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Date: 19/07/2021

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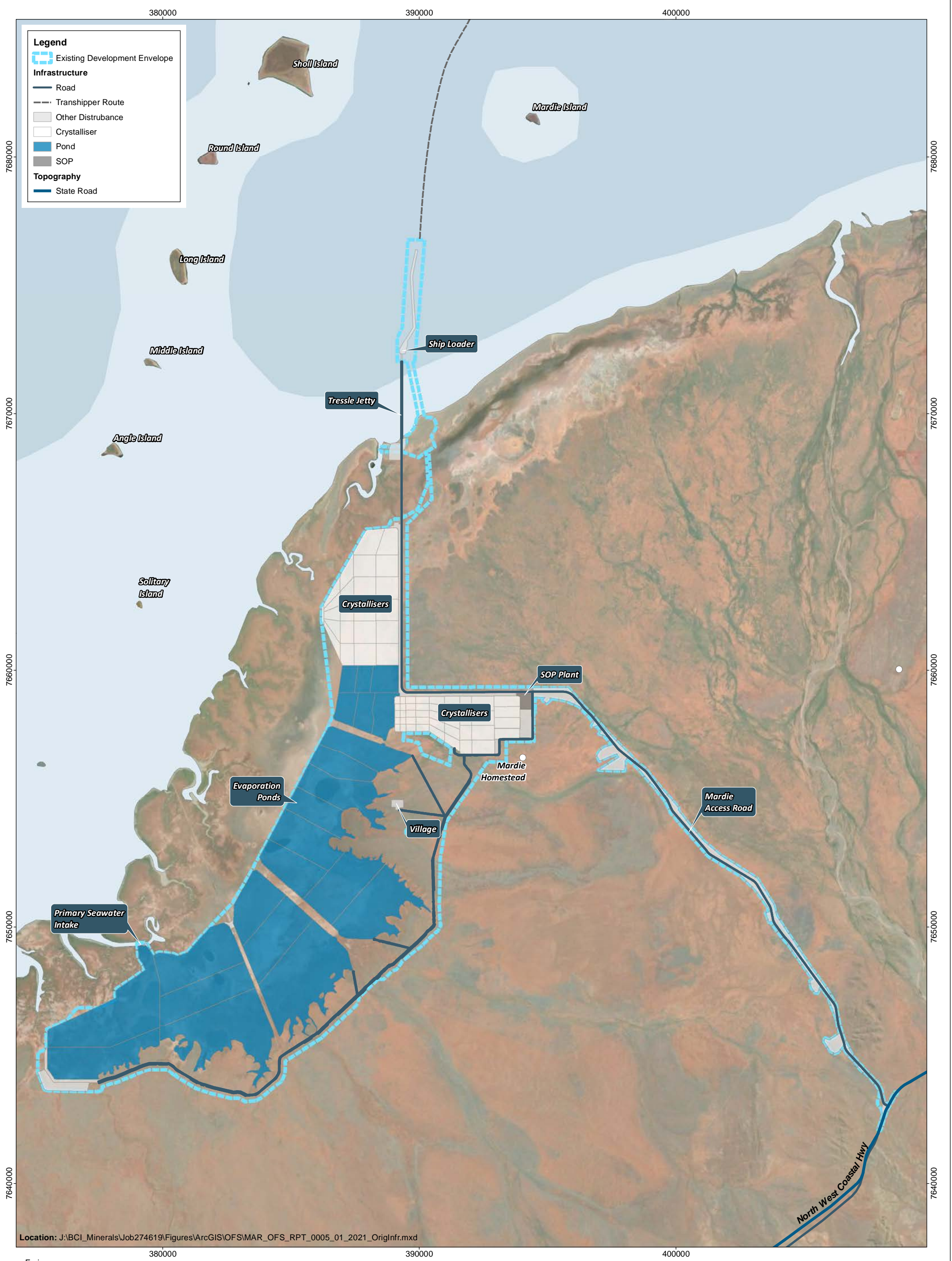
GDA2020 MGA Zone 50
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Date: 19/07/2021
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Mardie Project Regional Location of the Proposal

Figure:
1



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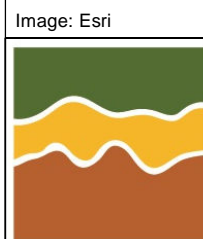


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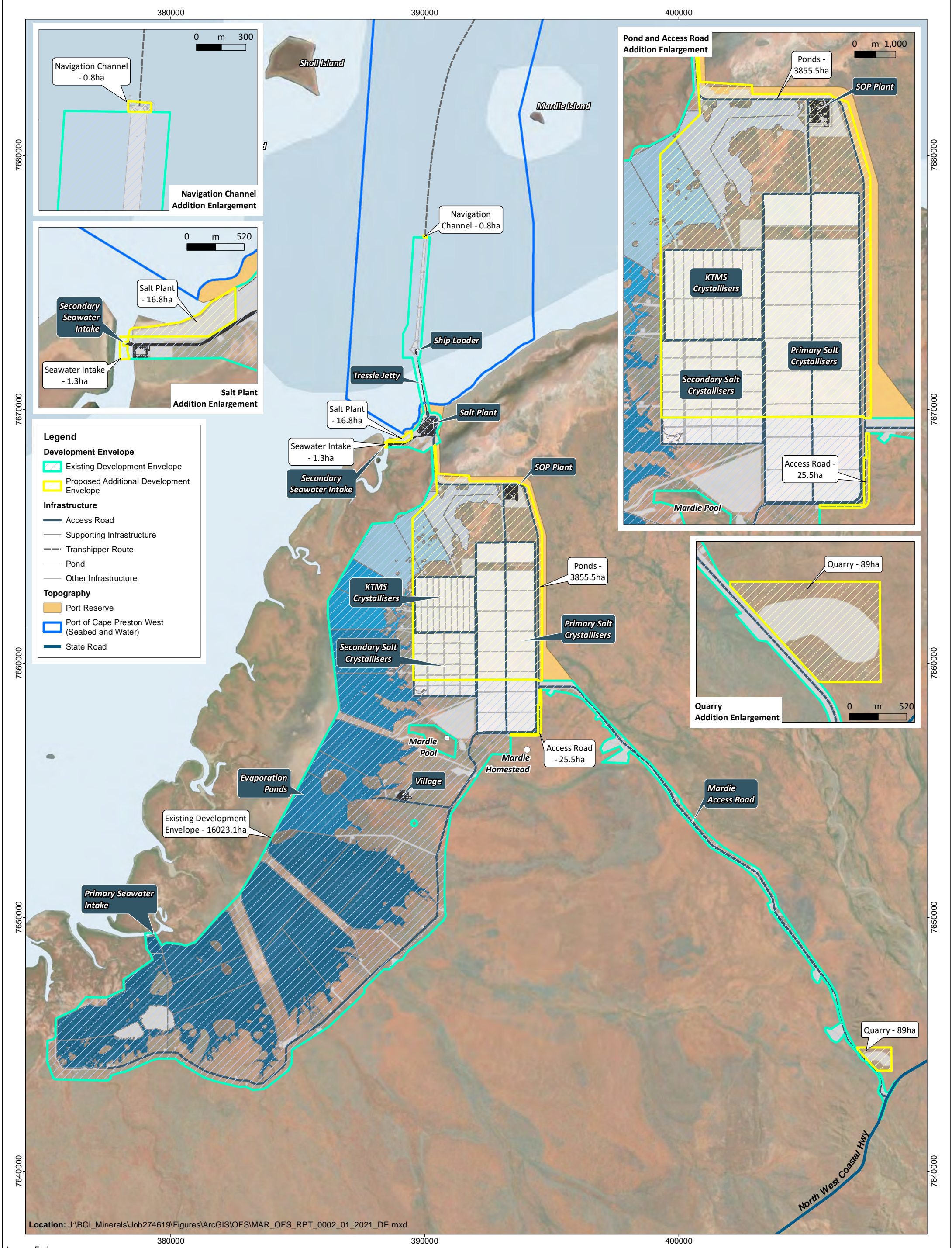
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GDA2020 MGA Zone 50
Scale: 1:130,000

Date: 22/07/2021

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Mardie Project Original design of the Proposal



Legend

Development Envelope

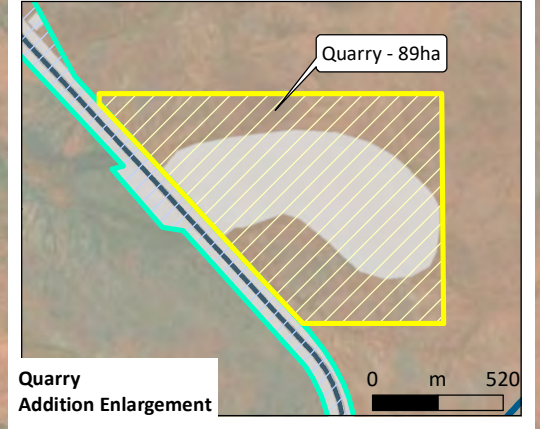
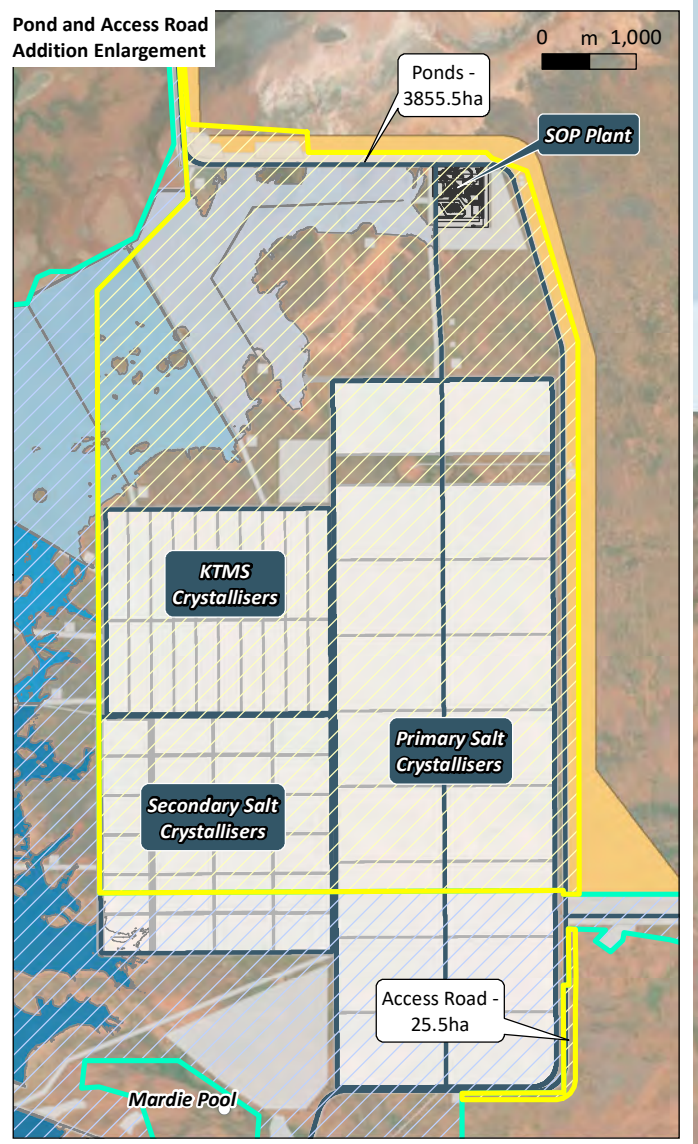
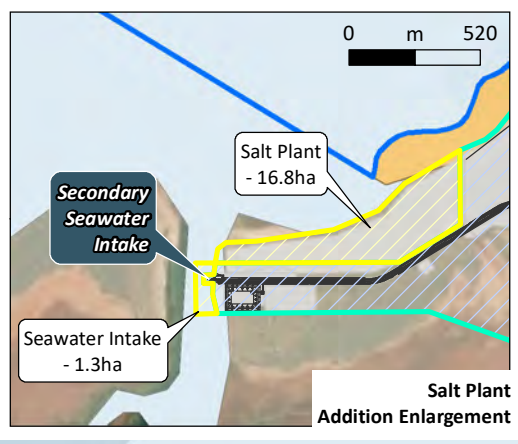
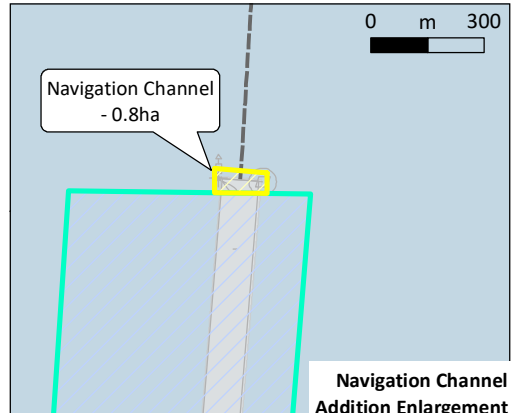
- Existing Development Envelope
- Proposed Additional Development Envelope

Infrastructure

- Access Road
- Supporting Infrastructure
- Transhipper Route
- Pond
- Other Infrastructure

Topography

- Port Reserve
- Port of Cape Preston West (Seabed and Water)
- State Road



Location: J:\BCI_Minerals\Job274619\Figures\ArcGIS\OFS\IMAR_OFS_RPT_0002_01_2021_DE.mxd



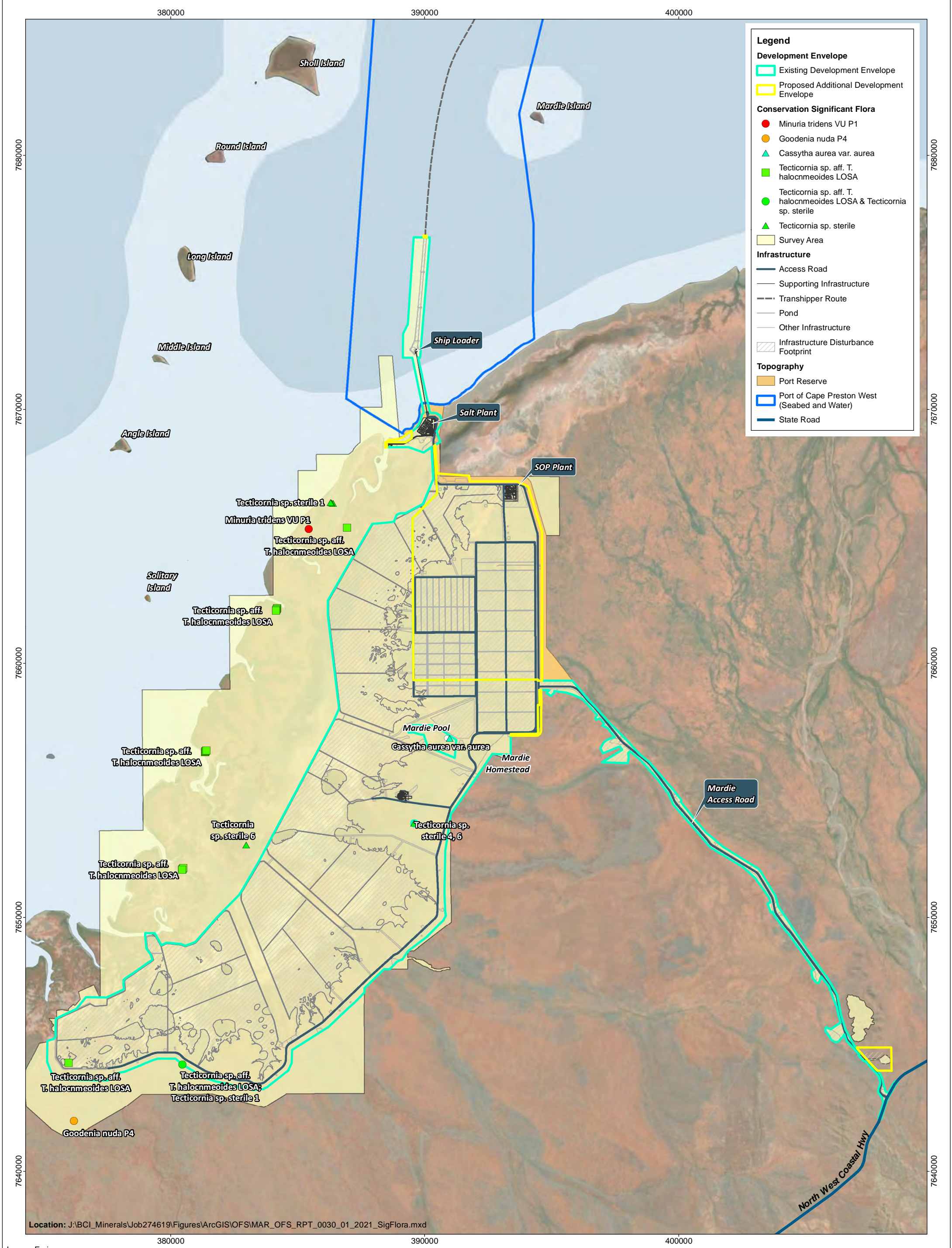
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GDA2020 MGA Zone 50
Scale: 1:130,000

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Mardie Project Proposal Development Envelopes and Indicative Disturbance Footprint



Legend

Development Envelope

- Existing Development Envelope
- Proposed Additional Development Envelope

Conservation Significant Flora

- Minuria tridens VU P1
- Goodenia nuda P4
- Cassytha aurea var. aurea
- Tecticornia sp. aff. T. halocnmeoides LOSA
- Tecticornia sp. aff. T. halocnmeoides LOSA & Tecticornia sp. sterile
- Tecticornia sp. sterile

Infrastructure

- Access Road
- Supporting Infrastructure
- Transhipper Route
- Pond
- Other Infrastructure
- Infrastructure Disturbance Footprint

Topography

- Port Reserve
- Port of Cape Preston West (Seabed and Water)
- State Road

Location: J:\BCI_Minerals\Job274619\Figures\ArcGIS\OFS\MAR_OFS_RPT_0030_01_2021_SigFlora.mxd

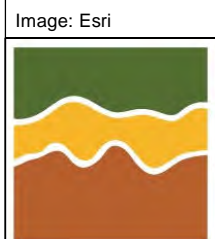


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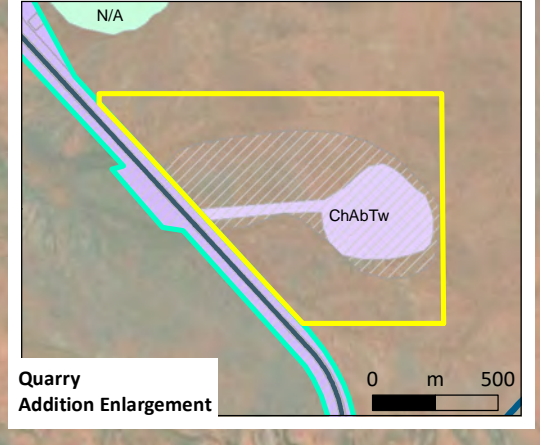
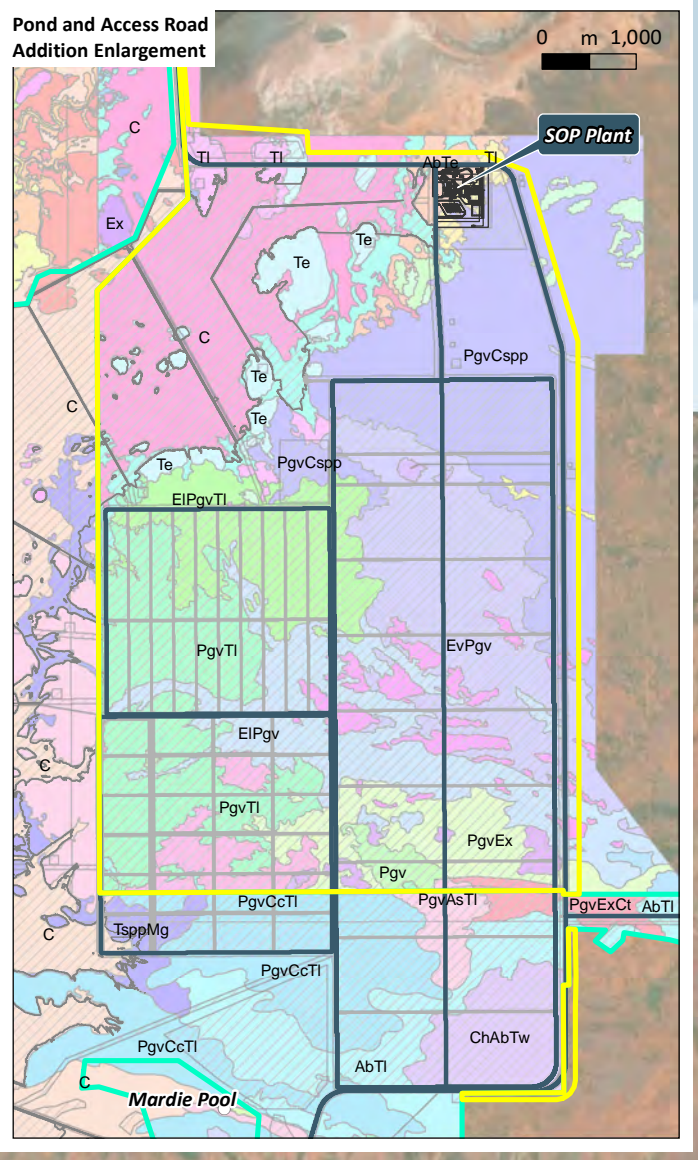
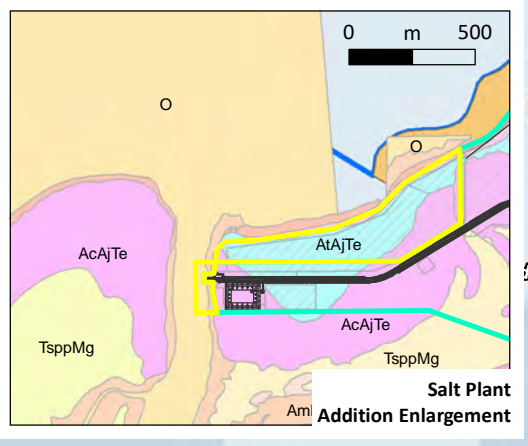
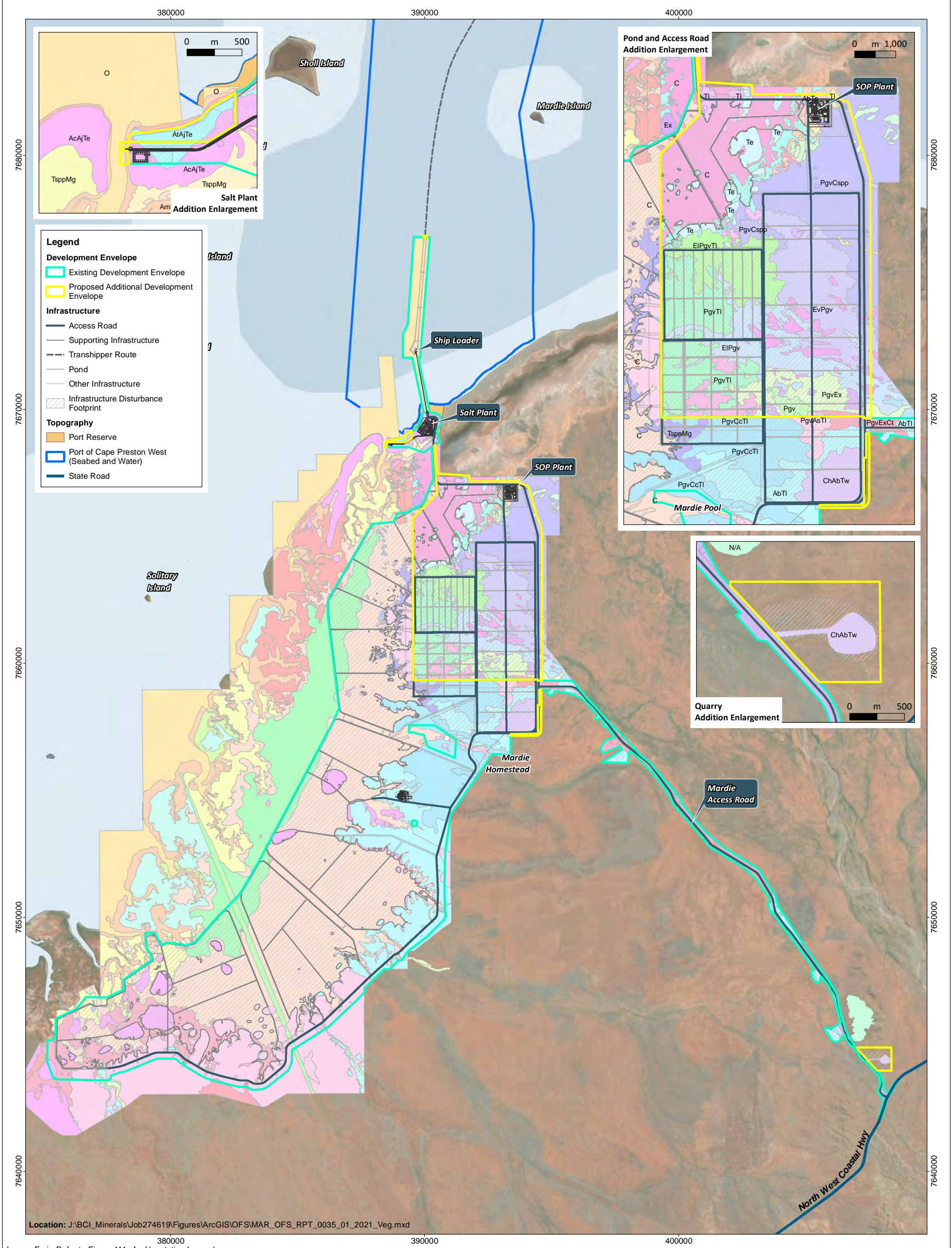
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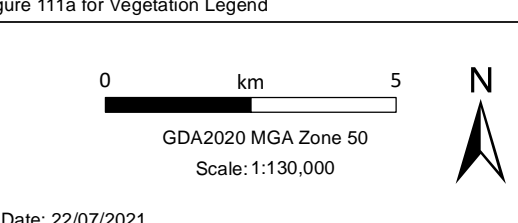
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Mardie Project Locations of Significant Flora Recorded During the Field Survey



- Legend**
- Development Envelope**
- Existing Development Envelope
 - Proposed Additional Development Envelope
- Infrastructure**
- Access Road
 - Supporting Infrastructure
 - Transhipper Route
 - Pond
 - Other Infrastructure
 - Infrastructure Disturbance Footprint
- Topography**
- Port Reserve
 - Port of Cape Preston West (Seabed and Water)
 - State Road

Location: J:\BCI_Minerals\Job274619\Figures\ArcGIS\OFS\MAR_OFS_RPT_0035_01_2021_Veg.mxd



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Mardie Project Site Vegetation Types

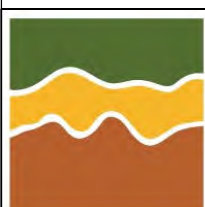
Figure:
5

Legend

Vegetation

-  AM - Algal Mat
-  AbTe - Acacia bivenosa shrubland, over Triodia epactia hummock grassland.
-  AbTI - Acacia biveonsa shrubland (with variable infestations of Prosopis glandulosa x velutina), over Triodia hummock grassland (with variable infestations of *Cenchrus ciliaris).
-  AbTI - Mid to tall mixed Acacia shrubland, frequently A. biveonsa and infestations of Prosopis glandulosa x velutina over Triodia hummock grassland, T. longicep with infestations of *Cenchrus ciliaris
-  AcAjTe - Isolated tall shrubs to open shrubland, frequently Acacia coriacea, *Prosopis glandulosa x velutina and Myoporum montanum over isolated low shrubs to open shrubland of *Aerva javanica over low closed Triodia epactia hummock grassland on sand dunes...
-  AcAjTe(Soak) - Soak surrounded by Isolated tall shrubs to open shrubland, frequently Acacia coriacea, *Prosopis glandulosa x velutina and Myoporum montanum over isolated low shrubs to open shrubland of *Aerva javanica over low closed Triodia epactia...
-  AjSIte - Beach/dune
-  AmMs - Mid open Avicennia marina and Rhizophora stylosa shrubland over low closed Muellerolimon salicorniaceum shrubland surrounding tidal creek
-  AmMs - Mid open Avicennia marina and Rhizophora stylosa shrubland over low closed Muellerolimon salicorniaceum shrubland surrounding tidal creek.
-  AspCs - Acacia sp. 'dendretic' woodland over *Cenchrus setiger tussock grassland.
-  AspTw - Acacia spp. and *prosopis glandulosa x velutina shrubland over Triodia wiseana hummock grassland.
-  AtAjTe - Isolated mid Adriana tomentosa var. tomentosa, Trichodesma zeylanicum var. zeylanicum and Rhagodia preissii subsp. obovata shrubs over isolated low *Aerva javanica, Corchorus walcottii and Indigofera linifolia shrubs over mid closed Triodia epactia...
-  Beach/dune - Bare sand, sporadic vegetation may be present
-  C - Mudflat or saltflat areas predominantly devoid of vegetation
-  C - Mudflat or saltflat areas predominantly devoid of vegetation.
-  C/TsppMg - Isolated *Prosopis glandulosa x velutina shrubs, over isolated Tecticornia spp. on raised mudflats.
-  ChAbTw - Isolated low Corymbia hamersleyana and C. candida trees over mid to tall shrubs to open shrubland of Acacia spp., frequently A. ancistrocarpa, A. bivenosa and A. pyrifolia var. pyrifolia over low to mid Triodia wiseana hummock grassland...
-  ChAbTw - Isolated low Corymbia zygophylla over mid to tall shrubs to open shrubland of Acacia spp., A. bivenosa over low to mid Triodia wiseana hummock grassland on flat and undulating plains (no C hamersleyana, scattered C. zygophylla over prosopis)
-  ChTw - Open Corymbia hamersleyana woodland, over variably present *Prosopis glandulosa x velutina shrubland, over Triodia wiseana hummock grassland.
-  Cleared - Cleared area with infrastructure and buildings
-  Cleared - Cleared areas.
-  Cleared - Cleared of vegetation, with some limited presence of regrowth
-  EIPgv - Eucalyptus victrix isolated trees, over *Prosopis glandulosa x velutina shrubland to closed shrubland.
-  EIPgvTI - Eucalyptus victrix sparse to open woodland, over Mesquite and Acacia xiphophylla sparse shrubland, over open Triodia longiceps hummock grassland.
-  EIPgvTI - Isolated Eucalyptus leucophloia trees, over *Prosopis glandulosa x velutina shrubland, over Triodia longiceps hummock grassland.
-  EvAcpCc - Isolated low trees to low open Eucalyptus victrix woodland occasionally with Corymbia candida trees over mid to tall open shrubland with Acacia spp., frequently Acacia coriacea subsp. pendens and A. pyrifolia var. pyrifolia, Ehretia saligna and...
-  EvPgv - Eucalyptus victrix and/or E. leucophloia open woodland, *Prosopis glandulosa x velutina shrubland.
-  Ex - Isolated *Prosopis glandulosa x velutina shrubs, over Eragrostis xerophila tussock grassland.
-  FW - Permanent fresh water pool
-  MaPgvTd - Mid Melaleuca argentea, *Phoenix dactylifera and Sesbania formosa woodland over tall open *Prosopis glandulosa x velutina woodland over isolated tall Typha domingensis, Schoenoplectus subulatus and Cyperus vaginatus sedges in creeks
-  MsTsaTh - Low Muellerolimon salicorniaceum, Tecticornia sp. affinity to T. halocnemoides large ovate seed aggregate shrubland on tidal mudflats
-  N/A - To be determined.
-  O - Ocean or tidal creek predominantly without vegetation
-  O - Ocean or tidal creek predominantly without vegetation.
-  P - Cleared area containing gas pipeline
-  Pgv - *Prosopis glandulosa x velutina open shrubland.
-  PgvAsTI - Isolated mid *Prosopis glandulosa x velutina over isolated low shrubs frequently Acacia synchronicia and Trianthema turgidifolia over low to mid Triodia longiceps and T. epactia hummock grassland on plains
-  PgvCcTI - Tall *Prosopis glandulosa x velutina shrubland over mid *Cenchrus ciliaris, Triodia longiceps and/or T. angusta hummock grassland
-  PgvCspp - *Prosopis glandulosa x velutina shrubland over *Cenchrus spp. tussock grassland of variable density.
-  PgvEx - Isolated shrubs of *Prosopis glandulosa x velutina, low Eragrostis xerophila tussock and *Cenchrus sparse tussock trassland.
-  PgvExCt - Isolated mid shrubs, *Prosopis glandulosa x velutina, Acacia xiphophylla and A. inaequilatera over low Eragrostis xerophila tussock grassland with occasional *Cenchrus ciliaris and Triodia spp. grasses over isolated low Corchorus tridens...
-  PgvTe - *Prosopis glandulosa x velutina shrubland, over Triodia epactia hummock grassland.
-  PgvTI - Isolated *Prosopis glandulosa x velutina shrubs, over Triodia longiceps hummock grassland.
-  PgvTw - Eucalyptus victrix isolated trees, over *Prosopis glandulosa x velutina and Acacia bivenosa sparse shrubland, over Triodia wiseana hummock grassland.
-  Te - Variably present isolated *Prosopis glandulosa x velutina shrubs, over Triodia epactia hummock grassland.
-  TI - Isolated Eucalyptus victrix trees, over isolated Acacia bivenosa shrubs, over Triodia longiceps hummock grassland.
-  TI - Variably present isolated *Prosopis glandulosa x velutina shrubs, over Triodia longiceps hummock grassland.
-  TsppMg - Isolated low shrubs to low Tecticornia halocnemoides subsp. tenuis chenopod shrubland on tidal mudflats
-  TsppMg - Isolated low shrubs to low open Tecticornia auriculata, T. halocnemoides and T. indica subsp. leiostachya shrubland over isolated low Eragrostis falcata grasses and Lawrenzia viridigrisea forbs on sandy rises on mudflats
-  TsppMg - Low Surreya diandra, Tecticornia halocnemoides subsp. tenuis and Sclerolaena costata shrubland over low open Eragrostis falcata grassland and isolated low Streptoglossa bubakii forbs on tidal mudflats
-  TsppMg - Low Tecticornia halocnemoides subsp. tenuis, T. indica subsp. leiostachya and Surreya diandra shrubland on tidal mudflats
-  TsppMg - Low Tecticornia sp. affinity to T. halocnemoides large ovate seed aggregate chenopod shrubland on tidal mudflats
-  TsppMg - Low Tecticornia spp. chenopod shrublands, frequently Tecticornia pterygosperma subsp. denticulata and T. halocnemoides subsp.'s chenopod shrublands on tidal mudflats
-  TsppMg - Low open Tecticornia indica chenopod shrubland over isolated low Triodia longiceps and Eragrostis falcata grasses on sandy rises on mudflats
-  TsppMg - Low open Tecticornia sp. sterile 1, Surreya diandra and Frankenia ambita over low open Eragrostis falcata grassland on tidal mudflats MS018Q1-4
-  TsppMg - Tecticornia spp. open samphire shrubland on tidal mudflats.
-  TsppMg / PgvCspp - Integrate of PgvCspp and TsppMg vegetation types.
-  TtSvTc - Low Trianthema turgidifolium, Neobassia astrocarpa and Pluchea rubelliflora shrubland over low Sporobolus virginicus grassland over isolated low Trianthema cussackianum forbs on low lying plains

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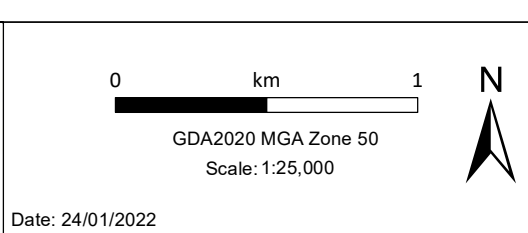
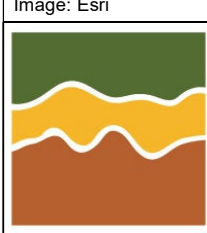
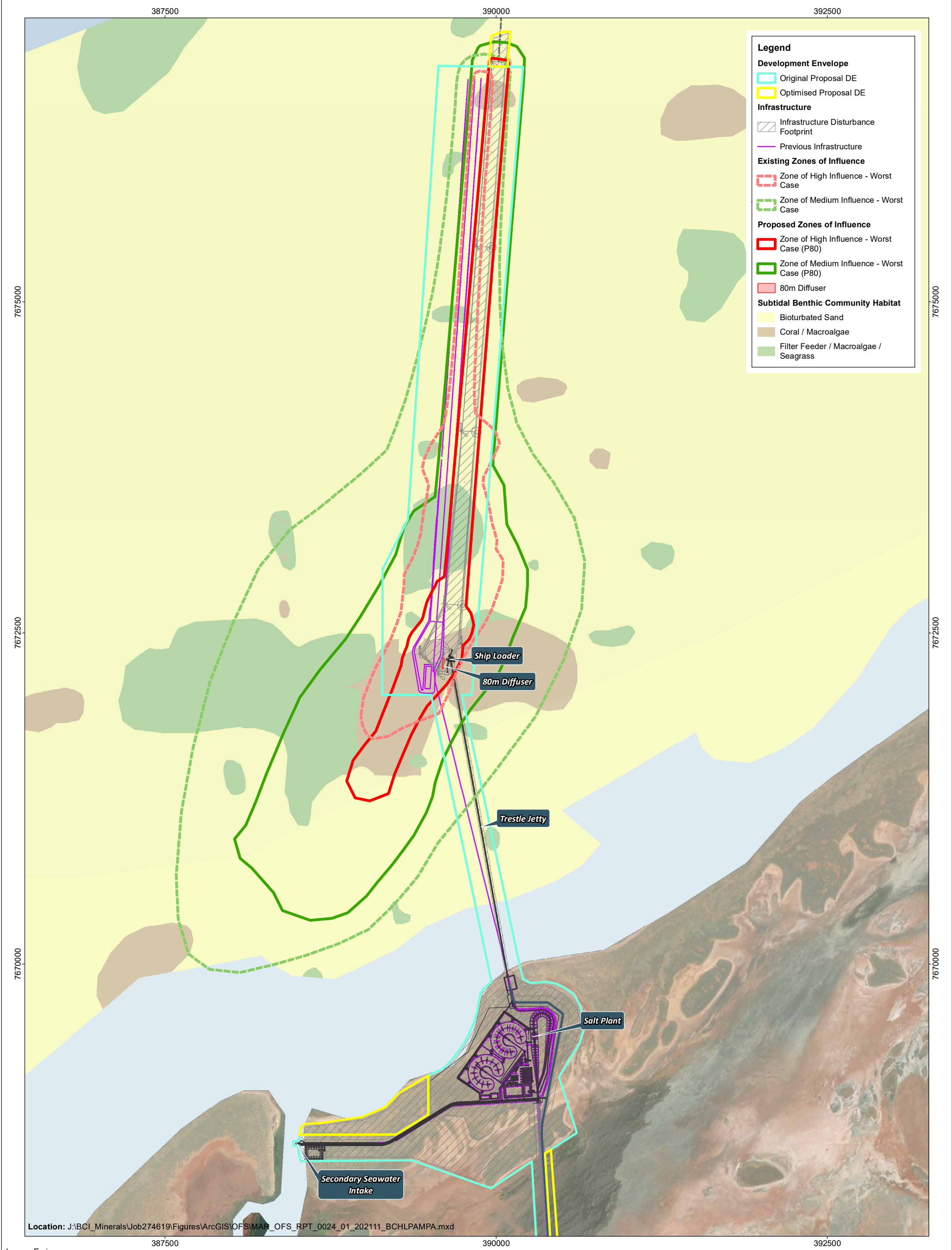
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**Mardie Project
Site Vegetation Types Legend**

Figure:

5a



Date: 24/01/2022

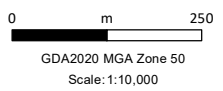
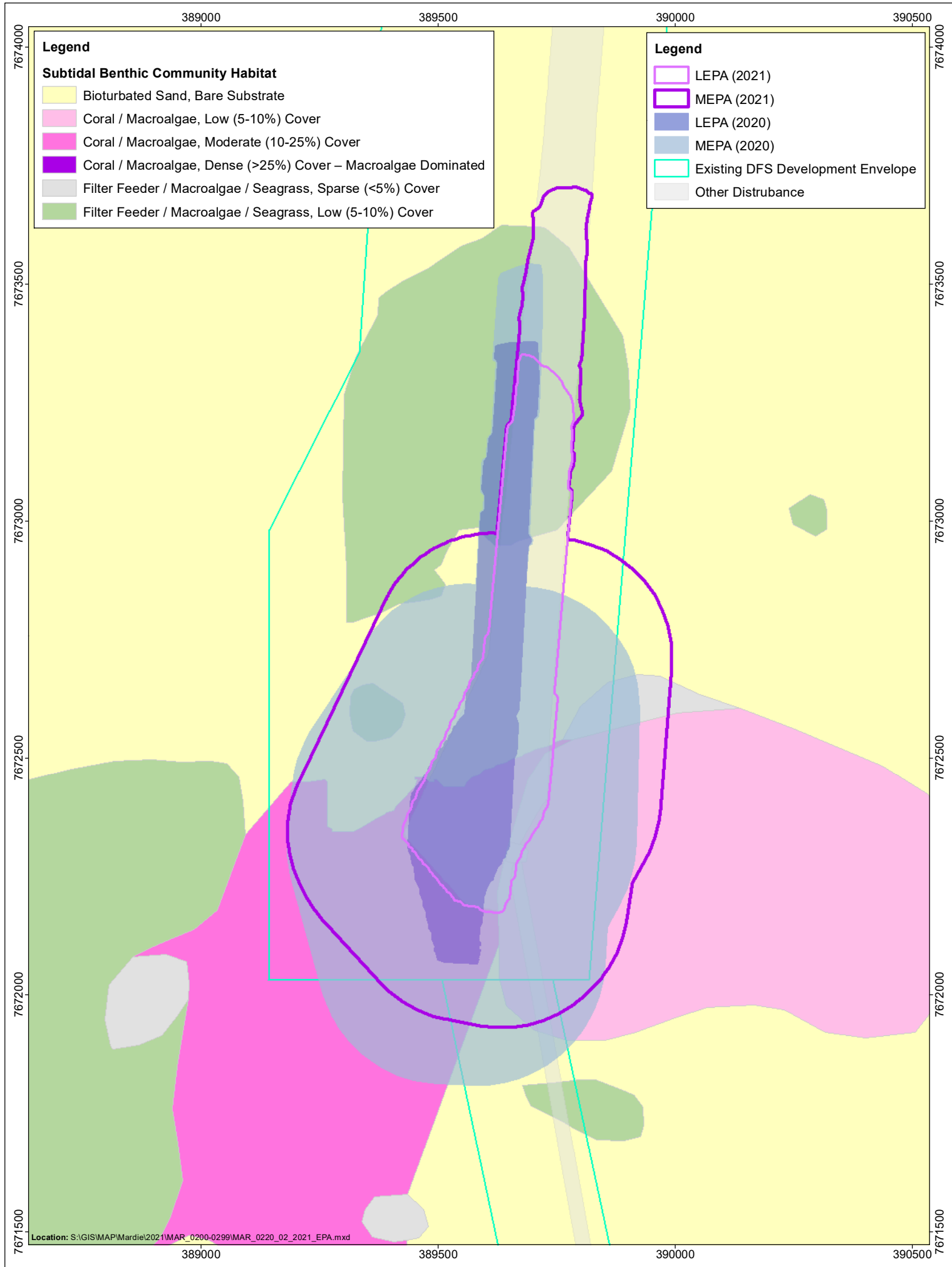
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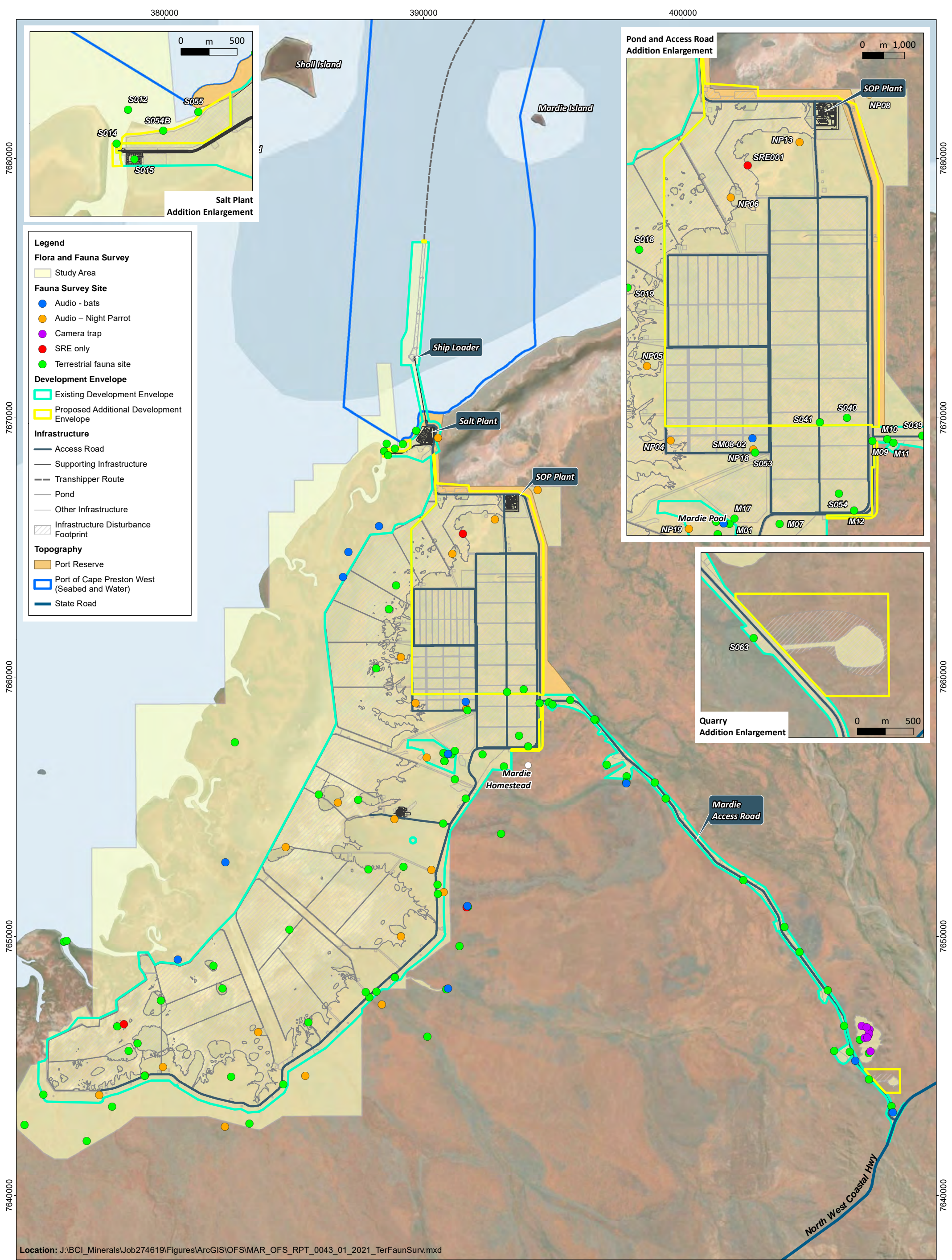
**Zones of Influence within subtidal BCH
(Original and Optimised Proposal)**

Figure:
6

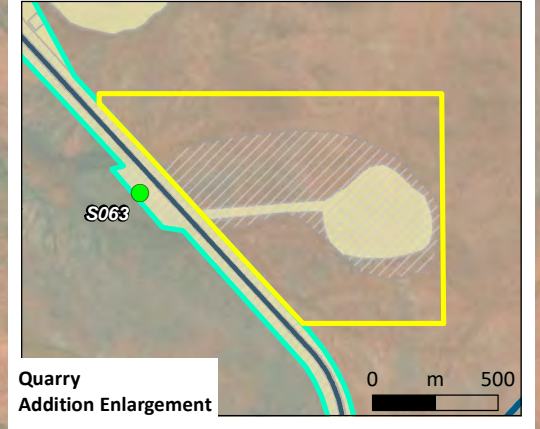
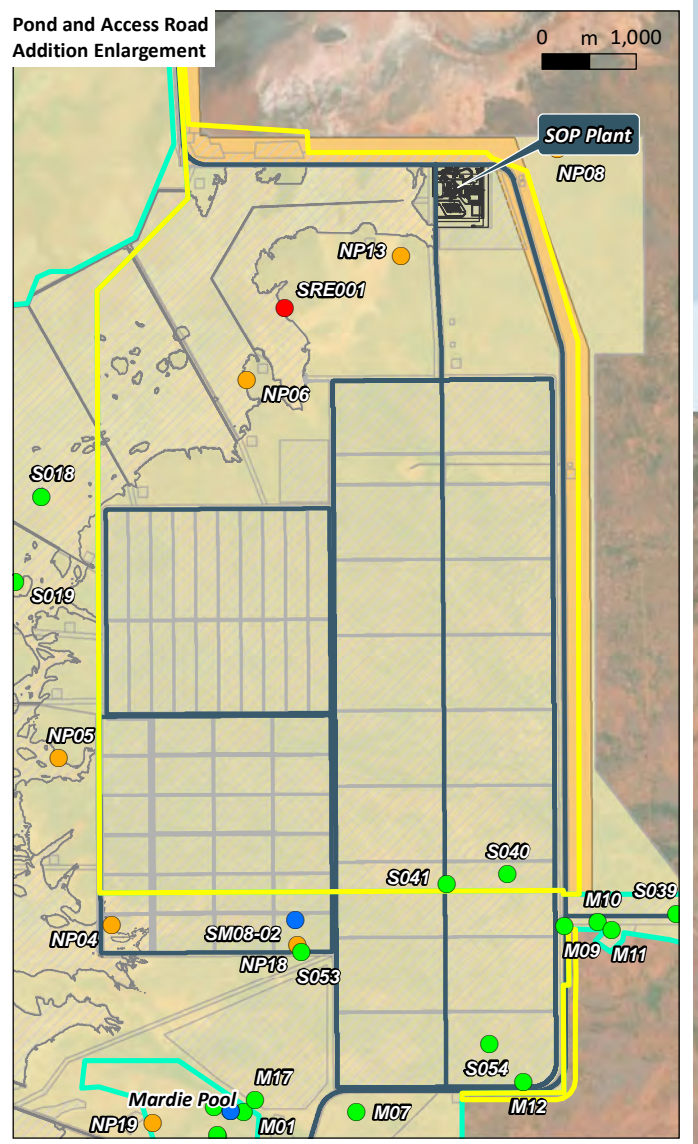


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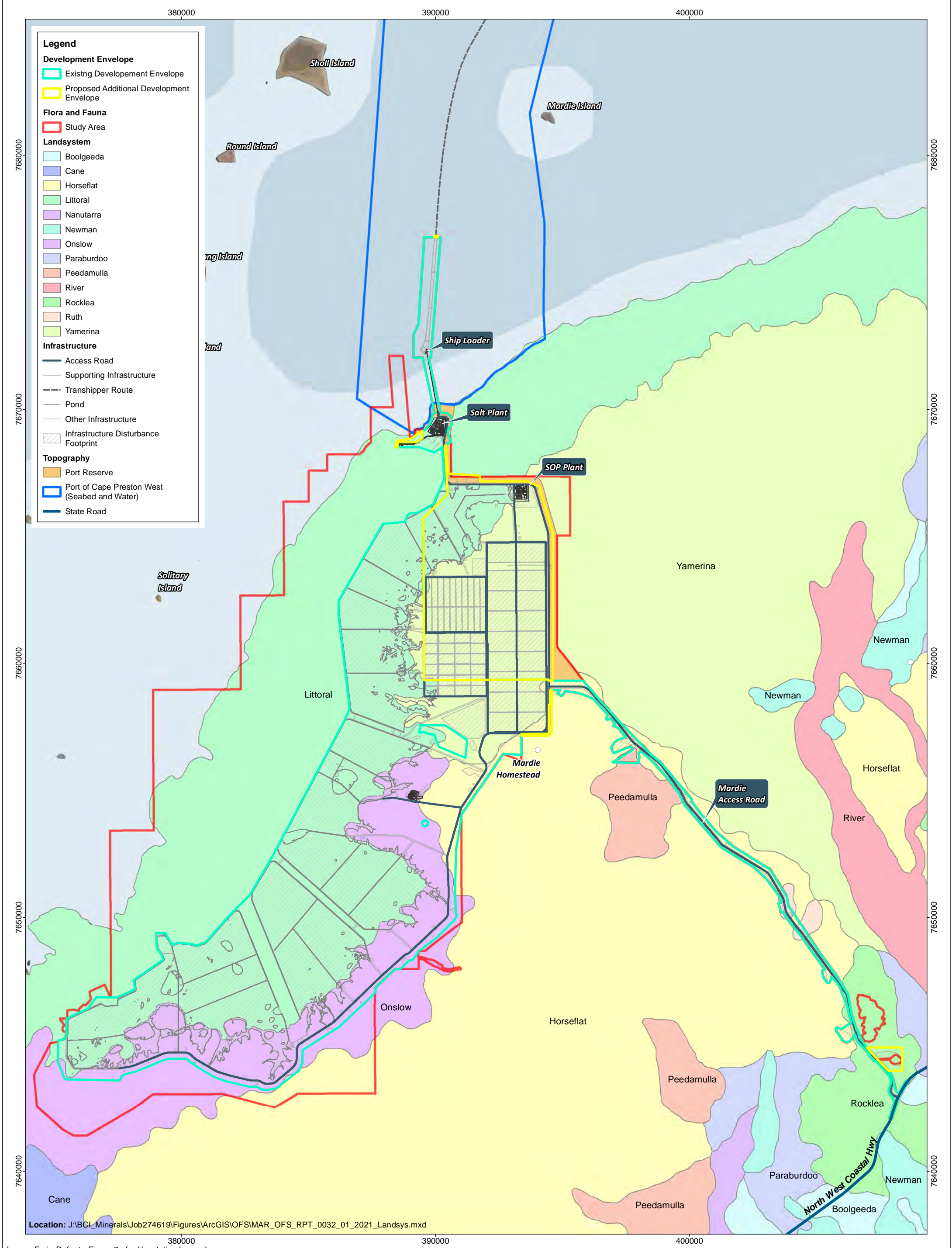
Mardie Project
Comparison of original and revised LEPA and MEPA boundaries



- Legend**
- Flora and Fauna Survey**
- Study Area
- Fauna Survey Site**
- Audio - bats
 - Audio - Night Parrot
 - Camera trap
 - SRE only
 - Terrestrial fauna site
- Development Envelope**
- Existing Development Envelope
 - Proposed Additional Development Envelope
- Infrastructure**
- Access Road
 - Supporting Infrastructure
 - Transhipper Route
 - Pond
 - Other Infrastructure
 - Infrastructure Disturbance Footprint
- Topography**
- Port Reserve
 - Port of Cape Preston West (Seabed and Water)
 - State Road



Location: J:\BCI_Minerals\Job274619\Figures\ArcGIS\OFS\IMAR_OFS_RPT_0043_01_2021_TerFaunSurv.mxd



Legend

Development Envelope

- Existing Development Envelope
- Proposed Additional Development Envelope

Flora and Fauna

- Study Area

Landsystem

- Boolgeeda
- Cane
- Horseflat
- Littoral
- Nanutarra
- Newman
- Onslow
- Paraburdoo
- Peedamulla
- River
- Rocklea
- Ruth
- Yamerina

Infrastructure

- Access Road
- Supporting Infrastructure
- Transhipper Route
- Pond
- Other Infrastructure
- Infrastructure Disturbance Footprint

Topography

- Port Reserve
- Port of Cape Preston West (Seabed and Water)
- State Road

Location: J:\BCI_Minerals\Job274619\Figures\ArcGIS\OFS\IMAR_OFS_RPT_0032_01_2021_Landsys.mxd

Image: Esri - Refer to Figure 7a for Vegetation Legend

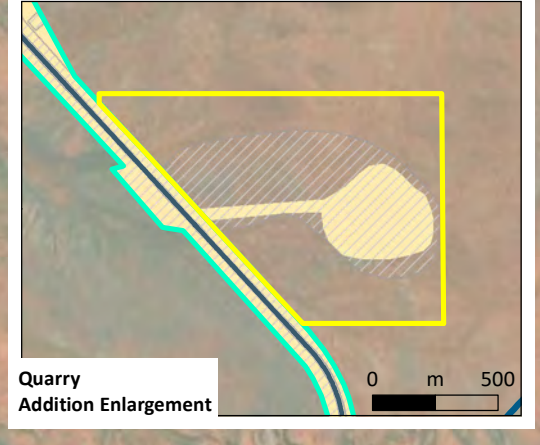
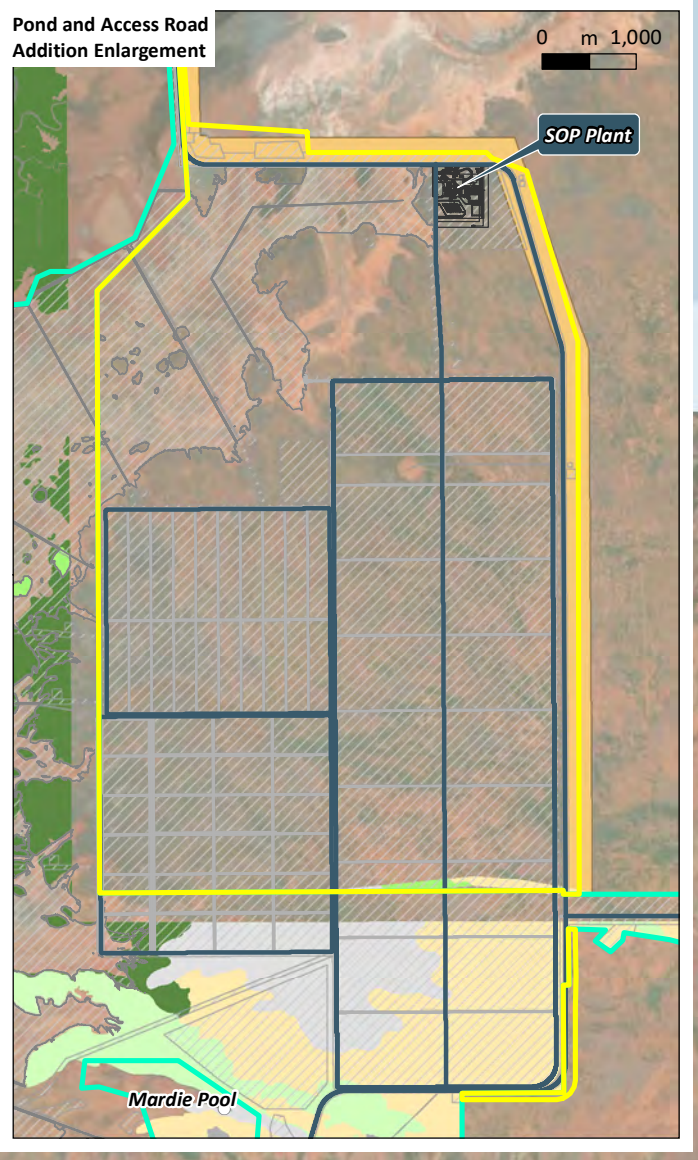
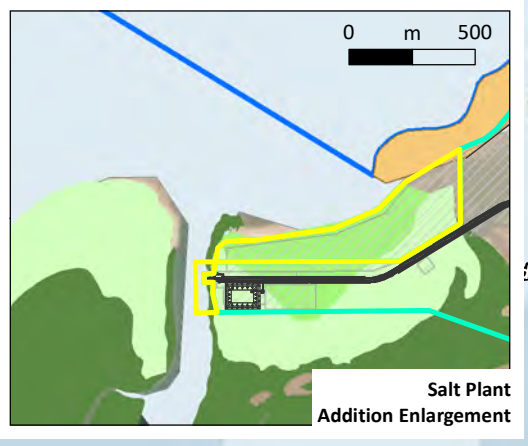
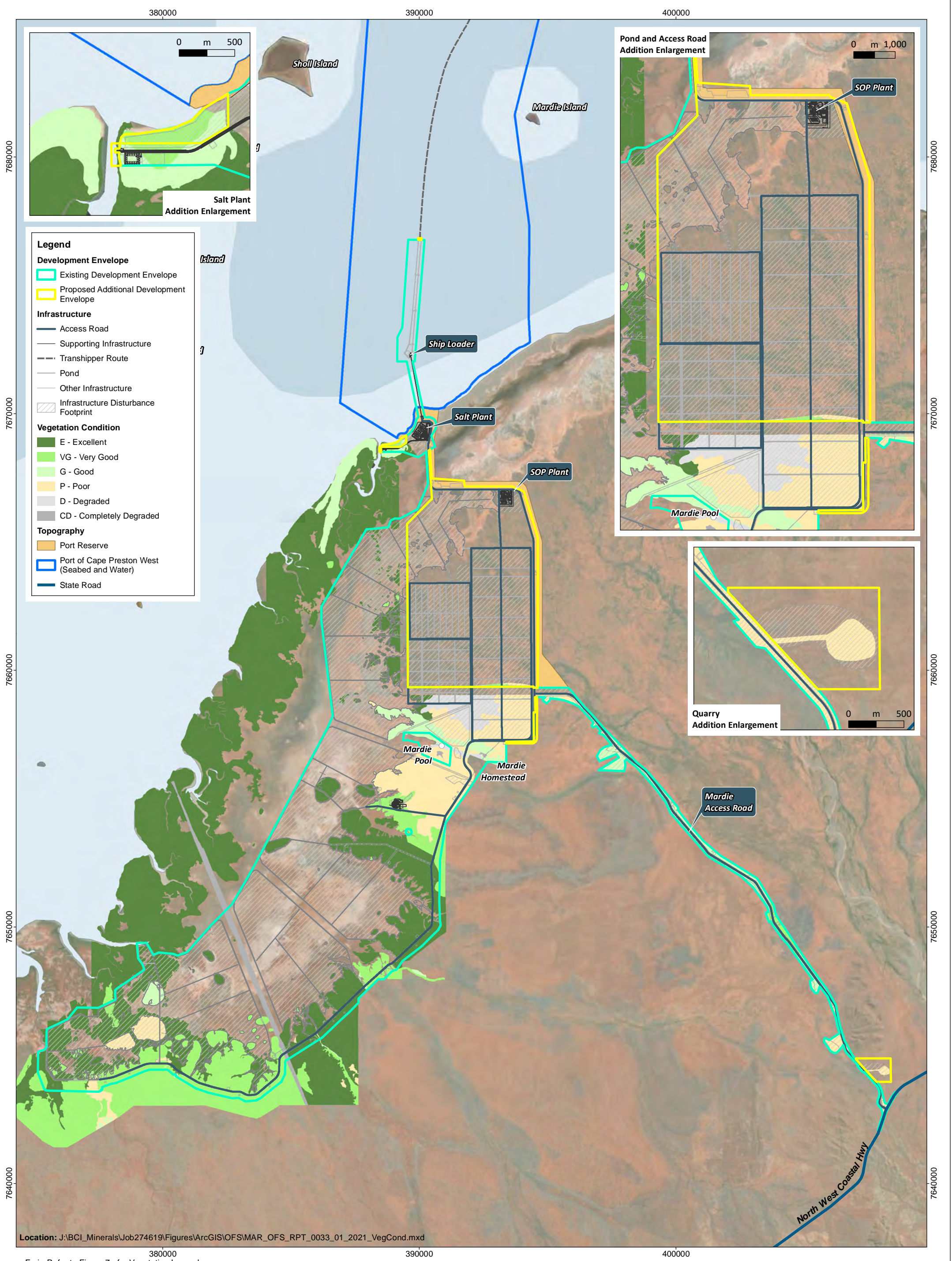
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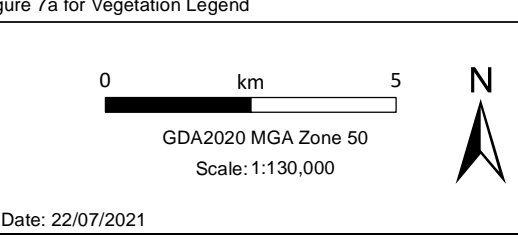
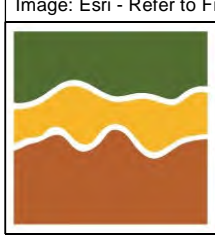
Mardie Project
Land systems of the Study Area

Figure:
9



- Legend**
- Development Envelope**
- Existing Development Envelope
 - Proposed Additional Development Envelope
- Infrastructure**
- Access Road
 - Supporting Infrastructure
 - Transhipper Route
 - Pond
 - Other Infrastructure
 - Infrastructure Disturbance Footprint
- Vegetation Condition**
- E - Excellent
 - VG - Very Good
 - G - Good
 - P - Poor
 - D - Degraded
 - CD - Completely Degraded
- Topography**
- Port Reserve
 - Port of Cape Preston West (Seabed and Water)
 - State Road

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Mardie Project Vegetation Condition

Figure:
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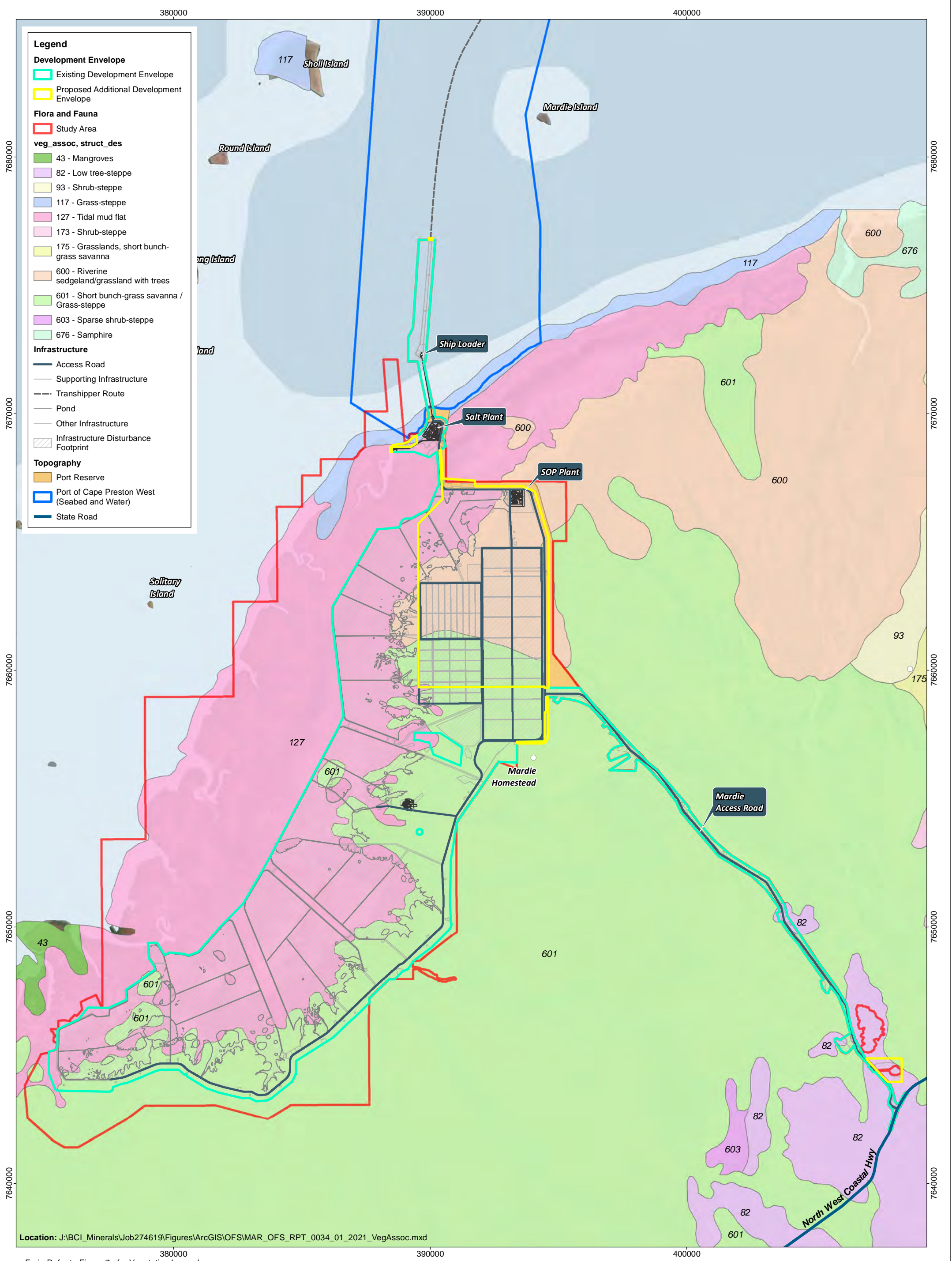


Image: Esri - Refer to Figure 7a for Vegetation Legend



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Mardie Project Vegetation Associations