



## **OAKDALE SOUTH INDUSTRIAL ESTATE**

**THE DRAFT AMENDMENT PROPOSES  
CHANGES TO THESE DCP CHAPTERS:**

**E6 ERSKINE BUSINESS PARK  
C10 TRANSPORT, ACCESS AND PARKING**

**COUNCIL REPORTS AND MINUTES  
INCLUDED IN THIS SECTION**

### **NOTE:**

**Amendments to the DCP are marked in red.**



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## E6 Erskine Business Park

### 6.1 Preliminary

#### 6.1.1 Aims and Objectives of this Section

- a) To enable a diversity of employment generating development to locate within the Erskine Business Park;
- b) To ensure that the standard of development does not detract from or unduly impact upon the existing built environment in adjoining rural and residential areas; and
- c) To ensure that development occurs in an environmentally responsible manner and future development limits adverse impacts upon significant biodiversity.
- d) To provide a framework that will lead to a high standard of development by encouraging local employment and creating an area which is pleasant, safe and efficient to work in;
- e) To ensure that development takes account of the physical nature of the local environment, particularly Ropes Creek, ridgelines and the natural landscape;
- f) To ensure that development does not result in pollution of waterways and in particular of Ropes Creek and South Creek;
- g) To promote the development of a visually attractive physical environment where the form, scale, colour, shape and texture of urban elements are managed in a way which will achieve an aesthetically pleasing balance which does not adversely affect the amenity of the existing residential areas;
- h) To identify and provide for public amenities and service infrastructure to accommodate development;
- i) To promote the creation of a landscaped area within the electricity transmission easement to act as a buffer between the employment zones and the residential communities;
- j) To establish environmental criteria and controls for development within the area to ensure that the environmental quality of adjoining areas is not compromised;
- k) To ensure that development is consistent with the objectives of the Threatened Species Conservation Act with particular regard to the endangered ecological communities, flora and fauna present on the site;
- l) To facilitate conservation of urban bushland; and
- m) To protect, restore and enhance riparian corridors within Erskine Business Park.

#### 6.1.2 Land to which this Section Applies

Erskine Business Park is part of the Western Sydney Employment Area (WSEA) which applies to land identified in the *State Environmental Planning Policy (Western Sydney Employment Area) 2009* (WSEA SEPP). The WSEA is located within the vicinity of the intersection of the M4 and M7 Motorways. The WSEA straddles four local government areas (Penrith, Blacktown, Fairfield and Holroyd) covering an area of approximately 2,450 hectares.

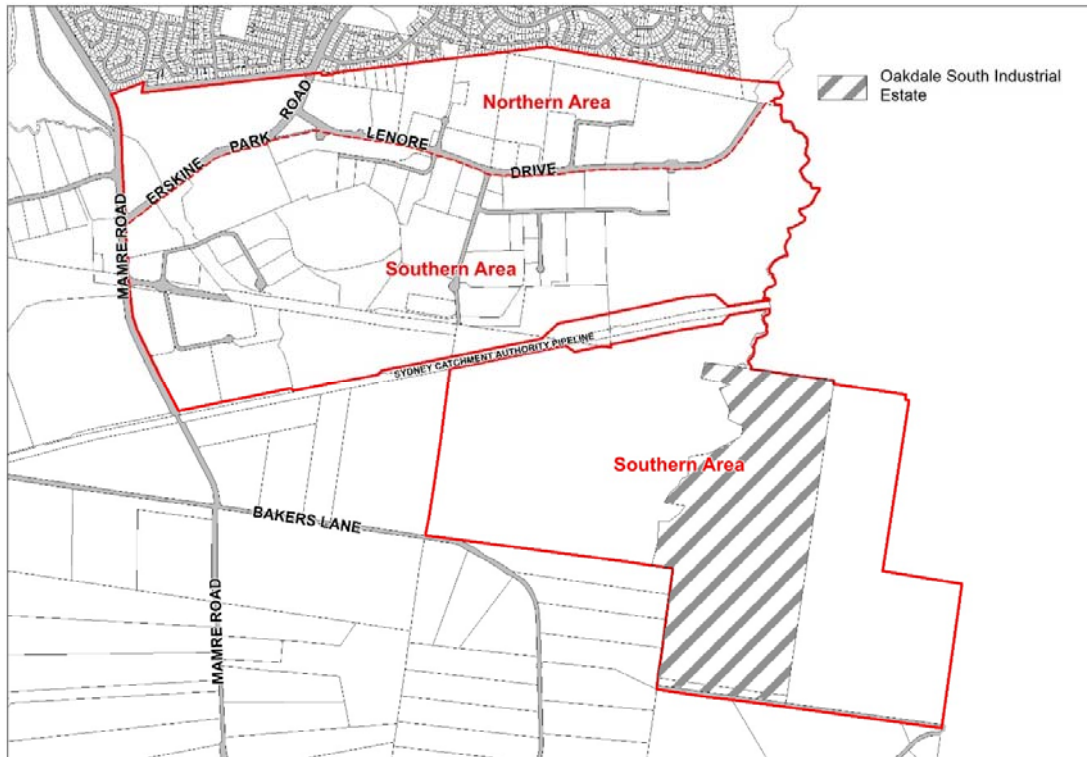
This Section applies to those WSEA lands within the Penrith LGA known as Erskine Business Park (as identified in Figure E6.1) and includes:

- a) The existing Erskine Business Park (divided into two precincts being the Northern Area and the Southern Area as shown in Figure E6.1); and

- b) An area also shown in Figure E6.1 which includes those lands south of the Sydney Catchment Authority (SCA).

This Section also provides more detailed provisions than are included in the WSEA SEPP in regard to development standards, the provision of public amenities and service infrastructure, and biodiversity conservation.

**Figure E6.1: Land to which this Section applies**



## 6.2 Subdivision

### A. Objectives

- To achieve maximum flexibility for siting and location of buildings and to achieve an appropriate density of development;
- To provide opportunities for parcels of land of varying size and dimensions to satisfy market demand and the needs of the development industry;
- To ensure that subdivision design takes into account biodiversity considerations and facilitates minimum impact development to protect remnant native vegetation on the site and on adjoining land;
- To preserve the natural topography and physical characteristics of the land;
- To provide opportunities for large lot subdivision;
- To ensure that development occurs in a logical and staged manner;
- To minimise the number of road entry points to designated roads and the northern access road, thereby allowing more efficient traffic management;

- h) To create the opportunity for "individual" design solutions and innovative and efficient subdivision layout;
- i) To create opportunities for large land parcels to be developed in a co-ordinated, unified manner, featuring elements such as a common landscape theme/treatment, similar architectural treatments, and where possible, shared parking areas; and
- j) To protect, restore and enhance riparian corridors.

## B. Controls

- 1) Lots fronting biodiversity areas or corridors are required to have on-site drainage controls in accordance with this section to prevent nutrient and erosion impacts on the bushland.
- 2) Lot design should maximise the conservation of the natural features of the site including important fauna habitats, rare or threatened plant habitats, and designated biodiversity areas.
- 3) Lots adjoining or containing watercourses are required to maintain or establish native vegetation riparian zones.
- 4) Perimeter roads are desirable from the point of view of bushfire control but may not be feasible if site disturbance is to be minimised.
- 5) The subdivision controls are:

**Table E6.1: Subdivision Controls in Erskine Business Park**

	Area	Control
Minimum Allotment Size	Northern Area (Refer to Figure E6.1)	20,000m <sup>2</sup>
	Southern Area – <b>excluding Oakdale South Industrial Estate</b> (Refer to Figure E6.1)	10,000m <sup>2</sup>
	E2 Environmental Conservation along the Ropes Creek Corridor.	40 hectares
	<b>Land known as the Oakdale South Industrial Estate, Erskine Park (Refer Figure E6.1)</b>	<b>5,000m<sup>2</sup></b>
Minimum Frontage	Northern and Southern Area (Refer to Figure E6.1)	60m
	E2 Environmental Conservation along the Ropes Creek Corridor	Not Applicable
	<b>Land known as the Oakdale South Industrial Estate, Erskine Park (Refer Figure E6.1)</b>	<b>40m (excluding cul-de-sacs) 35m minimum lot width at building line</b>

- 6) Council will consider a variation to the above allotment size and frontage for lots created for either “utility installations” or “utility undertakings” (e.g. electricity substation).

## 6.3 Site Development and Urban Design

### 6.3.1 Height

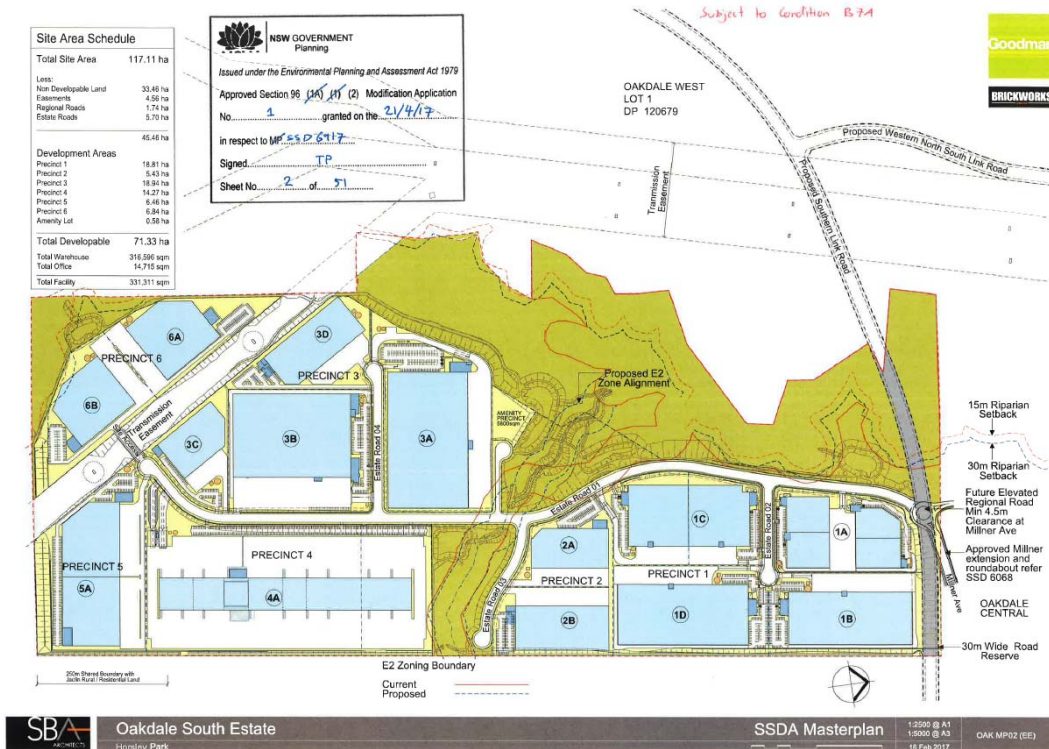
#### A. Objectives

- To encourage building forms that respond to the topography of the site and the relative position of the allotment to other allotments and the street;
- To ensure a scale of buildings which minimises the impact of development on adjoining residential areas; and
- To minimise the impact of development on views from adjoining residential areas.

#### B. Controls

- The maximum height for buildings and structures in the Northern Area shown in Figure E6.1 shall not exceed 12m.
- The maximum height for buildings and structures in the Southern Area shown in Figure E6.1 shall not exceed 15m, unless otherwise specified below.
- Generally, buildings should be sited on mid-slope to avoid visual impact on ridges and to be in harmony with the existing landscape.
- On sloping sites, the building or buildings should be designed, where possible, so as to "step" physically up or down the site to avoid visual impact on ridges.
- Within the Oakdale South Industrial Estate, no warehouse buildings in Precinct 4, 5 or 6 shall exceed a ridgeline height of 13.7m. Refer to Figure E6.2 Oakdale South Industrial Estate – Precinct Plan.

**Figure E6.2 Oakdale South Industrial Estate – Precinct Plan**



## 6.3.2 Site Coverage

### A. Objectives

- a) To limit the density of development; and
- b) To encourage the provision of open space and landscaping on development sites, consistent with the landscape objectives in the Landscape Design of this Plan.

### B. Controls

- 1) Site coverage shall not exceed 50%, **unless otherwise specified below**
- 2) **Site coverage within the Oakdale South Estate shall not exceed 65% (excluding building awnings).**
- 3) Where land is included in Biodiversity Conservation Areas or Electricity Transmission Line Easements, that land can be included in site coverage calculations.

## 6.3.3 Setbacks

### A. Objectives

- a) To provide an open streetscape with substantial areas for landscaping; and
- b) To enhance the visual quality of development and the urban landscape.

### B. Controls

- 1) The setback standards are outlined in the table below. Where the property has frontage to more than one road, Council will consider a variation to setbacks on the secondary road frontage, as shown in Table E6.2 below.

**Table E6.2 Setback Requirements**

Setback Type	Setback
Designated Road (Mamre Road and Erskine Park Road)	20m
Northern Access Road (Lenore Drive and Erskine Park Link Road to Westlink M7)	20m
<b>Southern Link Road</b>	<b>20m</b>
Western Access Road (Trunk Collector)	20m
Other Road Frontages	15m
<b>Estate roads within the Oakdale South Industrial Estate</b>	<b>7.5m</b>
Rear and Side Boundaries <b>(unless otherwise specified elsewhere in this table)</b>	5m
<b>Side Boundaries within the Oakdale South Industrial Estate</b>	<b>0m subject to compliance with fire rating requirements</b>

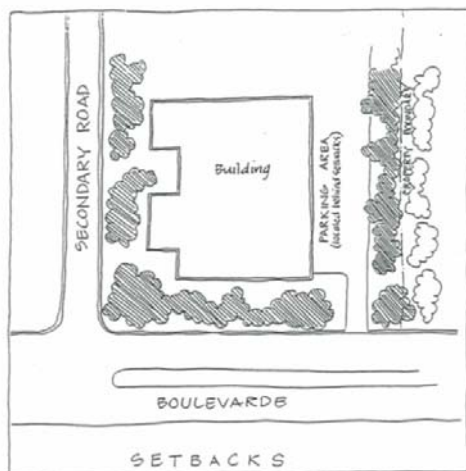


Setback Type	Setback
Rear and side boundary setbacks to development adjacent to the Oakdale South Industrial Estate, excluding the southern property boundary and the eastern property boundary.	5m
Boundary setbacks along the southern property boundary of the Oakdale South Industrial Estate	30m
Boundary setbacks along the eastern property boundary of the Oakdale South Industrial Estate	10m
Transmission Line Easement	8m
Water Supply Pipeline	5m
Boundaries Adjacent E2 Environmental Conservation zone along the Ropes Creek Corridor.	10m

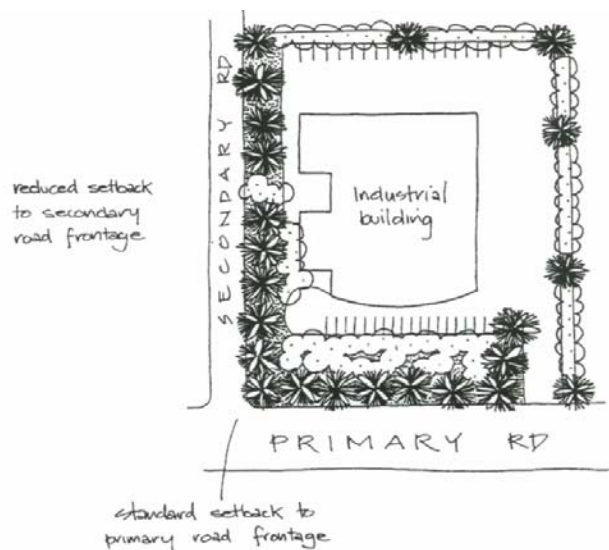
2) Notwithstanding Control (1) above, no development other than the following development is permitted within the defined setback for any road, other than Lenore Drive, Mamre Road and Erskine Park Road:

- a) Car parking
- b) landscaping in accordance with the provisions of the Landscape Design Section of this Plan;
- c) maintenance/rehabilitation of biodiversity corridors or areas in accordance with the provisions of the Vegetation Management Section of this Plan;
- d) utility services installation;
- e) accessways and driveways (not permitted in setbacks to designated roads);
- f) approved signage;
- g) street furniture; and
- h) drainage works.

**Figure E6.3: Building setbacks (1)**



**Figure E6.4: Building setbacks (2)**



- 3) Notwithstanding Control (2) above, Council may consider a variation to permit car parking within part of the setbacks to Erskine Park Road and Lenore Drive for 1 – 23 Lenore Drive, Erskine Park (Lot 1, DP 1071114), which is the site on the corner of Erskine Park Road and Lenore Drive. Council shall consider the type and scale of the development when assessing any such request for variation to either building or car parking setbacks.
- 4) Existing remnant vegetation within front, rear and side setback areas shall be retained and enhanced as an integral part of the landscaping proposals for each development.
- 5) Where sites back onto designated roads or the main access roads, those setback areas shall be provided with mounded landscape screens. Existing remnant vegetation shall be retained and enhanced as part of those landscaping proposals.

## 6.3.4 Urban Design

### A. Objectives

- a) To encourage a high standard of architectural design, utilising quality materials and finishes;
- b) To establish varied and articulated frontages facing or visible from public roads;
- c) To minimise perceived scale and mass and to prevent monotonous building forms resulting from poor design of walls or rooflines; and
- d) To ensure that new development contributes to the creation of a visually cohesive urban environment.

### B. Controls

#### Architectural/Design

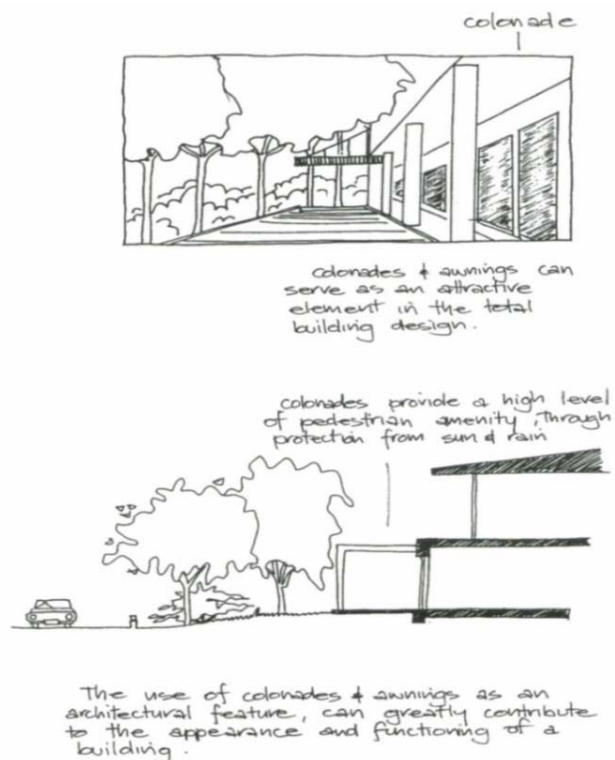
- 1) In assessing development proposals, Council will have regard to the quality of building design and materials (type and colour).
- 2) Prominent elevations, such as those with a frontage to the street or public reserves or those that are visible from public areas, must present a building form of significant architectural and design merit. The construction of large, blank wall surfaces is not permitted.
- 3) Large unrelieved expanses of wall or building mass will not be supported by Council, and as such should be broken up by the use of suitable building articulation, fenestration or alternative architectural enhancements.
- 4) The use of large, uninterrupted areas of metal cladding or untreated concrete surfaces for wall construction is not supported. Applicants shall vary materials or finishes for external walls to provide attractive streetscapes and quality building designs. Council may limit the use of a single construction material to 50% of a wall surface area.
- 5) All loading areas should be located towards the rear of allotments. Where possible, loading areas should be screened from the view of main road frontages through physical and/or vegetation screening.
- 6) Details of samples of external materials and finishes shall be submitted with the Development Application.
- 7) External materials should not have an index of reflectivity above 20%.
- 8) Energy efficient design principles should be employed in all building designs.
- 9) Walls shall be articulated to provide more varied streetscapes, where visible from public roads or adjacent residential areas.
- 10) Part of the cross-section of buildings shall be projected to reduce apparent height and scale of external walls, including:
  - a) awnings and/or upper storeys that project above footpaths;
  - b) roofs with eaves that project beyond external walls;
  - c) colonnades.
- 11) Entrances to buildings must be highlighted by architectural features consistent with the overall design of the building.
- 12) Particular care should also be taken in:
  - a) designing roof elements; and

- b) locating plant and mechanical equipment including exhausts, so as to reduce their visual impact from elevated locations.
- 13) External material colours to be consistent with the following palette of colours developed for Erskine Business Park:
  - a) Earth Tones - stone colours, browns, muted greens, sand, dark red/ plums; and
  - b) Cool Tones - soft greys, grey/blues.

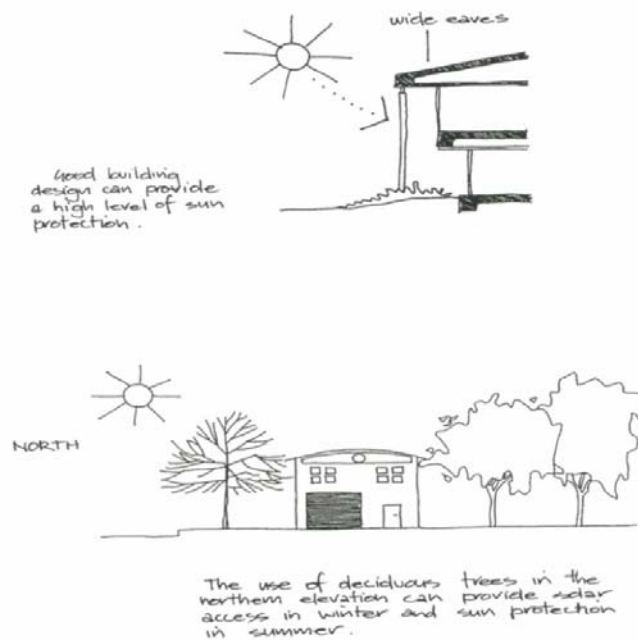
#### **Siting/Building Orientation**

- 1) Building elevations oriented towards residential areas shall be minimised. Where site constraints create difficulties in complying in this regard, elevations shall be appropriately detailed using windows, broken building planes and other architectural devices.
- 2) Design and layout of buildings shall give consideration to local climatic conditions. For example:
  - a) where possible, buildings should take advantage of a north or north easterly aspect;
  - b) western orientations should be avoided;
  - c) trees should be planted around the building to create shade, screening and wind breaks.
- 3) Development should not seriously impede the access of solar radiation to surrounding land and development.

**Figure E6.5: Pedestrian friendly urban design**



**Figure E6.6: Energy efficient design**



### 6.3.5 Signage and Estate Entrance Walls

#### A. Objectives

- a) To promote an integrated design approach to all signage in character with the locality and its architectural and landscape features;
- b) To provide a quality entrance statement and signage at each of the entrance points to the Estate;
- c) To prevent the proliferation of signs;
- d) To minimise the visual impact of signage;
- e) To prevent distraction to motorists and minimise the potential for traffic conflicts;
- f) To permit the adequate display of information concerning the identification of premises, the name of the occupier and the activity conducted on the land; and
- g) To encourage a coordinated approach to advertising where multiple occupancy of sites occur.

#### B. Controls

- 1) Signage on individual allotments will be required to comply with the provisions of the Advertising and Signage Section of this Plan.
- 2) In addition, all advertising is required to be:
  - a) constructed of high quality, durable materials;
  - b) considered in conjunction with the design and construction of buildings;
  - c) restricted generally to one sign identifying the name of the occupants and/or products manufactured or produced on the site; and

- d) contained wholly within the site.
- 3) Decorative masonry entrance walls and high quality Estate signage (indicating the name of the Estate) shall be provided, as shown on Figure E6.11 – Erskine Business Park Traffic Works, at the following entrance points to Erskine Business Park:
- a) the intersections of Mamre Road and Erskine Park Road;
  - b) on Erskine Park Road for south-bound traffic leaving the Erskine Park residential area;
  - c) the intersection of Mamre Road and the proposed Western Access Road; and
  - d) on Lenore Drive at the future eastern entrance to the estate at Ropes creek when the link to the Western Sydney Orbital is constructed.
- 4) The entrance walls and signage referred to in Control (3) above are to be funded by contributions levied under the Contributions Plan for Erskine Business Park.
- The proposed works for the Ropes Creek entrance to the estate will, however, be funded by a separate, second account within the Contributions Plan for this Estate.
- 5) Any business directory signage installed by developers shall be of a high quality and shall have a consistent design throughout the Estate.
- 6) The official name of the Estate shall be determined by Council in conjunction with the landowners/developers and shall be utilised in a marketing/promotions campaign for the Estate.
- 7) For buildings within the Oakdale South Industrial Estate, a maximum of one illuminated sign is permitted on each elevation of each of each warehouse building. All illuminated signage shall be oriented away from residential receivers.

**Figure E6.7: Acceptable signage**



## **6.3.6 Lighting**

### **A. Objectives**

- a) To provide adequate security lighting for business establishments, whilst ensuring there is no adverse impact upon the use and enjoyment of adjoining premises and surrounding areas, particularly residential and rural areas; and
- b) To provide suitable lighting along the road network to enhance landscaping.

### **B. Controls**

- 1) Lighting details shall be provided as part of any relevant Development Application.
- 2) Lighting design should address the principles of Crime Prevention through Environmental Design (CPTED), where there is significant pedestrian activity, late night work-shifts or safety and security issues. These principles are outlined in the Site Planning and Design Principles Section of this Plan.
- 3) Adequate lighting should be provided to meet security requirements without excessive energy consumption. Lighting powered by solar batteries or other renewable energy sources is encouraged. The use of sensor lighting, both internally and externally, should be considered.

## **6.3.7 Fencing**

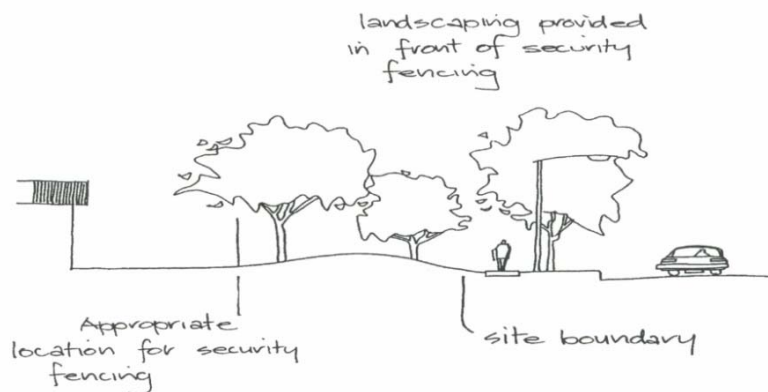
### **A. Objectives**

- a) To ensure that the security needs of the development are satisfied in a manner which complements the surrounding landscape design and streetscape quality; and
- b) To ensure that fencing is consistently located behind the landscaped front setback and is of a consistent high quality.

### **B. Controls**

- 1) No fencing other than a low ornamental type may be erected at the front site boundary. Should an applicant elect to use high security fencing, such fencing must be located either behind the landscape setback or alternatively within the landscaped area midway between the site front boundary and the building line.
- 2) Security fencing shall generally be of an "open" nature and of a dark colour, such as green or black plastic coated mesh fencing, which blend better with screening vegetation than galvanised wire.

**Figure E6.8: Appropriate location for security fencing.**



### **6.3.8 Services**

#### **A. Objectives**

- a) To ensure that adequate services are available to facilitate development; and
- b) To ensure the co-location of services where possible.

#### **B. Controls**

- 1) Council shall require as conditions of any development consent that arrangements satisfactory to:
  - a) Sydney Water will be made for the provision of water and sewerage services;
  - b) Integral Energy have been made for the supply of electricity;
  - c) arrangements satisfactory to the relevant telecommunications authority will be made for the provision of telecommunications services;
  - d) Council have been made for the drainage of the land.
- 2) Council will require, as a condition of consent, that electricity and telecommunication mains be placed underground. Council also requires the co-location of services where this is technically feasible.
- 3) Council will require that all new premises within the Erskine Business Park be provided with state of the art telecommunications infrastructure utilising optic fibre or DSL technology to enable companies to access broad band services using high speed, high reliability telecommunications.

### **6.3.9 Transmission Line Easement**

#### **A. Objectives**

- a) To create a physical buffer between the Erskine Business Park and adjoining residential communities;
- b) To provide landscaped treatment which creates:

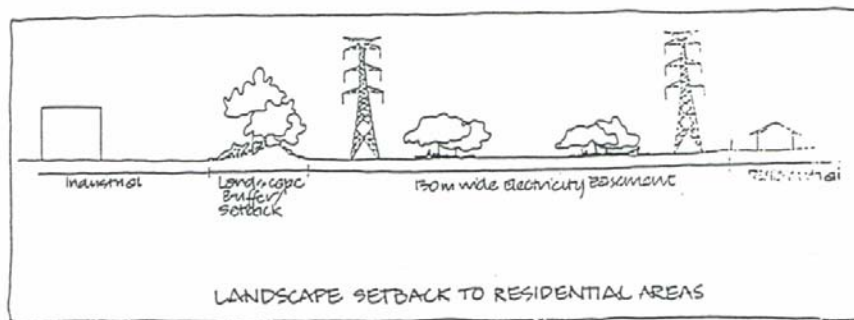


- i) an attractive outlook for adjoining residential properties; and
- ii) linkages between the residential areas and Erskine Business Park; and
- c) To provide limited opportunities for development of the land affected by the transmission line easement for landscaping, and/or maintenance/ rehabilitation of biodiversity conservation areas.

## B. Controls

- 1) Council does not support the carrying out of development on land affected by the Transgrid Electricity Transmission Line Easement.
- 2) Approved landscape treatment (refer to the Landscape Design of this Plan), and/or maintenance/rehabilitation of biodiversity corridors or areas (refer Part 8 Biodiversity of this Section) shall be carried out on land affected by the transmission line easement.
- 3) Existing vegetation within this easement shall be retained and enhanced as part of any proposal by applicants to provide a landscape screen between a proposed development and adjacent residential areas.

**Figure E6.9: Transmission easement**



## 6.4 Environmental Quality

### 6.4.1 Noise Pollution

#### A. Objectives

- a) To establish design criteria for noise emissions from industrial or other employment-generating development;
- b) To establish acoustic environmental goals for existing and future adjacent residential areas; and
- c) To establish noise contributions for individual allotments within the employment zones when related to residential boundaries.

#### B. Controls

- 1) Any machinery or activity considered to produce noise emissions from a premise shall be adequately sound-proofed so that noise emissions are in accordance with the provisions of the *Protection of the Environment Operations Act 1997*.

- 2) The use of mechanical plant and equipment may be restricted in the Northern Area (Figure E6.1). Developers in all areas should ensure through design of their development that no offensive noise is emitted.
- 3) Where it is considered likely that a development may cause an adverse impact on nearby rural or residential areas, a noise impact statement from a qualified acoustical engineer will be required to be submitted to Council for consideration with the Development Application. A noise impact statement will need to demonstrate that the proposed development will not create any adverse impact.
- 4) All development shall comply with the requirements of relevant Australian Standards and State Government policies and guidelines relating to Noise.
- 5) The acoustic criteria adopted by this section will be implemented in the following manner:

### **Erection of Buildings**

- 1) An acoustic design report shall be required for developments that are likely to generate high noise levels and for development in the area immediately adjoining residential areas. The acoustic design report should refer to the relevant Australian Standards and State Government policies and guidelines relating to Noise.
- 2) If an acoustic design report is not required at the Development Application stage, conditions will be imposed as part of the development consent which requires compliance with the relevant Australian Standards and State Government policies and guidelines relating to noise. Applicants must have regard to the criteria and demonstrate a standard of acoustic treatment for the building to comply with such criteria.
- 3) It is essential that potential developers investigate noise amelioration features to be included in building design, which will assist in achieving compliance with Council's acoustic criteria. Having regard to the surrounding topography, it is critical that the roof element of all buildings be acoustically capable of controlling potential breakout noise.

## **6.4.2 Air Pollution**

### **A. Objectives**

- a) To maintain existing air quality and improve local air quality where possible; and
- b) To ensure future development does not adversely affect existing air quality.

### **B. Controls**

- 1) The emission of air impurities is to be controlled and limited to the standards allowed by the *Protection of the Environment Operations Act 1997*, to the satisfaction of Council and the Environmental Protection Authority at all times.
- 2) Applicants may be required to provide information detailing the potential impact of their development on air quality in the region.
- 3) An assessment of the merits of the proposal will be made at the Development Application stage. However, applicants should be able to demonstrate that the most efficient means of minimising emissions are being utilised.

## **6.4.3 Storage, Transportation and/or Processing of Chemical Substances**

### **A. Objectives**

- a) To ensure that the use, storage or transportation of any chemical substance/s do not have any detrimental impact on the environmental quality of the surrounding area; and
- b) To ensure any proposed development involving the storage, transportation and processing of chemical substances shall have regard to the requirements of State Environmental Planning Policy No. 33 - Hazardous and Offensive Development.

### **B. Controls**

The following information is to be submitted with any Development Application which involves the storage, transportation and/or processing of chemical substances:

- 1) External storage of goods must be avoided wherever possible. Where the nature of the activity or the materials means that internal storage is impractical, all external storage areas must be located behind the front building setback. In addition, when assessing development applications involving external storage of goods, Council will take into consideration:
  - a) The proposed height and on-site arrangement of stored goods;
  - b) Visual impact of the storage area, and how this is proposed to be minimised (orientation, screening with landscaping and/or solid fencing etc.);
  - c) Access arrangements; and
  - d) Safety issues.
- 2) Detailed description of the use and all methods/procedures associated with the use, including flow diagrams.
- 3) A floor plan of the subject premises depicting the dimensions of the building and indicating the internal layout of all equipment, storage and display areas.
- 4) A comprehensive list of all chemicals/goods and quantities proposed to be utilised in the activity and actually stored on the subject premises.
- 5) A description of the method of storage of chemicals/goods on the premises, and the type of containment or packaging to be used.
- 6) A description of the method of transportation of chemicals/goods to/from the premises (include the size and nature of vehicles, proposed routes and frequency of delivery to and from the site).
- 7) Details regarding the number of vehicles likely to be involved with the use at any one time and the provision and allocation of storage/standing areas for such vehicles.
- 8) Details of onsite water quality control.
- 9) Details of waste treatment and transportation.

## **6.4.4 Energy Conservation**

### **A. Objectives**

- a) To encourage development designed to minimise energy usage; and

- b) To encourage development to consider the application of energy efficient technology and systems.

#### **B. Controls**

- 1) Development must demonstrate that the following have been taken into account in the design process:-
  - a) Potential for effluent re-use
  - b) Water minimisation techniques, including water recycling
  - c) Waste minimisation techniques, including recycling.

### **6.4.5 Trading/Operating Hours of Premises**

#### **A. Objectives**

- a) To ensure the amenity of adjoining residential and rural areas is preserved; and
- b) To ensure development is provided the flexibility in trading/operating hours to ensure it is competitive and productive.

#### **B. Controls**

- 1) Construction works (all development) shall generally be restricted to the following hours:
  - a) Monday to Friday, 7.00 a.m. to 6.00 p.m.
  - b) Saturday, 7.00 a.m. to 1.00 p.m.
  - c) No work on Sundays or Public Holidays
- 2) The hours of operation for premises involved in any type of employment generating activity shall be dealt with on a merits basis. Council appreciates that because of the nature of certain activities shift work may be essential to the viability of the development.
- 3) In considering applications Council shall have regard to the likely impact of the trading hours of a particular activity on the amenity of adjoining residential and rural areas.

## **6.5 Drainage**

### **6.5.1 Introduction**

The provision of a drainage system is necessary to ensure that urban development is adequately serviced, occurs in an orderly manner and that best practice is applied to stormwater management solutions.

Council has determined that the most effective method to facilitate development is to encourage at-source pollution controls and promote the maintenance of predevelopment flow regimes from all developed land. In considering all Development Applications, Council will assess the adequacy of the trunk drainage system, downstream of the proposed development and its ability to meet the objectives listed below.

#### **A. Objectives**

- a) To ensure that an adequate and environmentally acceptable method of removing surface water and stormwater is implemented;
- b) To ensure that development does not result in the pollution of waterways and that the transportation of pollutants is minimised;

- c) To ensure that development does not create or exacerbate problems relating to saline or highly erodible soils;
- d) To protect, restore and maintain the physical and biological integrity of the waterways; and
- e) To ensure the overall drainage system is designed to minimise, to acceptable levels, the risk of local flooding.

## **B. Controls**

- 1) The provision of drainage shall be in accordance with the Water Management Section of this Plan.
- 2) Council's preferred drainage/flooding/water quality control option for the Erskine Business Park is shown in Figure E6.10 - Erskine Business Park Drainage Works. Whole of life costs and ease of maintenance will be critical considerations in determining the form of the final drainage option.
- 3) There are two distinct sub-catchments within Erskine Business Park, identified generally as the "Western" catchment discharging into South Creek and the "Eastern" catchment discharging into Ropes Creek, both of which discharge into the greater South Creek Catchment.
- 4) The greater South Creek Catchment is subject to the criteria contained within *Sydney Regional Environmental Plan No. 20 – Hawkesbury – Nepean River (No. 2 – 1997)* and the Water Management Section of this Plan.

## **6.5.2 Western Catchment – South Creek**

The western portion of the release area drains under Mamre Road, to the north of the Erskine Park Road intersection, and into South Creek. It is dominated by an old quarry site, which splits the catchment into northern and southern sub-catchments.

## **A. Controls**

- 1) The Warragamba-Prospect Water Supply Pipeline traverses the southern sub-catchment from west to east and further subdivides it into two distinct catchments north and south of the pipeline.
- 2) The catchment south of the pipeline is located outside the boundary of Erskine Business Park. There are a number of partly formalised natural drainage lines, which drain this southern external catchment under the Water Supply Pipeline and into the Erskine Business Park. Existing flows entering from this southern external catchment are to be accommodated within the stormwater drainage infrastructure elements provided within the Erskine Business Park lands.
- 3) The crossings under the Water Supply Pipeline shall not be modified without prior approval from Penrith City Council and the Sydney Catchment Authority.
- 4) Major trunk drainage elements proposed for this western catchment are shown in Figure E6.10 – Erskine Business Park Drainage Works of this Section. Additional drainage infrastructure will be required to be provided upstream of these identified elements in conjunction with development of individual sites to achieve the desired stormwater management objectives.
- 5) This additional drainage infrastructure is to be constructed by the developer of the land concerned. Existing creek lines within areas of significant vegetation also form major trunk drainage functional elements and are not expected to be modified by development.

- 6) A proportion of flows from the land to the north of Erskine Park Road are to be directed into the proposed detention basin facility on the southern side of Erskine Park Road to ensure compliance with the appropriate stormwater management outcomes.
- 7) Should any development occur within the “south western” sub-catchment then all developments, within the sub-catchment, shall treat and attenuate their discharges on site to Council’s requirements.
- 8) The resultant flows shall be directed towards the north, along the eastern side of Mamre Road, into the detention basin/wetland treatment systems located adjacent to Erskine Park Road.
- 9) Only environmental flows, of appropriate quality, from any future development of the “south western” catchment, shall be directed across Mamre Road into the rural lands to the west.
- 10) All land identified by Council as performing a significant drainage function and where not specifically identified in the Contributions Plan, is to be covered by an appropriate “restriction as to user” as deemed applicable by Council, and created free of cost to Council.

### **6.5.3 Eastern Catchment – Ropes Creek**

#### **A. Background**

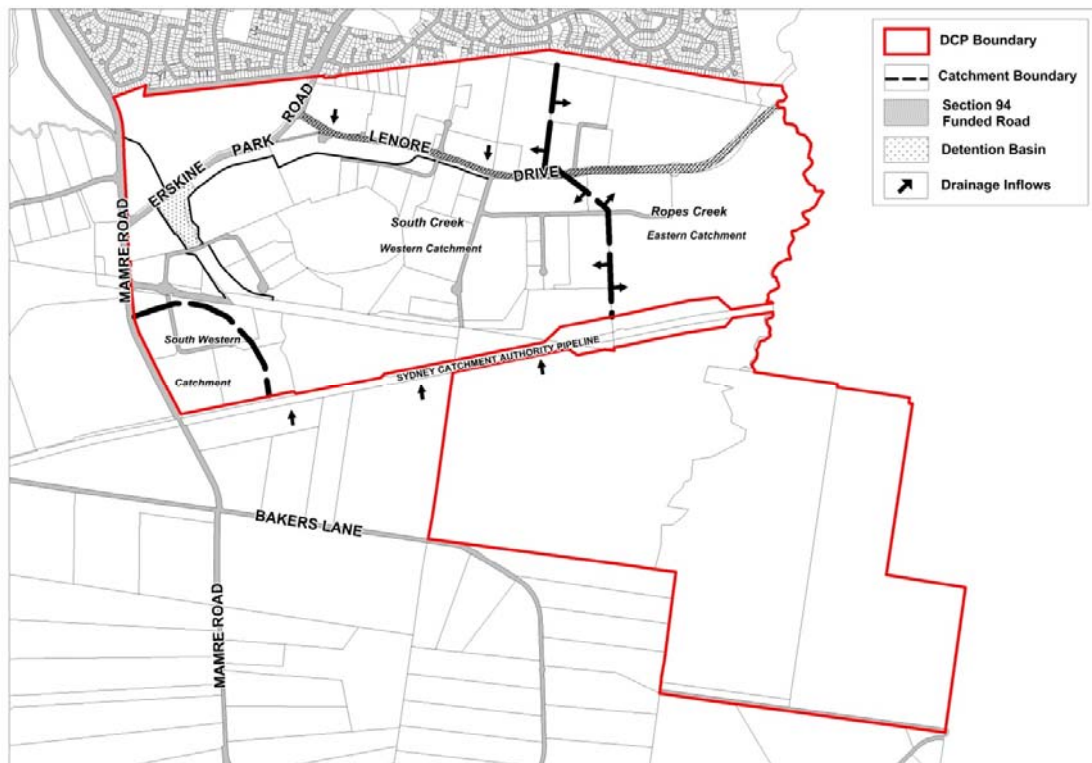
The eastern portion of the release area drains into Ropes Creek. A small section of this portion drains directly into Ropes Creek via a number of local swales, whilst the remainder of the catchment drains to an existing channel system located along the eastern side of the Erskine Park residential estate.

No trunk drainage channel elements have been identified in this catchment.

#### **B. Controls**

- 1) Development within the sub-catchment, which drains directly into Ropes Creek, will be required to direct its stormwater runoff into a detention basin facility. Special attention will need to be given to this aspect of the development during the subdivision design process.
- 2) Developments in this area will be required to design environmentally sensitive stormwater management solutions consistent with the constraints specific to the site.
- 3) All drainage infrastructure required in this catchment, shall be provided with the development of the land, at the developer’s cost.
- 4) Management of stormwater quantity and quality close to its source has the potential to limit the impact of major drainage works on the endangered vegetation throughout this area. Consequently, at-source, on-site controls are the preferred treatment strategy in this catchment and their implementation will be encouraged.
- 5) No regional water quality or water quantity controls have been identified in this Plan, however there will be a requirement for the runoff from the Eastern Catchment to conform to Council’s standard. This will be the responsibility of individual developers in that part of the estate. It is envisaged that these facilities will be provided near the Ropes Creek interface. There will be no levies associated with this Eastern Catchment.
- 6) The drainage solution shall include provision for water quality and quantity for all roads. This water quality/quantity system shall be clear of the 1 in 100 year flood line and biodiversity corridor.
- 7) Land identified by Council as performing a significant drainage function and where not specifically identified in that plan is to be covered by an appropriate “restriction as to user” as deemed by Council.

**Figure E6.10: Erskine Business Park Drainage Works**



## 6.6 Transport Network

### A. Objectives

- To create a road network which enables a safe and efficient access for all users, while minimising through traffic on minor roads;
- To incorporate sustainable landscape and drainage opportunities in the design of the transport network;
- To encourage the use of efficient alternate transport, including public transport, bicycles, and pedestrians;
- To provide traffic facilities to give safe and efficient access to Mamre Road and Erskine Park Road;
- To provide for a future road link to the Westlink M7 and to provide all properties within this estate a direct connection to this link road;
- To minimise the number of road entry points to designated roads and the northern access road thereby allowing more efficient traffic management;
- To maintain the capacity of the State Arterial Roads (Erskine Park and Mamre) by minimising the number of access points; and
- To provide better connectivity between Erskine Business Park and other parts of WSEA.

### B. Controls

#### Internal Road System

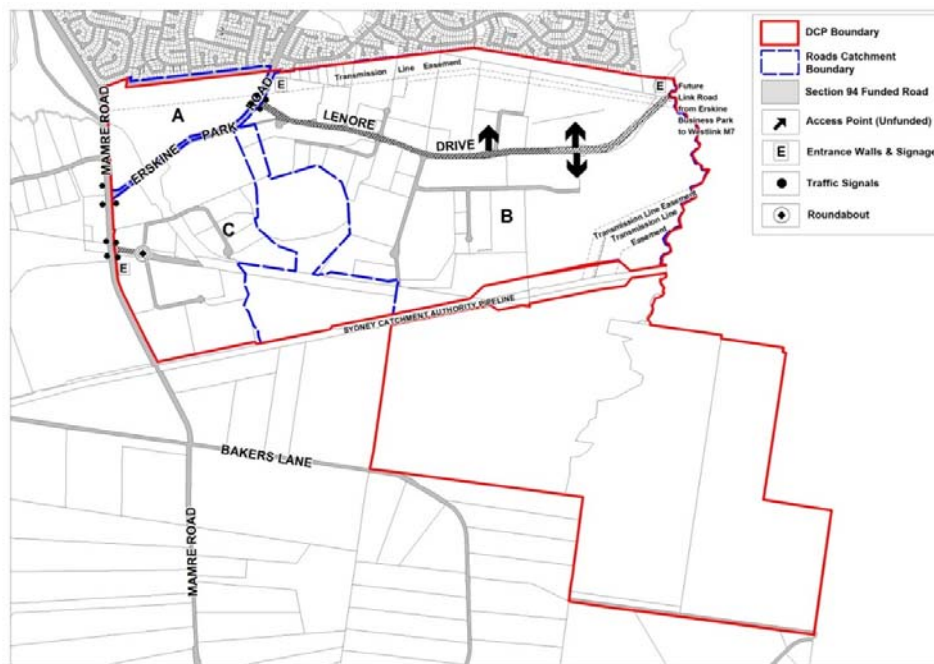


- 1) The two main access roads to Erskine Business Park indicated in Figure E6.11 are:
  - a) Lenore Drive (Northern Access Road)
  - b) James Erskine Drive (Western Access Road)
- 2) Access Road.
- 3) The internal road system shall be provided in accordance with the principles and requirements set out below.
- 4) Access points shall be located so as to optimise safety, traffic flow and landscape opportunity. The Northern Access Road shall be access controlled such that:
  - a) **North of Northern Access Road (existing location of Lenore Drive):** Access to Lenore Drive will be limited to one access point per lot. Upon redevelopment, the access point for Lot 5A, DP162129 shall be combined with one of the adjoining lots.
  - b) **South of Northern Access Road:** Access to Lenore Drive shall be limited to the three points as shown on Figure E6.11 of this Section.
- 5) All parking shall be provided either on site or in centralised off-road locations.
- 6) Upgrading of Erskine Park Road and Mamre Road shall be undertaken to accommodate the increases in traffic generated by this development.
- 7) Direct vehicular access to Mamre Road shall only be permitted at the signalised intersections with Erskine Park Road and the James Erskine Drive. Direct vehicular access to Erskine Park Road shall only be permitted at the signalised intersection to Lenore Drive and at one combined intersection for the property north of Erskine Park Road and the eastern block for Lot 16 DP259146. No other direct vehicular access to these designated roads will be permitted.
- 8) All intersections within the internal road network shall incorporate traffic facilities, which promote safe and efficient traffic movement.
- 9) The proponent shall have regard to "Guide for Traffic Generating Development", Roads and Traffic Authority of NSW, October 2002.
- 10) Development shall, where appropriate, be designed to:
  - a) Allow all vehicles to either leave or enter the site in a forward direction;
  - b) Accommodate heavy vehicle parking and manoeuvring areas;
  - c) Avoid conflict with staff, customer and visitor vehicular movements; and
  - d) Ensure satisfactory and safe operation with the adjacent road system.
- 11) Full details of the volume, frequency and type of vehicle movements shall be submitted with the development application.
- 12) In general:
  - a) Turning circles will be required to be provided to accommodate the largest type of truck which could reasonably be expected to service the site.
  - b) All developments must be designed and operated so that a standard truck may complete a 3-point or semi-circular turn on the site without interfering with parked vehicles, buildings, landscaping or outdoor storage and work areas; and
  - c) Large-scale developments shall be designed to accommodate semi-trailers. In the case of the conversion of an existing development, should it appear that a truck turning circle may prove difficult; a practical demonstration may be required.



- 13) Council will assess the suitability of manoeuvring areas provided for large vehicles by reference to Australian Standard 2890 series.
- 14) Adequate space is to be provided within the site for the loading, unloading and fuelling (if applicable) of vehicles. These areas shall be screened from the road.

**Figure E6.11: Erskine Business Park Traffic Works**



## 6.7 Biodiversity

The Biodiversity Management Plan Erskine Park Employment Area, which identifies the Biodiversity Conservation Area, was devised by Council, Department of Planning and the Landowners to deliver a genuine balance between development and conservation to deliver dual outcomes of environmental protection and employment generation.

### 6.7.1 Biodiversity Conservation Area and Landscape Buffer

Figure E6.12 nominates the extent of the biodiversity conservation area/corridor to be conserved or managed for biodiversity purposes and the extent of the landscape buffer on Lot 11 DP229784, 576b Mamre Road, Erskine Park which has been replaced by a Landscape Buffer in accordance with a Major Project Approval issued by the Minister for Planning on 28 October 2009.

#### A. Objectives

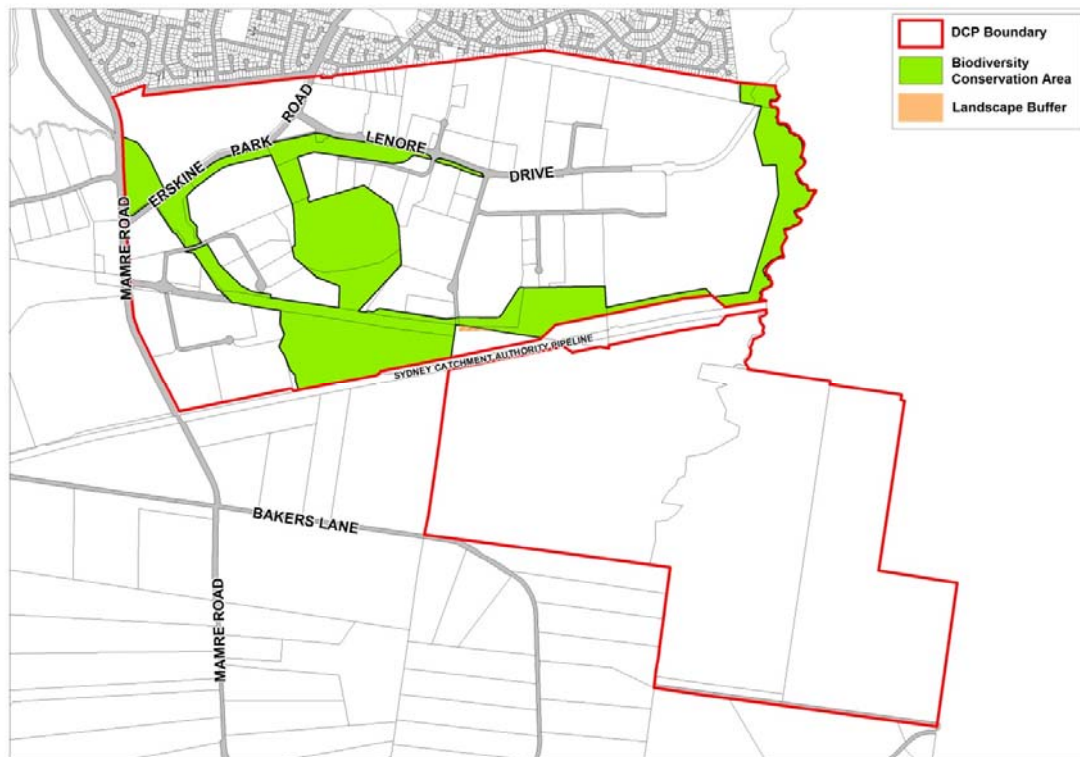
- a) To promote the conservation of urban bushland;
- b) To protect and preserve native vegetation and biological diversity in accordance with the principles of ecologically sustainable development;
- c) To retain native vegetation in parcels of a size and configuration which will enable the existing plant and animal communities to survive in the long term;
- d) To protect and enhance habitat for threatened species and endangered ecological communities;

- e) To provide a biodiversity corridor linking system linking remnant native vegetation across the site with the riparian biodiversity system within South Creek, the remnant native vegetation in Erskine Business Park and the Ropes Creek Riparian Biodiversity system; and
- f) To provide funding and management arrangements to enable the establishment of a biodiversity corridor and its ongoing maintenance.

## **B. Controls**

- 1) No clearing of native vegetation shall occur within the Erskine Business Park Biodiversity Conservation Area and Landscape Buffer as outlined by Figure E6.12 – Biodiversity Conservation Area and Landscape Buffer.
- 2) No clearing of native vegetation shall occur within Erskine Business Park without the consent of Council.
- 3) Land located within the Biodiversity Conservation Area shall be managed in accordance with the endorsed Biodiversity Management Plan by Greening Australia or the land manager appointed by the Department of Planning and Environment.
- 4) A Landscape Management Plan is to be prepared to the satisfaction of Council for land located within the Landscape Buffer Area.

**Figure E6.12: Biodiversity Conservation Area and Landscape Buffer**



## 6.8 Landscaping

This section should be read in conjunction with the Landscape Design Section of this Plan.

### 6.8.1 Objectives

- a) To retain and enhance locally and regionally significant cultural and ecological values;
- b) To create a landscape character and amenity that is appropriate to the scale and nature of the development; and
- c) To develop an overall landscape character that is derived from natural and cultural landscape features contained within the site and immediate environs.

### 6.8.2 Controls

Removal of existing vegetation can result in a lower take up of water contributing to a rising ground water table and potential problems with salinity. Saline soils can damage roads, parking areas and buildings as well as ultimately causing scouring and effecting vegetation growth. Once soils have become saline it is virtually impossible to reverse the effects. Preservation of existing vegetation, particularly larger trees on ridgelines can help reduce or delay the impact of salinity. Existing trees are to be preserved wherever possible. The siting and layout of a development at the initial concept stage must consider the location of trees with a view to their preservation. Existing trees shall not be removed prior to the written consent of Council being obtained.

The existing vegetation to be retained must be protected from soil compaction, root, trunk and limb damage, soil contamination and changes in surface level that will affect the health of the specimen. Protection measures are to be installed prior to the commencement of any earthworks. A man-proof, sturdy and durable chain-wire fence of sufficient height shall be erected 1m beyond the dripline of each specimen for the full circumference of all vegetation to be protected.

## **6.9 Landscape Areas**

### **6.9.1 Objectives**

- a) To provide functional areas of planting that enhance the presentation of a building;
- b) To screen undesirable views;
- c) To reduce building energy consumption;
- d) To provide outdoor staff amenity facilities;
- e) To select tree species that are “low maintenance” planting to reduce the impact of green waste;
- f) To provide wildlife habitats; and
- g) To contribute to the overall character of the locality.

### **6.9.2 Controls**

#### **Selection and Use of Planting Material**

- 1) A framework planting of endemic canopy and shrub species is to be established for all developments. This will enhance the sense of place for each development site. Consideration to be given to features such as bird attracting qualities, aromatic foliage and flowers, and habitat value as well as visual qualities, site suitability, and proximity to biodiversity corridors or areas. Habitat value is to be given high priority.
- 2) Smaller scale and less visually prominent planting may include species other than those endemic to the area. This will produce variety and interest in the landscape at this scale. This does not apply to development adjoining Biodiversity Areas or within or adjoining Biodiversity Corridors.
- 3) Property entrances may be highlighted with feature planting, and need not be limited to native or endemic species. No plant species shall be used on site that could become a weed within remnant bushland areas or creek lines.
- 4) Plant species should be carefully selected to meet service authority requirements in easement locations.
- 5) Plant material in car parks should be used to provide shade, ameliorate views of large expanses of paved areas and cars, and to identify entrances to car parks.
- 6) Trees providing shade in car parks should be given sufficient area for root development.
- 7) Narrow strips of landscaped area between an allotment boundary and building, or between parking areas and a building should be avoided.
- 8) Island planting beds should be interspersed throughout large parking areas. Planting should consist of ground covers, shrubs to 1m, shade producing and canopy species.
- 9) Plant material shall be a mix of super-advanced, advanced and normal nursery stock that will provide a quick effect especially in visually prominent areas. Larger plant sizes would be appropriate in some locations.

- 10) Groundcovers should be considered as a grass alternative in areas not specifically designed for pedestrian use.
- 11) Presentation of a building facade to the street should be complemented with appropriate enframing or screening vegetation. The visual impact of large expanses of wall should be reduced in scale by architectural treatment as well as by dense grove planting or other landscape design solutions.
- 12) Consideration should be given to solar access and energy conservation, with the appropriate use of deciduous trees.

### **6.9.3 Requirements**

#### **Hard Landscape Materials**

- 1) Paving, structures and wall materials should complement the architectural style of buildings on the site and be of local origin where possible.
- 2) Materials should cause minimal detrimental visual impact, and the use of subtle coloured materials and block or brick paving is encouraged.

### **6.9.4 Requirements**

#### **Performance Standards and Maintenance**

- 1) Landscape works are generally constructed at the completion of building works.
- 2) However, Council may require by way of conditions of development consent, that tree bonds be placed over existing significant trees on a proposed development site. Any such existing trees and all landscape works from the approved development should be maintained throughout the duration of the construction works and in perpetuity for the life of the development. The onus for satisfactory maintenance is on the applicant until the development has been completed and on the owner thereafter.
- 3) These requirements should be read in conjunction with the Landscape Design Section of this Plan.

### **6.9.5 Landscape Area Requirements**

#### **Landscape Setbacks for the Oakdale South Estate**

- 1) The following minimum landscaped setbacks shall be applied at the Oakdale South Estate:
  - (a) Southern Link Road: Average of 20m depth along the site frontage. 20m setback / 10m landscape.
  - (b) Collector Road: 7.5m, or average of 50% of setback along the frontage
  - (c) Local Estate Road: Average of 50% of setback along the frontage.
  - (d) Side boundary: No minimum requirement.
  - (e) Rear boundary: 2.5m
  - f) Southern property boundary: perimeter landscape treatments along the 30m earth bund wall on the southern boundary of the OSE; and,

g) Eastern property boundary: a 10m wide landscape setback along the entire length of the eastern property boundary.

**Figure E6.13: Landscaping for a large industrial site.**

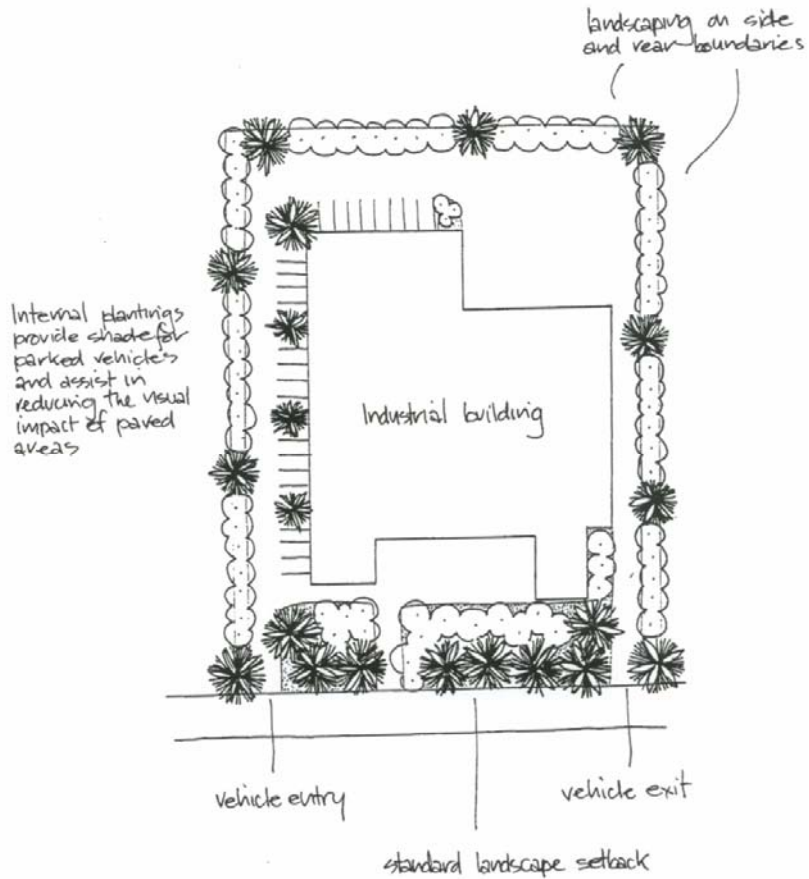
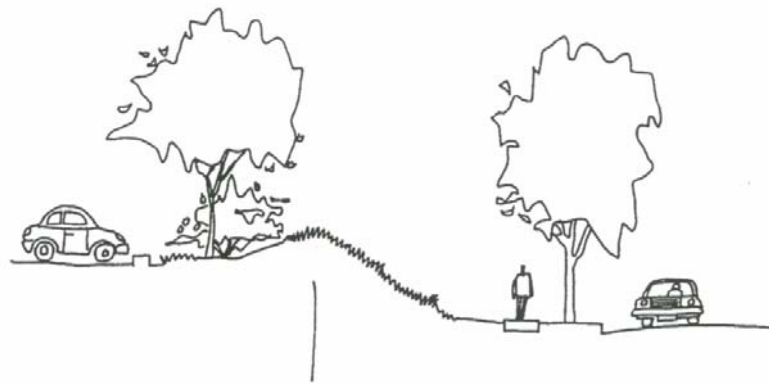
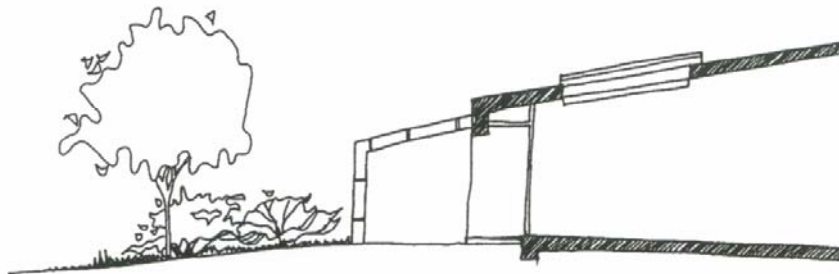


Figure E6.14: Landscaping concepts



The use of a landscaped mound provides a good visual screen for parking and outdoor storage areas.



Integration of built forms and landscaping can be achieved through the use of groundcovers & colonnades

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# C10 Transport, Access and Parking

## A. General Objectives

- a) To integrate transport planning and land use to promote sustainable development and greater use of public transport systems;
- b) To minimise the impacts of traffic generating developments and manage road safety issues;
- c) To ensure that access paths and driveways are integrated in the design of developments and minimise impacts on road systems;
- d) To provide appropriate parking for all development whilst promoting more sustainable transport use;
- e) To facilitate connections and accessibility for those using non vehicle transport by providing appropriate facilities to improve amenity and safety;
- f) To facilitate bicycle connections and provide appropriate bicycle facilities to improve amenity and safety; and
- g) To ensure that access is provided for all people with diverse abilities.

## B. Other Relevant Sections of this DCP

This section should be read in conjunction with all other relevant sections of this DCP. In particular, the following sections cover issues which overlap with transport, access and parking.

## C. Other Relevant Information

Other relevant information includes:

- Planning Guidelines for Walking and Cycling (December 2004) NSW Department of Infrastructure, Planning and Natural Resources; Roads and Traffic Authority
- Improving Transport Choice – Guidelines for planning and development (August 2001) NSW Department of Urban Affairs and Planning; Transport NSW; Roads and Traffic Authority
- Healthy By Design: a planners' guide to environments for active living (June 2004) National Heart Foundation (Victorian Division).
- Guide to Traffic Generating Developments (2002) Roads and Traffic Authority (as updated). The Roads and Maritime Services (RMS) Technical Direction (TDT 2013/04a) Guide to Traffic Generating Developments Updated Traffic Surveys.
- Australian Standards AS2890, AS1428, AS1158 and AS4287. The Roads and Maritime Services (RMS) Australian Standard Supplement to Australian Standard AS2890 Parking Facilities Part 1 – 6.

- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
- Final Draft Penrith Integrated Transport and Land Use Strategy (2008) Penrith City Council
- Penrith Accessible Trails Hierarchy Strategy (PATHS)
- Draft Interim Guidelines: Transport Management and Accessibility Plans, Ministry of Transport and Roads and Traffic Authority - [www.transport.nsw.gov.au](http://www.transport.nsw.gov.au)

## 10.1. Transport and Land Use

### A. Background

This section of the DCP seeks to maximise the benefits to the community of an effective and well-used public transport system by promoting planning and development outcomes that will support and sustain public transport use, improve community health, and which will achieve the more effective integration of land use and public transport infrastructure.

### B. General Objectives

- a) To develop a coherent urban system of compact walkable neighbourhoods with relatively intense, mixed use town centres;
- b) To provide a highly-interconnected street network that clearly distinguishes between arterial routes and local streets, establishes good internal and external access for residents, maximises safety, encourages walking and cycling, supports public transport and minimises the impact of through traffic;
- c) To reduce travel demand including the number of trips generated by development and the distances travelled, especially by car;
- d) To promote and facilitate the use of public transport as a more sustainable alternative to the private car for personal travel;
- e) To ensure that transit infrastructure is effectively integrated with other development, to maximise safety, security and convenience for transit users; and
- f) To promote and facilitate walking and cycling within transit oriented precincts by establishing and maintaining high levels of amenity, safety and permeability in the urban form.

### C. Controls

- 1) A *Transport Management and Accessibility Plan* (TMAP) is to be prepared for all significant developments (see Appendix F3 – Submission Requirements for further details). The TMAP is to address the objectives and controls in this section.
- 2) New development that will have potential significant public transport patronage (especially residential, commercial and employment generating uses) is to be located close to existing or proposed transport nodes or networks.
- 3) A range of uses are to be provided or integrated in mixed-use areas to provide a range of services in a single location and minimise the need for additional travel.
- 4) Public transport use is to be enhanced by providing good pedestrian connections from places of residence or employment to transport networks or nodes.

## 10.2 Traffic Management and Safety

### A. Objectives

- a) To provide safe and efficient travel routes for all vehicles in the Penrith LGA;
- b) To reduce the number of vehicle and pedestrian accidents per capita;
- c) To ensure the safety of cyclists, pedestrians and passing traffic during construction of development;
- d) To cater for current and future growth of vehicle traffic usage;
- e) To encourage the orderly and economic provision of road and intersection works;
- f) To ensure that existing roads and intersections are upgraded to provide a satisfactory level of service consistent with the volume and nature of traffic generated by the proposed development; and
- g) To avoid new direct access to and from arterial, sub-arterial and other major roads.

### B. Controls

#### 1) Traffic Studies

Traffic studies may be required for some developments. Check with Council about whether a traffic report is required to support your proposal.

- a) Development applications for major development proposals should be accompanied by an appropriate *Traffic Report* (see Appendix F3 – Submission Requirements for further details). The Traffic Report should detail the assessed impact of projected pedestrian and vehicular traffic associated with the proposal, with recommendations on the extent and nature of the traffic facilities necessary to preserve or improve the safety and efficiency of the adjacent road system.
- b) A Traffic Report must be provided for applications required to be referred to the Roads and Maritime Services (RMS) under Column 2 and a *Traffic Impact Statement* for Column 3 of SEPP (Infrastructure) 2007.
- c) Depending on the scale, type and nature of the use proposed, Council may determine that a Traffic Report or Traffic Impact Statement is required for certain development which is not listed under Column 2 or 3 of SEPP (Infrastructure) 2007.
- d) Any Traffic Report or Traffic Impact Statement is required to address the following issues:
  - i) The objectives of this section relating to transport and land use;
  - ii) The objectives of this section relating to traffic management and safety;
  - iii) The objectives and controls of this section relating to traffic generating developments; and
  - iv) The issues set out in Appendix F3 – Submission Requirements of this DCP.

- e) Any development identified in Schedule 3 of *State Environmental Planning Policy (Infrastructure) 2007* is either referred to RMS (Column 2 developments) or Council's Local Traffic Development Committee (Column 3 developments) for assessment and conditions as required.

## **2) Road Safety**

- a) Each development should demonstrate how it will:
  - i) Provide safe entry and exit for vehicles and pedestrians which reflect the proposed land use, and the operating speed and character of the road;
  - ii) Minimise the potential for vehicular/pedestrian conflicts, providing protection for pedestrians where necessary;
  - iii) Not restrict traffic flow or create a hazard to traffic on roads in the vicinity of the development;
  - iv) Provide suitable off-street parking facilities to accommodate vehicles generated by the development; and
  - v) Identify the need, where apparent, for any additional on-street traffic facilities or road works which may be required to maintain the safe and efficient movement of vehicles and pedestrians.
- b) Where feasible, vehicle access for developments should be from service roads/lanes.
- c) The design of direct vehicular access to developments should consider the traffic impacts on the surrounding road network. This may require the provision of deceleration, acceleration, right turn lanes and road widening, as necessary.
- d) Provision must be made for all vehicles to enter and leave properties in a forward direction other than for single dwellings.
- e) The layout and design of parking areas must minimise vehicle to pedestrian impacts, especially where heavy vehicle access to loading docks is proposed.

## **3) Traffic Generating Development**

- a) New access points off arterial, sub arterial or other major roads is to be avoided where alternate access opportunities exist.
- b) Any development identified in Schedule 3 of *State Environmental Planning Policy (Infrastructure) 2007* is either referred to RMS (Column 2 developments) or Council's Local Traffic Development Committee (Column 3 developments) for assessment and conditions as required.

## 10.3. Key Transport Corridors

### A. Background

This section seeks to identify key transport corridors in the City of Penrith that have specific functions, character or requirements that need to be protected when approving development along those corridors. Section C1 'Site Planning and Design Principles' provides more guidance on what is required in areas with particular scenic and landscape values.

Key transport corridors that need to be protected include:

- Andrews Road
- Gipps Street/Werrington Road
- Park Road
- Castlereagh Road
- Great Western Highway
- Richmond Road
- Cranebrook Road
- Greendale Road
- The Northern Road
- Christie Street
- Londonderry Road
- Lenore Drive
- Dunheved Road
- Luddenham Road
- Main Western Railway Corridor.
- Elizabeth Drive
- Mamre Road
- Erskine Park Road
- Mulgoa Road

### B. Objectives

- a) To protect the character of certain transport corridors in the City of Penrith; and
- b) To ensure that development is appropriately setback from transport corridors.

### C. Controls

#### 1) Character of Key Transport Corridors

- a) Applicants need to ensure that the proposed development is in character with each of the key transport corridors.
- b) Access driveways and development in proximity to the key transport corridors need to protect the landscape character and any heritage values, and ensure traffic safety.

#### 2) Development Setbacks from Transport Corridors

- a) A minimum setback of 100m is required from Mulgoa Road where development is proposed in rural or environmental zones.
- b) A minimum setback of 30m is required from all other key transport corridors where development is proposed in rural or environmental zones.

## 10.4 Roads

### A. Objectives

- a) To regulate the key characteristics of new streets to provide traffic safety and efficient traffic flow, appropriate parking provision, appropriate pedestrian and cycle provision, and suitable verge and road reserve widths in accordance with each road's function and use within the general road hierarchy;
- b) To ensure public safety from criminal elements by considering the NSW Police 'Safer by Design' or 'Crime Prevention Through Environmental Design' principles and protocols;
- c) To minimise construction and maintenance costs, and avoid the need for future property acquisition;
- d) To maintain flexibility to allow for future changes in land use patterns;
- e) To ensure noise from all sources is within acceptable limits; and
- f) To incorporate appropriate traffic calming measures.

### B. Controls

#### 1) Controls for all roads

- a) Proposed roads must comply with the road configurations set out in Table C10.1. These configurations apply to private and community title roads as well as all public roads.
- b) In special circumstances where it can be clearly demonstrated that the road configurations in Table C10.1 are not appropriate, then the following key principles must be applied to any alternative proposal:
  - i) Road and lane widths must allow for two-way movement and turning movements of design vehicles, including consideration for buses, heavy vehicles, garbage trucks and emergency vehicles;
  - ii) Verge widths must consider requirements for utilities, street tree planting, footpaths, shared paths and urban design outcomes;
  - iii) Adequate on-street parking must be provided;
  - iv) Adequate turning paths must be provided for all design vehicles at intersections and for property access;
  - v) Road widths must be set to minimise kerbside restrictions and regulatory signage;
  - vi) Sufficient width must be provided for specialist drainage functions; and
  - vii) Life cycle costs for construction and maintenance must be minimised.

**Table C10.1: Road Configurations**

<b>Street/Road Type</b>	<b>Parking Lane Provision (m)</b>	<b>Width of Dedicated Travel Lanes – Both directions (m)</b>	<b>Verge widths (m)</b>	<b>Road Reserve (m)</b>	<b>Concrete Pathway 1.5m wide</b>
<b>Local</b>	2 x 2.5	3	2 x 3.8	15.6	Both sides <sup>(9)</sup>
<b>Collector</b>	2 x 2.5 <sup>(4)</sup>	7 <sup>(4)</sup>	2 x 4.8	21.6 <sup>(4)</sup>	Both sides <sup>(4)</sup>
<b>Distributor</b>	2 x 3.95 <sup>(6)</sup>	7 <sup>(6)</sup>	2 x 4.8	24.5	Both sides
<b>Industrial</b>	2 x 3.0 <sup>(4)</sup>	7 <sup>(4)</sup>	2 x 3.8	20.6 <sup>(4)</sup>	Both sides <sup>(4)</sup>
<b>Rural</b>	n/a	7	2 x 6.0 <sup>(7)</sup>	19	n/a

**Notes:**

- 1) *It is not intended that this table address all road configurations. The characteristics and requirements for other roads will be assessed on merit as part of any development proposal. Special consideration will need to be given to other road configurations such as laneways, access ways, commercial precincts and roads fronting schools.*
- 2) *Road configurations shall allow for widening at horizontal curves and intersections to allow for the turning paths of design vehicles without encroachment upon nominal centrelines of the road network.*
- 3) *Additional widening will be required for the provision of specialist drainage functions within the road reserve.*
- 4) *Additional widening may be required on collector and industrial roads to provide for cyclists in accordance with the Australian Road Design Guidelines. Provision for cyclists will be dependent on Penrith City Council's cycleway strategy and the surrounding cycle network.*
- 5) *Where required additional widening will be required for the provision of central medians, indented bus bays and Planning for Bushfire Protection requirements.*
- 6) *Parking and travel lanes for distributor roads allow for on-road cycle ways.*
- 7) *Rural residential roads for lots less than or equal to one hectare will generally be treated as local roads without the requirement for pedestrian pathways.*
- 8) *Verge widths adjacent to open space shall be a minimum of 3.8m.*
- 9) *Pathways are required on the dwelling side only.*
- 10) *Kerb types shall be consistent with Penrith City Council's Engineering Design Guidelines.*



**Local road** means a road or street used primarily for property access. Local roads include laneways, access ways and rural residential roads for lots typically less than or equal to 1 hectare.

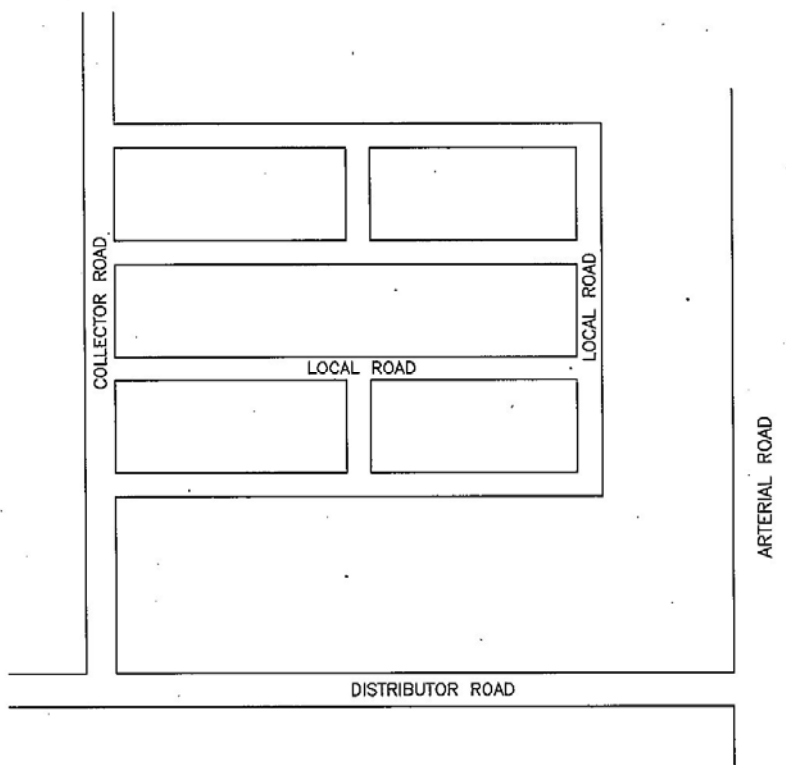
**Collector road** means a road which collects and distributes traffic in an area, as well as providing direct property access.

**Distributor road** means a road connecting arterial roads to areas of development.

**Industrial road** means a road providing access to industrial zoned land and for other development which generates frequent truck movements.

**Rural road** means a road providing access to rural areas and properties typically exceeding one (1) hectare.

**Figure C10.1: Road Hierarchy**



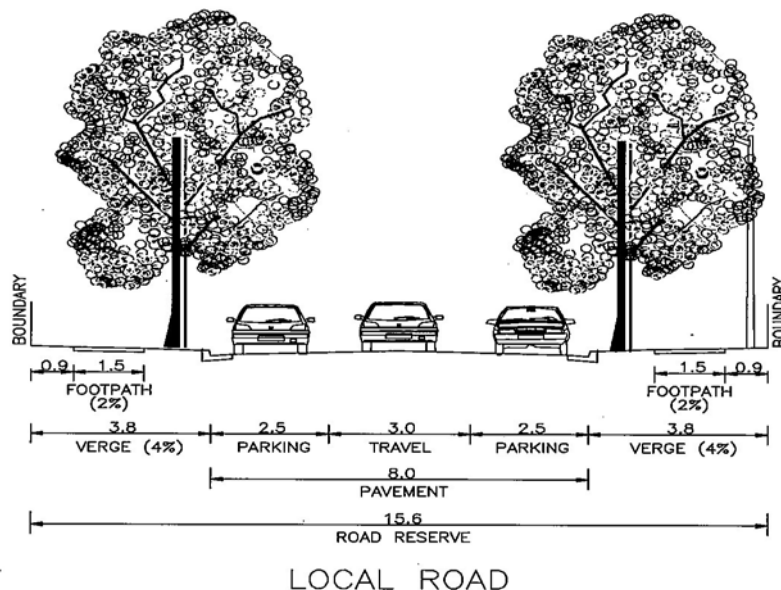
## 2) Local roads

a) Local roads are to achieve the following performance objectives:

- i) Direct access to residential properties and interconnectivity with other local roads and collector roads;
- ii) Provide for heavy vehicles and emergency vehicles, including circulation and manoeuvring of garbage trucks;
- iii) Ensure only occasional, minor delays or the need for driver co-operation due to vehicles parking on both sides of the road;

- iv) Provide adequate on-street parking;
  - v) Provide pedestrian pathways on both sides of the road; and
  - vi) Provide lighting in accordance with relevant Australian Standards.
- b) Roads are to be designed in accordance Penrith City Council's Engineering Design Guidelines and conditions of development consent with reference to Figure C10.2.
- c) Further controls may be applied as part of a development consent based on the individual circumstances of any proposed layout with reference to the adjoining road network.

**Figure C10.2: Local Road**

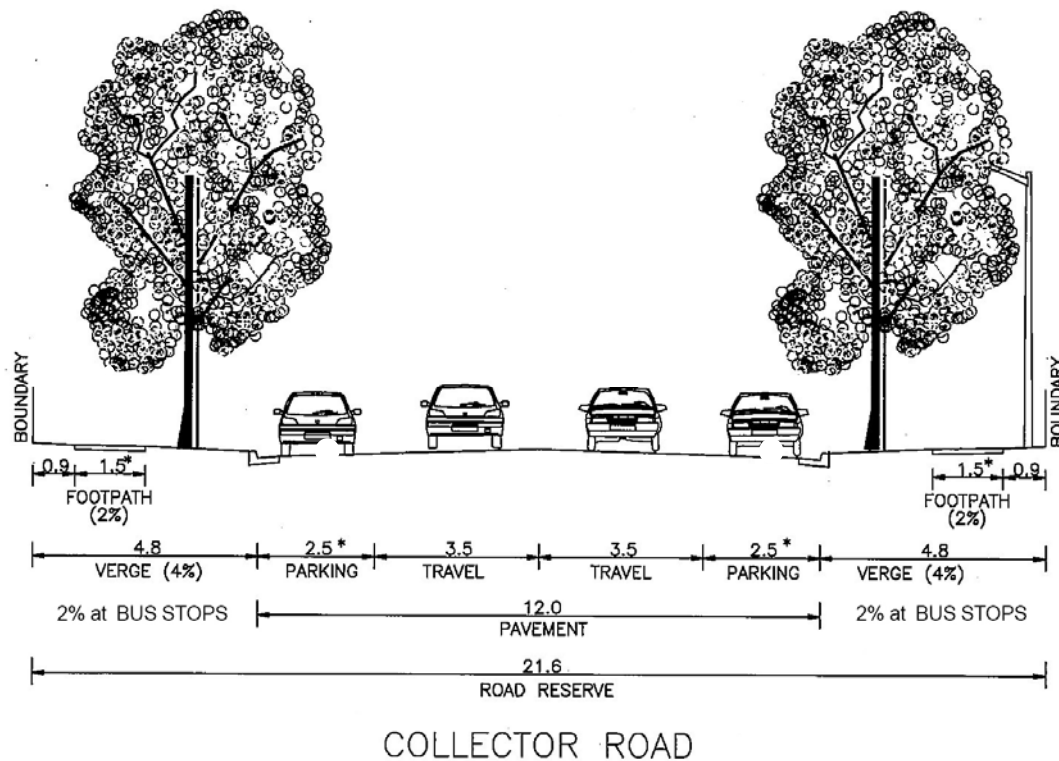


### 3) Collector roads

- a) Collector roads are to achieve the following performance objectives:
- i) Provide high accessibility for all road users;
  - ii) Be at a scale consistent with the higher order role these roads play in the overall road network;
  - iii) Provide for local bus services within the road lane widths;
  - iv) Provide an off-road shared path. On road cycle ways will be considered in some circumstances;
  - v) Provide pedestrian pathways on both sides of the road with safe crossing points;
  - vi) Integrate pedestrian and cycle pathways with the surrounding network;
  - vii) Provide lighting in accordance with relevant Australian Standards;
  - viii) Provide for turning paths of heavy vehicles at intersections;

- ix) Provide dedicated on-street parking on both sides of the road; and
  - x) Be able to comfortably accommodate the co-location of on-street bus stops, DDA compliant boarding points, bus shelters and pathways.
- b) Roads are to be designed in accordance Penrith City Council's Engineering Design Guidelines and conditions of development consent with reference to Figure C10.3.
- c) Further controls may be applied as part of a development consent based on the individual circumstances of any proposed layout with reference to the adjoining road network.

**Figure C10.3: Collector Road**

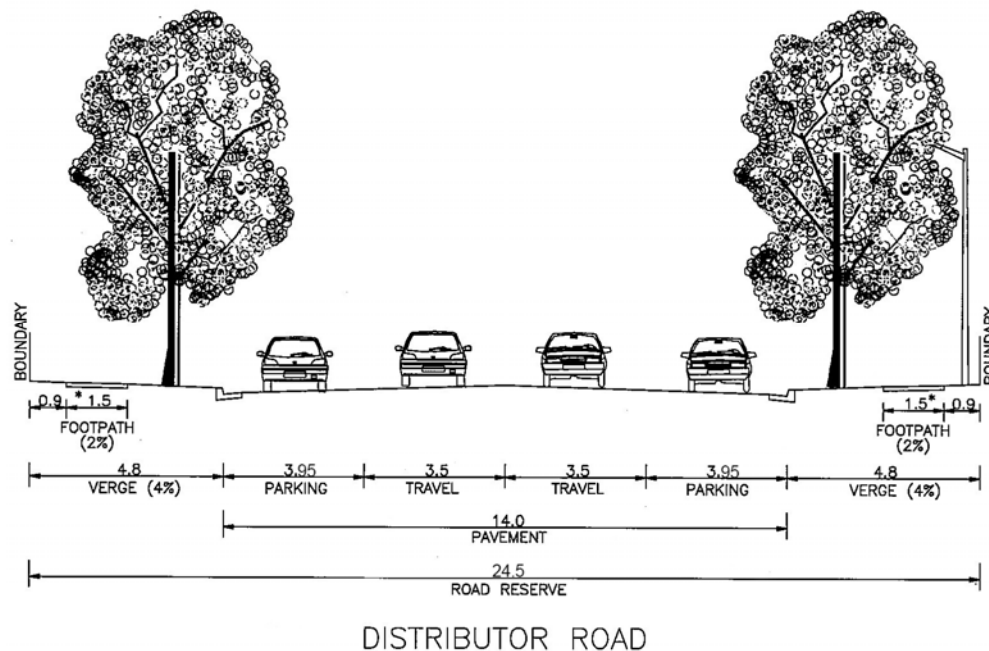


#### 4) Distributor roads

- a) Distributor roads are to achieve the following performance objectives:
- i) Provide high accessibility for all road users;
  - ii) Be at a scale consistent with the higher order role these roads play in the overall road network;
  - iii) Provide for heavy vehicles and buses within the road lane widths;
  - iv) Provide on-road cycle ways (cycleway widths are to be designed from the lip of gutter);

- v) Provide pedestrian pathways on both sides of the road;
  - vi) Provide for turning paths of heavy vehicles at intersections;
  - vii) Provide dedicated on-street parking or additional lanes dependant on traffic volumes; and
  - viii) Be able to comfortably accommodate the co-location of bus shelters and pathways.
- b) Roads are to be designed in accordance Penrith City Council's Engineering Design Guidelines and conditions of development consent with reference to Figure C10.4.
- c) Further controls may be applied as part of a development consent based on the individual circumstances of any proposed layout with reference to the adjoining road network.

**Figure C10.4: Distributor Road**

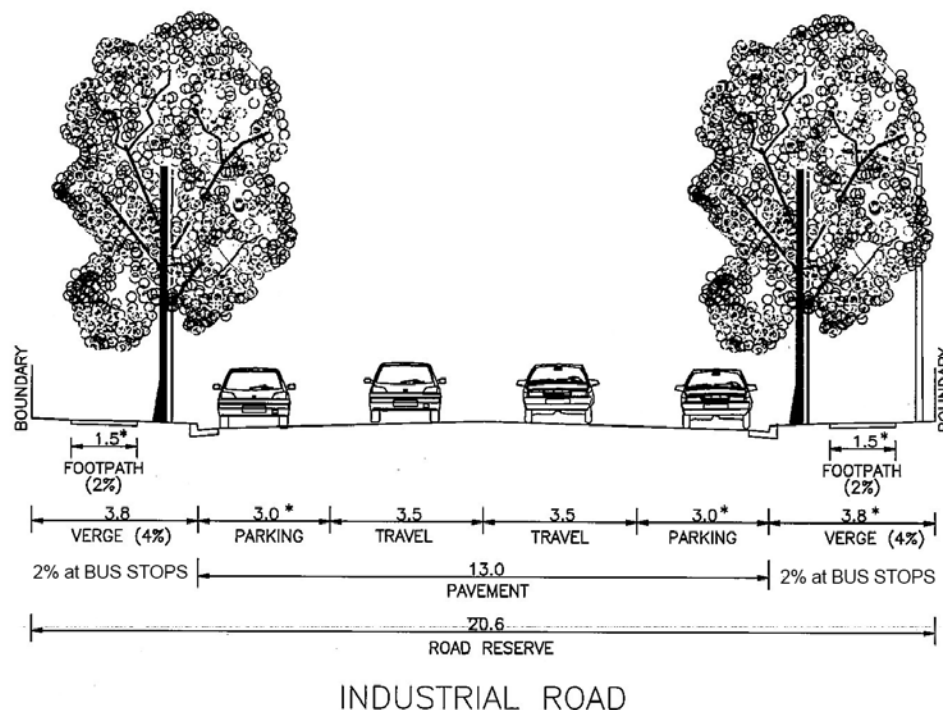


## 5) Industrial roads

- a) Industrial roads are to achieve the following performance objectives:
- i) Provide direct access to industrial properties and interconnectivity with the adjoining road network;
  - ii) Provide for all classes of heavy vehicles and appropriate circulation;
  - iii) Provide dedicated on-street parking on both sides of the road;
  - iv) Provide a shared path or on road cycle ways; and
  - v) Provide lighting in accordance with relevant Australian Standards.

- b) Roads are to be designed in accordance Penrith City Council's Engineering Design Guidelines and conditions of development consent with reference to Figure C10.5.
- c) Further controls may be applied as part of a development consent based on the individual circumstances of any proposed layout with reference to the adjoining road network.

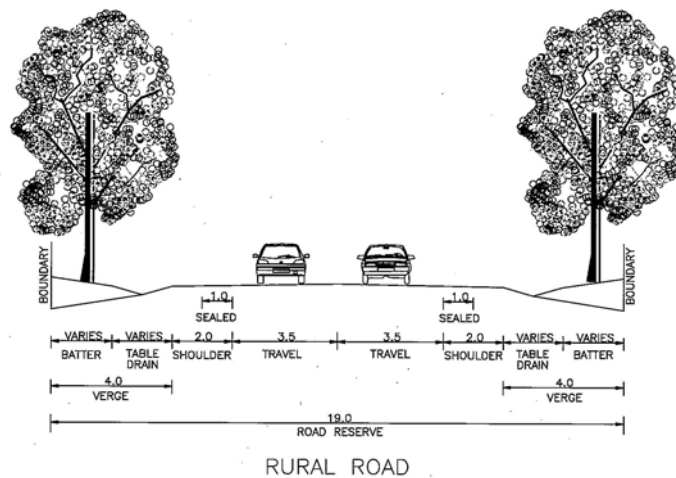
**Figure C10.5: Industrial Road**



## 6) Rural roads

- a) Rural roads are to achieve the following performance objectives:
  - i) Provide direct access to residential/rural properties and interconnectivity with the adjoining road network;
  - ii) Provide for all classes of heavy vehicles; and
  - iii) Provide lighting in accordance with relevant Australian Standards.
- b) Roads are to be designed in accordance Penrith City Council's Engineering Design Guidelines and conditions of development consent with reference to Figure C10.6.
- c) Further controls may be applied as part of a development consent based on the individual circumstances of any proposed layout with reference to the adjoining road network.

**Figure C10.6: Rural Road**



## **10.5. Parking, Access and Driveways**

### **10.5.1. Parking**

#### **A. Background**

This section of the DCP provides a set of principles to be used when assessing the need for car parking requirements in the City of Penrith. Minimum parking requirements have been set by Council to ensure that development functions efficiently and there is limited impact on street parking and congestion.

Car parking required by this DCP must be provided for onsite unless the consent authority is satisfied that adequate car parking is provided elsewhere.

Council owned public car parking is not to be included as part of a building's gross floor area.

#### **B. Objectives**

- a) To ensure the provision of an appropriate number of vehicular spaces having regard to the activities present and proposed on the land, the nature of the locality and the intensity of the use;
- b) To require parking areas to be designed and constructed in accordance with the Australian Standards for efficient and safe vehicle circulation and parking;
- c) To reduce pedestrian and vehicle conflicts on development sites.
- d) To facilitate an appropriate level of on-site parking provision to cater for a mix of development types;
- e) To minimise the visual impact of on-site parking;

- f) To provide adequate space for parking and manoeuvring of vehicles (including service vehicles and bicycles);
- g) To enable the conversion of above ground parking to other future uses; and
- h) To support the complementary use and benefit of public transport and non-motorised modes of transport such as bicycles and walking.

## **C. Controls**

### **1) Provision of Parking Spaces**

- a) Parking provided on site is to meet AS 2890 and where appropriate, AS 1428.
- b) For any proposed development, Council will require the provision of on-site car parking to a standard appropriate to the intensity of the proposed development as set out in Table C10.2 below.
- c) Within rural zones, the range of possible uses of land is very broad. Car parking is to be provided in accordance with Table C10.2: Car Parking Rates. If parking rates for the use is not listed, it will be the applicant's responsibility to demonstrate that adequate parking is provided.
- d) For commercial developments providing employment for 20 people or more, bicycle parking is to be in secure and accessible locations, and provided with weather protection. The following associated facilities are to be provided:
  - i) Change and shower for cyclists and are to be conveniently located close to the bicycle storage areas.
  - ii) Where the building is to be strata-titled, the bicycle storage facilities and shower/change facilities are to be made available to all occupants of the building.
- e) For existing developments, a new use must not commence or the floor area increased until the required car park spaces have been provided on the site, corresponding to the land use outlined in Table C10.2.
- f) In the absence of specific requirements relevant to particular developments, the parking requirements in the RTA's "Guide to Traffic Generating Developments" (as updated) and Australian Standard AS 2890.1 and 2 - 2004 should be referred to as a guide. In the absence of all data, the applicant should revert to the use of first principles.
- g) Where relevant, development shall provide on-site loading facilities to accommodate the anticipated heavy vehicle demand for the site.
- h) Stacked parking will not be permitted for visitor spaces for any development.
- i) Stacked parking in commercial or industrial development may be permitted for employee spaces only, provided the number of stacked spaces does not account for more than 10% of the total required parking spaces.
- j) Car parking above ground level is to have a minimum floor to ceiling height of 2.8m so it may be adapted to another use in the future.



- k) Car parking and associated internal manoeuvring areas provided over and beyond the requirements of this DCP shall be calculated as part of the development's gross floor area.
- l) Where possible, natural ventilation is to be provided to underground parking areas with ventilation grilles and structures that are:
  - i) integrated into the overall façade and landscape design of the development;
  - ii) located away from the primary street façade; and
  - iii) oriented away from windows of habitable rooms and private open space areas.
- m) Proposals for basement parking areas are to be accompanied with a geotechnical report prepared by an appropriately qualified professional and any other supporting information to the Development Application.
- n) For all residential development at least one car parking space for each dwelling shall be covered the second space may be "stacked" or "tandem" or located on a driveway.

**Table C10.2: Car Parking Rates**

Type of Development	Parking Requirement
<b>Residential</b>	
Dwelling House	2 spaces per dwelling – stack or tandem parking acceptable
Dual Occupancy	2 spaces per dwelling (2 or more bedrooms) – stack or tandem parking acceptable
Multi Dwelling Housing	<p>On-site resident parking for each dwelling:</p> <p>1 car space per 1 bedroom</p> <p>1.5 car spaces per 2 bedrooms or part thereof</p> <p>2 car spaces per 3 or more bedrooms</p> <p>In addition, visitor parking is to be provided for developments that have 5 or more dwellings: 1 space for every 5 dwellings (or part thereof)</p>
Residential Flat Buildings	<p><u>On-site resident parking for each dwelling:</u></p> <p>1 space per 1 or 2 bedrooms</p> <p>2 spaces per 3 or more bedrooms</p> <p>1 space per 40 units for service vehicles</p> <p>In addition, visitor parking is to be provided for developments that have 5 or more dwellings: 1 space per every 5 dwellings, or part thereof.</p> <p>1 space for car washing for every 50 units, up to a maximum of 4</p>



Type of Development	Parking Requirement
	spaces per building.
<b>Commercial</b>	
Bowling Alleys, Squash Courts	3 spaces per lane or court
Bulky Good Premises	1 per 50m <sup>2</sup> of gross floor area
Business and office premises	<p>St Marys Town Centre– 1 space per 60m<sup>2</sup> GFA</p> <p>Penrith City Centre –1 space per 100m<sup>2</sup> GFA</p> <p>(Please see “Other Site Specific Requirements” at the end of this table for additional requirements for parking provision in the Penrith City Centre.)</p> <p>All other areas – 1 space per 40m<sup>2</sup> GFA.</p>
Child Care Centres/Pre Schools	<p>1 space per 10 children plus 1 per employee plus provision for any dwelling.</p> <p><b>Note:</b> Where a child care centre/pre-school is not located in or immediately adjoining a residential area, a submission to vary the above parking rates will be considered.</p>
Entertainment Facilities/Function Centres	1 space per 3.5 seats or 1 space per 3.5m <sup>2</sup> of gross floor area, whichever is the greater
Fitness Centre including Gym	7 spaces per 100m <sup>2</sup> GFA
Health Consulting Rooms/ Medical Centres	3 spaces per health care professional practising at any one time plus 1 space per receptionist/support staff, plus 1 space per associated dwelling.
Hospitals	1 space per 3 beds plus 1 space per 2 employees
Hotel or motel accommodation	1 space per unit plus 1 space per manager plus 1 space per 6 employees
Place of public worship	1 space per 4 seats or 1 space per 6m <sup>2</sup> of gross floor area, whichever is the greater
Pubs/Registered Clubs	1 space per 4m <sup>2</sup> of bar floor area plus 1 per 6m <sup>2</sup> lounge and dining room
Restaurants, reception and function rooms	1 space per 6m <sup>2</sup> of seating area, plus 1 space per employee
Retail Premises	Penrith City Centre and St Marys Town Centre – 1 space per 30m <sup>2</sup> GFA

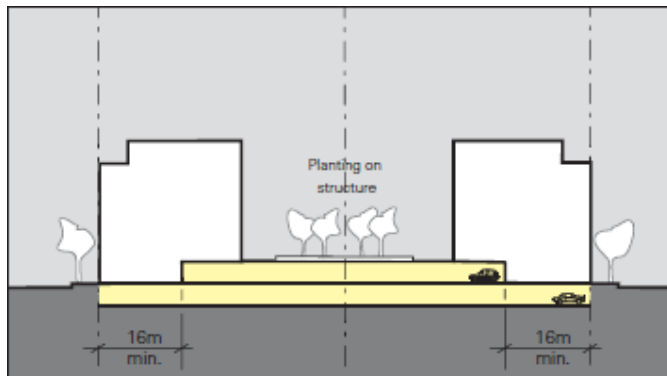
Type of Development	Parking Requirement
	(Please see "Other Site Specific Requirements" at the end of this table for additional requirements for parking provision in the Penrith City Centre.)
Retail Premises Shop	Supermarkets – 1 space per 10m <sup>2</sup> of floor area that is to be used for retailing activities  Other neighbourhood and specialty shops – 1 space per 30m <sup>2</sup> GFA
Service Stations and Convenience Stores	6 spaces per work bay plus 4 spaces per 100m <sup>2</sup> of gross floor area of convenience store
Vehicle Sales or Hire Premises	1 space per 100m <sup>2</sup> of display area plus 1 space per employee, plus 6 spaces per work bay
<b>Industrial</b>	
Freight Transport Facilities	1 per transport vehicle present at peak vehicle accumulation plus 1 per 2 employees
Industries, including ancillary office	1 space per 75m <sup>2</sup> of gross floor area or 1 space per 2 employees, whichever is the greater
Vehicle Body Repair Workshops/ Vehicle Repair Stations	3 spaces per 100m <sup>2</sup> of gross floor area or 6 per work bay, whichever is the greater
Warehouses or distribution centres, including ancillary office	1 space per 100m <sup>2</sup> of gross floor area  (except as otherwise specified in this Table)
Other Uses	In accordance with RMS Guidelines or if there are no parking guidelines for a specific use, then a site specific car parking analysis will be required. This may require the applicant to submit a car parking report from a suitably qualified traffic consultant.
<b>Accessible Parking</b>	
Accessible car spaces should be in accordance with the Access to Premises Standards, Building Code of Australia and AS2890.	
<b>Bicycle Parking</b>	
Bicycle parking in accordance with the suggested bicycle parking provision rates for different land use types in the document 'Planning Guidelines for Walking and Cycling' (NSW Government 2004). Bicycle parking spaces should comply with AS2890.3:1993 Bicycle Parking Facilities.	
<b>Other Site Specific Requirements</b>	

Type of Development	Parking Requirement
<p><b>Penrith City Centre</b> – A maximum 60% of the total number of commercial parking spaces required by a development, other than for service vehicles, car washing bays and parking spaces allocated to people with a disability, are to be provided on-site.</p> <p>The balance of the total required number of spaces not provided on-site would need to be subject to a contribution under an adopted Contribution Plan or as set by the terms of a Voluntary Planning Agreement.</p> <p><b>Oakdale South Industrial Estate</b></p> <p>Car parking shall be provided in accordance with the following rates:</p> <ul style="list-style-type: none"> <li>• 1 space per 300m<sup>2</sup> of warehouse gross floor area (GFA);</li> <li>• 1 space per 40m<sup>2</sup> of office GFA; and</li> <li>• 2 disabled spaces for every 100 car parking spaces.</li> <li>• Underground / basement car parking is not permitted at Oakdale South Industrial Estate.</li> </ul>	

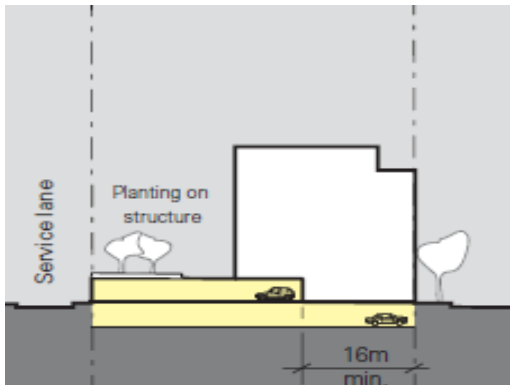
## 2) Additional Controls for Developments within the Commercial Core and Mixed Use zones

- a) On-site parking is to be accommodated in basement parking except to the extent provided for below:
  - i) Up to 25% of the required parking can be provided above ground, where: it is located at least 16 metres behind a building alignment that addresses a public street or public space and/or fronting a service lane with appropriate screening (refer to Figure C10.7 and C10.8).
  - ii) Any additional parking provided above ground will count towards gross floor area for the purposes of calculating Floor Space Ratio.

**Figure C10.7: Aboveground parking must be screened by an active edge to the public domain**



**Figure C10.8: Aboveground parking may be located adjacent to a lane, with appropriate screening to reduce the impact on the public domain**



### **3) Additional Controls for Residential Developments**

- a) On-site parking for residential developments, including the residential component in a mixed use development, is to be accommodated wholly in a basement parking area unless the applicant can demonstrate to Council's satisfaction that the site's unique conditions prevent the parking from being located in a basement structure.
- b) If on-grade car parking is proposed, the location and adequacy of the parking area must not adversely impact on the amenity of the adjoining neighbourhood. The parking area is to:
  - i) be located on the side or rear of the site, and is not visible from the street and street frontage;
  - ii) be landscaped or screened so that cars parked in the parking area are not visible from adjoining buildings or the street/ street frontage; and
  - iii) allow safe and direct access to the building entry points.

### **4) Waiver or Reduction of Parking Spaces**

- a) Council has the discretion to waive or reduce the number of car spaces required for a particular site if the reduced provision can be justified in a Traffic Impact Statement, in terms of:
  - i) Proximity to public transport nodes;
  - ii) Opportunity to share parking with another use; or
  - iii) An empirical assessment of car parking.
- b) Council may consider a monetary contribution in lieu of parking shortfall in certain circumstances where a waiver or reduction of parking spaces cannot be justified. All such cases will be considered on their individual merit and the contribution will be based on the current parking rate in respect of off-street parking demand generated by the development but not satisfied on the site. The parking contribution will be based on the actual cost of providing additional parking off site.

## **5) Design of Parking and Manoeuvring Areas**

- a) Car space dimensions must comply with the relevant Australian Standards.
- b) The movement of pedestrians throughout the car park should be clearly delineated and be visible for all users of the car park to minimise conflict with vehicles. The car parking and manoeuvring layout should be in accordance with the provisions of AS 2890.1 - 2004.
- c) Provision of parking spaces for disabled persons should be in accordance with the Access to Premises Standards, the Building Code of Australia and AS2890.
- d) Council will require all car parking areas to be constructed of hard standing, all weather material, with parking bays and circulation aisles clearly delineated.
- e) Vehicle access is to be integrated into the building design as to be visually recessive.
- f) It will be necessary for the method of treating and minimising runoff from parking and access areas to be addressed as part of any development application (See the section entitled 'Stormwater and Drainage' in the Water Management Section).
- g) For development in the R4 High Density Residential zone, use semi-pervious materials for all uncovered parts of driveways and parking areas to assist with stormwater infiltration.
- h) Large car parking areas (more than 5 vehicles) should be visually separated from access roads and from the buildings they serve by planting and other landscaping and should not be visually prominent from public roads, either through separation or screening.
- i) All vehicles must be able to enter and leave the site in a forward direction without the need to make more than a three point turn.
- j) Council may require the provision of internal directional signs to assist site visitors in locating parking areas.
- k) For residential development, other than a single residence, the minimum space width shall provide for full door opening in accordance with Table B1 of AS2890.1 – 2004.
- l) The design of the car park should ensure that passive surveillance is possible and, where appropriate, incorporate active measures such as cameras and security patrols. Car parks should be designed to minimise dark areas through the provision of appropriate lighting.
- m) Access to security parking shall be designed to ensure the access mechanism is accessible to the vehicle driver on the entry side of the driveway.
- n) Provision should be made for all vehicles to enter and exit a secure (i.e. boom-gated) area in a forward direction.
- o) Visitor parking should be provided outside the secured parking areas.
- p) The design of car parks should ensure adequate separation of staff/visitor parking and loading dock circulation areas for heavy vehicles.
- q) Vehicular ramps less than 20m long within developments and parking stations must have a maximum grade of 1 in 5 (20%). Ramp widths must be in accordance with AS2890.

- r) Access ways to underground parking should be sited to minimise noise impacts on adjacent habitable rooms, particularly bedrooms.
- s) Loading docks associated with the development shall be provided on-site, with all loading and unloading activities occurring on-site.
- t) All loading and unloading areas are to be:
  - i) integrated into the design of developments,
  - ii) separated from car parking and waste storage and collection areas,
  - iii) located away from the circulation path of other vehicles,
  - iv) provided separately for commercial/retail and residential uses, where part of a mixed use development, and
  - v) designed for commercial vehicle circulation and access complying with AS 2890.2.
- u) Vehicular access to the loading / unloading area(s) is preferred off rear lanes, side streets and right of ways. Where appropriate, consider a single vehicular access point for the loading/unloading area(s) and waste collection area(s).
- v) Secure multi-deck car parks should incorporate communication devices such as:
  - i) Intercoms at boom gates;
  - ii) Public address systems;
  - iii) Telephones; or
  - iv) Emergency alarms.
- w) To ensure users of secure multi-deck car parks are easily able to determine the location of exit and access points, security intercoms or similar and appropriate signage are to be included.
- x) All surfaces in the car park should be painted in light coloured paint or finished in light grey concrete to reflect as much light as possible.
- y) All potential entrapment points should be avoided, e.g. under stairs, blind corners and wide columns. Adequate lighting and mirrors should be used when certain design features are unavoidable.
- z) Access, parking, manoeuvring and loading facilities for commercial and industrial development shall be in accordance with AS 2890.2 - 2004 and accommodate vehicle types as outlined in Table C10.3.
- aa) Council may require a development to cater for vehicles larger than the minimum specified above where the development is for uses such as a transport depot, warehouse, etc. All service vehicles must enter and exit the development site in a forward direction.

**Table C10.3: Minimum design vehicle requirements for commercial and industrial developments - minimum design vehicle requirements**

Site Area	Design Vehicle
Up to 1,500m <sup>2</sup>	Medium Rigid Vehicle (MRV)
1,500m <sup>2</sup> to 4,000m <sup>2</sup>	Heavy Rigid Vehicle (HRV)
Greater than 4,000m <sup>2</sup>	Articulated Vehicle

Additional guidelines for the design of car parking areas can be found within the Policies, Guidelines and Procedures for Traffic Generating Development published by the RMS.

## 10.5.2. Access and Driveways

### A. Objectives

- a) To ensure satisfactory arrangements are made for access to any development or new allotment created by subdivision;
- b) To require that access internal to the development is adequate to accommodate traffic generated by the development;
- c) To minimise the impact of vehicle access points on the quality of the public domain;
- d) To minimise the impact of driveway crossovers on pedestrian safety and streetscape amenity;
- e) To minimise stormwater runoff from uncovered driveways and parking areas;
- f) To ensure that access ways and driveways provide safe access from a property to a public road; and
- g) To ensure driveways do not negatively impact on pedestrian mobility.

### B. Controls

#### 1) General Requirements

- a) The road access to the site should provide for safe entry to and exit from the site. All vehicles must enter/exit the site in a forward direction. (This does not apply to single dwellings).
- b) The entry and exit from the site should provide for appropriate traffic sight distance in both directions, in accordance with the provisions of AS2890.1 and 2 - 2004 for car parking and commercial vehicles respectively.
- c) The design of the development driveway should take into consideration the traffic volumes of the surrounding road network.
- d) Driveways should be:

- i) Provided from lanes and secondary streets rather than the primary street, wherever practical;
  - ii) Located taking into account any services located within the road reserve, such as power poles, drainage inlet pits and existing street trees;
  - iii) Setback a minimum of 6m from the perpendicular of any intersection of any two roads; and
  - iv) Located to minimise noise and amenity impacts on adjacent residential development.
- e) The driveway crossing and access roads shall be designed in accordance with the provisions of AS2890.1 and 2 - 2004 for car parking and commercial vehicles respectively.
- f) Driveway widths must comply with the relevant Australian Standards.
- g) Driveway grades, vehicular ramp width/grades and passing bays must be in accordance with the relevant Australian Standard (AS2890.1).
- h) Access to basement parking shall have an entry threshold a minimum of 300mm above the top of the kerb. The threshold shall be increased within areas of flooding or local overland flows to a minimum of 300mm above the flood level. The design of the development shall ensure that floodwater cannot enter the car park in a 1% Annual Exceedance Probability (AEP) flood event.
- i) The required threshold should be set within the property to prevent cross fall greater than 4% within the footway area.
- j) No direct access will be permitted to the M4 Western Motorway.

## **2) Design**

- a) For rural subdivisions, the width of sealed surface shall be determined at the time of subdivision taking into consideration the intensity of use, landscaping proposals, servicing requirements and drainage design. Roads should be designed to enhance the rural character and long stretches of straight road should be avoided.
- b) All driveways (including in rural and environmental zones) are to be sealed from the point of the public road up to and including the hard-stand parking areas.
- c) The design of rural driveways shall ensure that stormwater is not impounded, concentrated or redirected onto adjoining properties.

## **3) Construction Standards**

- a) Roads shall be constructed to Council's standards in consultation with Council's Engineering Services Unit and Council's 'Guidelines for Engineering Works - Development and Subdivision'.
- b) Design drawings should be accompanied by details of the erosion and sediment control measures that are to be implemented during construction.



#### **4) Dedication**

- a) New road reservations and rights-of-way shall be dedicated or created at no cost to Council.

#### **5) Access to Allotments Created in Subdivision**

- a) New allotments must have direct access to dedicated public roads.
- b) Where battle-axe subdivision is supported, the following controls apply:
  - i) The battle-axe width is generally to be a minimum of 10m. Where two battle axe developments adjoin reciprocal rights-of-carriage way may be permitted;
  - ii) The battle-axe handle is to be stabilised or sealed depending on the anticipated intensity of use; and
  - iii) The line of any sealed or stabilised area within the battle-axe handle should be varied and landscaped where appropriate to avoid a 'gunbarrel' appearance.
- c) Passing bays will be required for the following:
  - i) Entry/exit of all properties;
  - ii) Access handles;
  - iii) More than one allotment; and
  - iv) Change in direction of the access handle.
- d) Bushfire requirements must be considered when designing access roads for subdivisions of land which is classified as 'bushfire prone land'. Access arrangements must include adequate provision for turning areas and emergency access.

#### **6) Responding to Topography**

- a) Natural contours should be followed when designing and constructing driveways. Driveways should be located to retain as much of the property's vegetation as practicable.
- b) Any new private access roads or driveways that connect to a public road should be sealed with asphalt or another suitable surface from the public road to prevent erosion and minimise dust and dirt transfer.

## **10.6. Pedestrian Connections**

### **A. Objectives**

- a) To provide a safe, convenient and legible movement network for people with diverse abilities, including those using wheelchairs, mobility scooters, people with prams, small children, elderly people and people with temporary injuries, between residences and points of attraction within and beyond the development;

- b) To design street networks to optimise personal mobility access to centres, schools, public transport stops and stations, and other destinations;
- c) To design major routes as 'integrator arterials' with extensive and frequent opportunity for pedestrians to move safely along and across them;
- d) To design and detail new developments to promote and support personal mobility to daily activities;
- e) To provide pedestrian pathways through parks for recreation purposes wherever practicable; and
- f) To provide walking routes along predictable pathways of travel, including approaches to schools, parks and shopping precincts.

## **B. Controls**

- 1) Footpaths should have ramps at all kerb corners for wheelchairs and pram access and cater for all people with diverse abilities in line with current Australian Standards.
- 2) Street lighting in accordance with the provisions of AS1158 should be present in all urban streets, while on rural traffic routes in general only intersections will be lit. Refer to Section C8 'Public Domain, for further information about lighting.
- 3) Pedestrian crossing distances in local streets should be shortened through kerb extensions and tight turning radii, which can cause vehicular traffic to slow to negotiate the tighter corners.
- 4) To enable comfortable passage for all people with diverse abilities, footpaths must be:
  - i) Provided on both sides of the road in urban areas;
  - ii) A minimum of 1.5m wide along collector and all lower order streets; and
  - iii) A minimum of 2.5m on approach routes to predictable destinations such as schools, parks and shopping precincts. (Three metre paths or wider are preferred).
- 5) Where street trees are not required to provide protection from passing cars for people on footpaths, a minimum outer nature strip of 0.5m on both sides of the street should be provided. Kerbs should be 'barrier' not 'rollover' design.
- 6) A durable, non-slip surface and even paving is to be designed and constructed for minimum maintenance. Continuous pathways, uninterrupted by variations in surface material must be provided.
- 7) Gradients from pathways to streets are to be minimal, safe and comfortable for people with limited mobility and those using wheelchairs, prams and trolleys in line with current Australian Standards.
- 8) Gradients and ramps must be aligned with desired paths of travel for pedestrians and cyclists.
- 9) A smooth transition from ramps to roads is to be provided for people using wheelchairs or prams. Ramps should be designed in accordance with appropriate design guidelines

and be as wide as the pathway or marked crossing point to eliminate squeeze points at transition areas.

- 10) Reconstructed driveways/pathways are to achieve a useable cross slope for a width of 915mm. Cars must slow to negotiate the two steeper ramps on either side of the pathway crossing, but will not 'bottom out' at these angles. (Source: Preiser. W and Ostroff E (2001) *Universal Design Handbook* McGraw-Hill).

## 10.7 Bicycle Facilities

### A. Objectives

- a) To encourage bicycle use by providing sufficient number of secure and accessible bicycle parking spaces with new developments.

### B. Controls

#### 1. Cycleways

- a) All cycle routes and facilities are to be consistent with the relevant requirements of "Austroads Cycling Aspects of Austroads Guides" and Roads and Maritime Services' "Bicycle Guidelines" including line-marking, signage and logos and Council policies regarding bicycle access.
- b) The minimum width of off-street shared cycle and pedestrian pathways is to be 2.5m on local routes with a minimum of 3m on major connector routes.
- c) Pedestrian and cycle routes and facilities in public spaces are to encourage way finding and be convenient, safe, well lit, clearly defined, functional and accessible to all.
- d) Shared paths and pedestrian refuge islands are to be designed to be fully accessible by all in terms of access points and gradients, in accordance with Australian Standard 1428:1-4.

#### 2. Provision of Bicycle Parking Spaces

- a) For commercial developments providing employment for 20 people or more, bicycle parking is to be in secure and accessible locations, and provided with weather protection, in accordance with AS2890.3:1993 Bicycle Parking Facilities.
- b) The following associated facilities are to be provided:
  - i) Change and shower facilities for cyclists are to be conveniently located close to the bicycle storage areas; and
  - ii) Where the building is to be strata-titled, the bicycle storage facilities and shower/change facilities are to be made available to all occupants of the building.
- c) Applicants should comply with the suggested bicycle parking provision rates for different land use types in the document 'Planning Guidelines for Walking and Cycling' (NSW Government 2004).

### **3. Design of bicycle spaces**

#### **a) Bicycle parking spaces must:**

- i) Be provided in accordance with AS2890.3:1993 Bicycle Parking Facilities;
- ii) Be located to provide convenient access from surrounding bicycle routes and main building entrances;
- iii) Not interfere with reasonable access to doorways, loading areas, access covers, furniture, services and infrastructure;
- iv) Not cause a hazard; and
- v) Be adequately lit during periods of use.

### **4. Bicycle Rails, Storage and Signage**

#### **a) A bicycle rail must:**

- i) Be securely fixed to a wall or to the floor or ground;
- ii) Be in a highly visible location for bicycle security (when not in a compound);
- iii) Be of a shape that allows a cyclist to easily lock the bicycle frame and wheels; and
- iv) Be located to allow easy access to park, lock and remove the bicycle.

#### **b) A bicycle compound or a bicycle locker must:**

- i) Be located to provide convenient access to other bicycle facilities including showers and change rooms;
- ii) Be fully enclosed;
- iii) Be able to be locked; and
- iv) If outside, provide weather protection for the bicycle.