

INDUSTRIAL DEVELOPMENT DESIGN GUIDELINES

June 2008



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1. INTRODUCTION

1.1 - THE PURPOSE OF THE GUIDELINES

The Industrial Development Design Guidelines, June 2008 (the Guidelines) have been prepared to provide assistance for applicants preparing planning permit applications and Council staff assessing the applications for the use and development of industrial land in Hobsons Bay.

The Local Industry policy at Clause 22.02 of the Hobsons Bay Planning Scheme (the Scheme) refers to the guidelines in assessing applications for the use and development of industrial land within the City of Hobsons Bay.

The Guidelines affect the industrial precincts in the City of Hobsons Bay. They apply to applications to use and develop land within the Industrial 1 Zone, Industrial 3 Zone, Mixed Use Zone and Schedules 2, 3, 4 and 5 of the Special Use Zone. The Guidelines should be read in conjunction with the Hobsons Bay Industrial Land Management Strategy, June 2008, Municipal Strategic Statement (MSS), and the Hobsons Bay Planning Scheme which can be found on the Councils' website (www.hobsonsbay.vic.gov.au). Particular attention should be paid to the zone and overlay provisions included in the scheme.

The Council recommends that applicants obtain professional assistance from town planners, architects and landscape architects in preparing applications.

The Council has discretion whether to apply the objectives, guidelines and specific requirements to development and use applications. The Guidelines cannot be applied to industrial uses that are an 'as of right' use in the zone but can apply to the building and works. The Guidelines can be waived where it is demonstrated that the development meets the intended outcomes of the Scheme.

Applicants should also refer to the Environmentally Sustainable Design (ESD) and Construction document which is available on the Department of Sustainability and Environment website (www.dse.vic.gov.au).

1.2 - OBJECTIVES OF THE GUIDELINES

The overall objectives of these guidelines are:

1. To ensure that the strategies and objectives for industry in Hobsons Bay, expressed in the Guidelines, the Strategy, Municipal Strategic Statement and the local policies, are given effect in the determination of applications for industrial land uses and developments.
2. To ensure that the objectives for each industrial precinct in the Strategy are given effect in the determination of applications for land uses and developments.
3. To achieve high quality urban design and architecture that accords with Clause 19.03, (Design and Built Form) of the Hobsons Bay Planning Scheme.
4. To improve the appearance and amenity of industrial areas.
5. To enhance the liveability, amenity and safety of the City.
6. To promote environmentally sustainable design.

1.3 - HOW TO USE THE GUIDELINES

The Guidelines apply to all industrial land in Hobsons Bay (refer to page 5 Map of Core and Secondary Industrial Areas and Strategic Redevelopment Areas, section 1.5D which highlights the industrial areas of the municipality). The use and / or development of industrial land must demonstrate consistency with the Guidelines and the Scheme.

The Guidelines must be read in conjunction with the Hobsons Bay Industrial Land Management Strategy (June 2008) and the Hobsons Bay Planning Scheme as additional requirements may apply.

1.4 - ABOUT HOBSONS BAY'S INDUSTRIAL AREAS

The City of Hobsons Bay currently has approximately 1,782 hectares of land zoned for industrial purposes. Industrially zoned land accounts for about 26% of all land within Hobsons Bay. Industrial land in Hobsons Bay accounts for 24% of the total supply of industrial land in the Western Region.

There are industrial precincts of varying size and role throughout many of the City's suburbs, however the majority of industrial land in Hobsons Bay is located in the northwest suburbs of Altona, Altona North and Brooklyn. Industry is also the predominant land use in the suburb of Spotswood, in the southeast area of the municipality.

The suburbs of Newport, Williamstown, Williamstown North and South Kingsville have small supplies of industrial zoned land located in industrial estates.

Much of the industrial land is retained in large holdings. This means that larger land consuming enterprises can be attracted to the City. Speculative subdivision of large holdings into smaller lots will be carefully controlled to ensure that the ability of the area to attract larger enterprises is not lost.

The City already has a substantial supply of smaller serviced industrial lots and land with subdivision approval for small lots that are yet to be developed. These lots are located at North Williamstown, Dohertys Road, Burgess Street and in the Altona Gardens Precinct (land encompassing Drake Boulevard, Aylesbury Drive and Kimpton Way and accessed from Kororoit Creek Road).

Industry in Hobsons Bay is generally well located having good access to the State's freeway and main road system. It is also close to Victoria's transport hub, centred on Footscray Road, Melbourne.

The City is also traversed by the national standard gauge rail route and access to Melbourne's airport's and the port are excellent. The City is strategically well placed for industrial and associated business growth.

1.5 - CLASSIFICATION OF HOBSONS BAY'S INDUSTRIAL AREAS

The Hobsons Bay Industrial Land Management Strategy, June 2008 identifies the following categories of industrial land that indicate their future role and function:

1.5A - Core Industrial Areas

- Designates major concentrations of industry, which are relatively unconstrained by residential or other sensitive uses.
- These areas will be protected and provide opportunities for new growth, including the expansion of existing industries.
- Non-industrial protrusions into these areas are not supported and rezoning of land to non-industrial zones will not be permitted.

1.5B - Secondary Industrial Areas

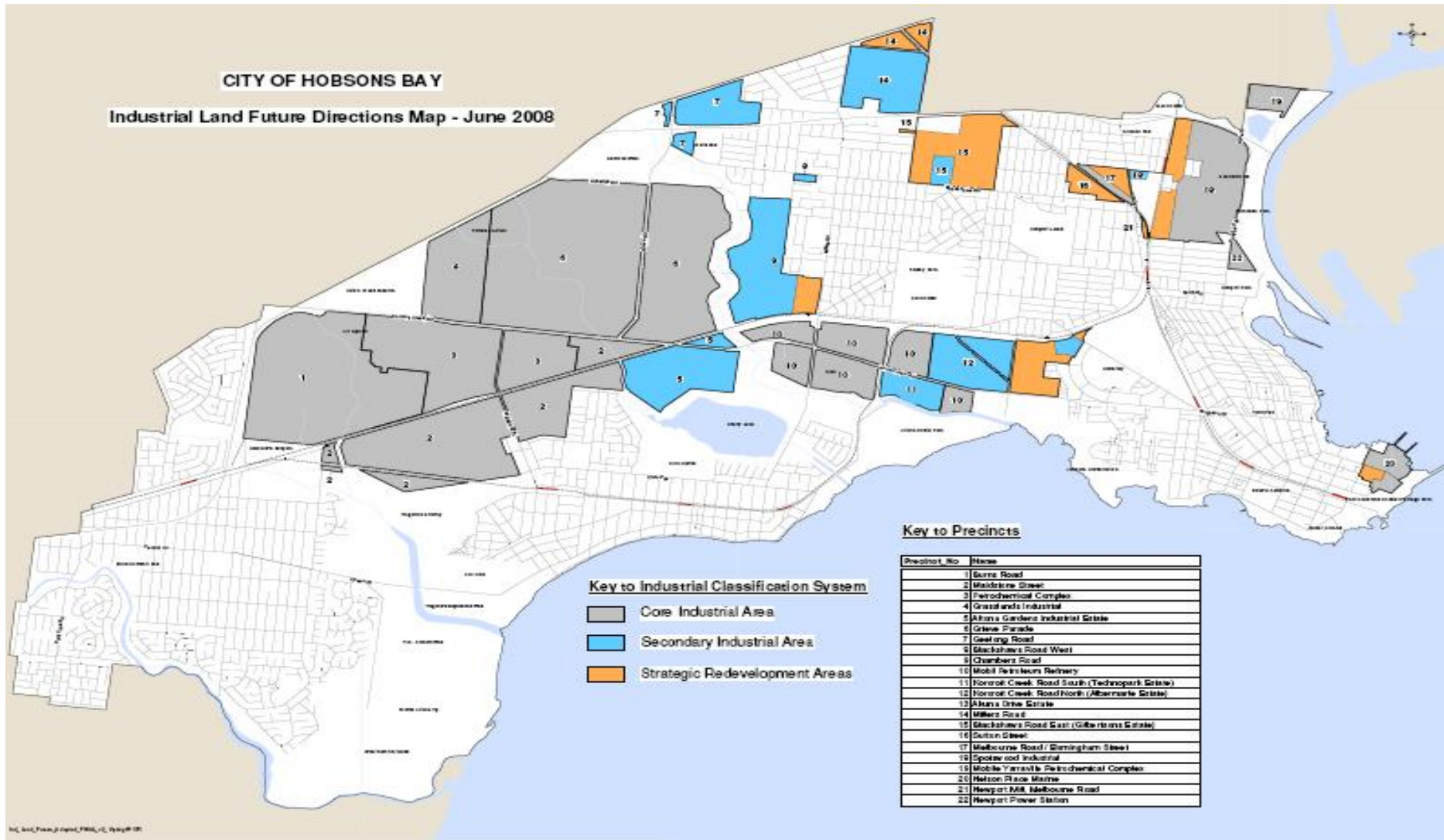
- Designates smaller concentrations of industry, which will continue to be of strategic importance to Hobsons Bay in terms of local economic development and employment.
- These areas cater for a wide range of small to medium businesses, which supply both industrial and domestic markets.
- Non-industrial protrusions into these areas will not be supported.

1.5C - Strategic Redevelopment Areas

- Designates areas that may evolve from a previous industrial use to provide a wider mix of employment opportunities, including a mix of industry, commercial and office accommodation.
- Designates areas that are constrained by surrounding land use patterns or access arrangements and where the opportunity exists for uses to change over time to a residential use.
- Designates areas that are not currently industrial, but because of the existing land use conditions are best suited to an industrial zone.
- The opportunity may remain for employment generating uses to continue or to re-establish, provided they are compatible with adjacent uses.
- Outline Development Plans will be prepared for each area to properly plan the detail of any redevelopment.

More specific details of the Strategic Redevelopment Areas (SRA's) can be found in the Hobsons Bay Industrial Land Management Strategy, June 2008.

1.5D - Map of Core and Secondary Industrial Areas and Strategic Redevelopment Areas



2. APPLICATION REQUIREMENTS

For application requirements applicants should refer to the relevant zone and sections of the in the Hobsons Bay Planning Scheme.

3. GENERAL REQUIREMENTS

3.1 – DEVELOPMENT DESIGN

3.1A – Site layout and built form

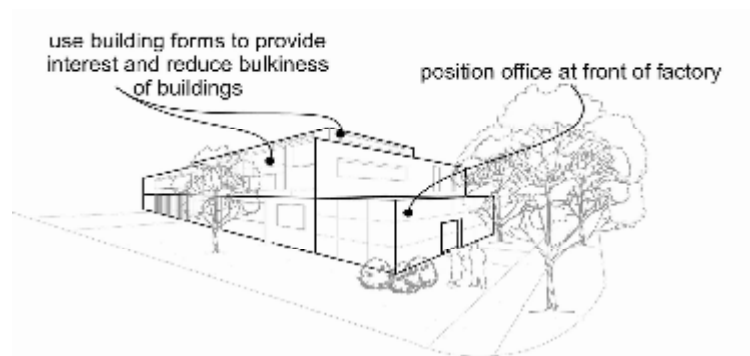
Objectives

1. To ensure that the site layout and built form contributes to the visual amenity of the area.
2. To protect and enhance public spaces.
3. To ensure that buildings are ‘in scale’ with the surrounding development.
4. To encourage building forms, materials and finishes that adds visual interest to the neighbourhood.
5. To achieve preferred building and landscaping setback requirements for industrial land other than in a Schedule to the Special Use Zone.
6. To ensure that on-site car parking at industrial premises is adequate, safe and visually attractive.

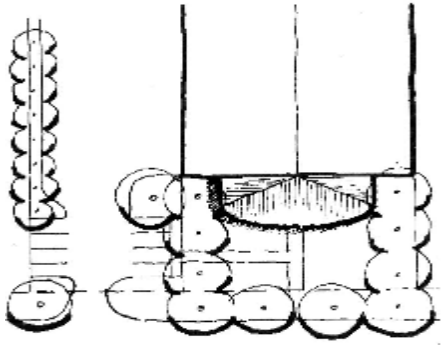
General Guidelines

Building walls visible from the street or public open space should be articulated to provide visual interest. Long blank walls will not generally be supported. Articulation of walls can be achieved by variations in setback, use of glazing and differing architectural materials, finishes and colours.

Visitor parking should generally be sited to the front of the site or adjacent to main office areas. Larger development should locate employee parking to the side or rear of the building to avoid a large expanse of car parking to the frontage.



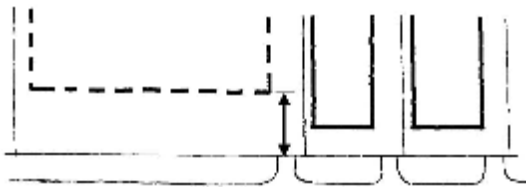
Office areas sited in front of buildings can help reduce building mass and increase visual interest and provide an active street frontage. Setbacks may be reduced to improve building articulation.



The setback of a new building should respond to its particular context. Building setback should be consistent with the setbacks of abutting buildings if it's a similar sized lot and if landscaping and parking objectives cannot be met.



Consistent setback for infill development.



Increase setbacks for larger building masses.

High structures should be appropriately setback from the frontage to minimise dominance on the site and public realm.

The height of buildings and works should take into account its proximity to roads, public and open space, waterways / courses, conservation areas and residential properties.

The height of buildings and works opposite or adjacent to houses should take into account the scale of the houses in relation to the street (except where the house is in an industrial zone).



Buildings must be setback and stepped in to relate to the scale of housing.

Development Setbacks

The following tables provide preferred setback standards for buildings and landscaped areas for each industrial precinct:

BUILDING SETBACK TABLE

Precinct	20m	15m	9m	4.5m	Development standards
Precinct 1, Burns Road, Altona					Requirements contained in SUZ4 of the planning scheme
Precinct 2, Maidstone Street, Altona					Requirement contained in SUZ4 of the planning scheme
Precinct 3, Petrochemical Complex, Altona					Requirements contained in SUZ3 and SUZ4 of the planning scheme
Precinct 4, Grasslands Industrial, Altona North					Requirement contained in SUZ4 of the planning scheme
Precinct 5, Altona Gardens Estate, Altona and Altona North	Kororoit Ck Rd		Other roads		
Precinct 6, Grieve Parade, Altona North	Kororoit Ck Rd		Other roads		
Precinct 7, Geelong Road, Brooklyn			Princes Highway	Other roads	
Precinct 8, Blackshaws Road/ West, Altona North				All roads	
Precinct 9, Chambers Road, Altona North		Millers Rd	Chambers Rd	Other roads	
			McArthurs Rd		
			Blomberg Rd		
Precinct 10, Mobil Petroleum Refinery, Altona and Altona North	Kororoit Ck Rd		Other Roads		
	Millers Rd				
Precinct 11, Kororoit Creek Road South, Williamstown North, Techno Park Drive			All roads		
Precinct 12, Kororoit Creek Road North, North Williamstown, Albemarle Estate			All roads		
Precinct 13, Akuna Drive Estate, Williamstown North			All roads		

Precinct	20m	15m	9m	4.5m	Development standards
Precinct 14, Millers Road, Brooklyn	Princes Highway		Front roads	Other roads	
	Millers Rd				
	Francis St				
Precinct 15, Blackshaws Road East, Altona North, Gilbertsons Estate		Blackshaws Rd	Other roads		
		New St Kyle Rd			
Precinct 16, Sutton Street, South Kingsville		Kyle Rd			No development standards
Precinct 17, Melbourne Road and Birmingham Street, Spotswood	Melbourne Rd				
	Birmingham St				
Precinct 18, Spotswood Industrial, Spotswood	Melbourne Rd		Other roads		
	Douglas Pde				
Precinct 19, Mobil Yarraville Petrochemical Complex, Spotswood	Francis St		Other roads		
	Hyde St				
Precinct 20, Nelson Place Marine, Williamstown					No development standards
Precinct 21, Newport Mill, Melbourne Road, Newport					No development standards
Precinct 22, Newport Power Station	Douglas Pde				
Note: Building setbacks unless otherwise required by the Planning Scheme (eg SUZ3, SUZ4 and DDO2). Landscape requirements may also apply and influence building setback.					

LANDSCAPING SETBACK TABLE

Precinct	100m	60m	50m	30m	20m	10m	9m	4.5m	1.8m	Development Standards
Sites under 1,000 square metres								Front boundary any road	Side boundary to any road	
All	Kororoit Ck	Cherrys Drain			PUZ					
		Kayes Drain			PPRZ					
		Cherry Lake			PRCZ					
		Laverton Creek			UFZ					
		Stony Creek								
		Stony Creek Backwash								
Precinct 1, Burns Road, Altona										Requirement contained in SUZ4 of the Planning Scheme
Precinct 2, Maidstone Street, Altona										Requirement contained in SUZ4 of the Planning Scheme
Precinct 3, Petrochemical Complex, Altona										Requirement contained in SUZ3 and SUZ4 of the Planning Scheme
Precinct 4, Grasslands Industrial, Altona North										Requirement contained in SUZ4 of the Planning Scheme
Precinct 5, Altona Gardens Estate, Altona & Altona North	Kororoit Ck		Cherry Creek	Railway line				Any road		
Precinct 6, Grieve Parade, Altona North	Kororoit Ck		Cherry Creek			Railway line		Any road		

Precinct	100m	60m	50m	30m	20m	10m	9m	4.5m	1.8m	Development Standards
Precinct 7, Geelong Road, Brooklyn								Princes Highway	Other roads	
Precinct 8, Blackshaws Road, West / Altona North									All roads	
Precinct 9, Chambers Road, Altona North							Millers Rd	Chambers Rd	Other roads	
								McArthurs Rd		
								Blomberg Rd		
Precinct 10, Mobil Petroleum Refinery, Altona & Altona North			Adjoining Industrial zones	Railway line			All roads			
Precinct 11, Kororoit Creek Road South, Williamstown North, Techno Park Drive								Kororoit Creek Rd	Other roads	
Precinct 12, Kororoit Creek Road North, North Williamstown, Albemarle Estate								Frontages	Other roads	
Precinct 13, Akuna Drive Estate, Williamstown North								Frontages	Other roads	
Precinct 14, Millers Road, Brooklyn							Princes Highway	Other frontages	Side and rear boundaries to other roads	
							Millers Rd			
							Francis St			

Precinct	100m	60m	50m	30m	20m	10m	9m	4.5m	1.8m	Development Standards
Precinct 15, Blackshaws Road East, Altona North, Gilbertsons Estate							Blackshaws Rd New St Kyle Rd	Other frontages		
Precinct 16, Sutton Street, South Kingsville										No development standards
Precinct 17, Melbourne Road and Birmingham Street, Spotswood							Melbourne Rd			
							Birmingham St			
Precinct 18, Spotswood Industrial, Spotswood							Melbourne Rd	Other frontages		
							Douglas Pde			
Precinct 19, Mobil Yarraville Petrochemical Complex, Spotswood							Francis St	Other frontages		
							Hyde St			
Precinct 20, Nelson Place Marine, Williamstown										No development standards
Precinct 21, Newport Mill, Melbourne Road, Newport										No development standards
Precinct 22, Newport Power Station, Newport							Douglas Pde			
Note: Landscaping setback unless otherwise required by the Planning Scheme (eg SUZ3, SUZ4, DDO2 and the landscape standards in section 3.1F of the guidelines).										

3.1B - Traffic and Car parking

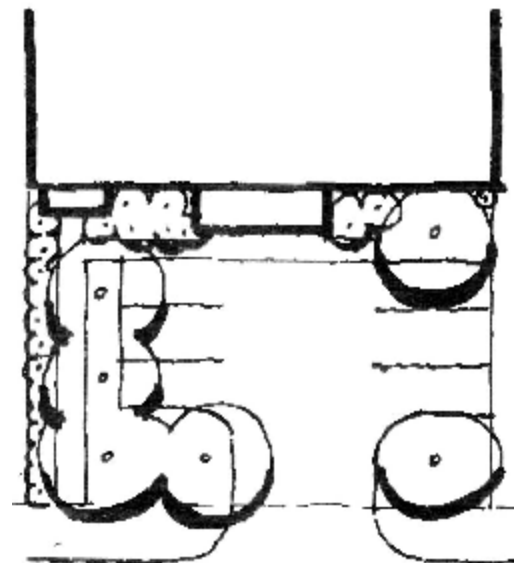
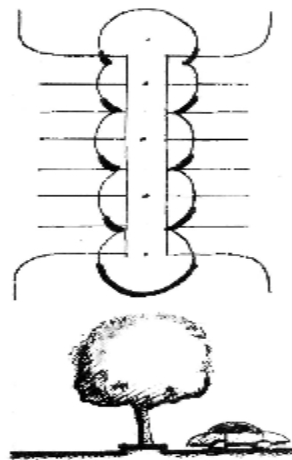
Objectives

1. To ensure that on-site parking at industrial premises is adequate.
2. To ensure that the siting of parking areas and access ways is safe and convenient.
3. To ensure that the layout of parking areas are visually attractive.

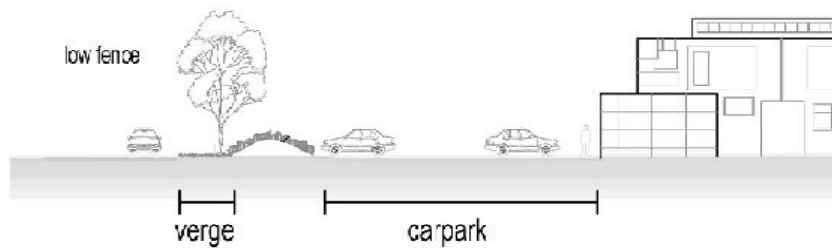
Guidelines

The visual impact of parking areas should be managed by:

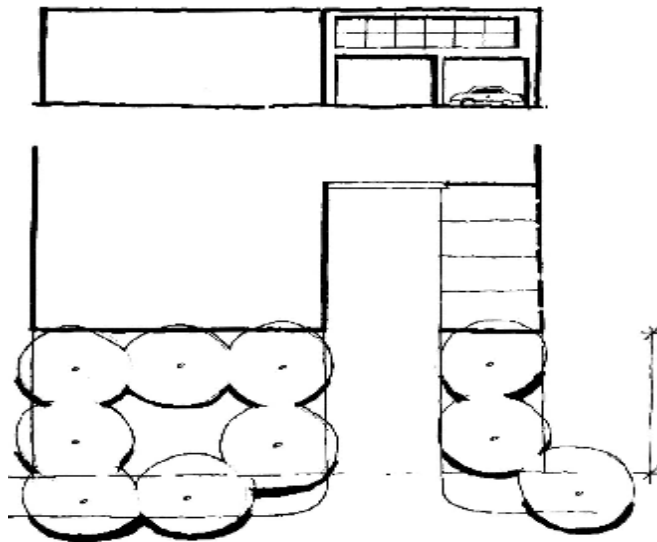
- Siting car parks behind substantial landscaping areas.
- Breaking up the car park with effective landscaped areas.
- Where appropriate provide opportunities for the shading of vehicles.
- Storing bicycles in proximity to buildings or stored within a covered compound, including the provision of associated end of trip facilities.
- Locating parking at the front of small sites and, where possible, include paths.



Car parking behind well-landscaped buffer strips may be positioned between buildings and roads or open space to increase the openness of the site when viewed from the public realm.



The windows of the building should be designed to face car parking areas to provide for passive visual surveillance.



'Undercroft' parking will not be approved unless well setback to allow additional landscaped areas.



3.1C - Site Access

Objective

1. To ensure that vehicles can access industrial sites safely and efficiently.

Guidelines

The development should be designed to enable vehicles to exit the site in a forward direction.

Sites larger than 1.0 hectare (10,000 square metres) must be designed so that all vehicles can enter and leave the site in a forward direction.

For sites with an area greater than 0.4 hectare (4000 square metres), provision should be made for articulated vehicles to enter and leave the site in a forward direction.

3.1D - Loading and Services Areas

Objective

1. To ensure the layout of loading bays is safe, convenient and visually attractive.

Guidelines

Where sites are located near residential areas loading and service areas should be sited to the rear or side of the property and away from residents, where possible.

At sites of 0.1 hectare (1000 square metres) or less loading areas may share access driveways with car parking areas provided that the visitor car spaces are not disrupted and remain accessible.

Loading areas should not be sited so that vehicles must reverse onto roads.

Loading areas should be separated from pedestrian access paths.

3.1E - Road Network

Objectives

1. To ensure that access arrangements to industrial sites accommodate for large vehicles.
2. To ensure that access to the site is safe and does not cause detriment to residential areas or other users.

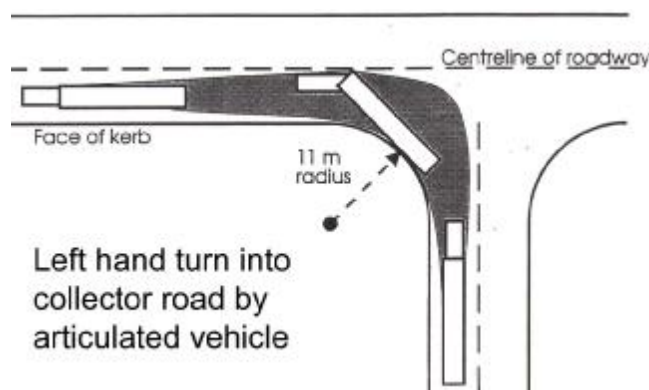
Guidelines

Off-street parking and access arrangements should be in accordance with Australian Standard AS 2890.2-1989 Off-street parking, Part 2: Commercial vehicle facilities.

Industrial uses that rely on heavy vehicle access should avoid using residential streets.

New industrial collector roads should be 12.5 metres wide and should include footpaths. Verge width should be 4.0 metres. (Refer to Site Access section 3.1C).

Intersections of minor access roads with collector roads should be designed to allow articulated vehicles to turn into the collector road without crossing the centre line of the collector road. The internal radius for left turns is to be at least 11 metres.



Source: Vic Roads

Where access for B-double trucks is required, a Traffic Engineer's report should be provided demonstrating these vehicles can enter and leave the site safely without unduly disrupting other road users or damaging infrastructure or landscaping.

3.1F - Landscaping

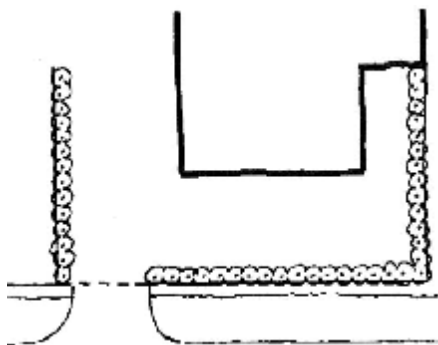
Objectives

1. To encourage open, well landscaped industrial precincts.
2. To encourage landscaping that enhances the appearance and amenity of the site and public areas.
3. To encourage the use of recycled water to irrigate landscaped areas.

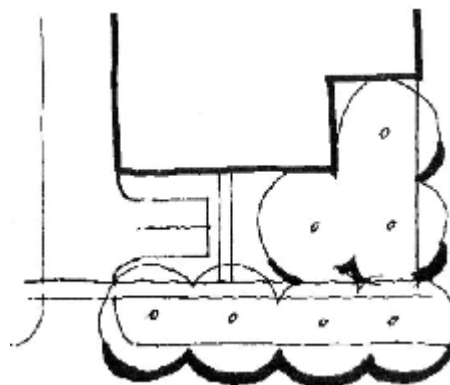
General Guidelines

Landscaping should:

- Complement the building design and form.
- Result in effective and substantial landscaped areas which include tree plantings.
- Designed to integrate with the landscaping themes of adjoining sites, the surrounding area and street trees within the precinct.
- Designed to provide a sensible balance between grassed and garden areas.
- Incorporate drought resistant plant and species that require little maintenance and water.
- Generally allow views into and across industrial sites rather than seeking to screen them entirely from view.
- Be used to screen and soften views of outdoor storage areas visible from public spaces.



Narrow landscaping strips are ineffective and should be avoided.



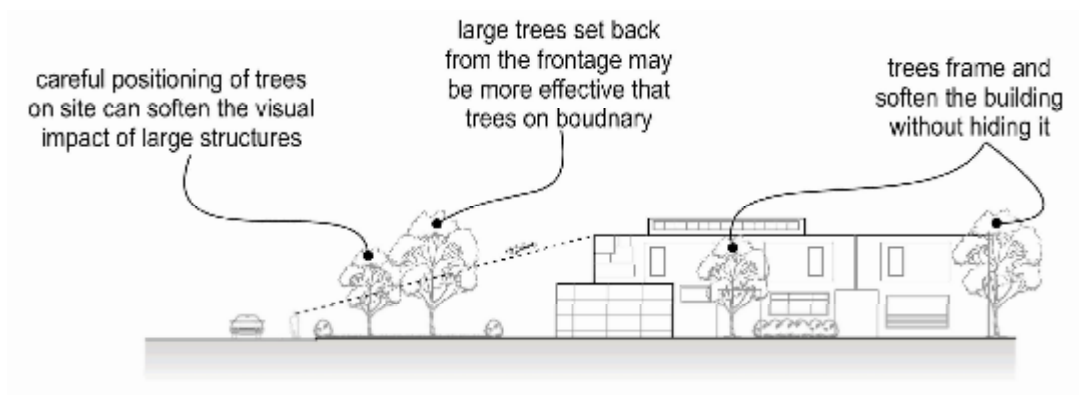
Aggregated areas provide space for larger trees to complement street trees.

The use of trees is critical to a successful landscaping result in industrial areas, where buildings are of a larger scale. Trees viewed from a distance can help break up the substantial lines of large industrial buildings and warehouses.

Trees should:

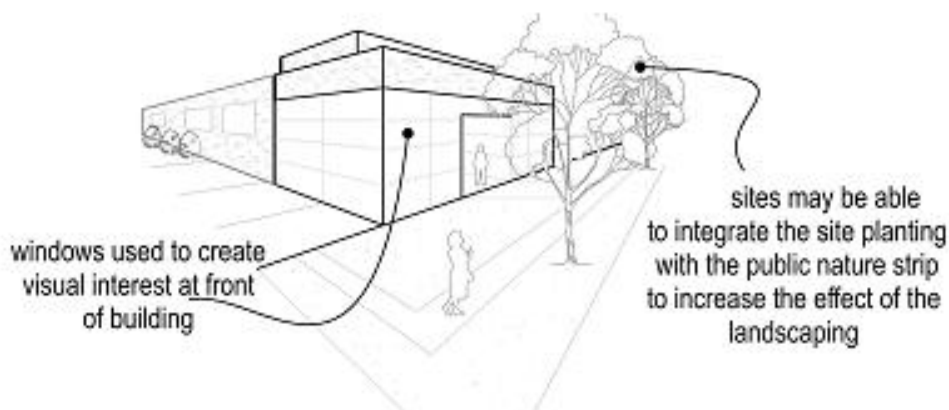
- Be selected and placed to complement and be in scale to the building.
- Be positioned to soften the height of buildings and structures.

On smaller sites landscaping areas should be proportioned to allow the establishment of substantial trees.



Where landscaping cannot be fully provided within the site because of existing buildings and works, planting outside the site will be considered.

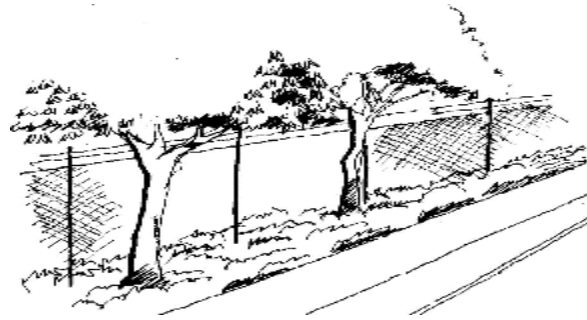
Landscaping may be integrated with the public nature strip to complement site landscaping, where appropriate and should have regard to public safety.



Dense planting adjacent to public thoroughfares will generally not be supported.



Dense planting is discouraged along public paths.



Open planting provides better security.

Landscaping strips next to car parking areas should, where possible be at least 1.8 metres wide excluding kerbs and other barriers. At larger premises where high maintenance grassed areas and garden beds are placed in front of fences, the grassed areas should ideally be several metres wide to allow easier mowing.

Integrating landscaping areas to provide a manageable and effective result may justify some reduction in the areas of landscaping on the site.

Rainwater from the rooves of industrial buildings, car parking areas and the site, should where practicable, be collected by a water saving / catchment devices and used for watering the landscape areas. An irrigation plan should be incorporated into the landscape design.

Landscaping along the creeks and drains must avoid use of exotic species and use indigenous species endemic to the area.

3.1G - Storage

Objectives

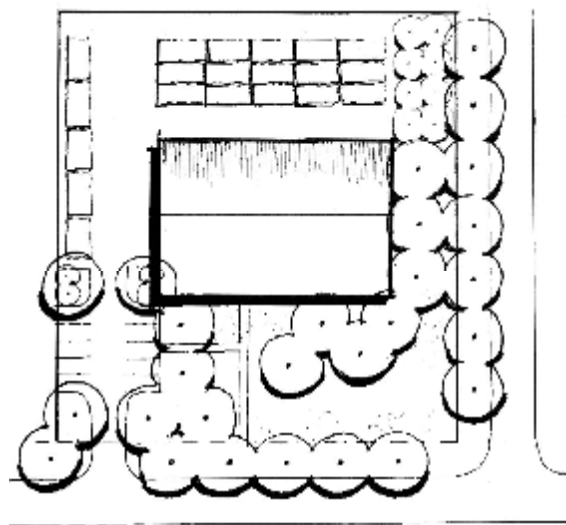
1. To ensure storage of goods does not lower the appearance and amenity of the area.
2. To ensure that sufficient area is allocated for external storage.
3. To ensure that storage of goods does not impact upon the quality of stormwater.

Guidelines

Outdoor storage should be:

- Located behind buildings.
- Set back from boundaries to allow landscaping.
- Consolidated into bundled areas rather than dispersed throughout the site.
- Appropriately screened by fencing, landscaping or trellis.
- Located away from stormwater drains.

Goods and materials must not be placed in car parks, vehicle access ways, landscaping areas or in the street.



Storage areas must be appropriately screened from public spaces.

3.1H - Container storage

Objectives

1. To ensure the placement of containers does not lower the appearance and amenity of the area.
2. To ensure the stacking of containers do not pose a safety hazard.

Guidelines

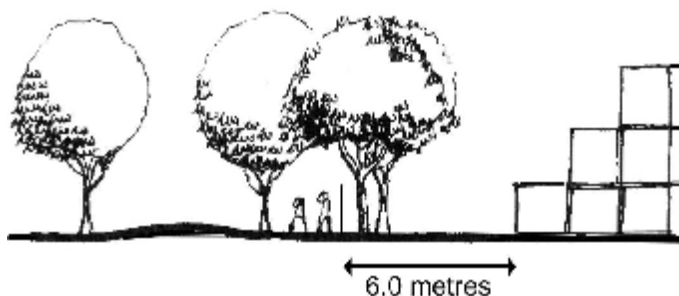
The following general guidelines apply where a planning permit is required:

The most immediate facing tier to the fenceline should not exceed one container high and the tiers must only rise by one increment (in a pyramid formation) until the maximum is reached.

The container stacks should not exceed four containers high on any surface other than concrete hardstand and should not exceed six containers high on concrete hardstand.

Container storage areas should be setback at least six metres from boundaries.

Landscaping and canopy trees should be incorporated into the setbacks to soften and minimise the appearance of storage container stacks on the street.



3.11 - Waste

Objectives

1. To ensure each premise has sufficient and appropriate access to waste and recycling facilities.
2. To ensure that waste is handled and stored so that it does not lower the appearance and amenity of the neighbourhood.
3. To ensure that waste does not impact upon the quality of stormwater and the surrounding environment.

Guidelines

All premises must have a designated waste storage and recycling area.

Waste storage areas including recycling bins should be appropriately screened from the public realm and must not be placed in car parks, vehicle access ways, landscaping areas or in the street.

Waste bins should:

- Allow ease of access by employees and service trucks.
- Not detract from the streetscape or other public areas.
- Not be located in front of buildings unless appropriately screened.
- Not block loading bays.
- Locating away from stormwater drains.

Waste must be stored in a bundled area so that no dust, grit, liquid or odours are emitted beyond the site boundaries, vermin is not attracted to the waste and that no paper, cardboard or plastic is blown around the site.

Where waste is stockpiled or processed in open areas effective landscape buffers should be provided.

Provision of on site waste storage bins during the construction phase of the development will be required.

3.1J - Lighting

Objectives

1. To ensure lighting does not impact the amenity of the local area.
2. To ensure sites are appropriately lit to provide security.

Guidelines

Adequate security lighting should be provided and be energy efficient.

Sensor lighting should be considered.

External lighting should be located around entrances and car parking and in areas where goods and equipment is stored outside.

Landscape lighting should be considered near public boundaries.

Lighting should be appropriately directed or baffled to prevent direct illumination where a site is in close proximity to residential properties.

3.1K - Fencing

Objectives

1. To ensure that fencing complements the amenity of the area and contributes to an 'open' streetscape.
2. To ensure fences provides adequate site security.

Guidelines

The following general guidelines apply where a planning permit is required:

Fencing should be unobtrusive and should not detract from the streetscape. It should generally be semi transparent and articulated, whilst providing adequate security for the premises. Solid and unarticulated fencing should be avoided.

At smaller industrial sites fences higher than 1.5 metres should generally not be constructed across the entire frontage, unless there is a requirement for site security.

Where high fences are used to enclose an industrial site, it is preferable that a section of the front of the premise be open to the street to provide a sense of address and contribute to the streetscape.

Where site security along the boundaries (not frontage) is required, fencing and gates should be constructed of black, plastic coated chain link fence or other approved material.

4. ENVIRONMENTAL SUSTAINABLE DESIGN PRINCIPLES

It is recognised that due to climate change there is pressure for the development of cleaner industries. The challenge is to develop industrial buildings which incorporate environmental sustainable design.

The design stage is critical in constructing an environmentally sustainable building, as 70% of a buildings efficiency and impact is locked in at the design stage. It is acknowledged this may pose some initial cost outlay, however there will be long term savings after the pay back period.

4.1A - Water Sensitive Urban Design

The use of water sensitive urban design in the layout of an industrial site can significantly improve the amenity of the area and improve stormwater quality.

Industries, warehouses and transport terminals should be encouraged to incorporate measures that reduce potable water consumption. This could be achieved by capturing and reusing water onsite.

Objectives

1. To lower contamination of stormwater discharge.
2. To reduce potable water consumption.
3. Improve quality of waterways.

Guidelines

Water sensitive urban design measures are dependent on the individual site layout and should include:

- Grassed swales instead of conventional kerb and channel drainage.
- Filter strips such as a maintained grass or vegetated strip.
- Stormwater infiltration measures at the end of swales or open drains.

Where practicable, rain water run off from industrial rooves and concreted areas should be collected in a water saving / catchment device for reuse in landscaped areas, production processes and toilet flushing.

4.1B - Energy Efficient Urban Design

The incorporation of energy efficient design and use of renewable energy, can dramatically reduce industry greenhouse emissions and in the longer term result in significant cost savings.

Objectives

1. To reduce buildings greenhouse emissions from industrial activity.
2. To adopt economically viable energy efficient design initiatives.
3. To ensure that industry strives to minimise its impact on global warming and climate change through appropriately designed buildings and appropriate industrial processes.

Guidelines

Incorporate energy efficient measures at the design stage as follows:

- *Building orientation*
 - Ensure appropriate orientation (northerly / north east aspect) that provides direct solar access in winter with appropriate shading in summer (eg: awnings, shutters, deciduous trees).
 - Minimise south facing windows and / or double glaze south facing windows.
 - Efficiently use natural lighting through such measures as locating windows to capture north light; use light wells and skylights, and use light coloured external and internal finishes to reflect light.
- *Heating and cooling*
 - Maximise insulation and thermal mass and minimise air building leakages, where appropriate.
 - Maximise natural ventilation that promotes cross flow ventilation within the building and ensuring the openings can be well sealed to minimise draught in colder months.
 - Heating and cooling systems should minimise power output while meeting the specific temperature needs of the business activities within a building.
- *Options to reduce electricity use*
 - Installation of energy efficient lighting.
 - Provision of onsite technologies that produce renewable sources of electricity for consumption.
 - Switch to Green Power accredited renewable energy.

4.1C - Sustainable Building Materials

The choice of materials in a new or refurbished development has an impact on the environment. It is therefore important to encourage the use of materials with minimal impact and reduce waste.

Objectives

1. To minimise the total material resources used.
2. To minimise the environmental impacts of material used.
3. To encourage the use of environmentally friendly materials.

Guidelines

Choose materials with recycled content. Examples include:

- Structural and reinforced steel that uses recycled steel content.
- Recycled glass.
- Recycled timber, certified plantation or engineered timber materials.
- Water based building finishes / materials, over products which contain volatile organic compound (VOC).

Please refer to Council's ESD factsheet for additional environmental sustainable advice.

5. OTHER CONSIDERATIONS

5.1A- Factoryettes Requirements

These are small industry, warehouse or storage units developed on a single lot with shared driveways and car parking areas. They are often subdivided into individual units after development. They are not generally suitable for motor vehicle repairs businesses or transport terminals.

Objectives

1. To ensure the size of factoryettes is adequate and can comfortably accommodate a variety of self-contained industrial uses and associated facilities.
2. To ensure that factoryettes do not detract from the amenity and aesthetics of surrounding areas.
3. To ensure that factoryettes are built for pedestrian accessibility and mobility.

Guidelines

Each factoryette unit should have:

- A separate roller or tilt door access for light commercial vehicles.
- A pedestrian door to an office area separate from the vehicle access door.
- A dedicated rubbish skip storage area that is easily accessible by a waste collection vehicle.
- A loading bay provided within proximity of each units vehicle access door.
- Toilet and bathroom facilities.
- An internal screened storage area should be provided for each unit.

5.1B - Motor Vehicle Repair Premises Requirements

Objective

1. To ensure that motor vehicle repair premises do not have a detrimental impact on the amenity of the area or public streets.

Guidelines

Sites should be at least 1000 square metres.

Client vehicle storage for motor repairers (mechanics, panel beaters, auto-electricians, tyres and accessories) should be adequate to ensure that vehicles and goods are not stored on car parking, landscaping areas and in the street.

The car parking areas must only be used only for staff and visitor vehicles and not be used for the purpose of storage or cars to be repaired.