Newman Town Centre Style Guide and Design Guidelines







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Introduction

Newman is located in the Pilbara region in Western Australia's North West. It was established in 1968 as a company town and is now the largest town and administrative centre of the Shire of East Pilbara (SoEP), located 1200km north of Perth and 450km south-east of Port Hedland. At a sub-regional level, it is the main urban centre serving the East Pilbara area.

The Pilbara region is recognised internationally for its rich iron ore deposits with many such mines located near to Newman. Under the State Government's Pilbara Cities Vision the Region will have two cities; Karratha City and Port Hedland City, supported by the Newman sub-regional centre. Like many resource centres in Australia, Newman must compete to attract and retain a skilled workforce. For Newman to compete successfully, it must build on its comparative advantage, and offer a place to live, work and invest that is of a world standard. The Region also boasts a number of natural attractions, including the Karijini National Park to the west and the Rudall River National Park to the east.

Newman is connected to Perth and coastal towns including Karratha and Port Hedland by the Great Northern Highway. It is also serviced by a domestic airport located 15km south of the town, which handled over 300,000 passengers for the 2011/12 financial year.

Background

Revitalisation of the Newman Town Centre is a priority for SoEP as it currently falls short of the community's expectations and compounds the 'Fly In Fly Out' worker situation. The Shire of East Pilbara, with funding made available through Royalties for Regions and the State Government's Pilbara Cities initiative has embarked on an important process to transform the Newman Town Centre by implementing actions identified by the Newman Revitalisation Plan project.

One such action is to prepare a local planning framework that is capable of delivering a town centre built form for Newman that reflects its intrinsic qualities and complements the natural environment, whilst being vibrant, dynamic, diverse and functional. The preparation and adoption of design guidelines within the town centre is an important pivotal cog in the local planning framework which aims to facilitate the community aspirations and expectations and to drive growth and the success of Newman as a regional economic and social community hub accommodating a permanent population of 15,000.

Planning Process for Delivering the Vision for the Newman Town Centre



Design and Application Process



Objective

The Shire of East Pilbara has set out to develop best-practice building design guidelines for the Newman Town Centre (NTC) which embraces and will deliver feasible and sustainable built form development outcomes consistent with Main Street, Climate Responsive and Environmentally Sensitive Design (ESD) principles.

Council is intent on providing a design vernacular which is relevant to the place and climactic conditions. This will include the implementation of higher standards of design controls and establishing a clear process for design development.

Statutory Planning Context

The SoEP Town Planning Scheme (TPS) currently does not have provision for structure plans to be recognised. Until such time that the TPS is amended and relevant clauses implemented, this document will be incorporated as a local planning policy. Once the TPS has been amended, Part 3 – Design Guidelines and Part 4 Detailed Area Plan will be incorporated into the Newman Town Centre Structure Plan to provide additional statutory weight in the assessment of Development Applications.

How to use this document

The document is divided into four parts (Style Guide, Climate Response, Design Guidelines and Detailed Area Plan (DAP)). The first two parts provide examples of the requirements for the design development process and ways to create localised design responses. The second two parts are intended as the statutory clauses which developers are bound to adhere to. It is intended that Council have the flexibility to work with developers to refine the designs to meet the intent of Parts 1 & 2 and the objectives of Part 3. The standards of Part 3 may be modified in some circumstances, at the absolute discretion of Council, should an alternative means which satisfies the objectives be identified. Development Applications are required to comply with the Detailed Area Plan. Where a Development Application diverges from the DAP, the DAP must be amended and endorsed by Council prior to approval of the Development Application.

Design and approval process

Council has high aspirations for the built form outcomes within the NTC however it is acknowledged that developers may have alternative means to achieving a similar high quality outcome. Therefore applications will need to demonstrate that the process outlined in the chart to the left has been complied with and satisfied.



Newman Town Centre Design Guidelines



Introduction

The aim of the Newman Town Centre Style Guide is to establish a language and desired urban design character which will develop a consistent theme of elements to reinforce this distinct character. This Style Guide will provide Council and developers with a tool to guide development towards the delivery of high quality built form outcomes, materials and colours pallet.

The Style Guide draws reference from the surrounding natural and resource industry landscape in addition to the Pilbara vernacular.

The intent and design of the document is to create a practical and accessible guide which is less about restricting urban design outcomes and more about promoting diversity and reinforcing character.

The Style Guide distinguishes three language types which influence the 'Newman style'; landscape, vernacular and resource industry. The document also identifies a material palette and landscape appropriate to the town centre.

The styles identified in the document are not exhaustive and proposed development designs should interpret the guide. Where there is a divergence from the Style Guide, a similar process in influence identification should be undertaken by the proponent to justify the divergence and give Council the means to assess the design.

Part 1 Style Guide

Development Context - Town Centre



Pilbara Landscape Context Hills -Landform dominant, big foreground Scrub -Horizon dominant, big sky

Large scale

Townscape Context Community and sport Pilbara Landscape Context

Low & broad scale

Townscape Context Residential

Pilbara Landscape Context River and gorge-Enclosed space Vegetation canopy

Dasis, Intense activity

Townscape Context Town centre

Pilbara Landscape Context Scrub - Horizon dominant, big sky

Low and broad scale

Townscape Context Residential

Pilbara Landscape Context Ridge- Broad landform feature

Large scale

Townscape Context Schools, Multi residential

Language Type 1 - Landscape Influence_Context Response

reference

- Kinge



- Earthtones, reds and oxides
- · Engraved surfaces
- Cuts and crevices
- Curvilinear form
- · Water and tree canopy refuge in the shade
 - Walls and landscape incisions, cuts and
 Small town kitsch scars

Walls from stone found nearby

Walls merge into landscape

Small openings

rounds

- · Predominance of horizontals
- Marks left by agriculture
- · Straw bale and rammed earth alterna-
- · Compatible materials blend into surtive construction
 - · Horizontal lines and scars

- · Canyons, cliff walls
- · Rich colours
- · Refuge and shade within gorge be- · Interpretation
- tween walls · Horizontal striations and layering

Historic Landscape Form & Art Lines & Objects

- Cultural references
- Sympathetic landscape form
- · Series of verticals in line
- · Terraces and shaping of the land
 - Lines and scars

lorras



- · Use of corten steel sheet and other oxidated metals eg. copper & bronze or bronze annodised aluminium
- · Openings like gaps between rocks
- Use of local stone
- · Building form mimics canyon
- Reds and oxides drawn from landscape

- Walls & Sympathetic Objects
- · Using parallel walls for shade and to define route
- · Openings like gaps between rocks
- · Use of rammed earth on ground plane
- · Emphasis of horizontal

Language Type 2 - Vernacular Influence_Context Observation



Use of Local Stone

- Local stone with flush mortar joints
- Local stone with tuck pointed joints
- Articulated corners
- Vertically proportioned openings
- Expressed structure on open gable
- Articulated window surround

Pitched Roof with Lean-to

- Gable ends with lean-to
- Monopitch with lean-to cantilever
 Ventilation cowls to roofspace
- Vertically proportioned openings
- Expressed structure on open gable
- corrugated iron on horizontal

Lean-to Verandah

- wrap around verandah
- lean-to verandah
- Raised-up verandah overlooking street.
- Stender posts
- Corrugated iron on horizontal
 - · Expressed water tanks



Use of Local Stone

- e of Eocar Stoffe
- Local stone with tuck pointed joints
- Articulated corners
- Vertically proportioned openings
- Expressed structure on open gable
- Shaded windows
- Articulated window surround

Pitched Roof with Lean-to

- Gable ends with lean-to
- Ventilation cowls to roofspace
- Vertically proportioned openings
- corrugated iron on horizontal
- Occassional curved roof form
- Expressed water tanks

Lean-to Verandah

- wrap around verandah
- lean-to verandah
- Slender posts
- Overhanging roof with deep eaves
- Occassional curved roof form
- Vertical shading

Language Type 1 - Landscape Influence_Context Response



Landscape Mimicry & Metaphor Walls and Incisions

- Curvilinear form
- Reds and oxides drawn from landscape
 "Cave-like" entrance
- · Forms mimic boulders
- · Entrance as cut, crevice or tear in surface
- Incisions in landscape
- · Shaded passage between walls and beneath "boulder"
- · Planted roofs

- Lines & Sympathetic Objects
- · Horizontals, parallel walls and lines in the landscape
- Framed views
- · Walls extend into and merge with landscape
- · Deep shading eaves and shadow



Landscape Mimicry & Metaphor Walls and Incisions

- Use of copper: bronze, corten, oxides.
 Walls provide refuge and shade.
 - · Wedge a sympathtic landscape form
- · Use of rammed earth construction

· Small or stender openings

rust etc.

Lines & Sympathetic Objects

- · Framed and directed views
- · Mimicry or referencing of gaps between rocks
- · Rammed earth walls and small openings.

Language Type 1 - Landscape Influence_Key Components



Language Type 2 - Vernacular Influence_Context Response



Use of Local Stone

- · Stone as mass plinth and walls
- · Base or podium for structure above
- · Flush joints or rustication
- Vertically proportioned openings

Pitched Roof with Lean-to

- · Monopitch overhangs pavilion and · wrap around verandah shades glass
- · Glass clerestory beneath deep over- · Raised-up verandah overlooking street hang
- · Diffuse light permitted through slatted · Deep overhanging roofs and verandahs eaves.
- Ventilation louvres and shading
- · Curved roof geometry on gable end with clerestory

Verandah

- lean-to verandah
- Slender posts

Use of Local Stone

- · Stone as mass plinth and walls
- Base or podium for structure above Gabion walls or dry-stacked interpreta-
- tion
- Small openings
- Steel edge details

Pitched Roof with Lean-to

- · Gable ends with lean-to
- Ventilation cowls to roofspace
- Vertically proportioned openings
- corrugated iron on horizontal
- Occassional curved roof form
- · Expressed water tanks · Clerestory glazing
- Shaded openings

 Expressed steel construction Articulated dry construction

Detail

- Detail replaces ornament.
- Overhanging roof with deep eaves
- Occassional curved roof form
- · Shading
- Corrugated sheet on horizontal.

STME planth abre 10015 450284 detral repa mannent cost perstilent ion

Language Type 2 - Vernacular Influence_Key Components





- dahs
 - Verandah shades street edge
 - Use of clerestory day-lighting

- round gutters projecting articulated surround open barrel 444 roof curved roof form flaps for shade and + ventilated roof steel sections ventilation empressed Space stone plinth with light lind-month steel pot barrel roof and shaded verandah using derston stretch canvas / tellon derestory. (courd for rentilation derestory shadow recess for shale . ventilation suspended verandal box' fournes Stone dimmeny shadow edge of == expressed as steel section -20,914.05 corrugations on horizontal Express eros bracing detail replaces omament stone filled Express retion water baskets tanko multiple overlapping roofs Pitched Roof with Lean-to Detail Stone as mass - plinth and walls Round galvanised gutters Expressed steel construction Stone chimney expressed as mass Ventilation cowls to roofspace Articulated dry construction · Steel sections expressed bird mouth Gabion walls or dry-stacked interpreta-٠ Detail replaces ornament corners Overhanging roof with deep eaves Small openings & articulated windo
 Occassional curved roof form Use of shadow gaps Expressed water tanks Projecting barrel roof
 - Clerestory glazing

Steel edge details

- Louvres for shade and ventilation.
- Expressed cross bracing and structure
- Corrugated sheet on horizontal.
- Multiple overlapping roofs.
- Use of stretch canvas/teflon shading







Difface light through shade structures to mimic the campy.

Use of Local Stone

- Stone as mass plinth and walls
- Base or podium for structure above
- Dry Stack stonework
- Small openings & steel edge details



10 24711

detail replaces meaning

m brigesta

stul section

corrections





derestory shadow recess



barrel coop and clivistory





mompitely with overhaus and lean-to

- **Overlapping & Curved Roof**
- Multiple overlapping roof · Glass clerestory beneath deep over-
- hang for daylighting & ventilation Full height vertical openings
- Ventilation louvres and shading

overhang

steed framing repeats

- · Open gable ends and projecting roof
- Occassional curved roof form · Expressed water tanks

corners

 Louvres for shade and ventilation Expressed structure

Round galvanised gutters

· Ventilation cowls to roofspace

· Steel sections expressed, bird mouth

Verandah

tanko

- · Verandah shades walkway on street
- edge Frayed edge permits diffuse light.
- · Slender posts and expressed framing elements
- · Raised-up verandah/terrace overlooking street
- Deep overhanging roofs and verandahs

Detail

 Expressed steel construction Articulated dry construction

Imyed

dillant

licht

edes lot

- · Detail replaces ornament
- · Overhanging roof with deep eaves
- Use of shadow gaps
- · Projecting barrel roof
- Corrugated sheet on horizontal.
- · Multiple overlapping roofs

Language Type 3 - Resource Industrial Influence_Context Response

A THE A

Lepitition, panels

> any record Frans

1- hoy Than



- · Rust metal frames and parts
- Expressed cross bracing
- · Curved roof form · Corrugated iron sheet
- Engineering Structures
- Expressed chimneys and pipes etc.
 - Exposed services and steel frames
 - Expressed truss girders
 - · Tensile structure girders and tension rods
 - · Containers

Equipment and Structure

- · Cantilevers and tensile structure



- Truss girders
- Containers

- Technology and Detail Rust metal sections
 - Exposed cross bracing
 - Oxide metal sheets expressed seam

amel proseti

Hall same

Industrial forms

Engineering Structures

· Expressed raised panel joints and structure

- Ventilation cowls to roofspace
- Chimneys

640000 PLB

Expressed truss girders



SVA MERTER

Equipment and Structure

- Cantilevers and tensile structures
- Truss girders
- Framing
- Expressed steel sections and panels

Language Type 3 - Resource Industrial Influence_Context Response



Technology & Detail - Shading Industrial structures - factories Expressed structure

- Vertical louvres technology of shad Suspended boxes inspired by gantry ing expressed
- · Shading battens on exposed frame

- · Exposed tensile structures
- · Exposed I-beam and expressed steel sections
- · "Warehouse" interpreted
- Framing expressed

and factory hall

Exposed steel sections

Exposed structure and services

structures

Sculptural ventilation cowls

Shade fabric louvres



SHAT

panels

- structure · Suspended "boxes" of building prograthme
- · Big section roof sheeting for cantilever
- Expressed truss girders
- · Expressed louvres and shading structures

fromming in

- Expressed portal frames

Language Type 3 - Resource Industrial Influence_Context Response





Suspended boxes inspired by gantry

Framing & portal frame expressed
Exposed structure & services

sections

· Exposed I-beam & expressed steel

- Vertical louvres technology of shading expressed
- · Shading battens on exposed frame



- · Local stone tuck or flush pointed
- Local stone dry stacked
- Local stone gabion baskets
- · Gravel pathways, driveways & courtyards · Perforated corrugated sheet · Reconstituted stone kerbs, benches, sills. Round galvanised steel gutters lintols. bollards, thresholds, ledges, cap-+ Expressed steel profiles
 - ping stones etc.
- · Corrugated iron on horizontal
- · Expressed raised seam & shadow gap
 - Polycarbonate translucent sheeting
- - · Expressed bird-mouth corner posts
 - · Large industrial sheeting sections
 - · Corrugations on curve

- · Rammed earth construction
- · Straw-bale construction
- In-situ aff-shutter concrete
- · Precast concrete panels
- Exposed structural steel sections, bracing and girders
- · Copper, bronze and oxidated metals
- Raised seam corten sheet, exposed
 Galvanised steel components ex Timber or reconstituted timber battens structure
- · Folded seam shadow joint between · Perforated & expanded sheet metals corten panels Lasercut stenciled letters for signage

pressed

- · Perforated metals
- · Rust sheet metal and steel plate [3Cr12]
- Earth tone terracotta cladding systems Galvanised steel grille ٠
 - on exposed galvanised steel structure
 - · Fibre cement louvres & cladding
 - Use of tensile fabric shade structures

Landscape to Public Realm



Carrey + Shede planting dominant Planting for clear corculation d to webitective Swall related activity Flexible Spaces for event

Town Centre Landscape Context

- Trees dominant.
- Shade and protection
- Pedestrian prioritized
- Local and exotic plant selections.

Interaction with public realm

- Visually permeable
- Attractive presentation
- Urban character
 - Activated

Space for Activity

- Functional furniture
- Adaptable Space
- Create protected areas of shade
- Clear circulation



Tree selection for

- Canopy
- Shade and soft dappled light
- Seasonal flowening
- Creation of comfortable micro-climate

Planting selection

- Low to maintain circulation sight lines
- Robust
- Civic scale with mass planting
- Reduce reflected heat from ground
- Turf primarily for active areas.

Planting selection for protected micro climates

- Verdant and attractive
- Colour and texture contrasts
- Form suitable for courtyard activity



Part 2 Climate Response



1. Adaptation to climate

1.1 Preamble notes

The Shire of East Pilbara (SoEP) has an aspiration to achieve the highest standards of water and energy efficiency in response to the climatic conditions. The application of suitable climate responses from the start of building design processes may avoid the need to include more expensive or sub optimal rectification measures to achieve the statutory building requirements.

This guide is designed to include a broad range of strategies, techniques and technologies that all need to work together to ensure sustainable comfortable development. The guide provides a primer for techniques and strategies to be applied in design that will assist the applicant ensure that the proposed development will achieve the relevant building regulatory requirements, such as section J in the BCA, for the building licence approval process.

1.2 Climate context

Newman's climate has the typical 2 main seasons that are experienced throughout most of northern Australia, with the relatively brief intersession transition compared to the southern regions. Rainfall can occur at any time of the year and is highly variable and unreliable in seasonal distribution. Typically the most significant events are associated with summer tropical low pressure systems, often from ex tropical cyclones, in the hotter months.

The relatively short cooler season from mid May to early September typically has mean maximum temperatures above 20° C and average minimum temperatures below 10°C. Under these conditions some passive solar heating is desirable in combination with well insulated internal thermal mass. Access to warm air through ventilation is reliable for most afternoons.

The hot season from late October until mid March has maximum average temperatures over 35°C and minimum average temperatures over 20°C. From December until early March non mechanical cooling is difficult, reduction of internal heat load by shading and insulation is essential for more cost effective thermal comfort. During less extreme heat conditions passive night time cooling is possible. Evaporative based cooling techniques have potential due to the low relative humidity, although typical domestic evaporative air-conditioners will not be suitable for day time cooling in hottest weather (similar to southern regions during heat waves).

Newman Town Centre Design Guidelines

1.3 Town Centre Context

Growing Within its Means

The Newman Town Centre will develop into a more fully integrated service, shopping and social area. The centre will accommodate a greater density and diversity of activities in a more efficient and much more attractive setting, and allow for the demands from population growth. As the centre grows, the need to respond to the energy, water and environmental limitations will need to be amplified.

Climate Response = High Amenity

In responding to the climactic factors of Newman, a by-product can be a substantial uplift in the amenity of the place. The factors which can have this dual benefit include:

- Shade trees to reduce the heat island effect from large areas of building and pavement, including species with higher evapo-transpiration rates for further cooling effect;
- Pedestrian priority, the town centre will accommodate more comfortable pedestrian activity within and connected to the rest of the town
- Canopies for the most active areas to for more shade and for casual social and alfresco uses; and
- More footpaths that are attractive, with better alignments for logical routes of travel and more comfortable to use due to the shade trees and canopies

In addition taller, buildings in the proposed urban format will create opportunities for protected outdoor spaces such as courtyards to provide extended hours of comfortable outdoor use when suitable design strategies are employed.





2. Strategies

2.1 Adaptability to climate

| Issue | Strategy |
|---|--|
| Consider potential climate variation and weather patterns | Adopt robust building design using appropriate |
| • Hotter | technology for local servicing and maintenance. |
| • Wetter and Dryer | |
| • More frequent significant events | |
| Significant events stronger/ more extreme | |
| | Exceed minimum standards for structural integrity and thermal efficiency. |
| | Investigate compatible design strategies used in cyclone regions and more humid hot climates. |
| | Allow more free-board for inundation events;- to protect vulnerable infrastructure such as electronics and many interior finishes. |
| | Consider emergency preparation; such as for a severe tropical low or cyclone that is achievable by occupants rather than relying on skilled personnel (for example; temporary removal of sail shades and access to windows for applying protection). |

2.2. Efficient Low resource use for building and lifecycle

| Issue | Strategy |
|---|---|
| Consumption and reliance on finite energy and construction resources like fossil fuels will be more | Avoid high embodied energy material where there are suitable alternative available, including |
| expensive in the future due to their scarcity. Furthermore the current power generation is nearing capacity and will | • Efficient structural design to reduce materials use |
| require innovative solutions to avoid major infrastrucutre | Different materials or construction techniques |
| costs to enable new development. | Re used, recycled and recyclable materials |
| | Low waste construction methods |
| | Adaptable building design to allow future changes of use |
| | Design a spatially efficient building that can be flexible to accommodate more activity using less resources. |
| Life time resource consumption from buildings are more significant than initial construction | Specify energy efficient appliances for thermal and mechanical requirements. |
| | Explore opportunities for future retrofitting of energy efficient technologies. |





2.3 Appropriate technology

| Issue | Strategy |
|---|--|
| Availability of technology | Many climate adaptability strategies require new technologies and proprietary systems. |
| | • Preference universal or standardised systems as these are more likely to remain serviceable. |
| | • Investigate the availability for parts or specialist technicians that will be readily available at short notice. |
| | • Ensure that the basic and regular maintenance and operation is achievable by non specialist technicians. |
| Application of technology The simple solutions are often the best because the end user understands how to optimise the system. The most | Review the use of specialist marginal techniques and technologies as these are more likely to be compromised in implementation. |
| successful type of innovation or adoption of technology is when the ideas are understood by everyone including building occupant. | Any technology or system is only as good as its implementation and use. When adopting new techniques allow for the required training and follow up performance reviews, for both construction and occupation. |
| Adaptability for new technologies | As appliances become available from advances in technology, retrofitting is easier with;- |
| | Logical and accessible services distribution |
| | • Rooms adaptable to new servicing distribution systems |
| | For example retrofitting cool water distribution systems from Tri Generation plants for air conditioning. |

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Newman Town Centre Design Guidelines

3. Example guidelines

In addition to the assessable items included in the NTCDG, the following demonstrate how techniques can be applied to design that address some practicalities for integrating climate responsive design.

3.1 Radiant heat

| Issue | Design strategy | Potential solutions |
|---|---|--|
| High thermal mass materials re- radiate more heat to outdoor areas after heat load is reduced, such as late afternoon and early night time. | Low thermal mass for exterior areas | Wherever possible use low thermal mass material adjacent to usable exterior areas, particularly where the materials are not able to be shaded. |
| Red dust is especially visually intrusive and unattractive on the light coloured special thermally efficient roofing paints and finishes which offer worthwhile improvements for energy efficiency and reduction of urban heat island effects. | Use heat reflective roof finishes where it is not visible from the public realm. | Screen / align finishes subject to obvious discolouration from street viewing. |
| Reducing radiant heat load on ceilings | Roof space ventilation | Consider historic double roof systems or the more contemporary ventilated roof space between under roof insulation and roof cladding. Use visually low impact ridge vents and screen unattractive cowls/ flues with screens complementing the facade shading. |
| Radiant heat to covered areas | Insulation to external solid roofs | Insulate and line all solid outdoor covered areas. |



Figure 3.1 b



3.2 Ventilation

| Issue | Design Strategy | Potential solutions |
|--|--|--|
| Seasonal ventilation options are required to optimise the different seasonal conditions | Allow adaptable cross ventilation opportunities. | can significantly improve the cross |
| • Avoiding east wind in summer day time | | ventilation, including low energy consumption night time cooling in the shoulder season. |
| Night time and early morning cooling easterly particularly during lower heat weather | | |
| • Day time ventilation cooler seasons | | |



Figure 3.2 b

3.3 Water efficiency

| Issue | Design Strategy | Potential solutions |
|---|-------------------|--|
| Retrofitting future water re use technology (or from regulation changes) may not suit current waste water plumbing. For example retrofitting future grey water where currently not allowed | to separate waste | Dual pipe waste water streams to where future recycling appliances could be installed. Allow external space for grey water re-use appliances that will not obscure circulation and are screened from the public realm. |



Introduction

The design guidelines form the development assessment controls for the built form of Development Applications within the NTC. The guidelines are divided into objectives and standards with graphical explanations of the standards. Applications are required to adhere to each of the objectives; however, if the applicant can demonstrate an acceptable alternative means to the standard of achieving the objective, Council, at its discretion, may approve an alternative design solution.

These guidelines should be read in conjunction with the other relevant statutory requirements such as the Local Town Planning Scheme and the Building Code of Australia.

The graphics demonstrating the Standards are in no way intended as a defined outcome for built form and are intended as a guide only. Applicants must design their building to respond to the specific conditions of each site.

The design guidelines are written in such a manner that they will be general in nature and respond to each of the precincts. These have been endorsed as a local planning policy in the interim until such time that a structure plan has been adopted.





1. Form and Massing



| 1.1 Enclosure to the street Minimum building heights are defined on the public realm without being imposing to the pedestrian.Minimum building heights are defined on the DAP.The fourth and higher floors are to be setback 6.0m from the front boundary. | Objective | Standard |
|---|--|--|
| | Provide a scale of building form which generates a good sense of enclosure to the public realm without being imposing to the | DAP. The fourth and higher floors are to be setback |

| Basic form | Vertical articulation |
|-----------------------------------|--------------------------|
| | |
| х | \checkmark |
| | |
| X Overly Figure 1.2 repetitive | ✓ Change in shape |

| Objective | Standard |
|--|--|
| 1.2 Building and Roof Form Encourage a high quality and distinct built form which provides interest and an appropriate sense of scale. | Compose façades with an appropriate scale, rhythm and proportion, which respond to the building's use, height and different street frontage conditions, while avoiding an |
| Allow for variety of roof forms and heights, creating interest and diversity, while reinforcing the identity of the town centre. | unconsidered repetition of elements. |

| Objective | Standard |
|--|--|
| 1.3 Fine Grain | Upper floors must emphasise the relationship |
| Larger buildings can present a poor human | to the ground floor tenancy and exhibit a form |
| scale and little interaction with the street. To | of elevation which is different to the form of |
| overcome this, buildings are to exhibit a high | the adjacent ground floor tenancy. Materials |
| degree of 'fine grain' and individuality. | and colours may be common on each. |

| Objective | Standard |
|---|--|
| urban form which promotes an identifiable | In the mixed use precinct, buildings are to span the width of the frontage abutting the public realm to promote a continuity and intensity of urban form. |
| | |

Building height is to be in accordance with the minimum heights specified in the DAP.

Where there is no rear access, vehicle access is permitted provided it is through the building.





Figure 1.4 a




-

| | Standard |
|--|---|
| 1.5 Landmarks Create a series of landmark buildings which identify the entries or key locations to the town centre, a change in urban structure and provide a navigation point. | As designated on the Detailed Area Plan, landmark built form elements are required to the nominated locations. Landmark buildings are to use at least one of the following methods to create a landmark element: Horizontal articulation of the building form from the surrounding building; Vertical articulation of the building form from the surrounding building; and Change in materials to accentuate the element from the surrounding building. |

Change in materials and colours

| Objective | Standard |
|---|---|
| 1.6 Articulation Buildings are to exhibit a high level of articulation in order to provide interest in the streetscape. | Buildings must provide two or more of the following elements spread across the elevation: |
| | • Balconies |
| | Change in height of parapet walls |
| | Horizontal articulation of the façade |
| | Use of architectural elements such as screens and shading devices |
| | Porticos and verandahs |
| | Change in colours and materials |
| | |
| | |
| | |

| Objective | Standard |
|--|---|
| 1.7 SetbacksMinimise setbacks to reduce the need for landscaping in an arid environment and create an urban sense of place reflective of the town centre.Ensure the use of space is functional and efficient. | Buildings within the retail precinct are to be built to boundary adjacent to the public realm. Building setbacks from the public realm within other precincts must be of a sufficient and appropriate size to permit trees to be planted and sustained, with due regard to water limitations. Building setbacks to the boundary with the adjoining lot are to be functional or built to boundary. |











An example way of achieving the minimum plot ratio standard is shown above. In this instance the calculation is $4A + 2B \ge 2C$



- = 4 Storeys of the specified building area
- = 2 Storeys of the specified building area
- = The area of the allotment

| Objective | Standard |
|--|--|
| L8 Site coverage and Intensity Maximise the use of available land and provide an active urban environment which generates vibrancy whilst optimising land uses. | Comply with Detailed Area Plan minimum development requirements. New development within the mixed use precinct must have a minimum plot ratio of 2:1 (except for fast food uses situated facing Newman Drive). New development within the office precinct must have a minimum plot ratio of 2:1. New development in the civic precinct must have a minimum plot ratio of 1:1 (except for education uses). New development in the hospital precinct must have a minimum plot ratio of 1:1. For partial re-development of larger lots a site planning strategy that demonstrates the capability for future development is required. Note: For clarity, Plot Ratio in this instance refers to Building area: lot area. |

Objective

2.1 Flexibility

Over time, buildings often change their function and readapt to market forces however adaption is sometimes inhibited by the form of the building and the practicality of the original architectural design. The long term direction for the NTC is to provide a continuous main street however this will evolve over time. Therefore, all buildings in the Core designated with Active Frontages must be designed with high ceilings to allow for retail type uses to be a viable use in the future.

2.2 Intensity

Town centres need a certain amount of intensity to achieve the desired vibrancy. However the market forces determine that a holistic build out it is often uncommercial to achieve in the first stages of development. This results in many buildings being constructed to a suboptimal intensity and due to their embedded value, they are unable to be replaced until their lifespan is reached. Therefore managing development in a staged process which coordinates developers to achieve minimum standards while allowing for evolution of the building is pivotal to the success of the town centre.

In some instances, there may not be the commercial drivers to achieve the desired intensity of built form. Where this occurs, alternative means to achieve the desired intensity should be negotiated between the developer and the SoEP.

The Newman Town Centre Structure Plan will establish parameters to achieve intensity standards and implementation measures.

Standard

3.5m minimum internal floor to ceiling height for ground floor active edges.

Flexible internal floor layouts with minimal supports to facilitate changes in use over time.

In order to allow an intense form to occur, but not to inhibit future development of a particular allotment, building staging is an acceptable means to delivering desired intensity of the structure plan. This allows developers to respond effectively to the current market but enshrines the future development of the allotment. Two methods for this have been considered:

- Ground Level Build Out this allows the first stage of development to build out the lower levels of the building with the structure being designed to support further development at a later date.
- Frontage Build Out this allows the developer to leave the rear of the allotment to a later date when market forces support further development providing that the front of the lot is fully built out.

These mechanisms can be applied if:

- The governance structure of the body corporate is setup in a way which will allow and encourage future development to occur
- Working Drawings for the ultimate design of the building are lodged with Council
- There is a minimum uptake of half of the dwelling target required
- The building is constructed to structurally support the additional development



Ground Level Build Out



Newman Town Centre Design Guidelines

3. Tieing in adjacent buildings



| Objective | Standard |
|--|--------------------------------------|
| To create an integrated and attractive urban form, buildings must 'tie' into each other seamlessly. This means that edges of different buildings must respond to existing or proposed buildings and abut the adjacent building at build to boundary points. | Small gaps between buildings are not |

Figure 3.1 b

4. Detailing the façade

Objective

Standard

4.1 Frontages

The frontages of buildings, being the façades which interact with the public realm, are the significant vertical elements of the public domain which define the way in which a space reads. They define character of the place and contribute to the overall vibrancy. It is therefore important that façades on key designated frontages, present an appealing streetscape which is inviting, and contributes to the creation of a safe and secure environment.

Façades should respond to Newman's climate.

Note: To determine the location of each frontage type, this section should be read in conjunction with Part 4 (DAP) of this document.

All façades facing the public realm must address the frontage through the use of windows, balconies, entries and awnings.





| Fig | ure | 42 |
|-----|-----|-----|
| FIG | ure | 4.2 |

| Objective | Standard |
|--|--|
| 4.2 Active Frontage Encourage a high quality and distinct frontages in areas which are intended to | Setback: 0.0m |
| be the most vibrant. This should be read in conjunction with Part 4 (DAP) of this document. | Active Frontage (windows and entries): 80% Min and ground floor minimum floor- to-floor height of 3.5m. |
| The built form is to abut the public realm and have a high level of activation to the frontage | Building Entry: Required |
| with windows and entries. Ground floors are to have high internal ceilings to facilitate adaption and flexibility of use. Vehicle access | Vehicle Access: is from side street or lane, where available. |
| is not permitted and should occur elsewhere. This particularly relates to Market Place and the associated squares. | Cafes, bars and restaurants should have fully opening façades to allow for flexibility for the venue to open up or close off to the public |
| Provide defined and visible building entries which face directly on to the street. | realm depending on the weather conditions. |
| Allow for activities at ground floor that spill out onto the public realm creating a vibrant streetscape. | |
| The preferred ground floor land use is Retail or Office. | |

| Objective | Standard |
|---|--|
| 4.3 Semi Active Frontage Semi Active Frontages relate to areas which have a highly urban character but do not support active functions such as entertainment retail. | Setback: 2.0m – 6.0m (for setback buildings, a high quality landscape is required) landscape to form part of DA for assessment. |
| The ground floor can be activated by office or residential activities however the façade must provide entries and many windows to provide a good sense of surveillance. | Active Frontage (windows and entries): 35% Min Building Entry: Permitted |
| The preferred ground floor land use is Civic, Residential, Office | Vehicle Access: Permitted |



| Objective | Standard |
|--|--|
| 4.4 Artistic Frontage Artistic Frontages allow for the façade limitations which occur with multideck carparks and some retail development where there is little scope to achieving a vibrant edge. | Setback: N/A (for setback buildings, a high quality landscape is required) Active Frontage (windows and entries): N/A |
| Artistic Frontages will need to deal with the bland walls to create interest in the form. Façades will comprise of a variety of treatments which are architecturally appealing and are aesthetic at both night and day. | Building Entry: Not Permitted Vehicle Access: Permitted |
| | |

Figure 4.4

| Objective | Standard |
|--|--|
| 4.5 Service Frontage | |
| Service Frontage acknowledges that there | Setback to secondary street or laneway: |
| is a requirement for many buildings to have | N/A (for setback buildings, a high quality |
| 'back of house' type activities such as delivery | landscape is required) |
| receiving areas and plant equipment. The | |
| design of the building should consider | Active Frontage: N/A |
| CPTED principles and should provide passive | Puilding Entry Convice Entries only |
| surveillance, unimpeded sightlines to key places/entries. For further information refer to | Building Entry: Service Entries only |
| the Designing Out Crime Planning Guidelines | Vehicle Access: Permitted |
| (WAPC, June 2006). | |
| | |

Objective

Maximise social interaction between building

Encourage a high quality and distinct built form which provides a thoughtful response to achieving cohesive high quality built form reflective of surrounding development.

Buildings should be designed and constructed to be adaptable. Adaptive buildings are designed to meet the changing needs and conditions. Adaptive strategies make renovation or repurposing of space easier, less expensive and less burdensome on the

4.6 Creating Vibrancy Along Key

and public realm at ground level.

Frontages

environment.



Figure 4.5

| Standard | |
|--|---|
| Bars, cafes and restaurants are to provide a flexible frontage through the use of bi-fold, stacking, or operable glazing to encourage street activation when weather conditions permit. Buildings are designed for multiple uses, | Bifold or Stacker type doors |
| utilising dimensions which are common to a variety of functions. | |
| | Cafes, Bars & Restaurants to have indoor/outdoor feeling |
| | Figure 4.6 |
| | |

Newman Town Centre Design Guidelines



| Objective | Standard |
|--|---|
| 4.7 Fenestration Passive or 'natural' surveillance should be maximised through window design. This can be facilitated by windows overlooking public realm. Projection of sun shading devices into the street reserve on upper levels and recessed windows can provide visual depth to the façade whilst and create visual interest. All windows should be shaded from direct sunlight. Shading elements should be moveable to allow more light penetration during cooler periods. | 30% (min) of the façade above the ground floor must be fenestrated. Small windows should be avoided other than to achieve energy ratings. Windows in a plain repetitious arrangement are to be avoided. Windows must be detailed to avoid plain façades through the use of materials and articulated forms such as façade modulation, overhangs or shading devices. Windows are to be screened by eaves, louvers, shields or other architectural elements. Screening is to be arranged to allow for sufficient passive surveillance to the public realm. |

| Objective | Standard |
|--|--|
| 4.8 Entries Entries are to be accentuated to assist with way finding and the visual hierarchy of the building. | Entries are to be accentuated from surrounding built form through the use of: Materials and colours Articulation of architectural details Landmark elements Awnings or pergolas Entries to the ground floor and upper floors are to be located on the active frontage |







| Objective | Standard |
|---|---|
| 4.10 Balconies Balconies are effective means to providing passive surveillance to the public realm. They are to be of a size which will promote their use and engagement of residents with the outside environment. | All the balconies must be constructed within the lot boundary. All development is to have a minimum of one balcony facing the public realm (this may be relaxed for the residential precinct). Balconies must be suitably screened to reduce solar penetration. Permeable materials must be used to allow cross ventilation (subject to BCA Requirements for fire and acoustics. |



| Objective | Standard |
|--|--|
| 4.11 Window Screening All windows and entries overlooking the public realm should allow passive surveillance. | Any window security barriers must be internal, operable, visually permeable when closed and be visually unobtrusive from the |
| Shop front windows and façade s of buildings should display activity and allow views to the public realm. | exterior. |

BANG 8

Figure 4.11

Newman Town Centre Design Guidelines

5. Landscaping



Figure 5.1

Figure 5.2

| Objective | Standard |
|--|--|
| 5.1 Landscape scale, continuity and articulation Achieve appropriate landscape treatments for an active and condensed urban town centre. | Planting selection visible from the public realm will complement species planted in the streetscape works as part of the Newman re- vitalisation Plan. Use urban (rather than suburban) planting design strategies with an emphasis on creating people spaces more than gardens. |
| | It is anticipated that generally planting will be finer or more detailed for non public areas. |

| Objective | Standard |
|--|--|
| 5.2 Shading Mitigate climate extremes with shade planting to open areas, to shade buildings and to create pleasant micro climates. | Introduce appropriate tree selections suitable for urban spaces. Shade and protection from wind will create a different micro-climate compared to open areas. This will allow the growth of amenity species that are less robust in fully open positions, including rapid transpiring species for cooling micro climate effects. Typically for more exposed and hotter positions select appropriately scaled native trees, or robust exotic species. For tree selection in protected positions more lush and tropical species may be included in selection. |

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|---|----|---|----|----|---|
| | | | | | |

Standard

5.3 Radiant Heat

Mitigate radiant heat loads with planting to exposed open space, with shading trees or ground cover planting Ensure that the majority of paving finishes will be shaded. Un-shaded open space will be planted with trees and groundcover planting.

Note; mitigation of radiant heat by using lawn areas needs to be considered with the water efficiency objectives below.

Demonstrate that a minimum of 50% of the un-covered pedestrian paving will be shaded at midday summer by the selected species on maturity or within 10 years of typical growth.

Paths that only access service areas or are only required for emergency fire egress do not need to be shaded.

New street planting in Newman above is at a similar density to the established planting shown below providing 95% shade cover to the path.



See Design Out Crime, Planning Guidelines June 2006

Western Australian Planning Commission Sections 5.1 Natural Surveillance and 5.7 Landscape Link http://www.planning.wa.gov.au/publications/789.asp

| Objective | Standard |
|---|--|
| 5.4 Safety Ensure that landscape treatments do not compromise safety and crime prevention strategies. | Planting will be predominantly lower than 600mm high, or trees with clear stem to more than 2100mm high to canopies, for clear sight lines and surveillance. Use trellis and climbing plants to walls as appropriate to provide vertical greenery and allow for maximum usable/ activated open space. |

The Water Corportation Waterwise web based guides provide an interactive plant selection tool

Click here or follow the links to Waterwise section on home page. http://www.watercorporation.com.au/W/waterwise_index. cfm?uid=0837-2686-2368-6916

Link to plant selection tool for Pilbara. http://www.watercorporation.com.au/w/waterwise_plants_pilbara.cfm

The Department of Agriculture and Food provide guidance on Declared plant species. Click here to see a list and search tool for declared weedy species information or follow thinks to weeds on the home page.

http://www.agric.wa.gov.au/PC_93088.html?s=700803442,Topic=PC_93079

| Objective | 2 | Standard |
|---|-------------------|---|
| 5.5 Water efficiency Water efficient garden desig | gn. | Follow Waterwise® (Water Corporation) landscape design principles to maximise the landscape amenity and water efficiency. |
| Objective | • | Standard |
| 5.6 Water efficiency Ensure environmental s planting selections. | sustainability of | Review plant selection with known and potential weedy species for inland Pilbara location. |

6. Fencing

| Objective | Standard |
|---|---|
| Clearly define public and private open spaces (including communal open space). | Use fencing to define private and Communal open space. All fencing to the public realm will be visually permeable and no more than 1200mm high. Fencing to service areas facing laneways will be visually permeable and may be up to 1800mm high. Open fencing styles with planting behind are encouraged. |

See Design Out Crime, Planning Guidelines June 2006 Western Australian Planning Commission Sections 4.1 Teritorial Reinforcement, 5.1 Natural Surveillance and 5.1 Landscape Link http://www.planning.wa.gov.au/publications/789.asp

7. Vehicle Accommodation & Access



8. Signage

| Objective | Standard |
|--|---|
| Objective | Standard |
| Signage in the Newman Town Centre should balance the need to provide appropriate exposure for businesses whilst not adversely impacting on the amenity of the area. Signage should be functional, complementary to the built form and preserve and enhance the appearance of the Town Centre. Signage should contribute to way finding and identification of buildings and individual businesses. This should be achieved without visual clutter or impacting on the desired character. | Consolidate advertising signs where possible. Integrate signs and building numbers into the overall fabric of development through consistency with the building scale, proportions and detailing. A maximum of one under-awning sign for a residential building and one per commercial or retail tenancy. May not obstruct the passage of or create a hazard for vehicles or pedestrians nor should it conflict with nearby safety, public directional or traffic signs. Other than a service or tourist direction sign, only advertise services or products associated with those available on the lot. Be structurally sound and capable of withstanding typical natural forces. A minimum clearance of 2.7 metres should be maintained above finished pavement level if located below an awning. Roof mounted signs, flashing signs and bunting are not permitted. However, unique signage which may enliven pedestrian space and entertain in keeping with the scale and character of the Town Centre shall be considered on its merits. |



Figure 8.1

Shire of East Pilbara

9. Building Typologies

Adjacent are typical examples of the building typologies by use which are likely to be employed in the Newman Town Centre. These are to be used in the same way the "standards" are applied. They a form based interpretation and not a desired type of archtiecture. They should not be interpreted literally and merely representative of the desired form. It is expected that buildings will have a higher standard of archtiectural appeal in accordance with the style guide principles.





Introduction

The Detailed Area Plan (DAP) has been prepared in response to the Newman Revitalisation Project undertaken by the SoEP and LandCorp which included a Town Centre Master Plan. It is intended that a Structure Plan be prepared for NTC which will test the Town Centre Master Plan and ensure its deliverability.

The primary purpose of the DAP is to facilitate the construction of buildings which promote a built form that reflects the vision of the Master Plan and eventually the adopted Structure Plan. The DAP will also aim to achieve integrated design between buildings, whilst screening unsightly aspects including servicing areas and the rear of properties.

The DAP will need to be amended to reflect the Structure Plan and incorporated into the document to provide greater statutory weight. In the interim, the DAP will be adopted as a local policy by Council.

Administration

Applications for planning approval or subdivision must show compliance with the DAP. The DAP will be used to guide Council in:

(a) making recommendations to the Commission on subdivision applications; and

(b) determining applications for planning approval.

Part 4 Detailed Area Plan



