



MOUNT ALEXANDER

— SHIRE COUNCIL —

Wesley Hill Industrial Estate

Urban Design & Landscape
Guidelines





Contents

Contents 3

Acknowledgements & Recognition	6
1.0 Introduction	1
1.1 Objectives	1
1.2 Use of the Guidelines	1
2.0 Background	3
2.1 Wesley Hill Industrial Estate: Stage 2	3
3.0 Glossary	5
4.0 Site Layout & Planning	7
4.1 Setbacks & Buffer Zones	7
4.1.1 Context	7
4.1.2 Objectives	7
4.1.3 Guidelines	7
5.0 Building Design	13
5.1 Environmentally Sustainable Design	13
5.1.1 Context	13
5.1.2 Objectives	13
5.1.3 Guidelines	13
5.2 Building Massing, Height & Character	15
5.2.1 Context	15
5.2.2 Objectives	15
5.2.3 Guidelines	16
5.3 Roof Form & Roofline	18
5.3.1 Context	18
5.3.2 Objectives	18
5.3.3 Guidelines	18
5.4 Architectural Features, Materials, Colours & Finishes	19
5.4.1 Context	19
5.4.2 Objectives	19
5.4.3 Guidelines	19
6.0 Around the Building	21
6.1 Access Points & Crossovers	21
6.1.1 Context	21
6.1.2 Objectives	21
6.1.3 Guidelines	21

6.2	Parking (Staff, Visitor & Truck)	22
6.2.1	Context	22
6.2.2	Objectives	22
6.2.3	Guidelines	22
6.3	Water Sensitive Urban Design	23
6.3.1	Context	23
6.3.2	Objectives	23
6.3.3	Guidelines	23
6.4	Service Areas	24
6.4.1	Context	24
6.4.2	Objectives	24
6.4.3	Guidelines	24
6.5	Landscape	25
6.5.1	Context	25
6.5.2	Objectives	25
6.5.3	Guidelines	25
6.6	Lighting	27
6.6.1	Context	27
6.6.2	Objectives	27
6.6.3	Guidelines	27
6.7	Signage	27
6.7.1	Context	27
6.7.2	Objectives	27
6.7.3	Guidelines	27
6.8	Fencing & Gates	28
6.8.1	Context	28
6.8.2	Objectives	28
6.8.3	Guidelines	28
6.9	Staff Amenity	29
6.9.1	Context	29
6.9.2	Objectives	29
6.9.3	Guidelines	29
6.10	Maintenance	29
6.10.1	Context	29
6.10.2	Objectives	29
6.10.3	Guidelines	29
7.0	Authorities & Other Disciplines	31

Appendix 1 Recommended Plant List





Acknowledgements & Recognition

The following staff from Mount Alexander Shire Council contributed to the development of these guidelines

Sue Howard, Director Economic Development

Nick Haslinghouse, Director Infrastructure

Russell Ogier, Manager Healthy Environments

John Anthony, Environment Officer

Bruce Lucas, Manager Infrastructure & Transport

Sally Morris, Manager Economic Development

Fiona McMahon, Manager Sustainable Development

1.0 Introduction

Mount Alexander Shire Council are currently developing the second stage of Wesley Hill Industrial Estate (WHIE). This second stage of development is proposed to meet current and forecasted demand for Industrial land in the Castlemaine region. The design and construction of this stage incorporates best practice environmental design to achieve Council's commitment to sustainable environmental, social and economic development.

Industrial areas traditionally simplify resolutions to urban design and site layout matters, often presenting a cluttered character with rudimentary shed structures, poor site layout, inconsistent design elements, minimal landscape treatments and sign clutter. This can lead to wasted and/or poor space management and a visually chaotic precinct.

To ensure the integration of WHIE with the surrounding context, in particular residential properties, a carefully considered design response is required for the development of each allotment. Therefore the Urban Design and Landscape Guidelines have been developed to direct and inform the development of WHIE, enable appropriate and innovative design solutions which result in a desirable and responsive environment for all users.

1.1 Objectives

- Create a highly desirable

and attractive Industrial address for all users

- Form the basis for built form and landscape design in the precinct.
- Promote functional, sustainable and innovative development.
- Convey both standard requirements for all development and desirable outcomes.

1.2 Use of the Guidelines

These guidelines will form the basis of a design and development overlay and apply to all allotments within Stage 2 of WHIE. The guidelines are in addition to other planning and building requirements applicable to this site.

The guidelines are intended to assist land owners in the preparation of a good site design. Land owners are encouraged to liaise with Council before submitting detailed proposals. Council's Planning and Building Departments will be able to assist with queries regarding permits, the Planning Scheme, the guidelines, and building regulations. Queries regarding drainage and stormwater requirements should be

addressed to Council's Engineering Department and Coliban Water. Other service authorities may also need to be consulted, depending on the proposed land use.

The landowner is required to prepare construction plans and specifications for submission to Council for endorsement prior to the commencement of any works. These plans are to satisfy the conditions of the guidelines and any other statutory Planning and Building requirements. The scaled plans should include a site analysis, site plan and development plan.



2.0 Background

2.1 Wesley Hill Industrial Estate: Stage 2

The site is bounded by residential properties to the north and west, existing Industrial properties to the east and the railway line to the south.

Vehicle access to the site access is through Stage 1 (Fitzgeralds Close) from Hitchcock Street. Works to the Creek Reserve will include a pedestrian link from the west (eg. Goodes Court) into the site.

The landscape treatment of the streetscape, linear buffer reserve and creek reserve will be detailed as part of the Stage 2 Subdivision Permit Application. Council intend to implement the landscape treatments prior to the sale of lots.

The design of this subdivision is based on general functional needs and best practice for Industrial land. All lots allow for the construction of an entry foyer, main building/storage shed (minimum floor space 300m²), parking, access driveways and external storage.

Further subdivision of lots is discouraged. However, any subdivision proposals will be assessed on their merits and their conformance with the objectives of these design guidelines.

The site coverage of the building footprint should not exceed 50% of any lot, unless the developer can demonstrate to the Responsible Authority how the proposal will not have a significant impact on:

- Increased stormwater runoff
- Appearance of development
- Scale of development
- Conflict with vehicle movement



3.0 Glossary

Articulation

Building articulation is the treatment of a façade and its relation to the street, neighbouring allotments and open space. The façade of a building can be articulated using elements such as setbacks, balconies, verandas, fenestration, materials and colour. Articulation also pertains to the way forms are treated with relation to scale, proportions and architectural style.

Character

Sometimes known as 'sense of place', character distinguishes an area by the presence/absence of defining site features. These may include topography, buildings, architecture, materials, textures, colours, land uses, parks, trees, gateways, landmarks, smells, views, natural and cultural assets/associations, etc.

Façade

An architectural term referring to the exterior front wall of a building.

Fenestration

The pattern and arrangement of doors and windows on a building.

Form

Form, particularly built form, is concerned with the three dimensional character of buildings, and includes mass, height, street scale, and urban density.

Frontage

This refers to the street alignment at the front of a lot. In the case of a lot that abuts more than one street, it is usually the shortest boundary that faces a street.

Gateways

These are used to signify the entrance to a precinct, a transition point between the two precincts and/or a dominant element of orientation. Their form may include a structure or built element, a landscaped feature or an artistic form. Gateways help to designate places and passages of movement and contribute to defining local character.

Materials, Colours and Finishes

Materials are used to construct buildings, for example timber or bricks, while colour and finishes (the surface texture) refer to the detail and appearance of this material.

Mass and Height

Both refer to the built form.

Mass is the volume of a building. Height is measured from 'finished ground level' to the upper most point of the building and does not include any antennas, chimneys or flues. Height has implications for views, solar access, privacy and character, as well as topography.

Parking

Parking is the space which is provided to park vehicle/vehicles.

Passive Solar Design

The technology of heating and cooling a building naturally without the use of mechanical equipment. The orientation of the building, site selection, materials, and design features allow the building to collect, store and distribute the sun's heat in winter, block the sun during the summer, and provide for air circulation and natural day lighting.

Finished Ground Level

This is the ground level of the site after the initial earthworks have been carried out. The finished ground level provides a reference for measuring the height of a building.

Roof Form and Roofline

A roof is the external surface of the top of a building. The form is the shape of this surface, while the roofline is the silhouettes produced by this shape. Rooflines including their form, materials and type are typically visible from a distance. Therefore, the appearance of the roofline has impacts on a building's appearance and its integration within the local context, as well as on views beyond.

Side and Rear Setback

The minimum distance from a building to the lot boundary other than those edges that front a street. All structures including the building, decks, pergolas, porches and verandas are not to occur within the specified setback distance. Side and rear setbacks affect the quality of space between buildings, acoustics and solar access.

Signage

Signs are public display panels or boards to visually communicate information. They may be permanent such as a road sign or company name, or temporary like an advertising sandwich board.

Street Setbacks

The minimum distance from a building wall to any boundary edge that fronts onto a street. It may be one edge or in the case of a corner block, two edges. All structures including the building, decks, pergolas, porches and verandas are not to occur within the specified setback distance. Street setback influences street character through its effect on how the internal lot layout relates to and addresses the street.

Structure

Urban structure covers the general features of a precinct that help to make it legible. These include gateways, landmarks, road layout and edges.

Views

Can be one of the following;

- A field of vision
- A scene
- A vista or view through a long narrow opening
- A way of showing or seeing something from a particular position or angle.

Views provide a public amenity and can have either a positive or negative effect on local character, depending on the particular 'view'. Views can enhance community safety through offering passive surveillance opportunities. However unrestricted views may also impact upon privacy.



4.0 Site Layout & Planning

4.1 Setbacks & Buffer Zones

4.1.1 Context

Setbacks and Buffer Zones are nominated to provide space between uses (eg. private and public). The aim of these spaces is to provide a physical and visual transition between uses. Setbacks and buffers also provide an opportunity for landscape treatments which assist in visual screening of undesirable views and noise attenuation.

4.1.2 Objectives

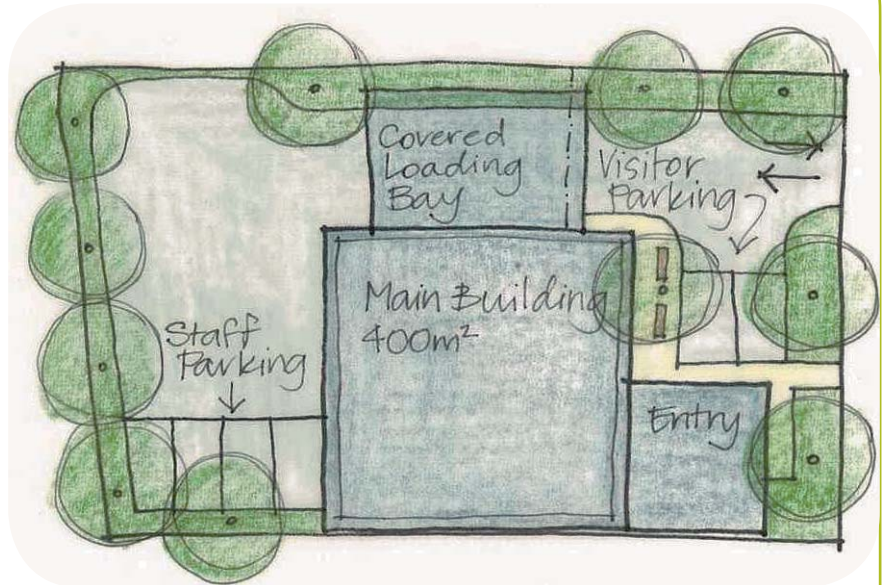
- Nominate appropriate buffer zones for development on each allotment
- Define appropriate character for various interfaces
- Ensure appropriate building setback is achieved to all existing roads, and site boundaries.
- Provide visual screening and noise attenuation

4.1.3 Guidelines

Site Perimeter Buffers and Setback

Appropriate landscape buffers and building setbacks must be provided around the perimeter of each lot. Refer to the table following for individual setbacks on each lot.

Figure 1: Indicative Lot Layout (Style A)



Lot Number	Lot Boundary			
	North	South	East	West
1	Minimum 2m landscaped buffer, 5m setback of built form	Minimum 3m landscaped buffer.	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 1m landscape buffer if building is not located on this boundary
2	Minimum 2m landscaped buffer, 5m setback of built form	Minimum 3m landscaped buffer.	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 1m landscape buffer if building is not located on this boundary
3	<i>Street frontage:</i> minimum 2m landscaped buffer, 5m setback of built form <i>Internal:</i> Minimum 1m landscape buffer if building is not located on this boundary	Minimum 3m landscaped buffer	<i>Street frontage:</i> minimum 2m landscaped buffer, 5m setback of built form <i>Internal:</i> Minimum 1m landscape buffer if building is not located on this boundary	Minimum 2m landscape buffer.
4	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 2m landscaped buffer, 5m setback of built form	Minimum 2m landscape buffer.
5	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 2m landscaped buffer, 5m setback of built form	Minimum 2m landscape buffer.
6	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 2m landscaped buffer, 5m setback of built form	Minimum 2m landscape buffer.
7	Minimum 1m landscape buffer. Setback of built form to be a minimum of 30m from residential title boundary.	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 2m landscaped buffer, 5m setback of built form	Minimum 2m landscape buffer.
8	Minimum 1m landscape buffer. Setback of built form to be a minimum of 30m from residential title boundary.	Minimum 1m landscape buffer if building is not located on this boundary	- N/A	Minimum 2m landscaped buffer, 5m setback of built form
9	Minimum 2m landscaped buffer, 5m setback of built form	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 1m landscaped buffer, 3m setback of built form	Minimum 1m landscape buffer if building is not located on this boundary
10	Minimum 2m landscaped buffer, 5m setback of built form	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 1m landscaped buffer, 3m setback of built form

Lot Number	Lot Boundary			
	North	South	East	West
11	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 2m landscaped buffer, 5m setback of built form	Minimum 2m landscaped buffer, 5m setback of built form
12	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 2m landscaped buffer, 5m setback of built form	Minimum 2m landscaped buffer, 5m setback of built form
13	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 2m landscaped buffer, 5m setback of built form	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 1m landscaped buffer, 3m setback of built form
14	Minimum 1m landscape buffer if building is not located on this boundary	Minimum 2m landscaped buffer, 5m setback of built form	Minimum 1m landscaped buffer, 3m setback of built form	Minimum 1m landscape buffer if building is not located on this boundary

The northern and western perimeters of the Stage 2 area will be further screened by landscape treatments within the abutting reserves.

Landscape buffers must incorporate appropriate vegetation. Refer to the *Recommended Planting List in Appendix 1* for suggested plant species.

Structural interfaces may be considered on interfaces with existing residential properties for additional visual and noise screening.

Front Boundary Setback

The front setback design must minimize visual bulk of buildings on the streetscape. Built form must be setback from the front boundary by a minimum of 5 metres with an average of 10 metres. This can include a landscape buffer and car parking. Lesser setbacks may be considered for the smaller corner lots (i.e. Lots 9, 10, 13, 14), and will be assessed on design merit.

Side and Rear Boundary Setback

Side and rear setbacks of buildings must comply with the building Regulations 2006 S.R. No. 68/2006 Part 4 – Siting.

On lots with more than one street frontage, buildings must be set back a minimum of 3 meters from the secondary street. This setback must include a minimum 1 meter vegetated buffer.

Building to the boundary is encouraged on at least one side to improve space efficiency and to provide opportunities for solar access and visual amenity (including building articulation, landscape and internal outlook). Side setback areas should be of practically useable area for either access, vehicle parking and landscaping.

Refer to Figures 1-5 for indicative functional Lot layouts.

Figure 2: Indicative Lot Layout (Style B)

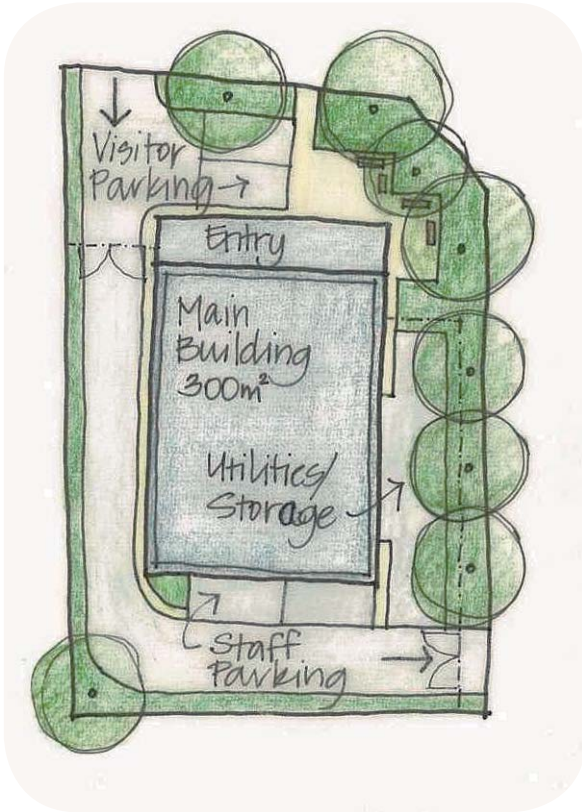


Figure 3: Indicative Lot Layout (Style C)

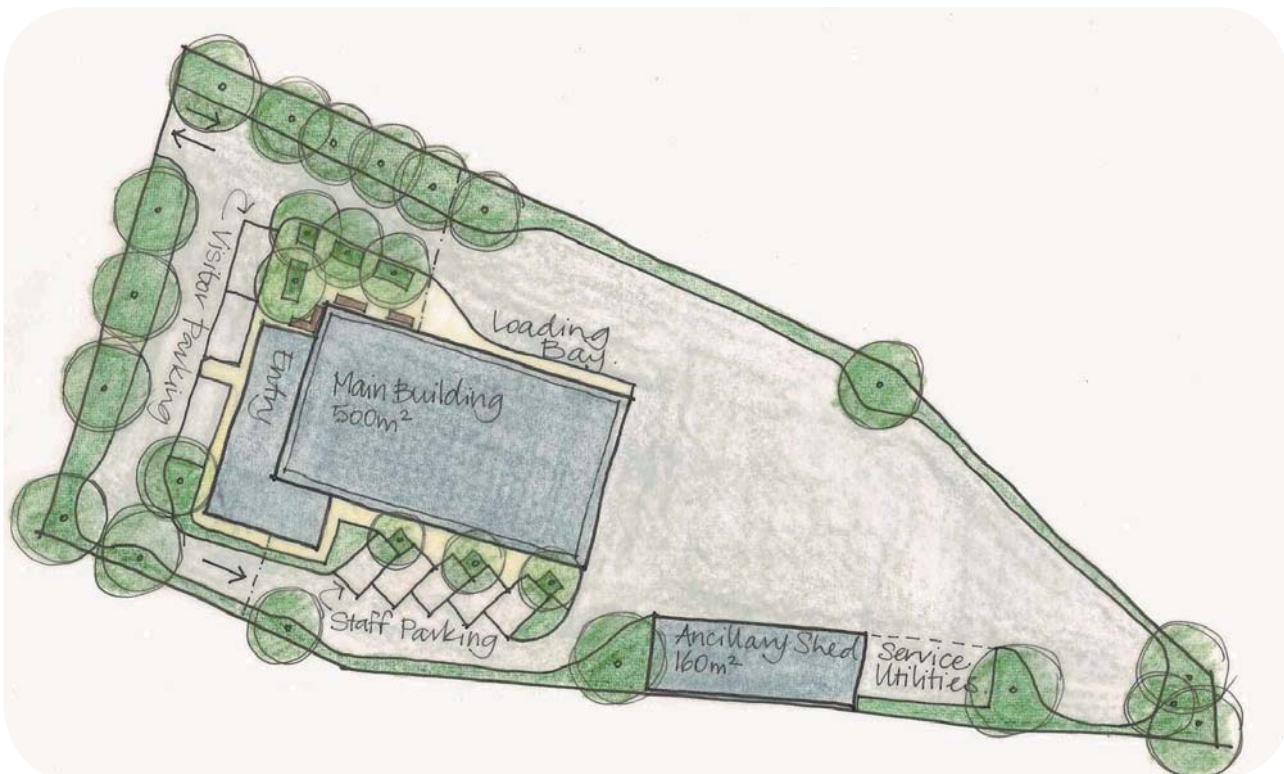


Figure 4: Indicative Lot Layout (Style D)

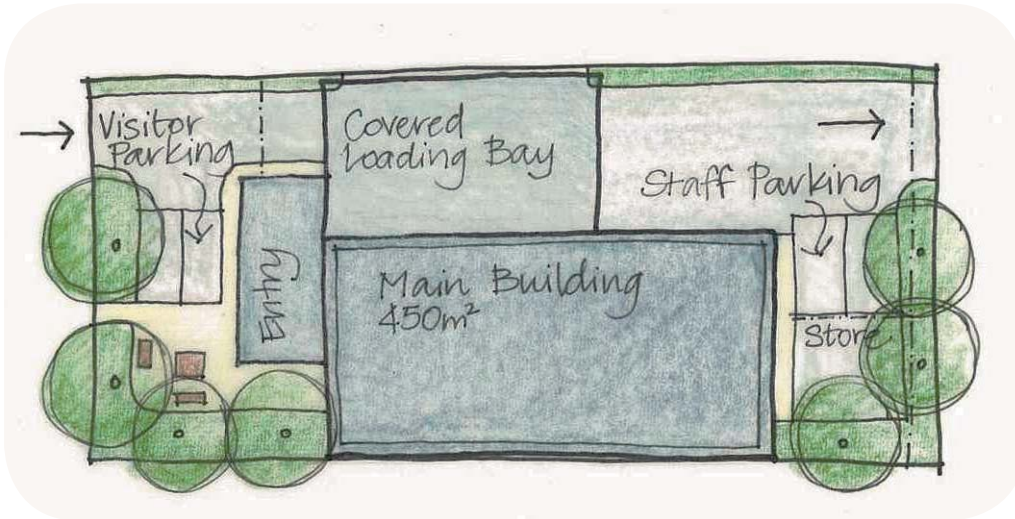
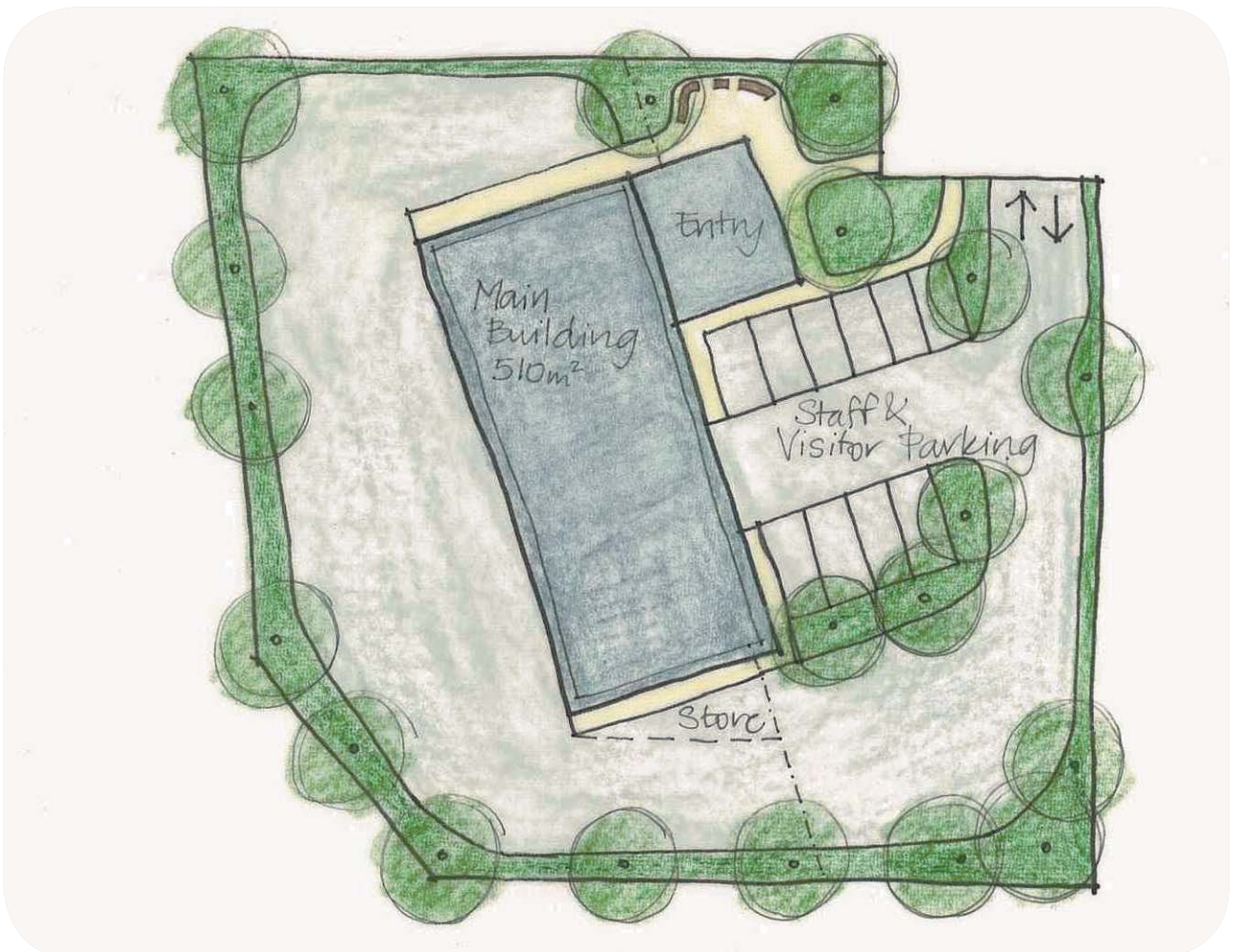


Figure 5: Indicative Lot Layout (Style E)





5.0 Building Design

5.1 Environmentally Sustainable Design

5.1.1 Context

Industrial developments have the potential of being major proponents of Environmentally Sustainable Design (ESD) due to the sheer scale and technological capabilities available to such developments. Architectural articulation could help achieve an environmentally responsive work space within these structures if they are well placed, designed and detailed.

Built form with good solar orientation has many direct and indirect benefits. The challenge is to ensure that different parts of the building respond appropriately to various passive solar design goals, while integrating them into a functional and elegant whole. Careful orientation and massing can regulate solar energy entering the building and greatly reduce cooling or heating requirements, especially for industrial buildings with high internal loads. This translates into lower energy costs over the life of the building. Careful solar control can also reduce costs for mechanical cooling equipment often to the point of lower overall construction cost.

5.1.2 Objectives

- Encourage design that is sustainable and environmentally responsible
- Minimise the use of non-renewable sources of energy
- Orient and layout buildings to improve energy efficiency
- Capture and re-use rainwater

5.1.3 Guidelines

Energy efficiency

Efficient use of energy is encouraged in the design, construction and operations. The following guidelines must be considered in the built form and landscape development of the site and implemented wherever possible:

Built Form

- Integrate building services into the built form design process with emphasis on minimising size and cost of energy use, and reducing operational energy
- Reduce heat transfer by orienting and designing the built form, particularly glazing areas and fenestration, based on passive solar design principles. Also use building cladding materials with maximised thermal performance.
- Consider opportunities for natural ventilation in large storage areas to reduce the dependence on mechanical services. If air conditioned spaces are required, provision of economy cycle cooling and overnight building flushing must also be considered.
- Use natural light wherever possible. Provide windows and skylights to reduce or eliminate the need for electric lighting creating a stimulating and productive environment for building occupants. This is especially recommended in the large storage buildings. Clerestory windows and industrial skylights must be oriented to capture the best ambient solar light possible on the given site.
- Orient indoor offices and outdoor passive recreation spaces to the north for maximum winter sun.

- Design windows on the north side of the building for summer sun protection and winter sun penetration.
- Provide external sun shading to west and north facades, windows and openings of the building. The use of movable louvers and forms of fenestration are encouraged.
- Consider prevailing wind patterns and utilize these to obtain passive cross ventilation through the siting of windows and doors. This method is particularly significant to large storage buildings that may not need artificial air conditioning.

Materials, Fittings & Fixtures

- Selection and use of materials with low embodied energy. For example, use local materials which require less freight, recycled materials, and/or materials which require minimal processing and maintenance.
- Consider the installation of computerised building management systems to monitor and optimise heating, cooling and lighting systems. For example, daylight sensors on external lighting.
- Consider cogeneration technology for power generation and heating/cooling and use of photovoltaic solar power and solar hot water is highly desirable
- Use of low energy lamps, high efficiency light fittings and effective room lighting controls are essential features that reduce energy requirements
- Nominate light coloured internal surfaces to reduce artificial lighting requirements.

External Areas

- Landscape external areas to provide summer shade and enable sun penetration in winter.
- Select muted tones and colours on external surfaces to reduce heat gain and reduce cooling requirements
- Locate washing and service areas to the south or west side of the building.

For further details you can visit these websites:
www.sustainability.vic.gov.au
www.gbcaus.org

Water efficiency

The site development must demonstrate water conservation and implement reuse where possible. Measures for rain water capture, storage, and use are also strongly encouraged.

The followings guidelines must be considered in the built form and landscape design to enhance water efficiency:

Built Form

- Harvest rainwater from building roof areas and store on site for reuse as appropriate. For example, toilet flushing, wash down of hard surfaces and vehicles, and irrigation of landscape areas.
- Consider systems to recycle water for the same use, or different uses within the site. Refer to EPA guidelines for water reuse (<http://www.epa.vic.gov.au/>)

Materials, Fittings & Fixtures

- Install water efficient fixtures and fittings to minimise water use.

External Areas

- Where possible external surfaces should be porous to maximise on site rain infiltration and to reduce storm water run off.
- Raingardens incorporated into the landscape buffer are encouraged to treat stormwater runoff.
- Use of low water use plants and storm water run-off from parking areas to be used to water these plants. Refer to Appendix 1: Recommended Planting List.



5.2 Building Massing, Height & Character

5.2.1 Context

The size and height of built form have an impact on the character of streetscape and user experience. Built form may vary depending on functional requirements. Industrial areas often provide for function but fail to present a user friendly environment due to the sheer size and scale of built form.

The built forms in Industrial areas can be defined as:

- Entrance / administration building which houses the reception area, office spaces and general amenities.
- Large storage buildings which are storage spaces with associated open air facilities which have larger area and visual bulk.
- Sheds and ancillary buildings like gate houses and small scale external storage.

5.2.2 Objectives

- Ensure that the form and scale of development enhances the streetscape and visual quality of the area.
- Develop built form that are fit for purpose and contribute to forming a positive user friendly character for the Industrial Estate

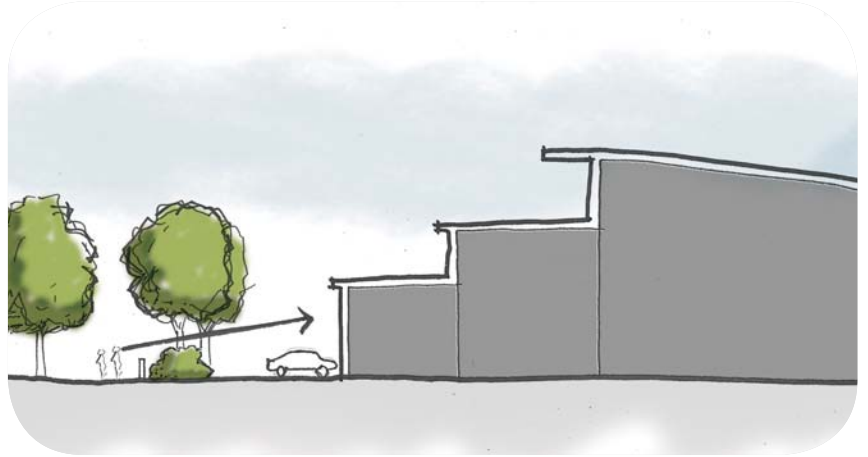


Figure 6: The entrance building must present a human scale to the main street frontage. Stepped built form is encouraged



Figures 7 & 8: The front entrance building addresses the street at a human scale. It is articulated with architectural features and colours, and is set within an appropriate front landscape.

5.2.3 Guidelines

The Entrance Building

It is essential that all entrance buildings achieve a sense of street address and display a human scale/proportion. These buildings must have a low-scale built form fronting the street. Sufficient architectural articulation and detailing is required to provide visual interest to the streetscape.

The street wall height of the entrance building must not exceed 2 storeys or 8 metres from the finished ground level. Upper storeys must be setback a minimum of 8 metres from the street wall facade. Stepped built form is recommended to avoid visual bulk. Consider a lower entry/reception area to the street frontage, with a larger storage or industrial building to the rear as a means of reducing the impact of built form on the streetscape (Figure 9).

Stepped and curved roof form is recommended to avoid large big box type built form and to provide opportunities for solar access. Stepped roof form also increases the opportunity for clerestory windows which increase natural light inside large hangars and is an energy efficient asset (Figure 6).

Adequate fenestration and due consideration to solar orientation will result in a comfortable and aesthetically pleasing workspace. Blank walled front facades are discouraged. Adequate architectural detailing and street address must be achieved through the built form design.

Large Storage Buildings

All storage structures must be within a maximum height of 15 metres from the finished ground level. 'Big box' style storage buildings must be avoided and the built form must not affect the visual amenity of the streetscape and surrounding areas.

The storage structures should relate to the entrance building in colours and materials and should have a complementary architectural style. It is recommended that roof forms of storage facilities should relate to the roof style of entrance feature buildings where possible. Curved roof styles are recommended for large storage buildings as they reduce visual bulk and dominance of the roof line on the streetscape.

At least 20% of the built form must be articulated with openings, glazing or light vents. All blank tilt concrete walls must be articulated with panels, textures or patterns.

Emergency access should be provided to at least two sides of the storage building.



Figure 9: The stepped entrance building provides a good street address



Figure 10: Interesting architectural detail provides good street address while also screening off excess solar heat gain



Figure 11: The large building relates to the entrance building in colour reflecting the branding of the company while still mostly maintaining muted colours



Figure 12: Blank tilt concrete walls articulated with pattern and colours provide visual interest

Sheds and Ancillary Buildings

Any ancillary storage spaces, sheds, hangars, etc which are detached from the main building must complement the main built form design with colours, textures or material and must not exceed an overall height of 12 metres.

Corner lots

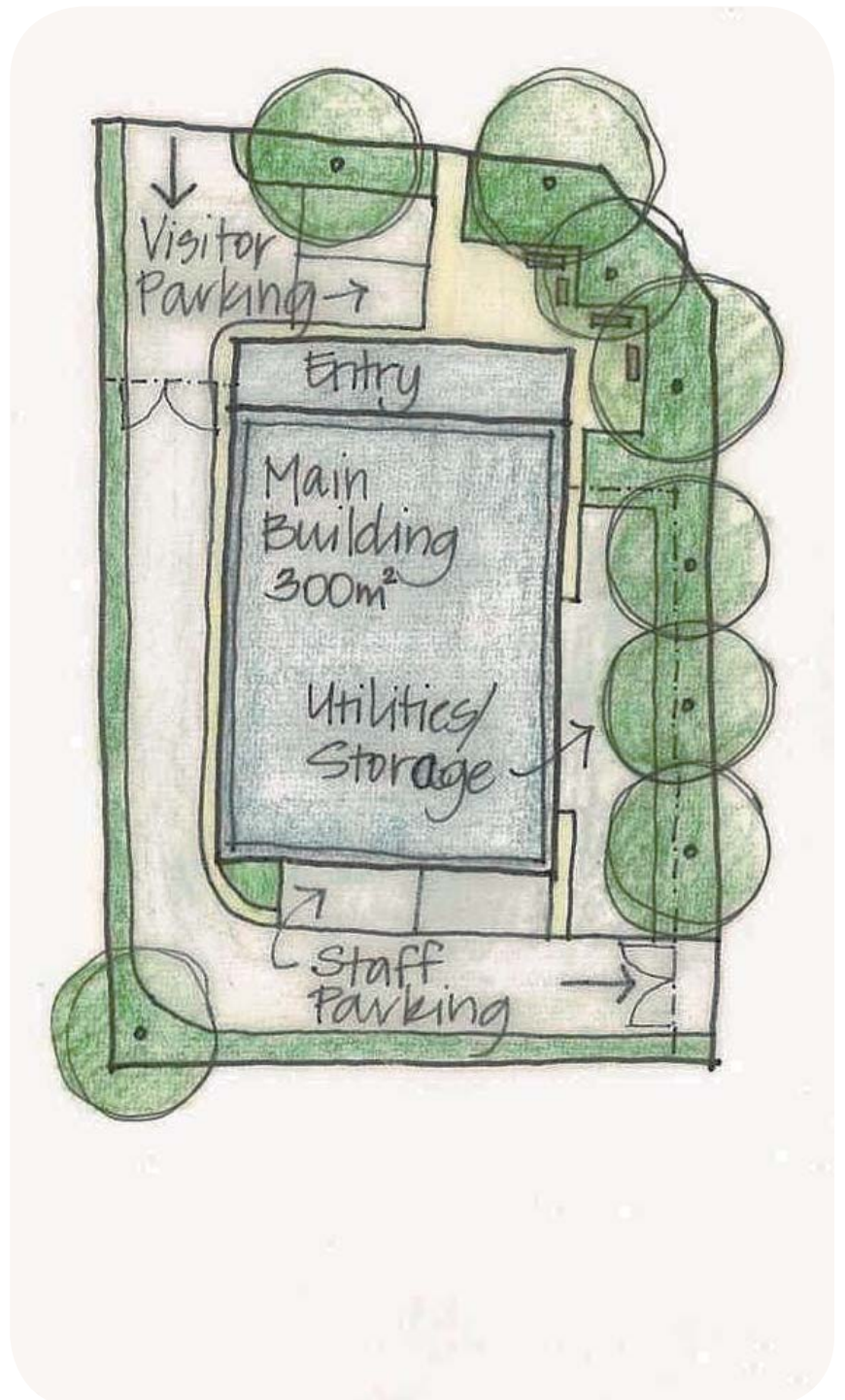
Corner lots have a significant impact on the overall urban character of the development, and therefore, considerable attention is required to ensure that a good outcome is achieved for both a corner lot layout and the development as a whole.

The entrance building that houses the reception, office etc of a corner lot must be designed to address both streets by incorporating elements of the front elevation for at least 3 metres of the side-street, and include adequate articulation with architectural features.

Particular fencing requirements apply to corner lots (refer to 6.8 Fencing & Gates).

Storage areas must not be located along the corner and must be screened from public view with landscape treatments if visible from the adjoining road (Figure 13).

Figure 13: Indicative Lot Layout (Style B)



5.3 Roof Form & Roofline

5.3.1 Context

Due to the functional size of Industrial buildings roof form and roofline can have a significant impact on the character. Ancillary fixtures such as air conditioners and aerials are often located on the roof of buildings. Due to the topography of this site, roof elements may be visible from public vantage points and some private properties. With careful thought these fixtures can be appropriately placed or screened to minimise their impact.

5.3.2 Objectives

- Avoid visual clutter of ancillary fixtures such as antennae and air conditioning units.
- Encourage the use of solar panels and eco-friendly fixtures

5.3.3 Guidelines

Ancillary fixtures (eg. air-conditioning, satellite dish, etc) are to be integrated into the roof built form with screens and/or located in order to minimise negative visual impacts on the streetscape and roofline.

External fixtures should be integrated into the built form with the use of parapet walls, rooflines or other architectural details (Figure 9). Air conditioning units must be located below the ridge line, coloured to match the roof and located away from public view. Any external service elements like plumbing and ventilation systems must be discerningly incorporated into the built form.

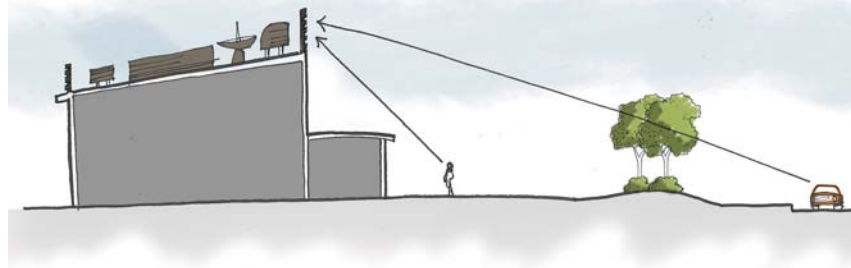


Figure 14: Ancillary fixtures must be screened by parapets or other architectural features to minimise visual clutter



Figure 15: Ancillary fixtures should not be visible from public spaces and contribute to visual clutter

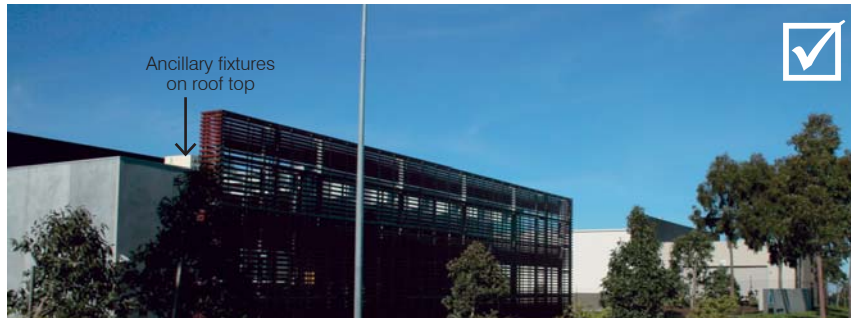


Figure 16: External fixtures must be screened with the use of parapets and other architectural details

The exception to this is solar panels and other infrastructure for sustainable energy supply. These fixtures are excepted from screening in recognition of their positive contribution to the environment and therefore character of the development. These fixtures may be located in direct public view. However like other fixtures, they are to be integrated into the built form as an aesthetic architectural detail.

5.4 Architectural Features, Materials, Colours & Finishes

5.4.1 Context

Architectural features, materials, colours and finishes are significant to the finished building appearance. While commercial/industrial premises may want a “stand-out” building to attract attention, this can detract from the overall character of the area.

5.4.2 Objectives

- Attractive buildings and ancillary facilities with high quality materials, innovative and attractive architectural articulation
- Visual harmony within the development, the surrounding areas and landscape.

5.4.3 Guidelines

The use of muted colours and textures are recommended to reduce the visual impact of the built form. There should be a level of consistency of materials used across the site. Therefore the primary construction materials must be concrete, steel, masonry and glass. However, other construction materials which meet the ESD guidelines would be considered on an individual basis.

The external roof and walls of industrial buildings must be finished in paint bonded metal, timber, brick or other non-reflective or muted colour materials. Materials, colours and textures used must lend a solid appearance to the buildings and present an attractive façade to the streetscape.

The front façade should not have more than 60% of one material in its architectural articulation to avoid monotonous façades. The maximum reflectivity of any glazing must not exceed 20% to avoid excessive glare to surrounding building occupants and motorists.



Figure 17 & 18: Loud colours must not be used. In the second photo, the built form addresses the street corner well, but has a negative visual impact because of strong colour use



Figure 19: Muted colours present a good street address and ties different parts of the building together well.



6.0 Around the Building

6.1 Access Points & Crossovers

6.1.1 Context

Industrial sites require management of both pedestrians and vehicles. Often the core business (eg. delivery vehicles and forklifts) are provided for at the expense of occasional traffic (eg. visiting pedestrians). Lack of planning for one use can present potential hazards for all.

6.1.2 Objectives

- Provide safe, manageable and convenient site access for all potential users
- Manage vehicular and pedestrian movements into, out of and around the site

6.1.3 Guidelines

The site access points to each lot should be designed with due consideration to potential users and their typical movement requirements in and out of the site. Pedestrian and vehicle access should be separated to avoid potential conflict.

Adequate signage must be provided at access points to direct traffic, particularly those who may be unfamiliar with the site.

All vehicles, including those delivering to, or servicing the site, must be able to enter and leave in a forward direction irrespective of the size of the lot.

Site layouts should be designed to minimise the occurrence of delivery vehicle/truck queuing on roads.

Crossovers must be sealed and constructed to Council standards.

All vehicular movement areas must be sealed pavement or be a compacted aggregate base to avoid creation of mud and dust. It is recommended that semi pervious pavers be used for low traffic areas of the site to increase rain infiltration and reduce storm water run-off.



Figure 20: Well defined access points for trucks to the left and cars to the right with a gatehouse controlling both access points



Figure 21 & 22: Clear and prominent signage which indicates address and type of vehicle access

6.2 Parking (Staff, Visitor & Truck)

6.2.1 Context

If parking is not adequately provided within individual lots, the streetscape can become blocked by delivery trucks and parked vehicles. As Stage 2 of WHIE is designed based on a one-way traffic treatment for Fitzgeralds Close limited street parking will be available. Therefore each site must provide staff and visitor parking to cater for their proposed use.

6.2.2 Objectives

- Accommodate carparking within individual lots
- Present parking on the site within a landscaped setting to have a positive impact on the visual character of the streetscape.
- Encourage an active street frontage by minimizing the amount and visual impact of parking on the road frontage of the lot.

6.2.3 Guidelines

Adequate car parking must be provided within the site with safe and efficient access points. Car parking will generally be required at a ratio consistent with the Mount Alexander Planning Scheme unless a particular use or development warrants a reduction.

Visitor and staff car parking should be separated if possible, with visitor parking being identifiable from the street and easily accessible to the building entry/reception. The visitor (or front) car park surface must be a sealed surface of concrete, asphalt or permeable pavers. Additional parking to the rear and/or side of the site may be an unsealed surface, such as compacted crushed rock.

The visual impact of car parking within the front setback should be minimised and include adequate landscape to reduce the scale of paved areas, implement water sensitive design principles and contribute to the overall amenity of the local environment (Figure 25).

The landscape design of all parking areas should provide shade to vehicles, but still maintain desirable sightlines to the building entry and signage. This may be achieved through the use of shade trees and groundcover planting (i.e. 0-0.7m tall).

Delivery vehicle and truck parking must be located away from the front of the lot and screened from public view.



Figures 23 & 24: The building address is dominated by car parking



Figure 25: Visitor car parking is provided at the front, with other parking away from public view

6.3 Water Sensitive Urban Design

6.3.1 Context

The benefits of Water Sensitive Urban Design (WSUD) practices are now widely proven and accepted. WSUD facilitates the fulfilment of a number of environmental obligations and has other desirable attributes. These include management of stormwater run-off, reducing pollution to natural water bodies, providing habitat to local fauna and providing a natural or 'green' setting to the development. The benefits to the long term infrastructural costs of a development, reduced maintenance requirements and public perception are also significant and can be achieved by integrating these processes.

6.3.2 Objectives

- Encourage the use of Water Sensitive Urban Design (WSUD) on individual sites.
- Ensure a collaborative design approach is employed.
- Encourage sustainable measures in infrastructure design, construction and management.

6.3.3 Guidelines

WSUD principles should be applied to the site. However its extent of implementation will be dependent on the type of use proposed (refer to EPA regulations).

There is a need for collaborative approaches and outcomes to ensure efficient and appropriate provision of infrastructure and services. Mount Alexander Shire Council and Coliban Water welcome initiatives addressing Water Sensitive Urban Design (WSUD) principles, however the use of WSUD could have management issues for particular uses in the industrial environment and hence all proposals must include a management plan for Council's review.



Figures 26 & 27: WSUD incorporated into the car park and building landscape treatment

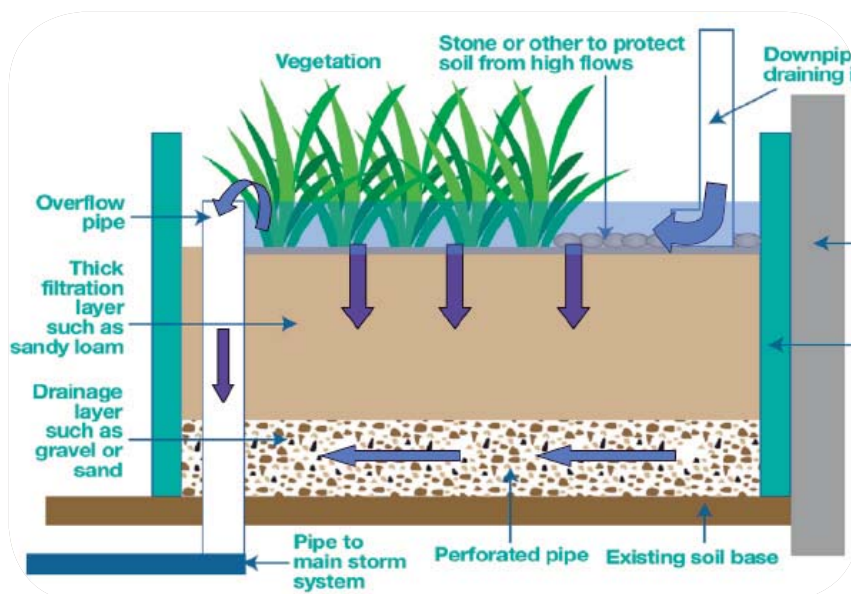


Figure 28 (left): Diagram of WSUD Raingarden function

6.4 Service Areas

6.4.1 Context

Service areas for temporary garbage storage, utility, external storage and washing docks are important to the function of industrial sites, but can often present undesirable views and odours.

6.4.2 Objectives

- Locate service areas out of public view

6.4.3 Guidelines

Locate service areas discreetly on the site. If this location can be viewed from a public place, the service area must be screened. This can be done by utilizing built form, landscape and/or fencing.

If large containers or vehicles are proposed to be washed on-site, an on-site wash bay is to be constructed of concrete or some other impervious and durable material. Waste from the bay must drain into a public sewer or a settlement and oil separation system. The system must comply with the Environment Protection Act 1970 and be installed to the satisfaction of the responsible authority.

Washing areas must be designed with due consideration to efficient water use, water source, recycling and reuse.



Figure 29: Storage of goods must be located away from public view or appropriately screened.

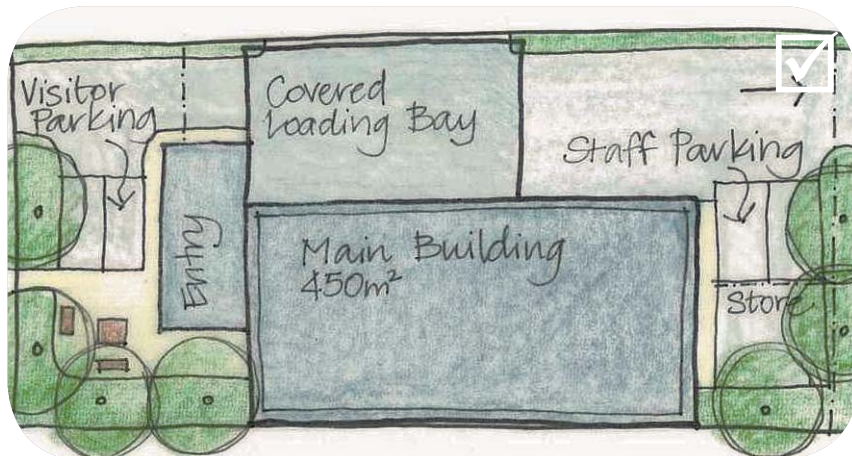


Figure 30: Indicative Lot layout with storage area located at the rear of the site and screened by landscape treatment

6.5 Landscape

6.5.1 Context

Landscape treatments have a positive impact on streetscape character and amenity. Compared with residential areas, landscape in Industrial areas is often omitted or neglected. Landscape treatments are a simple and effective way to improve site appearance. Appropriate planting can also contribute to the creation of green habitat corridors.

The use of spaces should be considered when designing landscape to ensure that undesirable views are screened and desirable views maintained. This is particularly important to the front of buildings where views contribute to the direction and safety of users. Passive surveillance by passers-by should be encouraged for safety and crime prevention following Crime Prevention Through Environmental Design (CPTED) principles .

6.5.2 Objectives

- Create a good appearance and pleasant spaces for all users
- Soften built-form
- Provision of green corridors and habitat, particularly for birdlife.
- Maintain traffic sightlines
- Encourage passive surveillance of public areas (i.e. creek reserve) and front of buildings for increased user safety and crime prevention.

6.5.3 Guidelines

The design of landscape treatments and selection of plant species should consider

- Functional requirements
- Proposed maintenance
- Water requirements and availability
- Contribution to streetscape, and
- User Amenity

It should also give preference to include species from the local Ecological Vegetation Class. A recommended plant list has been included in Appendix 1. Plant selections should be discussed with the local authority prior to submitting a proposal.



Figures 31 & 32: Buildings must be softened by a maintained landscape.



Figure 33: A shaded space with picnic tables provides amenity for staff and visitors

Landscape treatments should comprise of considered design outcomes coupled with appropriate material selection. While the use of indigenous species is encouraged, the nature of the intended land use for this development is such that indigenous plantings may not be suitable to achieve the desired functional outcomes. Generally species should be selected on the basis of their suitability and tolerance to the conditions on site.

Selected vegetation should require minimal, systematic maintenance regimes, with particular preference given to those which can be managed through coppicing and regeneration methods.

Tree locations including setbacks from the back of kerb and grouping arrangements should be determined by the growth habit and form of individual species and must avoid obstructing key sightlines or posing safety risks. Trees must not impede the safe passage of vehicles or lead to excessive amounts of debris littering the carriageway.

At the front of the site, where landscape is viewed by the public, planting should be tall canopy trees with mixed low vegetation to allow visibility for traffic movement and CPTED.

Screen planting must be considered in areas of the development that are:

- a. Subject to direct views from the public roads and railway, particularly rear of lots and shared lot boundaries.
- b. Considered to be excessive in terms of building or external goods storage mass.
- c. Considered to be sensitive in terms of security risks.
- d. Car and truck parking areas.

Refer to Figure 32.

Examples of screen planting are trees and/or tall shrubs planted in a single or double row and chain-wire mesh fencing with climbers.

Sculptural or constructed features may be considered particularly where they can offer an innovative identity to the development or compliment the character of proposed buildings.



6.6 Lighting

6.6.1 Context

Lighting around the building may be required to extend the hours of operation and assist in the prevention of crime.

6.6.2 Objectives

- Encourage low energy use lights
- Ensure that adjacent user amenity is not reduced by lighting.

6.6.3 Guidelines

Lighting should be selected and located based on ESD principles (refer to 5.1).

Light must not spill onto adjacent properties.

6.7 Signage

6.7.1 Context

Good signage plays a crucial role in communication. However signage is often ineffective with illegible text, inconsistent and therefore confusing, or overwhelming.

6.7.2 Objectives

- Signage that is legible, clear and consistent, communicating address and directing users.
- Signage to match the built form to encourage visual harmony.

6.7.3 Guidelines

Signs should be kept to a minimum sufficient to identify the establishment and should not adversely impact the streetscape by being overwhelming and obtrusive. Signs should not be erected on or within the roof gable. Signs can be displayed within the face of the building or parapets and should not exceed 10% of the wall facing roads.

Signage at the entry must clearly indicate the location of relevant parking spaces and the building entry/reception. The signage must be complimentary to the building façade in colour and material.

Internally illuminated signs must be located so as to not cast light that may create a visual or traffic hazard, or cause significant loss of amenity to adjacent properties.

Freestanding signs should be displayed parallel to or at right angles to a road. "V" shaped signs are strongly discouraged.



6.8 Fencing & Gates

6.8.1 Context

Fencing and gates have a significant role in defining streetscape character, public and private space. Fencing within Stage 1 of WHIE is cyclone mesh with barbed wire. This presents a security conscious image that is not welcoming. Although it provides protection from theft and/or vandalism, this type of fencing is only appropriate to rear and side fences, but not for the main street frontage.

6.8.2 Objectives

- Provide functional fencing and gates to secure premises
- Contribute to positive appearance of lot frontages

6.8.3 Guidelines

Fencing must not dominate the streetscape and must be designed as aesthetic features that blend into the landscape. Fences on front boundaries are discouraged. Landscape treatments are preferred to create a threshold between the public and private realm.

Fencing and gates must be designed of an appropriate material and colour so as to reduce their visual impact on the streetscape and compliment the built form.

If security fencing is required for the lot it should be setback behind the reception/entry building. Corner lots requiring security fencing must setback the fencing a minimum of 1m from the title boundary on the secondary road side.

Security fencing should have a high degree of transparency and be provided in black plastic coated cyclone wire. Barbed wire or razor wire is not acceptable fencing materials.



6.9 Staff Amenity

6.9.1 Context

Staff Amenity influences productivity, safety and job satisfaction. However pleasant outdoor spaces that staff can use during breaks are rarely provided.

6.9.2 Objectives

- Encourage the provision of outdoor amenity areas for staff

6.9.3 Guidelines

Provision of an on-site amenity for staff to congregate at break times or for small company events is recommended. Depending on the use of the site and number of staff the amenity space could be as simple as outdoor seating in a landscaped area, or a more elaborate space with outdoor picnic setting, BBQ, shade sail and landscaping. If possible, the amenity space should be located on the north or eastern side of the building and take advantage of views of public space, particularly the creek reserve.

The staff amenity space can be incorporated into the required landscape buffer areas. This approach makes efficient use of the concentrated landscape treatments intended for each frontage and creates an overall landscape character for the development which is supplements the public open space.

6.10 Maintenance

6.10.1 Context

A poorly maintained landscape can be detrimental to the character of a place, suggesting that the place is not valued by the users. Even low maintenance plants require some maintenance to establish and maintain good form.

6.10.2 Objectives

- Establishment of the landscape
- A well kept and tidy appearance

6.10.3 Guidelines

All sites must establish and maintain their landscape treatments to ensure proper growth and a clean and tidy appearance.





7.0 Authorities & Other Disciplines

Throughout all stages of site development the timely engagement of the related professional services and regulatory bodies must be sought to ensure conformation with any necessary requirements and an efficient and coordinated outcome. These may include but are not limited to:

- Mount Alexander Shire Council
- Planning and Urban Design
- Engineering and Survey
- Traffic Engineering
- Environmental Consultants
- Environmental Protection Authority (EPA)
- Acoustic Consultants
- Northern Central Catchment Management Authority (NCCMA)
- Coliban Water
- Department of Sustainability and Environment (DSE)
- Country Fire Authority (CFA)
- V/Line



Appendix 1
Recommended Plant List

Recommended Planting List

Planting Zone	Botanical Name	Common Name
Trees		
	<i>Acacia implexa</i>	Lightwood
	<i>Eucalyptus leucoxylon subsp. Pruinosa</i>	Yellow Gum
	<i>Eucalyptus polyanthemos</i>	Red Box
	<i>Eucalyptus tricarpa</i>	Red Ironbark
Large Shrubs		
	<i>Acacia acinacea</i>	Gold-dust Wattle
	<i>Acacia williamsonii</i>	Whirrakee Wattle
	<i>Bursaria spinosa</i>	Sweet Bursaria
	<i>Calytrix tetragona</i>	Common Fringe Myrtle
	<i>Correa glabra</i>	Rock Correa
	<i>Dodonaea viscosa ssp. cuneata</i>	Sticky Hop-bush
	<i>Hakea decurrens ssp. physocarpa</i>	Bushy Needlewood
	<i>Melaleuca lanceolata</i>	Moonah
Small Shrubs		
	<i>Grevilea dryophylla</i>	Goldfields Grevillea
	<i>Philotheca verrucosa</i>	Bendigo Wax-flower
Tufting Plants / Sedges		
	<i>Dianella revoluta</i>	Black-anther Flax-lily
	<i>Lomandra filiformis</i>	Wattle Mat-rush
	<i>Poa sieberianna</i>	Grey Tussock Grass
Groundcovers / Climbers		
	<i>Acaena novae-zealande</i>	Bidgee Widgee
	<i>Caprobrotus modestus</i>	Inland Pigface
	<i>Clematis microphylla</i>	Small-leaved Clematis
	<i>Enchylaena tomentosa var. tomentosa</i>	Ruby Saltbush
	<i>Hardenbergia violacea</i>	Native Sarsaparilla
	<i>Myoporum parvifolium</i>	Creeping Boobialla
Ephemeral Plants for WSUD		
	<i>Carex appressa</i>	Tall Sedge
	<i>Dianella admixta</i>	Black-anther Flax-lily
	<i>Ficinia nodosa</i>	Knotted Club Rush
	<i>Lomandra longifolia</i>	Wattle Mat-rush
Marginal Plants for WSUD		
	<i>Caprobrotus modestus</i>	Inland Pigface
	<i>Derwentia perfoliata</i>	Derwent Speedwell
	<i>Enchylaena tomentosa</i>	Ruby Salt Bush
	<i>Eutaxia microphylla</i>	Common Eutaxia
	<i>Leptospermum myrsinoides</i>	Heath Tea Tree
	<i>Lomandra longifolia</i>	Spiny-headed Mat Rush
	<i>Pultenaea pendunculata</i>	Matted Bush-pea



CPG Australia Pty Ltd
A subsidiary of **Downer EDI Limited**
Offices Melbourne Shepparton Bendigo Albury Geelong

Knowledge Creativity Performance
Engineering Surveying Planning Urban Design Landscape Architecture Traffic and Transport
Sustainability and Environment Agribusiness Project Management Strategic Consulting