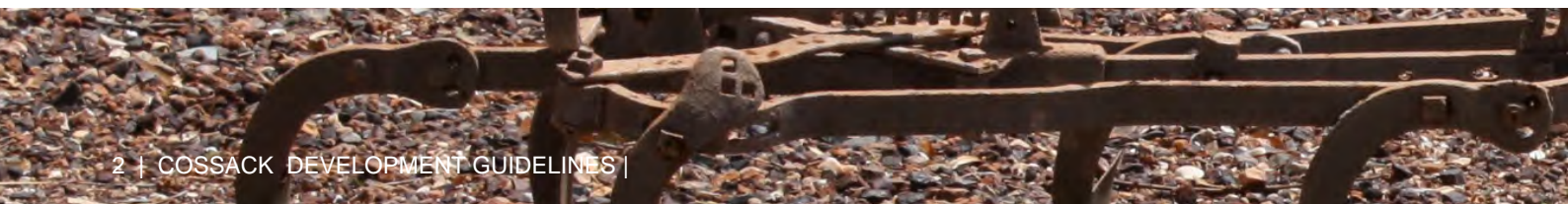


COSSACK DEVELOPMENT GUIDELINES

OCTOBER 2015

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VISION

Cossack is a Pilbara treasure, where the signposts of time guide a reflection of the past, an appreciation of the present and prospect for the future. The development of this secluded hamlet is intended to offer a broad range of tourism experiences which promote and enhance the natural, cultural and recreational values of its unique location, and heritage as a 'Pioneer of the Pilbara'.

A 'place' responsive development approach to the historic town of Cossack will afford an economically balanced, environmentally sensitive and socially rich experience.

The future Cossack is intended to:

- Be recognised for its unique environmental, cultural and recreational values, and the immersive experiences it offers in a remote natural setting
- Showcase the unique Pilbara heritage and natural environment
- Demonstrate an economically sustainable balance through a range of accommodation options
- Stand in contrast to conventional suburban or urban development
- Offer a diverse range of memorable and engaging experiences
- Foster opportunities for engagement with partners in the delivery of tourism, visitor opportunities and education



LANDSCAPE CHARACTER

Cossack is located on a rocky peninsular on the shore of Butchers inlet (the Mouth of the Harding River) and is segregated from the mainland by tidal marshes. Connection to surrounding towns is via causeway through the tidal marshes. The historic town site has a strong sense of isolation, giving it a quality of remoteness despite its relative proximity to surrounding Pilbara towns.

The landscape of the peninsular is diverse and dramatic, with steep rocky outcrops existing alongside undulating sand dunes, flat salt marshes, mangrove covered shorelines and wide beaches. The contrast of the different landscape types heightens the dramatic and picturesque qualities of the peninsular with sudden transitions from flat grassy plains to steep rocky outcrops and then to coastal and marine environments captured in a single view. Throughout these landscape types there is a pervading sense of openness and the wide views that rarely feel impeded. Where views are restricted, it is by topographic rises in well vegetated land forms that give the sense of a continuing natural landscape rather than concealment or enclosure.

Cossack is well vegetated with thick coverage of low spinifex and grasses that give prominence to any features that rise above the ground plane such as small acacia trees, rocky outcrops, ruins or preserved heritage buildings. This dominance of low vegetation including seemingly stunted twisting trees, give a windswept coastal character to Cossack and provide the openness to the views that enhance the feeling of isolation.

The strength of the landscape character of Cossack elicits a strong response from visitors and makes the experience of Cossack a memorable one. Any development in Cossack must be sensitive to this landscape character and not attempt to supplant it, with landscape and built form interventions careful to remain subservient to the landscape character in its current form.



DESIGN GUIDELINE INTENT

The intent of the Cossack Design Guideline is to provide existing and potential property owners with information to assist them and their design professionals in planning 'place' sensitive developments. The Cossack Design Guidelines have been prepared in order to ensure that proposed developments assist in both preserving and promoting the historic character and landscape setting of this nationally valued heritage site.

In addition, the purpose of the guidelines is to explore site sensitive development opportunities for a range of accommodation types to meet the needs of a variety of groups of people.

These guidelines are based on the 1996 Conservation Policy created by the Heritage Council of Western Australia and have been developed in accordance with the principles of the Australia ICOMOS charter for the Conservation of Places of Cultural Significance. The Cossack Conservation Policy applies to the registered Cossack Heritage Precinct the extent of which is demarcated in the precinct plan extract from the conservation policy in Appendix 2.

While guided by the 1996 Conservation Policy the guidelines have made an interpretation of the policies intent with regard to visually sensitivity and the creation of visually sensitive zones. These guidelines do not reproduce the zones of visual sensitivity as described in the conservation policy therefore direct reference to the policy is encouraged.

The guidelines facilitate two potential approaches to tenure at Cossack, an Individualised approach that maintains the existing lot configuration with individual ownership of each lot, or a Collectivised approach which would allow grouped dwelling options and commercial tourism operators.

The aim is to provide appropriate development models to attract future funding opportunities to ensure a sustainable future for Cossack, a living heritage.



DESIGN OBJECTIVES

- The design objectives reflect the overall intention of the guidelines in promoting site-sensitive development that acknowledges the following attributes:
 - arid landscape character
 - topography
 - heritage elements
 - sparse built form
 - views
- Appropriate design responses are required to retain and strengthen the themes that give the locality and its setting its unique character, being:
 - A coastal hamlet
 - A sense of history
 - An arid landscape setting
 - A local scale
- Limit impact on the sensitive landscape setting by minimising ground disturbance and limiting activities near accommodation.
- Adapt and reuse existing heritage buildings in Cossack for a diverse range of opportunities including, for example, restaurant/bar, event spaces, galleries, interpretive spaces, and visitors' centre.
- Undertake alterations and improvements to the town centre buildings that minimise impacts on the heritage and environmental values of Cossack.
- Explore a range of accommodation options to meet the needs of a variety of groups of people, to help support other activities and increase the length of stay for visitors.
- Potential accommodation types to be considered include:
 - High quality eco-tourist accommodation
 - Cabins or huts for residents or visitors (including families and education groups) involved in recreation programs or leisure activities
 - Low-cost tourist accommodation, for recreational and leisure visitors who wish to spend less on accommodation, who may be individuals or groups
 - Camping, including tents, camper trailers and caravans, with good quality facilities and services



DEVELOPMENT AREAS

Individualised Tenure

The Development Areas define development types based on the principles of visual character, heritage, landform and flooding as described by the Cossack Visioning Study direction (2014).

If individualised tenure of existing lots continue then the following lots (indicated in orange) are considered suitable for short stay settlement as per the Cossack Visioning Study principles and Cossack Design Guidelines: Lots 110-115, Lots 128-132, Lots 146-153 and Lots 174-176

Existing individualised lots (indicated in yellow) are only considered suitable for short stay informal accommodation i.e. camping trailers, tents and caravans: Lots 168-73, Lots 20-21, Lots 133-138, Lots 116-120, Lots 139-145 and Lots 162-167.



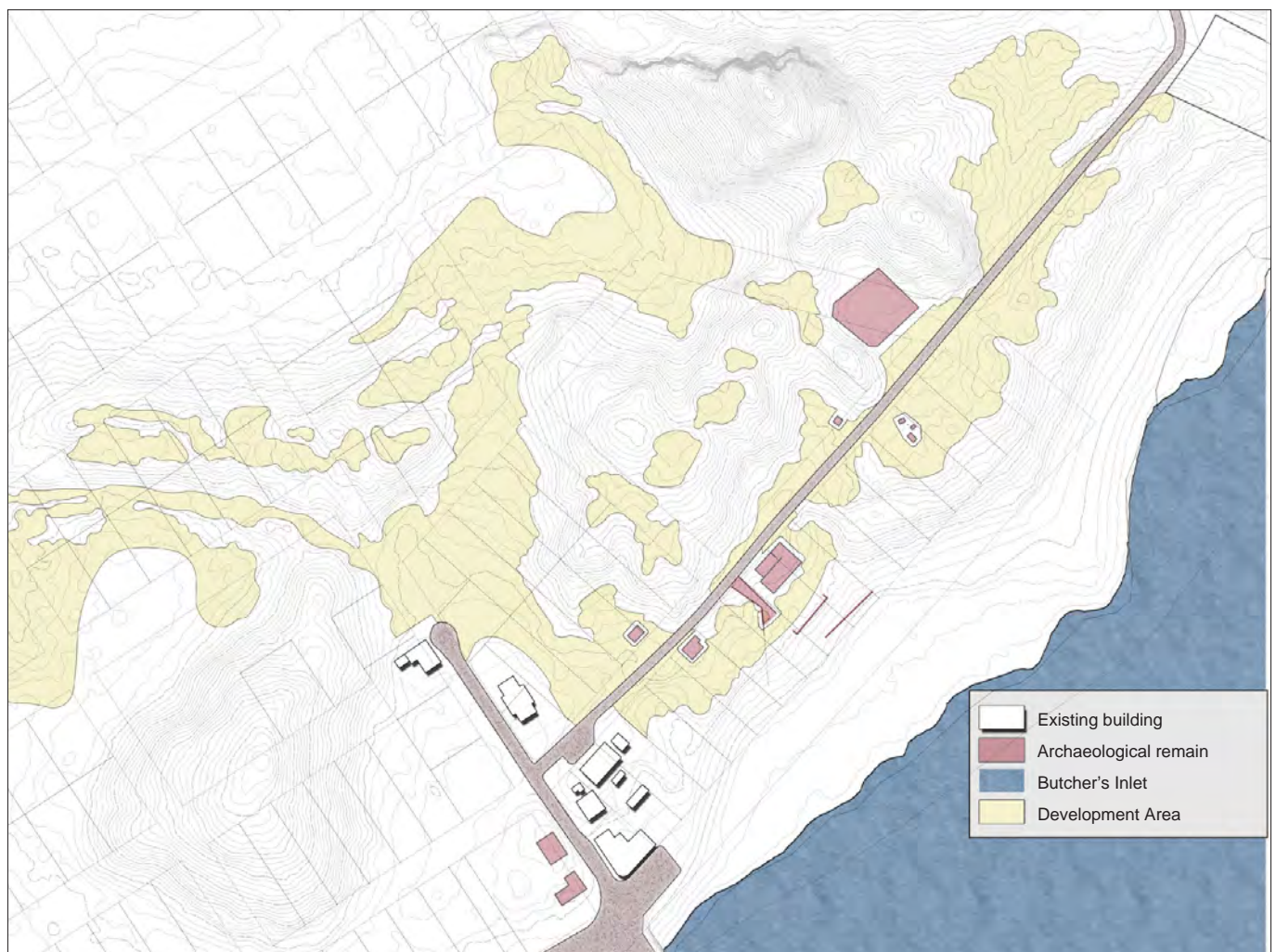
Individualised tenure - Development Area

Collectivised Tenure

The development Area defines the area of land on which development can occur.

If lot amalgamation occurs then the below areas are considered suitable for development. This Development Area is a refinement of the findings from the Cossack Visioning Study and represents land that is:

- Above the 1 in 100 year flood zone
- Less than 10% slope
- At least 4m clear of extant archaeological ruins



Collectivised tenure - Development Area

DEVELOPMENT PROXIMITY TO HERITAGE BUILDINGS

This development proposal takes the position that the ongoing preservation of the existing heritage structures in Cossack will be best achieved through passive activation. By co-locating the proposed development and the existing heritage structures, the history of the place becomes an integral part of the visitors' experience. By sympathetically integrating the new with the existing buildings, the heritage remnants become the civic heart of the new Cossack, rather than isolated museum pieces.

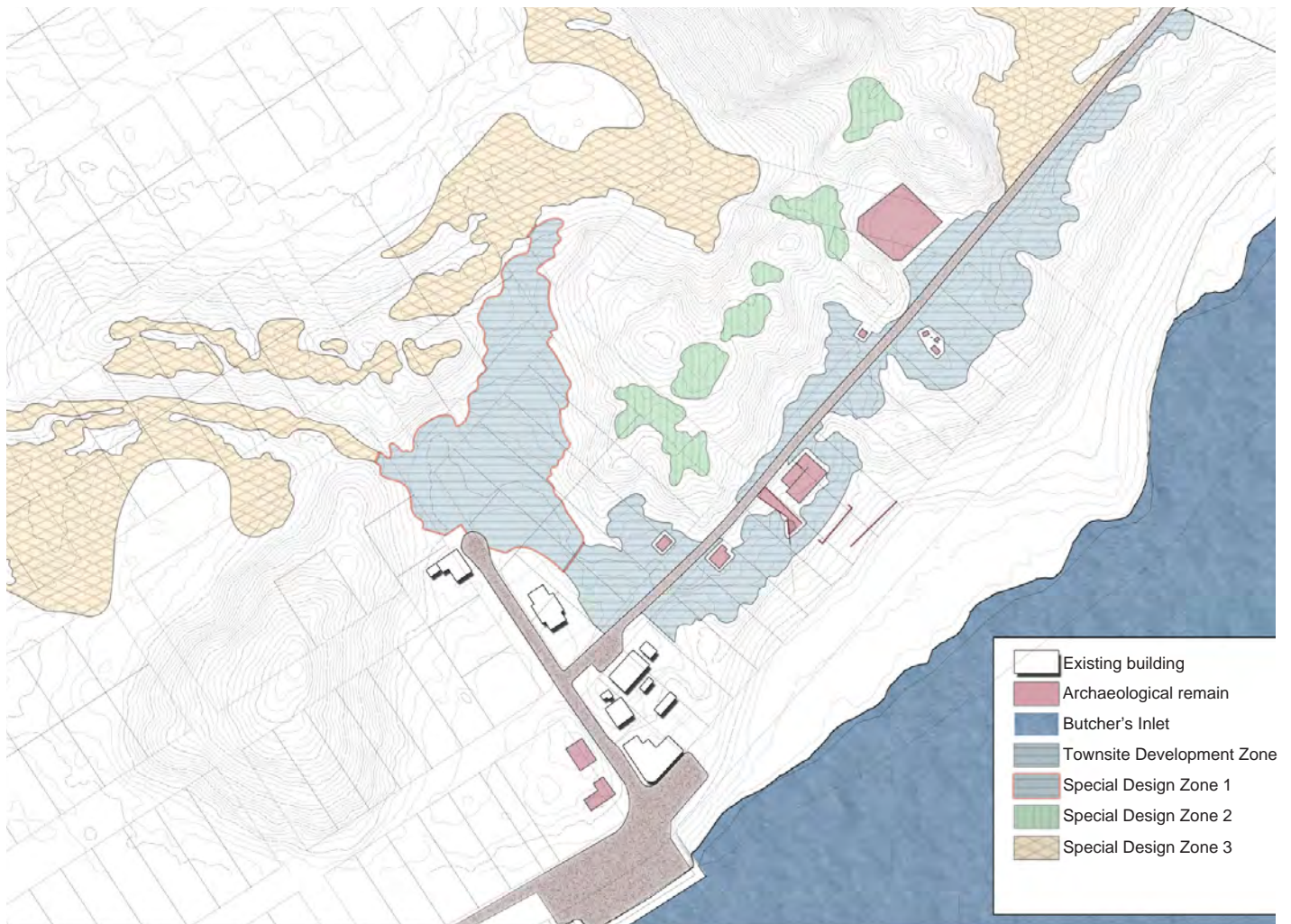
While the existing conservation plan views the heritage structures in the round, granting each view shed equal importance, this proposal prioritises the view from the southwest as this was the entry point and main street of the original settlement. Setback requirements ensure that this view is maintained, while the built form guidelines ensure that the form, bulk and scale of new development will be sympathetic to, but not compete with the heritage structures from other viewpoints.



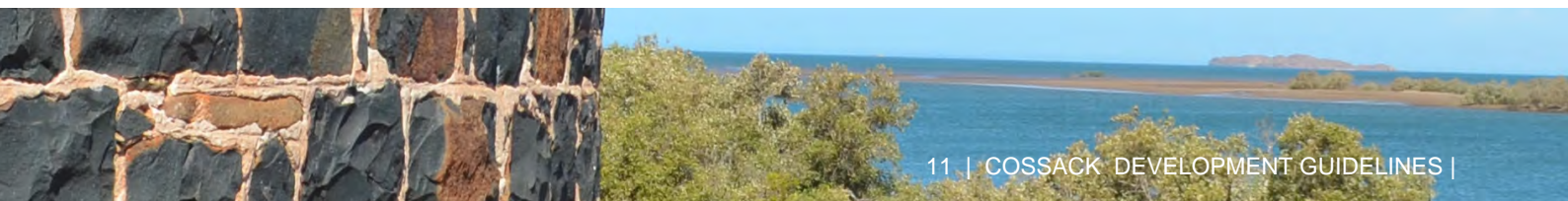
DEVELOPMENT ZONES

Zoning is proposed for the development to define appropriate development options to suit the varied site conditions and to assist in achieving the design goals and hence the vision for Cossack.

The developable land is divided into zones: The Town Site Development Zone and Special Design Zones 1, 2 and 3. The main zone is the Town Site Development Zone and the base guidelines are for this area, with the Special Design Zones having some distinct guidelines to allow a different form of development in these zones.



Development Zones

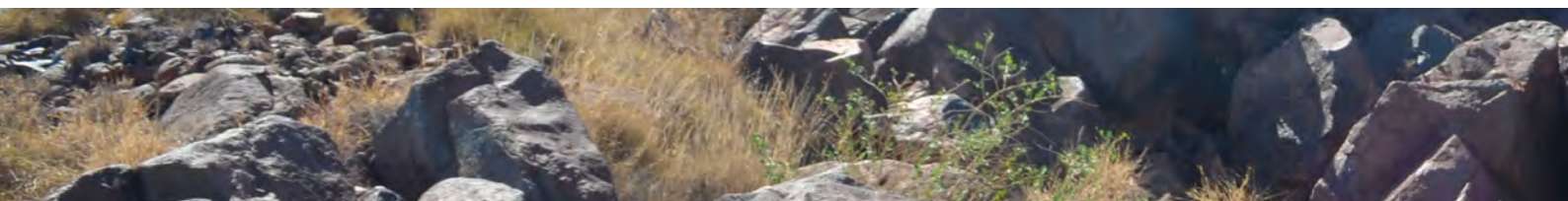


PARKING STRATEGY

A general strategy is proposed where parking associated with any new development is incorporated into the development envelope. Day visitor parking is proposed to be concentrated around the wharf, in front of existing Backpackers accommodation or areas of wide road verge.



Parking Strategy

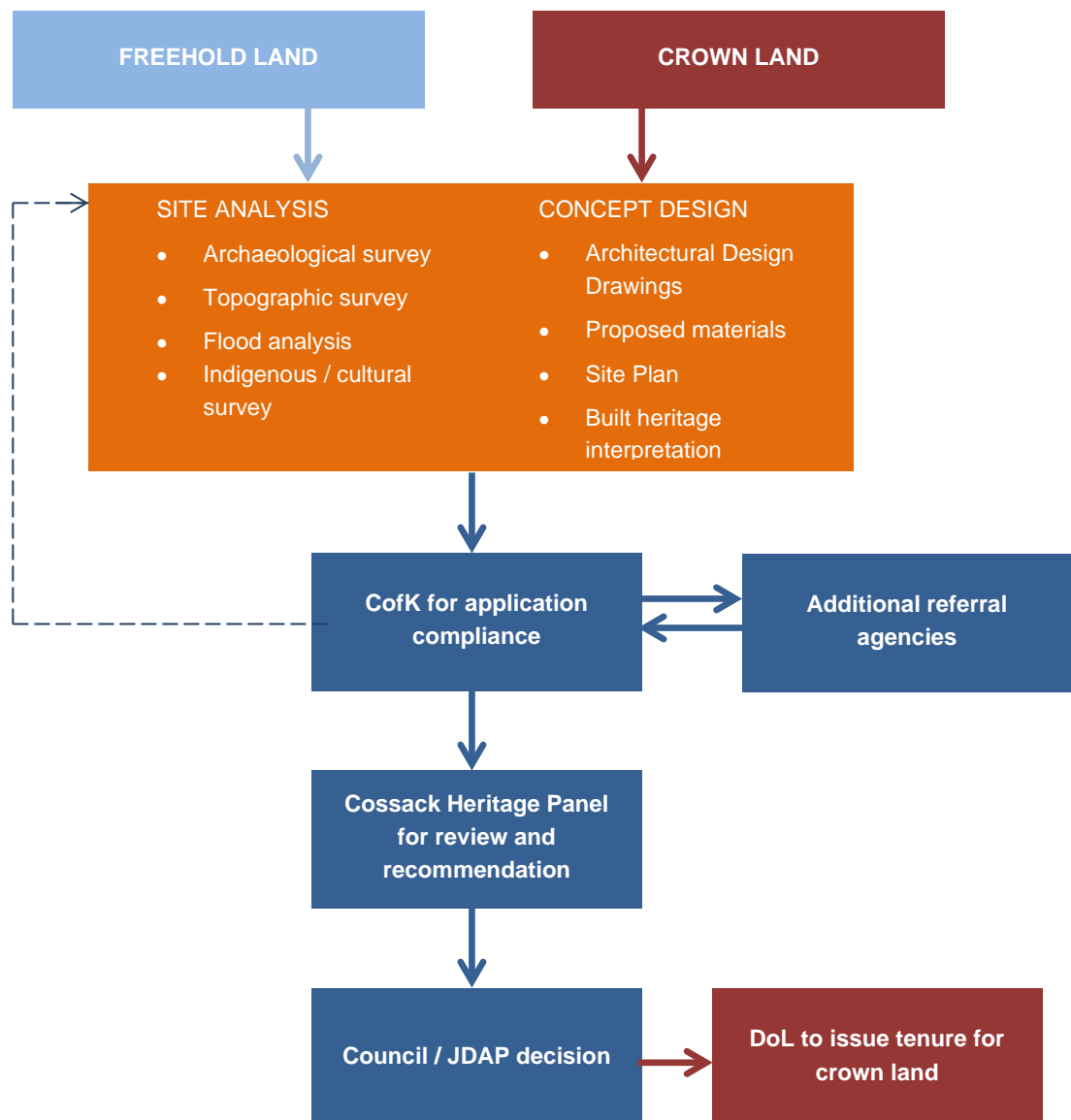


APPROVALS PROCESS

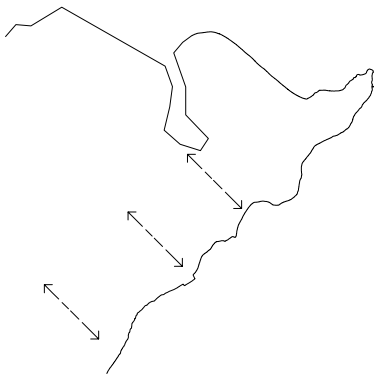
As a condition of purchase, lot re-allocation or existing lot development the owner must obtain design endorsement from the Cossack Heritage Panel and the City of Karratha (CofK).

Lot owners should familiarise themselves with the Cossack Design Guidelines that were developed by the Cossack Advisory Group and the CofK and ensure their concept design adheres to them before submitting their design to the City of Karratha to ensure application compliance. The submission should include concept design drawings, proposed materials and site plan to an adequate level of detail to justify conformity to the design guidelines. A site survey must accompany the design submission, including an archaeological, Indigenous cultural and topographic survey, and a site specific flood analysis.

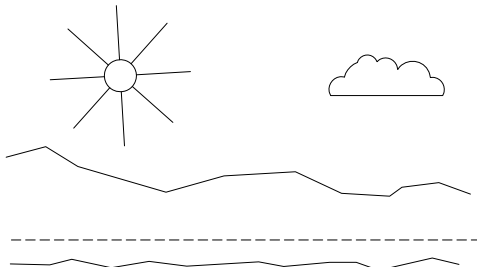
If Crown Land then the application is submitted to the Department of Lands (DoL) who will refer application to the CofK. The application is then reviewed by the Cossack Heritage Panel (CHP) that consists of heritage, architectural, indigenous, planning and design experts. If endorsement is recommended by the CHP, the recommendation is reviewed by the Council prior to a final council decision. If on crown land the endorsed application is submitted to the DoL for an issuing of tenure.



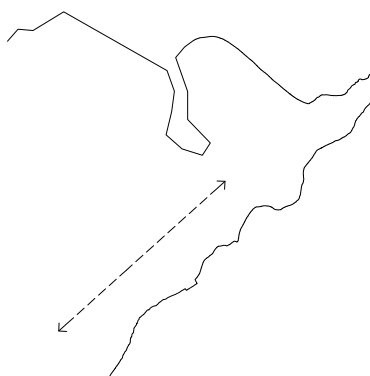
DEVELOPMENT CHARACTER



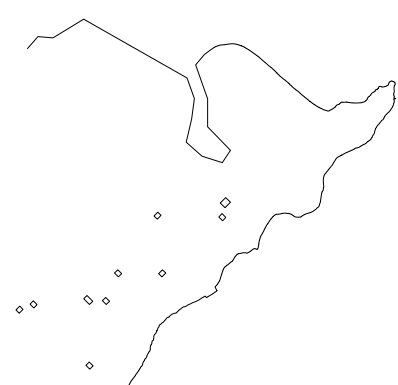
North-west and South-east views



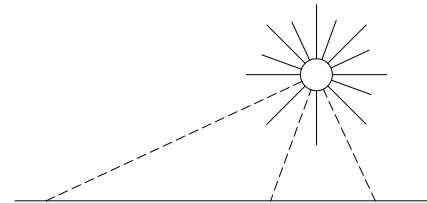
Dramatic landscape, sea, sky, ground



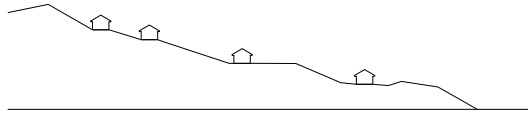
Linear relationship from town centre to Butcher's inlet



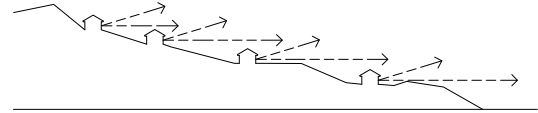
History of lightweight buildings scattered in open setting



High solar radiation



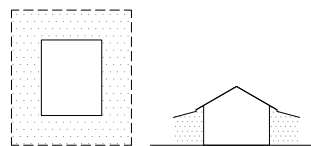
Built form relates to topography minimise fill/excavation



Topography allows for expansive views



Simple and compact plan and volume forms



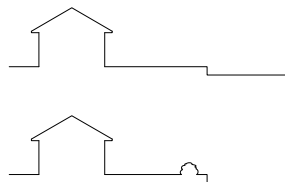
Encourage verandahs and areas of deep shade adjacent to buildings



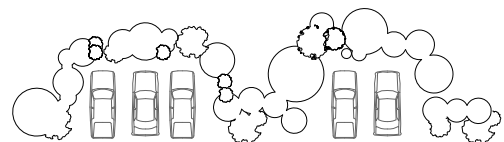
New development should not dominate through scale, colour or materials



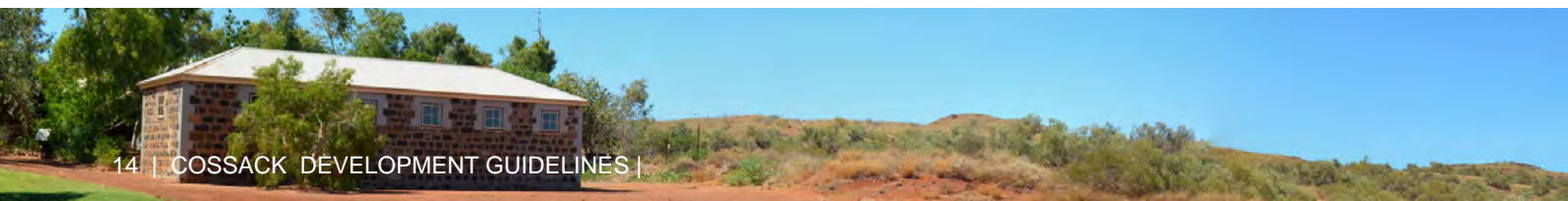
Existing buildings use local materials and colours

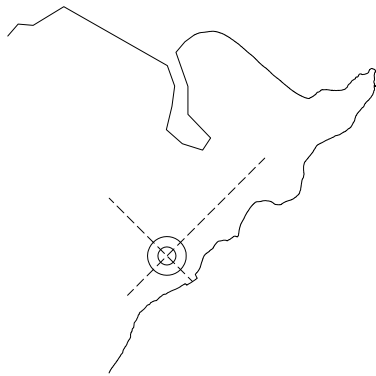


No or low fences, landscaped edges

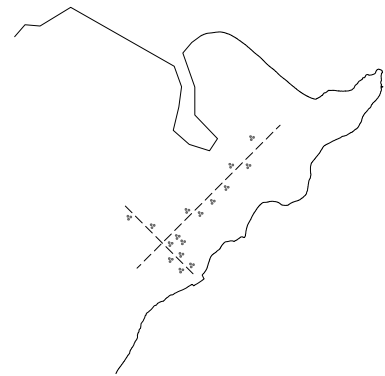


Encourage communality through shared, shaded parking pockets

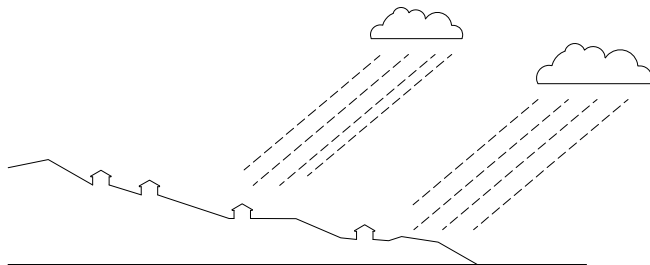




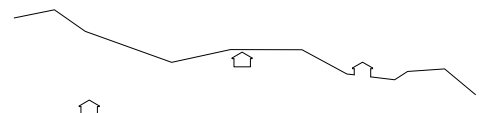
Pearl and Perseverance roads axis
centre the hamlet



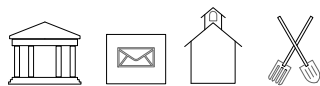
String of remnant archeo-tourism sites



Hamlet exposed to wind and weather



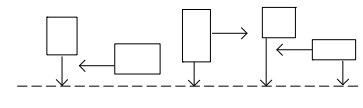
Low site coverage, arid landscape dominant



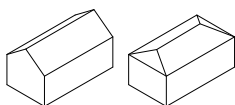
Historic mix of uses



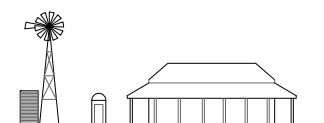
Encourage adaptive reuse of
civic buildings



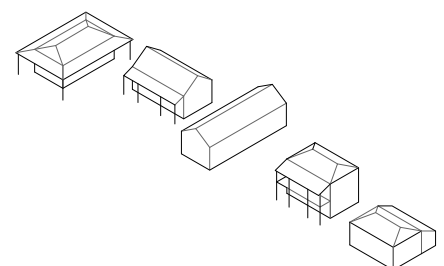
Civic buildings are stand alone with
large, varied setbacks and side and
front addresses



Hip and gable roofs



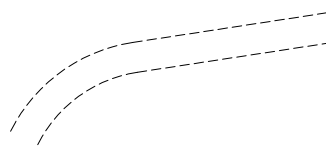
Encourage contemporary interpretation
of local industrial/pastoral built forms



Historical family of simple built form
retained, individual but not identical



Ground surface to be permeable and shared



Generally untreated roads and no footpath



Low scale native vegetation
no formal planting

DESIGN GUIDELINES:

TOWNSITE DEVELOPMENT ZONE

SITING

Building envelope / Site coverage

Design Intent:

The vision for Cossack is that of a low key hamlet in look and feel, with a stronger image and identity as a coastal settlement in the Pilbara rather than a town site. Therefore, it is important to avoid an urban or suburban look and feel in Cossack. This can be achieved by the scale, height and materials of buildings, but also the balance between built form and the existing arid landscape. Cossack is located in a dramatic landscape, where sea, sky and ground are dominant. It has a history of lightweight buildings scattered in an open setting. In order to promote the preferred future character of Cossack, it is important that the landscape character of the place is retained and strengthened.

Mandatory Requirements:

Individual

- Maximum 20% site coverage, including all outbuildings
- No boundary to boundary construction permitted
- Outbuildings must be behind the main building line

Collective

The maximum number of dwellings permitted is:

- Townsite Development Zone: 40 dwellings
- Special Design Zone 1: Refer to Special Design Zone Guideline
- Special Design Zone 2: Refer to Special Design Zone Guideline
- Special Design Zone 3: Refer to Special Design Zone Guideline

Further Guidance:

- Construction on boundaries should be avoided
- Buildings may be skewed in relation to cardinal orientation or roads
- Minimise natural ground disturbance or activity that occurs around accommodation

Dwelling Size

Design Intent:

The aim is to retain Cossack as a small coastal settlement with the landscape and existing heritage buildings being the dominant elements. This will be maintained by ensuring that new development has an appropriate scale and density which does not significantly alter the landscape or compete with the remaining heritage fabric. New development is primarily residential and is to be modest, of similar size or smaller than the existing buildings and spaced in the landscape. Where appropriate buildings should be amalgamated to concentrate the built form and further reduce the impact on the arid landscape.

Mandatory Requirements:

Individual:

- Minimum dwelling size is to be 60m² (fully enclosed covered area)
- Maximum dwelling size is to be 120m² (fully enclosed covered area)

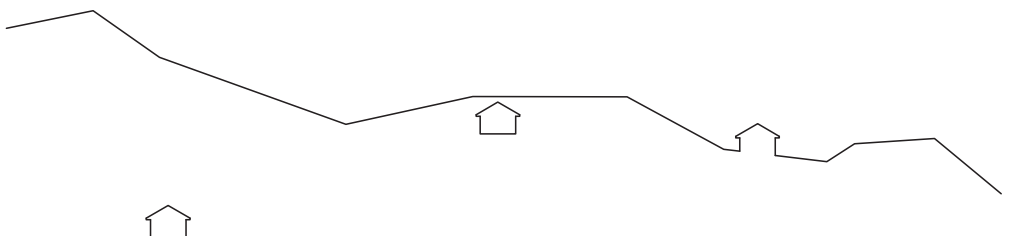
Collective:

- Minimum dwelling size is to be 60m² (fully enclosed covered area)
- Maximum dwelling size is to be 120m² (fully enclosed covered area)
- Maximum number of dwellings to be grouped into a single built form is to be 6.

Further Guidance:

Collective:

- Amalgamation of a number of dwellings within a single built form is encouraged up to a maximum of five dwelling or 600m²



Low site coverage, Landscape dominant over built form



Orientation and Solar Control

Design Intent:

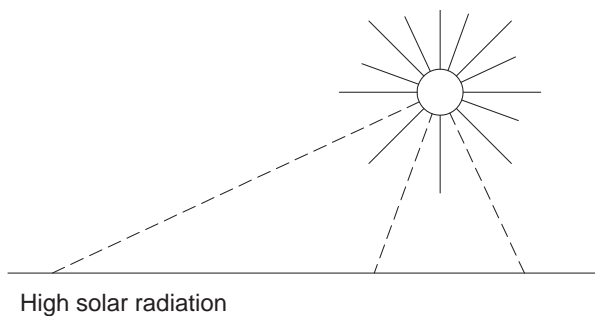
Cossack has generally comfortable winter temperatures and hot summer temperatures. Buildings should be oriented in order to avoid solar heat gain and take advantage of passive systems of heating and particularly cooling in order to save energy running costs and increase the living comfort and enjoyment for occupants.

Mandatory Requirements:

- Any glazed openings larger than 1m² are to be shaded.

Further Guidance:

- Aim to minimise exposure of house walls and outdoor living areas to direct sunlight.
- North and south facing openings are more able to be shaded than those on east and west walls, and so larger openings should occur on the north or south side of buildings.
- Glazing should be minimised on east and west sides of buildings to avoid low level sun.
- Houses may be skewed to alignment of roads in order to optimise solar control and cross ventilation.



Ventilation

Design Intent:

Main living areas and major openings should be designed and located to enable cross ventilation to effectively cool indoor spaces. The most beneficial breezes in Cossack are from the north-east, north-west and west. Buildings openings should be oriented to maximise cross ventilation in order to save energy running costs and increase the living comfort and enjoyment for occupants.

Mandatory Requirements:

- Habitable rooms with two external walls should have an operable opening in each wall.
- Habitable rooms must have, per opening, a minimum openable area of 1m²

Further Guidance:

- Encourage movement of breezes through buildings by use of breezeways and narrow plans. Building designs should make the use of breezeways to enhance air movement through houses.
- Site buildings for exposure to cooling breezes from the north-east to west
- All habitable rooms should be fitted with a ceiling fan.
- Smaller openings on the windward side and larger openings on the leeward side of buildings promote the most effective cross ventilation opportunities.
- Non-glazed ventilation openings are encouraged.



Setbacks

Design Intent:

The pattern and morphology of the historical lightweight buildings of Cossack is one of varied setbacks, informal or askew siting, multiple approaches to buildings and gaps between buildings. The built environment is intended to be realised as informal collections of buildings, sited in a similar way to a pastoral or industrial vernacular; outbuildings that have accumulated over time, with gaps between them, not always lining up, and without distinctive front and rear faces. Varied setbacks will break down the scale of development, provide adequate open space around buildings and encourage a high level of visual permeability through the area.

Mandatory Requirements:

Individual

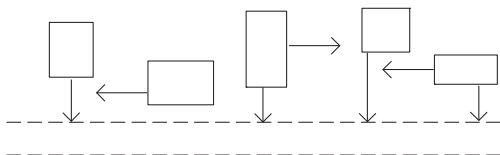
- Setback from primary roads to be minimum 3m, maximum 10m
- One side setback to be minimum 4m
- The remaining side setback to be minimum 1.5m
- Ancillary structures are to at a minimum be in line with the wall of the main dwelling
- Development on Pearl Street must be setback to align with the existing Court House building.
- Corner lots on Pearl Street must treat Pearl Street as the primary road.
- Minimum distance between new development and heritage buildings to be 12m.

Collective

- Setback from primary roads to be minimum 3m, maximum 10m.
- Minimum distance between buildings to be 4m generally and minimum distance between new development and heritage buildings to be 12m.

Further Guidance:

- Setback is to be measured from the roofline
- Varied setbacks are encouraged
- Primary setbacks may be averaged where buildings are skewed



Informality through varied setbacks

Car Parking

Design Intent:

Individual:

It is recognised that cars and boats are a part of north-west life. Undercover parking is important for permanent residences in order to provide weather protection and shade for vehicles in all seasons. It is intended that undercover parking be unobtrusive, open and under the roof line of the main part of the house, so that it reads as part of the house rather than a separate area. This is intended to ensure that there is a coherent character to dwellings and that consideration is given to parking areas early in the design process, so that they do not appear as add-ons or ad hoc development.

Collective:

It is intended that cars do not drive onto sites but are parked adjacent to roads in collectivised parking pockets. By containing cars in such a way, the natural landscape will remain dominant. Parking pockets can be planned so that they do not impede views from dwellings. The bulk and scale of dwellings is minimised if cars are not contained on site. Communitality and a holiday experience is encouraged through shared parking pockets.

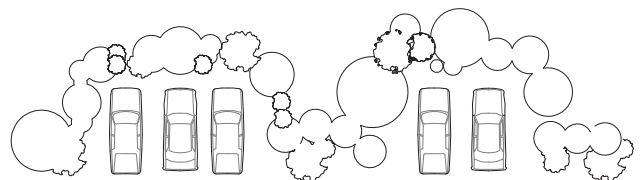
Mandatory Requirements:

Individual:

- Garages and garage doors are not permitted
- Carports must be open on at least three sides and connect to main building.
- Carports should either be incorporated with the main roof cover or may be simple, single pitch lean to structures. They shall not have independent roof geometry.
- Detached carports are not permitted.
- Garden/Tool sheds are not permitted.
- Parking spaces for boats, trailers and caravans should not be located forward of the primary façade of the dwelling.

Collective:

- No carports are permitted
- Car parking is to be limited to collective parking pockets



Encourage communitality through shared parking spaces

and will not be permitted elsewhere.

- Parking pockets are to be located to minimise view disruption from dwellings

Further Guidance:

Individual:

Carport areas adjacent to and under the roof line of houses can also be used for a variety of activities if cars are backed out, and provide ample covered areas of deep shade. Driveway width should be minimised and permeable paving materials are encouraged. Parking spaces for boats, trailers and caravans should not be located forward of the primary facade of the dwelling.

Collective:

Low scale native vegetation and local rocks/boulders may be

Private open space and privacy

Design Intent:

Open space is an important component of residential development. These spaces provide private places for residents and they are used for entertaining, play, relaxation and outdoor activities. It is recognised that in Cossack, there is ample communal open space for recreation and play. Private open space will be most useful if it is a shaded, insect-proof area that is an extension of the internal living area. Activity and disturbance of open space beyond connected or extended internal areas is to be minimised.

Mandatory Requirements:

- Minimum covered external private open space of 18m² to be provided to each dwelling
- The minimum dimension of the covered external private open space is to be 3m
- There shall be a direct relationship between living areas and the covered external private outdoor space.
- The covered external area must be permanently covered with a roof.
- Open space lay down areas that do not have a direct relationship with the dwelling is not permitted
- The external private open space must be insect proof.

Further Guidance:

- Opportunities for outdoor cooking are encouraged
- For the purposes of this provision bedrooms are not considered living areas

Excavation and Fill

Design Intent:

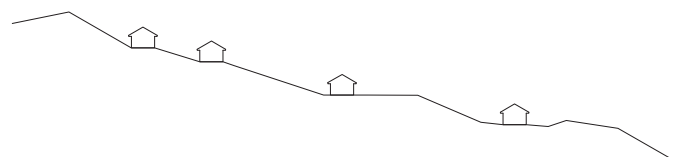
To preserve the natural topography of the site, and to minimise disruption of natural drainage patterns, changes to the natural contours of the land are sought to be minimised.

Mandatory Requirements:

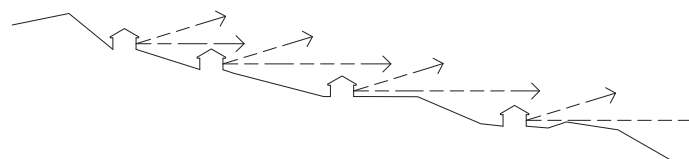
- Excavation and fill is limited to a maximum of 500mm above or below existing ground level over the whole site.
- Retaining walls should be a maximum height of 750mm
- If a building is on stumps, the underfloor perimeter of the building must be enclosed.
- The maximum height of floor level above adjacent natural ground level for any stumped structure is 1m

Further Guidance:

- Design should attempt to build along contours rather than across slopes.
- If cut and fill is required, it should be minimised and be balanced across a building site by appropriate placement and/or stepping of buildings.



Built form relates to topography, minimal excavation / fill



Topography allows for expansive views



ARCHITECTURAL DESIGN

Character

Design Intent:

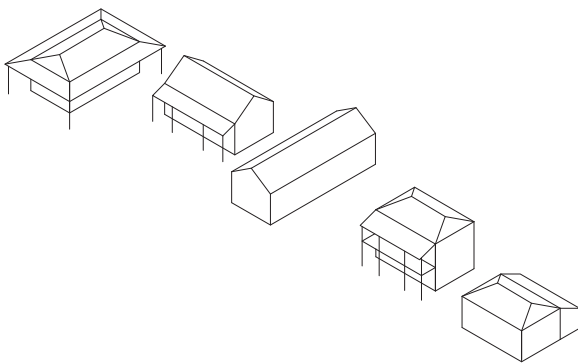
The intended character of Cossack is a low key, low scale coastal settlement with a unified architectural identity through a common language of colour, materials and general building form. Simple building forms should be configured for adequate natural ventilation, daylight and privacy. Volumes should also be simple to minimise bulk. This will ensure that future development of Cossack stands in contrast to conventional suburban or urban development.

Mandatory Requirements:

- Buildings should demonstrate climate responsiveness by adherence to the mandatory requirements of these Design Guidelines.

Further Guidance:

- New buildings should not dominate the existing buildings through scale, colour or materials, complex geometry or roof forms.
- Application of multiple cladding materials is to be avoided.



Historical family of simple built form retained, individual but not identical

Scale

Design Intent:

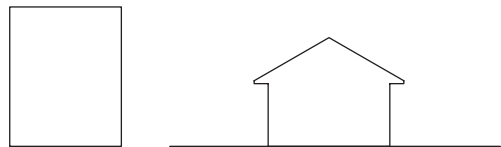
Design of new buildings should consider the scale and form of existing buildings and the landscape setting. The existing civic buildings define the heart of the settlement and should not be dominated through scale by new development. It is important that internal ceiling heights allow for warm air to rise above human level and for ceiling fans to be installed without interference with comfortable occupation.

Mandatory Requirements:

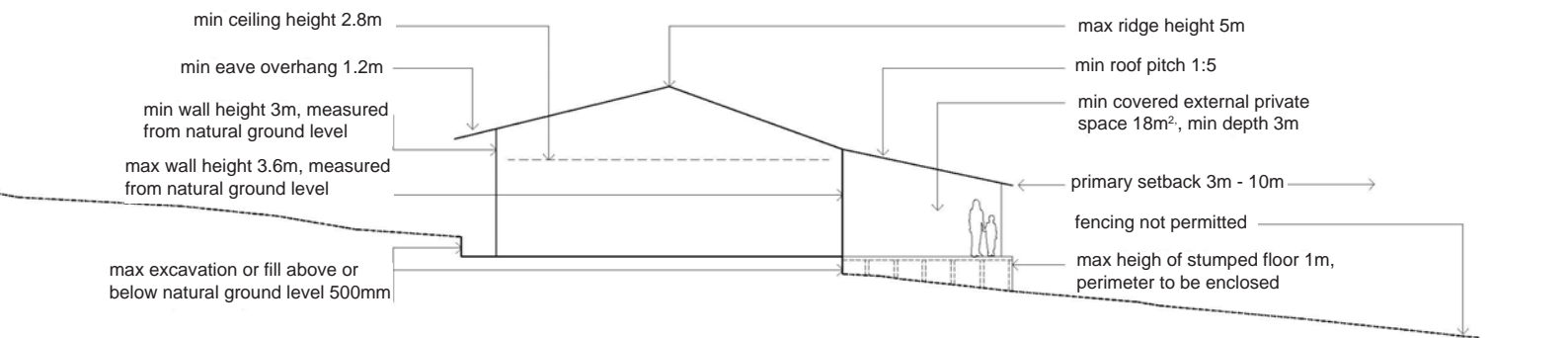
- Single storey development only is permitted.
- Wall plate height minimum 3m, maximum 3.6m
- Maximum ridge height is to be 5m
- Minimum internal ceiling heights to habitable rooms to be 2.8m from finished floor level

Further Guidance:

- Building height is measured from natural ground levels



Simple and compact plan and volume forms



Elevations and Cladding

Design Intent:

New built form should have a limited palette of materials, colours and textures to reflect the Cossack context. Light-coloured materials suit a hot climate as they reduce heat absorption of roofs and walls and can also reduce the energy consumption of cooling equipment. Long term maintenance requirements are reduced by using materials that withstand high solar radiation and intense climatic conditions. Materials should be selected for their weathering qualities; materials that do not corrode, flake or decay should be used and applied paint finishes should be minimised.

Mandatory Requirements:

- Primary cladding materials must be light-coloured to reduce heat gain and the colours of external surfaces (pre-finished, painted and/or natural surfaces) must be no more than three.
- Permitted wall materials are zincalume/colorbond, fibre cement sheet, polycarbonate sheet or timber (solid and composite panels) cladding, rammed earth and masonry.
- Rendered sheet products and commercial composite cladding products are not permissible.
- Colorbond shall be light-coloured. Permitted colorbond colours are: Paperbark, Surfmist, Evening Haze, Dune and Shale Grey.

Further Guidance:

- Encourage the use of light coloured wall and roof materials
- Encourage the use of zincalume for both wall and roof cladding
- Encourage as-found finishes to reduce long term maintenance requirements
- Natural materials, including timber, local stone and rammed earth are encouraged
- External painting is to be restricted to the minimum extent necessary



Existing buildings use local materials and colours

Roof Construction

Design Intent:

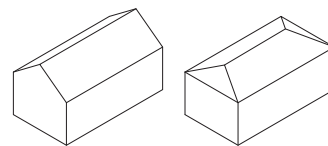
Design of roofs should enable natural ventilation. Roof shapes should not be complicated. Use the shape and construction of the roof to improve the building's ability to resist direct heat ingress and promote natural ventilation. Large roof overhangs are useful for shading walls and openings. . Roof forms of the original settlement and remaining heritage buildings are uncomplicated, and the historical character of the settlement will be retained by this control.

Mandatory Requirements:

- Roofs may be simple hipped, gabled, flat or skillion.
- Covered outdoor areas should either be incorporated with the main roof cover or may be simple, single pitch lean to structures. They shall not have independent roof geometry.
- Minimum roof pitch is to be 1 in 5
- Eaves of minimum 1.2m to be provided to entire perimeter of buildings.
- Roof cladding is to be zincalume or colorbond
- No slate, clay or concrete tiles are permissible
- No gutters/downpipes are to be installed on buildings

Further Guidance:

- Roofs should be ventilated by way of roof ventilators, ventilated ridges or gables, double 'parasol' construction and/or permeable eaves, to suit the cyclonic category for Cossack
- Roof materials are to be durable and of high quality.
- Roofs should be designed to shed high volumes of water quickly without the use of gutters.
- Roofs should be designed with optimum positioning of solar panels in mind.



Hip and gable roofs



Verandahs, Pergolas and Shade structures

Design Intent:

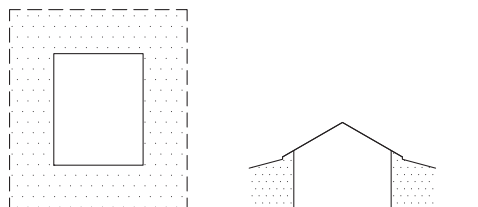
To promote outdoor living in a semi-tropical environment by providing adequately shaded, functional outdoor living areas and to reduce reliance on mechanical ventilation, airconditioning and associated energy consumption. Verandahs, pergolas and shade structures are encouraged to help precondition interior spaces, shade walls and openings from direct sun and provide covered external areas for outside living. They also encourage good relationships between indoor and outdoor spaces through the use of solar/weather protected external open spaces.

Mandatory Requirements:

- All glazed openings larger than 1m² should be shaded with localised shade structures

Further Guidance:

- Encourage multiple verandahs, pergolas and/or shade structures to provide a variety of areas of deep shade adjacent to buildings.
- Vertical shading to east and west facing openings is most effective.



Verandahs and areas of deep shade adjacent to buildings

Ancillary Structures

Design Intent:

Ancillary structures should not dominate through scale, material or colour. The dwellings should be the dominant built form to ensure the character of the place is related to people rather than vehicles, stores, and other ancillary uses.

Mandatory Requirements:

Individual:

- One single storey storage shed of maximum 25m² is permitted per lot, but should be designed as an integral part or extension of the main building in terms of height, material and colour.
- Ancillary structures are to be incorporated under the main line of the roof.
- Ancillary structures are to at a minimum be in line with the wall of the main dwelling.
- If air conditioners are used, condenser units should be located below the eave line or at ground level, screened from public view and where appropriate fitted with noise baffles.

Collective:

- No storage sheds or ancillary structures are permitted
- If air conditioners are used, condenser units should be located below the eave line or at ground level, screened from public view and where appropriate fitted with noise baffles.

Further Guidance:

- Hinged, sliding and tilt-up doors are preferred for shed openings. Roller doors are not permitted.
- Air-conditioning plant and condenser units and roof-mounted equipment, including TV antennas and satellite dishes, must not be readily visible from front street

Fencing

Design Intent:

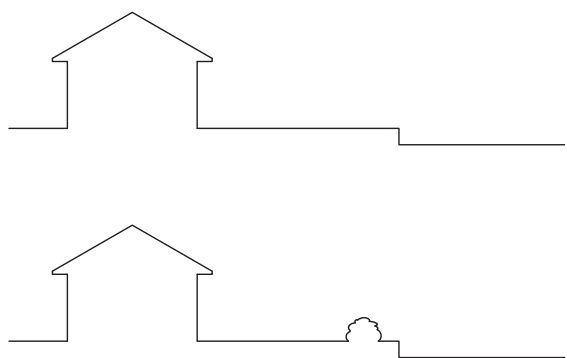
The open, coastal, communal character sought for Cossack relies on an indistinct demarcation between lots and buildings. Pedestrian and view permeability through the settlement is valued. The settlement is intended to have a friendly, communal and informal non-suburban atmosphere, which can be enhanced by no front, boundary or rear fences.

Mandatory Requirements:

- Fencing is not permitted.

Further Guidance:

- The intended interface between street and dwellings is characterised by remnant coastal shrubs and informal planting.



No fencing, landscaped edges



LANDSCAPE GUIDELINES

Landscape General approach

Design Intent:

Landscape interventions are to be minimal and sensitive to the existing site qualities. High emphasis is placed upon the retention of topsoil, vegetation and topography with minimal site disturbance or private use 'lay down' areas beyond the dwelling. The provision of insect proof, shaded, exterior spaces with each dwelling is conceived as the main private exterior living spaces for occupants, therefore some landscape elements traditionally associated with comfortable and private outdoor living are restricted.

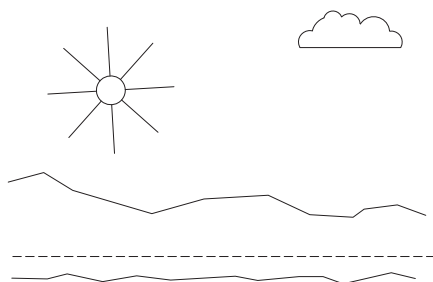
Overland drainage interventions (eg swales) are not considered necessary in the development as impermeable surfaces are limited and the development sites consist of free draining soils. Minimal, appropriate landscape treatments such as gravel French drains containing the roof run-off will create a development that is congruous with its surrounding landscape reducing its impact and preserving Cossack's landscape character.

Mandatory Requirements:

- Open space landscape additions such as irrigated lawns, street trees, walls (not associated with retaining of dwelling pad), fences, screens, garden beds of exotic species, retaining walls, screening structures, raised planting beds, built in BBQ's are not permitted.
- Formalised permeable access paths and drains using locally sourced gravels are permitted.
- Minimal 5m clearing around dwelling to be slashed vegetation maintaining a low vegetation cover with existing stabilised topsoil.

Further Guidance:

- French drains and gravel that extends from the dwelling is recommended to control water run-off and vegetation against dwelling.



Dramatic varied landscape

Driveways and paths

Design Intent:

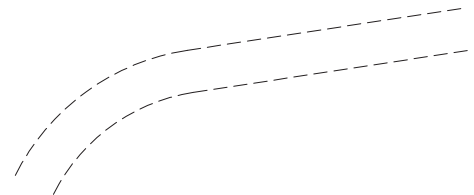
To create an informal coastal hamlet character for the development paths and driveways are to be permeable, intimate in scale and congruous with the surrounding natural ground. Roadways fringed with stabilised local gravels allow pedestrian relief from vehicular traffic. An intimacy of development scale can be preserved with paths that are narrower than suburban equivalents. Low key, informal paths and driveways of local materials will minimise the imposition of the development upon the existing landscape character.

Mandatory Requirements:

- Paths and driveways are to be constructed of permeable material.
- Paths are to be of a maximum width of 1m.

Further Guidance:

- Steppers are suitable for inclusion to increase stability of walkable surfaces in areas near dwellings and should be of congruous appearance to the surrounding landscape.
- Cement stabilised gravel paths can be used for universal access purposes.
- The use of local gravels or sands is encouraged for paths and driveway to be congruous to the surrounding landscape.



Generally unsealed roads without footpaths

Water Tanks

Design Intent:

To supplement the water supply of Cossack water tanks are can be utilised and can even contribute to the heritage character of the development. Water tanks of appropriate scale, form and materiality can ease the burden of piping water long distances and can contribute to the heritage character and continue traditions of remote lifestyles.

Mandatory Requirements:

- Water tanks are to be constructed of corrugated iron and if coloured are to adhere to the permitted colour-bond palette as in the architectural elevations and claddings section of this guideline.
- Maximum size of water tanks is to be 4.2m diameter and 2.2m tall (30,000L)

Further Guidance:

- Locating water tanks near carpark, or driveways is encouraged to ease the water delivery process.

Site Clearance

Design Intent:

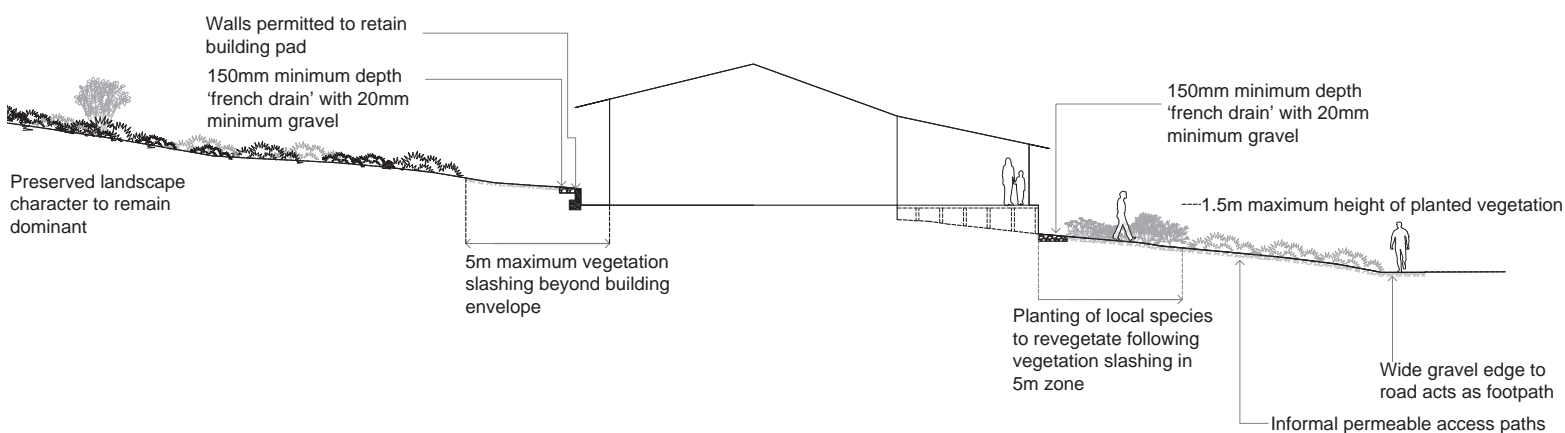
To ensure the preservation of Cossacks significant landscape character and allow it presence in the new development, site clearance should be kept to a minimum. If the built form is constructed without extensive site clearance then the local vegetation that significantly contributes to the landscape character will be retained and erosion prevented.

Mandatory Requirements:

- Site clearance for the construction of dwellings is restricted to a maximum of 4m beyond the perimeter of the proposed building footprint.
- Site clearance is allowable for the creation of paths however path widths are restricted to 1m.
- Site clearing for the parking of vehicles and boats is permitted and must adhere to the carparking and driveway guidelines.

Further Guidance:

- The siting of dwellings and carpark to avoid remnant tree and significant shrubs species is encourages. The preservation of significant trees and shrubs will enhance the landscape surrounding a dwelling.



Planting

Design Intent:

Cossack has a dense covering of vegetation that should be maintained. The use of local species is required to avoid the introduction of a new landscape aesthetic to create contrast with the surrounding landscape. The general approach to plantings is more towards revegetation rather than distinct interventions. Local species of appropriate scale can assist in revegetating areas that have been cleared during construction or increasing the interest immediately surrounding dwellings. Plantings that complement the surrounding landscape will assist in reducing the impact of the new development on the existing character of Cossack.

Mandatory Requirements:

- Planting must be of species that are local to the Pilbara coastline.
- Height at maturity of each species must not exceed 1.5m to preserve open views.
- Lawns are only permitted in public open space.

Further Guidance:

- Revegetation of denuded and cleared areas should be encouraged and collaboration with local nurseries can assist the sourcing of the most appropriate species.
- Stock grown from site collected seed is the most desirable outcome and efforts to accomplish this should be encouraged.



Low native vegetation, no formal planting

Ground Surfaces

Design Intent:

Preservation of existing site drainage and congruity with existing landscape character are the main consideration of surface treatments around dwellings. Hardstand areas are to be constructed of local gravels and stabilised sands and are to be permeable. Due to the absence of guttering, gravel of suitable depth or "French Drains" are required to prevent erosion in the areas where water falls from roofs. Surfaces that allow natural site drainage to occur and visually compliment the surrounding landscape will reduce the impact of the development on the character of Cossack.

Mandatory Requirements:

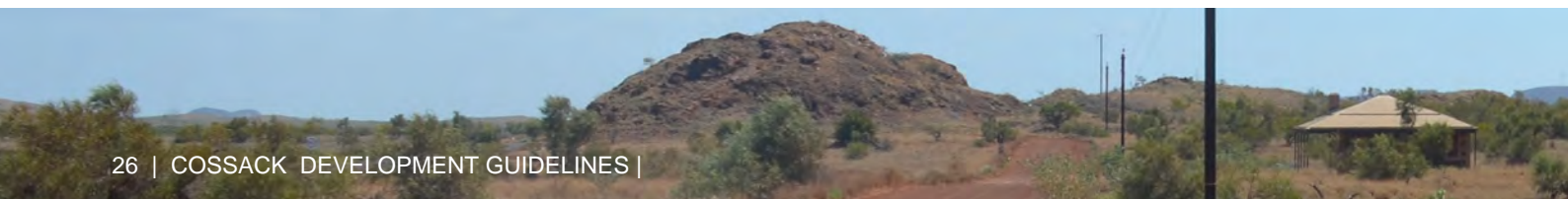
- Cement stabilised surfaces must have a fall greater than 1% away from any built form.
- A surface of 20mm nominal particle sized gravel at a minimum of 150mm depth is recommended in areas where water will sheet from roofing.

Further Guidance:

- Revegetation is encouraged in any area not considered useable hardstand, path, parking or vehicle access route.

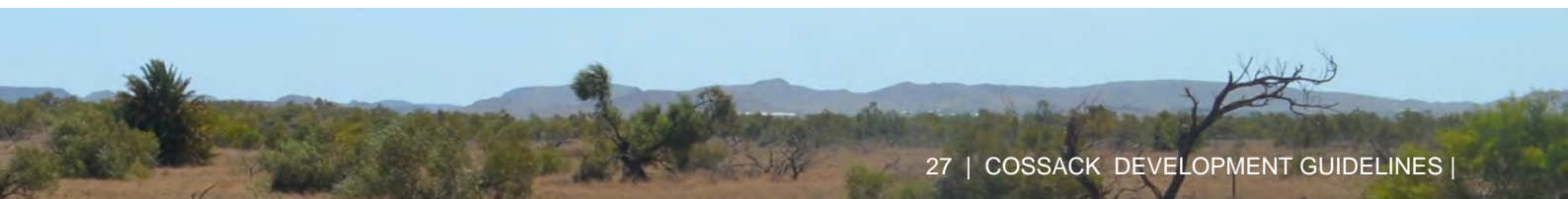


Ground surface to be permeable and shared



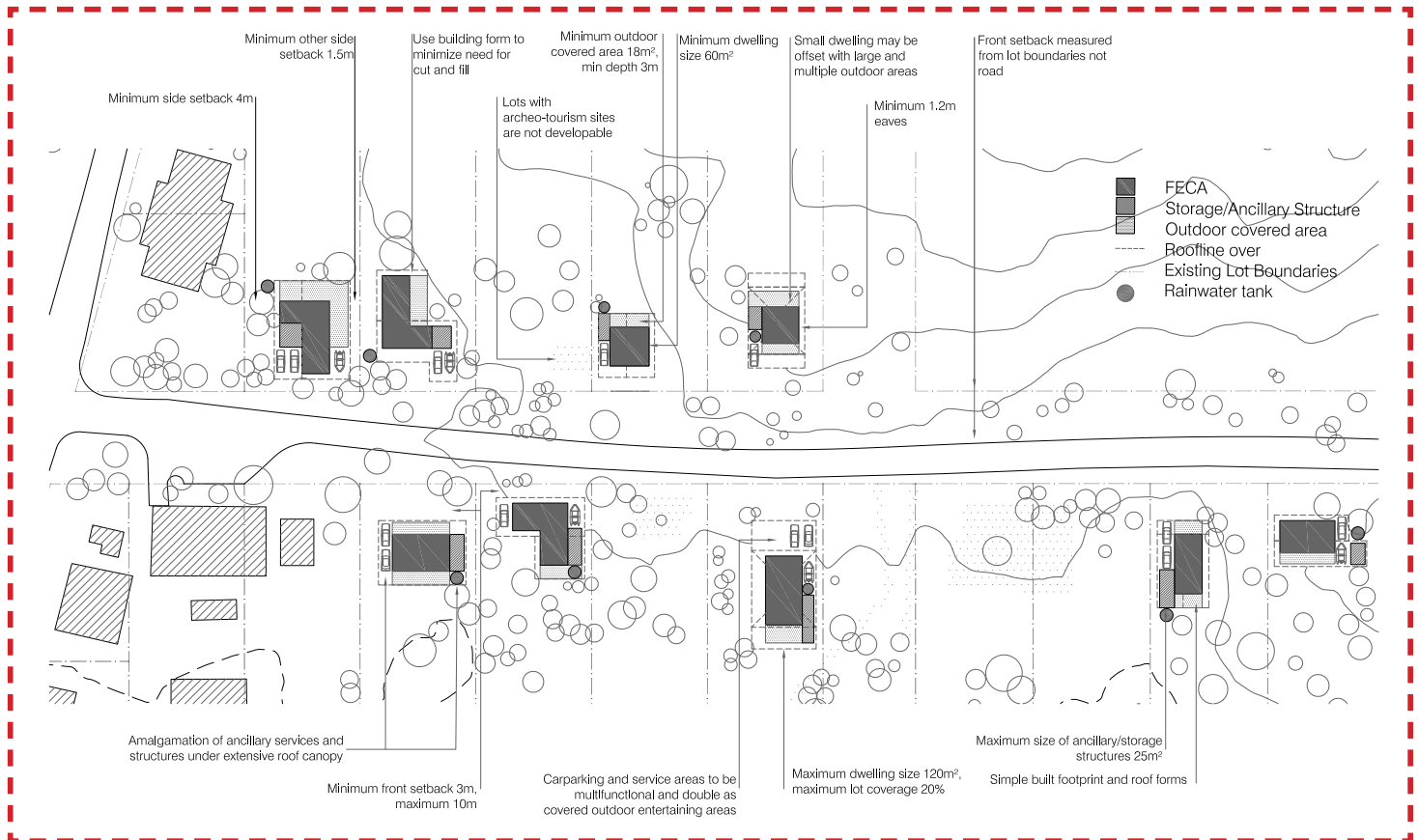


Cossack existing landscape vernacular

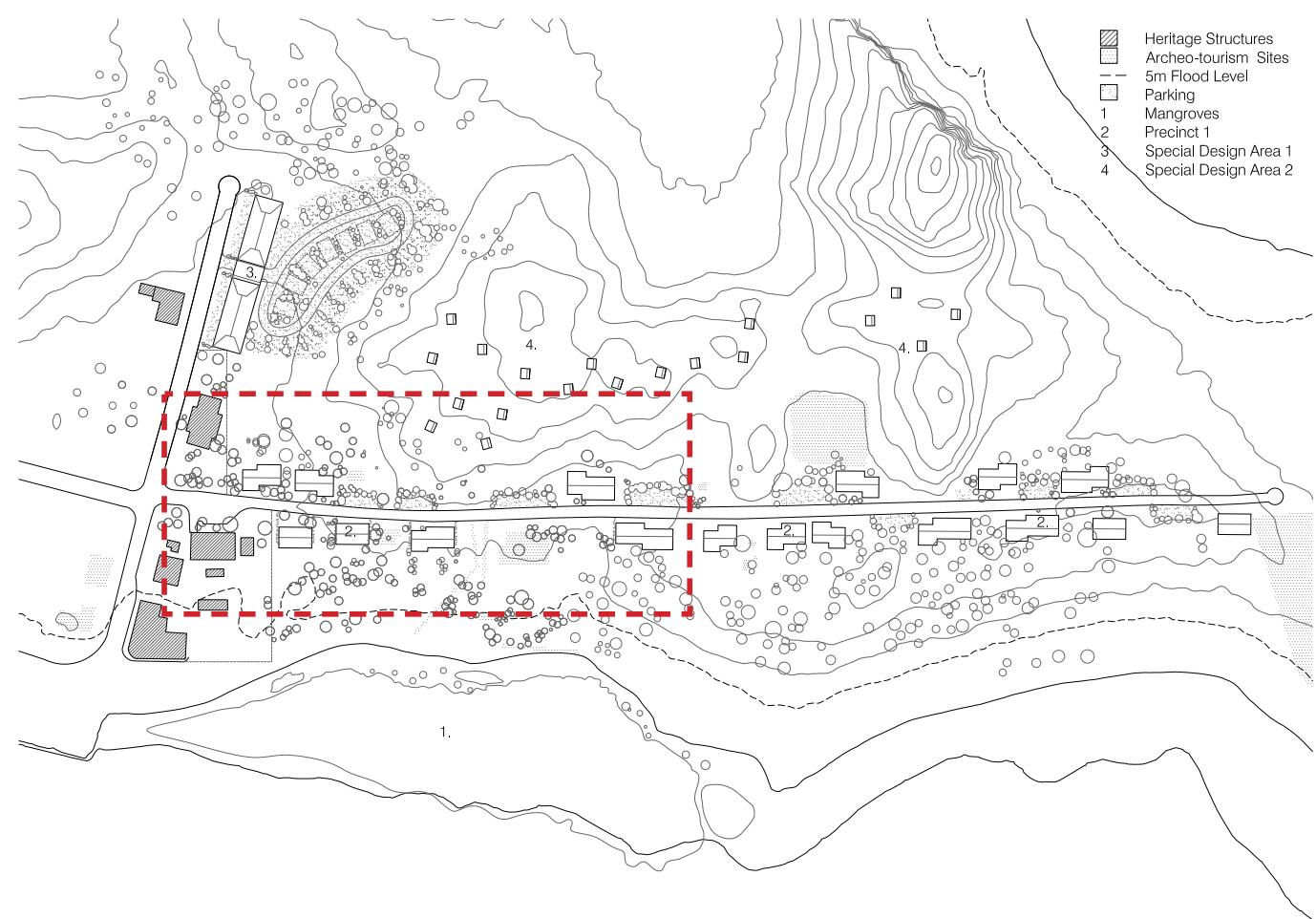


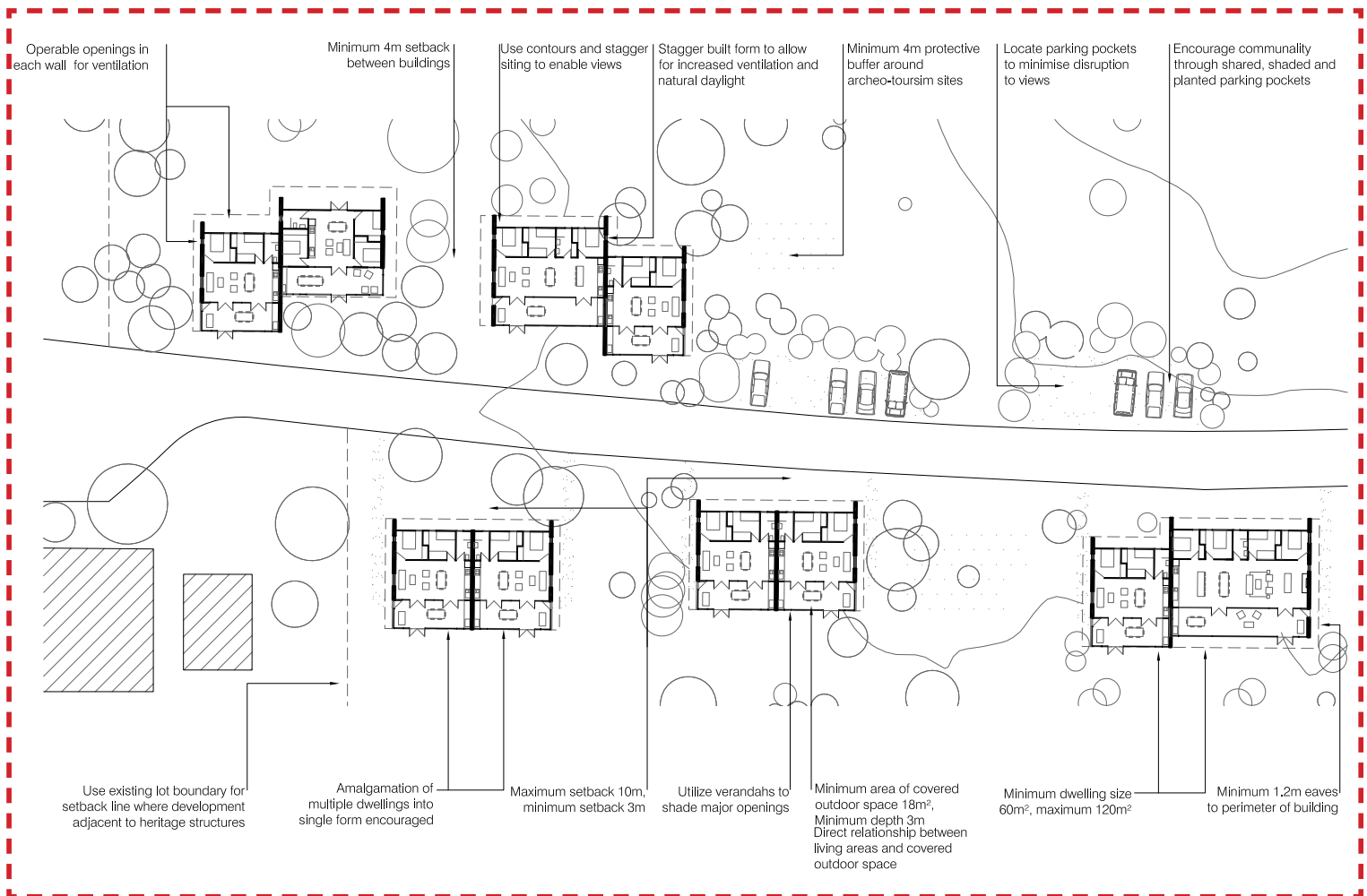
Example plan - Townsite Individualised





Example plan - Collectivised Development





SPECIAL DESIGN ZONE 1

Vision

Special Design Zone 1 is intended to be developed as a site for short term affordable accommodation; simple accommodation quarters, caravan bays and camping for tents and/or camper trailers.

This is a sandy site with low dune vegetation, adjacent to the town centre but out of site from the approach road to Cossack. It has good proximity to the town centre and is nestled in a gully with low, consistent gradient.

Building Envelope / Site Coverage

Design Intent:

In order to continue the public scale of Pearl Road, it is intended that all of the permanent built form is located on Pearl Road, and that the rest of the site is retained as an arid campground setting, with minimal infrastructure to support camping, gravel roads and paths and an informal layout arrangement.

Mandatory Requirements:

- Maximum of three (3) individual buildings allowable on site
- Maximum FECA allowable on site is 900m²
- All built form must be contained within 30m measured parallel to Pearl Road
- Maximum of eighteen (18) camper trailer/tent sites allowable on site
- Maximum of seven (7) caravan sites allowable on site
- No concrete hardstands are allowable

Further Guidance:

- The accommodation quarters and associated facilities are to be located adjacent to Pearl Road, in line with existing buildings, and there are to be no other buildings on site.
- A singular built form approach is encouraged, so that the reception, camp kitchen, ablutions, laundry and all other support facilities are contained within the same building envelope, which in turn is similar to the building envelope of the accommodation quarters and caretaker's residence.
- A general store/shop is encouraged.

Setbacks

Design Intent:

Built form for Special Design Zone 1 will extend the town centre northwards. Buildings should be read as part of the existing pattern of development on Pearl Road.

Mandatory Requirements:

- Setback from primary road to be aligned with the existing Court House building

Further Guidance:

- Linear built form parallel to Pearl Street is encouraged. Built form should not be more than 25 metres deep.

Excavation and Fill

Design Intent:

To preserve the natural topography of the site, and to minimise disruption of natural drainage patterns, changes to the natural contours of the land are sought to be minimised.

Mandatory Requirements:

- Excavation and fill is allowable only for built form envelope and is not allowed in the internal campground
- Excavation and fill in built form envelope is as per Townsite Design Guidelines

Access and Car Parking

Design Intent:

It is intended that cars, caravans and trailers drive to the internal campground but all other vehicles are parked adjacent to Pearl Street in the primary setback. By containing vehicles in such a way, the natural landscape will remain dominant.

Mandatory Requirements:

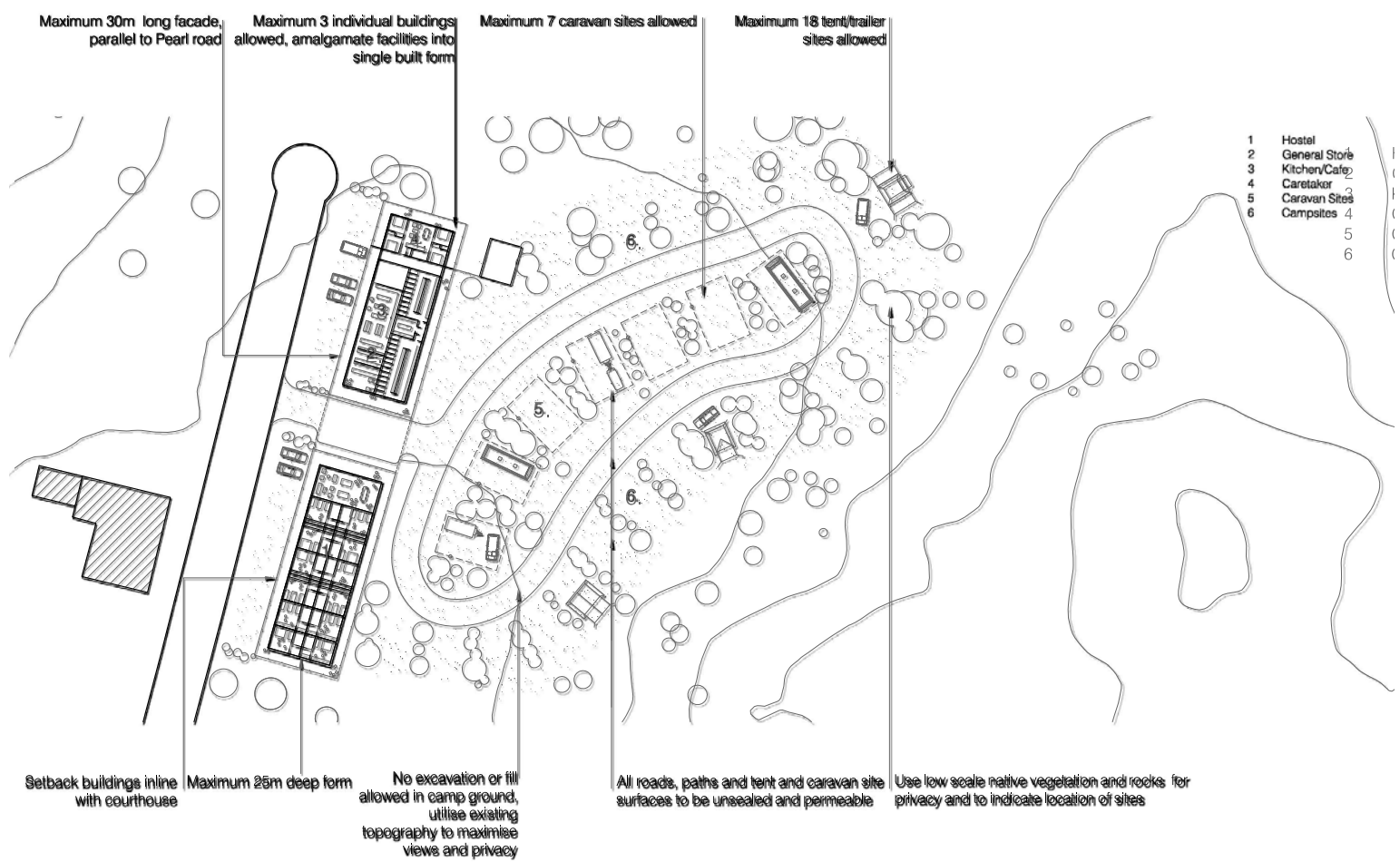
- Pearl Street shall be extended along current alignment
- Visitor/short term parking bays should be provided in 6m setback between Pearl Street and the proposed building/s

Further Guidance:

- Low scale native vegetation and local rocks/boulders may be used to indicate parking areas. Ground surfaces should be unsealed, permeable and shared.



Example plan - Special Design Zone 1



SPECIAL DESIGN ZONE 2

Vision

Special Design Zone 2 is intended to be developed as a site for short term accommodation; detached, well-appointed cabins with expansive views and a high level of privacy.

The site is a string of high points along the ridge north of Perseverance Street. It is a rocky, sparsely vegetated site with expansive panoramic views. The sites have limited flat terrain and are exposed to wind and weather.

Building Envelope / Site Coverage

Design Intent:

The site is dramatic and rugged and should retain its dominance. It is intended that the cabins are compact and simple in form and that they are stand-alone structures.

Mandatory Requirements:

- Maximum of twenty (20) cabins allowable on site
- Cabins to be maximum 20m² FECA, with maximum 9m² private external covered area

Further Guidance:

- Cabins are to be sited to maximise privacy and minimise earthworks.

Setbacks

Design Intent:

It is intended that the cabins maintain a high level of privacy between each other.

Mandatory Requirements:

- Minimum distance between cabins to be 6m.

Further Guidance:

- Cabins are to be sited to maximise privacy and minimise earthworks.

Excavation and Fill

Mandatory Requirements:

- No excavation or fill is allowable.
- Cabins are to be framed and elevated from ground.

Car Parking

Mandatory Requirements:

- Vehicle access is to be limited; no private vehicle access will be allowable on site.

Private Open Space and Privacy

Design Intent:

Private open space adjacent to cabins may provide a useful extension to the compact internal living space. As the cabins are compact in area, the private open space should be similarly scaled.

Mandatory Requirements:

- Maximum covered external private open space of 9m² is allowable for each cabin
- Covered private open spaces must be insect proof

Further Guidance:

- Covered external private space should be located to avoid overlooking from and to adjacent cabins

Scale

Design Intent:

The cabins are to have compact footprints and simple forms. They will appear small in scale in relation to the rugged landscape. Therefore, they may be slightly taller than other built form in Cossack without detriment to its character. Taller internal volumes will make the cabins more comfortable and well-appointed.

Mandatory Requirements:

- Maximum overall height is to be 5m from averaged adjacent natural ground level
- Internal ceiling heights to habitable rooms to be minimum 3m from finished floor level

Roof Construction

Design Intent:

Generally as per Townsite Design Guidelines except that flat or skillion roofs are encouraged.

Mandatory Requirements:

- Flat or skillion roofs are encouraged
- Minimum roof pitch is to be 2 degrees
- Minimum 1.2m eaves are mandatory for elevations with major openings

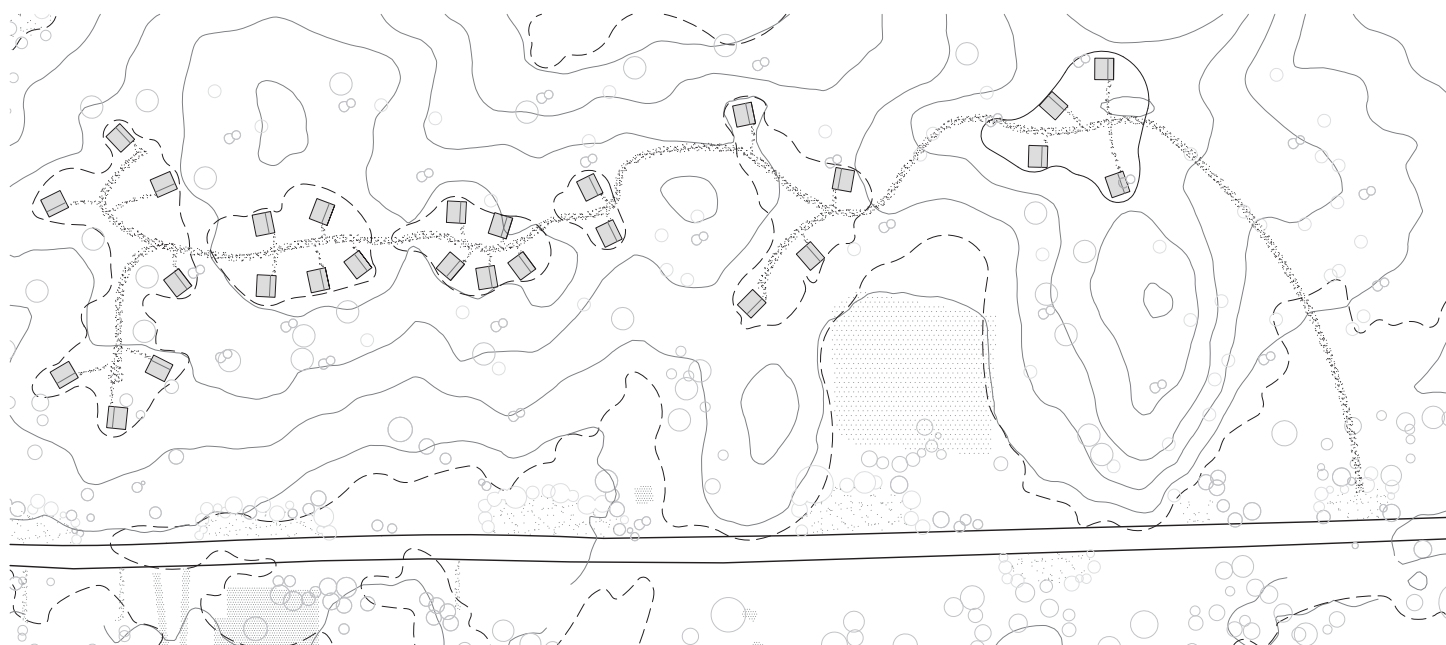
Verandahs, pergolas and shade

Mandatory Requirements:

- Verandahs and pergolas are limited to the allowable covered external private open space. Glazing within east and west facing walls should be shaded with localised shade structures.



Example plan - Special Design Zone 2



SPECIAL DESIGN ZONE 3

Vision

Special Design Zone 3 is intended to be developed as a site for short term accommodation; camping and eco-tents (glamping).

This Special Zone comprises the remaining land identified with development potential. These are areas further from the town centre and relate strongly to the theme of an arid landscape setting. The areas are beyond view from the town

Site Coverage

Design Intent:

Sites are to be adequately distanced from each other to promote a sense of isolation. Vegetation should be preserved between camp sites to enhance the isolated landscape experience.

Setbacks

Design Intent:

It is intended that individual accommodation sites maintain a high level of privacy between each other.

Mandatory Requirements:

- Minimum distance between camp sites to be 20m

Further Guidance:

- Individual accommodation sites are to be located to maximise privacy and minimise earthworks.

Excavation and Fill

Mandatory Requirements:

- No excavation or fill is allowable

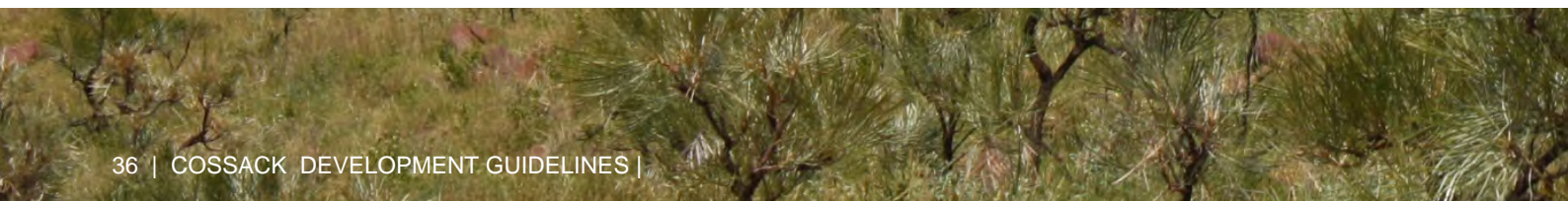
Car Parking

Mandatory Requirements:

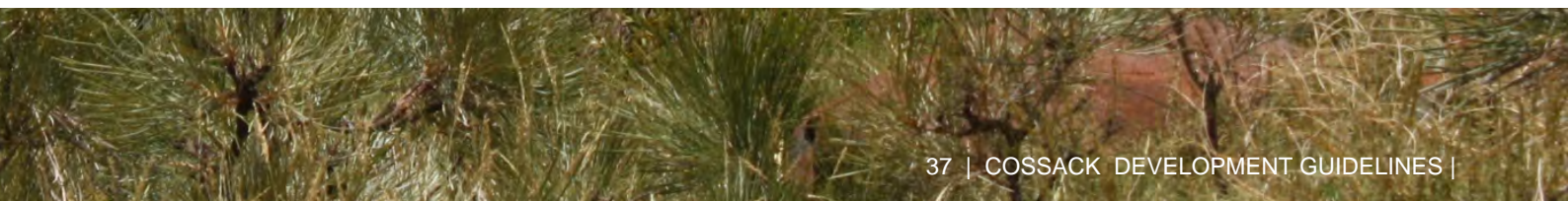
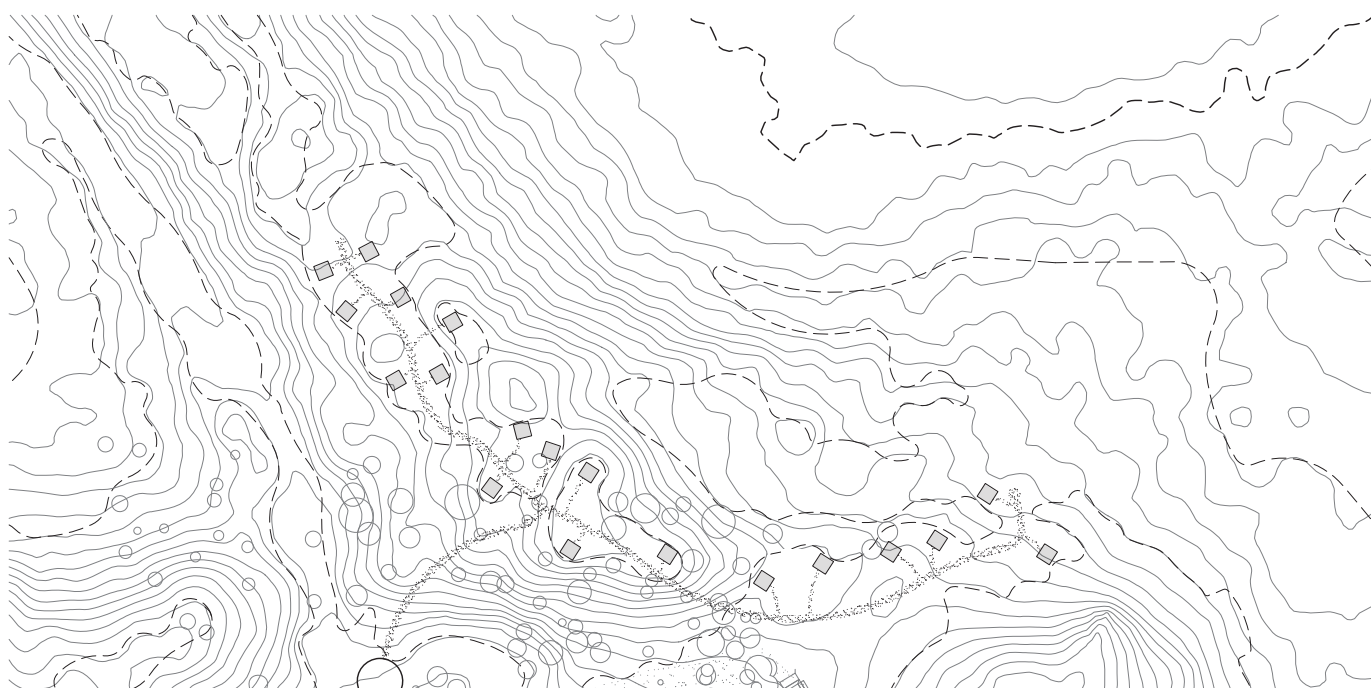
- Ground surfaces are to be unsealed, permeable and shared.

Further Guidance:

- Low scale native vegetation and local rocks/boulders may be used to indicate parking areas.



Example plan - Special Design Zone 3





Special Design Zone 3: Example - Karijini eco retreat



Special Design Zone 2: Example - Hotel Endemico, Mexico



Special Design Zone 1: Example - Karijini camp sites



Special Design Zone 2: Example - Hotel Endemico, Mexico

APPENDIX 1:

SERVICING OPTIONS

Energy

Currently a 5.2 km 33kV single phase overhead power line supplies the towns power from the Point Samson main before joining two pole mounted transformers and supplying the town via underground cabling.

Solar panels on roofs can assist in supplementing the energy requirements of the development however upgrading and extending the existing system will ensure the base load reliability of the power supply in Cossack.

At proposed full development the power requirements (not including individual solar panels) would be based on an average of 12kwh per dwelling, at 40 dwellings this would equate to approximately 500kwh per day capacity (to be confirmed).

Water

The current water supply is via 50mm MDPE pipe that runs above ground and connects to the 500mm steel main that links the Harding Dam with Cape Lambert. This water supply then meets a 70kL storage tank. The existing water supply does not meet current water corporation standards and the storage tank is considered inadequate, and will need to be upgraded prior to significant development at Cossack.

Water tanks can be utilised to supplement the water supply, however due to the lack of rainfall these tanks will require filling by water cartage. Reliability of service an upgrade of the existing system to meet water corporation standards is recommended.

At proposed full development the water requirements would be up to 180L per person per day, and therefore maximum capacity of 30kL per day would be required for 40 dwellings averaging 4 occupants (to be confirmed).

Communications

Cossack is in range of Telstra's Next G network that services Wickham and Point Samson townships and therefore it is recommended that communications be wireless via this network or satellite systems rather than upgrade to any cable based networks.

Waste Water

The existing disposal system uses septic tanks and leach drains. If individual lot ownership occurs then the size of the lots allows for individual septic tanks and irrigation fields (1000m²). If collectivised tenure occurs then the potential exists for a local waste water treatment plant and relocation system in Cossack.

At proposed full development the waste water treatment requirement is approximately 165L per person per day, and therefore maximum capacity of 27kL per day would be required for 40 dwellings averaging 4 occupants (to be confirmed).

Waste Management

A waste transfer station is located north of Roebourne and it is anticipated that the development at Cossack could be serviced by the City of Karratha's waste management services.

APPENDIX 2:

COSSACK CONSERVATION POLICY REGISTERED PRECINCT PLAN

The following Precinct Plan is an extract from the Heritage Council's Cossack Conservation Policy 1996, and shows the extent of the registered Cossack Heritage Precinct.

Cossack

A Policy for its Conservation

Figure 1

Reserve 36813

Registered Precinct

Cossack Conservation Plan August 1996

