



**Queensland  
Government**

Department of Aboriginal and  
Torres Strait Islander Partnerships

---

MASTER PLAN

# DOOMADGEE

DEPARTMENT OF ABORIGINAL AND TORRES STRAIT ISLANDER PARTNERSHIPS  
AMENDMENT 2 - 8 APRIL 2020

**AECOM**

## CLIENT



Department of Aboriginal and Torres Strait Islander Partnerships

In partnership with -  
Doomadgee Aboriginal Shire Council



## PREPARED BY


### AECOM

AECOM Australia Pty Ltd  
Level 3, 120 Bunda St, Cairns, QLD 4870  
PO Box 5971  
T +61 7 4222 6000 F +61 7 4222 6001  
www.aecom.com  
ABN 20 093 846 925

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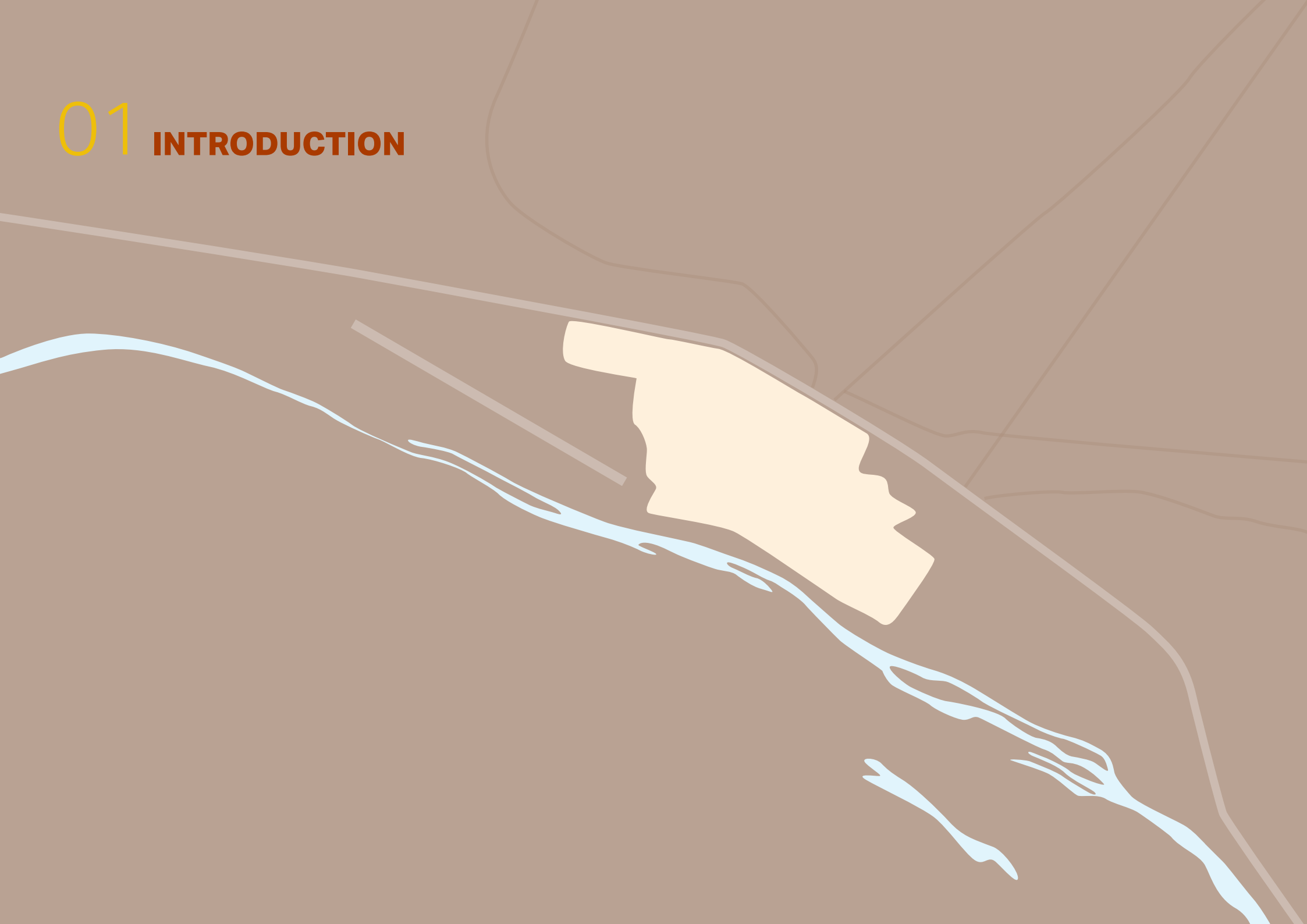
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# 01 INTRODUCTION





## PROJECT BACKGROUND

The availability and cost of community housing in remote indigenous communities is affected by a range of factors including availability of residential land, unmet demand for housing and cost of building, limited housing choice options, and tenure restrictions on land. Housing is also periodically required for Government agencies, Councils and NGOs.

Industrial activity is one of the key pillars of employment in all communities. Councils recognise the need to provide diversity in local employment opportunities, and as such encourage growth by having suitable sites available for use by small business.

The right combination of housing choice and employment opportunity is a key ingredient in the achievement of successful and vibrant communities with a diversified economy. A practical, long term plan for the delivery of new housing, industry and other employment generating land use is intended to provide a clear indication of future growth and development within the community.

In consultation with the Remote Indigenous Land and Infrastructure Program Office (RILIPO), within the Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP), Doomadgee Aboriginal Shire Council has identified the need to prepare a Future Residential and Industrial Land Use Master Plan in line with their Town Planning Scheme.

## PREFERRED MASTER PLAN OPTION

Figure 1 outlines the preferred master plan option. This preferred option of the Future Residential and Industrial Land Use Master Plan was developed through consultation sessions with Council, State Government, Traditional Owners and the community.

## REPORT PURPOSE

The document encompasses the aspirations and hopes for Doomadgee and as such should be reviewed on an annual basis allowing for the update and addition of new priorities. Information in support of the community's growth should be added as annexures to this document allowing for a central repository of knowledge.

This report contains an overview of investigations and stakeholder consultation undertaken in the Doomadgee community. It seeks to provide Council and DATSIP with a readily accessible and easily interpreted summary of the preferred master plan option, associated infrastructure requirements and implementation strategy.

It should be noted that the preferred option (Figure 1) and implementation strategy do not represent a funding commitment. It is intended that this report will be utilised by the Doomadgee Aboriginal Shire Council as an evidence base to support future applications for a range of potential funding and/or grants. It is also a document which can be used to guide future investment and growth decisions with a clear understanding of the positive outcomes that can be leveraged for the community.














Future development should reflect planning scheme assessment benchmarks and consider the following design approaches:

- Disaster Resilience - Resilient Queensland 2018-2021
- Crime Prevention through Environmental Design (CPTED) - designing the built environment to create safer neighbourhoods by increasing the perceived likelihood of detection and apprehension
- Healthy by Design - practical guidance in designing walkable and ultimately more liveable communities
- Water Sensitive Urban Design (WSUD) - land planning and engineering approach which integrates the urban water cycle into urban design to minimise environmental degradation and improve aesthetic and recreational appeal
- Climate Change - carbon neutrality, carbon reduction, carbon farming, water security and energy efficiency.





The preferred option includes the following areas features:

-  1 Marradgee Road: 66 x 800m<sup>2</sup> residential lots
-  2 Ned Street: 20 x 800m<sup>2</sup> residential lots
-  3 Cattle Street: 19 x infill residential lots
-  1 Industrial precinct: 25 industrial lots
-  1 Commercial precinct
-  1 Caravan park
-  1 Community facility
-  2 Water and sewage treatment upgrades
-  3 Community hall
-  4 Relocation of sewage treatment plant
-  1 BMX facility and waterplay site (Option 1)
-  2 Waterplay site (Option 2)
-  3 Waterplay site (Option 3)

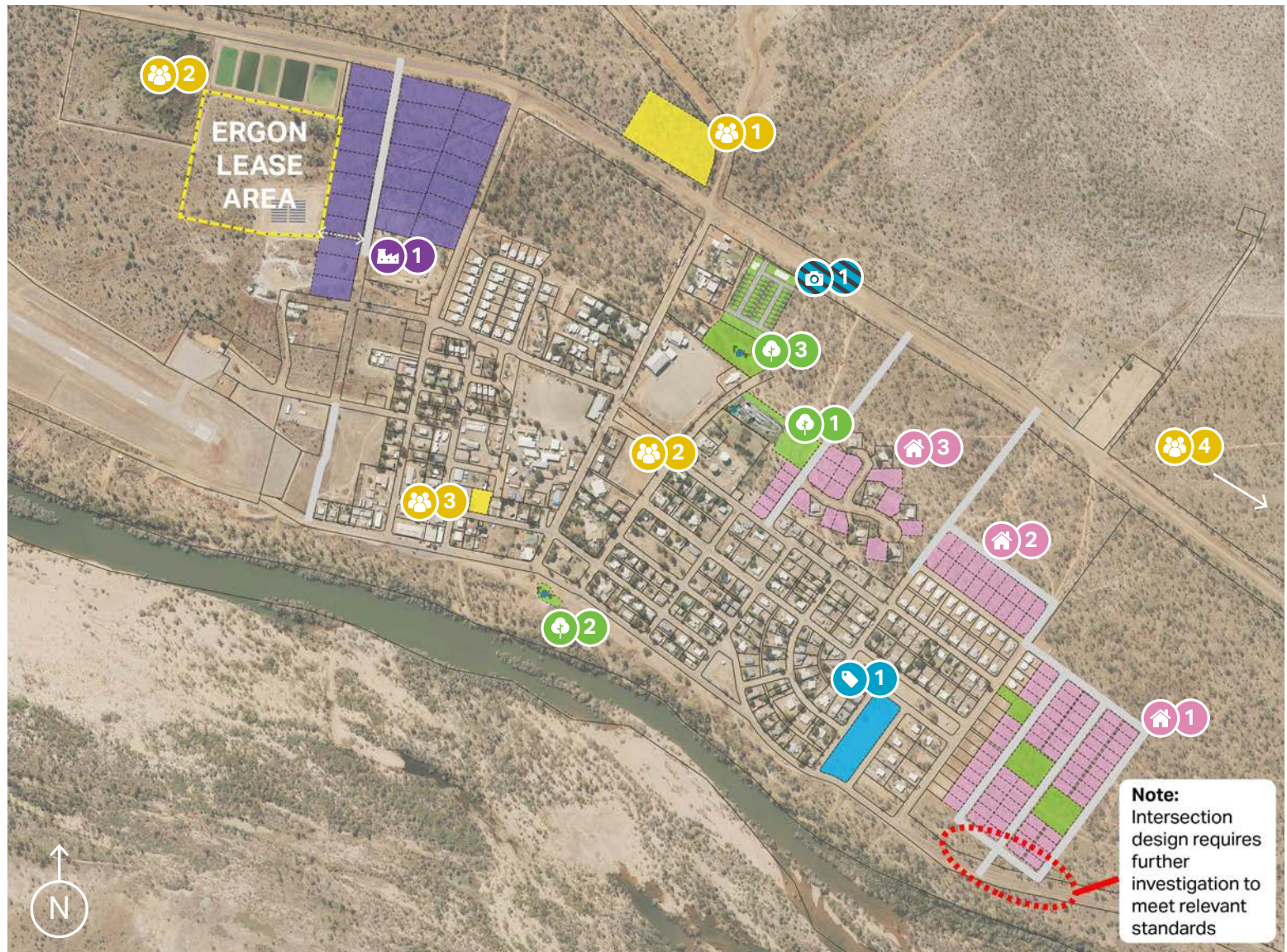


FIGURE 1: PREFERRED OPTION - AMENDMENT 1

RESIDENTIAL		RECREATION	
INDUSTRIAL		COMMUNITY	
COMMERCIAL		ROAD	

200m      400m

# 02 COMMUNITY OVERVIEW





## LOCATION

Doomadgee is a remote indigenous community located approximately 125 km south of the Gulf of Carpentaria and 90 km east of the Queensland - Northern Territory border. The nearest township is Burketown, located approximately 80 km to the north-east. The closest major centre is Cairns, located approximately 760 km to the east.

The Doomadgee Aboriginal Shire Council area comprises approximately 1,821 km<sup>2</sup> of land across two areas (one inland and one coastal). The inland part of the Council area contains the township and is wholly surrounded by Burke Shire Council.





## TOWNSHIP AND MASTER PLAN AREA

The Doomadgee township is located on the northern side of the Nicholson River. The frame area surrounding the township includes key utility services, namely the sewage treatment plant and airport.

The area for this master planning exercise, shown in Figure 2, comprises the existing township and surrounding frame area.



FIGURE 2: TOWNSHIP AND MASTER PLAN AREA



## COMMUNITY AND GOVERNANCE

The Doomadgee community is positioned alongside the Nicholson River and provides access to the coast, freshwater rivers and Lawn Hill National Park, one of the Gulf's most popular natural tourist attractions.

The Traditional Owners of Doomadgee are the Waanyi [Wahn-yee], Gangalidda [Gung-ga-lee-dah] and Garawa [Gar-ah-wah] peoples. The original Mission, known as 'Old Doomadgee' was established in 1933 close to the coast of the Gulf of Carpentaria. Following a cyclone the mission was moved to its current site on the Nicholson River in 1936.

In 1983 the Queensland Government assumed responsibility for the administration and management of the then Doomadgee Mission. In 1984 the *Community Services (Aborigines) Act 1984* was enacted which established the Doomadgee Aboriginal Community Council which operated for 26 years.

In July 2010 under the *Local Government Act 2009* the Doomadgee Aboriginal Shire Council was established. The Council is represented by a Mayor and 4 Councillors with elections every 4 years. The community is Deed of Grant in Trust land managed by Doomadgee Aboriginal Shire Council.

## LAND USE, FACILITIES AND SERVICES

The township area of Doomadgee is approximately 116 hectares in size and extends between Doomadgee Road and the Nicholson River. Land use within the town is predominantly residential in nature. Other land uses and features include:

- Council administrative building
- Guest House (includes workers accommodation)
- Rodeo
- Ergon Energy compound (power station) and solar farm
- Airport
- Workshop
- Doomadgee State School (P to 10) and Resource Centre/Library
- Doomadgee Rural Hospital (includes Community Health Centre).

Recent residential expansion has occurred east of Murradgee Road, north of Ned Street and east of Potter Street, opposite the rodeo ground.

- Services
  - / Queensland Ambulance Service, SES, Doomadgee Rural Fire Brigade, Queensland Police, Probation and Parole
  - / Centrelink agent (access to Centrelink, Child Support, Medicare and CRS Australia payments and services)
  - / Building and Asset Services
  - / Australia Post
- Early childhood
  - / Child Care Centre
  - / Mum's and Bubs Group
  - / Children and Family Centre
- Shops
  - / CEQ Retail Store (operated by DATSIP)
  - / Doomadgee Roadhouse (Fuel, food, accommodation, groceries)

/ Burketown Bakery

/ Butcher

- Community

/ Health and Wellbeing Centre

/ PCYC

/ Gidgee Healing services

/ Family Responsibilities Commission

/ Youth Hub (run by council)

/ Yellagundgimarra Aboriginal Health Council

/ Ngooderi House Aged Care Hostel

/ "My Pathway" Enterprise Management Group

/ Myuma Group

/ Doomadgee Gospel Chapel Service

/ Doomadgee Community Justice Group

/ Women's Shelter and Safe House

/ Men's Group and Women's Group

/ Black Star Radio.





SEWAGE TREATMENT PLANT

SOLAR FARM

RODEO

DOOMADGEE ROADHOUSE

POLICE

PCYC

AIRPORT

ERGON ENERGY COMPOUND

STATE SCHOOL

WATER TREATMENT PLANT

COUNCIL OFFICE

DOOMADGEE RURAL HOSPITAL

RETAIL STORE

CHURCH

NICHOLSON RIVER

GUNNALUNJA DR

GOODDEEDAWA RD

ROBERT ST



## LAND USE CATEGORIES

Development of the Master Plan has been undertaken using a number of land use categories. This page provides a summary of each land use.

### RESIDENTIAL

Residential land uses primarily relate to the provision of traditional detached housing. Residential land may support a range of dwelling types including detached houses, duplexes and units. Residential land use is often co-located with open space which provides residents easy access to passive and active recreation.



### COMMERCIAL

Commercial land uses typically involve business activities which may include the sale of goods (e.g. shops, restaurants) or provision of services (e.g. offices). Commercial activity may be a component of a broader industrial land use.



### OPEN SPACE

Open space land uses support a range of informal and formal recreation activities. Informal recreation means the use of open space for activities such as bushwalking, cycling, picnics and playgrounds. Formal recreation means the land includes facilities for specific sporting activities (e.g. football, tennis, netball).



### COMMUNITY FACILITIES

Community facilities land accommodates a broad range of activities which relate to core public or community services. Community facilities include uses for health services, education, arts and culture, religion, community support and utility infrastructure (e.g. water and sewage treatment, waste management).



### INDUSTRIAL

Industrial land uses generally involve the manufacturing, processing, treatment or repair of goods. Industrial uses are generally categorised based on their level of impact based on noise, air and odour emissions. Examples of industrial land uses includes manufacturing plants, processing plants, workshops and warehouses. Certain industrial uses may also have components of, or similarities to, commercial land uses.



### TOURISM

Tourism land uses are focused on providing goods, facilities, services and entertainment for tourists. This may include caravan parks, campgrounds, short term accommodation, visitor centres or businesses operating tours.





## TENURE

Land throughout most of the Doomadgee LGA is Deed of Grant in Trust (DOGIT), managed by Council. There are however large portions of land within the township area which are held as reserves for specific purposes (e.g. airport, school).

Land to the south of the Nicholson River, located with Burke Shire Council, is leasehold tenure.

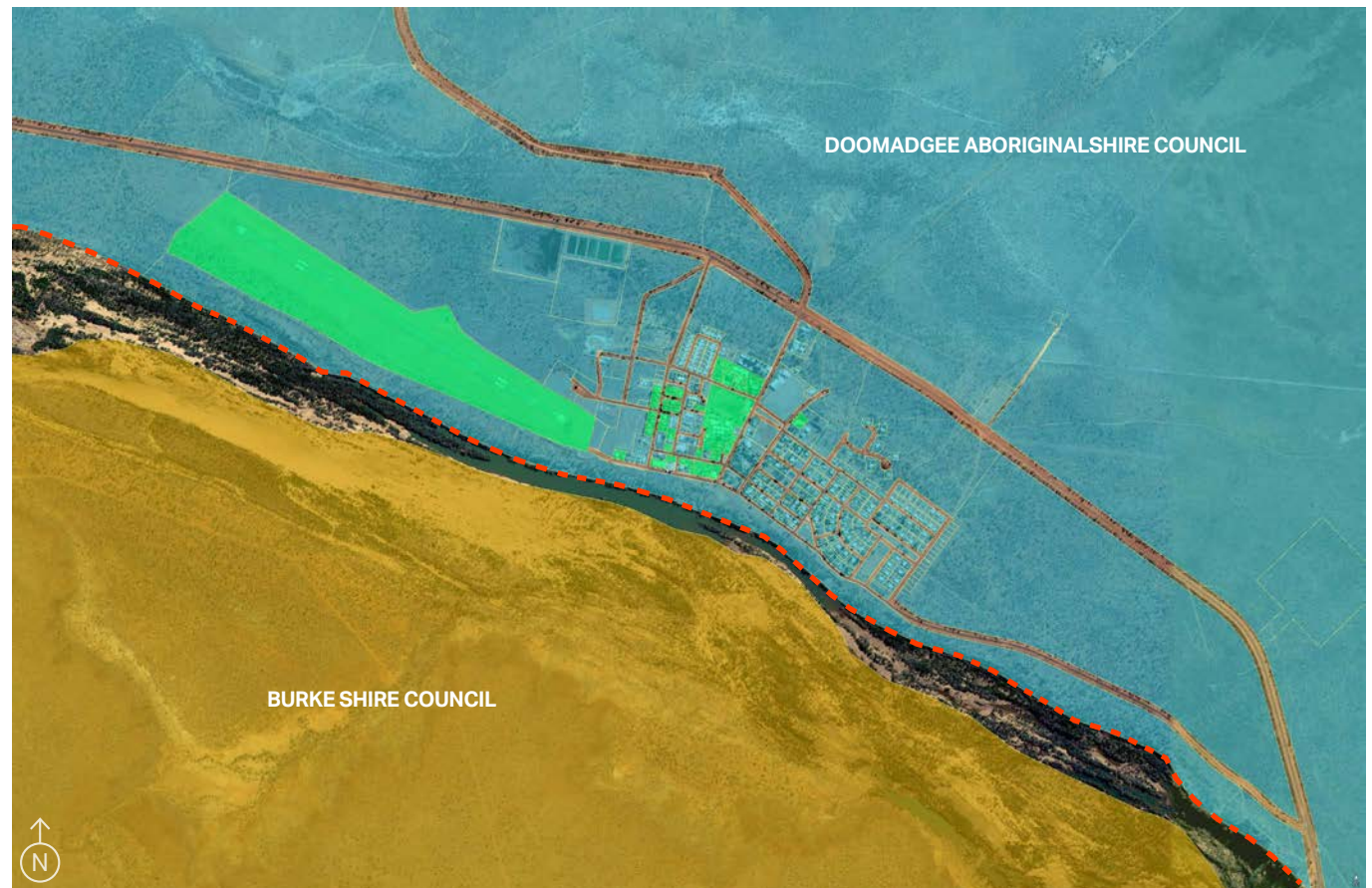


FIGURE 3: TENURE

- LGA BOUNDARY
- DOGIT
- RESERVE
- LEASHOLD





FIGURE 4: TOWNSHIP CADASTRAL BOUNDARIES



## NATIVE TITLE

There are currently no Native Title determinations over the township area of Doomadgee. Land outside of the township is however subject to the following determinations:

- QCD2015/003: Gangalidda & Garawa People #2
- QCD2010/007: Waanyi Peoples.

The future land use and development identified in this master plan may require Indigenous Land Use Agreements (ILUAs) where it relates to land where extinguishment of Native Title has not occurred.

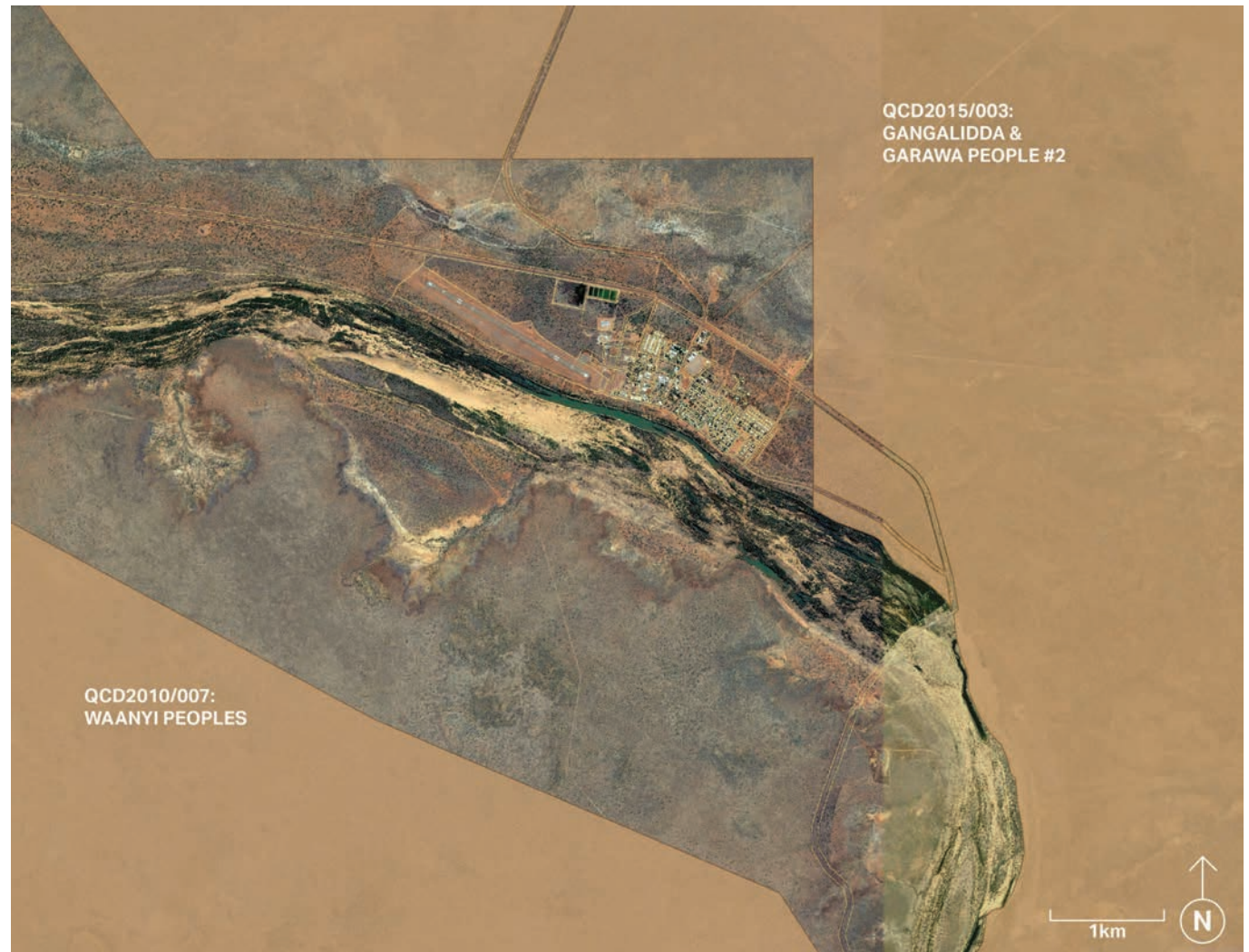


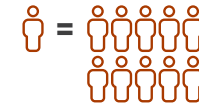
FIGURE 5: NATIVE TITLE DETERMINATIONS

1,405  
PEOPLE

ABS CENSUS

2,000  
PEOPLE

DOOMDGEЕ ABORIGINAL SHIRE COUNCIL

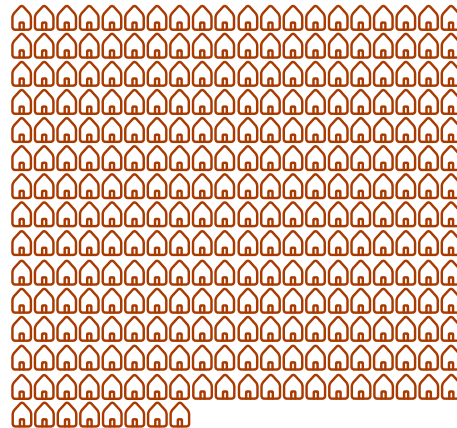
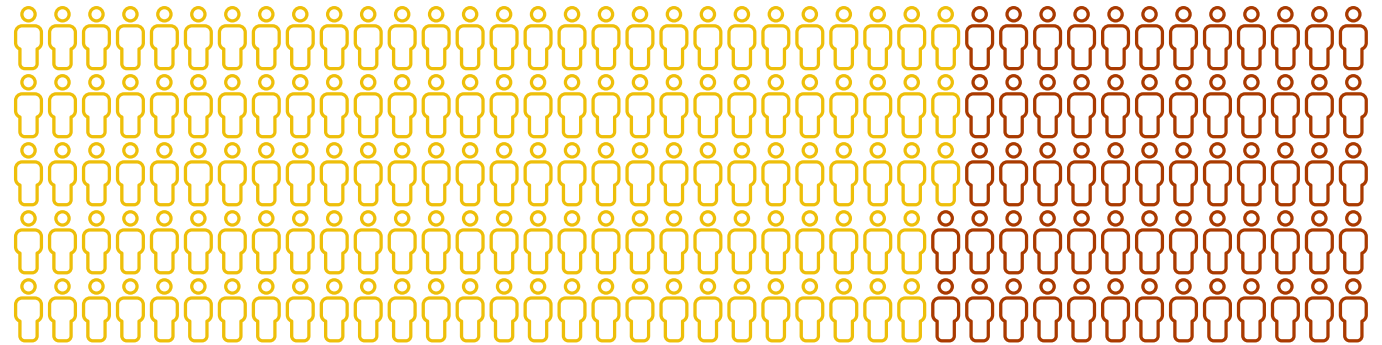


## DEMOGRAPHICS

An overview of key population and housing characteristics within the Doomadgee LGA has been derived from the following published sources:

- Australian Bureau of Statistics – 2016 Census of Population and Housing data products (Doomadgee (S) (LGA32770) 1,827.7 km<sup>2</sup>):
  - / General Community Profile (Catalogue number 2001.0) (ABS 2016a)
  - / Aboriginal and Torres Strait Islander Peoples Profile (Catalogue number 2002.0) (ABS 2016b)
  - / Time Series Profile (Catalogue number 2003.0) (ABS 2016c)
  - / Quickstats webpage (ABS 2016d).
- Queensland Government Statisticians Office - Projected population (medium series), by local government area, Queensland, 2011 to 2036 (Queensland Government 2015). Source: Queensland Government population projections, 2015 edition; Australian Bureau of Statistics, Regional population growth, Australia, 2013-14, (Cat no. 3218.0)
- Doomadgee Aboriginal Shire Council Planning Scheme, 2014 – Priority Infrastructure Plan: Population and Housing Projections.

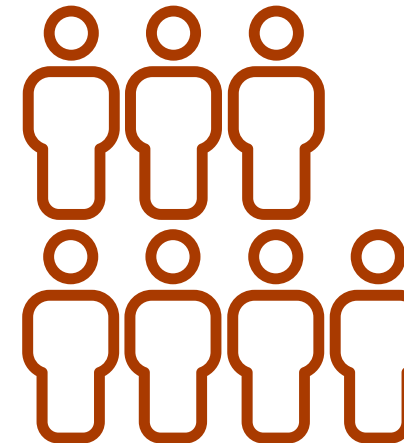
The 2016 Census data products provide the most recent overview of existing population and housing statistics. As LGA-level population projections based on the 2016 Census are not yet available, earlier projections, published by the Queensland Government Statistician's Office (QGSO), have been utilised to characterise long term population trends within the community. The current population estimate of 2,000 persons has been derived from counts undertaken by Council in 2017.



288  
DWELLINGS



3  
BEDROOMS  
PER HOUSEHOLD



6.9  
PEOPLE  
PER HOUSEHOLD

### QUEENSLAND

 3.2  
BEDROOMS  
PER HOUSEHOLD

 2.6  
PEOPLE  
PER HOUSEHOLD

### AUSTRALIA

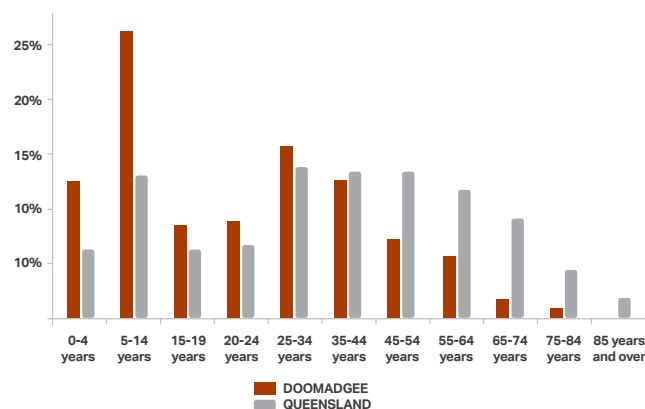
 3.1  
BEDROOMS  
PER HOUSEHOLD

 2.6  
PEOPLE  
PER HOUSEHOLD



## POPULATION

The 2016 Census recorded the population within Doomadgee to be 1,405 persons. Graph 1 provides a summary of the total population and age structure based on the 2016 census. It is evident that over time, a large proportion of the population is aged below 14 years with a median age of 21, compared to 37 for Queensland. The population profile indicates a lower representation of the 15-19 age group compared to the proportion of the population aged under 14 years. This is likely attributed to high school age students travelling outside the community to attend boarding school.



**GRAPH 1: POPULATION COUNT AND AGE STRUCTURE 2016 CENSUS - DOOMADGEE & QUEENSLAND**

SOURCE	2011	2016	2021	2026	2031	2036
<b>ABS Census</b>	1,289	1,405	-	-	-	-
<b>QGSO medium series projections</b>	1,374	1,410	1,486	1,568	1,649	1,732
<b>Doomadgee Planning Scheme</b>	1,280	1,435	1,551	1,661	-	-

Source: (ABS 2016c) (Queensland Government 2015) (DASC 2014)

**TABLE 1: COMPARISON OF PROJECTION/RECORDS OVER TIME**

Table 1 benchmarks the 2016 ABS Census data against previous population projections published by the Queensland Government Statistician's Office and Doomadgee Aboriginal Shire Council (Planning Scheme). It is noted however that in 2017, Council population counts have identified a population of approximately 2,000 persons which exceeds the estimates in all published sources.

The Council projections forecast a population increase between 2011-16 of 12.1%, while Census recorded a 8.9% growth. Based on Queensland Government population projections for the Doomadgee local government area, the Doomadgee population will increase by 23.2% to 1,732 people by 2036.

The 2036 - 2041 population forecasts drawn from Queensland Government population statistics shows the population aged over 45 years of age increases by 28.1%, impacting future development requirements.

Aging populations drive demand for increased health care services to address more complex healthcare issues. Increases in community services and aged care facilities are also required to support an aging community. In particular, Graph 1 shows the increase the over 65 year age group which will require mobility accessible single storey or low set residential housing.

## HOUSING

Based on the 2016 Census, there were a total of 267 occupied and 5 unoccupied dwellings within the Doomadgee LGA. Table 2 provides a summary of key housing statistics.

ITEM	DETAIL
<b>DWELLING COUNT</b>	
Occupied	267
Unoccupied	21
<b>Total</b>	<b>288</b>
<b>NUMBER OF BEDROOMS</b>	
1 bedroom	3
2 bedrooms	57
3 bedrooms	134
4 or more bedrooms	54
Number of bedrooms not stated	27
Average number of bedrooms per dwelling	3
Average number of people per household	4.5
<b>TENURE</b>	
Rented	241
Other	3
Not stated	27

\*Please note that there are small random adjustments made to ABS data values to protect the confidentiality of data. These adjustments may cause the sum of rows or columns to differ by small amounts from table totals.

**TABLE 2: HOUSING CHARACTERISTICS DOOMADGEE**

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# 03 INFRASTRUCTURE REVIEW



The following section provides an overview of the nature and capacity of existing infrastructure servicing the township.

## WATER SUPPLY

Water supply infrastructure at Doomadgee comprises the following elements:

- Raw water source: Two separate raw water intakes are located on the Nicholson River, one adjacent to the airport and one adjacent to Wattle Street. The raw water sources are bores equipped with two submersible multistage SP46-5 borehole pumps. The raw water pumps have a combined capacity of 35 L/s
- Raw water rising main: 150 mm diameter raw water rising mains
- Water Treatment Plant (WTP) incorporating aeration, flocculation, clarification, filtration and disinfection: The aeration tower has a capacity of 20 – 25 L/s. Clarification and filtration is provided by two package plants which are operated in a duty/standby capacity. The newer plant has a capacity of 30 L/s and the original plant has a capacity of 25 L/s
- Potable water storage reservoir: Ground level reservoirs with a total storage capacity of 4 ML
- Booster pump station located at the reservoirs, containing the following pumps:
  - / Variable speed drive (VSD) pump set: 4 No. Hydro 2000 MPC-E 2 x CRE 90-2-2 11 kW (3 duty and 1 standby pump). The design duty point is 75 L/s at 26 m, which is serviced by 3 no. pumps at 96% (48 Hz)
  - / Jacking pump: CRE 20 – 03 4 kW
- A gravity feed reticulation system consisting of DN50 mm to DN200 mm gravity feed mains.

An average day demand of 600 L/EP/day has been adopted for Doomadgee. Existing water supply demands are outlined in Table 3.

DESCRIPTION	AVERAGE DAY (L/s)	PEAK DAY (L/s)	PEAK HOUR (L/s)
Residential Lots	13.89	31.25	62.50
Non-Residential Loads	1.89	4.26	8.51
<b>TOTAL</b>	<b>15.78</b>	<b>35.51</b>	<b>71.01</b>

**TABLE 3: EXISTING WATER SUPPLY DEMANDS**

## STORMWATER

The stormwater infrastructure network is an overland flow system which grades away from the river and discharges flows to the north of the town and a piped drainage network which discharges flows to the Nicholson River.

## ELECTRICITY & COMMUNICATIONS

The electricity network is an overhead supply to the property boundary. Communication services are provided within underground conduits.

## TRANSPORT

Doomadgee contains a network of bitumen sealed internal roads. Recent development has adopted the minimum requirements of the FNQROC Regional Development Manual.

## SEWERAGE

The original sewerage system for Doomadgee was a common effluent drainage scheme. The collection system consists of septic tanks, a network of 100 mm and 150 mm diameter effluent collection sewers and five sewerage pump stations. Details of the pump stations are provided in Table 4.

New areas in the community including the Marradgee Road and Ned Street expansions have been designed to operate as a traditional gravity system.

The treatment system comprises a series of five lagoons, which include two primary ponds, three secondary ponds and a bunded evaporation area. The treatment lagoons have the capacity to treat a population of 1,650 EP.

PUMP STATION	PUMP STATION CAPACITY	RISING MAIN DETAILS
Pump Station 1	14.3 L/s	100 mm diameter pressure main, discharges to pump station 2
Pump Station 2	20.3 L/s	150 mm diameter pressure main, discharges to pump station 4
Pump Station 3	6.7 L/s	100 mm diameter pressure main, discharges to pump station 4
Pump Station 4	27.3 L/s*	150 mm diameter pressure main, discharges to the STP. The Sewerage Upgrade design report (AECOM, 2003) recommended an upgrade to a 200 mm diameter main for 2013.
Pump Station 5	4.5 L/s single pump capacity	68 m long HDPE DN110 PE 100 SDR 9 (84.5 mm ID)

\* Design flow for pumps when pressure main upgraded to 200mm dia.

**TABLE 4: EXISTING SEWAGE PUMP STATIONS AND ASSOCIATED PRESSURE MAINS**

DESCRIPTION	AVERAGE DRY WEATHER FLOW (L/s)	PEAK WET WEATHER FLOW (L/s)
Residential Lots	6.25	31.25
Non-Residential Loads	0.79	3.95
<b>TOTAL</b>	<b>7.04</b>	<b>35.20</b>

**TABLE 5: EXISTING SEWERAGE FLOWS**

—

# 05 MASTER PLAN METHODOLOGY





The process to develop the master plan sought to balance community goals and aspirations with key social, economic and environmental factors. The intention was to produce a comprehensive framework for the growth and development of Doomadgee.

The adjacent infographic depicts the five stages of the master planning process undertaken for Doomadgee.



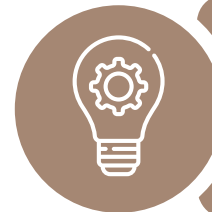
### Stage 1 - Planning Context

Analysis of the current State and local planning framework, supporting the development of opportunities and constraints for future land uses and development.



### Stage 2 - Workshop

A master planning workshop was held with participants from Council, DATSIP and AECOM. The workshop aimed to establish aspirations for future development in the community and inform the development of the Concept Plan.



### Stage 3 - Concept Plan

Based on the opportunities and constraints identified during the planning analysis and workshop, a concept plan identifying future land use patterns and opportunities was prepared for consultation.



### Stage 4 - Consultation

The Concept Plan was provided to Council for community consultation, where community members were invited to provide feedback on the settlement pattern and land uses proposed.



### Stage 5 - Final Master Plan

Through community consultation the concept plan was refined into the Final Master Plan. The Master Plan aims to guide the future growth and development on Doomadgee.

—

# 06 PLANNING REVIEW



## OVERVIEW

This chapter provides an overview of the following policies, plans and legislation which are relevant to the Doomadgee Master Plan:

- State
  - / Queensland State Planning Policy 2017
  - / Vegetation Management Act 1999
  - / Nature Conservation Act 1992
- Regional
  - / Gulf Regional Development Plan 2000
- Local
  - / Doomadgee Council Planning Scheme 2014.

## STATE PLANNING POLICY

The [State Planning Policy \(SPP\)](#) identifies State interests that must be reflected in all new Queensland Planning Schemes, ensuring that these interests are represented in development and land use decisions across Queensland. The State interests are grouped under five key themes:

- Liveable communities and housing
- Economic growth
- Environmental heritage
- Safety and resilience to hazards
- Infrastructure

At its time of preparation, the Doomadgee Planning Scheme 2014 appropriately integrated the State Planning Policy. Any future amendments to the planning scheme to align with this master plan would need to consider the current SPP.

## VEGETATION MANAGEMENT ACT 1999

The majority of land surrounding the township is mapped as Category B Regulated Vegetation which is regulated under the Vegetation Management Act 1999. The existing township is predominately within the Category X area. Clearing of vegetation within a Category X area does not require approval under the Vegetation Management Act 1999. A small portion of land to the south-east of the STP is mapped Category C Regulated Vegetation, high-value regrowth vegetation.

Vegetation surrounding the township area are predominately mapped as a Least Concern Regional Ecosystems. Appendix C contains a copy of regional ecosystem mapping for the township and surrounding area. Clearing vegetation in these areas would generally not be supported unless the land is located within an urban zone.

## NATURE CONSERVATION ACT 1992

The protected plants flora survey trigger map identifies high risk areas under the Nature Conservation Act 1992 which are likely to contain endangered, vulnerable or near threatened flora species. A flora survey is required prior to any vegetation clearing in mapped high risk areas.

The existing township, airport, marine facilities and landfill are not located within a high risk area.

The rest of the island's hill slopes are mapped within a high risk area. Appendix C contains a copy of the flora survey trigger map for Doomadgee.

## GULF REGIONAL DEVELOPMENT PLAN

Doomadgee is in the Gulf region, and is subject to the Gulf Development Regional Plan (the Regional Plan) 2000. The plan provides direction for land use and development with a planning horizon of 2020. The plan aims to identify and maximise the opportunities and resources to secure the future of the region and provide adequate, appropriate and coordinated service delivery for the Council areas within the region and support the implementation of the local Planning Scheme.

The opportunities available to Doomadgee include :

- Training a significant number of community members to undertake environmental and natural resource management, and Indigenous healthcare
- Protect, manage and leverage places and landscapes of cultural heritage for eco and cultural tourism opportunities
- Achieve representation of all interests in the development of the regional economy
- Achieve sustainable industries owned and operated by local people (Tourism, arts and craft, construction)
- Enhancing the liveability of the townships to increase attraction and retention of workers and families
- Improving the security and reliability of community water supplies
- Regionally significant projects providing social infrastructure supporting resident and non-resident populations.

The challenges impacting Doomadgee within the regional plan include:

- High cost of living due to population size and reliance on imports
- Lack of public transportation
- Remoteness, limited infrastructure and access to markets
- Securing and maintaining basic infrastructure for the community
- Maintaining viable communities with employment opportunities
- Low health and education standards and outcomes
- Preparing and implementing a community plans and planning scheme
- Absence of secure individual title
- Climatic conditions and seasonal water availability.

## PLANNING SCHEME

Development within the Doomadgee Aboriginal Shire Council (DASC) Local Government Area (LGA) is subject to the provisions of the Doomadgee Planning Scheme 2014. The scheme, adopted in November 2014, was prepared in accordance with the Queensland Planning Provisions (QPP) version 3.0 – 25 October 2013 and reflects the State Interests outlined in the State Planning Policy (SPP).

The preferred land use pattern for the township and surrounding areas is expressed in the zone map (Figure 6) which largely reflects the existing land use pattern with the following characteristics:

- Council facilities/office and various utility uses located in the township core along Goodeedawa Road
- Commercial uses (i.e. store, roadhouse) located at south-west corner and northern fringe of township
- Airport and sewage treatment facility located to the west of township
- Various areas of open space
- Residential uses distributed throughout township.

It is noted that three areas (south of Doomadgee Road and west of Marradgee Road) are identified as "emerging community" zone. These are areas which may be suitable for residential / urban development in the future.

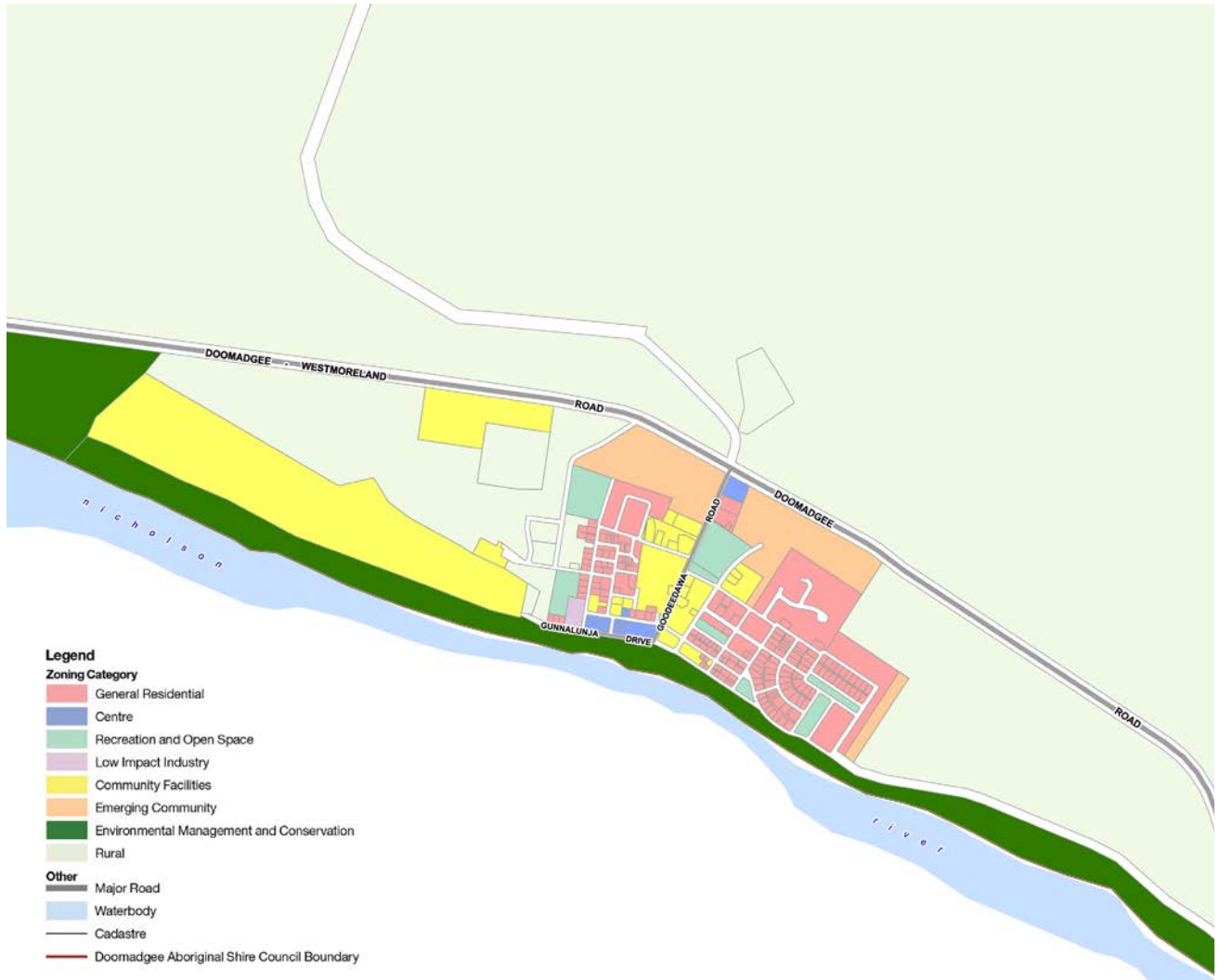


FIGURE 6: ZONING PLAN



## OVERLAYS

The Planning Scheme includes a range of overlay maps which highlight particular built form, environmental and physical matters which may affect development. These include:

- Airport Environs Overlay
- Biodiversity Areas Overlay
- Bushfire Hazard Overlay
- Coastal Hazard Area Overlay
- Flood Hazard Overlay
- Stock Route Overlay.

These overlays have effect at a development assessment level by triggering different levels of assessment and assessment criteria (codes). The following sections described the extent of each overlay and implications for the master plan.

### Airport Environs Overlay

The entire township area is within the airspace for Doomadgee Airport (Figure 7). Building height restrictions ranging from 8.5m to 12.5m apply along a corridor extending east from the runway. These restrictions would not affect development of low density (detached houses) or low-medium density (units/townhouses) residential uses.

### Stock Route Overlay

Doomadgee Road is mapped as a stock route, with a buffer area extending 50m to the north and south. The overlay requires buildings for residential and accommodation activities to be set back 50m from the road frontage.

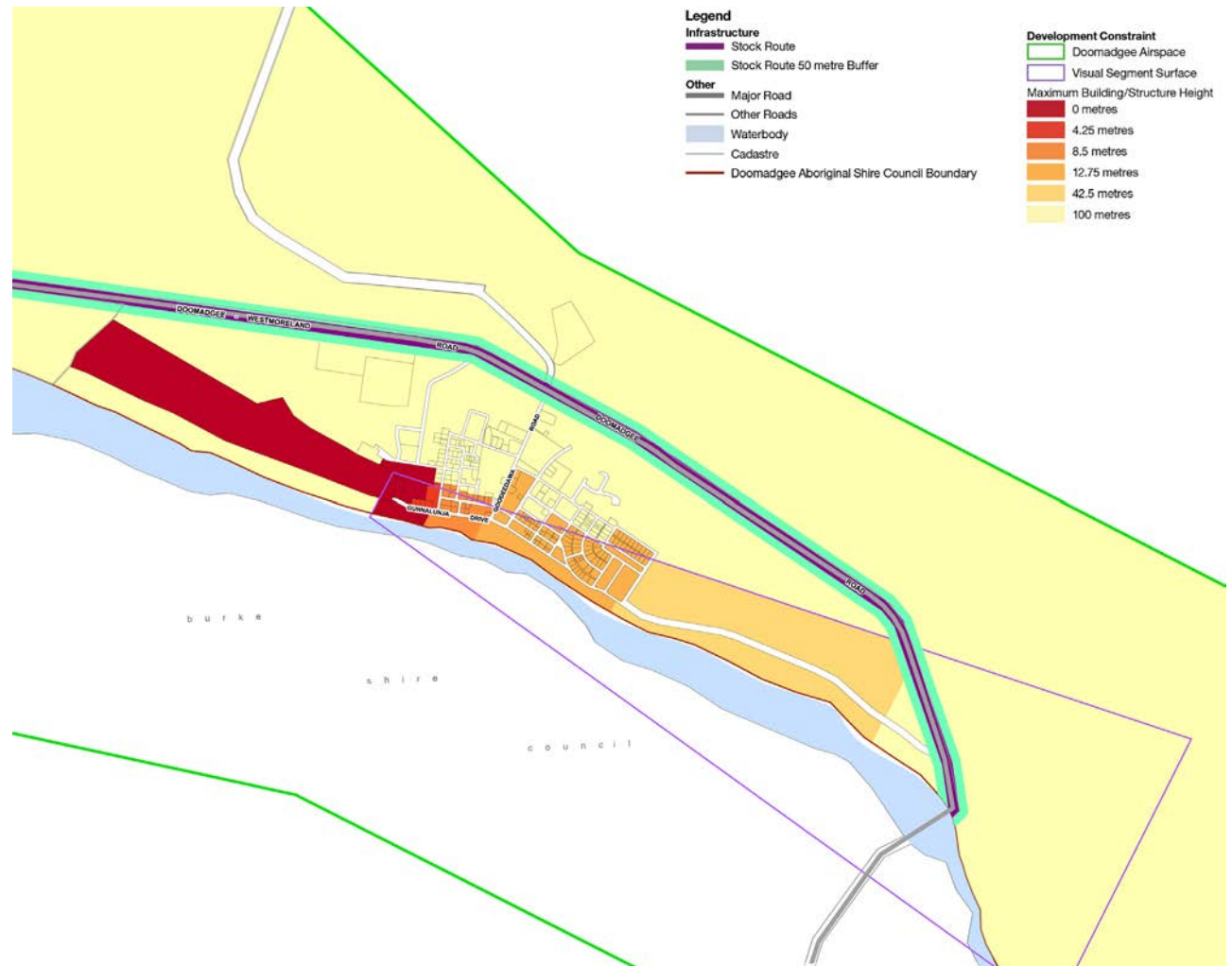


FIGURE 7: AIRPORT ENVIRONS OVERLAY AND STOCK ROUTE OVERLAY

**Biodiversity Areas Overlay**

Most undeveloped land surrounding the township is mapped as containing regulated vegetation (Figure 8). Development and clearing within these areas may trigger a higher level of assessment and require ecological assessment. For the purposes of master planning, regulated vegetation has been assumed to not represent a significant physical constraint to future development and expansion, particularly as this overlay includes areas of land zoned as Emerging Community. The overlay also includes wetland and waterway areas which are either localised to the banks of the Nicholson River or do not affect the township area.

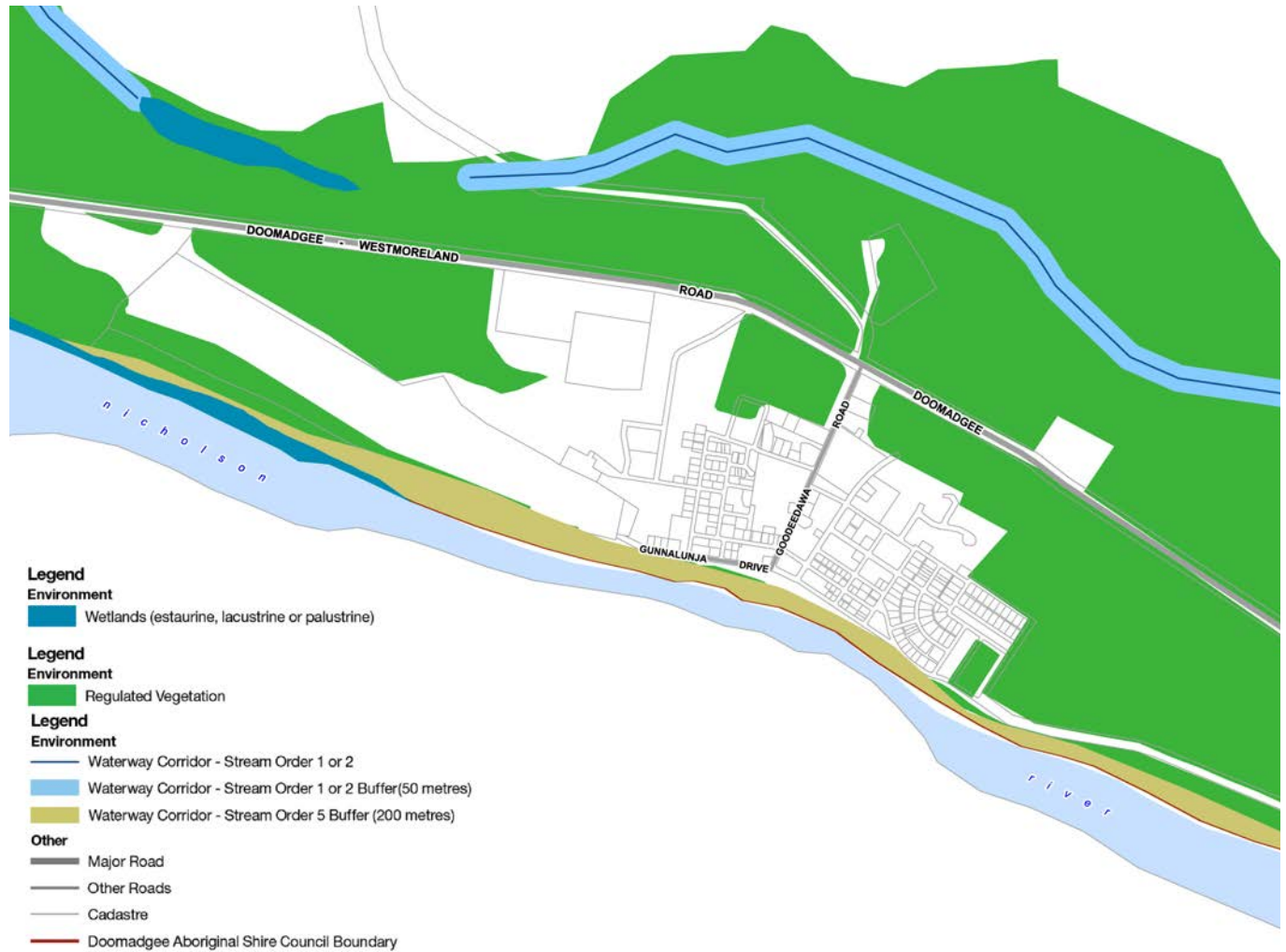


FIGURE 8: BIODIVERSITY AREAS OVERLAY

### Bushfire Hazard Overlay

The township is surrounded by mapped areas of medium bushfire hazard and the potential bushfire impact buffer (Figure 9). Development in areas subject to this overlay would need to address bushfire hazard via appropriate design responses (i.e. firebreaks) and management plans. These future development requirements are not considered to be a constraint for the purposes of master planning.

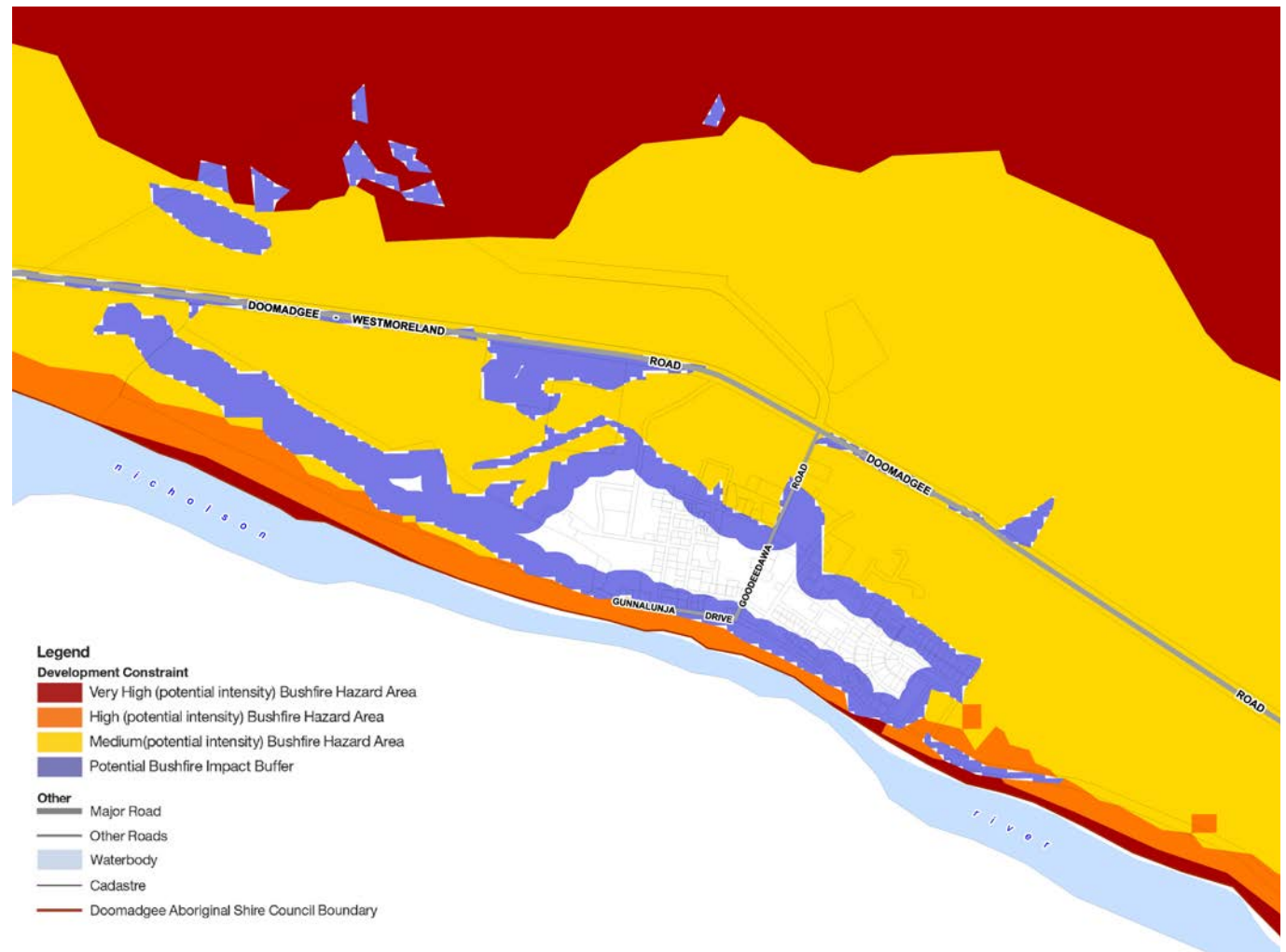


FIGURE 9: BUSHFIRE HAZARD OVERLAY (EXTRACT)

**Flood Hazard Overlay**

Flood hazard within and surrounding the township area is generally mapped as low (1% AEP) (Figure 10). The area to the east and north-east are not mapped as being subject to flood hazard. Whilst flooding is not an absolute barrier for the purposes of master planning, development in areas subject to mapped flood inundation will likely require earthworks to achieve suitable habitable floor levels and drainage characteristics.

**Coastal Hazard Area Overlay**

The coastal hazard overlay does not apply to the township area.

**SUMMARY**

The range of overlays, whilst relevant to future detailed design and development assessment, are not a significant constraining factor for the purposes of master planning.

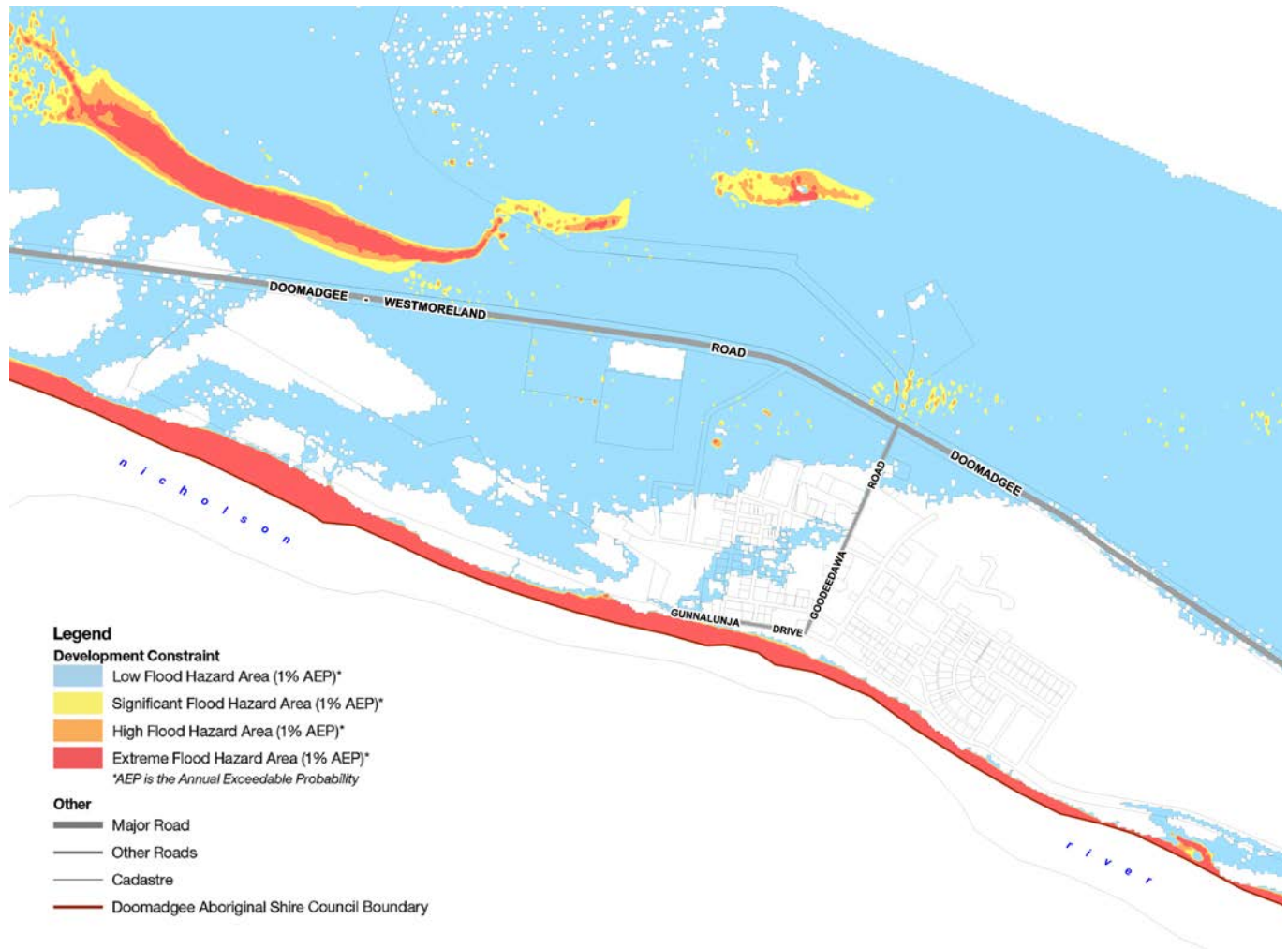


FIGURE 10: FLOOD HAZARD OVERLAY



# 07 CLIMATE CHANGE AND RESILIENCE



## CLIMATE CHANGE & PLANNING

Climate change is now a key consideration when undertaking community planning, with climate adaptation strategies common place for Queensland communities. The increased risk of natural hazards including bush fires, drought, flood and changed precipitation patterns needs consideration when planning for the future vitality and safety of Queensland communities.

The Queensland Government has developed two key strategies that identify the risks that climate change poses to Queensland communities including:

- Queensland Climate Transition Strategy
- Resilient Queensland 2018-2021.

### Queensland Climate Transition Strategy

The [Queensland Climate Transition Strategy](#) identifies the Queensland Government’s commitment to addressing and mitigating climate change risks for Queensland. The strategy outlines three climate change commitments as follows:

- 50% renewable energy for Queensland by 2030
- Zero net emissions by 2050
- Interim emissions reduction target of 30% below 2005 levels by 2030.

The actions associated with achieving each of the commitments above are categorised into three pathways as shown in Figure 12. Pathway 3 has bearing on the master planning process for Doomadgee. Achieving the Strategy’s goals at a regional community level hinges on empowering local governments to enact the actions outlined in Figure 13.

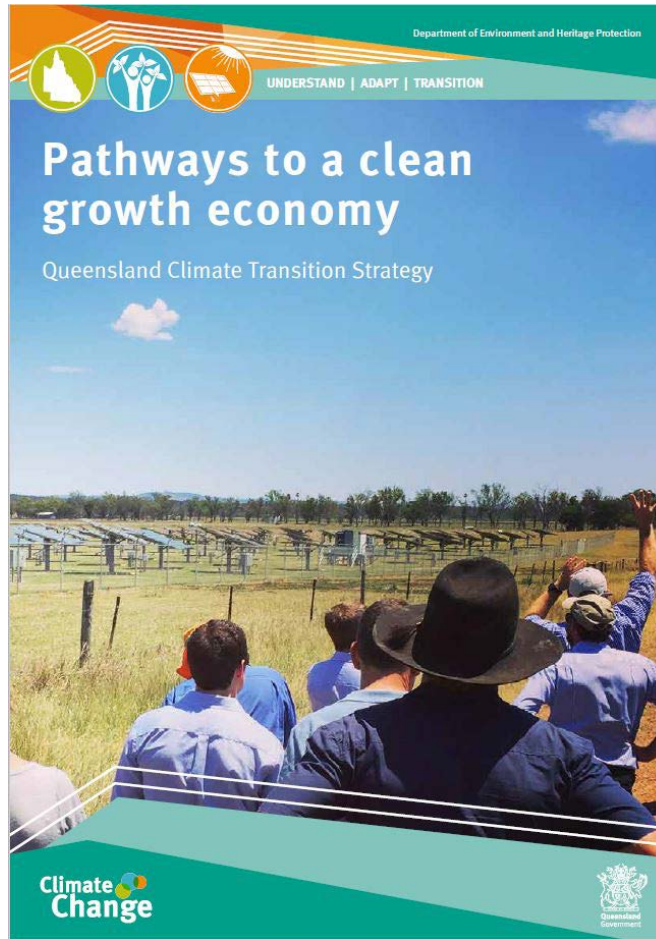


FIGURE 11: QUEENSLAND CLIMATE TRANSITION STRATEGY



FIGURE 12: QUEENSLAND CLIMATE TRANSITION STRATEGY - PATHWAYS

## Response 5

### Support Queensland communities to take action

#### Action

5.1	Build leadership capacity within communities to develop place-based climate transition roadmaps
5.2	Our Transition—provide tools, data and financial support for communities
5.3	Zero net pledges and Talking Transition program
5.4	Decarbonise remote communities
5.5	Work with local governments to build climate transition capacity

FIGURE 13: QUEENSLAND CLIMATE TRANSITION STRATEGY - PATHWAY 3, RESPONSE 5 ACTIONS

### Resilient Queensland 2018-21

The [Queensland Strategy for Disaster Resilience 2017](#), originally developed in 2014, was updated in 2017 to reflect international best practice on climate change risk and delivering a comprehensive, all-hazards approach to mitigating risk and building disaster resilience in Queensland. The strategy provides an overarching framework to achieve its four key objectives:

- Queenslanders understand their disaster risk
- Strengthened disaster risk management
- Queenslanders are invested in disaster risk reduction
- There is a continuous improvement in disaster preparedness, response and recovery.

The aim of the strategy is to build Queensland's disaster resilience through a collaborative whole of government approach to disaster resilience that is regionally coordinated, locally led and supported by state resources.

[Resilient Queensland 2018-21](#) provides a set of actions aligned with the Queensland Strategy for Disaster Resilience 2017. The actions relevant to local governments include:

- Contribute to the development of local and regional resilience and recovery plans
- Talk to the Queensland Government about developing a community resilience assessment and a prioritised action plan.

The full set of actions associated with the strategy should be reviewed when considering implementation of this master plan. The strategy is included in Appendix D.



**FIGURE 14: RESILIENT QUEENSLAND 2018-21 DRIVERS FOR DISASTER RESILIENCE**

Source: Queensland Government, 2018. *Resilient QUEENSLAND 2018-21 Delivering the Queensland Strategy for Disaster Resilience*



**FIGURE 15: RESILIENT QUEENSLAND 2018-21 DRIVERS FOR DISASTER RESILIENCE**

Source: Queensland Government, 2018. *Resilient QUEENSLAND 2018-21 Delivering the Queensland Strategy for Disaster Resilience: SUMMARY, May 2018*



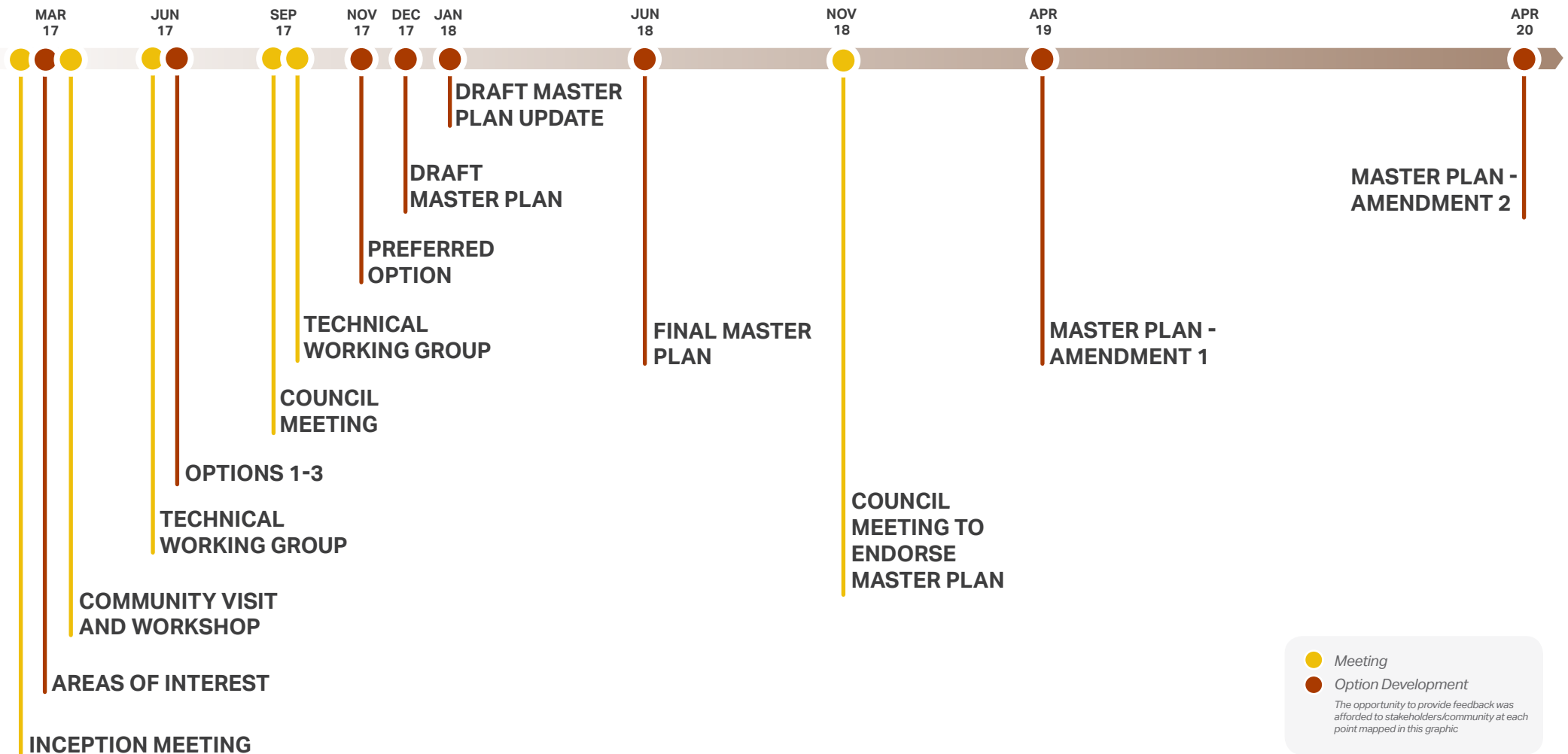
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07 **STAKEHOLDER  
CONSULTATION**



## OVERVIEW

Development of the master plan has been informed by consultation with community stakeholders. The below chart outlines the phases of engagement and concept development for the Doomadgee Master Plan.



Development of the master plan has been guided by ongoing consultation with community stakeholders. Table 6 provides an overview of consultation activities for the project.

DATE	LOCATION	PARTICIPANTS	DETAILS
01.03.2017	DASC Cairns Office	Cr Edric Walden (Mayor), Cr Jason Ned (Deputy Mayor), Cr Tony Chong, Cr Sharrayne Foster, Cr Dean Jupiter, Lothar Siebert (CEO), Garry Jeffries (Director of Engineering), Colleen Golledge (DATSIP), Jeremy Kingsford (DATSIP), James Jentz (AECOM), Brian Gibbs (AECOM)	Inception meeting to discuss the purpose of the project, limitations and identification of potential areas and issues for further investigation.
23.03.2017	DASC Doomadgee Office	Cr Edric Walden (Mayor), Cr Tony Chong, Cr Dean Jupiter, Garry Jeffries (Director of Engineering), Colleen Golledge (DATSIP), Brian Gibbs (AECOM)	Follow up meeting and site visit to clarify sites for detailed investigation and development of options.
29.06.2017	DASC Doomadgee Office	Cr Edric Walden (Mayor), Colleen Golledge (DATSIP), Cr Jason Ned (Deputy Mayor), Lothar Siebert, CEO, Garry Jeffries, Director of Engineering, Robert Zigterman (DATSIP)	Technical Working Group (TWG) meeting. Three (3) concept options presented to Council for consideration.
20.09.2017	DASC Doomadgee Office	Full Council (Resolution No 4-09/17 Moved - Cr Tony Chong Seconded - Cr Jason Ned)	That Council accepts the final concept drawings (Modified Option 3 with markups) as provided by DATSIP, furthermore Council approve of DATSIP to enter into the next phase (engineering design and costings) of the project. Carried
28.09.2017	DATSIP Cairns Office	Lothar Siebert, CEO, Garry Jeffries, Director of Engineering, Colleen Golledge (DATSIP)	Technical Working Group (TWG) meeting.

TABLE 6: PROJECT MEETINGS

## KEY ISSUES

Key issues identified during the stakeholder engagement process of relevance to the project include:

- Housing
  - / There is likely to be continued strong demand for housing, evidenced by existing overcrowding
- Industrial/commercial uses
  - / Acknowledged that certain uses in the town centre (workshops, depots and power generation) are not ideal in the long term
  - / Committed plans exist to relocate certain uses (Council depot and MyPathways) to land north of the airport
- Public open space / recreation
  - / Township has a combination of formal and informal public open space
  - / Potential opportunities to create a youth open space activity area (at existing bmx track) and potentially develop a children's water-play area
- Public health
  - / Standing water from various sources cause mosquito infestations and this has a public health impact
  - / Odour from sewage treatment ponds also an issue under certain weather conditions (south-easterly winds)
- Native Title and cultural heritage
  - / Urban expansion to the east of the township would be limited by the Native Title determination boundary
  - / Ultimate consent for new development would be subject to cultural heritage clearance by applicable Traditional Owners.

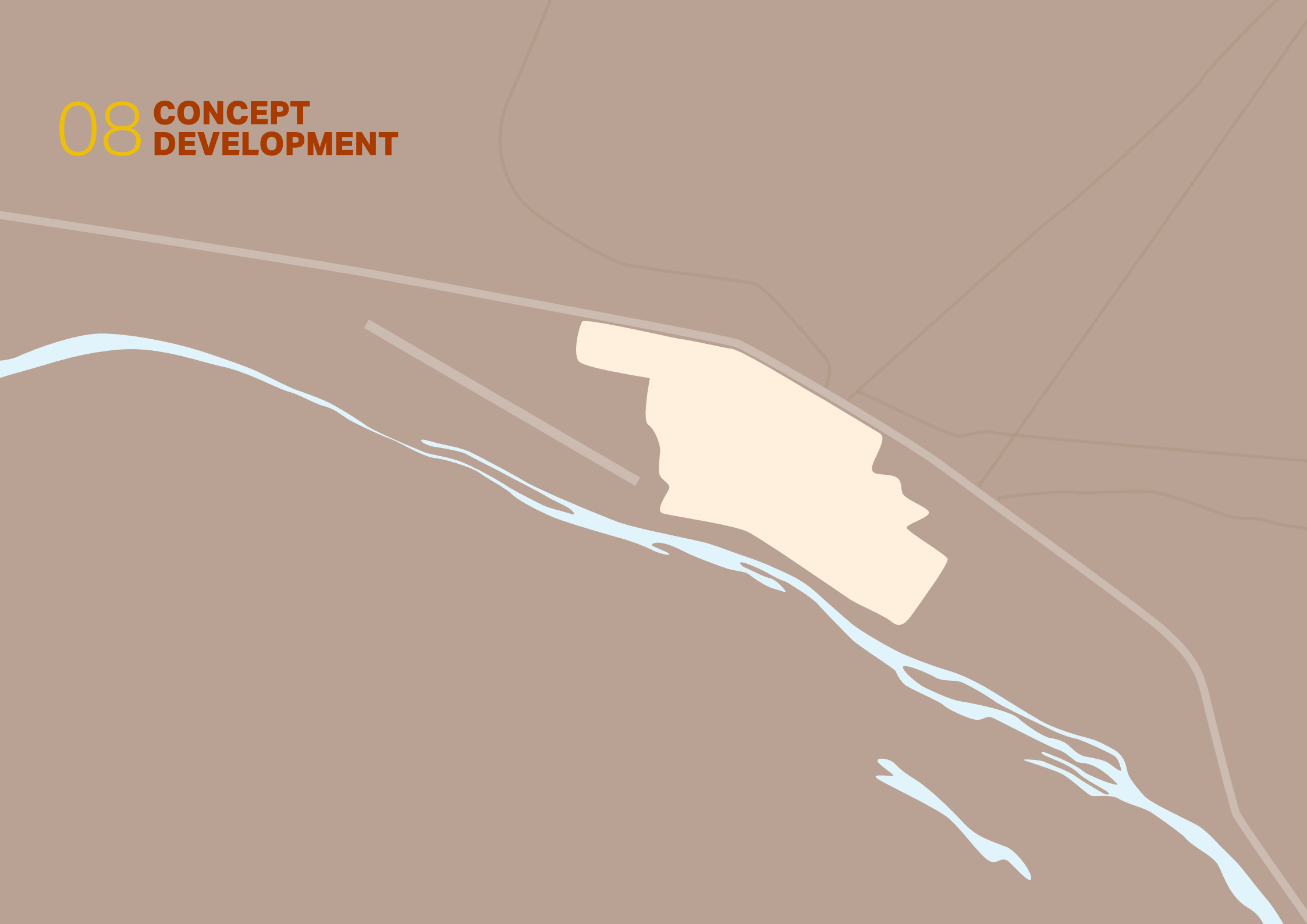
## ONGOING DEVELOPMENT

Following completion of the initial master plan document and preferred option, Council and stakeholders identified a number of further modifications which are described in Section 11, including:

- Addition of 3<sup>rd</sup> potential waterpark site between the PCYC and Roadhouse
- Community hall located adjacent to the Council building
- Replacement of the current sewage treatment plant with a mechanical plant to the north-east of town
- Provision for driveway access to Ergon Solar Farm.



**08** CONCEPT  
DEVELOPMENT



As part of the master planning process, it is also important to understand how Doomadgee functions now, and in the future, within the broader Gulf region.

To facilitate discussion and engagement with Council and community stakeholders an initial “areas of interest” figure (Figure 16) was prepared based on the initial engagement with Council and DATSIP representatives. Further detail regarding this initial concept is provided in Section 07.

Key questions which will influence the future planning and development on Doomadgee therefore include:

- What kind of recreation facilities would youth and families use?
- Are industrial uses in appropriate long term locations?
- Is there sufficient industrial land?
- Are current houses overcrowded and meet resident needs?
- Is room required for any other government service providers?
- Is flooding impacting residential dwellings?

### AREAS OF INTEREST

Following the initial project meeting on the 1st of March 2017, a range of areas of interest were identified. These areas, along with a summary of indicative land uses and yields were then presented to Council stakeholders on the 23rd of March 2017 (refer Figure 16).

Following review of the range of potential areas, it was agreed by stakeholders in attendance on the 23rd of March 2017 that further investigations should focus on the following:

- Extension of residential subdivisions north and east from Marradgee Road
- Infill of existing subdivision north of Cattle Street
- Industrial precinct to the east of the solar farm
- Caravan park adjacent to the existing roadhouse
- Children’s water-park / water-play area either south-east of the shop or adjacent to the water treatment site.

Subsequent feedback from Council indicated a desire for land to be identified for a future social club to the north of Doomadgee Road.

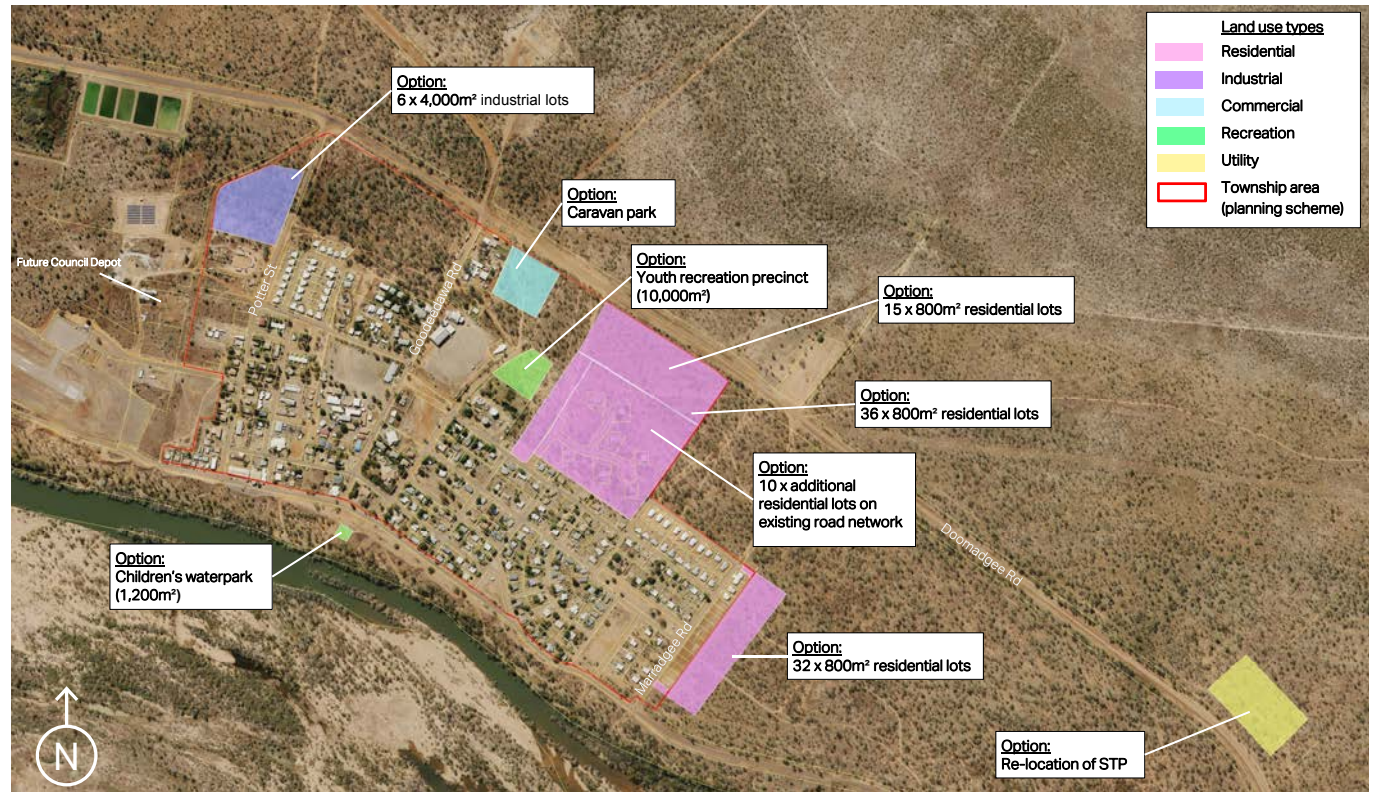


FIGURE 16: AREAS OF INTEREST IDENTIFIED ON 1 MARCH 2017

200m 400m



## OVERVIEW

Three (3) concept options were developed which were presented to Council for consideration on 30 June 2017. Common features between all options include:

- Caravan Park – located adjacent to the Doomadgee Roadhouse, comprising the following features:
  - / 1 x caretaker residence/office
  - / 1 x amenities block
  - / 8 x powered slab sites
  - / 10 x grassed camp sites
- Social Club – approximately 2ha site located north-west of Doomadgee Roadhouse

- Recreation precincts

- / Waterplay park (Site 1) and BMX facility located opposite PCYC and adjacent to Water Treatment Plant. Waterpark features include a playground on 200m<sup>2</sup> pad, 800m<sup>2</sup> ground-level fountain and 50m<sup>2</sup> change room / amenities block. BMX facility includes 350m track, starters platform/ ramp and 90m<sup>2</sup> clubhouse/amenities building
- / Waterplay park (Site 2) and pedestrian/cyclist link located between Nicholson River and Gunnalunja Drive. Features include a playground on 200m<sup>2</sup> pad, 800m<sup>2</sup> ground-level fountain and 50m<sup>2</sup> change room / amenities block.

The following sections describe the further features of each option.



FIGURE 17: WATERPLAY PARK (SITE 1) AND BMX FACILITY



FIGURE 18: WATERPLAY PARK (SITE 2) - NICHOLSON RIVER



## OPTION 1

Key precincts and features include:

- Industrial Precinct – eleven (11) industrial lots located to the north of the Rodeo Ground, bounded by Potter Street and Pascoe Street. The industrial lots range in size from 2,000m<sup>2</sup> to 4,700m<sup>2</sup> and each have at least one frontage to an existing road corridor
- Cattle Street Precinct – combination of infill (serviced) and greenfield land between Cattle Street and Doomadgee Road. Features include:
  - / 2 x 3,000m<sup>2</sup> commercial /office lots
  - / 11 x infill residential lots ranging in size from 1,000m<sup>2</sup> to 2,200m<sup>2</sup>. Lot boundaries and sizes generally determined by existing road corridor and cadastral boundaries.
  - / 57 x residential lots ranging in size from 700m<sup>2</sup> to 1,500m<sup>2</sup> and two areas of parkland/open space. New road connections provided from Cattle Street through to Doomadgee Road
- Marradgee Road Precinct – western extension of recent Marradgee Road subdivision. Features include:
  - / 62 x 800m<sup>2</sup> residential lots
  - / Three areas of parkland/open space totalling approximately 15,200m<sup>2</sup>
  - / Extension of road network (ring road around subdivision) with connections to Marradgee Road and Gunnalunja Drive.

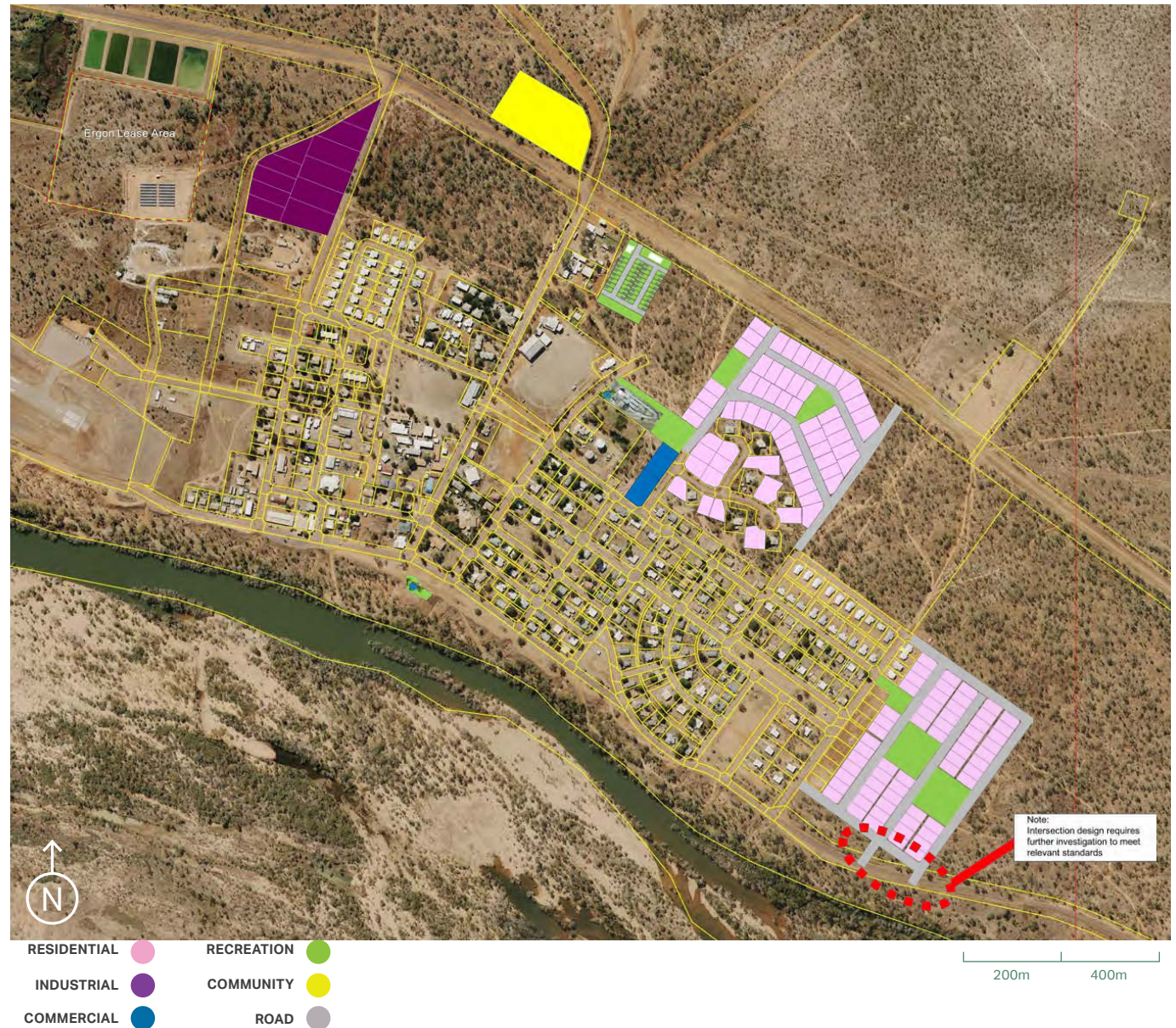


FIGURE 19: OPTION 1



## OPTION 2

Key precincts and features include:

- Industrial Precinct – 24 industrial lots located to the north and west of the Rodeo Ground, bounded by Potter Street and the Ergon solar farm lease. The industrial lots range in size from 2,000m<sup>2</sup> to 5,200m<sup>2</sup> and each have at least one frontage to an existing road corridor. The layout retains the existing road network (Potter Street and Pascoe Street)
- Cattle Street Precinct – infill (serviced) land north of Cattle Street comprising:
  - / 18 x infill residential lots ranging in size from 1,000m<sup>2</sup> to 2,200m<sup>2</sup>. Lot boundaries and sizes generally determined by existing road corridor and cadastral boundaries
- Marradgee Road Precinct – western extension of recent Marradgee Road subdivision. Features include:
  - / 50 x 800m<sup>2</sup> residential lots
  - / Three areas of parkland/open space totalling approximately 12,000m<sup>2</sup>
  - / Extension of road network (ring road around subdivision) with connections to Marradgee Road and Gunnalunja Drive.

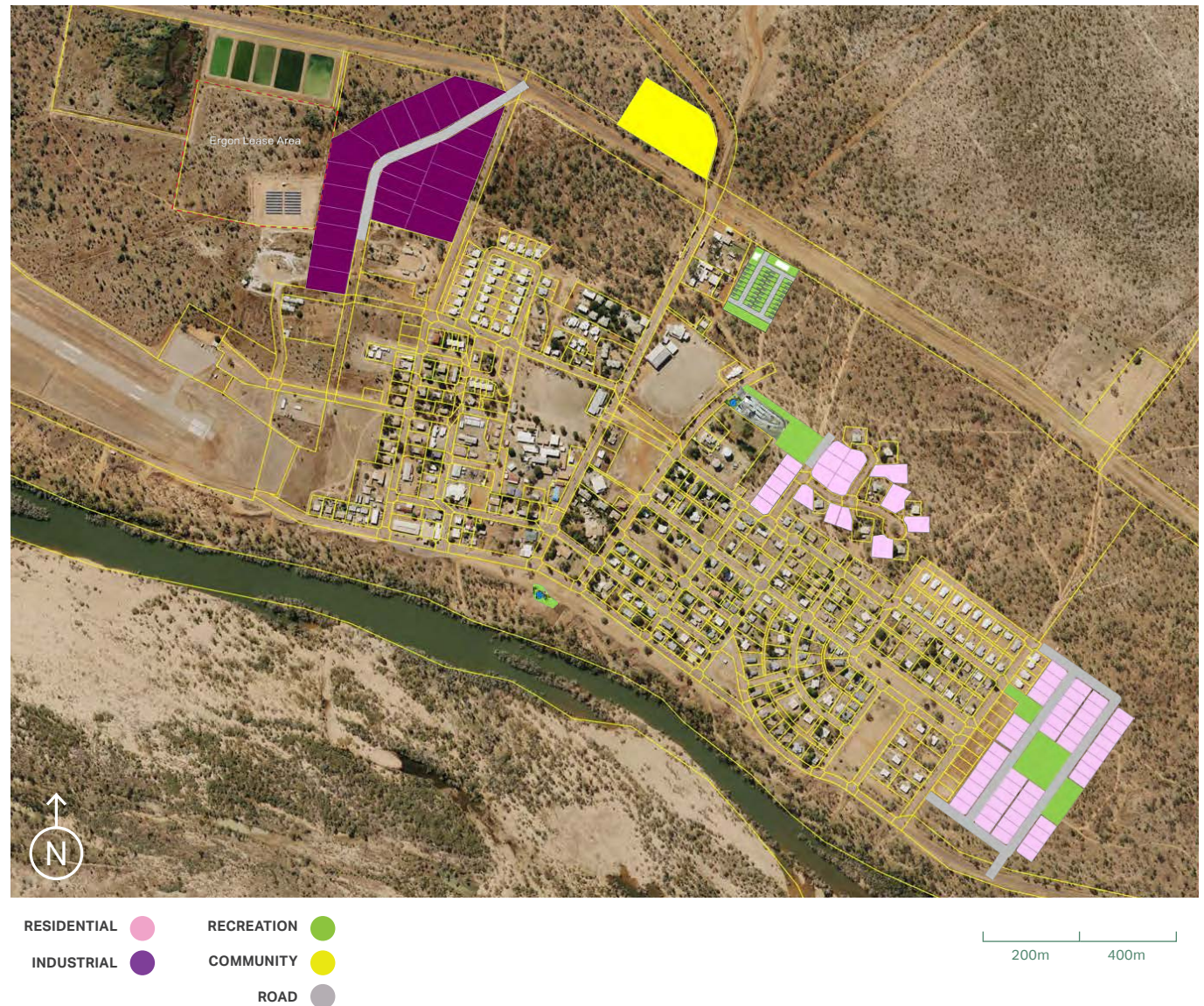


FIGURE 20: OPTION 2



### OPTION 3

Key precincts and features include:

- Industrial Precinct – 25 industrial lots located to the north and west of the Rodeo Ground, bounded by Potter Street and the Ergon solar farm lease. The industrial lots range in size from 2,000m<sup>2</sup> to 5,300m<sup>2</sup>. The layout modifies the road network and realigns the Pascoe Street connection through to Doomadgee Road
- Cattle Street Precinct – combination of infill (served) land north of Cattle Street. Features include:
  - / 2 x 3,000m<sup>2</sup> commercial /office lots
  - / 11 x infill residential lots ranging in size from 1,000m<sup>2</sup> to 2,200m<sup>2</sup>. Lot boundaries and sizes generally determined by existing road corridor and cadastral boundaries. New road connections provided from Cattle Street through to Doomadgee Road
- Ned Street Precinct – 10 residential lots opposite recent subdivision north of Ned Street
- Marradgee Road Precinct – western extension of recent Marradgee Road subdivision. Features include:
  - / 60 x 800m<sup>2</sup> residential lots
  - / 2 x 2,400m<sup>2</sup> commercial lots
  - / Three areas of parkland/open space totalling approximately 12,000m<sup>2</sup>
  - / Extension of road network (ring road around subdivision) with connections to Marradgee Road and Gunnalunja Drive.

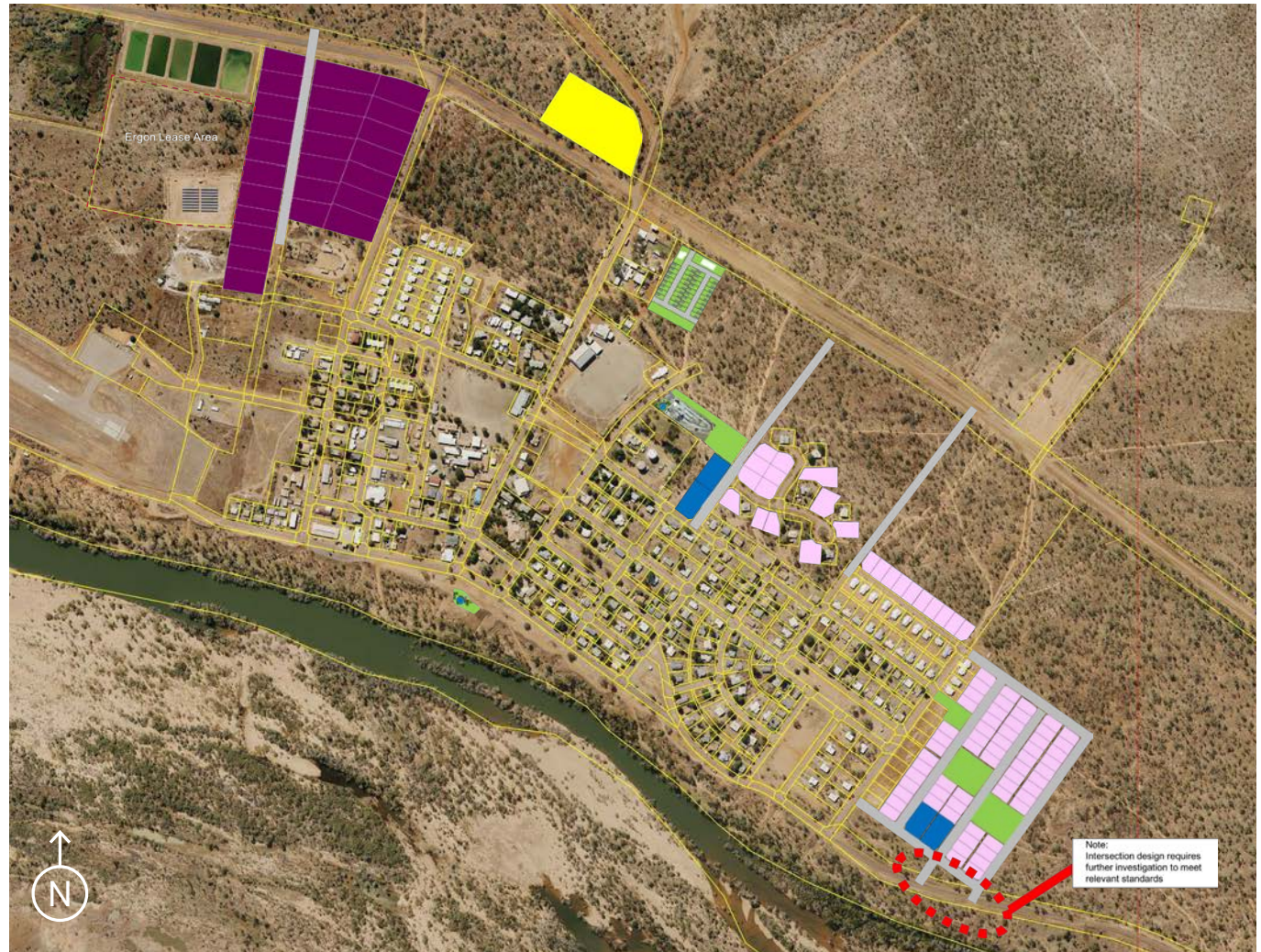


FIGURE 21: OPTION 3



# 09 PREFERRED OPTION



## OVERVIEW

Options 1-3 were considered by the Mayor and Councillors who sought feedback from members of the community. A preferred option was then identified by Council, largely based on Option 3, with the following modifications:

- Consolidation of future commercial land uses to the disused football field located between Wattle Street and Daylight Street
- Areas previously identified as commercial land use in the Marradgee Road Precinct and north of Cattle Street changed to residential land use
- Addition of second row of housing within the Ned Street Precinct

The preferred option includes the following areas features:

-  **1** Marradgee Road Precinct: 66 x 800m<sup>2</sup> lots to the east of Marradgee Road and three parkland areas totalling 12,000m<sup>2</sup>
-  **2** Ned Street Precinct: 20 x 800m<sup>2</sup> lots between Ned Street and Doomadgee Road
-  **3** Cattle Street Precinct: 19 x infill lots ranging in size from 800m<sup>2</sup> to 2,000m<sup>2</sup> north of Cattle Street
-  **1** Industrial precinct: 25 lots, ranging in size from 2,000m<sup>2</sup> to 5,300m<sup>2</sup>, located north-west of the existing rodeo ground. Precinct includes new road infrastructure servicing the industrial precinct and providing a connection to Doomadgee Road
-  **1** Commercial precinct: Located on the disused football field between Wattle and Daylight Streets in the south eastern section of town
-  **1** Caravan park located adjacent to Doomadgee Roadhouse
-  **1** Community facility site to north of Doomadgee Roadhouse
-  **2** Water and sewage treatment upgrades
-  **1** BMX facility and waterplay area (Site 1) adjacent to the Cattle Street precinct and water treatment plant
-  **2** A new waterplay facility (Site 2) on the banks of the Nicholson River, including new pedestrian and cyclist link

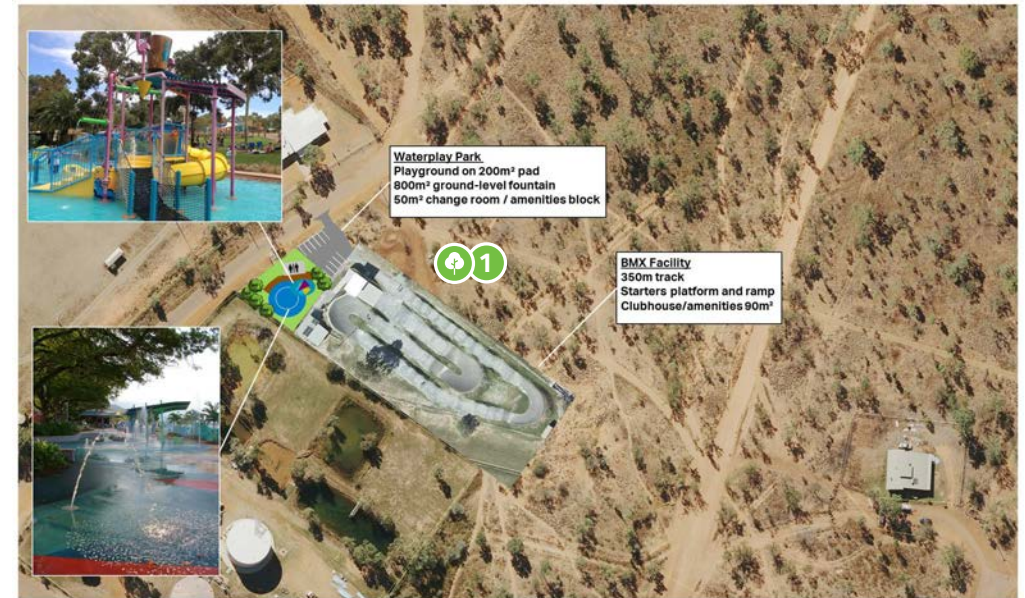
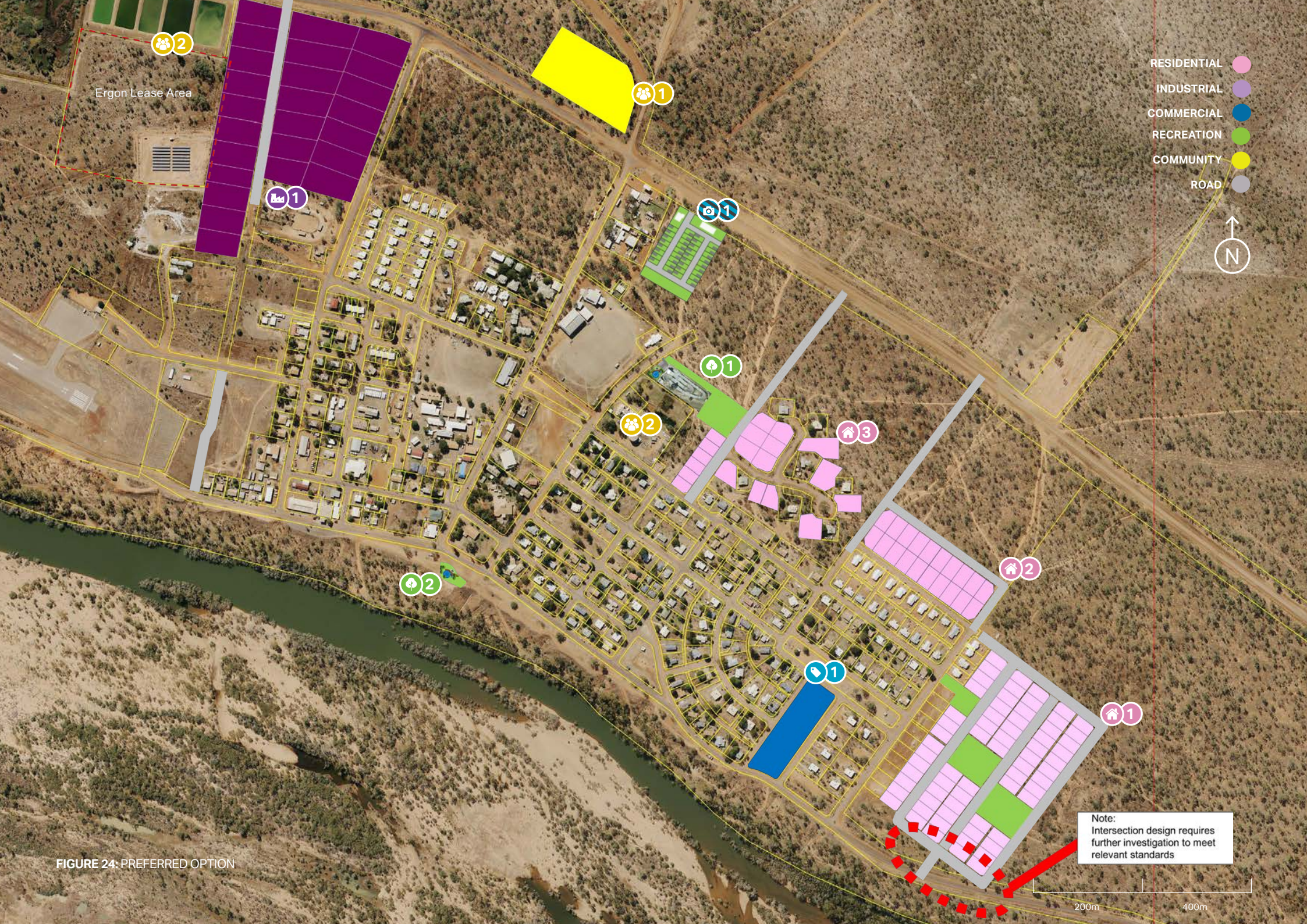


FIGURE 22: WATERPLAY PARK (SITE 1) AND BMX FACILITY



FIGURE 23: WATERPLAY PARK (SITE 2) - NICHOLSON RIVER





- RESIDENTIAL ●
- INDUSTRIAL ●
- COMMERCIAL ●
- RECREATION ●
- COMMUNITY ●
- ROAD ●



Note:  
Intersection design requires  
further investigation to meet  
relevant standards

200m 400m

FIGURE 24: PREFERRED OPTION



# 10 INFRASTRUCTURE REQUIREMENTS



## OVERVIEW

This section provides an overview of infrastructure requirements and cost for each component of the master plan to create sites which are "shovel ready" (excludes internal demolition, construction and service connections).

## WATER SUPPLY

The aeration tower at the water treatment plant, raw water source intake and associated rising mains, storage reservoirs and the booster pump station will require an upgrade to accommodate the range of development areas identified in the master plan. The existing package treatment plant has sufficient capacity and does not require upgrade if the two units can be operated simultaneously. Alternatively, the use of demand management to reduce the water demands may limit the need for trunk infrastructure upgrades. Aside from the proposed commercial precinct, additional water mains ranging from 100 mm to 150 mm diameter will be required to service the range of development areas.

## ROADS

The existing road network generally provides access to most areas identified in the master plan. New roads are limited to the Marradgee Road subdivision, Ned Street subdivision, Industrial precinct and a connection between Cantle Street and Doomadgee Road. Minimum requirements of the FNQROC Regional Development Manual have been assumed for costing purposes.

## SEWERAGE

The existing sewage treatment plant will require upgrade to accommodate the proposed master plan. A mechanical plant has been assumed for costing purposes. The existing five sewerage pump stations and the pressure main between pump stations 1 and 2 will also require upgrade to accommodate the proposed master plan.

The Marradgee Road subdivision, Ned Street subdivision, Industrial Precinct, BMX facility and water play park will require 150 mm diameter gravity sewers. The Marradgee Road subdivision and the Industrial precinct both require a new sewerage pump station and associated rising mains. The caravan park and community facility site require low pressure pump station units and small diameter rising mains.

## EARTHWORKS

The Doomadgee community is located in a very flat area. Earthworks are required at the Marradgee Road subdivision, Ned Street subdivision and the Industrial Precinct to allow minimum grading of sewerage and stormwater infrastructure. The proposed community facility site and Caravan Park are located within the low flood hazard area. Filling within a nominal building footprint has been assumed for the community facility site. No filling has been applied to the Caravan Park site as the site can be evacuated in the event of a flood event.

## STORMWATER

Stormwater infrastructure will be required for the Marradgee Road subdivision, Ned Street subdivision and the Industrial Precinct. Infrastructure will include stormwater pipes, kerb and channel and drainage swales. The remaining streets will utilise the existing overland flow paths.

## ELECTRICAL AND COMMUNICATIONS

Pits and conduits for communication services are required for any sites located on new roads. The length of conduit has been assumed to be generally the same as the length of proposed new water mains. Overhead electricity supply lines and new poles will be required for any sites located on new roads. Poles are required every 80 m and at changes in direction. The same alignment has been assumed for communications and electrical services.

Figure 25 and Tables 7-8 provide an overview of proposed infrastructure and costs for the key components of the master plan. Appendix B contains an infrastructure assessment which describes existing network characteristics, modelling approach, design specifications and design assumptions for each component of the master plan.



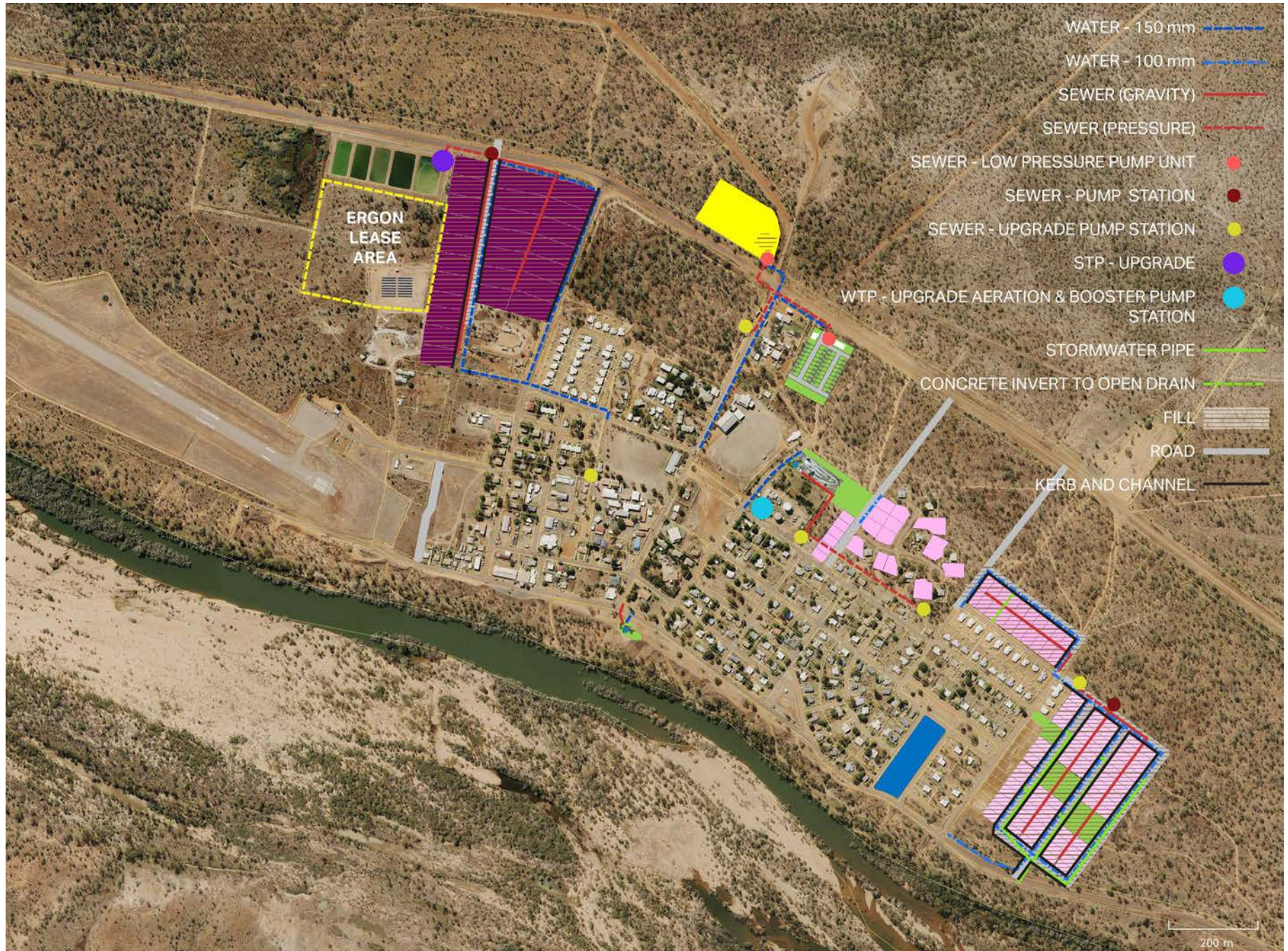








FIGURE 25: INFRASTRUCTURE REQUIREMENTS



TABLE 7: OPINION OF PROBABLE CONSTRUCTION COSTS - RESIDENTIAL, INDUSTRIAL AND COMMERCIAL SITES

Item	Unit	Rate	 1		 2		 3		 1		 1		 1	
			MARRADGEE ROAD (66 LOTS)		NED STREET (20 LOTS)		CANTLE STREET (19 LOTS)		INDUSTRIAL PRECINCT (25 LOTS)		COMMERCIAL PRECINCT		CARAVAN PARK	
<b>PRELIMINARIES</b>														
Establishment / disestablishment and misc. site prep.		20%		\$1,108,518		\$229,303		\$45,193		\$2,000,540		\$0		\$108,400
<b>PROJECT MANAGEMENT</b>														
Survey, design and construction administration		Variable	10%	\$554,259	8%	\$91,721	15%	\$33,894	5%	\$500,135		\$0	15%	\$81,300
<b>WATER SUPPLY</b>														
Water Mains - DN100	m	\$250	1840	\$460,000	470	\$117,500		\$0		\$0		\$0		\$0
Water Mains - DN150	m	\$300		\$0		\$0		\$0	1560	\$468,000		\$0	550	\$165,000
Connection to existing mains	each	\$2,000	2	\$4,000	2	\$4,000		\$0	1	\$2,000		\$0	1	\$2,000
Upgrade aeration system	item	\$50,000		\$0		\$0		\$0		\$0		\$0		\$0
<b>ROADS</b>														
Bitumen sealed Road, 6.5 m wide	m	\$471	1575	\$741,441	715	\$336,591	480	\$225,963		\$0		\$0		\$0
Bitumen sealed Road, 12.0 m wide	m	\$869		\$0		\$0		\$0	640	\$556,216		\$0		\$0
<b>SEWERAGE</b>														
Gravity Sewer - DN150	m	\$270	880	\$237,600	275	\$74,250		\$0	925	\$249,750		\$0		\$0
Rising main - DN50	m	\$200		\$0		\$0		\$0		\$0		\$0	325	\$65,000
Rising main - DN80	m	\$225	130	\$29,250		\$0		\$0	130	\$29,250		\$0		\$0
Rising main - DN150	m	\$300		\$0		\$0		\$0		\$0		\$0		\$0
Manhole	no.	\$6,700	10	\$67,000	3	\$20,100		\$0	12	\$80,400		\$0		\$0
Sewerage Pump Station	item	\$400,000	1	\$400,000		\$0		\$0	1	\$400,000		\$0		\$0
Low Pressure Pump Station	item	\$10,000		\$0		\$0		\$0		\$0		\$0	1	\$10,000
Upgrade STP - Mechanical Plant	item	\$5,000,000		\$0		\$0		\$0		\$0		\$0		\$0
Upgrade pump station	item	\$120,000		\$0		\$0		\$0		\$0		\$0		\$0
<b>DRAINAGE</b>														
Stormwater Pipe	m	\$600	1095	\$657,000		\$0		\$0		\$0		\$0		\$0
Layback Kerb & Channel	m	\$165	2520	\$415,800	425	\$70,125		\$0	1250	\$206,250		\$0		\$0
Reinforced concrete invert to open drain	linear m	\$210		\$0	95	\$19,950		\$0		\$0		\$0		\$0
<b>EARTHWORKS</b>														
Fill - Type 1	m³	\$50	31200	\$1,560,000	5100	\$255,000		\$0	143926.7	\$7,196,335		\$0		\$0
Fill - Type 2	m³	\$75		\$0		\$0		\$0		\$0		\$0		\$0
<b>COMMUNICATIONS</b>														
Communications	m	\$450	1840	\$828,000	470	\$211,500		\$0	1560	\$702,000		\$0	550	\$247,500
<b>ELECTRICAL</b>														
Electrical	pole	\$7,500	19	\$142,500	5	\$37,500		\$0	15	\$112,500		\$0	7	\$52,500
<b>CONTINGENCY</b>														
Contingency		30%		\$1,927,610		\$402,012		\$91,515		\$2,671,563		\$0		\$219,510
<b>TOTAL</b>				<b>\$9,132,978</b>		<b>\$1,869,552</b>		<b>\$396,565</b>		<b>\$15,174,939</b>		<b>\$0</b>		<b>\$951,210</b>




Item	Unit	Rate	1		2		1		2	
			BMX FACILITY AND WATERPLAY - SITE 1		WATERPLAY - SITE 2		COMMUNITY FACILITY		WATER AND SEWER CAPACITY UPGRADES	
<b>PRELIMINARIES</b>										
Establishment / disestablishment and misc. site prep.		20%		\$42,600		\$13,188		\$39,200		\$1,77,800
<b>PROJECT MANAGEMENT</b>										
Survey, design and construction administration		Variable	20%	\$42,600	20%	\$13,188	15%	\$29,400	10%	\$588,900
<b>WATER SUPPLY</b>										
Water Mains - DN100	m	\$250		\$0		\$0		\$0		\$0
Water Mains - DN150	m	\$300	170	\$51,000	35	\$10,500	100	\$30,000		\$0
Connection to existing mains	each	\$2,000	1	\$2,000	1	\$2,000	1	\$2,000		\$0
Upgrade aeration system	item	\$50,000		\$0		\$0		\$0	1	\$50,000
<b>ROADS</b>										
Bitumen sealed Road, 6.5 m wide	m	\$471		\$0		\$0		\$0		\$0
Bitumen sealed Road, 12.0 m wide	m	\$869		\$0		\$0		\$0		\$0
<b>SEWERAGE</b>										
Gravity Sewer - DN150	m	\$270	210	\$56,700	87	\$23,490		\$0		\$0
Rising main - DN50	m	\$200		\$0		\$0	95	\$19,000		\$0
Rising main - DN80	m	\$225		\$0		\$0		\$0		\$0
Rising main - DN150	m	\$300		\$0		\$0		\$0	380	\$114,000
Manhole	no.	\$6,700	4	\$26,800	1	\$6,700		\$0		\$0
Sewerage Pump Station	item	\$400,000		\$0		\$0		\$0		\$0
Low Pressure Pump Station	item	\$10,000		\$0		\$0	1	\$10,000		\$0
Upgrade STP - Mechanical Plant	item	\$5,000,000		\$0		\$0		\$0	1	\$5,000,000
Upgrade pump station	item	\$120,000		\$0		\$0		\$0	5	\$600,000
<b>DRAINAGE</b>										
Stormwater Pipe	m	\$600		\$0		\$0		\$0		\$0
Layback Kerb & Channel	m	\$165		\$0		\$0		\$0		\$0
Reinforced concrete invert to open drain	linear m	\$210		\$0		\$0		\$0		\$0
<b>EARTHWORKS</b>										
Fill - Type 1	m³	\$50		\$0		\$0		\$0		\$0
Fill - Type 2	m³	\$75		\$0		\$0	1000	\$75,000		\$0
<b>COMMUNICATIONS</b>										
Communications	m	\$450	170	\$76,500	35	\$15,750	100	\$45,000		\$0
<b>ELECTRICAL</b>										
Electrical	pole	\$7,500		\$0	1	\$7,500	2	\$15,000		\$0
<b>CONTINGENCY</b>										
Contingency		30%		\$89,460		\$27,695		\$79,380		\$2,296,710
<b>TOTAL</b>				<b>\$387,660</b>		<b>\$120,011</b>		<b>\$343,980</b>		<b>\$9,952,410</b>

# 11 ONGOING OPTION DEVELOPMENT





This master plan is a living document and as such, the following additional matters have been identified for further consideration after preparation of the preferred concept:

-  3 Additional potential waterpark site located adjacent to the PCYC and Roadhouse
-  3 Community hall located adjacent to the existing Council building
-  4 Relocation of sewage treatment plant (new mechanical plant) approximately 2.2km north-east of town

Whilst a total of three locations have been identified for a future waterpark, it is understood that only one would be developed in the future.

Based on feedback from Ergon, a minor boundary adjustment has been made within the industrial subdivision to allow for an access driveway/ easement.

The following sections provide a summary of each component of the master plan, outlining cost, related projects and priority within the following timeframes:

- Short term (0-5 years)
- Medium term (5-15 years)
- Long term (>15 years)

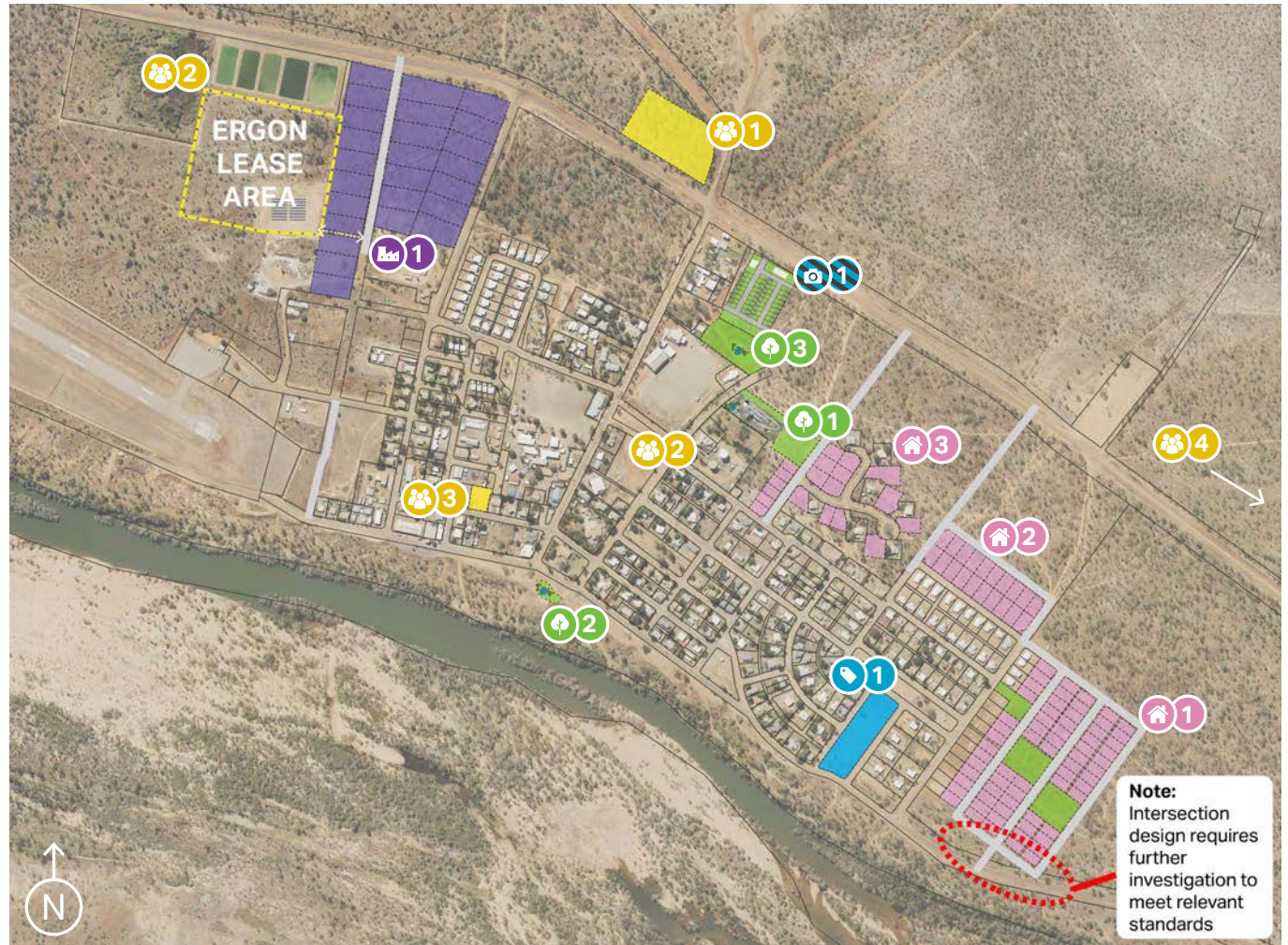


FIGURE 26: AMENDED OPTION



## MARRADGEE ROAD

### Summary

Staged extension of recent subdivision on Marradgee Road to provide 66 greenfield residential lots.



<b>Project reference</b>	R1
<b>New lots</b>	66
<b>Associated projects</b>	R2
<b>Priority</b>	Short, medium and long term
<b>Infrastructure cost</b>	\$9,132,978

### Recommendations

R1.1: Undertake planning scheme amendment to incorporate area into the general residential zone.

R1.2: Address *Native Title 1993* requirements and amend Indigenous Land Use Agreement (ILUA).

R1.3: Address duty of care requirements under the Aboriginal Cultural Heritage Act 2003 (e.g. cultural heritage survey and cultural heritage management plan).

R1.4: Obtain approvals under the planning scheme and State legislation (e.g. reconfiguring a lot, operational works etc).

R1.5: Undertake civil engineering design for necessary infrastructure upgrades and extension.

## NED STREET

### Summary

Staged extension of recent subdivision on Ned Street to provide 20 greenfield residential lots.



<b>Project reference</b>	R2
<b>New lots</b>	20
<b>Associated projects</b>	R1
<b>Priority</b>	Short term
<b>Infrastructure cost</b>	\$1,869,552

### Recommendations

R2.1: Undertake planning scheme amendment to incorporate area into the general residential zone.

R2.2: Address *Native Title 1993* requirements and amend Indigenous Land Use Agreement (ILUA).

R2.3: Address duty of care requirements under the Aboriginal Cultural Heritage Act 2003 (e.g. cultural heritage survey and cultural heritage management plan).

R2.4: Obtain approvals under the planning scheme and State legislation (e.g. reconfiguring a lot, operational works etc).

R2.5: Undertake civil engineering design for necessary infrastructure upgrades and extension.

## CANTLE STREET

### Summary

Infill development within and surrounding Cattle Street to provide 19 residential lots.



<b>Project reference</b>	R3
<b>New lots</b>	22
<b>Associated projects</b>	OS1
<b>Priority</b>	Short term
<b>Infrastructure cost</b>	\$396,565

### Recommendations

R2.1: Address *Native Title 1993* requirements and amend Indigenous Land Use Agreement (ILUA).

R2.2: Address duty of care requirements under the Aboriginal Cultural Heritage Act 2003 (e.g. cultural heritage survey and cultural heritage management plan).

R2.3: Obtain approvals under the planning scheme and State legislation (e.g. reconfiguring a lot, operational works etc).

R2.4: Undertake civil engineering design for necessary infrastructure upgrades and extension.



## INDUSTRIAL PRECINCT

### Summary

Greenfield development to create 25 industrial lots of varied size on western side of town, north of Rodeo Ground and south of Sewage Treatment Plant.



<b>Project reference</b>	I1
<b>New lots</b>	25
<b>Associated projects</b>	-
<b>Priority</b>	Long term
<b>Infrastructure cost</b>	\$15,174,939

### Recommendations

I1.1: Undertake feasibility assessment to confirm demand for industrial land and if necessary, adjust size and layout of precinct.

I1.2: Undertake planning scheme amendment to incorporate area into an industrial zone.

I1.3: Address *Native Title* 1993 requirements and amend Indigenous Land Use Agreement (ILUA).

I1.4: Address duty of care requirements under the Aboriginal Cultural Heritage Act 2003 (e.g. cultural heritage survey and cultural heritage management plan).

I1.4: Obtain approvals under the planning scheme and State legislation (e.g. reconfiguring a lot, operational works etc).

I1.5: Undertake civil engineering design for necessary infrastructure upgrades and extension.

## COMMERCIAL PRECINCT

### Summary

Conversion of existing disused open space (football field) to create new commercial precinct



<b>Project reference</b>	C1
<b>New lots</b>	-
<b>Associated projects</b>	-
<b>Priority</b>	Medium term
<b>Infrastructure cost</b>	\$0

### Recommendations

C1.1: Prepare business case for commercial development.

C1.2: Undertake planning scheme amendment to incorporate area into a the centre zone, or seek approval under planning scheme for impact assessable material change of use.

C1.3: Prepare precinct layout and concept plan.

C1.4: Address *Native Title* 1993 requirements and amend Indigenous Land Use Agreement (ILUA).

C1.5: Address duty of care requirements under the Aboriginal Cultural Heritage Act 2003 (e.g. cultural heritage survey and cultural heritage management plan).

C1.6: Obtain approvals under the planning scheme and State legislation (e.g. reconfiguring a lot, operational works etc).

## CARAVAN PARK

### Summary

Caravan park located adjacent to Doomadgee Roadhouse comprising a caretaker unit, amenities, 8 x powered sites and 10 grassed campsites.



<b>Project reference</b>	T1
<b>New lots</b>	-
<b>Associated projects</b>	-
<b>Priority</b>	Medium term
<b>Infrastructure cost</b>	\$951,210

### Recommendations

T1.1: Prepare business case for caravan park.

T1.2: Undertake planning scheme amendment to incorporate area into a the centre zone, or seek approval under planning scheme for impact assessable material change of use.

T1.3: Prepare site layout and concept plan.

T1.4: Address *Native Title* 1993 requirements and amend Indigenous Land Use Agreement (ILUA).

T1.5: Address duty of care requirements under the Aboriginal Cultural Heritage Act 2003 (e.g. cultural heritage survey and cultural heritage management plan).

T1.6: Obtain approvals under the planning scheme and State legislation (e.g. reconfiguring a lot, operational works etc).

T1.7: Seek expressions of interest for site operator.



## COMMUNITY FACILITY

### Summary

Approximately 2 ha site located to north of Doomadgee Road to accommodate a community facility (e.g. Sports Club, Social Club).



<b>Project reference</b>	CF1
<b>New lots</b>	1
<b>Associated projects</b>	-
<b>Priority</b>	Long term
<b>Infrastructure cost</b>	\$343,980

### Recommendations

CF1.1: Undertake feasibility assessment, including identification of potential community and sporting organisations who may operate the facility.

CF1.2: Prepare business case.

CF1.3: Undertake planning scheme amendment to incorporate area into an appropriate urban zone, or seek approval under planning scheme for impact assessable material change of use.

CF1.4: Undertake civil engineering design for necessary infrastructure upgrades and extension.

## WATER AND SEWER CAPACITY UPGRADES

### Summary

Upgrades to water and sewage treatment facilities to cater for cumulative demand generated by the range of development areas.



<b>Project reference</b>	CF2
<b>New lots</b>	-
<b>Associated projects</b>	All
<b>Priority</b>	Short term
<b>Infrastructure cost</b>	\$9,952,410

### Recommendations

CF2.1: Undertake civil engineering design for upgrade of existing water aeration tower and water booster pump station.

CF2.2: Upgrade to a mechanical sewage treatment plant, upgrade five existing pump stations and pressure main between pump stations 1 and 2.

## COMMUNITY HALL

### Summary

New community hall on land adjacent to Council building.



<b>Project reference</b>	CF3
<b>New lots</b>	-
<b>Associated projects</b>	-
<b>Priority</b>	Short term
<b>Infrastructure cost</b>	Refer CF3.1 below

### Recommendations

CF3.1: Undertake preliminary engineering assessment and costing to confirm existing services are adequate and requirement for earthworks and flood immunity.

CF3.2: Undertake civil engineering design for necessary infrastructure upgrades and extension.

## SEWAGE TREATMENT PLANT RELOCATION

### Summary

Relocation of sewage treatment plant (new mechanical plant) approximately 2.2km north-east of town (alternative to in-situ upgrades as part of CF2)



<b>Project reference</b>	CF4
<b>New lots</b>	-
<b>Associated projects</b>	CF2
<b>Priority</b>	Long term
<b>Infrastructure cost</b>	\$12-13 million (order of magnitude only)

### Recommendations

CF4.1: Undertake investigation to confirm whether lower-cost alternatives exist which could address underlying drivers (e.g. treatment capacity, health/amenity issues).

CF4.2: Undertake costing exercise, including cost of infrastructure relocation, mechanical plant construction, land purchase, remediation of existing site and approvals.

## BMX AND WATERPLAY - SITE 1

### Summary

New open space site for BMX facility and water play area adjacent to the Cattle Street Precinct and water treatment plant.



<b>Project reference</b>	OS1
<b>New lots</b>	-
<b>Associated projects</b>	R3
<b>Priority</b>	Short term
<b>Infrastructure cost</b>	\$387,660

### Recommendations

OS1.1: Council to undertake site selection exercise to identify preferred site (OS1, OS2 or OS3).

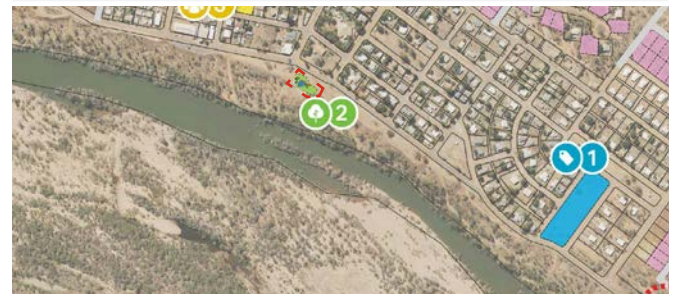
OS1.2: Undertake planning scheme amendment to incorporate area into a the recreation and open space zone, or seek approval under planning scheme for impact assessable material change of use.

OS1.3: Undertake civil engineering design for necessary infrastructure upgrades and extension.

## WATERPLAY - SITE 2

### Summary

New water play area on the banks of the Nicholson River, including pedestrian and cyclist links.



<b>Project reference</b>	OS2
<b>New lots</b>	-
<b>Associated projects</b>	-
<b>Priority</b>	Short term
<b>Infrastructure cost</b>	\$120,011

### Recommendations

OS2.1: Council to undertake site selection exercise to identify preferred site (OS1, OS2 or OS3).

OS2.2: Undertake planning scheme amendment to incorporate area into a the recreation and open space zone, or seek approval under planning scheme for impact assessable material change of use.

OS2.3: Undertake civil engineering design for necessary infrastructure upgrades and extension.



## WATERPLAY - SITE 3

### Summary

New water play area next to the PCYC and Doomadgee Roadhouse.



<b>Project reference</b>	OS3
<b>New lots</b>	-
<b>Associated projects</b>	T1
<b>Priority</b>	Short term
<b>Infrastructure cost</b>	Refer to OS3.1 below

### Recommendations

OS3.1: Undertake preliminary infrastructure assessment costing.

OS3.2: Council to undertake site selection exercise to identify preferred site (OS1, OS2 or OS3).

OS3.3: Undertake planning scheme amendment to incorporate area into a the recreation and open space zone, or seek approval under planning scheme for impact assessable material change of use.

OS3.4: Undertake civil engineering design for necessary infrastructure upgrades and extension.

# 12 KEY REFERENCES





This chapter provides an overview of other key reference documents and design strategies which should be considered by Council as part of implementation of the Doomadgee Master Plan.

## DOOMADGEE ABORIGINAL SHIRE COUNCIL CORPORATE PLAN 2020 - 2024

The Corporate Plan 2020 - 2024 is the corporate plan prepared by the Doomadgee Aboriginal Shire Council. The plan is the lead document for Council's service provision. The Corporate Plan fulfils the Council's obligations under the *Local Government Act 2009*.

The Corporate Plan highlights the following mission statement:

*"Council exists to lead and serve the Community in an efficient and effective manner, ensuring all the Community has appropriate amenities and the best possible quality of life."*

Key challenges in the corporate plan for Doomadgee were identified:

- Reinforcing respect within the community
- Restoring a sense of pride within the community
- Rebuilding a strong work ethic
- Having the resources to achieve our goals
- Building a safe cohesive community

The goals identified in the corporate plan are:

- Governance
  - / To achieve maximum community benefit from available financial resources
  - / To provide timely, quality services to customers through effective and efficient administration of Council affairs
  - / To maximise Council's human resource potential
- Community
  - / To create opportunities through Arts and Culture to enhance individuals' skills, bolster community pride and quality of life
- Disaster Management
  - / To limit the impact of natural and unforeseen disasters

- Economic Development
  - / To increase the overall strength and diversity of the Shire's economic base, create jobs and actively promote the Shire's tourism potential
- Environment
  - / To conserve the natural and built environments to achieve ecologically sustainable development
  - / To prove and sustain an effective and disposal service
- Infrastructure
  - / To maintain and upgrade essential infrastructure to maximise the utility of existing assets and provide for their long term improvement and / or replacement
- Community and Human Services
  - / To encourage and participate in the continuing development of community to sevice and foster a safe, harmonious community with a strong communit spirit
- Public Health
  - / To create and foster a dynamic ongoing relationship with all relevant health policy departments and health service providers to ensure that operational programs are coordinated, focused and effective, in contributing to and enhancing, the health and wellbeing of the whole community
- Planning and Development
  - / To develop and implement planning controls that ensure and encourage balanced and sustainable development and to promote the Shire as a desirable place to live, work, invest and visit.

## DOOMADGEE ABORIGINAL SHIRE OPERATIONAL PLAN 2019 - 2020

The Operational Plan 2019 - 2020 provides detailed strategies, activities, timing and budget links for implementation of the following core program themes identified in the Corporate Plan 2019 - 2020:

- Governance
  - / Financial Management
  - / Administration and Corporate Service
  - / Human Resources
- Community
- Disaster Management
- Economic Development
- Environment
  - / Environmental Protection
  - / Waste Management
- Infrastructure
- Community and Human Services
- Public Health
- Planning and Development.

## ACTIVATE! QUEENSLAND 2019-2029

Activate! Queensland 2019–2029 is the Queensland Government's 10 year strategy to further enrich the Queensland way of life; harnessing the pride of great sporting traditions, embracing iconic natural environment and building on strong community foundations to deliver better health and wellbeing outcomes, especially for those most vulnerable.

Activate! Queensland will be rolled out through three multi-year action plans. The first action plan, Our Active8, will outline the practical, whole-of-government actions to be implemented from 2019 to 2022 and will be delivered through eight strategies across four priority areas:

- Activate Queenslanders
  - / 01 Enhance equity and inclusion
  - / 02 Transform attitudes and behaviours
- Activate Environments
  - / 03 Deliver quality and accessible places and spaces
  - / 04 Improve liveability and activity in our communities
- Activate Success
  - / 05 Grow elite success and keep Queensland winning
  - / 06 Provide world-class fan experiences through major sports and entertainment facilities
- Activate Collaboration
  - / 07 Transform the active industry's role
  - / 08 Leverage knowledge, technology and innovation.

## CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

Crime Prevention Through Environmental Design (CPTED) is designing using the built environment to create safer neighbourhoods.

Growing interest in environmental criminology led to the use of natural surveillance, access control and territoriality as a natural method in crime prevention.

The 'broken window' principle demonstrated how neglected zones invite crime, and reinforced the need for good property maintenance to assert visible ownership of space.

Appropriate environmental design can also increase the perceived likelihood of detection and apprehension, known to be the biggest single deterrent to crime.

## HEALTHY BY DESIGN

Healthy by Design has been developed in response to local government requests for practical guidance in designing walkable, and ultimately more liveable, communities.

This is encouraged by providing:

- well planned networks of walking and cycling routes
- streets with direct, safe and convenient access
- local destinations within walking distance from homes
- accessible open spaces for recreation and leisure
- conveniently located public transport within walkable distances
- local neighbourhoods fostering community.

## WATER SENSITIVE URBAN DESIGN

Water-Sensitive Urban Design (WSUD) is a land planning and engineering design approach which integrates the urban water cycle, including stormwater, groundwater and wastewater management and water supply, into urban design to minimise environmental degradation and improve aesthetic and recreational appeal.

This is encouraged through:

- natural channel design
- stormwater outlets as park and waterway systems
- erosion treatment for urban waterways
- sediment and retention basins as natural features
- landscape design of urban water systems.

## COASTAL BLUE CARBON: AN INTRODUCTION FOR POLICY MAKERS

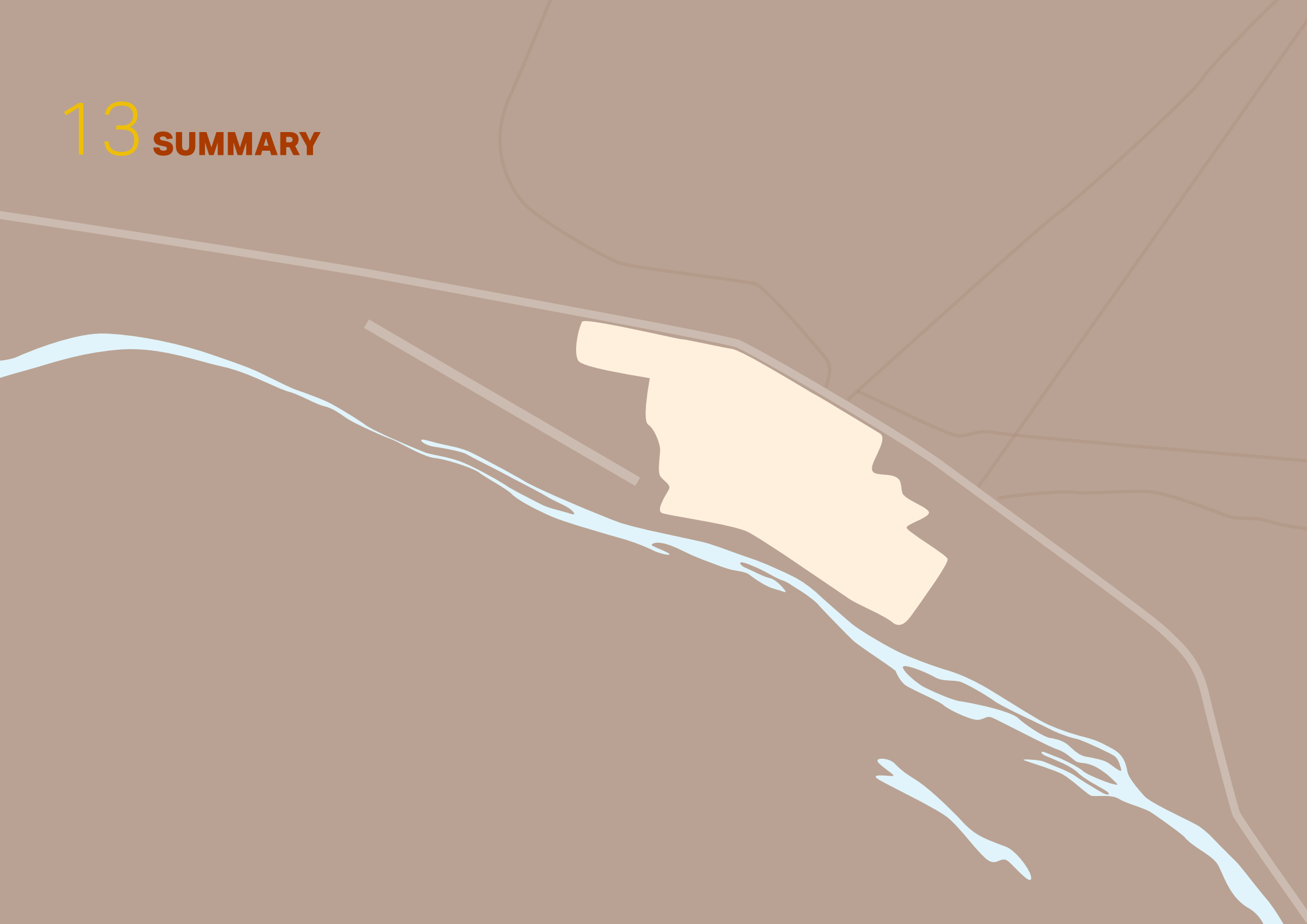
Coastal blue carbon: an introduction for policy makers provides an introduction to the concept of blue carbon and coastal blue carbon ecosystems – mangroves, tidal marshes and seagrasses. It outlines:

- why blue carbon ecosystems are important
- the basic science of blue carbon as a basis for policy and practical action
- an overview of relevant policy frameworks, and
- a summary of finance sources that can support practical action.

It describes some of the challenges and opportunities in developing policies and undertaking projects to protect and restore coastal blue carbon ecosystems. It also highlights some of the projects and countries that are leading the way in managing these challenges and opportunities. It serves as a reference for those who are new to blue carbon and those who are seeking to bring a greater focus on blue carbon in their jurisdictions.



# 13 SUMMARY



The preferred master plan identifies a range of development opportunities which provide Council with a clear set of options to progress future residential and non-residential development into the future. The right combination of housing choice and employment opportunity will promote a successful and vibrant community with a diversified and strong local economy.

In order to provide sufficient capacity within the water and sewage treatment systems to cater for the cumulative demand generated by the range of development areas, the following key upgrades have been identified:

- Water treatment plant - upgrade of existing aeration tower and booster pump station
- Sewage treatment plant - upgrade to a mechanical plant, upgrade existing five pump stations and pressure main between pump stations 1 and 2.

Each proposed development area will also require specific extensions and/or connections to existing infrastructure and services. In addition to enabling infrastructure and funding, a range of further requirements and obligations will need to be met for each aspect of the master plan. These include:

- Address Native Title and amend ILUA
- Obtain planning approval in accordance with planning scheme
- Conduct appropriate cultural survey and obtain clearance.

The preferred master plan represents a guide for development throughout the Doomadgee community over the short, medium and long term. Council will consider the indicative yields and enabling infrastructure costs when staging future development and infrastructure outlay. The yields and costs will also provide an important basis of information to inform discussions and negotiations with key agencies and stakeholders.

The additional elements identified in Section 09 have not been subject to an infrastructure assessment and costing. This aside, the following general information is noted for future consideration:

- Waterpark site - area contains electricity main which would affect siting and design. Given proximity to previously identified site (site 1), enabling costs are likely to be of a similar magnitude
- Community hall - services are already available at this lot however assessment is required to confirm flood risk and associated earthwork requirements
- STP relocation - a mechanical plant and associated network extensions may cost in the order of \$12-13 million, excluding costs associated with land purchase, approvals and remediation of the existing site. It is recommended that further investigations are undertaken to identify whether lower-cost alternatives exist which could address the underlying drivers (e.g. treatment capacity, health / amenity issues).

Table 9 provides a summary of the elements of the master plan, enabling infrastructure costs and key further requirements and obligations. Table 10 summarises the specific actions recommended for each project.






AREA	ENABLING INFRASTRUCTURE COST	OTHER REQUIREMENTS / OBLIGATIONS		
		NATIVE TITLE / ILUA	PLANNING APPROVAL	CULTURAL HERITAGE
R1: Marradgee Road (66 lots)	\$9,132,978 (\$138,378 per lot)	●	●	●
R2: Ned Street (20 lots)	\$1,869,552 (\$93,477 per lot)	●	●	●
R3: Cattle Street (19 lots)	\$396,565 (\$20,872 per lot)	●	●	●
I1: Industrial Precinct (25 lots)	\$15,174,939 (\$606,998 per lot)	●	●	●
C1: Commercial Precinct	\$0*	●	●	●
T1: Caravan Park	\$951,210	●	●	●
OS1: BMX Facility & Waterplay Site 1	\$387,660	●	●	●
OS2: Waterplay Site 2 (Nicholson River)	\$120,011	●	●	●
OS3: Waterplay Site 3	TBC	●	●	●
CF1: Community facility	\$343,980	●	●	●
CF2: Water and Sewer Capacity Upgrades	\$11,374,410	●	●	●
CF3: Community Hall	TBC	●	●	●
CF4: STP Relocation	TBC	●	●	●

**TABLE 9: ENABLING INFRASTRUCTURE COST**

\*Site has access to existing services

● = Matter to be addressed



REF.	DETAILS		RECOMMENDATIONS / ACTIONS
R1		MARRADGEE ROAD	<p>R1.1: Undertake planning scheme amendment to incorporate area into the general residential zone.</p> <p>R1.2: Address <i>Native Title 1993</i> requirements and amend Indigenous Land Use Agreement (ILUA).</p> <p>R1.3: Address duty of care care requirements under the Aboriginal Cultural Heritage Act 2003 (e.g. cultural heritage survey and cultural heritage management plan).</p> <p>R1.4: Obtain approvals under the planning scheme and State legislation (e.g. reconfiguring a lot, operational works etc).</p> <p>R1.5: Undertake civil engineering design for necessary infrastructure upgrades and extension.</p>
R2		NED STREET	<p>R2.1: Undertake planning scheme amendment to incorporate area into the general residential zone.</p> <p>R2.2: Address <i>Native Title 1993</i> requirements and amend Indigenous Land Use Agreement (ILUA).</p> <p>R2.3: Address duty of care care requirements under the Aboriginal Cultural Heritage Act 2003 (e.g. cultural heritage survey and cultural heritage management plan).</p> <p>R2.4: Obtain approvals under the planning scheme and State legislation (e.g. reconfiguring a lot, operational works etc).</p> <p>R2.5: Undertake civil engineering design for necessary infrastructure upgrades and extension.</p>
R3		CANTLE STREET	<p>R2.1: Address <i>Native Title 1993</i> requirements and amend Indigenous Land Use Agreement (ILUA).</p> <p>R2.2: Address duty of care care requirements under the Aboriginal Cultural Heritage Act 2003 (e.g. cultural heritage survey and cultural heritage management plan).</p> <p>R2.3: Obtain approvals under the planning scheme and State legislation (e.g. reconfiguring a lot, operational works etc).</p> <p>R2.4: Undertake civil engineering design for necessary infrastructure upgrades and extension.</p>
I1		INDUSTRIAL PRECINCT	<p>I1.1: Undertake feasibility assessment to confirm demand for industrial land and if necessary, adjust size and layout of precinct.</p> <p>I1.2: Undertake planning scheme amendment to incorporate area into an industrial zone.</p> <p>I1.3: Address <i>Native Title 1993</i> requirements and amend Indigenous Land Use Agreement (ILUA).</p> <p>I1.4: Address duty of care care requirements under the Aboriginal Cultural Heritage Act 2003 (e.g. cultural heritage survey and cultural heritage management plan).</p> <p>I1.4: Obtain approvals under the planning scheme and State legislation (e.g. reconfiguring a lot, operational works etc).</p> <p>I1.5: Undertake civil engineering design for necessary infrastructure upgrades and extension.</p>
C1		COMMERCIAL PRECINCT	<p>C1.1: Prepare business case for commercial development.</p> <p>C1.2: Undertake planning scheme amendment to incorporate area into a the centre zone, or seek approval under planning scheme for impact assessable material change of use.</p> <p>C1.3: Prepare precinct layout and concept plan.</p> <p>C1.4: Address <i>Native Title 1993</i> requirements and amend Indigenous Land Use Agreement (ILUA).</p> <p>C1.5: Address duty of care care requirements under the Aboriginal Cultural Heritage Act 2003 (e.g. cultural heritage survey and cultural heritage management plan).</p> <p>C1.6: Obtain approvals under the planning scheme and State legislation (e.g. reconfiguring a lot, operational works etc).</p>











REF.	DETAILS		RECOMMENDATIONS / ACTIONS
T1		CARAVAN PARK	<p>T1.1: Prepare business case for caravan park.</p> <p>T1.2: Undertake planning scheme amendment to incorporate area into a the centre zone, or seek approval under planning scheme for impact assessable material change of use.</p> <p>T1.3: Prepare site layout and concept plan.</p> <p>T1.4: Address <i>Native Title 1993</i> requirements and amend Indigenous Land Use Agreement (ILUA).</p> <p>T1.5: Address duty of care care requirements under the Aboriginal Cultural Heritage Act 2003 (e.g. cultural heritage survey and cultural heritage management plan).</p> <p>T1.6: Obtain approvals under the planning scheme and State legislation (e.g. reconfiguring a lot, operational works etc).</p> <p>T1.7: Seek expressions of interest for site operator..</p>
C1		COMMUNITY FACILITY	<p>CF1.1: Undertake feasibility assessment, including identification of potential community and sporting organisations who may operate the facility.</p> <p>CF1.2: Prepare business case.</p> <p>CF1.3: Undertake planning scheme amendment to incorporate area into an appropriate urban zone, or seek approval under planning scheme for impact assessable material change of use.</p> <p>CF1.4: Undertake civil engineering design for necessary infrastructure upgrades and extension.</p>
C2		WATER AND SEWER CAPACITY UPGRADES	<p>CF2.1: Undertake civil engineering design for upgrade of existing water aeration tower and water booster pump station.</p> <p>CF2.2: Upgrade to a mechanical sewage treatment plant, upgrade five existing pump stations and pressure main between pump stations 1 and 2.</p>
C3		COMMUNITY HALL	<p>CF3.1: Undertake preliminary engineering assessment and costing to confirm existing services are adequate and requirement for earthworks and flood immunity.</p> <p>CF3.2: Undertake civil engineering design for necessary infrastructure upgrades and extension.</p>
C4		SEWAGE TREATMENT PLANT RELOCATION	<p>CF4.1: Undertake investigation to confirm whether lower-cost alternatives exist which could address underlying drivers (e.g. treatment capacity, health/amenity issues).</p> <p>CF4.2: Undertake costing exercise, including cost of infrastructure relocation, mechanical plant construction, land purchase, remediation of existing site and approvals.</p>
OS1		BMX AND WATERPLAY - SITE 1	<p>OS1.1: Council to undertake site selection exercise to identify preferred site (OS1, OS2 or OS3).</p> <p>OS1.2: Undertake planning scheme amendment to incorporate area into a the recreation and open space zone, or seek approval under planning scheme for impact assessable material change of use.</p> <p>OS1.3: Undertake civil engineering design for necessary infrastructure upgrades and extension.</p>
OS2		WATERPLAY - SITE 2	<p>OS2.1: Council to undertake site selection exercise to identify preferred site (OS1, OS2 or OS3).</p> <p>OS2.2: Undertake planning scheme amendment to incorporate area into a the recreation and open space zone, or seek approval under planning scheme for impact assessable material change of use.</p> <p>OS2.3: Undertake civil engineering design for necessary infrastructure upgrades and extension.</p>
OS3		WATERPLAY - SITE 3	<p>OS2.1: Undertake preliminary infrastructure assessment costing.</p> <p>OS2.2: Council to undertake site selection exercise to identify preferred site (OS1, OS2 or OS3).</p> <p>OS2.3: Undertake planning scheme amendment to incorporate area into a the recreation and open space zone, or seek approval under planning scheme for impact assessable material change of use.</p> <p>OS2.4: Undertake civil engineering design for necessary infrastructure upgrades and extension.</p>

TABLE 10: ACTION PLAN

# 14 REFERENCES



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