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1.0 Introduction

These Design Guidelines apply to land within the Highway Precinct, refer to Figure 1 of these Design Guidelines. The land within the Highway Precinct is owned by the Town of Port Hedland (the Town), leased to the Port Hedland International Airport Asset Pty Ltd (PHIA) and subleased.

The Design Guidelines aim to provide guidance for the design and approval of development within the Highway Precinct and address:

- · Primary building requirements including setbacks, minimum levels, and height;
- Site design requirements including parking and access, loading and storage; fencing and landscaping;
- · Built form design requirements including orientation and layout, materials, finishes, signage, plant and equipment; and
- Management requirements including stormwater, waste, verge amenity and bushfire risk.

1.1 Highway Precinct vision

The precinct is intended to form a small business park in a manner that is compatible with the *Port Hedland International Airport Master Plan 2018 – 2038*, the objectives of Local Planning Scheme No. 7 (LPS 7) and Table 7 of LPS 7.

The Port Hedland International Airport Master Plan 2018-2038 makes the following visionary comments:

"The Highway Precinct will accommodate businesses that wish to be located at the airport and take advantage of the exposure and/or access to the Great Northern Highway.

Airport-related activities include:

- Rental car storage areas;
- Freight sheds; and
- Aircraft maintenance facilities.

Uses that may wish to be located at or near the airport for other reasons include:

- Offices for businesses that use the airport;
- General warehousing;
- Industry-general;
- Industry-light;
- Retail fuel sales; and
- Road freight facilities and road transport lay down yards.

Other non-aviation related uses may include:

- Car dealerships; and
- Solar power storage or collection.

1.2 Land use permissibility

Table 7 of the LPS 7 identifies land use permissibility.



Introduction

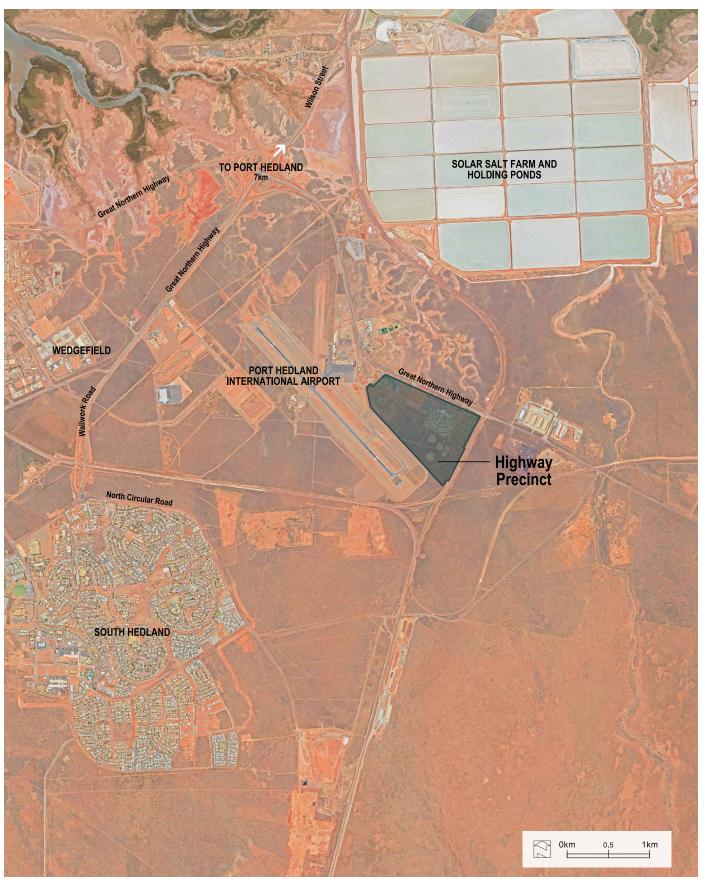


Figure 1 - Context plan



Introduction

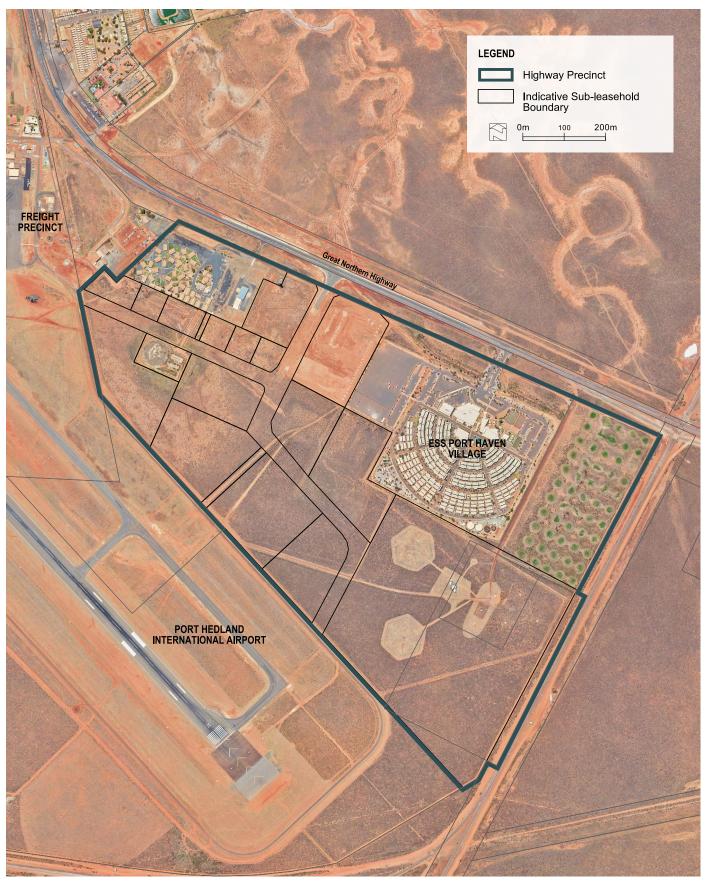


Figure 2 - Local plan



1.3 Design principles

These design principles are to be considered for development in the Highway Precinct:

- Development shall be constructed and operate in a manner that does not compromise the efficiency or operational capability
 of the Port Hedland International Airport, having regard to the Airport Safeguarding Plan and in particular:
 - a. Navigation aid infrastructure safety zones and signal direction;
 - b. Minimising sun reflection and glare from surfaces;
 - Complying with height limitations as per the Obstacle Limitation Surface (OLS), Procedures for Air Navigational Surfaces – Aircraft Operations (PANS-OPS) and Visual Segment Surface (VSS) of the airport; and
 - d. Design and installation of lighting that does not illuminate above the horizontal nor have the potential to cause confusion to pilots.
- If noise sensitive premises are proposed, that these are located beyond the N70 noise contour as per the Port Hedland
 International Airport Master Plan 2018-2038 and the proposal will provide details of how it will mitigate noise impacts on the
 receiver(s) to acceptable levels.
- 3. Development is to provide an appropriate level of streetscape amenity and landscape appearance, in particular:
 - a. Introducing a landscape buffer along the frontage to Great Northern Highway; and
 - b. Buildings have a finished appearance, fencing is consistent, and other site improvements minimise visual clutter.
- 4. Development and site layout should provide sufficient flexibility and sustainability in relation to (but not limited to):
 - a. Buildings and site layouts that can facilitate alternate land uses and functions in the future;
 - b. Buildings that are designed to be climate responsive and energy efficient;
 - c. Consideration of the total water cycle as part of a site and building design; and
 - d. Waste minimisation, reuse and recycling as part of activities on-site.

Status, Requirements & Process

2.0 Status, Requirements & Process

2.1 Relationship to other planning instruments

These design guidelines have been prepared and adopted as a local planning policy pursuant to the Town of Port Hedland Local Planning Scheme No. 7 (LPS 7). Due regard shall be given to the design guidelines in the determination of development applications.

The LPS 7 prevails to the extent of any inconsistency with these design guidelines.

Where applicable, Part 139 of the *Civil Aviation Safety Regulations 1998* and Part 139 Manual of Standards – Aerodromes prevail to the extent of any inconsistency with these design guidelines.

Other local planning policies apply to the Highway Precinct and should be read in conjunction with the design guidelines, including:

- LPP/02 Advertising Signs;
- LPP/03 Shipping/sea containers & transportable buildings; and
- LPP/08 Port Hedland International Airport.

2.2 Variations to the design guidelines

Variations to the design guidelines may be considered by the Town, however, the Town will require the applicant to provide suitable justification demonstrating how a proposed variation will not compromise this Policy's design principles or the provisions of LPS 7.

2.3 Lodgement requirements / application guidance

These design guidelines include the following elements to assist proponents in preparing their designs and applications:

- The following sections address site and building requirements, built form design, and natural resource management;
- The sections contain development controls to address for all development applications;
- The Development Checklist provides a quick reference guide for proponents and the Town. Pursuant to clause 63(1)(d) of the *Regulations*, the Town can reasonably require a development application to provide further information.



3.1 Site and building requirements

3.1.1 Building setback

Development controls

The nominated setbacks ensures there is space at the front of the site to accommodate on-site visitor, vehicle circulation, and a landscape zone.

- 1. Figure 3 demonstrates the following setbacks:
 - Great Northern Highway setback: 25 metres minimum;
 - b. Primary street setback: 33 metres minimum;
 - Secondary street setback: 10 metres minimum;
 and
 - d. Other/side/rear setbacks: encouraged to provide setbacks for vehicle circulation and reciprocity where practicable with abutting properties; to assist with natural light penetration; natural crossflow ventilation; for landscaping to reduce heat loads / on-site drainage.
- Parking for staff and trade display may be located in the street setback, where it does not result in an encroachment into the landscaping zone, and provision of visitor car parking is met.



Vegetation endemic to area can be suitable for vegetation buffer to Highway.

3.1.2 Appearance to Great Northern Highway

Great Northern Highway is a key freight route and entry road into Port Hedland.

Development controls

The Town seeks to ensure that development sites provide a suitable appearance to the Highway.

- Boundary fencing to Great Northern Highway shall be black chain link or steel mesh fencing, garrison or palisade fencing with a maximum height of 2.4m.
- 2. Buildings, outbuildings, structures, storage, laydown and parking areas shall be kept in a manner that does not reduce the amenity, and free of vandalism/ graffiti.
- The site shall be kept free of rubbish.

Landscape controls

The Town seeks to ensure that a vegetation buffer is established adjacent to the Highway.

- Within a site's 25m Great Northern Highway setback area, the site shall be planted with a native buffer to screen views of the development.
- Buffer shall be wide enough for multiple rows of plants in a staggered layout, nominally 20 metres. The setback area may be used for open swales integrated with the buffer.
- Implementation of buffer plantings to coincide with development to ensure establishment and consistency of plantings. Reticulation and/or watering shall be required to ensure survival.
- Vegetation screening may warrant an addendum or revised BMP, refer section 3.3.5.



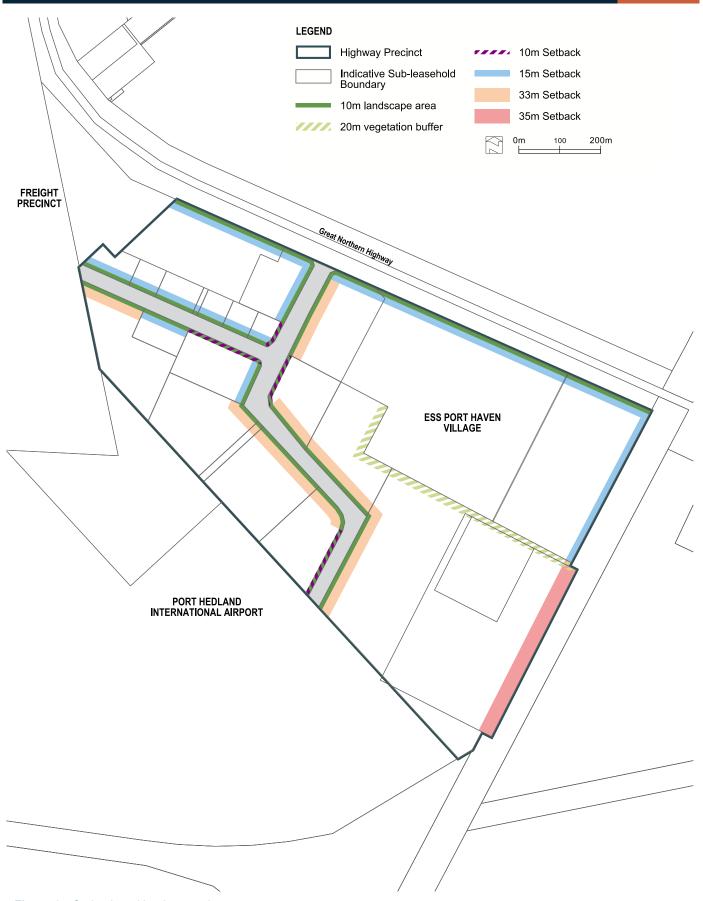


Figure 3 - Setback and landscape plan

3.1.3 Building height

Development controls

Height of development and temporary structures (including but not limited to cranes and light towers) shall maintain minimum height clearances for the operational requirements of the airport.

Building height is limited in accordance with the Airport Obstacle Limitation Surface (OLS). The Town will generally not support permanent intrusions into the OLS. Any proposed variation, whether temporary or permanent, shall be referred to the PHIA for comment, prior to erection.

Non-Directional Beacon controls

Development shall not impact upon the Non-Directional Beacon with a High Frequency Radio Antenna Array (NDB) located in the south-east of the airport.

In order to protect radio reception and transmission in / within proximity of the Highway Precinct, the infrastructure has buffers that extend to 500 metres from the NDB at an angle of 3 degrees vertical from the NDB antenna array. The NDB has an elevation of 100 feet (30.48 metres).

Building height will be subject to the following:

Height shall be in accordance with the buffer surrounding the Non-Directional Beacon, as applicable (explained above).

3.1.4 Parking and site access

Development controls

Development of a site shall be capable of accommodating required parking, vehicle circulation, loading areas and safe movement. Refer to example of indicative parking layout and setbacks on following page.

1. All parking, loading areas and vehicle accessways must be contained on-site, excluding the designated crossovers.

a.

the number of accessible car parking spaces h shall be in accordance with the Building Code of Australia; and

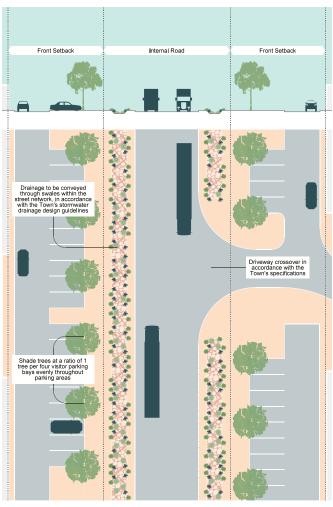
be in accordance with the Town's LPS 7; and

- design of parking spaces shall be in accordance C. with Australian Standards AS 2890.1.
- Heavy vehicle and commercial vehicle parking shall be 5. separated from visitor and staff parking areas, screened from the street and located behind the front building line to the rear or sides of the buildings (where buildings are proposed). Swept path diagrams are required to be submitted with the development application to demonstrate that vehicles can enter and exit the site in forward gear.
- Visitor parking areas are to be provided with suitable species (refer section 3.3.4) of shade tree at a ratio of 1 tree per four visitor parking bays evenly throughout the parking areas (unless alternate shading is provided for bays adjacent to the building).
- Parking areas and access driveways shall be sealed to the Town's specifications and satisfaction. Where parking or circulation areas are proposed to be unsealed the application shall be accompanied with a dust management plan and detailed stormwater plan that addresses sediment control and erosion. Lots closest to the ESS Port Haven Village shall have sealed parking areas and driveways to help reduce dust emissions.
- 8. Construction and provision of crossovers shall be appropriate for the proposed vehicle types and weight. The crossover and culvert design standards are to be in accordance with the Town's Engineering Department Guidelines.

2. Provision of car parking bays shall:







Example of indicative parking layout and setbacks

3.1.5 Site coverage

Development controls

- There is no minimum or maximum site coverage.
- Site plan to detail building coverage and demonstrate that the proposal accommodates required car parking, vehicle circulation, drainage, landscaping, storage areas associated with the use and activity, stormwater, and effluent disposal.

3.1.6 Verge treatment

Development controls

Development will positively contribute to the amenity of the street.

Outside of the sublease sites, the street verge areas provide a stormwater drainage and landscaping function.

- 1. Drainage is to be conveyed through swales within the street network. Development is to connect to the stormwater drainage system within the street network, in accordance with the Town's stormwater drainage design guidelines.
- 2. Verges are not permitted to be used for anything other than landscaping or stormwater.



Landscape area with visitor parking in front setback



3.2 Built form design

3.2.1 Building orientation

Development controls

Buildings shall be oriented to the street, and contribute to the streetscape and character of the Highway Precinct.

- 1. The primary building entrance and façade shall orient to the primary street.
- For lots with multiple street frontages, the building(s) must address these through orientation, design detail, materials, and major openings (doors / windows). Extensive blank walls are not appropriate.

3.2.2 Building entries and address

Development controls

- Buildings shall provide a legible and visible entry to the street.
- 2. The main entrance should be designed for universal access and connected with a path and access ramps to the visitor parking area(s).
- 3. Entrance points to buildings should provide protection for pedestrians by means of substantial integrated building elements such as a verandah, canopy or colonnade.
- Blank, monotonous façades are not permitted to the primary street. Façade treatments to break up the bulk and scale of buildings must be incorporated into the design.

3.2.3 Loading, external service, washdown bays

Development controls

The location of storage areas, loading, external service, and washdown bays shall not be visible from the Great Northern Highway or the airport.

 All servicing, loading/unloading or open storage areas shall be located behind the building line (where buildings are proposed) and screened from the street, Great Northern Highway and the airport as applicable.

- Loading areas shall be designed to accommodate manoeuvrability on-site so that vehicles can enter and exit in forward gear.
- Washdown area(s) to be accompanied with details of the area, pad, plate oil / hydrocarbon separator and disposal area to the specification and satisfaction of the Town.



Primary building entrance and facade being legible and visible



Entrance proint provides protection, facade treatment provides surveillance



Primary building entrance connected to car park area, main facade treatment breaks up the bulk and scale of building



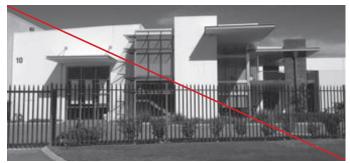
3.2.4 Boundary fences

Development controls

Fencing shall compliment the visual appearance of the development, whilst providing security to businesses.

- Front fencing is permitted between buildings / boundaries 1. where it is aligned to the building line.
- 2. Fencing is permitted to rear and side boundaries.
- 3. The front visitor parking and landscape area is to be unfenced.
- Fencing standards apply as follows: 4.
 - Street frontage: black chain link or steel mesh fencing, garrison or palisade fencing to a maximum height of 2.4m; and
 - b. Side and rear boundaries: Colorbond fencing; black or galvanized chain link or steel mesh fencing to a maximum height of 2.4m.
- 5. Barb wire or razor wire is not permitted.
- 6. Electrified fencing may be permissible with sufficient justification and a high standard of design.





Front visitory parking and landscape area is to be unfenced

3.2.5 Materials, finishes and colours

Development controls

Temporary structures, transportable buildings and sea/shipping containers are to be finished and maintained to a comparable standard as permanent buildings.

- As a minimum, prefabricated tilt-up concrete panels shall 1.
- 2. Cladding and complementary materials and finishes to walls that would be visible from a street shall be incorporated. Use of external materials should help to break up the building mass and provide variation.
- 3. Glazing shall be used in order to provide visual surveillance of the street and/or site.
- 4. Any transportable buildings / sea containers shall have finishes consistent with LPP/03 Shipping/sea containers & transportable buildings.

3.2.6 Plant and equipment

Development controls

Building design shall limit the visual impact of plant and equipment from the street.

Plant and equipment must be screened from the street view using roof structures, architectural elements, and screens.

3.2.7 Signage

Development controls

Signage is an important element for commercial wayfinding and identifying a business address for deliveries and customers alike. The Design Guidelines seek to discourage the proliferation and visual intrusion of signage on the streetscape.

- A 'gateway sign' may be established for identifying the Highway Precinct as a location and for wayfinding purposes. The following applies to an entry statement:
 - The gateway sign is located within the Highway Precinct land, and is not in a road reserve nor integrated into a road design;
 - b. The gateway sign promotes the whole precinct and not a selection of businesses:
 - The gateway sign may be a pylon sign, consistent with the assessment criteria in LPP/02 Advertising Signs;
 - d. Signage font is legible from the Highway to minimise the level of driver distraction;
 - e. The gateway sign is not illuminated in a manner that is unsafe for users of the Highway or aircraft;
 - f. Is limited to one, and shall have signage space for all tenancies: and
 - g. The gateway sign does not constitute a traffic hazard nor interfere with road safety or traffic efficiency.
- No signage shall be affixed to fencing or be free-standing placed along the frontage to Great Northern Highway.
- 3. No signage is permitted within the setbacks to Great Northern Highway.
- 4. Large scale signage may be considered on roofs, given proximity to the airport, where it is simple in design, is not offensive, and does not result in detrimental impacts to the safety or operational capability of the airport.
- 5. All other signage shall be considered in accordance with the Scheme and LPP/02 *Advertising Signs*.

3.2.8 External and internal lighting

Development controls

External lighting can create confusion, distraction or glare to pilots in the air. Lighting needs to be carefully selected so that it does not impact the operation of the airport.

- Light sources and fixtures that contribute to safety and crime prevention.
- Developers and designers should take advice upon the zones of restricted lighting of the Port Hedland International Airport and refer to the National Airports Safeguarding Framework Principles and Guidelines and the guideline issued by CASA Lighting in the Vicinity of Aerodromes – Advice to Designers.
- Artificial lighting shall not be installed 3 degrees above the horizonal and directed within the site, or appropriately screened or shielded to limit light spill.
- 4. Proposals for coloured external lights should be referred to the Port Hedland International Airport for advice.

3.2.9 Outbuildings and other structures

Development controls

Outbuildings and other structures should be considered in the context of presenting as an integrated whole with the main building(s) on-site.

- Outbuildings and other structures that are not integrated with the main building should be set behind the main building line.
- Shipping/sea containers and transportable buildings shall be located at the rear of the site; painted and in good condition prior to being placed on-site, and otherwise address the provisions of LPP/03 Shipping/sea containers & transportable buildings.



Example of transportable buildings, painted and in good condition

3.3 Natural resource management

3.3.1 Stormwater and drainage management

Development controls

- A stormwater plan shall be prepared as part of a development application, designed in accordance with the Town's Engineering Guidelines to the satisfaction of the Town and in particular:
 - Should have regard to and incorporate water sensitive urban design principles;
 - Shall be designed to ensure there is no standing water on-site or within the aerodrome that would attract birds or wildlife; and
 - c. Where a site is proposed to be unsealed, a detailed plan shall include erosion prevention measures and sediment traps.
- 2. On-site drainage flows should be as notated on the plan.
- Indicative leasehold lots shall be filled, in accordance with Appendix A.
- 4. Stormwater shall be directed to the drainage swales within the road network.
- 5. Each leasehold site shall contain a minimum of the 1 in 5 year rainfall event (6 minute duration).

- Discharge points shall be designed and constructed with sediment traps and secured with cemented rock pitching or similar to prevent erosion.
- 7. Any private swales located within the lot boundary swales shall include protected embankments and a base to prevent erosion. Should an unsealed yard or other area be proposed, sediment traps shall be designed and constructed to prevent sediment entering swales at all discharge points.

3.3.2 Effluent disposal

Development controls

A reticulated sewerage service is not available to the Highway Precinct.

- An on-site treatment and disposal system for sewerage (which includes nutrient removal) will be required. Indicative details can be shown on the Site Plan, with an advice note for submitting Application to Construct or Install an Apparatus for the Treatment of Sewage.
- The developable area of the lot will be determined based on the system's effluent disposal capacity.
- There will be ongoing leasee obligations to ensure that the treatment and disposal system is regularly maintained in accordance with relevant health regulations.

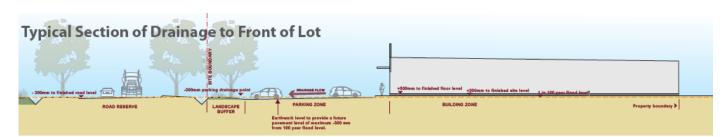


Figure 4 - Typical sections through different lot drainage types

3.3.3

3.3.3 Waste management

Development controls

Minimising the visual impact of storage and waste receptacle areas is important given the views from the airport and Great Northern Highway. It is necessary to ensure that rubbish and waste areas do not attract birds or animals.

- Waste and recycling storage areas are to be screened from all road frontages. The dimensions and location of rubbish bin storage areas will be at the discretion of the Town.
- Rubbish bins and waste storage areas are to be sealed and covered / enclosed and provided with a bin wash down facility. If not fenced or otherwise enclosed, tie down points or alternative means of securing bins during cyclones must be provided.
- No permanently open bins shall be permitted on-site.
 Bins shall be closed and capable of being sealed at all times.

3.3.4 Landscaping

Development controls

The Highway Precinct will incorporate landscaping treatments including hard scape (i.e. rock swales) and soft landscaping (i.e. trees and shrubs). Endemic species that are tolerant to the climate and/or will not encourage birdlife to the area are preferred.

- Plant species must be selected and planted in accordance with the species list in Table 1. The Town may require a landscape plan to be submitted and approved as a condition of development approval.
- Undertake weed management at minimum quarterly treatments.
- 3. All landscape areas and tree planting shall be undertaken prior to the commencement of the use.
- 4. Suitable species of shade tree are to be provided to parking areas at a ratio of 1 per 4 car bays, evenly throughout the parking areas (unless alternate shading is provided for bays adjacent to the building).

3.3.5 Bushfire management

Development controls

A bushfire management plan, refer Appendix B, has been prepared for the Highway Precinct and there are ongoing responsibilities for each site occupier.

 Vegetation in verges and landscape areas to be maintained as 'low threat vegetation'.

Table 1 - Species list

Tree Species			
Scientific Name	Common Name	Mature Size	Planting rate (per m²) to obtain
			60% canopy coverage.
Acacia anuera	Mulga	10m	single/group 3 - 5 per 10m ²
Acacia coriacea	Desert oak / dogwood	7m	
Brachichyton acuminatus	Rock kurrajong	8m	
Corymbia deserticola	Desert bloodwood	7m	
Eucalyptus dichromophloia	Variable barked bloodwood	10m	
Lysiphyllum cunninghamii	Native bauhinia	7m	
Melaleuca leucadendron	Cadjeput	10m	
Pittosporum phylliraeoides	Weeping pittosporum	8m	

Shrub Species			
Scientific Name	Common Name	Mature Size (height x spread)	Planting rate (per m²)
Acacia sclerosperma	Limestone wattle	1.5m x 1.5m	1/sqm
Acacia xiphophylla	Snakewood	1.5m x 1.5m	1/sqm
Eremophila glabra	Emu bush	1m x1m	3/sqm
Eremophilla macdonnelii		1m x1m	3/sqm
Eremophila maculata	Spotted emu bush	1.5m x 1.5m	2/sqm
Eremophila pterocarpa	Silver poverty bush	1m x 1m	3/sqm
Senna artemisioides	Silver cassia	1.5m x 1.5m	1/sqm
Senna artemisioides ssp. helmsii	Crinkled cassia	1.5m x 1.5m	1/sqm
Senna artemisioides ssp. Oligo-	Bloodbush	1.5m x 1m	2/sqm
phylla			
Senna artemisioides ssp.Sturtii Grey cassia		1.5m x 1.5m	2/sqm

Groundcover Species			
Scientific Name	Common Name	Mature Size (height x spread)	Planting rate (per m²)
Acacia gregorii	Gregory's wattle	0.5m x 2m	2/sqm
Enchylaena tomentosa	Barrier salt bush	0.1-0.6 x 2m	3/sqm
Gomphrena canescens	Bachelor's buttons	0.1-0.9m x 0.8m	3/sqm
Ipomoea muelleri	Native morning glory	0.2m x 2m	2/sqm
Maireana georgei	Satiny bluebush	0.5m x 1.3m	3/sqm
Pimelea ammocharis		0.2-1.5m x x1.5m	3/sqm
Ptilotus calostachyus	Weeping mulla mulla	0.2-2m x 0.5m	3/sqm
Ptilotus rotundifolius	Royal mulla mulla	0.5m x 1m	2/sqm
Scaevola parvifolia	Camel weed	0.3m x 0.5m	3/sqm
Swainsona Formosa	Sturt's desert pea	0.3m x 1m	3/sqm
Tribulus hirsutus		0.15 x spreading	3/sqm

Tussock Species				
Scientific Name	Common Name	Mature Size (height x spread)	Planting rate (per m²)	
Chrysopogon fallax	Golden beard grass	0.3-1.5m(h)	4/sqm	
Cymbopogon ambiguous	Native lemon grass	0.5m x0.5m	4/sqm	
Triodia epactia		1m x 0.5m	4/sqm	
Triodia pungens	Soft spinifex	0.3-2m (h)	3/sqm	



4.0 **Development Checklist**

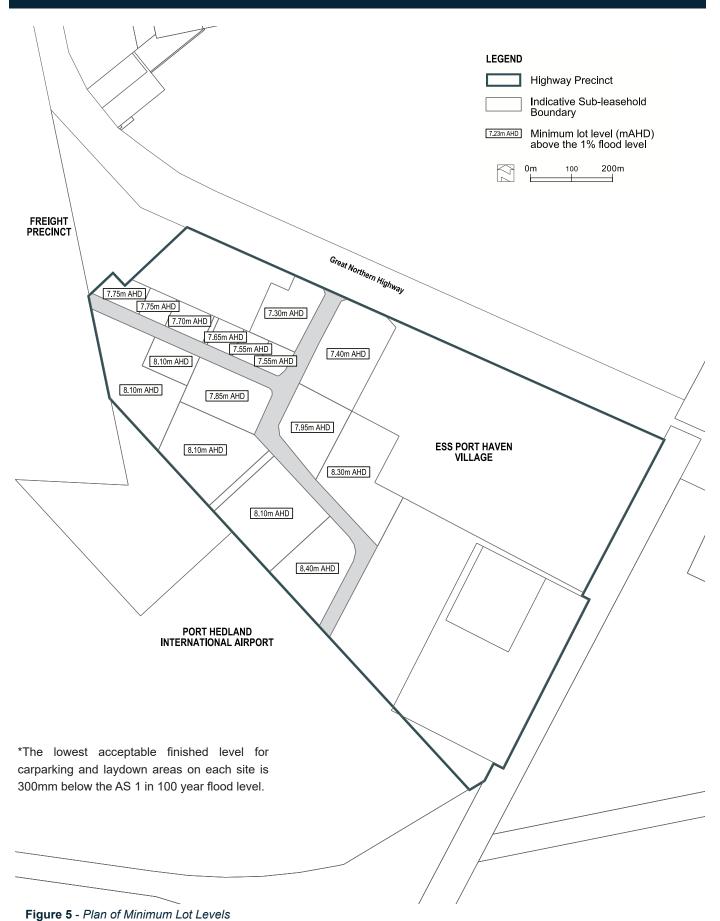
Item	Yes / No	Comment
Details of the proposed minimum finished floor levels (above		
the 1-in-100 year ARI flood level) and proposed heights of		
buildings, lighting, antennae, and cranes (below the Obstacle		
Limitations Surface).		
Details of proposed vehicles (light and heavy vehicles) to		
access the site, accompanied with swept paths annotated on		
the site plan demonstrating how vehicles can enter and exit the		
site in forward gear.		
Crossover details from the site to the road network to		
demonstrate it is appropriate for the proposed vehicle types.		
Stormwater details to accommodate a minimum 1-in-5 year		
ARI event on-site, with overflow stormwater being directed to		
the drainage system.		
Landscape concept plan, using the species list in these Design		
Guidelines.		
Colours and materials scheme, annotated on the elevations.		
Fencing details (type, colour, location and height).		
Locations for signage.		
Where parking and access areas are proposed to be unsealed,		
accompanied with a dust management plan.		

APPENDIX A

Initial Stormwater Strategy



Appendix A



Highway Precinct - Design Guidelines

APPENDIX B

Bushfire Management Plan

