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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.

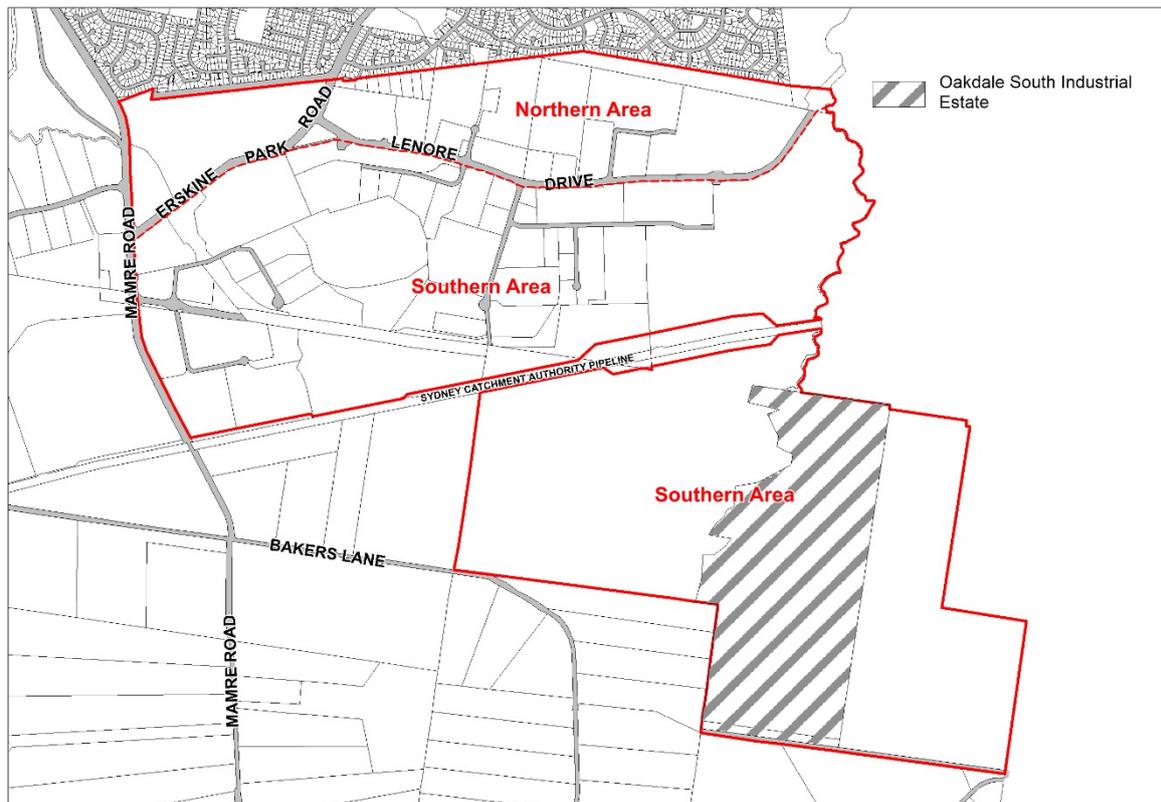
This Section applies to those WSEA lands within the Penrith LGA known as Erskine Business Park (as identified in Figure E6.1) and includes:

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

- 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

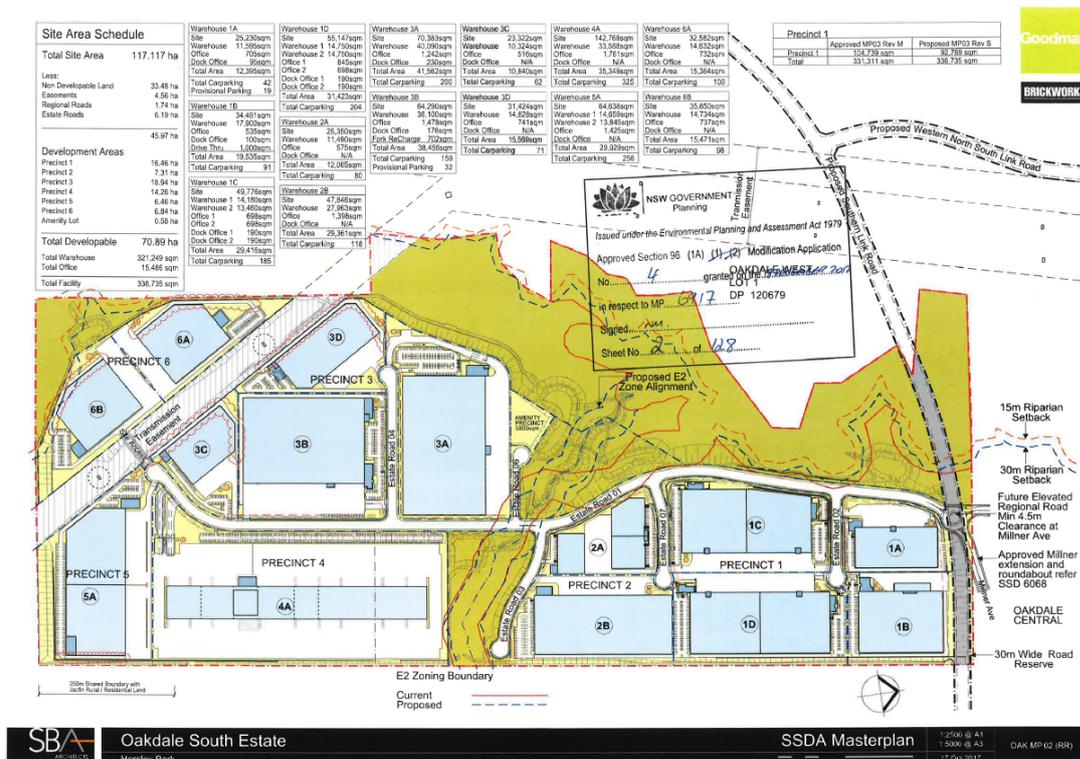
### A. Objectives

- a) 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;
- b) To ensure a scale of buildings which minimises the impact of development on adjoining residential areas; and
- c) To minimise the impact of development on views from adjoining residential areas.

### B. Controls

- 1) The maximum height for buildings and structures in the Northern Area shown in Figure E6.1 shall not exceed 12m.
- 2) The maximum height for buildings and structures in the Southern Area shown in Figure E6.1 shall not exceed 15m, unless otherwise specified below.
- 3) Generally, buildings should be sited on mid-slope to avoid visual impact on ridges and to be in harmony with the existing landscape.
- 4) 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.
- 5) 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**

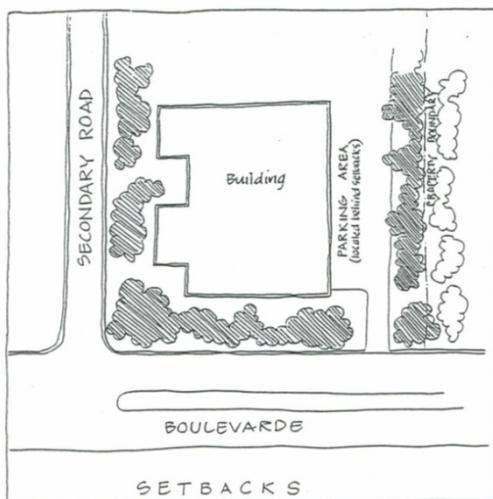
Setback Type	Setback
Designated Road (Mamre Road and Erskine Park Road)	20m
Northern Access Road (Lenore Drive and Erskine Park Link Road to Westlink M7)	20m
Southern Link Road	20m
Western Access Road (Trunk Collector)	20m
Other Road Frontages	15m
Estate roads within the Oakdale South Industrial Estate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

<b>Setback Type</b>	<b>Setback</b>
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

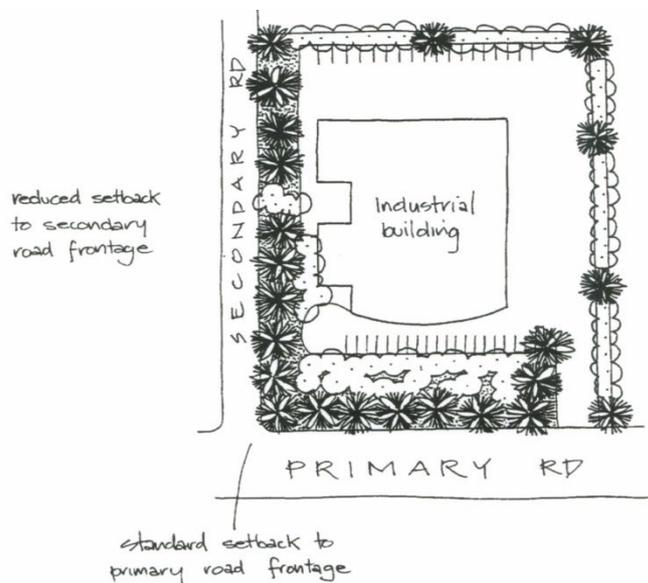
2) Notwithstanding Control (1) above, no development other than the following development is permitted within the defined setback for any road, other than Lenore Drive, Mamre Road and Erskine Park Road:

- 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

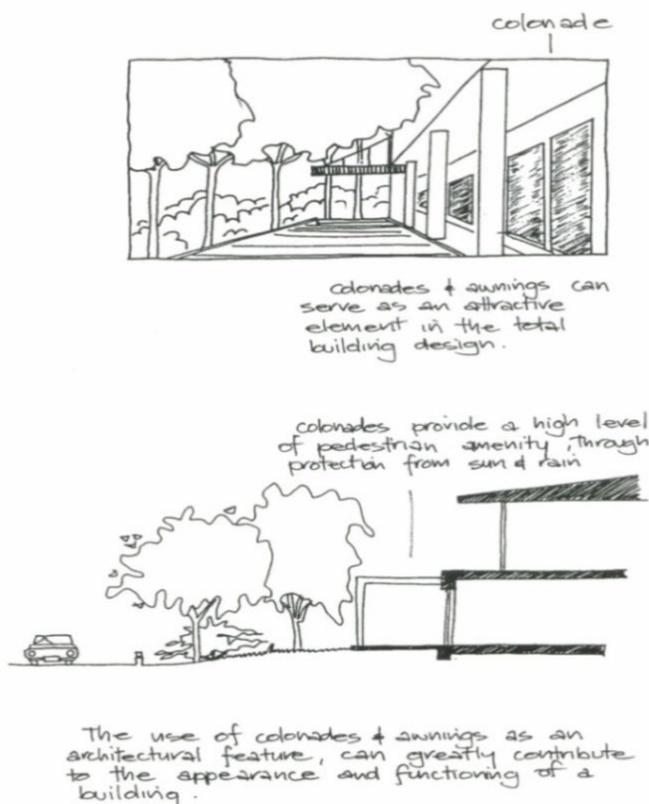
- 1) In assessing development proposals, Council will have regard to the quality of building design and materials (type and colour).
- 2) Prominent elevations, such as those with a frontage to the street or public reserves or those that are visible from public areas, must present a building form of significant 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.

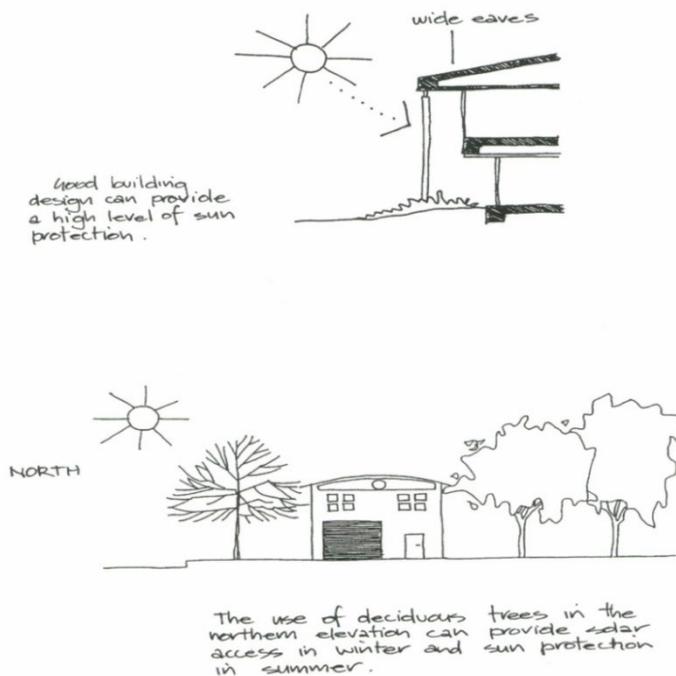
**Siting/Building Orientation**

- 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:
- the intersections of Mamre Road and Erskine Park Road;
  - on Erskine Park Road for south-bound traffic leaving the Erskine Park residential area;
  - the intersection of Mamre Road and the proposed Western Access Road; and
  - 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.
- Any business directory signage installed by developers shall be of a high quality and shall have a consistent design throughout the Estate.
  - 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.
  - 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

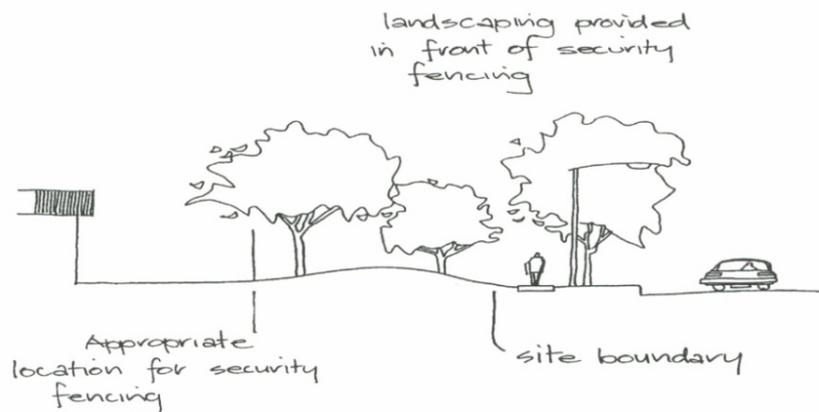
### A. Objectives

- 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**

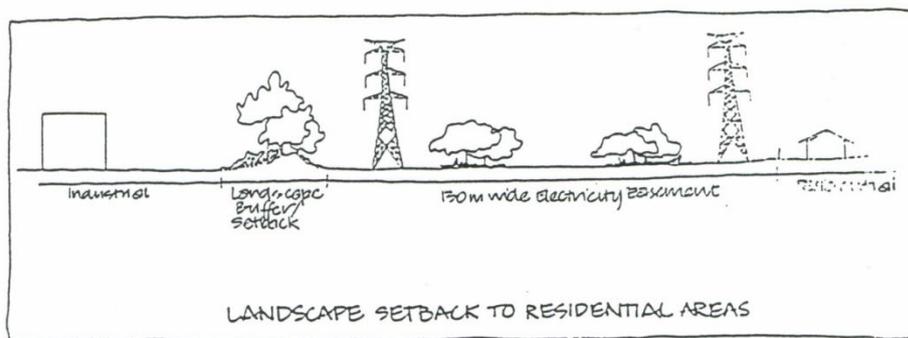
- a) To create a physical buffer between the Erskine Business Park and adjoining residential communities;
- b) To provide landscaped treatment which creates:

- 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**

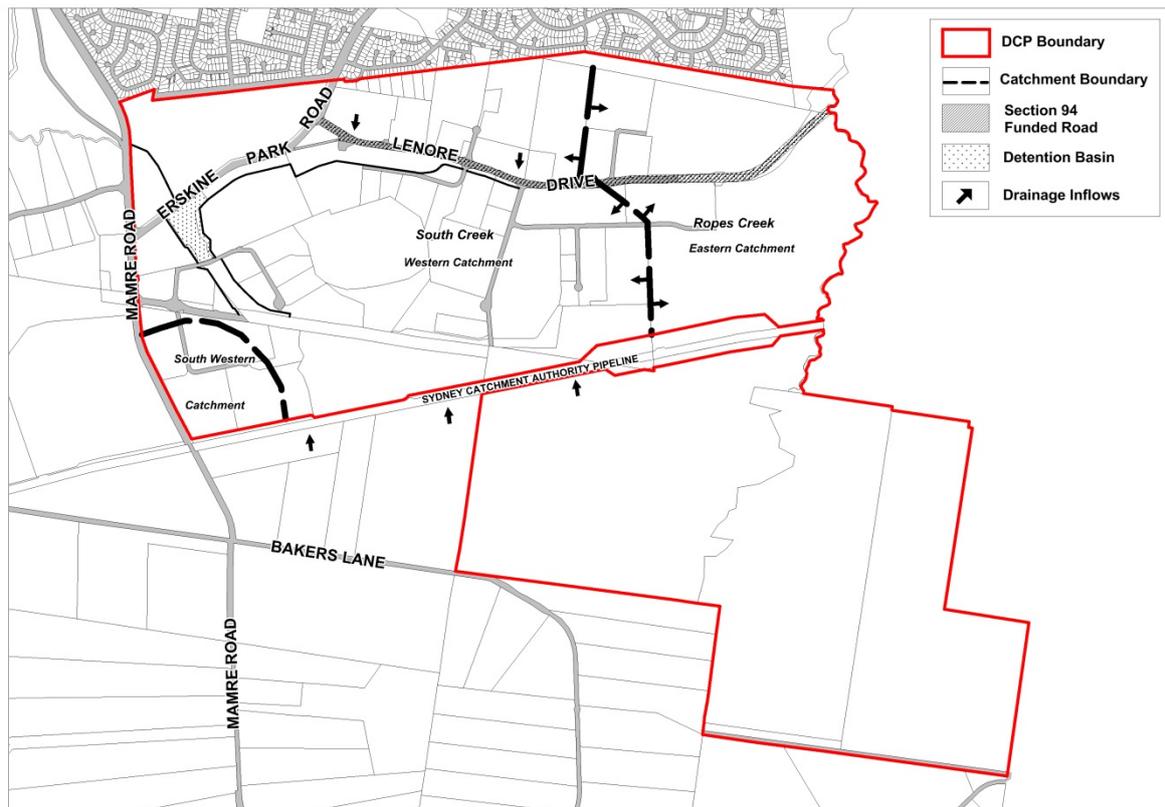
The eastern portion of the release area drains into Ropes Creek. A small section of this portion drains directly into Ropes Creek via a number of local swales, whilst the remainder of the catchment drains to an existing channel system located along the eastern side of the Erskine Park residential estate.

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.

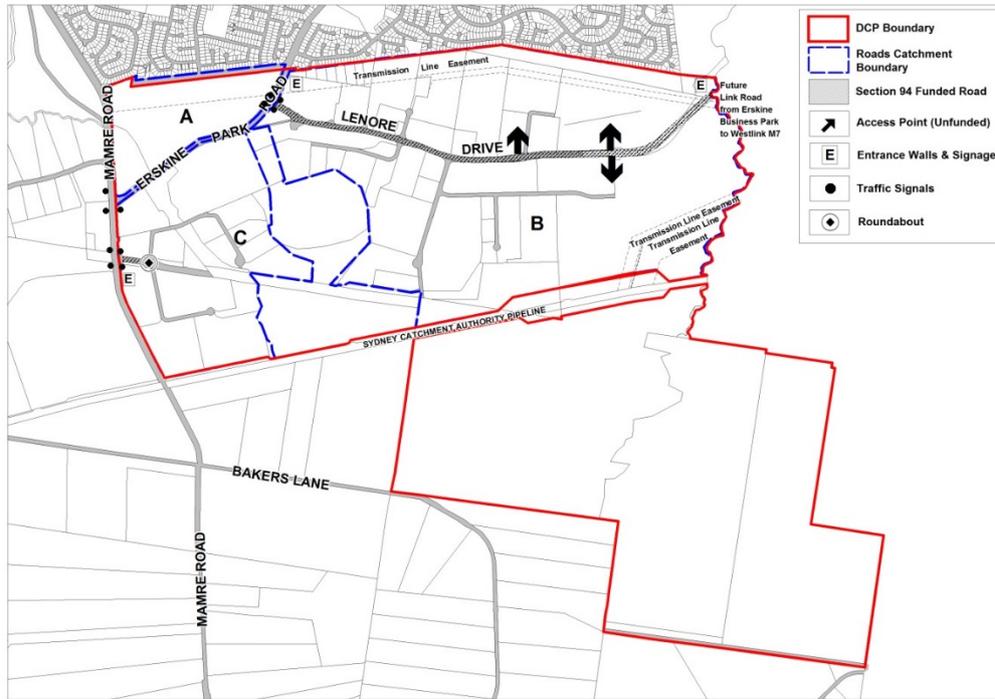
### B. Controls

#### 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

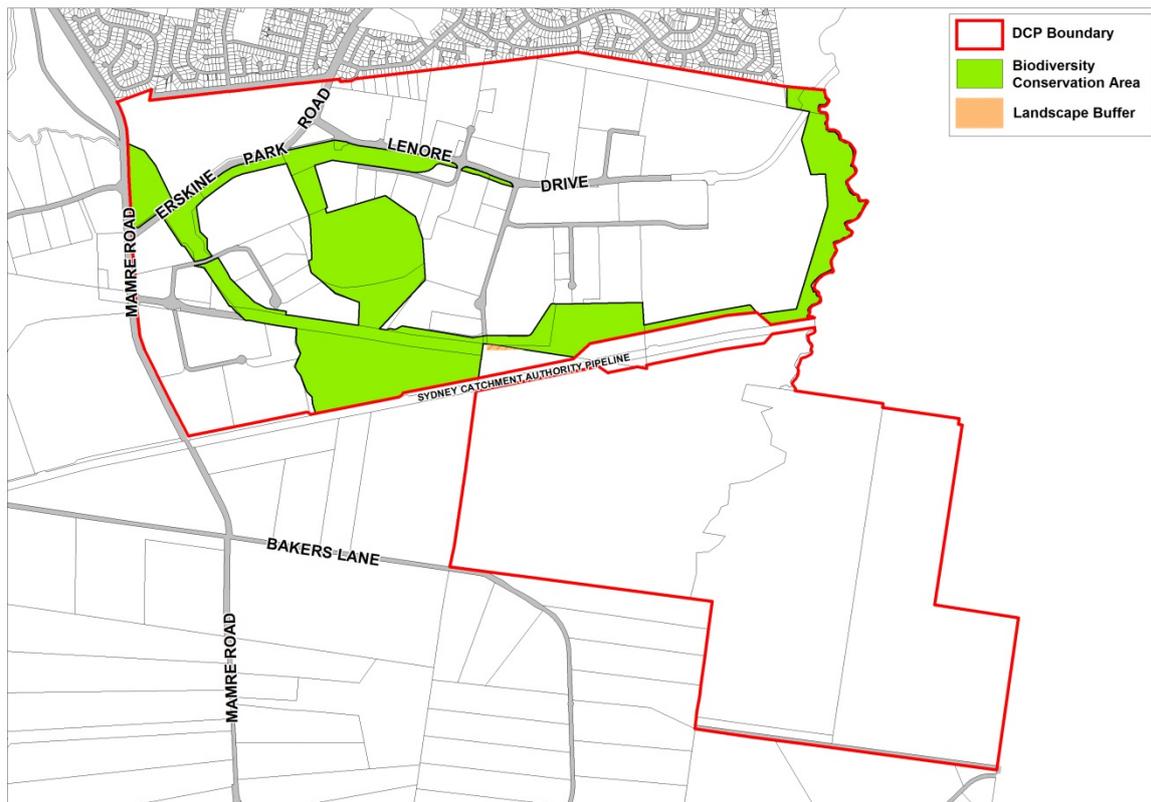
- a) To promote the conservation of urban bushland;
- b) To protect and preserve native vegetation and biological diversity in accordance with the principles of ecologically sustainable development;
- c) To retain native vegetation in parcels of a size and configuration which will enable the existing 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.**

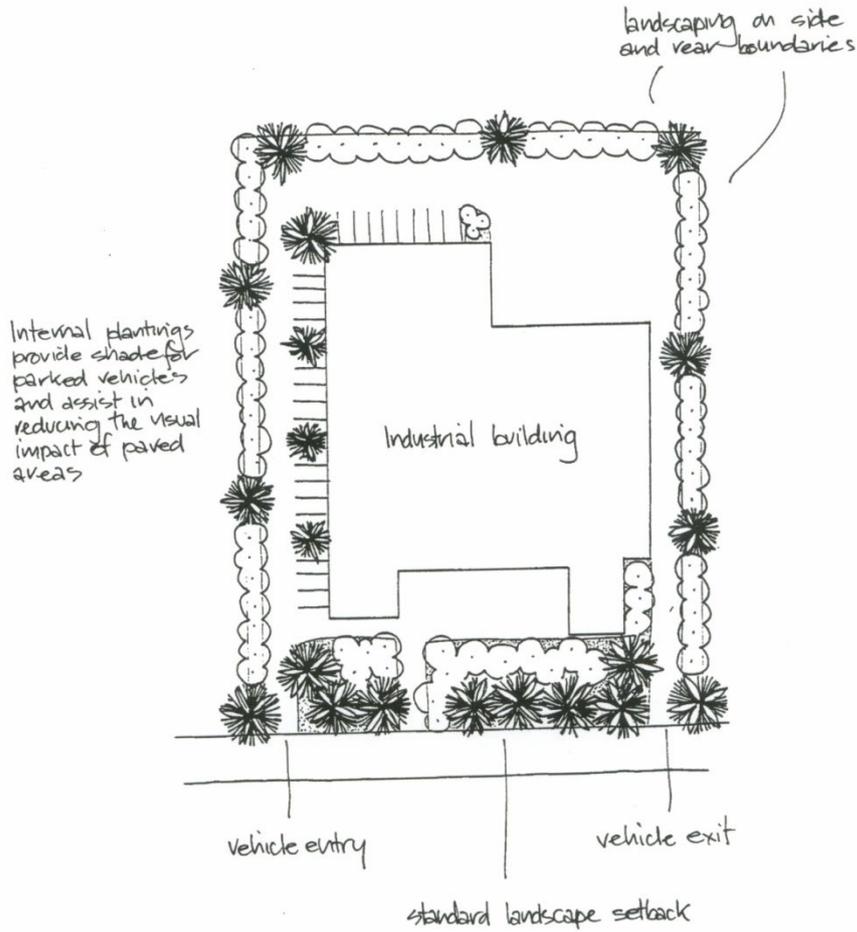
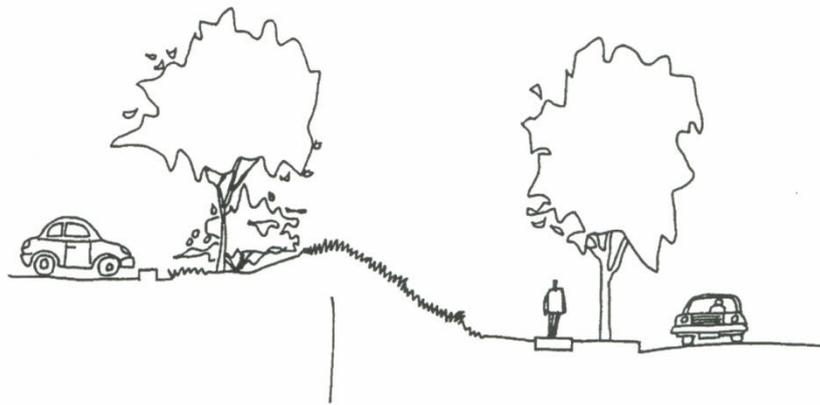
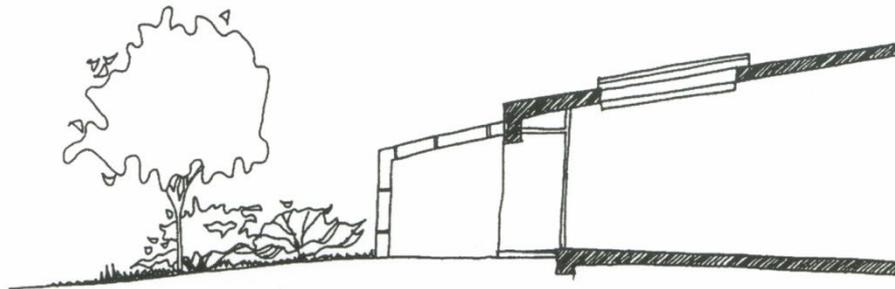


Figure E6.14: Landscaping concepts



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 & canopies