Part B – Land Use Based Planning Controls

Chapter B2: Residential Subdivision

Contents

Figures

1 INTRODUCTION

1. This Chapter of the DCP outlines the objectives and detailed controls for residential subdivision in addition to the planning controls contained in the relevant Local Environmental Plan.

2. The purpose of this chapter of the DCP is to provide Council's detailed requirements for residential subdivision development upon land zoned either: R1 General Residential, R2 Low Density Residential, R3 Medium Density Residential, R4 High Density Residential, R5 Large Lot Residential, B1 Neighbourhood Centre and B4 Mixed Use.

3. This part of the DCP should be read in conjunction with:

   (a) The relevant Local Environmental Plan which prescribes the zoning and minimum subdivision lot size requirements.

   (b) Part A (Introduction and General Requirements) of the DCP which provides advice on the lodgement requirements for a Development Application.

   (c) Part D (Locality based DCPs / Precinct Plans) of the DCP which provides specific locality based or precinct based planning controls which may affect a proposed residential subdivision in a specific locality.

   (d) Part E (General Planning Controls City Wide) of the DCP which outlines Council's general planning requirements for all developments.

   (e) Council's Subdivision Code which outlines Council's minimum design and construction specifications for all components of a subdivision including but not limited to earthworks, drainage and road works etc.

2 OBJECTIVES

1. The objectives of this Part of the DCP are:

   (a) To facilitate a range of lot sizes to permit a range of housing styles and housing mix, in order to meet the changing demographic profiles and housing requirements for residents in the City of Wollongong Local Government Area;

   (b) To ensure the subdivision of land is responsive to inherent site conditions and constraints;

   (c) To ensure that all subdivisions are designed to take into account the principles of ecologically sustainable development and solar energy efficiency, to assist in ensuring that subsequent development is significantly more energy efficient;

   (d) To ensure subdivisions achieve high quality urban design outcomes through maximising the number of new lots with principal street frontage and to restrict the number of battle-axe lots;

   (e) To ensure that lot sizes, dimensions and layout are consistent with best practice in terms of urban design, solar access orientation and energy efficiency;

   (f) To establish a clear hierarchy of different road types which cater for different types of traffic movement through residential subdivisions; and

   (g) To ensure that the majority of residential allotments are within a 400 metre walking distance from an existing or proposed new bus stop.

3 DEFINITIONS

Corner Allotment Is a lot which has frontage to two roads on adjacent boundaries.

Irregular shaped allotment means an allotment which is not regular in shape.

Regular shaped allotment means either:

(a) Allotment which is either square or rectangular in shape; or

(b) Allotment of another shape where a square or rectangular shape equivalent in area to the minimum lot size area for the allotment type could be contained within the boundaries of the allotment and includes a battle-axe shaped allotment and a corner allotment where the only deviation from the above requirements is the access handle (ie battle axe lot) or the splay corner (ie corner lot).

4 TYPES OF RESIDENTIAL SUBDIVISION

4.1 General

1. In NSW, there are three (3) main forms of residential subdivision, namely:

   (a) Torrens Title subdivision;

   (b) Strata Title subdivision; and

   (c) Community Title subdivision.

4.2 Torrens Title Subdivision

4.2.1 General

1. Torrens Title subdivision is the main form of subdivision of a parcel of land.

2. Torrens Title is a system of title, based on registration. The property owner is referred to as the 'registered proprietor' who holds the land subject to interests and other rights recorded in the register but is free from all other interests. The registered proprietor is issued with a Certificate of Title (CT) that is a duplicate copy of the folio entry in the central Torrens Lands Title register, held by the NSW Department of Lands (Land & Property Information).

4.2.2 Development Application Lodgement Requirements

1. Any Development Application for a proposed Torrens Title subdivision must be supported by the following documentation:

   (a) A registered survey plan of the subject site and associated location of any buildings or structures.

   (b) A subdivision plan which shows all existing easements or covenants over relevant lots in the proposed subdivision.

   (c) A Statement of Environmental Effects which addresses the proposal's relationship with relevant environmental planning instruments (including any relevant State Environmental Planning Policy, State Code, relevant LEP etc) and this DCP.

4.3 Strata Title Subdivision

4.3.1 General

1. The application of the Strata Titles Act applies principally to the subdivision of residential flat buildings, townhouses, villas or dual occupancies into separate parts / units.

2. Strata title subdivision is essentially the subdivision of space in three dimensions defined by or with reference to walls, floors and ceilings as well as courtyards. It allows for the horizontal subdivision of land and / or airspace into separate titles for separate "strata" lots or units. Each lot or unit represents a separate apartment. An owner of a strata title unit has title to the air bounded by the inner skin of the boundary walls of the unit and by the ceiling height above and the floor level below horizontally.

3. The legal title to the land and building structure is owned by the "Owners Corporation" being a corporate body comprising and representing the owners of all the units in the building. The common property in the strata title includes the building itself, common open space, waste and recycling storage bin areas, visitor car parking and driveways on the land. Generally, car parking spaces (except visitor car parking spaces) are marked on the strata plan and form part of the unit title for the unit owner's exclusive rights.

4.3.2 Development Application Lodgement Requirements

1. Any Strata Title subdivision application must be accompanied by the following documents:

   (a) A survey plan of the site and the building;

   (b) A strata subdivision plan showing proposed individual entitlements, common property (including common open space and visitor car parking) and any easements or other restrictions etc;

   (c) A Statement of Environmental Effects which addresses the proposal's relationship with any previous development consents granted upon the site and consistency with relevant environmental planning instruments, including the relevant LEP and any State Codes as well as the proposal's relationship with this DCP; and

   (d) A copy of any previous Development Consents and Construction Certificates applying to the site, including any buildings upon the site.

4.4 Community Title Subdivision

4.4.1 General

1. Community Title subdivision is a form of subdivision which lies between conventional Torrens Title subdivision and Strata Title subdivision. Community Title enables common (shared) property to be created within an otherwise conventional subdivision.

2. Community title subdivision is primarily governed by the Community Land Development Act 1989 and Community Land Management Act 1989.

3. The Community Land Development Act 1989 permits community title subdivisions to be staged or non-staged developments. The main advantage of staging of larger Community Title subdivisions is that the initial development costs will be lower because the first stage(s) of the development can be used to finance the construction of later stages. It also enables the development of planned communities of any residential type where the use of some land is shared.

4. Council encourages urban consolidation / housing density initiatives involving Community Title subdivisions, particularly in areas within proximity to railway stations. In certain cases, Council may generally agree to the road carriageway widths for private roads servicing up to 12 dwellings

within the subdivision being reduced in width, except where in the opinion of Council there is a potential adverse traffic management issue.

4.4.2 Community Title Management Structure

1. The Community Titles legislation allows for a multi-tiered management structure incorporating either two (2) or three (3) main levels or types of schemes, namely:

   (a) Community;

   (b) Precinct; and

   (c) Neighbourhood.

2. The multi-tiered management structure applies only to Community Title schemes which are developed in stages. The multi-tiered management structure includes all three (3) levels in a scheme.

3. The Community Plan shows the development of the total area broken up into at least two (2) development lots plus common property.

4. The Precinct Plan is the subdivision of a development into at least two (2) precincts plus common property and is managed by a Precinct Association which comes under the control of the Community Association.

5. The Neighbourhood Plan is the further re-subdivision of a precinct within the Precinct Plan. Lots within the Neighbourhood Plan are managed by a Neighbourhood Association which comes under the control of both the Precinct Association and the broader Community Association.

6. It also allows a further level as a strata scheme integrated into the overall scheme.

7. In a proposed two tier management structure, the second tier of management is created by the registration of a neighbourhood plan subdividing a community development lot in a community plan into lots for separate use or disposition known as neighbourhood lots. The neighbourhood scheme is administered by a neighbourhood association which will automatically become a member of the community association.

8. The by-laws for each community scheme are set out in the Management Statement which is registered with the relevant plan of subdivision. Each community scheme is bound by the rules set out in its own Management Statement. The Management Statement is required to cover a range of matters including:

   (a) The management, use and maintenance of community property such as roads and special facilities such as constructed wetlands, recreational facilities and open space areas;

   (b) Waste and recycling storage and collection areas etc;

   (c) Insurance of common property; and

   (d) The proceedings of the Executive Committee.

9. The Development Contract is the construction agreement between the developer and the members of the scheme regarding the type and timing of facilities proposed to be constructed within the common property.

4.4.3 Development Application Lodgement Requirements

1. Any Development Application for a proposed Community Title subdivision must be accompanied by the following documents:

   (a) A subdivision plan which shows the proposed individual lots and proposed "Association Property" lots (including any private roads, common open space, recreational facilities etc) as well as any necessary easements / restrictions.

   (b) A draft Management Statement and a draft Development Contract which comply with the provisions of the Community Land Development Act 1989 and Community Land Management Act 1989.

   Note: If development consent is ultimately granted to the Community Title subdivision, the final Management Statement and final Development Contract together with any 88B Instrument will be required to be lodged with the final plan of subdivision as part of the Subdivision Certificate application.

   (c) A survey plan of the subject site.

   (d) A Statement of Environmental Effects which addresses the proposal's relationship with relevant environmental planning instruments (including any relevant State Environmental Planning Policy, State Code, relevant LEP etc) and this DCP.

5 SUBDIVISION DESIGN - TOPOGRAPHY, NATURAL LANDFORM & SIGNIFICANT VEGETATION

5.1 Objectives

(a) To ensure the design of any proposed residential subdivision takes into account inherent site constraints and natural landform features.

(b) To ensure that the design of any proposed residential subdivision takes into account any significant trees or other vegetation upon the subject site, including any endangered ecological community or threatened species.

5.2 Development Controls

1. The topography and landform of the site must be taken into consideration as part of the design of the subdivision layout, in order to optimise solar access opportunities and maximise views to key natural features.

2. The topography and landform of a locality are important place-making elements and hence, roads should be designed to respond to such features.

3. The subdivision lot layout should be designed to improve views to special features such as the escarpment backdrop, remnant stand of significant trees (ie Spotted Gum forest or stand of Norfolk Island pine trees) or the coastline.

4. Where the land slopes at a grade of 6% or greater, the predominant road alignment should be perpendicular to the contours of the site, wherever practicable.

5. The subdivision layout should be designed to minimise lots which are considerably higher or lower that the road level.

6. The road alignment should be straight or gently curved, wherever possible, to enable edges (eg street trees or building line setback frontages) to frame the vista.

6 SUBDIVISION LOT LAYOUT – ASPECT & SOLAR ACCESS ORIENTATION

6.1 Objectives

(a) To ensure residential lots are well designed to take into account aspect, orientation, slope issues and optimal solar access.

(b) To provide residential lots which maximises solar access and energy efficiency opportunities for future dwellings and private open space areas.

6.2 Development Controls

1. Aspect is a major factor in designing the layout of a subdivision.

2. Roads running generally east – west are preferred since they provide for lots with a north-south axis which caters for optimum solar access to dwellings and private open space. Lots with a main north-south axis (20ºW to 30°E) provide the best flexibility for the siting of future dwellings and also reduce potential overshadowing problems.

3. Lots with a main east-west axis (ie roads running north-south) should be widened, in order to ensure satisfactory solar access opportunities into living rooms of future dwellings and rear private open space areas and to help prevent overshadowing of dwellings and private open space on adjoining lots.

4. Lots with a NW – SE or NE – SW axis are less favourable and may need to be specifically designed or larger than normal to allow for the siting of a dwelling which is not directly parallel to the boundaries.

5. Lots should be rectangular shaped rather than irregular shaped, wherever practicable, in order to maximise solar access opportunities. Lots on the southern side of any road should have a greater frontage to the road, to allow improved solar orientation for the future dwelling.

6. Wherever possible, an access way to a rear battle-axe lot should be located on the southern side of an allotment, in order to minimise any potential overshadowing of future adjoining dwellings.

7. For major residential subdivisions involving 50 or more allotments, reference should also be made to the principles contained in the Coastal Design Guidelines for NSW dated February 2003, prepared by Urban Design Advisory Service and Tourism NSW.

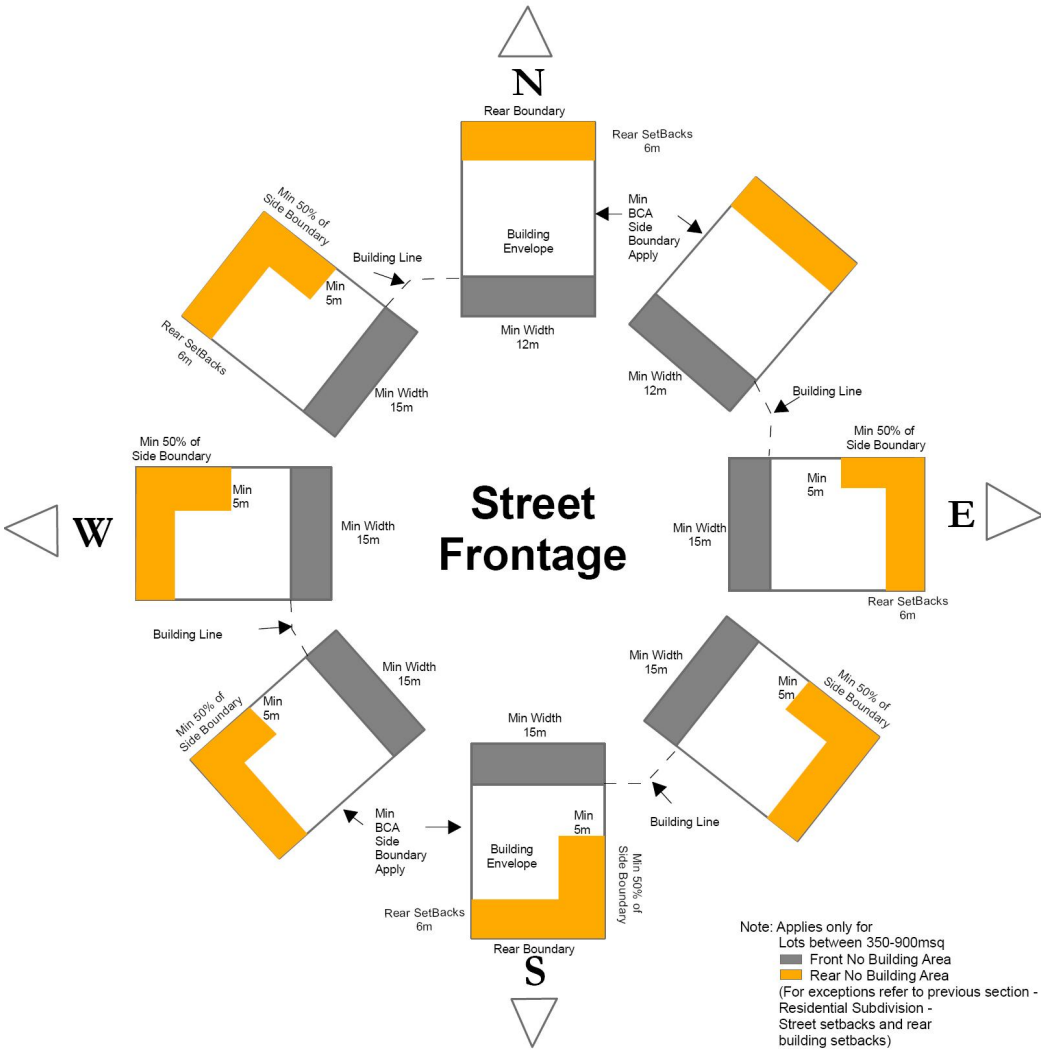

Figure 1: Solar Access Orientation – Minimum Building Envelopes and Lot Widths

7 MINIMUM SUBDIVISION ALLOTMENT SIZE REQUIREMENTS

7.1 Objectives

(a) To ensure the subdivision of residentially zoned land is consistent with the objectives and minimum subdivision lot size requirements of the relevant LEP.

(b) To ensure any subdivision of land is sympathetic to the surrounding subdivision pattern and the amenity of the residential neighbourhood in that particular locality is maintained.

(c) To ensure any subdivision of land provides sufficient site area to cater for the future intended housing.

(d) To ensure the design of any proposed residential subdivision takes into account inherent site constraints and minimises any potential adverse environmental impacts.

7.2 Development Controls

1. The minimum subdivision allotment size requirement for a particular parcel of land shall be in accordance with the provisions of the relevant LEP and the accompany Lot Size Map, relevant to the subject land.

2. The minimum subdivision allotment size requirement for a battle axe allotment, excludes that portion of the proposed lot which forms the battle axe access handle.

3. Larger allotments may be required in certain circumstances such as battle-axe lots (especially irregular shaped battle axe lots), lots containing steeply sloping land or land containing a watercourse or land fronting an arterial road.

8 LOT WIDTH & DEPTH REQUIREMENTS

8.1 Objectives

(a) To ensure residential lots are designed to provide sufficient lot width and depth, to cater for a suitable range of dwelling styles having regard to any site constraints or environmental qualities of that land.

(b) To ensure residential lots in low density residential areas provide sufficient site area to cater for detached dwelling-houses with sufficient rear private open space which gains appropriate sunlight access during mid-winter.

8.2 Development Controls

1. A minimum 12 metre lot width is required for residential allotments at the front building alignment, except for any lot which has a NW – SE or NE – SW axis.

2. Lots with a NW – SE or NE – SW axis should be widened to 15 metres at the front building alignment, in order to ensure satisfactory solar access opportunities into living rooms of future dwellings and rear private open space areas and to help prevent overshadowing of dwellings and private open space on adjoining lots.

3. The minimum depth for a residential allotment should be at least 25 metres.

9 BATTLE-AXE ALLOTMENTS

9.1 Objectives

(a) To encourage conventional residential subdivisions with direct public road access, rather than a series of battle axe allotments one behind each other, in order to maintain the residential amenity and character of the locality.

(b) To permit a maximum of two (2) battle axe allotments in a subdivision upon certain land where inherent site constraints such as slope or topography may otherwise prevent a conventional residential subdivision which would provide direct public road access to all lots.

(c) To minimise the potential adverse streetscape and amenity impacts upon the locality arising from a number of battle axe lots sharing a common access corridors.

(d) To ensure each battle axe lot has a sufficient site area with a suitable building envelope to accommodate a range of different dwelling styles, in order to minimise any potential amenity or privacy impacts upon adjoining residential properties.

(e) To ensure each battle axe lot has a sufficient site area to provide satisfactory on-site parking with suitable vehicular access and manoeuvring areas.

9.2 Development Controls

1. The minimum allotment size requirement for battle-axe lots shall be in accordance with the relevant LEP and accompanying Lot Size Map, excluding the site area required for the battle-axe lot access handle.

2. The minimum lot width for a battle-axe allotment shall be 15 metres as measured at the front building line (ie exclusive the access handle). The 15 metre minimum lot width requirement for battle axe lots is set at 6 metres from the end of the battle axe handle (ie within the main building portion of the site).

3. A maximum of two (2) battle-axe allotments will be permitted behind a allotment which has direct frontage to a dedicated public road in the proposed subdivision. Under no circumstances will Council favourably consider any subdivision proposal involving a series of battle-axe lots, one behind each other.

4. All battle-axe allotments must have direct access to a dedicated public road, through the provision of an access handle attached to each battle-axe lot or via a shared access corridor (ie maximum of two (2) lots may share a common access corridor).

5. The minimum access corridor width for a battle axe allotment shall be 5 metres with a minimum road pavement width of 3 metres for the entire length of the access handle.

6. A 1 metre wide landscaping strip shall be provided along each side of the required 3 metre wide road pavement. The landscaping strip shall be planted with suitable small trees, shrubs and groundcovers.

7. A shared access corridor may be permitted for a maximum of two (2) battle axe allotments where, in the opinion of Council, the proposed access arrangement will satisfactorily cater for safe vehicular and pedestrian access to each of the lots and that satisfactory sight line distances are available between the subject lots and the public road.

8. Any access corridor shared between two (2) battle axe allotments must be created through reciprocal rights of carriageway under Section 88B of the Conveyancing Act 1919. The minimum shared access handle width shall be 5 metres with a minimum road pavement width of 3 metres for the entire length of the access handle. However, the shared access handle must be designed wide enough to satisfactorily cater for the placement of garbage and recycling bins (ie associated with the dwellings on the two battle axe lots) adjacent to the access handle road pavement

9. A minimum 1 metre wide landscaping strip must be provided along each side of the required 3 metre wide road pavement of any shared access handle. The landscaping strip shall be planted with suitable small trees, shrubs and groundcovers. and also include a hard stand area on one side of the access handle for garbage and recycling bins (ie directly abutting the public road reserve). The opposite 1 metre wide landscaping strip in the shared access handle shall include letterboxes for the two lots (ie directly abutting the public road reserve).

10. All battle-axe lot access corridors must be provided with all-weather road pavement. All access handle driveway crossings must be of a full concrete or asphalt construction and must be designed having regard to current fire regulations for fire hydrants. Driveways must be sited to allow for visibility of vehicles entering and leaving the site.

11. Driveway construction must give consideration to driveway drainage, utility servicing and retaining structures.

12. Within bush fire hazard areas, access to allotments shall be in accordance with the requirements of the NSW Rural Fire Service Planning for Bush Fire Protection 2006 guidelines. In the event of any inconsistency between the access requirements to lots between this part of the DCP and the Planning for Bush Fire Protection 2006 guidelines, the Planning and Bush Fire Protection guidelines.

13. Each battle axe access corridor must have capacity for vehicular turning facilities and two (2) on-site parking spaces must be provided for each battle axe lot.

14. Access corridors within bush fire prone areas must provide a suitable turning area, in order to enable the satisfactory manoeuvring of fire fighting vehicles in accordance with the requirements of the NSW Rural Fire Service Planning for Bush Fire Protection 2006 guidelines will prevail.

15. The maximum gradient for any access way required for a battle axe lot subdivision should be 25%.

16. The gradients for access handles for allotments within bush fire prone areas shall be in accordance with the requirements of the NSW Rural Fire Service Planning for Bush Fire Protection 2006 guidelines.

17. Stormwater drainage on driveways must be contained in kerbs or a central dish and conveyed to the Council stormwater drainage system via the public road.

10 BUILDING ENVELOPES

10.1 Objectives

(a) To ensure each residential lot has a suitable building envelope to accommodate a range of different dwelling styles, in order to minimise any potential amenity or privacy impacts upon adjoining residential properties.

(b) To ensure the building envelope for each residential lot, takes into account all relevant constraints of the site and / or any easement or other restrictions pertaining to the land.

(c) To ensure the building envelope for each residential lot takes into account any area of the subject land which contains significant remnant trees or other significant vegetation (including riparian vegetation).

(d) To ensure building envelopes are appropriately positioned to maximise solar access opportunities and energy efficiency for future dwellings and rear private courtyards for each residential lot.

10.2 Development Controls

1. Council may require residential lots to provide a specific rectangular building envelope with minimum dimensions of 15 metres (depth) x 10 metres (width), where the subject site contains any inherent site constraint(s) (eg flooding, geotechnical constraints etc) or contains significant remnant vegetation, any threatened flora species, endangered ecological community etc. Any such building envelope shall be exclusive of the required setback requirements for a dwelling-house as per Chapter B1: Residential Development.

2. A 15 metre (depth) x 10 metre (width) building envelope will be required for any proposed battle axe allotment upon land zoned R2 Low Density Residential, since the erection of a two storey

dwelling on a battle axe allotment is not permitted for land zoned Residential R2, under Chapter B1: Residential Development. Therefore, a building envelope is required to provide a sufficient building platform, to cater for a single storey dwelling.

3. Any proposed building envelope shall be shown on the required subdivision concept layout plan accompanying the Development Application. Additionally, any existing easements or other restrictions on the use of the land should be shown on the required subdivision layout plan.

   Note: In the event that Council ultimately supports the proposed subdivision, a condition of consent may be imposed requiring the imposition of a restriction on the use of land pursuant to the provisions of Section 88B of the Conveyancing Act 1919 which shows the building envelope for each lot within the subdivision. This requirement may apply to certain subdivisions where sites are subject to inherent site constraints (eg geotechnical /slope instability issues etc) or contain significant vegetation, threatened flora or fauna, flood prone / riparian land or other constraints which may require the building envelope to be specifically identified on the lot(s).

11 STAGING OF MAJOR RESIDENTIAL SUBDIVISIONS

11.1 Objectives

(a) To ensure the staging of a major residential subdivision is well planned and that all relevant roads, drainage and other infrastructure services are provided for each stage in the subdivision.

(b) To ensure the staging of the development minimises any potential adverse noise or amenity conflicts, arising from construction equipment and plant operating on later subdivision stages upon residents in early release stages.

11.2 Development Controls

1. In cases of a major residential subdivision, a staging plan will be required which shows the proposed staging program. Additionally, the Statement of Environmental Effects shall provide a detailed outline of the proposed staging program, including the proposed total number of lots within each relevant stage.

2. The subdivision staging should be designed to minimise conflicts arising from construction plant and equipment operating during the construction of later subdivision stages impacting upon the amenity of residents living in dwellings within the earlier subdivision stages. This may also require the provision of temporary access arrangements for heavy vehicles associated with the stages under construction separate from the first stage(s) of the subdivision. The provision of suitable landscaping treatment and / or acoustic walls may also be necessary to minimise potential privacy, amenity or noise impacts upon first stage residents.

3. In the event that the staging of the subdivision is approved, all necessary subdivision works (including road works, drainage works, water and sewerage infrastructure, telecommunications, electricity supples etc) must be completed for each relevant stage, prior to the release of any Subdivision Certificate.

12 SUPERLOTS IN RESIDENTIAL SUBDIVISIONS FOR INTEGRATED HOUSING OR MEDIUM DENSITY HOUSING

12.1 Objectives

(a) To ensure large residue lots or superlots for future dual occupancy or medium density housing are well planned and are strategically placed to reflect future traffic management conditions and other environmental conditions.

(b) To encourage large residue lots to be earmarked for medium density housing early in the residential subdivision process.

12.2 Development Controls

1. The configuration and lot size of residue or super lots shall be designed to meet the future planning requirements for either dual occupancy, multi dwelling development or residential apartment building developments contained in this DCP. Accordingly, the subdivision plan accompanying the Development Application shall indicate the intended future residential use of the residue lot.

2. In the event that the residue lots are not designed to comply with the future planning requirements for the intended future residential development, then a reduced dwelling yield may occur when the Development Application for the development of the residue lot is assessed.

3. Large residue lots should be located in strategically placed locations in subdivisions and generally not at the end of cul-de-sacs. However, in certain circumstances, the positioning of a residue lot at the end of a cul-de-sac may be supported where individual site circumstances such as traffic management and other environmental conditions, support this arrangement.

13 CUT AND FILL LAND RE-SHAPING WORKS

13.1 Objective

(a) To ensure all finished residential lots are provided with a satisfactory fall towards the stormwater drainage system, in order to guarantee satisfactory stormwater run-off from each lot and to ameliorate against any potential water ponding impacts within the subdivision.

13.2 Development Controls

1. All finished lots shall have a minimum 2% fall towards the proposed stormwater drainage system, in order to allow for suitable stormwater run-off from the site and to help minimise any potential water ponding.

14 PUBLIC RESERVES

14.1 Objectives

(a) To provide public open space (ie both active and passive) within reasonable proximity for all residential lots within existing urban areas and new release areas.

(b) To ensure the provision and embellishment of public open space is consistent with Council's planned requirements, to meet the recreational needs of the community.

(c) To preserve remnant native bushland including endangered ecological communities within public open space buffers, where possible.

(d) To limit the amount of land proposed to be dedicated to Council for public open space, to only lands zoned RE1 Public Recreation, under the relevant LEP or other lands previously identified by Council as being required for public open space.

(e) To minimise costs of on-going maintenance of public open space.

14.2 Development Controls

1. The size and location requirements for public open space shall generally be in accordance with the following table, except where varied by Council. The exact location and the level of equipment or other embellishment required for `the open space must be discussed with Council upfront, prior to the lodgement of the Development Application, where such open space is proposed to be dedicated to Council for a public reserve or other purposes.

Table 1: Size and Location Criteria for Pubic Open Space

Public Open Space Type	Minimum Total Area Requirement	Maximum walking distance from all dwellings to the public open space
Local Open Space	1 Hectare	800 metres
District Open Space	3 hectares	2 kilometres via road or pedestrian network

Note: Whilst Council may have had preliminary discussions with an applicant upfront over the possible future dedication and embellishment of land for public reserve(s), there is no guarantee that the proposed subdivision will be ultimately approved until such time as the application is properly assessed and determined on its merits, based on the "Matters for Consideration" as listed under Section 79C of the Environmental Planning and Assessment Act 1979.

2. Council will not accept the dedication of land for the purposes of public reserve where in the opinion of Council, there is already sufficient public open space in the locality and / or the land is not zoned RE1 Public Recreation.

3. Any approved public reserve lot shall be fully embellished in accordance with Council's requirements, prior to the release of the Subdivision Certificate.

4. Private open space may be provided as community lots in a Community Title subdivision. Any small open space area in a Community Title subdivision should be at least 500m^2 - 1,000m^2 in area and should make provision for seating as well as provision for an integrated children's playground equipment.

5. Wherever possible, riparian corridors should form the 'spine' for public open space within a subdivision.

15 PEDESTRIAN AND CYCLE WAY NETWORKS

15.1 Objectives

(a) To ensure residential subdivisions provide adequate pedestrian and cycleway linkages to facilities and services within the surrounding locality.

(b) To ensure the road network adequately caters for the safety of pedestrians, cyclists and motorists through the provision of adequate sight lines at critical locations such as intersections, driveway crossings, bus stops and crossing points.

(c) To ensure all pedestrian footpaths and shared pathways / cycle ways are designed in accordance with relevant Australian Standards and AUSTROADS.

(d) To ensure all pedestrian footpaths and cycle ways are designed to incorporate Crime Prevention through Environmental Design (CPTED) principles by minimising any potential hiding places.

15.2 Development Controls

1. Any residential subdivision should identify the overall layout of dedicated pedestrian footpaths and cycle ways within the subdivision. The constructed pedestrian footpath shall be a minimum width of 1.5 metres. For any shared pedestrian footpath / cycleway, a minimum 2.5 metre width is required and widened to 3 metres if the shared footpath / cycleway, where it is adjacent to any structure.

2. Pedestrian and cycle ways should be provided to link roads particularly cul-de-sacs and to directly access public transport routes such as bus stops as well as public reserves.

3. Pedestrian footpaths shall have a maximum longitudinal grade of 15%, except in cases where the approved road carriageway will have a longitudinal grade greater than 15%. Path ramps connecting pedestrian footpaths with roads must be designed to meet the needs of people with a disability (eg wheelchairs or sight impairment) and people with a pram.

4. All pedestrian footpaths or shared pathways / cycle ways should be designed in accordance with the requirements of Australian Standard AS 1428-2001. The maximum gradient for such pathways should be 1 in 14, wherever practicable. The pathway should be constructed of concrete, except where varied by Council.

5. Safe pedestrian crossings are to be created with the use of pedestrian refuges, slow points, thresholds or other appropriate measures.

6. Any shared pedestrian pathway and cycleway shall incorporate a minimum 2.5 metre wide concrete pavement. The shared pedestrian / cycleway should link residential precincts with schools and neighbourhood business centres wherever practicable.

7. All cycle ways are to be provided in accordance with AUSTROADS (part 14) Guide to Traffic Engineering Practice Bicycles and Council's Subdivision Code.

8. All footpaths and cycle ways are to be provided with appropriate lighting and designed to incorporate Crime Prevention through Environmental Design (CPTED) principles by minimising any potential hiding places.

9. The full design details shall be shown on the subdivision plans submitted with the Development Application.

16 ACOUSTIC FENCING

16.1 Objective

(a) To ensure appropriate acoustic fencing is provided for subdivisions which are subject to potential adverse noise impacts, in order to provide a pleasant acoustic environment for all residential lots within the subdivision.

16.2 Development Controls

1. Acoustic rear boundary fencing will be required in most circumstances for residential lots abutting an arterial or sub-arterial road.

2. The acoustic fencing shall be of a masonry construction with either decorative artwork emblazoned on the masonry and / or horizontal banding. The maximum height of acoustic fencing shall be restricted to 3 metres above natural ground level at the common property boundary.

3. The full details of the proposed acoustic fencing shall be submitted with the Development Application.

4. Acoustic barriers must be augmented with suitable buffer screen planting within the road verge between the footway / cycleway and the barrier structure. The full details of the proposed buffer screen planting shall be shown on a detailed landscape concept plan which is to be submitted with the Development Application. The landscape concept plan should be prepared in accordance with the requirements of Chapter E6: Landscaping.

17 STREET TREE PLANTING

17.1 Objectives

(a) To provide suitable street trees within residential subdivisions, in order to improve the streetscape character of the locality.

(b) To improve the general residential amenity of the subdivision.

(c) To ensure the planting of street trees in new subdivisions is appropriate and compatible with existing street tree planting within certain suburbs in the city.

17.2 Development Controls

1. The planting of street trees shall be integrated with driveway crossings, utility services, street lighting and shall be undertaken in accordance with the general requirements contained in the Chapter E6: Landscaping in this DCP.

2. Council may require the planting of a specific tree species for certain roads in a subdivision, especially if there is already an existing street tree scheme in the suburb. This requirement will be determined by Council as part of the assessment of the Development Application.

3. The equivalent of one (1) street tree for each 12 metres of residential road frontage (ie with locations adjusted for driveway crossings, lighting, sightlines, utility services and the like) will generally be required.

4. The planting of the street trees should occur, after at least 80% of the construction and infrastructure work have been completed, for the subdivision.

18 ENTRY STATEMENTS

18.1 Objectives

(a) To ensure entry statements are appropriately designed and constructed to enhance the streetscape character of the residential estate.

(b) To ensure all entry statements and supporting structures (including night lighting) are contained wholly within the private realm of the subdivision, rather than within any existing or proposed future public road reserve.

(c) To ensure all entry statements are well designed to minimise any potential obstructions to motorists, pedestrians and cyclists and to prevent any potential adverse traffic visibility impact and / or visual distraction to motorists.

18.2 Development Controls

1. Entry statements mark and define the entry to a residential estate and are designed to enhance the streetscape character of the estate.

2. All entry statements (including associated special effects and night lighting) at the entry to residential subdivisions must be contained wholly within the private property and not within any land proposed to be dedicated as public road reserve.

3. The location and form of the entry statement must not unduly impede or restrict pedestrian, cyclist or public and private vehicular movement to or from the site. The siting and design of an entry statement must not reduce traffic visibility on adjacent roads and should not cause an unsafe visual distraction to vehicle drivers.

4. The entry statement should also be designed to incorporate Crime Prevention through Environmental Design (CPTED) principles by minimising any potential hiding places.

5. The full design details of the proposed entry statement(s) shall be shown on the required Landscape Plans to be submitted with the Development Application.

19 ROAD CONNECTIVITY, PERMEABILITY AND LEGIBILITY

19.1 Objectives

(a) To establish a legible and well connected road network that promotes safe pedestrian and bicycle movement as well as convenient vehicular access.

(b) To provide improved road, pedestrian and cycleway connections linking residential areas with public reserves, business centres, public services and facilities.

19.2 Development Controls

1. New subdivision roads should be designed to be integrated and connected with the existing local road network of the surrounding neighbourhood, wherever possible. In new subdivisions, cul-de-sacs should be minimised, wherever possible, in order to ensure connectivity within an estate.

2. Road design taking into account the surrounding local road network in the locality, especially the existing road hierarchy.

3. The subdivision design must achieve enhanced vehicular permeability and legibility in the location and layout of the road pattern.

4. The integration of new subdivision roads with existing roads will help to:

   (a) Improve interconnections and minimise travel distances to / from facilities and services;

   (b) Provide a choice of routes; and

   (c) Spread traffic loads throughout the local road network, rather than intensifying traffic volumes to a restricted number of roads.

5. Connected grid networks may also improve safety when dwellings are sited to address block edges, to enable passive surveillance.

6. The road network should provide internal connectivity to allow for a distributed traffic flow as well as encourage walking and cycling within the subdivision and wider area.

7. Pedestrian footways and cycleways should be safe and convenient to encourage alternative transport options to motor vehicles.

8. A larger subdivision involving 50 or more residential lots should be designed to minimise any excessive “backtracking”. Therefore, the creation of multiple cul-de-sacs and “no through” roads within a larger lsubdivision is discouraged.

20 ROAD NETWORK - ROAD HIERARCHY

20.1 Objectives

(a) To provide a defined hierarchy of roads, in order to provide an acceptable level of access, safety and convenience for all road users.

(b) To ensure that the design features of each residential road within a subdivision reflects the role of the road within the overall road network.

(c) To provide an acceptable level of access, safety and convenience for all road users within existing urban areas and new release areas, whilst ensuring acceptable levels of amenity and minimising traffic management issues in the particular locality.

(d) To provide appropriate road access for larger and special purpose vehicles including garbage and recycling trucks, fire trucks, delivery trucks etc.

20.2 Road Hierarchy

20.2.1 General

1. The road hierarchy generally relates to the division of the road network into identifiable road classifications or road types.

2. A hierarchical road network is essential to maximise road safety, residential amenity and legibility. Each class of road in the road network serves a distinct set of functions and is designed

accordingly. The design of the road network is required to convey to motorists the predominant function of the road.

3. Roads cater for a range of functions primarily either providing direct access to land use activity or for movement of traffic through a locality, which is known as 'through traffic'. Roads also provide pedestrian and bicycle pathways as well as bus and heavy vehicle routes.

20.2.2 Arterial Roads

1. Arterial roads are roads of major state or regional significance catering for relatively high traffic volumes and / or long distance travel. In urban areas, arterial roads act as major transport corridors linking large activity centres. Arterial roads have no desirable upper traffic limit with speed limits along the road expected to be in the range of 70 km/hr up to 110 km/hr.

20.2.3 Sub-Arterial Roads

1. Sub-Arterial roads are of lesser importance than arterial roads but still cater for high traffic volumes and / or long distance travel for through traffic. In urban areas, traffic is carried from one sub-region to another sub-region. Traffic volumes on sub-arterial roads are not expected to exceed 20,000 vehicles per day in desirable circumstances.

20.2.4 Collector Roads

1. Collector roads are typically characterised by lower traffic volume roads and connect local roads through to sub-arterial or arterial roads. Collector road typically carry between 3,000 vehicles up to 9,000 vehicles per day. The design speed for these roads should be 50 km/hr.

20.2.5 Access Roads

1. Local roads predominantly cater for low volume localised short –distance travel and access to properties. Local roads normally carry up to 3000 vehicles per day. The desirable speed limits for local access roads are 50 km/hr or less.

20.2.6 Access Streets and Cul-de-sacs

1. Access streets and cul-de-sacs generally cater for up to 30 dwellings and carry up to 300 vehicles per day.

20.2.7 Access Ways / Small Cul-De-Sacs

1. Access ways are relatively short in – length and generally cater for up to 10 dwellings. Access ways typically carry up to 150 vehicles per day. Access ways may be either dedicated as public roads or alternatively, may be private roads in a community lot, under a Community Title Subdivision.

21 ROAD DESIGN REQUIREMENTS - ROAD TYPES AND CHARACTERISTICS OF ROADS IN RESIDENTIAL ROAD NETWORKS

21.1 Objectives

(a) To ensure sufficient road carriageway and verge widths are provided for each road type, in order to enable all roads to perform their designated function within the road network.

(b) To ensure that the road reserve adequately caters for all required functions including the safe and efficient vehicular and pedestrian movement throughout the road network, provision of on-street parking and the provision of street tree planting and other landscaping, where appropriate.

(c) To ensure road verges are of sufficient width to physically accommodate all necessary infrastructure assets and utilities.

(d) To provide road geometry that is consistent with the designated function of the specific road as well as the physical characteristics of the locality.

(e) To ensure the road network is simple and safe for all road users, including motor vehicles, pedestrians and cyclists.

(f) To ensure that appropriate vehicle speed limits are incorporated into the road design to enhance the safety of pedestrians and cyclists, the young and people with a disability.

(g) To ensure new release areas are designed to provide for safe, convenient and efficient bus routes.

21.2 Development Controls

1. The design of any road as part of a subdivision shall be in accordance with the following Table 2 for each specific road type and in accordance with Council's Subdivision Code.

Table 2: Characteristics of roads in residential road networks

Street Type	Traffic Volume (vpd) (1)	Target Speed Environment (km/h)	Minimum Carriageway Width (3) (m) (2)	Parking Provision	Kerb Type	Concrete Footpath	Shared Path	Verge Width (m)	Street Pavement Type	Road Reservation Width (m)
Access Place (4) (Adjacent to Public open Space)	< 100	25	3.5 One Way	1 verge bays per 2 lots (5)	Barrier kerb (open space) Roll kerb (lots)	No (6)	No (7)	1.5 adj to open space 3.5 m adj to lots	Reinforced Concrete	8.5
Access Place (4)	< 100	25	3.7 One Way	1 verge bays per 2 lots (5)	Barrier kerb	No (6)	No (7)	3.5	Reinforced Concrete	10.7
Access Street (4)	< 300	25	6.5 Two Way	Carriage way (8)	Barrier kerb	No (6)	No (7)	3.5 (9)	Asphalt	13.5
Local Street (minor)	300 - 1,000	40	7.5 (10)	Carriage way	Barrier kerb	Yes 1.5 m one side	No (7)	3.5 (9)	Asphalt	14.5

Street Type	Traffic Volume (vpd) (1)	Target Speed Environment (km/h)	Minimum Carriageway Width (2) (3) (m)	Parking Provision	Kerb Type	Concrete Footpath	Shared Path	Verge Width (m)	Street Pavement Type	Road Reservation Width (m)
Local Street (major) (11)	1,000 - 3,000	40	9.5	Carriage way	Barrier kerb	Yes 1.5 m one side	No (7)	3.5 (9)	Asphalt	16.5
Collector (11)	3,000 - 6,000	50 (12)	Min. 11.5	Carriage way	Barrier kerb	Yes 1.5 m one side	2.5 m shared path one side	Min. 3.5	Asphalt	Min. 18.5
Major Collector / Sub Arterial (11) (13)	> 6,000	60 (12)	Min. 13.5 (14)	Carriage way	Barrier kerb	Yes 1.5m one side	2.5 m shared path one side	Min. 3.5 (15)	Asphalt	Min. 20.5

Source: Derived from AMCORD & Landcom Street Design Guidelines

21.2.1 Notes:

(1) AADT assumes traffic generation of ten vehicles per day per conventional single dwelling allotment. Peak hour traffic volume is assumed to be 10% of AADT.

(2) The provisions of the NSW Rural Fire Service publication *"Planning For Bushfire Protection 2006"* guidelines must also be met and will take precedence.

(3) Street layout and curve radii must make provision for service vehicles to manoeuvre.

(4) Maximum length of segment shall be 100 m.

(5) Parking bays to be integrated with street lighting plan and landscape plan in order to ensure that each lot has satisfactory access.

(6) Concrete footpath is required if the street is part of a dedicated pedestrian route.

(7) Shared path is required if the street is part of a dedicated off road cycle route.

(8) Lot layout shall be designed to ensure staggered on street parking in order to present a clear travel land with passing opportunities.

(9) Where an Access Place or Local Street is adjacent to public open space, the verge adjacent to the open space may be reduced to 1.5 m.

(10) A minimum 15 metre lot width may be required at the street frontage, where Council determines that on-street parking is required.

(11) Painted centreline marking required where AADT exceeds 1,000 vpd.

(12) Reduced speed environment is required at designated pedestrian / shared path crossings.

(13) Direct vehicular access to lots not permitted.

(14) Painted edge lines required to define carriageway lane width of 3.5 m and cycle lane 1.0 m.

(15) An acoustic assessment is required to assess the need for wider verge and/or acoustic barrier.

(16) Where lots have the potential for re-subdivision and / or dual occupancy, such potential shall be taken into account when estimating AADT.

Derived from AMCORD & LANDCOM Street Design Guidelines

21.2.2 Additional Requirements:

(a) Refer to Council's Subdivision Code for general subdivision design and the construction requirements for roads, stormwater drainage, utility services etc.

(b) Road carriageways must be widened at bends to allow for wider vehicular travel paths (Austroads Turning Templates)

(c) The maximum length of a road carriageway shall be 200 metres between intersections / bends in an urban setting.

(d) The maximum length of cul-de-sacs should not exceed 80 metres.

(e) Roads should be designed to provide visual interest in the streetscape through kerbs (where appropriate), landscaping and paving treatments. The road design should be compatible with the existing road pattern in the locality.

(f) The minimum spacing of staggered intersections in a local road network should be 20 metres.

(g) Any subdivision proposal adjoining a rear lane shall be designed so as to provide both vehicular and pedestrian access to the front road.

(*) Early upfront consultation is recommended with both the NSW Roads & Traffic Authority and Council's Infrastructure Division, in order to determine the total road reserve and road carriageway width requirements for designated roads (arterial and sub-arterial roads).

Note: The design and construction for each road type as indicated in the Table above shall also be in accordance with the design requirements contained in Wollongong City Council's "Wollongong Subdivision Code" dated 24 February 2003.

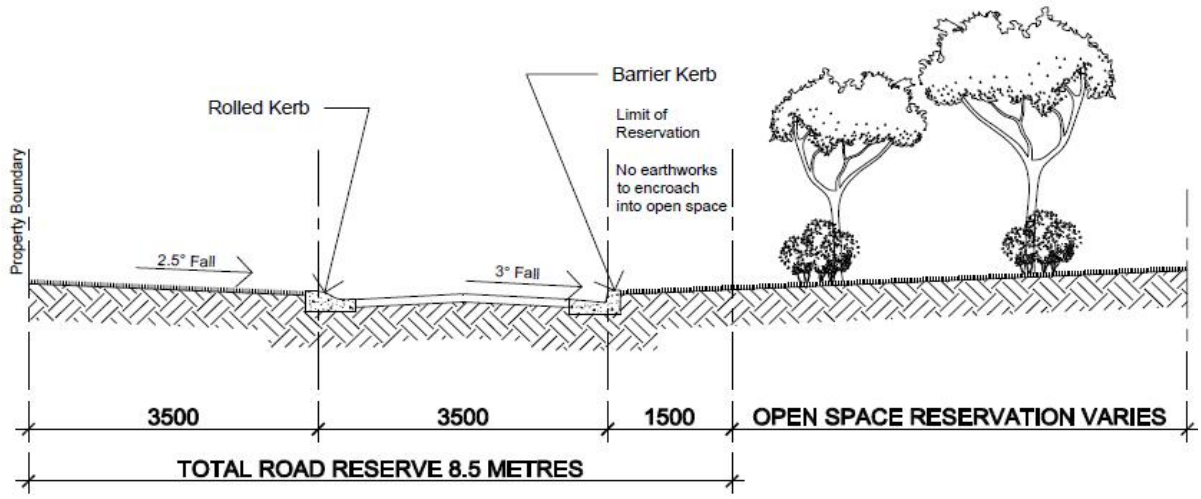

Figure 2: Access Place – One Way [4] (Adjacent to Public open Space)

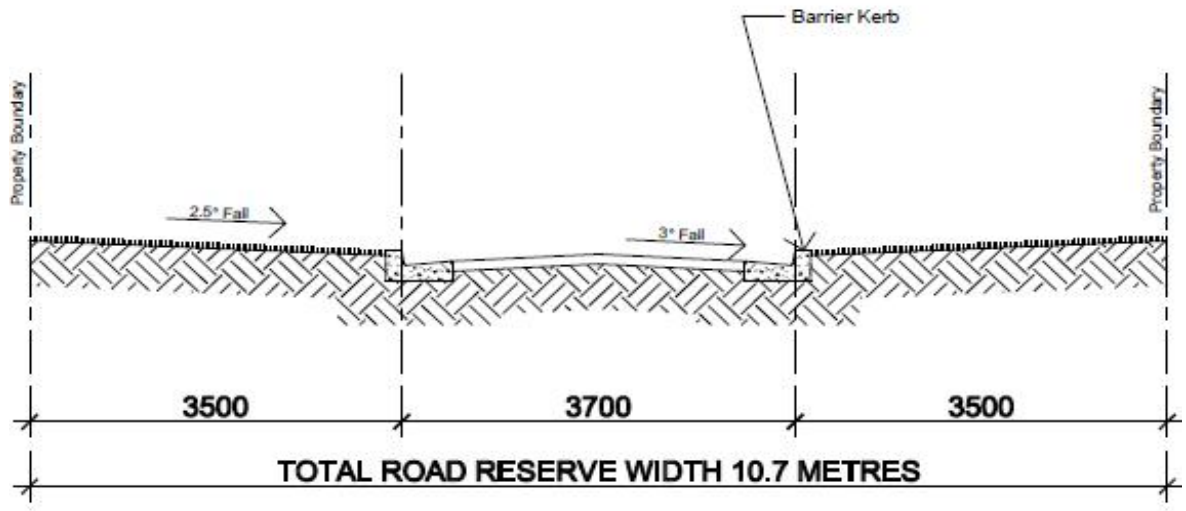

Figure 3: Access Place – One Way [4]

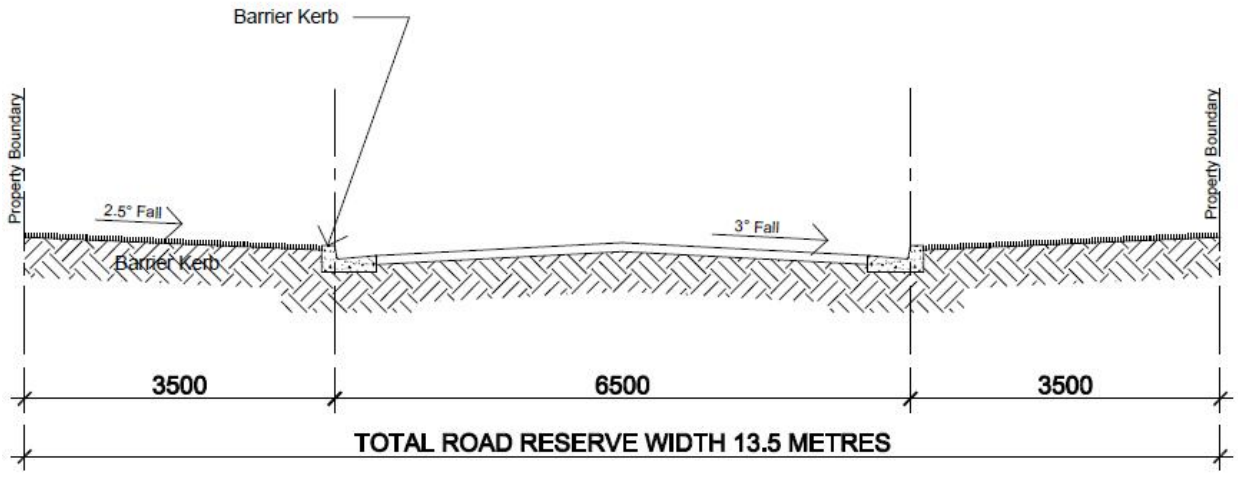

Figure 4: Access Street [4]

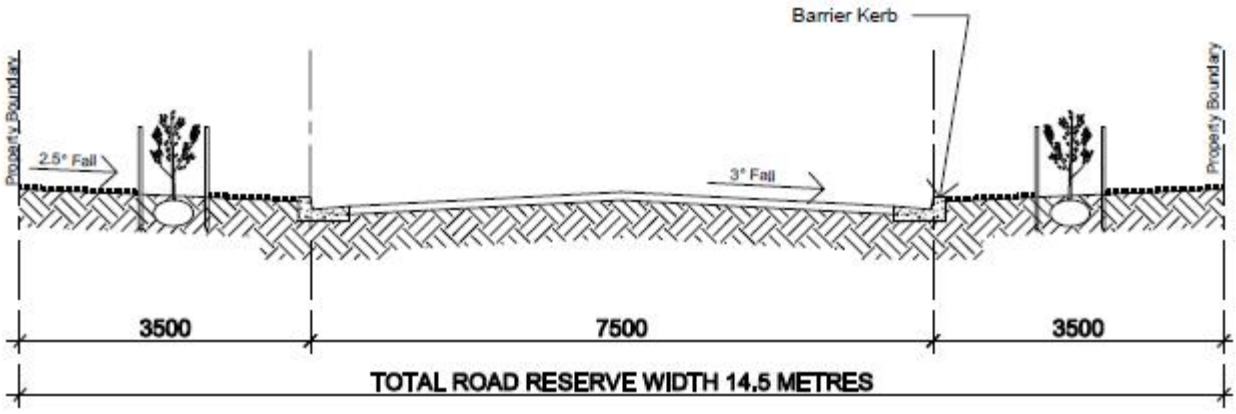

Figure 5: Local Street (minor)

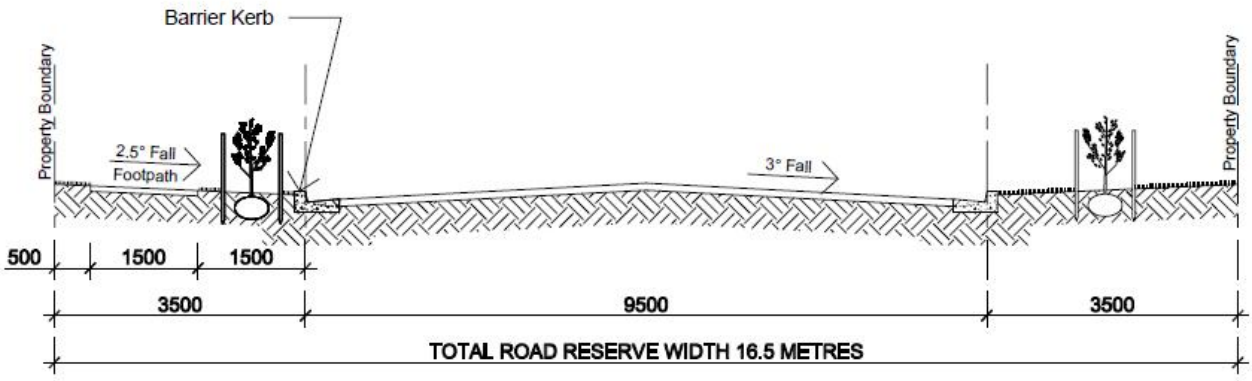

Figure 6: Local Street (major) [11]

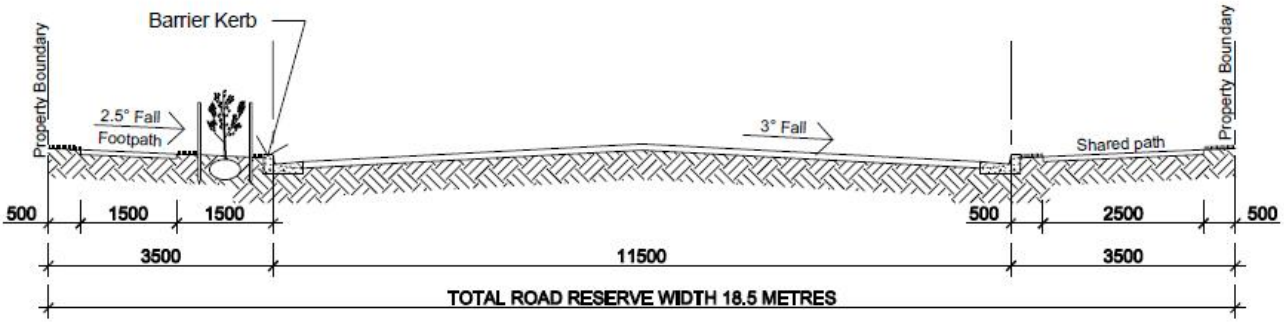

Figure 7: Collector [11]

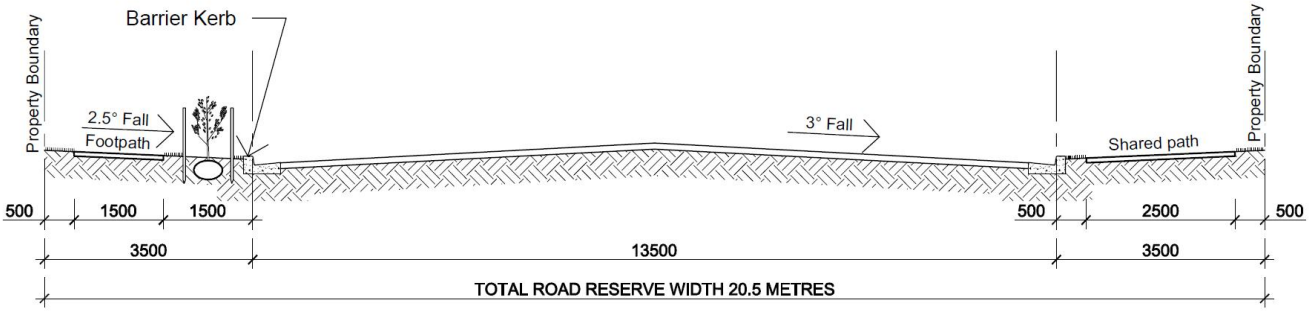

Figure 8: Major Collector / Sub Arterial [11] [13]

22 REQUIREMENTS FOR NEW ROAD, DRAINAGE WORKS AND INFRASTRUCTURE CONSTRUCTION

22.1 Objective

(a) To ensure all residential lots have suitable, safe and efficient access to and from public roads and that all road and stormwater drainage infrastructure works are properly constructed.

22.2 Development Controls

1. All allotments in a subdivision must gain direct access to / from a properly formed public road.

2. The full cost of the construction of new roads, (including the construction of the road carriageway, footpaths and / or bicycle shareways, full kerb and gutter, street tree planting etc) stormwater drainage and the provision of infrastructure services to a subdivision will be borne by the subdivider / developer.

3. The required road, stormwater drainge and infrastructure works shall be constructed in accordance with Council's Subdivision Code and any necessary requirements by the infrastructure service authority. The roadworks, drainage works and infrastructure services shall be completed, prior to the issuing of a Subdivision Certificate. For approved staged subdivisions, all required road, drainage and infrastructure works must be completed for each stage prior to the issue of the Subdivision Certificate for each respective stage.

23 REQUIREMENT FOR UPGRADING OF POORLY CONSTRUCTED OR UNFORMED PUBLIC ROADS

23.1 Objective

(a) To ensure all residential lots have suitable, safe and efficient access to and from public roads and that all road and stormwater drainage infrastructure works are properly constructed.

23.2 Development Controls

1. All allotments in a subdivision must gain direct access to / from a properly formed public road.

2. In areas where the subdivision fronts a poorly constructed or unformed public road, the subdivision will be subject to the construction of full kerb and gutter, stormwater drainage, full or half road construction and sealing in addition to the provision of nature strips with a 3% cross fall to the roadway. The final decision as to the level of construction required will be at the discretion of Council.

24 BUS ROUTES

24.1 Objectives

(a) To encourage bus services to link existing urban areas (especially business centres) with new residential subdivisions within new release areas.

(b) To ensure residential subdivisions within new release areas are designed to ensure safe, convenient and efficient bus routes within reasonable walking distance to the majority of residential lots in a subdivision.

(c) To provide safe and convenient bus stops along the planned bus route.

24.2 Development Controls

1. Large residential subdivisions should be designed to make provision for a bus service to link existing urban areas with the new residential subdivisions. The bus route should be designed to provide adequate servicing by bus companies. Therefore, consultation should take place with the

local bus companies and the relevant NSW Department of Transport and Infrastructure office to determine whether a bus service can be provided in the new residential subdivision.

2. The bus route should be primarily designed along collector roads and linked up to sub-arterial or arterial roads, due to the requirement for wider road carriageways.

3. Indented bus parking bays should be provided at nominated bus stops.

4. Bus stops should be generally located within 400 metres walking distance for 90% of the lots in the immediate locality.

5. Any proposed roundabout on a bus route must be designed to satisfactorily accommodate bus manoeuvring through and around the roundabout.

6. Bus shelters are to be provided at key bus stops. In this regard, bus shelters are to be no more than 800 metres apart and are to be located in positions that will service the maximum number of dwellings. The approved bus shelters are to be installed during the subdivision construction stage by the property developer involved in the subdivision.

7. Bus stops should be easily accessible for all people (including people with a disability), well defined and within casual observation from nearby dwellings, whilst minimising any interference with the streetscape amenity of the locality. All pedestrian pathways leading to and from bus stops should be designed to have a maximum gradient of 1 in 14 and be in compliance with Australian Standard AS 1428-2001.

8. Safe pedestrian crossing points should be provided at each bus stop by the introduction of non-raised pedestrian thresholds and refuges and in accordance with the requirements of Council.

25 RESIDENTIAL CUL-DE-SACS & TURNING HEADS

25.1 Objectives

(a) To restrict the length of cul-de-sacs within a residential subdivision to improve accessibility to public transport facilities such as bus stops and provide more direct vehicular access arrangements for emergency vehicles.

(b) To ensure cul-de-sacs and turning heads are designed to provide safe and efficient vehicular access for cars, waste collection and recycling trucks, removalist trucks, emergency vehicles etc.

(c) To ensure all new residential lots are capable of being either accessed or serviced by emergency vehicles and other non-passenger vehicles such as waste and recycling collection trucks and removalist trucks, without adversely affecting the performance or safety of the surrounding road network.

(d) To restrict “T” or “Y” turning heads to smaller cul-de-sacs which serve a limited number of residential lots within a subdivision.

25.2 Development Controls

1. The maximum length of any cul-de-sac should be 80 metres, in order to ensure adequate accessibility to public transport facilities such as bus stops as well as suitable access arrangements for emergency service vehicles and waste disposal vehicles.

2. The minimum road reserve radius for the turning head of any small residential cul-de-sac (ie serving a maximum 30 dwellings / allotments) shall be 12 metres with a minimum road carriageway width of 8.5 metres.

3. "T" or "Y" turning heads will only be permitted within small cul-de-sacs / access roads which serve up to a maximum of 10 lots / dwellings. In most cases, a "Y" turning head configuration is preferred, in order to discourage potential parking in the turning space. Turning heads must provide sufficient space for larger vehicles such as waste and recycling collection trucks to make a three point turn.

4. Where a "T" or "Y" turning head is proposed, a suitable waste and recycling bin storage area(s) must be carefully positioned on the left hand (forward direction of the truck). The bin storage area(s) must not be located any closer than 5 metres from the forward end and 8 metres from the reverse end of the "T" or "Y" turning head. This is to ensure that waste and recycling collection trucks are able to satisfactorily service the bin storage areas.

26 ROUNDABOUTS

26.1 Objective

(a) To ensure all roundabouts are safe and are designed in accordance with traffic engineering best practice.

26.2 Development Controls

1. Roundabouts are to be designed in accordance with the requirements of the publication AUSTROADS Guide to Traffic Engineering Practice – PART 6 Roundabouts and the NSW Roads & Traffic Authority's Roundabouts Geometric Design Method Version 1.1 January 1997. Roundabouts must also be designed to provide for safe passage of pedestrians and cyclists.

2. The design and construction of a roundabout upon an existing or proposed public road will be subject to the separate approval of Council's Infrastructure Division. As part of this consideration, Council's Infrastructure Division will also consider the whole of life assets cost of the roundabout and determine whether landscaping or hard finishing's to the centre island of the roundabout is required.

27 ROAD JUNCTION SPACING

27.1 Objective

(a) To ensure road junctions are properly designed to minimise any potential traffic management or traffic safety issues.

27.2 Development Controls

1. The minimum distance between an access road and a collector road shall be 60 metres where the junction is on the same side of the road or 40 metres where the junction is located on the opposite side of the road.

2. The minimum distance between collector roads shall be 120 metres if the junction is on the same side or 100 metres where the junction is staggered on the opposite side of the road.

3. All intersections are to be T-junctions or roundabouts (ie subject to Council's agreement as to the location and design of any proposed roundabout).

28 TRAFFIC CALMING DEVICES

28.1 Objective

(a) To provide appropriate traffic calming devices, in order to improve traffic management flows within large residential subdivisions.

28.2 Development Controls

1. Traffic calming devices such as thresholds, slowpoints, speed humps, chichanes and splitter islands are to be designed in accordance with the requirements of AUSTROADS Guide to Traffic Engineering Practice – PART 10, the NSW Roads & Traffic Authority's Local Area Traffic Management and Sharing the Main Street publications. Any proposed traffic calming devices will require the approval by Council's Local Advisory Traffic Committee.

2. Traffic device designs should comply with Australian Standard AS 1742.13 – Manual of Uniform Traffic Devices.

28.3 Location of Traffic Calming Devices

1. The location of traffic calming devices must be consistent with the streetscape requirements of the locality and must also be based upon the location of existing and / or proposed street lighting, drainage pits, driveway crossings, on-street car parking requirements and the location of utility services.

28.4 Traffic Calming Devices – Design Vehicles

1. Any proposed traffic calming device must be designed to enable emergency vehicles to reach all properties from the road.

2. Traffic calming devices upon local roads with a feeding function between arterial or sub-arterial roads and access streets are to be designed in accordance with a 14.5 metre long rigid truck / bus as per AUSTROADS Guide to Traffic Engineering Practice (Drawing No.SD037).

3. Raised platform threshold treatments are not permitted where such treatments may be used as pedestrian crossings by pedestrians.

28.5 Design Speed Controls

1. A reduction in vehicular speed can be achieved by creating a visual environment conducive to lower speeds through using landscaping treatments and other traffic calming devices to segment streets into relatively short road lengths (ie generally less than 300 metres long).

2. Speed reduction can also be achieved through using traffic calming devices which shift vehicle travel paths laterally (eg slow points, roundabouts, corner treatments) or vertically through humps, platform intersections etc).

28.6 Sight Line Distance Requirements

1. Any proposed traffic calming device must be designed to cater for critical sight distances for the design operating speed of the subject road.

2. Speed control devices (such as narrowed threshold treatments) should be located in close proximity to existing or proposed street lighting. Any such traffic calming measures must incorporate appropriate reflective treatments to delineate the vehicular travel path.

28.7 Streetscape Requirements for Traffic Calming Devices

1. The main streetscape issues to be taken into account in the design of traffic calming devices include the following:

   (a) Improve the landscape character of the locality;

   (b) Reduce the linearity of roads by segmentation;

   (c) Avoid continuous long straight lines (kerb lines) for local roads; and

   (d) Maximise the continuity between existing and new landscape areas.

29 TRAFFIC CONTROL DEVICES & SIGNS

29.1 Objective

(a) To provide appropriate traffic control devices and signs within residential subdivisions, in order to ensure traffic safety.

29.2 Development Controls

1. Traffic control devices, signs, pavement marking and guideposts are to provided to roads, intersections, pathways and cycleways in accordance with the requirements of Australian Standard AS 1742.1 – 13 Manual of Uniform Traffic Control Devices and the NSW Roads & Traffic Authority's Interim Guide to Signs and Markings.

30 SPLAY CORNERS

30.1 Objective

(a) To provide appropriate splay corners at intersections within residential subdivisions, to ensure adequate sight line distances.

30.2 Development Controls

1. All intersections in a subdivision shall be provided with a minimum 4.25 metre splay or as required by Council's Infrastructure Division.

31 STREET LIGHTING

31.1 Objectives

(a) To provide effective street lighting along all roads within the subdivision, to maximise vehicular and pedestrian safety.

(b) To provide appropriate street lighting at key intersections and pedestrian crossings as well as traffic calming device locations to maximise vehicular and pedestrian safety.

(c) To provide appropriate lighting along all pedestrian pathways and / or shared pathways / cycle ways, in order to maximise pedestrian and cyclist safety.

31.2 Development Controls

1. Electric street lighting systems are to be provided for roads and intersections as well as pedestrian crossing and traffic calming device locations in accordance with AS / NZS 1158 Road Lighting as indicated in the following Table 3.

Table 3: Road type - street lighting requirements

Road Type	Street Lighting Category (AS 1158)
Arterial Roads	V4
Connector Road (>7000 vehicles / day)	P3
Connector Road (<7000 vehicles / day)	P4
Access Road in Business Areas	P3
Access Road	P4
Laneway	P5
Public Pathways & Cycleways	P4
Car parks	P11
Traffic Calming Device (including roundabout)	Horizontal illuminance min. of 3.5 lux
Pedestrian Refuge	Horizontal illuminance min. of 3.5 lux

Note: Category of illumination is defined in AS 1158 Part 1.1 and Part 3.1. All lighting designs are to be prepared in accordance with AS / NZS 1158 for the above specified categories.

32 RESTRICTED ACCESS TO ARTERIAL OR SUB-ARTERIAL ROADS

32.1 Objective

(a) To restrict access to any arterial or sub-arterial road to maintain satisfactory traffic flows and safety along such roads, where alternative public road access is available and practicable.

32.2 Development Controls

32.2.1 General

1. Direct access to any arterial or sub-arterial road will not be permitted where alternate public road access is available. However, direct property access to / from an arterial or sub-arterial road will not be restricted until such time as alternate public road access is available.

32.2.2 Creation of Legal Restrictions Prohibiting Direct Access to Designated Roads (Arterial or Sub-Arterial Roads)

1. Council may require as a condition of consent as part of any subdivision or development that a suitable restriction on the use of land be created pursuant to the provisions of Section 88B of the Conveyancing Act 1919, in order to legally prohibit direct access to / from any adjoining Arterial or Sub-Arterial Road where alternative direct public road access is available to / from the subject site.

32.2.3 Temporary Access to Designated Roads (Arterial or Sub-Arterial Roads)

1. Temporary access may be granted to a designated road (arterial or sub-arterial road) where alternate public access has not yet been completed. However, this temporary access arrangement will be dependent upon the nature of the access arrangement in relation to the arterial or sub-arterial road. Additionally, the formal concurrence of the NSW Roads & Traffic Authority may be required.

33 NSW FIRE BRIGADE ACCESS - FIRE HYDRANTS

33.1 Objective

(a) To provide fire hydrants within close proximity to all residential lots in a subdivision in accordance with the relevant Australian Standard and the requirements of Sydney Water Corporation and NSW Fire Brigades.

33.2 Development Controls

1. All allotments created must be within 60 metres to a fire hydrant in accordance with Australian Standard AS 2419. The proposed location of fire hydrants shall be shown on the subdivision plan.

2. Fire Hydrants must be provided in accordance with the requirements of Sydney Water Corporation and the NSW Fire Brigades. In the event that the subdivision is ultimately approved, a condition of consent will be imposed requiring the submission of documentary evidence from both the Sydney Water Corporation and the NSW Fire Brigades confirming that the provision of fire hydrants is in accordance with their requirements, prior to the release of the final subdivision plan

34 BUSH FIRE PROTECTION

34.1 Objectives

(a) To ensure any residential subdivision upon land classified as bush fire prone land is designed to minimise the potential bush fire hazard risk.

(b) To ensure any residential subdivision upon land classified as bush fire prone land is designed to provide an efficient and safe road network which minimises potential bottle-necks.

(c) To ensure any residential subdivision upon bush fire prone land is designed to minimise the siting of future dwellings away from ridge tops and other steeply sloping land, especially upslope lands, within saddles or narrow ridge crests.

(d) To provide public open space as an accessible public refuge area, wherever practicable.

(e) To ensure each residential subdivision upon bush fire prone land is designed to provide satisfactory asset protection zone (APZ) separation distances from the bush fire hazard and guarantee that future dwellings are capable of achieving conformity with the "deemed-to-satisfy" requirements of the Building Code of Australia.

34.2 Development Controls

1. Any proposed residential subdivision upon land classified as bush fire prone land is an Integrated Development Application under section 91 of the Environmental Planning and Assessment Act 1979 since the formal concurrence is required from the NSW Rural Fire Service (Headquarters), pursuant to section 100B of the Rural Fires Act 1997.

2. Any Integrated Development Application for a proposed residential subdivision upon bush fire prone land will be subject to compliance with the requirements of the NSW Rural Fire Service publication titled *"Planning for Bush Fire Protection guidelines 2006"* and hence, the application must be accompanied by a bush fire assessment report. The bush fire assessment report must be prepared by a suitably qualified and experienced bush fire consultant and must provide a comprehensive assessment as to how the proposed development complies with the *"Planning for Bush Fire Protection guidelines 2006"*, including Chapter 4: Bushfire Provisions – Development Stage in the guidelines. The Statement of Environmental Effects (SEE) should specifically address the findings and conclusions of the bush fire assessment report to ensure compliance with the *"Planning for Bush Fire Protection guidelines 2006"*. The findings and conclusions of the bush fire assessment report should also be reflected in the design of the proposed subdivision.

3. New residential subdivisions in bush fire hazard prone lands will generally require a perimeter road system to assist in providing access to fire fighting vehicles. Any such perimeter road must be designed as a through road and cater for two –way vehicular traffic.

35 STORMWATER DRAINAGE (INCLUDING WATER SENSITIVE URBAN DESIGN INFRASTRUCTURE)

35.1 Objectives

(a) To minimise stormwater drainage run-off impacts upon downstream properties.

(b) To limit post development discharges to pre-development levels.

(c) To provide a sustainable stormwater drainage and water quality environment incorporating both natural and man-made landscape features and which is aesthetically pleasing.

(d) To encourage water sensitive urban design initiatives for larger residential subdivisions, in order to maintain or enhance the water quality in watercourses.

35.2 Development Controls

1. A detailed stormwater drainage concept plan together with calculations is required to be submitted with the Development Application.

2. The proposed stormwater drainage system for the subdivision shall be designed in accordance with the requirements of the Stormwater Management & Water Sensitive Urban Design chapters in Part E of the DCP.

3. For subdivisions involving 20 or more allotments, the proposed stormwater drainage system must incorporate water sensitive urban design techniques, wherever possible, in order to minimise runoff and restrict discharge from the site. This may be achieved by using grass swale drains, bio-filtration, bio-retention basins, detention ponds, reuse systems and retention of natural watercourses including wetlands and pool and riffle zones etc. Other stormwater quality improvement measures such as artificial wetlands, sedimentation basins and gross pollutant traps or trash racks may also be provided to facilitate the removal of sediment and other pollutants.

4. Where water sensitive urban design features (eg grass swales, bio-filtration measures, water quality detention ponds or basins etc) are proposed to be ultimately handed over to Council, upfront consultation is required to be held with Council prior to the lodgement of any subdivision application. This will ensure that appropriate design parameters, minimum performance requirements, monitoring and maintenance regimes are agreed upon between Council and the subdivider for each relevant WSUD treatment measure upfront. In the event that no agreement is reached upfront, Council is unlikely to accept the hand over of any such assets.

5. All stormwater drainage systems are to be designed to prevent public access to any hazardous drainage and water quality facilities.

6. The discharge of stormwater runoff must be restricted into a lawful point of discharge such as a natural watercourse or waterway to which the development site naturally drains or existing stormwater drainage systems as agreed to by Council.

7. Where there is no existing lawful point of discharge, the applicant must:

   (a) Dedicate the discharge point to Council's connecting reserves or easements that provide legal continuity from the site to an off-site legal point of discharge into a natural watercourse or waterway or suitable public stormwater drainage system and

   (b) Construct the necessary connecting drainage works.

8. For downward sloping sites away from public roads or watercourses, written documentary evidence must be provided from downstream property owners which confirms their agreement for stormwater drainage pipes and associated creation of necessary easements through their properties, in order to guarantee that satisfactory arrangements have been made for stormwater drainage from the site.

9. The provision of inter-allotment drainage is required where drainage pipelines convey stormwater from private residential lots across other adjoining residential lots (ie not draining directly to a public road). The creation of 1.5 metre wide inter-allotment drainage easements will be required as part of the subdivision. The inter-allotment drainage easements shall not be vested in Council.

10. Where it is necessary to connect into Council's existing stormwater drainage system, the capacity of the existing stormwater drainage system is to be checked to ensure its capacity of accepting the additional developed run-off from this development. Costs associated with any necessary upgrading or drainage is to be borne by the developer and work is to be undertaken in accordance with Council's Subdivision Code and Part E Stormwater Management chapter to this DCP.

36 RIPARIAN LAND MANAGEMENT

36.1 Objectives

(a) To protect urban creeks and riparian corridors from further degradation and improve their environmental function.

(b) To conserve, enhance and protect existing native riparian vegetation, wherever possible.

(c) To maintain or enhance the stability of the bed and banks of a watercourse.

(d) To minimize 'edge effects' at the riparian corridor / urban interface by the provision of a suitable riparian corridor width.

(e) To ensure riparian land management measures are compatible with floodplain risk management objectives.

36.2 Development Controls

1. Any proposed residential subdivision involving waterfront land on, in or within 40 metres of the top of bank of a river, creek or intermittent watercourse, lake or estuary will be subject to compliance with the requirements of Chapter E23 Riparian Corridor Management in this DCP.

37 SERVICING ARRANGEMENTS

37.1 Objectives

(a) To ensure the provision of infrastructure servicing / utilities is carried out in accordance with the requirements of Council and the relevant infrastructure servicing authority.

(b) To maximise the opportunities for shared (common) trenching and to reduce constraints on landscaping within road reserve verges.

37.2 Development Controls

1. Shared common trenches for service infrastructure are preferred in order to also enable the planting of trees and other landscaping within the road verges.

2. It is recommended applicants consult with servicing authorities at an early stage in the planning process to ensure that all allotments can be appropriately serviced by reticulated water and sewerage and electricity supplies.

3. In the event that the subdivision cannot be adequately serviced by reticulated water and sewerage supplies, then Council is unlikely to support any such application.

4. Where a subdivision is approved, a condition of consent will be imposed requiring the submission of a Notice of Requirements from Sydney Water Corporation to Council prior to the release of the Construction Certificate for the proposed subdivision. Additionally, a separate condition of consent will be imposed requiring the submission of a Section 73 certificate from Sydney Water Corporation which confirms that satisfactory arrangements have been made for reticulated water and sewerage infrastructure to the subdivision and the original Section 73 Certificate lodged with the Subdivision Certificate application.

5. Electricity distribution must be underground in all new residential subdivisions. Accordingly, the subdivision plan should provide details of the location of any required electricity sub-stations.

6. Telecommunication services are to be provided to all proposed lots. The submission of documentary evidence from a telecommunications carrier will be required for any approved subdivision, prior to the release of the Subdivision Certificate.

7. All allotments must be designed to enable the suitable provision for waste facilities. In cul-de-sacs, the head of the cul-de-sac must be designed to provide sufficient road reserve width (footpath area), in order to enable the storage of garbage and recycling bins without hindering access to adjacent properties.

8. Battle axe allotments shall be designed to include sufficient area within the existing public road reserve verge to cater for the provision of garbage and recycling bins. Alternatively, a garbage and recycling bin storage area may be provided within close proximity to the adjoining public road, but will be subject to private waste servicing arrangements being made by the property owner in the event that Council's waste contractor is not able to service the bin storage area.

9. Applicants are encouraged to liaise with Council's Waste Services Section of the City Works Division, in order to guarantee satisfactory waste service arrangements and to minimise potential future problems arising from poorly designed waste and recycling storage facilities.

38 MONETARY CONTRIBUTIONS TOWARDS THE PROVISION OF PUBLIC SERVICES AND AMENITIES

1. The payment of monetary contributions will be required pursuant to Section 94A of the Environmental Planning and Assessment Act 1979 for the provision of public services and amenities. The amount of contributions payable to Council will be determined by the Section 94A Contributions Plan.

39 ROAD NAMING

1. Council has a responsibility to clearly identify public roads in accordance with the *Roads Act 1993*, and in the interests of public information and safety.

2. Developer's suggestions for the names of new road(s), together with the reasons for the names proposed, should be submitted in accordance with Council's Road Naming Policy for Council's consideration.

3. Council's policy is to give first preference to names with historical, zoological, botanical or geographic associations with Wollongong and the Illawarra Region, and if possible with the locality where the subdivision is proposed.

4. Where more than one street exists within a subdivision, consideration should be given to a street naming "theme" to help create a distinct identity for the area.

5. Where no suggestions are received for the naming of roads, Council will determine the street names.

6. New street name signs are to be paid for by developers.

7. As part of the road naming procedures under section 162 of the Roads Act 1993, Council will forward the proposed road names in a subdivision to the Geographical Names Board for the Board's appropriate comment. In cases where the Geographic Names Board does not support the proposed road naming, Council will request alternative road names and in certain cases will liaise with the applicant.

8. For any classified roads, the NSW Roads & Traffic Authority will determine the road name in consultation with the Geographic Names Board.

40 STREET NUMBERING

1. Poor or inadequate house numbering (or even no numbering at all) can seriously hamper emergency services in the performance of their duties.

2. Street / property numbering shall be clearly and permanently displayed on the kerb to identify the street number to essential / emergency services.

3. Numbers should be a minimum 100 mm high x 50 mm wide and of a colour contrasting with the surface to which they are affixed. Numbers should be maintained in a clear condition at all times by property owners or occupiers.