

Liverpool Development Control Plan 2008
Part 2.8
Land Subdivision and Development North of
the Railway Line at Voyager Point

19 February 2014

Part 2.8 must be read in conjunction with Part 1

Refer to Part 3.8 for Non Residential Development in Residential Zones

Liverpool Development Control Plan 2008

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1. Preliminary

Applies to

1. Part 2.8 applies to the land, shown in Figure 1.
2. Part 1 also applies to the land shown in Figure 1.
3. Part 3.8 applies for Non Residential Development on the land.
4. Parts 3.1 – 3.7 do not apply to the land.



Figure 1 Land to which this Part applies

Background

The subject land above presents the last parcel of land north of the railway line at Voyager Point. This subject land is bounded by Council owned land to the north and east, Williams Creek to the west and existing residential to the south.

This part of the DCP provides controls for the subdivision including street layout and development controls for the subject land.

Objectives

To achieve quality development on the Voyager Point Land through high standards of urban design and environmental performance with particular reference to enhancing accessibility, achieving environmental sustainability and delivering social and economic benefits.

2. Controls for public domain

This section provides controls and objectives relating to development in the public domain. It covers:

- Access.
- Community context.
- Streetscape.
- Soil management and contamination.
- Water cycle, flood risk and vegetation management.

These controls apply to development in areas that are accessible to, and will be used by, the wider community.

2.1 Street Network and Street Types

Background

The estate is to be an accessible place linked to its surroundings with streets, pedestrian and cyclist pathways and connections to public transport.

Objectives

- a) To provide an attractive residential street environment
- b) To provide for the safe and efficient circulation of traffic.
- c) To provide for the safe and efficient movement of pedestrians with particular regard to the provision of clear and safe access routes for people who have a disability
- d) To provide safe, legible and efficient access based on the street network and augmented by connections through public open space.
- e) To link the Estate with its surroundings by connecting to external road networks, pedestrian and cycle paths, public transport routes and public open space networks.
- f) To take advantage of public transport opportunities, such as the East Hills railway line.
- g) To ensure adequate access for emergency vehicles on all edge roads.
- h) To ensure servicing is able to be carried out appropriately.
- i) To ensure appropriate access for people who are disabled.
- j) To ensure safety for pedestrians.
- k) To ensure street network and resultant lot layout provide maximum opportunity for passive solar access to dwellings when orientated towards the street.

Controls

1. Provide access from and relate development to Sirius Road.
2. The Sirius Road frontage of the site is to be upgraded with new pavement and kerb and gutter. The road width is to accommodate buses and a bus stop just beyond the eastern edge of the site.
3. Provide only one access point to the site from Sirius Road.
4. Provide an edge road to all public land boundaries with the site that complies with all relevant requirements and provides indented visitor parking.
5. The street and block network is to be legible, permeable and fine grained facilitating walking and cycling.

6. All streets are to be legibly signposted with street names and property numbers.
7. Street layouts are to be designed to ensure pedestrian safety and design speed of 50km/h.
8. A street network plan is to be submitted for all applications showing street and intersection types and any other proposed street treatments.
9. All intersections are to be designed in accordance with the RTA *Austroads Road Design Guide* and the specifications set out in the Transport and Traffic Assessment.
10. Kerb ramps are required at all intersections where footpaths are provided.
11. Footpaths must be provided on one side for local streets.
12. Provide an access easement in favour of Liverpool City Council for emergency vehicles only from Buxifolia Court to the southwest corner of the site. Access to the emergency access link shall be restricted by gate/bollards.

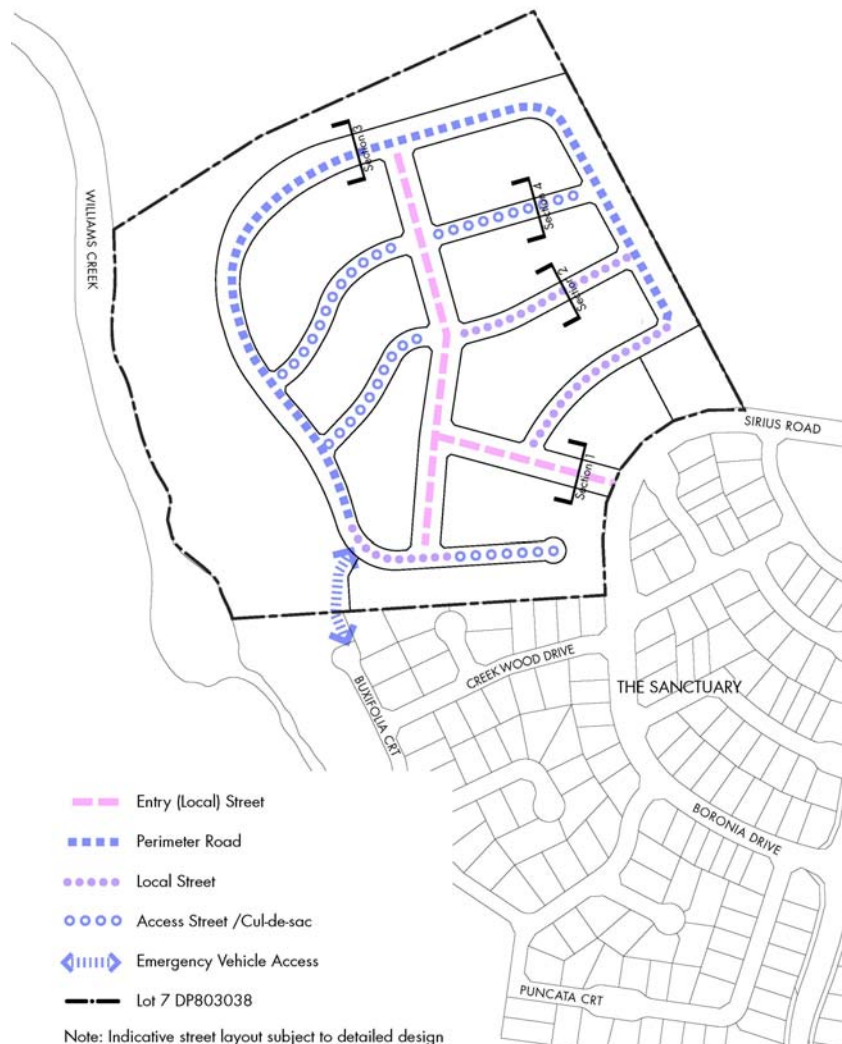


Figure 2 Indicative street network and hierarchy for the site

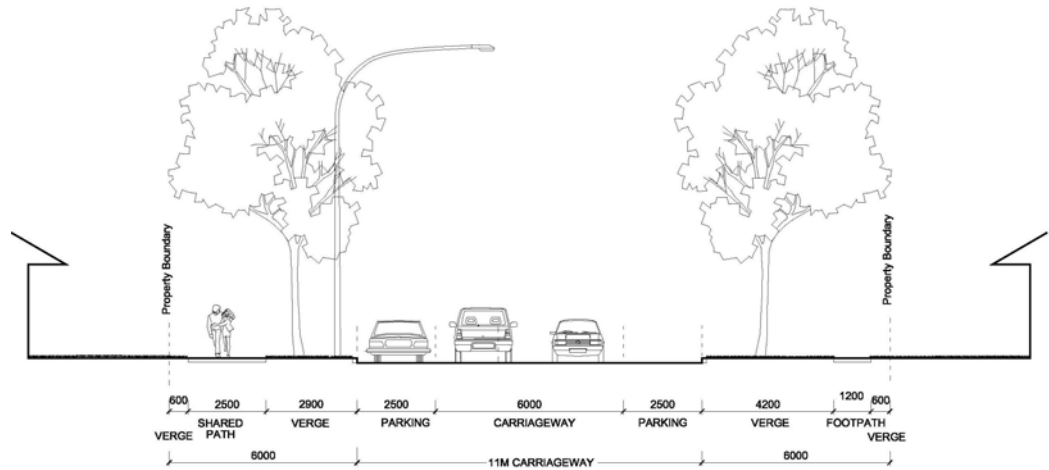


Figure 3 Entry Local Street

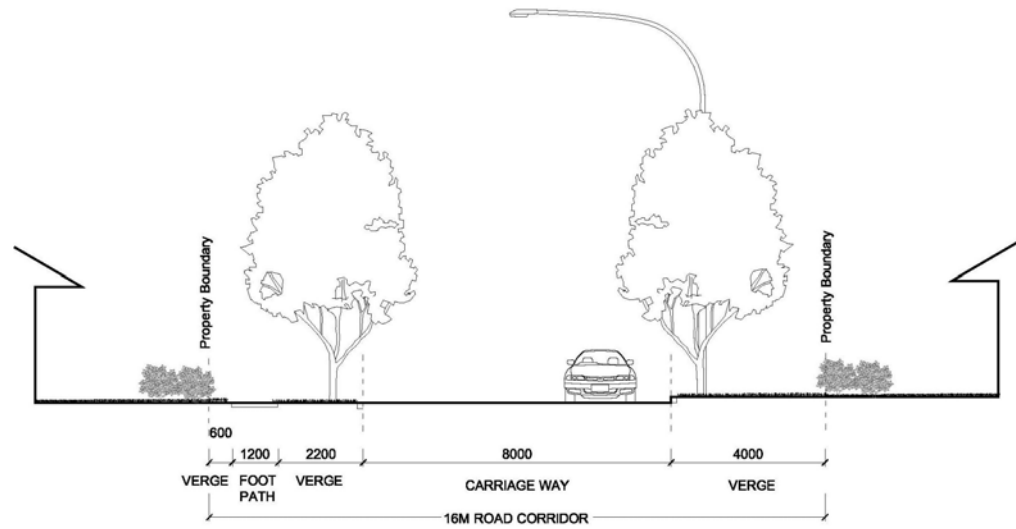


Figure 4 Local Street

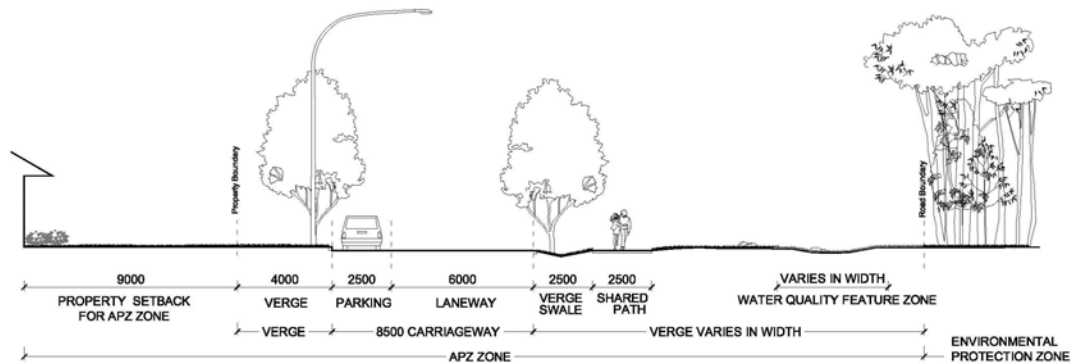


Figure 5 Perimeter Road

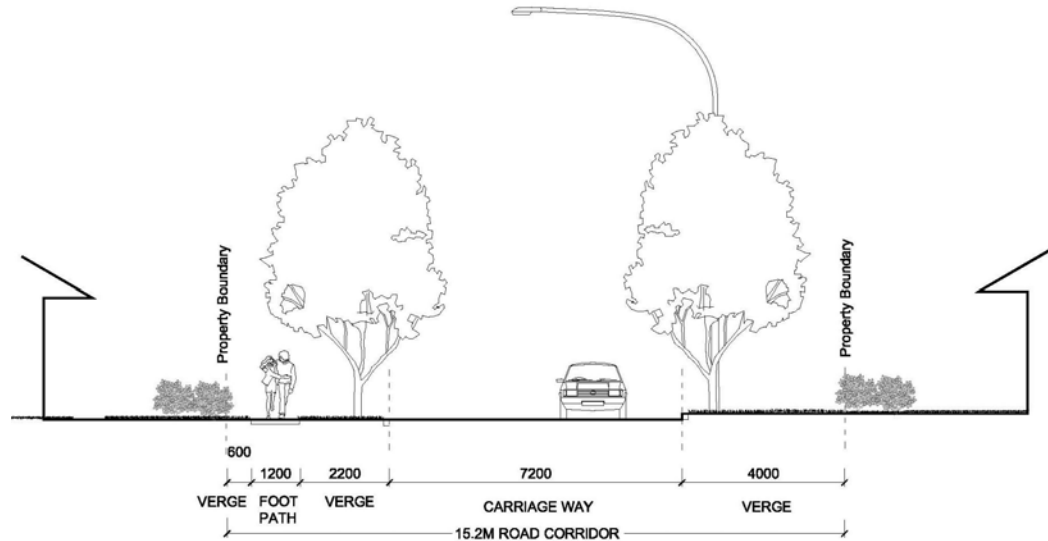


Figure 6 Access Street/ Cul-de-sac

2.2 Pedestrian and Cyclist Networks

Background

This Plan seeks to encourage walking and cycling. Pedestrian and cycle facilities in public spaces are to be safe, clearly defined, functional and accessible to all. They should provide linkages to social leisure activities, and should be characterised by excellence of design appropriate to the area. An indicative shared path network is illustrated on Figure 8.

Vehicle crossings over footpaths need to be managed and minimised to ensure that they do not detract from the quality of the public domain, disrupt pedestrian or cycle movement, or threaten user safety.

Objectives

- a) To encourage walking and cycling as opposed to the use of private vehicles for local trips.
- b) To provide a permeable and interconnected network of streets and pathways that give safe, convenient and legible access to areas of attraction both within and beyond the suburb.
- c) Minimise and prevent, where possible, vehicular crossings over pedestrian or cyclist pathways.

Controls

1. Driveways are to be designed and located to minimise conflicts with pedestrians and cyclists on footpaths.
2. Wherever possible driveways are to be a single crossing, perpendicular to the kerb alignment.
3. Pedestrian and cycle paths in open space areas should be located close to streets on the edge of open spaces to take advantage of street lighting and allow casual surveillance by residents and drivers. Where this is not possible, paths should be well-lit and visible from the street.
4. Pedestrian and cycle paths are to link the open space network within and outside the suburb.
5. Shared pedestrian and cycle paths are to be a minimum 2.5m wide.

6. Designated pedestrian-only paths are to be a minimum of 1.2m wide.
7. Pedestrian and cycle facilities in public spaces are to be safe, well lit, clearly defined, functional and accessible to all.
8. Pedestrian and cycle paths are to be designed to be fully accessible by all with access points and gradients being designed in accordance with AS 1428:1-4.

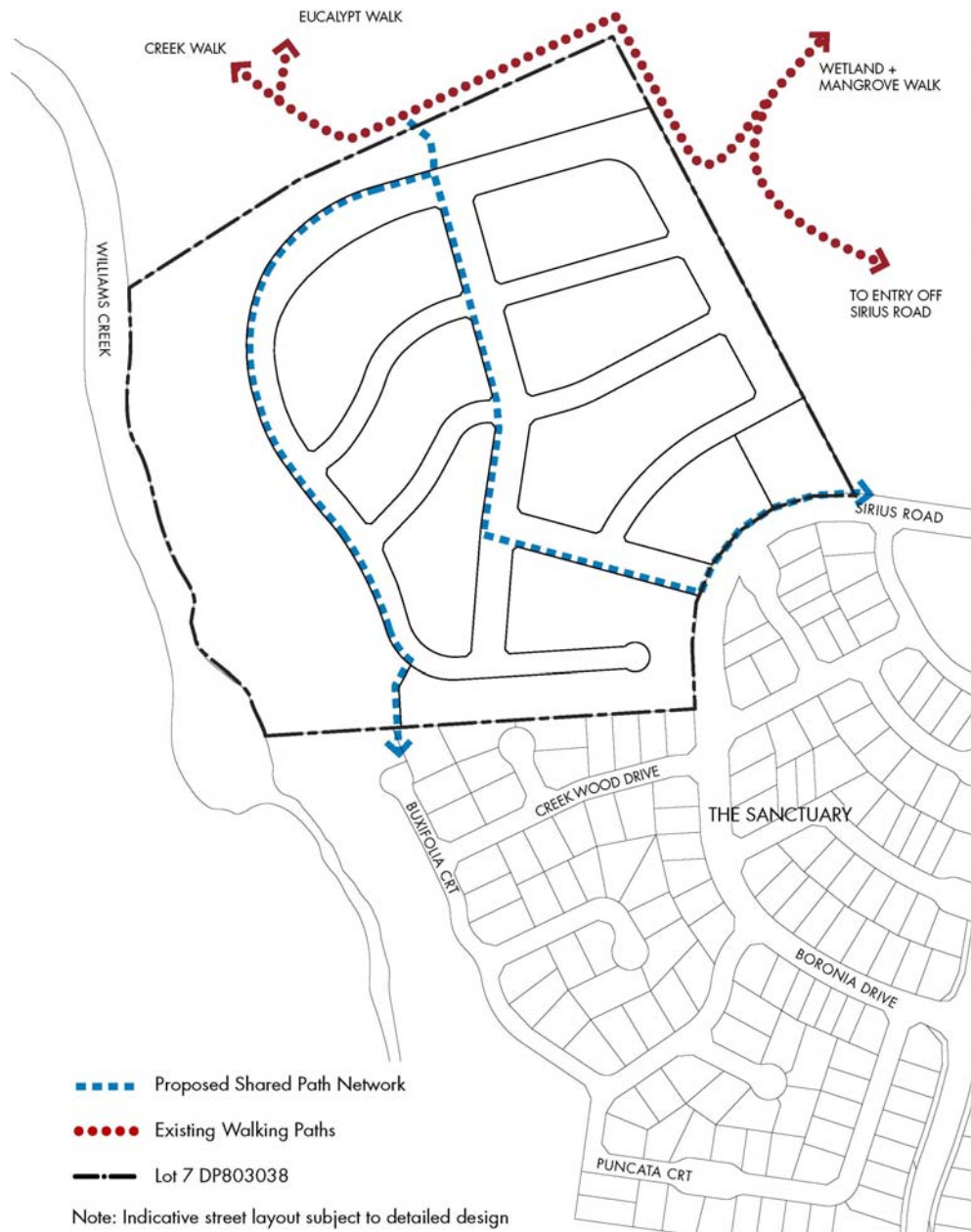


Figure 7 Indicative Shared Path Network

2.3 Streetscape and Street Trees

Background

Street furniture should maximise pedestrian comfort, convenience and amenity, create visual harmony and be used to define spaces, streets, paths and gateways. Opportunities for public art in significant public domain locations should be explored as part of the development process.

Objectives

- a) To create a sense of identity for the area.
- b) To enhance public spaces so that they are vibrant, safe and welcoming.
- c) To facilitate cultural identity through art and design in public places.
- d) To create quality streetscapes that is visually attractive and integrates with surrounding street layout.

Controls

- 1. Street furniture is to be incorporated into the design of all public spaces and should be consistent in design and style.
- 2. Street furniture is to be located so as not to impede mobility, generally in accordance with AS 1428:1 - 4.
- 3. The location and detailing of all proposed street furniture is to be indicated on the Landscape Plan, to be submitted with the DA.

Street Tree Planting

- 1. Street trees shall be required to be planted in conjunction with the creation of a new street or the extension of an existing street.
- 2. One street tree shall be planted 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 8 for details.
- 5. Trees and shrubs on individual streets must be of a uniform species. On streets adjacent to bushland, species indigenous to the area must be planted.

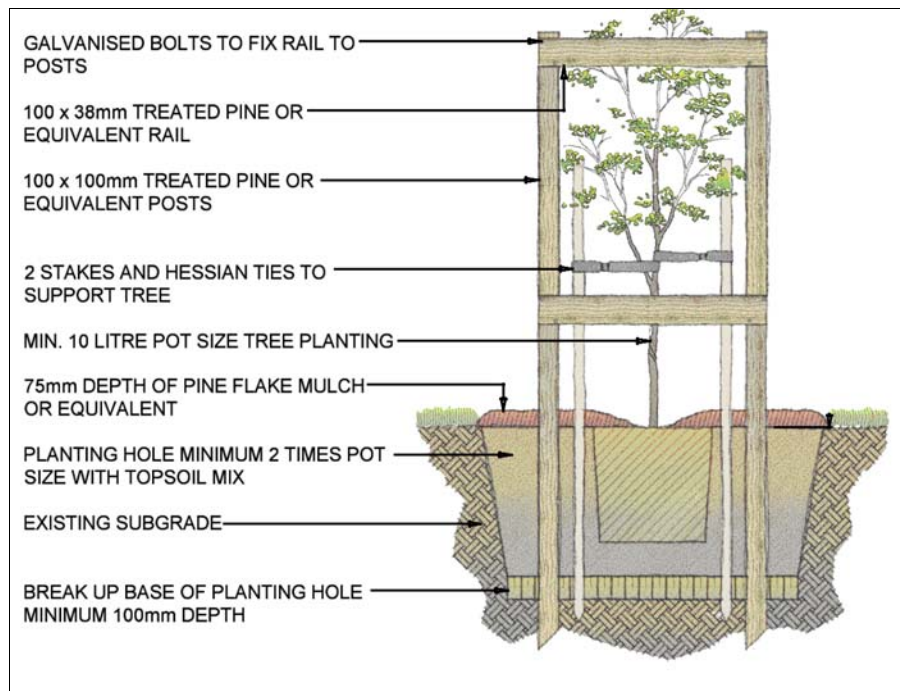


Figure 8 Tree Protection



Figure 9 Indicative street tree network

2.4 Open Space

Background

Public spaces can be designed to promote vibrant social interaction, civic pride and a sense of public ownership and belonging. Landscaped areas and open space within the public domain play a major role in setting the character of the locality. These areas should make the neighbourhood pleasant and welcoming and be convenient to the needs of the community.

Objectives

- a) To ensure adequate provision and distribution of public open space to meet the needs of the residents.
- b) To retain and integrate existing landscape elements, such as vegetation and topographic features, in the design of new development.
- c) To provide links between the open space areas and community and retail facilities.
- d) To endorse public ownership of open spaces and environmental protection zones within the site to promote local and regional recreational and ecological values.
- e) To retain and integrate existing landscape elements, such as vegetation and topographic features, in the design of new development.
- f) To integrate landscape design with water cycle management across the development area to promote water sensitive urban design principles as part of the development.
- g) To extend, link and reinforce the natural features of the area, particularly the natural watercourses and habitat.
- h) To encourage the use of native species and low maintenance landscape treatments.
- i) To ensure good quality open space to meet the recreational needs of residents.

Controls

- 1. Public open spaces within the site are to be designed and landscaped to minimise maintenance and be in accordance with the *NSW Planning for Bushfire Protection Guidelines*. This is to be achieved through the use of appropriate native species. The Landscape Plan submitted with the Subdivision DA must demonstrate how the proposed landscape treatments will minimise maintenance.
- 2. Public open space is to have frontage to public streets with adjacent buildings oriented towards the open space.
- 3. Existing trees, tree stands and vegetation, in good health, are to be retained where possible.

2.5 Vegetation Management

Background

Existing vegetation is to be conserved through the provision of a vegetation management plan focusing on protection zones as illustrated on Figure 10.

Objectives

- a) To maximise opportunities for creek restoration and enhancement that mimics natural stream processes.
- b) To conserve, protect and enhance existing vegetation and biological connectivity through the provision of continuous vegetated riparian protection zones along Williams Creek.

- c) To enable existing watercourses to contribute to and be enhanced by a coordinated approach to development within the area.
- d) To provide for appropriate traffic and pedestrian circulation throughout the site while providing for the protection of existing vegetation and its environmental functions.
- e) To link the riparian corridors to other remnant areas of vegetation in the north-west corner of the site and along the western boundary.

Controls

- 1. Development should generally be in accordance with the *Voyager Point Vegetation Management Plan* prepared in August 2005 by BES Bushfire and Environmental Services.
- 2. The riparian corridor adjacent to Williams Creek is to be a minimum of 40m in width measured from the top of bank. An additional 10m vegetated buffer area should also be provided.
- 3. All remnant vegetation along the creeks should be protected and enhanced.
- 4. Development is to be excluded within the riparian corridor including buildings, roads, recreational facilities and car parks.
- 5. Any bank stabilisation measures are to employ techniques that minimise visual impacts and complement the natural environment.
- 6. The location of public footpaths and cycleways should be sensitive to, and not significantly disrupt the integrity of the vegetated riparian corridor and be located at the outside edge of the riparian corridor (furthest from the watercourse). Access to the watercourse can be provided at strategic locations where the ecological integrity of the existing riparian vegetation and stream bed and bank stability will not be compromised.

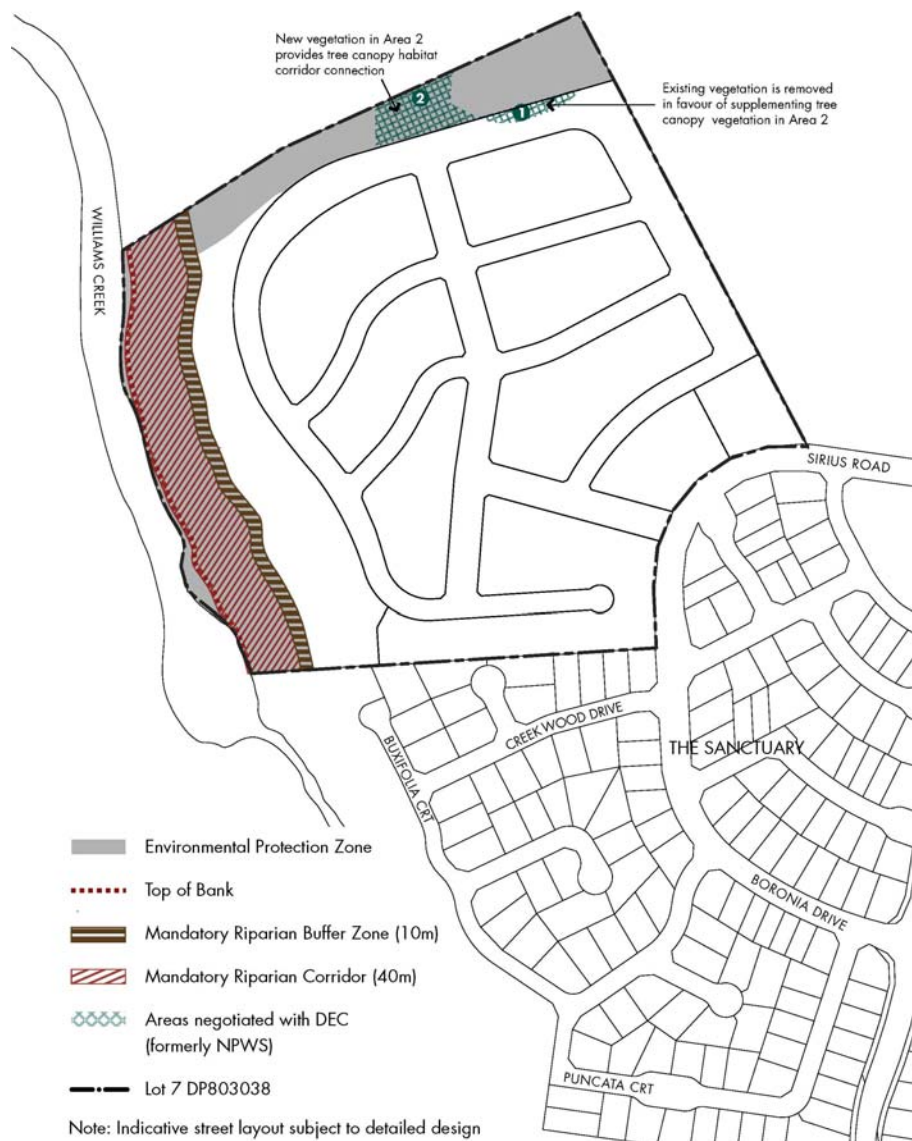


Figure 10 Riparian and Vegetation Conservation

2.6 Bushfire Risk Management

Background

All development on Bush Fire Prone Land must satisfy the aim and objectives of the *NSW Planning for Bushfire Protection Guidelines*.

This plan aims to provide for the protection of human life and to minimise impacts on property from the threat of bush fire, while having due regard to development potential, on-site amenity and protection of the environment.

Objectives

- a) To afford occupants of any building adequate protection from exposure to a bush fire.
- b) To provide for a defensible space to be located around buildings.
- c) To provide appropriate separation between a bushland hazard and buildings which, in combination with other measures, prevent direct flame contact and consequent ignition.
- d) To ensure that safe operational access and egress for emergency service personnel and residents is available.
- e) To provide for ongoing management and maintenance of bush fire protection measures, including fuel loads in the asset protection zone (APZ).
- f) To ensure that utility services are adequate to meet the needs of fire-fighters (and others assisting in bushfire fighting).

Controls

1. Development should generally be in accordance with the:
 - Voyager Point Vegetation Management Plan prepared in August 2005 by BES Bushfire and Environmental Services.
 - Preliminary Bushfire Protection Assessment prepared BES Bushfire and Environmental Services in October 2004
 - *NSW Planning for Bushfire Protection Guidelines*.
2. Provision of an APZ within the defined limited of the site in accordance with *NSW Planning for Bushfire Protection Guidelines*. The APZ shall not be located in the riparian corridor or buffer zone (APZ identified on Figure 11).
3. The vegetation within the APZ (refer to Figure 11) will be managed as an Inner Protection Zone as prescribed in the *NSW Planning for Bushfire Protection Guidelines*.
4. A perimeter road is to be provided between the riparian corridor and residential development in accordance with *NSW Planning for Bushfire Protection Guidelines*.
5. Provision of an emergency access route linking the proposed public perimeter road with the existing public road (Buxifolia Circuit) within the APZ in the southwest corner of the estate. The emergency access is to be:
 - A minimum trafficable width of 4m.
 - Surfaces should be sufficient to support a 13 tonne emergency fire vehicle.
 - Trafficable under all weather conditions.
 - A minimum vertical clearance of 6m to any overhanging obstruction, including tree branches.
 - Clearly signposted as an emergency access.
 - Public vehicular access is to be restricted by a gate or removable bollards.



Figure 11 Bushfire Risk Mitigation

2.7 Water Cycle Management

Background

There is a need for development of the site is to maintain and enhance the quality of the natural environment including the functioning of waterways to minimise flood risk and preserve the ecological values of the site. Figure 12 illustrates an indicative water management strategy for the site.

Objectives

- a) To reduce the impact and risk of flooding on both people and property.
- b) To ensure that there are no adverse impacts on existing flood regimes in the surrounding areas, as a result of the proposed development.
- c) To encourage a holistic approach to water cycle management, implementing total catchment management principles.
- d) To integrate water management measures with innovative urban design.
- e) To minimise the impact of urbanisation on stormwater quality within the catchment so that stream flows mimic natural pre-development flows by encouraging salinity management principles and water sensitive urban design practices.
- f) To prevent development within overland flow paths that would change their course or decrease their flood storage capacity.
- g) To allow land uses and development that are compatible with the predicted flood hazard and have minimal impact on the natural functions and flood storage capacity of the water cycle (including the floodplain, floodways and overland flow paths).
- h) To minimise the volume of stormwater draining from the site and maximise opportunities for water conservation and re-use.
- i) To minimise the stormwater run-off through the provision of pervious areas and vegetation.
- j) To minimise any risk to human life and damage to vehicles as a result of inundation.
- k) To ensure that the principles of water sensitive urban design are to be implemented having regard to erosion management principles.

Controls

1. Development will generally be in accordance with the *Stormwater Management Strategy* prepared in September 2004 by Parsons Brinckerhoff.
2. Where any construction within the floodplain, adjacent to a watercourse, drainage depression or an enclosed drainage system is proposed, the Subdivision DA is to be accompanied by a hydrologic and hydraulic assessment to allow a determination of the risk and impact by, and on, the development proposal by flooding. The assessment is to include:
 - Analysis of the impact of the development on flood storage capacity, flood conveyance, flood levels, and flow velocities.
 - Identification of the flood risk to both people and property as a result of the development.
 - External and internal catchment hydrology for rainfall events up to the probable maximum flood (PMF), including the 1% Annual Exceedence Probability (AEP) design storm.
 - An estimation of the capacity of the existing drainage system.
 - Predicted extent of flood inundation.

- Depths and velocities of predicted flood flows to allow effective hazard categorisation.
- The development shall have no adverse impact on the existing flood regime in the surrounding areas and shall demonstrate the operation of any proposed flood mitigation measures.
- The use of infiltration trenches will not be permitted immediately upslope of building foundations, retaining walls or unstable embankments. A proposal for the use of infiltration trenches must be supported by specialist engineering advice having regard to:
 - Catchment hydrology.
 - Soil permeability.
 - Recharge.
 - Water table level.
 - Effect on adjoining properties.
 - Proposed outlet/absorption/infiltration devices.
- The trunk drainage system shall be designed to convey the 1% AEP flood event, with a freeboard of 300 mm. Roads adjacent to trunk drains are to be designed to carry flows in excess of the drainage system. The crown of the road shall be at least 300mm above the 1% AEP flood level. Buildings adjacent to these roads shall have habitable floor levels 300mm above the crown of the road.
- Where drainage depressions pass through a property, adequate provisions must be made for the passage of stormwater runoff with adequate freeboard to building floor levels.
- It may be necessary to enhance the site's drainage capacity. This could result in the need to locate drainage services across Council-owned land. In this event it may be necessary to obtain Council approval. Such action needs to be identified and addressed at the Subdivision DA stage.
- In the event of Council being requested to approve the location of a piece of infrastructure on its land, it will require:

Documentation that such an activity will not prejudice the use of the land for the purpose for which it exists.

The possible preparation or amendment to the Plan of Management for the land.

3. The following restrictions apply to applications for development in overland flow paths:

- No slab-on-ground construction is permitted within an overland flow path.
- Where buildings are required to be raised above the flood level due to their location in an overland flow path or a flood affected area, the space underneath the building must not be filled or enclosed in any way. Spaces underneath such buildings must not be used for the purpose of habitable rooms, however they may be used for parking, and small-unenclosed structures may be permitted at Council's discretion.
- Where fences are proposed within an identified overland flow path, there must be adequate provision for water conveyance.



Figure 12 Indicative Water Management Strategy

3. Controls for private domain

Controls relating to the private domain are designed to ensure residential development responds to the distinctive natural and urban features within and beyond the site and sensitive ecological features.

3.1 Dwelling Types, Lot Size and Site Coverage

Background

The Estate presents opportunities for a range of lot sizes to suit a variety of dwelling types. The main objective is to provide choice through a mix of housing types associated with high quality open spaces. The predominant housing type will be detached dwellings.

Objectives

- a) To promote sustainable forms of suburban development.
- b) To establish a compact community with high levels of liveability and amenity.
- c) To encourage the provision of a range of housing types and forms at an appropriate dwelling density.
- d) To ensure an appropriate development interface with the existing development in 'The Sanctuary'.
- e) To establish an acceptable interface with public open spaces.
- f) To increase the walkability of suburban living, and decrease reliance on private vehicles.

Controls

1. Housing in the Estate can comprise of any of the following as appropriate:
 - Dwelling houses.
 - Semi detached dwellings.
 - Small lot dwellings.
2. The maximum lot yield from the Voyager Point Estate site is 137 dwellings.
3. The residential areas to have a maximum dwelling density of 12.4 dwellings per hectare (based on original gross site area) with the housing and subdivision design complementary to 'The Sanctuary'.
4. Lots adjoining established residential lots in "The Sanctuary", to have a lot size of 550sqm or larger and shall be restricted to detached dwellings.
5. Lots fronting Sirius Road must be 450sqm or greater.
6. Development fronting Sirius Road shall be restricted to detached dwellings.
7. The minimum lot size permitted is 400sqm notwithstanding this control, 25% of the maximum lot yield may be developed at a range between 300 – 400sqm as part of Integrated Housing.
8. Smaller lots (between 300 – 400sqm) must be located within 200m of useable accessible public open space.
9. The maximum building footprint on lots above 400 sqm is 55%. Notwithstanding this control, a maximum building footprint of 60% applies on lots between 300 – 400 sqm as part of Integrated Housing.
10. The minimum lot frontage for lots above 400sqm is 12m, calculated from the specified front setback (building line). Notwithstanding this control, the minimum lot

frontage of 11m applies to lots between 300 – 400sqm as part of Integrated Housing.

11. For irregularly shaped lots, the minimum lot width is calculated from the specified front setback (building line) and is 12m for all dwelling types.
12. Lot sizes and dimensions are to take into account: the slope of the land to minimise earthworks/retaining wall construction and the retention of existing trees.
13. A maximum requirement for lot splays of 6 x 6m is required on corner lots. For corner lots on streets with indented car parking the maximum requirement is 3 x 3m. Splays are to be designed in accordance with the diagrams below.

3.2 Orientation

Background

The orientation of dwellings on the lots should be designed to maximise solar access to reduce household energy consumption and to make best use of the land available.

Maximising solar access is an important consideration, but it must be balanced with:

- Establishing a desired streetscape character (e.g. by aligning dwellings to the street);
- Providing for enjoyment of views (e.g. towards open space); and
- Fitting with the topography.

Objectives

- a) To optimise solar access to dwellings.
- b) To contribute positively to desired streetscape character.
- c) To support the amenity and design of public and private open space.
- d) To ensure lots are oriented to optimise solar access to facilitate micro-climate management, including the application of energy conservation principles.
- e) To ensure all dwellings address the street and overlook open space where possible;
- f) To ensure that lot size and dimensions take into consideration the physical characteristics of the land, in a way which promotes retention of existing vegetation and reduces the incidence of damaging earthworks and retaining wall construction.
- g) To sensitively relate to ecologically significant features and ensure adequate separation from natural constraints including bushfire and flooding.
- h) To ensure passive surveillance of public space through the effective and functional layout designs of new developments.

Controls

1. Generally and where consistent with desired street and public open space layout, orient lots within 30 degrees east and 20 degrees west of north.
2. Select dwelling types which respond to the streetscape while optimising solar access.
3. Design solutions include:
 - Use courtyards, L-shaped configurations and increased setbacks to northern boundaries.
 - Optimise solar access to living spaces and associated private open spaces by orienting them to the north.
 - Detail building elements to modify environmental conditions, as required, maximising sun access in winter, and sun shading in summer.

3.3 Residential Amenity

Setbacks

Background

The street setback of a development is an important consideration for the streetscape, and buildings should be sited to complement and enhance the streetscape.

Objectives

- a) To ensure consistent front setbacks.
- b) To contribute to the creation of attractive and memorable streetscapes that has a consistent character.
- c) To provide adequate space for tree planting to front and rear of dwellings.

Controls

Front setbacks

The street setback for all dwellings shall be a minimum of 4.5m.

Side setbacks

- 1. Single storey dwellings: the minimum side setback is 1m.
- 2. Two storey dwellings: the minimum side setback is 1.2m.
- 3. Elements such as fascias, gutters, downpipes, eaves (up to 450mm wide), chimneys, flues and pipes may encroach into the side setback.

Rear setbacks

All dwellings shall have a minimum rear setback of 6m.

Asset protection zone

Dwellings which are affected by the APZ must not have any part of the dwelling within the protection zone.

Corner sites

- 1. Corner sites are to provide a dwelling frontage to both streets.
- 2. Corner lots are to have a secondary/side setback of a minimum 3m.

Solar access

Objectives

- a) To optimise solar access to habitable rooms and private open spaces.
- b) To minimise overshadowing of neighbouring properties.

Controls

- 1. All daytime living areas to receive a minimum of 4 hours sunlight between 9.00am and 3.00pm at the winter solstice (June 21).
- 2. Any overshadowing of neighbouring properties must not result in less than 4 hours sunlight access to living areas between 9.00am and 3.00pm on the winter solstice (June 21).
- 3. The shadows cast by neighbouring dwellings, the proposed tree plantings and fences are to be shown on a shadow diagrams submitted as part of the Residential Dwelling DA for each block. Side and front setback dimensions are to be adjusted to ensure solar access objectives are met.
- 4. The shadow diagrams shall indicate, at a minimum, the shadow impact at 9am, 12 noon and 3pm midwinter (June 21). Shadow diagrams at other times, particularly at equinox and midsummer would assist in determination of the application. These

diagrams must show shadows cast by the proposed building(s), tree plantings, courtyard walls, fences and any other neighbouring development.

5. All dwellings are to control sun access with a minimum eave width of 400mm.

3.4 Amenity and Environmental Impact

Background

Visual and acoustic privacy is a component of overall residential amenity. Residents have reasonable expectations about the levels of privacy they should enjoy within their dwelling and principle open space area. Designs must consider the visual and acoustic privacy of both new and existing residences.

Objectives

- a) To ensure buildings are designed to achieve visual and acoustic privacy.
- b) To protect visual privacy by minimising direct overlooking of habitable rooms and private open space.
- c) To contain noise within dwellings and minimise noise from outdoor areas.

Controls

Visual Privacy

1. Habitable room windows that have a direct outlook to the principle open space area or habitable room windows of an adjacent dwelling within 9m are to:
 - Be offset from the edge of one window to the edge of the other by a distance sufficient to limit views into the adjacent windows; or
 - Have sill heights of 1.5m above floor level; or
 - Have fixed obscure glazing in any part of the window below 1.5m above floor level.

Acoustic Privacy

2. The design of attached dwellings must minimise the opportunity for sound transmission through the building structure, with particular attention given to protecting bedrooms and living areas.
3. Living areas and service equipment must be located away from bedrooms of neighbouring dwellings.
4. In attached dwellings, bedrooms of one dwelling are not to share walls with living spaces or garages of adjoining dwellings, unless it is demonstrated that the shared walls and floors meet the noise transmission and insulation requirements of the Building Code of Australia.

3.5 Landscaped Area and Private Open Space

Background

High quality private open space contributes to high levels of residential amenity and outdoor recreational and relaxation opportunities within the boundary of a property. The design of private open space must consider the need for high levels of solar access as well as the need for privacy.

Objectives

- a) To provide useable private open space that offers a high level of residential amenity.
- b) To enhance the spatial quality, outlook and useability of private open space.
- c) To reduce stormwater run-off through the provision of pervious areas.

- d) To facilitate safety through passive surveillance.
- e) To each block is to provide adequate private open spaces for outdoor play, entertaining, living and services, and ensure deep root zone for tree planting.
- f) To ensure landscape design is responsive to local microclimate and dwelling design.

Controls

1. For each dwelling provide private open space at ground level which is a minimum of 30% of the lot area or a minimum of 70sqm which ever is the greater.
2. The primary outdoor living area (within the private open space) is to receive a minimum of 4 hours sunlight at the winter solstice between the hours of 9am and 3pm.
3. 80% of outdoor areas to have pervious surface treatments (excluding driveways).
4. Each dwelling is to provide ground level private open space adjoining the main living area of the dwelling. The private open space is to include:
 - A primary area of at least 35sqm with a minimum dimension of 4m, directly accessible from a major living area.
 - An external area for clothes drying, with at least 2 hours of full solar access between 9:00am and 3:00pm on the winter solstice.
 - An all weather outdoor area of 18sqm having a minimum dimension of 3 m adjacent to daytime living spaces.
 - Adequate private open spaces for outdoor play and entertaining, and ensure deep soil zone for tree planting.
5. Front courtyards are not permitted.

3.6 Dwelling frontages, Streetscapes and Fencing

Dwelling Frontages

Background

Dwelling frontages are important as the meeting place of the public and private domains. The way a dwelling interacts with the street influences perceptions of the street and, in turn, the character of the suburb. Dwelling frontages can be designed to form a welcoming, safe, interesting and green streetscape environment.

Objectives

- a) To provide attractive, architecturally coherent streetscapes which reinforce the social and circulation functions of a street.
- b) To enhance the setting, outlook and amenity of dwellings.
- c) To provide a clear distinction between public and private space which enhances the streetscape.
- d) To improve real and perceived levels of safety in residential streets through casual surveillance of the street and dwelling entries.

Controls

1. The ground floor level of the front façade of dwellings is to contain at least one window to a habitable room to allow casual surveillance.
2. Verandas, porches and balconies are encouraged on front elevations to provide articulation and allow casual surveillance.
3. Dwelling entries must be visible from the street and be covered to provide protection against the weather.

4. Entry features or porticos should be utilised to provide visual interest to the façade. Entry features may encroach in the setback by up to 1.5m.
5. The presentation of blank walls to the street is not permitted. Windows to service rooms such as bathrooms and laundries should not be situated on the front dwelling façade.
6. The street front property boundaries of dwellings should be defined, which may involve the use of low height walls, hedges or other landscape features, excluding front fences and courtyard walls.
7. On corner sites, the property boundary on the secondary frontage must be clearly defined, with continuation of the treatment used on the primary street frontage from the corner of the lot to at least 3m behind the front building setback.



Figure 13: An Example of Building Appearance (Indicative Only – Not to Scale)

Fencing

Background

Front fences are optional; however they provide a clear delineation between private and public land.

Objectives

- a) To provide a clear transition between public and private areas.
- b) To provide a visual element within the streetscape.
- c) To ensure fencing enhances the streetscape.

Controls

Primary Frontage

1. Front fences to be a minimum of 0.6m and a maximum of 1.2m in height, and constructed of masonry, timber and/or vegetation.
2. Front fences are to be light coloured and low in height or open form.
3. Fences should not prevent surveillance by the building's occupants of the main open or communal areas within the property or the street frontage.
4. The front fence must be 20% transparent.
5. Front fences are to be constructed of materials compatible with the proposed design of the dwelling.

Secondary Frontage

6. Side fences must be a maximum of 1.8m in height, and constructed of masonry, timber, metal pickets and/or landscaped.

7. For side fences along the secondary frontage, a maximum height of 1.2m is required for the first 9 m measured from the front boundary, the remaining fence / wall may then be raised to a maximum of 1.8m (see Figure below). The secondary setback is the longest length boundary. If there is no fence at the front of the dwelling the side fence must then start no more than 9m from the front boundary.
8. Side fencing facing a public street or open space must not be constructed of sheet metal. However, metal sheet fencing is permitted on internal boundaries.



Figure 14 Fence types

3.7 Car Parking and Access

Background

The provision of on-site parking is required for all residential allotments. On-site parking is to be provided in a way that does not compromise the appearance of dwellings from the street.

Objectives

- a) To provide sufficient and convenient parking for residents and visitors.
- b) To ensure that parked vehicles do not create traffic or pedestrian hazards, and do not degrade landscaped areas such as grass verges.
- c) To reduce the visual impact of garages, carports and parking areas on the streetscape and improve dwelling presentation.

Controls

- 1. The visual impact of garages is to be minimised, as illustrated on Figure 14.
- 2. A minimum of one and a maximum of two roofed car parking spaces shall be provided for each dwelling.
- 3. The parking area per vehicle is to be in accordance with AS 2890:1.
- 4. On lots with a frontage 12m or less, side by side garages are not permitted on single storey dwellings. Single garages or tandem garages may be utilised as an alternative.
- 5. All parking spaces for adaptable housing are to comply with AS 2890:1 for disabled parking.
- 6. All garage and carport entries are to be set back a minimum of 5.5m from the front property boundary.
- 7. Garage design, form and materials must be compatible with the dwelling character.
- 8. Stacked or tandem car parking spaces are acceptable, provided that at least one space is located a minimum of 5.5m from the front property boundary.

3.8 Private driveways

Background

Private driveways can be designed to minimise their impact on the streetscape and on the environment.

Objectives

- a) To provide safe and convenient access to garages, carports and parking areas;
- b) To create a pleasant, low maintenance place.
- c) To clearly define public and private spaces, such that driveways are for the sole use of residents;
- d) To permit casual surveillance of private driveways from dwellings and from the street; and
- e) To minimise conflict between pedestrians and vehicles at the junction of driveways and footpaths.

Controls

1. The driveway crossing the verge between the property boundary and the kerb is to have a maximum width of 5.5m.
2. Driveways to be no wider than 3.5m at front property boundary.
3. Driveways are to have surface treatments on either side suitable for infiltration.
4. Driveways are to have the smallest configuration possible to serve the required parking facilities and vehicle turning movements.
5. Access to allotments in the vicinity of roundabouts and traffic islands and intersections shall not be provided within 10m.
6. On corner allotments, driveways are not to be within 6m of the tangent to the kerb return.
7. Driveways are not to be within 0.5m of any drainage facilities on the kerb and gutter.
8. At the street entry, the driveway is to have low visual impact and be clearly distinguishable as private access only.
9. Planting at driveways should not block lines of sight for pedestrians, cyclists and vehicles.
10. Driveways to be in accordance with the relevant Australian Standards for vehicular turning circles, visibility distances and gradients.



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