# Prepared for

Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships and Torres Strait Island Regional Council



Contact Information Project Information

**Document Information** 

Cardno (Qld) Pty Ltd Prepared for Department of Seniors, File Reference Q194171-004.10ER.R30.001 - Erub

ABN 57 051 074 992 Disability Services and Island Master Plan

15 Scott Street Aboriginal and Torres Strait

Paramatta Park Islander Partnerships and

Cairns QLD 4870 Torres Strait Island Regional

Australia Council

www.cardno.com

Phone +61 7 4034 0500 Project Name Torres Strait Master Planning Date 7 July 2022

Job Reference Q194171 Version Number 002

Author(s): Approved By:

Brendan Standen Stephen Whitaker Effective Date 7/07/2022

Senior Planner Senior Planner, Technical Lead - Planning

# **Document History**

Version	Effective Date	Description of Revision	Prepared by	Reviewed by
001	29/06/2020	First Draft	Brendan Standen	Stephen Whitaker
002	07/07/2022	Final	Roisin Cosgrave	Teresa Schmidt





# **Table of Contents**

1	Introduction		
	1.1	Purpose	4
	1.2	Structure	4
	1.3	Relationship to the Zenadth Kes Planning Scheme	4
	1.4	Acknowledgement	4
2	Vision		6
3	Communit	y Aspirations	7
4	Projects		8
	4.1	Land Use Categories	8
	4.2	Project Listing	9
	4.3	Project Detail	10
5	Infrastruc	ture	27
	5.1	Topography/Climate Change	27
	5.2	Roads	27
	5.3	Stormwater	27
	5.4	Water Supply	27
	5.5	Sewerage	28
	5.6	Electricity Supply and Street Lighting	28
	5.7	Telecommunications	28
6	Action Pla	n	29

# **Appendices**

Appendix A	Master Plan Map	
Appendix B	Master Plan Project Index	
Appendix C	Action Plan Summary	
Appendix D	Infrastructure Costings	
Appendix E	Precinct Plans	
Appendix F	Analytical Translation	
Tables		
Table 4-1	Project Listing	9
Table 6-1	Action Plan	29
Figures		
Figure 1-1	Master Plan Elements	5

# 1 Introduction

#### 1.1 Purpose

Torres Strait Island Regional Council (TSIRC), with the support of the Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP), has developed the Erub Island Master Plan. The Erub Island Master Plan is intended to be used by TSIRC, Prescribed Body Corporates (PBCs), State agencies, service providers and the broader community to inform planning decisions in relation to future development.

The Erub Island Master Plan seeks to guide the future use of land on Erub Island in a manner that is cognisant of community needs, demands and aspirations. The Erub Island Master Plan identifies a range of future residential; industrial; commercial / tourism; community facilities; and recreation and open space development projects. The Master Plan has been prepared to ensure the orderly, efficient and effective use of land in a way that is reflective of relevant opportunities and constraints. The Master Plan seeks to coordinate the actions of a range of different stakeholders to maximise the benefits of new development projects to the community.

The Erub Island Master Plan is a living document endorsed by TSIRC, intended to be progressively updated as new development occurs to reflect the changing needs and aspirations of the community.

#### 1.2 Structure

The Erub Island Master Plan includes the following elements:

- > A Master Plan Map, provided as Appendix A;
- > A Vision, provided in Chapter 2;
- > Community Aspirations, provided in Chapter 3;
- > Master Plan Projects, the details of which are articulated in Chapter 4; and
- > An **Action Plan**, provided in Chapter 6.

The Master Plan is also supported by a separate Technical Report.

The relationship between these elements is shown in **Figure 1-1**.

# 1.3 Relationship to the Zenadth Kes Planning Scheme

The Erub Island Master Plan is intended to identify a high level strategic direction for the future development of Erub Island having regard to all relevant planning considerations, including the *Zenadth Kes Planning Scheme* ('the Planning Scheme').

The Master Plan does not replace or alter the Planning Scheme as it relates to Erub Island and does not change current development approval requirements. Projects or works identified by the Master Plan may require development approvals and/or changes to the Planning Scheme and these are identified in the Master Plan itself as appropriate.

The Planning Scheme forms part of the statutory town planning framework established under the *Planning Act 2016*, which provides for the regulation of development activity. The Master Plan is a non-statutory strategic planning document intended to guide decision making with regard to the long term development of Erub Island. It may be appropriate in certain circumstances for TSIRC to amend the Planning Scheme to reflect findings of the Master Plan. Recommendations in this regard are made in the Master Plan.

# 1.4 Acknowledgement

Gogobithiay (land, sea and sky) is fundamental to the Torres Strait Islander way of life. Gogobithiay cannot be separated into land, sea and sky and it cannot exist without the Torres Strait people.

The Erub Island Island Master Plan acknowledges the native title holders, the Erubam Le people as the traditional custodians of Erub Island. The Master Plan also acknowledges all community members.

Any person proposing to undertake development on Erub Island should pay respect to the Erubam Le people's custodianship of the island by seeking permission to use its resources and ensuring that development acknowledges the special and ongoing cultural relationship of the Erub Island community with Gogobithiay.

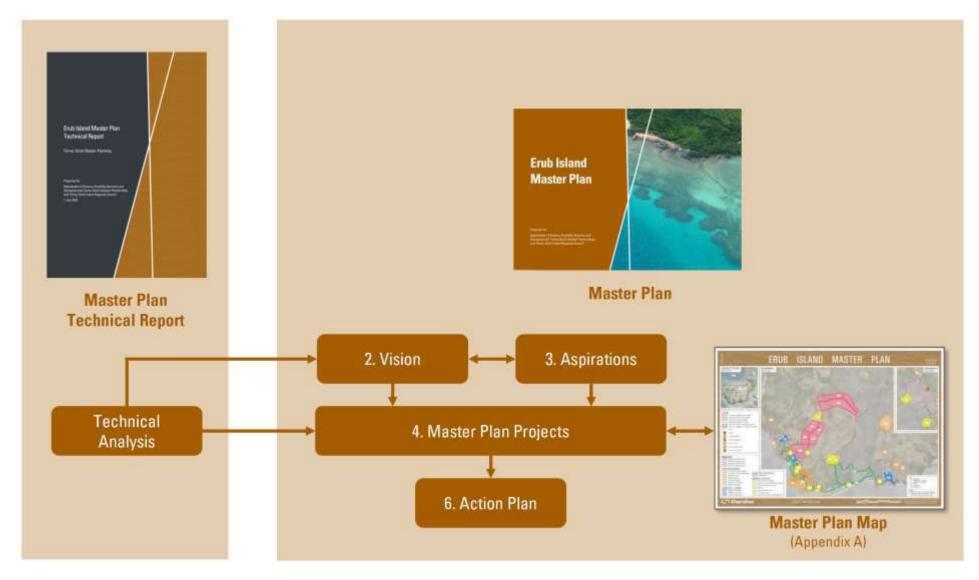


Figure 1-1 Master Plan Elements

# 2 Vision

**Erub Island** will develop in a way that is responsive to both the unique and elongated settlement pattern of the township and the needs of its residents, ensuring a sustainable and improved quality of life for the community.

The township core, located centrally within the Erub Island community, includes a consolidation of new and existing services, including a new child care centre, health care centre and appropriate commercial activities. The township's proximity to the boat ramp and jetty will mean this area is a focus of economic and community activity on the island. The establishment of commercial nodes at the eastern and western extents of the township respond to the challenges faced by residents in ribbon like development by affording them services that support their day-to-day needs outside the township core.

A foreshore precinct to the east of the township core will capitalise on the island's coastal amenity, providing a park, exercise equipment, walking track and appropriate community gathering places, rest areas and facilities. A path network connects people and places throughout the township, with the foreshore precinct serving as key node in the broader recreation and open space network. The significance of places of worship proximate to the precinct, and within the community more broadly, will be protected and embellished.

New development is to support enterprise and tourism opportunities including the establishment of a nursery, training local apprentices (in construction), expanding seafood industries and establishing guest houses. Upgrades to the jetty and boat ramp and the availability of vacant elevated land that takes advantage of the islands coastal vistas provide the foundations for the success of these enterprise opportunities.

A new residential expansion area on elevated land strategically positioned between the township core and western commercial precinct will respond to the community's need for additional dwellings. A range of housing types that align with the needs of residents will be provided.

New development should seek to improve the quality of urban services provided to the community, including water and sewerage infrastructure, roads, lighting and telecommunications access.



# **3 Community Aspirations**

- > The Erub Island community will be provided with housing that meets its needs.
- > The Erub Island community will be provided with access to key community services that support the day to day needs of its residents, including shopping/business uses, garden markets, child care, health care and a mothers room.
- The Erub Island community will expand local business and enterprise opportunities to support economic activity and local employment, particularly in the sectors of seafood industry and tourism.
- > The Erub Island community will celebrate its culture, history and character and this will be reflected through the protection of sacred sites, existing facilities and features and new development such as arts and cultural centres.
- The Erub Island community will be easily and safely accessed from the surrounding region by air and sea.
- The Erub Island community will increase physical activity, for both movement and recreation, through the use of dedicated facilities and networks.
- > The Erub Island community will have access to quality urban infrastructure services including street lighting and sealed roads.
- The Erub Island community will be responsive to the changing environment including sea level rise, tidal inundation and climate change



# 4 Projects

# 4.1 Land Use Categories

The consideration of land uses as part of the Erub Island Master Plan has been undertaken using a number of land use categories. An explanation of each land use category is provided below.

Residential	Commercial / Tourism	Recreation and Open Space
Residential land uses primarily relate to the provision of housing. Residential land may support a range of dwelling types of varying scale (for example, single low-rise homes, duplexes, and unit complexes). Open space is often integrated within residential areas to soften the built environment and provide land for passive and active recreation.	Commercial land uses typically involve business activities which may include the sale of goods (such as shops and cafes) or services (such as offices and medical centres).  Tourism land uses also involve business activities, however these are focussed on providing goods, services, facilities and entertainment for tourists.  Examples of tourism land uses include tourist parks, accommodation and businesses operating tours.	Recreation land uses support the provision of land for recreational activities, which may be organised or informal. This includes sporting facilities such as fields, courts, stadiums and arenas, rodeo grounds, walking / cycling paths and outdoor exercise equipment.  Open space areas provide dedicated natural spaces throughout an urban area enhance the beauty and environmental quality of neighbourhoods. They may include formalised landscaping also comprise recreational opportunities.  Recreation and open space areas are commonly collocated.

#### **Community Facilities** Other Industrial land uses generally involve the manufacturing, Community facilities land uses support the delivery of The "Other" land use category has been used to processing, treatment or repair of goods. Industrial land community services or provide community benefit. describe other uses and projects which commonly uses involve varying degrees of intensity and severity, Community facilities include uses for health services, support the primary land uses. This may include generally linked to their potential level of impact on education (schools and colleges), arts and culture, infrastructure projects such as new roads or urban nearby land uses associated with their emissions (such religion, community support, civic infrastructure (water, services and civic improvements such as beautification as air, noise and odour). Examples of industrial land uses sewer, waste, transport and other similar facilities), and landscaping. include manufacturing plants, processing plants, employment and training. mechanical workshops, transport depots, storage sheds and warehouses.

# 4.2 **Project Listing**

Table 4-1 provides a listing of projects identified by the Master Plan. Further detail is provided in relation to each project as follows:

- > The land to which each project relates is identified by the Erub Island Master Plan Map, a copy of which is provided as **Appendix A**.
- > Key details relating to each project are outlined in Section 4.3 of this report.
- > A summary of the Master Plan projects is provided in the project index included as **Appendix B**.
- > Detailed breakdowns of the infrastructure costings for each project are provided in Appendix D.

Table 4-1	Project Listing
RS1	Residential Expansion Area 1
RS2	Residential Expansion Area 2
RS3	Residential Expansion Area 3
RS4	Residential Expansion Area 4
CT1	Commercial Node West
CT2	Commercial Node East
СТЗ	Tourist Accommodation
CT4	Environmental Tourism

CF1	Cemetery Protection Area
CF2	Landfill Protection and Expansion Area
CF3	Place of Worship Protection
CF4	Nursery
CF5	Sacred Site Protection
CF6	Child Care Centre
CF7	Arts Centre Protection and Expansion
<b>OS1</b>	Path Network

OT1	Jetty and Boat Ramp Upgrades
OT2	Recreational Boat Ramp and Anchorage
ОТ3	CBD Precinct Plan
OT4	Airport Upgrades
<b>OT</b> 5	Foreshore Precinct
ОТ6	Water Supply Upgrades
<b>OT7</b>	Sewerage Upgrades
<b>OT8</b>	"Back of Island" Access
ОТ9	Telecommunications Upgrades
OT10	Carbon and Renewable Energy Opportunities

Note: Projects CT4, OT8, OT9 and OT10 are not shown on the Master Plan Map provided as Appendix A.

# 4.3 Project Detail

#### **Residential Projects**

The Master Plan has identified a residential expansion area to accommodate an anticipated demand for eight additional dwellings. The Master Plan also seeks to diversify the housing products provided on Erub Island. These key directions were identified as part of the technical analysis which is documented in the Erub Island Master Plan Technical Report. Further detail is also provided in **Appendix F**.

# RS1 Residential Expansion Area 1

#### **Summary**

An elevated area of land at Egrue Village has been identified as being suitable for short-term residential expansion. The area is identified by the Planning Scheme for this purpose. Development of the area is likely to be formed by a residential subdivision, which should be encouraged to include a range of dwelling types and sizes to suit demand. Part of the land is mapped under the Planning Scheme as being affected by Landslide Hazard and being of Low Environmental Value.

New Lots	22 Lots (e:	stimate)	
Lot Size	1,100m² (average)		
Priority	Short Teri	n	
Infrastructure Cost	\$11,068,844		
	СТ3		
Key Actions	1	6	

#### Recommendations

Investigate the extent to which the Landslide Hazard and Low Environmental Value of the land may affect future residential development and respond to these features accordingly.

RS<sub>2</sub>

# Residential Expansion Area 2

#### Summary

An elevated area of land north-east of the township along Erub Island Road has been identified as being potentially suitable for accommodating medium-long term residential demand. This land may be appropriate for the establishment of residential properties, particularly where existing residents need to relocate due to high coastal hazard risks and impacts. The land is more centrally located to the island away from the coastline and adjoins the RS1, forming a logical extension for long-term residential development.

New Lots	22 Lots (estimate)		
Lot Size	1,100m² (average)		
Priority	Long Tern	า	
Infrastructure Cost	\$8,576,556		
	RS1		
Key Actions	1	6	

#### **Recommendations**

Investigate the extent to which the constraints may affect future residential development and respond to these features accordingly. It may be necessary to identify the future land use intent of this land in the Planning Scheme, which would require an amendment to be undertaken.

# RS3 Residential E

#### **Summary**

An area of land north of RS2 along Erub Island Road has been identified as being potentially suitable for accommodating longer term residential demand. This land may be appropriate for the establishment of residential properties, particularly where existing residents need to relocate due to high coastal hazard risks and impacts. The land is more centrally located to the island away from the coastline and adjoins the RS2, forming a logical extension for long-term residential development. Further investigation of this land is required to identify the extent to which it could be developed, with regards to land constraints. Development of the land will need to consider the provision of an appropriate interface to the existing Landfill Protection and Expansion area on Erub Island Road.

New Lots	To be confirmed		
Lot Size	1,100m² (a	verage)	
Priority	Long Term		
Infrastructure Cost	To be costed		
Key Actions	1	6	

#### **Recommendations**

Investigate the extent to which the constraints may affect future residential development and respond to these features accordingly. It may be necessary to identify the future land use intent of this land in the Planning Scheme, which would require an amendment to be undertaken.

RS4

# Residential Expansion Area 4

#### **Summary**

An area of land north of CF2 has been identified as being potentially suitable for accommodating longer term residential demand. This land may be appropriate for the establishment of residential properties, particularly where existing residents need to relocate due to high coastal hazard risks and impacts. The land is elevated and located centrally on the island. It is north of RS3 along Erub Island Road and represents logical extension for long-term residential development. Further investigation of this land is required to identify the extent to which it could be developed, with regards to land constraints. Development of the land will need to consider the provision of an appropriate interface to the existing Landfill Protection and Expansion area on Erub Island Road.

To be confirmed		
1,100m² (average)		
Long Term		
To be costed		
1 6		
	1,100m <sup>2</sup> (a Long Tern To be cos	1,100m² (average) Long Term To be costed RS3

#### Recommendations

Investigate the extent to which the constraints may affect future residential development and respond to these features accordingly. It may be necessary to identify the future land use intent of this land in the Planning Scheme, which would require an amendment to be undertaken.

# **Commercial / Tourism Projects**

The Master Plan seeks to ensure that the community is provided with sufficient access to commercial land uses, particularly through the development of more localised land uses. The Master Plan also seeks to promote the development of uses and infrastructure associated with tourism, in appropriate locations. These key directions were identified as part of the technical analysis which is documented in the Erub Island Master Plan Technical Report. Further detail is also provided in **Appendix F**.

CT1 Commercial Node West		
Summary	New Lots	1 Lot
The Master Plan has identified a Commercial Node at the western end of the township at Sadi Village.  This node is intended to serve a variety of purposes, including providing local retail services to the	Lot Size	N/A
surrounding community to minimise travel to the CBD.	Priority	Medium Term
	Infrastructure Cost	\$2,571,633
	Associated Projects	-
	Key Actions	4 6

CT2

# **Commercial Node East**

#### **Summary**

The Master Plan has identified a Commercial Node at the eastern end of the township at Greenhill Village. This node is intended to serve a variety purposes, including providing local retail services to the surrounding community to minimise travel to the CBD. The Planning Scheme includes the land in the Environmental Management and Conservation Zone. The Planning Scheme also identifies the land as being erosion prone and subject to flooding.

_				-	
Kec	omr	nen	tah	ını	21

Future investigations of the land will need to consider the lands constraints mapped by the Planning Scheme.

It may be necessary to identify the future land use intent of this land in the Planning Scheme, which would require an amendment to be undertaken.

New Lots	1 Lot				
Lot Size	N/A				
Priority	Medium Term				
Infrastructure Cost	\$3,377,617				
Associated Projects	-				
Key Actions	1	4	6	8	

CT3

# **Tourist Accommodation**

#### **Summary**

The Master Plan identifies a block of land (Lot 66 on SP270873) on the corner of Erub Island Road and Road No. 6 at Egrue Village as being suitable for tourist accommodation. This area is intended to be protected and enhanced for tourist accommodation that capitalises on the coastal vistas offered by the elevated land. Any new tourist accommodation will be connected to the CBD by the Path Network (**0S1**).

New Lots	N/A		
Lot Size	N/A		
Priority	Medium Term		
Infrastructure Cost	\$1,926,846		
Associated Projects	0S1		
Key Actions	4		

CT4

# **Environmental Tourism**

#### **Summary**

Opportunity exists in various locations throughout the island for the environmental values of the area to be protected and enhanced for the benefit of tourist activities aimed at the appreciation of any unique environmental features or areas. Any tourism operations should occur in a manner that is sensitive to the fragility of the natural environment, to ensure it can be sustained over the long term.

New Lots	N/A				
Lot Size	N/A				
Priority	Medium Term				
Infrastructure Cost	N/A				
Associated Projects	-				
Key Actions	4	6			

# **Community Facilities Projects**

The Master Plan seeks to promote the protection and expansion of key community facilities. The Master Plan also provides opportunities for the establishment of new community facilities where demand exists. These key directions were identified as part of the technical analysis which is documented in the Erub Island Master Plan Technical Report. Further detail is also provided in **Appendix F**.

# **CF1** Cemetery Protection and Expansion Area

#### **Summary**

The cemetery, located inland of the developed area of the island, should be subject to ongoing protection to ensure that the cultural and spiritual connection of the community with this land is maintained. Where appropriate, improvements such as access works and fencing may be provided, however any such works should be undertaken sensitively. The future needs of the community should also be met through the use of additional land to the east of the existing cemetery. Expansion of the cemetery may also require changed car par parking and other arrangements. As part of the protection of the area, the community value of the site should be documented.

New Lots	N/A				
Lot Size	N/A				
Priority	Ongoing				
Infrastructure Cost	To be costed				
<b>Associated Projects</b>	-				
Key Actions	3	6	9		

# CF2 Landfill Protection and Expansion Area

#### Summary

The landfill located on Erub Island Road, inland of the coastal development, is an important piece of infrastructure that should be protected from encroachment by incompatible development. Ongoing use of the site should also seek to improve the efficiency of operations so that use of the facility is minimised where possible. Opportunities for the expansion of waste infrastructure should be explored (if required). A vacant parcel of land to the south of the airstrip has been identified as potentially being suitable for a landfill area.

New Lots	N/A
Lot Size	N/A
Priority	Short Term
Infrastructure Cost	N/A
Associated Projects	-
Key Actions	3

#### **Recommendations**

Future investigations of the land will need to consider and respond to any existing environmental and cultural heritage values. It may be necessary to identify the future land use intent of this land in the Planning Scheme, which would require an amendment to be undertaken.

CF3

# Place of Worship Protection

#### **Summary**

The Master Plan has identified that the existing places of worship should be protected and maintained as an important asset to the local community. Further embellishment of the existing buildings and grounds may be appropriate where it is in keeping with the character and nature of the site.

New Lots	N/A			
Lot Size	N/A			
Priority	Ongoing			
Infrastructure Cost	N/A			
Associated Projects	-			
Key Actions	3	9		

CF4

# Nursery

#### **Summary**

A vacant parcel of land to the south of the airstrip has been identified as potentially being suitable for a nursery. The project is intended to fulfil the community's aspiration for a nursery on the island, which may also provide sales to other islands in the region.

#### **Recommendations**

Future investigations of the land will need to consider and respond to any existing environmental or cultural heritage values. It may be necessary to identify the future land use intent of this land in the Planning Scheme, which would require an amendment to be undertaken.

New Lots	N/A				
Lot Size	N/A				
Priority	Medium Term				
Infrastructure Cost	N/A				
<b>Associated Projects</b>	-				
Key Actions	1	4	7		

CF5

# **Sacred Site Protection**

#### **Summary**

The Master Plan has identified the location of sacred sites that should be protected for the benefit of all members of the community. As part of the protection of these area, the community value of the site should be documented. Where access to the site is in keeping with the community and cultural value, this should be sensitively facilitated. Opportunity may exist to provide tourism access, again where in keeping with the value of the site.

New Lots	N/A				
Lot Size	N/A				
Priority	Ongoing				
Infrastructure Cost	N/A				
Associated Projects	-				
Key Actions	3	4	6	9	

CF6

# **Child Care Centre**

#### **Summary**

The Master Plan identifies the current school site (Lot 67 on SP270873), as being potentially suitable for a child care centre. The community has identified a need for child care facilities, which the Master Plan will deliver through the provision of a new facility. Child care services should be expanded as demand necessitates and consideration should be given to facilitating home-based child care, where appropriate.

Child care has been acknowledged as a regional issue which comprises significant complexity with regard to legal compliance. On this basis it is anticipated that future child care services will be delivered as a coordinated service covering multiple islands or the entire region.

New Lots	N/A		
Lot Size	N/A		
Priority	Short Term		
Infrastructure Cost	N/A		
Associated Projects	-		
Key Actions	6		

#### **Recommendations**

The location and delivery model for child care should be further explored through engagement with key stakeholders to ensure that specific needs are identified and aspirations are appropriately met.

# CF7 Arts centre protection and expansion

# **Summary**

The Master Plan has identified that the existing arts centre should be protected and maintained as an important asset to the local community. Further embellishment of the existing building and grounds may be appropriate where it is in keeping with the character and nature of the site.

New Lots	N/A				
Lot Size	N/A				
Priority	Short Term				
Infrastructure Cost	Subject to Investigation				
Associated Projects	-				
Key Actions	3	4	6		

# **Recreation and Open Space Projects**

The Master Plan seeks to provide improved opportunities for recreation, through the provision of an integrated network of active transport infrastructure and the identification of land for dedicated sporting facilities. This key direction was identified as part of the technical analysis which is documented in the Erub Island Master Plan Technical Report. Further detail is also provided in **Appendix F**.

	0	4	
U	9		

# Path Network

#### **Summary**

The Master Plan identifies a pedestrian and cycle path network looping through part of the township. The pathway network will serve to improve connectivity whilst also support recreational opportunities and enhanced access to sacred sites (where appropriate). Development of the pathway should be combined with supporting infrastructure such as seats, lighting, rest stops, general amenities and landscaping to improve its contribution to the community. Pathway construction should occur in conjunction with the new rockwall (where possible).

New Lots	N/A			
Lot Size	N/A			
Priority	Medium T	erm		
Infrastructure Cost	\$703 per metre (concrete) \$450 per metre (gravel) \$225 per metre (earth)			
Associated Projects	CT3	0T3	OT5	
Key Actions	2	6	8	

#### **Other Projects**

The Master Plan identifies a range of other projects intended to ensure the community is serviced with appropriately located facilities and infrastructure. These projects have been identified in response to direct community needs and include precinct plans, further investigations and new/upgraded infrastructure. These key directions were identified as part of the technical analysis which is documented in the Erub Island Master Plan Technical Report. Further detail is also provided in **Appendix F**.

# **OT1**

# **Jetty and Boat Ramp Upgrades**

#### **Summary**

The jetty and boat ramp located on Erub Island Road at the south-western corner of the island is a key arrival and departure location for people and goods. Further improvements in this location will support the efficient and safe use of this facility, whilst also expanding the ability for it to be used in a manner that supports economic activity. Upgrades may include in water works such as channel works and dredging, markers and a rockwall while on land works may include a freezer, parking, storage and setdown areas.

Jetty and boat ramp upgrades are a common project across all communities within the region. It is anticipated that required upgrades may be delivered as a regional work package which is progressively rolled out across each community.

New Lots	N/A			
Lot Size	N/A			
Priority	Short Term			
Infrastructure Cost	To Be Costed			
Associated Projects	OT2 OT3			
Key Actions	4 6 8		8	

#### Recommendation

It is recommended that all improvement works are identified in consultation with key stakeholders using the jetty and boat ramp.

The projects interface and inclusion in the CBD Precinct Plan (**0T2**) should be considered as part of future works.

# Recreational Boat Ramp and Anchorage

#### **Summary**

The Master Plan Project identifies the need for an additional boat ramp and anchorage opportunities (floating pontoon or jetty) for smaller, recreational vessels within the bay area to improve safety and the overall efficiency of tourism and emergency operations.

#### Recommendation

It is recommended that all improvement works are identified in consultation with key stakeholders using the existing jetty and boat ramp on Erub Island Road.

New Lots	N/A			
Lot Size	N/A			
Priority	Short Term			
Infrastructure Cost	To Be Costed			
Associated Projects	OT1			
Key Actions	4	6	8	

**OT3** 

# **CBD Precinct Plan**

#### **Summary**

The Master Plan has identified an area of developed land in the south-west of the island along Erub Island Road for future precinct planning. This land is strategically located as the centre of activities on the island and, with coordinated planning, can progressively be developed in a manner that will positively contribute to the amenity and character of the community. This location and the services and facilities currently provided within it have the potential to be embellished and expanded, cementing it as the core of the community.

A copy of a preliminary Precinct Plan is provided as Appendix E.

#### Recommendations

Investigate the extent to which coastal hazards may affect future development of the precinct and respond to these features accordingly. Further planning of the land should consider the recommendations of the *Torres Strait Adaptation and Resilience Plan 2016-2021* and future Coastal Hazard Adaptation Strategies for the region.

Development of this project should also consider its interface to **OT1** (Jetty and Boat Ramp Upgrades).

New Lots N/A	N/A		
Lot Size N/A	N/A		
Priority Mediu	Medium Term		
Infrastructure Cost N/A	N/A		
Associated Projects OT1	OT1		
Key Actions 4	4 6 8		

# Airport Upgrades

#### **Summary**

In order to improve access to Erub Island and the utility of airport infrastructure, further upgrades to the airstrip should be investigated. These upgrades may include the development of public amenities, terminal and waiting area facilities; storage and maintenance facilities; car parking and ancillary facilities; improving the arrival experience and interface with surrounding land.

Lighting, surfacing, and drainage upgrades to the roads connecting the airport to the township area should also be investigated to increase safety and connectivity across the island.

New Lots	N/A
Lot Size	N/A
Priority	Short Term
Infrastructure Cost	To Be Costed
Associated Projects	-
Key Actions	6

**OT5** 

# **Foreshore Precinct**

#### **Summary**

The Master Plan identifies an elongated parcel of land (Lot 408 on SP270873) to the east of the township core, on the southern side of Erub Island Road, as being suitable for a Foreshore Precinct. The Foreshore Precinct is intended to capitalise on the coastal amenity of the location, providing a park, walking track (**0S1**), exercise equipment, and appropriate community gathering places and facilities. The Foreshore Precinct is proximate to places of worship (on the northern side of Erub Island Road) and has an interface to the CBD Precinct Plan (**0T2**). The Path Network (**0S1**) also extends through the site.

A copy of a preliminary Precinct Plan is provided as Appendix E.

New Lots	N/A			
Lot Size	N/A			
Priority	Long Term			
Infrastructure Cost	N/A			
Associated Projects	CF3 OS1 OT3			
Key Actions	1 2 6		8	

#### **Recommendations**

Any development would need to respond to the coastal hazards affecting the land, the precinct's interface to project **CF3** (Place of Worship Protection), the CBD Precinct Plan **(0T2)** and the Path Network **(0S1)** that extends through the lot.

# Water Supply Upgrades

#### **Summary**

The Master Plan Project identifies the need for increased water storage capacity to meet current and future demand of the community. This may include raising the walls of the existing lagoons or investigating new dam or reservoirs. The water supply network should also be upgraded to improve treatment standards.

Details of specific works and upgrades required upgrades are provided in Chapter 5 of the Master Plan.

New Lots	N/A
Lot Size	N/A
Priority	Short Term
Infrastructure Cost	To Be Costed
Associated Projects	-
Key Actions	3

**OT7** 

# Sewerage Upgrades

#### **Summary**

The sewerage network should be upgraded to meet current and future demand and treatment standards. Details of specific works and upgrades required upgrades are provided in Chapter 5 of the Master Plan.

New Lots	N/A
Lot Size	N/A
Priority	Short Term
Infrastructure Cost	To Be Costed
<b>Associated Projects</b>	-
Key Actions	3

# "Back of Island" Access

#### **Summary**

A range of opportunities are available for recreational and community activities to occur in areas of the island outside the established township. These opportunities should be further investigated in consultation with the community. Access is a primary constraint and any planned areas should be coordinated with road upgrades.

New Lots	N/A		
Lot Size	N/A		
Priority	Medium Term		
Infrastructure Cost	To Be Costed		
Associated Projects	-		
Key Actions	5 6		

**OT9** 

# Telecommunications Upgrades

#### **Summary**

The community's access to telecommunications should be improved to ensure that coverage is available throughout the township, its immediate surrounds where activity occurs and within the surrounding ocean to allow ease of communication with vessels, particularly in an emergency. Various upgrades should be identified in consultation with service providers.

New Lots	N/A	
Lot Size	N/A	
Priority	Short Term	
Infrastructure Cost	To Be Costed	
<b>Associated Projects</b>	-	
Key Actions	6	

# **OT10**

# Carbon and Renewable Energy Opportunities

#### **Summary**

As explained in the Erub Island Master Plan Technical Report, the Queensland Government has identified a target to be carbon neutral by 2050. A variety of opportunities exist across Erub Island to implement carbon initiatives that can assist in achieving this target. Key opportunities including renewable energy installations (wind and solar), reductions in fossil fuel use, carbon burning and blue carbon. Further investigations should be undertaken to identify suitable initiatives and potential sites. These opportunities also provide the potential to generate employment for the local community.

New Lots	N/A
Lot Size	N/A
Priority	Medium Term
Infrastructure Cost	To Be Costed
Associated Projects	-
Key Actions	6

# 5 Infrastructure

In order to support future residential, industrial, commercial, tourism, community facilities, recreation and open space development on Erub Island in accordance with the Master Plan, upgrades to existing infrastructure networks and new infrastructure will be required as detailed below. High level costings of supporting infrastructure are included in **Appendix D**.

# 5.1 Topography/Climate Change

The townships on Erub Island are located along the coastal foreshore and adjacent hill slopes. All new development should be constructed at a sufficient height above highest astronomical tide (HAT) to protect residents and the community from the impacts of forecast climate change rises in sea level and from tidal surge from cyclones.

#### 5.2 Roads

Roads on the island are mainly bitumen surfaced, with some gravel paved roads. For durability, roads are to be preferably constructed six (6) metres wide in either 150 mm thick fibre reinforced concrete, or gravel paved and bitumen surfaced. Roads are to be provided with either a 300 mm wide concrete edge strip or mountable kerb and channel either side as appropriate. The access road to the airstrip is bitumen surfaced and requires complete reconstruction with culverts upgraded. All unsealed roads within the residential and commercial development should be fully surfaced as funds become available.

#### 5.3 Stormwater

The Queensland Urban Drainage Manual (QUDM) provides current criteria for the design of stormwater drainage in urban residential developments. QUDM generally requires systems for primary drainage in streets to carry 39% Annual Exceedance Probability (AEP) (1 in 2 yr. ARI) runoff, and 1% AEP (1:100 yr. ARI) runoff for major drainage paths and cross road culverts, to limit flooding of public and private property to acceptable levels.

To avoid expensive underground drainage systems and the recurrent cost of ongoing maintenance of pipe systems, open table drains and drainage swales could be provided where appropriate for both primary and secondary drainage.

Due to steeper grades of future roads in some locations, care needs to be exercised to ensure that the stormwater drainage system performs in accordance with the requirements of QUDM.

Stormwater runoff captured from newly developed areas is required to be treated to remove nutrients from the runoff prior to discharge to waterways.

# 5.4 Water Supply

Raw water is sourced from surface rainfall runoff capture stored in a covered dam. The supply of raw water for treatment is just sufficient to meet current and projected future demand. The pH of the raw water of between 2.0 and 6.2 is below the guidelines recommended range of 6.5 to 8.5. Seasonal turbidity levels range from 40 NTU to 210 NTU, which is far higher than the recommended value of 1.0 NTU. Levels of iron are within guidelines recommendations, levels of magnesium are significantly higher than guidelines recommendations, and levels of aluminium span the guideline recommendations for potable water. The treatment plant has recently been upgraded to reduce turbidity levels in treated water discharged from the treatment plant.

The existing water treatment plant capacity is required to be increased from 225 kL per day to 300 kL per day to meet future demand. The current storage capacity for treated water of 815 kL is adequate to meet current and future demand.

Emergency standby power generation equipment should be installed to all critical infrastructure in the water supply system to maintain supply to users during loss of electricity supply.

Reticulation mains of adequate size are to be extended to all new development and be provided with fire hydrants and metered service connections.

Current per capita consumption of 415.14 litres per day exceeds the TSIRC's target consumption of 350 litres per person per day, which may be achieved through demand and leak detection management.

The following upgrades to the existing water supply network will be required to support planned future development:

- > Increase treatment plant capacity from 225 kL per day to 300 kL per day;
- > Install equipment to reduce the level of magnesium in the raw water to within Guidelines.
- > Install equipment to adjust the pH of treated water to within the recommended guideline range;
- > Install emergency power supply generators at all critical infrastructure;
- > Install SCADA equipment to permit remote monitoring of system performance to enable prompt rectification of breakdowns that occur from time to time;
- > Undertake leakage detection in the reticulation system to reduce wastage; and
- > Provision of adequate training for operators.

# 5.5 Sewerage

The sewerage system comprises of gravity sewers, manholes, effluent pump stations, rising mains and an "EPCO" package plant for treatment of effluent prior to discharge to the ocean. The treatment plant capacity is significantly oversized, which leads to operational problems. Effluent discharged from the treatment plant to the ocean is not compliant with licence discharge standards. All new development is to be connected to the existing sewerage network.

The treatment plant has recently been upgraded.

The following upgrades to the existing sewerage network will be required to support planned future development:

- > Undertake treatment plant management to ensure effluent discharged meets licence requirements;
- > Install SCADA equipment to permit remote monitoring of system performance to enable prompt rectification of breakdowns that occur from time to time;
- > Install emergency power supply generators at all critical infrastructure; and
- > Provision of adequate training for operators.

# 5.6 Electricity Supply and Street Lighting

Reticulated electricity to the community is provided from an unmanned isolated fully automated multi-unit diesel generators installed in a power station owned and operated by Ergon.

New development to be delivered under the Master Plan will need to be provided with underground electricity reticulation supplied from new pad mounted transformers where required, installed to Ergon standards.

New street lighting shall comply with Ergon standards for urban residential developments.

#### 5.7 Telecommunications

New development is to be provided with connections for landline and internet services supplied from underground cabling in the street, and mobile services where available, all installed by Telstra.

# 6 Action Plan

Action Plan

Table 6-1

The Action Plan is summarised in **Table 6-1** and identifies future actions arising from the Master Plan. Actions listed in the Action Plan are identified as Key Actions for each project.

	Undertake further investigations in relation to specific land parcels
1	The Master Plan has identified a number of locations that may be suit

The Master Plan has identified a number of locations that may be suitable for further development, subject to specific on-site investigations, which will likely identify developable and constrained land.

#### **Develop a Recreation Strategy**

A strategy should be developed to guide the provision of active travel and recreational infrastructure so that it may form part of a coordinated and integrated network. This is of particular importance for walking and cycling paths.

# Protection of Community Facilities and Infrastructure

The Master Plan identifies a number of community facilities and infrastructure that are to be protected and maintained for the benefit of the community. The ongoing maintenance of these facilities should be prioritised, with further expansion or embellishment considered when necessary.

#### **Encourage Economic Activity**

The Master Plan identifies a number of locations which will support economic activity, however there is a need to encourage businesses to take up the opportunities provided by this land, particularly relating to industry and tourism.

5	Investigate Cultural, Economic and Recreational Areas  Further investigation of potential cultural, economic and recreational areas beyond the township should be undertaken.
6	Consultation with Key Stakeholders  The Master Plan identifies a number of conceptual opportunities which require consultation with stakeholders relevant to these projects, in order to determine more detailed design requirements to support the delivery of these projects.
7	Planning Scheme Amendments  In a number of instances it may be necessary for the Planning Scheme to be amended to reflect the Master Plan projects identified and ultimately support the delivery of these projects.
8	Coastal Inundations Investigations and Works  Undertake specific investigations into coastal inundation required to identify land that may be suitable for future projects identified by the Master Plan, subject to specific mitigation and protection works.
9	Documentation of Cultural Values  The cultural and spiritual values of significant sites such as churches and cemeteries should be documented for the community.

APPENDIX

A

MASTER PLAN MAP



# ERUB ISLAND MASTER PLAN

VERSION 004 5 July 2022





# RESIDENTIAL: RS1 RESIDENTIAL EXPANSION AREA 1 RS2 RESIDENTIAL EXPANSION AREA 2 RS3 RESIDENTIAL EXPANSION AREA 3 RS4 RESIDENTIAL EXPANSION AREA 4 OTHER DEVELOPMENT: OT1 JETTY AND BOAT RAMP UPGRADES OT2 RECREATIONAL JETTY AND BOAT RAMP OS1 P

POLICE FACILITY (QPS)

U14   AIRPORT UPGRADES	COMM
0T5 FORESHORE PRECINCT	CF1
0T6 WATER SUPPLY UPGRADES	CF2
0T7 SEWERAGE UPGRADES	CF3
COMMERCIAL / TOURISM:	CF4
CT11 COMMERCIAL NODE WEST	CF5
OTO COMMERCIAL MORE EACT	OFO

CT2 COMMERCIAL NODE EAST
CT3 TOURIST ACCOMMODATION

DIAGRAM A DIAGRAM B SCALE 1:6,000 SCALE 1:8,000 OT5 **RECREATION & OPEN SPACE:** OS1 PATH NETWORK KEY:
RS = RESIDENTIAL
CT = COMMERCIAL / TOURISM **MUNITY FACILITIES:** CEMETERY PROTECTION AREA CF = COMMUNITY FACILITIES LANDFILL PROTECTION AND EXPANSION AREA OT = OTHER PLACE OF WORSHIP PROTECTION OS = OPEN SPACE ID = INDUSTRIAL NURSERY SACRED SITE PROTECTION • PROJECTS CT4, OT8, OT9 AND OT10 ARE NOT CF6 CHILD CARE CENTRE SHOWN ON THE MASTER PLAN MAP. REFER TO ARTS CENTRE PROTECTION AND EXPANSION



**APPENDIX** 

В

MASTER PLAN PROJECT INDEX



# **ERUB ISLAND MASTER PLAN**PROJECT INDEX

The below table provides a summary of the projects identified in the Master Plan.

ID	Project Name	New Lots	Lot Sizes	Priority	Infrastructure Cost	Associated Projects	Key Actions
RS1	Residential Expansion Area 1	22 Lots (estimate)	1,100m² (average)	Short Term	\$11,068,844	CT3	1, 6
RS2	Residential Expansion Area 2	22 Lots (estimate)	1,100m² (average)	Medium-Long Term	\$8,576,556	RS1	1, 6
RS3	Residential Expansion Area 3	Subject to Investigation	Subject to Investigation	Long Term	To be costed	RS2	1, 6
RS4	Residential Expansion Area 4	Subject to Investigation	Subject to Investigation	Long Term	To be costed	RS3	1, 6
CT1	Commercial Node West	1 Lot	N/A	Medium Term	\$2,571,633	-	4, 6
CT2	Commercial Node East	1 Lot	N/A	Medium Term	\$3,377,617	-	1, 4, 6, 8
СТЗ	Tourist Accommodation	N/A	N/A	Medium Term	\$1,926,846	OS1	4
CT4	Environmental Tourism	N/A	N/A	Medium Term	N/A	-	4, 6
CF1	Cemetery Protection and Expansion Area	N/A	N/A	Ongoing	N/A	-	3, 6, 9
CF2	Landfill Protection and Expansion Area	N/A	N/A	Short Term	N/A	-	3
CF3	Place of Worship Protection	N/A	N/A	Ongoing	N/A	-	3, 9
CF4	Nursery	N/A	N/A	Medium Term	N/A	-	1, 4, 7
CF5	Sacred Site Protection	N/A	N/A	Ongoing	N/A	-	3, 4, 6, 9

Erub Island Master Plan | Project Index

ID	Project Name	New Lots	Lot Sizes	Priority	Infrastructure Cost	Associated Projects	Key Actions
CF6	Child Care Centre	N/A	N/A	Short Term	N/A	-	6
CF7	Arts Expansion and protection area	N/A	N/A	Short Term	N/A	-	3, 4, 6
081	Path Network	N/A	N/A	Medium Term	\$703 per metre (concrete) \$450 per metre (gravel) \$225 per metre (earth)	CT3, OT3, OT5	2, 6, 8
OT1	Jetty and Boat Ramp Upgrades	N/A	N/A	Short Term	To Be Costed	OT2, OT3	4, 6, 8
0Т2	Recreational Boat Ramp and Anchorage	N/A	N/A	Short Term	To Be Costed	0T1	4, 6, 8
<b>OT3</b>	CBD Precinct Plan	N/A	N/A	Medium Term	N/A	0T1	4, 6, 8
<b>OT4</b>	Airport Upgrades	N/A	N/A	Medium Term	To Be Costed	-	6
<b>OT5</b>	Foreshore Precinct	N/A	N/A	Long Term	NA	CF3, OS1, OT3	1, 2, 6, 8
ОТ6	Water Supply Upgrades	N/A	N/A	Short Term	To Be Costed	-	3
<b>OT7</b>	Sewerage Upgrades	N/A	N/A	Short Term	To Be Costed	-	3
<b>OT8</b>	"Back of Island" Access	N/A	N/A	Medium Term	To Be Costed	-	5, 6
ОТ9	Telecommunications Upgrades	N/A	N/A	Short Term	To Be Costed	-	6
OT10	Carbon and Renewable Energy Opportunities	N/A	N/A	Medium Term	To Be Costed	-	6

Erub Island Master Plan | Project Index

APPENDIX

C

ACTION PLAN SUMMARY



# **ERUB ISLAND MASTER PLAN**ACTION PLAN SUMMARY

The below table provides a summary of the relationship between the Action Plan and the projects identified in the Master Plan.

ID	Action	RS1	RS2	RS3	RS4	CT1	CT2	СТЗ	CT4	CF1	CF2	CF3	CF4	CF5	CF6	CF7	<b>0S1</b>
1	Undertake further investigations in relation to specific land parcels			RS3			CT2						CF4				
2	Develop a Recreation Strategy											0S1					
3	Protection of Community Facilities and Infrastructure									CF1	CF2	CF3		CF5		CF7	
4	Encourage Economic Activity					CT1	CT2	СТ3	CT4				CF4	CF5		CF7	
5	Investigate Cultural, Economic and Recreational Areas	Economic and Recreational															
6	Consultation with Key Stakeholders			RS3		CT1	CT2		CT4	CF1				CF5	CF6	CF7	0S1
7	Planning Scheme Amendments												CF4				
8	Coastal Inundations Investigations and Works						CT2										0S1
9	Documentation of Cultural Values									CF1		CF3		CF5			

Erub Island Master Plan | Action Plan Summary

ID	Action	0T1	OT2	ОТ3	OT4	OT5	<b>OT6</b>	OT7	0T8	ОТ9	OT10
1	Undertake further investigations in relation to specific land parcels					OT5					
2	Develop a Recreation Strategy					OT5					
3	Protection of Community Facilities and Infrastructure						OT6	0T7			
4	Encourage Economic Activity	0T1	0T2	0T3							
5	Investigate Cultural, Economic and Recreational Areas								OT8		
6	Consultation with Key Stakeholders	0T1	0T2	0T3	OT4	OT5			0T8	OT9	OT10
7	Planning Scheme Amendments										
8	Coastal Inundations Investigations and Works	0T1	0T2	0T3		OT5					
9	Documentation of Cultural Values										

Erub Island Master Plan | Action Plan Summary

APPENDIX

 $\mathsf{D}$ 

INFRASTRUCTURE COSTINGS



#### **TORRES STRAIT MASTER PLANNING**

#### INFRASTRUCTURE COST ESTIMATES

Prepared for the Department of Aboriginal and Torres Strait Islander Partnerships



#### 10ER ERUB ISLAND

Last Update: Last Update:

5-Jul-22

				Last Up	date	e:	Last Up	date	<b>)</b> :						5-Jul-22			
Project					R	\$1		R	S2		С	T1		C	T2		C	T3
Yield (Number of Lots)					2	22		2	22			1			1		1	N/A
Item	Unit		Rate	Qty		Amount	Qty		Amount	Qty		Amount	Qty		Amount	Qty		Amount
		_			_			_			_			_			_	
HEADWORKS INFRASTRUCTURE UPGRADE																		
Sewage Treatment Plant Upgrade	Item																	
Water Treatment Plant Upgrade	Item	$\vdash$									_							
Reservoirs Upgrade DEVELOPMENT	Item										_							
Earthworks					-													
Site clearing and disposal of material	На	\$	15,750	3.20	\$	50.400	3.6	l s	56.700	0.4	\$	6.300	1.0	\$	15,750	0.5	l s	7,875
Erosion and sediment control	m	\$	45	560	\$	25.200	400	\$	18.000	150	\$	6,750	150	\$	6.750	150	\$	6.750
Strip topsoil and respread	m <sup>3</sup>	\$	34	3,200	\$	108,000	3,575	\$	120,656	400	\$	13,500	900	\$	30,375	500	\$	16,875
Cut to fill on lots	m <sup>3</sup>	\$	45	7,000	\$	315.000	3,575	\$	160.875	1.600	\$	72.000	1500	\$	67.500	1500	\$	67.500
Cut in open drains to fill on lots	m <sup>3</sup>	\$	45	0	\$	313,000	1,000	\$	45,000	0	\$	72,000	0	\$	07,300	0	\$	07,300
Cut in roads and table drains to fill on lots	m <sup>3</sup>	\$	45	0	\$	-	1,000	\$	45,000	0	\$	-	0	\$	-	0	\$	-
Roadworks	<u>l</u> m	φ	40		φ	-	1,000	Ψ	45,000		φ		U	φ	-	U	φ	
Concrete Road (7.0 m)	l m	\$	3.375	570	\$	1,923,750	175	\$	590.625	200	\$	675,000	250	\$	843.750	100	\$	337,500
Stormwater Drainage		Ψ	5,575	070	Ψ	1,323,730	173	Ψ	330,023	200	Ψ	073,000	230	Ψ	040,700	100	Ψ	337,300
Concrete edge strips/K & C to road pavement	l m	\$	450	1,140	\$	513,000	350	\$	157,500	400	<b>S</b>	180.000	500	\$	225.000	200	l s	90,000
Concrete invert to table drain	m	\$	500	0	\$	-	1,200	\$	600,000	0	\$	-	0	\$	-	0	\$	-
1200 x 450 RCBC incl conc base/invert crossing	m	\$	3,375	32	\$	108,000	20	\$	67,500	12	\$	40,500	12	\$	40.500	12	\$	40.500
Headwalls, Wingwalls and Aprons	m <sup>3</sup>	\$	4.050	13	\$	52,650	9	\$	36,450	5	\$	20,250	5	\$	20,250	5	\$	20,250
Bio-Basins	m <sup>2</sup>	\$	1,013	800	\$	810,000	900	\$	911,250	100	\$	101,250	230	\$	232,875	125	\$	126,563
Bio basin concrete spillway	m <sup>2</sup>	\$	788	150	\$	118.125	150	\$	118,125	75	\$	59.063	75	\$	59.063	75	\$	59.063
Water Reticulation					Ť	-, -		Ė	-, -		Ė	,		Ť	,		Ť	,
100 dia, PVC pipe	m	\$	450	900	\$	405,000	180	\$	81,000	250	\$	112,500	450	\$	202,500	75	\$	33,750
150 dia. PVC pipe	m	\$	563	0	\$		0	\$		0	\$		0	\$	_	0	\$	
200 dia PVC pipe	m	\$	731	0	\$	_	0	\$	_	0	\$	_	0	\$	_	0	\$	_
SV's	No	\$	3,375	11	\$	37,125	2	\$	6,750	3	\$	10,125	3	\$	10,125	2	\$	6,750
Hydrants	No	\$	5,119	12	\$	61,425	3	\$	15,356	4	\$	20,475	6	\$	30,713	2	\$	10,238
Single house connections	No	\$	2,250	22	\$	49,500	22	\$	49,500	3	\$	6,750	5	\$	11,250	3	\$	6,750
Connect to existing main	No	\$	6,750	1	\$	6,750	1	\$	6,750	1	\$	6,750	2	\$	13,500	2	\$	13,500
VSD Pump Building	Item	\$	337,500	1	\$	337,500	1	\$	337,500	0	\$	-,	0	\$	-,	0	\$	-
Variable speed drive pump set	Item	\$	225,000	1	\$	225,000	1	\$	225,000	0	\$	-	0	\$	-	0	\$	-
Standby generator	Item	\$	112,500	1	\$	112,500	1	\$	112,500	0	\$	_	0	\$	_	0	\$	_
James J. Bollotatol	1	Ψ	112,000	Ι .	ΙΨ	112,000	' '	IΨ	1.12,000	ı	IΨ		Ĭ	ΙΨ		Ū	ΙΨ	

#### **TORRES STRAIT MASTER PLANNING**

#### INFRASTRUCTURE COST ESTIMATES

Prepared for the Department of Aboriginal and Torres Strait Islander Partnerships



#### 10ER **ERUB ISLAND**

				Last Update: Last Update:					5-Jul-22								
Project					RS1		R	S2		С	T1		С	T2		С	Т3
Yield (Number of Lots)					22			22			1			1		١	I/A
Item	Unit	Rate	Qt	у	Amount	Qty		Amount	Qty		Amount	Qty		Amount	Qty		Amount
Sewerage Reticulation																	
150 dia. PVC	m	\$ 4	60	0 \$	270,000	810	\$	364,500	150	\$	67,500	120	\$	54,000	300	\$	135,000
Manholes	No	\$ 11,2	50 15	5 \$	168,750	17	\$	191,250	4	\$	45,000	3	\$	33,750	7	\$	78,750
Lot connections	No	\$ 1,6	38 22	\$	37,125	22	\$	37,125	3	\$	5,063	2	\$	3,375	3	\$	5,063
FRP Pump Station	Item	\$ 1,068,7	0 0	\$	-	0	\$	-	0	\$	-	0	\$	-	0	\$	-
Standby Generator	Item	\$ 112,5				0	\$	-	0	\$	-	0	\$	-	0	\$	-
90 OD polyethylene pressure main	m	\$ 4	0	\$	-	0	\$	-	0	\$	-	0	\$	-	0	\$	-
110 OD polyethylene pressure main	m	\$ 6	<b>75</b> 0	\$	-	0	\$	-	0	\$	-	0	\$	-	0	\$	-
140 OD polyethylene pressure main	m	\$ 7	88 0	\$	-	0	\$	-	0	\$	-	0	\$	-	0	\$	-
Electricity Supply																	
Conduits, pits and pole bases	Lots	\$ 13,5	00 22	2 \$	297,000	22	\$	297,000	3	\$	40,500	4	\$	54,000	3	\$	40,500
Cabling and street lights	Lots	\$ 16,8	<sup>2</sup> 5 22	\$	371,250	22	\$	371,250	3	\$	50,625	4	\$	67,500	3	\$	50,625
Transformer	No	\$ 225,0	00 1	\$	225,000	0.5	\$	112,500	0	\$	-	0	\$	-	0	\$	-
Sub Totals				\$	6,628,050		\$	5,135,663		\$	1,539,900		\$	2,022,525		\$	1,153,800
Contingencies	Item	30%		\$	1,988,415		\$	1,540,699		\$	461,970		\$	606,758		\$	346,140
Preliminaries																	
Establishment, insurance, As-constructed	Item	22%		\$	1,458,171		\$	1,129,846		\$	338,778		\$	444,956		\$	253,836
Project Management																	
Survey, design, and construction administration	Item	15%		\$	994,208		\$	770,349		\$	230,985		\$	303,379		\$	173,070
TOTALS				\$	11,068,844		\$	8,576,556		\$	2,571,633		\$	3,377,617		\$	1,926,846

APPENDIX

Ε

PRECINCT PLANS



# ERUB ISLAND MASTER PLAN CBD PRECINCT PLAN

VERSION 001 29 June 2020







2 FORESHORE PARKLAND



3 SHARED ZONE



# ERUB ISLAND MASTER PLAN FORESHORE PRECINCT

VERSION 001 29 June 2020







2 SHARED ZONE









APPENDIX

F

ANALYTICAL TRANSLATION



### ERUB ISLAND MASTER PLAN

### **ANALYTICAL TRANSLATION**

#	Direction	Technical Report	Master Plan Projects	Notes
1.	The Master Plan will need to cater for increased demand for housing (eight new dwellings), because of a need to reduce overcrowding and cater for population growth. This could be accommodated within the township expansion area immediately adjoining Erub Village, to the north/north-east of electricity infrastructure.	4 Demographic Analysis 8.1 Aboriginal and Torres Strait Islander Housing Action Plan 2019- 2023 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	RS1	
2.	The Master Plan should seek to diversify the available housing products, particularly the provision of smaller housing types such as units and townhouses. These dwelling types can be supported as infill housing, which will allow them to be well located proximate to key services and facilities.	4 Demographic Analysis 8.1 Aboriginal and Torres Strait Islander Housing Action Plan 2019- 2023 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	RS1	
3.	The Master Plan should support the provision of facilities for ageing in place and accessible living including accommodation for independent living (for persons of any age who may need care).	4 Demographic Analysis 8.1 Aboriginal and Torres Strait Islander Housing Action Plan 2019- 2023 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	RS1, 0T3	

#	Direction	Technical Report	Master Plan Projects	Notes
4.	The Master Plan should investigate the multiple possible future housing investigation areas identified in the planning scheme strategic framework for housing opportunities associated with the aspiration of traditional owners to relocate to tribal land.	4 Demographic Analysis 8.1 Aboriginal and Torres Strait Islander Housing Action Plan 2019- 2023 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	RS2, RS3, RS4	
5.	The Master Plan should explore options for the development of the town expansion area identified by the planning scheme to the north/north-east of the existing township area for accommodation and enterprise opportunities for tourism.	2.5 Services and Facilities 5 Planning Analysis 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	CT3	
6.	The Master Plan should seek to facilitate the provision of active transport infrastructure (walking / cycling paths) to connect important parts of the community and promote healthy living through physical activity.	5 Planning Analysis 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	0S1	
7.	The Master Plan should seek to support the protection and embellishment (where appropriate) of key sacred and cultural sites identified by the community. This may include improving community access.	5 Planning Analysis 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	CF5	
8.	The Master Plan should support expansion and/or renewal in the town centre with a focus on improving accessibility for the community.	2.5 Services and Facilities 8.5 Healthy by Design / Walkability 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029	ОТЗ	

#	Direction	Technical Report	Master Plan Projects	Notes
9.	The Master Plan should seek to protect places of worship and cemeteries and facilitate the identification of additional land to support future community needs.	8.12 TSIRC Corporate Plan 2020-2025 2.5 Services and Facilities 8.12 TSIRC Corporate Plan 2020-2025	CF1, CF3	
10.	The Master Plan should locate development in a manner that is reflective of the potential effects of coastal processes.	5 Planning Analysis 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.11 Torres Strait Regional Adaptation and Resilience Plan 2016-2021 8.12 TSIRC Corporate Plan 2020-2025	All projects	
11.	The Master Plan should investigate the provision of land for potential food production, which may include community or market gardens or agricultural activities. Land suitable for this purpose potentially exists immediately east of the existing town centre.	5 Planning Analysis 8.9 Food Security 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	CF4	
12.	The Master Plan should support the efficient use and embellishment of the jetty and boat ramp precinct. This will likely include supporting improvements to vessel access through new or improved marine infrastructure and the provision of new landbased infrastructure. This precinct may also provide opportunity for seafood business enterprises.	2.5 Services and Facilities 5 Planning Analysis 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025 8.13 Warpil — Fishing for Our Future	OT1	
13.	The Master Plan should support the development of new boat ramp and anchorage facilities for smaller, recreation vessels to improve safety and the overall efficiency of tourism and emergency operations.	2.5 Services and Facilities 5 Planning Analysis 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025 8.13 Warpil – Fishing for Our Future	OT2	

#	Direction	Technical Report	Master Plan Projects	Notes
14.	The Master Plan should support the development of new recreational facilities.	8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	OS1, OT6	
15.	The Master Plan should support the development of tourism opportunities that are compatible with the aspirations of the community including establishing a new guesthouse.	2.5 Services and Facilities 5 Planning Analysis 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	CT3, CT4, OT1, OT3, OT4, OT5	
16.	The Master Plan should support the identification of land that may be suitable for seafood/fishing business development.	5 Planning Analysis 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025 8.13 Warpil – Fishing for Our Future	ОТ1, ОТ3	
17.	The Master Plan should support the provision of a child care facility in the town centre and nearby the school.	<ul><li>2.5 Services and Facilities</li><li>5 Planning Analysis</li><li>8.10 Torres Strait and Northern</li><li>Peninsula Regional Plan 2009-2029</li><li>8.12 TSIRC Corporate Plan 2020-2025</li></ul>	CF6	
18.	The Master Plan should support the development of cultural centres and arts centre.	<ul><li>2.5 Services and Facilities</li><li>5 Planning Analysis</li><li>8.10 Torres Strait and Northern</li><li>Peninsula Regional Plan 2009-2029</li><li>8.12 TSIRC Corporate Plan 2020-2025</li></ul>	OT3, CT1, CT2 , CF7	
19.	The Master Plan should investigate opportunities to improve community access to other areas of the island (beyond the township), particularly for recreation, economic and cultural purposes.	8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	ОТ8	

#	Direction	Technical Report	Master Plan Projects	Notes
20.	The Master Plan should investigate opportunities for carbon offsetting, both in land and sea areas.	<ul><li>8.2 Queensland Climate Transition</li><li>Strategy</li><li>8.4 Carbon</li><li>8.10 Torres Strait and Northern</li><li>Peninsula Regional Plan 2009-2029</li><li>8.12 TSIRC Corporate Plan 2020-2025</li></ul>	OT10	
21.	The Master Plan should identify potential opportunities for alternative energy projects.	<ul> <li>8.2 Queensland Climate Transition</li> <li>Strategy</li> <li>8.4 Carbon</li> <li>8.8 Renewable Energy</li> <li>8.10 Torres Strait and Northern</li> <li>Peninsula Regional Plan 2009-2029</li> <li>8.12 TSIRC Corporate Plan 2020-2025</li> </ul>	OT10	
22.	The Master Plan should support the protection and expansion (if required) of the existing landfill site.	<ul><li>2.5 Services and Facilities</li><li>6 Infrastructure Analysis</li><li>8.10 Torres Strait and Northern</li><li>Peninsula Regional Plan 2009-2029</li><li>8.12 TSIRC Corporate Plan 2020-2025</li></ul>	CF2	
23.	The Master Plan should investigate opportunities to improve communications infrastructure (telephone and internet).	8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	ОТ9	
24.	The Master Plan should support the provision of appropriate lighting in key locations in the town.	8.12 TSIRC Corporate Plan 2020-2025	OS1, OT3, OT5	

#	Direction	Technical Report	Master Plan Projects	Notes
25.	The Master Plan should facilitate upgrades to the water supply network in order to improve water treatment quality and capacity to meet current standards. The ability to increase water storage should also be considered to ensure sufficient capacity exists to meet future demand.	6 Infrastructure Analysis 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	OT6	
26.	The Master Plan should facilitate upgrades to the sewerage network, specifically with regard to the current operating state of the treatment plant, the quality of discharge from the system and pump station capacity.	6 Infrastructure Analysis 8.10 Torres Strait and Northern Peninsula Regional Plan 2009-2029 8.12 TSIRC Corporate Plan 2020-2025	0Т7	
27.	The Master Plan should be updated to reflect the outcomes of community consultation activities undertaken.	7 Consultation	CF1, CF5, RS1, RS2, RS3, RS4, CF6, CF7, OT2, CF2, CF4	