



SOUTH HEDLAND TOWN CENTRE DESIGN GUIDELINES 2023



TOWN OF
PORT HEDLAND

CONTENTS

1.0 INTRODUCTION

1.1 BACKGROUND

1.2 VISION

2.0 PURPOSE + STRUCTURE

2.1 PURPOSE

2.2 STRUCTURE & USE

2.3 ARRANGEMENT OF THE DGS

2.4 LAYOUT OF THE DESIGN GUIDELINES

3.0 DESIGN GUIDELINES

3.1 PUBLIC INTERFACE

3.1.1 CAR PARKING INTEGRATION

3.1.2 SHADE

3.1.3 LIGHTING

3.1.4 WALKABILITY

3.1.5 SAFETY & SURVEILLANCE

3.1.6 MATERIALITY

Hardscape

Softscape

3.1.7 TEMPORARY STRUCTURES

3.2 BUILT FORM DESIGN

3.2.1 BUILDING FACADES

3.2.2 BUILDING CORNERS

3.2.3 ROOF FORMS

3.2.4 MATERIALS

3.2.5 BUILDING ENTRANCES

3.2.6 SETBACKS & FENCES

3.2.7 ADAPTABILITY

3.2.8 BUILDING SERVICES

3.2.9 BICYCLE FACILITIES

3.2.10 CULTURAL & CIVIC BUILDINGS

3.3 ENVIRONMENTAL DESIGN

3.3.1 WATER MANAGEMENT

3.4 LANDSCAPE & PLANTING

3.4.1 BIODIVERSITY & WATERING

3.4.2 RECOMMENDED PLANT LIST

4.0 DEVELOPMENT CHECKLIST

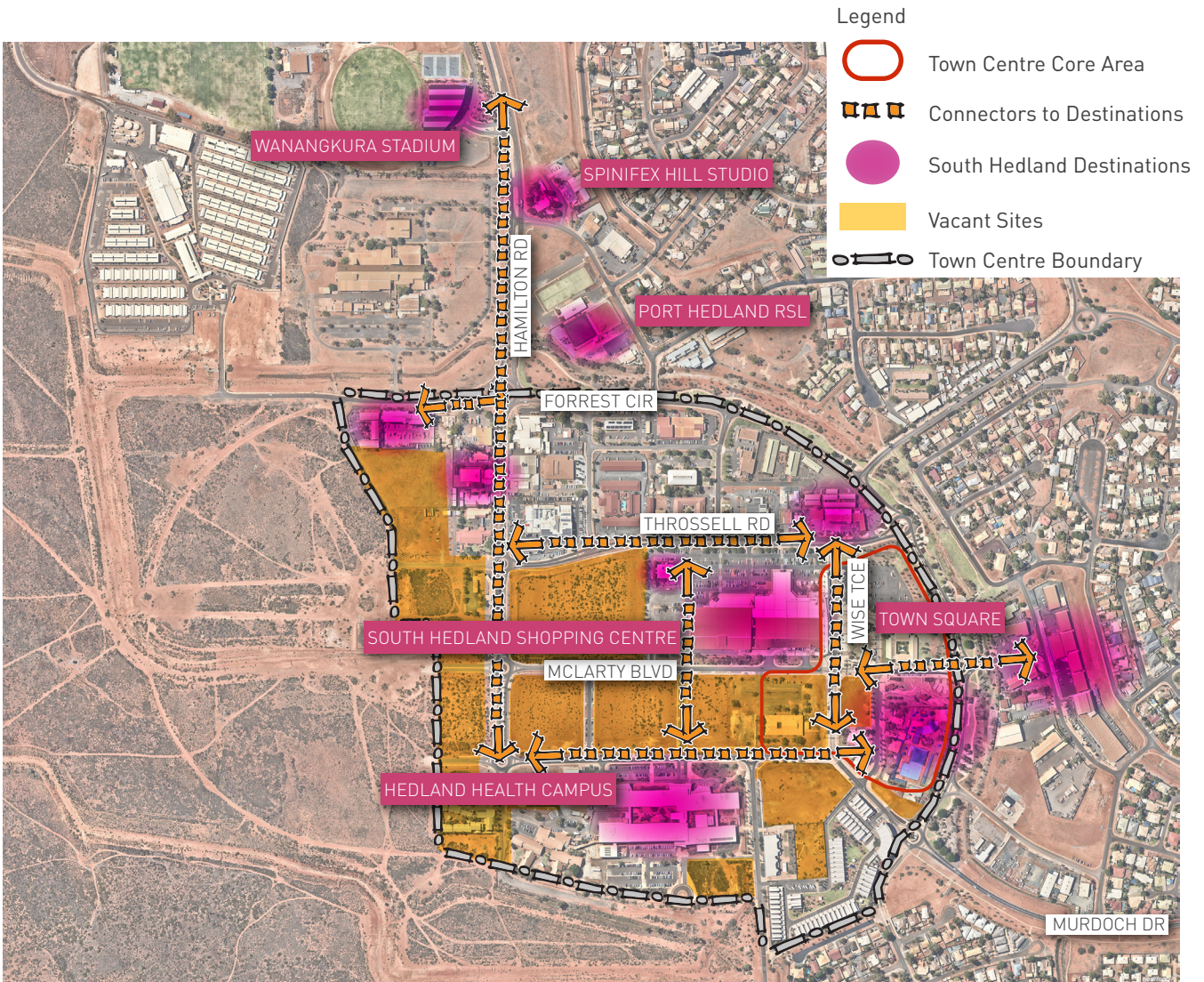
1.0 INTRODUCTION

1.1 BACKGROUND

The South Hedland Town Centre Design Guidelines are part of an exciting place-based initiative to revitalise and expand the Town Centre of South Hedland. The South Hedland Town Centre Design Guidelines were prepared following the state government's Royalties for Regions commitment to providing funding assistance for the expansion and revitalisation of the South Hedland Town Centre.

The Design Guidelines have been adapted to support the implementation of the South Hedland Place Plan which is being facilitated by the Town of Port Hedland.

These Design Guidelines were originally prepared as a supplement to the South Hedland Town Centre Structure Plan, which was adopted by the Town of Port Hedland in October 2013. However the Design Guidelines have since needed to be updated with current development and changes to planning and design regulations in Western Australia (Design WA).



Map 1: The South Hedland Town Centre - The above plan highlights the Town Centre area, the key destinations and key connections between them.

1.2 VISION

The Local Planning Strategy and South Hedland Place Plan emphasises a more vibrant, safe and comfortable Town Centre:

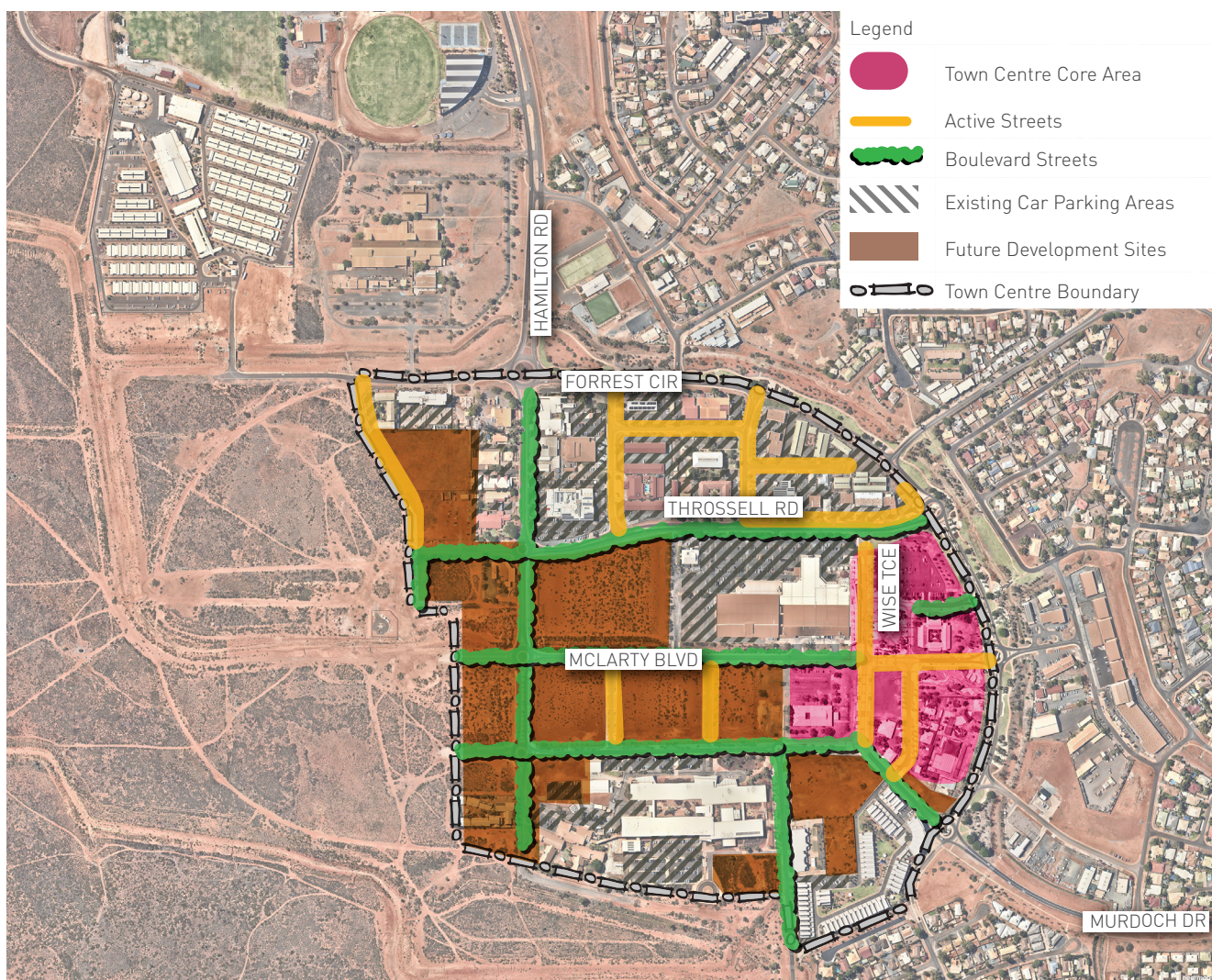
“The South Hedland Town Centre is an oasis that offers comfortable and safe places to meet and connect, conduct business and have a really great time. It’s a place that supports and welcomes all cultures with open arms and celebrates our history and diversity through dance, music, art, laughter and even tears. South Hedland is a place we’re proud to call our living room and we are working hard to make it meaningful.”

(South Hedland Place Plan Report A , 2021, p. 41)

The vision for the Town Centre has evolved through the processes of preparing the South Hedland Town Centre Place Plan. From discussions with Council and the community in a series of public meetings, objectives were established for redevelopment of the Town Centre. A number of guiding urban design and place principles have been developed in line with the view of creating a dynamic, accessible and inclusive regional centre.

1.2.1 TOWN CENTRE PRINCIPLES

- Improved pedestrian legibility and walkability, within and around the Town Centre, building on the existing street network and pedestrian connections to other areas and destinations of South Hedland;
- Invest the capital costs in the explicit fundamentals of the public realm design (i.e. shade and cooling) to create rich, diverse and active streets and places;
- Advocate for a mixture of residential, retail and office uses, with increased residential density within the Town Centre Core area and Medical precinct, encouraging housing choice and expansion of services;
- Leverage the Town Square as a living room for indigenous and non-indigenous users, supporting user diversity, accessibility and inclusivity in place;
- Plan, design, develop and operate buildings and places with the locals, fostering a strong sense of community stewardship, safety and recreational activity; and
- Celebrate the open landscape of East Pilbara within the Town Centre, including the intimacy and relief of shade, vegetation, as well as sounds, feelings and connection to the flora and fauna.



Map 2: The Town Centre Typologies - The above plan highlights the typologies of various streets and spaces, relative to the Element Objectives of these Design Guidelines.

2.0 PURPOSE & STRUCTURE

2.1 PURPOSE

These Design Guidelines are the link between The South Hedland Town Centre Structure Plan, 2013 (SHTCSP) and its implementation. The SHTCSP specifies the community's development intentions for the Town Centre. These Design Guidelines have been prepared to guide development within the SHTCSP, promoting a place-based approach for private development sites. These Design Guidelines are supplemented by the Place Plan (2021), which provides guidance on public realm design.

Development of the Town Centre is under the jurisdiction of the Town of Port Hedland and these guidelines are endorsed by the council. Development WA and the Town of Port Hedland will use these guidelines as a tool for design guidance and assessment of development applications in conjunction with other relevant documents.

2.2 STRUCTURE & USE

The South Hedland Town Centre Design Guidelines have been structured in the following three parts to assist proponents in preparing their designs and applications for the Town Centre. The design guidelines are structured into Public Interface, Built Form, Environmental Design and Landscaping & Planting sub sections. These Design Guidelines should be read in conjunction with the following documents:

- South Hedland Town Centre Place Plan (2021);
- South Hedland Town Centre User Experience Guide (2021);
- Council Planning Scheme and Policies;
- South Hedland Town Centre Structure Plan (2014);
- Residential Design Codes;
- National Construction Codes and relevant Australian Standards; and
- The Pilbara Vernacular Handbook.

This Local Planning Policy forms part of the Town of Port Hedland local planning policy framework. Where this Policy is inconsistent with the Town of Port Hedland Local Planning Scheme, the local planning scheme prevails.

Where this Policy is inconsistent with an adopted Local Development Plan, Activity Centre Plan or Structure Plan, the adopted Local Development Plan, Activity Centre Plan or Structure Plan prevails.

The design guidelines are only applicable to development with a sales contract after the final date of adoption, to provide Development WA the opportunity to amend their contracts to include Local Planning Policy 13 South Hedland Town Centre Design Guidelines 2023.

2.3 ARRANGEMENT OF THE DGS

Part 3 of the Design Guidelines is for planners, designers and development assessors. It is presented as a series of design elements, each dealing with a different aspect of building development and design. Each element includes the following sections to inform the assessment of applications for development approval:

2.3.1 ELEMENT OBJECTIVES

The Objectives outline the design intent underpinning each element of the Design Guidelines.

2.3.2 ACCEPTABLE OUTCOMES

The Acceptable Outcomes provide guidance for all development proposals. They will collectively ensure that critical components of the Element Objectives are met. Applicants may provide alternative design solutions to these requirements if they can successfully demonstrate that the Element Objectives or Design Guidance are satisfied or exceeded.

2.3.3 DESIGN GUIDANCE

The Design Guidance section provides additional recommendations by which development can meet and achieve the Element Objectives. The Design Guidance ensures a high level of sustainable design, community interaction, public realm interface/contribution and architectural character. Adherence to these recommendations will ensure a 'Best Practice' outcome.

2.3.4 SUPPORTING IMAGES & DIAGRAMS

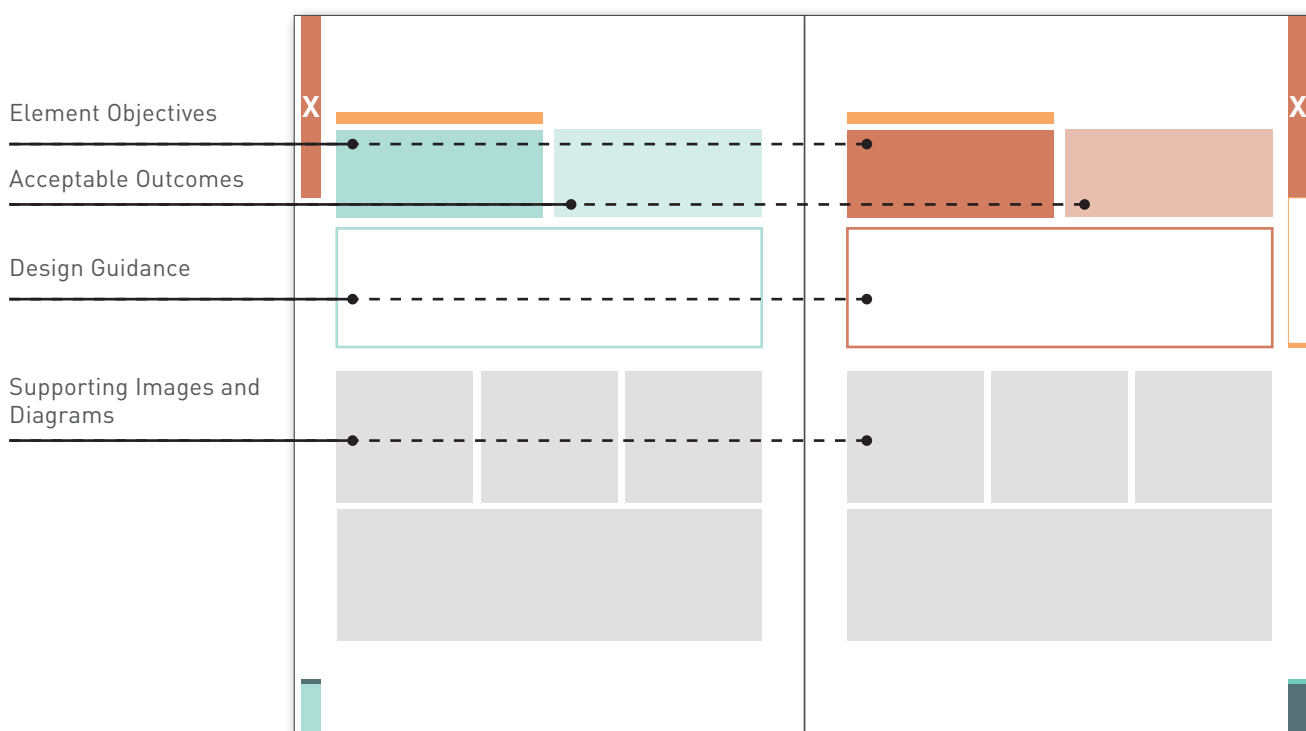
The images and diagrams shown within the design guidelines provide a visual guide to the desired outcomes for each design element and promote the application of best practice design solutions. It is important to consider the principles within the images and diagrams, and apply those principles to the design and development within the Town Centre.

2.4 LAYOUT OF THE DESIGN GUIDELINES

The Element Objectives and Acceptable Outcomes are contained within coloured boxes. Design Guidance usually follow either on the same page or the following page within an outlined white box.

Part 3 prescribes the Objectives, Acceptable Outcomes and Design Guidance for the design, interface and amenity of development, to assist proponents, design reviewers and decision-makers in making and assessing proposals.

PART 3 OF THE DESIGN GUIDELINES



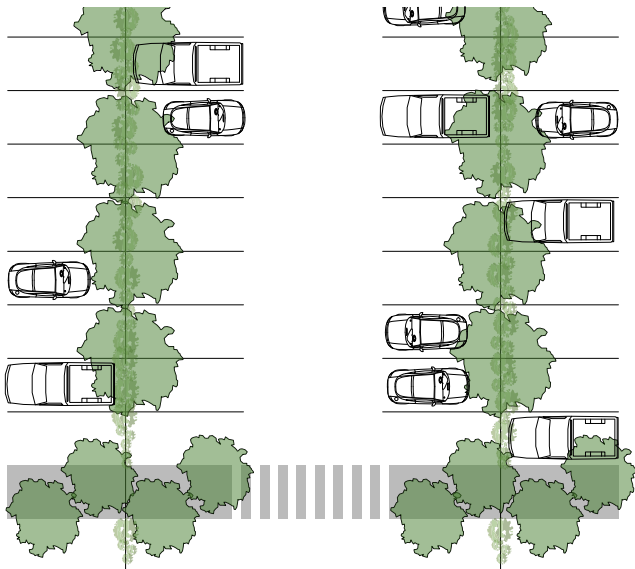
3.0 DESIGN GUIDELINES

3.1 PUBLIC INTERFACE

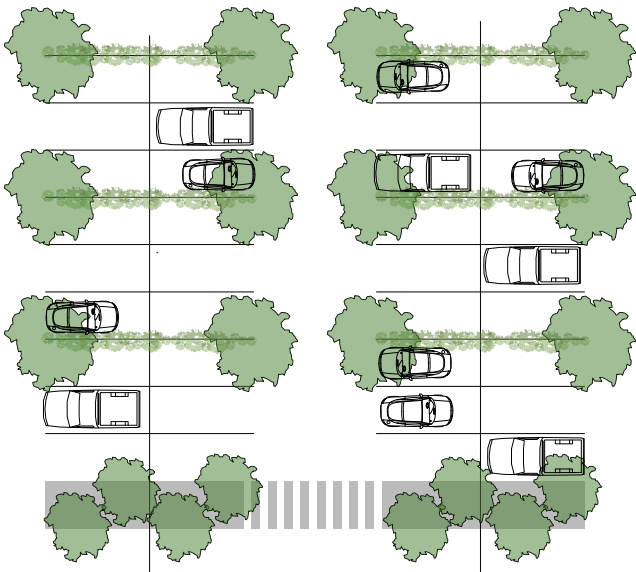
3.1.1 CAR PARK INTEGRATION

Element Objectives:

1. To ensure the provision of sufficient, safe and shaded parking within a functional and attractive setting.
2. Ensure any landscaping within paved areas has the best opportunity for healthy growth.
3. Minimise the impact and dominance of parking from the streetscape.



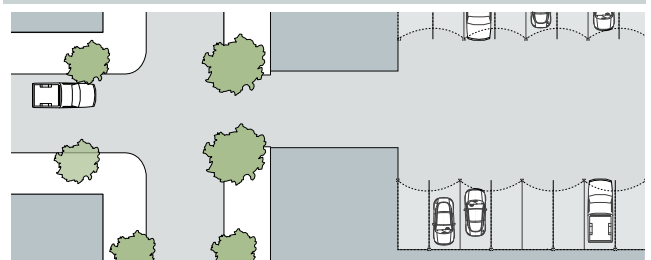
Large shade trees must be provided at a ratio of one tree for every four car parking bays. In addition to this, continuous shade must be provided to walkway areas within all car parks. Drainage swales can also be provided within these areas.



An alternative option to above configuration of planting to meet the requirement of providing one shade tree for every four car parking bays.

Acceptable Outcomes:

1. Parking is to be located to the rear of the lot.
2. The upper level of decked parking structures must be shaded by a roof or shade structure.
3. Decked parking structures shall also be screened on the outside of the building.
4. A maximum of one vehicle entry is permitted per lot, where the lot has up to 2 street frontages. Where a lot has 3 or more street frontages, a maximum of two vehicle entries are permitted.
5. Where car parking is provided at grade and is not covered by a roof, trees must be provided in the ratio of at least one (1) for every four (4)-car bays- rounded up to the nearest whole tree where necessary. These trees must have the chance to grow up to 500lt in place.
6. Each tree planted within car parking areas requires a 9sqm infiltration zone.
7. Any public on-street parking removed as part of a development shall be provided on-site with public access or compensated via cash-in-lieu payments.
8. Large expanses of car parking areas are to be broken-up by vegetation and shade, reducing heat build-up within car parks.
9. All car parking areas proposed as part of new development shall be supported by CCTV and lighting.
10. All car parking areas, loading and servicing areas proposed as part of any new development are to be well lit.
11. For Boulevard Streets (see Page 5), a mixture of parking can be provided, including at grade within the property boundary, sleeved parking and or decked parking.
12. For Active Streets (see Page 5), all parking must be sleeved to the rear of buildings. Decked parking is also permitted along Active Streets however it must also be sleeved.
13. Shade must be provided to areas of walkway within all at grade car parks. Shade trees for car park walkways are not counted as part of the requirement for 1 tree for every 4 parking bays.
14. For commercial development, where the applicant can demonstrate that sufficient available on-street parking exists during peak demand periods, and that is able to effectively contain any potential parking overflow, the Town can consider a variation to the minimum car parking requirements in accordance with the Town of Port Hedland Local Planning Scheme No. 7.



Large car parking areas must be screened from the street by perimeter style built form, particularly along Active Streets.

Design Guidance:

- Water Sensitive Urban Design (WSUD) techniques (i.e. drainage swales) are recommended within planting areas of car parks and also to address 3.3.1 Water Management. They are effective measures for creating tree infiltration zones.
- Consider additional planting to the 1 tree for every 4 parking bays for increased shade benefits.
- Within at grade car parking areas, consider the use of lighter coloured asphalts, or asphalt sealants, which can be applied to black asphalt to lighten the colour, reducing heat gain in car parking areas.
- Consider the use of permeable paving in at grade car parking areas particularly for tree infiltration zones.
- Where parking is provided behind the property boundary along Boulevard streets, it should be integrated into the streetscape, through materials, softscape, trees and seating.
- Decked parking structures can reduce the surface areas needed for at grade parking and the need to provide shade.



Examples of screening on decked parking structures, permeable paving can also be used at ground level for additional at grade parking.



Combination of natural and built shade elements in car parks can increase comfort and reduce heat gain.



Examples of the use of drainage swales within a car parking areas, pedestrian accessibility should be considered also.

3.0 DESIGN GUIDELINES

3.1 PUBLIC INTERFACE

3.1.2 SHADE

Element Objectives:

1. Reduce the Town's Urban Heat Island to encourage the ongoing use of outdoor spaces throughout the year, and at different times of the day.
2. Promote shaded and sheltered walkable streets, places and footpaths, supporting key movement networks and links to key destinations.

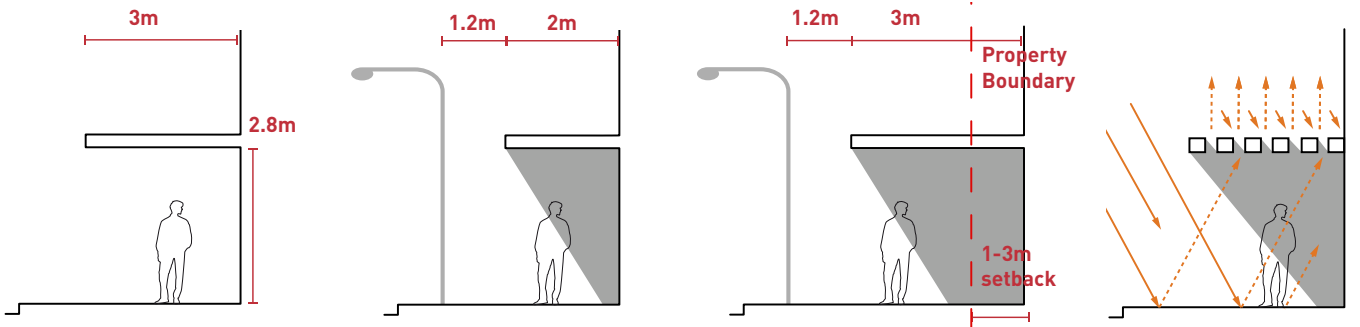
Design Guidance:

- Break up large areas of hard surfaces by using shade to reduce heat build-up.
- Trees should be prioritised over built shade structures.
- A combination of shade trees, awnings and shade structures can provide a comfortable environment for pedestrians.
- Ensure built shade structures are robust and durable to extreme weather conditions and easy to maintain. Built shade should fit the local vernacular and relate to landscape tones and materials of South Hedland.
- Where buildings interface with public open spaces and play areas, natural shade should be provided.
- Consider fully shaded areas adjacent to key pedestrian movement corridors and desire lines.
- Dense shade tree planting is encouraged to develop continuous shaded links and/or public areas.

Acceptable Outcomes:

1. Shade must be provided to all pedestrian paths, seating, within private land and/or where interfaced with the public realm.
2. Continuous shade must be provided to the building façade during hours of the day where UV rating is 3 or above.
3. Trees planted in the public realm must be installed as per the Local Government Guidelines for Subdivisional Development, Cl 6.3.4.1 - Trees in Paved Areas.
4. For Commercial and Mixed Used development along Active Streets, awnings must be provided.
5. Awnings must be designed with regard to the existing street lighting and trees installed within the road reserve.
6. A minimum awning width of 3.0m, and an awning height of 2.8m for all commercial tenancies is required.
7. The awning width may be reduced up to 2m to accommodate for a 1.2m awning setback to existing street infrastructure (light poles and street trees). However it is recommended that a 3m awning width is maintained in all instances and rather the ground floor be setback (up to 3m) to allow for the 1.2m setback to infrastructure (see 3.2.6 Setbacks & Fences).
8. For Commercial and Mixed Use development along Boulevard Streets, shade must be provided adjacent to the property boundary, either in the form of shade trees, awnings or stand alone shade structures.
9. Ground floor setbacks to be in accordance with Map 3 Town Centre Shades and Setbacks Plan.

Active Streets (0-3m setback)



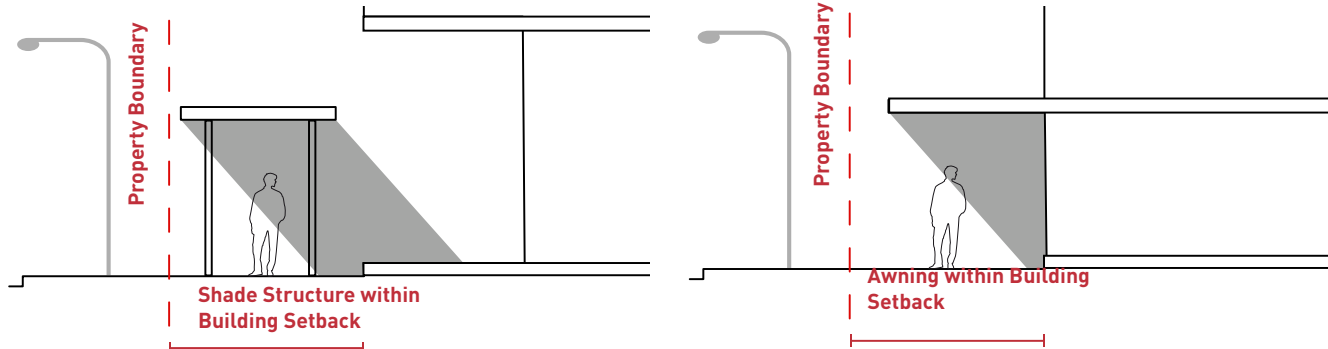
Min awning width of 3.m and awning height of 2.8m.

2m awning width accommodates for a 1.2m setback.

Alternatively, a setback ground floor (up to 3m) maintains the 3m awning width.

Segmented awnings ensure hot air does not get trapped.

Boulevard Streets (no setback)



Whilst shade trees are the preferred form of shade for Boulevard Streets, awnings or standalone shade structures can be provided within the property boundary adjacent to the public realm.

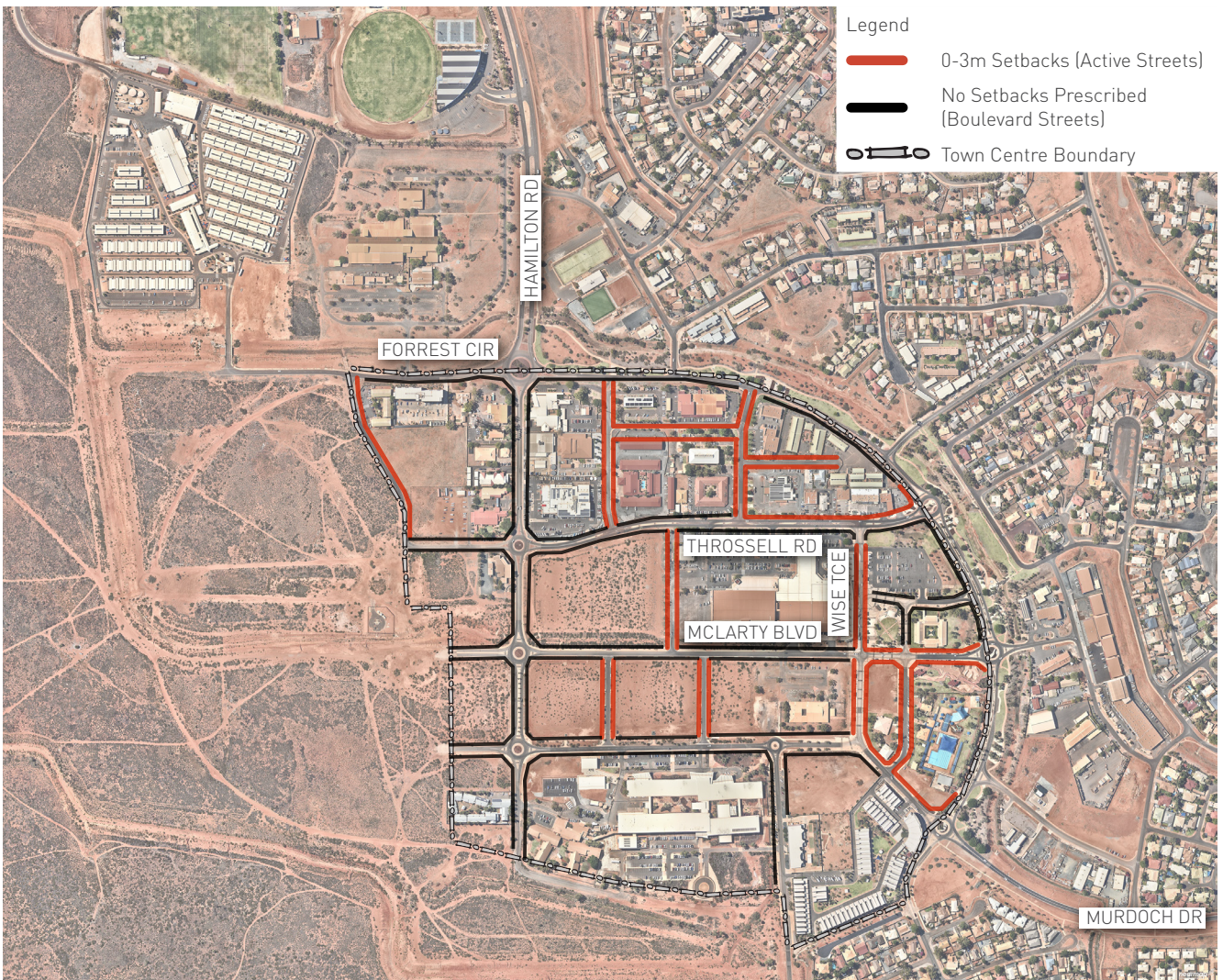
Active Street



Boulevard Street



Examples of shaded public interface areas where shade elements, both built and natural and sometimes a combination of both can contribute reducing heat gain within the public realm. Active Streets require awnings (left) whilst Boulevard Streets require standalone shade structures and/or shade trees adjacent to the property boundary if setback (right).



Map 3: Town Centre Shade and Setbacks Plan - The above plan highlights the required setbacks in relation to the Town Centre Typologies (Page 5), which impacts shade requirements for Active and Boulevard Streets.

3.0 DESIGN GUIDELINES

3.1 PUBLIC INTERFACE

3.1.3 LIGHTING

Element Objectives:

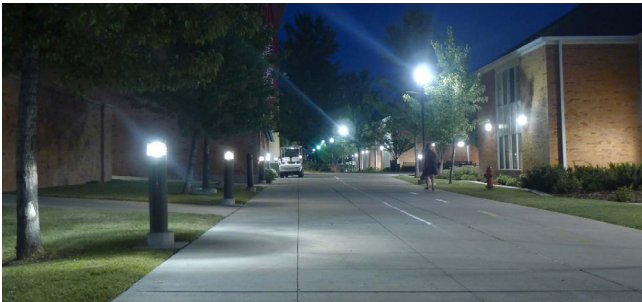
1. Contribute to creating a safe and vibrant night-time experience, as well as increased public realm and property security.
2. To ensure vibrancy and use of public spaces within the town centre at all times of the day and night.
3. To reduce energy use by ensuring efficient lighting systems used.

Acceptable Outcomes:

1. All outdoor, car park and security lighting is to be directed downwards with no light spill above the horizontal plane.
2. All public and private areas are to be provided with adequate lighting in accordance with Safer Places by Design – CPTED Design Guidelines.
3. External light fixtures must be robust, vandal resistant and complementary to the design character of the affected building and open space.

Design Guidance:

- Consider the impact of glare and overly lit areas or light spill onto dwellings, motorists, cyclists and pedestrians.
- Where appropriate, integrated lighting with functional elements, such as the lighting of heritage facades, landscape elements, seating and play elements, display lighting in shop fronts, and illuminated signage.
- Minimise the use of up lighting, due to impacts on dark skies and astrotourism.
- Ensure that lighting adjacent to key public open spaces can be controlled, so that feature lighting can be used.
- Integrate cultural narrative into feature lighting so that it is unique to South Hedland and Pilbara.
- Consider utilising building facades to hang catenary lighting, minimising the amount of catenary poles required.
- At the minimum P3 Lighting should be used adjacent to key pedestrian walkways and P5 adjacent to key streets.
- Refer to the Place Plan for appropriate locations of feature lighting / light installations.



A combination of low and high lighting can provide functional and practical solutions to increasing safety to all pedestrian spaces.



Good lighting within car parking areas is key, to enhance safety and sightlines at night.



Examples of good public interface lighting techniques where active frontages and dwellings can assist in providing additional lighting to the public realm.

3.0 DESIGN GUIDELINES

3.1 PUBLIC INTERFACE

3.1.4 WALKABILITY

Element Objectives:

1. Enable walkable streets and places through private development.
2. To ensure walkable streets and places that prioritise people over cars through safe, legible and connected streetscapes.
3. Connect destinations with a comfortable pedestrianised public realm interface.

Acceptable Outcomes:

1. Provide formalised priority pedestrian crossings across vehicular and cycle routes.
2. The design of publicly accessible footpaths and walkways within private property (Boulevard Streets) are to have priority over vehicle crossovers and driveways.

Design Guidance:

- For Boulevard Streets, consider co-locating furniture, drink fountains, lighting, wayfinding and shade adjacent to key pedestrian paths that connect key destinations within the Town Centre and to outer areas.
- The design of pedestrian paths and streets should be unobstructed to allow for free flowing movement.
- Providing clear separation and protection between pedestrian spaces and vehicle spaces, through various design treatments (raised kerbing, buffer planting areas, bollards and/or planter boxes).



Walkable Streets: Providing a combination of shading elements, active edges combined with adjacent green spaces. It is important that development that interfaces with the public realm assists in creating a strong pedestrian focus.



Walkable places provide a balance between hardscape and softscape, and provide a variety of shade elements and seating opportunities.

3.1.5 SAFETY & SURVEILLANCE

Element Objectives:

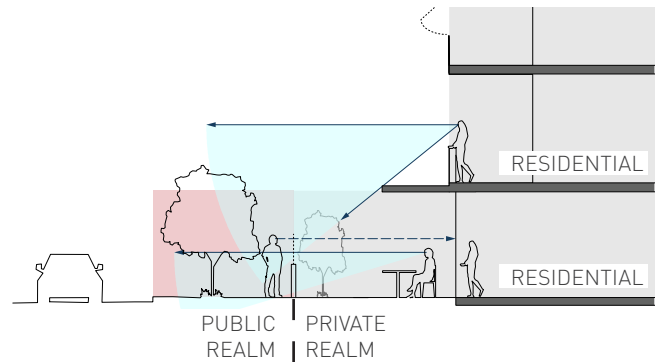
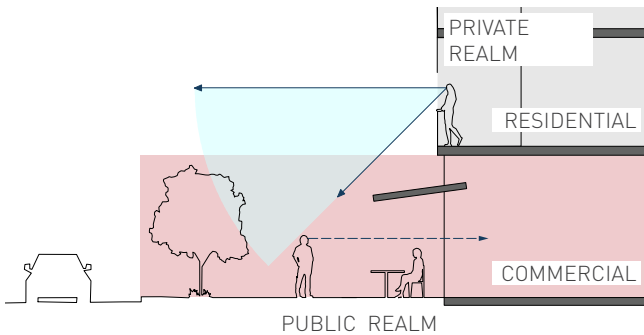
1. Enhance safety and surveillance through Crime Prevention Through Environmental Design (CPTED) to support the safety and activation of the public realm.
2. A safe and secure Town Centre, which is highly utilised throughout the day and at night.
3. Create welcoming and comfortable public spaces.

Acceptable Outcomes:

1. Passive surveillance and physical security measures must be provided to all interfaces between private spaces (buildings, private open spaces) and public spaces (pedestrian access ways, public open spaces, primary streets and laneways).
2. All development applications are to incorporate CPTED elements in accordance with WAPC Safer Places by Design – CPTED Design Guidelines.

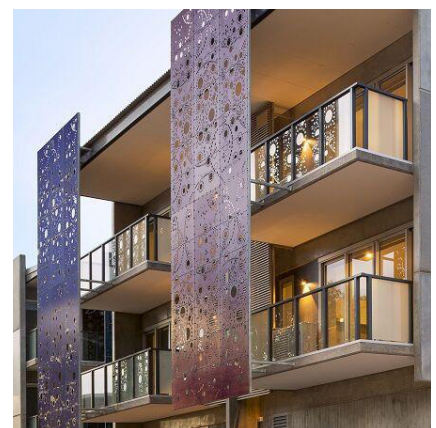
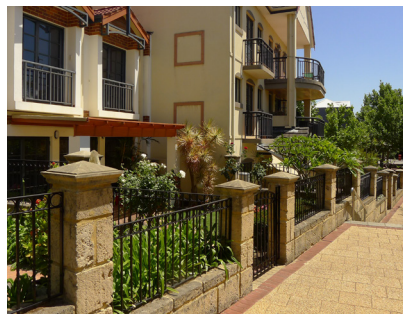
Design Guidance:

- Ensure the design of buildings maintains and/or enhances sight lines between buildings and streets, public spaces and car parking areas.
- Crime Prevention through Environmental Design (CPTED) principles should be applied throughout the design process.
- Consider the use of multifunction smart poles adjacent to key public spaces as they provide capabilities for CCTV, Wi-Fi, lighting and feature lighting capability.



Mixed Use Buildings: Providing passive surveillance from upper level dwellings to the street below and active frontages.

Residential Buildings: Providing passive surveillance from ground and upper level dwellings to the street.



Opportunities for effective public realm surveillance by orientating private open spaces (balconies, private courtyards, frontyards) and active edges (alfresco, shop fronts and building entries) adjacent to streets, paths and public open spaces for both mixed use and residential buildings.

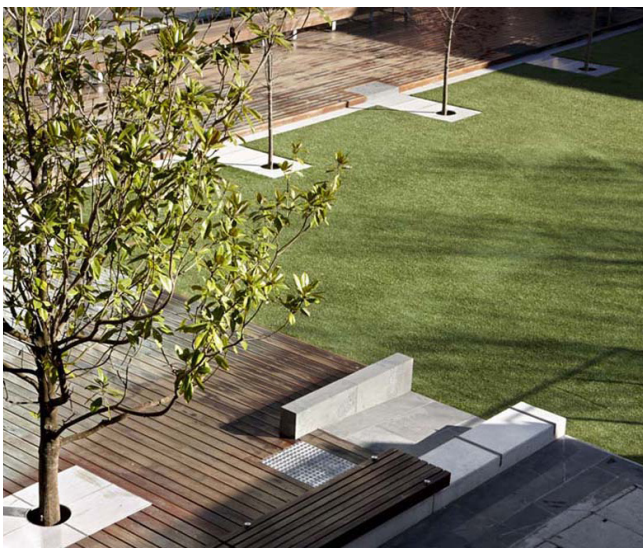
3.0 DESIGN GUIDELINES

3.1 PUBLIC INTERFACE

3.1.6 MATERIALITY

Element Objectives:

1. To ensure the provision of quality, aesthetically pleasing and durable hardscape treatments that contribute to the materiality of the Town Centre.
2. Prioritise softscape to lower the Town's Urban Heat Island temperatures and increase amenity.
3. Celebrate the natural landscape identity and tones of South Hedland and the greater Pilbara region.
4. Create intimate places for people to gather and share stories.
5. Provide consistency for materials and furniture throughout the Town Centre.
6. Incorporate elements from Pilbara vernacular handbook.



Hardscape

Acceptable Outcomes:

1. Paving must be robust, high quality, easily maintained and integrated into the overall character of the development.
2. Paving abutting buildings must have substantial shading by eaves, awnings, trees or landscaping.

Design Guidance:

- Quality hardscape treatments include engineered stone paving, cobble stone, other stone varieties, exposed aggregate concrete, brick, permeable paving, timber, limestone (i.e. travertine), cement/clay unit pavers and compacted crushed stone (cement stabilised).
- The use of asphalt should be avoided where possible, and limited to car parking areas only.
- The use of insitu concrete should be minimised where possible, and used in contrast with other hardscape textures (i.e. concrete and timber).
- Consider using paving materials that allow easy access to underground services and cost-effective replacement in the event of damage or discolouration.
- In key locations, consider engaging local artists in the design of feature hardscape elements to create a unique place expression.
- Consider using lighter and cooler pavement tones to reflect heat and lessen heat absorption.
- Minimise the extent of hardscape areas within open spaces and adjacent to streetscapes.



Examples of hardscape treatments and combination / integration with softscape materiality. Feature paving and treatments are encouraged for Active Streets, particularly Wise Terrace. Using materials relevant to South Hedland is key to enhance the sense of place.

Softscape

Acceptable Outcomes:

1. For pedestrian paths, walkways and passive recreation areas, landscaping must be provided.
2. Areas of lawn cover must be confined to specific usable areas only and properly irrigated.
3. Where gravel mulch or loose aggregates are used for publicly accessible planting areas, it must be bound by an additive resin so it cannot be used as a projectile.
4. All planting areas must be mulched to a minimum depth of 50mm for gravel and 100mm for organic mulch.
5. Crackerdust is not permitted to be used as garden mulch, or in any communal area. Feature aggregates such as stabilised decorative quartz are possible alternatives.
6. Vegetation must be located to maintain clear view-lines between activity areas in buildings and open spaces and parking lots.
7. Landscape areas should not provide areas of concealment or entrapment.



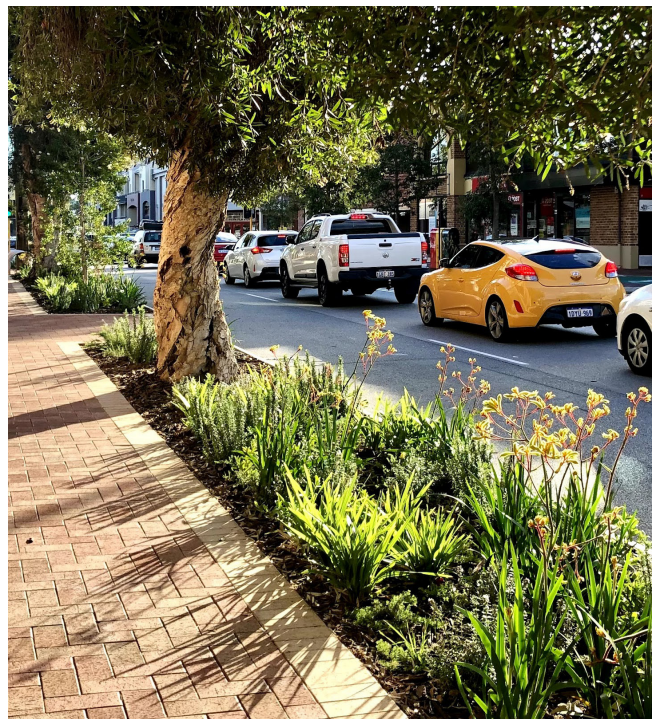
Ensuring larger drainage swales can be crossed via dedicated pedestrian paths or elevated walkways.



Examples of soft and hard materiality, with break out areas of softscape to provide relief from hardscape areas, which can contribute to lower Urban Heat Island impact.

Design Guidance:

- The use of organic mulch should be prioritised over gravel mulch.
- Prioritise the softscape surfaces and ground covers in the public realm over hardscape surfaces.
- Provide as much permeable surface area on-site as possible and include drainage options such as dry creek bed features, garden swales and retention and overflow areas, wherever practicable.
- Break up walking paths with shaded green areas between destinations, particularly along Boulevard Streets.
- Break-up large expanses of hardscape and car parking areas into smaller zones by using softscape, planting and shade. This will also reduce heat build-up within carparks.
- Ensure drainage swales are designed to maintain pedestrian permeability, where appropriate.
- Swales can be planted with native grasses and shrubs that contribute to the purification of water runoff.
- Ensure the constant movement of water for any water features included in the landscape design to prevent mosquito breeding grounds.
- Incorporate softscape adjacent to key pedestrian desire lines and building entries.
- Refer to 3.4.2 Recommended Plant List for specific species of planting.



3.0 DESIGN GUIDELINES

3.1 PUBLIC INTERFACE

3.1.7 TEMPORARY STRUCTURES

Element Objectives:

1. Provide short term activation opportunities to support pedestrian movement networks, public spaces and underutilised / vacant lots.
2. Create a variety of affordable spaces to encourage local start-ups and support events and programming within the Town.
3. Ensure temporary structures do not detract from the amenity, character and established streetscape.

Acceptable Outcomes:

1. Temporary structures are to utilise local materials and source construction to a local manufacturer (where possible).
2. Building service infrastructure (e.g. air condition units) shall be screened from view of the street (where possible).
3. Shade, lighting and seating must be provided to support the installation of temporary structures.

Design Guidance:

- Consider using temporary structures to activate underutilised vacant lots and future development sites.
- Temporary structures should be co-located along bike parking and key pedestrian movement corridors.
- Consider the dual purpose of temporary structures and partnerships with local businesses (i.e. a library or art gallery cafe, bike repair cafe, or a pop up restaurant that also has a retail component etc.).
- Private initiatives for temporary structures are encouraged, where temporary structures are provided on private land adjacent to public open spaces.
- Refer to the Place Plan for appropriate locations of temporary structures.



Examples of temporary structures which provide high levels of activation on private land and adjacent to key public spaces and car parking areas. These initiatives provide for ideal solutions to vacant or undeveloped lots.

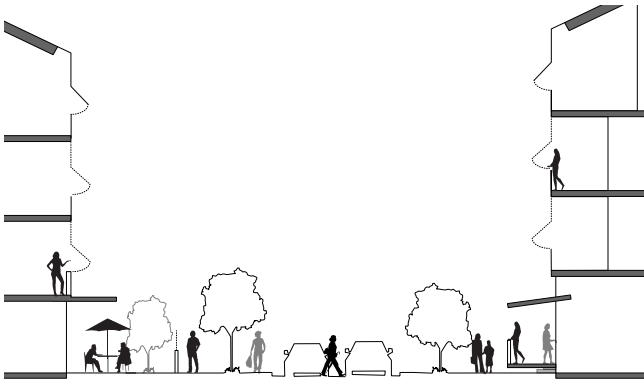
3.0 DESIGN GUIDELINES

3.2 BUILT FORM DESIGN

3.2.1 BUILDING FACADES

Element Objectives:

1. To ensure that built form reflects the unique characteristics of the Pilbara and enlivens the Town Centre with forms, materials, proportions and elements suitable to the climate and place.
2. To ensure building facades are of high architectural quality, interesting, well-proportioned and enhance the public domain and street character.
3. Promote a fine grain character.
4. To ensure that building elements are integrated into the overall building and facade design.
5. Minimise blank walls overlooking car parks, streets and areas of public open space.
6. Ensure advertising signage attached to facades and awnings does not dominate the façade nor reduce natural surveillance to the streetscape.



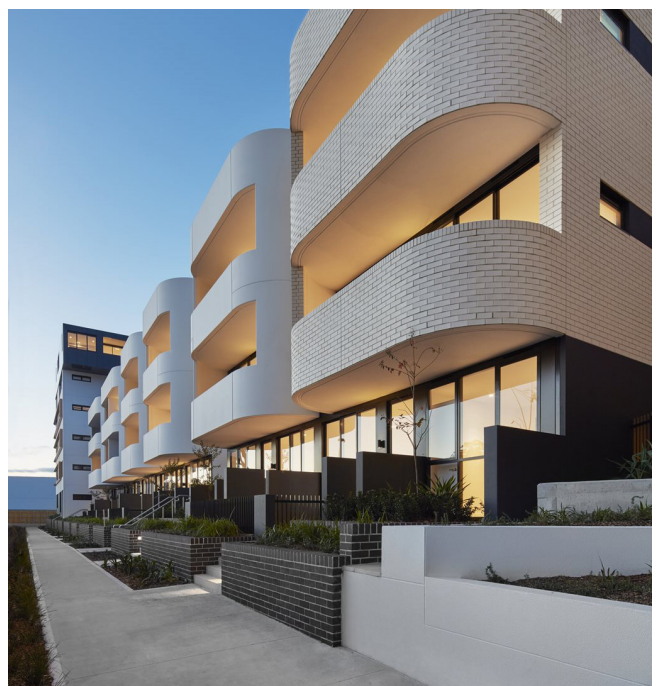
Active edges can still be achieved with ground floor residential uses, through a variety of private open spaces, dwelling entries, lobby entries and openings to habitable rooms.



Examples of an active residential ground floor interfaces to the public realm. Raised balconies, entries and terraces provide a quality interface to the public realm, whilst providing surveillance opportunities.

Acceptable Outcomes:

1. All Active Streets are to be framed by activated ground floor facades (shops, cafes, residential front yards etc) for at least 80% of the lot boundary.
2. Where a lot has multiple frontages to Active Streets, streets are to be framed by activated ground floor facades (shops, cafes, residential front yards etc.) for at least 60% of the lot boundary.
3. Blank walls are not permitted to any street frontage, except for rear lanes.
4. Blank walls are permitted to rear private parking areas, however they must include entries and openings to ensure passive surveillance opportunities.
5. Elevations must be articulated with colours and textures to differentiate between units and tenancies to break down long facades.
6. All windows require shading devices such as screens, eaves and/or awnings.
7. Tenant Advertising Signage is subject to Local Planning Policy 02 (LPP/02) - Advertising Signs.
8. Full length window advertising signage is not permitted within the Town Centre, as it must allow for natural surveillance to the street. A maximum of 25% of the total window area can be covered by signage and not interrupt natural line of sight.
9. All street facing facades must have at least one major opening to a habitable room or outdoor living area.
10. Security grills or shutters (if installed) must be integrated into the building façade and be visually permeable to not reduce natural surveillance.



Design Guidance:

- Buildings over 4 storeys must be articulated to define the podium and upper level sections, using terraces, balconies, setbacks and/or awnings.
- Facades should be composed with an appropriate scale and proportion that responds to the buildings use. This will enable buildings to be easily 'read' by a pedestrian or observer as to their function and purpose.
- Where blank walls are permitted, consider art murals.
- Consider breaking up long stretches of facades with pedestrian access ways such as through-site links, arcades and walkways.
- Consider recessed entries or portions of facade to create publicly accessible shaded green spaces within building forecourts with lighting and seating.
- Consider structural screening elements on building facades to improve shade to upper levels.
- Orientate windows, entries, balconies, private outdoor spaces and other openings towards pedestrian access ways, public open spaces, primary streets, secondary streets (if corner location) and laneways.
- All commercial tenancies adjacent to the public realm should provide lighting within the façade, entry, foyer and/or major opening.
- Within residential developments, all building interfaces should provide natural surveillance to the public realm through ground floor front yards and entries, and upper level balconies and terraces.



Outcomes of permeable ground floor facades, where even major retail can provide a good interface outcome. Full window advertising signage is undesirable as detracts from activation and surveillance opportunities. Clear security grills and shutters are acceptable



An example of a building facade that provides articulation and screening devices to openings and upper level balconies.



Examples of active frontages with a commercial and retail focused ground floor.

3.0 DESIGN GUIDELINES

3.2 BUILT FORM DESIGN

3.2.2 BUILDING CORNERS

Element Objectives:

1. To ensure building corners adequately address their prominence and streetscape, particularly where they form a 'gateway' or terminate a view corridor.

Acceptable Outcomes:

1. Blank walls to corner frontages are not permitted.
2. Buildings on corners must address both street frontages, particularly through openings, balconies or other building articulation techniques.
3. Corner buildings must be given strong architectural expression and exhibit a greater level of design.

Design Guidance:

- Buildings on corners should provide a well considered balance between the continuity of the streetscape and 'feature' building elements.
- Consider ground floor recessed corner facades with awnings, shade and seating to create shaded green spaces within building forecourts.
- Where a gateway is created through building form, it should be designed as an integral part of the architectural composition and detailing of the building.



Examples of corner buildings which celebrate the prominence of their location. This is achievable for all building types, even residential buildings. Corner buildings also act as passive wayfinding cues, as they are easily identifiable and can be remembered for its location.

3.0 DESIGN GUIDELINES

3.2 BUILT FORM DESIGN

3.2.3 ROOF FORMS

Element Objectives:

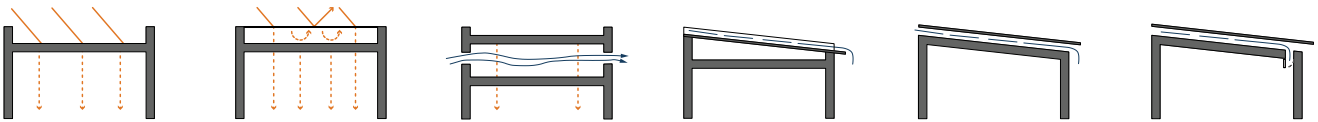
1. To ensure roof forms within the town centre are integrated and respond to the intended character of the whole precinct.
2. To encourage a variety of roof forms which allow the greatest protection and response to the harsh Pilbara climate.
3. Reduce heat gain and solar absorptance

Acceptable Outcomes:

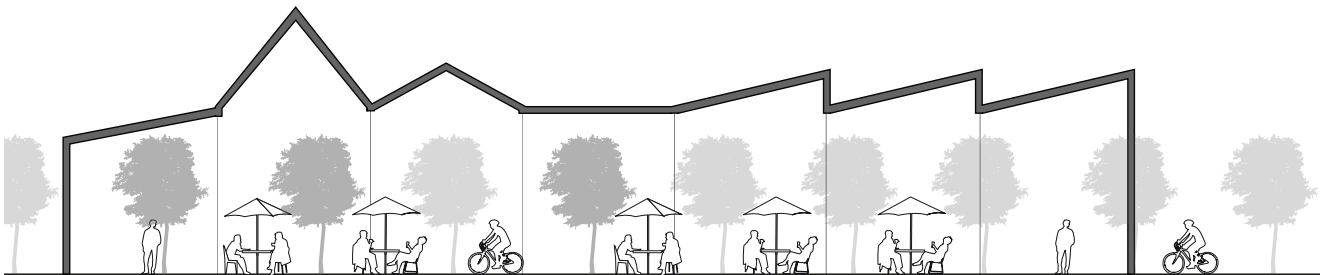
1. Rainwater runoff from the roof requires careful civil and landscape design to redirect runoff away from the building and to meet the on-site retention requirements.
2. Roof colours must have a solar absorptance rating less than 0.5, to reduce heat gain.
3. Roof mounted air-con condensers are recommended to be under-cover/shaded to protect them from the weather and to maximise their efficiency and life.
4. All roof and podium terraces must include structural shade elements, particularly in higher density housing development where private outdoor spaces are limited.
5. Use roof forms to identify individual units within a block of attached buildings. This will assist in breaking down the horizontal scale of long facades.

Design Guidance:

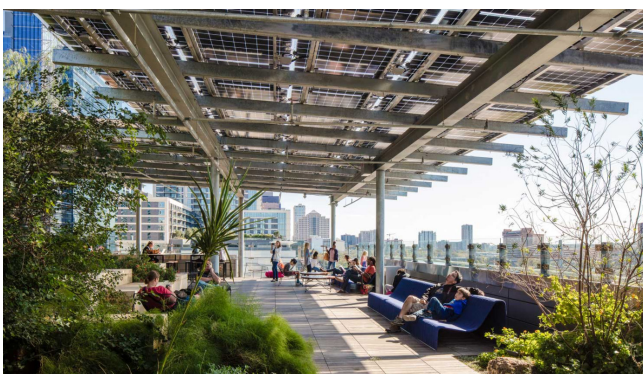
- Design roofs to allow for the movement of cool air and prevent direct heat gain into the building.
- Where planting is provided on the roof or podium, resilient planting should be used. Refer to the 3.4.3 Recommended Plant List for more details.
- The design of roof spaces should plan for the future installation of photovoltaic panels so that panels can be mounted parallel to the roof plane.
- Consider integrating solar panels into structural shade elements on roof terraces.
- Roof forms are encouraged to be simple and avoid 'feature' elements in the design.
- Small openings in solid roofs offer weather protection and help alleviate heat gain.
- Consider using different roof forms to identify individual units within a block of attached buildings. This will assist in breaking down the horizontal scale of long facades.
- A combination of temporary structures under a shared roof is also encouraged.



The form and construction of the roof will affect the way in which the building performs thermally. The movement of breezes around the roof form and the level of insulation from the sun provided by its design are just two of the important things to consider when designing the roof of your building.



For single developments with long stretches of facade, differentiating roof forms will enable the creation of a fine grain character and breaks down long facades by identifying individual units.



Photovoltaic cells not only provide renewable energy but can also act as a structural shade element for roof terraces. Planting increases photovoltaic cell production by 25%.



An example of native resilient plant species used on roof and podium terraces.

3.0 DESIGN GUIDELINES

3.2 BUILT FORM DESIGN

3.2.4 MATERIALS

Element Objectives:

1. To ensure the use of high quality materials that convey a sense of permanence, are place-responsive and detailed in a range of colours reflecting the local environment
2. Promote and celebrate the natural colours and materials of the local Pilbara landscape.

Acceptable Outcomes:

1. Materials must be chosen for their durability, robustness and appreciation of the environmental conditions of South Hedland and its location within a cyclone Region D location.
2. Colours must be selected to reflect the local environment/landscape and reduce heat absorption.
3. Facades and roofs of buildings that face the street must not use highly reflective materials.

Design Guidance:

- In extreme climates, such as in the Pilbara, managing the effectiveness of building materials in reflecting heat, reducing the flow of heat and absorbing, storing and releasing heat (radiation, convection, conduction) is fundamental to providing comfort inside buildings.
- High solar exposure also means that many materials can become prematurely weakened or damaged. It is preferred that materials have high resistance to solar damage.
- Appropriate heavyweight materials include stone, brick, concrete block, in-situ or precast concrete and rammed earth.
- Lightweight construction systems are beneficial in hot arid climates as they reduce thermal heat build-up and transference.
- Permeable materials including perforated metal mesh, timber battens and trellis', enable air flow but block direct solar access to the interior.



Good example of robust material combinations used to reflect the local landscape and identity.

3.2.5 BUILDING ENTRANCES

Element Objectives:

1. To ensure clearly defined entries add interest and activity to the street.
2. To create entrances that provide a desirable identity for the development.
3. To ensure that building entrances, particularly pedestrian entries, appropriately orient the user and contribute to intuitive wayfinding.
4. Ensure main building entries improve the presentation and function of the building.

Acceptable Outcomes:

1. All building entrances shall be well lit at night for identity and safety and incorporate universal access.
2. Coordinate the location of building entries with features of the external environment, including crosswalks, traffic signs, footpath amenities and street tree planting.
3. Building entries must be designed as integral and identifiable elements of the building facade and must be clearly visible from roadways and footpaths.
4. Individual entries from the footpath must be provided to all ground level residential and commercial tenancies addressing the street.
5. Separate entries must be provided for vehicles and pedestrians, and for different types of uses in a building.
6. Buildings must have pedestrian entries from rear car parking areas in addition to multiple street frontage entries.
7. All entries must be provided with shelter, using built shade or shade trees.



An identifiable pedestrian entry to a residential lobby, celebrating the buildings form, with good lighting.



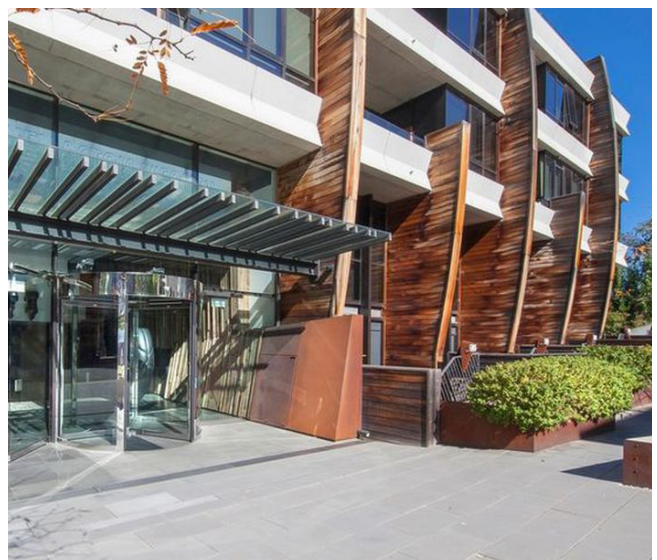
Recessed pedestrian entries supported by shade, and co-located with entries to private front yards.

Design Guidance:

- Consider clear lines of transition between public streets, shared private circulation spaces and private spaces.
- Deep awnings provide protection to the entrance of the building as well as helping to identify the entrance.
- Installation of security screens to entrance doors to achieve adequate cross ventilation.
- Provide appropriate security measures to ensure they do not allow unintended access to upper levels or roofs of a building.
- Design building entries to be open and porous with covered outdoor areas which blur indoor and outdoor spaces.
- Increase the amount of individual entries for ground floor residential development from the street.



Separate vehicle and pedestrian entries from the street.



An apartment lobby entrance, supported by terraced residential units either side, with individual entries to the street.

3.0 DESIGN GUIDELINES

3.2 BUILT FORM DESIGN

3.2.6 SETBACKS & FENCES

Element Objectives:

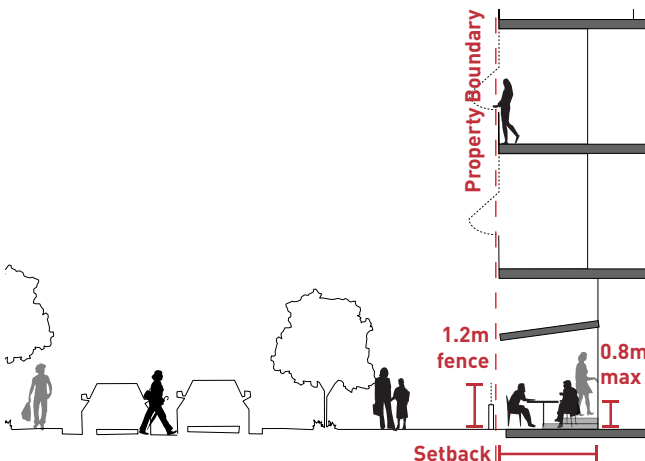
1. To provide adequate boundary security to all properties whilst providing an open and inviting face to visitors
2. To limit opportunities for concealment of intruders by ensuring planting and screening allows for passive surveillance of property boundaries.

Design Guidance:

- Permeable fencing often provides greater security than solid walls as the opportunities for concealment are reduced.
- Select high branching tree species for potential problem areas and prune trees to a minimum of 1.8 metres above grade to maintain view-lines and maximise surveillance.
- Use low planting beds or local grasses (600mm maximum height) on the perimeter of a property, with taller shrubs and dense cover trees located in the middle or rear of internal courtyards and garden spaces.
- For residential ground floor setbacks, a level change can assist with balancing the requirements for privacy whilst being part of the street. Level changes should not be more than 0.8m above street level.



Projecting balconies of a residential building built to the boundary, providing good passive surveillance to the street below.



Residential ground floor setbacks to incorporate courtyards or front yards. These spaces should not be more than 0.8m above street level.

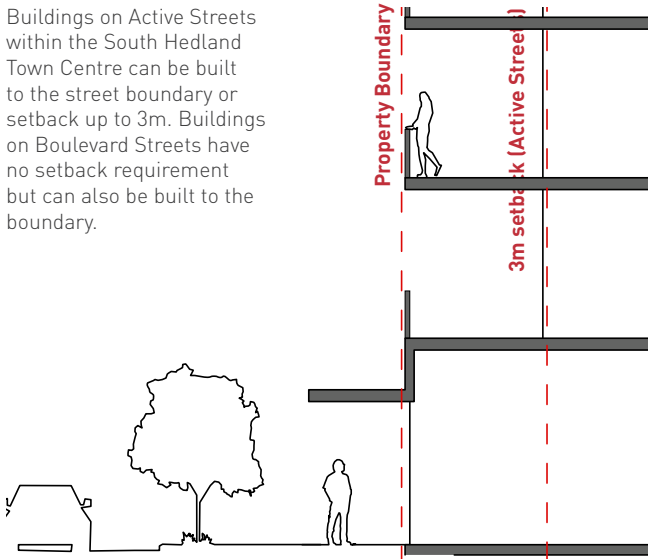
Acceptable Outcomes:

1. Ground to third floor portions of Commercial, Mixed Use and Residential buildings that abut an Active Street must be setback 0-3m.
2. Ground to third floor portions of Commercial and Mixed Use and Residential buildings that abut a Boulevard Street do not require a minimum setback.
3. The ground floor setbacks to a maximum of 3m along Active Streets must meet the awning requirements (3.1.2 Shade) when accommodating existing street trees, light poles and other infrastructure.
4. Façade design includes:
 - scaling, articulation, materiality and detailing at lower levels that reflect the scale, character and function of the public realm
 - rhythm and visual interest achieved by a combination of building articulation, the composition of different elements and changes in texture, material and colour.
5. For residential buildings along Active Streets, ground floor setbacks of 3m are permissible to accommodate front yards, courtyards and softscape areas which are visually open to and part of the street.
6. Front yards and ground floor courtyards with access to the public realm shall include shade planting and softscape.
7. All fencing which includes pedestrian access and abuts public open space (street, footpath or laneway), must be maximum 1.2m high and 50% visually permeable and provide secure access from the street.
8. Where pedestrian access must be denied to private property, private communal open spaces, or commercial properties for security measures, visually permeable fencing is to be used to a maximum 2.1m high. This fencing is not to provide footholds or other climbing aids.
9. Cyclone fencing, razor wire and 'panel' fencing (Colorbond or fibre cement) must not be used within the Town Centre precinct.

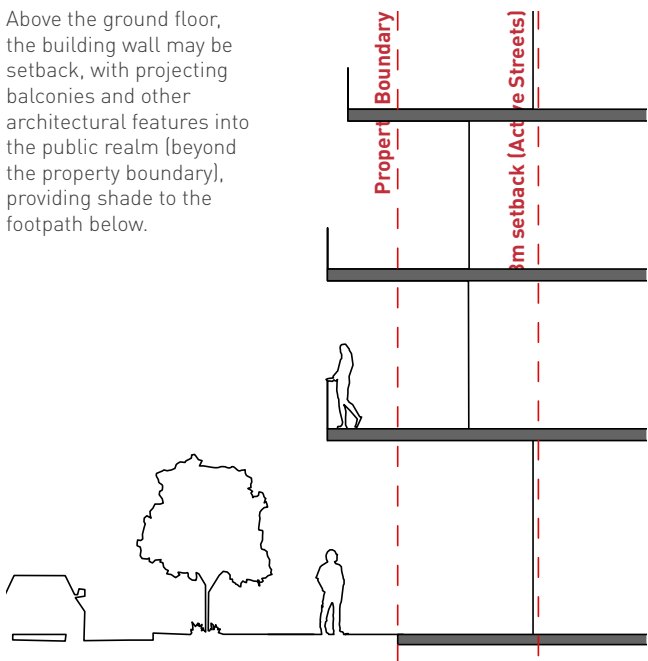


A good example of a raised ground floor balcony adjacent to the public realm, providing a balance between privacy and relationship to street.

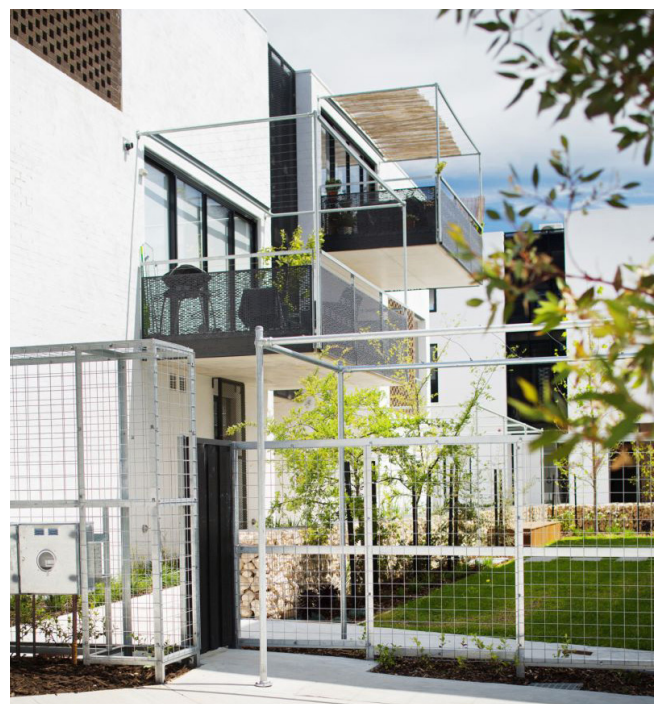
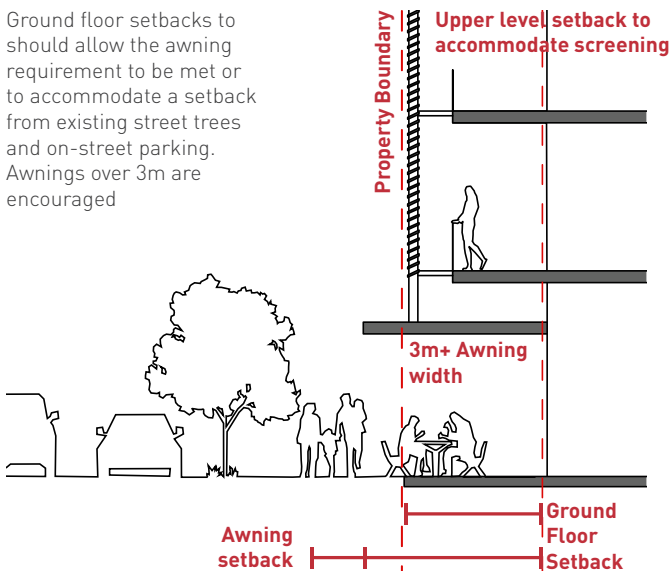
Buildings on Active Streets within the South Hedland Town Centre can be built to the street boundary or setback up to 3m. Buildings on Boulevard Streets have no setback requirement but can also be built to the boundary.



Above the ground floor, the building wall may be setback, with projecting balconies and other architectural features into the public realm (beyond the property boundary), providing shade to the footpath below.



Ground floor setbacks should allow the awning requirement to be met or to accommodate a setback from existing street trees and on-street parking. Awnings over 3m are encouraged.



Examples of permeable fencing providing good surveillance and access to the public realm.

3.2.7 ADAPTABILITY

Element Objectives:

1. To ensure that the Town Centre has the ability to adapt to the changing needs of the Town's population over time.

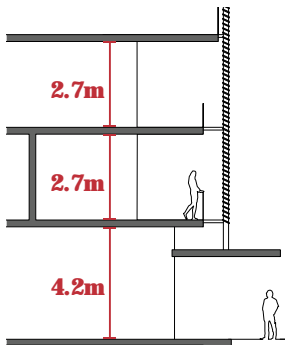
Acceptable Outcomes:

1. For mix-use or commercial developments, the street facing building must have a ground floor-to-ceiling height of 4.2m. Buildings not facing the street ground floor to first floor to be a minimum of 3.2m.
2. Upper levels floor-to-ceiling measurements must be a minimum of 2.7m for all buildings.

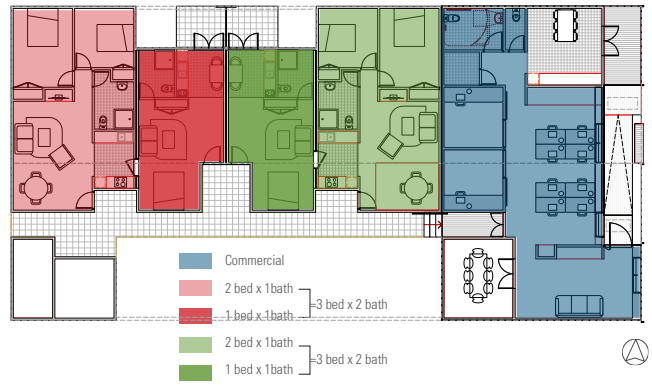
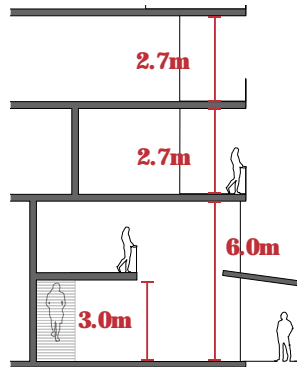
Design Guidance:

- To allow for residents to 'age in place', consider opportunities for apartments to be easily adapted for universal access. Provision of ramps, increased doorway widths and structural members that allow for the future addition of handrails are recommended. Kitchen and bathroom designs that are adaptable for wheelchair access are also recommended.
- Adaptability of buildings from residential to part-commercial can be considered, and allowances made for changes of use over time. In this instance, consider the use of double height ground floors with mezzanine levels.
- Ensuring power and technology connections allow for changes of use to all tenancies will mean that any future upgrades and conversions can be completed with minimal changes (and cost) to the building's infrastructure.

ADAPTABLE RESIDENTIAL BUILDING

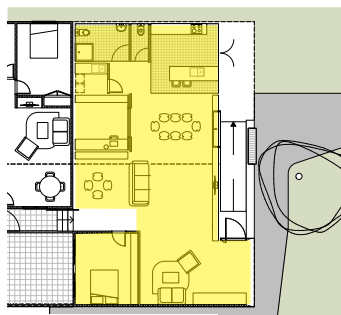


WITH DOUBLE HEIGHT GROUND FLOOR

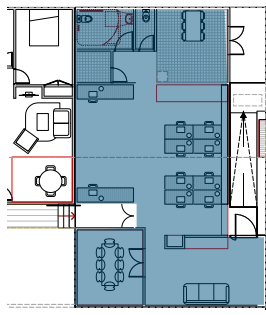


Floor-to-ceiling heights for all ground floor mix-use and commercial tenancies must be a minimum of 4.2m.

Dual key units

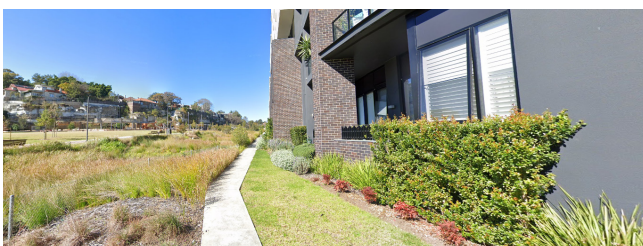


RESIDENTIAL USE



COMMERCIAL CONVERSION

Consider opportunities to design ground floor residential apartments that enable future commercial adaptation and use.



Low and permeable fencing and balustrade, adjacent to a footpath and public open space.



Adaptable housing with double height ground floors.

3.0 DESIGN GUIDELINES

3.2 BUILT FORM DESIGN

3.2.8 BUILDING SERVICES

Element Objectives:

1. To ensure a high level of amenity and acoustic comfort by protecting the privacy of residents from external noise sources.
2. To ensure that services and related hardware required for the function of buildings do not have a negative impact on the character and amenity of the area and are designed to meet changing needs over time.
3. Reduce reliance on electrical drying appliances by providing alternative zero-energy options.
4. To ensure mechanical service equipment does not impact on the visual or acoustic amenity of adjacent uses or the public realm.
5. To minimise the creation of refuse within the South Hedland Town Centre.
6. To encourage recycling to reduce waste and lower the environmental impact of new buildings.

Acceptable Outcomes:

1. All building services (fire boosters, transformers etc.) are to be integrated into the building and concealed from the public realm.
2. Air conditioning units must be screened if located on balconies, so that they are concealed from the public realm.
3. All air conditioning condenser units must be contained on the property and utilise noise control and visual concealment measures to minimise impacts (centralised plant rooms, screens).
4. All piped and wired services, and meters must be contained on the property and concealed from public view.
5. All service enclosures and screening treatments must be designed as an integral part of the overall development with landscape treatment of surrounding area.
6. Provision must be considered for the collection of waste on-site, including waste storage and area for collection vehicle turning.
7. Additional space within the site must be provided for the collection of bulk-waste on council specified days.
8. All refuse storage areas must be screened from public view from primary and secondary streets.
9. A waste management plan shall be submitted at Development Approval to the Town of Port Hedland. This shall be developed by a qualified sustainability or waste consultant.
10. There must be opportunity for outdoor drying facility for all residential units.
11. All development must submit a construction management plan which includes dust management, street tree protection, footpath impact, location of site machinery and materials.

Design Guidance:

- Some commercial and retail functions will also require drying facilities. Locating these components separately from those provided for residents is highly recommended.
- An acoustic report prepared by a qualified acoustic engineer, is recommended for all mixed-use developments.

A range of methods can be used to mitigate noise. These include:

- Locating outdoor living areas and indoor habitable rooms away from noise sources.
- Utilising building construction techniques and facade treatments, such as glazing, window frames, ceiling insulation and sealing of air gaps.
- Additional to the noise and appearance of air conditioning units, the hot air expelled from them can make for an uncomfortable experience when pedestrians or residents are required to walk past the exchange unit. Locating these units separate from any pedestrian activity is highly recommended.
- Consider the use of recycled or recyclable materials in all aspects of construction, landscape and fit-out stages of the project.
- Choose construction system(s) based on environmental impact and life cycle costs, including durability and maintenance requirements, life cycle energy consumption, adaptability and recycling potential, local availability of materials and transportation distances.
- Where a development is a refurbishment or renovation of an existing building, consider incorporating existing building elements into new construction.
- Integrate waste management processes into design stages of the project, including using standard component sizes to reduce waste, and selecting materials and components on durability, adaptability and ease of future services upgrades.
- A waste management plan is an integral part of the sustainability strategy, the plan should indicate how waste is to be recycled, amongst other initiatives.



Locating noise generating services such as air conditioners on roof areas reduces the visual impact on the streetscape.



Acoustic screens for roof services and air conditioning units can further reduce noise.



Balconies free of air conditioning units reduce noise impacts and create more usable space for private open space.



Air conditioning units located discretely and away from public view, if not located on the roof of the building.



Examples of service enclosures and screening treatments designed as an integral part of the overall development.

3.0 DESIGN GUIDELINES

3.2 BUILT FORM DESIGN

3.2.9 BICYCLE FACILITIES

Element Objectives:

1. Ensuring a bicycle friendly environment and reducing car dependency.
2. To integrate bicycle transport as a key method of transport through the provision of 'end of trip facilities' for cyclists in all commercial, retail and mixed use developments.
3. Leverage the existing system of pedestrian and bike paths to complete a comprehensive network of shared paths through and around the Town Centre.

Design Guidance:

- Bicycle parking spaces for visitors work best when located in a publicly accessible, sheltered location near the front entrance of a building.
- Showers, change rooms and lockers are to be well lit and ventilated, capable of being locked from both sides, and located as close as possible to the bicycle parking facilities.
- In residential applications where designated storage space and bicycle facilities are combined its minimum area is 4.5sqm to ensure adequate storage space.
- Publicly accessible and secure bike enclosures/shelters are encouraged on private land providing they are accessible.
- Consider co-locating bike repair shops/stations within buildings and/or co-locating with temporary structures (see 3.1.7 Temporary Structures).



Acceptable Outcomes:

1. Private development shall provide bicycle parking and end-of-trip facilities to serve Town Centre residents, employees and visitors.
2. Residential land uses are to comply with the bicycle parking requirements of the relevant Residential Design Codes.
3. Bicycle parking must be provided as per:

Commercial	1 space per 400sqm gross floor area (GFA), with a minimum of 4 spaces per development.
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4. Developments are to demonstrate how alternative transport modes have been encouraged, primarily through the provision of End-of-trip facilities such as bike racks, showers and lockers, as per:

Showers	One shower following the first five (5) long-term parking spaces, plus an additional shower for each four (4) bicycle parking spaces thereafter.
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Change Room/ Lockers	One change room or direct access to a communal change room per shower. Change Rooms are to include lockers.
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5. If multiple commercial tenancies share bike bays, end of trip facilities must be communally accessible.
6. Private bicycle parking spaces for commercial tenants are to be located in a secure, well-lit location on the ground floor and away from pedestrian traffic.
7. Public bicycle parking spaces or storage enclosures are to be located in close proximity to key cycle routes and identified EOT facilities (where possible).
8. Publicly accessible bicycle parking to be available at all Civic and Cultural buildings.



Examples of external and internal end of trip facilities.

3.2.10 CULTURAL & CIVIC BUILDINGS

Element Objectives:

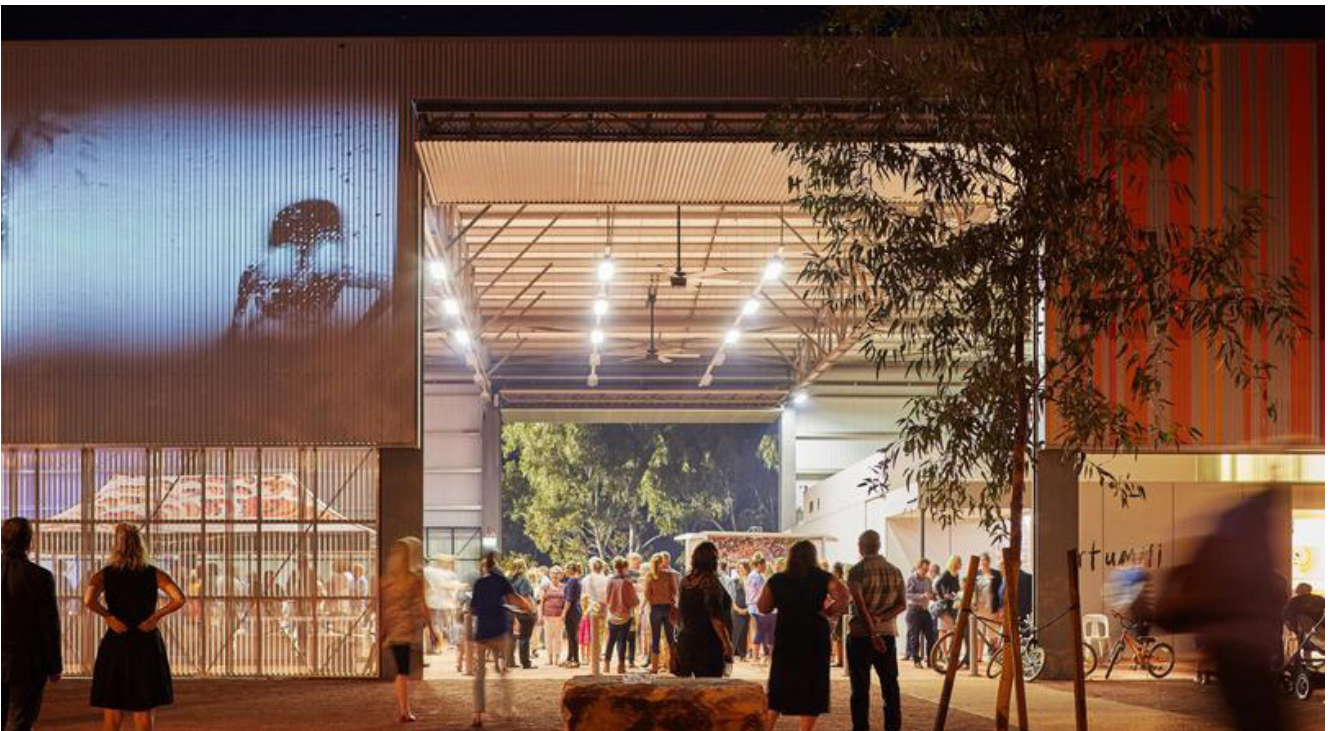
1. Contribute to identity, arts and culture of South Hedland.
2. Foster the start-up and innovation culture within South Hedland.
3. Provide new flexible and multifunctional spaces for events, so that the community can gather and meet.
4. Promote generous floor to ceiling heights and provide for future building adaptability.

Acceptable Outcomes:

1. All cultural and civic buildings are to be well-lit at night and capable of being used for after-hours community or social events.
2. It must be demonstrated that multi-functional spaces within cultural and civic spaces contribute to the identity, arts and culture of South Hedland.
3. Ground floor to ceiling height shall be a minimum of 3.2m to provide generous floor space and height.

Design Guidance:

- Design of cultural and civic buildings to be open and porous with covered outdoor areas which blur indoor and outdoor space
- Cultural and civic buildings should have open edges and internal spaces that are publicly accessible.
- Cultural and civic buildings are destinations and should provide activation to the public realm.
- Promote the co-location of artists and maker spaces, galleries and start-up spaces within cultural and civic buildings as drivers of activation.
- Flexible open planned design with large floor to ceiling heights allow for flexibility of events and programming.



Examples of community and civic buildings that act as destination nodes, and provide alternative uses to their main function.

3.0 DESIGN GUIDELINES

3.3 ENVIRONMENTAL DESIGN

3.3.1 WATER MANAGEMENT

Element Objectives:

1. To ensure Water Sensitive Urban Design (WSUD) principles are employed throughout the site, to manage stormwater from roads and open space.

1. Stormwater drainage infrastructure to be provided in accordance with the Town's "Local Planning Policy 11 - Stormwater Management and supporting Guidelines"
2. Stormwater disposal to be in accordance with the approved Structure Plan to ensure adequate retention on site, disposal from any basement parking area and connection to local/district stormwater system.
3. Any water recycling approaches should be developed and implemented in accordance with Stormwater Management Manual of Western Australia.

Design Guidance:

- Considered plumbing design can allow for the provision of rainwater for specific internal uses, with an automatic diversion valve which switches to mains water whenever the tank is empty
- Consider the re-use of grey water for irrigation and ground water replenishment



An example of controlling and minimising overflow and flooding through simple detailing, in this instance it allows for overflow from a small



Large swales and Water Sensitive Urban Design gardens can deal with more intense overland flow events.

3.0 DESIGN GUIDELINES

3.4 LANDSCAPE & PLANTING

3.4.1 BIO-DIVERSITY & WATERING

The use of vegetation for shading is particularly effective where eave overhangs do not prevent solar penetration. Landscaping has to be able to withstand the normal cyclonic storm events as such strong root systems need to be established.

Element Objectives:

1. To enhance the existing biodiversity or habitat of native flora and fauna.
2. To encourage the use of native flora, thus expanding the habitat for local fauna such as bird and insect life.
3. Promote the use of endemic native tree/plant species.
4. Promote and celebrate the natural look and feel of the Town Centre.
5. Planting is low maintenance and requires minimal irrigation.
6. To ensure water efficiency measures are taken to reduce consumption of potable water on gardens.

Acceptable Outcomes:

1. It is recommended that 80% of all planting be selected from the 3.4.2 Recommended Plant List.
2. The pruning of large shade trees adjacent to the public realm is not to be done without consent of the Town's horticulturists. Emergency pruning or pruning for cyclone preparation does not require consent.
3. Shade trees that are supplied and installed by the developer/landowner within the property boundary and adjacent to the public realm in accordance with the approved landscape plan, must be maintained by the landowner, developer or strata body for the duration of development and replaced if damaged.



Native landscape that reflects the character of the Pilbara region is highly recommended, and also ensures the need for watering is minimal.

Design Guidance:

- For development along Boulevard Streets and Active Streets (Page 5), it is recommended that larger tree sizes are planted, where possible.
- Tree protection measures for young planted trees is recommended, to minimise risk of being damaged.
- Consider planting shade trees within future development sites adjacent to footpaths as soon as possible, so that trees can mature by development stages. Native and exotic shade trees should be considered.
- Local native plants thrive in the harsh environmental conditions experienced in South Hedland. For this reason they are both a logical and environmentally appropriate choice for planting.
- Many exotic species will thrive in the South Hedland conditions, but can potentially have detrimental impacts on the balance of existing flora and fauna in the area and on natural waterways.
- Native plants should be prioritised over exotic species, where access to generous landscape and garden bed areas can be achieved. Natives can provide good biodiversity opportunities.
- Exotic species can be more suitable in resilient in urban, paved areas. Exotics can provide good shade opportunities.
- Local native plants are essential to assist in maintaining the pre-development water flows during the wet season. E.g. native grasses flatten when water flows through them and they slow the water down and filter out debris and silts that can potentially cause harm to downstream marine and mangrove systems.
- Local plants rarely require more than a 2 year establishment period and depending on application, i.e. feature garden of swale revegetation planting, permanent watering can be terminated.
- Local native plants also withstand drought and are cyclone resistant.
- Integrate a Bush Tucker (edible) Garden and Nature Play into the Town Centre.
- The *Owenia reticulata* (Pundle Tree) and *Acacia translucens* (Poverty Bush), are endemic to South Hedland and only grow in the area. It is very hard to propagate and therefore should be planted where possible.
- When clearing a lot and/or site, the local top soil, native grasses and any remnant provenance vegetation should be stripped, mulched and stockpiled for future use.
- Smart approved WaterMark products are recommended for use in the garden, in particular, hose connectors, rain sensors, soil moisture monitors and sprinkler systems.
- Consider installing a dripper or subsurface delivery system to minimise evaporation.



Nature play and bush tucker gardens are multi-use initiatives which leverage native landscape design.

3.0 DESIGN GUIDELINES

3.4 LANDSCAPE & PLANTING

3.4.2 RECOMMENDED PLANT LIST

SCIENTIFIC NAME	COMMON NAME
Exotic Street and Shade Trees	
<i>Ficus microcarpa</i> var <i>hillii</i>	Hill's Weeping Fig
<i>Tipuana tipu</i>	Pride of Bolivia, Rosewood
<i>Millettia pinnata</i>	Pongamia Indian Beech
Native Street Trees	
<i>Corymbia terminalis</i>	Bloodwood, Desert Bloodwood
<i>Eucalyptus victrix</i>	Coolibah, Black heart Gum
<i>Melaleuca dealbata</i>	Karnbor
<i>Melaleuca leucadendra</i>	Cadjeput
<i>Mimusops elegi</i>	Walara
<i>Terminalia canescens</i>	Wingnut Tree, Native Almond
<i>Brachychiton gregorii</i>	Desert Kurrajong
<i>Corymbia flavescens</i>	Ghost Gum
Shade Trees	
<i>Acacia aneura</i>	Mulga
<i>Acacia tumida</i>	Pindan Wattle
<i>Corymbia aspera</i>	Brittle Bloodwood
<i>Corymbia dichromophloia</i>	Variable Barked Bloodwood
<i>Corymbia flavescens</i>	-
<i>Corymbia opaca</i>	Desert Bloodwood
<i>Eucalyptus camaldulensis</i>	River Gum
<i>Ficus brachypoda</i>	Native Banyan Fig
<i>Melaleuca argentea</i>	Silver Cadjeput, paperbark
<i>Melaleuca viridiflora</i>	Broad leaved Paperbark
<i>Owenia reticulata</i> [^]	Native Walnut, Desert Walnut
<i>Peltophorum pterocarpum</i>	Yellow Poinciana Native
<i>Pittosporum phylliraeoides</i>	-

SCIENTIFIC NAME COMMON NAME

SCIENTIFIC NAME	COMMON NAME
Small Trees	
<i>Acacia coriacea</i>	Wirewood
<i>Acacia pyrifolia</i>	Kanji Bush
<i>Bauhinia cunninghamii</i>	Native Bauhinia
<i>Corymbia deserticola</i>	Desert Bloodwood
<i>Corymbia zygomphylla</i>	-
<i>Dolichandrone heterophylla</i>	Lemonwood
<i>Erythrina vespertilo</i>	Native Coral Tree
<i>Eucalyptus leucophloia</i>	Snappy Gum
<i>Hakea lorea</i>	Corkwood, Witinti
<i>Melaleuca lasiandra</i>	

Large Shrubs	
<i>Acacia acradenia</i>	-
<i>Acacia ancistrocarpa</i>	Fitzroy wattle
<i>Acacia bivenosa</i>	Dune Wattle
<i>Acacia coleii</i>	-
<i>Acacia monticola</i>	Curly Bark Wattle
<i>Acacia pyrifolia</i> DC. var. <i>Pyrifolia</i>	-
<i>Acacia trachycarpa</i>	Minni Ritchi
<i>Acacia translucens</i>	Poverty Bush
<i>Acacia tumida</i> var. <i>Pilbarensis</i>	-
<i>Alyogyne hakeifolia</i>	Native Hibiscus
<i>Capparis spinosa</i>	Caper Bush
<i>Crotalaria cunninghamii</i>	Green birdflower tree
<i>Eremophila fraseri</i>	Burra, Native Fuchia, Turpentine bush
<i>Eremophila glabra</i>	Tar Bush
<i>Eremophila maculata</i>	Spotted Emu bush
<i>Eremophila pterocarpa</i>	Silver Poverty Bush
<i>Grevillea eriostachya</i>	Yellow Flame Grevillea, Desert grevillea
<i>Grevillea wickhamii</i>	Wickham's Grevillea
<i>Santalum lanceolatum</i>	Northern Sandalwood
<i>Senecio magnificus</i>	Showy Groundsel
<i>Senna artemisioides</i>	Silver Cassia
<i>Senna artemisioides</i> ssp. <i>x sturtii</i>	Straight Leaf Cassia

[^]Endemic Species.

* Species of limited seasonal flowering should be used in concentrated amounts and located with other species of seasonal flowering.

SCIENTIFIC NAME	COMMON NAME
Small Shrub	
<i>Acacia adoxa</i>	Grey Whorled Wattle
<i>Acacia hilliana</i>	Tabletop Acacia
<i>Acacia wickhamii</i>	-
<i>Atriplex bunburyana</i>	Silver Salt Bush
<i>Capparis spinosa</i>	Common Caper
<i>Corchorus walcottii</i>	Wooly Corchorus
<i>Gomphrena canescens</i>	Bachelors Buttons
<i>Halgania sp.</i>	-
<i>Maireana georgei</i>	Satiny Bluebush
<i>Pimelea ammodaridifolia</i>	-
<i>Ptilotus calostachyus</i> *	Weeping Mulla Mulla*
<i>Ptilotus exaltatus</i> *	Pink Mulla Mulla*
<i>Ptilotus rotundifolius</i> *	Royal Mulla Mulla*
<i>Scaevola browniana</i>	-
<i>Scaevola crassifolia</i>	Fanflower
<i>Scaevola parvifolia</i>	Camel Weed
<i>Senna notabilis</i>	-
<i>Solanum lasiophyllum</i>	Flannel Bush
<i>Swainsona formosa</i> *	Sturt desert Pea*
<i>Tecticornia auriculata</i>	-
<i>Teucrium racemosum</i>	Grey Germander

SCIENTIFIC NAME	COMMON NAME
Ground Cover	
<i>Acacia adoxa</i> var. <i>subglabra</i> Pedley	-
<i>Acacia gregorii</i>	
<i>Canavalia rosea</i>	Coastal Canavalia Coastal Jack bean
<i>Diplopeltis stuartii</i>	Desert pepperflower
<i>Enchylaena tomentosa</i>	Barrier Saltbush
<i>Indigofera boviparda</i>	-
<i>Ipomoea costata</i>	Desert Yam
<i>Ipomoea muellerii</i>	Poison Morning Glory
<i>Ipomoea pes-caprae</i> subsp. <i>brasiliensis</i>	Prostrate
<i>Myoporum parvifolium</i>	Creeping Boobialla
<i>Polymeria ambigua</i>	Morning Glory
<i>Ptilotus appendiculatus</i>	-
<i>Ptilotus arthrolasius</i>	-
<i>Ptilotus axillaris</i>	Matt Mulla Mulla
<i>Swainsona formosa</i>	Sturt's Desert Pea
<i>Tribulus hirsutus</i>	Desert Pea

Grasses	
<i>Cyperus vaginatus</i>	Stiff leaf sedge
<i>Cymbopogon ambiguus</i>	Native Scented Lemon Grass
<i>Spinifex longifolius</i>	Beach spinifex
<i>Themeda triandra</i>	Kangaroo Grass
<i>Triodia epactia</i>	-
<i>Triodia intermedia</i>	Lobed Spinifex
<i>Triodia pungens</i>	Soft spinifex, gummy spinifex
<i>Triodia schinzii</i>	Feathertop spinifex
<i>Triodia epactia</i> & <i>Triodia secunda</i>	Soft Spinifex

3.0 DESIGN GUIDELINES

3.4 LANDSCAPE & PLANTING

3.4.2 RECOMMENDED PLANT LIST

Street Trees



Hills Weeping Fig (exotic)



Pride of Bolivia, Rosewood (exotic)



Indian Beech (exotic)



Desert Kurrajong (native)



Ghost Gum (native)



Coolibah, Black Heart Gum (native)



Desert Bloodwood (native)



Wingnut Tree, Native Almond (native)

Shade Trees



Yellow Poinciana (native)



Broad leaved Paperbark (native)



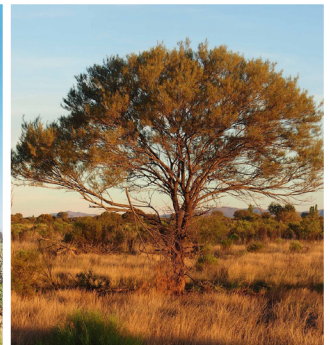
River Gum (native)



Silver Paperbark (native)



Native Desert Walnut (native)



Mulga (native)



Brittle Bloodwood (native)



Desert Bloodwood (native)

Shrubs



Curly Black Wattle (native)



Native Hibiscus (native)



Northern Sandalwood (native)



Creeping Boobialla (native)



Silver Cassia (native)



Yellow Flame Grevillea (native)



Pink Mulla Mulla (native)



Green Birdflower Tree (native)

Ground Cover & Grasses



Sturts Desert Pea (native)



Desert Pepperflower (native)



Barrier Saltbush (native)



Desert Yam (native)



Feathertop Spinifex (native)



Native Scented Lemon Grass (native)



Kangaroo Grass (native)



Soft Spinifex (native)

4.0 DEVELOPMENT CHECKLIST

MARK Y (YES) N (NO) OR N/A (NOT APPLICABLE) ACCORDING TO WHETHER YOUR PROPOSAL COMPLIES WITH THE ASSOCIATED CHECKLIST ITEMS BELOW. ALTERNATIVELY, IF PROPONENT BELIEVES THE RELEVANT OBJECTIVES NOTED IN THE DESIGN GUIDELINES CAN BE MET IN AN ALTERNATIVE WAY, MARK THE P (PERFORMANCE) COLUMN.

	Y	N	N/A	P	COMMENTS
3.1 PUBLIC INTERFACE					
3.1.1 CAR PARK INTEGRATION					
1. Parking is to be located to the rear of the lot.					
2. The upper level of decked parking structures must be shaded by a roof or shade structure.					
3. Decked parking structures shall also be screened on the outside of the building.					
4. A maximum of one vehicle entry is permitted per lot, where the lot has up to 2 street frontages. Where a lot has 3 or more street frontages, a maximum of two vehicle entries are permitted.					
5. Where car parking is provided at grade and is not covered by a roof, trees must be provided in the ratio of at least one (1) for every four (4)-car bays-rounded up to the nearest whole tree where necessary. These trees must have the chance to grow up to 500lt in place.					
6. Each tree planted within car parking areas requires a 9sqm infiltration zone.					
7. Any public on-street parking removed as part of a development shall be provided on-site with public access or compensated via cash-in-lieu payments.					
8. Large expanses of car parking areas are to be broken-up by vegetation and shade, reducing heat build-up within carparks.					
9. All car parking areas proposed as part of new development shall be supported by CCTV and lighting.					
10. All car parking areas, loading and servicing areas proposed as part of any new development are to be well lit.					
11. For Boulevard Streets (see Page 5), a mixture of parking can be provided, including at grade within the property boundary, sleeved parking and or decked parking.					
12. For Active Streets (see Page 5), all parking must be sleeved to the rear of buildings. Decked parking is also permitted along Active Streets however it must be also sleeved.					
13. Shade must be provided to areas of walkway within all at grade car parks. Shade trees for car park walkways are not counted as part of the requirement for 1 tree for every 4 parking bays.					
14. For commercial development, where the applicant can demonstrate that sufficient available on-street parking exists during peak demand periods, and that is able to effectively contain any potential parking overflow, the Town can consider a variation to the minimum car parking requirements in accordance with the Town of Port Hedland Local Planning Scheme No. 7.					
3.1.2 SHADE					
1. Shade must be provided to all pedestrian paths, seating , within private land and/or where interfaced with the public realm.					
2. Continuous shade must be provided to the building façade during hours of the day where UV rating is 3 or above.					
3. Trees planted in the public realm must be installed as per the Local Government Guidelines for Subdivisional Development, Cl 6.3.4.1 - Trees in Paved Areas.					
4. For Commercial and Mixed Used development along Active Streets, awnings must be provided.					
5. Awnings must be designed with regard to the existing street lighting and trees installed within the road reserve.					
6. A minimum awning width of 3.0m, and an awning height of 2.8m for all commercial tenancies is required.					

	Y	N	N/A	P	COMMENTS
7. The awning width may be reduced up to 2m to accommodate for a 1.2m awning setback to existing street infrastructure (light poles and street trees). However it is recommended that a 3m awning width is maintained in all instances and rather the ground floor be setback (up to 3m) to allow for the 1.2m setback to infrastructure (see 3.2.6 Setbacks & Fences).					
8. For Commercial and Mixed Use development along Boulevard Streets, shade must be provided adjacent to the property boundary, either in the form of shade trees, awnings or stand alone shade structures.					
9. Ground floor setbacks to be in accordance with Map 3 Town Centre Shades and Setbacks Plan.					
3.1.3 LIGHTING					
1. All outdoor, car park and security lighting is to be directed downwards with no light spill above the horizontal plane.					
2. All public and private areas are to be provided with adequate lighting in accordance with Safer Places by Design – CPTED Design Guidelines.					
3. External light fixtures must be robust, vandal resistant and complementary to the design character of the affected building and open space.					
3.1.4 WALKABILITY					
1. Provide formalised priority pedestrian crossings across vehicular and cycle routes.					
2. The design of publicly accessible footpaths and walkways within private property (Boulevard Streets) are to have priority over vehicle crossovers and driveways.					
3.1.5 SAFETY & SURVEILLANCE					
1. Passive surveillance and physical security measures must be provided to all interfaces between private spaces (buildings, private open spaces) and public spaces (pedestrian access ways, public open spaces, primary streets and laneways).					
2. All development applications are to incorporate CPTED elements in accordance with WAPC Safer Places by Design – CPTED Design Guidelines.					
3.1.6 MATERIALITY					
Hardscape					
1. Paving must be robust, high quality, easily maintained and integrated into the overall character of the development.					
2. Paving abutting buildings must have substantial shading by eaves, awnings, trees or landscaping.					
Softscape					
1. For pedestrian paths, walkways and passive recreation areas, landscaping must be provided.					
2. Areas of lawn cover must be confined to specific usable areas only and properly irrigated.					
3. Where gravel mulch or loose aggregates are used for publicly accessible planting areas, it must be bound by an additive resin so it cannot be used as a projectile.					
4. All planting areas must be mulched to a minimum depth of 50mm for gravel and 100mm for organic mulch.					
5. Crackerdust is not permitted to be used as garden mulch, or in any communal area. Feature aggregates such as stabilised decorative quartz are possible alternatives.					
6. Vegetation must be located to maintain clear view-lines between activity areas in buildings and open spaces and parking lots.					
7. Landscape areas should not provide areas of concealment or entrapment.					

4.0 DEVELOPMENT CHECKLIST

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	Y	N	N/A	P	COMMENTS
3.1.7 TEMPORARY STRUCTURES					
1. Temporary structures are to utilise local materials and source construction to a local manufacturer (where possible).					
2. Building service infrastructure (e.g. air condition units) shall be screened from view of the street (where possible).					
3. Shade, lighting and seating must be provided to support the installation of temporary structures.					
3.2 BUILT FORM DESIGN					
3.2.1 BUILDING FACADES					
1. All Active Streets are to be framed by activated ground floor facades (shops, cafes, residential front yards etc) for at least 80% of the lot boundary.					
2. Where a lot has multiple frontages to Active Streets, streets are to be framed by activated ground floor facades (shops, cafes, residential front yards etc.) for at least 60% of the lot boundary.					
3. Blank walls are not permitted to any street frontage, except for rear lanes.					
4. Blank walls are permitted to rear private parking areas, however they must include entries and openings to ensure passive surveillance opportunities.					
5. Elevations must be articulated with colours and textures to differentiate between units and tenancies to break down long facades.					
6. All windows require shading devices such as screens, eaves and/or awnings.					
7. Tenant Advertising Signage is subject to Local Planning Policy 02 (LPP/02) - Advertising Signs.					
8. Full length window advertising signage is not permitted within the Town Centre, as it must allow for natural surveillance to the street. A maximum of 25% of the total window area can be covered by signage and not interrupt natural line of sight.					
9. All street facing facades must have at least one major opening to a habitable room or outdoor living area.					
10. Security grills or shutters (if installed) must be integrated into the building façade and be visually permeable to not reduce natural surveillance.					
3.2.2 BUILDING CORNERS					
1. Blank walls to corner frontages are not permitted.					
2. Buildings on corners must address both street frontages, particularly through openings, balconies or other building articulation techniques.					
3. Corner buildings must be given strong architectural expression and exhibit a greater level of design.					
3.2.3 ROOF FORMS					
1. Rainwater runoff from the roof requires careful civil and landscape design to redirect runoff away from the building and to meet the on-site retention requirements.					
2. Roof colours must have a solar absorptance rating less than 0.5, to reduce heat gain.					
3. Roof mounted air-con condensers are recommended to be under-cover/shaded to protect them from the weather and to maximise their efficiency and life.					
4. All roof and podium terraces must include structural shade elements, particularly in higher density housing development where private outdoor spaces are limited.					

	Y	N	N/A	P	COMMENTS
5. Use roof forms to identify individual units within a block of attached buildings. This will assist in breaking down the horizontal scale of long facades.					
3.2.4 MATERIALS					
1. Materials must be chosen for their durability, robustness and appreciation of the environmental conditions of South Hedland and its location within a cyclone Region D location.					
2. Colours must be selected to reflect the local environment/landscape and reduce heat absorption.					
3. Facades and roofs of buildings that face the street must not use highly reflective materials.					
3.2.5 BUILDING ENTRANCES					
1. All building entrances shall be well lit at night for identity and safety and incorporate universal access.					
2. Coordinate the location of building entries with features of the external environment, including crosswalks, traffic signs, footpath amenities and street tree planting.					
3. Building entries must be designed as integral and identifiable elements of the building facade and must be clearly visible from roadways and footpaths.					
4. Individual entries from the footpath must be provided to all ground level residential and commercial tenancies addressing the street.					
5. Separate entries must be provided for vehicles and pedestrians, and for different types of uses in a building.					
6. Buildings must have pedestrian entries from rear car parking areas in addition to multiple street frontage entries.					
7. All entries must be provided with shelter, using built shade or shade trees.					
3.2.6 SETBACKS & FENCES					
1. Ground to third floor portions of Commercial, Mixed Use and Residential buildings that abut an Active Street must be setback 0-3m.					
2. Ground to third floor portions of Commercial and Mixed Use and Residential buildings that abut a Boulevard Street do not require a minimum setback.					
3. The ground floor setbacks to a maximum of 3m along Active Streets must meet the awning requirements (3.1.2 Shade) when accommodating existing street trees, light poles and other infrastructure.					
4. Façade design includes: <ul style="list-style-type: none"> scaling, articulation, materiality and detailing at lower levels that reflect the scale, character and function of the public realm rhythm and visual interest achieved by a combination of building articulation, the composition of different elements and changes in texture, material and colour. 					
5. For residential buildings along Active Streets, ground floor setbacks of 3m are permissible to accommodate front yards, courtyards and softscape areas which are visually open to and part of the street.					
6. Front yards and ground floor courtyards with access to the public realm shall include shade planting and softscape.					
7. All fencing which includes pedestrian access and abuts public open space (street, footpath or laneway), must be maximum 1.2m high and 50% visually permeable and provide secure access from the street.					

4.0 DEVELOPMENT CHECKLIST

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	Y	N	N/A	P	COMMENTS		
8. Where pedestrian access must be denied to private property, private communal open spaces, or commercial properties for security measures, visually permeable fencing is to be used to a maximum 2.1m high. This fencing is not to provide footholds or other climbing aids.							
9. Cyclone fencing, razor wire and 'panel' fencing (Colorbond or fibre cement) must not be used within the Town Centre precinct.							
3.2.7 ADAPTABILITY							
1. For mix-use or commercial developments, the street facing building must have a ground floor-to-ceiling height of 4.2m. Buildings not facing the street ground floor to first floor to be a minimum of 3.2m.							
2. Upper levels floor-to-ceiling measurements must be a minimum of 2.7m for all buildings.							
3.2.8 BUILDING SERVICES							
1. All building services (fire boosters, transformers etc.) are to be to integrated into the building and concealed from the public realm.							
2. Air conditioning units must be screened if located on balconies, so that they are concealed from the public realm.							
3. All air conditioning condenser units must be contained on the property and utilise noise control and visual concealment measures to minimise impacts (centralised plant rooms, screens).							
4. All piped and wired services, and meters must be contained on the property and concealed from public view.							
5. All service enclosures and screening treatments must be designed as an integral part of the overall development with landscape treatment of surrounding area.							
6. Provision must be considered for the collection of waste on-site, including waste storage and area for collection vehicle turning.							
7. Additional space within the site must be provided for the collection of bulk-waste on council specified days.							
8. All refuse storage areas must be screened from public view from primary and secondary streets.							
9. A waste management plan shall be submitted at Development Approval to the Town of Port Hedland. This shall be developed by a qualified sustainability or waste consultant.							
10. There must be opportunity for outdoor drying facility for all residential units.							
11. All development must submit a construction management plan which includes dust management, street tree protection, footpath impact, location of site machinery and materials.							
3.2.9 BICYCLE FACILITIES							
1. Private development shall provide bicycle parking and end-of-trip facilities to serve Town Centre residents, employees and visitors.							
2. Residential land uses are to comply with the bicycle parking requirements of the relevant Residential Design Codes.							
3. Bicycle parking must be provided as per:							
<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Commercial</td> <td>1 space per 400sqm gross floor area (GFA), with a minimum of 4 spaces per development.</td> </tr> </table>	Commercial	1 space per 400sqm gross floor area (GFA), with a minimum of 4 spaces per development.					
Commercial	1 space per 400sqm gross floor area (GFA), with a minimum of 4 spaces per development.						
4. Developments are to demonstrate how alternative transport modes have been encouraged, primarily through the provision of End-of-trip facilities such as bike racks, showers and lockers, as per:							

		Y	N	N/A	P	COMMENTS
Showers	One shower following the first five (5) long-term parking spaces, plus an additional shower for each four (4) bicycle parking spaces thereafter.					
Change Rooms/ Lockers	One change room or direct access to a communal change room per shower. Change Rooms are to include lockers.					
5.	If multiple commercial tenancies share bike bays, end of trip facilities must be communally accessible.					
6.	Private bicycle parking spaces for commercial tenants are to be located in a secure, well-lit location on the ground floor and away from pedestrian traffic.					
7.	Public bicycle parking spaces or storage enclosures are to be located in close proximity to key cycle routes and identified EOT facilities (where possible).					
8.	Publicly accessible bicycle parking to be available at all Civic and Cultural buildings.					
3.2.10 CULTURAL & CIVIC BUILDINGS						
1.	All cultural and civic buildings are to be well-lit at night and capable of being used for after-hours community or social events.					
2.	It must be demonstrated that multi-functional spaces within cultural and civic spaces contribute to the identity, arts and culture of South Hedland.					
3.	Ground floor to ceiling height shall be a minimum of 3.2m to provide generous floor space and height.					

3.3 ENVIRONMENTAL DESIGN

3.3.1 WATER MANAGEMENT

1.	Stormwater drainage infrastructure to be provided in accordance with the Town's "Local Planning Policy 11 - Stormwater Management and supporting Guidelines".					
2.	Stormwater disposal to be in accordance with the approved Structure Plan to ensure adequate retention on site, disposal from any basement parking area and connection to local/district stormwater system.					
3.	Any water recycling approaches should be developed and implemented in accordance with Stormwater Management Manual of Western Australia.					

3.4 LANDSCAPE & PLANTING

3.4.1 BIODIVERSITY & WATERING

1.	It is recommended that 80% of all planting be selected from the 3.4.2 Recommended Plant List.					
2.	The pruning of large shade trees adjacent to the public realm is not to be done without consent of the Town's horticulturists. Emergency pruning or pruning for cyclone preparation does not require consent.					
3.	Shade trees that are supplied and installed by the developer/landowner within the property boundary and adjacent to the public realm in accordance with the approved landscape plan, must be maintained by the landowner, developer or strata body for the duration of development and replaced if damaged.					

