



# Industrial Land

## Development Control Plan

<b>Version</b>	<b>Adopted</b>	<b>Effective</b>
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**(Excludes the Moss Vale Enterprise Corridor to which the Moss Vale Enterprise Corridor DCP applies)**



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# Part A

## Provisions Applicable to All Industrial Zoned Land



## **PART A**

# **PROVISIONS APPLICABLE TO ALL INDUSTRIAL ZONED LAND**

## **Section 1 Introduction**

### **A1.1 Citation**

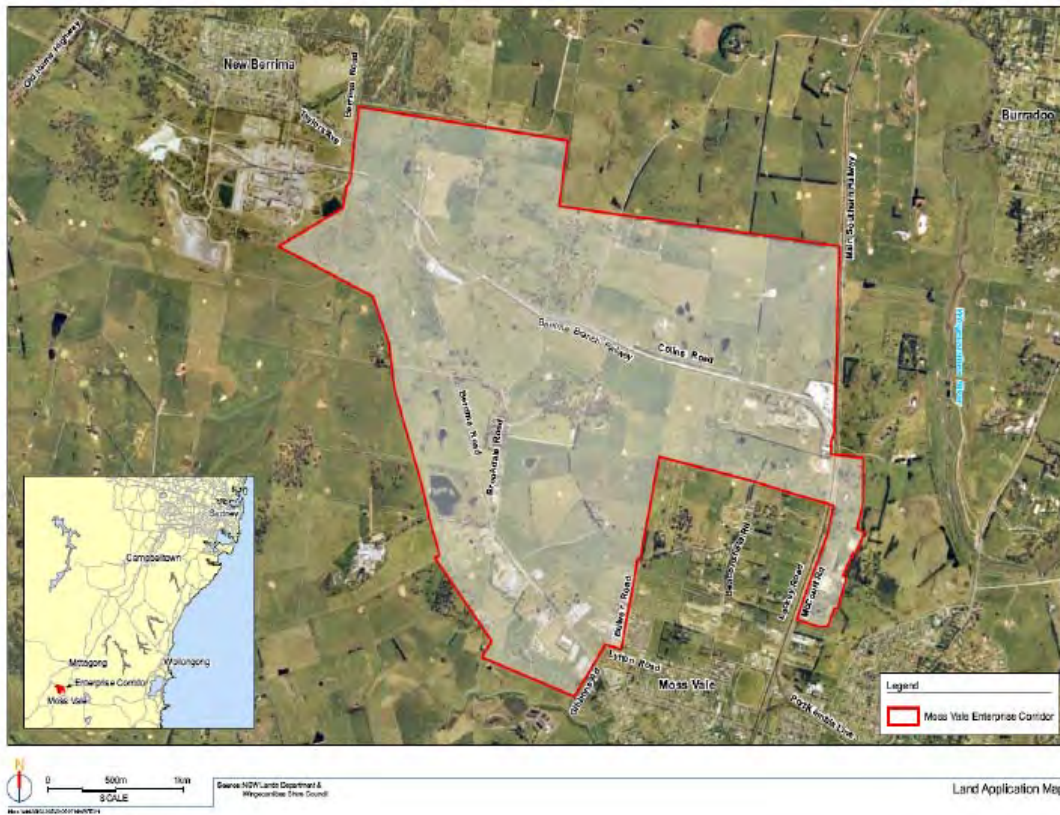
This plan shall be cited as the *Industrial Land Development Control Plan* (Industrial Land DCP).

### **A1.2 Date of Commencement**

This Plan was originally adopted by Council on 13 April 2011 and first came into effect on 20 April 2011. Please refer to the amendment table on the cover page.

### **A1.3 Land to Which This Plan Applies**

The Industrial Land DCP applies to all land zoned IN1 General Industrial, IN2 Light Industrial & IN3 Heavy Industrial under the provisions of WLEP 2010, **except for** land within the Moss Vale Enterprise Corridor as shown on the following map. That land is covered by the Moss Vale Enterprise Corridor Development Control Plan.



#### A1.4 Development to which this plan applies

This Industrial Land DCP applies to development that is 'Permitted with consent' (Permissible) in the Land Use Tables for Industrial Zoned land under Wingecarribee Local Environmental Plan 2010 (WLEP 2010). For a detailed explanation of the permissibility of development under the land use tables see Section 1.5 of this DCP.

This DCP does not apply to development applications that would be considered Exempt or Complying Development under State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 or the following provisions of the Wingecarribee Local Environmental Plan (WLEP) 2010. Exempt development complies with the provisions of Clause 3.1 of the WLEP 2010. Complying development complies with the provisions of Clause 3.2 of the WLEP 2010.

Land Use applications for the use of an undeveloped Industrial site for a Prohibited use cannot be approved. If an industrial zoned site is currently being used for a purpose that is prohibited by the WLEP 2010, it may be that the site benefits from extenuating circumstances conferred on it by the 'existing use' provisions of the Environmental Planning & Assessment Regulations, 2000. If this is the case, please contact Council's Town Planning staff for clarification and further advice. In these circumstances the provisions of this DCP are applicable.



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All development involving Building works will be required to comply with the Building Code of Australia.



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## **A1.5 The structure of this Development Control Plan (DCP)**

This DCP is divided into four (4) Parts:

- Part A contains two Sections.
  - Section 1 contains general information regarding all industrial land uses and applications.
  - Section 2 contains broad objectives for industrial development in established industrial localities.
- Part B contains development controls and objectives that are applicable to aspects of permissible industrial development in established industrial localities.
- Part C provides specific controls for land uses that are permissible with development consent in industrial zones but are not covered in Part B.

Section 1 of Part A provides general information regarding the jurisdiction and application of environmental planning instruments and the information to be submitted with a development application. Applicants should familiarise themselves with this section prior to lodging a development application in all localities.

Section 2 of Part A focuses Shire Wide objectives on development in the established industrial localities. All applications in established industrial localities are required to address these objectives in any Statement of Environmental Effects (SEE) submitted for Council's consideration. (See also Section 1.9 and Section 1.10)

Part B contains development controls and their objectives that are applicable to aspects of permissible development in the established industrial areas. These address aspects and characteristics of industrial development that must be addressed when preparing plans and in the SEE for land use applications. Whether your application is for an industrial use or not, as a minimum, the controls contained within Part B must be addressed in the SEE submitted with an application.

Part C contains specific controls to be addressed for land uses that may have aspects not covered by the controls contained in Part B. Part C is applicable to land uses identified under the Table of Land Uses that are not necessarily industrial in character or are ancillary to industrial development, but where consideration should be given to certain aspects in addition to the controls contained in Part B. For example, a neighbourhood shop may be proposed as part of an Industrial Unit complex. Neighbourhood shops will require car parking at a different rate to industrial uses. Therefore, the provisions contained in Part C will also be applicable. It is therefore recommended that intending applicant's check the land uses contained in Part C for any additional provisions.

## **A1.6 Explanation of Land Use Tables**

The list of land uses permissible in the Industrial Zones can be found under the Land Use Tables attached to the relevant Industrial Zoning, IN1 (General Industrial), IN2



(Light Industrial) and IN3 (Heavy Industrial) contained in the Wingecarribee Local Environmental Plan 2010 (WLEP 2010).

The land use tables contain three categories of permissibility;

- 2 Permitted without consent
- 3 Permitted with consent
- 4 Prohibited

Land uses that are 'Permitted without consent' do not require a land use application to be lodged. However, it should be noted that land uses are defined in the dictionary (in WLEP '09) and the proposed land use must comply with the definition to remain 'Permitted without consent'. For example, Home Occupations in Industrial IN1 & IN2 Zones are 'Permitted without consent'. Home Occupations must satisfy the definition to remain classified as a Home Occupation. If a proposed land use does not satisfy the definition, the proposal can no longer be considered as 'Permitted without consent' and therefore requires a development application to be lodged.

Where development that is 'Permitted without consent' requires the approval of a state government agency, proponents must lodge an application directly with the State Government agency.

Land uses that are 'Permitted with consent' (Permissible) require a Land Use Application (LUA) to be lodged with Council, and development consent granted, prior to the use or occupation of any site. Applications involving physical works may also require a Construction Certificate to be issued prior to any use, occupation or work commencing on any site.

In some cases, land use applications will also require the concurrence of a state government agency. These applications are lodged with Council and are called Integrated Development Applications (see Section A1.7 Integrated Development).

Land uses that are 'Prohibited' cannot be approved.

### **A1.7 Associated Planning Instruments**

This Plan has been prepared in accordance with, and to satisfy the requirements of, the Environmental Planning and Assessment Act 1979 (EP&A Act, 1979), and Environmental Planning and Assessment Regulations 2000 (EPAR Act, 2000).

This Development Control Plan must be read in conjunction with the following Environmental Planning Instruments & Council Endorsed Specifications:

- The Environmental Planning & Assessment Act, 1979 (EP&A Act, 1979)
- The Environmental Planning & Assessment Regulations, 2000 (EP&A Regulations, 2000)
- Wingecarribee Local Environmental Plan 2010.
- The relevant State Environmental Planning Policies (SEPPs).





- The relevant Regional Environmental Plans (REPs, specifically the following).
- Wingecarrabee Shire Council Technical Specifications. *The Council may, from time to time, adopt technical specifications with respect to construction works and the erection of buildings. A copy of the current specifications is available for inspection and purchase at Council's Offices or on the Council's website.*

### **A1.8 Development in Sydney's Drinking Water Catchments.**

The Sydney Catchment Authority (SCA) manages and protects Sydney's drinking water catchments through the regulation of developments in the catchment areas, consistent with the *Drinking Water Catchments Regional Environmental Plan No 1* (the REP) or its equivalent.

Land within Sydney's drinking water catchments must be developed in accordance with the requirements of the REP.

#### **Objectives**

- To ensure water catchments deliver high quality water while sustaining diverse and prosperous communities;
- To improve water quality in degraded areas where quality is not suitable for the relevant environmental values; and
- To maintain or improve water quality where it is currently suitable for the relevant environmental values.

#### **Controls**

Under the REP, Council cannot grant development consent unless it is satisfied the development will have a neutral or beneficial effect on water quality. In assessing whether a proposed development has a neutral or beneficial effect on water quality, Council must be satisfied that:

- the development has no identifiable potential impact on water quality; or
- will contain any such impact on the site of the development and prevent it from reaching any watercourse, waterbody or drainage depression on the site; or
- will transfer any such impact outside the site by treatment in a facility to the required standard and disposal approved by the consent authority; and
- the development incorporates the SCA's current recommended practices (or equivalent standards and practices) which represent best industry or development practice in terms of maintaining water quality.

Any proposed development which Council believes does not have a neutral or beneficial effect on water quality must be referred by Council to the SCA, for a decision on concurrence, before development approval can be given. The SCA in granting concurrence may impose conditions to ensure a neutral and beneficial



impact on water quality. If the SCA is not satisfied a neutral and beneficial impact on water quality can be achieved, concurrence will be withheld and Council will not be able to approve the development. For information on the REP and the SCA's current recommended practices, applicants should refer to the SCA's website at [www.sca.nsw.gov.au](http://www.sca.nsw.gov.au)

To enable Council and the SCA to assess whether a development will have a neutral or beneficial effect on water quality, all development applications in the drinking water catchments must be accompanied by a *Water Cycle Management Study*. The contents of a Water Cycle Management Study, including the information, reports and modelling required, will vary according to the type of development and the risks it poses to water quality, with more in depth studies required for developments that pose a higher risk. The SCA has published the *Neutral or Beneficial Effect on Water Quality Assessment Guidelines* to assist councils and applicants (available on the SCA's website at [www.sca.nsw.gov.au](http://www.sca.nsw.gov.au)) which categorises developments into five modules according to complexity and the risk to water quality.

A *Water Cycle Management Study* accompanying a development application must include the following components:

- Clearly outline the development proposed, including a detailed site plan which includes site constraints
- A summary and location of the water quality control measures proposed as part of the development
- A statement, based on the information in the Water Cycle Management Study, as to whether the development has a neutral or beneficial effect on water quality, consistent with the SCA's *Neutral or Beneficial Effect on Water Quality Assessment Guidelines*.

In addition, the Water Cycle Management Study should contain the following reports or modelling.



<b>Development type</b>	<b>Information required in the <i>Water Cycle Management Study</i></b>
Minor developments which represent a very low risk to water quality. Limited to very minor alterations and additions to residential houses in <u>sewered</u> areas	<ul style="list-style-type: none"> <li>• An assessment, consistent with the SCA's <i>Neutral or Beneficial Effect on Water Quality Assessment Guidelines</i>, as to whether the development will have any identifiable potential impact on water quality. If there are any potential impacts then the development requires the information outlined in Module 1.</li> </ul>
<i>Module 1</i> Less complex developments which represent a minor risk to water quality. These include typically new single dwellings, dual occupancy or townhouses, or alterations and additions to existing dwellings, in <u>sewered</u> areas.	<ul style="list-style-type: none"> <li>• Modelling using the Small-scale Stormwater Quality Model</li> <li>• Conceptual erosion and sediment controls to be applied during construction</li> </ul>
<i>Module 2</i> Less complex developments which represent a medium risk to water quality. These include typically new single dwellings, dual occupancy or townhouses, or alterations and additions to existing dwellings, in <u>unsewered</u> areas.	<ul style="list-style-type: none"> <li>• Modelling using the Small-scale Stormwater Quality Model</li> <li>• Conceptual erosion and sediment controls to be applied during construction</li> <li>• On-site Wastewater Management Report</li> </ul>
<i>Module 3</i> Developments considered to be moderately complex which represent a medium to high risk to water quality. These include typically multi-dwelling housing and small lot residential subdivisions in <u>sewered</u> areas	<ul style="list-style-type: none"> <li>• Stormwater quality modelling (using either the Small-scale Stormwater Quality Model or the MUSIC stormwater quality model)</li> <li>• Conceptual Erosion and Sediment Control Plan or a more detailed conceptual Soil and Water Management Plan</li> </ul>
<i>Module 4</i> Developments considered to be moderately complex which represent a high risk to water quality. These include typically multi-dwelling housing and residential subdivisions in <u>unsewered</u> areas	<ul style="list-style-type: none"> <li>• Stormwater quality modelling (using either the Small-scale Stormwater Quality Model or the MUSIC stormwater quality model)</li> <li>• Conceptual Erosion and Sediment Control Plan or a more detailed conceptual Soil and Water Management Plan</li> <li>• On-site Wastewater Management Report</li> </ul>
<i>Module 5</i> Developments considered to be highly complex or non-standard developments which represent the highest risk to water quality. These include typically major industrial and commercial developments, and agriculture developments such as intensive livestock farms and intensive plant growing, extractive industries and tourism and recreational developments.	<ul style="list-style-type: none"> <li>• Stormwater quality modelling (using either the Small-scale Stormwater Quality Model or the MUSIC stormwater quality model)</li> <li>• Conceptual Soil and Water Management Plan</li> <li>• On-site Wastewater Management Report (if relevant)</li> <li>• Development specific pollutant assessment requirements</li> </ul>



Applicants and consultants are strongly recommended to refer to the SCA publication *Developments in Sydney's drinking water catchments – water quality information requirements* (available on the SCA's website at [www.sca.nsw.gov.au](http://www.sca.nsw.gov.au)). This publication outlines in detail the content requirements for a Water Cycle Management Study, and the different reports and modelling which need to be included, according to the type and scale of development proposed.

### **A1.9 Integrated Development**

Integrated Development Applications are those that require consideration by a State Government agency as outlined on page 4 of the Land Use Application form.

Integrated development applications are lodged with Council and referred by Council to the relevant State agencies or authority(s) under Section 91 of the EP&A Act, 1979. Additional copies of the application will therefore need to be submitted with the application (depending on the number of agencies to be referred). There is a Council administration fee for this service in addition to the fee charged for the assessment of the application by the relevant authority. Please refer to Council's schedule of fees and charges for these amounts.

There are two processes in determining Integrated Development applications. The first method of determining Integrated Development applications is in the event that conditions of development consent are received from the state agency; these can then be incorporated into Council's development consent.

The second method of determining Integrated Development proposals is where additional approvals, permits or licenses are required following Council's determination. These consents contain deferred commencement conditions. The additional approvals, permits or licences must be obtained prior to the validation of Council's development consent. Where a deferred development consent has been granted, no work is permitted on the subject site until the deferred commencement conditions have been satisfied and Council's consent has been validated.

If the application will be Integrated Development Councils development Control Section may provide preliminary advice regarding the information to be submitted with these applications however it is recommended that the applicant make early contact with the relevant agency(s) to establish any specific information the State Agency requires. This additional information can then be lodged with the application to Council.

### **A1.10 Important points to note when preparing a development application**

It should be noted that the objectives contained within the WLEP 2010 are mandatory objectives imposed by environmental planning legislation. These objectives are over and above the objectives contained in this DCP. While every attempt has been made to ensure consistency between these objectives, all objectives that are applicable to a development proposal, including those in this Industrial Land DCP



must be addressed in a Statement of Environmental Effects (SEE) accompanying any development application.

Council recognises that, due to physical or policy (DCP) constraints on a site, development may not comply with all of the controls relating to a particular land use. As a guide, where an application does not comply with the control(s) contained in this DCP, and all efforts have been made to amend or modify the application to ensure compliance, these applications will be considered and determined usually at a Council meeting.

It is important to remember that the onus is on the applicant to demonstrate compliance with all relevant provisions of the Industrial Land DCP and any other environmental planning instruments (see Section 1.6 and 1.7). An application cannot be assessed unless all supporting information has been lodged for a proposal. It is therefore strongly recommended that intending applicant's check the relevant land use controls contained in this Industrial Land DCP to ensure that all controls relating to a proposed development (be it industrial development or not) have been addressed on plans or in the SEE.

It is recommended that applicants obtain a copy of Council's '*Guide to lodging a Land Use Application in Wingecarribee Shire*'. These are available at Council's Customer Service Centre in Moss Vale or on Council's website at [www.wsc.nsw.gov.au](http://www.wsc.nsw.gov.au) and following the links via Planning & Development; forms; Land Use application forms & guide; LUA Guide – updated July 2006.

### **A1.11 Contents of a Statement of Environmental Effects**

It is a legal requirement that all development applications lodged are accompanied by a SEE. The contents of a SEE will address the objectives and controls contained in the relevant environmental planning instruments as described above. So that Council officers can properly consider the impacts of an Industrial Development proposal on a locality, the information provided with a SEE shall include;

- Proposed Days and Hours of operation
- Number of staff
- Estimation of traffic demand, movements, manoeuvring and unloading facilities.
- Details of the methods of waste disposal (including liquids)
- Machinery/Equipment used
- Details of any noise generation devices (including refrigeration units)
- Details of any chemicals to be used on-site and the management thereof
- Signage (will require assessment against SEPP 64)
- Details of any licensing, notices etc relating to on-site contamination history.
- Details of any lighting, including orientation and purpose.
- Details of water disposal off-site
- Details of any air emissions that will occur including odour



## A1.12 Additional Information

When considering the impacts that industrial development will have on both the natural and built environment, Council may also request additional information in order to evaluate the proposal in accordance with the provisions of Section 79C of the EP&A Act, 1979. In particular, Section 79C(1) requires Council to consider:

- (a) *the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,*
- (b) *the suitability of the site for the development,*

The purpose of these provisions is to undertake a *risk assessment* of the proposal with regard to the site and its locality. From this point it is important to disclose all aspects of a proposed development (and maintain compliance with the definition for land uses that are permitted without consent) to reduce the likelihood of compliance and regulatory enforcement action if the business is permitted to operate. For example if a *vehicle repair station* (that does not include spray painting) is proposed and spray painting (that requires ventilation) is introduced after the business is approved, this changes the land use (to a *vehicle body repair shop*) and the impacts the proposal will have on the locality. Council may, in these circumstances, order an operating business to cease until it is resolved.

These circumstances also apply to industries where noise generation, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products and grit impact on adjoining properties. They also apply to site constraints such as flooding, landslip, bushfire and ecological constraints.

If an aspect of normal operations, or site constraints (see Section A1.13) comes to light during an assessment and it is considered that either of these may have impacts on nearby properties or the integrity of an approval, Council can request additional information it considers necessary to its proper consideration of an application. The application will then proceed when the additional information is lodged. Additional information Council can request may include but is not limited to;

- Contamination Investigation/Site Validation/Remediation Reports
- Traffic studies
- Odour Impact reports
- Noise impact reports
- Water Quality assessments
- Air Quality Reports
- Erosion and sediment control reports
- Waste Management Plans & Reports (during and post construction)
- Flood Studies
- Bushfire reports
- Geotechnical reports
- Flora and Fauna Reports
- Aboriginal Archaeological Surveys
- Environmental Management Plan

Any additional information must be prepared by a suitably qualified person.



### **A1.13 Site Analysis**

Site Analysis is the process of identifying the opportunities and constraints that should influence the siting and design of new development. New development should respond positively to the size, shape and orientation of the lot and to the existing pattern of development adjacent and adjoining the site.

The Site Analysis Report will consist of drawing notations which records the physical characteristics of the site and its surrounds and is accompanied by a SEE explaining how the design of the proposed development takes account of the outcomes of the site analysis. All drawings submitted as part of the site analysis must be to a regular scale (1:100, 1:200 and 1:500) and indicate the direction of true north.

### **A1.14 The elements of a Site Analysis**

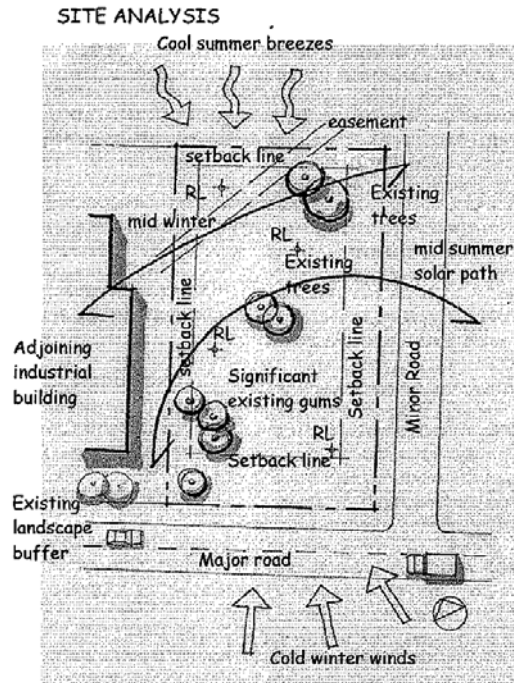
A Site Analysis must be submitted with all Development Applications:

- (a) The site analysis prepared shall notate the following matters to Council's satisfaction:
  - (i) The slope and contours of land including levels at AHD;
  - (ii) The location and nature (whether perennial or intermittent) of any watercourses and associated flooding or drainage characteristics;
  - (iii) The orientation of the land including the marking of true north;
  - (iv) The location, extent and nature of any existing development, buildings and activities upon, adjacent and in proximity to the land;
  - (v) The location and nature of any utility services;
  - (vi) The location and description of any existing trees and vegetation upon, adjacent and in proximity to the land including significant remnant trees and bushland;
  - (vii) The existing means of vehicle and pedestrian access;
  - (viii) Any items or places of known Aboriginal and European cultural heritage;
  - (ix) The direction and nature of prevailing climate characteristics such as wind direction and rainfall;
  - (x) Any potential bush fire threat;
  - (xi) Views to the land, particularly from a public place; and
  - (xii) The location and nature of any other known constraint to development of the land, including potential soil contamination, -noise sources or geotechnical issues.
  - (xiii) Existing levels of the land in relation to buildings and roads (ie, contours & spot levels including the location of escarpment/rock outcrops)
- (b) A written statement and/or drawings explaining how the design of the proposed development has taken the site analysis into account.

**Figure 1a**

**Sample Site Analysis Drawing –**

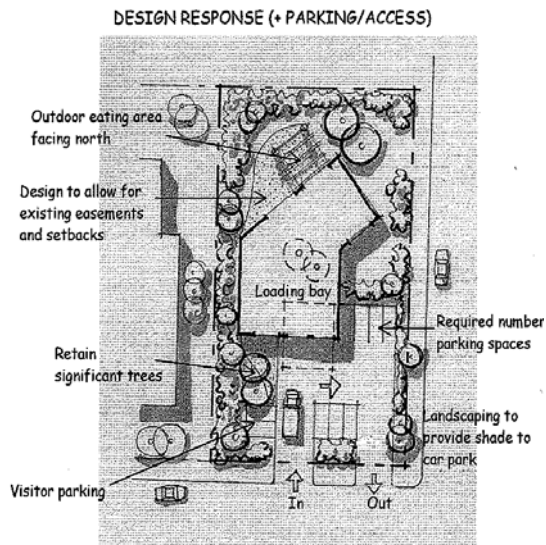
*Documents the existing physical characteristics of the site. Site analysis drawings should be submitted at a suitable scale, depending on the size of the site and the amount of information that needs to be communicated on the drawing.*



**Figure 1b**

**Sample Design Principles Drawing**

*Shows how the existing site conditions have been interpreted into design principles that will guide new development of the site.*



**Figure 1.**

The results of the site analysis will provide the context within which planning of the development site can begin. The results of the site analysis must then respond to the controls contained in this Industrial Land DCP.





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## Section 2 General Objectives

### A2.1 Introduction

Each development proposal will be assessed according to the applicable development controls and how well it meets the stated objectives of the Industrial Land DCP, the objectives and provisions of the Wingecarribee LEP 2010 (the WLEP 2010), the EP&A Act, 1979 and the EP&A Regulation, 2000.

Council recognises that every new development changes the existing fabric of the built environment. Council is however only interested in development proposals that demonstrate a positive contribution, either directly or indirectly, to the objectives stated below. Some objectives relate directly to the locality and privately-owned land, others relate to the public domain. The objectives of the locality shall be met directly by the design, layout and compliance with the controls contained herein. Other objectives may be met by, for example, developer contributions collected under the EP&A Act, 1979. The objectives are included here to provide applicants, and other readers of this Plan, with an overview of Council's intentions with regard to the future development of Industrial localities.

Applicants are reminded that, where applicable, the specific objectives and outcomes for industrial development must be incorporated into their proposals and explained in the SEE.

### A2.2 Objectives of this Plan

This section lists the broad objectives which guide industrial development. These should be read in conjunction with the specific objectives of each control as they apply to particular aspects of development contained in Part B.

Applicants are also directed to the Wingecarribee Local Environmental Plan 2010 that contains the objectives applicable to each zone. All development proposed in an Industrial Zone (IN1, IN2& IN3) must be consistent with the objectives of the applicable zone.

In assessing development applications, Council will consider the extent to which a proposal contributes to both the zone objectives and the following:

### A2.3 Economic Function

Industrial localities play an important role as an employment generator and service provider for both residents and visitors to the Southern Highlands. Council recognises that the design and function of industrial areas are major influences on the efficiency of these centres. The Economic Function objectives of this Plan are intended to allow for the efficient and effective development of industrial areas.



The Economic Function objectives are:

- (a) Enhance the role of Industrial localities within the overall economic structure of Wingecarribee Shire in providing industrial land.
- (b) Recognise and enhance the role of Industrial areas as a service centre providing goods and service for the surrounding community.
- (c) Recognise and enhance the role of Industrial localities as an important employment generator.
- (d) Recognise and enhance the role of Industrial Areas as an important service centre for markets outside the Wingecarribee Shire.
- (e) Encourage appropriate site amalgamation and redevelopment to provide for a range of new business and industrial opportunities and expansion of existing industrial opportunities.

#### **A2.4 Environmental Sustainability**

Council has a demonstrated commitment to the principles of Ecologically Sustainable Development (ESD). It is Council's responsibility to ensure the Shire's economic development prospers but not to the detriment of the environment or Community. Council therefore encourages these principles through the design and practices of industrial development. Council is keen to identify and encourage improvements in the natural environment. In this regard Council seeks to:

- (a) Ensure that buildings are designed incorporating the principles of ESD by requiring the construction of 'energy smart' buildings that are energy and water smart and incorporate sustainable technologies.
- (b) Protect existing land uses from land use conflict (including water, noise and air quality) during and post construction.
- (c) Provide flexibility in planning controls for best practice and new technologies that promote ESD principles and ensure that there is no loss of biological diversity or ecological integrity.
- (d) Encourage development that demonstrates a neutral or beneficial effect on water quality, particularly with regard to riparian areas (Chinamans, Gibbergunyah and Mittagong Creeks)

Council will apply these principles to the development and in consideration of the potential impact on the environment.

## **A2.5 Water Sensitive Design**

### **A2.1.1 Introduction**

Water Sensitive Design (WSD) is a commitment to the avoidance, reduction and recycling of water within developed areas thereby reducing reliance on aquifer ecosystems, wetlands, creeks and rivers, to gain water supply and to discharge wastewater.

Development can have many impacts on the environment, both visible and unforeseen. One typical consequence includes an increase in the discharge (quantity) and frequency of water runoff and nuisance flood events within developed environments. These events largely result from the presence of hard, impervious surfaces e.g. roofs, roads and driveways facilitating runoff across a high proportion of the developed environment. These surfaces reduce the capacity of the environment to absorb and infiltrate water and hence increase reliance on stormwater pipes, creeks and rivers, and flood mitigation structures.

WSD, at both a local and catchment level, assists in reducing these dependences and recharges water back into the environment.

In order to address WSD for development within the Shire, a 'treatment train' approach is recommended. A WSD Treatment Train includes a number of measures and treatments in series, rather than employing one single measure or treatment in order to achieve the objectives of water sensitive design.

An example of a treatment train at a street scale for a proposed subdivision resulting in a small number of new allotments may include:

- ~ Grassed swales adjacent to road/s,
- ~ Onsite bio-retention system and associated gross pollutant trap to capture runoff and filter pollutants and discharge water into natural system at a rate similar to that pre-development, and
- ~ Bio-retention system filtering water discharge from any onsite car park.

### **A2.1.2 Objectives**

The overall aim of WSD is to avoid, or at least minimise, the impact of development on all aspects of the natural water cycle.

WSD objectives for all development proposed within the shire are:

- (a) Conservation of potable water.
- (b) Protection of natural ecosystems and waterways.
- (c) Protection of water quality entering natural ecosystems and waterways.
- (d) Minimisation of surface runoff entering natural ecosystems and waterways.
- (e) Integration of stormwater and wastewater treatments into the natural landscape to enhance visual, social, cultural and ecological values.



### **A2.1.3 Controls**

WSD controls are to be satisfied for all development applications and integrated into the Water Cycle Management Study (or equivalent plan) for the proposed development and included in all modelling conducted (e.g. MUSIC or small-scale stormwater quality modelling).

#### **Objective 1: Conservation of potable water**

*Controls:*

1. All development within the shire is to utilise potable water efficiently. For residential dwellings including houses and units, the requirements of BASIX ensures the development complies with NSW planning requirements to conserve water. For all other development within the shire, the following must be achieved:
  - (a) Minimum 3A\* star rated shower heads, tap fittings and toilet flush systems.
  - (b) Installation of rainwater tank/s to be utilised on site for watering of landscaping and may be plumbed to toilets and/ or laundry facilities. Size of tank will vary in accordance with development type and capacity to utilise water onsite. Rainwater tanks should be sized to capture (at minimum) the first 10mm of rainfall runoff from all building roofs proposed onsite.

*\*3A star rating means a fixture or appliance is rated to that level of water efficiency in accordance with AS/NZS 6400:2005 Water efficient products rating and labelling.*

#### **Objective 2: Protection of natural ecosystems and waterways**

*Controls:*

2. Development should not occur within riparian buffer zones outlined in Wingecarrabee Shire Council Local Environment Plan 2010 (Clause 7.5 Natural Resource Sensitivity – Water and related maps) and vegetation within the riparian buffer distances is to be maintained and intact.

#### **Objective 3: Protection of water quality entering natural ecosystems and waterways**

*Controls:*

3. All development within the shire must comply with the requirements of *SEPP (Drinking Water Catchment) 2011* to ensure water quality exiting a site post development achieves a neutral or beneficial effect (NorBE) in comparison to pre-development water quality runoff.
4. Development which proposes to re-develop an existing, developed site (particularly those used previously for commercial and/ or industrial purposes), the proposed development must comply with one of the following, whichever provides the greatest treatment of water:
  - (a) Water quality exiting a site post-development must achieve a neutral or beneficial effect (NorBE) in comparison to pre-development water quality



runoff (in accordance with *SEPP (Sydney Drinking Water Catchment) 2011*).

- (b) Post-development water quality runoff must achieve the following targets as improvements to the pre-development water quality runoff exiting the site:
- (i) 85% reduction in the average annual total suspended solids loads.
  - (ii) 65% reduction in the average annual total phosphorus load.
  - (iii) 45% reduction in the average annual total nitrogen load.
  - (iv) 90% reduction in the average annual gross pollutant (size >5mm) load.
  - (v) To retain sediment coarser than 0.125mm for flows up to 25% of the 1 year ARI peak flow.
  - (vi) To ensure no visible oils for flows up to 25% of the 1 year ARI peak flow, in areas with concentrated hydrocarbon deposition.

(Source: Draft Environmental Targets *DECCW Managing Urban Stormwater*, in Coffs Harbour City Council *Water Sensitive Urban Design Policy*)

It is the responsibility of the developer to meet the objectives which achieve a net positive environmental outcome.

#### **Objective 4: Minimisation of surface runoff entering natural ecosystems and waterways**

*Controls:*

5. For development within the shire which proposes to subdivide land and create four or more allotments, the maximum discharge for the 1:100 year storm shall not exceed the pre-development discharge.

#### **Objective 5: Integration of stormwater and wastewater treatments into the natural landscape to enhance visual, social, cultural and ecological values**

*Controls:*

6. Development must not propose to pipe or channel riparian corridors or waterways.
7. Current recommended practices outlined within *SEPP (Sydney Drinking Water Catchment) 2011* and current best practice technical guides must be utilised to ensure effective functioning of treatment options utilised.

When planning and designing development within the Shire, reference is to be made to Current Recommended Practices contained within *SEPP (Sydney Drinking Water Catchment) 2011* and current best practice guidelines and technical documents such as:

- *Technical Guides: Australian Runoff Quality – A Guide to Water Sensitive Urban Design (Engineers Australia, 2006).*
- *Water Sensitive Urban Design Engineering Procedures: Stormwater (Melbourne Water, 2005).*
- *Water Sensitive Urban Design (Landcom, 2009).*

### A2.1.4 Examples of WSD Treatment Options

In order to achieve WSD targets 2 - 5, development will require the use of treatments in series, complementing one another. Table 1 provides examples of suitable WSD treatment options to assist in achieving these targets.

**Table 1: Examples of suitable WSD treatment for various development scale**

WSUD treatment option	Allotment scale	Street Scale	Catchment/ sub catchment scale
Rain garden	X	X	X
Rain water tank	X	X	
Swales/ buffer strips		X	
Porous paving	X	X	X
Infiltration systems	X	X	
Bioretention basins	X	X	X
Constructed wetlands		X	X
End of pipe treatment e.g. gross pollutant traps	X	X	X

- **Rain Gardens (small bioretention systems)**

Rain gardens are landscaping features which can be incorporated at a range of locations, shapes or sizes, and capture and filter stormwater runoff. They may also include a drainage component conveying flow into the stormwater pipe network beneath. Common locations include small parks, car parking facilities (between parking bays) and surrounding residential dwellings.



Photo\*: Example of rain garden (bioretention basin) adjacent to car parking bay at Beachside Car park (Melbourne), Victoria.

- **Swales and Buffer Strips**

Swales and buffer strips act as biofilters slowly conveying water through a filtration medium e.g. grass, vegetation, gravel and disconnect impervious areas (e.g. roads) from downstream waterways. Swales and buffer strips act to collect stormwater runoff and decrease flows and thereby downstream impacts in rainfall events.

They can be used adjacent to roads however should not be used as infiltration points due to the ability of collected water to affect road base materials. Council prefers swales and buffer strips to be located adjacent to roads and not to be included in the medium-stripe design due to access and maintenance issues associated with these locations.



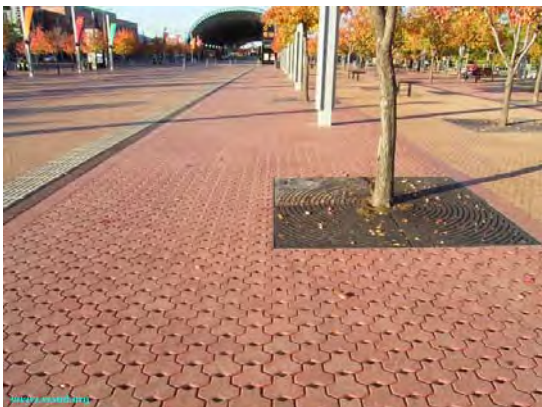
Photo\*: Vegetated swale, Fairfield New South Wales



Photo\*: Grassed swale with adjacent driveways, Cairlea, Brisbane Queensland.

- **Porous Pavements**

Porous paving (permeable paving) allows rainwater to penetrate into soil and subsoil layers, recharging water supplies and filtering pollutants. In some cases excess water from rainfall events may also be conveyed into drainage pipes located beneath.



Photo\*: Porous pavements and permeable street tree plantings located at Sydney Olympic Park, New South Wales.



Photo\*: Onsite retention basin and vegetated filter integrated into the surrounding landscape, Warriewood (Pittwater Council), Sydney.

- **Infiltration systems**

These systems do not treat stormwater, instead aim to capture runoff and promote infiltration. Infiltration systems reduce damage downstream from heavily rainfall events by reducing peak flows and downstream flooding. These systems also assist in recharging groundwater.

- **Bio-retention Systems**

Bio-retention systems (e.g. basins and swales) are not designed to convey the flow of water, instead they are designed to capture stormwater runoff which drains through a filter medium. Bio-retention basins may take a variety of shapes and forms within a catchment, however they are sensitive to materials which may block them.



Photo\*: Vegetated bioretention swale at Warriewood (Pittwater Council), Sydney.



Photo\*: Bioretention basin, Victoria Park, Sydney.

- **Constructed Wetlands**

Constructed wetlands are shallow vegetated water bodies which remove pollutants from stormwater through processes including sedimentation, fine filtration, detention and biological uptake. Wetlands can also have significant social and community benefits, providing habitat for wildlife and sites for recreational activities such as walking and bicycle riding. The constructed wetland may be located on-stream or off-stream and will vary in size depending on their location within a catchment.





Photo\*: Constructed wetland, Marrickville (Tempe), New South Wales.



Photo\*: Constructed wetland, Sydney University (Darlington), New South Wales

- **End of pipe treatments e.g. gross pollutant traps**

End of pipe treatments are designed to be a last resort to capture gross pollution within catchments prior to it entering creeks and waterways. These devices are designed to retain litter and debris, and coarse materials delivered downstream throughout storm and heavy rain events.

End of pipe treatments are used as a last attempt to remove pollution from waterways and require frequent maintenance and cleaning out.



Photo: Gross pollutant trap at Umina, Gosford City Council, New South Wales (Source: [www.gosford.nsw.gov.au](http://www.gosford.nsw.gov.au) ).

\* Photo source [www.wsud.org](http://www.wsud.org)



## **A2.6 Visual Amenity**

Every new structure generates an impact on the visual amenity of the immediate environment which, in turn, affects the environment of the surrounding area. Visual impacts result from the overall appearance of the development and its relationship to the existing built form. Inappropriate design can generate significant adverse impacts and Council is only interested in developments which make a positive visual contribution.

Council is not necessarily seeking the duplication of existing form. It is acknowledged that there are situations where contrasts in scale and appearance produce great urban design, creating landmark buildings. However, all new development must respond to the essential elements that make up the character of the surrounding urban environment.

The nature of Industrial Building Design however, does not always lend itself to assimilate all building structures into the public domain and streetscape. To balance this against the Economic Function of Industrial Areas, Council's visual amenity objectives prompt a greater level of attention to the street frontage treatment and public interface of the proposal.

Forecourt and front setback landscaping can create an attractive space between buildings, car parking and the public domain. Well designed, low maintenance landscaping and clear signage can add to the legibility of buildings and 'guide' visitors, market representatives and transportation providers towards accesses and onto properties while preventing traffic disruption. Council's objectives in this regard are:

- (a) Demonstrate an appreciation of, maintain and enhance the existing streetscape.
- (b) Enhance the character and efficiency of individual streets through appropriate design and the legibility of buildings.
- (c) Provide landscaping that is drought tolerant and low maintenance to encourage the establishment of suitable species and
- (d) Provide landscaping that contributes to the overall visual amenity of the locality.

## **A2.7 Vehicular and Pedestrian Function**

New development impacts on the functionality of a locality. Traffic, parking, pedestrian access and streetscape all contribute to business and visitor function and safety. When visitors and regulars are moving around industrial areas, clear property (numbers, names and symbols) and pathway (roads and footpaths) identification are important.



A simple but common example is being held up behind a B-Double that can't find the place they are looking for. This is frustrating and dangerous for them and other users. Front boundary fencing and entrances delineated by colour or articulation and providing street numbering and signage at employee, transportation and pedestrian entrances makes a contribution to the efficiency of businesses and their localities. Similarly, transport vehicle entrances which are too narrow for larger vehicles to safely exit from or cause other user conflict raise OH&S issues where they do not need to be. Council will only support those developments which make a positive contribution to:

- (a) Clearly indicated property accesses
- (b) Minimisation of vehicular/pedestrian conflicts
- (c) Off site vehicle and pedestrian circulation
- (e) Provision of safe and accessible connections to alternate transport facilities (Bicycle/Motorcycle parking, the provision of showers and amenities exceeding the provisions of the BCA – Section B.7.c)
- (f) Provide access to all possible forms of transport
- (g) Transport circulation within the property.

In order to demonstrate the application of the objectives contained in Section A2.5 & A2.6, a street front perspective of the development may be requested. This would provide visual evidence of how the proposal integrates into the existing locality.

## **A2.8 Minimising Land Use Conflict - The Residential Interface**

It is recognised above that Industrial localities serve an important function. However, to reduce the incidence of land use conflict between land uses, particularly residential, consideration must be given for applications that will have a direct interface with adjacent (opposite) and adjoining land uses. The use of physical separation or barriers, buffer distances (including roads) or structures, alone may not be sufficient to minimise land use conflict from incompatible land uses.

Attention is therefore drawn to the issues where land use conflicts arise. The following categories will be raised where it is considered that any proposed development has the potential to create such a land use conflict. Council's assessment may require applicants to demonstrate, by way of additional information, plans or professional drawings that their proposal will be compatible with adjacent or adjoining residential land uses during construction and operation.

The list of potential land use conflict shall include, but is not limited to:

- Environmental quality (including biodiversity, air, water and noise);
- Transport and traffic movement;
- Hours of operation;
- Lighting and noise generation;
- Any matter raised in section A1.11;



- 
- Potential On-Street Parking Impacts, particularly high volumes outside normal business hours;
  - Building design and materials used;

Controls B.3 provide buffer areas between industrial zoned land and rural and residential zoned land. Empirical evidence confirms that the impact of industrial development can extend beyond the required 10 metre setback. Council will request additional information considered necessary to properly assess the impact of industrial development where it is considered to extend beyond the nominal setback.



## Section 3 Construction Standards & Procedures

### A3.1 Introduction

When preparing detailed plans, applicants are directed to the following surveys and reports which may be required to address specific site conditions and to Council's construction standards with regard to certain matters. Council inspection procedures with regard to certain matters are also addressed in this Section.

### A3.2 Surveys and Reports

Council may require the preparation and submission of certain reports when a new Land Use Application is lodged. These are detailed below.

#### A3.2.1 Geotechnically Sensitive Areas

A geotechnical report, prepared by a suitably qualified consultant, is to be lodged with the development application. The report should generally address the publication *Landslide Risk Management Guidelines (2007)* produced by the Australian Geomechanics Society. Appropriate professional indemnity insurance must be held by consultant.

#### A3.2.2 Structural Stability

Where there is a Geotechnical Report that relates to the Allotment, any Engineer's design shall carry the following statement:

*"A geotechnical risk assessment report no....prepared by....and dated....has been examined by myself and I have given due regards to its recommendations and hereby certify that the design has been prepared to ensure the longevity of the building."*

All designs shall nominate a site classification vide AS 2870 *"Residential Slabs & Footings Code"*.

#### A3.2.3 Hydraulic Details

Hydraulic details, prepared by a suitably qualified hydraulic consultant, shall be provided for:

- a) Stormwater service
- b) Water supply service (including fire services)
- c) Sewerage service
- d) Trade Waste discharges to sewer for all buildings except a single dwelling house and associated outbuilding(s). These details are to be submitted with a development application if deemed necessary or with the Section 68 application to Council.



### A3.2.4 Site Survey Reports

During construction, Council may require the submission of a survey report prior to the pouring of concrete and then upon completion of the building works (prior to occupation), in the following circumstances:-

- a) Where a Class 1-9 building is located within 300mm of the minimum side boundary setbacks, (including distance to wall and distance to eaves/gutter)
- b) Where a structure is located within 300mm of a registered easement
- c) At floor level stage, prior to the pouring of concrete or fixing flooring material, where the property is within an area affected by flooding inundation.

### A3.3 Building near or over Council Mains and Easements

**NB: Structures are to be erected clear of Council's water, sewer and drainage mains by a minimum of one (1) metre and 1.2 metres for a sewer manhole and shall be clear of any easement over such a main. The following controls apply only in those situations where Council is satisfied that there is no alternative to the proposed location.**

#### A3.3.1 Sewer Mains

- (a) Under no circumstances will Council permit a building to be erected over a sewer rising main.
- (b) Council may permit the building over a sewer main in accordance with the following:
  - (i) The maximum length of the sewer main built over by an unelevated structure (ie. Less than 1.7 metres clearance above the pipe) shall not exceed 12 metres unless otherwise authorised by Council.
  - (ii) A registered easement over the main being granted at the owner's expense.
  - (iii) Where replacement, augmentation or amplification of the sewer main is required, the pipes shall be UPVC or cast iron at a cost to be negotiated between the owner and the Council.
  - (iv) No building is permitted over a sewer manhole.
  - (v) The unobstructed personal access of minimum width 900mm shall be provided to any manhole located upon private property.
  - (vi) A building shall not be erected within the area of influence above the angle of repose of 45 degrees for normal loam/clay/sand foundations, or 60 degrees for rock foundations measured 600mm from the outside of the pipe for the trench bottom.
  - (vii) Piers designed by a professional engineer shall be provided to carry structural loadings below the invert level of the main. In all circumstances the clearances between a building and a main or



drain shall be to the satisfaction of special requirements of the Council.

#### **A3.3.2 Construction Requirements**

- a) The weight of any building shall be distributed away from any sewer main or stormwater drain by pier & beam construction. The piers shall be embedded on firm foundation at least 300mm below the invert of the pipe with a minimum horizontal clearance from the pipe of 600mm.

#### **A3.3.3 Water mains**

- a) No building is permitted over a water main.

#### **A3.3.4 Other mains**

- a) No building is permitted over a stormwater drain or easement unless special extenuating circumstances prevail, and permission is resolved by the Council.

#### **A3.3.5 Proximity to easements**

- a) A structure is permitted to be constructed up to a registered easement (but not encroaching on the easement unless permitted in the wording of the easement). If a structure is to be located within 200mm of a registered easement, Council will require the submission of a survey report at footing stage and prior to occupation of the building.

### **A3.4 Building over two or more Allotments**

- a) If building work is proposed over two or more allotments, Council may require the consolidation of these lots.
- b) If the minimum allotment size required to allow development consent to be issued within the zoning or the area necessary to allow adequate septic effluent disposal requires more than one lot, Council will require the consolidation of the lots. This shall occur prior to issue of a construction certificate.

### **A3.5 Subfloor Areas of Buildings**

Subfloor enclosures, using a material compatible with the subject structure, shall be provided. Where visible from the public road, (note: the provision of landscaping does not affect the visibility from the road) subfloor enclosure is to be provided along the road frontage with a return to the first pier on the side elevations.



### A3.6 Exhaust Fans

Any exhaust fan provided in the kitchen ceilings and walls shall be ducted directly outside to prevent the build up of condensation, fats and the like.

### A3.7 Stormwater Disposal

Final means of disposal of stormwater to Council's stormwater system must be approved by Council. The following types of disposal will generally be acceptable:

- (a) **Disposal to an interallotment drainage system with connection to the junction provided** - Where no junction is provided, a new 45° sweep is to be laid in the interallotment drain for connection. Any other form of connection is prohibited.
- (b) **Disposal to Council's kerb and gutter by connection into the outlet provided** - Where no outlet is provided in the kerb and gutter a saw cut of the kerb and gutter will be permitted and pre fabricated galvanized steel stormwater adapter approved by Council is to be placed within the kerb. A high strength concrete mix shall be used to reinstate the kerb and this must match the profile of the kerb. Where more than one outlet is to be placed within a kerb a spacing of two (2) metres between the outlets shall occur.
- (c) **Disposal to Council's road table drain** may occur provided the pipe is maintained a suitable distance from the road carriageway to ensure damage does not occur. The outlet of the pipe must be protected by the placement of solid protection, such as concrete around the outlet to prevent damage to the pipe. Other means of disposal to the table drain in areas without kerb and gutter may be accepted by Council. Details are to be submitted and approved.
- (d) **Disposal directly to Council's stormwater mains** is permitted subject to certain conditions. Details are to be obtained from Council's Engineering staff.
- (e) **On site stormwater disposal** may be permitted. On allotments with an area of less than 4000m<sup>2</sup> a hydraulic consultants report may be requested by Council to verify that on site disposal can occur without damaging buildings, cause a nuisance to neighbouring properties or create a problem through adding stormwater into the ground surface (A Geotechnical Engineer may also be required to verify this issue).
- (f) The disposal trenches shall be located a minimum distance of 5 metres from any adjoining property boundary. In circumstances where there is a larger roof and hardstand area, or soil conditions make disposal unsuitable, other means of disposal will be required. Stormwater/retention trenches must be located downstream of any septic tank effluent/sullage disposal area. Trenches, drains and pipes shall not traverse or penetrate any effluent disposal area. The typical size of trench for each downpipe is 3 metres long, 600mm wide and 600mm deep however this is dependant on soil conditions. Where





concealed gutters, box gutters, high fascia gutters (without stormports) and/or internal downpipes have been installed it is advisable that a surcharge grating mounted above the finished surface be installed adjacent to the base of the downpipe connection of the drain/pipe.

- (g) Where adverse falls occur from the roof drainage system to the final disposal point, the proposed method of drainage and disposal is to be submitted to the Council for approval. In these instances the provision of an easement with the fall of the land to Council's stormwater disposal system, is the most suitable solution. For on site disposal options see above. *A pump system for conveyance of stormwater will not be permitted.*
- (h) **Disposal of stormwater into collection tanks** will be permitted by Council provided the over flow is conveyed to a means of disposal specified in 1-6 above as appropriate. Where the water is to be used for domestic purposes, a first flush system should be installed and must be compliant with all BASIX conditions.
- (i) Stormwater runoff from areas where water may become polluted will be subject to suitable pre-treatment measures as specified by Council and other statutory authorities.

## A3.8 Structures Over Public Areas

### A3.8.1 Verandah Awnings

Refer also to BCA prescribed standards.

NB: Requirements for Seismic loadings.

- (a) Spacing of posts shall be a minimum of 3 metres.
- (b) The posts shall have a minimum size of 100mm x 100mm.
- (c) Only square section timber or metal posts shall be used.
- (d) The awning shall be 600mm from the kerb to the gutter edge.
- (e) The colour and design shall comply with any Council specified villages colour scheme and design.
- (f) The posts shall not be erected within the zone of influence of any services.
- (g) The underside of the awning shall have a minimum clearance of 3 metres above the footpath. The Council may require that any or all awning or verandahs proposed to be erected over a road be of the cantilever type.
- (h) The width of a cantilever awning that extends beyond a road alignment must not exceed 3660mm and must be a minimum of 600mm back from the roadside edge of the kerb.



### **A3.8.2 Pipes and services**

- (a) Pipes and services must not project beyond the road alignment, except as provided by this clause.
- (b) Rainwater heads may project not more than 450mm and rainwater downpipes may project not more than 150mm above a height of 2700mm above the pathway level.
- (c) In the case of an existing building, the Council may approve the projection of essential service pipes.
- (d) Construction of projections - Projections beyond the road alignment are to be constructed so that they may be removed at any time after their erection without causing the building to which they are part to be structurally unsafe and without causing a reduction in the required fire-resistance rating of any structural member of the building. Projections shall also fully comply with seismic loading requirements.

### **A3.9 Site Access Standards During Construction**

- (a) All Council assets (eg sewer manholes, stormwater systems etc.) shall be protected from damage. An inspection of the existing assets shall be carried out prior to the commencement of any work on site. Vehicular access to the site shall be via a single designated access point. This point is to be located so that the possibility of damage to Council's property is minimised during construction and shall be constructed to Council's satisfaction.
- (b) The building supervisor is responsible to ensure that all contractors, sub-contractors and delivery trucks use the designated access point. Repairs to damaged grass verges, drainage lines, concrete footpaths, kerb and gutter are to be carried out by the builder/owner/contractor to Council's specification and supervision prior to occupation of the development.
- (c) The kerb, gutter and footpath adjoining the site must be kept clear of soil and debris during the course of the construction.
- (d) If there is no kerb and gutter, the designated access point shall be provided with adequate provision to prevent the damage of any underlying services or
- (e) drains, or damage to the surface of any swale drain.

### **A3.10 Footpath Protection During Construction and Hoardings**

- (a) Hoardings – Approval from Council required prior to erection along with payment of appropriate fees.
- (b) For building construction work in commercial and industrial zones the building standard for protection of public foot paths and roads shall be:-



- (i) Type A – Fence Type Hoarding Requirements of Division of Inspection Services, Workcover Authority.
- (ii) Type B – Overhead type Hoarding Requirements of Division of Inspection Services, Workcover Authority. Hoarding standard for multi-storey construction within 3.5 metres of a public footpath or road, that exceeds a height of 7.5 metres from any point on that frontage.

## **A3.11 Waste Management and Disposal**

### **A3.11.1 Introduction**

This section of the DCP provides Council's general requirements for waste minimisation, management and recycling for development throughout the Shire. These requirements include waste management objectives and development controls derived from the NSW Department of Environment and Climate Change's Publication titled Model Waste Not DCP Chapter (dated July 2008).

### **A3.11.2 CONTROLS**

- (a) Prior to all demolition and / or some construction works
  - (i) A Waste Management Plan is required for all demolition works and /or construction works (with a value greater than \$50,000).
  - (ii) Consideration must be given to re-using existing materials, or parts thereof, on the subject site for the proposed use.
  - (iii) Applicants must demonstrate a commitment to waste minimisation by completing a Waste Management Plan that will minimise material going to landfill.
  - (iv) The Waste Management Plan must address the following requirements (as a minimum):
    - Volume and type of waste, land fill and recyclables to be generated.
    - Storage and treatment of waste and recyclables onsite.
    - Facilities proposed to receive residual waste and recyclables.
  - (v) Where the building contains asbestos, Council will ask for verification of the disposal technique used, the amount removed and the disposal location for the asbestos materials. This documentation will need to be submitted within 7 days of off site disposal.
  - (vi) Receipts from the disposal of residual waste and recyclables are required to be retained by the applicant in order to confirm the lawful disposal of these materials.



### A3.12 During Construction

- (a) Construction activities are to be managed so that waste is sorted, reused or recycled, where possible. Potentially windblown rubbish such as foam, cardboard or plastic must be stored on the site within a receptacle with a tight fitting, secure lid.
- (b) Any fill removed from the site shall only be placed on an approved waste disposal facility and as detailed in the Waste Management Plan.
- (c) It is not acceptable to dispose of all waste material generated from construction to landfill. Instead, applicants must demonstrate a commitment to waste minimisation. The Waste Management Plan must demonstrate implementation of the following during construction (as a minimum):
  - Installation of waste storage receptacles, and
  - Sorting of waste into material types.
- (d) Receipts from the disposal of residual waste and recyclables are required to be retained by the applicant in order to confirm the lawful disposal of these materials.

A Waste Management Plan Template is available at Council or on Councils website as part of the land use application forms.

### A3.13 Inspections relating to water, stormwater, sanitary drainage and effluent disposal systems under a Section 68 approval under the Local Government Act 1993

Council shall be notified twenty four (24) hours in advance that the following works are ready for inspection. A satisfactory inspection shall be carried out prior to covering any completed works.

- (a) Stormwater drains if acting as the PCA (NB Council inspects stormwater drainage within properties only where a Hydraulic Consultant has NOT completed a hydraulics design)
- (b) Stormwater absorption trenches
- (c) Internal sewer drains under water test
- (d) External sewer drains under water test
- (e) Water plumbing
- (f) Pump well and associated pump lines
- (g) Septic tank or aerated wastewater treatment system

#### Absorption trenches

- (a) Final inspection of water plumbing, on site septic disposal, sanitary drainage and stormwater drainage
- (b) Works in relation to road reserves, footpath, kerb and gutter, road shoulder and drainage within public lands or road reserves



### **A3.14 Civil Design & Certification**

On completion of works and prior to occupation, certification from a Professional Engineer shall be submitted to Council detailing that all internal civil works are in accordance with the approved plans and specifications for developments where these plans were required by Council. The relevant Hydraulic Consultant shall certify that stormwater and any fire services installed are in accordance with the Council accepted design.

### **A3.15 Re-sited Buildings**

- (a) A development application for a re-sited building shall be accompanied by photographs of all elevations of the building.
- (b) Council will carry out an inspection of all proposed re-sited buildings located within the Shire and may require inspection of buildings located outside of the Shire. If Council does not require an inspection of the building the following reports are required:
  - (i) a letter from a professional engineer regarding the structural stability and suitability of the building.
  - (ii) a certificate from a pest control company, with regard to the presence of termites or borers.
  - (iii) a statutory declaration to accompany photographs of all elevations of the dwelling stating that the pictures are a true representation of the dwelling and its current condition.
  - (iv) Additional items for development application:
- (v) A bond is payable at time of lodgement of application, as per Council's revenue policy.
- (vi) A copy of a public risk insurance policy which covers the transit of the building is to be submitted with the application. Such a policy shall be for not less than \$2 million.
- (c) The requirements of the NSW Police, Roads and Traffic Authority, Integral Energy and any other statutory authority as appropriate are to be obtained and their requirements adhered to in the relocation of the subject building
- (d) The building shall be completed to a satisfactory standard (as determined by Council Officers) within six months of being placed on the site. The electrical installation is to be inspected and approved by the local supplier.



### **A3.16 Property Address – Street and Rural numbering**

- a) After completion of a building, the mailbox or building must be identified with letters or numerals with a minimum height of 38mm, of colour contrasting with the area of attachment.
- b) Kerbs: Letters and numerals to have a minimum height of 100mm.
- c) Rural numbering is to be fixed at the entry to the property and is available from council's offices.

### **A3.17 Unformed Roads**

#### **A3.17.1 Introduction**

Vehicular access to the site shall be provided in accordance with Council's Unformed Roads Policy. An application to construct the road under the Roads Act is to be made prior to the release of any development consent, with the road to be constructed prior to the occupation of the building. A copy of the policy follows.

Safety Workers Compensation Insurance is to be held by the contractor for all employees engaged for works relating to the development that work within Council's roads and other public land. All vehicles and plant used shall be registered and covered by a third party personal and third party property insurance policy.

Traffic Control/Safety Prior to any work commencing which affects Council's roads, the applicant is to notify Council and obtain relevant approvals. A traffic Management Plan, prepared by a suitably qualified consultant, may be required with the Development/Construction Certificate application.

#### **A3.17.2 Policy for the Upgrading of Unformed Roads**

If a landowner intends to gain vehicular access to their land along an unformed road, then the following conditions will apply:-

- (a) A written application to conduct a formed road must be lodged, stating the reasons for the proposal.
- (b) The application will be assessed, and written conditional approval may be granted:-
  - (i) In the case of access to a single lot, the access to generally take the form of a 4m wide gravel surfaced road, with culverts, generally located in the centre of the road reserve. Steep grades will require sealing of the road and lining of table drains in accordance with normal standards.
  - (ii) In the case of access to multiple lots in the same ownership, the access will be conditioned as if the application was subdivision to create the existing lots.
- (c) If an approval is given, standard conditions will apply, including:-



- (i) Normal engineering standards of road construction
  - (ii) Provision for traffic in accordance with the relevant Australian Standard
  - (iii) Approval by Council's Engineers of the contractor, following proof of the usual licences, insurances, etc
  - (iv) Approval by Council's Engineer of the materials and methods proposed to be used
- (d) Following construction of the road in accordance with the conditional approval, and its acceptance by Council's Engineer, Council may assume responsibility for its maintenance after occupation of a dwelling served by the road only in residential or village zones.

### **A3.17.3 Background to the Policy**

#### **(a) Legal Framework**

- (i) The relevant legal framework is contained in the Roads Act 1993.
- (ii) Council has no statutory duty to carry out works of construction or repair of public roads, or to keep them in repair.
- (iii) It is an offence to carry out any work on a public road without the consent of Council. (Section 138)
- (iv) Council can give this consent subject to conditions. (Section 139)
- (v) Council can revoke this consent at any time and for any reason. (Section 140)
- (vi) If the road is a Crown road rather than a public road, the relevant State Government Department will only permit its upgrading if Council will then accept it as a public road. Therefore, Council can impose identical conditions to those that would apply to a public road.

#### **(b) The principles behind the policy are:-**

- (i) Council has an obligation to ensure that legal access is available to all lots. Council has NO obligation to provide physical access to lots.
- (ii) The market value of a lot reflects the amenities which benefit the lot, such as water supply, sewerage, gas, sealed road access, etc.
- (iii) Council should not be required to provide vehicular access at its cost as this is effectively subsidising the purchase price of the lot.
- (iv) Owners of a lot on an unformed road who genuinely wish to build on the land should be able to do so at a reasonable cost, including the cost of provision of vehicular access.



- (v) Council needs to minimize its exposure to subsequent complaints and requests for construction and sealing of the formed access road, by ensuring that it is built to an appropriate standard.
  - (vi) Owners or developers of multiple lots located on an unformed road who intend to develop and resell the lots should be required to provide access to a standard that would apply to subdivision. In such cases, the developer should be prevented from the sequential extension of the road and sale of the lots one at a time, by “bending” the policy.
- (c) The intentions of the policy are:-**
- (i) To allow property owners to provide access to their land at reasonable cost.
  - (ii) To minimize requests for Council to further upgrade or maintain a road provided by a property owner.
  - (iii) To ensure that the effects on the environment are considered and adverse impacts minimised.
  - (iv) To ensure that de-facto land developers are required to provide a standard of road identical to that required by subdivision.





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## Section 4 Signage

### A4.1 Introduction

Council recognises that signage provides a key opportunity to make a positive contribution to all development, including industrial development.

### A4.2 Objectives

Council has adopted a series of broad planning objectives for all signs on Industrial zoned land:

- (a) Signs should reflect well on business standards within the Shire as a whole.
- (b) Signs should inspire confidence in the business or product being advertised.
- (c) Signs shall be designed to complement the overall design style of the development.
- (d) Signs shall only relate to a function which could reasonably be expected to be carried out in that neighbourhood.
- (e) Signs shall not offend or adversely affect the amenity of the people who live in, work in, or visit the site in terms of their size, appearance, wording, illumination, overshadowing or in any other way.
- (f) Signs shall be simple, clear and effective in conveying their message.
- (g) Signs shall not comprise objects such as cans, bottles and other three-dimensional proprietary and like representations.

### A4.3 General Requirements

There are a number of mandatory criteria which all signs (irrespective of their type, location, size, design etc) must satisfy. These are specified below.

- a) Signs associated with multiple building or site occupancy, as in shopping arcades and business services occupying first floor office suites, shall adopt a single co-ordinated approach to advertising by means of clear building identification and appropriately located 'shared' directory facilities.



- b) Signs shall achieve a high degree of safety and not represent hazards to passing drivers or pedestrians, transport workers or other property.
- c) Signs shall not be confused with, or inhibit instructions given by, official traffic management facilities and signs.
- d) Signs shall only appear on land where the advertised activity or development is carried out, except signage that is permitted under the provisions of Council's Tourism and Related Signage Policy.
- e) Signs shall reflect the quality of the business, services or product to which they relate.
- f) Signs shall be simple in both design and message presentation and legible in both colours and text style.
- g) Signs shall complement the finishes and colours of the building/place to which it is attached/erected.
- h) Signs shall relate to the architectural design lines of the building and adjacent buildings, particularly those constructed prior to 1950.
- i) Signs shall maintain the existing 'balance' of the building.
- j) There will be a limit on the total number of signs within a locality, particularly above awnings.
- k) All buildings will be clearly numbered on the face of the building.

#### **A4.4 Signage requiring Council consent**

The following signage requires Council consent. The Application must include a copy of the proposed art work for the sign as well as details of the dimensions of the proposed sign and a diagrammatic indication of the proposed location of the sign.

##### **A4.4.1 Free Standing Business Identification Signs on Business Premises**

These provisions apply in respect of signs to be located on sites on business premises where the development, or public access to the development, is set back from the street alignment by 3 or more metres.

- (a) A maximum of one (1) free standing business identification sign shall be permitted in the area between the building and the street alignment where such sign may be single or double sided and must be framed.
- (b) A free-standing sign may run either parallel to the street or perpendicular to the street frontage.



- (c) A free-standing sign shall be located within an overall sign structure envelope with dimensions not exceeding height: 4.5 metres, width: 1.5 metres, depth: 300mm.
- (d) No part of the sign structure shall overhang Council's footpath, nor the public road reserve.
- (e) The sign shall be supported by 'simply designed' pole supports, avoiding large exposed supporting frameworks, unless in the opinion of the Council such framework is intentionally designed as an architectural feature.

#### **A4.4.2 Signage for Multiple Premises**

There are a number of different instances where multiple businesses share or belong to one overall industrial development. These include:

- (a) An industrial complex with frontage (at either end) to either a public street, car park or other public area such as a park.
- (b) premises where shops occupy ground floor space (both with or without direct street frontage) and professional offices occupy upper levels of the same building.
- (c) industrial developments where buildings are set back from a public road and most often have frontage to a car park.

In these situations the following controls apply:

- (a) Signage for 'hidden' premises, ie no direct street or public area frontage, shall be designed so that such signage is shared between all businesses that occupy the same development.
- (b) The only additional opportunity for signage in these 'multiple premises' instances is for a directory sign located at a strategic location on the ground level frontage.
- (c) Prominent street numbering on building facades can also assist with the identification of 'hidden' premises. Street numbering is encouraged and does not require planning approval.
- (d) In multiple unit industrial complexes, where buildings are set back from a public road and have frontage to a car park, pedestrian area or the like, Council may permit a free standing directory sign, which will be assessed on its merits, based on the objectives for signs in industrial zones.
- (e) In multiple unit industrial complexes without premises having frontage to a car parking area or external pedestrian area etc, signage attached to external building facades will be assessed on its merits based on the objectives for signs in industrial zones.



- (f) Signage in respect of development with frontage to a car park or external pedestrian area within view of a public street or place, shall comply with the requirements for signs in industrial zones as they would apply to premises having frontage to a public street.

#### **A4.5 Industrial Signage for which no Council consent is required**

Provided applicants comply with the above objectives and requirements and the following controls, Council consent is not required for the following forms of signage.

If the proposed sign exceeds any of the maximum standards listed below, an Application must be lodged with Council. The Application must include a copy of the proposed art work for the sign as well as details of the dimensions of the proposed sign and a diagrammatic indication of the proposed location of the sign.

##### **A4.5.1 Business identification sign in industrial zones**

- (i) Maximum size—1m<sup>2</sup> per metre of frontage for the first 10m.
- (ii) Must be securely fixed by rigid metal supports.

##### **A4.5.2 Directional signs, name plates, advance traffic warning signs, community information signs and law enforcement signs erected by the council or other public authorities.**

- (i) Signs erected over a public road must be at least 0.6m from the vertical projection of the kerb line, and suspended at least 2.6m above existing ground level.

##### **A4.5.3 Real estate signs, advertising that the premises on which they are displayed are for sale or lease must comply with the following:**

- (i) Maximum 2 signs per premises in residential areas with a combined total surface area of 3m<sup>2</sup>.
- (i) Maximum size in business or industrial areas—4.5m<sup>2</sup>.
- (ii) Located wholly within the property boundaries of the land to which the sign relates, or if on the footpath, must be flush against the property boundary.
- (iii) Must not be displayed for more than 7 days after the commencement of the letting or sale of the property, to a maximum of 6 weeks after the exchange of contracts.
- (iv) Must not be erected on public land.
- (v) *Open for Inspection/Open House* signs permitted, but must be removed on the day of opening.



#### **A4.5.4 Property address sign**

- (i) One sign per premises.
- (ii) Maximum size—1m<sup>2</sup> in residential zones and 1.5m<sup>2</sup> in all other zones.
- (iii) Maximum height—1.8m in residential, rural or environmental management zones.
- (iv) Must not be illuminated in the residential, rural or environmental management zones.
- (v) Located wholly within property boundaries of the land to which the sign relates, or is flush mounted to the front fence or front wall of a building as long as the sign does not protrude beyond the physical limits of that fence or building.

#### **A4.5.5 Temporary signs:**

- (i) Must only announce a local event of a religious, educational, cultural, political, social or recreational character or relates to a temporary matter in connection with the event.
- (ii) Must not include advertising of a commercial nature (except for the name of the event's sponsor).
- (iii) Must not be displayed earlier than 14 days before the day on which the event is to take place or commence and must be removed within 7 days after the completion of the event.
- (iv) Must not be a fly poster taped to poles, hoardings or buildings.

#### **A4.5.6 Display Flags**

- (i) Flags used for advertising in business areas shall not be additional to the maximum number of signs permissible under this plan, i.e. if an applicant seeks approval for an above awning sign and flag(s), Council will not consent to both types of signage as it would exceed the intended number of signs for that circumstance.
- (ii) Council will consider proposals for advertising flags in lieu of other types of signs in commercial zones, and such will be considered on their individual merits and must satisfy the objectives for this section of the DCP.

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## Section 5 Outdoor Lighting

### A5.1 Introduction

Council is concerned that poorly designed and improperly located external lighting can create significant light and glare pollution with adverse impacts on both the population and the environment.

Where buildings are generally locked at night, external lighting is most usually installed to deter intruders, however, a number of studies indicate that there is no conclusive correlation between night lighting and a reduction in the crime rate. Most property crime is still committed during the day, or inside lit buildings. In fact, outside illumination can draw attention to the building and help criminals see what they are doing. Outdoor lighting should provide real security, not just a feeling of safety.

The external lighting of residential buildings or buildings frequently used at night is essential for the convenience and safety of residents and visitors, but again, suitable lighting fixtures and techniques are necessary to ensure there are no adverse impacts. Similarly, external lighting associated with outdoor activities such as tennis courts, outdoor recreation areas or pathways can impact on neighbouring dwellings.

People are not the only ones affected. Researchers are only now beginning to understand the long term impacts of artificial night light on ecosystems. As rural areas are developed, light pollution can produce a state of continual 'twilight' which can affect wildlife breeding and feeding habits as well as the habits of the moths and other insects on which such wildlife depends. In some cases, certain trees may shed their leaves out of cycle, further disrupting the natural food chain.

The quality of the night sky is a highly valued asset of the Southern Highlands environment. Unlike city areas where ambient light significantly diminishes the ability to see the night sky, the Southern Highlands affords excellent night sky visibility and Council wants to protect this valuable asset.

Poorly directed external light is also a waste of the energy used to generate it and so contradicts Council's objectives for ecologically sustainable development.

These significant residential and environmental implications of light pollution can be easily avoided, without compromising the safety and convenience which external night lighting is intended to provide, through ensuring that new lighting fixtures are of a "full cutoff" type, that is, a type of fixture from which no light is emitted above the horizontal and no light dispersion or direct glare shines above a 90-degree, horizontal plane from the base of the fixture.

Using such fixtures is beneficial in three ways. First, glare is significantly decreased or even eliminated. Uncomfortable or temporary blinding from a glaring light can distract the eye and cast harsh shadows that create easy concealment opportunities for a trespasser. Second, shielded fixtures help control both the placement and the amount of light. Entrances, windows, and gates can be the focal points of a lighting



scheme that does not over illuminate, but allows adequate and uniform visibility that dissipates shadows. Third, the downward concentration of light created by fully shielded fixtures typically requires a lesser wattage lamp than traditional lighting because every bit of illumination is directed where it can make a difference. A lesser wattage lamp can be used with associated cost benefits.

In addition to the “full cutoff” design, timers, dimmers, and motion sensors can all contribute to reducing the impact of night-time lighting with additional benefits. For example, lights triggered by motion sensors, are much more effective in indicating the presence of an intruder than lights which are on all night.

## **A5.2 Objectives**

In assessing any land use application which includes the provision of external night lighting, Council will have due regard to the following objectives:

- (e) Lighting for security purposes shall be adequate for that purpose without drawing unnecessary attention to the development;
- (f) Lighting shall not adversely impact on surrounding development;
- (g) Lighting shall not create ‘twilight’ impacts on the surrounding environment; and
- (h) Lighting shall not diminish the quality of the night sky.

## **A5.3 Controls**

- a) Outdoor lighting must be a “full cutoff light fixture”, i.e. a type of fixture with no light emitted above the horizontal and no light dispersion or direct glare to shine above a 90-degree, horizontal plane from the base of the fixture.
- b) All outdoor lighting fixtures shall be designed, installed, located and maintained to avoid glare on to adjacent properties or streets
- c) All direct illumination shall be kept within the boundaries of the subject property.
- d) Accent lighting, when so approved, shall be directed downward on to the building or object and not toward the sky or on to adjacent properties. Direct light emissions shall not be visible above the roof line or beyond the building edge.
- e) Spot lighting on landscaping and foliage shall be limited to 150 watts incandescent. The lamp shall be shielded and not create disabling or nuisance glare.
- f) Timers shall be accurately set to ensure that lighting is used only when natural light is insufficient.



## Section 6 Development Near Rail Corridors & Busy Roads

This section applies to development on land which is adjacent to a rail corridor or a busy road corridor. The contents of the Department of Planning's document "Development near Rail Corridors and Busy Roads – Interim Guideline" (which may be viewed at the Customer Services Counter of Wingecarribee Shire Council) must be consulted.

### A6.1 Development Adjacent to a Rail Corridor

#### A6.1.1 Controls

- (i) The protection of the stability of the nearby rail corridor and railway land during excavation and construction of any development must be ensured.
- (j) Any excavation greater than 2m in depth and within 25 metres of the rail corridor will require concurrence with the relevant authority under clause 86 of SEPP (Infrastructure) 2007.
- (k) Drainage from the development is to be adequately disposed of so as not to be diverted on to the rail corridor.
- (l) Appropriate fencing is to be constructed to clearly separate the development from the railway land so as to avoid people straying on to railway land, either during construction or following completion of the development.
- (m) Appropriate landscaping and fencing is to be installed to screen and soften views of the rail tracks from the development and to help alleviate the 'sense' of exposure of the development to the source of rail noise.

#### A6.1.2 Introduction

Council will require concurrence from the relevant regulatory authority for several roads within Penrose and Wingello villages. Generally, access to development from these roads is not encouraged and will be limited to existing access points only. It should be noted, however, that even existing access arrangements may be reviewed in light of certain redevelopment proposals.

Land Use Applications involving land fronting state authority regulated roads need to comply with the following controls.

#### A6.1.3 Controls

Council shall not grant consent to the carrying out of development on any land to which this Clause applies unless it is satisfied that adequate provision has been made to ensure that such development:

- a) avoids any new direct vehicular access to any relevant road and removes any existing access where alternative rear lane or other access is achievable.





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- b) provides that any essential access to any relevant road be designed so that all vehicles enter and leave the site in a forward direction.
  - c) restricts vehicular access, car parking and loading/unloading facilities to an alternative access, such as a rear lane, where such access is available.
  - d) makes an appropriate Section 94 developer contribution towards the provision of public car parking where only a single frontage to a relevant road is available.



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## Section 7 Telecommunications and Radiocommunications Infrastructure

### A7.1 Introduction

The following objectives and provisions apply to telecommunications and radiocommunications infrastructure (including broadcasting infrastructure covered under the *Telecommunications Act 1997* and the *Radiocommunications Act 1992*).

New telecommunications and radiocommunications infrastructure requires Council development consent, unless it is exempt by Commonwealth legislation such as the Telecommunications (Low Impact Facilities) Determination 1997 or is classified as exempt or complying.

As part of a carrier's consultation obligation for telecommunications and radiocommunications exempted by Commonwealth legislation, Council encourages a written submission demonstrating consistency with the objectives and provision below.

The following objectives and provisions do not apply to temporary emergency services or domestic satellite receivers.

### A7.2 How do these provisions relate to Commonwealth legislation?

#### *Telecommunications Act 1997 and Radiocommunications Act 1992*

These provisions clarify the expectations of Council on carriers who operate under the *Telecommunications Act 1997* and *Radiocommunications Act 1992*.

#### *Telecommunications Code of Practice 1997*

These provisions clarify and standardise the expectations of Council in respect to land access situations.

#### *Telecommunications (Low-Impact Facilities) Determination 1997 (LIF Determination)*

While these provisions do not have the authority to override the LIF Determination, they nevertheless provide advice to carriers about the expectations of Council and require voluntary cooperation.

#### *Code for the Deployment of Radiocommunications Infrastructure (ACIF, 2002)*

These provisions broaden the scope of the ACIF Code by applying consistently to not only carriers and their agents, but also builders and operators of all RFR-Emitting infrastructure, including those operating under the *Radiocommunications Act 1992*. Consultation with Council is required under this code.



### National Broadband Network (NBN Co) Rollout

The National Broadband Network is a wholly owned Government Business Enterprise (GBE) that is intended to provide a network of infrastructure to carriers at wholesale prices. This network will be constructed using a combination of fixed wireless, optical fibre and satellite communications devices to connect residences and businesses. Most of the infrastructure will be exempt under the *Telecommunications (Low Impact Facilities) Determination 1997*. As a public authority the balance will be exempt under the *NSW Infrastructure SEPP*.

## **A7.3 OBJECTIVES**

This Section identifies Council's social and environmental objectives with regard to the development of telecommunications and radiocommunications infrastructure within Wingecarribee Shire.

### **A7.4 Social**

- (i.) To ensure that the general public and local communities have connection to up-to-date telecommunications technology
- (ii.) To apply the precautionary principle through prudent location of telecommunications and radiocommunications infrastructure to:
  - a. Minimise EMR (Electro-Magnetic Radiation) exposure to the public
  - b. Avoid or minimise impacts on sensitive surrounding land uses, particularly with regard to visual impact.
  - c. Achieve equity for all stakeholders by endeavoring to balance their various needs of access, EMS Potential, visual impact and service provision.
  - d. Provide mechanisms by which information can be disseminated to ensure that community is adequately informed and empowered to participate in the planning/decision making process.

### **A7.5 Environmental**

- (i.) To help implement principles of urban design in respect to telecommunications and radiocommunications infrastructure
- (ii.) To promote good industrial design of infrastructure
- (iii.) To provide infrastructure that is visually compatible with surrounding character and locality/visual context with particular regard to heritage buildings/areas and cultural icons.
- (iv.) To prevent any adverse impact on the natural environment
- (v.) To restore the site after discontinuation or removal of infrastructure



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## **A7.6 CONTROLS**

### **A7.6.1 Australian Standards**

All facilities are required to comply with relevant Australian standards, including EMR standards.

### **A7.6.2 Visual Amenity**

Carriers are to design antennas and supporting infrastructure in such a way as to minimise or reduce visual and cumulative visual impact from the public domain and adjacent areas.

### **A7.6.3 Infrastructure must;**

- (i.) The infrastructure design will respect the amenity of the local context, particularly ensuring that such development shall:

### **A7.6.4** (a) Be appropriate in colour, texture, form, bulk and scale.

- (b) Be well designed
- (c) Be integrated with the existing building structure unless otherwise justified to Councils satisfaction.
- (d) Have concealed cables where practicable and appropriate
- (e) Be unobtrusive where possible
- (f) Be consistent with the character of the surrounding area.

- (ii.) Infrastructure must be removed when it is no longer being used for transmission.

- (iii.) The site must be restored and rehabilitated following construction of the infrastructure.

- (iv.) Demonstrate compliance with the provisions of Section A1.6 to A1.11

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**Note:**

Landlord requirements are not considered adequate justification for non-compliance

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## A7.7 Co-Location Requirements

**A7.7.1** Co-Location is the practice of locating a number of different telecommunications facilities, often owned by different carriers, on one facility or structure.

- i. Where co-location of telecommunications facilities are proposed the impact of the development is to be assessed against:
  - (a) Cumulative emissions of all co-located telecommunications facilities;
  - (b) Visual impact of co-located telecommunications facilities
  - (c) The physical and technical limits to the amount of infrastructure that masts and towers are capable of supporting; and
  - (d) Whether the required coverage can be achieved from the location
- ii. Carriers shall demonstrate a precautionary approach and effective measures to minimise the negative impacts of co-location

## A7.8 Location

- (i) **The applicant must demonstrate that, in selecting a site, it has adopted a precautionary principle approach to minimising EMR exposures consistent with Section 1.5 of the ACIF Code.**
- (ii) The preferred location for telecommunications and radiocommunications infrastructure is industrial areas, low use open space and commercial centres, rural areas and infrastructure corridors such as railways and highways.
- (iii) Radio Communications and Telecommunications facilities are to be located a minimum distance of 100 metres from residences where they are to be installed in residential areas. In setting this distance Council supports the precautionary approach to protect residential amenity.
- (iv) The proposal is to avoid or minimise the physical impact of any facility on endemic flora and fauna habitats.
- (v) The proposal is to avoid or minimise the visual impact on heritage significance of adjacent, adjoining or surrounding heritage items or conservation areas listed in Wingecarribee LEP 2010
- (vi) The applicant shall demonstrate particular consideration of sensitive land uses especially where a telecommunications or radiocommunications facility is proposed that is not ancillary to its primary function (see co-location above) Sensitive land uses include:
  - (a) Where occupants are located for long periods of time (eg, Residents).
  - (b) That are frequented by young children (eg, schools and child care centres) and



- (c) Where there are people with particular health problems (Hospitals and child care centres)

### **A7.9 Physical Design**

- (i) Infrastructure must be of high quality design and construction.
- (ii) Proposals should consider the range of available alternative infrastructure including new technologies to minimise unnecessary or incidental EMR emissions and exposures, as required by Section 5.2.3 of the ACIF Code
- (iii) The plan for the facility must include measures to restrict public access to the antenna(s). Approaches to the antenna must contain appropriate signs warning of EMR and providing contact details for the facility's owner/manager.
- (iv) The minimum requisites that shall apply where relevant are the BCA and the relevant Australian standards. The applicant must provide Council with certification to demonstrate compliance with the BCA and other standards

### **A7.10 Public Health**

- (i) The applicant is to demonstrate the precautions it has taken to minimise EMR exposures to the public.
- (ii) The applicant is to provide documentation to show that the proposed facility complies with the relevant Australia exposure standard.
- (iii) The applicant is to provide a mapped analysis of the cumulative effect of the proposal.
- (iv) A Community Consultation Plan is required for all proposals requiring Council consent detailing how the consultation is to be conducted and how the results will be forwarded to Council



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### **A7.11 Environmental Impacts**

- (i) This clause applies to land zoned E2 Environmental Conservation, E3 Environmental Management and E4 Environmental Living
- (ii) Development to which this clause applies requires development consent.
- (iii) The applicant is to avoid or minimise the physical impact of any proposed facility on the visual aspect of a location.
- (iv) New installations should consider the use of renewable energy sources to minimise the need for connection to the conventional power grid (particularly in remote locations), so that such installations are self sufficient in terms of energy supply and to reduce the reliance on conventional power sources.

### **A7.12 Heritage Impacts**

- (i) The applicant is to provide a heritage report/impact assessment where the installation of infrastructure may impact upon a heritage item or property located in a conservation area.



# **Part B**

# **Industrial Development Controls**





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## PART B INDUSTRIAL DEVELOPMENT CONTROLS

### B.1 Subdivision

#### Objectives

- (A) To ensure subdivision results in lots that are suitable for a range of industrial developments.
- (B) To ensure safe and efficient vehicle and pedestrian access and movement within a site.
- (C) To facilitate the subdivision of land, and prevent the excising of land that may be integral to the function of a development.
- (D) Encourage the consolidation of existing lots.
- (E) To encourage subdivision design that allows water and energy efficiency and good solar access

#### Controls

##### **a. Minimum Lot Size and Frontage.**

- (i) The minimum lot size created by a subdivision on industrial zoned land is 1,500 m<sup>2</sup> (excluding any access handle).
- (ii) The minimum street frontage of a lot created as a result of a subdivision shall not be less than 30 metres (excluding any access handle)

##### **b. General**

Subdivision Design must comply with Council's technical Specifications for Engineering Standards.

- (i) Subdivision proposals must demonstrate that the proposed configuration is suitable to the functional and operational needs of future site development. Where the configuration is marginal, it may be necessary to provide an overlay of site development to demonstrate compliance or justification for non-compliance.
- (ii) Subdivisions must demonstrate due regard to the natural and physical features of the land and that an industrial building, sufficient parking, loading and unloading, circulation and landscape areas can be constructed on any proposed site.
- (iii) Lots must be connected to essential services (water, sewer, electricity and telecommunications) with capacity to accommodate the demands generated by proposed development. Any proposal that requires a greater service capacity than is currently provided will need to be upgraded, at the proponent's expense, prior to the



issue of a Subdivision Certificate. Certificates for the provision of these services will be required prior to the release of a Subdivision Certificate for registration with the Land and Property Information (LPI) Office (this is the old Land Titles Office).

- (iv) New internal access roads, which will revert to Public Road Reserve, must be designed with a minimum road reserve of 20 metres.

## **B.2 Building Site Coverage**

### Objectives

- (A) To ensure Industrial Buildings are able to provide ancillary facilities (car parking, circulation, landscaping, open space).
- (B) To ensure Industrial Buildings do not result in an overdevelopment of the site.
- (C) To contain the bulk and scale of Industrial Buildings.

### Controls

#### **a. Maximum Building Footprint**

- (i) The maximum building footprint shall not be greater than 65% of the site area. (Building footprint means that part of a site occupied by a building)
- (ii) Buildings in the IN3 Heavy Industrial zone with an area greater than 25% dedicated to office or showroom purposes will need to substantiate, by evidence to the contrary, that the location is necessary because either no suitable business zoned land is available, or that the use is of a type that location in a business zone is not desirable.

#### **b. Floor Space**

The Floor Space is used to calculate site coverage and car parking.

Mezzanine levels will generate additional car parking on site which must be provided. Therefore so that all occupants within an industrial complex have an equal opportunity to install a mezzanine level within their unit, the mezzanine in any industrial development including a single building or a unit complex is not to exceed 35% of the ground floor area of the individual building or unit. This therefore allows an upper maximum Floor Space Ratio of 1:1 assuming a maximum 65% building footprint as well as a maximum 35% mezzanine throughout the complex.



- (i) The mezzanine floor of any building shall not be more than 35% of Building Footprint. Additional mezzanine floor area can only be exceeded where it can be demonstrated that adequate car parking can be provided on site.

### **B.3 Building Setbacks**

#### Objectives

- (A) To provide satisfactory separation between industrial buildings, the streetscape and adjoining buildings.
- (B) To prevent land use conflict between industrial and other land-uses.
- (C) To provide safe and efficient ingress and egress in and around industrial properties.
- (D) To provide sufficient setbacks along major roads for the planting of landscape elements so as to screen industrial development.
- (E) To provide flexibility for good design.

#### Controls

##### **a. Front Building Setback**

The following formula shall be applied to each change in building height.

Variation to the building setback may be considered for parapet walls.

Justification for the variation must be submitted with the Development Application. Each proposal for variation will be determined on its merits. The minimum setback shall be 5.0 metres.

- (i) Local Roads

The minimum Front Building Setback is to be 10 metres

- (ii) Arterial or Main Roads

The minimum Front Building Setback is to be 20 metres of an existing or proposed alignment.

- (iii) Secondary Frontages (corner allotments)

Secondary Street Frontage: Where an industrial building has a Frontage to more than one street the above setback applies to at least one frontage while a setback from the other street shall be four (4) metres minimum.

##### **b. Side Setback**

- (i) Large Buildings

The minimum Side Boundary setback is to be 6 metres.

Section C2.3 of the BCA requires large buildings (>18,000m<sup>2</sup>) to provide at least a 6 metre access around the building for emergency vehicles.



## (ii) Small Buildings

The minimum Side Boundary setback may be 0 metres

Section C2.3 of the BCA permits buildings (< 18,000m<sup>2</sup>) to have a zero lot-line to properties adjoining industrially zoned (IN1, IN2, or IN3) land where compliance with the fire safety provisions can be demonstrated. A zero side setback is not permitted to properties adjoining residential land.

## (iii) Buildings adjoining Rural, Residential zones or Riparian land.

The minimum setback from all boundaries on properties adjoining rural and residential zoned land or a riparian area is 10 metres. This setback can be offset with the addition of dense landscaping that obscures the impact of any structures along the common boundary.

**c. Rear Setback**

## (i) Immediately adjoining Residential and Non-Industrial Zoned land

a. 10 Metres

## (ii) Adjoining Industrial Zoned land

a. 0 metres subject to compliance with the Building Code of Australia Fire Rating requirements.

## (iii) Immediately adjoining riparian and protected areas

a. 10 metres or in accordance with Sydney Catchment Authority (SCA) or Hawkesbury Nepean Catchment Management Authority (HN CMA) requirements.

**B.4 Building Design**Objectives

- (A). To minimise the impact of industrial development on the locality and adjoining land-uses.
- (B). To provide building designs that are easily identifiable and readily located from public roads.
- (C). To incorporate innovative technologies into new developments to reduce ongoing water and energy use and maintenance costs.

Controls**a. Height**

The Height of any industrial building, measured as a vertical distance from any point on the roof of the building to the ground level immediately below that point, shall not be greater than

- (i) 15 metres.



Any building proposed in excess of this limit will be required to show good cause for the departure from this control.

**b. Visual Amenity, Materials, Colours and Finishes**

External facades (including roofs) shall use material, colours and finishes that will not be reflective or cause the sun to reflect off surfaces onto other properties. For example glare can travel great distances where lighter colours and smooth surfaces reflect the sun during the day (due also to the angle of the surface). Darker colours also blend in with surrounding vegetation more easily than lighter colours. These elements must be considered when designing the premises and any ancillary structures.

Articulation should be used where facades (longer than 10 metres) will dominate the property frontages.

**c. Design and Appearance**

Passive solar energy and ventilation is to be incorporated into the design of buildings to minimise reliance on non-renewable energy use. New development must consider building design and operation measures that reduce energy consumption relative to conventional buildings. These measures could include;

- Free-spinning ventilation ducts.
- Using hand operated louvres or (roof mounted) wind turbines.
- Effective use of vertical and horizontal cross-flow ventilation.
- Use of renewable energy sources such as solar heat pump water systems.
- Use of renewable or recycled building materials
- Insulation of roof and walls to Australian Standards
- Use of sustainable energy technologies such as photo-voltaic cells and co-generation.

Water conservation principles are to be incorporated into the design of new buildings to minimise reliance on reticulated water. (See Section A 2.4)

Devices used in the functioning of the building, such as mechanical ventilation and air conditioning plant, ventilation ducts, hoppers, waste storage containers and the like are to be located towards the rear of the property or suitably screened so they can not be seen from a public place.

Any external lighting for a building (including security lighting) must be directed towards the site from the property boundaries. Any lighting fixed to buildings must contain 'Light Spill' to within the property boundaries by the use of barndoors (shutters). It is recommended that night-time



security lighting be operated by motion sensors set to extinguish lighting within a reasonable timeframe.

#### d. Signage

Any signage proposed for an Industrial property must comply with *Advertising and Signage Policy* and be consistent with *State Environmental Planning Policy 64 – Advertising and Signage* (SEPP 64). Please refer to SEPP 64 for the provisions of that plan.

Some signage, advertising structures and displays are included as exempt development (that is, do not require development consent) under Clause 16 of the Wingecarribee Local Environmental Plan 2010.

If any signage is to be erected for a business, it must;

- (i) clearly state the street number of the property;
- (ii) clearly state the business name (and any logo); and

Council's *Advertising and Signage Policy* for Industrial Land is attached to this DCP as Appendices with the following allocation.

Appendix 3:	Councils Objectives for Signs in Wingecarribee Shire.
Appendix 4:	Sign Definitions (including diagrams)
Appendix 5:	Design Principles
Appendix 6:	Assessment Criteria (from SEPP 64)
Appendix 7:	Signs that do not require Council approval
Appendix 8:	Requirements for Signs that need Council approval

## B.5 Access and Parking

### Objectives

- (A). To maintain traffic circulation on and around industrial properties
- (B). To minimise traffic disruption to through traffic.
- (C). To ensure traffic generated by industrial development does not affect local or regional traffic movements
- (D). To make entrances and exits of properties easily recognisable to visitors
- (E). To minimise the potential congestion or hazard on adjoining roads at points of ingress/egress.
- (F). To discourage the use of streets for the parking of vehicles associated with new developments.



**Controls** On-Site Parking shall be provided at the rate determined by Appendix 1. Car Parking provisions and specifications are located in Appendix 2 of this DCP.

If a use type is not listed in Appendix 1, Council will have regard to the Roads and Traffic Authority Guide for Traffic Generating Developments and to comparable uses at other locations in assessing the car parking requirements of the development.

**a. Access requirements**

- (i) Access to any proposed industrial development is to be via a non-residential street, unless the proposed development:
- Has no other alternative access; and
  - Demonstrates that consideration has been given to the affect of traffic generated by the site; and
  - Identifies an appropriate traffic management scheme, which would mitigate potential impacts on residential areas

A statement addressing the above must be submitted with any application that requests access via a residential street

- (ii) All vehicles must enter and exit the site in a forward direction
- (iii) Entrances and exits shall be clearly identified by signage. Landscaping or fence treatment or have a featured surface.
- (iv) Arterial or main roads; ingress and egress must be gained from a local road in cases where it can be provided. Further, RTA concurrence will be required for development on a main or arterial road.

*The RTA is unlikely to allow access to a classified road where access is available via a local road. This may necessitate the closure of existing access to the classified road. RTA concurrence under Section 138 of the Roads Act, 1993, is required for any works within a classified road reserve, including a driveway connection or upgrade'*

*Where future development is likely to compromise the safety or efficiency of a junction or intersection, suitable planning mechanisms are to be established to obtain developer contributions towards resolution of the safety or efficiency impact.*

- (v) Buildings should be designed and landscaped to reinforce entry points and exit points.
- (vi) Where possible, gates shall be of a "sliding" type in order to prevent problems relating to access to and within industrial developments and vehicle sight distance.





- (vii) Where "swinging" gates are being installed, gates shall open away from the street and in doing so shall not restrict access to any part of the development, including car parking spaces, manoeuvring areas, general access to/from the property and sight distance.
- (viii) Where driveways are located on a main road, gates from front boundaries are to be indented to provide a holding area for vehicles when the gates are closed. The desirable minimum depth should cater for a six-metre vehicle. However, this length may need to be increased depending on the use of the building(s) and the type of vehicles using the site.
- (vi) Access points and connections to the Southern Railway Line must be designed and constructed to meet Australian Track Corporation and/or other relevant authority standards.

**b. Loading and Unloading facilities**

- (i) Development with a gross lease able floor area of
  - less than 1,000 m<sup>2</sup> must be designed for the manoeuvring of a medium rigid vehicle as defined by AS 2890.2: 2004
  - more than 1,000 m<sup>2</sup> must be designed for the manoeuvring of a large rigid vehicle as defined by AS 2890.2: 2004
- (ii) In order to prevent or reduce vehicle turning movements on-site, loading and unloading areas must be located with easy access to entrances, exits and loading docks.
- (iii) Sufficient area shall be provided on-site for the queuing/parking of service vehicles
- (iv) Vehicle loading and unloading facilities should be separated from passenger vehicle and pedestrian circulation paths and vehicle parking areas.
- (v) All service vehicles must be parked wholly within the site at all times

**c. Vehicle/Pedestrian circulation**

- (i) Vehicle and pedestrian circulation paths must be separated to reduce safety risk. It is recommended that pedestrian paths be incorporated into landscaping and hard surfaced. Pedestrian pathways incorporated into landscaping can be included in landscape area calculations.
- (ii) Accesses should be incorporated into the front landscaping (as below) so building entrances can be easily recognised from the street.



**Figure 2.**

Easily recognised and clearly signposted entrances to properties provide efficient vehicle movements and reduce traffic disruption.

**d. Manoeuvring area**

Manoeuvring areas must be within the property boundaries. These areas must not have any impact on landscape areas. Design criteria for vehicle turning areas are available from Council's Development Engineer's.

**N.B** Council's reference document in the preparation of parking controls is Australian Standard 2890– Parking Facilities. It is noted that separate standards under the 2890 series exist for Off Street Carparking, Bicycle Parking and Parking for people with a disability

Roads and Traffic Authority – *Traffic and Transport Technical Directions and Manuals*

TDT 2001/06a – Autoturn Swept Path Computer Programme

Roads and Traffic Authority – *Guide for Traffic Generating Developments*

*Investigation of Parking Rates in Wingecarribee Shire* prepared by Chris Hallam dated August 2005

*Austroads – Design Vehicles and Turning Templates*

*Wingecarribee Technical Specifications for Engineering Standards*



## B.6 Open Areas and Landscaping

### Objectives

- (A). To provide open areas that are landscaped and incorporated into the design of the site.
- (B). To provide landscaping that softens and screens the visual impact of industrial structures, infrastructure, storage areas and large expanses of hard paved surfaces from residential and environmentally sensitive areas.
- (C). To provide robust and low maintenance non invasive landscaping within developments that contribute to water efficiency and reduces airborne pollutants on land adjoining Riparian Corridors.
- (D). To promote landscape and outdoor amenity within developments particularly for employees and visitors in terms of views, aesthetics, microclimate and outdoor areas.
- (E). To protect and maintain existing mature trees on private land and Council reserves.
- (F). Respect the Residential interface and riparian areas along watercourses.

### Controls

#### **a. Minimum Landscape Area**

Intending applicants are urged to consider Sections A1.7, A2.4, A2.5 and A2.7 of this DCP when considering site layout and the contribution landscaping makes to the visual appearance and functioning of a site.

- (i) A landscaped area, no less than 3 metres in depth, is to be provided measured from the front property boundary.
- (ii) A one (1) metre wide landscape strip, suitably bordered shall also be provided along the side boundaries. Gaps in the side boundary landscaping are permissible where site development is to be in conjunction with the future or existing development of an adjoining site. Noting Section (vi) below, the remainder of the subject site may only be used for sealed car parking, driveways and manoeuvring areas.
- (iii) Additional landscaping on site is to be provided at a rate of 1 square metre for every two car parking spaces required on site which can be provided in a single consolidated location on the site or integrated with the car parking area/s.

Notwithstanding the above, the provision of landscaping within parking areas may be confined to a specific area warranting protection (for example a riparian area or Endangered Ecological Community) or

distributed around hard stand areas to provide effective shading and a suitable amenity to the locality.

Figure 3 illustrates these setback requirements.

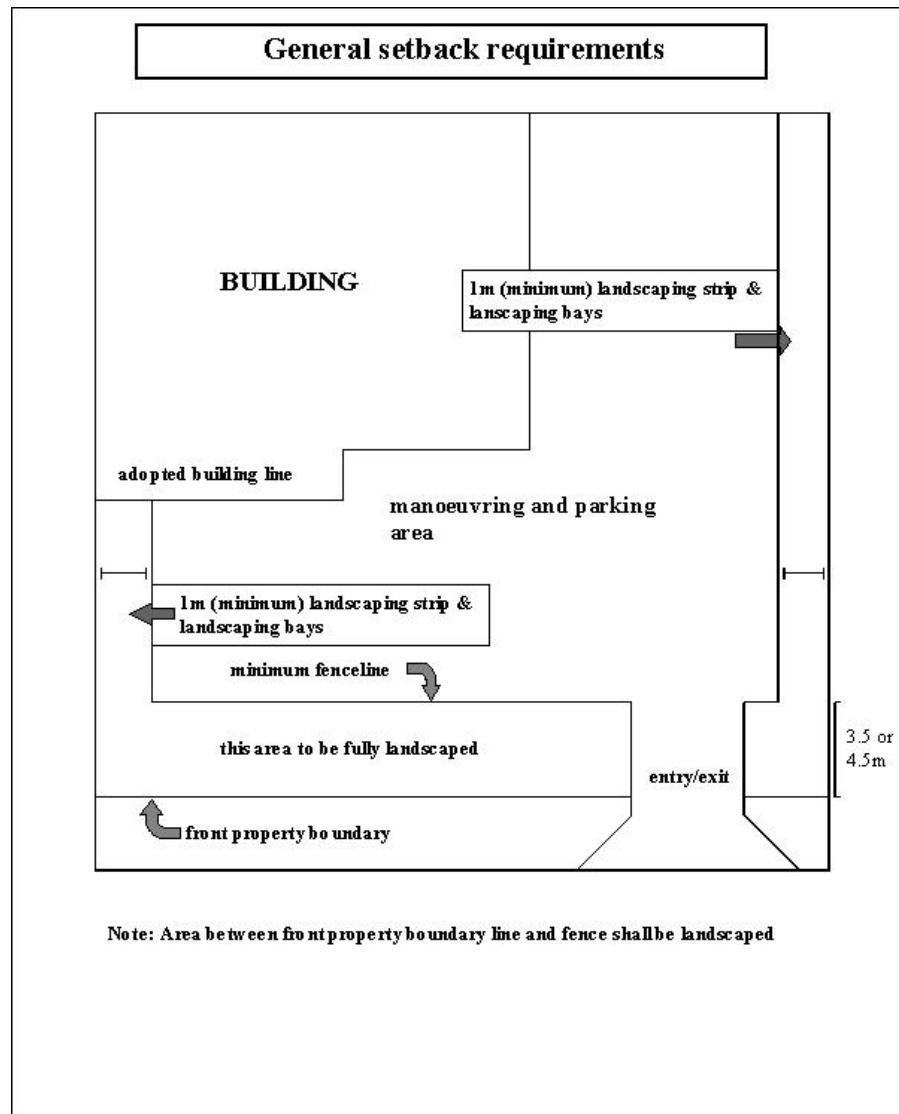


Figure 3

Product display may be permitted in the area between the front of the building and the above setbacks in some circumstances. Details of areas to be used for product display will need to be submitted with the development application and will be assessed on merit. The proposed landscaping for this area will be a consideration in the assessment.



A landscape plan prepared by a suitably qualified person is to be submitted with all industrial development applications addressing the provisions included in this section detailing the location of:

1. Any existing vegetation to be retained relocated or removed
  2. Deep soil landscape and planter areas
  3. Parking and associated access driveways;
  4. Paved and grassed areas;
  5. Boundary fencing;
  6. Loading/unloading areas;
  7. Any external storage areas;
  8. Planting scheme including trees, shrubs, grasses and groundcovers using local provenance of evergreen species.
  9. Water & maintenance schedules including drip irrigation and mulching details
- (iii) No excavation or structures shall be within the drip-line of mature trees.
- (iv) Trees may be removed with Council's consent where they are located within the footprint of a proposed structure and accompanied by an arborists report stating that they are dead, dying or dangerous. A sufficient number of existing trees of suitable species must be retained or relocated on-site and incorporated into landscaping to provide summer shade and winter sun and to screen any proposed structure from the street.
- (v) Barriers, such as logs, kerb and guttering or low fencing, must be provided around landscaping to prevent vehicles from damaging plantings.
- (vi) Council shall not consent to development on Industrial Land unless:
- a. A landscaped area, no less than 3 metres in depth, is incorporated within the primary building setback.
  - b. No work associated with the ongoing use of the site is to take place within the landscaped area;
  - c. All work associated with the lawful development on the land that is to be carried out external to a building, shall be screened from view from roads and public places by a landscape or lattice screening barrier;
  - d. Adequate provision has been made for the establishment and ongoing maintenance of all landscape areas; This will include suitable drought tolerant species.
- (vii) Council prefers the use of Australian native trees and shrubs in the landscaping of the estate, due to their compatibility with the natural habitat, their relatively fast growth and low maintenance (see Appendix 9).



- (viii) Consent will not be granted for landscape plans that contain aggressive colonising species and noxious weeds contained in Appendix 9.

## b. Fencing

### (1) Front boundary fencing.

So as not to obscure any proposed signage;

- (i) **Solid front fencing** may be a maximum height of 1.2 metre (above natural ground level). Concrete blocks are not permitted forward of the building line.
- (ii) **Transparent front boundary fencing** (coloured cyclone wire mesh or spaced star picket fencing) may be a maximum height of 1.8 metres (above natural ground level).

Any fencing that is visible from a public place and located behind the front boundary, is to be finished in materials and colours that are visually recessive in appearance and complimentary to the external finish of the building.

It is preferable to locate any front boundary fencing behind front boundary landscaping, to reduce the impact on the streetscape (see *Figure 4* below).

### (2) Side Boundary Fencing

Side boundary fencing may be 1.8 metres high and of solid construction.

Note: All boundary fencing is subject to the provisions of the *Dividing Fences Act, 1991*.

## c. Earth mounds

Earth mounds may be used to screen the property from the street and reduce road noise (see *Figure 4*). When located along front boundaries, earth mounds provide a significant contribution to streetscape amenity. Earth mounds also provide a good base for the planting of front boundary vegetation.

We encourage the appropriate reuse of excavated materials for mounding within landscape areas as a strategy to minimise waste that is generated by the development going to land-fill.

If earth mounds are incorporated into landscaping, they must be planted with mature native trees at a density of 1 tree per square metre. Earth mounds should be used in landscape area only and are not required across access points.

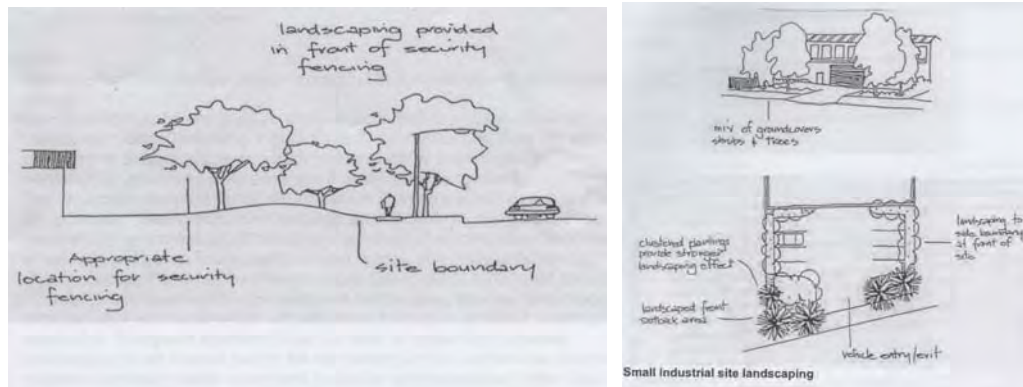


Figure 4.

#### d. External Storage Areas

- (i) External storage areas shall not be located forward of the front building line and shall be screened from view from a public place.

Where exceptional circumstances can be demonstrated, for example paving brick displays, vehicle and machinery display areas or where an existing building is constructed from side boundary to side boundary, goods should be positioned inwards towards the property and appropriate screen fencing materials used to the street frontage. Parking will still need to be provided in accordance with the requirements of this DCP.

#### e. Chemical Storage

Many industries use chemicals in their processes and these will, more than likely, have impacts on the natural environment when spillage occurs. For this reason controls need to be in place to protect the natural environment in the event of accidents and spillages. Applicants will therefore need to provide the following details:

- (i) A comprehensive list of the chemicals and quantities to be stored and used on the site\*; and
- (ii) A register of all MSDS for chemicals;
- (iii) Bunded areas for the storage of chemicals constructed to a depth equivalent to 110% of the largest container or 25% of the maximum total storage capacity.
- (iv) Spilled wastes must be disposed of in accordance with manufacturers requirements
- (v) A locked storage area which is clearly posted (eg Chemical Store – Keep Out) in addition to a No Smoking Sign. Ideally this should be a separate, well – ventilated cupboard or building used only for this purpose. It needs to be located away from other buildings and drainage lines that drain to stormwater.

\* Materials Safety Data Sheets ([www.msds.com](http://www.msds.com)) provide useful information regarding the potential impacts on health and the environment and how spills should be managed. Information is also



provided regarding the most appropriate method of disposal of any waste or contaminated material.

## B.7 Utilities

### Objectives

- (A). To use building materials, design and orientation to achieve energy efficiency
- (B). To use water and energy efficient fittings and fixtures in the building.

### Controls

#### a. **Supply; Water, Electricity, Telecommunications and Effluent Disposal**

- (i) No external service or plumbing conduits, other than down pipes for roof water are to be visible from any public place.
- (ii) The use of renewable energy is encouraged and Council is willing to consider design concessions for the implementation of renewable energy input into the operations of industry.

#### b. **Drainage, Stormwater and Wastewater Management**

Water conservation and Water Sensitive Urban Design principles must be incorporated into the design of buildings to minimise reliance on reticulated water.

All Stormwater Management Plans and Waste Water Management Plans requested by Council or the Sydney Catchment Authority must meet or exceed the Neutral or Beneficial Effect (NorBE) test and the water quality objectives using current Recommended Practices (CPR) contained in the Drinking Water Catchment Regional Environmental Plan No1.

Reference will also be required to the Landcom publication: *Managing Urban Stormwater: Soils and Construction Vol 1, 4<sup>th</sup> Edition, Landcom, 2004*

WSUD measures will include

- (i) A minimum of 50% of the roof area to be connected to a rainwater storage device and the installation of a tank of suitable capacity (minimum 8,000) water tank
- (ii) The re-use of stormwater collection for non-potable (undrinkable) uses (supplying machinery water jackets, cooling high temperature processes, landscape irrigation, flushing toilets, etc)





- (iii) Water Sensitive Urban Design (WSUD) technologies shall be incorporated into the design of both the site and buildings.
- (iv) Devices for the capture, storage and treatment of water (such as tank and On-Site Detention ponds and basins) suitable for recycling and re-using water on-site (including landscaping) shall be included in any proposal.

**c. Amenities**

- (i) At a minimum toilet and bathroom facilities are to be provided for the development in accordance with the BCA. Consideration shall be made for showers and change rooms in support of Council's Bicycle Strategy and to provide staff with adequate space for storage of work wear and weather apparel.

**d. Lighting**

Lighting is essential for convenience and safety, but if not properly controlled it can result in adverse impacts on adjoining properties and the night sky. Most generally the problem is lighting which is poorly directed so that there is a spill over effect beyond the range required for direct illumination purposes.

The quality of the night sky is a highly valued asset of the Southern Highlands environment. Unlike city areas where ambient light significantly diminishes the ability to see the night sky, the Southern Highlands affords excellent visibility and Council wants to protect this asset.

Poorly directed light is also a waste of the energy used to generate it and so contradicts Council's objectives for ecologically sustainable development

**Objectives**

In considering the lighting of a development, the applicant must ensure that proposed lighting:

- (a) provides for the night time protection of the development without drawing unnecessary attention to it;
- (b) does not adversely impact on surrounding development;
- (c) does not impede the visibility of passing traffic
- (d) does not diminish the quality of the night sky.



## Controls

- (a) Lighting and diffusers shall not allow light to be directed upwards more than 90 degrees.
- (b) Timers shall be accurately set to ensure that lighting is used only when natural light is insufficient.

## B.8 Environmental Management

### Objectives

- (A). To maintain the health of receiving waterways by minimising discharge to sewer, drainage and natural air and water systems.
- (B). To ensure a high level of environmental quality and preserve the amenity of adjoining land uses (particularly residential)
- (C). To ensure industrial development maintains noise level amenity for all land uses and control intrusive noise impacts on residences as outlined in DECC Industrial Noise Policy
- (D). To control intrusive noise impacts on residences.

### Controls

#### **a. Soil Erosion and Sediment Control**

Effective erosion and sediment controls are to be installed prior to any construction activity commencing including earthworks.

Where building or earthworks are proposed where the area of disturbance is less than 2500m<sup>2</sup>, Council's Development Engineers may request an Erosion and Sediment Control Plan. This plan would include a written document as well as site diagrams that clearly indicate where measures are going to be implemented to minimise erosion and sedimentation.

Where building or earthworks are proposed where the area of disturbance is 2500m<sup>2</sup> or greater, a Soil and Water Management Plan will be required. This plan is to include a written document as well as a set of diagrams, prepared by a suitably qualified person that clearly identifies the constraints of soil erosion, sediment pollution and stormwater pollution.

All Erosion and Sediment Control plans and all associated works must meet or exceed the Neutral or Beneficial Effect (NorBE) test and the water quality objectives using Current Recommended Practices contained in the Drinking Water Catchment Regional Environmental Plan No1.



Reference will also be required to the Landcom publication: *Managing Urban Stormwater: Soils and Construction Vol 1, 4<sup>th</sup> Edition, Landcom, 2004.*

All erosion and sediment control measures are to remain in position until disturbed soils are turfed, 70% vegetated or otherwise stabilised. The controls must be effective and prevent sediment entering the stormwater system, drainage depressions and water courses causing water pollution.

All sediment and erosion controls are to be monitored and maintained on a regular basis particularly after a rain event, to ensure that the controls in place are adequate and functioning correctly.

**b. Noise, Air and Water Quality** (see also Section A1.10)

Applicants shall provide;

- (i) Details of potential impact on Noise, Air and Water quality proposed;
- (ii) Details of methods to minimise emissions of the above in an environmental management plan.
- (iii) Demonstrated compliance with *Drinking Water Catchments Regional Environmental Plan*.
- (iv) Application of Water Sensitive Urban Design principles.
- (v) An environmental management plan that demonstrates that the development shall not cause nuisance to residents by way of hours of operation, traffic movement, parking, headlight glare, security lighting and the like.

**c. Contaminated Land**

Applicants shall provide;

- (i) For declared contaminated sites or where the potential exists for on site contamination from a previous use eg chemical storage facility, petrol station, a site contamination analysis, demonstrating consistency with *State Environmental Planning Policy 55 – Remediation of Land* and the *Contaminated Land Management Act 1997* shall be provided.
- (ii) Where there are indications that contamination is, or may be present, Council will require the applicant to undertake a site specific contamination study where it is considered highly probable that the land is subject to contamination.

**d. Waste Minimisation and Management**

Applicants shall provide;

- (i) A Waste Management Plan for during and post construction detailing the volume or weight of material



- 
1. To be reused
  2. To be recycled
  3. To be disposed of at an authorised waste transfer station.
- (ii) Waste collection vehicles shall not stand on public roads or footpaths.
- (iii) An area, screened from public view or located behind the front façade of the building and with convenient access to service vehicles, shall be provided for waste storage containers.

## **B.9 Development Contributions**

Development Contributions for Industrial Development are collected under the provisions of the Environmental Planning & Assessment Act, 1979 (EP&A Act, 1979). For details of Development Contributions, please consult Council's adopted Development Contributions Plan.



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# Part C

## Specific Land Use Development Controls



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## PART C SPECIFIC LAND USE DEVELOPMENT CONTROLS

The controls contained in this section are to be applied in conjunction with the controls contained in Part B.

For ease of use and condensing the controls contained in this part, land uses that will have similar characteristics have been grouped together.

For example:

Hazardous Industries, Hazardous Storage Establishments, Offensive Industries and Offensive Storage Establishment

Parking requirements for all uses are provided as Appendix 1

The following requirements are for those land uses permissible in Industrial Zones where their location in Industrial areas has an identified potential for land use conflict and where consideration should be given to aspects not covered by the controls contained in Part B of this DCP.

### **Agricultural Produce Industries**

Retail sales from agricultural produce industries may only be permitted where retail sales are demonstrated to be ancillary to the predominant use and must be wholly separate from the agricultural production industry on the site.

### **Caravan Parks**

Caravan Parks are subject to the provisions of *State Environmental Planning Policy No 21 – Caravan Parks* (SEPP 21) and the *Local Government (Caravan Park, Manufactured Home Estates, Camping Ground and Moveable Dwellings) Regulation 2005*.

### **Child Care Centres**

Where child care facilities are proposed in industrial localities, the centre must be constructed so that internal ambient noise levels satisfy environmental guidelines. That is, to protect exposure of the occupants from external noise, the applicant/operator must ensure that the centre keeps out environmental noise and vibration.

Applications will be forwarded to Department of Community Services for comment.

### **Function Centres**

Council may reduce the above parking requirements where it can be demonstrated that ample parking will be available in the vicinity for patrons outside normal business hours, without adversely affecting the amenity of the surrounding locality during the day or evening.

### **Hazardous Industries, Hazardous Storage Establishments, Offensive Industries, Offensive Storage Establishment**

To minimise the impacts from hazardous industry on adjoining landuses, any development including parking location, shall be in accordance with *State Environmental Planning Policy 33 (Hazardous and Offensive Industries)* and with the *Hazardous Industry Advisory Paper No.10* available from the Department of Planning website and the National Standard [NOHSC: 1014 (2002)] for the Control of Major Hazard Facilities. Issues such as noise, air



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quality, waste, water quality, safety and land contamination will need to be addressed with an application by reports of suitable format

**Helipads**

Must be constructed and maintained to Civil Aviation Safety Authority (CASA) Standards. A report and plan of management will be required to be submitted with the application. The application and report will be referred to the CASA for their consideration. Noise will be a major issue therefore a noise study will be required.

**Landscape and Garden Supplies**

Drainage or Bunding will be needed to impede above normal levels of organic and inorganic compounds and materials from entering drainage systems and waterways. If composting is being undertaken, DECC approval may be required. Odour from organic compounds can be substantially reduced with construction of a purpose built structure and a plan of management addressing the issue of compost odour. Section B.7 is considered applicable when drainage from the site is able to enter a Category 1 drainage channel. In applying this Section the largest container is considered to be a bay for the bulk storage of loose material (requiring handling by shovel or mobile plant).

**Office Premises**

Where Office space is proposed as part of an Industrial Development, for the purpose of safety, visitor's entrances to buildings shall be separated from the industrial use and loading/unloading areas of the site and easily and directly accessed from visitor parking areas.

**Stock and Saleyards**

An environmental management plan for the operation of Stock and Saleyards shall be provided detailing daily cleaning programmes and any materials to be used (hay bales, detergents) in maintenance of hygienic stock yards and sale areas. Odour from the break down of organic compounds can be substantially reduced with construction of a purpose built structure. Noise, Waste, odour and water quality are issues that will be elevated in the plan of management for a stock and saleyards. Issues of waste and effluent disposal, noise, odour and water quality will specifically need to be addressed.



# Part D

# Appendices





USE	PARKING REQUIREMENT
<b>Business Uses</b>	
Office, Commercial	<ul style="list-style-type: none"> <li>1 space per 30 m<sup>2</sup> of gross leaseable floor area.</li> </ul>
Bulky Goods, Hazardous Industries (IN3), Hazardous Storage Establishments (IN3), Landscape and Garden supplies, Offensive Industries (IN3), Offensive Storage Establishment (IN3) Stock and Saleyards, Timber and Building Supplies, Waste Management Facilities, Warehouse or Distribution Centre,	<p>1 space per 30 sq m of office and showroom/retailing area, plus 1 space per 300 sq m of gross floor area (minimum 3 car spaces)</p> <p>1 Heavy Goods Vehicle (HGV) parking Bay per 1000m<sup>2</sup> nett floor area (or part thereof) is required for single use sites (where one business occupies a whole or majority of a site).</p>
<b>Health &amp; Community Services</b>	
Home-based Child Care	1 space for every 4 children, for both parent and staff parking.
Veterinary Hospitals	4 spaces per consulting room or surgery.
Recreational Areas, Recreation Facilities (Indoor), Recreation Facilities (Outdoor), Recreation Facilities (Major)	<p>1 space per 100m<sup>2</sup></p> <p>3 spaces per lane or court or 1 space per 100m<sup>2</sup></p> <p>10 spaces per hectare of informal playing area or 1 space per 100 m<sup>2</sup> formal playing area</p> <p>3 spaces per 100m<sup>2</sup> or 9 seats plus minimum 2 bus parking areas</p>
Community Facilities, Public Administration Building	1 space per 30 m <sup>2</sup> of nett floor space (minimum 3 spaces)
<b>Food Premises:</b>	
Restaurant	<p>1 space per 3 seats OR 15 spaces per 100 sq m gross floor area.</p> <p>Council may reduce the above parking requirements where it considers that ample parking will be available in the vicinity for patrons during evening hours, without adversely affecting the amenity of the surrounding locality during the day or evening.</p>
Coffee Shops / Cafés (with dine in fixtures)	1 space per 30 sq m of gross leaseable floor area.
Fast Food Take Away Food Outlets (eg McDonalds, Kentucky Fried Chicken)	<ul style="list-style-type: none"> <li>With no on site seating and no drive through facilities. 12 spaces per 100 sq m gross floor area</li> <li>Developments with on-site seating but no drive-through facilities: 12 spaces per 100 sq m gross floor area, plus the greater of 1 space per 5 seats (both internal and external seating), or 1 space per 2 seats (internal seating)</li> <li>Developments with on-site seating and drive-through facilities, greater of: 1 space per 2 seats (internal), or 1 space per 3 seats (internal and external).</li> </ul>
Registered Clubs	A traffic study is to be prepared by a qualified traffic engineer, with the parking requirement



	established through surveys of similar existing developments, noting the existing supply of and demand for parking in the area, and of the peak parking periods of individual facilities within the club.
USE	PARKING REQUIREMENT
<b>Industrial Uses</b>	
Vehicle Repair Station, Vehicle Body Repair Workshop	6 spaces per workshop bay 1 Designated service/delivery vehicle space
Depots, Freight Transport Facilities, Passenger Transport Facilities, Transport Depots, Waste Disposal Landfill Operations * with ancillary services (servicing repairs and the like)	1 space per 90 m <sup>2</sup> of nett building area (minimum 3 spaces) 2 HGV truck/bus parking bays  * 3 HGV spaces per service bay (Minimum 3)
Light Industry, Rural Industry  * With office or showroom component	1 space per 100 sq m of gross floor area, or 1 space per 2 employees, whichever is the greater, PLUS * 1 space per 40 sq m of office and showroom area.
Motor Car, Caravan, Boat and Truck Showroom	1.5 spaces 200m <sup>2</sup> site area plus 6 spaces per any workshop bay
Storage Units	1 space per 500 m <sup>2</sup> of storage area – plus 1 space per employee
<b>Tourist and Visitor Accommodation (Clause 53)</b>	
Motel (where Restaurant included, use to include appropriate rate)	1 space per Motel room plus 1 space per 2 employees.
Hotel	accommodation component: 1 space per Hotel room plus 1 space per 2 employees. Bar, lounge & dining component: A traffic study is to be prepared by a qualified traffic engineer, with the parking requirement established through surveys of similar existing developments, noting the existing supply of and demand for parking in the area, and of the peak parking periods of individual facilities within the hotel.
Bed & Breakfast Establishments, Boarding House, Guest House Hostel & Lodging House	1 space per 2 beds, plus 1 space per manager, plus 1 space per 2 employees
<b>Other</b>	
Educational Facilities, Environmental Facilities, Function Centres	1 space per 2 staff, plus 1 space per 20 Year 12 students, plus 2 bus parking areas plus 1 space per 10 tertiary students, 1 space per 10 seats in a hall or 100 m <sup>2</sup> ( <u>these spaces may be inclusive of all other requirements</u> ) spaces for sports fields etc, shall be determined by Council in each case.
<b>Note:</b>	



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Where a facility is ancillary to the principle use eg; school, church, consideration will be given to the actual likely increased patronage.

Place of Public Worship	2 spaces per 9 seats or 100 m <sup>2</sup>
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## Car Parking

### 1.0 Objectives

All new development must make adequate provision for the off-street parking of cars associated with it, either by providing on-site parking, or by making a contribution towards the provision of public car parks. Where on-site parking is provided, the development must ensure that vehicular access to and from the site is safe and does not impede traffic flow.

Council's vehicular access and off-street parking controls seek to achieve the following objectives:

- (a) To ensure that adequate off street parking and off street loading and unloading is provided in conjunction with development throughout the Wingecarribee Shire.
- (b) To discourage the use of streets for the parking of vehicles associated by traffic generated new developments.
- (c) To ensure that parking areas are functional and operate efficiently.
- (d) To ensure that car parking areas are visually attractive.
- (e) To ensure that car parking facilities are safe and meet the needs of users.
- (f) To ensure that vehicle demand generated by a development including visitor, employee and commercial and service vehicles can generally be parked and loaded off the public street.
- (g) To ensure that vehicular access points are safe and are located to minimise disruption to vehicles and pedestrians on the public street system.
- (h) To provide communal public car parking in appropriate areas from developers contributions where the development cannot accommodate adequate on site parking or Council chooses to aggregate parking in a centralised location(s).

### 1.2 Relevant Technical Documents

Applicants are directed to the following technical documents which must be read in conjunction with this section of the DCP:

- (a) Australian Standards – Parking Facilities:
  - (i) AS 2890.1 : 2004 Part 1 Off-Street Car Parking.
  - (ii) AS 2890.2 : 2002 Part 2 Off-Street Car Parking.
  - (iii) AS 2890.3 : 1993 Part 3 Bicycle Parking Facilities.



- (iv) AS 2890.5 : 1993 Part 5 On-Street Parking.
- (v) AS 2890.1 : 2004 Parking for People with Disabilities.
  
- (b) Roads & Traffic Authority – Traffic and Transport Technical Directions and Manuals.
- (c) TDT 2001/06a – Autoturn Swept Path Computer Program.
- (d) Roads & Traffic Authority – *Guide for Traffic Generating Developments*.
- (e) Wingecarribee Shire Council Development Control Plan No 41 – *Design (Vol 1) and Construction (Vol 2)*
- (f) *Investigation of Parking Rates in Wingecarribee Shire* prepared by Chris Hallam dated August 2005
- (g) Austroads – Design Vehicles and Turning Templates 1995

### 1.3 Car Parking Requirements

- (a) The number of car parking spaces to be provided on the site is determined by the nature of the development and specific requirements are included within the controls for each type of development described in the Plan.
  
- (b) If the car parking requirements for a specific development are not contained within this Plan, Council will have regard to the Roads and Traffic Authority Guide for Traffic Generating Developments, and to comparable uses at other locations, in assessing the car parking requirements of the development.
  
- (c) The loss of any on-street parking as a result of the development, including new vehicular entry points or loading zones, shall be compensated for by providing on site parking equal to the number of lost spaces.

### 1.4 Requirements for Additions and Alterations to Existing Buildings or Redevelopment

- (a) Car parking provision for additions / alterations or redevelopment shall comply with the requirements of this Plan.
  
- (b) Where additions or alterations to an existing development are proposed, Council will require parking provision for the amount of additional car parking deemed to be generated by the additions or alterations.
  
- (c) Where parking has not been required by Council for an existing use, but where such parking has been provided, Council will require the retention of such parking as is currently provided up to, but not exceeding, Council's requirements for the specified type of development.
  
- (d) A redevelopment is to comply with Schedule of Car Parking Requirements in the terms of amount of car parking generated by the new proposal. Any claim for car parking credits for an existing building and / or usage will need to be substantiated by appropriate documentary



evidence, ie previous development consents, with the development application for Council to assess. In circumstances where the applicant cannot demonstrate a previous requirement, the amount of car parking that is deemed to be credited shall be based upon the rates in Schedule in [Appendix 4](#). Council may decide to accept car parking credits to be placed against the demand deemed to be generated for the new development proposal.

### **1.5 Use of Parking Areas**

- (a) All parking spaces shall be used solely for the parking of motor vehicles for owners, staff and customers except where noted. On no account shall such spaces be used for storage or garbage purposes.
- (b) Boom gates, remotely operated doors and other devices designed to stop the public from accessing the parking area are not permitted.
- (c) No signposting or restrictions on individual spaces is allowed.

### **1.6 Disabled Parking Requirements**

- (a) Disabled parking spaces shall be provided for each building use according to the applicable Standard.
- (b) The disabled parking requirements will be to the current Australian standard.

### **1.7 On Site Parking Deficiencies**

- (a) In circumstances where it is not physically possible or where, for traffic reasons or otherwise, it is impracticable to provide on-site, the total number of parking spaces required under this Plan, the applicant shall make appropriate arrangements for the provision of the car parking shortfall with Council.
- (b) Council's preferred approach for such arrangements is through a voluntary Planning Agreement lodged with the Development Application. Council's adopted policy in relation to Planning Agreements sets out the requirements and process.
- (c) If there is a deficiency in the required number of car spaces, and no Planning Agreement is entered into, the Development Application shall be refused.

### **1.8 Design of Off-Street Parking Facilities**

- (a) The minimum design requirements for parking facilities are the Australian Standard AS 2890 series.



- (b) While the Australian Standard is the minimum standard this does not prohibit designs to a higher standard which can improve accessibility and amenity thereby possibly increasing the attraction of a particular development.
- (c) Applicants are directed to **A12.9** below for advice on how to design a car park.
- (d) Provision shall be made for the landscaping of uncovered parking areas with adequate screening from the street, where appropriate. Generally, a 3 metre wide landscaped strip shall be provided along street frontages between the alignment and open parking/loading areas.
- (e) Shade tree plantings should be provided and maintained within open car parking areas.
- (f) Sufficient details shall be submitted with the development application to adequately indicate the extent of the proposed landscaped treatment of the site.
- (g) A detailed landscape plan will generally be sought with the Construction Certificate application.
- (h) Council prefers the use of AUSTRROADS Design Vehicles and Turning Templates for all vehicle movements on, or on to public roads, and the turning template, found in AS 2890.1 and AS 2890.2 for on-site manoeuvring.
- (i) Where Autoturn or similar packages are to be used, they must be only within the confines of RTA Technical Directive TDT 2001/06a – RTA Policy Autoturn Swept Path Computer Program or any subsequent amending directive.

### 1.9 How to Design a Car Park Using AS 2890.1:2004

The following table provides a guide for designing a car park using AS 2890.1 : 2004. The table indicates the tasks involved and the relevant clause, table or figures from AS 2890.1 : 2004 (unless otherwise stated) which should be consulted. Please note that not all design requirements are listed below and AS 2890.1 : 2004 must be used as the primary reference source.

Step	Task	Based on information from:
1.	Determine number of car spaces required.	Relevant Section of this Plan.
2.	Determine classification of off-street parking facilities.	Clause 1.4 & Table 1.1
3.	Determine dimensions of parking bay module - <ul style="list-style-type: none"> <li>• Parking bay</li> <li>• Aisle width</li> </ul>	Clause 2.4.1 & Figure 2.2 Clause 2.4.2-2.4.4 & Figures 2.2-2.4
4.	Design of Circulation Roadways and ramps.	Clause 2.5




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5.	Driveway Access width. <ul style="list-style-type: none"> <li>• Determine Parking Facility Category</li> <li>• Determine Driveway width using Parking Facility Category</li> </ul>	Clause 3.2.1 & Table 3.1 Clause 3.2.1, Clause 3.2.2 & Table 3.2
6.	Determine Access Driveway Location.	Clause 3.2.3 & Figure 3.1
7.	Check Sight Distance requirements.	Clause 3.2.4 & Figure 3.2
8.	Additional Requirements: <ul style="list-style-type: none"> <li>• Column Location &amp; Spacing</li> <li>• Height Clearances</li> </ul>	Clause 5.2 & Figure 5.2 Clause 5.3 & Figure 5.3

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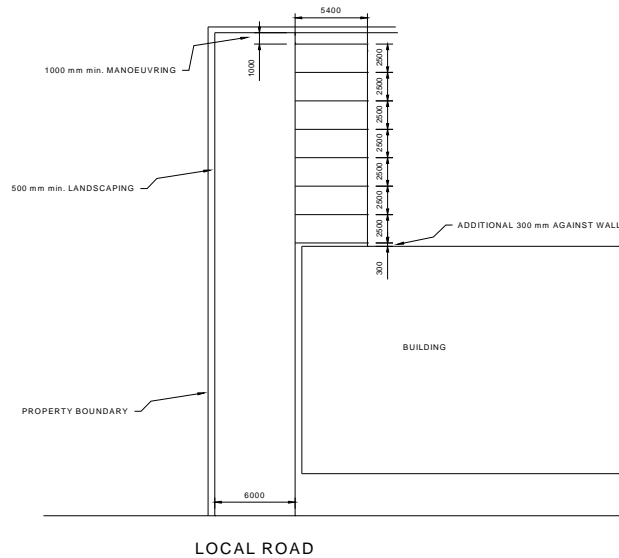


**EXAMPLE 1**

The proposed development is a medium turnover commercial development in a town centre on a Local Road requiring 7 parking spaces.

<b>Step</b>	<b>AS 2890 Design Requirements</b>	<b>Example 1 requirements</b>
1.	Determine number of spaces required.	7
2.	Determine classification of off street parking facilities.	Classification 2
3.	Determine dimensions of parking bay module 1) Parking bay 2) Aisle width	A = 2.5m B = 5.4m Aisle Width = 5.8m
4.	Design of Circulation Roadways and ramps	Width = 5.5 m minimum
5.	Driveway Access width. 1) Determine Parking Facility Category 2) Determine Driveway width using Parking Facility Category	Parking Facility Category = 1 3.0 to 5.5. Use 6.0 m to comply with Council's Standard Drawing SD 108
6.	Determine Access Driveway Location	Checked - OK
7.	Check Sight Distance requirements.	Landscaping & Fencing terminated before front boundary to comply.
8.	Additional Requirements: Column Location and Spacing Height Clearances	Not Applicable.

**Resulting Layout of Car Park**



### EXAMPLE 2

The proposed development is a high turnover retail development in a town centre on an Arterial Road, requiring 12 parking spaces. The car park will be underground and have access via a curved ramp.

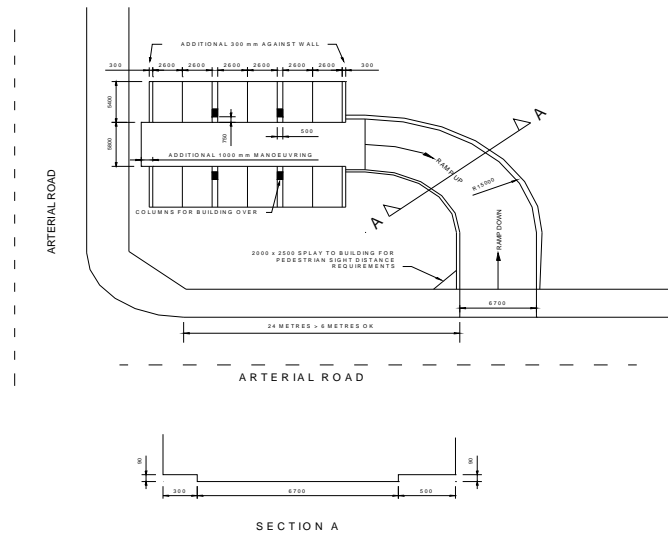
Step	AS 2890 Design Requirements	Example 2 requirements
1.	Determine number of spaces required.	12
2.	Determine classification of off street parking facilities.	Classification 3
3.	Determine dimensions of parking bay module 1) Parking bay 2) Aisle width	A = 2.6m B = 5.4m Aisle Width = 5.8m
4.	Design of Circulation Roadways and ramps	Ro = 15m Width = 6.7m Clearance outside of curve 500mm. Clearance inside of curve 300mm. A line-marked centre line is required. The ramp long-section was designed using Council's Standard Drawing SD 123 to provide a more accessible ramp.



5.	Driveway Access width. 1) Determine Parking Facility Category 2) Determine Driveway width using Parking Facility Category	Parking Facility Category = 2 6 to 9 metres permissible. Choose 6.7 metres to match ramp width.
6.	Determine Access Driveway Location	Checked - OK
7.	Check Sight Distance requirements.	Building Splay required for pedestrian sight distance
8.	Additional Requirements: Column Location and Spacing Height Clearances	Columns located outside of building envelope. Ramp terminated before car park entry - Height OK.



## Resulting Layout of Car Park





Management Hierarchy	Protect Natural Systems	Integrate Stormwater treatment into the Landscape	Protect Water Quality	Reduce Run-off & Peak Flow	Water Conservation
<p><b>1. Avoid</b> Avoid water consumption and wastewater generation, stormwater generation and stormwater contamination.</p>	<ul style="list-style-type: none"> <li>Identify habitat corridors, buffer areas, key vegetation and topographical features which may assist the treatment of stormwater, aesthetics of development and required for ecological connectivity and design into development.</li> <li>Avoid vegetation removal and changes to topography.</li> <li>Protect and retain natural drainage features (contours and associated vegetation).</li> </ul>	<ul style="list-style-type: none"> <li>Full consideration of site analysis at the earliest stages of design process.</li> <li>Consideration of complete cycle of water and opportunities for treatment aid use of water flows.</li> <li>Process attuned to natural hydrological and ecological processes.</li> <li>Incorporation of multi-purpose corridors that may include water features, habitat protections and recreational facilities.</li> </ul>	<p>Dwellings, industrial and commercial activities.</p> <ul style="list-style-type: none"> <li>Decreased impermeable surfaces (roof, paved area).</li> <li>Store and use contaminants (chemicals, nutrients) so as to avoid stormwater contamination.</li> <li>Retain vegetation and landscape features which treat stormwater.</li> <li>Avoid earthworks (cut and fill).</li> </ul> <p>Sub divisions and neighbourhoods.</p> <ul style="list-style-type: none"> <li>Decreased impermeable surfaces (roads, paved areas).</li> </ul>	<p>Dwellings, industrial and commercial activities.</p> <ul style="list-style-type: none"> <li>Decreased impermeable surfaces (roof, paved area, road area).</li> <li>Retain vegetation and landscape features which treat stormwater.</li> </ul> <p>Sub divisions and neighbourhoods.</p> <ul style="list-style-type: none"> <li>Decreased impermeable surfaces (roads, paved areas).</li> <li>Retain vegetation and landscape features which treat stormwater.</li> </ul>	<p>Dwellings, industrial and commercial activities.</p> <ul style="list-style-type: none"> <li>“Fit for purpose” potable water replacement i.e. using roof water, stormwater and reclaimed water for low end uses (toilets, garden).</li> </ul>



Management Hierarchy	Protect Natural Systems	Integrate Stormwater treatment into the Landscape	Protect Water Quality	Reduce Run-off & Peak Flow	Water Conservation
			<ul style="list-style-type: none"> <li>• Retain vegetation and landscape features which treat stormwater.</li> <li>• Avoid earthworks (cut and fill)</li> </ul>		
<p><b>2. Reduce</b> Reduce potable water consumption and wastewater generation, stormwater generation, stormwater contamination, removal of vegetation and alteration to landform.</p>	<ul style="list-style-type: none"> <li>• Reduce extent of vegetation clearing.</li> <li>• Reduce need to contour site.</li> <li>• Reduce intrusion and disruption in habitat connectivity areas.</li> </ul>		<p>Dwellings, industrial and commercial activities.</p> <ul style="list-style-type: none"> <li>• On site infiltration.</li> <li>• Roof water and stormwater tanks.</li> <li>• On site treatment.</li> <li>• Reduce volumes of earthworks.</li> <li>• Erosion and Sediment Control measures during construction phase.</li> </ul>	<p>Dwellings, industrial and commercial activities.</p> <ul style="list-style-type: none"> <li>• On site infiltration.</li> <li>• Roof water tanks.</li> <li>• On site detention.</li> </ul> <p>Sub divisions and neighbourhoods.</p> <ul style="list-style-type: none"> <li>• Design infiltration, retention and detention into street, lot layout and drainage system.</li> </ul>	<p>Dwellings, industrial and commercial activities.</p> <ul style="list-style-type: none"> <li>• Water efficient fixtures.</li> <li>• Water efficient landscaping.</li> </ul> <p>Sub divisions and neighbourhoods.</p> <ul style="list-style-type: none"> <li>• Water efficient streetscape and park landscaping.</li> <li>• Protect wastewater system from groundwater</li> </ul>



Management Hierarchy	Protect Natural Systems	Integrate Stormwater treatment into the Landscape	Protect Water Quality	Reduce Run-off & Peak Flow	Water Conservation
					and stormwater incursion to reduce wastewater volumes.
<p><b>3. Re-use</b> Re-use water, wastewater, stormwater, soil and vegetation waste</p>	<ul style="list-style-type: none"> <li>• Re-use cleared vegetation for landscaping.</li> <li>• Re-use top soil and fill material.</li> </ul>		<p>Dwellings, industrial and commercial activities.</p> <ul style="list-style-type: none"> <li>• Roof water, stormwater, grey water on site harvesting and re-use.</li> <li>• Divert on site runoff to garden and lawn areas.</li> </ul>	<p>Dwellings, industrial and commercial activities.</p> <ul style="list-style-type: none"> <li>• Roof water, stormwater, grey water onsite harvesting and re-use.</li> <li>• Divert on site runoff to garden and lawn areas.</li> </ul>	<p>Dwellings, industrial and commercial activities.</p> <ul style="list-style-type: none"> <li>• Roof water, stormwater, grey water on site harvesting and re-use.</li> </ul> <p>Sub division and neighbourhood.</p> <ul style="list-style-type: none"> <li>• Stormwater diverted to street level and park landscaping.</li> </ul>



Management Hierarchy	Protect Natural Systems	Integrate Stormwater treatment into the Landscape	Protect Water Quality	Reduce Run-off & Peak Flow	Water Conservation
					<ul style="list-style-type: none"> <li>• Grey re-use for sub surface garden irrigation.</li> </ul>
<p><b>4. Recycle</b> Recycle Water, wastewater, stormwater, soil and vegetation waste.</p>	<ul style="list-style-type: none"> <li>• Compost green waste for off site use.</li> <li>• Re-use top soil and fill material on development off site.</li> </ul>		<p>Sub division and neighbourhood.</p> <ul style="list-style-type: none"> <li>• Sub division scale stormwater harvesting and treatment.</li> </ul>	<p>Sub division and neighbourhood.</p> <ul style="list-style-type: none"> <li>• Sub division scale stormwater harvesting and treatment.</li> </ul>	<p>Sub division and neighbourhood.</p> <ul style="list-style-type: none"> <li>• Reclaimed water.</li> <li>• Subdivision scale stormwater harvesting and treatment.</li> <li>• Reclaimed water re-use.</li> </ul>
<p><b>5. Disposal (End of pipe).</b></p>	<ul style="list-style-type: none"> <li>• Disposal of green waste and fill to landfill.</li> <li>• Landscaping.</li> <li>• Vegetation regeneration.</li> <li>• Reinstatement of riparian zones and habitat.</li> <li>• Contouring site.</li> </ul>		<p>Dwellings, industrial and commercial activities.</p> <ul style="list-style-type: none"> <li>• End of pipe Erosion and Sediment Control measures.</li> </ul> <p>Subdivision and neighbourhood.</p>	<p>Sub division and neighbourhood.</p> <ul style="list-style-type: none"> <li>• Stormwater Pipe disposal.</li> </ul>	<p>Neighbourhood.</p> <ul style="list-style-type: none"> <li>• Wastewater Treatment Plant and disposal.</li> </ul>





Management Hierarchy	Protect Natural Systems	Integrate Stormwater treatment into the Landscape	Protect Water Quality	Reduce Run-off & Peak Flow	Water Conservation
			<ul style="list-style-type: none"> <li>• End of pipe Stormwater Quality Improvement Device.</li> <li>• End of pipe Erosion and Sediment Control measures.</li> </ul>		