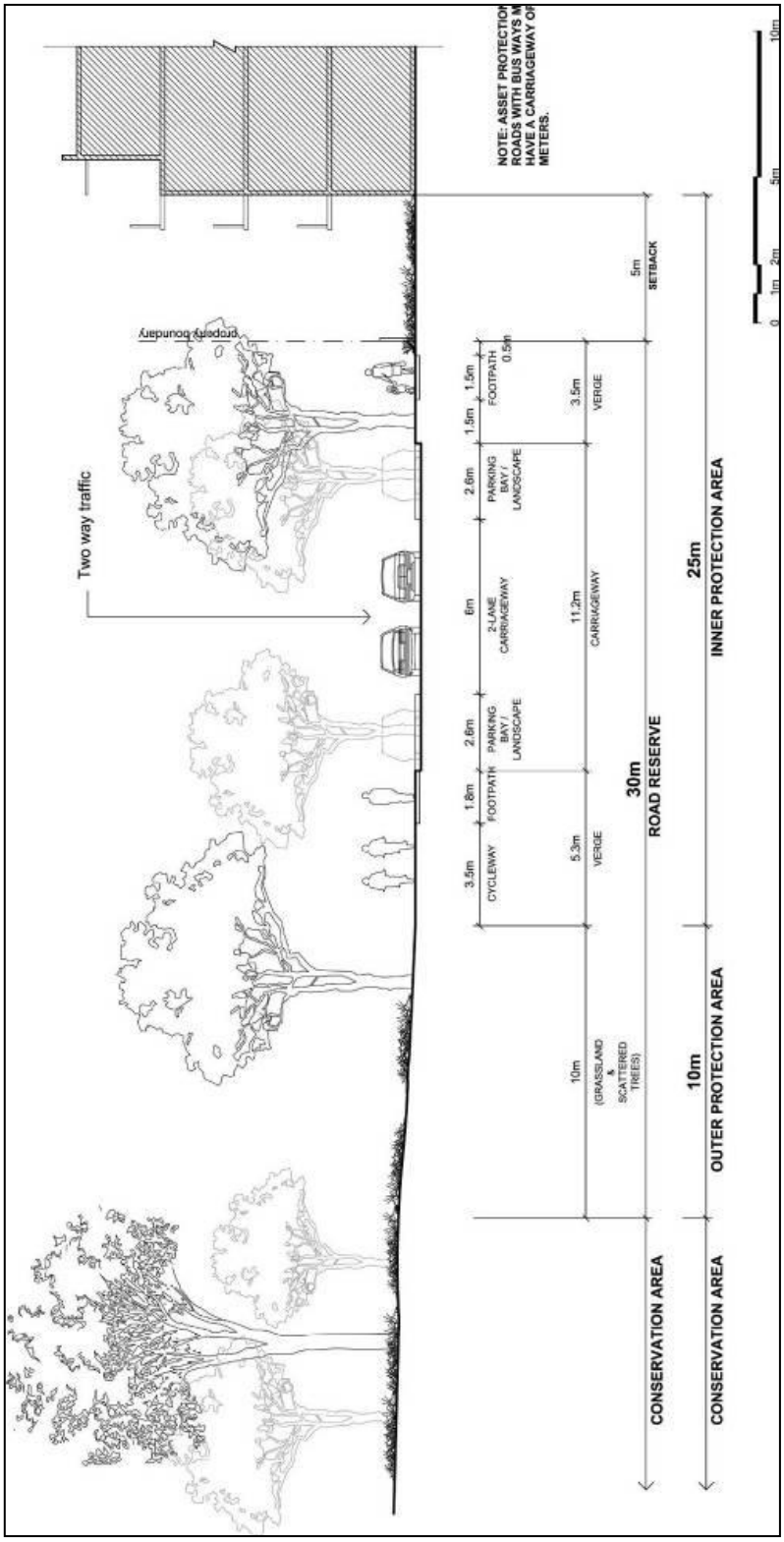


Figure 5 Asset Protection Road

2.2 Pedestrian and Cyclist Paths

Background

Pedestrian and cycle facilities in public spaces provide linkages to social and cultural activities and educational facilities, and should be characterised by excellence of design appropriate to the area.

Objectives

a) To encourage walking and cycling for local trips.

b) To provide a permeable and interconnected network of streets and pathways that gives safe, convenient and legible access to areas of attraction both within and beyond the suburb.

Controls

1. Pedestrian and cycle paths shall be provided in conjunction with the subdivision of land, creation of streets and development of open space in accordance with Figure 6.
2. Shared pedestrian/cycle links, cycle ways, public streets and lanes shall be clearly and frequently signposted to indicate their shared status.
3. Designated cycle lanes on streets shall be clearly indicated by line-markings on the road surface and/or by signs beside the road.
4. Shared pedestrian and cycle paths shall be a minimum 2.5m wide.
5. Designated pedestrian-only paths shall be a minimum of 1.5m wide and located in accordance with Figures 3 - 4.

2.3 Streetscape and Street Trees

Background

Street furniture should maximise pedestrian comfort, convenience and amenity, create visual harmony and be used to define spaces, streets, paths and gateways. Opportunities for public art in significant public domain locations should be explored as part of the development process.

Objectives

a) To create a sense of identity for the area.

b) To enhance public spaces so that they are vibrant, safe and welcoming.

c) To facilitate cultural identity through art and design in public places.

d) To create quality streetscapes that is visually attractive and integrates with surrounding street layout.

Controls

1. Street furniture is to be incorporated into the design of all public spaces and should be consistent in design and style.
2. Street furniture is to be located so as not to impede mobility, generally in accordance with *AS 1428:1 - 4*.
3. The location and detailing of all proposed street furniture is to be indicated on the Landscape Plan, to be submitted with the DA.

Street Tree Planting

1. Street trees shall be required to be planted in conjunction with the creation of a new street or the extension of an existing street.
2. One street tree shall be planted in the verge space outside of each allotment created.
3. The street trees shall be planted prior to the release of the subdivision certificate.
4. The trees shall be provided with protection to ensure their survival during the construction of buildings in the street. Refer to Figure 6 for details.
5. Trees and shrubs on individual streets must be of a uniform species. On streets adjacent to bushland, species indigenous to the area must be planted.

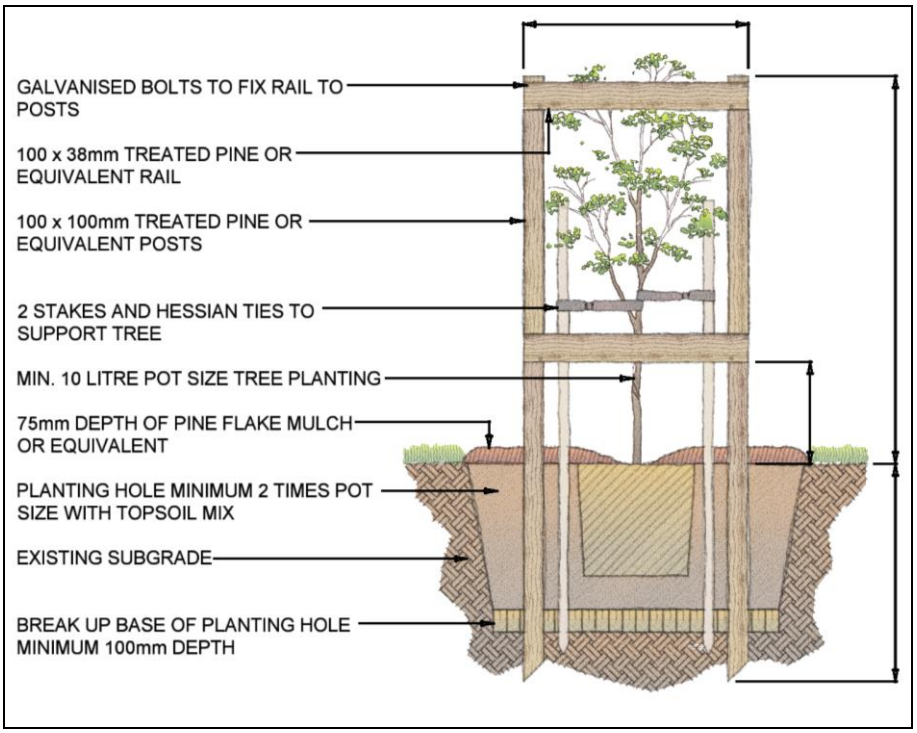


Figure 6 Tree Protection

2.4 Open Space

Background

Pleasure Point has remnants of extensive woodland that has unfortunately been degraded over time. It is intended to preserve the remaining remnant woodland portions. Given the high ecological and amenity value of these remnant portions of canopy trees should be retained. It is also intended to build public spaces that provide for vibrant social interaction and civic pride within the locality.

Objectives

a) To provide for a high quality environment

b) To provide for a high amenity subdivision by retaining as many mature trees as is possible.

c) To create a series of linked public spaces which are attractive and memorable.

d) To preserve mature trees, saplings and natural bushland.

e) To provide public access to the Georges River Foreshore for residents.

Controls

1. Land identified for open space under *Liverpool LEP 2008* shall be dedicated to Council in conjunction with the subdivision of adjoining residential land.
2. Direct vehicle and pedestrian connection shall be provided between the land identified as RE1 along the Foreshore and with future residential subdivision of the adjoining land via a public road.
3. The street network should be designed to avoid removal of large stands of existing trees.
4. The street network should be designed to preserve mature trees within the verge of the road reservation.
5. Public roads should be located between private allotments and open space areas.
6. Open Space is to be designed in accordance with Planning for Bushfire Protection 2006 to minimise potential impacts of bushfire on life and property.
7. To create visually interesting streetscapes through the use of native plantings and street plantings.

2.5 Views and View Sharing

Background

Pleasure Point has several view points, and potential views to natural bushland and to the Georges River or Williams Creek. It is important to ensure that there are equitable opportunities for lots with potential views.

Objectives

a) To provide for equitable view sharing.

b) To provide for a subdivision pattern that maximises view points.

c) That view points should be located prior to subdivision.

Controls

1. Lots should be designed as per Figure 7 to maximise view sharing.
2. Higher density lots should be located at potential view point areas.

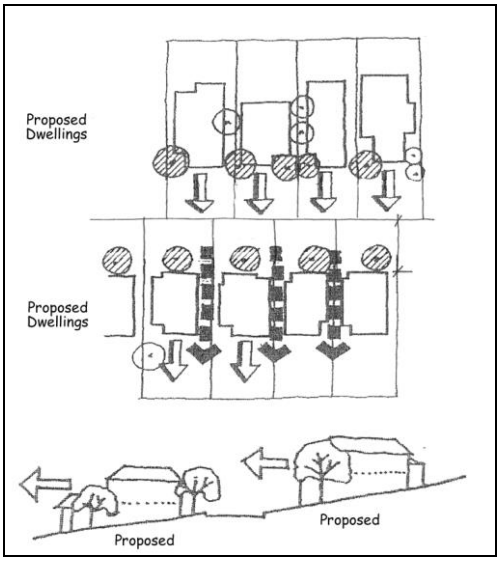


Figure 7 View Sharing

2.6 Bushfire Protection

Background

Pleasure Point is adjacent to a significant bushland area (eastern portions of Pleasure Point) and any development adjacent to the bushland will require bushfire management measures.

Objectives

a) To reduce the potential for loss of life or property in the event of a bushfire and provide a safer environment.

b) To ensure that development in bushfire prone areas is accessible by emergency services at all times.

c) To ensure that development in bushfire prone areas is designed to enhance the survivability of the building and is prepared for its defence in the event of a bushfire.

d) Implement an ongoing maintenance regime to manage surrounding vegetation and asset protection zones to reduce possible bushfire fronts and protect the development.

Controls

1. A 25 metre setback applies to the rear boundary of all lots adjacent to DP 239468 (see Figure 8)
    a. Within the 25 metre rear setback area:
        i. Any above ground structures are to be limited to a 15 square metre footprint and constructed of non-combustible material.
        ii. Landscaping is to include fire resistant species.
        iii. Fixed water systems are to be installed.
    b. For properties directly adjoining DP 239468 the rear fence shall be:
        i. 1.8m high
        ii. Consist of see through construction e.g. cyclone wire
2. A fire trail parallel to Pleasure Point Road shall be provided as part of any development of lots 4 - 7 DP 239468. The trail shall link to Pleasure Point Road through lots 4 - 7 and meet the requirements of section 4.3.3 of *Planning for Bushfire Protection 2006*.
3. This track is to be located as shown on Figure 9. Gates must be provided in side boundary fences to allow passage of fire trucks and equipment along the trail in the event of fire.
4. Any area west of the bushfire trail is to be treated as a fuel reduced zone.

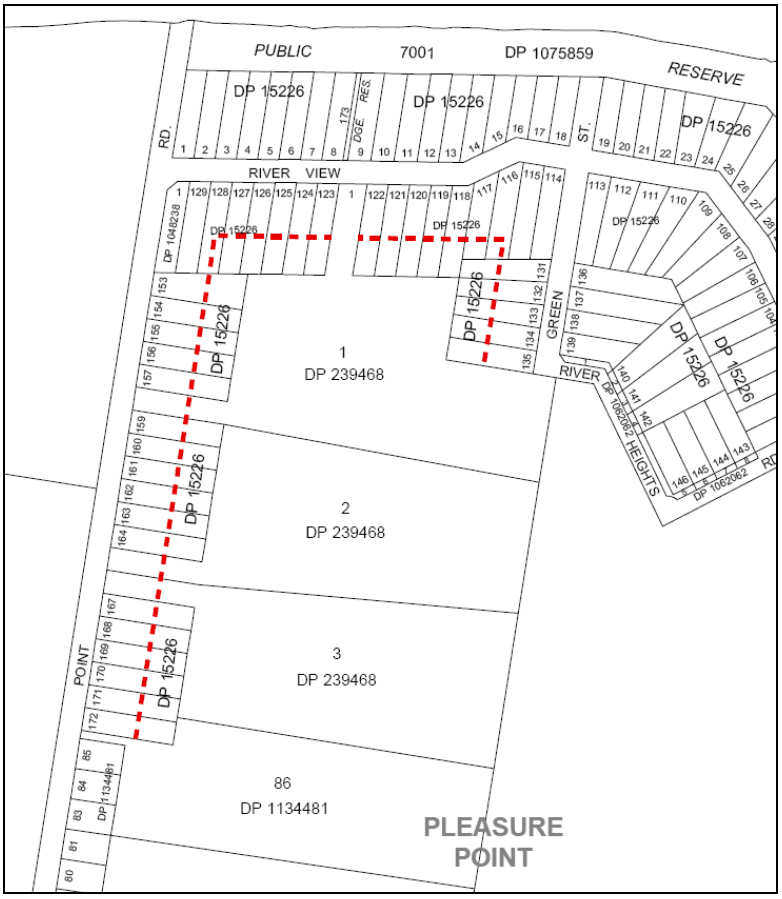


Figure 8 Land to which a 25 metre setback applies

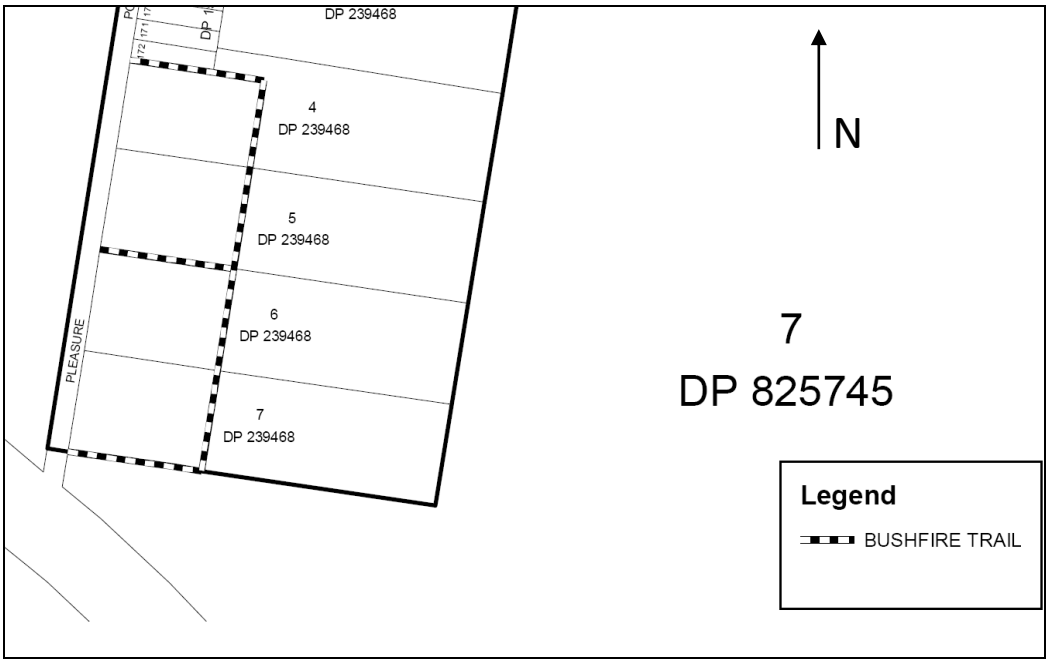


Figure 9 Bushfire Trail

2.7 Creek Corridors

Objectives

a) To protect and enhance native vegetation.

b) To protect and enhance archaeological and cultural values.

c) To protect and enhance aquatic habitats.

Controls

1. Provide for the protection of the creek environment, including water quality, soil stability and creek bed habitat.
2. Bush fire asset protection zones are to be incorporated into boundary road design and outside the conservation areas and creek zones.
3. Avoid the removal of existing trees in the following zones:
   - RE1 - Recreation - Public
   - W1 – Natural Waterways
   - ~~E3~~ C3 – Environmental Management
4. Service utilities can only be provided within Creek Corridors if no other practical or feasible opportunity exists to cross the corridor at designated crossing points, such as streets and pedestrian crossings.

2.8 Stormwater Quantity and Quality Management

The site drains partly to Williams Creek and partly to a gully that drains to the Georges River.

Stormwater quantity and quality management are intended to reduce the impact of rapid stormwater conveyance on streams and wetlands, remove pollutants to improve water quality, retain habitats, conserve water, integrate landscape and recreational opportunities and protect downstream development from inundation.

Water quality detention / bio-retention basins will be an integral part of stormwater management.

Objectives

a) To provide an urban water management system for both stormwater quantity and quality

b) To minimise hydrological impacts on the environment.

c) To protect and enhance the natural water systems and water quality.

d) To manage floods, attenuate flows and maximise integration of Water Sensitive Urban Design strategies where appropriate.

e) To ensure no net increase in peak discharges exiting the site.

f) To mitigate flood damage to the built environment, inundation of dwellings and stormwater damage to properties.

g) To provide an urban water management system that will be economically maintained and to ensure that arrangements are in place for on-going maintenance.

Controls

1. Part of the site drains to a gully west of Pleasure Point Road and is zoned E3 Environmental Management. It is not intended that this be transferred to public ownership but rather kept in private ownership in conjunction with residential purposes in the adjoining R2 zone. Development for residential development in the R2 zone shall ensure that the peak discharge of stormwater does not exceed the pre-development flows and that water quality is not degraded.

2. A Stream and Riparian Management Plan (SRMP) is to be prepared as part of the Water Cycle Management Plan and submitted with the subdivision Development Application for the full extent of each creek corridor within the subdivision being developed. These SRMPs are to be prepared in consultation with Council and Department of Water and Energy and require the approval of Council.

3. The SRMPs are to include the following:

   - Plans showing, in detail, the existing creek channels, creek vegetation (including remnant native vegetation), geomorphic features and aquatic habitats (reed beds, snags etc).
   - Detailed plans of any channel modification and stabilisation works.
   - A longitudinal stream survey section (if stream works are proposed) of the existing and proposed creek channel bed in sufficient detail to identify changes in bed level and hydraulic features (i.e. pools and riffles).
   - Details on the staging and sequencing of any works within the creek zone.
   - Recommendations on how to address the modified drainage system and reaches.
   - A vegetation management plan is to be incorporated into the SRMP for the establishment of creek corridors. It must use natural and assisted regeneration and planting of locally native vegetation (trees, shrubs and groundcover species).

4. The proposed Internal Link Road crossing of the creek must be designed to facilitate the movement of aquatic and terrestrial species, and are to incorporate features that allow for light penetration beneath the structure.

5. The design of any structures crossing the creek in the E3 zone are to ensure the following:

   - 1% AEP flood conveyance.
   - Flora and fauna connectivity.
   - Scour protection.

6. Provide off line water quality control bio-retention systems to trap pollutants and fine sediment.

7. Provide structural water quality management devices, including, gross pollutant and sediment traps and litter management devices.

8. Where any construction adjacent to a creek, natural watercourse, drainage depression, or an enclosed drainage system is proposed, the DA should be consistent with the SRMP and is to be accompanied by a full hydrologic and hydraulic assessment. The assessment is to include:

   - External and internal catchment hydrology for rainfall events including the 1.5, 5, 20 and 100 year ARI design event.
   - An estimation of the capacity of the existing drainage system.
   - Predicted extents of flood inundation, depths, and velocities of predicted flood flows to allow effective hazard categorisation.

9. Where drainage routes pass through a property, adequate provision must be made for the passage of stormwater runoff with adequate freeboard to building floor levels. In the event of Council being requested to approve the location of a piece of infrastructure on its land, it will require:

- Documentation that such an activity will not prejudice the use of the land for the purpose for which it exists.
- Possible preparation or amendment to the Plan of Management for the land, and if this action is necessary a fee may be required.

Liverpool city council
creating our future together

Council Administration Centre Level 2, 33 Moore Street, Liverpool NSW 2170

Postal Address Locked Bag 7064, Liverpool BC NSW 1871

Customer Contact Centre 1300 36 2170

Fax 02 9821 9333

NRS (National Relay Service) 133 677

Email lcc@liverpool.nsw.gov.au

Website www.liverpool.nsw.gov.au

Liverpool Development Control Plan 2008

Part 3.9

Boarding House Development

Part 3.9 must be read in conjunction with Part 1

Parts 2, 3, 4 and 6 also apply to boarding house development

LIVERPOOL CITY COUNCIL

LIVERPOOL THE GREAT SOUTH WEST

Liverpool Development Control Plan 2008
Part 3.9 Boarding House Development

Table of Contents

1. Preliminary 1
2. General Requirements 3
3. Building Character 4
4. Site Planning 5
5. External Design 6
6. Internal Design 7
7. Communal Open Space 9
8. Parking and Access 10
9. Amenity 11
10. Side and Rear Setbacks in the R2 zone 12

Appendix 1 – Character Statement 13

Appendix 2 – Plan of Management 14

Table of Figures

Figure 1 Bedroom Ratio Formula 7

List of Tables

Table 1 8

Table 2 8

Table 3 12

1. Preliminary

Applies to

1. Part 3.9 applies to Boarding Houses in the R1 General Residential, R2 Low Density Residential, R3 Medium Density Residential, R4 High Density Residential, ~~B1 Neighbourhood Centre, B2 Local Centre and B4 Mixed Use zones~~ E1 and MU1 zones , except as provided below.
2. Part 1 of the DCP also applies to the land.
3. The following Parts of the DCP shall also be applied to boarding house development:
   i. Part 2 of the DCP must be applied in specific localities.
   ii. Part 3.2 of the DCP must be applied in the R2 zone.
   iii. Part 3.6 of the DCP must be applied in the R3 zone.
   iv. Part 3.7 of the DCP must be applied in the R4 zone (outside of the Liverpool City Centre).
   v. Part 4 of the DCP must be applied in the Liverpool City Centre.
   vi. Part 6 of the DCP must be applied in ~~business zones~~ E1, E2, E3 and MU1 zones.

Note: Part 3.9 of the DCP prevails to the extent of any inconsistency with Parts 2, 3, 4 and 6 of the DCP.

Background

The State Environmental Planning Policy (Affordable Rental Housing) 2009 [SEPP ARH] was introduced on 31 July 2009 to increase the supply of affordable rental housing in NSW and as a result, the Liverpool LGA has seen a significant increase in demand for such housing. Particularly, controls are required to regulate the development of boarding houses, and this part of the DCP ensures that boarding houses are sympathetic to the desired character of their surroundings.

Link to SEPP ARH

This part of the DCP must be read in conjunction with the SEPP ARH. Where there is an inconsistency between the SEPP ARH and this DCP, the SEPP ARH prevails. The controls listed in the following subsections of this part of the DCP are to be used when addressing Clause 30A of the SEPP ARH.

Link to Liverpool LEP 2008

Liverpool LEP 2008 provides overall requirements and objectives for development in the residential and ~~business areas~~ E1, E2, E3 and MU1 zones of Liverpool. Each zone provides objectives, which provide direction for the controls in the DCP. There are also general provisions for development in the residential and ~~business zones~~ E1, E2, E3 and MU1 zones as well as provisions for specific forms of development in certain areas or for development on specific sites.

Objectives

a) To ensure boarding houses achieve a high standard of urban design, which are compatible with the desired amenity and character of the area.

b) To provide controls additional to those contained within State Environmental Planning Policy (Affordable Rental Housing) 2009 (SEPP ARH).

c) To ensure that the amenity of neighbours is maintained.

2. General Requirements

Registration

All boarding houses are to be registered in accordance with the provisions of the Boarding Houses Act 2012, and are to be utilised in accordance with the Boarding Houses Regulation 2013.

Building Code of Australia (BCA)

Boarding Houses may be classified as either Class 1b or Class 3 under the BCA.

A BCA report is required for all Class 3 boarding houses and any boarding house involving alterations and additions to an existing building.

Subdivision

The subdivision (including strata or community title subdivision) of boarding houses is not permitted.

3. Building Character

Objectives

a) To achieve the desired future character for the locality and minimise amenity impacts on adjoining properties.

b) To reduce adverse impacts on heritage items.

Controls

1. A Character Statement is to be submitted with all applications for boarding house development. At a minimum the statement is to address the criteria listed under Appendix 1 of this DCP.

Note: Character statements are to be prepared by a suitably qualified person and must include 3D perspective drawings showing how the building appears when situated amongst other buildings within a 100m radius.

2. Boarding houses located in the vicinity of a Heritage Item or within a Heritage Conservation Area must be designed sympathetically to the significance of the Heritage Conservation Area/Item.

4. Site Planning

Objectives

a) To ensure that boarding houses are only provided on lots that are capable of supporting such development.

b) To ensure that boarding houses are located in areas that encourage patronage of public transport.

Controls

1. All boarding houses must be located in an accessible area as defined in the SEPP ARH.

Note: Boarding houses in the R2 zone are subject to additional locational criteria as required under the SEPP ARH.

2. Boarding houses must not be located on cul-de-sacs streets and battle-axe allotments.

3. Boarding houses must have a separate pedestrian access to a street.

4. Boarding houses must be located to minimise the extent of cut and fill.

5. External Building Design

Objectives

a) To encourage designs that are sympathetic to the amenity of adjoining neighbours.

b) To ensure buildings address all street frontages appropriately.

Controls

1. All boarding rooms must only be accessed from within the building.
2. Main entrances shall not be located along rear and side boundaries where they face adjoining properties.

6. Internal Building Design

Objectives

a) To ensure that boarding houses are designed to provide sufficient communal facilities for the occupants in terms of communal indoor and outdoor areas, kitchen and laundry facilities.

b) To limit the potential overdevelopment of various sites in Liverpool.

c) To ensure that lodgers are provided with a reasonable level of amenity.

Controls

1. Boarding houses shall be limited to a maximum number of bedrooms using the formula below (rounded to the nearest whole number). Any floor space ratio (FSR) over 1:1 shall be rounded down to 1:1:

No. of rooms = $\frac{\text{Site Area (sqm)}}{45}$ X FSR (no more than 1:1)

Example 1: 400sqm site with 0.5:1 FSR

$\frac{400\text{sqm}}{45}$ X 0.5 = 4.4 (or 4 rooms)

Example 2: 2,500sqm site with 2:1 FSR

$\frac{2500\text{sqm}}{45}$ X 1 = 55.5 (or 56 rooms)

Figure 1: Bedroom ratio formula

2. Communal living rooms and kitchens shall be the focal point of the building (e.g. near lobby, laundry, mail area etc.) and be provided with access to the communal open space area.

3. An indoor communal living room must be provided at a rate of 15sqm for the first 5 lodgers (or part thereof) and 1sqm for each additional lodger.

Note: Required floor area for the communal living room may be split across multiple parts of the building if it is seen as beneficial for the internal layout of the building.

4. No boarding rooms shall open directly on to communal living, dining and kitchen areas.

5. At least 10% of the rooms shall be adaptable in accordance with the relevant Australian Standards (AS) for Adaptable Housing (AS 4299 - 1995) as amended.

6. Boarding houses shall be designed to comply with the minimum access requirements contained within the BCA and Australian Standard 1428 – Design for Access and Mobility (as amended).

7. At least 70% of the rooms shall receive a minimum of 3 hours direct sunlight between 9am and 3pm on 21 June.
8. Where self-contained boarding rooms are proposed they shall be provided with the following facilities (at a minimum) in accordance with Table 1:

Table 1 Self-contained facilities

Facility	Area
Bathroom	2.1sqm
Shower in bathroom	0.8sqm
Laundry	1.1sqm
Kitchenette	2sqm

9. Where shared facilities are proposed, they must be provided at a rate of 1 per 10 occupants (or part thereof) in accordance with Table 2:

Table 2 Communal facilities

Facilities
1 washing machine and 1 washing sink
1 electric clothes dryer or 30m of external clothes line
1 bathroom
1 toilet and wash basin (separate from bathroom)

10. A communal kitchen is to be provided on each floor (if more than 2 storeys) with a minimum area of 8sqm or 1.2sqm for each resident without a kitchenette (whichever is the greater).

Note: The kitchen is to comply with food safety standards adopted under the NSW Food Act 2003 and the National Code for the Construction and Fitout of Food Premises.

11. If management or reception offices (apart from a manager's room) are to be provided, they are to be located at a central, visible point which is convenient to occupants and visitors of the boarding house.
12. Boarding houses in the B1, B2 or B4 zones shall not be provided with any rooms on the ground floor.

7. Communal Open Space

Objectives

a) To ensure that access to communal open space areas are designed to meet the needs of lodgers.

b) To ensure that privacy is provided to communal open space areas from adjoining developments.

Controls

1. The communal open space must receive 3hrs of sunlight to 50% of its area between 9am and 5pm on 21 June, and must:

   i. be provided at ground level in a courtyard or terrace area, wherever possible;

   ii. provide partial cover from weather;

   iii. incorporate soft/porous surfaces for 50% of the area;

   iv. be connected to communal indoor spaces, such as kitchens or living areas;

   v. contain communal facilities such as barbecues, seating and pergolas where appropriate; and

   vi. be screened from adjoining properties and the public domain with plantings or similar

8. Parking and Access

Objectives

a) To provide car parking facilities on site that are convenient, safe and have sufficient space for vehicular manoeuvrability.

b) To ensure that increased traffic movements do not have adverse impacts on the road network.

c) To minimise the need for on street car parking.

d) To provide convenient pedestrian access.

Controls

1. A traffic and parking impact statement is required for all boarding house developments demonstrating that the use of the premises will not result in adverse traffic, parking and road safety impacts. The assessment is to include the following (but not being limited to):

   i. Identification of prevailing traffic conditions;

   ii. the likely impact of the proposed development the road network;

   iii. pedestrian and traffic safety measures; and

   iv. justification for any variations of on-site parking requirements

2. The path to any building entrance(s) shall be designed in a manner which provides direct and convenient access from the nearest public footpath.

9. Amenity

Objectives

a) To ensure that boarding houses operate without impeding upon the amenity of adjoining residents.

b) To ensure appropriate noise and vibration attention measures are incorporated into boarding houses where applicable.

Controls

1. An acoustic report prepared by a suitably qualified person shall be submitted and is to include:
   i. Identification of sensitive noise receivers potentially impacted by the proposal;
   ii. Measure (in decibels) and describe the existing acoustic environment;
   iii. Details of the acoustic mitigation measures to be implemented in the proposal;
   iv. Identification of noise likely to be generated by the proposal based on full occupation; and
   v. Certification that the proposal is capable of operating without causing nuisance, including a statement of mitigation measures required to ensure this

2. A 'Plan of Management' is to be submitted with each development application for a boarding house, including criteria as outlined in Appendix 2.

10. Side and Rear Setbacks in the R2 zone

Objectives

a) To provide visual and acoustic privacy to adjoining development.
b) To minimise the impacts of intensified development in low density areas.

Controls

1. Buildings in the R2 zone shall be setback from the side and rear boundaries in accordance with Table 3:

Table 3 Setbacks

Item	Side Setback	Rear Setback
Ground Floor	3m	6m
First Floor	3m	8m

Note: Boarding house encroachments may only occur if it is seen as beneficial for open space, solar access and the internal layout of the building.

Appendix 1 – Character Statement

At a minimum all local character statements must analyse the desired urban form and scale with regard to the following elements:

Building Type

- Identify the predominant building typology in the locality (e.g. single storey detached dwellings) and ensure that (and describe how) the proposed boarding house is sympathetic to both the existing and desired future building type.

Streetscape

- Identify and describe the streetscape character and provide for a development which is consistent with, or improves upon, this character by means of public domain improvements (e.g. planting street trees and minimising driveway cross-overs).

Setbacks/Building lines

- Determine if there is a desired subdivision pattern and spacing of buildings including, consistency in size of lots, frontage width, and regular spacing between buildings.
- Explain how the proposed boarding house will be consistent with the desired future building separation in the locality.

Building Style

- Identify the dominant age/style of buildings in the locality (e.g. federation, 'interwar', post WWII style).
- Describe how the design of the boarding house will respond to the style of surrounding buildings in the locality.

Materials and Finishes

- Identify and describe the predominant building finishes and materials in the locality.
- Explain how the selected materials and finishes for the boarding house are appropriate when juxtaposed against that of other buildings in the locality.

Views, vistas and skylines

- Identify any views or vistas within the locality (e.g. views towards heritage buildings or bodies of water)
- Describe how the design of the boarding house will respond to the views and vistas.
- Determine if the boarding house will open up or block views that are enjoyed by occupants of existing developments in the vicinity.

The character statement is to be prepared by a suitably qualified person and must also include 3D perspective drawings showing how the built form appears when situated amongst other buildings within a 100m radius.

Appendix 2 – Plan of Management

At a minimum all plans of management must contain the following elements:

- Manager duties & staffing arrangements including the location and 24/7 contact details of any on-site manager or resident caretaker, who has overall responsibility for the operation, administration, cleanliness, maintenance and fire safety of the premises.
- Council consent compliance details (attached as an addendum upon commencement of operations)
- Procedures for maintaining an Incidents Register, and keeping Council informed of any change in management
- Occupancy rates for each bedroom.
- House rules and how they will be displayed including (but not limited to) guest behaviour, activities and noise, parking arrangements, operating hours of outdoor common areas, visitor policy, and the use of alcohol and/or drugs, and location of smoking area.
- Measures to minimise impacts on adjoining residents including the management of communal open spaces, visiting hours and limitations on noise generating activities between 10pm and 7am.
- Waste management, cleaning and property maintenance measures including schedule of regular professional cleaning, landscaping and pest control services, and details of waste management procedures (including disposal of ‘sharps’ and/or sanitary napkin receptacles).
- Furniture and facilities including a list of items to be provided in each room (inclusive of communal areas) of the premises.
- Safety and security including an emergency evacuation plan with emergency contact details, staff training, fire mitigation measures, display of annual fire safety statement, perimeter lighting, landline telephone and floor plans showing emergency egress routes.

LIVERPOOL CITY COUNCIL

Ground Floor, 33 Moore Street,
Liverpool NSW 2170

1300 36 2170

www.liverpool.nsw.gov.au

lcc@liverpool.nsw.gov.au

NRS 133 677 (for hearing and speech impaired callers only)

Liverpool Development Control Plan 2008

Part 4

Development in

Liverpool city centre

~~6 May 2020~~

May 2024

Part 4 must be read in conjunction with Part 1

LIVERPOOL CITY COUNCIL

LIVERPOOL THE GREAT SOUTH WEST

Liverpool Development Control Plan 2008
Part 4 Liverpool city centre

4.1. PRELIMINARY 3

4.2. CONTROLS FOR BUILDING FORMBUSIN..... 8

4.2.1 Building form 8

4.2.2 Building Envelopes 111

4.2.3 Controls for the Fine Grain Precinct 111

4.2.4 Controls for the Midrise Precinct.....13

4.2.5 Controls for sites that require the submission of a DCP or concept DA…15

4.2.6 Building Floor Plates.....22

4.2.7 Street Alignments and Street Setbacks 22

4.2.8 Side and rear boundary setbacks 24

4.2.9 Minimum Floor to Ceiling Heights 25

4.2.10 Housing Choice and Mix 26

4.2.11 Deep Soil Zones and Site Cover 26

4.2.12 Public Open Space and Communal Open Space.....27

4.2.13 Landscape Design 28

4.2.14 Planting on Structures.....29

4.3. PEDESTRIAN AMENITY.....29

4.3.1 Pedestrian Permeability 29

4.3.2 Pedestrian Overpasses and Underpasses.....32

4.3.3 Active Street Frontages.....33

4.3.4 Street Address 33

4.3.5 Street and Building Interface 34

4.3.6 Lane / Serviceways and Building Interface.....34

4.3.7 Awnings 35

4.3.8 Building Design and Public Domain Interface.....37

4.3.9 Street Intersections and Corner Buildings 38

4.3.10 Public Artworks 38

4.4. TRAFFIC AND ACCESS.....40

4.4.1 Vehicular Access and Manoeuvring Areas 40

4.4.2 On Site Parking.....41

4.5. ENVIRONMENTAL MANAGEMENT.....42

4.5.1 Wind Mitigation.....42

4.5.2 Noise.....42

4.6. CONTROLS FOR SPECIFIC AREAS 44

4.6.1 Heritage Items and Conservation Areas 44

4.6.2 Site Specific DCPs……..……..…45

Figure 4-1: Land to which this Part applies..... 3
Figure 4-2 Precincts 10
Figure 4-1: Fine Grain/Mid-Block……..……12
Figure 2-4: Fine Grain/Corner……..……..……..12
Figure 4-5: Mid-Rise/Mid-Block 13
Figure 4-6: Mid-Rise/Corner 14
Figure 4-7: Tower on a Podium/Mid-Block.....15
Figure 4-8: Tower on a Podium/Corner Site 20
Figure 4-9: Tower on a Podium/Acute Corner Site 21
Figure 4-10 Street Setbacks.....23
Figure 4-11 Laneway and Serviceway Setbacks 24
Figure 4-12 Through Site Links 31
Figure 4-13 Awnings 36
Figure 4-14 High Pedestrian Priority Areas 41
Figure 4-15 Noise.....43

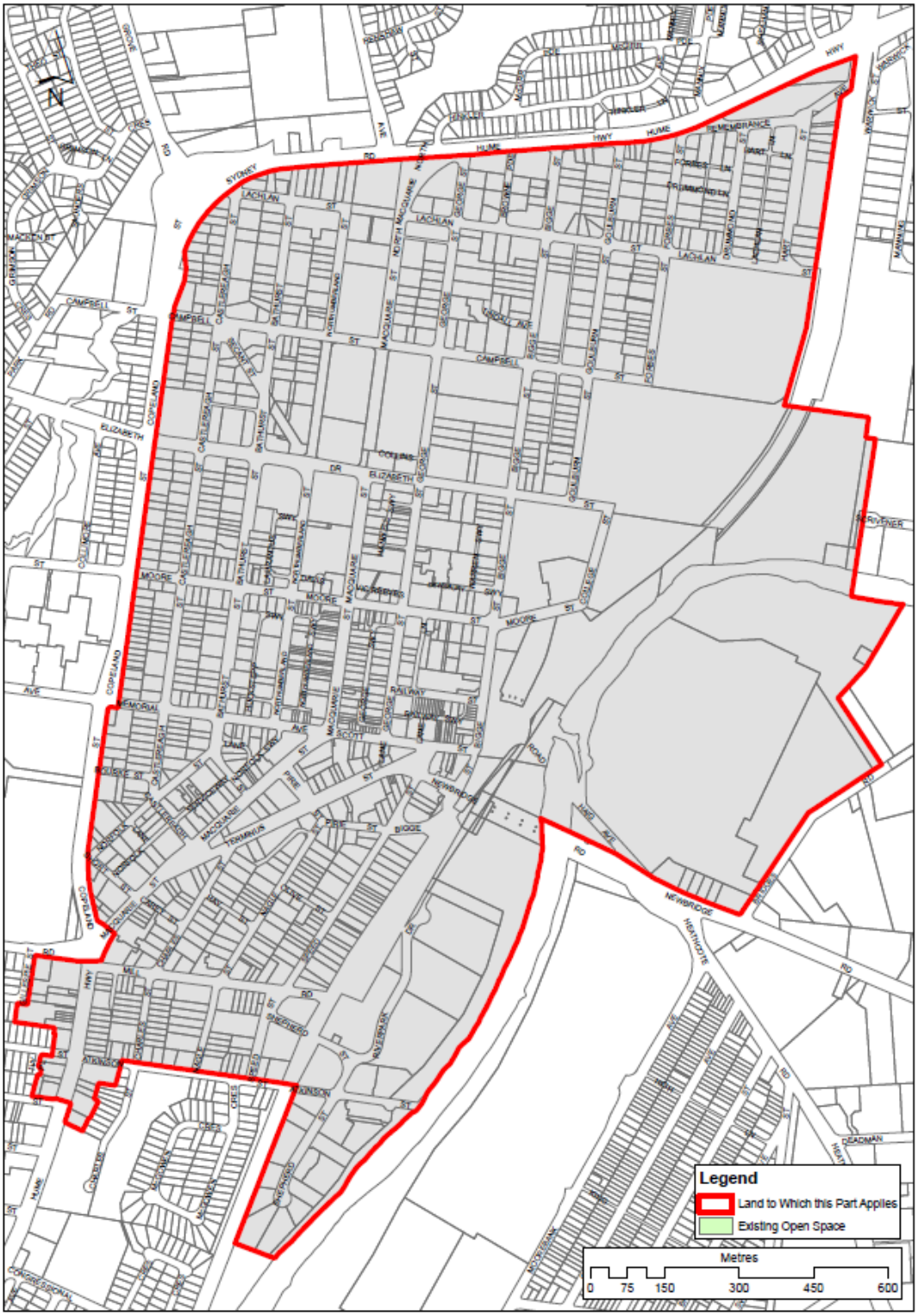
4.1. PRELIMINARY

Applies to

This Part applies to the area shown in Figure 4-1.

Part 1 also applies to the area shown in Figure 4-1.

Figure 4-1: Land to which this Part applies



Background
The Liverpool city centre was identified by the Department of Planning as a regional city through the Sydney Metropolitan Strategy – A City of Cities in 2005. This status was confirmed in A Plan for Growing Sydney released by the Department of Planning and Environment in December 2014.

In March 2018 the Sydney Regional Plan, *A metropolis of three cities* was published by the Greater Sydney Commission (GSC), establishing a renewed planning framework for the Sydney region as a whole towards 2056. The Western City District Plan — connecting communities (WCDP), was finalised by the GSC in March 2018 also. The WCDP provides detailed planning direction for the future development of Liverpool city centre, as part of the Liverpool LGA.

Liverpool city centre LEP revision
In 2015 Council launched a review of the planning controls applying to Liverpool city centre. The city centre LEP review sought to revitalise Liverpool city centre, to create a mixed-use, vibrant 18-hour city centre, a walkable city that offers living, recreation and work opportunities and a city focused along the river. To this end it was decided to significantly expand the area of ~~B4 — Mixed Use~~ MU1 – Mixed Use, zoned land and reduce the area of land zoned ~~B3 – Commercial Core~~ E2 – Commercial Core. This amendment to Liverpool Local Environmental Plan (LLEP) 2008 — Amendment 52, was gazetted and came into force on 5 September 2018.

In addition to rezoning land to reduce the size of the Commercial Core and expand the area of Mixed Use zoned land, Amendment 52 defined legible character precincts based on ownership, subdivision, street block patterns, and the role of the public domain. It also specified an urban form that responds to the character of each precinct, has different building typologies, and offers different economic opportunities.

Amendment 52 enables individual owners to develop sites without the requirement for amalgamation, improves connectivity to and within the city centre, de-couples car parking from development where appropriate and develops consistent urban form, where possible, for new development within the city centre. It is envisaged that increasing the number of residents in the city centre will activate the city centre, and will lead to increased demand for retail and services, resulting in more jobs.

This Part of Liverpool Development Control Plan (LDCP) 2008 seeks to provide appropriate development objectives and controls that will facilitate development in Liverpool city centre in concert with the Liverpool Local Environmental Plan (LLEP) 2008.

Characteristics of the Liverpool city centre
The character of Liverpool city centre can be divided into specific areas which have a number of character elements as described below. The character areas are illustrated in **Figure 4.2** below. However, where appropriate, reference is also made to which precinct, illustrated on the FSR map as amended by Amendment 52, also applies:

- Mixed Use (Area 7 and Area 8).
- High Density Residential.
- Education and Medical Precinct (Area 9).
- Commercial Core (Area 10)
- Standalone sites (including Area 11)
- City Centre Riverfront.
- Georges River Precinct.

Commercial Core

Land considered as part of Amendment 52, but which retains the ~~B3 – Commercial Core~~ E2 – Commercial Core zoning. Council aims to increase employment in the city centre to a total of 30,000 jobs by 2031. Commercial development is encouraged throughout the Mixed Use and Commercial Core areas of the city centre.

Liverpool city centre's commercial core is located near the public transport interchange on land bounded by Elizabeth Street to the north, Bigge Street to the east, George Street to the west and Railway Street to the south. In addition, the existing Westfield shopping centre is also part of the Commercial Core. Preservation of a Commercial Core in the city centre will support the broader base of uses likely to arise in the Mixed Use areas. Retail development will continue to be focused around the Macquarie Street Mall and Westfield shopping centre, though retail uses will also be permitted throughout the Mixed Use and Commercial precincts.

Mixed Use

Amendment 52 expanded the area of Liverpool city centre zoned ~~B4 – Mixed Use~~ MU1 – Mixed Use,. Land zoned ~~B4 – Mixed Use~~ MU1 – Mixed Use, may be developed for a range of retail/commercial and residential uses. Three new precincts have been defined for the rezoned sites in Liverpool city centre and some existing ~~B4~~ MU1 sites. These precincts relate to the existing site characteristics, ownership patterns and subdivision patterns. The precincts are identified as Fine Grain, Midrise and Long Term Civic Sites. Certain lots within the Mid-Rise and Long-term Civic Sites (in addition to the Commercial Core) precincts may be developed pursuant to clause 7.5A of LLEP 2008, but only if they meet lot size and access requirements.

The Fine Grain and the Midrise sites use a perimeter block typology, defined by building envelopes (see 4.22 below). The building envelopes enable buildings constructed to these profiles to relate to each other and the street network.

Lots that may be developed pursuant to clause 7.5A are large, strategically located sites, which can be developed subject to a concept development application as defined by section 4.23 of the Environmental Planning and Assessment (EP&A) Act 1979 and the delivery of a public benefit, as defined by clause 7.5A(3)(b) of LLEP 2008 (see 4.2.5 below).

High Density Residential

Liverpool city centre is an increasingly popular residential destination. The Commercial Core and Mixed Use areas of the city centre are surrounded by R4 – High Density Residential zoned land. With the growth of the hospital, there will be increasing demand for accommodation for health workers. One of Council's aims is to improve access to residential areas and the city centre.

In addition to significant residential development in the Mixed Use areas of the city centre, residential development will be focused around the northern, western and southern periphery. It is desirable that the frontages to Macquarie Street at Pioneer Park accommodate retail/café/restaurant activities at ground floor with residential and potentially some office space on floors above. Shepherd Street (at the southern extremity of the city centre) offers the potential to accommodate residential development with good access to the Georges River. Planning controls have been reviewed to assist this outcome.

Education and Medical Precinct

The Education and Medical precinct is located on the eastern edge of the city centre. It is defined by the South-Western Sydney Area Health Service (Liverpool Hospital) and attendant medical centres and clinics, the Liverpool Private Hospital, public and private schools, and the Liverpool TAFE buildings. The precinct is centred on historic Bigge Park and the Francis Greenway-designed old Liverpool Hospital, now part of TAFE.

LLEP 2008 identifies Liverpool Hospital as a Long-Term Civic Site so that the site may develop using a concept development application and with a full range of building typologies.

Standalone sites

Standalone sites, as illustrated in **Figure 4.2**, describes a number of sites in certain locations around the city centre, which have been rezoned by Council independently of Amendment 52. The sites have been recognised by Council with development standards which will encourage architecturally significant buildings. It is envisaged that these buildings will develop using the tower on podium building typology.

City centre riverfront

Liverpool city centre was the first of the 'Macquarie towns', chartered by Governor Lachlan Macquarie in 1810. From its foundation, the city identity was closely connected to the Georges River. Since the development of the railway line along the river as early as 1856, the city centre has become increasingly divorced from the river. The State Rail Freight Line, which runs alongside the passenger line immediately adjacent to the river, has further divided the city and obstructs connections across the Georges River, both physically and visually.

The natural edge of the Georges River and the Chipping Norton lakes system is one of Liverpool's most valuable assets. Opportunities exist to create continuous urban parkland. Council is committed to exploring improved connections from the city centre to the river and to Moorebank.

Georges River Precinct

The Georges River Precinct has been identified for potential city centre expansion due to the large sites, the limited ownership and proximity to the train station. The site has a number of constraints however, including the location of the railway line, which presents a barrier to access to the city centre, the river and the site's location within the 1% AEP (i.e. 100 year flood). There is limited existing connectivity to the city centre.

Streets, Laneways and Serviceways

The Hoddle grid, adopted as the township plan shortly after Governor Macquarie founded Liverpool, provides an excellent and legible framework for development. It has a vital role in determining the city's built form.

Streets make up the largest area of public space in Liverpool city centre. Used primarily for traffic and pedestrian movement, they also accommodate business, shopping, festivals, dining, socialising and entertainment. Within the formal grid of north-south and east-west streets there are serviceways (lanes) and arcades. Currently the serviceways do not generally provide direct connections between streets but the arcades do.

In the southern part of the city centre, the grid distorts in response to the topography, forming a secondary grid. The meeting of the regular Hoddle grid with the secondary grid along Memorial Avenue creates corner blocks with obtuse and acute angles. This provides a valuable opportunity to reinforce the character and streetscape quality of Liverpool city centre.

The core of the city centre is bounded by Bathurst Street, Campbell Street, Bigge Street, Pirie Street and Terminus Street. These streets carry the bulk of through traffic around the city centre to access the major arterials – Newbridge Road, Hoxton Park Road, the Hume Highway, Elizabeth Drive and the Cumberland Highway.

The network of serviceways complements the dominant qualities of the main streets. Hidden

within the blocks, the serviceways have the potential to be extended to provide important direct pedestrian links to the streets. If this can be achieved, the serviceways have the capacity to improve permeability and provide spaces that diversify and enrich the city structurally and economically. The active street frontages along Macquarie Street and throughout the city centre are also an asset that should be maintained and expanded.

The development controls in this Part complement the amended LLEP 2008 and define the built form required to ensure that the amenity of the streets and lanes/serviceways is protected and enhanced.

Satisfactory arrangements

At the request of Transport for NSW, Council conducted a review of the transport needs that would be created by the additional residential development that would be made possible by rezoning much of the existing commercial core of the city centre to permit residential development. The review made a number of recommendations, including that a range of improvements to designated State public infrastructure would be required to support the planned residential growth.

In order to fund the required infrastructure improvements, clause 6.4A of LLEP 2008 indicates that the development of any and all residential accommodation on land within the intensive urban development area of Liverpool city centre (i.e. “Area 7”, “Area 8”, “Area 9”, “Area 10” or “Area 11” shown on the Floor Space Ratio Map), must demonstrate via written confirmation from the Secretary of the DP&E that, according to clause 6.4A(2), “satisfactory arrangements have been made to contribute to the provision of designated State public infrastructure in relationship to the land on which the development is to be carried out.”

The satisfactory arrangements provision must be satisfied prior to the determination of a DA which includes residential development. It is expected that the satisfactory arrangements will take the form of an additional levy on residential development, and may require the making of the planning agreement with the DP&E.

Development of hotel, motel, backpacker, bed-and-breakfast or serviced apartment accommodation is not considered “residential development” and will not be subject to satisfactory arrangements as described in clause 6.4A of LLEP 2008.

Site-specific Development Control Plan

Clause 6.6, Development control plan, of LLEP 2008 requires that:

> *(1) Development consent must not be granted for development on land in an urban release area or intensive urban development area unless a development control plan that provides for the matters specified in subclause (2) has been prepared for the land.*

The “intensive urban development area” is defined in clause 6.4A as being “Area 7”, “Area 8”, “Area 9” or “Area 10” shown on the Floor Space Ratio Map.

Proposed development that does not rely on clause 7.5A of LLEP 2008 (see Section 2.1.4 below), would not require the lodgement of a site-specific DCP. Council will accept an assessment of compliance with Part 1 and Part 4 of LDCP 2008 in lieu of the submission of a site-specific DCP. For development undertaken pursuant to the floor space bonuses described in clause 7.5A of LLEP 2008, please refer to Section 4.2.5 of this Part.

4.2. CONTROLS FOR BUILDING FORM

4.2.1 Building form

Background

Building form refers to the individual elements of building design that collectively contribute to the character and appearance of the built environment. LLEP 2008 includes provisions for land use, building heights, sun access, floor space ratio (FSR) and design excellence. The development controls in this Part of the DCP are intended to reinforce the desired outcomes for the city centre. The resulting built form and character of new development should contribute to an attractive public domain in Liverpool city centre and produce a desirable setting for the intended uses.

The provisions in the Apartment Design Guidelines (ADG) associated with State Environmental Planning Policy No.65 – Design Quality are incorporated in this DCP to apply to all residential development in the Liverpool city centre including apartments, any residential component of a mixed use development, and serviced apartments that are strata titled. Where there is an inconsistency between other provisions in the ADG and this DCP, the ADG prevails to the extent of the inconsistency.

Within the existing Liverpool city centre, the diversity of uses is reflected in the different building typologies. These are:

- Perimeter Block (accommodating commercial and residential uses).
- Towers on a Podium (accommodating commercial and residential uses).
- Detached Buildings (apartment buildings, religious, commercial, education and medical uses).

LLEP 2008 identifies specific precincts on the FSR map for Liverpool city centre (Area 7, Area 8, Area 9, Area 10 and Area 11). The precincts relate to specific character areas defined in this Part as follows:

- “Area 7” is the Fine Grain Precinct;
- “Area 8” is the Midrise Precinct;
- “Area 9” is the Long-Term Civic Sites Precinct;
- “Area 10” is the Commercial Core Precinct; and
- “Area 11” is the Standalone site known as 77-83 Moore Street and 193 Macquarie Street.

The precincts are shown in **Figure 4-2**.

Objectives

1. Establish the scale, dimensions, form and separation of buildings as appropriate for the city centre and the range of uses.
2. Provide a strong definition of the public domain with buildings on a common alignment.
3. Promote building frontages with good connections to the street.

Controls

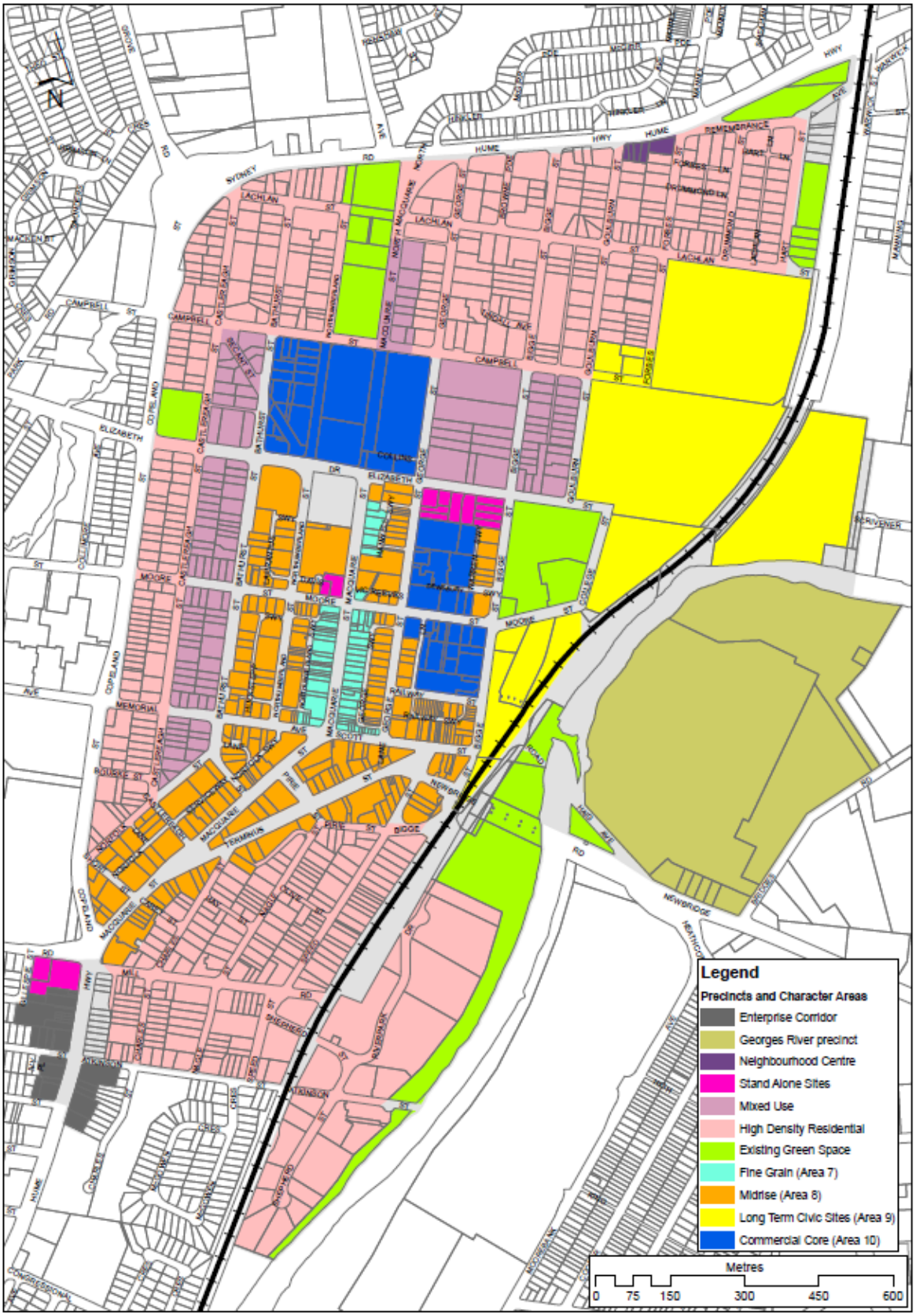
Develop new buildings in Liverpool city centre using the following building typologies for precincts as identified in **Figure 4-2**:

1. Perimeter block typology for Fine Grain precinct.
2. Perimeter block typology for Midrise precinct, with the exception of those Midrise sites developed pursuant to clause 7.5A of LLEP 2008 (which may also be developed with a

tower on podium typology).

3. Perimeter block, tower on podium or detached building typology for Long Term Civic Sites.
4. Tower on podium or detached building typology for standalone sites.
5. Perimeter block, tower on podium or detached building typology for Commercial Core sites.
6. Perimeter block, or detached building typology for Mixed Use.
7. Detached building typology for High Density Residential sites.
8. Perimeter block, or detached building typology for Enterprise Corridor sites and Neighbourhood Centre sites.

Figure 4-2 Precincts



4.2.2 Building Envelopes

Background

Building envelopes provide buildings with a strong address to the street, ensure compatibility between sites and maintain a suitable relationship to the scale of existing buildings. The lower scale buildings on the Fine Grain and Midrise sites contribute to the character of the existing city centre and make a positive contribution to its vitality, image and identity.

Midrise and Commercial Core sites of over 1,500m^2 in area may be developed as described in clause 7.5A of LLEP 2008 in certain circumstances. See section **4.2.5 Controls for sites requiring the submission of a DCP** for greater clarification.

4.2.3 Controls for the Fine Grain Precinct

Background

The Fine Grain Precinct is identified on **Figure 4-2**. Fine Grain Sites are small sites that have a very important role for pedestrian interface along streets. They are important because of their short frontages to streets, variety of uses, but also because the diverse ownership offers significant contrast of character, opening hours and price-point for retail offerings.

Objectives

1. Create a contiguous street wall even though sites are developed independently.
2. Address solar access/privacy and light within the building envelope so that separate studies are not required.
3. Provide active street and lane/serviceway frontages.
4. Encourage development without car parking on site.

Controls

Design new buildings in the Fine Grain Precinct as follows:

1. Construct a maximum of four storeys to the street and four storeys to the serviceway frontages, with an additional two storeys set back to street frontages in accordance with **Figures 4-3** and **4-4**.
2. Locate retail uses at the ground floor on street and lane/serviceway frontages (where possible).
3. Develop no more than one level of (at grade) car parking (where necessary), which is to be appropriately screened or sleeved.
4. Provide parking in accordance with LLEP 2008 provisions or make an alternative arrangement to the satisfaction of Council.

Figure 4-3: Fine Grain/Mid-Block

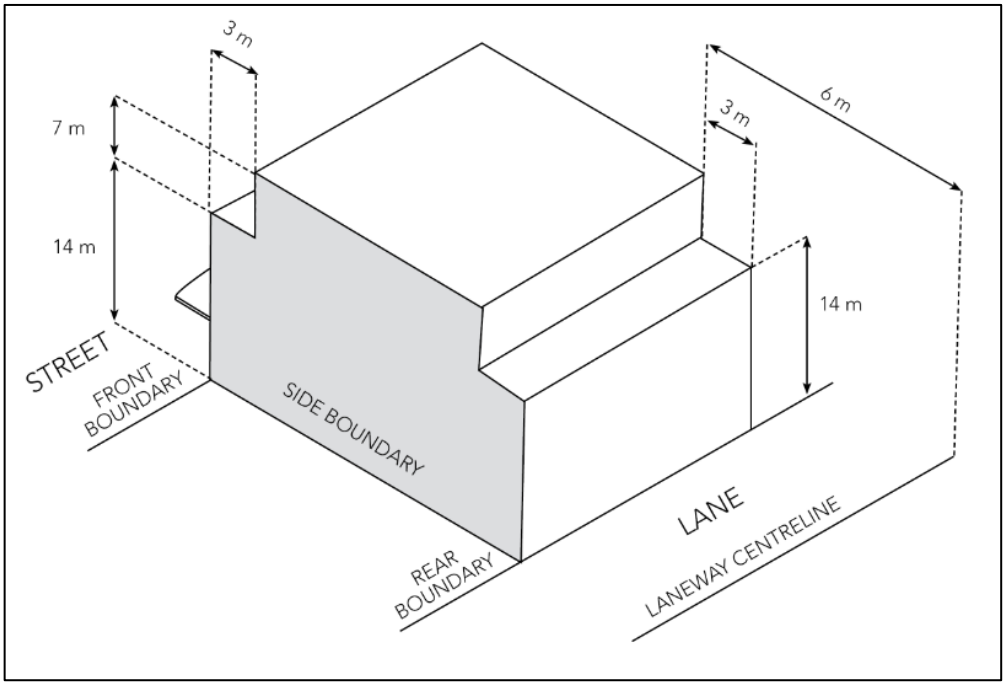
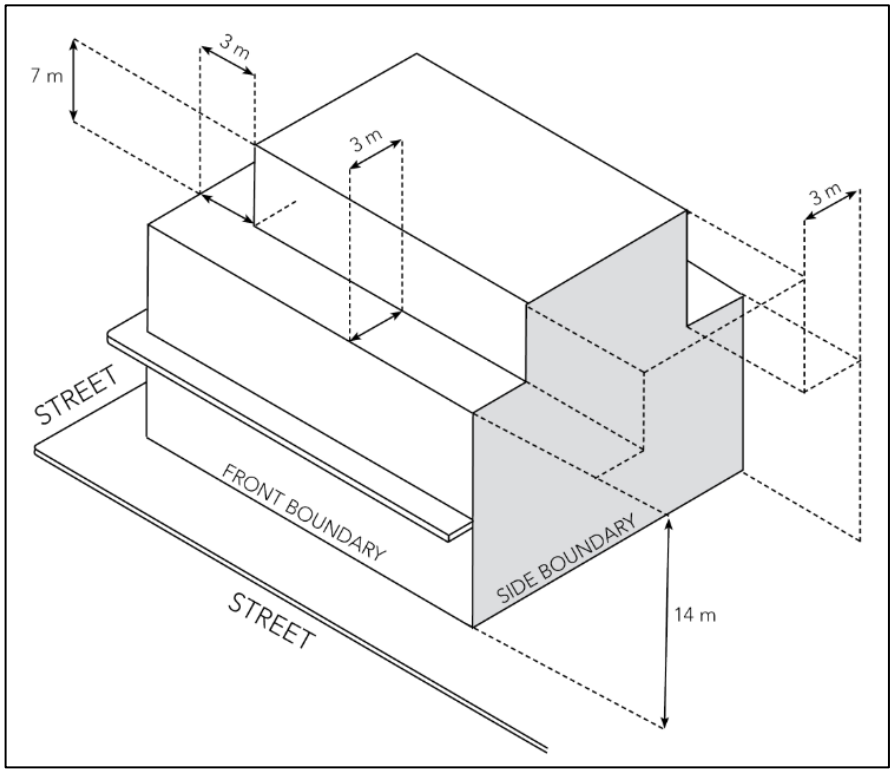


Figure 4-4: Fine Grain/Corner



4.2.4 Controls for the Midrise Precinct

Background

The Midrise Precinct is identified on **Figure 4-2**. Midrise Sites are capable of accommodating more development than Fine Grain Sites. They are important because of the relatively short-frontages to streets and their diverse range of uses. Differing ownership also provides a variety of use and form that single ownership of large city buildings does not achieve.

Objectives

1. Form a contiguous street wall even though sites are developed independently.
2. Address solar access/privacy and light within the building envelope so that separate studies are not required.
3. Provide active street and lane/serviceway frontages.
4. Allow flexibility of uses within the building envelope (long life/loose fit) that can change over time.
5. Provide parking for the development on site.

Controls

Design new buildings in the Midrise Precinct as follows:

1. Construct buildings to a maximum of six storeys to the street and four storeys to the lane/serviceway frontages, with an additional two storeys set back to both frontages in accordance with **Figures 4-5** and **4-6**.
2. Develop retail uses at the ground floor at street and lane/serviceway frontages (where possible).
3. Develop at least one level above the ground floor for a commercial use, or that is capable of being adapted to a commercial use.
4. Provide parking in a basement car park. No more than one level of service (at grade) car parking is permitted and this is to be appropriately screened or sleeved.
5. Provide parking in accordance with the LLEP 2008.

Figure 4-5: Mid-Rise/Mid-Block

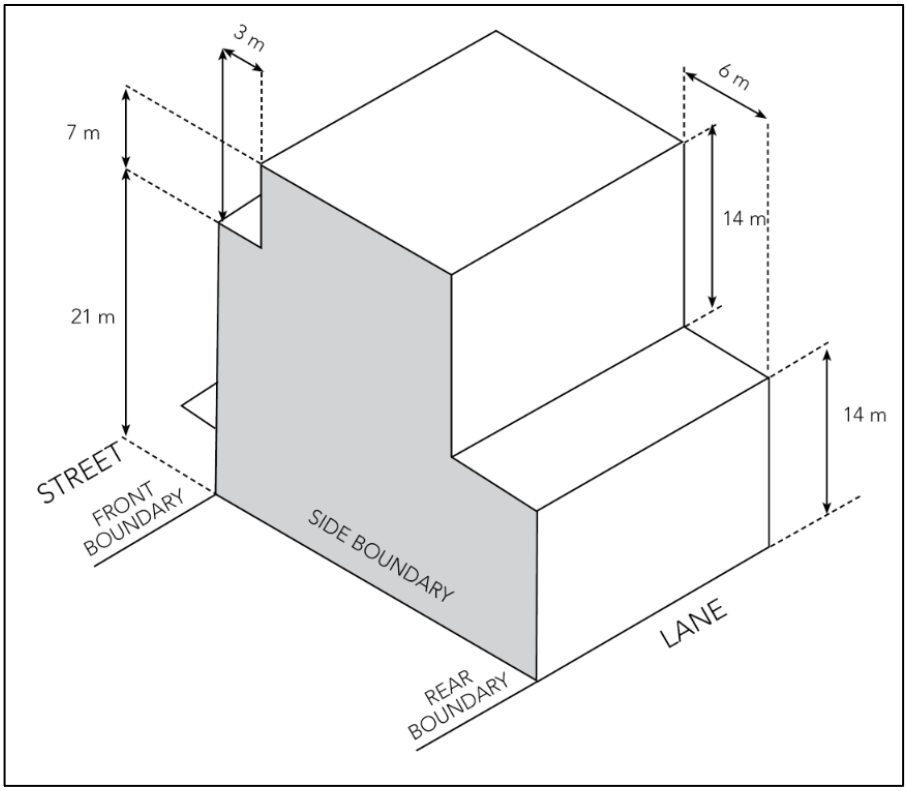
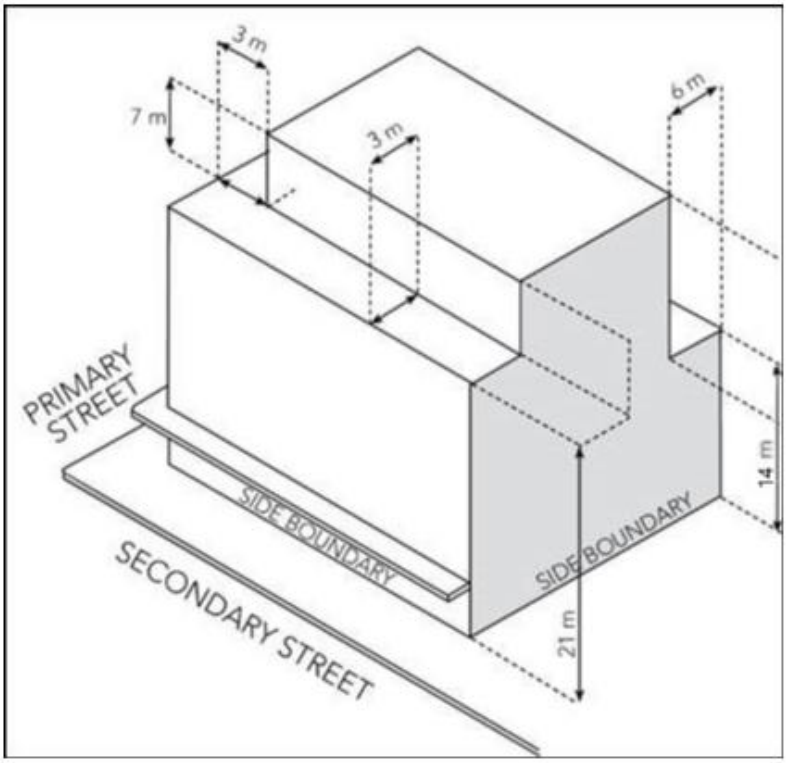


Figure 4-6 Mid-Rise/Corner



4.2.5 Controls for sites that require the submission of a site specific DCP or concept DA

Background

Clause 7.5A of LLEP 2008 provides additional provisions relating to certain land in Liverpool city centre. This section specifies the requirements for a lot to be developed according to the provisions of clause 7.5A.

The provisions of clause 7.5A are not considered development standards and therefore may not be varied according to clause 4.6 of LLEP 2008. Minimum requirements for the development of a lot pursuant to clause 7.5A are:

- That the lot is situated within “Area 8”, “Area 9” or “Area 10” on the Floor Space Ratio Map; and
- Has a lot size exceeding 1500m2; and
- Has two or more street frontages.

Pursuant to clause 7.5A(2), any building which is proposed to exceed the maximum height shown for the land on the Height of Buildings Map, and the maximum floor space ratio shown for the land on the Floor Space Ratio Map for the site (to a maximum FSR of 10: 1 in “Area 8” or “Area 10” and 7:1 in “Area 9”), must be developed so that at least 20% of the gross floor area is used for the purposes of:

- business premises;
- centre based childcare facilities;
- community facilities;
- educational establishments;
- entertainment facilities;
- food and drink premises;
- functions centres;
- information and education facility;
- medical centres;
- public administration buildings; or
- retail premises.

The Dictionary of LLEP 2008 defines the meaning and development requirements of each of the specified uses.

Development of sites pursuant to clause 7.5A of LLEP 2008 will require the submission of a DCP. According to section 4.23(2) of the EP&A Act 1979:

(2) However, if an environmental planning instrument requires the preparation of a development control plan before any particular or kind of development is carried out on any land, that obligation may be satisfied by the making and approval of a concept development application in respect of that land.

In other words, the requirement to lodge a DCP pursuant to clause 7.5A(3)(a) of LLEP 2008, may be satisfied by the lodging of a concept development application pursuant to the requirements of section 4.23 of the EP&A Act 1979 instead. It is to be noted however, that section 4.23(3) of the EP&A Act also applies to any such application meaning that:

3) Any such concept development application is to contain the information required to be

included in the development control plan by the environmental planning instrument or the regulations.

Objectives

1. That development of sites within Liverpool city centre pursuant to clause 7.5A demonstrates the appropriate mix of uses and standards of design excellence.
2. Provide appropriate parking for the development on site.
3. Provide active street and lane/serviceway uses .

Controls

1. Sites that require the submission of a DCP are to be developed pursuant to the adopted site specific DCP or a concept development application consistent with Division 4.4 of the EP&A Act 1979 and clause 7.5A of LLEP 2008.
2. Clause 7.5A(3)(b) of LLEP 2008 specifies that any proposed development which seeks to utilise the additional provisions relating to certain land in Liverpool city centre must yield a public benefit, in that the site on which the building is to be located must also include one or more of the following uses (NB: in order to provide the required public benefit, these uses must be publicly accessible):
    - recreation areas;
    - recreation facilities (indoor);
    - community facilities;
    - information and education facilities;
    - through site links; or
    - public car parks.

    Each land use that is required to yield public benefit (with the exception of "through site links" and "public car parks", defined below), is defined in the Dictionary of LLEP 2008. The size, scale, location and detailed use of any such proposed development, must be included in the required site specific DCP or concept development application, and be to the satisfaction of Council.

    Through site links are only to be developed on those sites indicated in Figure 4.12 and must be developed in accordance with the requirements of section 4.3 Pedestrian Amenity.

    Public car parks are only to be developed with the written permission of Council and must be vested in or under the control of Council. Provision of public car parking must be consistent with Council's Parking Strategy and locational requirements. Any such public car park must be of sufficient scale and located so as to be of a public benefit acceptable to Council.

3. The concept development application lodged pursuant to clause 7.5A of LLEP 2008, must demonstrate how the proposal addresses all matters described in 7.5A(4)(a-m), as follows:

    (a) the suitability of the land for development.

    The site specific DCP or concept development application must articulate planning and design principles relating to development of the land and explain how these address Part 4 of Liverpool Development Control Plan 2008 and any other relevant documents or plans. It must include an analysis of the characteristics and the local context of the land to which it applies.

It must conceptually outline and show graphically the proposed site layout and planning for the development of the land, including the conceptual vertical and horizontal distribution of potential future uses, arrangement, footprint, envelopes and mix of building types. Through analysis of a number of illustrated options for redevelopment it must determine the preferred approach,

(b) the existing and proposed uses and use mix.

The site specific DCP or concept development application must describe the existing uses of any building currently occupying the site, and the proposed use mix to be developed on the site (noting additional use requirements outlined in control 1 above),

(c) any heritage issues and streetscape constraints.

The site specific DCP or concept development application must describe how the proposal will address all heritage items in the vicinity, in accordance with the requirements of clause 5.10 of LLEP 2008 and section 4.6.1 of this Part,

(d) the impact on any conservation area.

The site specific DCP or concept development application must indicate how any proposed development within the Bigge Park Conservation Area addresses the requirements of clause 5.10 of LLEP 2008 and section 5.10 of this Part,

(e) the location of any tower proposed, having regard to the need to achieve an acceptable relationship with other towers (existing or proposed) on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form.

Liverpool city centre is a mixed-use environment. The site specific DCP or concept development application must ensure that any proposed residential tower is consistent with ADG separation and side setback distances, taking into account existing or proposed towers on the same site or neighbouring sites. Siting of all proposed towers, residential or commercial, must be consistent with clause 7.4 of LLEP 2008 Building separation in Liverpool city centre,

(f) the bulk, massing and modulation of buildings

The site specific DCP or concept development application must illustrate the proposed bulk, massing and modulation of buildings to be developed on the site,

(g) street frontage heights.

The site specific DCP or concept development application must indicate the street frontage heights of any proposed building. A tower on podium building is to be designed so that the podium is:

a. four to six storeys in height at the primary street frontage;
b. four storeys in height to the lanes and/or serviceways; and
c. 6 metres from a side/rear boundary if the site is adjoining a property that is not zoned ~~B4 — Mixed Use~~ MU1 – Mixed Use, or contains a stand-alone building. The setback should be in accordance with the ADG,

(h) environmental impacts, such as sustainable design, overshadowing and solar access, visual and acoustic privacy, noise, wind and reflectivity.

The site specific DCP or concept development application must illustrate how the proposed design will satisfactorily address environmental impacts on the public domain and other sites in proximity, depending on the scale of the development. Designs must ensure the streetscape environment is of pedestrian scale and ensures human qualities of solar access, shade and amenity are provided and negative elements such as noise and wind are minimised,

(h) the achievement of the principles of ecologically sustainable development.

The site specific DCP or concept development application must illustrate the ways by which the development proposed maximises ecological sustainability,

(i) encouraging sustainable transport, including increased use of public transport, walking and cycling, road access and the circulation network and car parking

***provision, including integrated options to reduce car use*.**

The site specific DCP or concept development application must incorporate a Transport Management and Access Plan (TMAP). The TMAP must illustrate how the proposed development will encourage sustainable transport including:

- measures to encourage increased use of public transport, walking and cycling;
- provisions for access (for pedestrians, cyclists and vehicles including heavy vehicles), circulation and car parking; and
- other measures to reduce car use (e.g. carpooling and car-share services),

***(j) the impact on, and any proposed improvements to, the public domain*.**

The site specific DCP or concept development application must demonstrate how the proposed development will integrate with and/or make improvements to the existing public domain, including the provision of setbacks where required. The site specific DCP or concept development application must include a detailed public domain plan.

Improvements to the public domain include:

1. Contributing to the urban tree canopy through new street tree plantings consistent with the Liverpool CBD Streetscape and Paving Manual 2018.
2. Providing street furniture and pedestrian amenity items.
3. Installing high quality pedestrian paving consistent with the Liverpool CBD Streetscape and Paving Manual 2018.
4. Integrating public art in accordance with section 4.3.10 of this Part.
5. Making provision for pedestrians to access to sunlight and shade.
6. Providing a design that contributes to activation of street frontages.
7. Integration of WSUD elements to improve vegetation success within the public domain,

***(k) achieving appropriate interface at ground level between buildings and the public domain*.**

The site specific DCP or concept development application must demonstrate how all buildings, including any proposed tower building, achieves an appropriate interface at ground level with existing and proposed buildings and the public domain, according to the requirements of Section 4.3.1 to 4.3.10 of this Part.

Electricity substations and waste collection points must be appropriately integrated into the building design to minimise disruption and visual clutter in the ground plane and streetscape,

***(l) the excellence and integration of landscape design*.**

The concept development application must demonstrate compliance with section 4.2.13 of this Part.

4. Locate non-residential uses at ground level that address all street frontages (and laneway/service way frontages, where possible).
5. Develop a maximum of two levels of above-ground car parking, provided it is sleeved by other uses on street frontages and appropriately screened or sleeved by other uses on lane/serviceway frontages. Aboveground parking must achieve minimum floor to ceiling heights that would permit adaption for another use (e.g. commercial/retail or residential).
6. Construct buildings according to the requirements illustrated in **Figure 4.7**, **Figure 4.8** or **Figure 4.9**, depending on the location of the site.

Figure 4-7: Tower on a Podium/Mid-Block

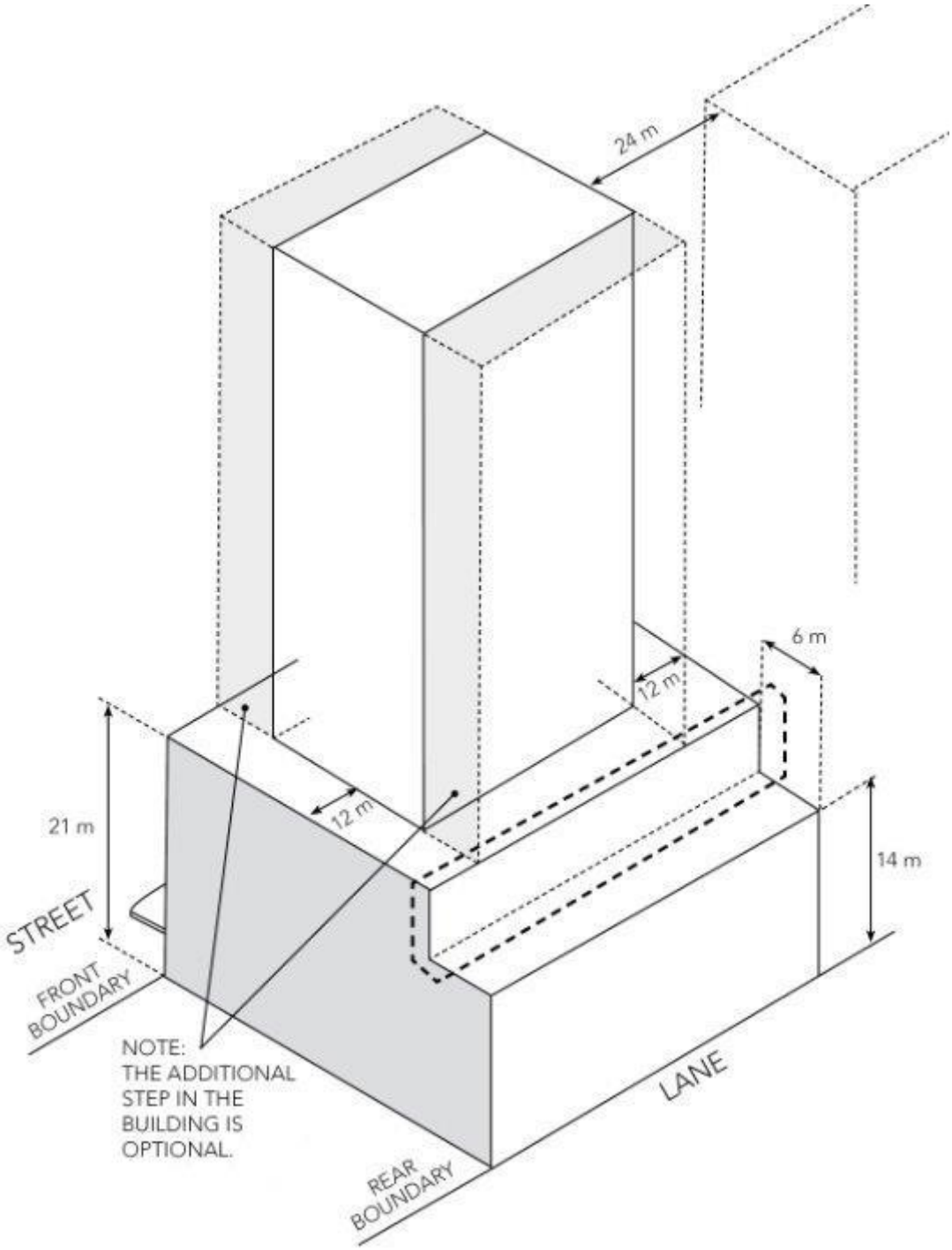


Figure 4-8: Tower on a Podium/Corner Site

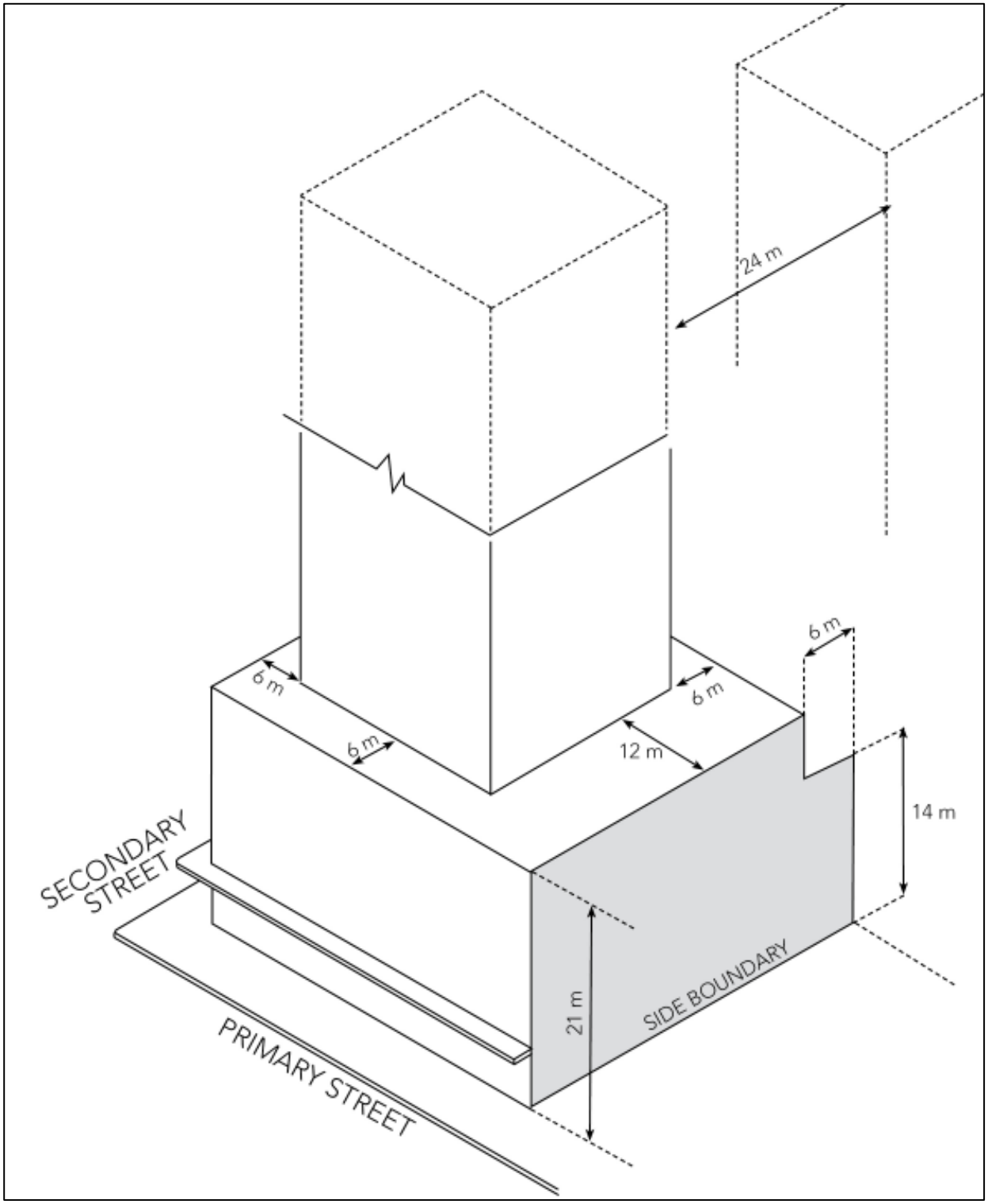
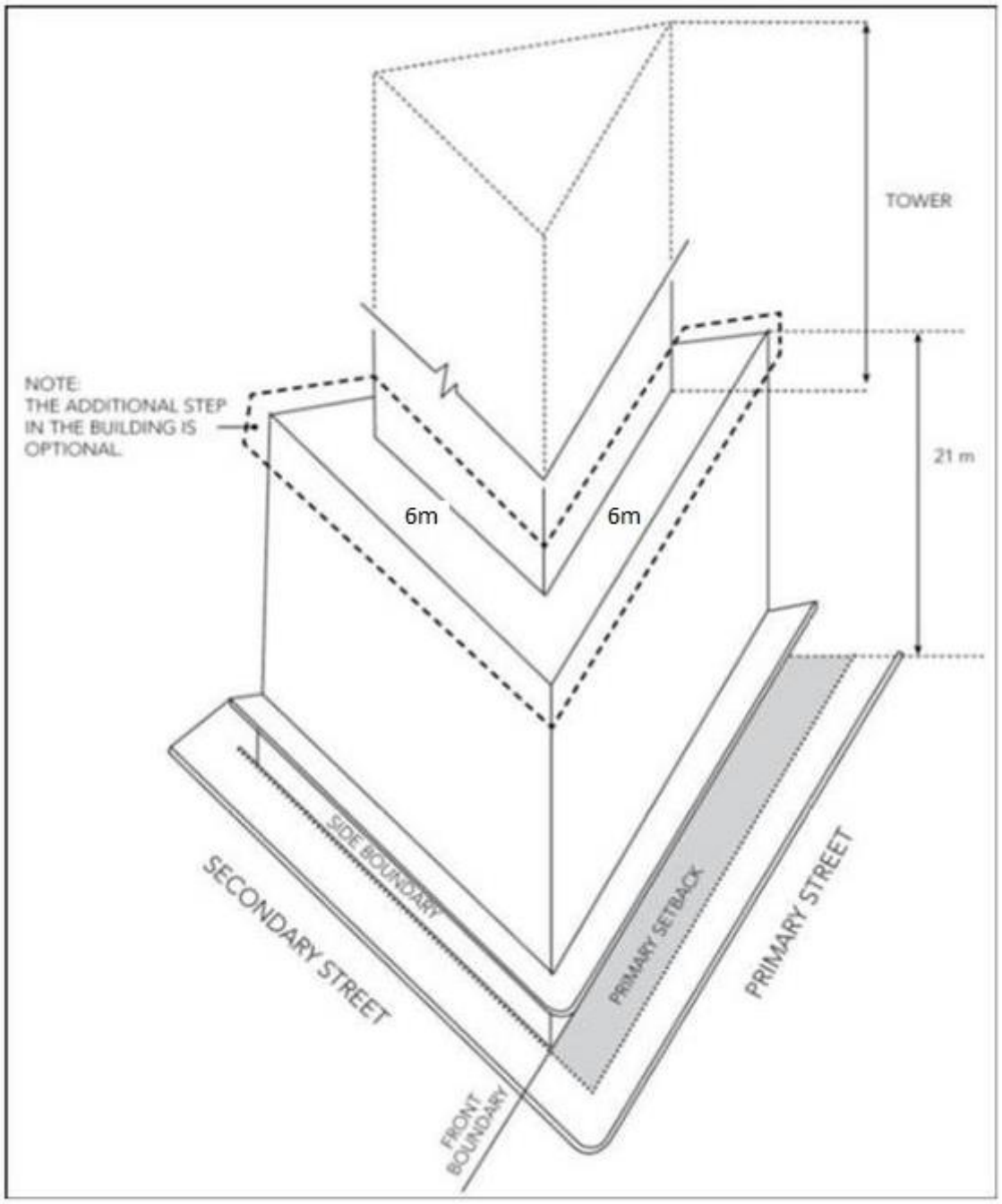


Figure 4-9: Tower on a Podium/Acute Corner Site



4.2.6 Building Floor Plates

Background

Limiting the size of tower floor plates allows for good internal amenity in terms of natural light and ventilation, while mitigating the potentially adverse impacts that tall and bulky buildings may have on the public domain including overshadowing and poor street amenity. Building depth is related to building use, meaning that commercial floor plates are typically deeper and larger than residential floor plates.

Objectives

1. Achieve living and working environments with good internal amenity and minimise the need for artificial heating, cooling and lighting.
2. Provide viable and useable commercial and/or residential floor space.
3. Contribute to useable and pleasant streets and public domain at ground level by controlling the size of upper level floor plates of buildings.
4. Reduce the apparent bulk and scale of buildings by limiting the size of the building.

Controls

1. Design the floor plate sizes and depth of buildings for Fine Grain and Midrise sites as indicated in the building envelopes.
2. Provide a maximum GFA of 700m2 per level for residential towers with maximum length of elevation of 45m.
3. Comply with ADG standards for building depth and number of apartments.
4. Provide a maximum GFA of 1,000m2 per level for commercial towers with maximum length of elevation of 45m. Where sites are greater than 2,000m² a proportionally larger GFA per floor may be considered.

4.2.7 Street Alignments and Street Setbacks

Background

Buildings define the street network and public domain. For this reason, the alignment and setbacks of buildings are critical to the quality of internal and external environments. Land in the setback areas may be utilised as outdoor dining and may have basement car parking located under it if required.

Objectives

1. Create a strong and consistent definition of the public domain.
2. Define the street as a spatial entity. Reinforce the importance of the public role of the street.
3. Provide front setbacks appropriate to building function and character.
4. Establish the desired spatial proportions of the street.
5. Provide sunlight access to streets, comfortable wind conditions, a generous footpath for pedestrians, and to assist growing conditions for street trees. Allow for street landscaping.
6. Locate active uses, such as shopfronts, close to pedestrian activity areas. Allow an outlook to, and surveillance of, the street.
7. Create a transition between public and private space.

Controls

1. Buildings are to comply with the front setbacks as set out in **Figures 4-12**.
2. Upper level frontages to a lane/serviceway must be setback 6 metres from the centre line of the lane/serviceway.
3. Construct perimeter block buildings and podiums, which comply with the building envelope requirement, to the street and side boundaries (0m setback).

4. Buildings with a boundary to the Hume Highway have a minimum setback of 8m.
5. Buildings on the southern side of streets identified in **Figure 4-10** have minimum front setbacks as follows, in order to maximise solar access:
   a. Elizabeth Street between Bathurst Street and George Street - 6m.
   b. Railway Street, Scott Street and Memorial Avenue - 3m.
   c. Parts of George, Bathurst, Terminus and Bigge Streets – 2.5m.

Figure 4-10 Street Setbacks

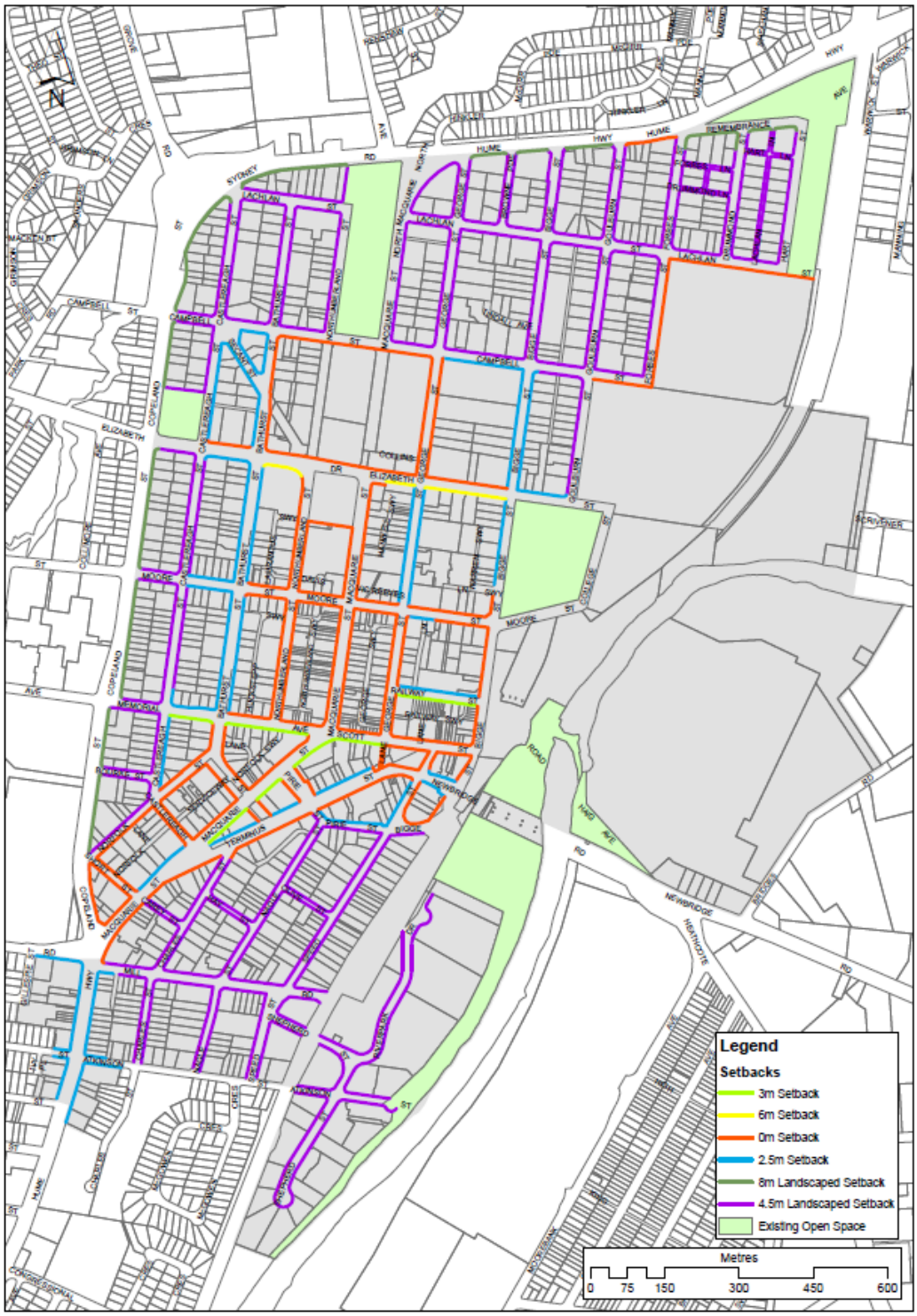
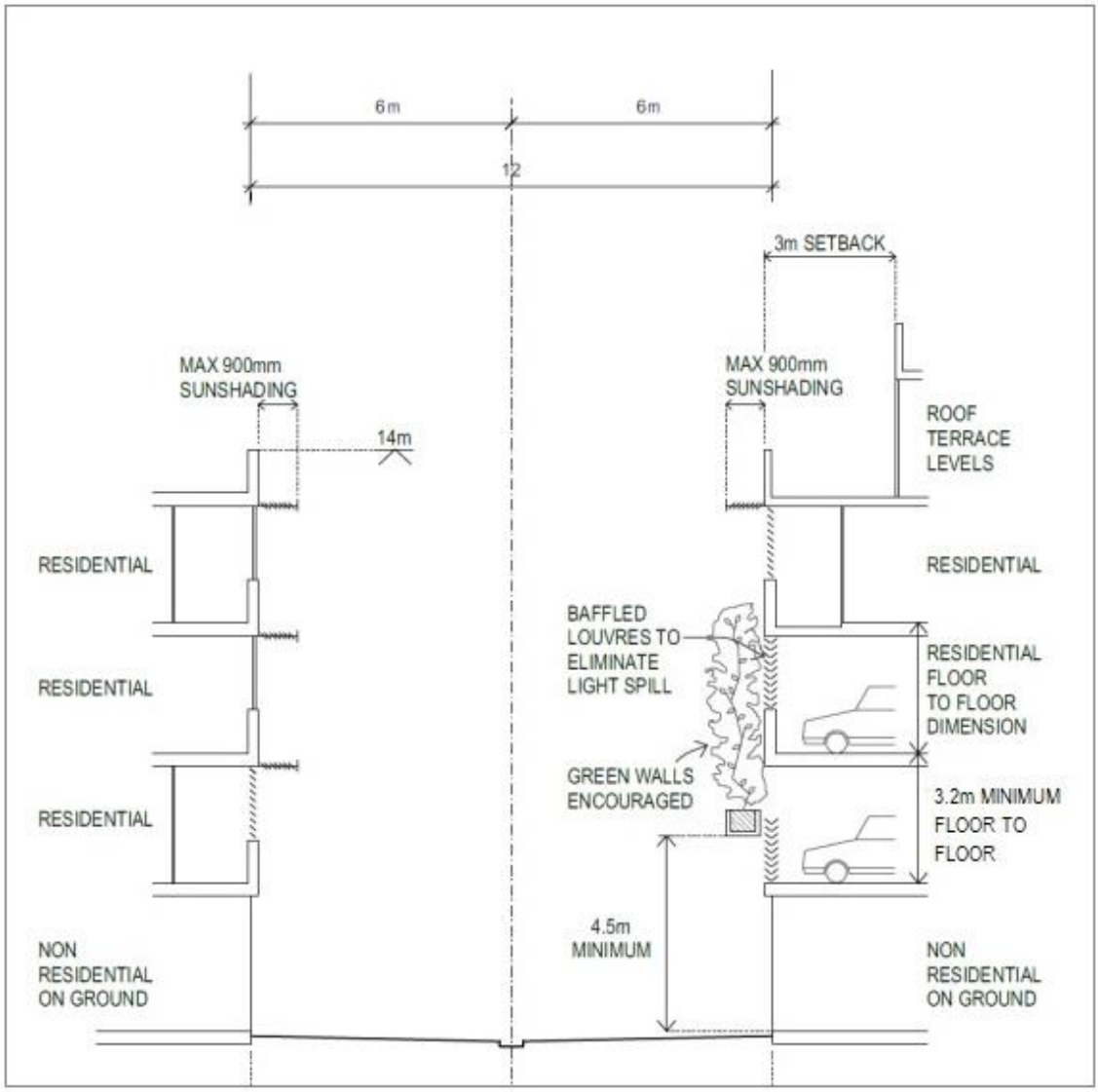


Figure 4-11 Laneway and Serviceway Setbacks



6. Pave the land in the set-back zone to match the paving in the public street so that it provides a seamless and level ground plane.
7. Ensure that no columns, blade walls or other building elements encroach the ground level of the front setback.
8. Ensure that balconies project a maximum of 1.2 metres into front building setbacks in the R4 - High Density Residential Zone.
9. Ensure that minor projections into front building lines and setbacks above ground level are designed for sun shading, entry protection or building articulation and enhance the amenity of the public domain.
10. Allow enclosures or screening of balconies only if they are moveable and aid the amenity of the apartments.

4.2.8 Side and rear boundary setbacks

Background

Side and rear setbacks, where provided, allow ventilation, solar and daylight access, assist with visual privacy, acoustic amenity, view sharing, and can reduce adverse wind effects. Building separation should relate to building height to ensure appropriate urban form, amenity and privacy for building occupants.

Objectives

Side and rear boundary setbacks must:

1. Ensure an appropriate level of amenity for building occupants in terms of daylight, outlook, view sharing, ventilation, wind mitigation, and privacy.
2. Achieve usable and pleasant streets and public domain areas in terms of wind mitigation and daylight access.

Controls

1. All residential and commercial buildings must comply with the separation distances in SEPP 65 and the ADG unless otherwise agreed with Council in an approved concept development application.
2. For existing buildings that do not comply with the setback requirements identified in control 1 above, appropriate screening must be installed should the building be refurbished or converted.
3. Buildings with a rear or side boundary to the rail corridor are to provide a minimum setback of 12m. The setback is to be appropriately landscaped.
4. Buildings on land zoned ~~B6 – Enterprise Corridor and B1 – Neighbourhood Centre~~ E3 – Productivity Support (Area A) and E1 – Local Centre (Area G) located in the Liverpool city centre, to have setbacks consistent with Table 4-1 below.
5. Construct buildings across the site facing the street and the rear boundaries rather than facing side boundaries.

Table 4-1 Side and rear boundary setbacks

Enterprise Corridor, Neighbourhood Centre and Existing Mixed Use areas	Setbacks	
	Side	Rear
Podium up to six levels :		
- If adjoining development built to boundary	0m	0m
- If adjoining stand-alone development	ADG	ADG
Stand-Alone Buildings		
- Building height up to 12m	ADG	6m
- Building height 12-25m	ADG	9m
- Building height over 25m	ADG	12m

4.2.9 Minimum Floor to Ceiling Heights

Background

The height of a ceiling contributes to amenity within an apartment and the perception of space. Well designed and appropriately defined ceilings can create spatial interest and hierarchy in apartments. Ceiling height is directly linked to achieving sufficient natural ventilation and daylight access to habitable rooms. The ground and first floor levels of mixed use apartment buildings should have increased ceiling heights to ensure their longer term adaptability for non-residential uses.

Objectives

Minimum floor to ceiling heights must:

1. Address the internal amenity of all users.
2. Assist in ensuring buildings are well-proportioned, articulated and modulated.
3. Allow for the potential for commercial uses in the first floor of any new building.

Controls

The minimum floor to ceiling heights are:

1. Ground floor: 3.6m.
2. Above ground level:
   a) Commercial office 3.3m.
   b) Capable of adaptation to commercial uses 3.3m.
   c) Residential 2.7m.
   d) Active public uses, such as retail and restaurants 3.6m.
3. Car Parks: Sufficient to cater to the needs of all vehicles that will access the car park and, if aboveground, adaptable to another use, as above.

4.2.10 Housing Choice and Mix

Background

A mix of dwelling types is essential to cater for different family groups and lifestyles, and to achieve housing affordability. Dwellings require internal flexibility as well as a variety of outdoor and recreational areas.

Objectives

Developments must:

1. Provide a mix of dwelling types, sizes and open space to cater for a range of household types and living styles.
2. Provide dwelling layout that is sufficiently flexible for residents' changing needs over time.
3. Meet the Australian Adaptable Housing Standard (AS 4299-1995) and provide a sufficient proportion of dwellings that include accessible layouts and features to accommodate the changing requirements of residents.

Controls

1. In addition to the provisions for dwelling mix in the ADG, residential apartment buildings and shop-top housing must comply with the following apartment mix and size:
   - Studio and one bedroom units must not be less than 10% of the total mix of units within each development;
   - Three or more bedroom units must not be less than 10% of the total mix of units within each development;
   - Dual-key apartments must not exceed 10% of the total number of apartments; and
   - A minimum of 10% of all dwellings (or at least one dwelling – whichever is greater) to be capable of adaptation for disabled or elderly residents.
2. Adaptable dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995).
3. Provide certification from an Accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).
4. Ensure car parking and garages allocated to adaptable dwellings comply with the requirements of the relevant Australian Standard for disabled parking spaces.

4.2.11 Deep Soil Zones and Site Cover

Background

Deep soil zones are areas of natural ground retained within a development, uninhibited by artificial structures and with relatively natural soil profiles. Deep soil zones have important environmental benefits, including promoting healthy growth of large trees with large canopies, protecting existing

mature trees, and allowing stormwater infiltration.

Limiting site cover provides separation between buildings. This space may be public (accessible and useable by the general public), communal (shared by all occupants of a development) or private (for the exclusive use of a single dwelling or tenancy).

Objectives

1. Provide an area on site that enables soft landscaping and deep soil planting, permit the retention and/or planting of trees that will grow to a large or medium size.
2. Improve amenity by allowing for good daylight access, ventilation, and assisting improved visual privacy.
3. Integrate with the open space and provide passive and active recreational opportunities.

Controls

1. The maximum permitted site coverage for development is specified in **Table 4-2**.

Table 4-2 Site coverage

Zone	Commercial & Mixed Use	Residential
Commercial Core, Fine Grain and Midrise	Up to 100%	N/A
Existing Mixed Use	75%	N/A
Enterprise Corridor and Infrastructure	75%	50%
All other zones	60%	50%

2. Include a deep soil zone as per Section 3E of the ADG in all developments with a residential component in all areas other than the Fine Grain Precinct and Midrise Precinct, or where perimeter block buildings are developed.

4.2.12 Public Open Space and Communal Open Space

Background

Public and communal open spaces are critically important for outdoor recreation opportunities for residents, connection to the natural environment, and valuable 'breathing space' between apartment buildings and within the city centre.

They also contribute to the appeal of the city, the individual development and the wellbeing of residents. High quality open space is essential in higher density urban precincts. The size, location and design of public and communal open space will vary depending on the site context and the scale of development.

Council encourages the development of the rooftop of residential flat buildings and mixed-use developments for the purposes of communal open space, including rooftop gardens, where possible. Better use of the rooftop space will increase the overall amenity and quality of new development in Liverpool city centre.

Objectives

Open space must:

1. Provide amenity in the form of:
   a) landscape character and design;
   b) opportunities for group and individual recreation and activities, including on the roof space of new residential flat buildings and mixed-use developments;

c) opportunities for social interaction;
d) environmental and water cycle management; and
e) opportunities to enhance microclimate.

2. Allow for a range of activities.
3. Provide an attractive outlook for residents.
4. Respond to and enhance site characteristics and context.
5. Optimise safety.

Controls

Existing Public Open Space

1. Ensure that at least 70% of Bigge Park, Apex Park, Pioneer Park and any other public open space in the city centre has a minimum of 3 hours of sunlight between 10am and 3pm on 21 June (Winter Solstice).

New Public Open Space

2. Dedicate open space to Council, where required, as part of an approved concept development application if the space meets the requirements of Council in terms of:
   a) location;
   b) aspect;
   c) accessibility;
   d) safety; and
   e) solar access. The open space must be located and designed so that at least 50% of the open space provided has a minimum of 3 hours of sunlight between 10am and 3pm on 21 June (Winter Solstice).
3. Developments with a residential component in all zones must comply with the sections 3D Communal Public Open Space and 4F Common Circulation and Spaces, of the ADG. Consistent with the requirements of the ADG, communal open space is to be collocated with areas of deep soil, where possible.
4. The roof space of residential flat buildings (RFBs) and mixed-use development (including shop-top housing) is to be developed for the purposes of communal open space that incorporate shade structures and amenity facilities (barbecue and rooftop garden) that complement the development.

4.2.13 Landscape Design

Background

Landscape design includes the planning, design, construction and maintenance of all utility, open space and garden areas. The landscape qualities of the city centre are an important influence on its image, comfort, public and private amenity. Landscaping within the public domain will be implemented within the framework established by the Liverpool CBD Streetscape and Paving Manual 2018. In the private domain, it is important that a strong and consistent approach to landscaping is achieved in order to contribute to both a high level of amenity and a cohesive image for the city centre.

Objectives

1. Enhance quality of life for residents and occupants within a development in terms of privacy, outlook, views and recreational opportunities.
2. Ensure potable water for irrigation is minimised. Incorporate passive irrigation where possible.
3. Ensure landscaping is integrated into the design of development.
4. Improve stormwater quality and control run-off.
5. Improve the microclimate and solar performance within the development.

6. Improve urban air quality and contribute to biodiversity.

Controls

1. Submit a landscape plan prepared by a registered landscape architect that demonstrates consistency with the above objectives and section 4V, water management and conservation, of the ADG.

4.2.14 Planting on Structures

Background

The following controls apply in the Commercial, Mixed Use and Enterprise Corridor zones (as identified in **Figure 4-2**) for planting on roof tops or over car park structures, particularly for communal open space required as a component of mixed use residential development, and in non-residential developments where the landscaping proposed is not on natural ground.

Objectives

1. Contribute to the quality and amenity of open space on roof tops and internal courtyards.
2. Encourage the establishment and healthy growth of trees in urban areas.
3. Minimise the use of potable water for irrigating planting on structures.

Controls

1. Comply with the Section 4P, planting on structures in the ADG in all developments with a residential component and/or communal open space.

4.3. PEDESTRIAN AMENITY

Pedestrian amenity incorporates all those elements of individual developments that directly affect the quality and character of the public domain. These provisions are intended to achieve a high standard of public domain design and pedestrian comfort in city centre public spaces. The pedestrian environment is to be characterised by excellence of design, high quality materials and a standard of finish appropriate to a regional city centre. The city's lanes, arcades and through-site links are to form an integrated pedestrian network providing a choice of routes at ground level for pedestrians.

The controls in this section aim to increase the vitality, safety, security and amenity of the public domain by:

1. Developing future through-site links at ground level;
2. Ensuring active street frontages;
3. Ensuring a positive relationship between the building and the public domain;
4. Ensuring provision of awnings along the retail frontages; and
5. Mitigating adverse impacts on the street arising from driveway crossings.

4.3.1 Pedestrian Permeability

Background

The existing serviceways and through-site links are an integral component of the pedestrian movement system, providing direct access between the street frontage, serviceways and rear parking areas. The north-south oriented street grid in the city centre provides excellent connectivity in this direction, but the city's street pattern would benefit from additional through-site links in an east-west direction. This will assist in reducing the overall street block size.

In some blocks, additional north-south connections will also improve accessibility and choice.

Additionally, laneways provide for site servicing in a manner that protects the quality of main street frontages in the city centre.

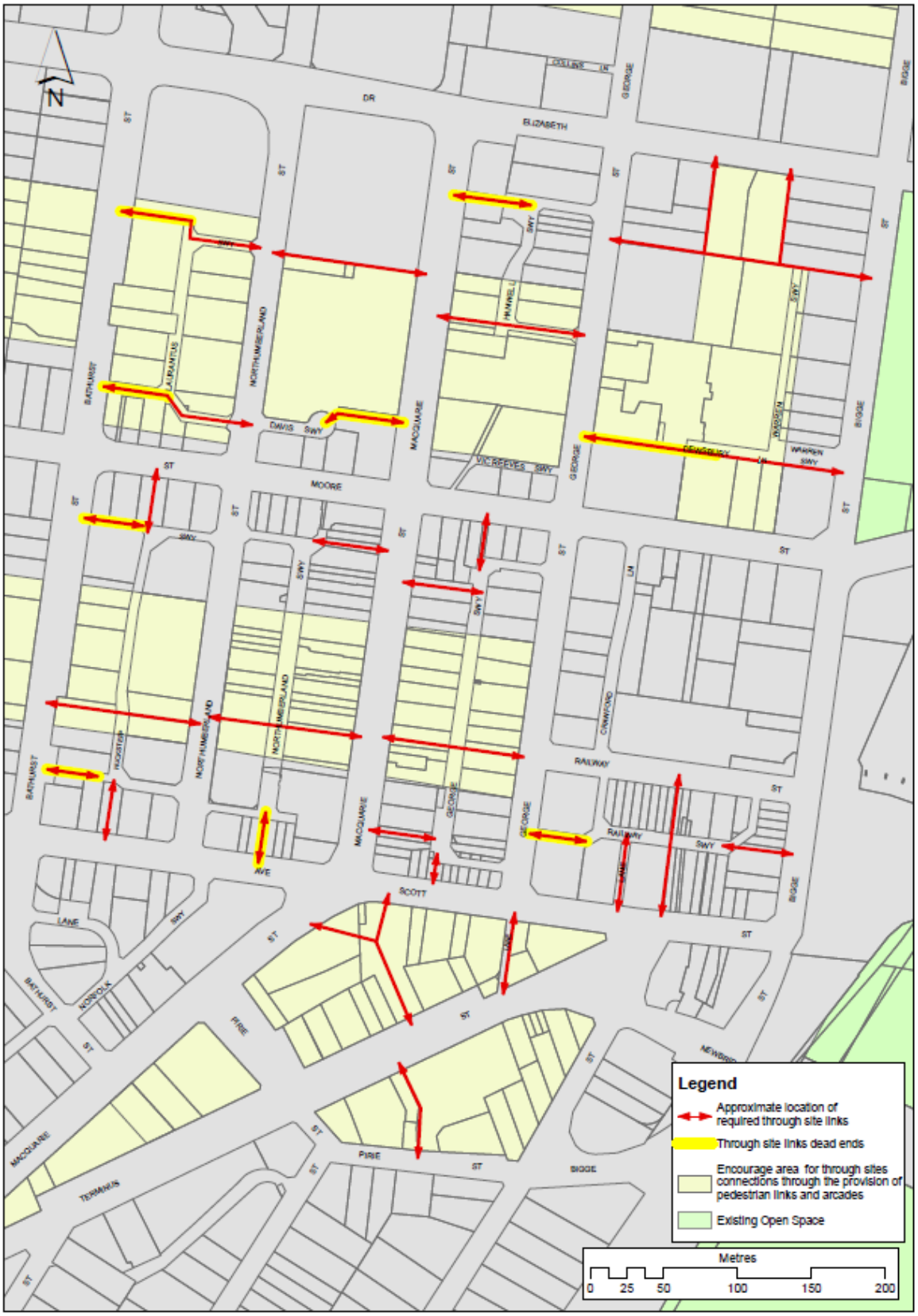
Objectives

1. Improve access and choice in the city centre by providing through-site links as redevelopment occurs.
2. Reduce the size of large street blocks to provide greater movement choice.
3. Create clear and direct throughways for pedestrians.
4. Increase the range of economic opportunities.
5. Retain and enhance existing through site links as redevelopment occurs.
6. Enable active street frontages on through site links.
7. Discourage vehicular access from the primary street frontages. Vehicular access shall be provided from secondary streets or laneways.

General Controls

1. Design through-site links to have direct sight lines.
2. Locate through-site links as shown in **Figure 4-12**.
3. Locate through-site links within "through site link encouragement areas" (as identified in **Figure 4-12**) opposite other through site links.
4. Extend existing dead end lanes (as identified in in **Figure 4-12**) through to the next street as redevelopment occurs.
5. Connect new through site links with existing and proposed through site links, serviceways, shared zones, arcades and pedestrian ways.
6. The siting of new through site links may be varied where new links cannot be directly aligned with existing links.
7. Retain existing, publicly and privately owned, through-site links.
8. Locate active uses on through site links where possible.
9. Nominate sites for through-site links, shared zones etc. that may be acquired by Council or may be dedicated to Council at no cost as part of a concept development application.
10. Vehicular access shall be provided from secondary streets or laneways only. Vehicular access will not be allowed from the primary street.

Figure 4-12 Through Site Links



Specific Controls for Different Link Typologies

1. Shareway | Pedestrians and Cars (Public) Through Site Links must:
   a) Be a minimum width of 6m and clear of all obstructions.
   b) Be open to the sky and to be publicly accessible at all times.
   c) Display signage at street entries indicating public accessibility and the street to which the through site link connects.

2. Pedestrian Paths | (Public) Through Site Links must:
   a) Be a minimum width of 3m clear of all obstructions.
   b) Be open to the sky and to be publicly accessible at all times.
   c) Have signage at street entries indicating public accessibility and the street to which the through site link connects.

3. Pedestrian Arcades and Through Site Links must:
   a) Be a minimum width of 5m and clear of all obstructions (including columns, stairs, and escalators).
   b) Provide public access at all business trading times.
   c) Be at least 2 storeys high.
   d) Have access to natural light for at least 50% of their length, where appropriate.
   e) Incorporate clear glazed entry doors comprising at least 50% of the entrance where air conditioned, and to be accessible at least 18 hours per day, 7 days per week.
   f) Display signage at street entries indicating public accessibility and the street to which the through site link connects

4.3.2 Pedestrian Overpasses and Underpasses

Background

Streets provide the best amenity and safety when activated by pedestrians. Pedestrians should be encouraged to use the street to enhance and contribute to street life, and to maximise safety and security of the public domain.

Pedestrian overpasses linking commercial or retail buildings over the public street are discouraged as they can have a negative impact on the streetscape quality and on views and vistas along streets. New pedestrian overpasses or underpasses will only be considered where they directly connect to major transport nodes (such as Liverpool railway station), and/or can substantially improve pedestrian safety and access over major arterial roads (such the Hume Highway).

Objectives

1. Promote pedestrian activation of streets and public places by limiting pedestrian overpasses and underpasses.
2. Encourage pedestrian circulation at street level.
3. Protect views and vistas along streets.

Controls

1. Design underpasses or overpasses in accordance with *Crime Prevention Through Environmental Design* principles and compliant with the applicable Australian Standard for Disabled Access.
2. Design overpasses to be fully glazed or open, and not greater than 3m wide or more than one level high.
3. Consider underpasses for direct connection under adjacent streets to the railway station

where they:

a) would substantially improve pedestrian safety and accessibility;
b) incorporate active uses, particularly at entry and exit points; and
c) have a minimum width of 4.5m clear of all fixed obstructions and a minimum ceiling height of 6m.

4.3.3 Active Street Frontages

Background

Active street frontages promote an interesting and safe pedestrian environment.

Active frontage uses are defined as one or a combination of the following at street level:

- entrance to retail;
- glazed entries to commercial and residential lobbies;
- café or restaurant, if accompanied by an entry from the street;
- active office uses, such as reception, if visible from the street; and/or
- public building if accompanied by an entry.

Objectives

1. Promote pedestrian activity and safety in the public domain.
2. Maximise active street frontages in Liverpool city centre.
3. Development in Liverpool city Centre is consistent with the Liverpool City Activation Strategy 2019-24.

Controls

1. Locate active street frontages on the ground level of all commercial or mixed use buildings, including adjacent through-site links.
2. Locate active street frontages in the Mixed Use, Commercial Core, Enterprise Corridor and Neighbourhood zones (as identified in **Figure 4-2**), on ground level. This does not preclude servicing activities particularly in the serviceways.
3. Locate active street frontages at first floor level in addition to ground for sites addressing major roads as depicted in **Figure 4-16**.
4. Locate street fronts at the same level as the footpath and with direct access from the street.
5. Use only open grill or transparent security (at least 50% visually transparent) shutters to retail frontages.

4.3.4 Street Address

Background

Street address is defined as that part of a building that has a frontage to the street, contains entries, lobbies, balconies and habitable rooms overlooking the street. Buildings can contribute positively to the street by providing a clear address to, direct access from and outlook over, the street.

Objectives

1. The street address for buildings must provide:

   a) An attractive interface between the public and private domains.
   b) Legible entries to the building from the street.
   c) Opportunities for surveillance of the street and public domain.

Controls

1. Provide a clear street address and direct pedestrian access off the primary street frontage in mixed use and residential developments.

2. Provide multiple entrances to large developments on all street frontages.
3. Provide direct 'front door' and/or garden access to the street in ground floor residential units.

4.3.5 Street and Building Interface

Background

Buildings are to provide privacy if dwellings are located on the ground floor. Where fences are used, they need to be designed to enable a positive relationship between the building and the street. Front fences include all fences to the primary and secondary street frontages, and side boundary fences forward of the building alignment.

Objectives

1. Clearly define the interface between the public and private domain.
2. Provide privacy for dwellings on the ground floor of buildings.
3. Ensure front fences allow for passive surveillance of the street.
4. Encourage the preservation and/or construction of fences, walls and landscaped areas that contribute to the character of the locality.

Controls

1. Design the area between the building and the public footpath so that it:
   a) provides visibility to and from the street (if non-residential use);
   b) provides privacy if residential uses are on the ground floor;
   c) introduces paving and/or landscaping between the street and the building; and/or
   d) screens any above ground car parking.
2. Use front fences that:
   a) do not present a solid edge to the public domain greater than 1.2 m above the footpath / public domain level; and
   b) are not constructed of sheet metal or opaque glass.

4.3.6 Lane / Serviceways and Building Interface

Background

Council envisages lane ways and serviceways in Liverpool city centre developing to offer some of the higher order functions of streets. While preserving functions necessary to the servicing of businesses, lane ways and serviceways may develop to include independent/niche retail businesses and/or residential accommodation in addition in addition to providing back of house services. Active street frontages on service ways can assist in promoting interesting and safe environments in which vehicles and pedestrians have access and a range of uses may flourish.

Objectives

1. Clearly define the interface between the public and private domain.
2. Provide for passive surveillance of the street from the building to the serviceway.
3. Minimise the impact of above ground car parking.
4. Provide suitable non-residential uses with direct pedestrian access to the lane/serviceway.
5. Ensure the effective operation of loading facilities.

Controls

1. Set back all levels above ground of buildings 6m from the centre line of the lane/serviceway so that residential uses can be accommodated on opposite sides of the serviceway, as described in **Figure 4-11**.
2. Provide active uses and/or entries at ground level where possible.
3. Screen or sleeve above ground car parking with green walls or other screening devices.
4. Electricity substations (where required) shall be situated within the building or its basement.

5. Vehicular entry points must be of high quality design. The impact of vehicular entry points on pedestrians must be minimised.
6. Garbage collection points, fire services and other service requirements are to be integrated into the design of the building.

4.3.7 Awnings

Background

Awnings increase the useability and amenity of public footpaths by protecting pedestrians from sun and rain. Awnings provide a public presence and interface within the public domain to contribute to the identity of a development.

Objectives

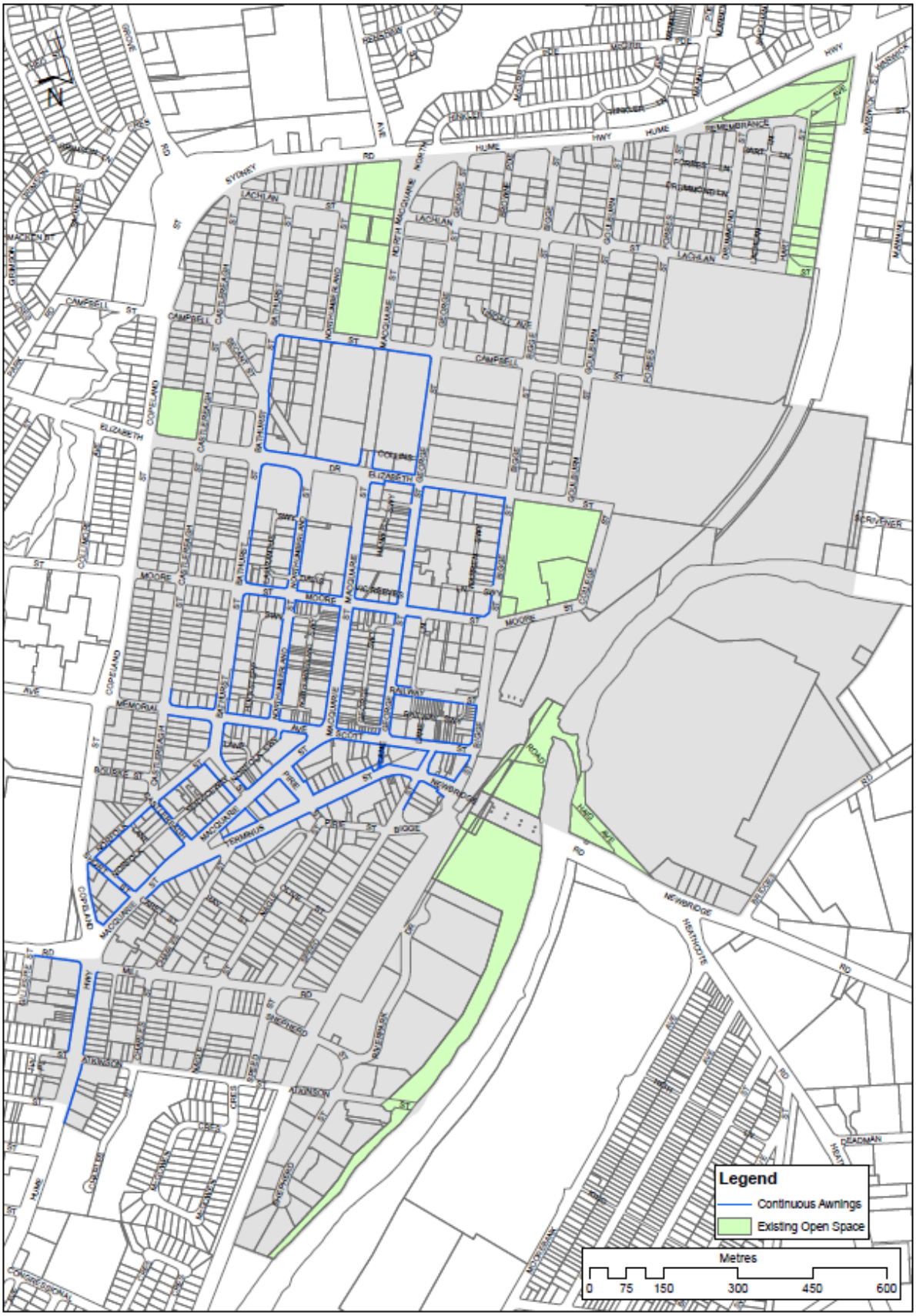
Awnings on buildings must:

1. Provide shelter for public streets where most pedestrian activity occurs.
2. Address the streetscape by providing a consistent street frontage.

Controls

1. Provide street frontage awnings for all new developments on streets identified in **Figure 4-13**.
2. Awnings must be:
   a) horizontal in form;
   b) minimum 2.4m deep (dependent on footpath width);
   c) minimum soffit height of 3.2m and maximum of 4m;
   d) stepped to accommodate sloping streets;
   e) integral with the building design;
   f) slim vertical faciae or eaves (generally not to exceed 300mm height); and
   g) setback 1.2m from kerb to allow for clearance of street furniture, trees, and other public amenity elements.
3. Match awning design to building facades, so that they maintain continuity and are complementary to those of adjoining buildings.
4. Include appropriate sun shading device for the outer edge of awnings along east-west streets if required. These blinds must not carry advertising or signage.
5. Provide lighting recessed into the soffit of the awning to facilitate night use and to improve public safety.
6. Maintain a minimum clearance of 2.8m from the level of the pavement to the underside of awning signage.
7. Provide all residential buildings in areas not identified for continuous awnings in **Figure 4-13** with awnings or other weather protection at their main entrance area.

Figure 4-13 Awnings



4.3.8 Building Design and Public Domain Interface

Background

Liverpool's public domain is defined by the buildings, streets and public places. The quality of the public domain is dependent on a consistent approach to the design of new development including the articulation and finish of building exteriors.

Dark coloured finishes (e.g. black, charcoal) can tend to increase heat absorption and add to the urban heat island effect, whereby the urban environment is hotter than surrounding land. Council encourages the use of lighter coloured finishes to help reduce the urban heat island effect in Liverpool city centre.

Objectives

The design of new/modified buildings in Liverpool city centre must:

1. Contribute positively to the streetscape and public domain by means of high quality architecture and robust selection of materials and finishes.
2. Provide richness of detail and architectural interest especially at visually prominent parts of buildings such as lower levels and roof tops.
3. Clearly define the adjoining streets, street corners and public spaces and avoid ambiguous external spaces with poor pedestrian amenity and security.
4. Seek to reduce the urban heat island effect by selecting lighter coloured external finishes.

Controls

1. Design new buildings that adjoin existing buildings, particularly heritage buildings and those of architectural merit so that they consider:
   a) the street 'wall' alignment and building envelope;
   b) the 'depth' within the façade;
   c) facade proportions; and
   d) the response to the corners at street intersections.
2. Provide balconies and terraces appropriately orientated where buildings face public spaces.
3. Articulate façades to address the street, proportion the building, provide 'depth' in the street wall when viewed obliquely along the street and add visual interest.
4. Use high quality robust finishes and avoid finishes with high maintenance costs, and those susceptible to degradation due to a corrosive environment. Large expanses of rented concrete finish is discouraged.
5. Select lighter-coloured materials for external finishes including roofs and avoid the use of darker-coloured materials (e.g. black, charcoal) to reduce the urban heat island effect.
6. Maximise glazing in the facades for retail uses.
7. For residential components of buildings, do not use highly reflective finishes and curtain wall glazing above ground floor level.
8. Construct only minor projections up to 600mm from building walls into the public space. These must not add to the GFA and must provide a benefit, such as:
   a) expressed cornice lines that assist in enhancing the definition of the street; or
   b) projections such as entry canopies that add visual interest and amenity.
9. Do not locate communication towers such as mobile phone towers, but excluding satellite dishes, on residential buildings or mixed use buildings with a residential component.
10. Incorporate roof top structures, such as air conditioning and lift motor rooms, into the architectural design of the building.
11. Screen air conditioning units on balconies.
12. No clothes drying facilities to be allowed on balconies.
13. All new commercial buildings are to demonstrate on the architectural plans that the rooftop is designed to enable the installation of solar panels.

4.3.9 Street Intersections and Corner Buildings

Background

As buildings located on corner sites address two street frontages instead of one, they are more visibly prominent than mid-block buildings. Corner buildings therefore play a particularly important role in the city centre. Corners can strengthen the form of city blocks, streets and intersections, identify important junctions, assist in revealing topographic features and define pedestrian routes.

Objectives

Corner buildings must:

1. Contribute to the legibility of the city.
2. Ensure they address all street frontages.
3. Support the role of corner sites in creating a clear skyline and minimising apparent density.
4. Respond to any heritage buildings on opposing corner sites.

Controls

1. Address all street frontages in the design of corner buildings.
2. Design the corner buildings to respond to the character of the intersection by recognising the different hierarchies of the street typologies.

Note: Intersections of different street types all require varied design responses.

4.3.10 Public Artworks

Background

Public Art enhances the visual quality and cultural influence of both the public domain. It contributes to people feeling positive about their surroundings. Public Art may be ephemeral, temporary or permanent in nature. **It** may be located in or part of a public space or facility and may be commissioned by either the public or private sector.

Public art also includes the conceptual contribution of an artist to the design of public spaces and facilities. Public Art is crucial to the development of public places which are innovative, vibrant and meaningful and allow curiosity, playfulness and or a sense of connection to form. Public art may take any of the following forms:

a) Functional Connection; seating, lighting, bollards
b) Decorative: Incorporated into structures eg paving, awnings
c) Iconic: Stand-alone sculptural works
d) Integrated: fully incorporated within the design eg flooring, windows
e) Interpretative: describe, inform or educate, on issues, events, situations eg signage, plaques, text based work

Objectives

Public Art in Liverpool city centre must:

1. Contribute to the city's physical attractiveness and the quality of life that it offers visitors and residents.
2. Interpret and express Liverpool's historical and cultural themes, particularly as identified in *Our Home, Liverpool 2027. Community Strategic Plan*
3. Improve the quality of public artworks in Liverpool.
4. Encourage the development of public art as consistent with Council's Public Art Policy.

Controls

1. Design public art to respond to the particular site of the development as well as the city as

a whole.

2. Provide well designed and visually interesting public art created by artists or organisations that are competent in the selected field and committed to best practice.
3. Construct Public Art of materials that are durable, resistant to vandalism, safe for the public and constructed to ensure minimal maintenance.
4. Develop clear and concise agreements with artists/organisations in relation to expectations and deaccession (the process used to permanently remove an object, artwork or assemblage).

4.4. TRAFFIC AND ACCESS

Background

This section contains objectives specifically related to pedestrian access, vehicular access, on-site parking and site facilities in the city centre. An upgrade of the intersection of the Hume Highway and Hoxton Park Road is also under consideration.

4.4.1 Vehicular Access and Manoeuvring Areas

Background

The location, type and design of vehicular access points to a development can have significant impacts on the streetscape, the site layout and the building façade design.

Objectives

The design and location of vehicular access to developments must:

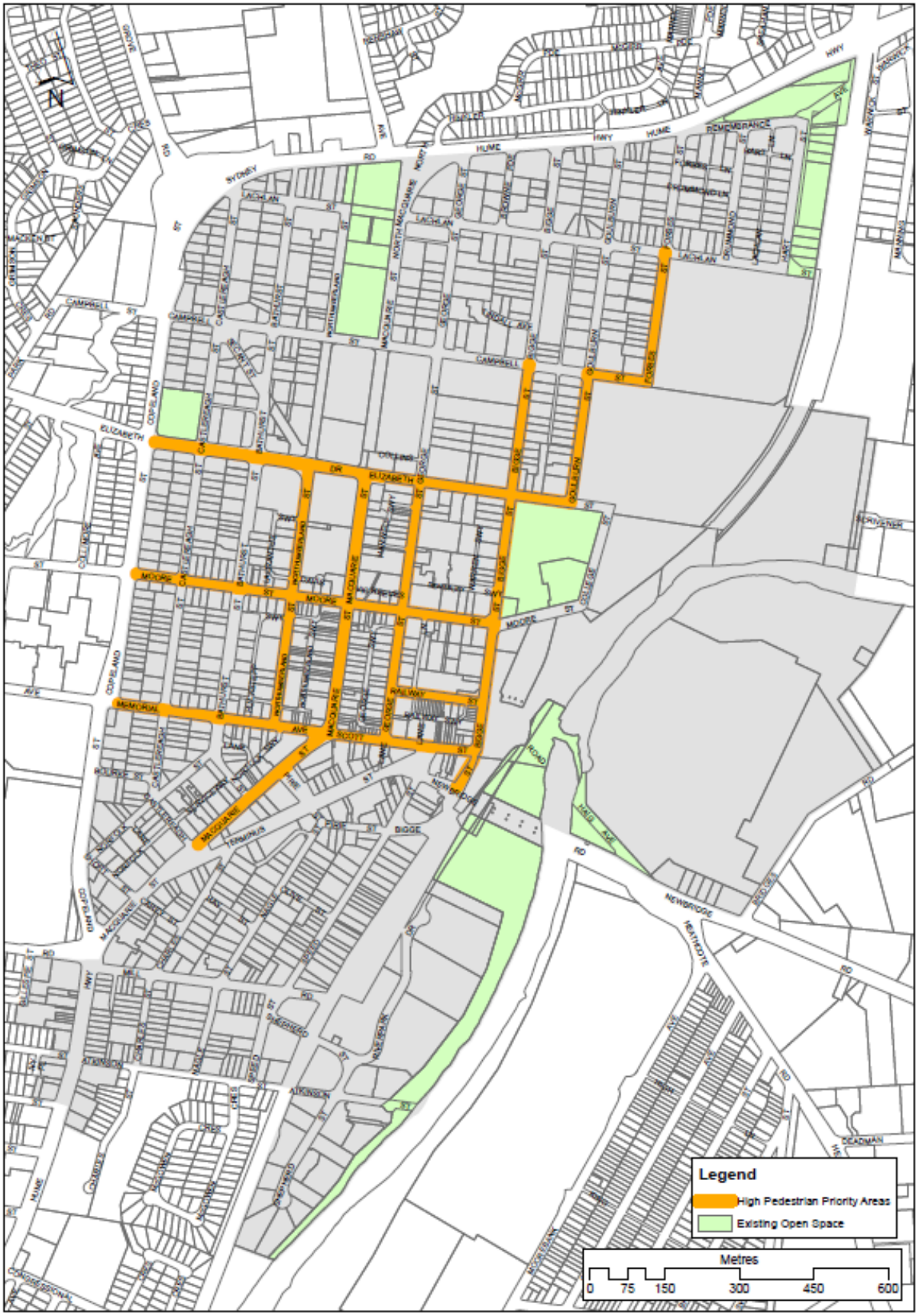
1. Avoid or minimise conflicts between pedestrians and vehicles on footpaths, particularly along pedestrian priority areas identified in **Figure 4-15**.
2. Not intrude visually into the streetscape continuity.

Controls

1. Vehicular access shall be restricted to the secondary street (other than along a High Pedestrian Priority Area) where possible.
2. Design of vehicle entry points must be of high quality and relate to the architecture of the building, including being constructed of high quality materials and finishes.

3. All weather access:
   a) Locate and design porte cochere (for hotels only) to address urban design, streetscape, heritage and pedestrian amenity considerations.
   b) Design porte cochere to be internal to the building, where practical, with one combined vehicle entry and exit point, or one entry and one exit point on two different frontages of the development.
   c) In exceptional circumstances for buildings with one street frontage only, an indented porte cochere with separate entry and exit points across the footpath may be permitted, as long as it is constructed entirely at the footpath level and provides an active frontage at its perimeter.

Figure 4-15 High Pedestrian Priority Areas



4.4.2 On Site Parking

Background

On-site parking includes underground (basement), surface (at grade) and above ground parking, including parking stations. Parking requirements for buildings on land zoned ~~B3 – Commercial Core~~ E2 – Commercial Core ~~B4 – Mixed Use~~ MU1 – Mixed Use, within Liverpool city centre are detailed in clause 7.3 of LLEP 2008. For other development (including buildings on land zoned R4 — High Density Residential, ~~B1 — Neighbourhood Centre or B6 — Enterprise Corridor~~) E1 – Local Centre (Area G) and E3 – Productivity Support (Area A) are detailed below. Bicycle parking requirements are detailed in section 21.3 of Part 1 LDCP 2008, On-Site Car Parking Provision and Service Facilities by Land Use.

Objectives

On site car parking must:

1. Provide a sufficient supply of on-site parking on the outskirts of the city centre to cater for a mix of development types.
2. Encourage economic growth within the city centre.
3. Enable the conversion of above ground parking to other uses in the future.
4. Encourage a modal shift in transport and recognise the complementary use and benefit of public transportation and non-motorised modes of transport such as bicycles and walking.

Controls

1. All required car parking is to be provided on site in an underground (basement) carpark except to the extent provided below:
   a) On Fine Grain and Midrise sites, a maximum of one level of surface (at grade) parking may be provided where it is fully integrated into the building design; and
   b) On sites requiring the lodgement of a concept DA, a maximum of one level of surface (at grade) and one additional level of above ground parking may be provided where it is fully integrated into the building design.
2. Provide car parking for buildings developed on land in the R4 - High Density Residential zone as follows:
   a) 1 space per two studio apartments.
   b) 1 space per one bedroom or two bedroom apartments.
   c) 1.5 spaces per three or more bedroom apartments.
3. Provide car parking for buildings developed on land in other zones (~~B1 — Neighbourhood Centre or B6 — Enterprise Corridor)~~ (E1 – Local Centre (Area G) and E3 – Productivity Support (Area A)) as follows:

a) 1 space per 100 m² of floor area

4. Service and visitor parking is to be provided for all development within the city centre. For sites zoned ~~B3 – Commercial Core~~ E2 – Commercial Core or ~~B4 – Mixed Use~~ MU1 – Mixed Use, service and visitor parking is to be provided as part of the parking required according to clause 7.3 of LLEP 2008, Car parking in Liverpool city centre. For all other sites, service and visitor parking requirements are additional to that specified in controls 2 and 3 above.

Service and visitor parking is to be provided In accordance with the following formula:

Residential (including residential components of mixed-use or other developments)

- 1 space per 10 apartments or part thereof, for visitors; and
- 1 space per 40 apartments for service vehicles (including removalist vans and car washing bays) up to a maximum of 4 spaces per building

All other development

5. Sufficient service and delivery vehicle parking adequate to provide for the needs of the development.

   Provision is to be made for motorcycle parking at the rate of 1 motorcycle space per 20 car spaces.

6. No less than 2% of the total parking demand generated by development shall be accessible parking spaces, designed and appropriately signposted for use by persons with a disability.

4.5. ENVIRONMENTAL MANAGEMENT

4.5.1 Wind Mitigation

Background

Windy conditions can cause discomfort and be dangerous to pedestrians. Downdrafts from buildings can inhibit the growth of street trees. Conversely, moderate breezes that penetrate streets can enhance pedestrian amenity and disperse vehicle emissions and air conditioning plant exhausts.

Objectives

Wind mitigation measures must:

1. Ensure that new developments satisfy nominated wind standards and maintain comfortable conditions for pedestrians.
2. Ensure that the moderate breezes are able to penetrate the streets of Liverpool city centre.

Controls

1. Design all new buildings to meet the following maximum wind criteria :
   a) 10m/second in retail streets;
   b) 13m/second along major pedestrian streets, parks and public places; and
   c) 16m/second in all other streets.
2. Submit a Wind Effects Report with the DA for all buildings greater than 35m in height.
3. Submit results of a Wind Tunnel Testing report for buildings over 48m in height.

4.5.2 Noise

Background

Noise sources from major road and railway corridors and mixed-use and commercial development have been identified within and adjacent to the city centre. It is important for the amenity and comfort of future occupants of buildings in proximity to these areas that appropriate measures are put in place.

Objectives

1. Noise mitigation measures must achieve appropriate amenity in noise affected locations.

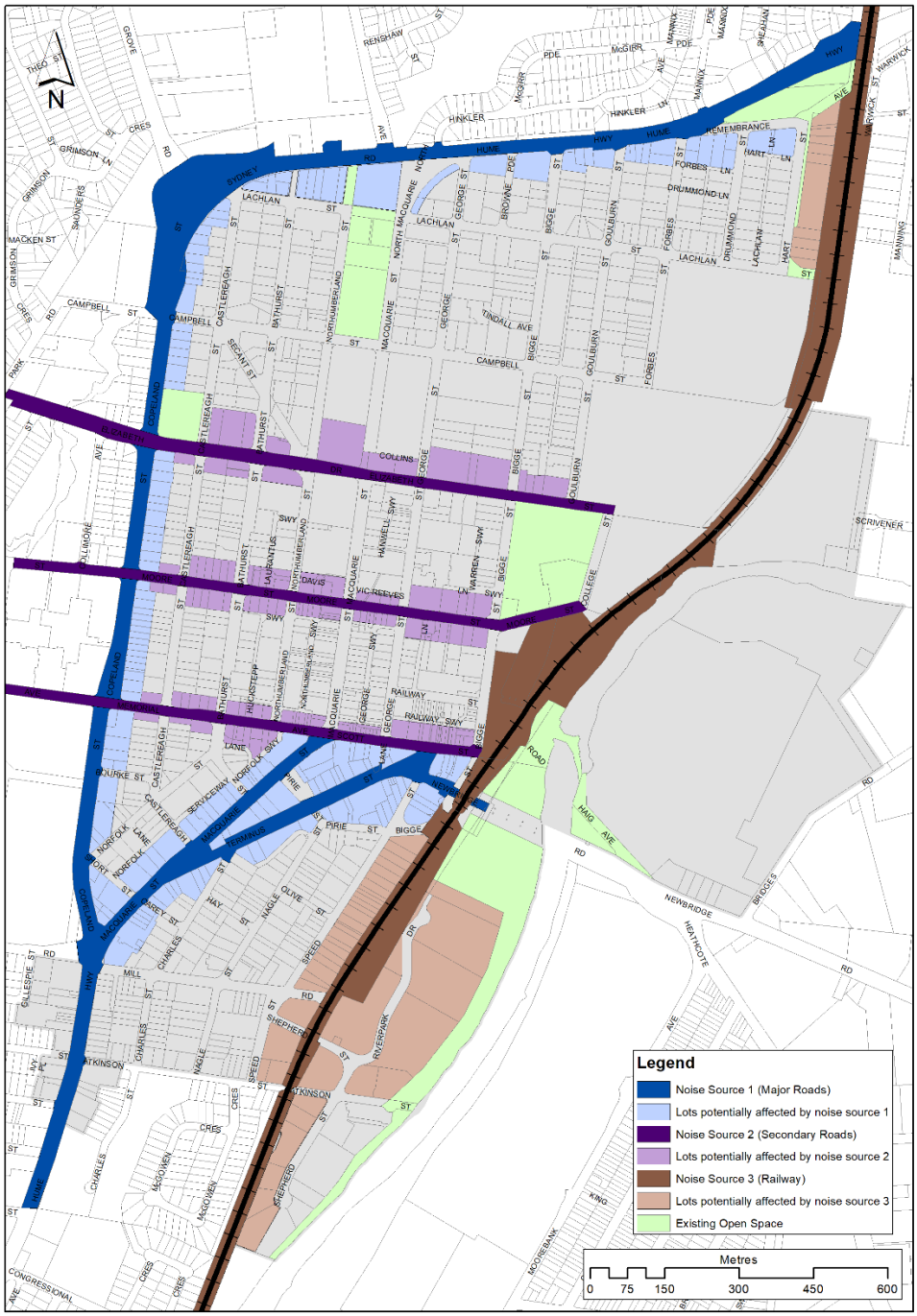
Controls

1. Design development on sites adjacent to road and rail noise sources identified in **Figure 4-16**, in a manner that shields any residential development from the noise source through the location and orientation of built form on the site, supported by an appropriate acoustic report as required by the State Environmental Planning Policy (Infrastructure) 2007.

2. Provide an 8m setback from the primary street frontage to any residential component of development located along Terminus Street and the Hume Highway.

All residential apartments and / or serviced apartments within a mixed use development should be designed and constructed with double-glazed windows and / or laminated windows, solid walls, sealing of air gaps around doors and windows as well as appropriate insulating building elements for doors, walls, roofs and ceilings etc; to provide satisfactory acoustic privacy and amenity levels for occupants within the residential and / or serviced apartment(s).

Figure 4-16 Noise



4.6. CONTROLS FOR SPECIFIC AREAS

Background

The following controls are in addition to the general controls elsewhere in this DCP. The purpose of this section is to provide additional, site specific controls for areas of sensitivity within the city centre. These included heritage areas and sites requiring the lodgement of a site-specific DCP.

4.6.1 Heritage Items and Conservation Areas

Background

Heritage items and heritage conservation areas identified on the heritage map and in Schedule 5 of the LLEP 2008. Works affecting listed heritage items or areas, or development on listed heritage sites, are subject to the provisions of the LLEP 2008. As part of the assessment process, the consent authority must have regard to:

- Heritage provisions outlined in Clause 5.10 of the LLEP 2008;
- Heritage objectives, controls and conservation criteria as listed below;
- The relevant Statement of Significance for each item;
- Any conservation management plan, heritage impact statement or study required by the consent authority in response to proposed development of these areas;
- For development that may impact a heritage item, information addressing relevant issues must be included in a Statement of Heritage Impact submitted with the DA; and
- Development within the curtilage of a listed item, or a heritage conservation area, or which will impact upon the setting of a heritage item or heritage conservation area is also subject to the following provisions. Where there is a discrepancy with general controls elsewhere in this DCP, the following objectives and controls are to apply.

Objectives

1. Facilitate the conservation and protection of heritage items and heritage conservation areas and their settings.
2. Reinforce the special attributes and qualities of the heritage significance by ensuring that development has regard to the fabric and prevailing character of the item or conservation area, including scale, proportions, materials and finishes.
3. Design infill development to complement the heritage values and address the desired future character.
4. Conserve, maintain and enhance existing views and vistas to buildings and places of heritage significance.
5. Ensure new buildings and landscaping in heritage precincts recognise community values and provide a sense of continuity. Refer to the joint NSW Heritage Office and RAIA publication “Designing in Context: Guidelines for Infill Development in the Historic Environment” (2005) for further guidance.

Controls

1. Submit a Conservation Management Plan prior to the submission of any development application for the following sites:
   a) St Luke’s Church;
   b) Liverpool Railway Station; and
   c) Liverpool College of TAFE (Francis Greenway Building).
2. Ensure that all development in the Bigge Park Conservation Area addresses any potential impact on the heritage significance of the area as a whole.
3. Retain and enhance the significance of heritage items and their setting in any new development within Liverpool city centre.

4. Undertake an assessment for sites in the vicinity of heritage items or heritage conservation areas, of the impact of the proposal on the setting of nearby heritage items or heritage conservation areas.
5. Establish the relevant criteria for each proposal depending on the nature of development, the proximity of the development to surrounding heritage items and conservation areas in addition to any other factors considered in the design of the subject building.
6. Infill building must not precisely imitate its neighbour but use recognisable tools such as spatial organisation, massing, scale, alignment, detailing, materials, roof forms and coursing lines to complement adjacent heritage items.
7. New buildings must not obstruct important views and vistas of a heritage item.

4.6.2 Site specific DCPs

Background

As noted in Section 4.2.5 above, certain sites in Liverpool city centre (having a minimum lot size of 1500 m² with two or more Street frontages and situated in “Area 8”, “Area 9” or “Area 10”) may be developed pursuant to Clause 7.5A of LLEP 2008. While Council’s preferred option is that development of these sites proceeds pursuant to a concept developed application, the option is to lodge a site specific DCP which meets all the requirements of clause 7.5A(4) of LLEP 2008. Any such site-specific DCPs are to be considered as amendments to Part 4 LDCP 2008 and included in this section.

Liverpool City Council
creating our future together

Liverpool Development Control Plan 2008

Part 5

Development in

Rural and ~~E3~~ C3 Zones

~~1 April 2015~~
May 2024

Part 5 must be read in conjunction with Part 1

Check if any Locality Parts also apply

Liverpool Development Control Plan 2008
Part 5 Rural and ~~E3~~ C3 Zones

Table of Contents

Outline 5

1. Site Planning 7

2. Setbacks 9

3. Private Open Space and Landscaped Area 11

4. Building Design, Style and Streetscape 12

5. Landscaping and Fencing 16

6. Car Parking and Access 19

7. Amenity and Environmental Impact 21

8. Site Services 22

9. Additional Requirements 23

9.1 Dwelling Houses and Dual Occupancy 23

9.2 Health Consulting Rooms 26

9.3 Home Businesses 26

9.4 Intensive livestock agriculture 28

9.5 Intensive plant agriculture 31

9.6 Rural Industries 34

9.7 Roadside stalls 35

9.8 Communication Facilities 36

9.9 Places of Public Worship 38

9.10 Landfill 39

9.11 Dams 41

9.12 Extractive Industries 42

9.13 Cemeteries, Crematoriums and Funeral chapels 44

9.14 Secondary Dwellings (Granny Flats) 45

Table of Figures
Table of Figures

Figure 1 Poor location of building 8
Figure 2 Better location of building 8
Figure 3.1 Setbacks to primary and secondary road frontages 10
Figure 3.2 Setbacks to primary road frontage, side and rear. 10
Figure 3.3 Dual occupancy primary, side and rear 10
Figure 4 Height of Buildings 13
Figure 5 Poor Roof Design 14
Figure 6 Better Roof Design 14
Figure 7 Poor example of Streetscape 14
Figure 8 Better example of Streetscape 15
Figure 9 Examples of Landscaping 18
Figure 10 Poor Driveway Design 20
Figure 11 Better Driveway Design 20
Figure 12 Dual-occupancies and subdivision 25
Figure 13 Recommended Distances for Poultry Farming Developments 29
Figure 14 Recommended Distances for Greenhouses/Igloos/Market Gardening 32

List of Tables

Table 1 Front Setbacks 9
Table 2 Setbacks for Intensive Livestock Agriculture 29
Table 3 Setbacks for Intensive Plant Agriculture 32

Outline

Applies to

1. Part 5 applies to all land in rural zone
2. Part 5 also applies for dwelling houses in the ~~E3~~ C3 zone
3. Part 1 of the DCP also applies to the land in the rural and E3 zoned land.

Background

Range of rural areas

Liverpool has a number of distinct rural environments. There are the western rural areas, which consist of large allotments, mostly west of The Northern Road. Some is used for agriculture while some is bushland. The area largely east of The Northern Road consists of smaller rural allotments, mainly 2 ha lots with 1.2 ha lots in the Austral area.

The area south of Camden Valley Way in Denham Court consists of largely 2 ha lots in the scenic hills and 1 ha lots in the valley. The other major rural area is west of The Northern Road, and consists of large blocks in agricultural uses. The rural land east of The Northern Road, is predominately in 2-5ha blocks, and is part of the Growth Centres. This means that this land will become residential land in the future.

Much of the rural areas have been used for agriculture for many years and the previous subdivision reflects these rural uses with most land in the 1.2 – 5 ha lots.

The ~~E3~~ C3 – Environmental Management ~~Protection Living~~ zone is contained within Part 5, which deals predominately with rural uses, as the ~~E3~~ C3 zone is used predominately on land, which has similar development standards within the *Liverpool LEP 2008* as the rural zones.

Link to Liverpool LEP 2008

The *Liverpool LEP 2008* provides a number of general provisions that apply to all land including that in the rural and ~~E3~~ C3 zones

Objectives

a) To minimise potential land use conflicts between intensive agriculture and neighbouring land uses.

b) To ensure new development maintains the rural character and recognises the diversity of rural zones.

c) To maintain agricultural viability of rural land.

d) To protect the natural environment including landform, waterways, air quality, native animals, threatened species populations, ecological communities or their habitats.

e) To maintain the rural character and scenic landscape qualities of land in the vicinity of the Georges River and Nepean River.

f) To preserve the rural character and scenic landscape qualities of the area.

g) To provide design requirements for the range of uses permitted in the various rural zones.

h) To provide design requirements to ensure that the range of uses permitted in the various rural zones are compatible with each other.

i) To provide design requirements to ensure that the range of uses permitted in the various rural zones are compatible with development permitted in adjoining zones.

j) To provide design requirements to ensure development in the rural zones are compatible with the natural environment.

k) To provide design requirements to ensure that development in the rural zones are compatible with the requirements of *Liverpool LEP 2008*.

l) To provide design requirements to ensure that development in the rural zones are compatible with the character and amenity of nearby areas (both existing and likely future) in terms of:

- its scale, bulk, design, height, siting and landscaping,
- its operation,
- traffic generation and car parking,
- noise, dust, light and odour nuisance,
- privacy,
- stormwater drainage,
- hours of operation,
- overshadowing.

1. Site Planning

Background

Rural areas within the Liverpool LGA, have maintained the rural aesthetic. Through a wide variety of land uses operate within areas zoned for rural use, development has used site planning and building design affectively to achieve the rural feel. Environmental Protection areas have significant environmental protection constraints that act similar to rural constraints, for the purpose of site planning.

Objectives

a) To ensure that new development is compatible with and enhances the visual quality of the existing rural environment.

b) To ensure that developments do not detrimentally affect the amenity of adjoining areas.

c) To site buildings having regard to views and vistas, the landform, existing buildings and roads, and to minimise the visual impact of buildings.

d) Does not restrict the uses of adjoining or existing agriculture.

Controls

Location of buildings

1. Buildings shall not be located on ridges or in places where they are too visible from the street.
2. Buildings shall be sited to maximise the retention of existing trees.
3. When siting buildings and seeking to maximise views, the visual impact of the building on the landscape is to be minimised.
4. Outbuildings and water tanks associated with rural dwellings are to be organised and planned in a group and not be predominantly from public view.
5. Site planning should be sensitive to site attributes, such as streetscape character, natural landform, existing vegetation, views and land capability.
6. The site layout should enhance the streetscape through the use of landscaping and built form.
7. Site planning should enable buildings to address streets and public open spaces.

Additional Controls on the location of Building in the ~~E3~~ C3 zone

1. The dwelling house must not be placed on land that is classified as Environmental sensitive land, as per the *Liverpool LEP 2008*.
2. The dwelling house must not be placed on land that is classified as within the residential flood planning area, as per the *Liverpool LEP 2008*.
3. The layout of the building should be designed in such a way to ensure that the majority of the dwelling is not visible from other land.
4. Development for a dwelling house must ensure that it has adequate access to a street, without additional clearing works.
5. Development for a dwelling house should ensure that connection to mains water supply or that a dam/rainwater tank of sufficient size can be placed without significant clearing.

6. Development for a dwelling house must ensure that there is adequate land available to dispose of sewage onsite, or into a mains sewer, without compromising surrounding water quality.

Figure 1 Poor location of building

Figure 2 Better location of building

2. Setbacks

Background

The setbacks from the street frontage can have a significant impact on the amenity of a rural or Environmental Protection area. It can also impact on access to and from a site and on traffic circulation. The environmental, economic and visual impacts of the various densities of rural development are readily noticeable.

Objectives

a) To ensure appropriate development on site.

b) That setbacks help maintain the rural character.

Controls

Site Coverage

Maximum site coverage: 10% except where otherwise specified for particular land uses.

Setback from Street frontage

1. Dwellings shall be setback as set out in the following table:

Table 1 Front Setbacks

Setback	Front Setback
Land within the RU1, RU2, or RU4 zone	20m
Land with a Frontage to Greendale Road	50m
Land that is classified as part of the Growth Centres	15m
Land within the ~~E3~~ C3 zone	20m

2. Minimum setback to secondary frontage from a public street: 10m.
3. Variation of the setback requirement may be considered in areas within the South West Growth Centre, where planning for new residential release is sufficiently advanced.

.

Setback from other boundaries

1. Minimum setback to side boundaries: 2m except where otherwise specified for particular land uses.
2. Minimum setback to rear boundaries: 10m except where otherwise specified for particular land uses.

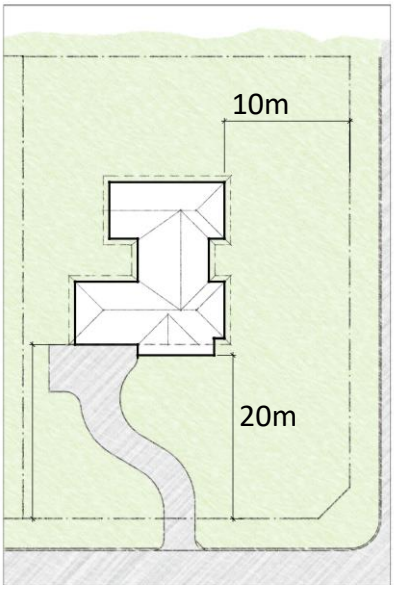


Figure 3.1 Setbacks to primary and secondary road frontages

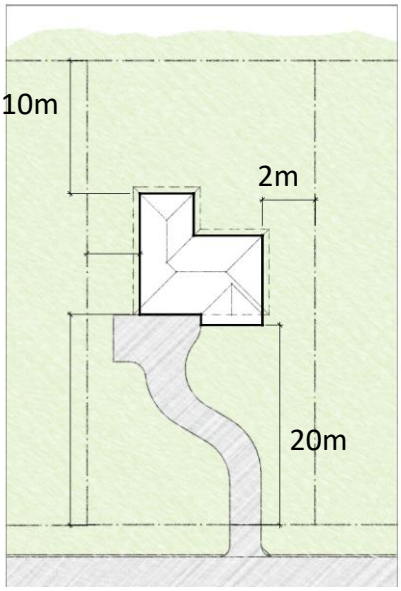


Figure 3.2 Setbacks to primary road frontage, side and rear.

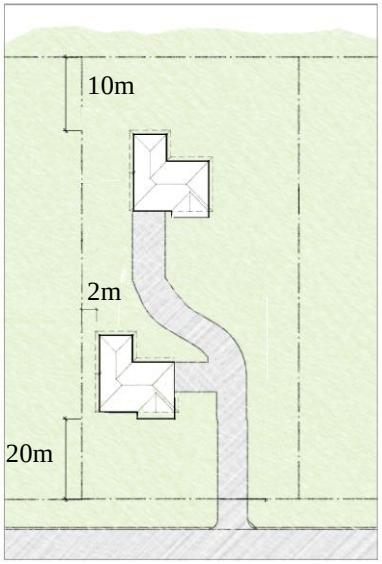


Figure 3.3 Dual occupancy primary, side and rear

Note:

- Council may consider variations to setbacks if it will result in a better environmental outcome or enhance the ability to subdivide land within the Growth Centres
- The clustering of the dwellings is encouraged. The purpose of Figure 3 is to illustrate the minimum setbacks and preferred dwelling siting.
- Images are not to scale.

3. Private Open Space and Landscaped Area

Background

Dwellings in Rural and Environmental Protection Areas require private open space. While this may not be too difficult to achieve it is nevertheless a need to be provided for.

Objectives

a) To ensure that Private Open Space is provided for residential development.

b) To ensure that areas of private open space are usable.

c) To ensure that Private Open Space is clearly defined for private use, and is private, landscaped and screened from overlooking.

Controls

Dwellings

1. Dwellings shall have private open space area not less than 100sqm. Areas less than 2.5m in width do not qualify as private open space.
2. Within the ~~E3~~ C3 zone, private open space may be varied up to a maximum of 20% if the applicant can show that to provide the maximum level of private open space, would detrimentally effect the Environmentally sensitive land.
3. Private Open Space must be directly accessible from living areas.
4. Private Open Space should be located where they are not visible from the street.
5. If necessary, fencing should be provided to provide privacy if Private Open Space is located at the side of the dwelling.
6. Areas of private open space must receive at least 3 hours of direct sunlight.

4. Building Design, Style and Streetscape

Background

All developments have an impact on the streetscape and landscape in rural or Environmental protection areas. This impact can result from the location, design and height of buildings and structures. Streetscape is the urban environment created by the relationship of built elements to the public domain. The quality and scale of architecture, landscape elements, natural elements and works in the public domain determine the streetscape character. Ancillary elements of development such as advertising, driveways and fencing are important elements of the streetscape. To make a positive contribution to the streetscape, new development needs to reinforce the scale and character of existing buildings and landscape elements.

Objectives

a) To protect the scenic, historic and cultural value of Liverpool's natural and built environment.

b) To protect significant views and vistas to and from public places.

c) To maintain the existing streetscape and rural aesthetic of the area.

d) To minimise the visual impact of any large development in rural zones.

e) To promote a high standard of urban design, particularly along Classified Roads.

Controls

Height in Rural Areas

Note: Height is generally not controlled by the *Liverpool LEP 2008* in rural zones. This is due to the varying and differing uses that can be found within rural zones, each with significant variations in height. Therefore the following restrictions generally apply.

Residential Heights in Rural Areas:

Residential Buildings are permitted to be a maximum of two (2) Storeys and an Attic in Height. This is equivalent to the height limit that is found across the residential zones of 8.5m.

Residential Heights in Environmental Protection Areas

Dwellings are permitted to be a maximum of (2) Storeys and an Attic in Height. Dwellings must be designed to blend in with the landscape, and minimal clearing works.

Other Non Residential Uses:

All non residential uses can have a general maximum height of 8.5m.

Further Restrictions on Height:

All development must fit in with the surrounding areas, and conserve and protect the rural nature of the area. Therefore the above heights are a guide only, and a merit based assessment will occur for all development above 8.5m for a dwelling, and above 8.5m for a non-residential building.

Towers

A landscape assessment shall be submitted showing that a tower would not have an adverse impact on the rural landscape.

Figure 4 Height of Buildings

Roof design

1. The roof pitch of a building is not to exceed 36 degrees.
2. Gabled and hipped rooflines are to be incorporated into the design of a building.

Building Materials

1. Materials must complement the rural landscape. Examples include stained timbers, brickwork, mud bricks, metal roofs and similar materials sympathetic to the Australian rural heritage.

Figure 5 Poor Roof Design

Figure 6 Better Roof Design

2. Buildings and structures must complement the rural landscape where possible. However Council will consider the use of the building when assessing building materials.

Colours

1. Natural earth colours and natural vegetation colours are to be emphasised on all buildings. (Examples include light ochres, silver greys, grey blues and olive greens.)
2. Highly reflective (shiny) colours are to be avoided for roofs and walls of buildings, including sheds.

Streetscape

1. Natural vegetation should be retained in setback to the street.
2. Buildings shall directly address the street frontage.

Figure 7 Poor example of Streetscape

Figure 8 Better example of Streetscape

Rural landscape

1. Except for driveways, no paved areas or “hard surfaces” are permitted in the front setback.
2. All development should attempt to maintain the existing natural environment.

Views, Scenic landscape and built features

1. Buildings shall not be sited that obstruct views and vistas.
2. Any significant natural and built features should be maintained.

~~E3~~ C3 landscape

1. No paved areas or “hard surfaces” are permitted in the front setback.
2. All development should attempt to maintain the existing natural environment.
3. Timber decking is an alternative to paving, as it can be built with and around the existing treed landscape.

5. Landscaping and Fencing

Background

The landscaping of a development has a major role in maintaining the streetscape and landscape of rural areas. Landscaping assists energy efficiency and thermal control to dwellings. Vegetation screens are used to minimise the effects of odour, winds and enhance the visual quality of the development.

The landscaping must consider the existing streetscape and landscape character and the impact on neighbouring properties. The provided landscaping should make the site more attractive and soften the appearance of development.

Objectives

a) That existing trees are retained whenever possible.

b) To protect any areas of scenic quality.

c) To preserve and enhance any significant natural features on site.

d) To encourage the use of indigenous flora, especially on sites adjoining natural vegetation corridors.

e) To encourage landscaping that is appropriate to the natural, cultural and heritage characteristics of its locality.

f) To ensure the visual impact of development is minimised and integrated into natural surrounds and the streetscape.

Controls

Tree Planting

1. Existing trees and native vegetation are to be retained, protected and incorporated into the development proposal. This is particularly important for vegetation which forms part a ridgeline tree canopy and in foreshore areas (with the exception of weed species).
2. Ridgelines shall be visually enhanced through the mass planting of additional indigenous vegetation, including native undergrowth and canopy species.
3. The landscape design of a development must have regard to the prevailing weather conditions.
4. Trees are to be used to provide shade to buildings, outdoor recreation areas and car parking. Unless required for screening or noise attenuation purposes, solid wall or fences, which do not allow 'through vision' along allotment boundaries will not be allowed.
5. All other perimeter screen planting is to be native species.
6. Hard surfaces should be limited to access, car parking and private open space areas.

Landscaping for rural landscape

Landscaping for rural landscape is generally applied for dwellings, out buildings and other buildings. While dense planting in garden beds may form part of the landscape treatment the primary aim is to provide tree planting to enhance the rural landscape. In particular the landscaping shall involve the following:

1. The trees shall provide a canopy for the streetscape and rural landscape.
2. Shrubs may be used and preferably in mulched garden beds.

3. Trees shall only be planted in grass where there is a border or protection around the tree separating it from the grassed area.

Landscaping for screening

Landscaping for screening is generally applied to uses such as Intensive Plant Agriculture, Intensive Livestock Agriculture, Extractive Industries, outside storage areas and large storage buildings. The aim is to minimise the view of such buildings and items. It will involve the provision of trees and shrubs in mulched garden beds. In particular the landscaping shall involve the following:

1. The trees shall provide a canopy for the streetscape and soften the appearance of the rural environment, without unduly concealing approved on site signage.
2. Mulched garden beds shall incorporate ground covers that will cover the ground area.
3. Large shrubs shall be used under the tree canopy to screen the building or item.
4. Shrubs shall only be planted in mulched garden beds.

Fencing

1. Maximum height for solid fences at the front of site: 1.2m.
2. Maximum height for transparent fences at the front of site: 1.8m.
3. Fences at the front of site shall not be chain wire, metal sheeting, brushwood or electric fences.
4. Fences alongside and rear boundaries shall have a maximum height of 1.8m.
5. Where screening of a building or item is needed a solid fence may be provided behind intensive landscaping.

Figure 9 Examples of Landscaping

6. Car Parking and Access

Background

Car parking and safe access provision can have a major impact on the streetscape and landscape of rural areas. Refer to Part 1 for additional information about car parking and access requirements.

Objectives

a) To provide adequate and safe vehicle entry and exit points.

b) To ensure movement of vehicles on site is adequate.

c) To provide adequate vehicle access and on-site car parking facilities for residents and visitors.

d) To minimise the impact of driveways and parking areas on existing landscaping, landform and streetscape.

e) To ensure pavement or driveway materials are sympathetic to the streetscape and surrounding landscape character.

Controls

Access

1. The location of access driveways should consider the natural features, topography and existing vegetation of the site. Access driveways should follow the topography and landscaping onsite.
2. Access driveways should be located where they are easily visible on the street. Avoid placing driveways at bends or where the road creates visibility problems for access points.
3. Development on sites located on classified roads may be required to provide a deceleration lane to ensure that the flow of traffic is not impeded.

Design and location of car parking and loading

1. Loading bays or parking for trucks, should be located in an area that is not visible from the street.
2. Large car parking areas are not to be visible from the street. Car parking areas must be clearly indicated through signage on site.
3. Should the site require overflow parking for special events, an area shall be designated that can be used for temporary car parking.

Figure 10 Poor Driveway Design

Figure 11 Better Driveway Design

7. Amenity and Environmental Impact

Background

Amenity is a major consideration for residents in rural areas. Rural activities such as intensive plant and livestock agriculture and rural industries have the potential to have a major impact on the amenity and environment of a rural area.

Objectives

a) To minimise the Environmental impact of such issues as pollution, noise, traffic, odour and ensure that the local amenity is not affected.

b) To restrict the size & intensity of some uses, where they may have an adverse affect on surrounding properties.

c) To ensure that any future aircraft noise will be of minimal disturbance to development within the vicinity of the airport site.

Controls

Noise

Land uses that would create excessive noise will not be permitted. Land uses will be subject to the *Protection of the Environment Act 2008.*

Air

Land uses that would create excessive pollution and odour will not be permitted. Land uses will be subject to the *Protection of the Environment Act 2008.*

Water cycle

Stormwater and excess water associated with irrigation including nutrient enriched waters generated within the site are to be contained and treated on the site.

Hazardous materials

Storage and handling of fuels and chemicals (fertilisers, pesticides) is to be contained within areas that are impermeably floored and bunded.

8. Site Services

Background

There is a range of services that may need to be provided either on site or within the adjacent road reserve. Owners are required to provide some services and maintain some of the services on the site. Owners must also ensure that services provided on the site are protected from any potential damage.

Objectives

a) To ensure that the required services are provided.

b) To ensure that the services provided are easily protected or maintained.

Controls

Waste management

1. Non-residential properties shall provide their own waste management.
2. Non-residential developments should provide details of their waste management system.
3. The storage of the garbage receptacles shall be screened from public view and from adjoining properties.

Letterboxes and House Numbering

1. Letterboxes shall be located along the front boundary and be clearly visible and accessible from the street.
2. The street number of a site must be visible from the street and made of a reflective material to allow visitors and emergency vehicles to easily identify the site.

Frontage works and damage to Council assets

1. Where a footpath, road shoulder, new or enlarged access driveway or is required to be provided this shall be provided at no cost to Council.
2. Council must be notified of any works that may threaten Council assets. Council must give approval for any works involving Council infrastructure.

Electricity Sub Station

In some cases it may be necessary to provide an electricity substation at the front of the development adjacent to the street frontage. This will involve dedication of the area as a public road to allow access by the electricity provider. The front boundary treatment used elsewhere on the street frontage shall be used at the side and rear of the area.

Sewer

Applications for development of land where reticulated sewage is not planned to be provided shall be accompanied by an application under *S68 of the Local Government Act 1993* for an On Site Sewer System. Development consent will not be issued until this application can be issued by Council.

9. Additional Requirements

Background

Liverpool LEP 2008 permits a range of non-rural land uses within the rural zones. Such development may be considered acceptable in that they are compatible with a rural environment and do not place excessive demand on services and infrastructure.

The following controls are additional to the provisions contained within Section 1-8 of this DCP chapter.

9.1 Dwelling Houses and Dual Occupancy

Background

Most rural properties will have a dwelling house for the occupants of the site. In some cases there will be a second dwelling on the site but which cannot be separately subdivided. The proliferation of dwelling houses and associated out buildings has the potential to have a major impact on the rural landscape. As such careful consideration should be given to the design, scale and location of such development on rural lots.

As per the provisions of LLEP 2008, dual occupancies can be either attached or detached with the exception of land zoned RU2 – Rural Landscape, in which case dual occupancies may be attached only.

Objectives

a) To ensure that Dwelling Houses and Dual Occupancy are compatible with the rural environment.

b) To ensure that the scale and location of dwellings retain the potential for rural agricultural uses and extractive industry.

c) To ensure that dwellings are located and arranged to minimise the potential for land use conflicts.

d) Ensure that external finishes have a minimal detrimental impact on the visual amenity of the area

e) Encourage consideration of all components of Dwelling Houses and Dual Occupancy developments such as fencing, driveways and landscaping in the design process.

Controls

The following controls are in addition to those in Sections 1 – 8 of this DCP Chapter.

Building Appearance, Streetscape and Layout

1. Depending on the location and land use zoning of the property, the LLEP 2008 may stipulate a maximum floor area for dual occupancies.
2. An extension or alteration which creates attached dual occupancy housing is to ensure that design features complement the existing dwelling house.
3. An attached dual occupancy shall be compatible with the design features of the existing dwelling in terms of cladding, colour, building materials, windows, verandahs, roof form and pitch.
4. The front building line of the second dwelling is to be located behind the building line of the existing dwelling house. In the event two dwellings are constructed at the same

time, one dwelling shall be sited to present as the principal dwelling with the second dwelling to be subservient in scale.

5. The principal dwelling and second dwelling in rural dual occupancies shall be sited in close proximity in order to reflect the traditional rural landscape character of clustering buildings and to allow for larger expanses of undisturbed land that allows for the pursuit of rural activities. Dual occupancies proposed on land zoned RU2 – Rural Landscape must be attached to the principal dwelling.
6. Mirror reversed dual occupancies or replica dwelling designs are not supported.
7. Attached Dual Occupancy development shall be physically attached under the same roofline and have the general appearance of a large single dwelling house when viewed from the primary street frontage. Structures such as carports, skillion roofs, pergolas, covered awnings and the like are not acceptable as a mode of attachment,
8. In the case of Detached Dual Occupancy and Secondary Dwelling development, both dwellings shall possess compatible architectural treatments and building materials.
9. Dwellings must be located to minimise the removal of any existing vegetation.
10. Buildings should be visually unobtrusive in the rural landscape.
11. Buildings should complement the characteristics of the landform. Cut and Fill must be kept to a minimum.
12. The roofline of all buildings should reflect the land profile within the vicinity of the development.
13. The colours of roof and wall cladding shall be generally low reflective neutral/earth tones, compatible with existing development on the site.
14. On land zoned RU2 – Rural landscape dual occupancies are not permitted to be created with semi-detached dwellings that have resulted from the subdivision of an attached dual occupancy. Refer Figure 12 below.

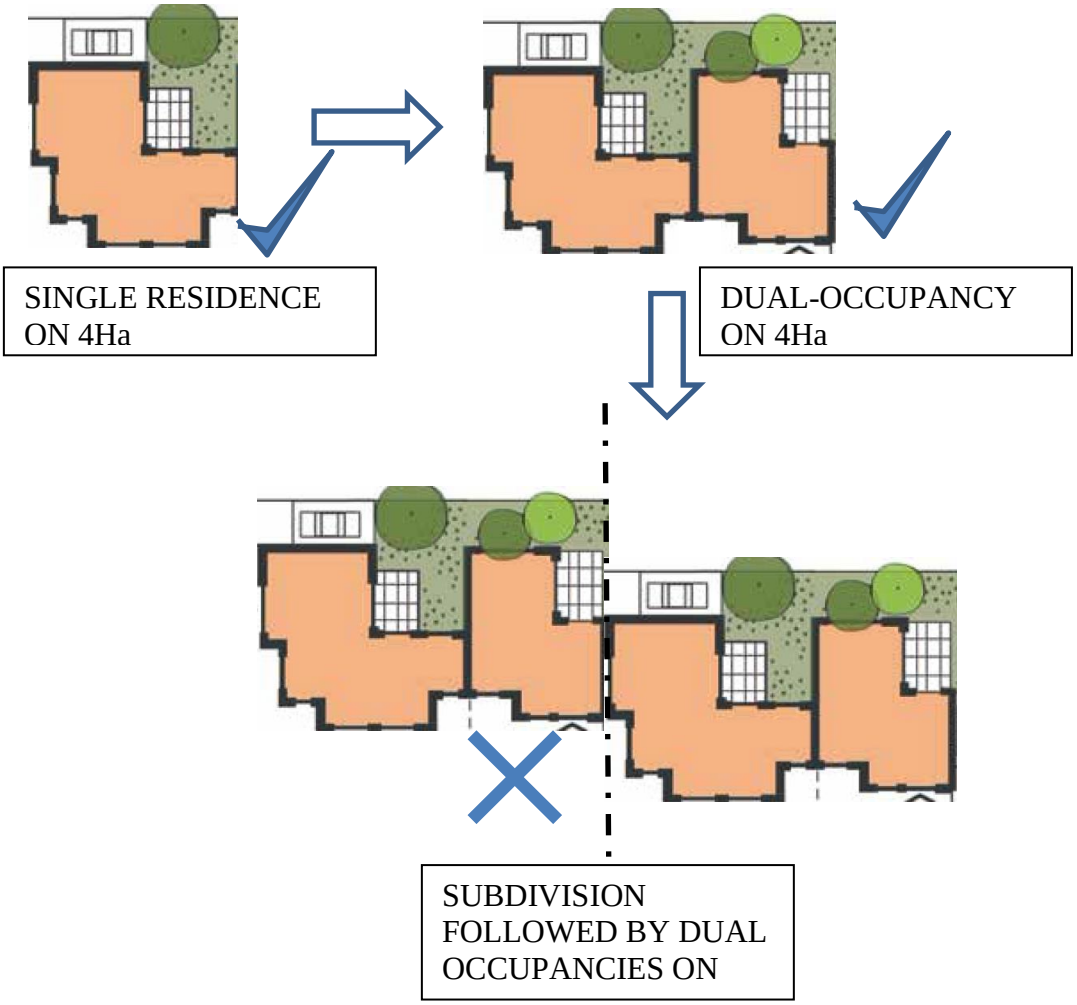


Figure 12: Dual-occupancies and subdivision

Car Parking and Access

Car parking areas, internal driveways and access driveways shall be constructed of all-weather material.

Rural Character

In areas of high quality natural settings such as elevated, sloping land with natural bushland, secondary dwellings should be visually unobtrusive. A visual impact assessment should be provided to support a proposed secondary dwelling. Council may require additional works to moderate the impact of the secondary dwelling to Council's satisfaction. Such works may include landscaping, mounding, or requiring relocation to a less obtrusive position.

Environment

1. Secondary dwellings must be located to minimise development on steeply sloping land to ensure that runoff from impervious surfaces is managed properly.
2. Secondary dwellings must be located to minimise any impacts on remnant Cumberland Plain Woodland and other environmentally sensitive land.

3. Secondary dwellings must be located to avoid bushfire hazard, consistent with Ministerial Direction 4.4 (Planning for Bushfire Protection).

Infrastructure

Applications for a dual occupancy must provide evidence of adequate provision of urban services and facilities to the satisfaction of NSW instrumentalities and Council. Particular care should be taken with the on-site treatment and disposal of effluent, which can have adverse environmental impacts, particularly on sloping sites, sites subject to flooding or smaller sites.

9.2 Health Consulting Rooms

Background

There is the need for Health consulting rooms in rural areas in the same way as there is in residential areas. While these are an intensification of the use of the site these can potentially carried out with minimal Environmental impact.

Objectives

a) To ensure that Health consulting rooms are compatible with the rural environment.

b) To minimise any adverse impact of Health consulting rooms on surrounding properties.

c) To ensure that the appearance of the building remains consistent with that of a Dwelling house.

Controls

The following controls are in addition to those in Sections 1 – 8.

Building Appearance, Streetscape and Layout

Health Consulting Rooms shall be located within the dwelling house on site.

Car Parking and Access

1. Car parking areas, internal driveways and access driveways shall be constructed of hard standing, all weather material. Car parking areas, internal driveways and access driveways must be clearly delineated.
2. Car parking areas should be located at the side or rear of the premises.

Amenity and Environmental Impact

Council may restrict the hours of operation to between 8.00 am and 6.00 pm, Monday to Friday, and 8.30 am to 12 noon on Saturday with no work to be conducted on Sundays or public holidays.

9.3 Home Businesses

Background

There is a demand for people to be able to work from home in rural areas in addition to operation of an agricultural business. Such businesses have the potential to have significant impact on rural areas.

Objectives

a) To ensure that Home Businesses are compatible with the rural environment.

b) To minimise any adverse impact of Home Businesses on surrounding properties.

Controls

The following controls are in addition to those in Sections 1 – 8.

Building Appearance, Streetscape and Layout

Where the Home Business is carried out in an outbuilding that building shall comply with the other requirements of the DCP. Council may limit the size of the building to ensure that the business does not become excessive and begin to have an adverse impact on the rural environment.

Car Parking and Access

1. Car parking, internal driveways and access driveways shall be constructed of hard standing, all weather material.
2. Car parking should be located at the side or rear of the premises.

Amenity and Environmental Impact

1. Council may restrict the hours of operation to between 8.30 am and 5.30 pm, Monday to Friday and 8.30 am to 12 noon on Saturday with no work to be conducted on Sundays or public holidays.
2. Council may require the preparation of a Noise Impact Statement prepared by a suitably qualified Acoustics Consultant in circumstances where the proposed Home Business is likely to generate significant noise levels.
3. Home businesses, which generate odours, will only be approved if those odours can be controlled on the site.
4. Council reserves the right to issue a 12 month consent on Home Business proposals, where it is considered that some doubts may exist about the extent of the impacts of the use on the adjoining residential area. In proceeding with the commencement of the use, the applicant is advised that Council is under no obligation to extend the development approval in circumstances where it is demonstrated that the use in operation has a detrimental impact on adjoining residential properties and the residential neighbourhood.
5. Home Businesses involving food preparation shall provide details of suitable odour-controlling installations such as filtered exhausts (including full manufacturer's details and specifications) prior to approval being considered.

9.4 Intensive livestock agriculture

Background

Intensive livestock agriculture is permitted in some rural areas. Such a use involves concentrated resources in the production of livestock. There are potential impacts on the rural environment involving odour, noise, and effluent impacts. It also involves intensive input of resources such as water and feed.

Objectives

a) To ensure that Intensive livestock agriculture is compatible with the rural environment.

b) To minimise any adverse impact of Intensive livestock agriculture on surrounding properties.

c) To minimise the Environmental impact of Intensive livestock agriculture on surrounding areas and the creek system.

Controls

The following controls are in addition to those in Sections 1 – 8.

Subdivision, Frontage and Allotment Size

Minimum Allotment Size: 8ha

Site planning

The selection of a site for Intensive livestock agriculture shall address adjoining uses, vistas, access and drainage.

Density and Setbacks

Site Coverage

Maximum Site Coverage: 10%.

Setbacks

Sheds for the housing of farmed animals or birds and solid and liquid waste storage/handling areas shall be setback in accordance with Table 2. (Also refer to Figure 12).

Table 2 Setbacks for Intensive Livestock Agriculture

Setback	New Farms	Existing Farms
Front and rear boundary	100m	50m
Side boundary	50m	10m
Dams, watercourses, wells and dry gullies	100m	50m
Dwellings on adjoining property in a Rural zone, R5 zone or other sensitive population	200m	150m
Other Intensive livestock agriculture premises	500m	500m
Dwellings on same property	50m	50m
Sheds for the housing of farmed birds	15m	15m
Existing vegetation	20m	15m
Residential zones	500m	500m

Note: These distances are a minimum and each application will be assessed on its merits. Council has the discretion to increase the minimum distances dependent upon the topography, prevailing wind direction, vegetation and other Environmental characteristics of the site.

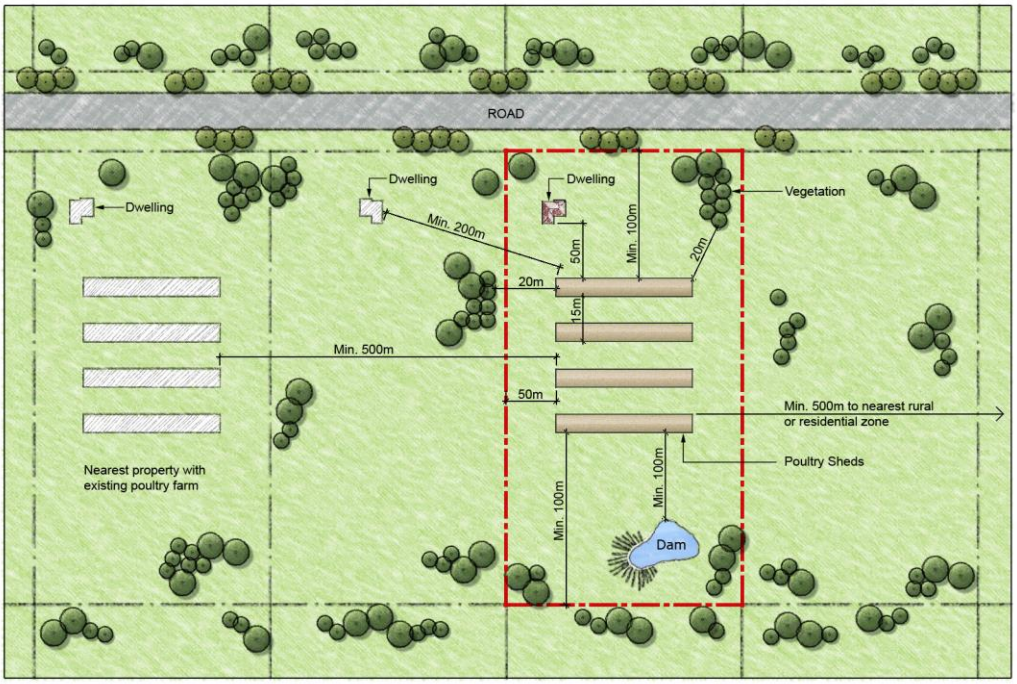


Figure 13 Recommended Distances for Poultry Farming Developments

Landscaping and Fencing

All structures are to have screen landscaping in order to minimise visual impact. A landscaping buffer should be established around the poultry sheds. Screen planting is to be located at least 12m from poultry sheds to allow for adequate air movement.

Car parking and Access

1. Details should be submitted to Council outlining the timing and manner of transport activities associated with the poultry farm. Details submitted should include the frequency, times, routes and number of bird deliveries and pick-ups, feed deliveries and clean-outs and gas deliveries.
2. Depending on the amount of traffic generated by the use, paving of car parking, internal driveways and access driveways may be required. If not an all weather surface may be required to be provided for car parking, internal driveways and access driveways. Car parking areas, internal driveways and access driveways must be clearly delineated.

Amenity and Environmental Impact

Farm Management Plan

A Farm Management Plan (FMP) is to be submitted with the DA. A suitably qualified person or rural consultant should prepare this document. This document should provide details of how the proposed development will address the following issues.

Waste Management

The FMP shall specify the method by which wastes including dead birds are to be disposed. The incineration of dead birds is prohibited, unless within an authorised incinerator and in accordance with EPA guidelines. On-site disposal of manure and composting is not acceptable. The preferred method of disposal is by waste contractors. The proposed method of wastewater collection and treatment including that water used in hose down areas is to be detailed.

Control of Pests and Vermin

The FMP shall demonstrate that adequate vermin control will be carried out with a regular fly and pest control program. The control program shall comply with the requirements of the *NSW Agriculture and Fisheries* and shall be maintained to the satisfaction of Council.

Dust Control

All areas of vehicular access are to be stabilised and treated in a manner to minimise dust nuisance caused by traffic generation. To eliminate dust as a nuisance, grass cover should be maintained and grown wherever practical and possible. The FMP shall also outline how dust from poultry sheds and ventilation sheds will be minimised and managed.

Pesticides

The FMP shall incorporate a schedule of all pesticides and other toxic chemicals likely to be stored and used upon the site. The FMP shall stipulate the purpose for which such chemicals are to be used and the manner of application. All use of chemicals will be in compliance with the *Pesticides Act 1999* and *Protection of the Environment Act 2008* and *Workcover*.

Odour Control

1. The FMP shall demonstrate adequate odour control from poultry sheds, waste storage and handling areas. Odour impacts can be dispersed by the addition of appropriate landscaping including upper and lower storey vegetation, and application of setbacks.

2. Fans on tunnel-ventilated sheds should be directed up rather than down. Odour mitigation efforts need to address the shed ventilation systems, population size, climatic conditions and topography of the site. The location of potential sensitive population should also be considered when siting elements of the development.

Noise Control

The FMP shall include strategies to minimise noise nuisance produced on site. The FMP shall include feed and gas deliveries and bird pick up events. The FMP shall provide information of separation distances, equipment selection and use, mitigation measures and hours of operation. Climatic conditions and topography should be considered with regard to noise transmission. (Refer to the *EPA Industrial Noise Policy* and the *EPA Road Traffic Noise Policy*).

Water Cycle

1. The FMP shall include advice from *Sydney Water* that the supply of water to the property is adequate. Where mains water supply is not available to the site, the FMP shall demonstrate that any alternative water supply is of adequate quality for the intended purpose.
2. Council consent is required to construct or form a dam. The FMP shall demonstrate that surface, ground and collective water bodies will not be polluted by any impacts of the development. Information should be provided as to the drainage and disposal of stormwater, the location of creeks and surface run off patterns, the proposed irrigation system and measures to clean and treat dirty water on site. Pollution mitigation efforts can include separation, hydrological isolation, water treatment or otherwise.

Site Services

The storage of the garbage receptacles shall be screened from public view and from adjoining properties.

9.5 Intensive plant agriculture

Background

Intensive plant agriculture is permitted in some rural areas. Such a use involves concentrated resources in the production of vegetables, flowers and other plants. There are potential impacts on the rural environment involving odour, noise, and effluent impacts. It also involves intensive input of resources such as water and fertiliser.

Objectives

a) To ensure that Intensive plant agriculture is compatible with the rural environment.

b) To minimise any adverse impact of Intensive plant agriculture on surrounding properties.

c) To minimise the Environmental impact of Intensive plant agriculture on surrounding areas and the creek system.

Controls

The following controls are in addition to those in Sections 1 – 8.

Subdivision, Frontage and Allotment Size

Minimum Allotment Size: 2ha.

Density and Setbacks

Site Coverage

Maximum Site Coverage: 20%, including any igloo structures.

Setbacks

1. Sheds for the Intensive plant agriculture shall setback in accordance with Table 3.

Table 3 Setbacks for Intensive Plant Agriculture

Setback	Distance
Front boundary	20m
Side and rear boundary	10 m
Dwellings on adjoining property in a Rural zone, R5 zone or other sensitive population	100 m
Dwelling on property	20 m
Existing vegetation including any vegetation on neighbouring land	20 m
Residential zone	300 m
Dams, watercourses, wells and dry gullies	40 m
Other similar farms	150 m

(Refer to Figure 12)

2. All greenhouses/igloos/market gardening farms shall be setback behind any dwellings and landscape screens on the site.
3. These distances are a minimum and each application will be assessed on its merits. Council has the discretion to increase the minimum distances dependent upon the topography prevailing wind directions, vegetation and other Environmental characteristics of the site.

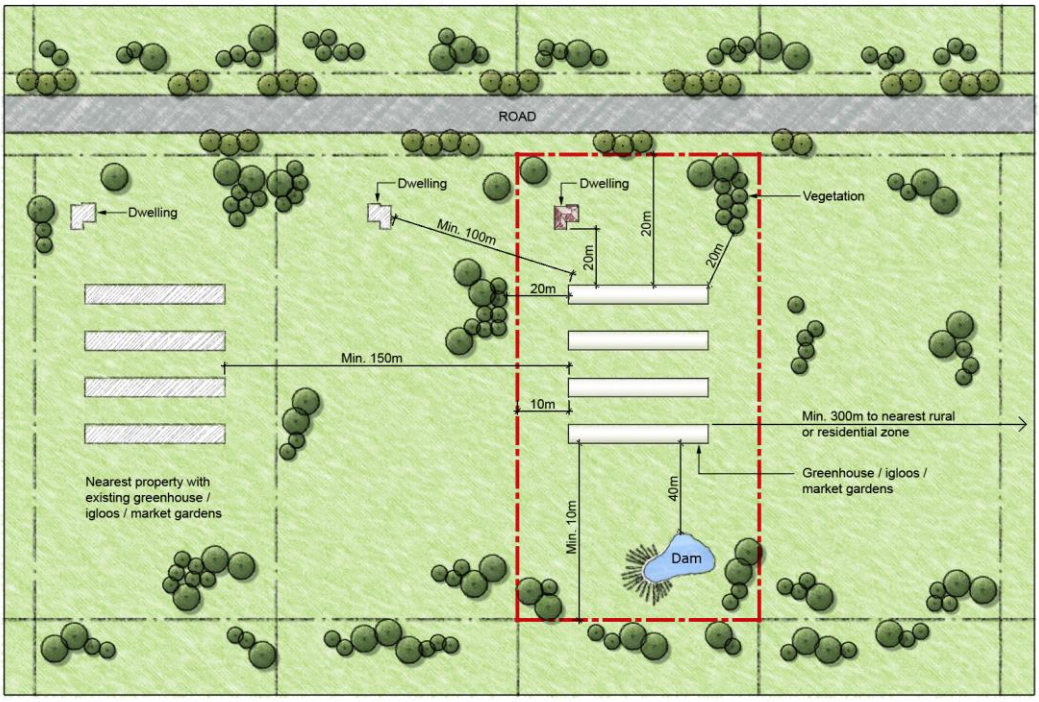


Figure 14 Recommended Distances for Greenhouses/Igloos/Market Gardening

Building Design, Style and Streetscape

Appearance

Only new and durable materials shall be used in the construction of such greenhouses/igloos/market gardens and such structures shall be maintained in a sound and tidy condition free from all defective or damaged material including plastic/fabric covering at all times.

Height

Maximum Height of Greenhouses/Igloos: 4m

Landscaping and Fencing

1. A suitable landscape screening or buffer shall be established between any boundary and greenhouses/igloos/market gardens to effectively mitigate the visual impact of the development.
2. Screen trees need to limit shading of growing areas, provide porous filter and capture dust and provide a windbreak.
3. The landscaped screening or buffers shall be established through planting trees or shrubs (minimum 1.5m in height). This will occur prior to the erection of any structures and shall at all times be adequately maintained to enhance its growth. Landscaped and grassed areas should be maintained in a neat manner.
4. Existing native vegetation should be protected or enhanced where possible to maintain the visual amenity and protect the ecological integrity of the rural area.

Car Parking and Access

1. All areas of vehicular access are to be stabilised and treated in a manner to minimise dust nuisance caused by traffic generation. To eliminate dust as a nuisance, grass cover should be maintained and grown wherever practical and possible.
2. Details should be submitted to Council outlining the timing and manner of transport activities associated with the market garden. Details submitted should include the frequency, times, routes and number of deliveries and pick-ups.
3. Depending on the amount of traffic generated by the use, paving of car parking, internal driveways and access driveways may be required. If not an all weather surface may be required to be provided for car parking, internal driveways and access driveways. Car parking areas, internal driveways and access driveways must be clearly delineated.

Amenity and Environmental Impact

1. Any chemicals or pesticides applied shall be used in strict accordance with the requirements of relevant legislation (e.g. *Pesticides Act 1999, Protection of the Environment Operations Act 2008 and Workcover*).
2. Mechanical equipment, such as heaters, air conditioners, frost fans etc. shall not be used or operated to create an artificial environment unless the requirements of the *Protection of the Environment Act 2008* have been satisfied. In this regard Council shall be consulted prior to the installation or use of any such equipment.

Water cycle

1. The FMP shall include advice from *Sydney Water* that the supply of water to the property is adequate. Where mains water supply is not available to the site, the FMP shall demonstrate that any alternative water supply is of adequate quality for the intended purpose.
2. Council consent is required to construct or form a dam. The FMP shall demonstrate that surface, ground and collective water bodies will not be polluted by any impacts of the development. Information should be provided as to the drainage and disposal of stormwater, the location of creeks and surface run off patterns, the proposed irrigation system and measures to clean and treat dirty water on site. Pollution mitigation efforts can include separation, hydrological isolation, water treatment or otherwise.
3. A minimum of 800sqm should be left void to alleviate the effects of the property's septic system.

9.6 Rural Industries

Background

Rural industries are permitted in some rural areas. They may involve the processing of rural produce or providing a service to rural properties in the local area. They have a potential to impact on the rural environment.

Objectives

a) To ensure that Rural Industries are compatible with the rural environment.

b) To minimise any adverse impact of Rural Industries on surrounding properties.

Controls

The following controls are in addition to those in Sections 1 – 8.

Site Planning

The selection of a site for a Rural Industry shall address adjoining uses, vistas, access and drainage.

Density and Setbacks

Buildings and Outside Storage Areas are to be sited at least 20m from a public street and from any boundary where there is a dwelling on an adjoining property.

Building Appearance, Streetscape and Layout

Rural Industries should maintain the rural streetscape. Designs should complement the surrounding buildings in relation to materials used, colours and building form.

Landscaping and Fencing

1. Planting/landscaping is to be used to screen buildings from the roadway and from neighbouring dwellings.
2. Outdoor storage yards are to be located behind buildings or screen walls so they are not visible from a public place or neighbouring property. Screen walls are to be compatible with respect to design, materials used and colours of buildings on site. Earth mounding and landscaping can also be used.
3. Chained wire fences for security purposes are to be located behind the landscaped setback area.

Car Parking and Access

1. Details should be submitted to Council outlining the timing and manner of transport activities associated with the poultry farm. Details submitted should include the frequency, times, routes and number of bird deliveries and pick-ups, feed deliveries and clean-outs and gas deliveries.
2. Depending on the amount of traffic generated by the use, paving of car parking, internal driveways and access driveways may be required. If not an all weather surface may be required to be provided for car parking, internal driveways and access driveways. Car parking areas, internal driveways and access driveways must be clearly delineated.

Amenity and Environmental Impact

1. Rural Industries that are likely to cause adverse Environmental impact and which do not satisfy the requirements of *Protection of the Environment Operations Act 2008* will not be permitted.
2. Council may limit the hours of operation of a Rural Industry where there is the likelihood of adverse impact on the amenity of the local area.

9.7 Roadside stalls

Background

Roadside stalls provide fresh produce to passing travellers and the local community. There is potential significant impact on the rural streetscape and landscape and also impact on traffic movement and safety.

Objectives

a) To ensure that roadside stalls are compatible with the rural environment.

b) To minimise any adverse impacts of roadside stalls on surrounding properties.

c) To minimise any adverse impact of roadside stalls on road safety and traffic movement.

Controls

The following controls are in addition to those in Sections 1 – 8.

Subdivision, Frontage and Allotment Size

Minimum Frontage: 20m.

Site Planning

Roadside stalls must be located immediately behind the front boundary of the site.

Density and Setbacks

Maximum Floor Space: 20sqm.

Building Appearance, Streetscape and Layout

1. Maximum height of structure: 3m.
2. No trees shall be removed for the erection of a stall.
3. The location of the stall must consider the streetscape and natural features of the site.

Landscaping and Fencing

Landscaping shall be provided around the Road Side Stall.

Car Parking and Access

1. Sites with poor visibility for vehicles will not be permitted. Roadside stalls will not be permitted at bends or where it is unsafe for vehicles to pull over.
2. Car parking areas, internal driveways and access driveways must be made of a hard standing, all weather material. Car parking areas, internal driveways and access driveways must be clearly delineated.

Amenity and Environmental Impact

1. Roadside stalls shall not operate facilities that produce any excessive noise or pollution.
2. Any waste that is produced must be disposed of daily. Details must be provided of waste storage on site.

9.8 Communication Facilities

Background

There is a need to permit Communication Facilities to allow sufficient coverage for uses of mobile telephones. This need is balanced by the need to consider the Environmental impact of these on rural areas. The Australian Communications Authority also manages Telecommunications Facilities.

Objectives

a) To ensure that Communication Facilities are compatible with the rural environment.

b) To minimise any adverse impact of Communication Facilities on surrounding properties.

c) To minimise the number of Communication Facilities by encouraging the co-location and sharing of facilities.

d) To minimise any health risks associated with the emission of electro-magnetic radiation.

e) To ensure that Telecommunications Facilities are not within close proximity to dwellings or sensitive populations in order to minimise the potential of electro-magnetic radiation exposure.

Controls

The following controls are in addition to those in Sections 1 – 8.

Site Planning

1. The selection of a site shall involve a site analysis of the existing landscape.

2. Existing and future potential for co-location of Telecommunications Facilities needs to be considered.
3. The erection of any new Telecommunications Facility must be proven to be required only where no available alternative for co-location is possible.
4. The construction of any Telecommunications Facility must have the demonstrated potential for co-location of additional facilities and must be addressed as part of any proposal.

Site Location

1. Telecommunications Facilities and associated ground facilities will not permitted on land that is *Environmentally Significant*" as identified in *Liverpool LEP 2008*.
2. Telecommunications Facilities and associated ground facilities will not permitted on land below the PMF level.

Density and Setbacks

A Telecommunications Facility shall be set back 300m from any dwelling or sensitive population unless the annual average exposure limit does not exceed 0.2uW/cm2.

Building Appearance, Streetscape and Layout

1. The shape, height and colour of the Telecommunications Facility shall be addressed in order to ensure that visual amenity is maintained.
2. A Telecommunications Facility is not to be located where it will detract the heritage significance or settings of a heritage item or potential archaeological site.
3. Wherever possible, Telecommunications Facilities should be of a "slimline monopole" construction.
4. Advertising signs of any type, including logos are not permitted on the Telecommunications Facility.
5. Night illumination is not permitted; except where a proposed Telecommunications Facility infringes the *Obstacle Limitation Surface* (OLS) for aircraft safety.

Landscaping and Fencing

1. A Telecommunications Facility shall be located where the vegetation, landform or features of an open space location will adequately screen or reduce the impact of the Telecommunications Facility from public areas.
2. A Telecommunications Facility must be located a sufficient distance from any existing trees to allow access.
3. Landscaping is required where any existing vegetation will not adequately screen a Telecommunications Facility.
4. Where landscaping is required, trees must be located a sufficient distance from the Telecommunications Facility to allow access.
5. All sites for Telecommunications Facilities and associated ground facilities must be enclosed by a minimum of 1.8m open mesh or similar fencing to prevent public access to the site in order to maintain public safety.

Amenity and Environmental Impact

1. All sites must have warning and information signs displayed to minimise public risk.
2. The level of electro-magnetic radiation emitted from any Telecommunications Facility must not exceed the limit of 0.2uW/cm2.
3. Any Telecommunications Facility, which is no longer needed, or no longer in operation shall be removed by the carrier at its own cost and restore the land to its natural state, within a three (3) month period. The carrier must also notify Council by letter prior to the removal of any Telecommunications Facility.
4. All sites for Telecommunications Facilities and associated ground facilities must be enclosed by a minimum of 1.8m open mesh or similar fencing to prevent public access to the site in order to maintain public safety.
5. If at any one time a Telecommunications Facility is no longer needed, or no longer in operation, the carrier will, except otherwise agreed with Council, at its own cost remove the structure and facilities and restore the land to its natural state, within a three (3) month period. The carrier must also notify Council by letter prior to the removal of any Telecommunications Facility.
6. Once development has been completed on the site, the carrier must then restore the site to its previous state. Under the *Telecommunications Code of Practice 2008*, this work must commence within 10 working days after completion of the development.

9.9 Places of Public Worship

Background

Some places of public worship seek to operate in rural areas. There is a trend for places of public worship to locate in rural areas, sometimes in conjunction with an Education Establishment. These are an intensive use of land with the potential for significant impacts on the streetscape and rural environment.

Objectives

a) To ensure that Places of Public Worship are compatible with the rural environment.

b) To minimise any adverse impact of Places of Public Worship on surrounding properties.

c) To minimise any adverse impact of Places of Public Worship on road safety and traffic movement.

Controls

The following controls are in addition to those in Sections 1 – 8.

Subdivision, Frontage and Allotment Size

Minimum site area: 1 ha.

Site Planning

Site Location

1. Places of Public Worship should be located:
   - On streets with widths that permit adequate safe manoeuvrability of vehicles & lines of sight for pedestrians, cyclists and vehicles.
   - Where traffic control devices do not impede vehicular access to site.

2. Places of Public Worship shall not be permitted adjacent to activities, which generate significant noise or air pollution.

Site Planning

The site layout should ensure that the front entrance to the Place of Public Worship is easily located and accessible.

Building Appearance, Streetscape and Layout

1. Maximum height: 8.5m and buildings must be consistent with the surrounding amenity.
2. Spires, towers and similar structures shall have a maximum height of 15m and may be considered on the basis of their bulk and scale, the extent of their overshadowing, and their contribution to the streetscape.
3. Buildings that are for the purpose of ancillary uses to a place of public worship must be single storey and comply with all relevant built form controls within this section.

Car Parking and Access

Overflow car parking may be required to be provided. This may be provided as a grassed area.

Amenity and Environmental Impact

1. Details must be provided of the intended times for services and other ancillary uses. Council will stipulate what times these events are permitted to be held.
2. An ancillary use includes schools, halls, residence, libraries or other uses directly associated with the Place of Public Worship.

Landscaping

1. A landscaped buffer zone of at least 10 metres wide must be provided to the side and rear boundaries of the site. The buffer zone shall not be used for parking areas or the like.

9.10 Landfill

Background

Landfill is sought when the topography of land does not suit the proposed economic use of land. This has potential to have a significant impact on the streetscape and rural landscapes as well as the water cycle particularly where Landfill involves flood prone land.

Objectives

a) To ensure that Landfill is compatible with the rural environment.

b) To minimise any adverse impact of Landfill on surrounding properties.

c) To minimise the environmental impact of Landfill on surrounding areas and the creek system.

Controls

The following controls are in addition to those in Sections 1 – 8.

Site Planning

1. Site planning should be sensitive to site attributes, such as streetscape character, natural landform, existing vegetation, views and land capability.
2. The site layout should enhance the streetscape through the use of landscaping.

Density and Setbacks

Minimum setback for Landfill from the street frontage, side and rear boundaries: 20m.

Building Appearance, Streetscape and Layout

Minor filling of land to fill a natural depression

1. Land shall not be filled higher than the land at the edge of the depression.
2. Minor filling to make the land reasonably level with the balance of the site shall be turfed to ensure that no soil erosion takes place.

Major Landfill to a former extractive industry or similar

1. Land shall not generally be filled higher than the level of land at the edge of the Landfill.
2. Upon completion major land filling shall be turfed and landscaped to ensure that no soil erosion takes place and to re-instate the rural environment.
3. Landfills are not permitted to operate on sites where there are significant vistas or areas of natural significance.

Landscaping and Fencing

The setback from the street frontage, side and rear boundaries shall be intensely landscaped prior to commencement of Land filling to screen the landfill and to help reduce the dispersal of dust.

Amenity and Environmental Impact

Construction

1. Material imported to the site should be:
   - Non-putrescible.
   - Free of slag, hazardous, contaminated, toxic or radioactive material.
   - Free of industrial, medical or building waste.
2. Imported material should not originate from a contaminated site unless:
   - That material has been scientifically tested and the materials approved for disposal as clean fill, or
   - The site from which the material originates has been demonstrated by suitable investigation to be free of contamination to the satisfaction of Council.
3. Landfill activity which involves excavation or the disturbance of the natural surface should not commence on land which has been identified as contaminated or which has been used at any time for activities listed in Appendix A of the Policy for the Identification, Evaluation and Remediation of Contaminated Land unless:
   - The site has been demonstrated by suitable investigation to be free of contamination to the satisfaction of Council, or
   - The proposed activity will not disturb any identified contamination so as to cause an adverse impact on the environment.
4. All soil testing should comply with the Environment Protection Authority (EPA) Guidelines and *ANZECC* and *NHMRC Guidelines for the Assessment and Management of Contaminated Sites.*

5. Records of the source of imported material (including the address and owner of the source site); the nature, quantity and date of all incoming loads; the name of the carrier and the vehicle registration number should be maintained by the applicant/operator and supplied to Council on a monthly basis together with results of chemical testing of that material.

6. Where the landfill activity and/or dam construction involves the excavation and removal of material from the site, the excavated material is to be tested for contamination prior to commencement of that excavation and proven to be free of contamination. All material leaving the site is to be disposed of to the satisfaction of the *Department of Environment and Climate Change* and Council. Records of the quantity and nature of the material excavated and removed from the site should be maintained by the applicant/operator. Records of the carrier, vehicle registration number, and destination of the material should also be maintained. Proof of the means of disposal of the excavated material should be supplied to Council on a monthly basis.

Water cycle

Stormwater runoff and/or flood characteristics should not be altered to the detriment of others by:

- The deflection and/or concentration of stormwater runoff.
- Restricting the width of overland flow paths and/or waterway areas, or
- Increasing the velocity of flow of natural drainage.

9.11 Dams

Background

Dams have in the past been constructed to harness rainwater for agricultural uses particularly in those areas where there is not reticulated water supply. Dams can contribute to the rural landscape but also have the potential to have significant Environmental impact.

Objectives

a) To ensure that Dams are compatible with the rural environment.

b) To minimise any adverse impact of Dams on surrounding properties.

c) To minimise the Environmental impact of Dams on surrounding areas and the creek system.

d) To ensure all dams are adequately and safely constructed.

Controls

The following controls are in addition to those in Sections 1 – 8.

Density and Setbacks

To avoid damages associated with potential overflow or seepage, dams are not to be sited within 50m of utility installations, streets or dwellings.

Building Appearance, Streetscape and Layout

1. Maximum height of the dam wall above top water level: 300mm.
2. Maximum batter ratio for dam walls is 3:1.

Landscaping and Fencing

The area around the Dam shall be landscaped to reduce evaporation and make the dam more attractive.

Amenity and Environmental Impact

1. The material to be used in the construction of the Dam shall not contain contaminated material.
2. The Dam shall be constructed to be structurally sound so that it would not fail in a PMF event.

Water cycle

3. Dams are to be designed and constructed to ensure that they do not result in the flooding of neighbouring properties by:
   - The deflection and/or concentration of stormwater runoff.
   - Restricting the width of overland flow paths and/or waterway areas.
   - Increasing the velocity of flow of natural drainage.
4. Dams are to be designed and constructed to control storm event spillway flow such that:
   - Flow is not concentrated onto neighbouring properties.
   - Runoff is dispersed as closely as possible to the original overland flow regime.
5. Dam construction is not to affect natural water flows on adjoining and downstream properties and is to be constructed off-line of the natural water flows.
6. Dam construction is not to adversely affect adjoining and downstream properties in flooding.

9.12 Extractive Industries

Background

Extractive industries are located where ever the mineral deposit is. The mineral deposit can have a significant economic benefit for the wider community. For this reason the State Government has protected such deposits so that other developments are not located too close to these and thereby avoiding land use conflicts. Such sites once mined provide opportunities for a landfill and rehabilitation. This also requires management due to the potential land use conflicts.

Objectives

a) To ensure that Extractive industries are compatible with the rural environment.

b) To minimise any adverse impact of Extractive industries on surrounding properties.

c) To minimise any adverse impact of Extractive industries on road safety and traffic movement.

d) To ensure that the site can be eventually rehabilitated satisfactorily.

Controls

The following controls are in addition to those in Sections 1 – 8.

Density and Setbacks

Extractive Industries shall observe the following setbacks:

1. 40m from any potential habitats for threatened species.
2. 200m from any critical habitats for endangered species.
3. Extraction should not occur within 200m of a dwelling.

Extractive Site:

The extractive site should have all landscaping and fencing measures implemented to minimise visual pollution within the rural landscape.

Streetscape:

The extractive industry site shall present a rural appearance to the streetscape through the use of endemic vegetation plantings to screen the site.

Landscaping and Fencing

Earth mounding and screen planting is to be provided around the perimeter of land proposed for extractive industry developments, landfill operations and rural industries. Proposed species are to be of suitable height and spread to screen the development from neighbouring land uses and the roadside and to be used as a means of dust control. Where an acoustic barrier is necessary, earth mounding is to be of an appropriate height.

Car Parking and Access

Extractive industries shall provide car parking at the rate of one car space per worker on site. This car parking shall meet the requirements of Part 1.

Amenity and Environmental Impact

1. Any machinery or associated equipment should be stored in a structure, when not being used.
2. Proponents must prepare a Dust Suppression Plan which identifies the range of measures to be used to minimise dust generation.
3. Stockpiles of materials should be stabilised and maintained to reduce any potential for dust nuisance.

Noise

Proponents must submit a Noise Impact Assessment Report which is to be prepared by a suitably qualified person and shall address a range of potential noise emission matters including (but not limited to) the following:

- The existing acoustic environment including a statistical breakdown of the meteorological conditions (prevailing winds, temperature, humidity and inversion details) and any topographical features of the subject site and surrounding locality which may influence potential noise, blasting and/or vibration impacts;
- Proposed hours of operation of the extractive industry operation including proposed hours of operation of trucks entering and exiting the site;
- Likely noise levels of any fixed and mobile extractive industry equipment which generates noise, including haulage trucks.
- Existing ambient noise levels at all residential dwellings within 1km or other sensitive land uses not associated with the extractive industry operation;

- Likely noise levels at all dwellings or other sensitive land uses within 1km not associated with the extractive industry operation; and
- Proposed mitigation measures and management practices.

Rehabilitation

1. Any DA must also submit a rehabilitation plan.
2. A site plan showing the proposed post-extraction final land use is required. This site plan shall include the following requirements:
   - The nature, location and duration of post-extraction land uses;
   - Expected final land form, including drainage lines; and
   - Proposed areas designated for the final proposed land use and other areas reserved for vegetation.
   - The Development Application should also address the program for the removal of all buildings and structures from the site.

Hours of operation

The Extractive Industries shall only be is permitted to operate between the hours of 7.00 am to 5.00 pm Monday to Friday and 7.00 am to 12.00 noon on Saturdays.

9.13 Cemeteries, Crematoriums and Funeral chapels

Background

Cemeteries, Crematoriums and Funeral chapels are sensitive land uses which can potentially have an impact on the amenity of the surrounding area. In particular, there may be visual and traffic impacts.

Objectives

a) To ensure that the operation of cemeteries, crematoria and funeral chapels does not have an adverse impact on adjoining land uses and the surrounding area.

b) To restrict these uses to appropriate locations.

c) To ensure uses locate on appropriate sites.

d) To ensure that uses locate on roads with the capacity to accommodate probable traffic generation. and

e) To provide for appropriate development controls relating to the ongoing operation of such uses.

Controls

The following controls are in addition to those in Sections 1 – 8 of this Part.

Site Suitability

1. Cemeteries and crematoria must locate on a site with a minimum of 15ha available for burial plots and memorial walls. Landscaped areas, setbacks, parking, driveways and turning areas, internal congregation areas, places of public worship, and areas where

ground water is within 3m of the surface will not be counted toward the minimum 15ha site area.

Note: This Minimum Lot Size requirement is to ensure financial and operational sustainability of the cemetery and to limit the proliferation of cemeteries and crematoriums on rural land.

2. Cemeteries, Crematoriums and Funeral chapels shall not locate on a road which has a seal width of less than 6m.
3. Burial plots must not be located in areas where the water table is within 3m of the ground surface. If the water table is between 3m and 5m of the ground surface, deep rooted planting will be required in affected areas.
4. Cemeteries should not be located on flood prone land.

Setbacks

1. Buildings and burial plots are to be sited at least 20m from a public street and at least 15m from any side or rear boundary.

Landscaping and Fencing

1. A berm is to be provided around the property and must be 1m high and 3m wide. Landscaping is to be provided over the top of the berm.
2. A landscaped buffer zone at least 10 metres wide must be provided to the side and rear boundaries of the site. The buffer zone shall not be used for parking areas or the like.
3. Any proposed cemetery must have an adequate water supply to ensure the ongoing maintenance of landscaping and to assist in the operation of the site.

Car Parking and Access

1. A traffic study is to be included with any development application for a cemetery, crematoria or funeral chapel. This study should determine whether or not a turning lane or slip lane is required to enter the site.

Operation

1. A Plan of Management must be submitted with a Development Application and must include details of the operation of the use.
2. In the case of perpetual burials, the Plan of Management needs to outline how the perpetual care would occur.

9.14 Secondary Dwellings (Granny Flats)

Objectives

a) To provide housing choice within a rural lot for the use of a separate dwelling within the existing title;

b) To minimise any potential impact on the surrounding area;

c) To minimise any potential impact on the future use of the surrounding area.

Controls

The following controls are in addition to those in Sections 1 – 8.

Site Suitability

1. Only one (1) Secondary Dwelling is permitted on any one lot of land.
2. Secondary Dwellings must be single storey.
3. A Secondary Dwelling shall not be approved where there is an existing dual occupancy on the same lot of land.
4. A Secondary Dwelling or Dual Occupancy shall not be permitted where it provides for more than two dwellings on a rural lot regardless of lot size.
5. A detached secondary dwelling is not permitted on land zoned RU2 – Rural Landscape.

Liverpool city council
creating our future together

Council Administration Centre Level 2, 33 Moore Street, Liverpool NSW 2170

Postal Address Locked Bag 7064, Liverpool BC NSW 1871

Customer Contact Centre 1300 36 2170

Fax 02 9821 9333

NRS (National Relay Service) 133 677

Email lcc@liverpool.nsw.gov.au

Website www.liverpool.nsw.gov.au

Liverpool City Council
creating our future together

Liverpool Development Control Plan 2008

Part 6

Development ~~in Business Areas~~ on land zoned E1, E2, E3 or MU1

~~25 July 2014~~
May 2024

Part 6 must be read in conjunction with Part 1

Check if any Locality Parts also apply

Liverpool Development Control Plan 2008
Part 6 Development in ~~in Business Areas on land zoned E1, E2, E3 or MU1~~

Table of Contents

1. Preliminary 6
2. Subdivision, Frontage and Allotment Size 8
3. Site Planning 9
4. Setbacks 11
5. Landscaped Areas and Pedestrian Areas 13
6. Building Form, Streetscape and Layout 15
7. Landscaping and Fencing 24
8. Car Parking and Access 29
9. Amenity and Environmental Impact 31
10. Site Services 32
11. Non Business Uses 33
12 Shop Top Housing 34
    - 12.1 Building Design, Streetscape and Layout 34
    - 12.2 Landscaping and Fencing 48
    - 12.3 Car Parking and Access 49
    - 12.4 Amenity and Environmental Impact 52
13. Restaurants/Outdoor Cafes 56
14. Child Care Centres 59
15. Telecommunications Facilities 62
16. Used Clothing Bins 64
17. Service Stations 66
18. Restricted Premises 67

Appendix – Outdoor Cafes 69

Table of Figures

Figure 1 Landscaping, Vehicular and Pedestrian Access 14
Figure 2 Neighbourhood Centre (E1 zones mapped as Area G) redevelopment with Shop Top Housing..... 18
Figure 3 Indoor/Outdoor Transition..... 19
Figure 4 Integration of public transportation 20
Figure 5 Corner Sites 20
Figure 6 Shop Top Housing..... 21
Figure 8 Building design..... 22
Figure 9 ~~B5 Business Development & B6 Enterprise Corridor~~ E3 – Productivity Support Pedestrian Access..... 23
Figure 10 Landscaping around a Local Centre 26
Figure 11 Landscaping around the ~~Business Development and Enterprise Corridor~~ E1 – Local Centre, E2 – Commercial Centre, E3 – Productivity Support or MU1 – Mixed Use zones 28
Figure 12 Reducing the visual impact of multi-storey car parking 30
Figure 13 Pedestrian Access..... 30
Figure 14 Shop Top Housing Designs 36
Figure 15 Shop Top Housing Designs 37
Figure 16 Shop Top Housing Roof Design 38
Figure 17 Ground Floor Entry to Shop Top Housing..... 40
Figure 18 Solar Access and Air Circulation within Shop Top Housing 43
Figure 19 Car Parking at grade 51
Figure 20 Balconies and Screening..... 53
Figure 21 Privacy, balconies and screening 54
Figure 22 Outdoor cafe seating on 6m wide footpath 56
Figure 23 Placement of outdoor seating areas cannot interfere with pedestrian road access..... 57

List of Tables

Table 1 ~~Business Development~~ E1 – Local Centre, E2 – Commercial Centre or MU1 – Mixed Use zones Setbacks 11
Table 2 ~~Enterprise Corridor~~ Setbacks..... 11

.

1. Preliminary

Applies to

This part applies to all land ~~in business zones~~ zoned E1, E2, E3 or MU1 under *Liverpool LEP 2008* except the Liverpool City Centre. See Part 4 for the Liverpool City Centre.

Part 1 of the DCP also applies.

Background

Range of ~~Business~~ E1 – Local Centre, E2 – Commercial Centre, E3 – Productivity Support or MU1 – Mixed Use Areas

Liverpool has a range of ~~business~~ E1 – Local Centre, E2 – Commercial Centre, E3 – Productivity Support or MU1 – Mixed Use areas. The largest is Liverpool City Centre, which is identified as a Region Centre for South Western Sydney.

Local Centres (~~B2~~ E1 zones mapped as Area C)

Below this are a number of "shopping mall" centres, each with at least one supermarket and a range of speciality shops. Carnes Hill and Casula also have discount department stores. These centres generally consist of one large building with associated on site car parking, generally at the front of the building and loading at the rear. Some have internal malls. They are generally located on the busier collector streets or sub-arterial roads and consequently have a significant amount of traffic and bus movement around them. There are also a congregation of services, such as health care professionals locating across the street in the residential zone. There is also Council Community and Recreation Facilities often located adjacent to these centres. In this way these centres become multipurpose centres where residents may often congregate.

Local Centres mapped as Area C are in the ~~B2~~ E1 zone~~s~~.

Neighbourhood Centres (~~B1~~ E1 zones mapped as Area G)

Below these centres are neighbourhood centres (E1 zone mapped as Area G), which consist of individual shops on separate lots fronting directly to the street with a rear laneway. These centres generally cater either for local shopping needs or for businesses that need low rent premises. There is generally less traffic generated around these centres. They are more a part of the residential environment than the Local Centres.

Neighbourhood Centres mapped as Area G are in the ~~B1~~ E1 zone~~s~~.

~~Business Development~~ Productivity Support mapped Area E (~~B5~~ E3 zones)

The ~~Business Development~~ E3 - Productivity Support mapped Area E zone is intended for use by bulky goods premises and other uses that require large floor plates which have limited opportunity to locate within commercial centres. ~~B5 Business Development~~ E3 - Productivity Support mapped Area E zones are located in areas of high accessibility to the arterial road network.

~~Enterprise Corridor (B6 zones)~~ E3 - Productivity Support zone mapped Area A.

In addition to the above centres there are also ~~business~~ Productivity Support mapped Area A areas along certain arterial roads. These generally cater for a broader market than the local area. They are not areas that people generally would congregate at, like the Local Centres.

In addition to these there are a number of sites that have ~~business development~~ Productivity Support on them but which are located and permitted in certain locations in

the residential areas. These generally consist of a service station and a convenience store and sometimes with a fast food outlet.

History of development of ~~Business Areas~~ E1 – Local Centre, E2 – Commercial Centre, E3 – Productivity Support or MU1 – Mixed Use zones.

The oldest and largest business area is Liverpool City Centre. Most other centres have only developed since the 1950's as each new residential area has developed.

Objectives

a) To have viable and vibrant local centres that provides a diversity of retail, commercial, residential, and other uses.

b) To have viable neighbourhood centres that provides businesses and services to the local community.

c) To revitalise and enhance the image and urban design of centres.

d) To ensure the building bulk of a development is in keeping with the height and scale of neighbouring development, and/or the desired character of the commercial centre.

e) To encourage viable retail and commercial activities.

f) To provide a high level of accessibility and amenity for workers, shoppers, residents, and visitors in the centres.

g) To provide housing choice in centres.

h) To protect the amenity of residential zoned land that adjoins centres.

2. Subdivision, Frontage and Allotment Size

Background

Land within the ~~Business zones~~ E1 – Local Centre, E2 – Commercial Centre, E3 – Productivity Support or MU1 – Mixed Use zones in Liverpool varies in size from individual shop size lots to large land holdings occupied by a shopping complex. The smaller lots often have rear lane access with loading access and a limited amount of car parking at the rear. The larger shopping complexes provide car parking and loading access wholly within their site. Any subdivision of land within a business zone for new development; or for redevelopment; or subdivision of an existing building should aim to ensure that the site can accommodate the car parking and loading facilities on site.

Development in a ~~business zone~~ E1 – Local Centre, E2 – Commercial Centre, E3 – Productivity Support or MU1 – Mixed Use zone may also incorporate shop top housing. A site will need to be wide enough to sufficient scope for window space for the occupants of the dwellings. The site will also need to be sufficient size to provide an adequate internal layout and private open space for the dwellings.

Objectives

a) To ensure that land in ~~a Business zone~~ the E1 – Local Centre, E2 – Commercial Centre, E3 – Productivity Support or MU1 – Mixed Use zone can accommodate the use including the car parking and loading provisions.

b) To ensure that there is sufficient frontage and area for any dwellings in conjunction with the business use.

c) To ensure that vehicular access is reasonably spaced and separated along roads and lanes.

d) To ensure suitable business exposure in a visually uncomplicated and ordered environment.

Controls

Neighbourhood Centres and Local Centres (~~B2 & B1~~ E1 zones)

Sites must have a minimum street frontage of 20 m.

~~Business Development (B5 zone)~~ E3 - Productivity Support zone mapped Area E

The minimum subdivision lot size is 2000sqm (LLEP 2008).

~~Enterprise Corridor (B6 zone)~~ E3 - Productivity Support zone mapped Area A

1. Development shall not be permitted for a new building (other than a maximum 10% addition to an existing structure) in the ~~B6 zone~~ E3 - Productivity Support zone mapped Area A unless the site has a frontage width to the Classified road of at least:
   - 30 m, where the site also has frontage to a local street that intersects with and would permit access to and from the classified road; or
   - 90m otherwise.
2. Development for a new building (other than a maximum 10% addition to an existing structure) in the ~~B6 zone~~ E3 - Productivity Support zone mapped Area A must not leave adjacent land such that it cannot achieve either:
   - A site frontage with of at least 30m (where the site also has frontage to a local street that intersects with and would permit access to and from the Classified road): or
   - 90m otherwise.

3. Site Planning

Background

Centres are relatively small in area compared with other land uses in Liverpool. In most cases there is residential development in the immediate vicinity with potential impacts on nearby residential areas.

Neighbourhood Centres (E1 zones mapped as Area G) in Liverpool LGA generally consist of groups of individual properties and any new development or redevelopment will probably take place incrementally. The impact of development on adjoining areas will be gradual.

~~The Local Centres~~ Local Centres (E1 zones mapped as Area C) are often in one land parcel. Any redevelopment of these is more likely to be a comprehensive development and have the potential to impact the surrounding area in one step.

~~Enterprise Corridors~~ E3 - Productivity Support generally consist of groups of individual properties, and any new development or redevelopment will probably take place incrementally. The impact of development on the highway environment will be gradual.

Objectives

a) To ensure that the development is compatible with amenity to nearby residential areas and open space.

b) To ensure that the development is compatible with the adjoining business development.

c) To ensure that the development reflects the character of the locality and environment.

d) To ensure that the development contributes to the public domain and attractiveness of the centre for its users;

Controls

Neighbourhood Centres, Local Centres ~~and Enterprise Corridor (B2, B1 & B6 zones)~~ (E1 – Local Centre) and E3 - Productivity Support zone mapped Area A

The siting of buildings and the development should:

1. Provide safe pedestrian, cycle and vehicle access to and from the public street.
2. Be compatible with nearby residential development in terms of appearance, overshadowing, privacy, views, setbacks and height.
3. Address the street and consider its presentation to the public domain.
4. Consider the impact on existing and potential pedestrian links.
5. Stormwater from the site must be able to be drained satisfactorily. Where the site falls away from the street, it may be necessary to obtain an easement over adjoining property to drain water satisfactorily to a Council stormwater system. Refer to Water Cycle Management in Part 1.

Neighbourhood Centres ~~(B1 zones)~~ (E1 zones mapped as Area G)

In Local Centres the siting of buildings and the development should also:

1. Be compatible with surrounding business development in terms of scale, bulk, setbacks, materials and visual amenity.
2. Assist in the creation of a main street environment.

~~Local Centres (B2 zones)~~ Local Centres (E1 zones mapped as Area C)

In Local Centres the redevelopment of the centres should also:

1. Utilise opportunities to address the street and provide an outdoor public domain.
2. Where appropriate provide bus access within the centre.
3. Incorporate links from any adjoining community facilities, open space or residential areas not currently linked.

Urban Design Strategy

The layout and location of each Local Centre is distinct. Any redevelopment of each centre shall be determined as part of an urban design strategy. This strategy shall consider the following in determining the appropriate building form and layout:

1. Opportunities for a public domain/public street frontage.
2. Need for car parking, bus stops and drop off points between the buildings and the public street.
3. Whether the street is a primary access to the Local Centre.
4. The location of adjacent residential development.
5. The range of adjoining uses, such as Health Consulting Rooms etc.

~~Business Development (B5 zone)~~ Productivity Support (E3 - Mapped Area E)

1. Where possible, site planning should allow for the retention of trees and vegetation particularly near the street frontage
2. The development must be designed around the site attributes such as slope, existing vegetation and land capability.
3. Development must address the street frontage.
4. Development should provide for articulation and variation of materials to minimise bulk/scale and visual dominance of the streetscape.

~~Enterprise Corridor (B6 zones)~~ Productivity Support (E3 - Mapped Area A)

In Enterprise Corridor the siting of buildings and the development should also:

1. Be compatible with existing business development in terms of scale, bulk, setbacks, materials and visual amenity.
2. Address the street and consider its presentation to the arterial road environment.

4. Setbacks

Background

Centres are relatively small in area compared with other land uses in Liverpool. In most cases there is residential development in the immediate vicinity with potential impacts on nearby residential areas.

Neighbourhood Centres (E1 zones mapped as Area G) in Liverpool LGA generally consist of groups of individual properties and any new development or redevelopment will probably take place on small lots incrementally. While the impact of development on adjoining areas will be gradual, it will be noticed over time.

The Local Centres are often in one land parcel. There is usually residential development across the street from Local Centres. Redevelopment of these may involve a substantial development. Given the size of the land parcels there may be a desire to carry out a substantial development, which has the potential to impact the surrounding area in one step.

Highway Business generally consists of groups of individual properties and any new development or redevelopment will probably take place incrementally. The impact of development on the highway environment will be gradual.

Objectives

a) To ensure the height and scale of a development complements neighbouring development, and/or the desired character of a commercial centre.

b) To ensure a development does not detrimentally affect the amenity of adjoining residential development.

Controls

~~Neighbourhood Centres, Local Centres, Business Development and Enterprise Corridor~~ E1 – Local Centre and E3 – Productivity Support

Rear Setbacks

1. Where the site has rear lane access the building may be built to the rear boundary, at ground and first floor level. Any floors above the first floor shall be setback equal to the height of the additional floors.
2. Where there is no rear lane access and the site adjoins land that is in a residential zone, the building shall be setback from the rear boundary as follows:
   - 5m for non-residential component of building up to 10m high.
   - 8m otherwise for components of building up to 15m high.

Side Setbacks

1. Where the site adjoins land that is also in a ~~business~~ E1 – Local Centre, E2 – Commercial Centre, E3 – Productivity Support or MU1 – Mixed Use zones zone there is no setback requirement.
2. Where the side boundary of the site adjoins land that is in a residential zone, the building may be required to be setback from the side boundary or limited to one storey near the boundary. Any floors above the ground floor shall be setback equal to the height of the additional floors.

Neighbourhood Centres ~~(B1 zones)~~ (E1 zones mapped as Area G)

Front Setbacks

1. Setbacks for new development shall observe the setbacks for the existing Neighbourhood Centre.
2. Subject to point 1, any floors above the first floor shall be setback equal to the height of the additional floors.

Local Centres ~~(B2 zones)~~ (E1 zones mapped as Area C)

Front Setbacks

As each layout and location of each Local Centre is distinct the setback shall be determined as part of an urban design strategy. This strategy shall consider the following in determining the appropriate setbacks:

1. Opportunities for a public domain/public street frontage.
2. Need for car parking, bus stops and drop off points between the buildings and the public street.
3. Whether the street is a primary access to the Local Centre.
4. The location of adjacent residential development.
5. The range of adjoining uses, such as Health Consulting Rooms etc.

~~**Business Development (B5 zones)**~~ E3 – Productivity Support (Mapped Area E)

Front Setbacks

Buildings in the ~~B5~~ E3 – Productivity Support (Mapped Area E) zone shall be setback in accordance with Table 1.

Table 1: ~~Business Development~~ E3 – Productivity Support (Mapped Area E) Setbacks

Street	Primary Setback (Ground Floor)	Secondary Setback
Classified Road	15m	10m
Road with residential opposite	15m	10m
All other roads	7.5m	5m

~~**Enterprise Corridor (B6 zones)**~~ E3 – Productivity Support (Mapped Area A)

Front Setbacks

Buildings in the ~~B6~~ E3 – Productivity Support (Mapped Area A) zone shall be setback in accordance with Table 2.

Table 2 ~~Enterprise Corridor~~ E3 – Productivity Support (Mapped Area A) Setbacks

Street	Primary Setback (Ground Floor)	Primary Setback (First Floor)	Secondary Setback
Hume Highway (between Terminus Street & South Western Freeway) Elizabeth Drive	2.5m	2.5m	2.5m
Hume Highway (South Western Freeway & De Meyrick Street)	10m	7.5 m	7.5m
Other locations	15m	12.5m	10m

5. Landscaped Areas and Pedestrian Areas

Background

Active street and building frontages provide safety and security to a street or shopping centre by enabling casual surveillance. Having access from the street or public areas to as many uses as possible provides active and lively streets and public areas.

Pedestrian areas within Local Centres and Neighbourhood Centres can provide an attractive meeting place for residents and shoppers. It also has the potential to generate additional business for retailers by providing areas for outdoor eating, display of retailers merchandise and a place for local community group promotions. Public footpaths can also provide a place for outdoor eating.

Pedestrian access into shopping complexes is made easier where separate pedestrian and cycle way paths are provided. Bicycle storage also assists in attracting business.

Some centres are adjacent to open space. Linkages between centres and open space, whether immediately adjoining or across the street, have the potential to increase the usage of the open space and the centre.

Objectives

a) To ensure active street frontages on public streets.

b) To encourage provision of attractive pedestrian areas.

c) To encourage linkages between centres and any adjacent public areas such as open space.

Controls

Neighbourhood Centres ~~(B1 zones)~~ (E1 zones mapped as Area G)

1. Pedestrian areas should minimise any changes in levels and allow wheelchair access to the shops from the car parking area and public footpaths.
2. Pedestrian areas should be separate from loading areas.
3. Sufficient area shall be provided to permit landscaping and tree planting within pedestrian areas and car parking areas.
4. Outdoor Eating Areas may be permitted in public footpath areas. Refer to the section on Outdoor Eating Areas.

Local Centres ~~(B2 zones)~~ (E1 zones mapped as Area C)

1. Redevelopment of a centre should incorporate shops having frontage to the exterior of the centre.
2. Usable pedestrian areas having frontage to shops should be provided and should be sufficiently wide in places to provide for outdoor eating areas.
3. Pedestrian areas should minimise any changes in levels and allow wheelchair access to the shops from the car parking area, bus stops, public footpaths and drop areas.
4. Pedestrian areas should link all major activity areas of the centre.
5. Pedestrian areas should be separate from loading areas.
6. Separate pedestrian access should be provided to adjoining public footpaths, community facilities and open space.
7. Sufficient area shall be provided to permit landscaping and tree planting within pedestrian areas and car parking areas.

Figure 1 Landscaping, Vehicular and Pedestrian Access

~~**Business Development and Enterprise Corridor (B5 and B6 zones)**~~ E3 – Productivity Support

1. Pedestrian areas should minimise any changes in levels and allow wheelchair access to the shops from the car parking area and public footpaths.
2. Pedestrian areas should link all major activity areas of the centre.
3. Pedestrian areas should be separate from loading areas.
4. Separate pedestrian access should be provided to adjoining public footpaths, community facilities and open space.
5. Sufficient area shall be provided to permit landscaping and tree planting within pedestrian areas and car parking areas.

6. Building Form, Streetscape and Layout

Background

Centres are relatively small in area compared with other land uses in Liverpool. In most cases there is residential development in the immediate vicinity with potential impacts on nearby residential areas. Achieving a high amenity of urban design is greatly dependent on the design and appearance of individual buildings. Well-designed new buildings not only improve the character and appearance but also contribute to the coherence of the public domain. In particular:

Neighbourhood Centres (E1 zones mapped as Area G) in Liverpool LGA generally consist of groups of individual properties and any new development or redevelopment will probably take place on small lots incrementally. While the impact of development on adjoining areas will be gradual, it will be noticed over time.

The Local Centres (E1 zones mapped as Area C) are in large are often in one land parcel. There is usually residential development across the street from Local Centres. Redevelopment of these is may involve a substantial development. Given the size of the land parcels there may be a desire to carry out a substantial development, which has the potential to impact the surrounding area in one step.

~~Enterprise Corridor~~ E3 – Productivity Support (Mapped Area A) generally consists of groups of individual properties and any new development or redevelopment will probably take place incrementally. The impact of development on the highway environment will be gradual.

Objectives

a) To ensure the height and scale of a development complements neighbouring development, and/or the desired character of a business centre.

b) To provide adequate amenity to the occupants and residents of a development in terms of solar access, visual and acoustic privacy, and natural ventilation.

c) To ensure a development does not detrimentally affect the amenity of nearby residential development.

d) To ensure a development is integrated with the public domain and contribute to an active pedestrian-orientated environment.

e) To maximise natural surveillance so that people feel safe at all times.

f) To ensure pedestrian entrances and exits are clearly visible from the street.

g) To promote high quality architectural design.

h) To ensure corner sites are developed as visually significant elements in order to promote a strong and legible character.

i) To ensure weather protection to pedestrians.

j) To ensure roof forms contribute to the proposed character of the centre and residential areas.

Controls

~~Neighbourhood Centres, Local Centres and Enterprise Corridor~~ E1 – Local Centre, E2 – Commercial Centre and E3 – Productivity Support (Mapped Area A)

Building Form

1. Articulate building walls addressing the street to add visual interest.

2. Development adjoining open space shall address the open space and avoid blank walls.

Building Materials

1. Highly reflective finishes are not permitted above the ground floor.
2. Colour & materials of the buildings shall be consistent with the existing adjoining development.

Entrances

1. Orientate entrances to buildings towards the public street and provide clear lines of sight between entrances, foyers and the street.
2. The common lobby to a home unit development should face the street.
3. Where the ground floor of a business development, mixed-use development, and shop-top housing faces the street, the ground floor must incorporate shopfront style windows with clear glazing so that pedestrians can see into the premises and vice versa.

Street Frontage

1. Ground floor uses are to be at the same general as the footpath and be accessible directly from the street.
2. Provide predominately glazed shop fronts to all ground floor retail areas.
3. Developments on corner sites shall address the corner and the secondary street frontage.
4. Avoid blank or solid walls and the use of dark or obscured glass on street frontages.
5. Roller shutters that obscure windows are not permitted.
6. Provide opportunities for table seating along shop frontages.
7. Any Automatic Teller Machine (ATM) must be located at a highly visible location at street level, and must be well lit at night and incorporate mirrors or reflective materials so that users can observe people behind them.
8. The street number of a building must be visible from the street and made of a reflective material to allow visitors and emergency vehicles to easily identify the location of the building.

Awnings

1. Provide continuous street frontage awnings to all new developments.
2. Wrap awnings around corners on street corner buildings.
3. Awnings must be complementary to each other.
4. Canvas blinds along the street edge are permitted.

Roof Forms

1. Minimise the bulk and mass of roofs and the potential for overshadowing from roofs.
2. Provide eaves with a minimum length of 400mm in dwellings with pitched roofs.
3. Where flat roofs are proposed, lift overruns and rooftop plant and machinery are to be obscured from view by parapets or designed to be incorporated within rooftop activities/features.
4. Incorporate lift overruns and service plant etc into the design of the roof.

5. Wherever possible provide landscaped and shaded areas on roofs to serve as communal private open space for residents of the building.

6. All new commercial buildings are to demonstrate on the architectural plans that the rooftop is designed to enable the installation of solar panels.

Material and Finishes

1. Avoid expanses of any single material.
2. Utilise high quality and durable materials and finishes, such as face brick with / without coloured render; and plain glass windows.
3. Avoid large wall tiles, rough textured render, polished metal and curtain walls or reflective glass.

Dwellings above shops

1. Dwellings and balconies in upper storeys shall address the street, rear laneway and any adjacent open space.
2. Access to dwellings above shops must be from the front street.
3. Dwellings above shops should be designed to facilitate flow through ventilation.
4. Entrances shall be designed to accommodate movement of furniture.

Adjoining Residential Areas

1. Development should minimise impact of the privacy of adjoining and nearby dwellings.
2. Development should be compatible with any adjoining and nearby dwellings.

Links to nearby Community Facilities and Open Space

Developments should incorporate opportunities for pedestrian links to adjoining Community Facilities and Open Space.

Neighbourhood Centres ~~(B1 zones)~~ ~~Neighbourhood Centres (B1 zones)~~ (E1 zones mapped as Area G)

The following illustration shows how redevelopment of a centre should address these items.

Figure 2 Neighbourhood Centre redevelopment with Shop Top Housing

~~Local Centres (B2 zones)~~ Local Centres (E1 zones mapped as Area C)

Public Transport Facilities

Redevelopment of a centre should consider the need to provide easier public transport access to a centre. This may include bus access through any car parking area to the pedestrian entrance to the centre. Covered pedestrian access from the bus stop should also be considered. Provision for timetable and route information should be provided.

Building Form

Developments should incorporate opportunities for pedestrian links. Redevelopment of local centres should attempt to enable a better transition between the indoor and outdoor locations of a centre, by enabling restaurants and cafes and similar businesses to have a dual frontage, internally and externally, to improve the amenity of the building. This outdoor space should be located within close proximity to bus stops and where pedestrians enter the centre.

Dwellings above shops Residential Development

Redevelopment of a centre may incorporate dwellings above the shops.

Car parking structures

1. Where car parking structures is provided above or below ground level its design shall be integrated into the design of the building.
2. Natural ventilation shall be provided to basement where possible using ventilation grills and structures.

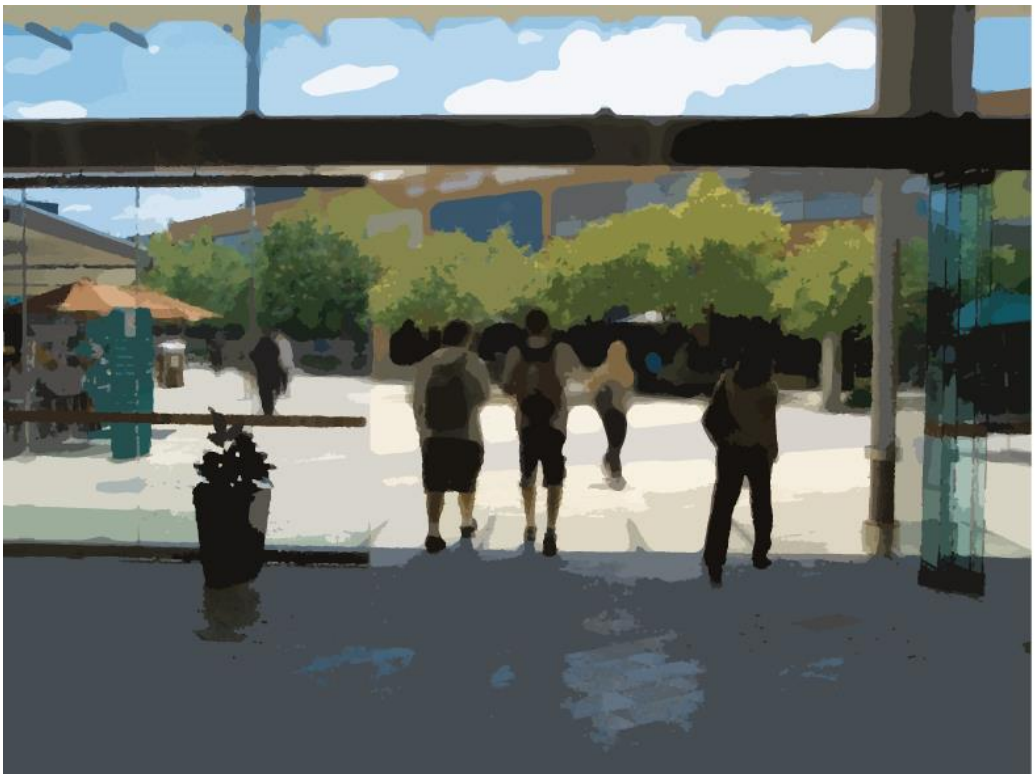


Figure 3 Indoor/Outdoor Transition

Figure 4 Integration of public transportation

Integrating public transport into the local centre can improve accessibility and provide alternatives for those who do not want to use their cars to reach the local centres.

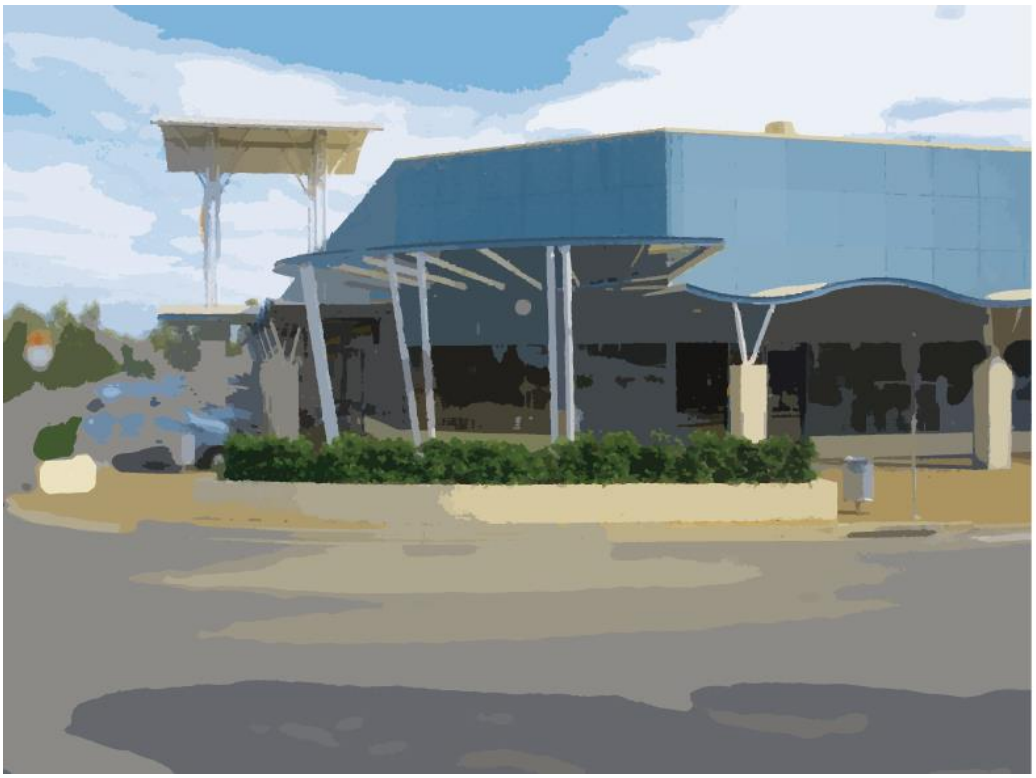


Figure 5 Corner Sites

Emphasis should be placed on corner sites to create focal points for the centre.

Figure 6 Shop Top Housing

If economically feasible local centres should look at shop top housing to increase the level of passive surveillance surrounding the centre to improve safety and security.

~~Business Development & Enterprise Corridor (B5 and B6 zones)~~ E3 – Productivity Support

The following illustrations show how redevelopment of an ~~enterprise corridor~~ E3 – Productivity Support (Mapped Area A) (Figures 7 and 8) and ~~Business Development~~ E3 – Productivity Support (Mapped Area E) (Figure 9) should address these items.

Figure 7 ~~Enterprise Corridor~~ E3 – Productivity Support (Mapped Area A) car parking

Buildings should attempt to minimise the visual impact of car parking from the road.

Figure 8 Building design

Buildings should use colour, different building materials and effects to make for an interesting architectural building, whilst remaining sympathetic to the surrounding buildings.

Figure 9 ~~B5 Business Development & B6 Enterprise Corridor~~ E3 – Productivity Support

Pedestrian Access

Pedestrians should have easy access to the buildings, through clever design of car parking, or a clearly marked zebra crossing to the primary entry of the store.

7. Landscaping and Fencing

Background

Centres are relatively small in area compared with other land uses in Liverpool. In most cases there is residential development in the immediate vicinity with potential impacts on nearby residential areas.

Neighbourhood Centres (E1 zones mapped as Area G) in Liverpool LGA generally consist of groups of shops fronting a public street. Most buildings are located on the front boundary or setback to provide a wider footpath. Opportunities for landscaping may in many cases be limited.

The Local Centres (E1 zones mapped as Area C) are often in one land parcel. There is usually residential development across the street from Local Centres (E1 zones mapped as Area C). Opportunities for landscaping generally involve any pedestrian areas and the car parking areas. Any redevelopment of these may involve a substantial development. Given the size of the land parcels and depending on the scope of the design there may be an opportunity to make substantial improvements to landscaping and the quality of the public domain.

Highway Business generally consists of groups of individual properties and any new development or redevelopment will probably take place incrementally. Opportunities for landscaping would probably involve the car parking areas along the street frontage.

Objectives

a) To ensure appropriate landscaping in commercial centres; and

b) To ensure the protection of existing trees on neighbouring residential zoned land.

c) To ensure the visual impact of development is minimised and integrated into the streetscape.

d) To improve the amenity of commercial centres.

Controls

1. Where trees are planted around high use facilities such as car park areas, children's play areas and walkways, they should have clean trunks to height of 1.8m.

2. Landscaping on any podium level or planter box shall be appropriately designed and irrigated.

~~Neighbourhood Centres, Local Centres, Business Development and Enterprise Corridor~~
E1 – Local Centre and E3 – Productivity Support

Where landscaping is to be provided a detailed landscape plan shall accompany a development application. A suitably qualified Landscape architect must prepare all Landscape Plans submitted with the development application. Refer to Part 1 for requirements for Detailed Landscape Plans.

Neighbourhood Centres ~~(B1 zones)~~ (E1 zones mapped as Area G)

Landscaped areas within Neighbourhood Centres shall generally involve the provision of trees and shrubs in mulched garden beds around car parking areas and where pedestrian areas are provided. In particular the landscaping shall involve the following:

1. mulched garden beds shall incorporate ground covers that will cover the ground area;

2. large shrubs shall be used as screen planting where there is a need to screen certain areas such as outside storage;

3. Shrubs shall only be planted in mulched garden beds.

~~Local Centres (B2 zones)~~ Local Centres (E1 zones mapped as Area C)

Landscaped areas within the redevelopment of any ~~Local Centres~~ Local Centres (E1 zones mapped as Area C) shall generally involve the provision of trees and shrubs in mulched garden beds. In particular the landscaping shall involve the following:

1. the trees shall provide a canopy for the streetscape and soften the appearance of the Business Environment, without unduly concealing approved on site signage;
2. mulched garden beds shall incorporate ground covers that will cover the ground area;
3. shrubs shall be used to soften appearance of the centre environment, but still allow viewing between the street and the development;
4. shrubs shall only be planted in mulched garden beds;
5. paving should assist in distinguishing the pedestrian areas from driveway areas;
6. paving should complement the pedestrian areas within a centre;
7. Seating should be provided in pedestrian areas, particularly at bus stops and waiting areas.

The following illustrates these requirements.

Figure 10 Landscaping around a ~~Local Centre~~ Local Centres (E1 zones mapped as Area C)

~~Business Development and Enterprise Corridor (B5 and B6 zones)~~ E3 – Productivity Support

Landscaped areas within Business ~~Development and Enterprise Corridor~~ E3 – Productivity Support zones shall generally involve the provision of trees and shrubs in mulched garden beds. In particular the landscaping shall involve the following:

1. The trees shall provide a canopy for the streetscape and soften the appearance of the ~~Enterprise Corridor~~ E3 – Productivity Support environment, without unduly concealing approved on site signage.

2. Mulched garden beds shall incorporate ground covers that will cover the ground area.
3. Shrubs shall be used to soften appearance of the area but still allow viewing between the street and the development.
4. Large shrubs shall be used as screen planting where there is a need to screen certain areas such as outside storage.
5. Shrubs shall only be planted in mulched garden beds.
6. Grassed areas may be considered in limited areas in conjunction with mulched garden beds.
7. Trees shall only be planted in grass where there is a border around the tree separating it from the grassed area.
8. The following illustrates these requirements.

Figure 11 Landscaping around the ~~Business Development and Enterprise Corridor~~ E3 – Productivity Support zones

8. Car Parking and Access

Background

Car parking and safe access provision is fundamental for all sites in the business areas. The layout of car parking areas may in the case of ~~Local Centres~~ Local Centres (E1 zones mapped as Area C) may reflect the street environment. Refer to Part 1 for additional information about car parking and access requirements.

Objectives

a) To ensure the provision of appropriate off-street parking for business areas.

b) To ensure car parking and loading facilities are in the most appropriate location given the urban design needs for the centre.

c) To ensure that car parking areas that are attractive and don't dominate the streetscape.

d) To locate loading in appropriate locations.

Controls

Neighbourhood Centres ~~(B1 zones)~~ (E1 zones mapped as Area G)

Car parking and loading areas shall be located off rear laneways where there is a rear laneway and existing car parking is located off the rear laneway. Council may consider the provision of car parking in front of a development if there is an existing car parking area provided in front of adjacent developments.

~~Local Centres (B2 zones)~~ Local Centres (E1 zones mapped as Area C)

As each layout and location of each ~~Local Centre~~ **Local Centres (E1 zones mapped as Area C)**is distinct the location and design of car parking shall be determined as part of an urban design strategy. The design and location of car parking and loading areas shall incorporate the following:

1. Provide an interface between the shops and car parking that feels like a public street environment.
2. Provide access for bus stops and drop off points either within or adjacent to the development
3. Locate car parking where it will minimise on street car parking.
4. Pedestrians should have easy access to the buildings, through clever design of car parking, or a clearly marked zebra crossing to the primary entry of the development. (See Figure 13)

Figure 12 Reducing the visual impact of multi-storey car parking

Locate loading areas in less visible areas. Avoid locating loading areas facing residential areas, public open space or the public street. It is preferable to locate loading areas adjacent to other business areas.

~~Business Development and Enterprise Corridor (B6 zones)~~ E3 – Productivity Support (Mapped Area A)

Car parking shall generally be located toward the front of the site.

Figure 13 Pedestrian Access

Pedestrians should have easy access to the buildings, through clever design of car parking, or a clearly marked zebra crossing to the primary entry of the store.

9. Amenity and Environmental Impact

Background

Business Areas are centres of activity for residents, workers and visitors. The level of activity varies depending on size, location and land uses in the centre. This activity may take for long periods of the day each day of the week. They are also increasingly the location of residential development. While this presents opportunities to add to activity it also presents some potential amenity issues and impacts on transport.

Objectives

a) To provide adequate amenity to the occupants of buildings and to neighbouring residential development in terms of solar access, and visual and acoustic privacy.

b) To ensure buildings and businesses provide safe and easy access for people.

c) To provide useable private open space for dwellings.

Controls

~~Neighbourhood Centres, Local Centres and Enterprise Corridor~~ E1 – Local Centre and E3 – Productivity Support (Mapped Area A)

Privacy

Development shall be designed to minimise overlooking of adjoining and nearby residential development.

Access to sunlight

Dwellings above shops shall be designed to maximise solar access.

Acoustic privacy

1. Where an allotment adjoins an Classified Road, dwellings must comply with *AS 3671 – Acoustics – Road Traffic Noise Intrusion*.

2. Dwellings should be located to minimise the impact of noise from car parking and loading areas.

Lighting

External lighting to a development must give consideration to the impact of glare on the amenity of adjoining and nearby residents.

10. Site Services

Background

There is a range of services that may need to be provided either on site or within the adjacent road reserve. Owners are required to provide some services and maintain some of the services on the site. Owners must also ensure that services provided on the site are protected from any potential damage.

Objectives

a) To ensure that the required services are provided.

b) To ensure that the services provided are easily protected or maintained.

Controls

~~Neighbourhood Centres, Local Centres, Business Development and Enterprise Corridor~~
E1 – Local Centre and E3 – Productivity Support

Letterboxes and House Numbering

1. A common letterbox structure must be located close to the main pedestrian entrance of a building.
2. The street number of a building must be visible from the street and made of a reflective material to allow visitors and emergency vehicles to easily identify the location of the building.

Frontage works and damage to Council assets

Where a footpath, road shoulder, new or enlarged access driveway or is required to be provided this shall be provided at no cost to Council.

Council must be notified of any works that may threaten Council assets. Council must give approval for any works involving Council infrastructure.

Electricity Sub Station

In some cases it may be necessary to provide an electricity sub station at the front of the development adjacent to the street frontage. This will involve dedication of the area as a public road to allow access by the electricity provider. The front boundary treatment used elsewhere on the street frontage shall be used at the side and rear of the area.

Waste management

1. Development involving dwellings shall provide at least two waste storage areas to separately cater for the dwellings and non-residential uses on an allotment.
2. A development must provide a waste storage area inside every food premises, and inside any shop that is capable of accommodating a food premises.
3. A development must locate a waste storage area inside the building, or adjacent to a lane where it is convenient and safe for residents, tenants, and waste collection trucks to access the waste storage area and the location and floor level are to the satisfaction of Council and Part 1.

Storage Facilities

A multi-unit development must provide a minimum storage area of 8 m3 to each dwelling. The storage area may be attached to the car parking space or spaces to each dwelling.

11. Non Business Uses

Background

Liverpool LEP 2008 permits a range of Non Business land uses within the business zones. These Non Business land uses may involve using an existing industrial development or construction of a new development. The following provisions are additional provisions for particular land uses. These land uses shall also comply with the other provisions of the DCP.

Objectives

a) To ensure that the Non Business developments are compatible with the Business environment.

b) To ensure that the Non Business developments do not unnecessarily restrict the operation of Business and related uses in Business areas.

c) To ensure that Non Business developments are designed to operate without adverse impact from Business developments.

Controls

The following controls are in addition to those in Sections 1 – 9.

Site Planning

Site planning for a Non Business development shall give consideration to how minimise the impact of uses on the site and how to ensure that a proposed use would not unduly impose restrictions on existing or future nearby business uses.

Building Appearance, Streetscape and Layout

All developments in a business area shall present a shop front to the street. Closing in of windows or painting over windows shall not be permitted.

Amenity and Environmental Impact

1. Where the hours of operation are after sunset, the car parking areas and any other public areas shall be provided with lighting to provide a safe environment for users of the premises after hours.

2. A Noise Impact Assessment Statement prepared by a qualified Acoustics Engineer may be required to be submitted with the application depending on the scale and location of the proposed use to show that the use can operate satisfactorily in the business area.

12 Shop Top Housing

Background

Shop Top Housing is a relatively recent phenomena within Liverpool. Traditionally Shop Top Housing was housing for the use of the owner or tennant of the shop below, but with an increase in the size and uses of shops, shop top housing has branched out with multiple apartment dwellings above shops. Therefore it is very important to ensure privacy, adequate parking and outdoor entertainment areas for the dwellings.

Objectives

a) To provide for an adequate outdoor entertainment space, as there is limited or no access to ground floor outdoor space.

b) To provide for well used outdoor spaces by linking them to indoor living areas.

c) To provide for adequate clothes drying spaces.

Controls

1. A minimum of 16sqm of open space in the form of a balcony shall be provided for each dwelling with a minimum width of 2.4m.
2. Private open space areas should be an extension of indoor living areas and be functional in size to accommodate seating and the like.
3. If there is little or no ground floor private open space, a minimum 4sqm fully or partially covered space (2 x 2m minimum) must be provided for clothes drying within the dwelling. This drying space must not be able to be clearly seen from the street, but have access to at least one large window if the space is fully covered, to provide for sufficient airflow for clothes drying. This drying space does not count towards the minimum 16 sqm of open space.

For balconies refer to Building Design, Streetscape and Layout for controls on their design.

12.1 Building Design, Streetscape and Layout

Building Appearance and Streetscape

Objectives

a) To ensure an attractive streetscape, which is consistent with the environment of a centre.

b) To promote high architectural quality in shop top housing.

c) To ensure that new developments have facades which define and enhance the public domain and desired street character.

d) To ensure that building elements are integrated into the overall building form and facade design.

Controls

1. Shop top housing shall comply with State Environmental Planning Policy No 65 – Design Quality of Shop top housing, and should consider the Residential Flat Design Code.
2. Building facades shall be articulated and roof form is to be varied to provide visual variety.
3. The pedestrian entrance to shop top housing shall be from the front of the site.

4. Driveway walls adjacent to the entrance of a basement car park are to be treated so that their appearance is consistent with the basement or podium walls.
5. A master antenna shall be provided for any development of more than three dwellings and be located so that it is not visible from the street or any public open space.
6. Consider the relationship between the whole building form and the facade and/or building elements. The number and distribution of elements across a façade determine simplicity or complexity. Columns, beams, floor slabs, balconies, window openings and fenestrations, doors, balustrades, roof forms and parapets are elements, which can be revealed or concealed and organised into simple or complex patterns.
7. Compose facades with an appropriate scale, rhythm and proportion, which respond to the building's use and the desired contextual character. This may include but are not limited to:
   - Defining a base, middle and top related to the overall proportion of the building.
   - Expressing key datum lines in the context using cornices, a change in materials or building set back.
   - Expressing the internal layout of the building, for example, vertical bays or its structure, such as party wall-divisions.
   - Expressing the variation in floor-to-floor height, particularly at the lower levels.
   - Articulating building entries with awnings, porticos, recesses, blade walls and projecting bays.
   - Selecting balcony types which respond to the street context, building orientation and residential amenity.
   - Cantilevered, partially recessed, wholly recessed, or Juliet balconies will all create different facade profiles.
   - Detailing balustrades to reflect the type and location of the balcony and its relationship to the façade detail and materials.
8. Design facades to reflect the orientation of the site using elements such as sun shading, light shelves and bay windows as environmental controls, depending on the facade orientation.
9. Express important corners by giving visual prominence to parts of the facade, for example, a change in building articulation, material or colour, roof expression or increased height.
10. Co-ordinate and integrate building services, such as drainage pipes, with overall facade and balcony design.
11. Co-ordinate security grills/screens, ventilation louvres and car park entry doors with the overall facade design

Figure 14 Shop Top Housing Designs

Figure 15 Shop Top Housing Designs

Roof Design

Objectives

a) To provide quality roof designs, which contribute to the overall design and performance of shop top housing.

b) To integrate the design of the roof into the overall facade, building composition and desired contextual response.

c) To increase the longevity of the building through weather protection.

Controls

1. Relate roof design to the desired built form. This may include:
   - Articulating the roof, or breaking down its massing on large buildings, to minimise the apparent bulk or to relate to a context of smaller building forms.
   - Using a similar roof pitch or material to adjacent buildings, particularly in existing special character areas or heritage conservation areas.
   - Minimising the expression of roof forms gives prominence to a strong horizontal datum in the adjacent context, such as an existing parapet line.
   - Using special roof features, which relate to the desired character of an area, to express important corners.
2. Design the roof to relate to the size and scale of the building, the building elevations and three-dimensional building form. This includes the design of any parapet or terminating elements and the selection of roof materials.
3. Design roofs to respond to the orientation of the site, for example, by using eaves and skillion roofs to respond to sun access.
4. Minimise the visual intrusiveness of service elements by integrating them into the design of the roof. These elements include lift over-runs, service plants, chimneys, vent stacks, telecommunication infrastructures, gutters, downpipes and signage.
5. Where habitable space is provided within the roof optimise residential amenity in the form of attics or penthouse dwellings.
6. All new shop top housing developments are to demonstrate on the architectural plans that the rooftop is designed to enable the installation of solar panels.

Figure 16 Shop Top Housing Roof Design

Building Entry

Objectives

a) To create entrances which provide a desirable residential identity for the development.

b) To orient the visitor.

c) To contribute positively to the streetscape and building facade design.

Controls

1. Provide as direct a physical and visual connection as possible between the street and the entry.
2. Achieve clear lines of transition between the public street, the shared private, circulation spaces and the dwelling unit.
3. Ensure equal access for all.
4. Provide safe and secure access by:
   - Avoiding ambiguous and publicly accessible small spaces in entry areas.
   - Providing a clear line of sight between one circulation space and the next.
   - Providing sheltered well-lit and highly visible spaces to enter the building, meet and collect mail.
5. Generally provide separate entries from the street for:
   - Pedestrians and cars.
   - Different uses, for example, for residential and commercial users in a mixed-use development.
   - Ground floor dwellings, where applicable.
6. Design entries and associated circulation space of an adequate size to allow movement of furniture between public and private spaces.

Figure 17 Ground Floor Entry to Shop Top Housing

Balconies

<u>Objective</u>

a) To ensure that balconies contribute positively to the façade of a building.

b) To ensure balconies are functional and responsive to the environment thereby promoting the enjoyment of outdoor living for dwelling residents.

c) To ensure that balconies are integrated into the overall architectural form and detail of shop top housing.

d) To contribute to the safety and liveliness of the street by allowing for casual overlooking and address.

Controls

1. Balconies may project up to 1m from the façade of a building.
2. Balustrades must be compatible with the façade of the building.
3. Ensure balconies are not so deep that they prevent sunlight entering the dwelling below.
4. Design balustrades to allow views and casual surveillance of the street.
5. Balustrades on balconies at lower levels shall be of solid construction.
6. Balconies should where possible should be located above ground level to maximise privacy for occupants, particularly from the street.
7. Solid or semi solid louvres are permitted.
8. Noise attenuation measures on balconies facing a Classified Road should be considered.
9. Balconies should be located on the street frontage and boundaries with views.
10. Primary balconies should be:
    - Located adjacent to the main living areas, such as living room, dining room or kitchen to extend the dwelling living space;
    - Sufficiently large and well proportioned to be functional and promote indoor/outdoor living. A dining table and two chairs (smaller dwelling) and four chairs (larger dwelling) should fit on the majority of balconies in any development.
11. Consider secondary balconies, including Juliet balconies or operable walls with balustrades, for additional amenity and choice in larger dwellings, adjacent to bedrooms or for clothes drying, site balconies off laundries or bathrooms.
12. Design and detail balconies in response to the local climate and context thereby increasing the usefulness of balconies. This may be achieved by:
    - Locating balconies facing predominantly north, east or west to provide solar access.
    - Utilising sunscreens, pergolas, shutters and operable walls to control sunlight and wind.
    - Providing balconies with operable screens, Juliet balconies or operable walls/sliding doors with a balustrade in special locations where noise or high winds prohibit other solutions - along rail corridors, on busy roads or in tower buildings - choose cantilevered balconies, partially cantilevered balconies and/or recessed balconies in response to daylight, wind, acoustic privacy and visual privacy.
13. Provide primary balconies for all dwellings with a minimum depth of 2m.
14. Ensuring balconies are not so deep that they prevent sunlight entering the dwelling below.
15. Design balustrades to allow views and casual surveillance of the street while providing for safety and visual privacy. Design considerations may include:
    - Detailing balustrades using a proportion of solid to transparent materials to address site lines from the street, public domain or adjacent development. Full glass balustrades do not provide privacy for the balcony or the dwelling's interior, especially at night.

- Detailing balustrades and providing screening from the public, for example, for a person seated looking at a view, clothes drying areas, bicycle storage or air conditioning units.

16. Operable screens increase the usefulness of balconies by providing weather protection, daylight control and privacy screening.

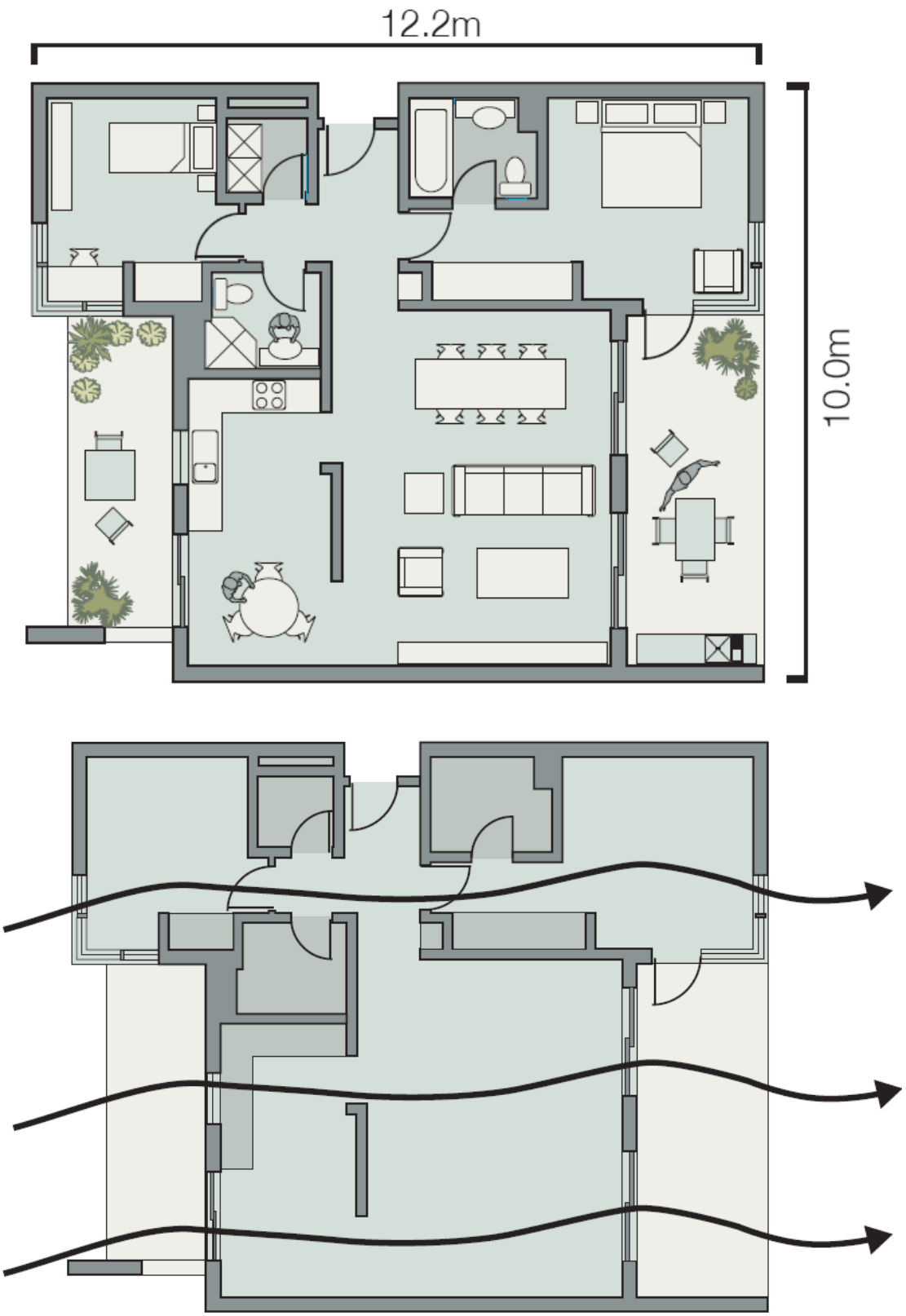


Figure 18 Solar Access and Air Circulation within Shop Top Housing

Daylight Access

Objectives

a) To ensure that daylight access is provided to all habitable rooms.

b) To provide adequate ambient lighting and minimise the need for artificial lighting during daylight hours.

c) To provide residents with the ability to adjust the quantity of daylight to suit their needs.

Controls

1. Plan the site so that new shop top housing is oriented to optimise northern aspect.
2. Ensure direct daylight access to communal open space between March and September and provide appropriate shading in summer.
3. Optimise the number of dwellings receiving daylight access to habitable rooms and principal windows:
4. Ensure daylight access to habitable rooms and private open space, particularly in winter use skylights, clerestory windows and fanlights to supplement daylight access.
5. Promote two-storey and mezzanine, ground floor dwellings or locations where daylight is limited to facilitate daylight access to living rooms and private open spaces.
6. Ensure single aspect, single-storey dwellings have a northerly or easterly aspect - locate living areas to the north and service areas to the south and west of the development.
7. Avoid south facing dwellings.
8. Design for shading and glare control, particularly in summer:
   - Using shading devices, such as eaves, awnings, colonnades, balconies, pergolas, external louvres and planting.
   - Optimising the number of north-facing living spaces.
   - Providing external horizontal shading to north-facing windows.
   - Providing vertical shading to east or west windows.
9. Consider higher ceilings and higher window heads to allow deeper sunlight penetration.
10. On west facing windows, vertical louvre panels or sliding screens protect from glare and low afternoon sun.

11. On north facing windows, projecting horizontal louvres admit winter sun while shading summer sun.
    - Using high performance glass but minimising external glare off windows.
    - Avoid reflective films.
    - Use a glass reflectance below 20%.
    - Consider reduced tint glass.
    - Limit the use of lightwells as a source of daylight by prohibiting their use as the primary source of daylight in habitable rooms. Where they are used:
    - Relate lightwell dimensions to building separation, for example, if non-habitable rooms face into a light well less than 12m high, the lightwell should measure 6 x 6 m.
    - Conceal building services and provide appropriate detail and materials to visible walls.
    - Ensure light wells are fully open to the sky.
    - A combination of louvres provides shading for different times of the day.

Internal design

Objective

To ensure that the internal design of buildings provide a pleasant environment for the occupants and residents of adjoining properties.

Controls

1. All staircases should be internal.
2. Minimise the length of common walls between dwellings.
3. Basement car parking shall be located beneath the building footprint.
4. Where possible natural ventilation shall be provided to basement car parking.
5. Design building layouts to minimise direct overlooking of rooms and private open spaces adjacent to dwellings.
6. Minimise the location of noise sensitive rooms such as bedrooms adjoining noisier rooms such as bathrooms or kitchens or common corridors and stairwells.
7. Where a site has frontage to a Classified Road, locate bedrooms away from the front of the site.
8. Where common walls are provided they must be carried to the underside of the roof and be constructed in accordance with *Part F5 of the Building Code of Australia*.
9. Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).

Ground Floor Dwellings

Objectives

a) To contribute to the desired streetscape of an area and to create active safe streets.

b) To increase the housing and lifestyle choices available in dwelling buildings.

Controls

1. Design front gardens or terraces, which contribute to the spatial and visual structure of the street while maintaining adequate privacy for dwelling occupants. This can be achieved by animating the street edge, for example, by promoting individual entries for ground floor dwellings.
2. Create more pedestrian activity along the street and articulate the street edge by:
   - Balancing privacy requirements and pedestrian accessibility.
   - Providing appropriate fencing, lighting and/ or landscaping to meet privacy and safety requirements of occupants while contributing to a pleasant streetscape.
   - Utilising a change in level from the street to the private garden or terrace to minimise site lines from the streets into the dwellings.
   - Increasing street surveillance with doors and windows facing onto the street.
3. Provide ground floor dwellings with access to private open space, preferably as a courtyard.

Security

Objectives

a) To ensure that buildings are orientated to allow surveillance from the street and adjoining buildings.

b) To ensure that entrances to buildings are clearly visible and easy to locate in order to minimise the opportunities for intruders.

c) To ensure buildings are safe and secure for residents and visitors.

d) To contribute to the safety of the public domain.

Controls

1. Entrances to buildings should be orientated towards the front of the site and facing the street.
2. The main entrance to dwellings or other premises should not be from rear lanes and should be designed with clear directions and signage.
3. Blank walls addressing the street frontage and other public places should be avoided.
4. Minimise the number of entry points to buildings.
5. Reinforce the development boundary to strengthen the distinction between public and private space by:
   - Employing a level change at the site and/or building threshold (subject to accessibility requirements).
   - Signage.
   - Entry awnings.
   - Fences, walls and gates.
   - Change of material in paving between the street and the development.
6. Optimise the visibility, functionality and safety of building entrances by:
   - Orienting entrances towards the public street.
   - Providing clear lines of sight between entrances, foyers and the street.

- Providing direct entry to ground level dwellings from the street rather than through a common foyer.
- Direct and well-lit access between car parks and dwellings, between car parks and lift lobbies and to all unit entrances.

7. Improve the opportunities for casual surveillance by:
   - Orienting living areas with views over public or communal open spaces, where possible.
   - Using bay windows and balconies, which protrude beyond the main facade and enable a wider angle of vision to the street.
   - Using corner windows, which provide oblique views of the street.
   - Providing casual views of common internal areas, such as lobbies and foyers, hallways, recreation areas and car parks.
8. Minimise opportunities for concealment by:
   - Avoiding blind or dark alcoves near lifts and stairwells, at the entrance and within indoor car parks, along corridors and walkways.
   - Providing well-lit routes throughout the development.
   - Providing appropriate levels of illumination for all common areas.
   - Providing graded illumination to car parks and illuminating entrances higher than the minimum acceptable standard.
9. Control access to the development by:
   - Making dwellings inaccessible from the balconies, roofs and windows of neighbouring buildings.
   - Separating the residential component of a development's car parking from any other building use and controlling car park access from public and common areas.
   - Providing direct access from car parks to dwelling lobbies for residents.

Natural Ventilation

Objectives

a) To ensure that dwellings are designed to provide all habitable rooms with direct access to fresh air and to assist in promoting thermal comfort for occupants.

b) To provide natural ventilation in non-habitable rooms, where possible.

c) To reduce energy consumption by minimising the use of mechanical ventilation, particularly air conditioning.

Controls

1. Utilise the building layout and section to increase the potential for natural ventilation. Design solutions may include:
   - Facilitating cross ventilation by designing narrow building depths and providing dual aspect dwellings, for example, cross through dwellings and corner dwellings.
   - Facilitating convective currents by designing units, which draw cool air in at lower levels and allow warm air to escape at higher levels, for example, maisonette dwellings and two-storey dwellings.
2. Select doors and windows (that open) to maximise natural ventilation opportunities established by the dwelling layout.

3. Provide narrow building depths to support cross ventilation.
4. Avoid single-aspect dwellings with a southerly aspect.
5. Design the internal dwelling layout to promote natural ventilation by:
   - Minimising interruptions in air flow through a dwelling.
   - Grouping rooms with similar usage together, for example, keeping living spaces together and sleeping spaces together. This allows the dwelling to be compartmentalised for efficient summer cooling or winter heating.
   - Selecting doors and openable windows to maximise natural ventilation opportunities established by the dwelling layout.

Storage Areas

Objective

To provide for the need of residents to be able to store personal items adjacent to the car parking area.

Controls

1. A secure storage space is to be provided for each dwelling with a minimum volume 8m3 (minimum dimension 1sqm). This must be set aside exclusively for storage as part of the basement or garage.
2. Storage areas must be adequately lit and secure. Particular attention must be given to security of basement and garage storage areas.

12.2 Landscaping and Fencing

Objectives

a) To ensure that the use of planting and landscape elements are appropriate to the scale of the development.

b) To add value to residents' quality of life within the development in the forms of privacy, outlook and views.

Controls

Planting on Structures

Objectives

a) To contribute to the quality and amenity of communal open space on podiums and internal courtyards.

b) To encourage the establishment and healthy growth of trees in urban areas.

Controls

1. Design for optimum conditions for plant growth by:
   - Providing soil depth, soil volume and soil area appropriate to the size of the plants to be established.
   - Providing appropriate soil conditions and irrigation methods.
   - Providing appropriate drainage.
   - Design planters to support the appropriate soil depth and plant selection by:
   - Ensuring planter proportions accommodate the largest volume of soil possible. Minimum soil depths will vary depending on the size of the plant. However, soil depths greater than 1.5m are unlikely to have any benefits for tree growth.

- Providing square or rectangular planting areas rather than long narrow linear areas.

2. The following are recommended as minimum standards for a range of plant sizes:
   - Large trees such as figs (canopy diameter of up to 16m at maturity)
     - Minimum soil volume 150m3.
     - Minimum soil depth 1.3m.
     - Minimum soil area of 10 x 10m or equivalent.
   - Medium trees (8m canopy diameter at maturity).
     - Minimum soil volume 35m3.
     - Minimum soil depth 1m.
     - Approximate soil area of 6 x 6m or equivalent.
   - Small trees (4m canopy diameter at maturity).
     - Minimum soil volume 9m3.
     - Minimum soil depth 0.8m.
     - Approximate soil area of 3.5 x 3.5m or equivalent.
   - Shrubs: Minimum soil depths 500 – 600mm.
   - Ground cover: Minimum soil depths 300 – 450mm.
   - Turf: Minimum soil depths 100 – 300mm.
   - Any subsurface drainage requirements are in addition to the minimum soil depths quoted above.

12.3 Car Parking and Access

Car Parking

Objectives

a) To provide convenient, accessible and safe on site car parking for residents and visitors.

b) To minimise driveway crossings to maximise on street parking and landscaped nature strips.

c) To integrate the location and design of car parking with the design of the site and building without compromising street character, landscape or pedestrian amenity and safety.

d) To integrate the location and design of car parking with the design of the site and the building.

Controls

1. Private car parking for shop top housing residents must be clearly identified and separated from regular business car parking.
2. Visitor car parking shall be clearly identified and may not be stacked car parking.
3. Visitor car parking shall be located between any roller shutter door and the front boundary.
4. Pedestrian and driveways shall be separated.
5. Driveways shall be designed to accommodate removalist vehicles.

6. Give preference to underground parking, whenever possible by:
   - Facilitating natural ventilation to basement and sub-basement car parking areas, where possible.
   - Integrating ventilation grills or screening devices of car park openings into the facade design and landscape design.
   - Providing safe and secure access for building users, including direct access to residential dwellings, where possible.
7. Where above ground enclosed parking cannot be avoided, ensure the design of the development mitigates any negative impact on streetscape and street amenity by:
   - Avoiding exposed parking on the street frontage.
   - Hiding car parking behind the building facade. Where wall openings (windows, fenestrations) occur, ensure they are integrated into the overall facade scale, proportions and detail.

Figure 19 Car Parking at grade

Pedestrian Access

Objectives

a) To promote shop top housing, which is well connected to the street and contributes to the accessibility of the public domain.

b) To ensure that residents, including users of strollers and wheelchairs and people with bicycles, are able to reach and enter their dwelling and use communal areas via minimum grade ramps, paths, access ways or lifts where practical.

Controls

1. Utilise the site and it's planning to optimise accessibility to the development.
2. Provide high quality accessible routes to public and semi-public areas of the building and the site, including major entries, lobbies, communal open space, site facilities, parking areas, public streets and internal roads.
3. Promote equity by:
   - Ensuring the main building entrance is accessible for all from the street and from car parking areas.
   - Integrating ramps into the overall building and landscape design.

12.4 Amenity and Environmental Impact

Privacy

Objectives

a) To locate and design buildings to meet projected user requirements for visual and acoustic privacy and to protect privacy of nearby residents.

b) To avoid any external impacts of a development, such as overlooking of adjoining sites.

c) To provide reasonable levels of visual privacy externally and internally, during the day and at night.

d) To maximise outlook and views from principal rooms and private open space.

Controls

1. Building siting, window location, balconies and fencing should take account of the importance of the privacy of on site and adjoining buildings and outdoor spaces.
2. Windows to habitable rooms should be located so they do not overlook such windows in other dwellings within the development or areas of private open space.
3. Landscaping should be used where possible to increase visual privacy between dwellings and adjoining properties.
4. Design building layouts to minimise direct overlooking of rooms and private open spaces adjacent to dwellings by:
   - Balconies to screen other balconies and any ground level private open space.
   - Separating communal open space, common areas and access routes through the development from the windows of rooms, particularly habitable rooms.
   - Changing the level between ground floor dwellings with their associated private open space, and the public domain or communal open space.
5. Use detailed site and building design elements to increase privacy without compromising access to light and air by:
   - Offsetting windows of dwellings in new development and adjacent development windows.
   - Recessed balconies and/or vertical fins between adjacent balconies.
   - Solid or semi-solid balustrades to balconies - louvres or screen panels to windows and/or balconies.
   - Fencing.
   - Vegetation as a screen between spaces.

- Incorporating planter boxes into walls or balustrades to increase the visual separation between areas.
- Utilising pergolas or shading devises to limit overlooking of lower dwellings or private open space.

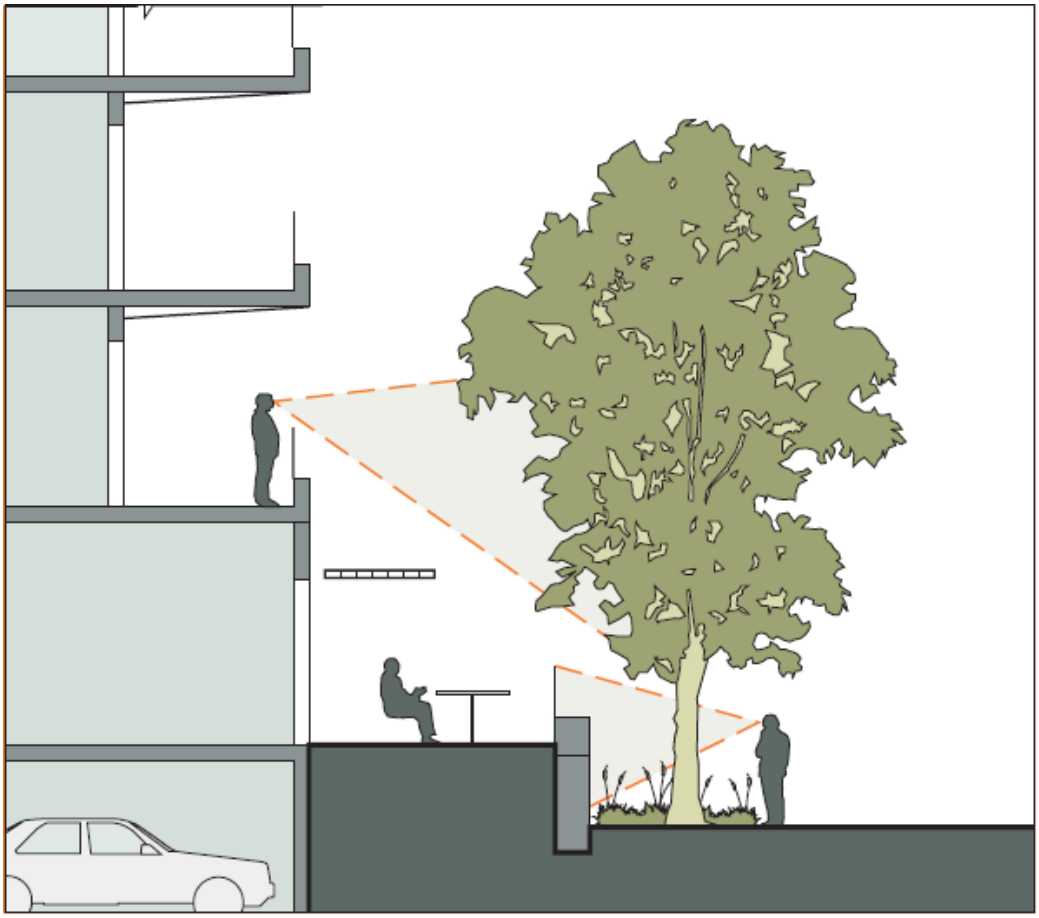


Figure 20 Balconies and Screening

Figure 21 Privacy, balconies and screening

Acoustic Impact

Objective

To ensure a high level of amenity by protecting the privacy of residents within shop top housing.

Controls

1. Noise attenuation measures should be incorporated into building design to ensure acoustic privacy between on-site and adjoining buildings.
2. Buildings having frontage to a Classified Road or a railway and impacted upon by rail or traffic related noises must incorporate the appropriate noise and vibration mitigation measures into the design in terms of the site layout, building materials and design, orientation of the buildings and location of sleeping and recreation areas.
3. The proposed buildings must comply with the Environment Protection Authority criteria and the current relevant Australian Standards for noise and vibration and quality assurance.
4. Arrange dwellings within a development to minimise noise transition between dwellings by:
   - Locating busy, noisy areas next to each other and quieter areas next to other quiet areas, for example, living rooms with living rooms, bedrooms with bedrooms.
   - Using storage or circulation zones within a dwelling to buffer noise from adjacent dwellings, mechanical services or corridors and lobby areas.
   - Minimising the amount of common walls with other dwellings.

- Design the internal dwelling layout to separate noisier spaces from quieter spaces by grouping uses within a dwelling - bedrooms with bedrooms and service areas like kitchen, bathroom, and laundry together.

13. Restaurants/Outdoor Cafes

Background

There is an increasing trend to have outdoor eating in conjunction with restaurants and cafes. This contributes to the activity in ~~business areas~~ E1 – Local Centre, E2 – Commercial Centre, E3 – Productivity Support or MU1 – Mixed Use zones. There is however a potential conflict between the users of outdoor eating areas and users of the footpath areas.

Objectives

a) To ensure that outdoor cafes enhance the economic viability for centres.

b) To ensure that outdoor cafes enhance the streetscape to create attractive and vibrant surroundings.

c) To preserve or enhance public amenity, safety and access.

Controls

These controls apply to outdoor eating areas on public footpaths. Other than Hours of operation, these controls do not apply to outdoor eating areas that may also take place on private land.

Building Form, Streetscape and Layout

6m wide footpaths or greater.

Locate outdoor cafe seating close to the kerb. This leaves space near the building frontage for pedestrian passage. See Figure 22.

Figure 22 Outdoor cafe seating on 6m wide footpath

1. There shall be no increase in the number of chairs and tables at each individual cafe site without further approval from Council.
2. Outdoor cafe furniture shall remain at least 3m away from any change in direction of kerb and gutter, as occurs at street corners and from any bus stop or taxi stand.

3. Outdoor cafe furniture shall remain at an appropriate distance from any pedestrian crossing, disabled parking spaces, post box, public telephone, street sign, street tree or other street structure.
4. Outdoor cafe furniture shall be arranged to avoid the standing of chairs within less than 1m of the back of the kerb (see Figure 22).
5. Outdoor cafe sites shall allow appropriate public access across the footpath between kerb and property boundary. This control does not apply within purpose built Council designed 'al fresco' dining areas.
6. The siting of outdoor cafe areas shall allow for pedestrian road crossing areas. Appropriate public access shall be provided along the footpath parallel to the boundary of the adjacent building or premises. A minimum of 2.5m of footpath shall be available to pedestrians at all time. (See Figure 23).

Figure 23 Placement of outdoor seating areas cannot interfere with pedestrian road access

Written Consent

Written consent from neighbouring tenants to establish outdoor cafe seating in front of other premises must be provided to council before such seating is permitted.

Car Parking and Access

No additional car parking is required for any outdoor eating area.

Amenity and Environmental Impact

The hours of operation shall be restricted to between 7:00 to 10:00 pm, unless otherwise varied by Council.

Operational matters

For further information on operational matters refer to the Appendix.

Landscaping

Planter boxes should be provided to enclose eating areas.

Site Services

1. If any of Council's street furniture or other items such as garbage bins, seats and planter boxes has to be removed for the installation of outdoor cafe seating, then that removal and any subsequent re-erection in the vicinity shall be at the permit holder's expense and shall be completed to Council's satisfaction.
2. Any additional lighting to normal street lighting shall be provided at the applicant's expense and shall be completed to the satisfaction of Council.
3. Any illuminations shall be appropriately managed during operations of the premises.

14. Child Care Centres

Background

There is an increasing need to have child care centres in close proximity to work places and places of residence. The need to locate child care centres in close proximity to work places and places of residence in business centres is balanced by the need to ensure that other business uses do not adversely affect the operation of a child care centre and vice versa. The Department of Community Services also regulates the standards and operations of child care centres.

Lot Sizes

The appropriate lot size is determined by the proposed number of children.

Objectives

a) To maintain the amenity, streetscape and character of the area.

b) To limit traffic and parking issues to the level found within the area.

Controls

1. The maximum number of children in any centre cannot exceed 45 for 0-5year olds, however Council may consider a maximum number of 60 children per centre of which 30% must be aged between 0-2.

The proposed child care centre must comply with open space requirements as set out in the Children Services Regulation 2004.

Licence Requirements

In order to operate a child care centre, the applicant needs to obtain the following:

1. A development consent from Council under the Environmental Planning and Assessment Act 1979.
2. A licence to operate from the NSW Department of Community Services (DOCS) under the Children and Young Persons (Care and Protection) Act 1998 and the Children's Services Regulation 2004.

It is strongly recommended that applicants arrange a meeting with Council prior to submitting a development application to ensure that all the pre-requisite documentation is in order. This will save time and money for the applicant.

Objectives

a) To ensure that Child Care Centres are compatible with the business environment.

b) To minimise any adverse impact of Child Care Centres on surrounding properties.

c) To locate childcare centres where they would not have an adverse impact on the safety and health of children.

Controls

The following controls are in addition to those in Sections 1 – 9.

Site Planning

1. Site planning should be sensitive to site attributes, such as streetscape character, natural landform, existing vegetation, views and land capability.

2. The site layout should enhance the streetscape through the use of landscaping and built form.
3. Site planning should enable buildings to address streets and public open spaces.
4. The site layout should ensure that the external play area is maximised and enjoys solar access.
5. The site layout should contribute to personal safety and to the protection of property by permitting casual surveillance of adequately lit outdoor spaces from windows and entries.
6. In areas exposed to significant levels of off-site noise, the site layout and building forms should assist in minimising noise entry.
7. The site layout should ensure that the front entrance to the Child Care Centre is easily located and accessible.

The outdoor play space shall not be located within the setback to the street;

1. Buildings shall be designed to ensure that sunlight shall be available to 50% of the outdoor play area for a minimum of 3 hours between 9.00 am and 3.00 pm on June 21 or shall not create additional overshadowing;
2. The play area shall not be used as a stormwater detention basin.

Building Appearance, Streetscape and Layout

1. A Child Care Centre must provide at least 3.25sqm of unencumbered indoor play space per child.
2. Indoor Play Areas
3. A centre must provide at least 3.25sqm of unencumbered play space per child

Landscaping and Fencing

1. Where a fence adjoins a park it shall be of a high-grade material consistent in quality with the building and the context of the park, and shall be designed to address the park;
2. Solid front fences and walls shall be a maximum of 1.2m in height;
3. Fences shall be constructed of materials compatible with the proposed building;
4. Gates shall be the same height, self-closing and be secure and fitted with a childproof lock.

Car Parking and Access

Access for the disabled including those with prams is to be provided from the car parking area to the building.

Amenity and Environmental Impact

Adjoining uses

Child Care Centres shall be designed and operated so that noise generated by the centre does not impact significantly upon adjoining properties.

Lead, Asbestos and other contaminants

1. Child Care Centres shall not be constructed on sites that are contaminated.
2. All buildings, whether to be built, extended, renovated or converted to a Child Care Centre shall not contain any material or substance that will cause lead or asbestos or other contamination or poisoning.

Noise

Child Care Centres shall not be permitted in areas where aircraft noise levels exceed *25 Australian Noise Exposure Factor (ANEF).*

Site Services

Owners must provide their own waste management system. Area must be designated for the storage of waste on site.

15. Telecommunications Facilities

Background

There is a need to permit Telecommunications Facilities to allow sufficient coverage for uses of mobile telephones. This need is balanced by the need to consider the environmental impact of these on rural areas. Telecommunications towers are also managed by the Australian Communications Authority.

Objectives

a) To ensure that Telecommunications Facilities are not within close proximity to dwellings or sensitive populations in order to minimise the potential of electro-magnetic radiation exposure.

b) To ensure that the siting of Telecommunications Facilities is compatible with other permissible and adjoining land uses.

c) To ensure that Telecommunications Facilities are sited with minimal intrusion.

d) To minimise the number of Telecommunications Facilities by encouraging the co-location and sharing of facilities.

Controls

Site Planning

1. A Telecommunications Facility shall not to be located where it will detract the heritage significance or settings of a heritage item or heritage conservation area;
2. The selection of a site shall involve a site analysis of the existing streetscape;
3. The location of a Telecommunications Facility shall not be within a 300m “buffer” from an adjoining dwelling or sensitive population unless the annual average exposure limit does not exceed 0.2uW/cm2;
4. Telecommunications Facilities and associated ground facilities are not permitted on land below the PMF level;
5. The erection of any new Telecommunications Facility must be proven to be required only where no available alternative for co-location is possible;
6. The construction of any Telecommunications Facility must have the demonstrated potential for co-location of additional facilities and must be addressed as part of any development application proposal.

Building Design, Streetscape and Layout

1. Where possible a Telecommunications Facility should be integrated into the design of a building in the business zone to minimise its impact on the streetscape of a business area.

2. Where a tower is proposed to be used:
   - The shape, height and colour of the Telecommunications Facility needs to be addressed in order to ensure that visual amenity is maintained;
   - Wherever possible, Telecommunications Facilities should be of a slimline monopole construction;
   - Advertising signs of any type, including logos are not permitted on the Telecommunications Facility;
   - Night illumination is not permitted; except where a proposed Telecommunications Facility infringes the Obstacle Limitation Surface (OLS) for aircraft safety;
   - Landscaping is required where any existing vegetation will not adequately screen a Telecommunications Facility.

Amenity and Environmental Impact

1. All sites for Telecommunications Facilities and associated ground facilities must be enclosed by a minimum of 1.8m open mesh or similar fencing to prevent public access to the site in order to maintain public safety.
2. All sites must have warning and information signs displayed to minimise public risk.
3. The level of electro-magnetic radiation emitted from any Telecommunications Facility must not exceed the limit of 0.2uW/cm2.
4. If at any one time a Telecommunications Facility is no longer needed, or no longer in operation, the carrier will, except otherwise agreed with Council, at its own cost remove the structure and facilities and restore the land to its natural state, within a three (3) month period. The carrier must also notify Council by letter prior to the removal of any Tower.
5. Once development has been completed on the site, the carrier must then restore the site to its previous state. Under the *Telecommunications Code of Practice 2008*, this work must commence within 10 working days after completion of the development.

16. Used Clothing Bins

Applies to

This section applies to charity bins located on either private or Council land.

Background

Used clothing bins are considered beneficial for the local community as they provide a means for residents to dispose of unneeded clothing items whilst providing an avenue for charities to obtain clothing donations from the public to provide goods, services and financial relief for disadvantaged people. Furthermore, clothing bins have the capacity to divert a substantial amount of recyclable material from landfill, thus ensuring the continued protection of the environment. The use of clothing bins is important as it supports both charitable causes and local residents in need.

Objectives

a) To recognise used clothing bins form a legitimate and appropriate means of social support while encouraging the recycling of unneeded clothing.

b) To allow for the operation of used clothing bins in a manner which limits adverse impacts upon visual amenity, health amenity, existing landscaping and the safety of pedestrians and vehicles.

c) To control the number and location of used clothing bins within the Liverpool LGA.

d) To regulate the size, appearance and maintenance of used clothing bins.

e) To provide Council with legal protection from issues that may arise with regard to the placement and operation of used clothing bins.

General controls for all Used Clothing Bins

The following provisions are to be applied in conjunction with used clothing bin controls contained in Part 1 of the DCP.

1. Used clothing bins are permitted in all business zones, the private recreation zone and on compatible sites such as educational establishments and places of public worship.
2. A maximum of 8 square metres must be identified in each development application for retail/shopping centre, schools and places of public worship for the future placement of used clothing bins.
3. A maximum of 2 used clothing bins are permitted on each shopping centre site. The bins at each shopping centre location are to be operated by the one charity organisation. Council reserves the right to use its discretion in determining whether additional bins are appropriate, and whether the site is considered suitable.
4. A used clothing bin must clearly display the name and telephone number of the operator and not exceed the following dimensions:
   - Width: 1.2 metres
   - Depth: 1.3 metres
   - Height: 1.9 metres
5. The used clothing bin is to be placed on a concrete slab to allow all weather use.
6. Used clothing bin should be readily accessible and are not to be located in a designated car parking space and manoeuvring areas, nor in such a way that contravenes any condition of development consent applicable to the site.

7. A used clothing bin must not be located in a position where it could cause an obstruction to pedestrian and cycle paths, affect vehicular sightlines, on a road verge or in a manner which contributes to a potentially dangerous situation.
8. At no time will a used clothing bin be permitted on Council's footpaths, cyclepaths or nature strips.

17. Service Stations

Applies to

This section applies to Service Stations in ~~Business zones~~. E1 – Local Centre, E3 – Productivity Support or MU1 – Mixed Use zones.

Background

Service Stations are permitted in the ~~B1 Neighbourhood Centre; B2 Local Centre; B4 Mixed Use; and B6 Enterprise Corridor zones~~ E1 – Local Centre, E3 – Productivity Support or MU1 – Mixed Use zones (Refer to Liverpool Local Environmental Plan 2008). Service Stations provide convenient goods to surrounding localities and passing commuter traffic.

Objectives

a) To preserve public amenity, safety and access.

b) To limit the impacts upon adjoining land uses such as residential accommodation and business uses.

Controls

1. Car parking areas shall:

    a) Be located to minimise conflict with vehicle movements for other uses on the site.

    b) Be located as close as possible to the use generating the need for parking e.g. take away food and/or retailing component to minimise on street car parking.

    c) Be provided in accordance with Part 1 of LDCP 2008.

2. Drive through areas should be located to minimise conflict with pedestrian movement and impacts on neighbourhood amenity.

3. Driveways must be appropriately designed and be located to ensure safe access and egress, particularly in reference to sight lines and pedestrian movements.

4. Buildings should be sympathetic to existing setbacks, heights and building envelopes of neighbouring properties.

5. Appropriate mitigation measures should be provided to limit noise, light overspill, visual impact and odour.

6. A Landscape Plan, prepared by a suitably qualified person, is to be submitted with any development application. Landscaping is to provide a visual and acoustic buffer to adjoining development.

18. Restricted Premises

Applies to

This section applies to 'Restricted Premises' (as defined by the Liverpool Local Environmental Plan 2008) in ~~Business zones~~. E2 – Commercial Centre or MU1 – Mixed Use zones.

Objectives

a) To ensure that the design and external appearance of restricted premises (including colour scheme and lighting) does not have an adverse impact on the architectural character of the surrounding built environment and streetscape appearance

b) To ensure that the safety of all staff and visitors to restricted premises is maintained when approaching, entering and leaving the premises

c) To ensure that restricted premises are provided with appropriate facilities in accordance with the relevant occupational health and safety provisions

d) To ensure that adequate and suitable facilities are provided within restricted premises to ensure the privacy, comfort, safety and security of staff and patrons

e) To ensure that advertising and signage associated with restricted premises is discreet, does not draw attention to the use and does not result in visual clutter or other adverse visual impacts on the surrounding area

f) To minimise the potential for the operation of a restricted premises to cause a disturbance in the surrounding area because of its size, location, hours of operation, number of employees or clients, or proximity to other restricted premises or sex services premises

g) To ensure the safe and adequate storage, handling and disposal of contaminated waste

Controls

Siting

1. Restricted premises shall not be located within 150m of any land zoned residential or any place of worship, school, community facility, child care centre, hospital, rail station, bus stop, taxi stand, licensed premises (i.e. hotel, club, restaurant), or any place regularly frequented by children for recreational or cultural pursuits.

2. Restricted premises shall not be located within 150m of any land for which a consent for the uses listed in item 1 above exists.

3. In determining an application to carry out development for the purpose of restricted premises, the consent authority must consider the following matters:

   - whether the operation of the restricted premises will be likely to cause a disturbance in the neighbourhood because of its size, location, hours of operation, clients or the number of employees and other people working in it,

   - whether the operation of the restricted premises will be likely to interfere with the amenity of the area, and

   - whether the operation of the restricted premises will be likely to cause a disturbance in the neighbourhood when taking into account other businesses operating in the neighbourhood offering similar goods and services and involving similar hours of operation.

Design of Premises

4. No part of the premises (other than an access corridor to the premises) shall be located at ground floor level, mezzanine, sub basement level or street level or be visible from a public place.

5. Restricted premises must be designed so that there is only one visible pedestrian entrance to the premises from the primary street frontage. In instances where there is no front access and/or front access is impractical, Council will consider a side or rear pedestrian access where adequate attention has been given to safety and security matters.

6. Rear or side pedestrian access is to be limited to one only, unless it can be demonstrated to Council's satisfaction that more than one access contributes to the amenity and functional efficiency of the restricted premises and surrounding uses and does not result in safety and security concerns or visual clutter via the need for additional signage.

7. The external appearance of restricted premises must respect the character and appearance of the streetscape, such that they do not become a prominent feature in the street. In this regard, the external colour scheme of these premises is to be consistent with surrounding colour schemes. Vivid and/or ostentatious colour schemes will not be permitted unless it can be demonstrated that the proposed colour scheme would be in keeping with the existing streetscape.

8. All entrances and exits of restricted premises must have appropriate lighting to ensure the safety of all staff and visitors as they arrive and leave the premises. Any flashing, intermittent etc. lighting used in conjunction with a restricted premises must not be visible from a public place.

9. No merchandising display relating to the sex services premises shall be erected, displayed or exhibited in any location which is visible from a public place or in an access corridor (including any stairwell to the premises).

Signage

10. Signage is to be discreet and is limited to a combination of the business name, address and phone number.

11. There is to be one sign, not exceeding 1.5sqm in area, per premises. A second sign may be permitted where pedestrian access is provided at the side or rear of the site.

12. The content, illumination and shape of the sign must not interfere with the amenity of the locality. In this regard, signs are not to include suggestive or offensive material, or include colours or designs that may distract passing motorists. Illumination of signs must not cause nuisance to any adjoining premises or interfere with the amenity of the area.

13. In addition to a business identification sign, a clearly visible street number is to be displayed on the premises.

Note: In addition to the above controls, applications for restricted premises must comply with the requirements of the Crimes *Act 1900 Section 578 (e)* and *Classification (Publications, Films and Computer Games) Enforcement Act 1995*.

Appendix – Outdoor Cafes

Furniture

Each establishment shall adopt its own consistent colour scheme and style for items such as seats, tables and umbrellas. The use of mismatched tables, chairs and umbrellas are not permitted.

1. Outdoor cafe furniture shall be of commercial quality to withstand the wear of outdoors commercial use.
2. Plastic tables and chairs are not permitted without approval of Council.
3. Selection, design and installation of outdoor cafe furniture shall be subject to Council approval.
4. Council must approve the colour and style of outdoor umbrellas within the CBD.
5. Outdoor cafe furniture including plants, containers and other items shall be approved by Council and maintained at all times in an appropriate aesthetic, structurally sound and hygienically clean condition by the permit holder.
6. Where footpath awnings are absent the permit holder shall provide removable outdoor umbrellas for the outdoor cafe.
7. Outdoor umbrellas are to be installed at such a height or in such a manner that there is no conflict with passing pedestrian traffic.
8. Outdoor umbrellas shall be a minimum height of 2.1m at the lowest point of overhang and shall be counterweighted or capable of being easily fastened to resist overturning. In some cases umbrellas can be inserted into permanent in-ground steel base fittings.
9. Outdoor chairs shall be capable of being easily stacked or folded for storage unless otherwise permitted by Council.
10. Outdoor cafe furniture and barricades shall be easily movable, so as to assist maintenance and cleaning of the pavement.
11. Outside of trading hours, outdoor cafe tables, chairs and umbrellas shall be removed from the footpath by the permit holder and shall be stored within the associated building premises.
12. Access to outdoor cafe seating shall be provided for people with disabilities.

Operation

The permit holder or delegated person in authority must observe the following requirements:

1. All business activities in the outdoor cafe area shall be conducted in a safe and clean manner.
2. All decisions of management shall reinforce the fact that the outdoor cafe area is a public place, which exists for the welfare of the public.
3. The outdoor cafe, and the area between the outdoor cafe and the associated business premises, shall be kept clean at all times, and any spilt food, liquid or other material likely to cause injury or offence shall be removed immediately by the permit holder or operator.
4. Food and drink preparation activities are not permitted in outdoor cafe areas.

5. All food scraps, eating utensils and waste material shall be removed from the outdoor cafe and taken into the associated business premises immediately after the completion of each meal.
6. Food waste disposal facilities must be provided within the associated business premises as required by Council.
7. Moveable barriers, tables, chairs, umbrellas and the like shall be removed from the footpath and stored in the associated business premises outside the approved trading hours. The leased area must be left clean at the end of the days trading. The operator is responsible for any damage sustained to Council property directly or indirectly associated with the outdoor cafe's operations.
8. No sound amplification equipment, jukeboxes or loud speakers shall be used in the outdoor cafe area for the purpose of announcements, broadcasts, playing of music (whether recorded or otherwise) or similar purposes.
9. Live entertainment may be provided at the outdoor cafe area with the prior written permission from Council.

Insurance

To provide adequate protection against claims that may arise as a result of the operation of the outdoor cafe, each operator shall have a current public liability risk insurance policy.

Council's public liability insurance requirements are as follows:

1. The applicant shall have a current liability risk insurance policy for the sum of not less than $10,000,000, which covers public liability resulting from actions associated with the outdoor cafe.
2. The policy shall indemnify Liverpool City Council against any public liability claims within the area between the front property boundary of the subject premises and the kerb line of the street for the full frontage of the subject premises. Where the outdoor cafe is not directly adjacent to the subject premises, the area covered by the insurance policy shall include the outdoor cafe permitted area and the area between the outdoor cafe and the subject premises frontage. The policy shall also cover accidents involving staff employed and the public within the associated outdoor cafe seating areas.
3. The applicant shall keep the policy current at all times and shall provide Liverpool City Council with a copy of the policy prior to the issue of the 'Permit for Outdoor Cafes'.

Footpath Permit Agreement and Insurance

Applicants will also need to provide public liability insurance for the outdoor cafe area and sign a permit agreement. The permit agreement is a legal document between the applicant and Council that allows the applicant to use the Council approved area for seating. As the insurance is renewed each year so is the permit agreement

Agreement and Enforcement

The Permit Agreement must be completed to Council's satisfaction and signed by the applicant.

Enforcement Measures for Non-Compliance

If non-compliance is noted, the permit holder will be given:

Step 1

A verbal warning and an explanation of the problem.

Step 2

A written notice to comply. If non-compliance continues, the permit holder will be given:

Step 3

An infringement notice and a maximum of up to five (5) penalty units.

Step 4

If there is continued non-compliance, Council reserves the right to revoke the permit. Any breach of safety must be rectified immediately, as non-compliance will result in instant loss of permit.

Site plans of the footpath area drawn to scale (1:100) including:

1. The dimensions and boundaries of the outdoor cafe.
2. The number and location of tables and chairs in the outdoor cafe area.
3. The kerb line of the street.
4. The width of the business premises frontage and location of entrances.
5. The width of the existing footpath adjacent to the business premises frontage and the remaining width of the footpath after allowing for outdoor cafe seating.
6. The location of pedestrian or vehicular entrances which serve the adjoining buildings premises or adjacent areas.
7. The design, material and location of any barriers intended to define any part or boundary of the outdoor cafe.
8. The location of any public utility structures such as power poles, bus stops, trees, street furniture, signposts or other items, which are adjacent to the site.
9. The area to be covered by the public liability insurance. This will include the permitted outdoor cafe area and the connecting area to the shop through which food and drink is delivered.
10. Provision of emergency vehicle access where required by Council so that such access always has priority over all outdoor cafe areas.
11. Details of the proposed colour, type and material of proposed chairs, tables, umbrellas, barricades and other items.
12. Details of proposed planter boxes, including plantings.
13. Details of proposed artificial lighting and/or heating.
14. Details of access, safety and other matters including those mentioned elsewhere in this DCP.

Step 5

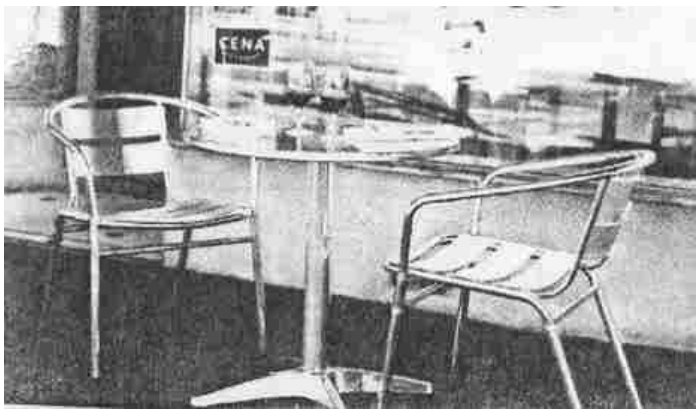
Signing of the Permit

If Council approves the Development Application, the applicant is required to accept the conditions, which apply to the Footpath Permit Agreement (See Appendix 3; Application for a Permit for Outdoor Cafes), by formally signing and receiving all relevant

documentation. Council will require a copy of the public liability insurance for the outdoor cafe and associated areas before the permit is issued.

Chairs and tables

Examples of Suitable Outdoor Furniture



Liverpool city council
creating our future together

Council Administration Centre Level 2, 33 Moore Street, Liverpool NSW 2170

Postal Address Locked Bag 7064, Liverpool BC NSW 1871

Customer Contact Centre 1300 36 2170

Fax 02 9821 9333

NRS (National Relay Service) 133 677

Email lcc@liverpool.nsw.gov.au

Website www.liverpool.nsw.gov.au

Liverpool City Council
creating our future together

Liverpool Development Control Plan 2008

Part 7

Development in ~~Industrial~~ areas zoned E4 – General Industrial or E5 – Heavy Industrial

~~3 September 2014~~
May 2024

Part 7 must be read in conjunction with Part 1

Check if any Locality Parts also apply

Liverpool Development Control Plan 2008
Part 7 Development in ~~Industrial~~ areas zoned E4 – General Industrial or E5 – Heavy Industrial

Table of Contents

1. Preliminary 5
2. Site Area 7
3. Site Planning 8
4. Setbacks 10
5. Landscaped Area 12
6. Building Design, Streetscape and Layout 14
7. Landscaping and Fencing 17
8. Car Parking and Access 20
9. Amenity and Environmental Impact 26
10. Site Services 29
11. Change of use of existing buildings 30
12. Non Industrial Developments 31
    - 12.1 Ancillary Dwellings 31
    - 12.2 Sex Service Premises 32
    - 12.3 Child Care Centres 33
    - 12.4 Telecommunication Facilities 35
    - 12.5 Shops, Service Stations & Restaurants 37
    - 12.6 Places of Public Worship 38
    - 12.7 Crematoria 38

Table of Figures

Figure 1 Setback for an Industrial Building 11
Figure 2 Landscaping along frontage. 13
Figure 3 Character of Industrial Buildings 15
Figure 4 Landscaping in front of a fence. 17
Figure 5 Landscaping in front of a high fence. 19
Figure 6 Landscaping between car parking spaces. 20
Figure 7 Lots with speed humps on service lane 23
Figure 8 Land without road access and land which must give Right of Way……..22
Figure 9: Kurrajong Road and service road section 23
Figure 10 Lots which must dedicate easement 23
Figure 11 Potentially Contaminated land 28

List of Tables

Table 1 Setbacks 10
Table 2 Landscaped Area 12
Table 3 Right of Way 21

1. Preliminary

Applies to

1. Part 7 applies to land ~~in industrial zones~~ zoned E4 – General Industrial or E5 – Heavy Industrial under *Liverpool LEP 2008,* except land at Shepherd Street, Liverpool and north of Newbridge and Bridges Road, Moorebank which is in Part 4. Liverpool City Centre.
2. Part 1 of the DCP also applies to the land.
3. Part 2.8 only applies to the Moorebank Defence Lands.

Background

There are several areas in Liverpool that are zoned industrial. The oldest industrial area in Liverpool is in Shepherd Street. The Warwick Farm and Moorebank areas began developing in the 1950's. The Chipping Norton area began developing in the 1960's. The area of Prestons east of Ash Road developed in the 1970's. Redevelopment has subsequently taken place in these areas.

The Prestons and the Cross Roads area began developing in the 1990's. The area around Anzac Road began developing in the 2000's.

Bulky Goods Retailing in Industrial Areas in centred on Warwick Farm and at Cross Roads. Over time additional non-industrial uses have taken place in the industrial areas.

Link to Liverpool LEP 2008

Liverpool LEP 2008 provides overall requirements and objectives for development in the industrial areas of Liverpool. It does not just cover industrial development but also non- industrial development in industrial areas.

Each zone provides objectives, which provide direction for the controls in the DCP. There are also general provisions for development in the industrial zones as well as provisions for specific forms of development in the industrial areas or for development on specific sites.

Objectives

a) To provide urban design requirements for the range of uses permitted in the various industrial zones.

b) To provide urban design requirements to ensure that the range of uses permitted in the various industrial zones are compatible with each other and with development permitted in adjoining zones.

c) To provide design requirements to ensure development in the industrial zones are compatible with the natural environment.

d) To provide design requirements to ensure that development in the industrial zones are compatible with the requirements of *Liverpool LEP 2008*.

e) To provide design requirements to ensure that development in the industrial zones which is in the vicinity of land within a residential zone would be compatible with the character and amenity of the existing and likely future nearby residential areas in terms of:

- Its scale, bulk, design, height, siting and landscaping.
- Its operation.
- Traffic generation and car parking.
- Noise, dust, light and odour nuisance.
- Privacy.
- Stormwater drainage.
- Hours of operation.
- Overshadowing.

2. Site Area

Background

The subdivision of sites zoned for Industrial use is permitted within *Liverpool LEP 2008*. Subdivision of sites may only occur if the newly created site meets the required site dimensions. Any access handles or corridors, cannot be included as part of the site area.

Objectives

a) To accommodate the needs of industry while ensuring that all allotments are of sufficient size to function efficiently

b) To enhance the quality of the streetscape in industrial areas.

Controls

Minimum site area of an allotment: 2,000sqm.

3. Site Planning

Background

Industrial areas within Liverpool LGA are potentially a very intensive use of land. The extent of impervious area is often very high, which can have an impact not only on the adjoining land but also on the broader area. The layout of the proposed development will have a significant impact on the streetscape environment of industrial areas.

Objectives

a) To ensure that the development considers the impact on adjoining properties.

b) To consider the natural features of the site.

c) To consider any other potential site constraints.

Controls

1. Where possible, site planning allows for the retention of significant trees and vegetation, particularly near the street frontage.
2. The development must be designed around the site attributes such as slope, existing vegetation and land capability.

Specific Controls for Prestons Industrial Area

Archaeologically Significant Sites

The following sites have been identified as having potential archaeological deposits and as such are required to lodge an archaeological investigation and heritage report prepared by a suitably qualified person with any Development Application for subdivision and/or development.

- Lot 10 DP 1070164 (Lot 10 Illaroo Road)
- Lot 1 DP 121122 (Lot 1 Kurrajong Road)
- Lots A, B, C, D DP 101475 (Kurrajong Road)

Bernera House Heritage Site

Lot 34, DP 2359 Yarrunga Road is identified as being the former location of Bernera House. Any DA for subdivision or development of this lot must be accompanied by an archaeological investigation and heritage report prepared by a suitably qualified person into the former house and outbuildings and any remnants or relics there of.

Land within Electricity Easements

The following general controls apply to any land affected by an electricity easement.

1. Buildings or other substantial structures or parts thereof shall not be erected within the easement area.
2. Minor structures, plant or equipment, shall not be erected or installed within the easement area without prior written approval of *TransGrid*.
3. Obstructions of any kind shall not be placed in the easement area within 15m of any part of a transmission line structure.
4. Vehicles, plant or equipment having a height exceeding 4.3m when fully extended shall not be brought onto or used within the easement without prior written approval of *TransGrid*.
5. Garbage, refuse or fallen timber shall not be placed within the easement area.
6. Flammable material shall not be stored within the easement area.

7. Trees and shrubs may be planted within the easement area provided that they are limited to types that will not grow to a height exceeding 4m.
8. Trailers and flammable material carriers shall not be parked within the easement area.

Servicing

1. *Integral Energy* has advised that until the rebuild of the Hoxton Park Zone Substation (2009/10), servicing capacity is limited within the Yarrunga Industrial Precinct. Council will refer any DA within this area (other than for subdivision or earthworks) to Integral Energy for their consideration. All DAs will be considered and development consents will be conditioned according to Integral Energy's response.
2. The Hoxton Park Recycled Water scheme provided by Sydney Water will service development within the Yarrunga precinct with non-potable water. Each Development Application must detail how dual reticulation is to be incorporated into development.

4. Setbacks

Background

The density and setbacks from the street frontage can have a significant impact on the general appearance of an industrial area. It can also impact on access to and from a site and on traffic circulation.

Objective

To ensure buildings do not adversely dominate the streetscape environment of industrial areas.

Controls

All buildings shall be setback in accordance with Table 1.

Table 1 Setbacks

Street	Primary Setback (Ground Floor)	Primary Setback (First Floor)	Secondary Setback
Classified Roads Any street fronting land in a residential zone	18m	15m	15m
Kurrajong Road	20m	20m	15m
Bernera Road , Governor Macquarie Drive and future link road across Hinchinbrook Creek to former Hoxton Park Airport	15m	12.5m	5m
All other street frontages	10m	7.5m	5m

Setbacks for land at Cowpasture Road (adjacent to future link road across Hinchinbrook Creek to former Hoxton Park Airport)

All buildings on land at Cowpasture Road (adjacent to future link road across Hinchinbrook Creek to former Hoxton Park Airport) shall be setback 5m from the rear and side boundary where this is not adjacent to the future link road.

Figure 1 Setback for an Industrial Building

Setbacks from Cabramatta Creek in Prestons

All development shall be set back from any land in the ~~E2~~ C2 Environmental Conservation zone along Cabramatta Creek in Prestons on the subject or adjoining properties by a minimum of 10m.

5. Landscaped Area

Background

The landscaping of a development has a major role in improving the streetscape of an industrial area. It also provides opportunities for staff recreation areas and absorption and detention of stormwater from the development. There is a need for sufficient area to be made available in order to provide sufficient landscaping.

Objectives

a) To ensure that sufficient deep soil areas are provided for landscaping.

b) To ensure that landscaping is provided to improve the streetscape environment of industrial areas.

c) To ensure that landscaping is sustainable in terms of length of plant life and maintenance.

Controls

1. A minimum of 10% of the site is to be landscaped at ground level.
2. A development must provide a landscaped area along the primary and secondary frontages of an allotment in accordance with Table 2

Table 2 Landscaped Area

Allotment size	**Minimum Landscape ~~Width~~ Depth (primary setback)**	**Minimum Landscape ~~Width~~ Depth (secondary setback)**
Smaller then 3,999sqm	5m	3m
Greater than 4,000sqm	10m	5m

3. Land which is at Cowpasture Road (adjacent to future link road across Hinchinbrook Creek to former Hoxton Park Airport) shall be landscaped in the setback 5m from the rear and side boundary (where this is not adjacent to the future link road).

Figure 2 Landscaping along frontage

6. Building Design, Streetscape and Layout

Background

All developments have an impact on the streetscape of industrial areas. This impact can result from the location, design and height of buildings and structures. Streetscape is the urban environment created by the relationship of built elements to the public domain. The quality and scale of architecture, landscape elements, natural elements and works in the public domain determine the streetscape character.

Ancillary elements of development such as advertising, driveways and fencing are important elements of the streetscape. To make a positive contribution to the streetscape, new development needs to reinforce the scale and character of existing buildings and landscape elements.

Crime Prevention Through Environmental Design (CPTED) is an integral component of high quality urban design and must be considered holistically throughout the design and development processes.

Objectives

a) To ensure the creation of an attractive streetscape character within each industrial area.

b) To encourage a high standard of architectural design for industrial buildings.

c) To ensure compatibility with any adjoining residential areas.

d) To promote a high standard of urban design, particularly along Classified roads.

e) To ensure buildings are orientated to allow surveillance from the street and adjoining buildings.

f) To locate and design buildings and structures to restrict access by intruders.

Controls

Facade treatment

1. The facades to a development must adopt a contemporary architectural appearance.
2. A development must use architectural elements to articulate facades, and minimise large expanses of blank walls. Architectural elements may include but not be limited to:
   - Defining the base, middle, or top of a building using different materials and colours.
   - Incorporating horizontal or vertical elements such as recessed walls or banding.
   - Defining the window openings, fenestration, building entrances, and doors.
   - Using roof forms and parapets to create an interesting skyline.
   - Using sun shading devices.
   - Incorporating public art work.
   - Using a variation of unit designs in a building complex.
   - Any other architectural feature to the satisfaction of Council.
3. Where a development proposes a portal frame or similar construction, Council does not permit the “stepping” of the parapet to follow the line of the portal frame.
4. The street facade of a development on a corner allotment must incorporate architectural corner features to add visual interest to the streetscape.

Figure 3 Character of Industrial Buildings

Materials & Colours

1. Glazing shall not exceed reflectivity of 20%.
2. A development must use:
   - Quality materials such as brick, glass, and steel to construct the facades to a development.
   - Masonry materials to construct a factory unit within a building, and all internal dividing walls separating the factory units.

Building design

1. The front door to a building should face the street.
2. The administration office or showroom must be located at the front of the building.
3. Windows on the upper floors of a building must, where possible, overlook the street.
4. The street number of a building must be visible from the street and made of a reflective material to allow visitors and emergency vehicles to easily identify the location of the building.
5. Open style or transparent materials are encouraged on doors and/or walls of lifts and stairwells, where fire safety requirements allow.
6. Waiting areas and entries to lifts and stairwells should be close to areas of active use and be visible from building entrances.
7. Driveways must provide adequate sight distance for the safety of pedestrians using the footpath area.
8. Pathways should provide direct access and any edgework should be low in height or not reduce visibility of the pathway.

9. Entry to basement parking areas should be through security access via the main building. This access should be fitted with a one way door (allowing for fire safety provisions) and allow only authorised access from the foyer into the basement.

10. Blank walls in general that address street frontages or public open space are discouraged. Where they are unavoidable building elements or landscaping must be used to break up large expanses of walls. In some cases an anti-graffiti coating will need to applied to the wall to a height of 2 metres.

11. All new industrial buildings are to demonstrate on the architectural plans that the rooftop is designed to enable the installation of solar panels.

Lighting

1. Lighting must be provided to the external entry path, common lobby, driveway, and car park to a building using vandal resistant, high mounted light fixtures.

2. The lighting in a car park must conform to *AS 1158.1, 1680, and 2890.1*.

3. External lighting to an industrial development must give consideration to the impact of glare on the amenity of adjoining residents.

Facilities

The siting of a telecommunication facility, aerial, satellite dish, plant room, lift motor room, mechanical ventilation stack, exhaust stack, and the like must integrate with the architectural features of the building to which it is attached; or be sufficiently screened when viewed from the street and neighbouring residential zoned land.

Service Areas

Service areas including waste, recycling areas and external storage areas are to be located away from principal street frontages and screened from view.

7. Landscaping and Fencing

Background

The landscaping of a development has a major role in improving the streetscape of an industrial area. All Industrial developments require landscaping to be provided. The landscaping must consider the existing streetscape character and the impact on neighbouring properties. The provided landscaping should make the site more attractive and soften the appearance of development.

Objectives

a) To establish an attractive streetscape character within the industrial areas.

b) To reduce the visual impact of industrial buildings & car parking areas.

c) To protect existing trees on site and on neighbouring allotments.

d) To provide outdoor amenity areas for use on industrial sites by employees.

e) To ensure that landscaping is sustainable in terms of length of plant life and maintenance.

f) To provide planting, which facilitates a habitat for native fauna.

g) To allow fencing to provide security to industrial premises.

h) To maximise surveillance using tall trees (lower branches above head height) and small shrubs and bushes.

Controls

The landscaped areas shall be landscaped to achieve that shown in the following illustration.

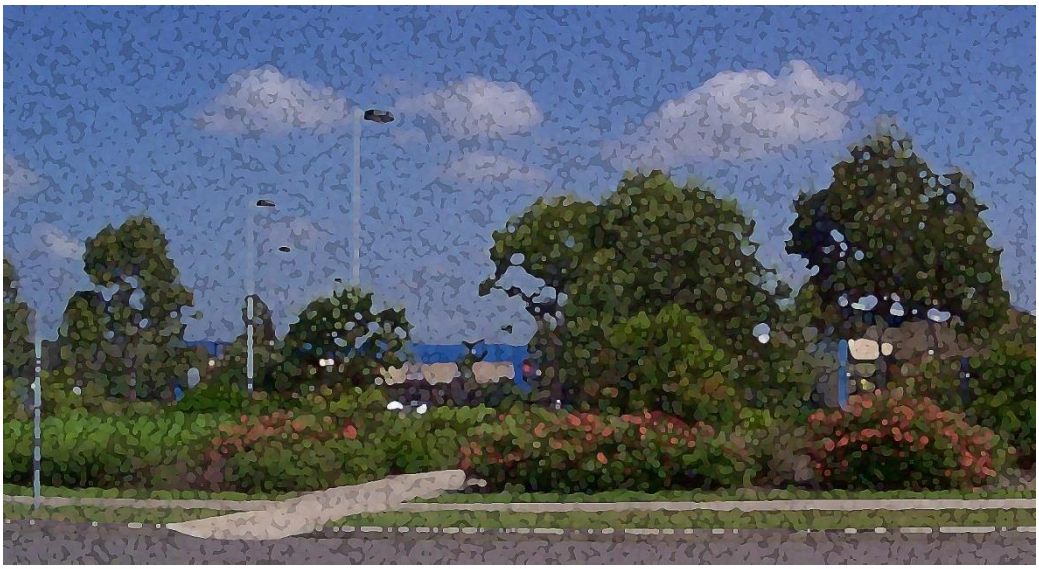


Figure 4 Landscaping in front of a fence

Landscape treatment in Industrial Areas

Landscaping within industrial areas shall generally involve the provision of trees and shrubs in mulched garden beds. In particular the landscaping shall involve the following:

1. The trees shall provide a canopy for the streetscape and soften the appearance of the industrial environment, without unduly concealing approved on site signage.

2. Mulched garden beds shall incorporate ground covers that will cover the ground area.
3. Shrubs shall be used to soften appearance of the industrial area but still allow line of sight between the street and the development.
4. Large shrubs shall be used as screen planting where there is a need to screen certain areas such as outside storage.
5. Shrubs shall only be planted in mulched garden beds.
6. Grassed areas may be considered in limited areas in conjunction with mulched garden beds.
7. Trees shall only be planted in grass where there is a border around the tree separating it from the grassed area.
8. The landscaping shall contain an appropriate mix of canopy trees, shrubs and groundcovers. Avoid medium height shrubs (0.6 -1.8m) especially along paths and close to windows and doors.
9. Landscaping in the vicinity of a driveway entrance should not obstruct visibility for the safe ingress and egress of vehicles and pedestrians.
10. Planting along pedestrian pathways, around car parking areas should be selected to promote surveillance and minimise areas for intruders to hide. Low hedges and shrubs, creepers and ground covers, or high canopied vegetation would be appropriate.

Trees

1. Trees must be planted in the landscape area at a minimum rate of 1 tree per 30sqm of the landscape area.
2. The trees must be capable of achieving a mature height greater than 8m.
3. Where trees are planted around high use facilities such as car parking areas and walkways, they should have clean trunks to height of 1.8m.
4. Large trees and shrubs should not be located so they can be used to access buildings on the site or adjoining properties.

Fences at Front Boundary

1. Solid front fences must have a maximum height of 1.2m.
2. Front fences higher than 1.2m shall be consistent with the following:
   - Maximum height of 2m.
   - Transparent.
   - Dark colour.
3. Chain wire, metal sheeting, brushwood and electric fences are not permitted.
4. Fences should not prevent surveillance by the building's occupants of the main open or communal areas within the property or the street frontage.
5. Where noise insulation is required, consider the installation of double-glazing or other noise attenuation measures at the front of the building rather than construction of a high solid form fence.

Screen Fencing

Where fencing is considered necessary to screen areas such as outside storage it shall consist of the following:

- Maximum height of 2m.
- May be solid construction.
- Shall be located behind the landscaped area.

Detailed Landscape Plan

A detailed landscape plan shall accompany a development application. A suitably qualified Landscape architect must prepare all Landscape Plans submitted with the development application. Refer to Part 1 for requirements for Detailed Landscape Plans.

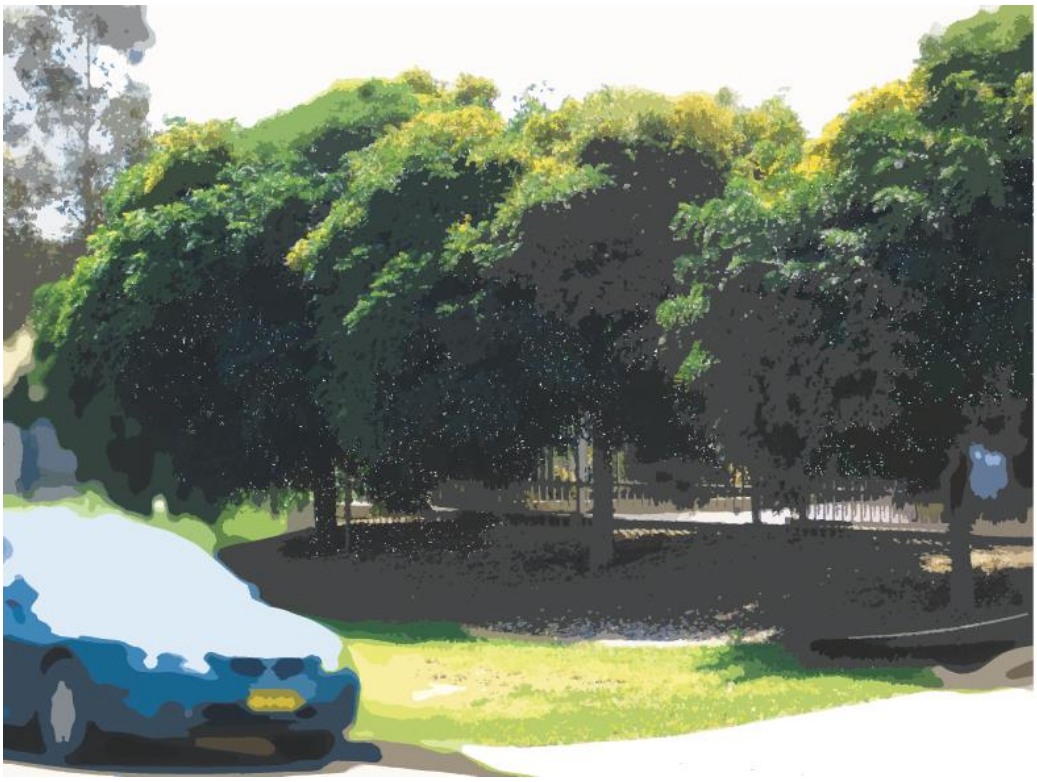


Figure 5 Landscaping in front of a high fence

8. Car Parking and Access

Background

Car parking and safe access provision is fundamental for all sites in the industrial areas. Refer to Part 1 for additional information about car parking and access requirements.

Objectives

a) To provide adequate on site car parking to reduce the need for street car parking.

b) To ensure safe and easy vehicle circulation within the site.

c) To provide safe and easy access to and from the site for pedestrians and motorists.

d) To minimise the impact of driveways and parking areas on existing landscaping, landform and streetscape.

e) To ensure pavement or driveway materials are sympathetic to the streetscape and surrounding landscape character.

Controls

1. The layout of driveways to loading docks must enable heavy vehicles to:
   - Enter and exit the site in a forward direction.
   - Park within designated loading areas.
   - When possible, loading docks are to be located in areas that:
     a. Are not exposed to public streets.
     b. Are generally separate from and do not interfere with car parking areas.
2. Car parking areas are to be landscaped to provide shade and reduce the visual impact of parked cars.
3. Provide a 2.5m wide landscape bay between every 6 - 8 car spaces.

Figure 6 Landscaping between car parking spaces

Traffic and Site Access adjacent to Kurrajong Road, Prestons

1. There is to be no truck access to sites from Kurrajong Road. All truck access to these properties is to be gained via rear driveways or roads.

2. An internal service road is to be provided adjacent Kurrajong Road which allows for safe car movements and may accommodate parking. See Figure 7.
3. Where a cul-de-sac is required a turning head with a minimum of 13.5m radius may be required.
4. The Kurrajong Road Service road will be created as a privately owned access way. As such right-of-way must be granted across each property.
5. Speed humps are to be provided within the service road at 100m intervals are to be located on the following lots at the following rates:
   - 1 speed hump on Lot 11, DP 1185132
   - 1 speed hump on Lot 41 DP 2359
   - 1 speed hump on Lot A DP 416483
   - 1 speed hump on Lot B DP 416483
   - 2 speed humps on Lot 43 DP 2359
   - 1 speed hump on Lot 20 DP 1173483

The subject lots are shown highlighted on Figure 7 below.

Figure 7: Speed humps are to be provided within the service road to be located on the highlighted lots at 100m intervals.

Right of Way

1. This DCP limits truck access for development on certain allotments facing Kurrajong Road. Also one part allotment has no road access due to severance caused by the M7. These allotments are listed in Column 1 of table 3.
2. To remedy this situation, certain allotments must retain a right-of-way across the land giving truck access to certain other lots as shown in the corresponding row of the table below. These allotments are listed in column 2 of table 3.

Table 3 Right of Way

Land which fronts Kurrajong Rd or without road access.	Land which must give right of way to the adjoining land
Lot A and B DP 416483	Lot 41 DP 2359
Lot B DP 416483	Lot A DP 416483
Lot 43 DP 2359	Lot 34 DP 2359

Lot 39 DP 2359	Lot 11 DP 1185132
Lot 38 DP 2359	Lot 1 DP 119428
Pt Lot 2 DP 1045029	Lot 3 DP 1045029

3. The location of this right of way is to be clearly shown within any DA for development of all lots listed in both column 1 and column 2.

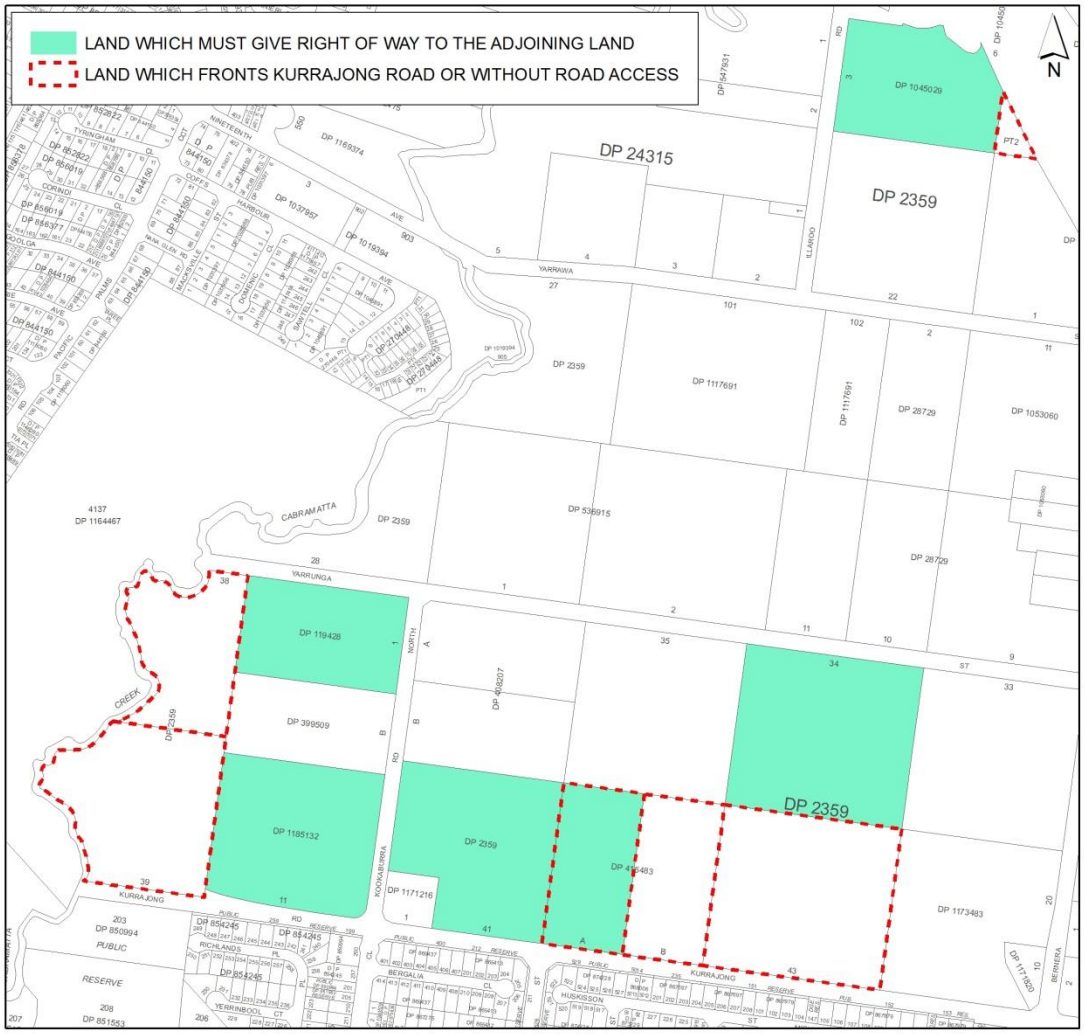


Figure 8: Land which fronts Kurrajong Rd or without road access and Land which must give right of way to the adjoining land.

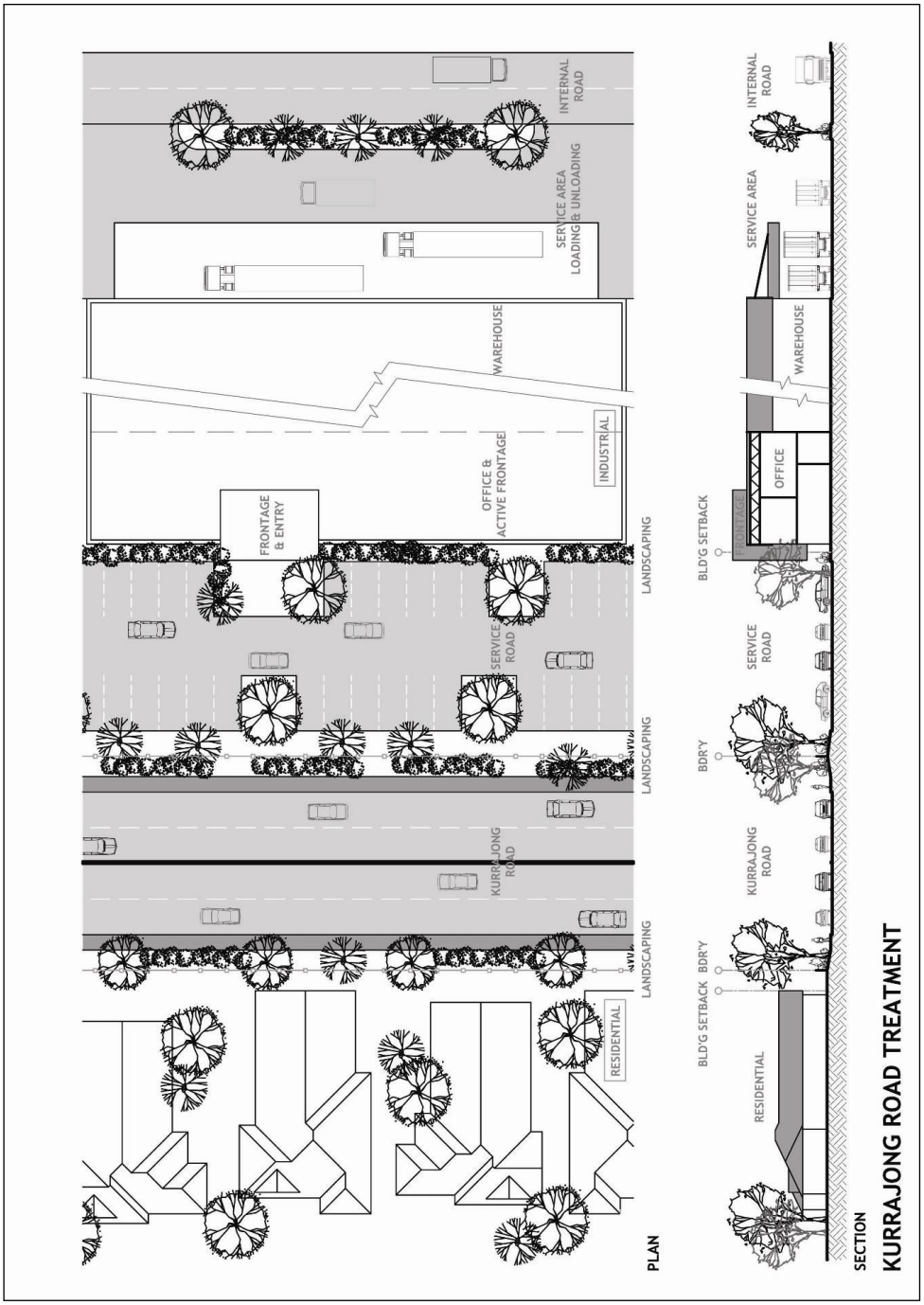


Figure 9 Kurrajong Road and service road section

Lots Fronting Bernera Road, Prestons

To minimise driveway access directly onto Bernera Road and to alleviate traffic impacts generated by turning movements:

1. Any lot that has frontage to Bernera Road in addition to a secondary street or planned future secondary street must utilise the secondary street for all vehicular access.
2. All allotments that address Bernera Road and have no alternate public road access may have only one driveway entry/exit point per existing allotment. This includes any allotment created after consolidation to achieve the minimum 65m
3. Pedestrian access is encouraged from Bernera Road.
4. Any DA for development of the following allotments must identify and dedicate a 14m wide easement along the Bernera Road frontage to accommodate drainage infrastructure:
   - Lot 1 DP 1045029
   - Lot 9 DP 1053060
   - Lot 10 DP 1053060
   - Lot 11 DP 1053060
   - Lot 6 DP 28729
   - Lot 7 DP 28729
   - Lot 8 DP 28729
   - Lot 9 DP 28729
   - Lot 33 DP 2359
   - Lot 20 DP 1173483

Subject allotments are illustrated in Figure 10 below.

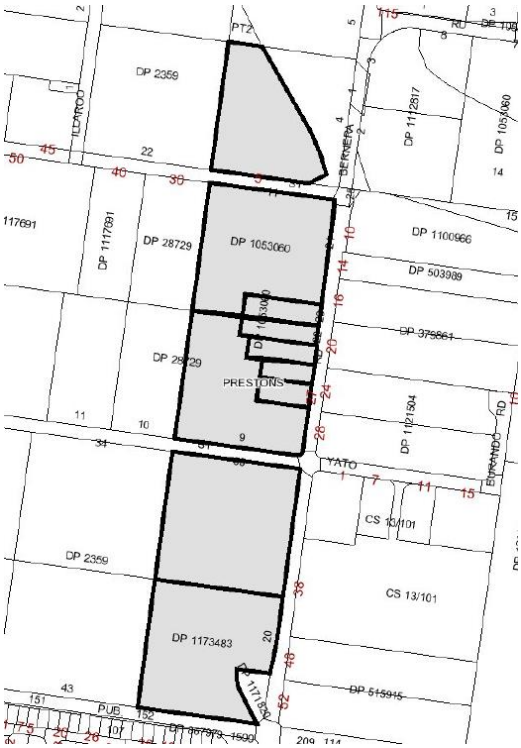


Figure 10: Allotments which must identify and dedicate a 14m wide easement along the Bernera Road frontage to accommodate drainage infrastructure

Traffic and Site Access for land at Cowpasture Road (adjacent to future link road across Hinchinbrook Creek to former Hoxton Park Airport)

1. Vehicular entry to the site from Cowpasture Road shall only be permitted if it consists of a deceleration lane from Cowpasture road, built to the satisfaction of Council.
2. Exit from the site shall be provided on the future link road across Hinchinbrook Creek to former Hoxton Park Airport).
3. Car parking must not be provided in the rear or side setbacks.

9. Amenity and Environmental Impact

Background

Industrial and related developments have potential to cause a significant environmental impact in terms of odours, noise and discharges. Some of these impacts are addressed by the *Protection of the Environment Operations Act 2008*. However the design and operation of development in industrial areas can contribute to avoiding these issues. The impacts may be on more sensitive land uses in nearby residential areas or on other uses within the industrial areas. As the range of uses permitted in the industrial areas is quite significant it is necessary to consider these impacts on land uses within the industrial zone.

Objectives

a) To ensure that neighbouring properties are not adversely affected from any operation on site.

b) To minimise the potential detrimental impact of pollution, dust, noise, odour and traffic.

Controls

External Industrial Activities

1. External processes in an industrial area and storage of materials will not be permitted along a Classified Road frontage or a road frontage opposite a residential area.
2. Storage and processing of motor vehicles, concrete, soil, glass and other similar components or materials shall be totally screened by fencing and dense landscaping (refer to Landscaping and Fencing and Section 4 Landscaping and Existing Trees in Part 1).
3. The maximum height of a stockpile for the recycling of motor vehicles, concrete, soil, glass and other similar components or materials shall be 6m.

Noise

In order to comply with the *Protection of the Environment Operations Act 2008* it may be necessary to construct external works. Mounding, planting and/or noise barriers may be permitted to reduce the impact of noise levels, provided that this does not compromise any other provision in the DCP. The following illustration gives examples of satisfactory treatments.

Hazardous materials and hazardous operation

Certain industrial processes are identified as *Designated Development* under the *Environmental Planning and* Assessment *Act 1979*. It will be necessary to contact the *NSW Department of Planning* for their requirements for the preparation of an environmental impact statement.

Hours of operation

Development which would have an adverse impact on adjoining or nearby residential areas will be limited to 7 am to 6 pm Monday to Friday and 7 am to 12 pm on Saturday and no work to be undertaken on Sundays.

Business where Trolley's are required

A daily trolley collection service or a coin operated return system is required for all business's that offer the use of trolleys to their customers.

Land in ~~E2~~ C2 Environmental Conservation zone at Prestons

- Where a proposal is likely to adversely impact on bushland on the ~~E2~~ C2 zoned land, a Vegetation management Plan (VMP) for the conservation of the bushland shall be submitted. The VMP shall be undertaken in accordance with the pertinent NSW Office of water Guidelines.

Contamination

Any DA for land identified as potentially contaminated by prior land use activities and shown in Figure 11, must be supported by a phase 1 contamination assessment.

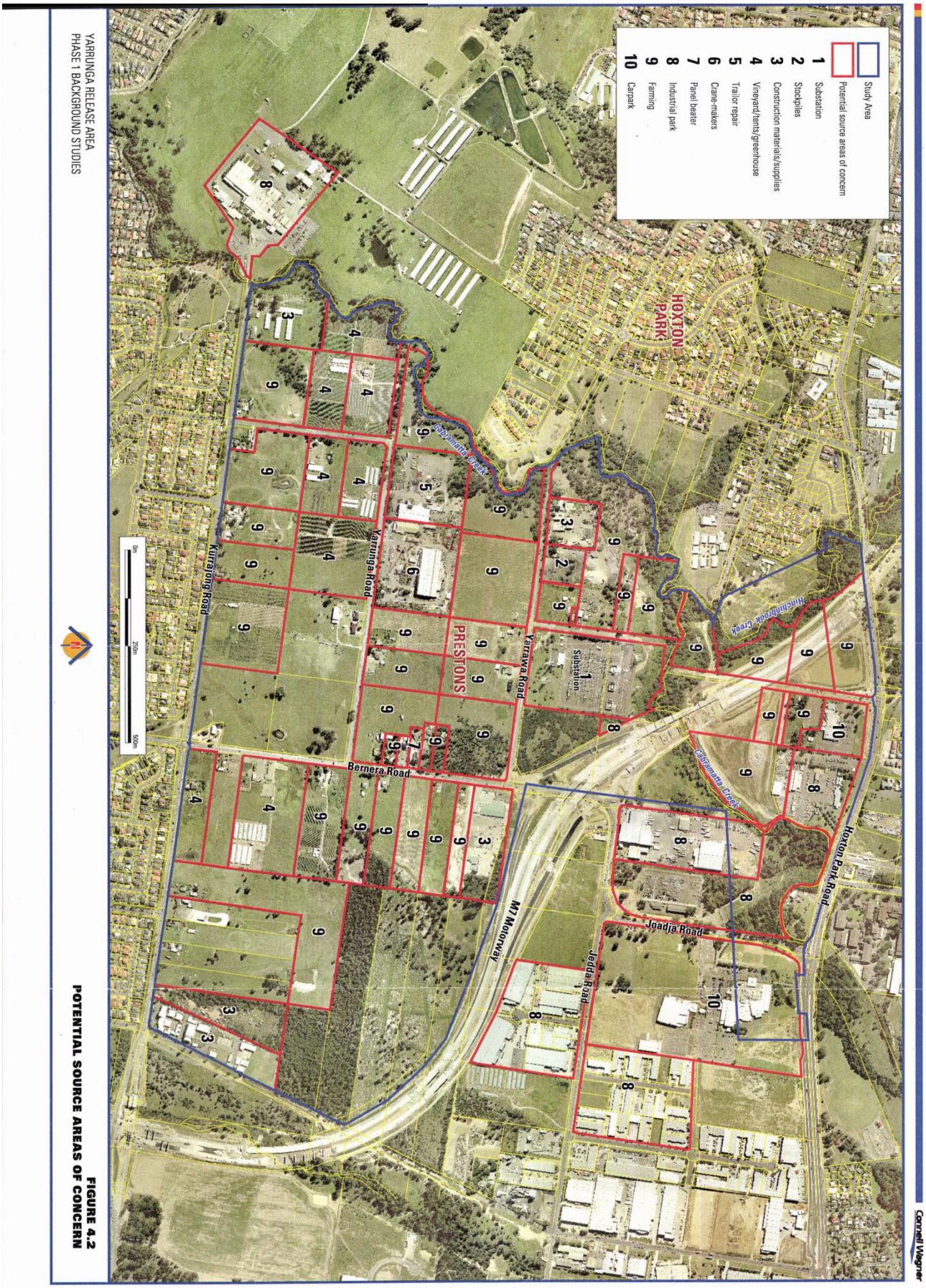


Figure 11 Potentially Contaminated land

10. Site Services

Background

There is a range of services that may need to be provided either on site or within the adjacent road reserve. Owners are required to provide some services and maintain some of the services on the site. Owners must also ensure that services provided on the site are protected from any potential damage.

Objectives

a) To ensure that the required services are provided.

b) To ensure that the services provided are easily protected or maintained.

Controls

Letterboxes and House Numbering

1. Letterboxes shall be located along the front boundary and be clearly visible and accessible from the street.
2. The street number of a site must be visible from the street and made of a reflective material to allow visitors and emergency vehicles to easily identify the site.

Waste management

Owners are to provide their own waste management services. These facilities will vary depending on the needs of the site. Any waste management equipment must not be visible from the street. Waste bins must be provided in a designated area that is easily and safely accessible for workers.

Frontage works and damage to Council infrastructure

1. Where a footpath, road shoulder or new or enlarged access driveway is required to be provided this shall be provided at no cost to Council.
2. Council must be notified of any works that may threaten Council assets. Council must give approval for any works involving Council infrastructure.

Electricity Sub Station

In some cases it may be necessary to provide an electricity sub station at the front of the development adjacent to the street frontage. This will involve dedication of the area as a public road to allow access by the electricity provider. The front boundary treatment used elsewhere on the street frontage shall be used at the side and rear of the area.

11. Change of Use of Existing Buildings

Background

Changes to the use of existing buildings in industrial areas may require upgrades. In some cases it will be from an industrial related use to a non-industrial use. It is necessary to ensure that the building will be suitable for the new use and that its use does not have an adverse impact on adjoining and nearby land uses.

Objectives

a) To ensure that the existing building is appropriate for the new use.

b) To ensure that any necessary upgrades or changes to the development are made.

c) To ensure there are minimal adverse impacts on surrounding development.

d) To ensure there are minimal adverse impacts on traffic on nearby streets.

Controls

Where a change of use is proposed to an existing development that will result in a significant impact on adjoining or nearby properties or on traffic movements may not be permitted.

Building Appearance, Streetscape and Layout

All buildings on site shall if needed be upgraded to comply with the *Building Code of Australia* relevant to the proposed use. Where this has an impact on the exterior of the building it shall comply with the requirements in this DCP.

Car Parking and Access

1. Where the new use requires more car parking than is currently provided, it shall where possible increase the car parking and loading provisions to meet the requirements of the DCP, subject to compliance with other provisions of the DCP.
2. Where a new use results in additional traffic generation it may be necessary to adjust the access driveways to suit the traffic generation. Refer to Part 1 of the DCP for details on access provisions.

Landscaping and Fencing

Where existing landscaping is below the standard identified in the DCP, the existing area of landscaping shall where possible be upgraded to the standard specified in the DCP.

Amenity and Environmental Impact

1. Any extension of hours outside the existing hours of operation or outside the hours of 6.00 am to 6.00 pm shall require consent from Council.
2. The new use shall not compromise the amenity of the locality in any greater, different or additional way than the existing use.

Site Services

Any adjustments required to any Council infrastructure in conjunction with the change of use shall be at no cost to Council.

12. Non Industrial Developments

Background

Liverpool LEP 2008 permits a range of Non Industrial land uses within the industrial zones. These are those uses which are ancillary to industrial businesses or which are compatible with an industrial environment.

These Non Industrial land uses may involve using an existing industrial development or construction of a new development. The following provisions are additional provisions for particular land uses. These land uses shall also comply with the other provisions of the DCP.

Some Non Industrial land uses have some specific controls. The rest are covered by general controls as follows:

Objectives

a) To ensure that the Non Industrial land uses are compatible with the industrial environment.

b) To ensure that the Non Industrial land uses do not unnecessarily restrict the operation of industrial and related uses in industrial areas.

c) To ensure that Non Industrial land uses are designed to operate without adverse impact from industrial developments.

Controls

The following controls are in addition to those in Sections 1 – 10.

Site Planning

Site planning for a Non Industrial uses shall give consideration to how minimise the impact of industrial uses on the site and how to ensure that a proposed use would not unduly impose restrictions on existing or future nearby industrial uses.

Car Parking and Access

Car parking shall minimise on street car parking be able to operate separately from other land uses on the site which may be closed out of hours.

Amenity and Environmental Impact

1. Where the hours of operation are after sunset, the car parking areas and any other public areas shall be provided with lighting to provide a safe environment for users of the premises outside daylight hours.

2. A Noise Impact Assessment Statement prepared by a qualified Acoustics Engineer may be required to be submitted with the application depending on the scale and location of the proposed use to show that the use can operate satisfactorily in the industrial area.

12.1 Ancillary Dwellings

Background

There will from time to time be a need for an ancillary dwelling in conjunction with a development within an industrial area. This includes a caretakers dwelling.

Objectives

To ensure that the ancillary dwelling is provided with an adequate living environment for the occupants.

Controls

The following controls are in addition to those in Sections 1 – 10.

Building Appearance, Streetscape and Layout

A separate pedestrian access shall be provided from the front of the building to the dwelling.

Private Open Space and Landscaped Area

The dwelling shall be provided with a minimum private open space area of 80sqm.

Car Parking and Access

A separate car parking space shall be provided for the dwelling.

Amenity and Environmental Impact

1. The dwelling shall be located so that it does not suffer adverse impact from the operation of the business on site.
2. Ancillary dwellings must be designed in accordance with the *Department of Environment and Climate Change's Industrial Noise policy*.
3. The impacts of industrial development should be mitigated by providing protection for the dwelling from overshadowing and overlooking, noise, light, dust and odour nuisance. These impacts can be mitigated by provision of acoustic engineering, walls, screening, physical separation, site landscaping and maintaining appropriate hours of operation.

12.2 Sex Service Premises

Background

Since the mid-1990s Sex Service Premises have been legal in NSW. Council has chosen to permit these in industrial areas subject to certain restrictions.

Objectives

a) To ensure Sex Service Premises are located at a reasonable distance from residential areas and other sensitive land uses.

b) To prevent the concentration of Sex Service Premises in one area.

c) To ensure safe access to Sex Service Premises for staff and patrons.

Controls

The following controls are in addition to those in Sections 1 – 10.

Site Planning

1. Sex Service Premises shall not be located within 150m of any land zoned residential or any place of worship, school, community facility, child care centre, hospital, rail station, bus stop, taxi stand, licensed premises (i.e. hotel, club, restaurant), or any place regularly frequented by children for recreational or cultural pursuits.
2. Sex Service Premises shall not be located within 150m of any land for which a consent for the uses listed in item 1 above exists.
3. Sex Service Premises shall not be located within 100m of the site of any other Sex Service Premises or any land for which a consent for Sex Service Premises exists.
4. Sex Service Premises shall not be located on a classified road or within 90m of a classified road if on a street intersecting a classified road.
5. No patron access is to be from a laneway.
6. Appropriate lighting must be provided to the pedestrian access and premises entry.

Amenity and Environmental Impact

As a condition of development consent a report shall be submitted annually to Council that demonstrates the Sex Service Premises is operating satisfactorily within the terms of the consent and not having an adverse impact upon the neighbourhood amenity. The report shall also provide confirmation from the NSW Police that the Sex Service Premises is operating satisfactorily.

Signage

1. Only one unobtrusive sign per premises, having a maximum size of 1.5sqm.
2. Sign wording must be limited to the trade name of the business operated and the address of the premises. No other characters, depictions, pictures or drawings are to be displayed on the sign.
3. The content, illumination, size, shape and location of the sign must not interfere with the amenity of the neighbourhood.

12.3 Child Care Centres

Background

There is an increasing need to have Child Care Centres in close proximity to work places. The need to locate Child Care Centres in close proximity to work places in industrial areas is balanced by the need to ensure that other industrial uses do not adversely affect the operation of a child care centre and vice versa. The *Department of Community Services* also regulates the standards and operations of Child Care Centres.

Lot Sizes

The appropriate lot size is determined by the proposed number of children.

Objectives

a) To limit traffic and parking issues to the level found within the area.

b) To maintain the amenity, streetscape and character of the area.

c) To provide and maintain a safe and healthy learning and play environment for children;

d) To ensure that the play areas are clearly defined and to enable children to play in a secure environment under supervision.

Controls

1. The maximum number of children in any centre cannot exceed 45 for 0-5 year olds, however Council may consider a maximum number of 60 children per centre of which 30% must be aged between 0-2.
2. The following controls are in addition to those in Sections 1 – 10.

Note: The proposed child care centre must comply with open space requirements as set out in the *Children Services Regulation 2004*.

Licence Requirements

1. In order to operate a child care centre, the applicant needs to obtain the following:
   - Development consent from Council under the *Environmental Planning and Assessment Act 1979.*
   - A licence to operate from the *NSW Department of Community Services* (DOCS) under the *Children and Young Persons (Care and Protection) Act 1998* and the *Children's Services Regulation 2004*.

2. It is strongly recommended that applicants arrange a meeting with Council prior to submitting a development application to ensure that all the pre-requisite documentation is in order. This will save time and money for the applicant.

Subdivision, Frontage and Allotment Size

Site Planning

The appropriate lot size is determined by the proposed number of children and meeting other requirements set out in this Part. The proposed child care centre must comply with open space requirements as set out in the *Children Services Regulation 2004*.

Site Location

Child Care Centres will not be permitted near or adjacent to the following uses:

- Extractive industries, Waste Depot or landfill site.
- Within 150m of a Sex Service Premises.
- Within 50m of mobile phone towers or antennas or transmission line easements or other similar electromagnetic radiation sources.

Site Planning

1. Site planning should be sensitive to site attributes, such as streetscape character, natural landform, existing vegetation, views and land capability.
2. The site layout should enhance the streetscape through the use of landscaping and built form.
3. Site planning should enable buildings to address streets and public open spaces.
4. The site layout should ensure that the external play area is maximised and enjoys solar access.
5. The site layout should contribute to personal safety and to the protection of property by permitting casual surveillance of adequately lit outdoor spaces from windows and entries.
6. In areas exposed to significant levels of off-site noise, the site layout and building forms should assist in minimising noise entry.
7. The site layout should ensure that the front entrance to the Child Care Centre is easily located and accessible.
8. Child Care Centres must be located and designed so as not to pose a health or safety risk to children using the centre.

Open Space and Landscaped Area

1. A Child Care Centre must have at least 7sqm useable outdoor play space per child.
2. The outdoor play space shall not be located within the street setback.
3. Buildings shall be designed to ensure that sunlight is available to 50% of the outdoor play area for a minimum of 3 hours between 9:00am and 3:00 pm on June 21 or shall not create additional overshadowing.
4. The play area shall not be used as a stormwater detention basin.

Building Appearance, Streetscape and Layout

A proposed child care centre must comply with the open space requirements as set out in the *Children Services Regulation 2004*.

Landscaping and Fencing

Landscaping

1. Where landscaping is used to provide privacy, species selected are to achieve these measures within three years.

2. All side and rear setback areas are to be planted with species in a way in which will provide privacy in maturity.
3. Advanced tree species are to be used for key elements within the landscape design to provide privacy screening.
4. Areas of grass are to be limited to play areas. Other landscaped areas are to be planted.
5. Trees adjacent or within the play area are to provide shade and allow winter sun entry
6. Landscaping species must be appropriate to prevent injury to children from toxic, spiky or other hazardous plant species.

Fencing

1. Side (behind the building setback) and rear fencing shall be no more than 1.8m in height unless adjoining a park.
2. Fences shall be constructed of materials compatible with the proposed building.
3. In areas zoned industrial, Child Care Centres shall provide fencing to the outdoor play area which is snake proof and prevents access by children from the play area to unsafe areas on subject or adjoining properties.
4. Where a fence adjoins a park it shall be of a high-grade material consistent in quality with the building and the context of the park, and shall be designed to address the park.
5. Solid front fences and walls shall be a maximum of 1.2m in height.
6. Gates shall be the same height, self-closing and be secure and fitted with a childproof lock.

Amenity and Environmental Impact

Contaminants

All buildings, whether to be built, extended, renovated or converted shall not contain any material or substance that will cause lead or asbestos or other contamination or poisoning.

Adjoining uses

Child Care Centres shall be designed and operated so that noise generated by the centre does not impact significantly upon adjoining properties.

12.4 Telecommunication Facilities

Background

There is a need to permit Telecommunication Facilities to allow sufficient coverage for uses of mobile telephones. This need is balanced by the need to consider the environmental impact of these on industrial areas. The Australian Telecommunications Authority also manages Telecommunication Facilities.

Objectives

a) To ensure that Telecommunication Facilities are not within close proximity to residential dwellings or sensitive populations in order to minimise the potential of electro-magnetic radiation exposure.

b) To ensure that the siting of Telecommunication Facilities is compatible with other permissible and adjoining land uses

c) To minimise any adverse impact of Telecommunication Facilities on surrounding properties.

d) To minimise the number of Telecommunication Facilities by encouraging the co-location and sharing of facilities.

Controls

The following controls are in addition to those in Sections 1 – 10.

Site Planning

1. A Telecommunication Facility shall be located where the vegetation, landform or features of an open space location will adequately screen or reduce the impact of the Telecommunications Facility from public areas and reduce the impact of the Telecommunications Facility.
2. A Telecommunication Facility shall not to be located where it will detract the heritage significance or settings of a heritage item.
3. The selection of a site shall involve a site analysis of the existing landscape.
4. The location of a Telecommunication Facility shall not be within a 300m "buffer" from an adjoining residential dwelling or sensitive population unless the annual average exposure limit does not exceed 0.2uW/cm^2.
5. Telecommunication Facilities and associated ground facilities are not permitted on land that is "Environmentally Significant" as identified in *Liverpool LEP 2008*.
6. Telecommunication Facilities and associated ground facilities are not permitted on land below the PMF level.
7. The erection of any new Telecommunication Facilities must be proven to be required where no available alternative for co-location is available.
8. The construction of any Telecommunication Facilities must have the demonstrated potential for co-location of additional facilities and must be addressed as part of any development application proposal.

Building Appearance, Streetscape and Layout

1. The shape, height and colour of the Telecommunication Facilities shall be addressed in order to ensure that visual amenity is maintained.
2. Wherever possible, Telecommunication Facilities should be of a slimline monopole construction.
3. Wherever possible Telecommunication Facilities may be incorporated into building roof areas but should be located to minimise visibility to public areas.
4. Advertising signs of any Telecommunication Facilities, including logos are not permitted on the Telecommunications Facility.
5. Night illumination is not permitted; except where a proposed Telecommunication Facilities infringes the *Obstacle Limitation Surface* (OLS) for aircraft safety.

Landscaping and Fencing

1. A Telecommunication Facility must be located a sufficient distance from any existing trees to allow access.
2. All sites for Telecommunication Facilities and associated ground facilities must be enclosed by a minimum of 1.8m open mesh or similar fencing to prevent public access to the site in order to maintain public safety.

Amenity and Environmental Impact

1. All sites must have warning and information signs displayed to minimise public risk.
2. The level of electro-magnetic radiation emitted from any Telecommunication Facility must not exceed the limit of 0.2uW/cm^2.
3. Any Telecommunication Facility, which is no longer needed, or no longer in operation shall be removed by the carrier at its own cost and restore the land to its

natural state, within a three (3) month period. The carrier must also notify Council by letter prior to the removal of any Telecommunication Facility.

4. All sites for Telecommunication Facilities and associated ground facilities must be enclosed by a minimum of 1.8m open mesh or similar fencing to prevent public access to the site in order to maintain public safety.
5. If at any one time a Telecommunication Facility is no longer needed, or no longer in operation, the carrier will, except where otherwise agreed with Council, at its own cost remove the structure and facilities and restore the land to its natural state, within a three (3) month period. The carrier must also notify Council by letter prior to the removal of any Telecommunications Facility.
6. Once development has been completed on the site, the carrier must then restore the site to its previous state. Under the *Telecommunications Code of Practice 2008*, this work must commence within 10 working days after completion of the development.

12.5 Shops, Service Stations & Restaurants

Background

These uses are permitted in industrial zones where they don't have a detrimental impact on the economic viability of commercial areas of the Liverpool LGA.

Objectives

a) To service the existing land uses and workers in Liverpool's industrial areas.

b) To ensure that this form of development maintains the existing streetscape character.

c) To ensure that there is minimal detrimental impact on the economic viability of existing commercial areas within Liverpool LGA.

Controls

The following controls are in addition to those in Sections 1 – 10.

Landscaped Area

The area shall be generally consistent with those for industrial developments.

Building Form, Streetscape and Layout

Buildings should maintain the existing streetscape of the industrial areas by ensuring that their design remains consistent with the existing setbacks, heights, building envelopes and appearance of neighbouring properties.

Landscaping and Fencing

Landscaping and fencing shall be generally consistent with those for industrial developments.

Car Parking and Access

1. Car parking areas for a shop, service station or restaurant shall be located to:
   - Minimise conflict with vehicle movements for other uses on the site.
   - Be as close as possible to the shop, service station or restaurant to minimise on street car parking.
   - Be able to operate separately from other land uses on the site, which may be closed out of hours.
2. Drive through areas should be located at the rear or side of any related building.

12.6 Places of Public Worship

Background

Some places of public worship seek to operate in industrial areas. The prime hours of operation of places of public worship are often outside the normal working week times. This assists to minimise conflicts.

Objectives

a) To ensure the amenity of the surrounding area is not adversely affected.

b) To only permit Places of public worship where they will not suffer an adverse impact from a business within an industrial area.

Controls

The following controls are in addition to those in Sections 1 – 10.

Building Form, Streetscape and Layout

1. The entrance to a place of public worship shall be located at the front of the building.
2. Where possible public areas within the places of public worship shall overlook the car parking area and other pubic areas surrounding the building.

Car Parking and Access

1. Car parking areas for places of public worship shall be located:
   - Near the street frontage.
   - To minimise conflict with vehicle movements for other uses on the site.
   - To be as close as possible to the places of public worship to minimise on street car parking.
   - To be able to operate separately from other land uses on the site which may be closed out of hours.
2. Provision should be made for overflow car parking for special festival days.

Amenity and Environmental Impact

Where the hours of operation are after sunset, the car parking areas and any other public areas shall be provided with lighting to provide a safe environment for users of the premises.

12.7 Crematoria

Any proposed development for crematoria is to comply with the relevant conditions within the Liverpool Development Control Plan 2008 Part 5 – Section 9.13 *Cemeteries and Crematoria*.

Liverpool city council
creating our future together

Council Administration Centre Level 2, 33 Moore Street, Liverpool NSW 2170

Postal Address Locked Bag 7064, Liverpool BC NSW 1871

Customer Contact Centre 1300 36 2170

Fax 02 9821 9333

NRS (National Relay Service) 133 677

Email lcc@liverpool.nsw.gov.au

Website www.liverpool.nsw.gov.au