Liverpool Development Control Plan 2008
Part 1

General Controls for all development

28 February 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

Table of Figures

List of Tables

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- Part 2.12 Repealed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 Zones

Part 6 Development in Business Zones

Part 7 Development in Industrial 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.

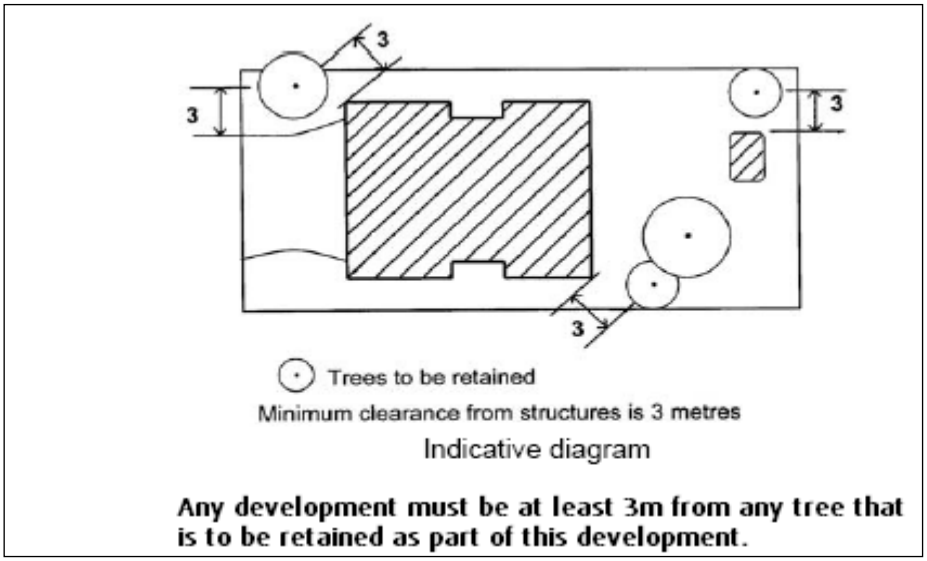

Figure 1 Retention of trees

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 – Environmental Conservation
- E3 – 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.

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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 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.

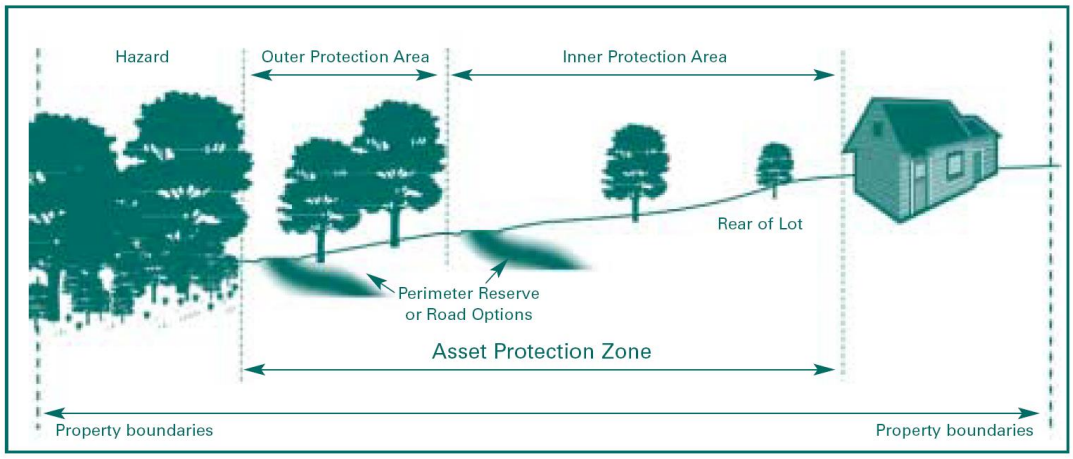


Figure 2 Key Components of an APZ (*NSW Rural Fire Service 2002)*

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.

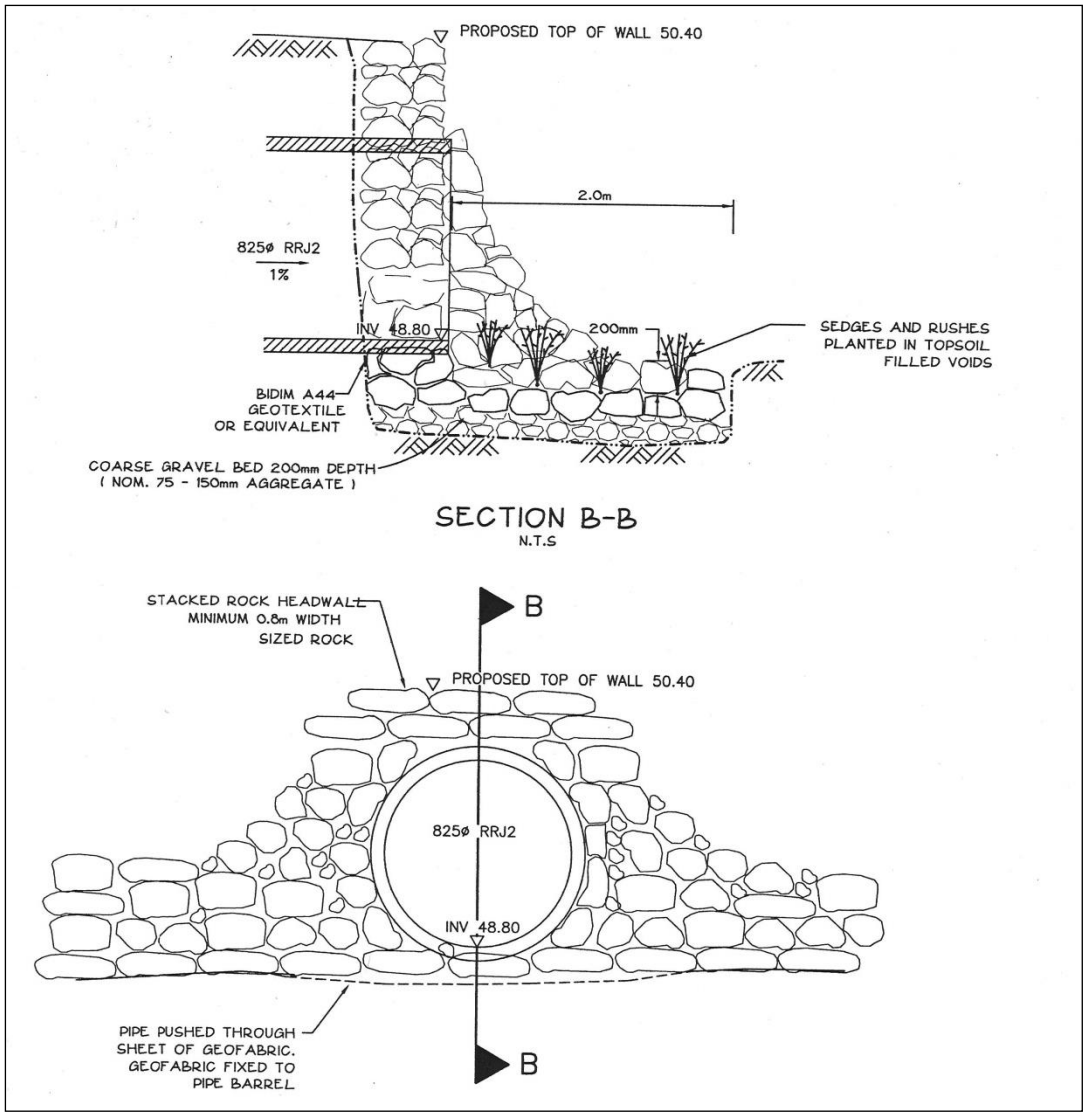


Figure 3 Discharging to a creek system

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 a Business or Industrial 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 – Environmental Conservation zone,
- E3 – 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.

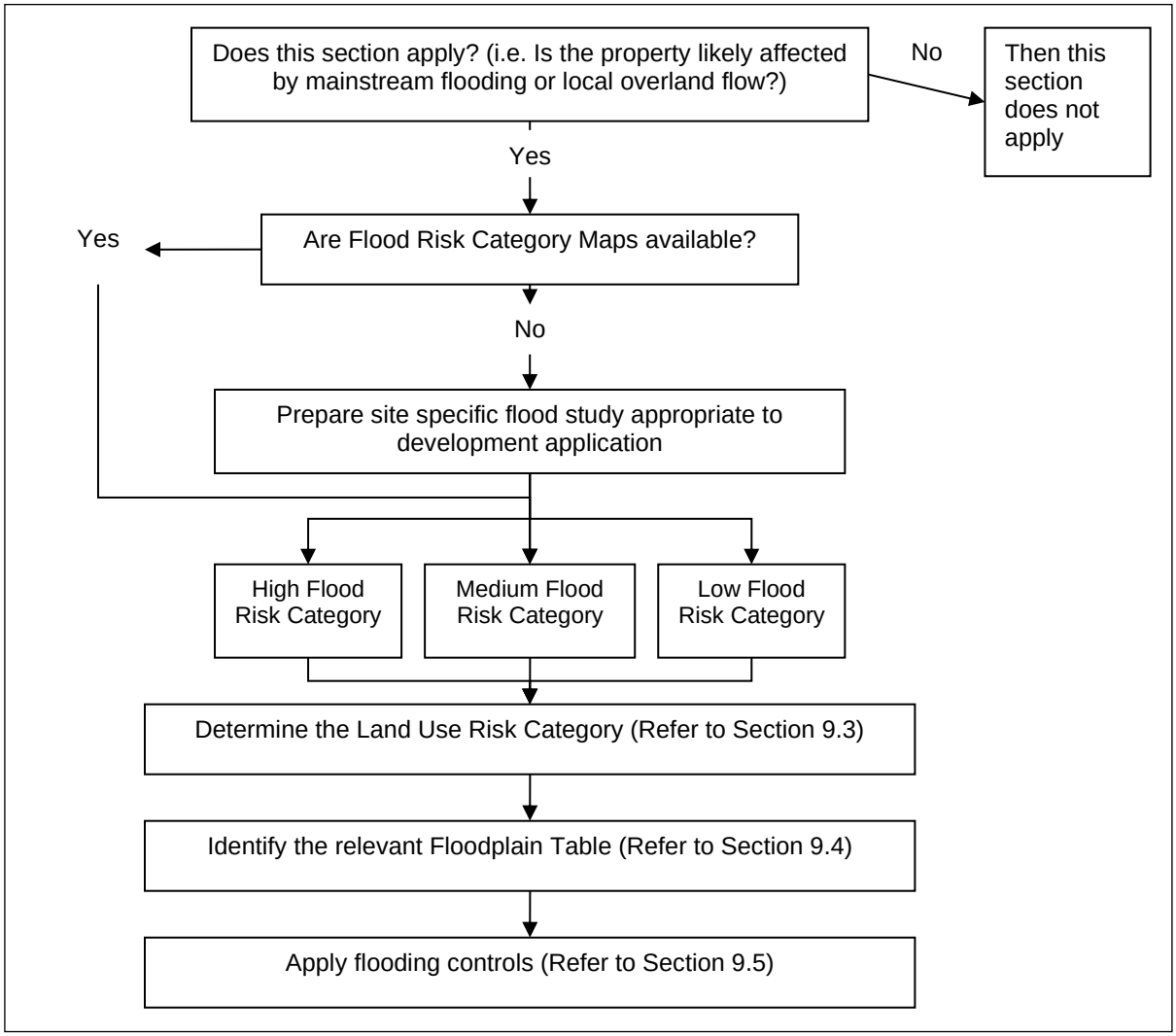


Figure 4 Flow chart for the determination of flood risk

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.

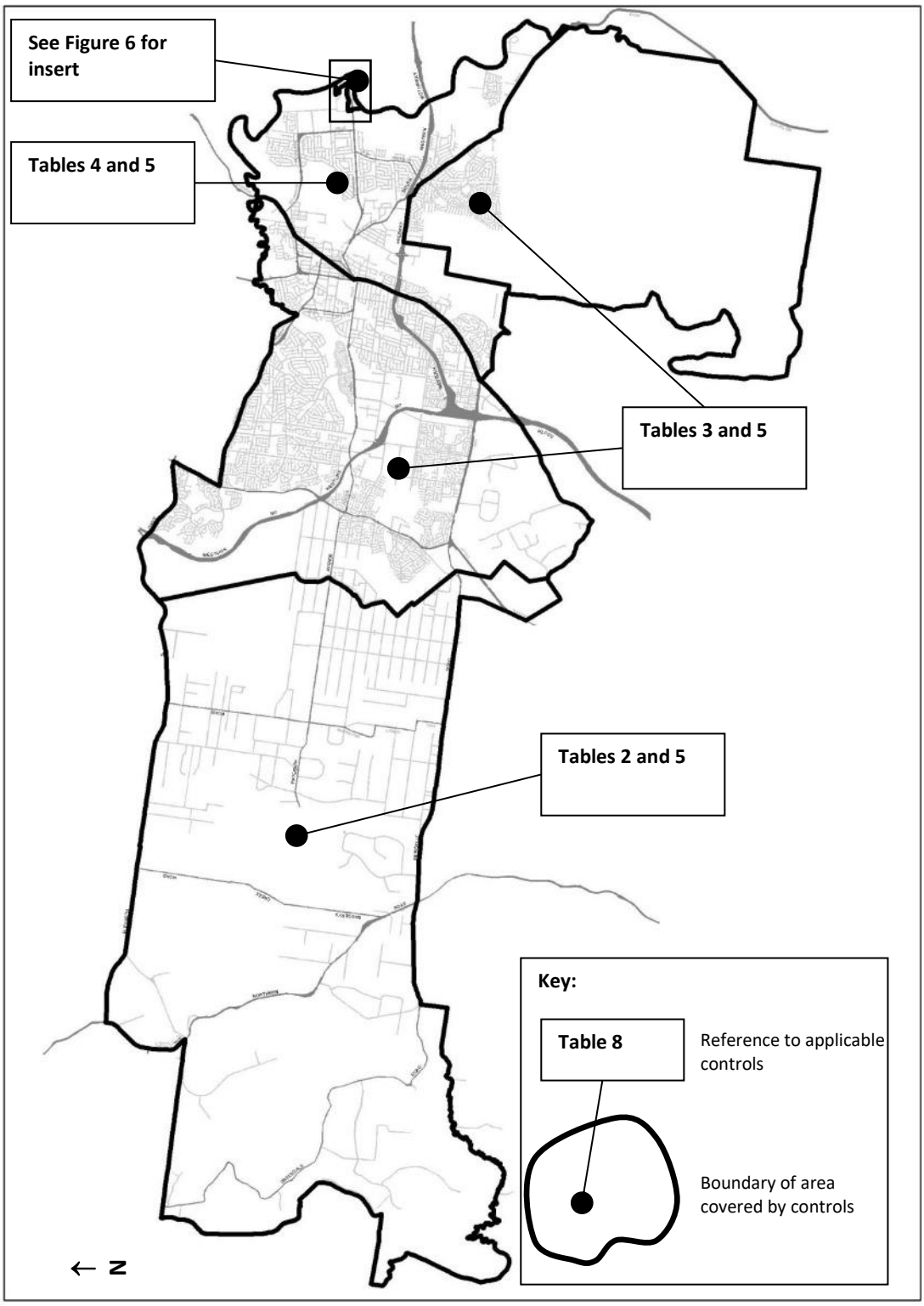


Figure 5 Map for identification of relevant floodplains

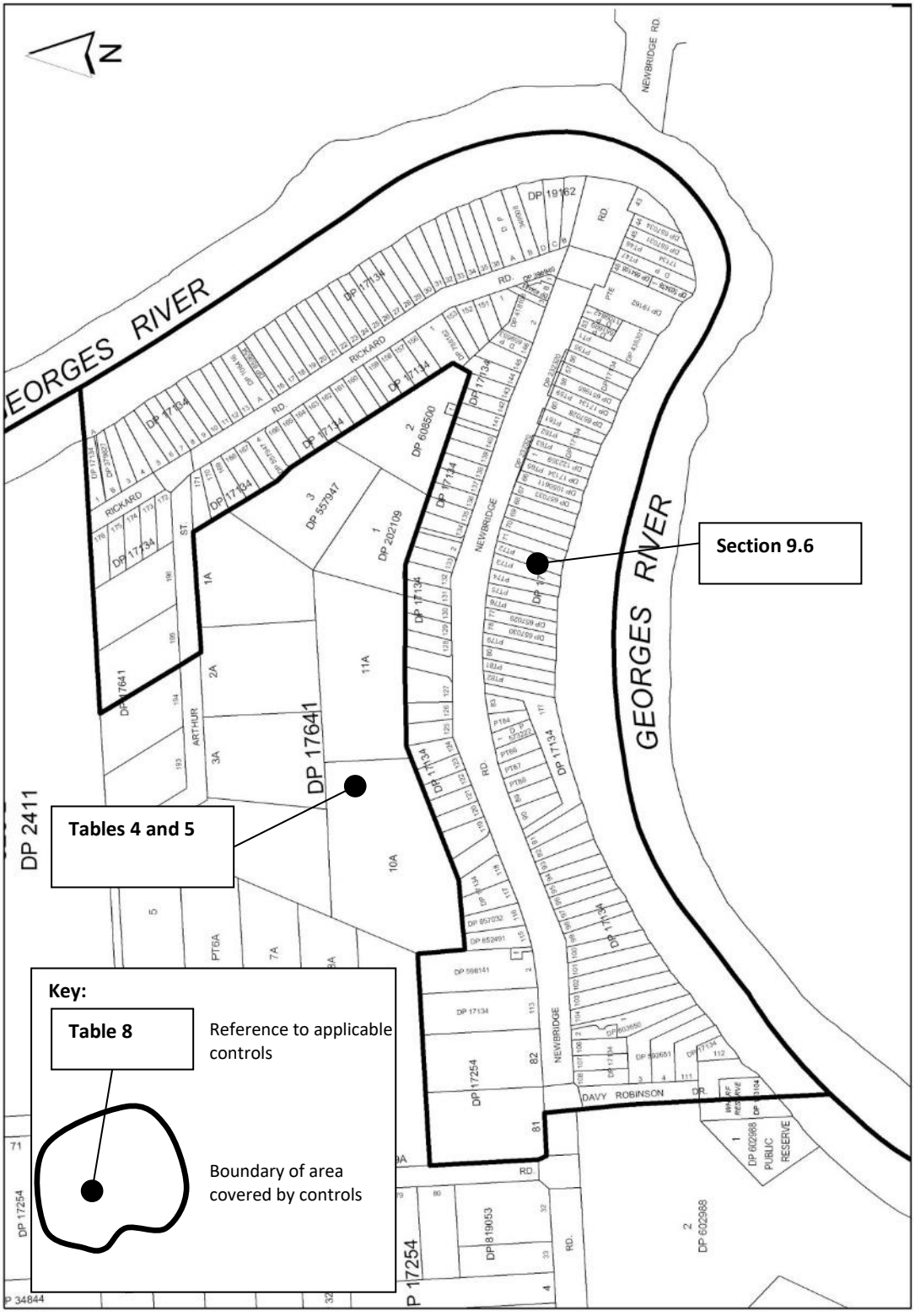


Figure 6 Moorebank Floodway

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.

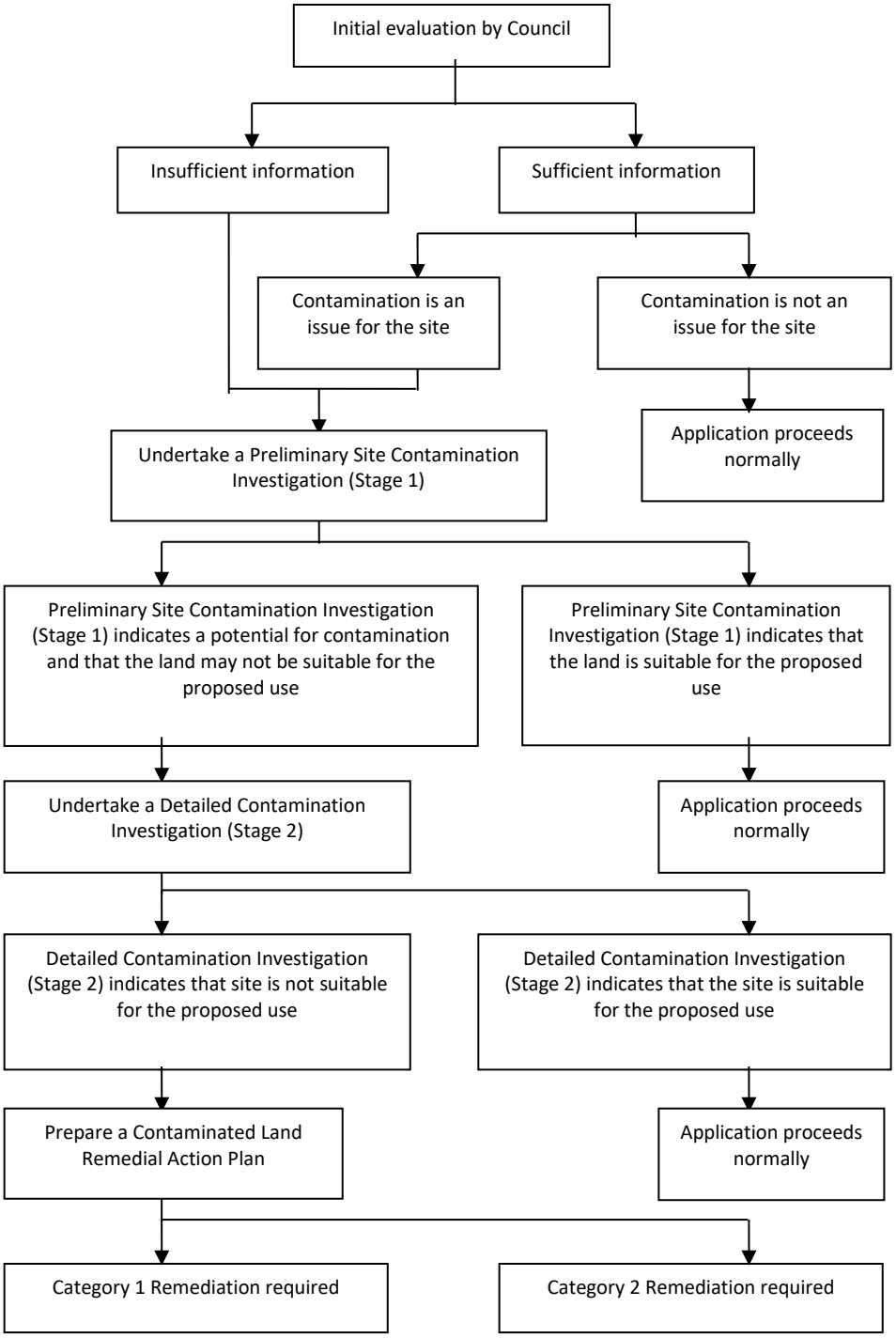


Figure 7 Model for Contaminated Lands Investigation and Management Strategies that should be undertaken. (Adapted from Managing Contaminated Lands, 1998)

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.

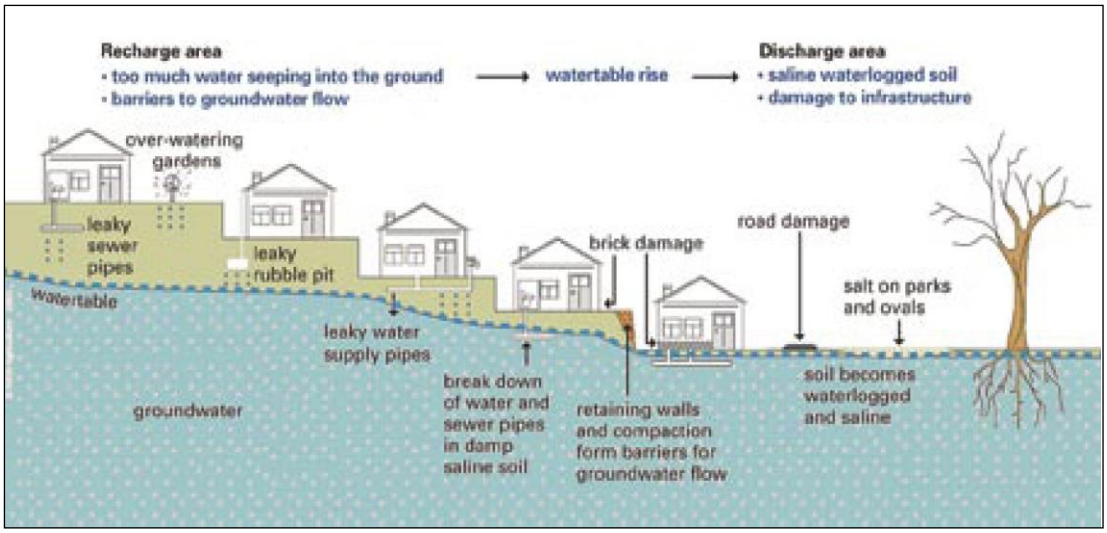


Figure 8 Illustration showing how development can impact on landscape functions as well as how development may be impacted upon salinity processes

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.*

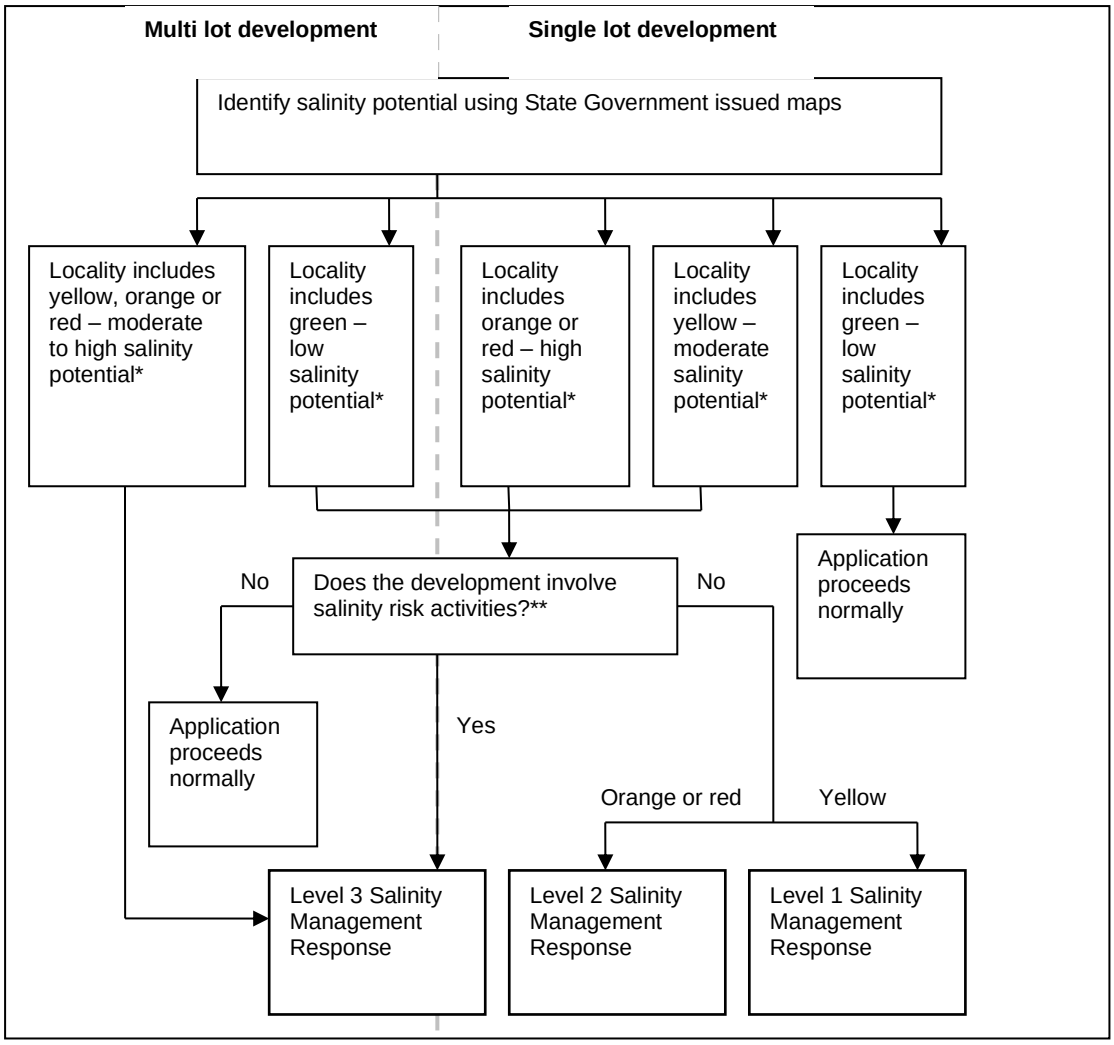


Figure 9 Model for how salinity assessment, investigation and management strategies should be undertaken (Adapted from WSROC 2003)

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.

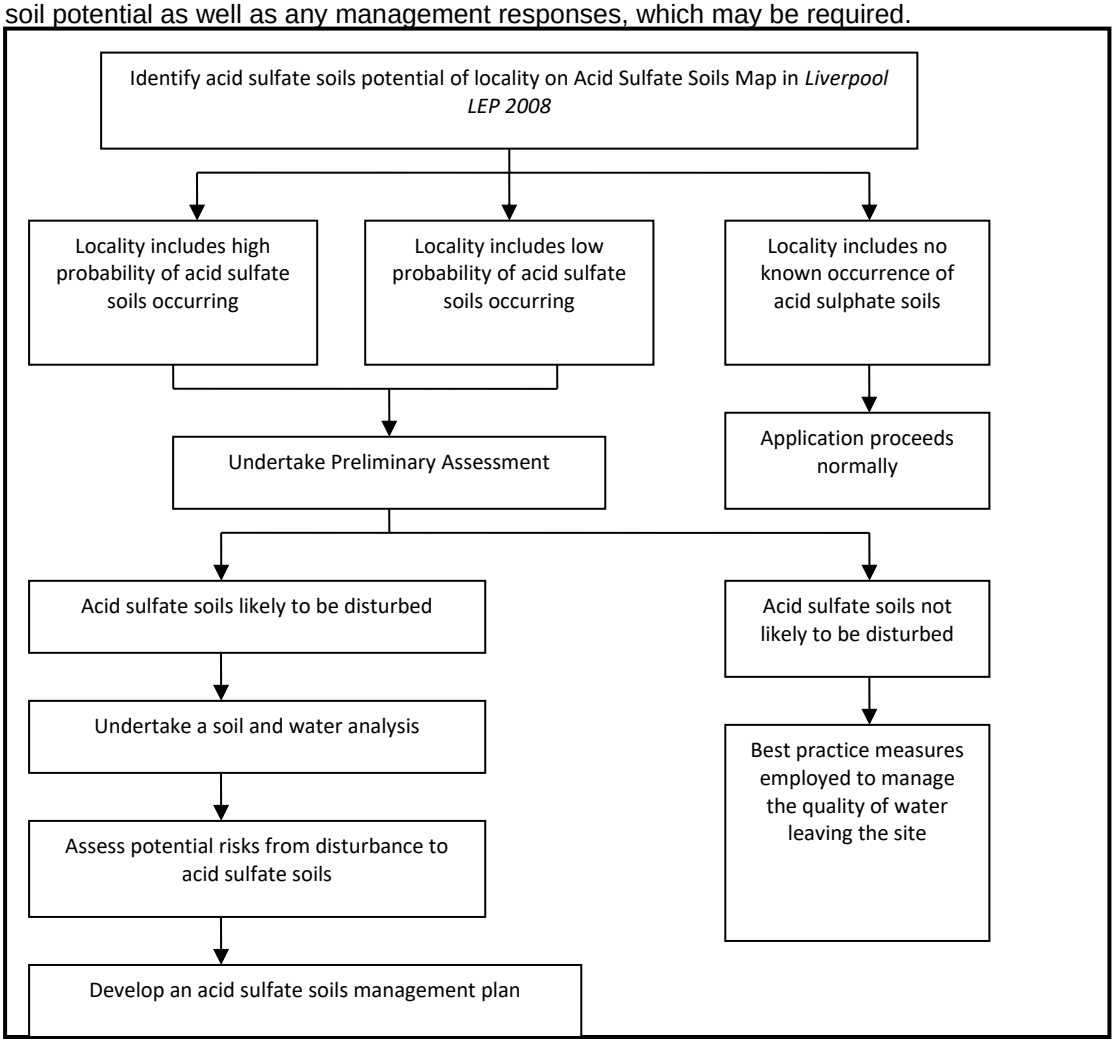


Figure 10 Model for how acid sulfate soils assessment, investigation and management strategies should be undertaken (adapted from *Acid Sulfate Soil Manual 1998*).

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.

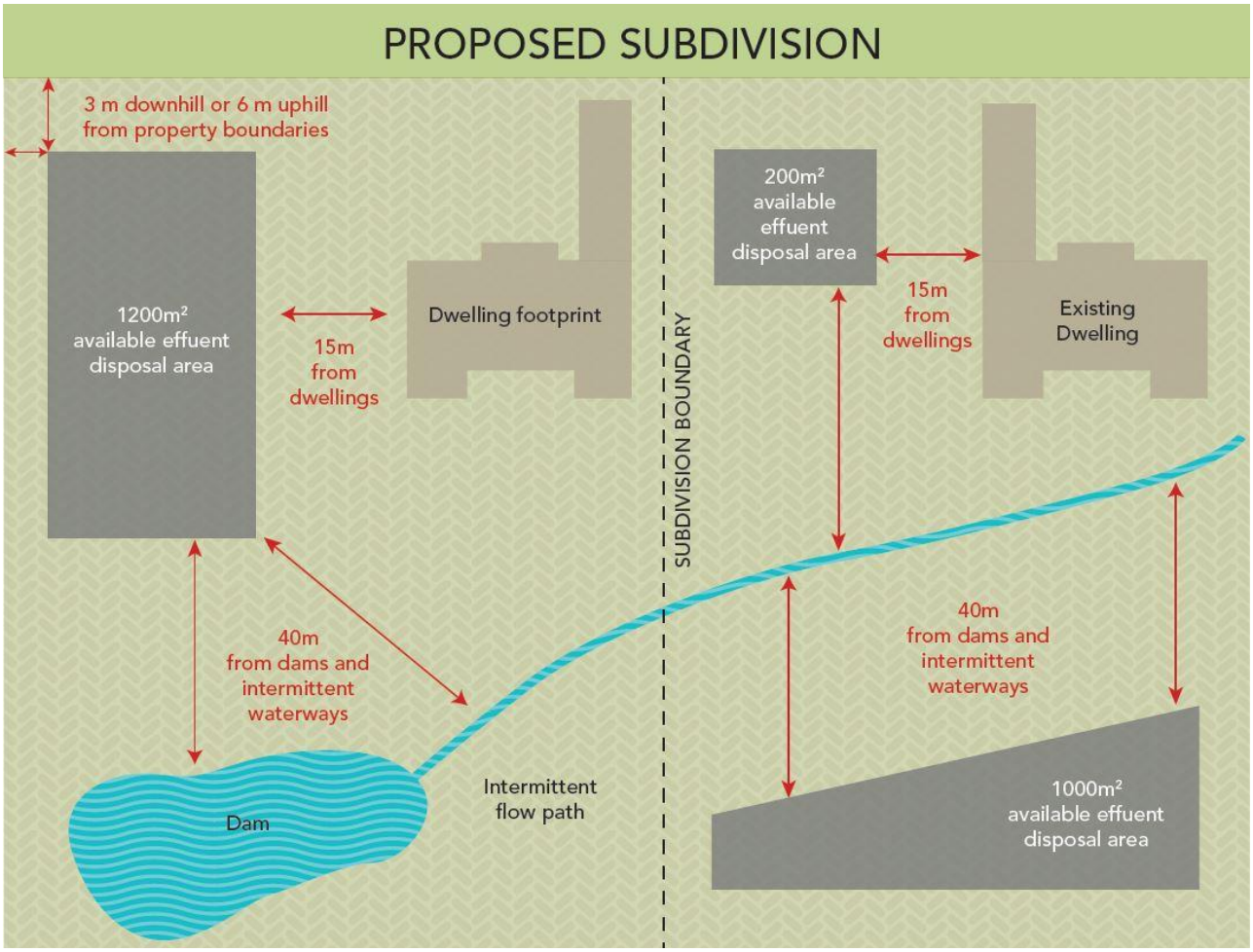


Figure 11: Example of a proposed subdivision with a total of 1200sqm of available effluent disposal area demonstrated on each lot.

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 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 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 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 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		
Rural, Residential & Industrial 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

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
Business 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
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

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
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 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 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 zones	1 space per 35sqm of LFA	Service access for a small rigid vehicle
Industrial zones	1 space per 70sqm of LFA	Service access for a small rigid vehicle
Recreation facilities		
Industrial & 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

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
Business 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 zones	1 space per 20sqm of LFA	Waste collection vehicle service access
Industrial 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 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
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)	1 space per 70sqm of LFA or 1.5 car spaces per employee, whichever is the greater	

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
Vehicle Repair Station		
Business zones	1 space per 70sqm of LFA	Service access for a small rigid vehicle
Industrial 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 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

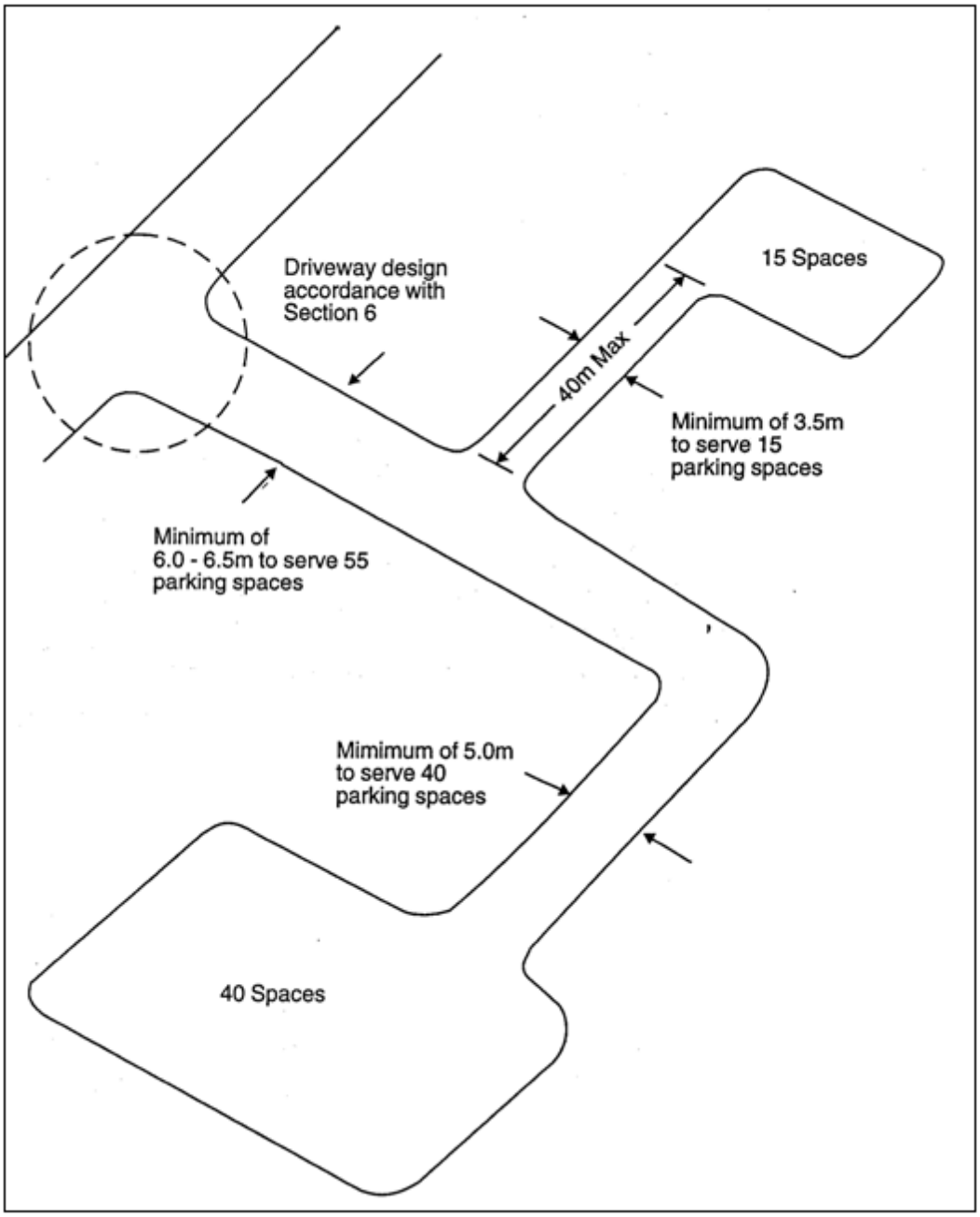


Figure 13 Car parking layout

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%).

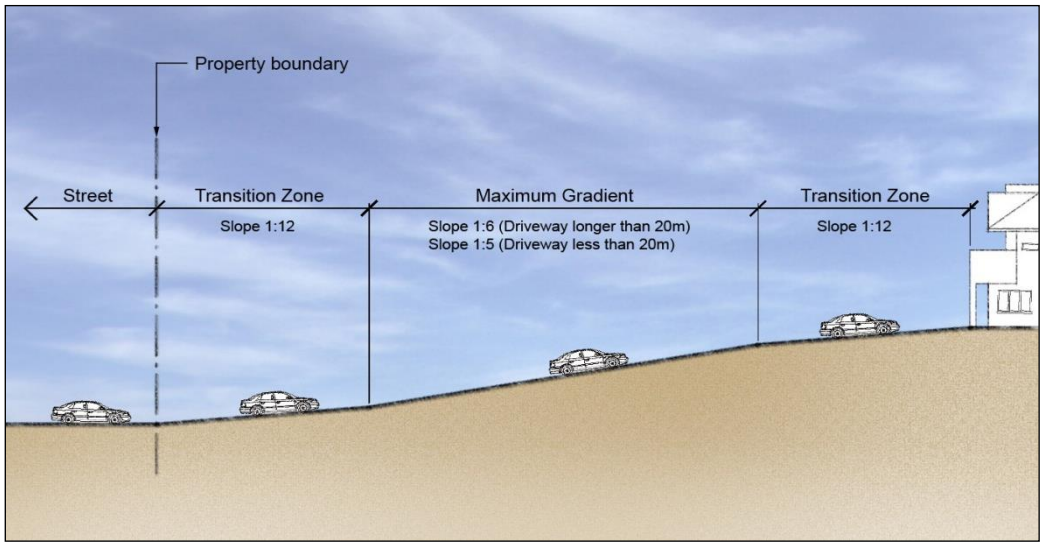


Figure 14 Driveway gradients

Widths

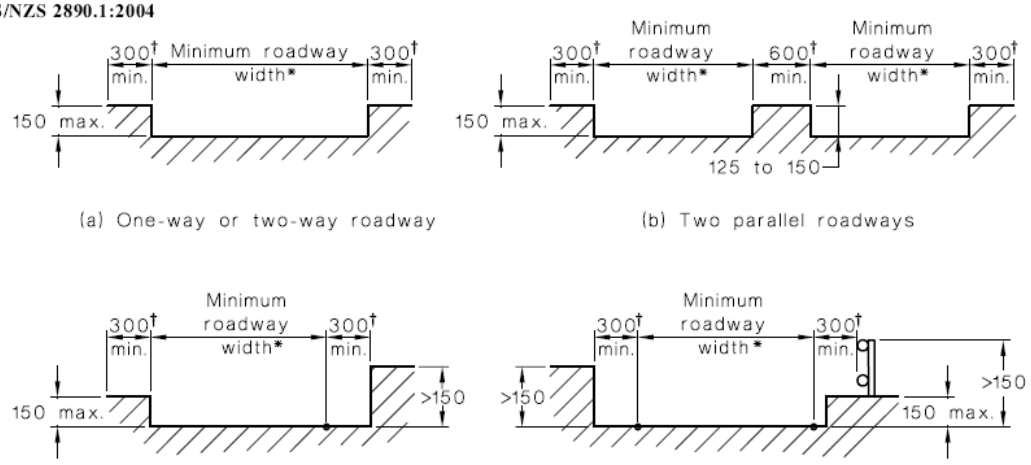
1. For internal driveways between the access driveway and the car parking area the minimum carriageway width depends on the number of car parking spaces and service bays served.
2. Consideration should be given to increase these widths where high levels of heavy vehicles usage are anticipated.
3. By 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 zones any Driveway Crossing shall be compatible with the existing and future paving pattern.

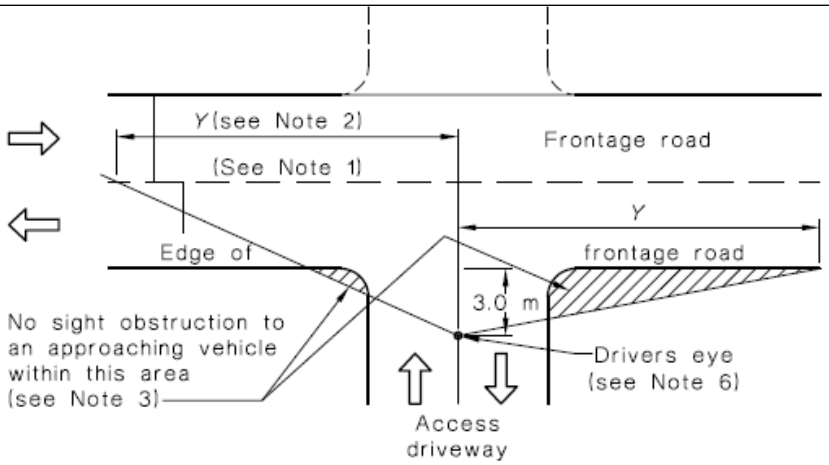
Second Driveways (for Residential Dwellings)

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.

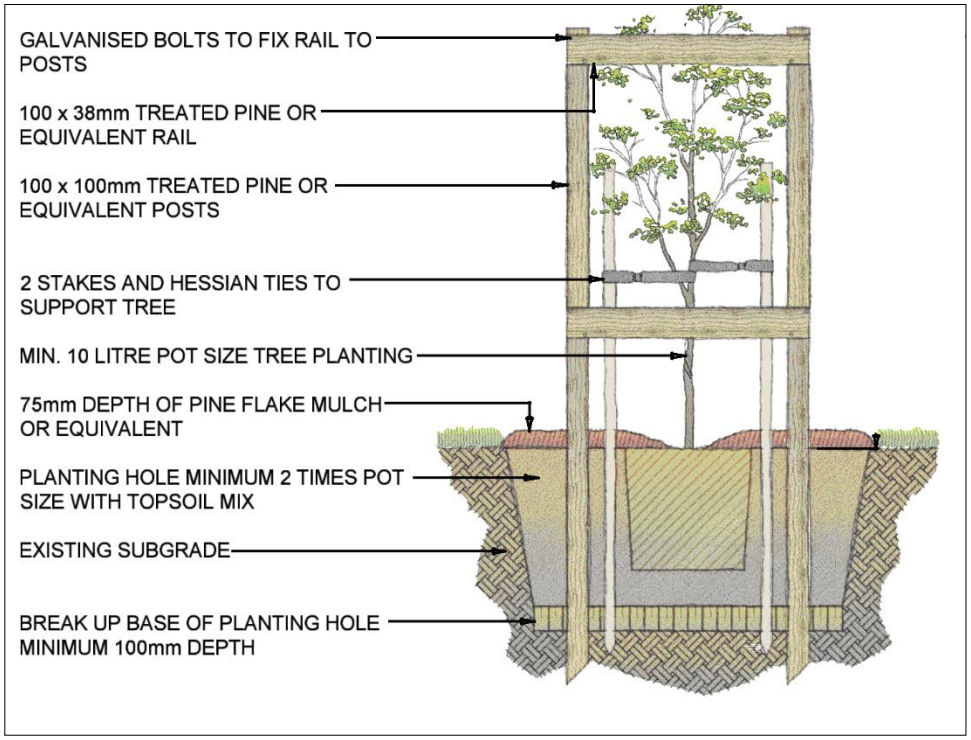


Figure 17 Tree Guard and Planting Details

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 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)

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 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
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 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.

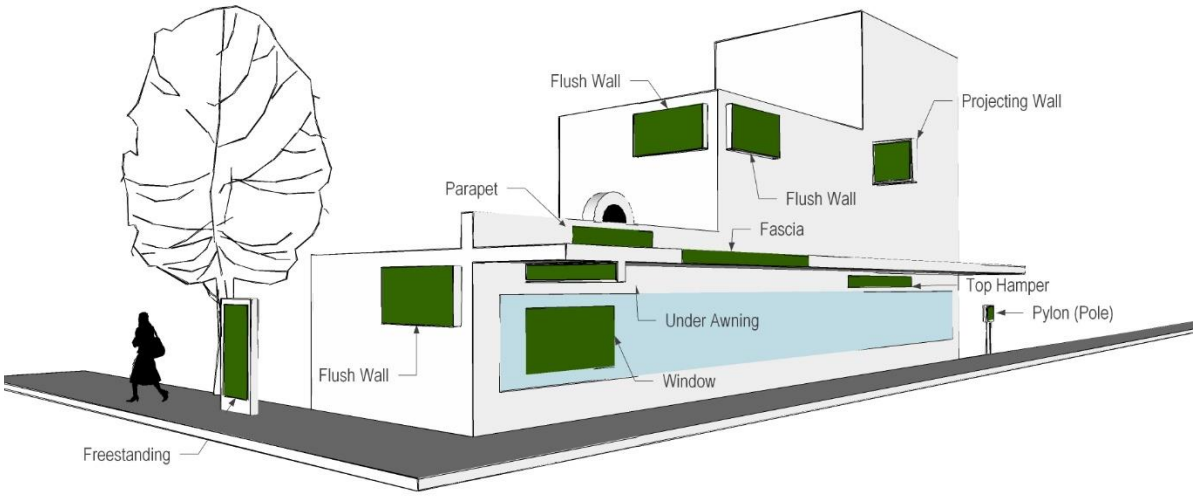


Figure 18 Types of Supported Signs

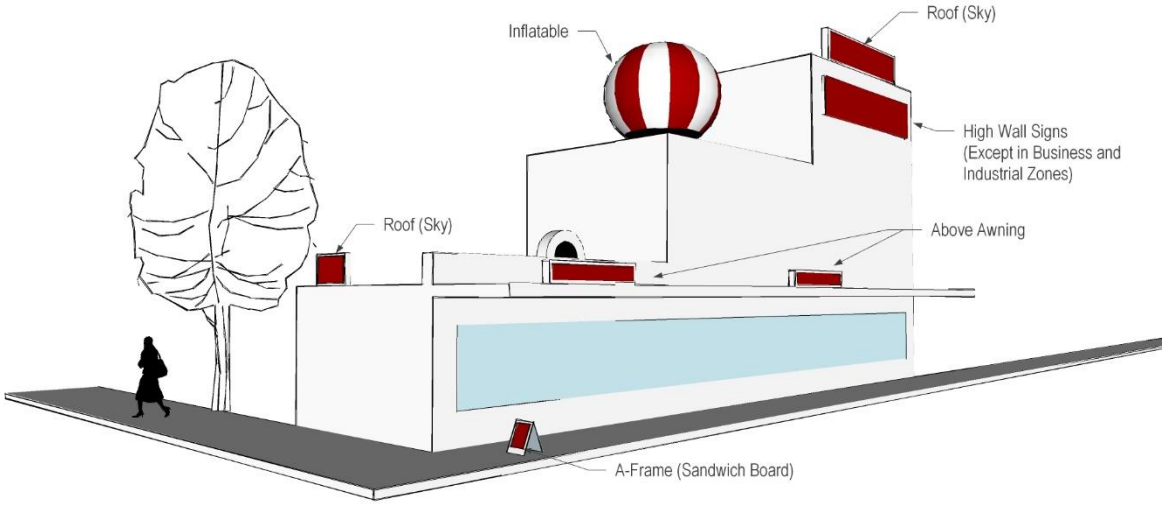


Figure 19 Types of Unsupported Signs

(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 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 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 zones	Industrial Zones and all other Business 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 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 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 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.

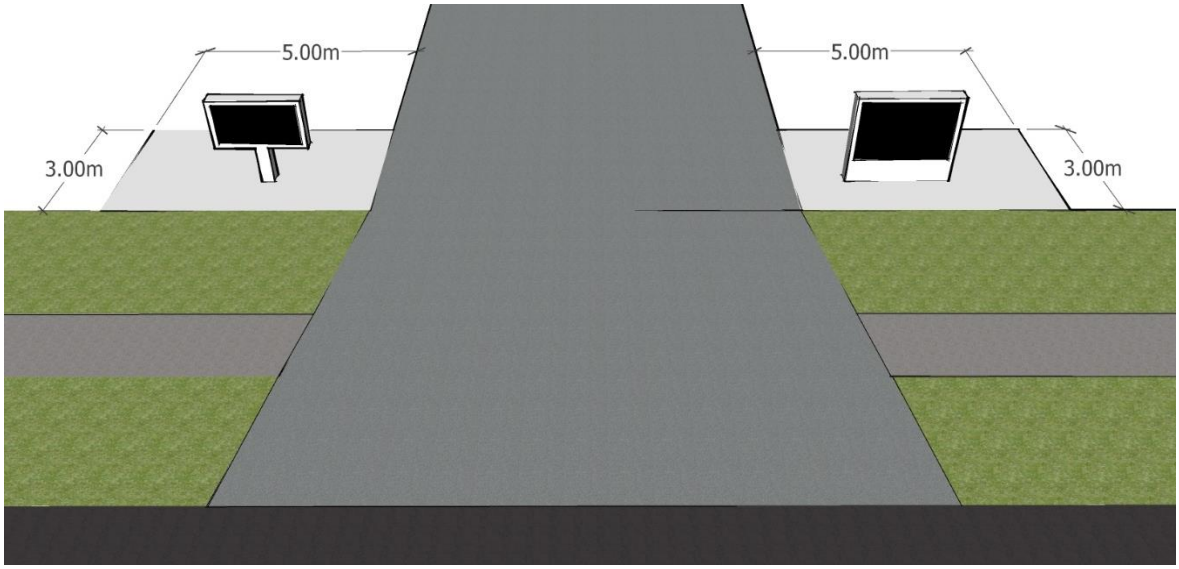


Figure 20 Permissible area for pole or pylon sign at the ingress to Industrial Zone development.

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 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 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.

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 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 areas. 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.

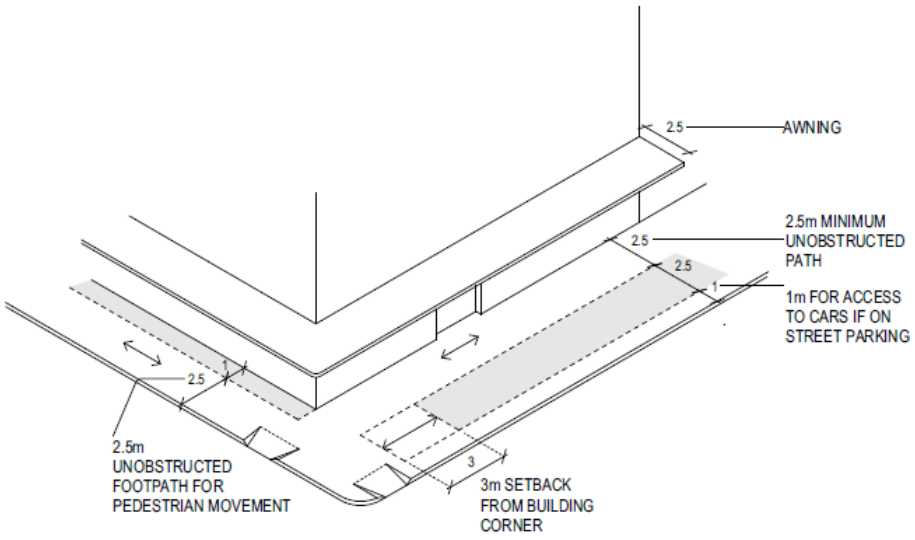


Figure 21 Indicative Outdoor Seating Zones

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 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

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