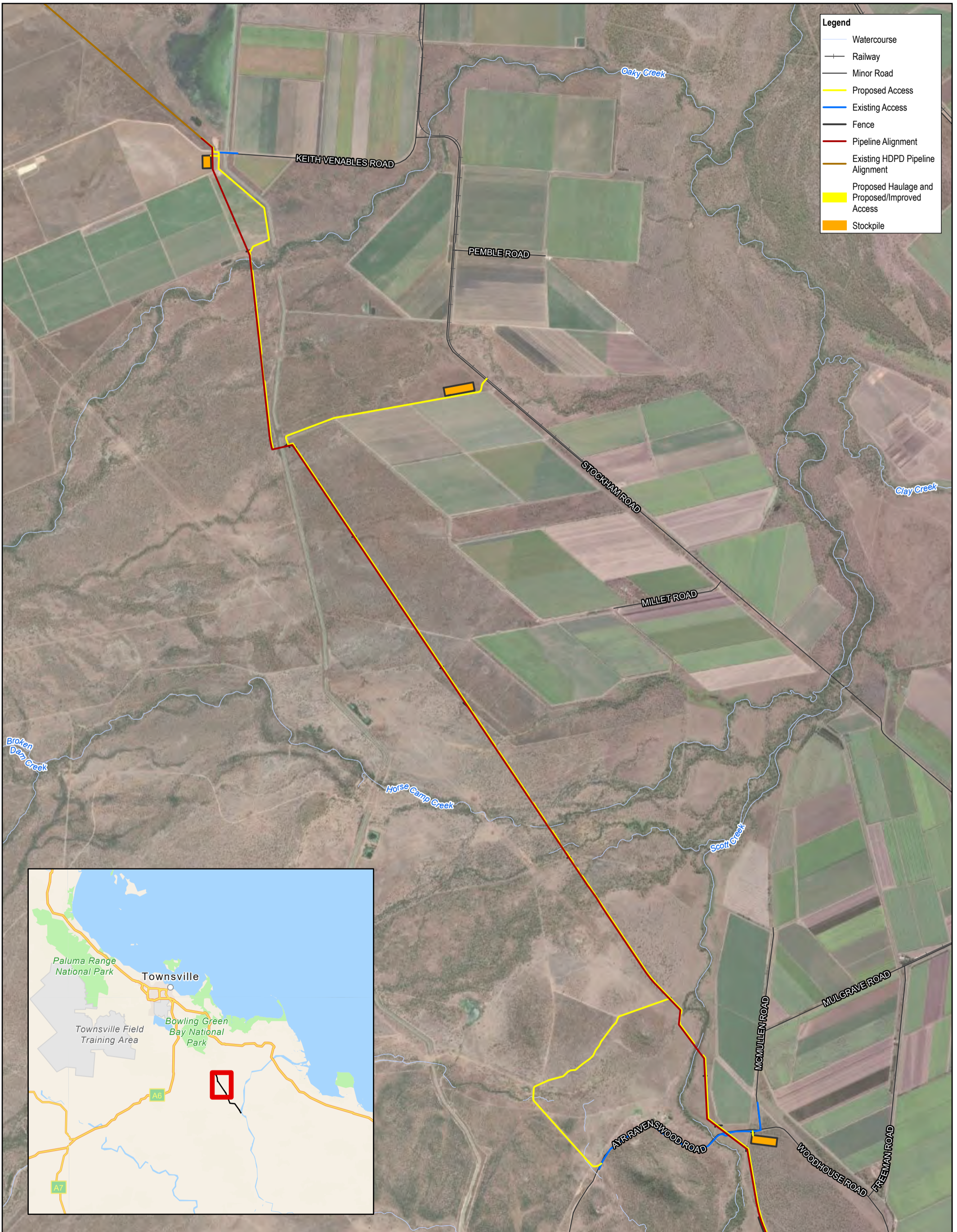


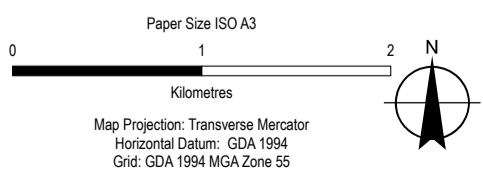
Appendix G

MNES report - figures



- Legend**
- Watercourse
 - Railway
 - Minor Road
 - Proposed Access
 - Existing Access
 - Fence
 - Pipeline Alignment
 - Existing HDPD Pipeline Alignment
 - Proposed Haulage and Proposed/Improved Access
 - Stockpile

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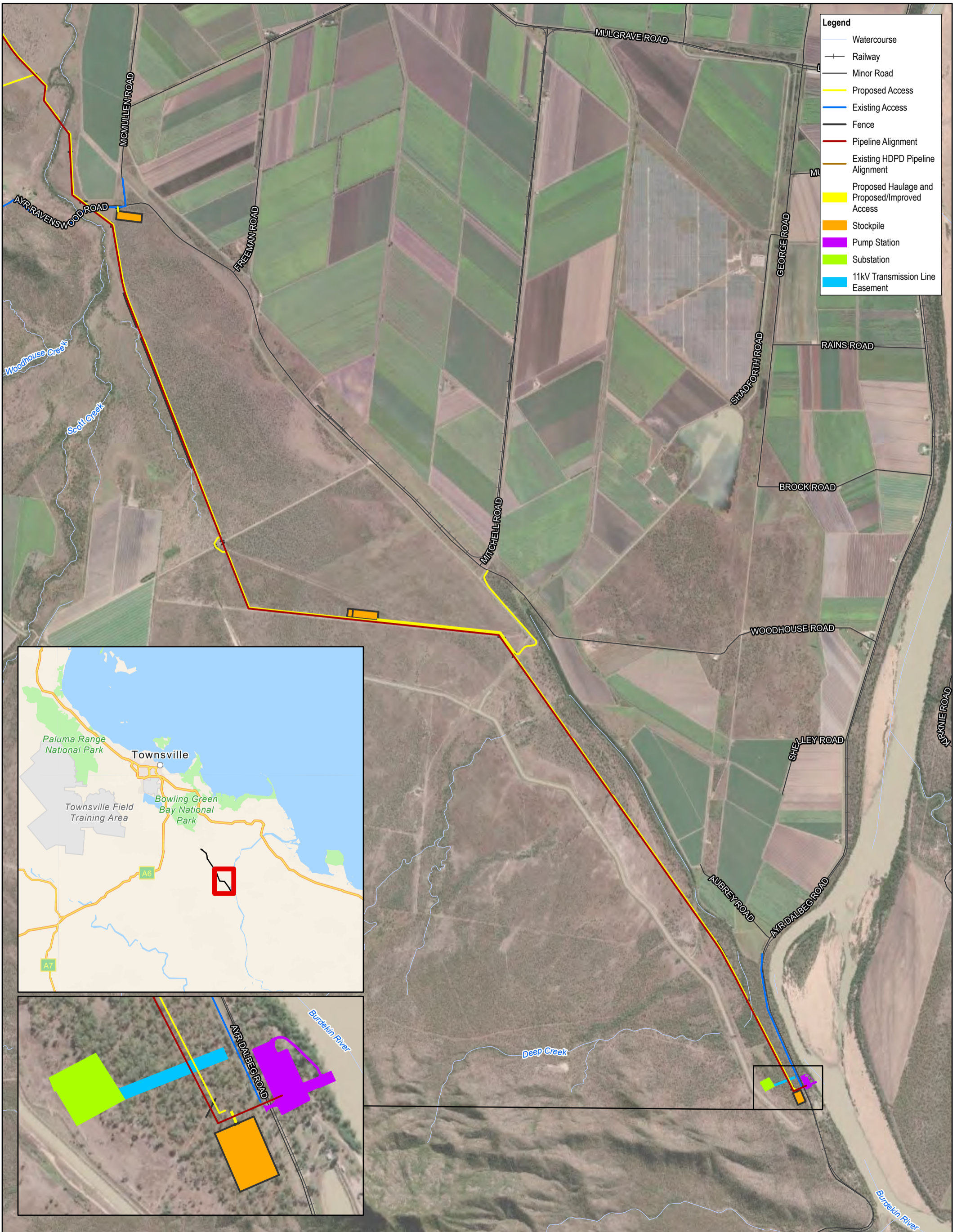


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Revision No. 2
Date 7/14/2022

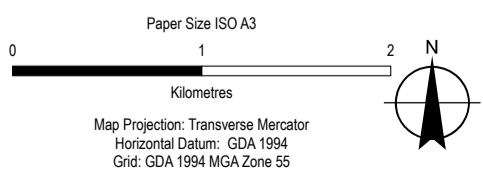
Houghton Pipeline Stage 2 project area

FIGURE 1-1



- Legend**
- Watercourse
 - Railway
 - Minor Road
 - Proposed Access
 - Existing Access
 - Fence
 - Pipeline Alignment
 - Existing HDPD Pipeline Alignment
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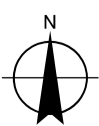
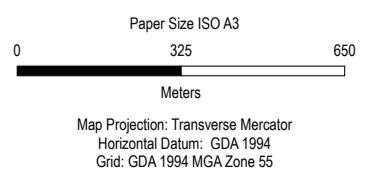
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Houghton Pipeline Stage 2 project area

FIGURE 1-1



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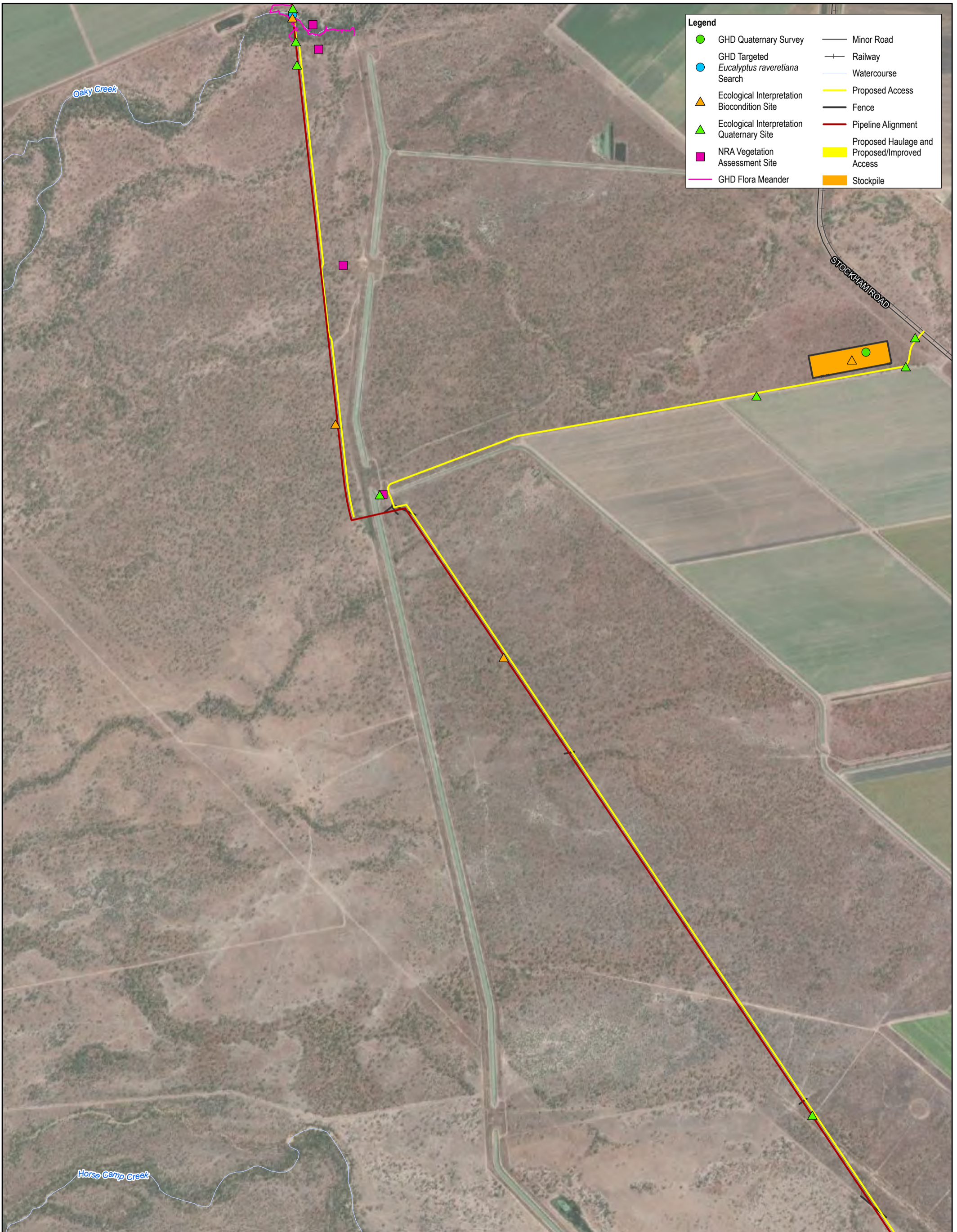


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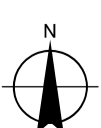
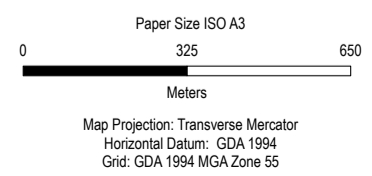
Distribution of flora survey effort

FIGURE 2-1



- Legend**
- GHD Quaternary Survey
 - GHD Targeted *Eucalyptus raveretiana* Search
 - ▲ Ecological Interpretation Biocondition Site
 - ▲ Ecological Interpretation Quaternary Site
 - NRA Vegetation Assessment Site
 - GHD Flora Meander
 - Minor Road
 - Railway
 - Watercourse
 - Proposed Access
 - Fence
 - Pipeline Alignment
 - Proposed Haulage and Proposed/Improved Access
 - Stockpile

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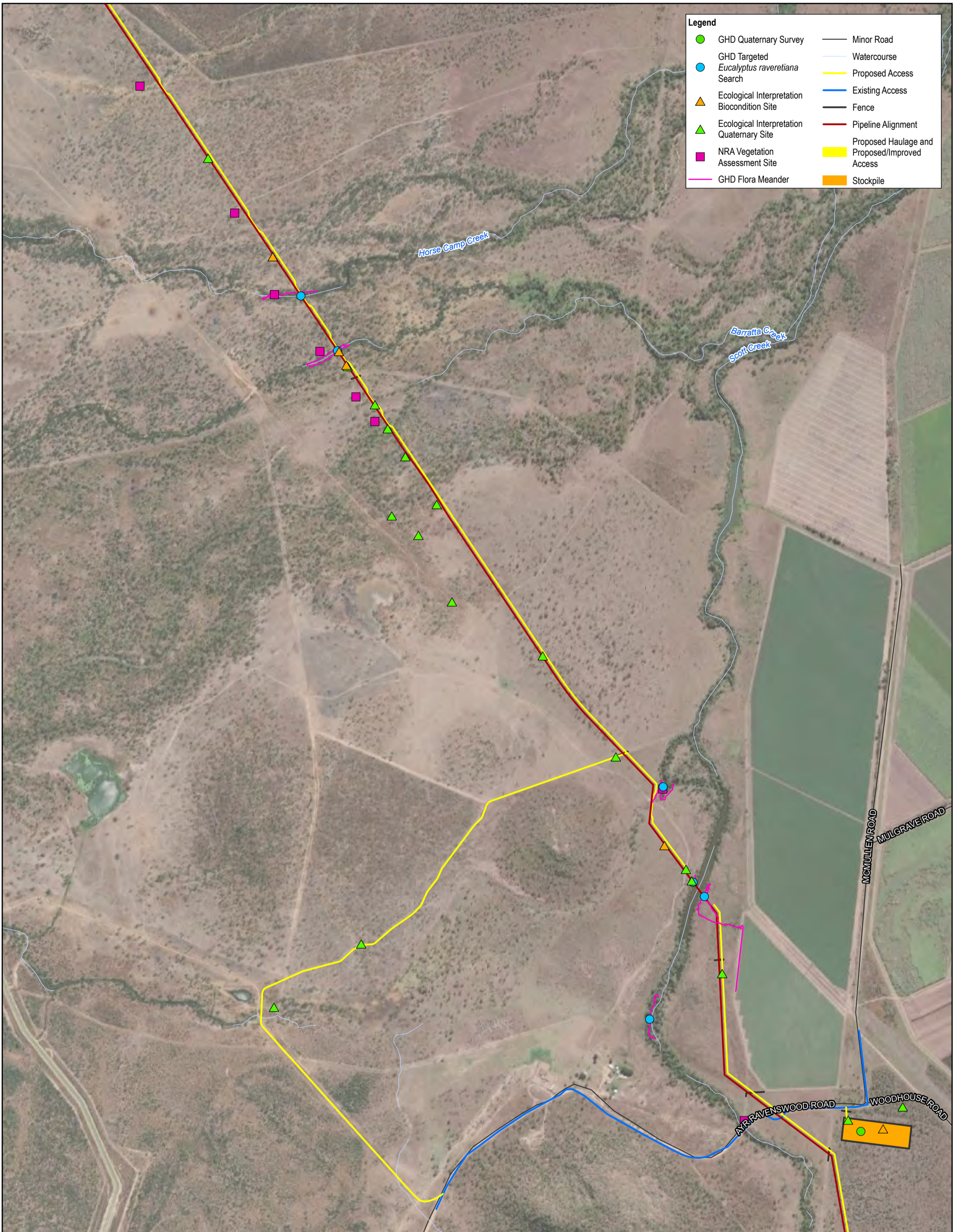


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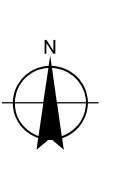
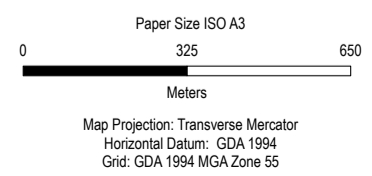
Distribution of flora survey effort

FIGURE 2-1



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Distribution of flora survey effort

FIGURE 2-1



Legend

	Ecological Interpretation Biocondition Site		Minor Road
	Ecological Interpretation Quaternary Site		Watercourse
	NRA Vegetation Assessment Site		Proposed Access
			Fence
			Pipeline Alignment


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Paper Size ISO A3

0 325 650

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

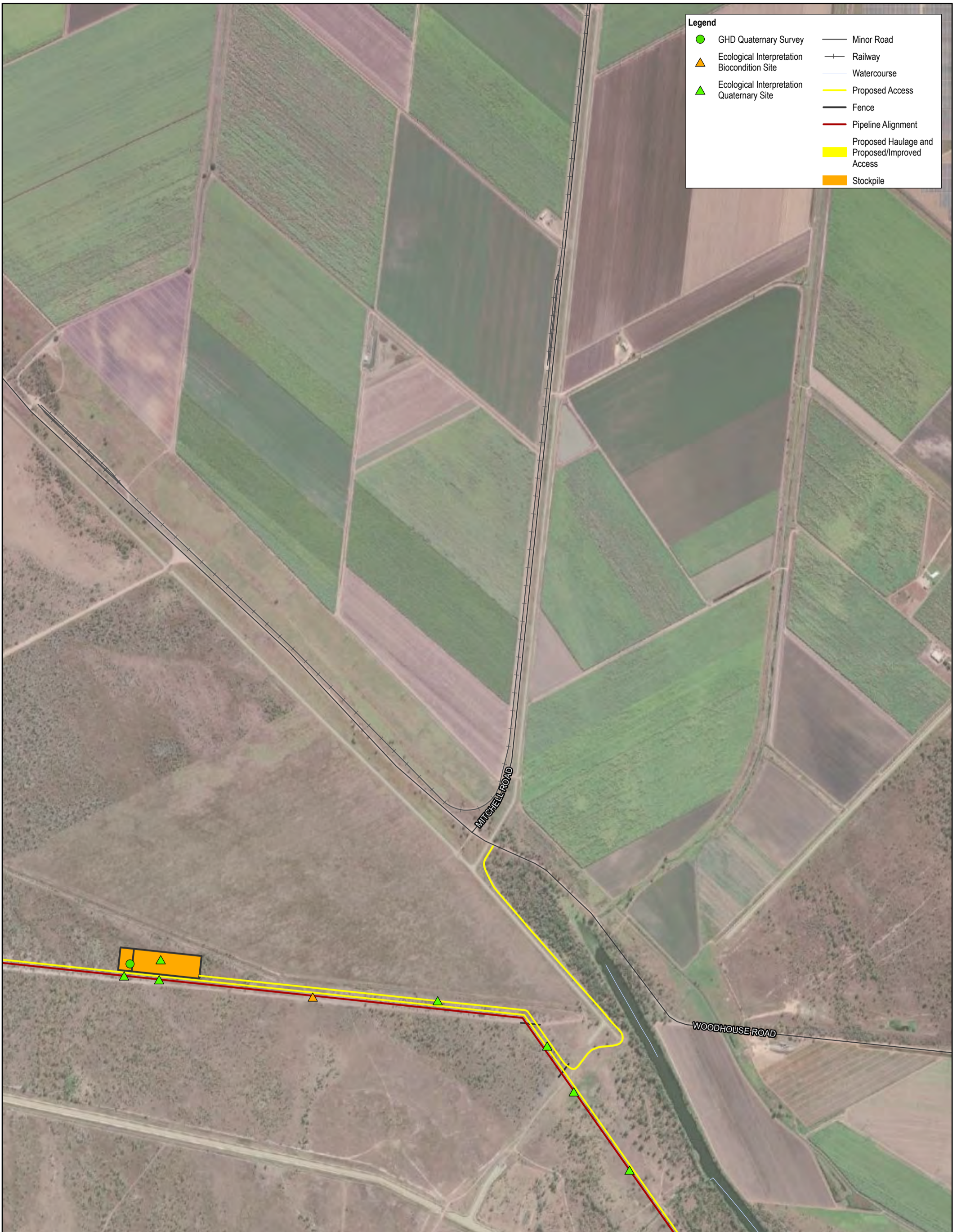



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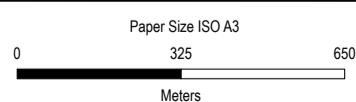
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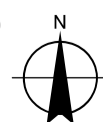
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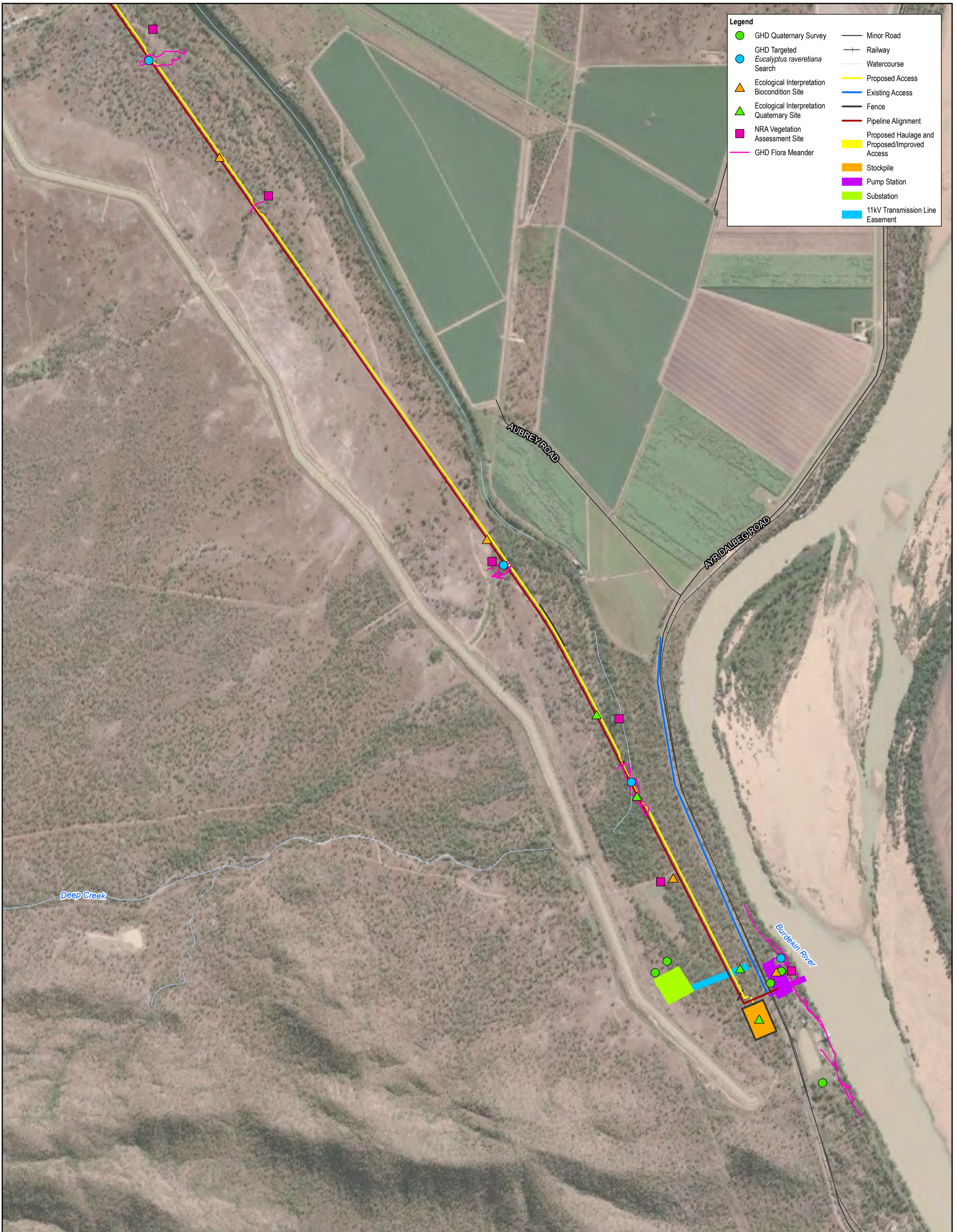


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Distribution of flora survey effort

FIGURE 2-1



- Legend**
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Paper Size ISO A3

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Meters

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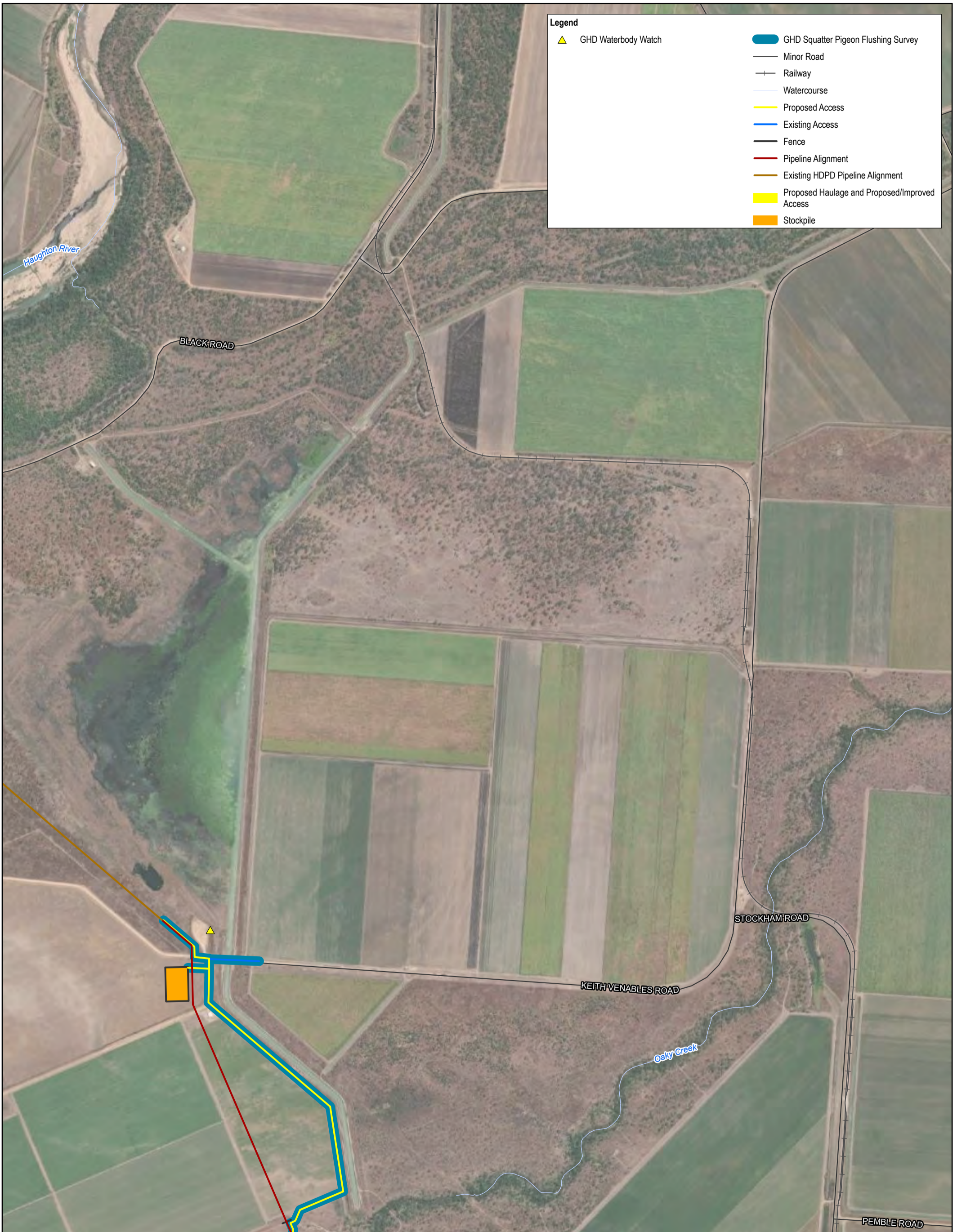


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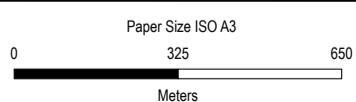
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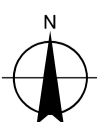
FIGURE 2-1



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Grid: GDA 1994 MGA Zone 55

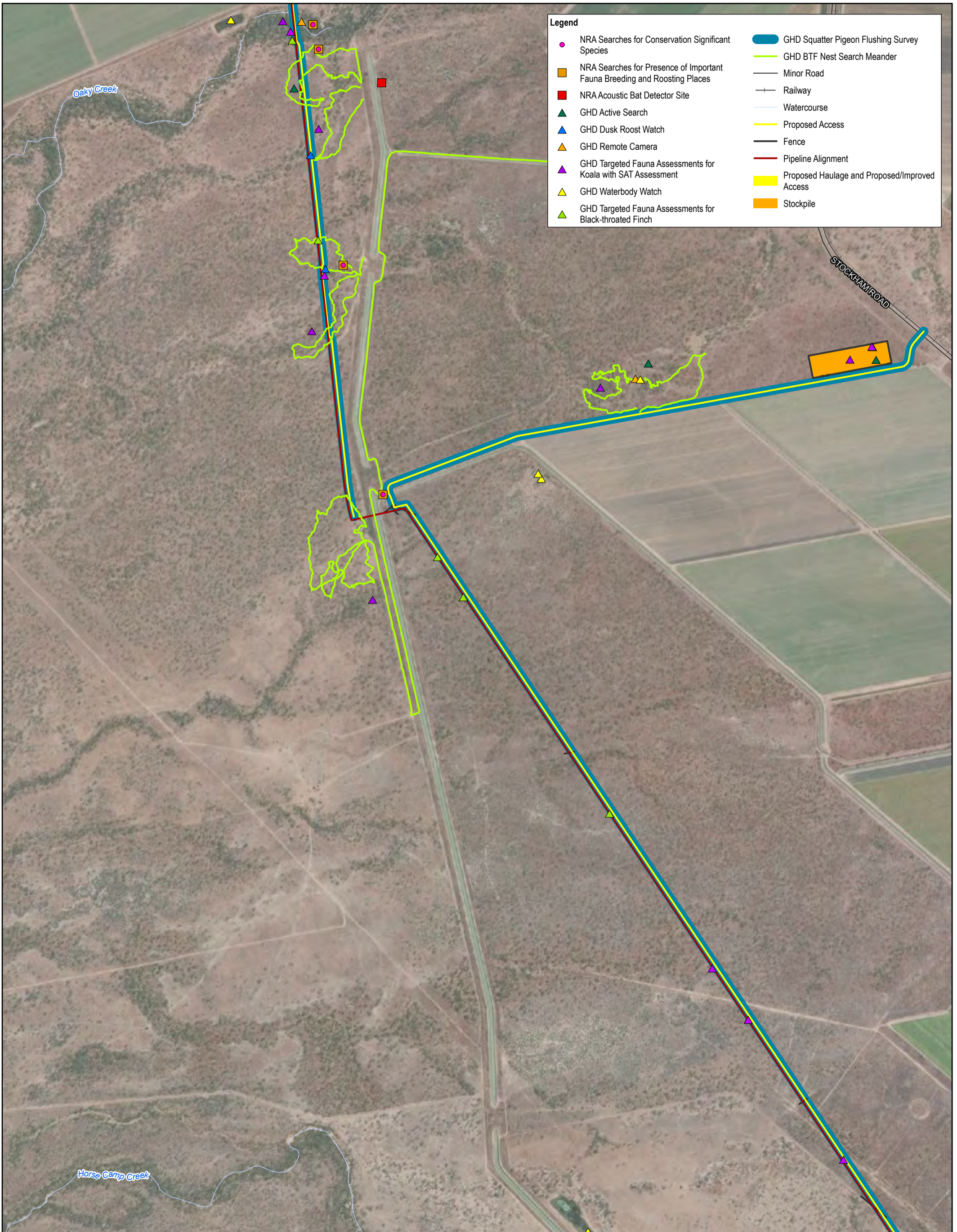


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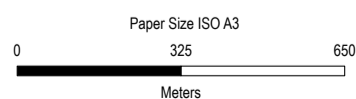
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Distribution of fauna survey effort

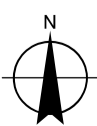
FIGURE 2-2



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Grid: GDA 1994 MGA Zone 55

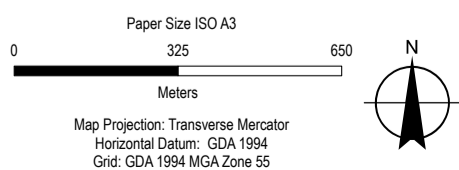
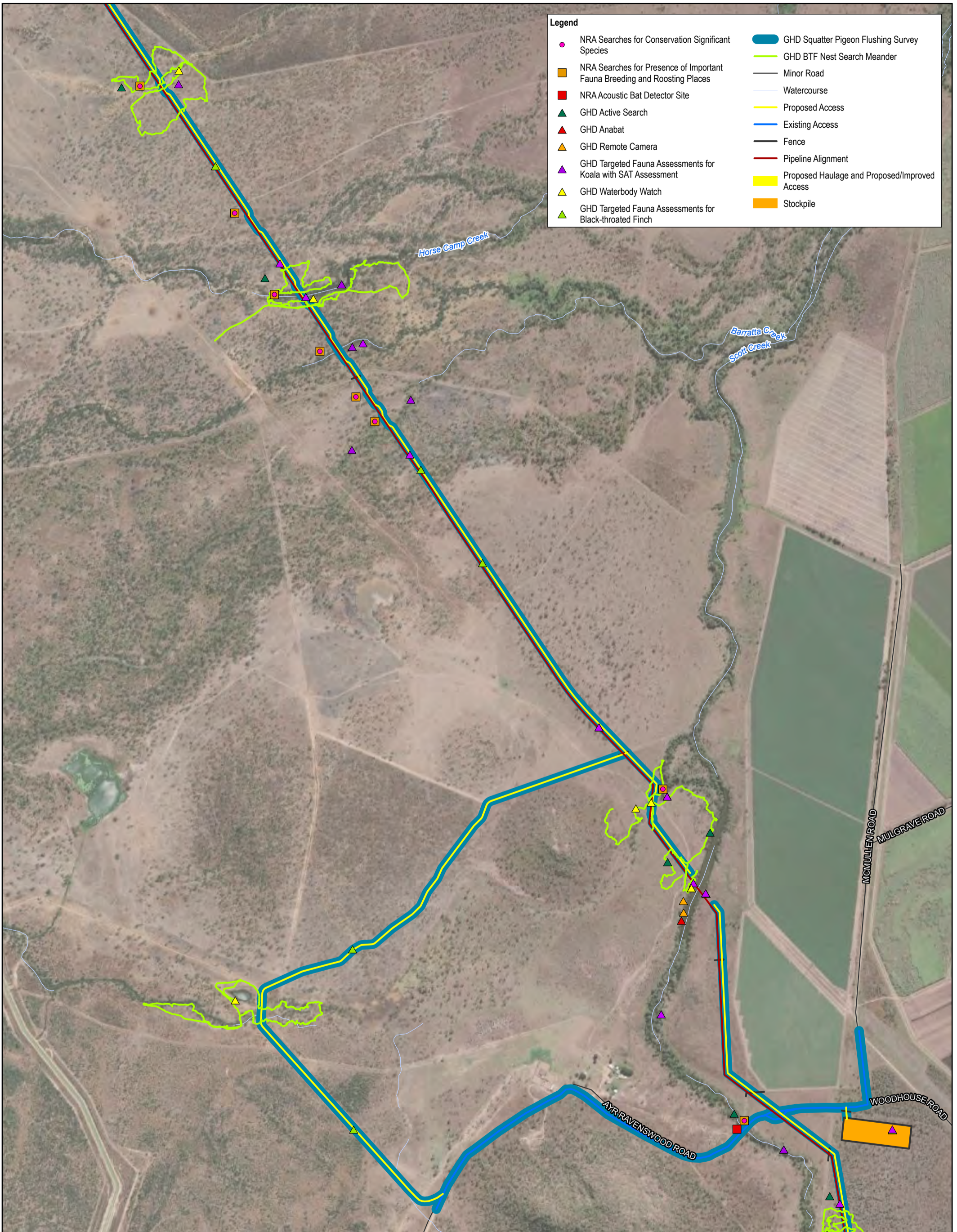


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Distribution of fauna survey effort

FIGURE 2-2

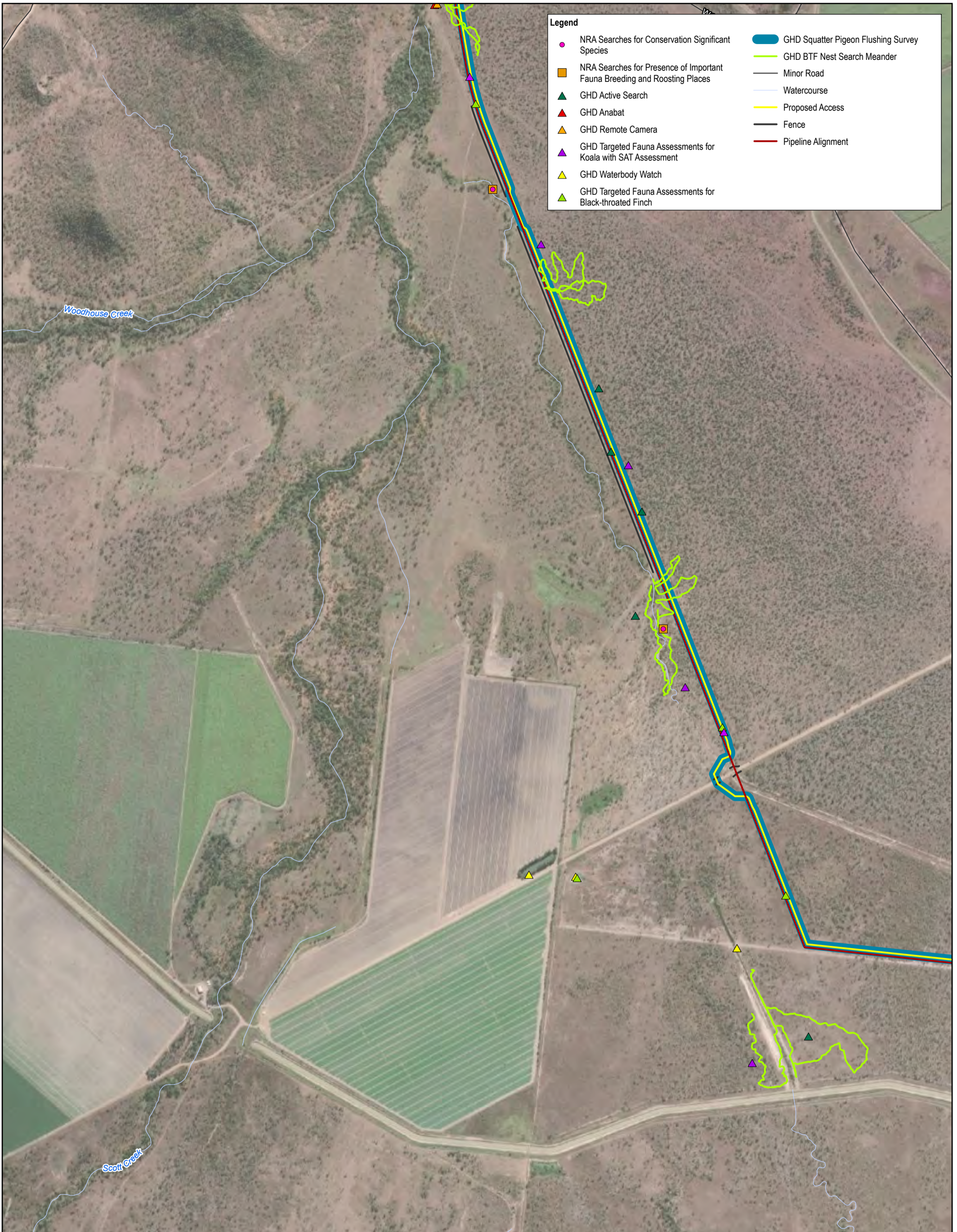


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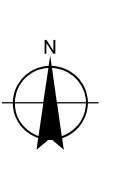
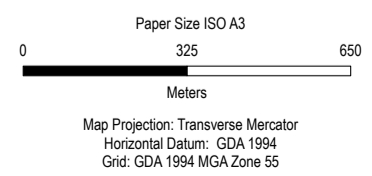
Distribution of fauna survey effort

FIGURE 2-2



- Legend**
- NRA Searches for Conservation Significant Species
 - NRA Searches for Presence of Important Fauna Breeding and Roosting Places
 - ▲ GHD Active Search
 - ▲ GHD Anabat
 - ▲ GHD Remote Camera
 - ▲ GHD Targeted Fauna Assessments for Koala with SAT Assessment
 - ▲ GHD Waterbody Watch
 - ▲ GHD Targeted Fauna Assessments for Black-throated Finch
 - GHD Squatter Pigeon Flushing Survey
 - GHD BTF Nest Search Meander
 - Minor Road
 - Watercourse
 - Proposed Access
 - Fence
 - Pipeline Alignment

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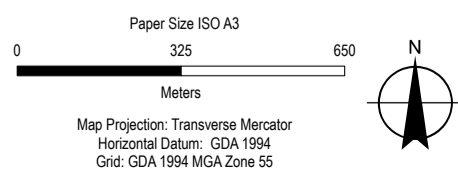
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Distribution of fauna survey effort

FIGURE 2-2



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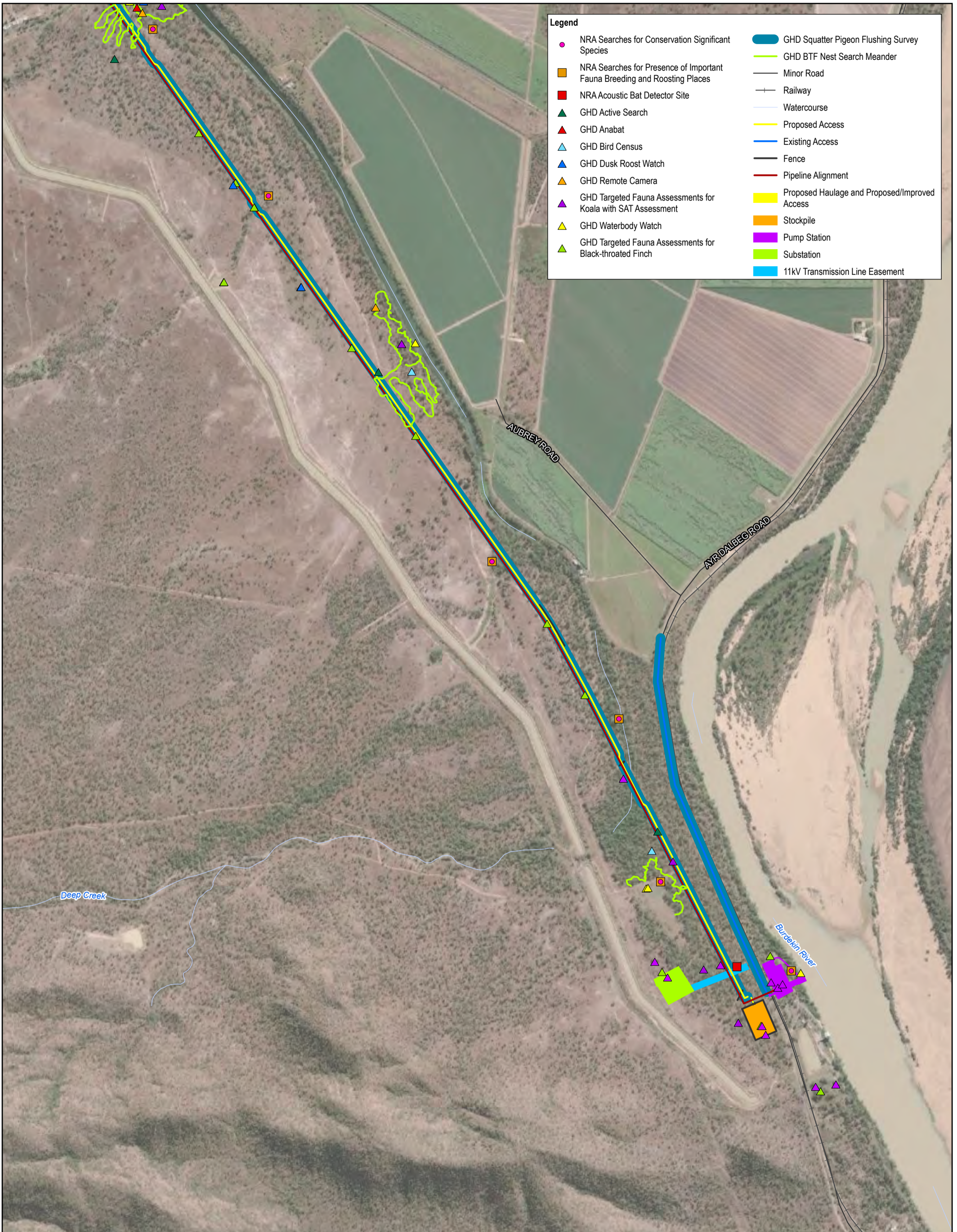


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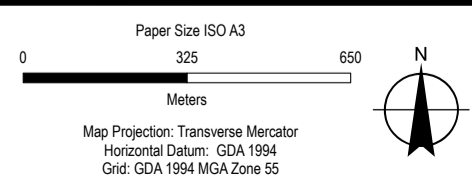
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Distribution of fauna survey effort

FIGURE 2-2



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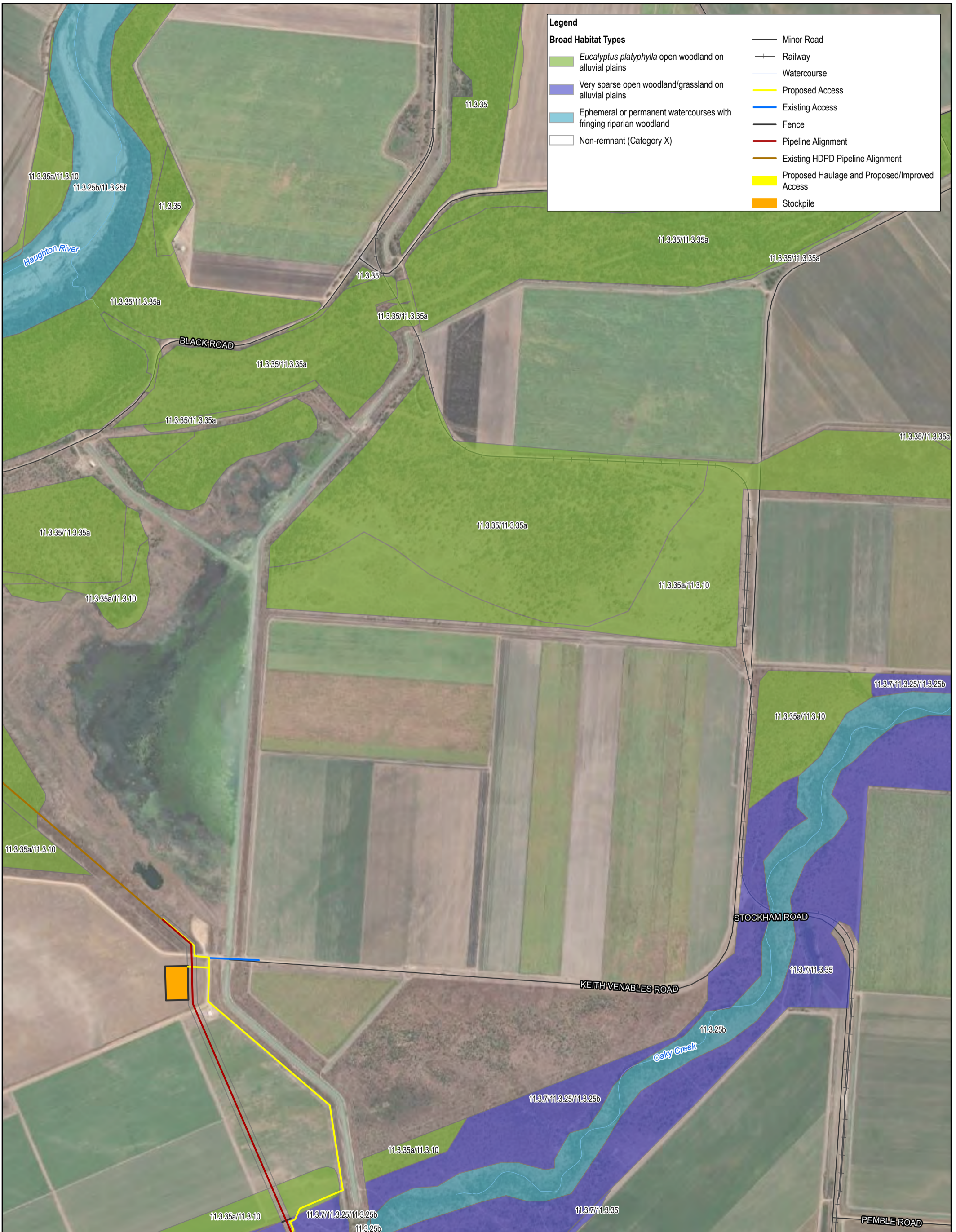


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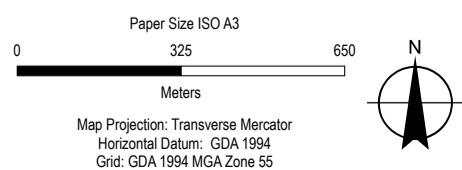
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Distribution of fauna survey effort

FIGURE 2-2



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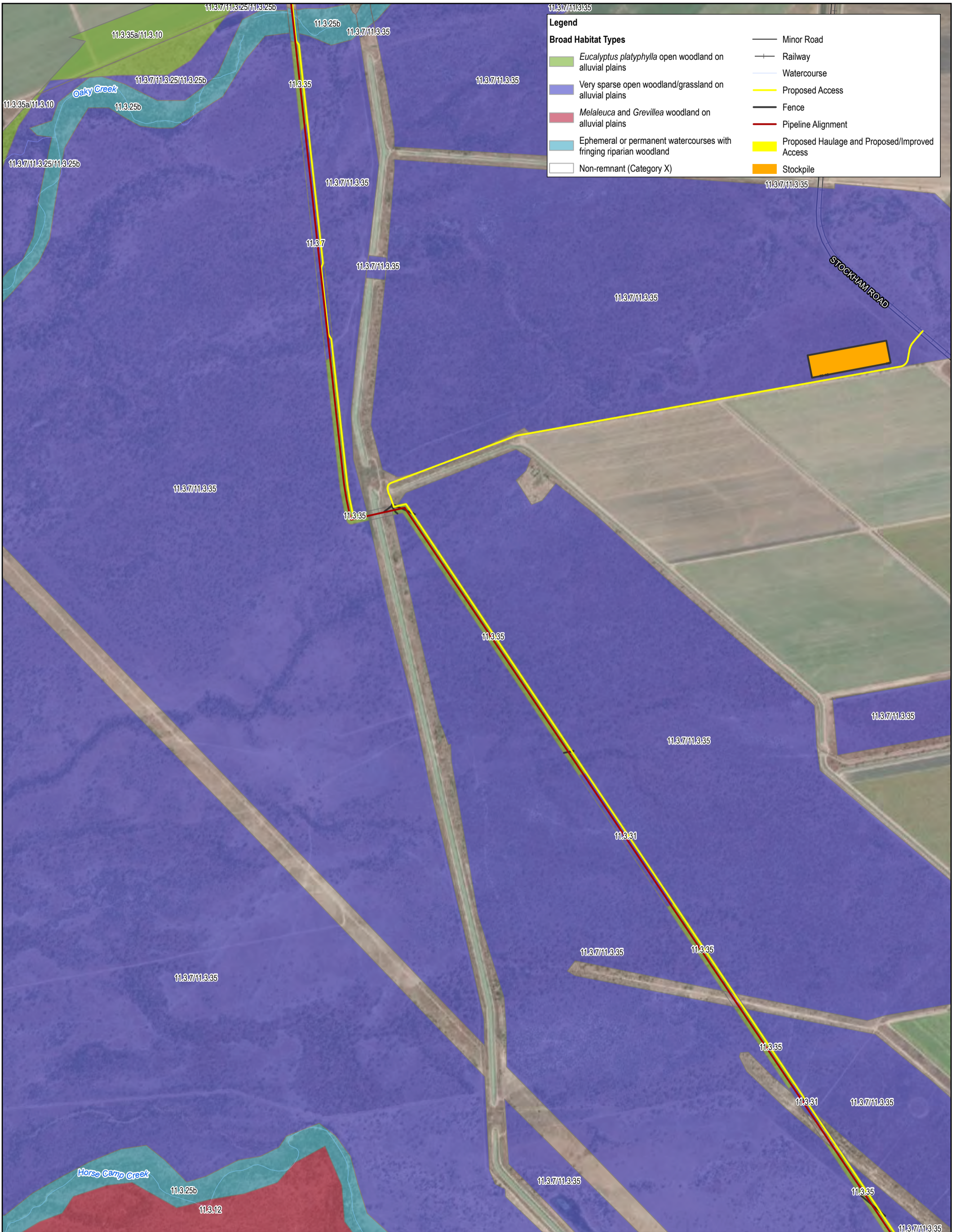


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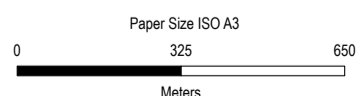
Project No. 12537606
Revision No. 1
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Distribution of fauna habitat types
within survey area

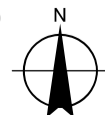
FIGURE 3-1



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Map Projection: Transverse Mercator
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Grid: GDA 1994 MGA Zone 55

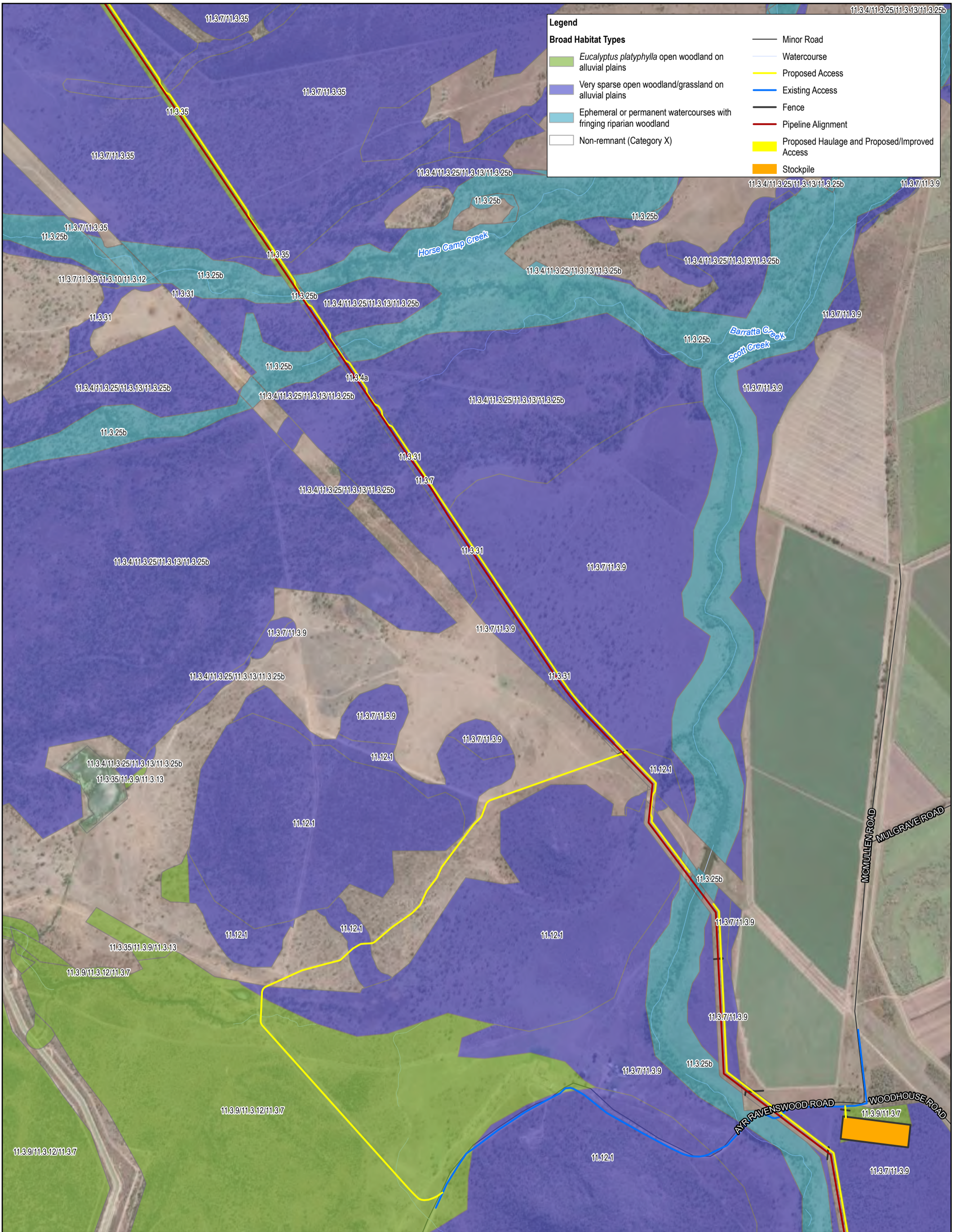


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Haughton Pipeline Stage 2 - MNES Assessment

Distribution of fauna habitat types
within survey area

Project No. 12537606
Revision No. 1
Date 7/15/2022

FIGURE 3-1



Legend

Broad Habitat Types	— Minor Road
 <i>Eucalyptus platyphylla</i> open woodland on alluvial plains	— Watercourse
 Very sparse open woodland/grassland on alluvial plains	— Proposed Access
 Ephemeral or permanent watercourses with fringing riparian woodland	— Existing Access
 Non-remnant (Category X)	— Fence
	— Pipeline Alignment
	 Proposed Haulage and Proposed/Improved Access
	 Stockpile

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Paper Size ISO A3

0 325 650

Meters

Map Projection: Transverse Mercator
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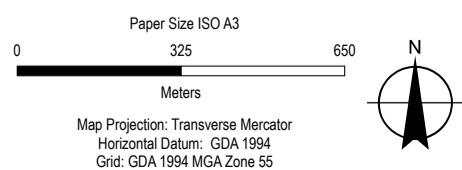
Distribution of fauna habitat types within survey area

Project No. 12537606
Revision No. 1
Date 7/15/2022

FIGURE 3-1



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Houghton Pipeline Stage 2 - MNES Assessment

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Distribution of fauna habitat types
within survey area

FIGURE 3-1



Legend

 <i>Eucalyptus platyphylla</i> open woodland on alluvial plains	
 Very sparse open woodland/grassland on alluvial plains	
 Non-remnant (Category X)	

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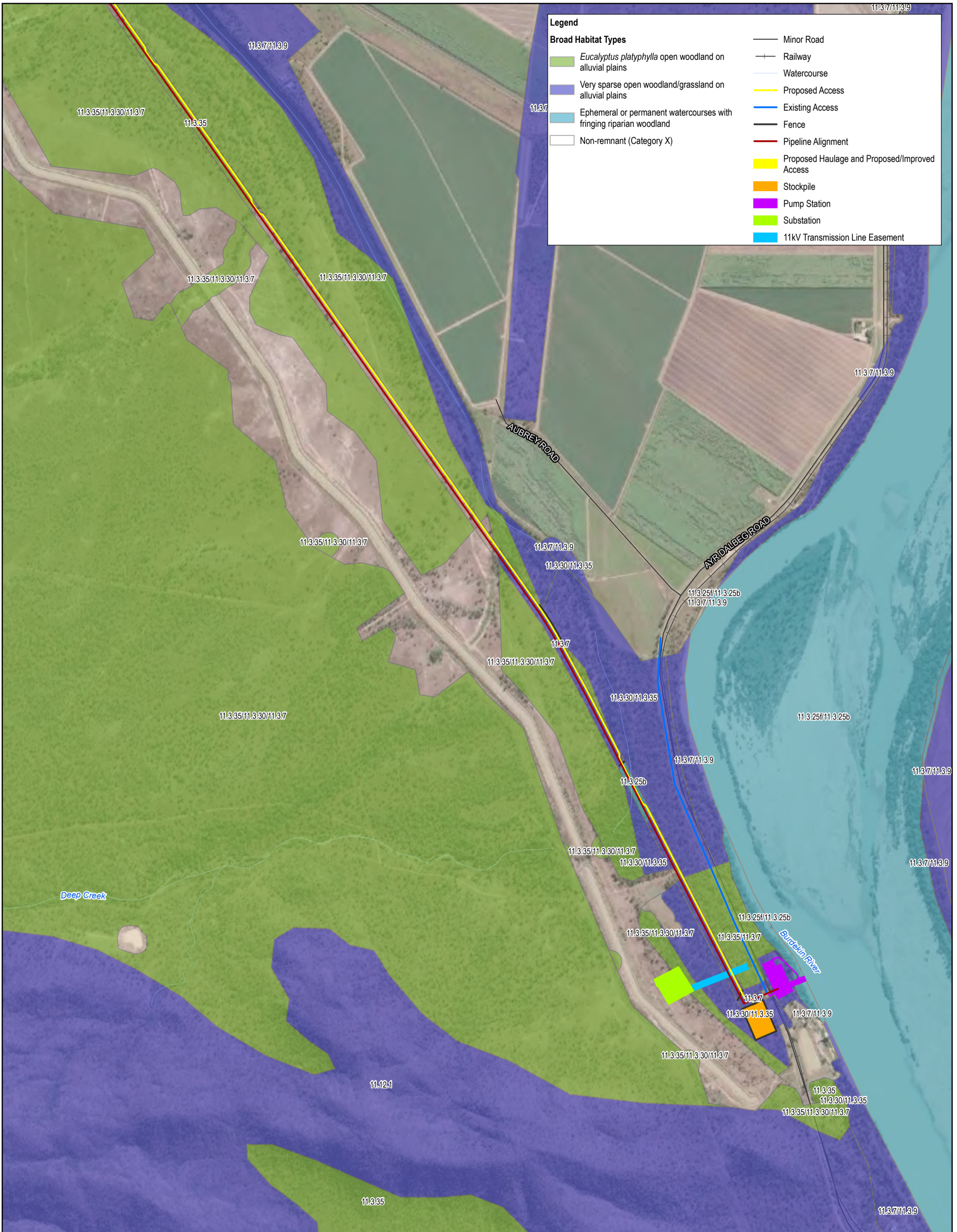


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Houghton Pipeline Stage 2 - MNES Assessment

Distribution of fauna habitat types within survey area

Project No. 12537606
Revision No. 1
Date 7/15/2022

FIGURE 3-1



Legend

Broad Habitat Types

- Eucalyptus platyphylla* open woodland on alluvial plains
- Very sparse open woodland/grassland on alluvial plains
- Ephemeral or permanent watercourses with fringing riparian woodland
- Non-remnant (Category X)

- Minor Road
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Map Projection: Transverse Mercator
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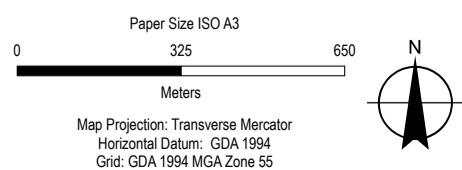
Distribution of fauna habitat types within survey area

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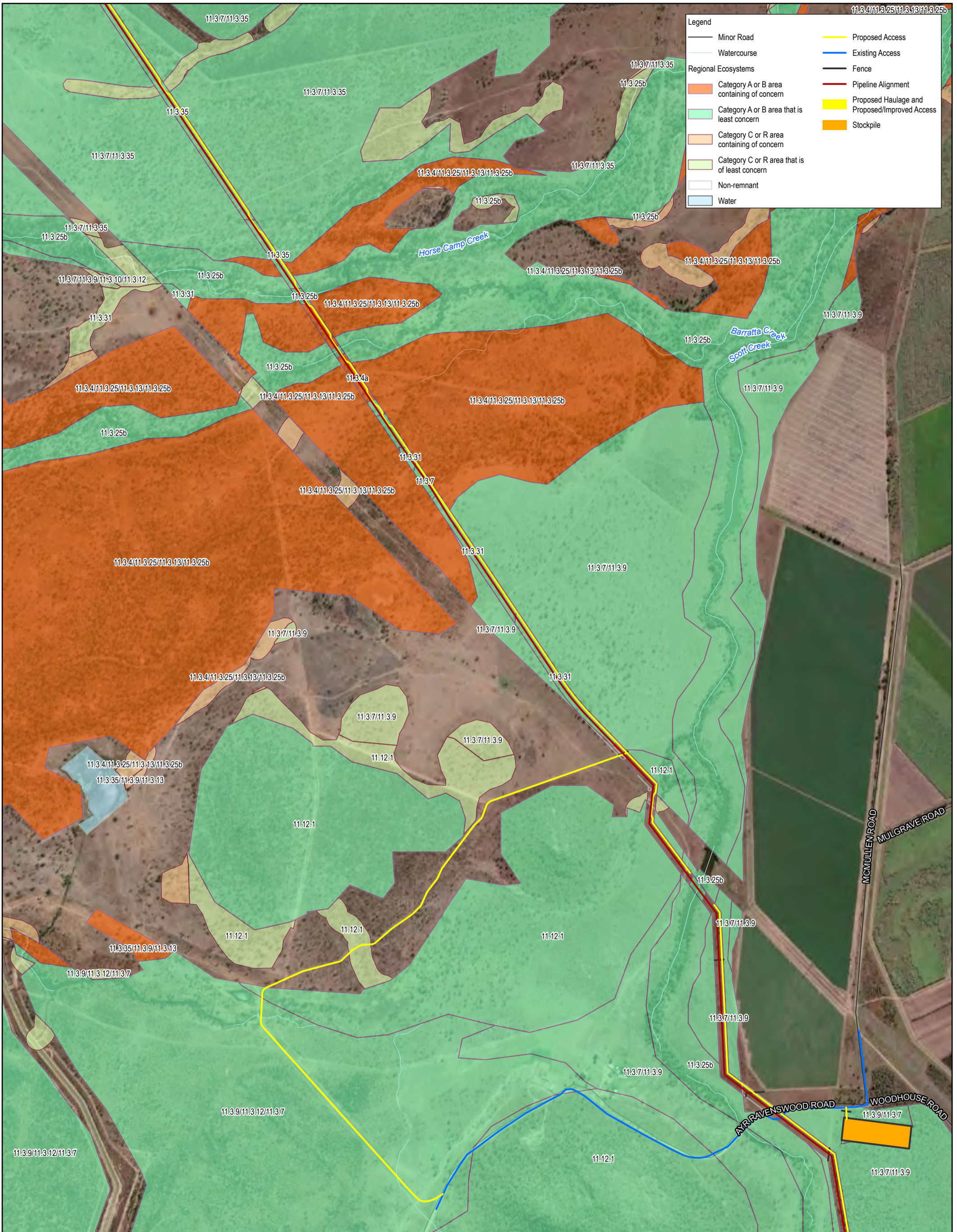


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Date 7/15/2022

**Vegetation communities
(regional ecosystems)**

FIGURE 3-2



Legend

- Minor Road
- Watercourse
- Regional Ecosystems
 - Category A or B area containing of concern
 - Category A or B area that is least concern
 - Category C or R area containing of concern
 - Category C or R area that is of least concern
 - Non-remnant
 - Water
- Proposed Access
- Existing Access
- Fence
- Pipeline Alignment
- Proposed Haulage and Proposed/Improved Access
- Stockpile

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Paper Size ISO A3

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Meters

Map Projection: Transverse Mercator
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Grid: GDA 1994 MGA Zone 55

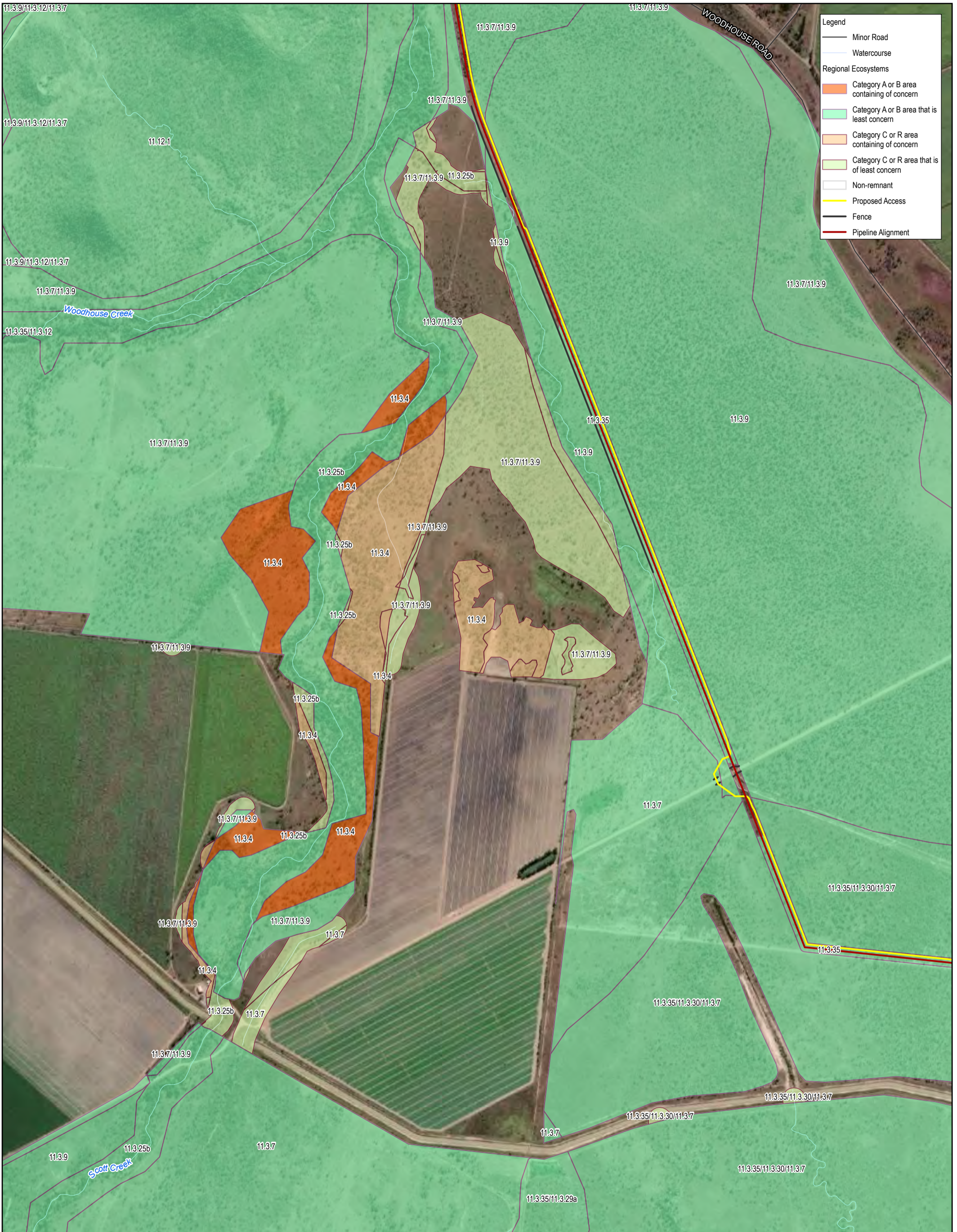


Townsville City Council
Houghton Pipeline Stage 2 - MNES Assessment

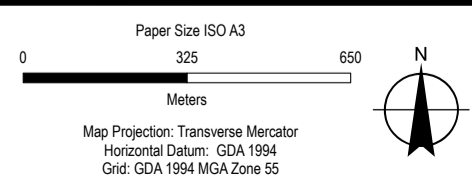
**Vegetation communities
(regional ecosystems)**

Project No. 12537606
Revision No. 1
Date 7/15/2022

FIGURE 3-2



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Project No. 12537606
Revision No. 1
Date 7/15/2022

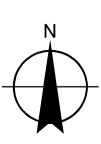
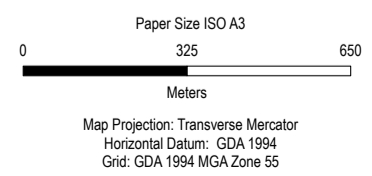
**Vegetation communities
(regional ecosystems)**

FIGURE 3-2



- Legend**
- Minor Road
 - +— Railway
 - Watercourse
- Regional Ecosystems**
- Category A or B area that is least concern
 - Category C or R area that is of least concern
 - Non-remnant
 - Proposed Access
 - Fence
 - Pipeline Alignment
 - Proposed Haulage and Proposed/Improved Access
 - Stockpile

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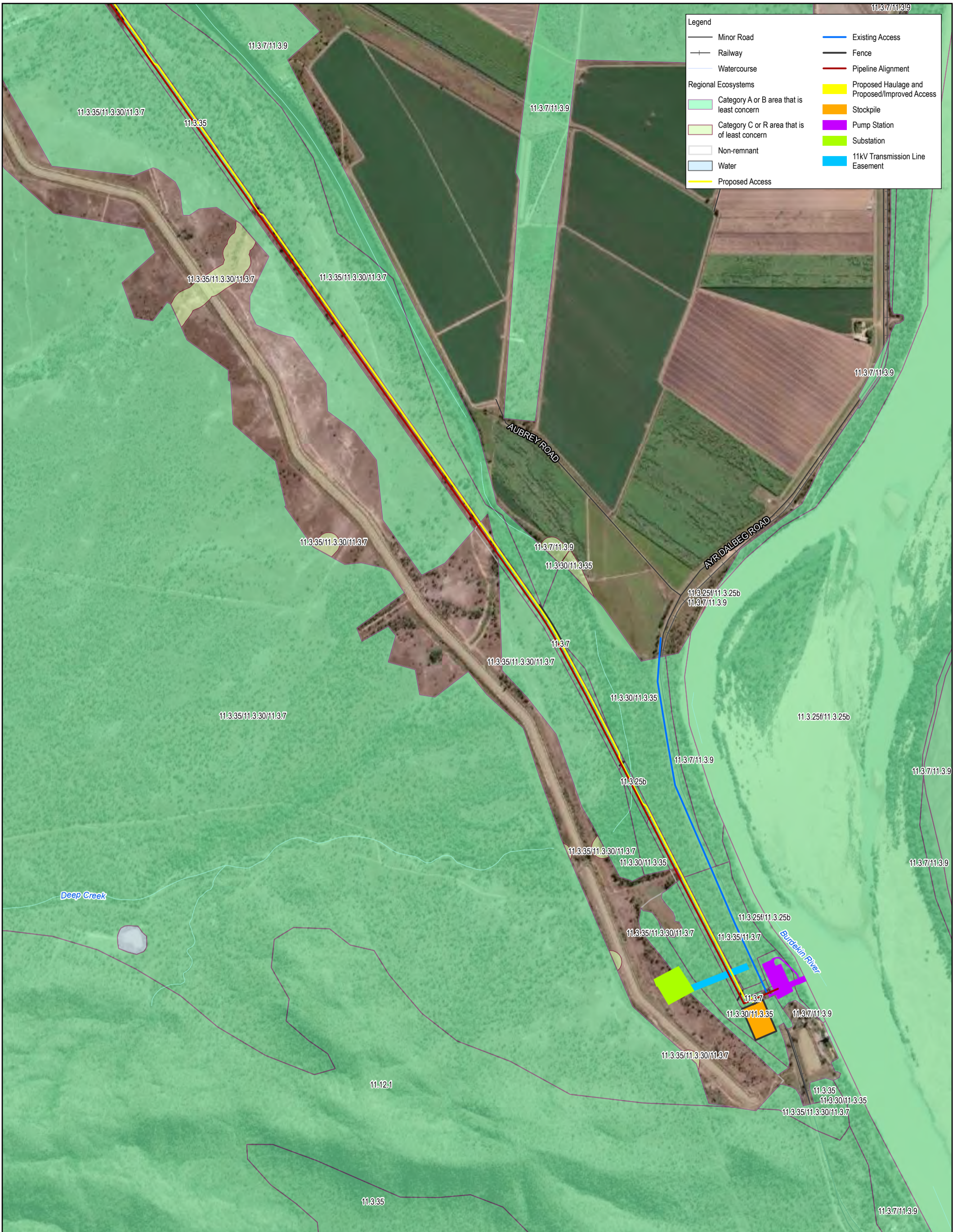


Townsville City Council
Houghton Pipeline Stage 2 - MNES Assessment

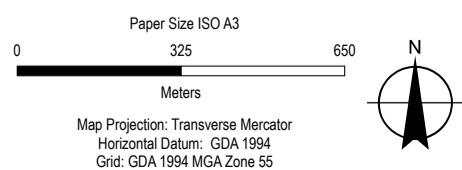
Project No. 12537606
Revision No. 1
Date 7/15/2022

**Vegetation communities
(regional ecosystems)**

FIGURE 3-2



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Townsville City Council
Houghton Pipeline Stage 2 - MNES Assessment

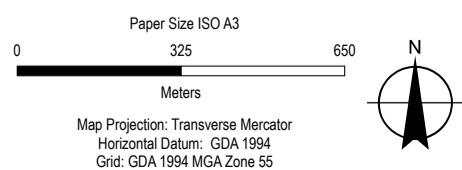
Vegetation communities
(regional ecosystems)

Project No. 12537606
Revision No. 1
Date 7/15/2022

FIGURE 3-2



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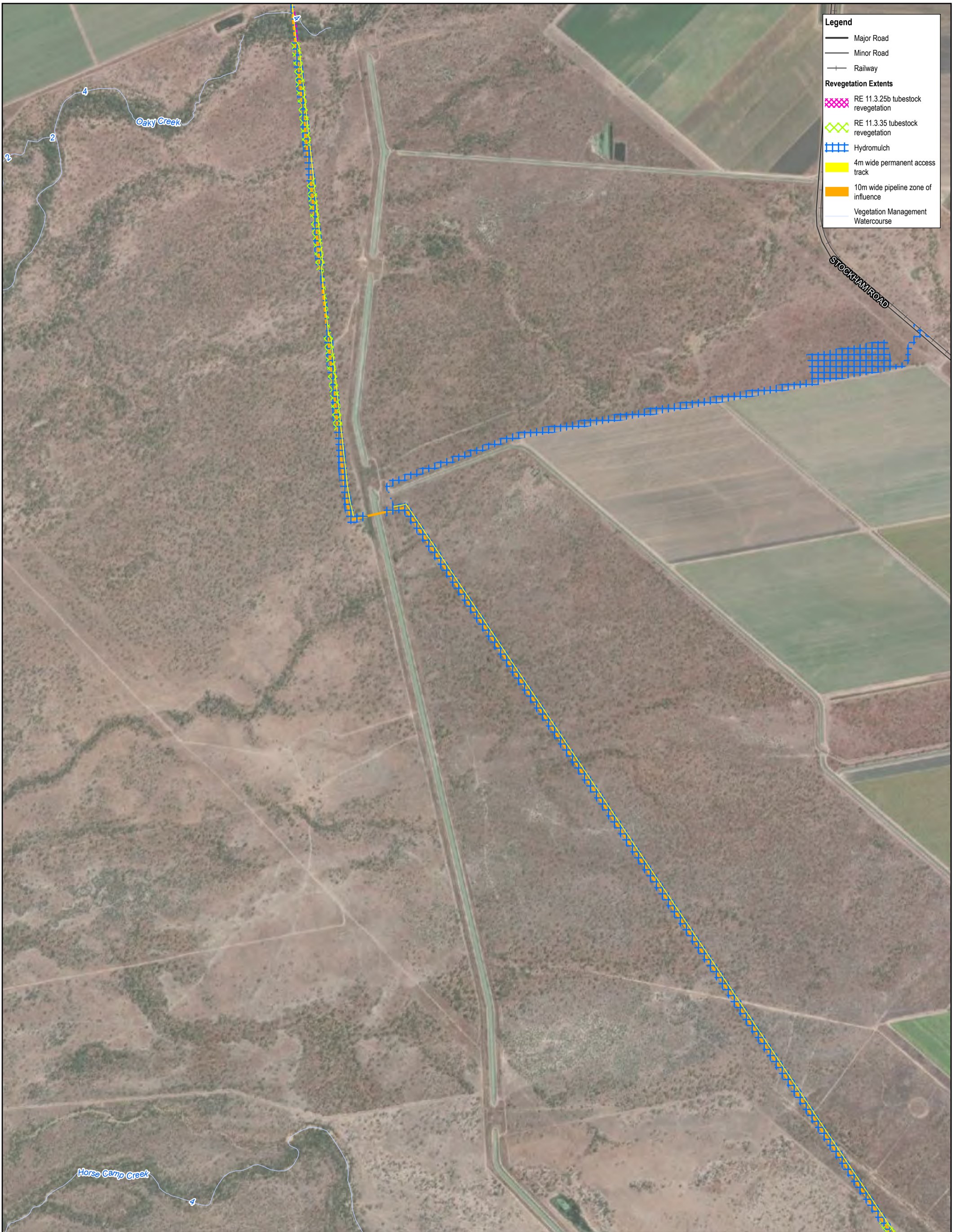


Townsville City Council
Houghton Pipeline Stage 2 - Rehabilitation Plan

Project No. 12537606
Revision No. C
Date 7/28/2022

Revegetation extents

Sheet 1 of 6
FIGURE 4-2



Legend

- Major Road
- Minor Road
- Railway

Revegetation Extents

- RE 11.3.25b tubestock revegetation
- RE 11.3.35 tubestock revegetation
- Hydromulch
- 4m wide permanent access track
- 10m wide pipeline zone of influence
- Vegetation Management Watercourse

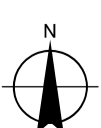
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Paper Size ISO A3

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Meters

Map Projection: Transverse Mercator
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Grid: GDA 1994 MGA Zone 55

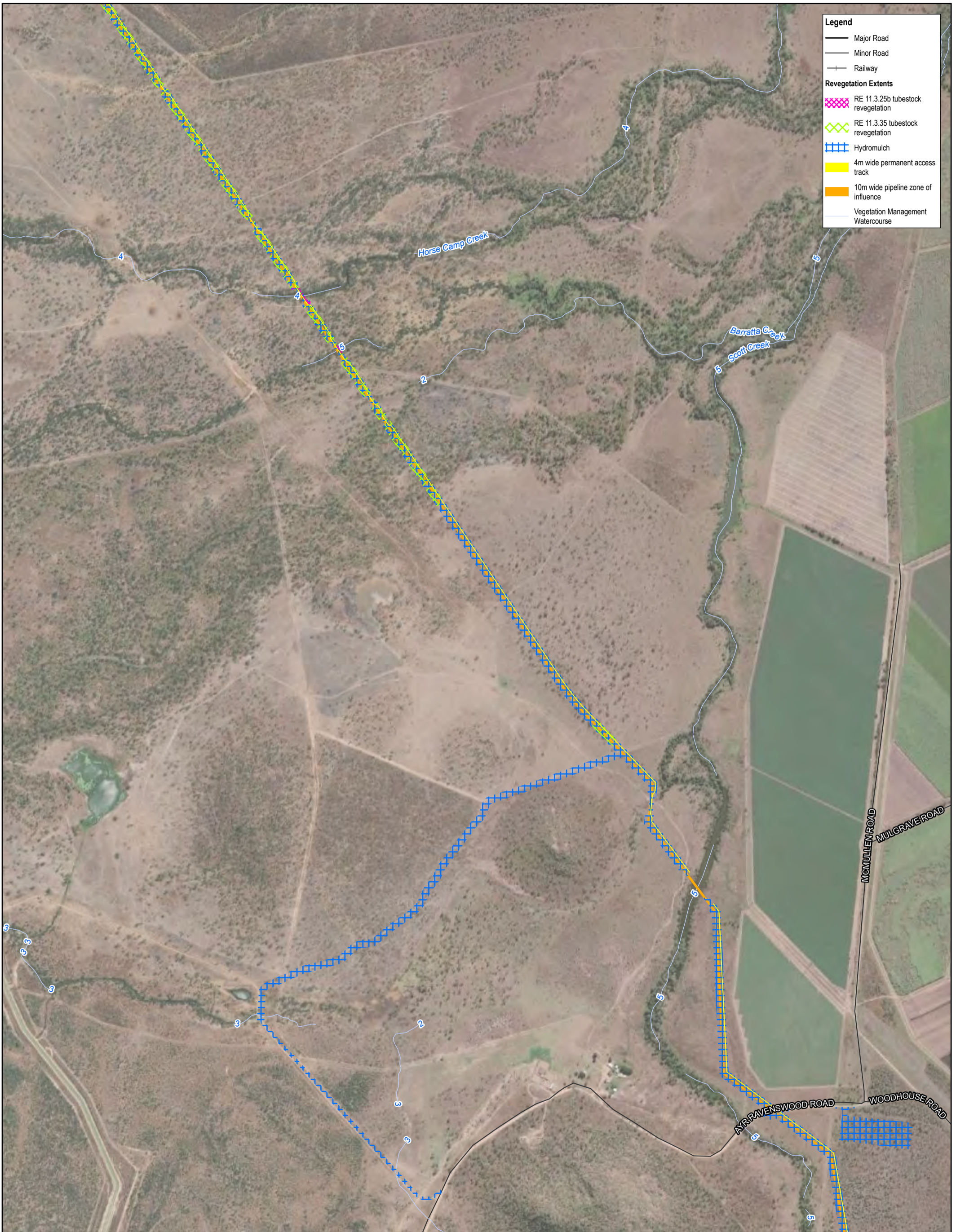


Townsville City Council
Houghton Pipeline Stage 2 - Rehabilitation Plan

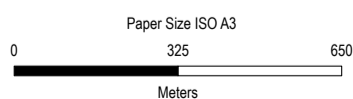
Project No. 12537606
Revision No. C
Date 7/28/2022

Revegetation extents

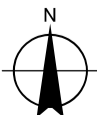
Sheet 2 of 6
FIGURE 4-2



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Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 55



Townsville City Council
 Haughton Pipeline Stage 2 - Rehabilitation Plan

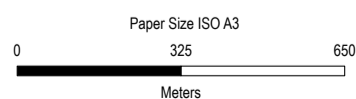
Revegetation extents

Project No. 12537606
 Revision No. C
 Date 7/28/2022

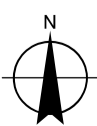
Sheet 3 of 6
 FIGURE 4-2



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Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55



Townsville City Council
Haughton Pipeline Stage 2 - Rehabilitation Plan

Project No. 12537606
Revision No. C
Date 7/28/2022

Revegetation extents

Sheet 4 of 6
FIGURE 4-2



Legend

- Major Road
- Minor Road
- Railway

Revegetation Extents

- RE 11.3.25b tubestock revegetation
- RE 11.3.35 tubestock revegetation
- Hydromulch
- 4m wide permanent access track
- 10m wide pipeline zone of influence
- Vegetation Management Watercourse

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Paper Size ISO A3

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Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

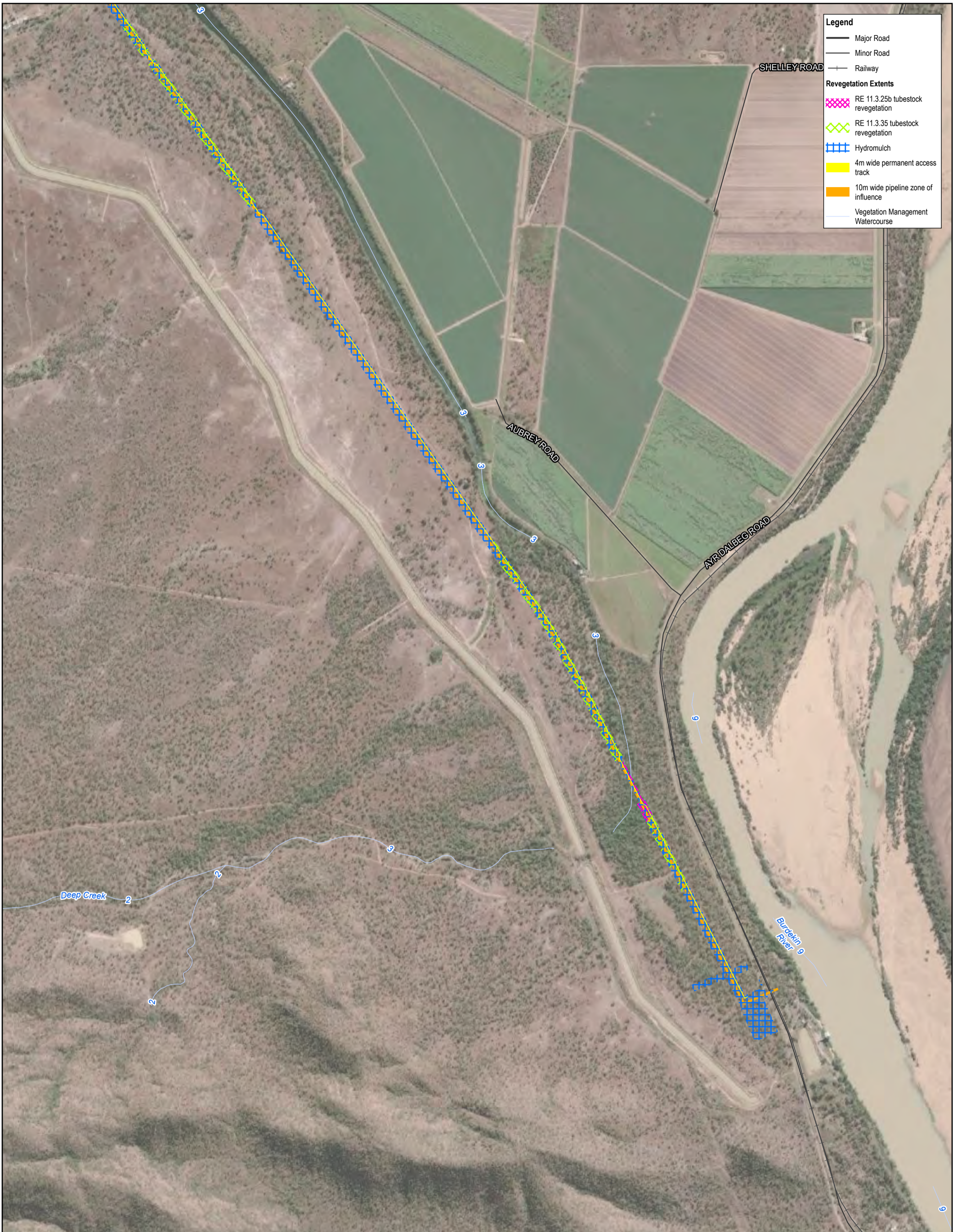


Townsville City Council
Houghton Pipeline Stage 2 - Rehabilitation Plan

Project No. 12537606
Revision No. C
Date 7/28/2022

Revegetation extents

Sheet 5 of 6
FIGURE 4-2



Legend

- Major Road
- Minor Road
- Railway

Revegetation Extents

- RE 11.3.25b tubestock revegetation
- RE 11.3.35 tubestock revegetation
- Hydromulch
- 4m wide permanent access track
- 10m wide pipeline zone of influence
- Vegetation Management Watercourse

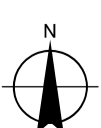
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Townsville City Council
Houghton Pipeline Stage 2 - Rehabilitation Plan

Project No. 12537606
Revision No. C
Date 7/28/2022

Revegetation extents

Sheet 6 of 6
FIGURE 4-2

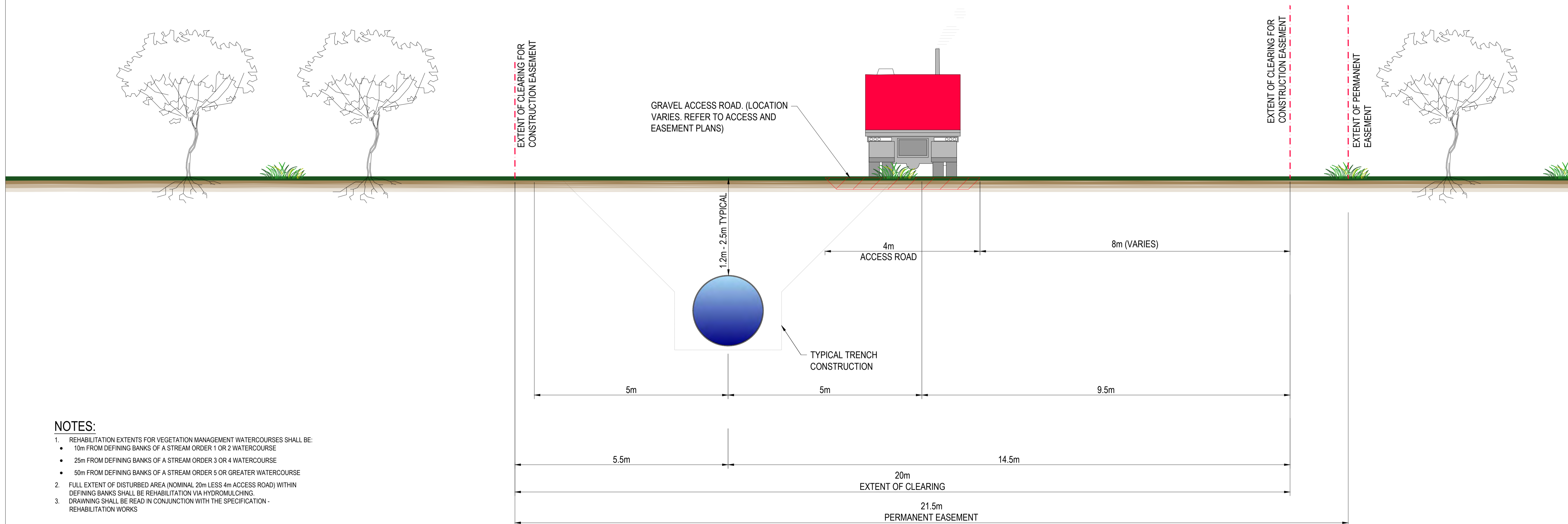
HYDROMULCH WITH ENDEMIC GRASS SPECIES

(EXCLUDES 4m ACCESS ROAD)

PLANT WITH CANOPY, SUBCANOPY, SHRUB AND GROUND STRATUM TUBESTOCK (REFER PLANS FOR RE TYPE)

(EXCLUDES 4m ACCESS ROAD)

10m ZONE TO REMAIN FREE FROM TUBESTOCK PLANTING



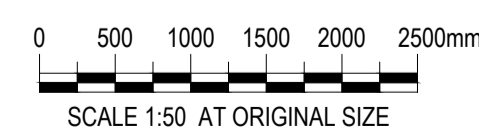
TYPICAL CROSS SECTION - REHABILITATION EXTENTS FOR VEGETATION MANAGEMENT WATERCOURSES

A SECTION
G5050 SCALE 1 : 50

NOTES:

1. REHABILITATION EXTENTS FOR VEGETATION MANAGEMENT WATERCOURSES SHALL BE:
 - 10m FROM DEFINING BANKS OF A STREAM ORDER 1 OR 2 WATERCOURSE
 - 25m FROM DEFINING BANKS OF A STREAM ORDER 3 OR 4 WATERCOURSE
 - 50m FROM DEFINING BANKS OF A STREAM ORDER 5 OR GREATER WATERCOURSE
2. FULL EXTENT OF DISTURBED AREA (NOMINAL 20m LESS 4m ACCESS ROAD) WITHIN DEFINING BANKS SHALL BE REHABILITATION VIA HYDROMULCHING.
3. DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION - REHABILITATION WORKS

Rev	Description	Checked	Approved	Date
B	REHABILITATION AMENDMENTS	DW*	SO*	15.08.22
A	100% ISSUE	DW*	SO*	17.03.22
Author	M.MACDONALD	Drafting Check	C.CARMELITO*	RPEQ No. 09505
Designer	G.GANGEMI	Design Check	D.WILLIS*	Date 17.03.22



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Project No.
12537606

Client TOWNSVILLE CITY COUNCIL
Project HAUGHTON PIPELINE STAGE 2 PIPELINE

Status 100% ISSUE

Drawing Title
REHABILITATION MEASURES VEGETATION MANAGEMENT WATERCOURSES

Drawing No.
HPS2-GHD-PL-G5051.dwg

Size
A1

Rev
B

HYDROMULCH WITH ENDEMIC GRASS SPECIES

(EXCLUDES 4m ACCESS ROAD)

PLANT WITH CANOPY, SUBCANOPY, SHRUB AND GROUND STRATUM TUBESTOCK (REFER PLANS FOR RE TYPE)

10m ZONE TO REMAIN FREE FROM TUBESTOCK PLANTING

PLANT WITH CANOPY, SUBCANOPY, SHRUB AND GROUND STRATUM TUBESTOCK (REFER PLANS FOR RE TYPE)

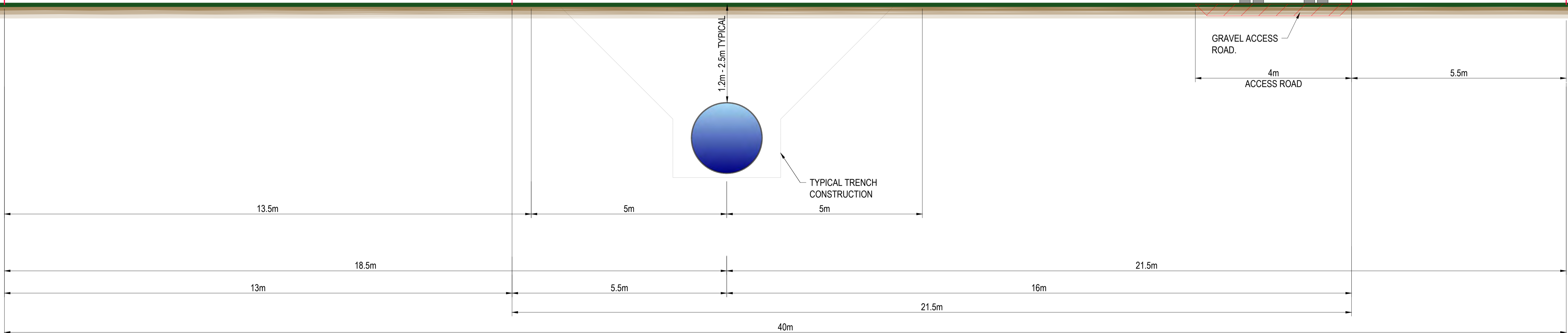
(EXCLUDES 4m ACCESS ROAD)

EXTENT OF CLEARING FOR CONSTRUCTION EASEMENT

EXTENT OF PERMANENT EASEMENT

EXTENT OF PERMANENT EASEMENT

EXTENT OF CLEARING FOR CONSTRUCTION EASEMENT



TYPICAL CROSS SECTION - REHABILITATION EXTENTS WITHIN 400m OF A VEGETATION MANAGEMENT WATERCOURSE CURRENTLY SUPPORTING REMNANT VEGETATION

SCALE 1:50

B SECTION
G5050 SCALE 1 : 50

Rev	Description	Checked	Approved	Date
A	100% ISSUE	DW*	SO*	15.08.22
Author	C.CARMELITO	Drafting Check	RPEQ No.	
Designer	D.WILLIS	Design Check	Date	



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Project No.
12537606

Client	TOWNSVILLE CITY COUNCIL
Project	HAUGHTON PIPELINE STAGE 2 PIPELINE
Status	100% ISSUE

Drawing Title
REHABILITATION MEASURES WITHIN 400m OF VEGETATION MANAGEMENT WATER COURSE

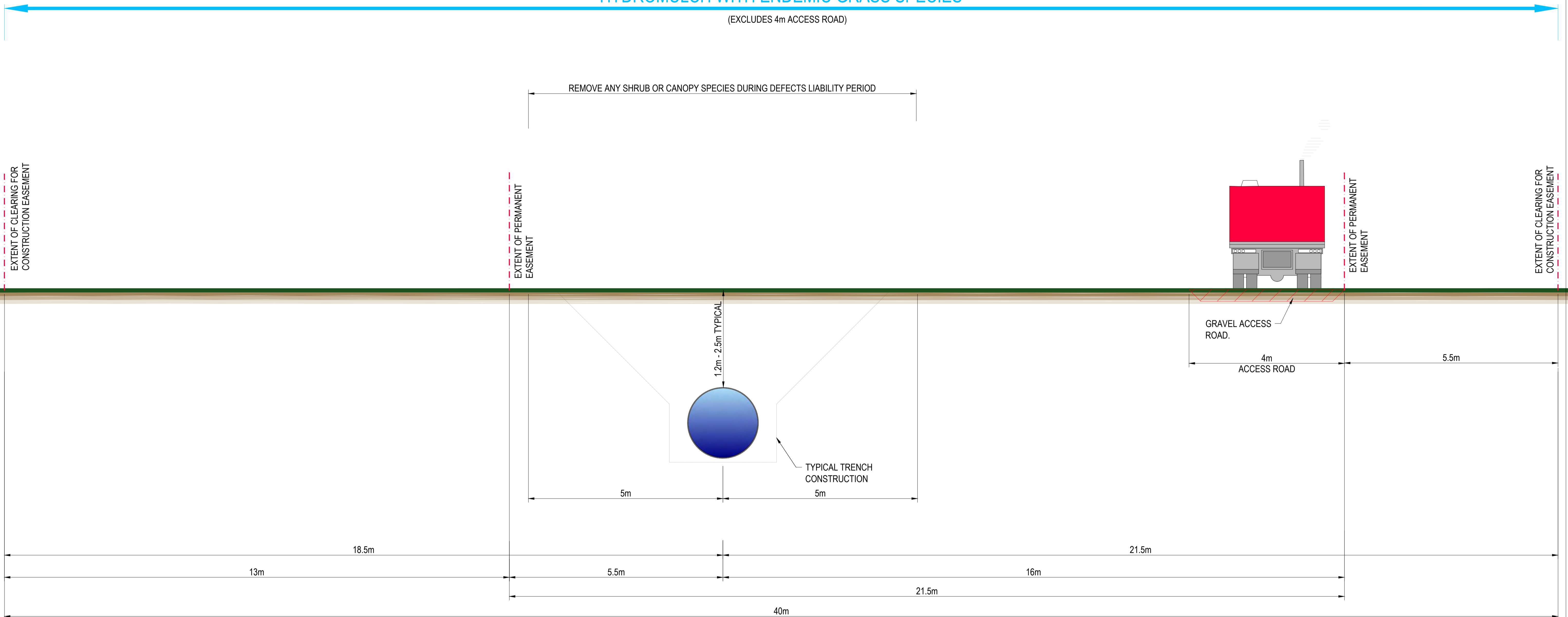
Drawing No.
HPS2-GHD-PL-G5052.dwg

Size
A1

Rev
A

HYDROMULCH WITH ENDEMIC GRASS SPECIES

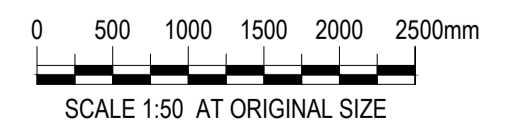
(EXCLUDES 4m ACCESS ROAD)



TYPICAL CROSS SECTION -
REHABILITATION EXTENTS (ALL
DISTURBED AREAS)

C SECTION
G5050 SCALE 1 : 50

B	REHABILITATION AMENDMENTS	DW*	SO*	15.08.22
A	100% ISSUE	DW*	SO*	17.03.22
Rev	Description	Checked	Approved	Date
Author	M.MACDONAL	Drafting Check	C.CARMELITO*	RPEQ No. 09505
Designer	D.GANGEMI	Design Check	D.WILLIS	Date 17.03.22



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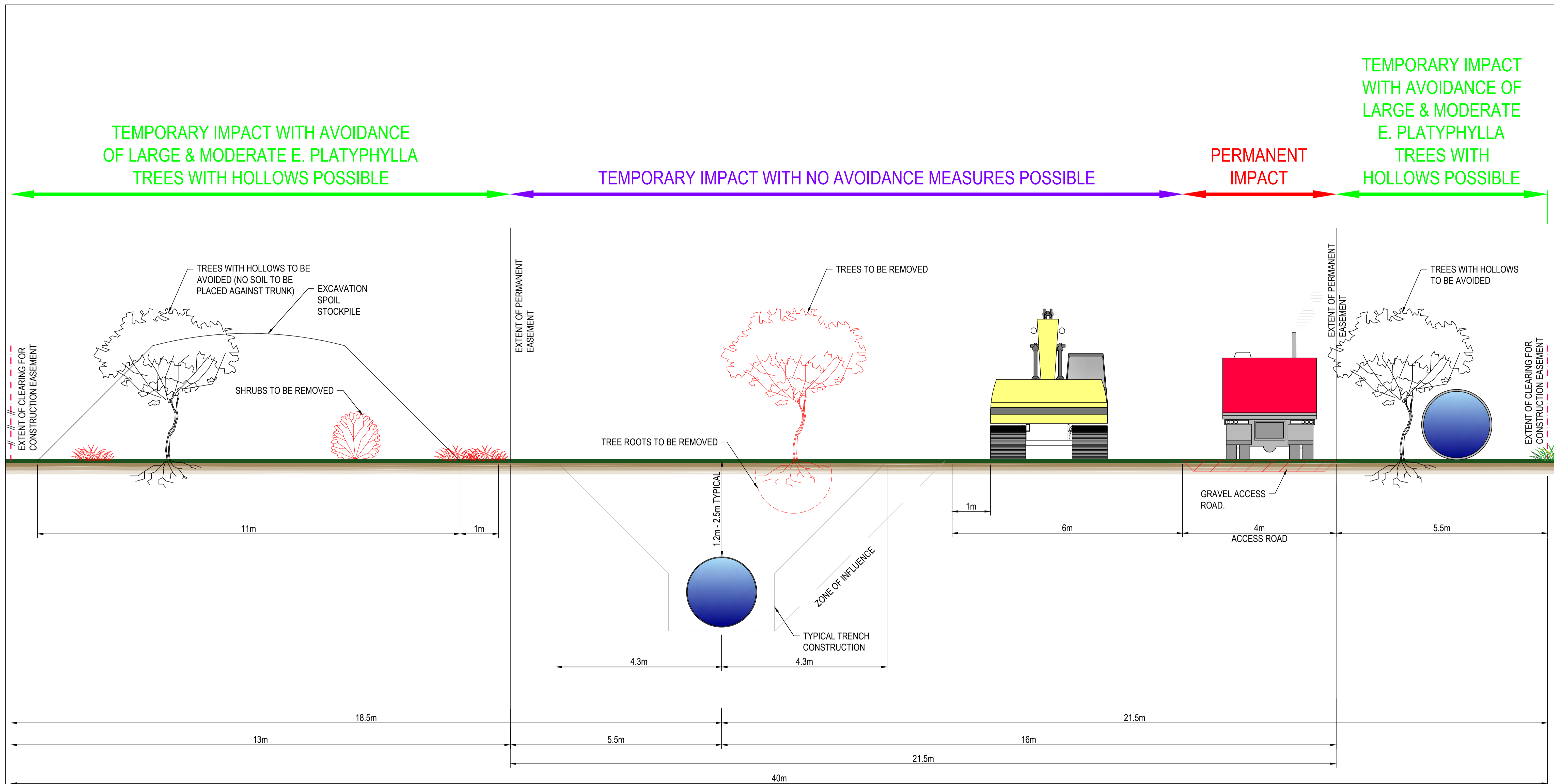
Project No. 12537606

Client	TOWNSVILLE CITY COUNCIL
Project	HAUGHTON PIPELINE STAGE 2 PIPELINE
Status	100% ISSUE

Drawing Title
REHABILITATION MEASURES
ALL OTHER DISTURBED AREAS

Drawing No. HPS2-GHD-PL-G5053.dwg

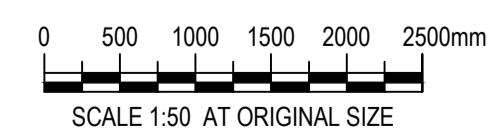
Size
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Rev
B



TYPICAL CROSS SECTION - AVOIDANCE AND IMPACT OF E.PLATYPHYLLA HOLLOWES

SCALE 1:50

Rev	Description	Checked	Approved	Date
A	100% ISSUE	DW*	SO*	17.03.22
Author	M.MACDONALD	Drafting Check	C.CARMELITO*	RPEQ No. 09505
Designer	D.GANGEMI	Design Check	D.WILLIS*	Date 17.03.22



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 T 61 7 4720 0400 F 61 7 4772 6514
 E tsvmall@ghd.com W www.ghd.com



Project No.
12537606

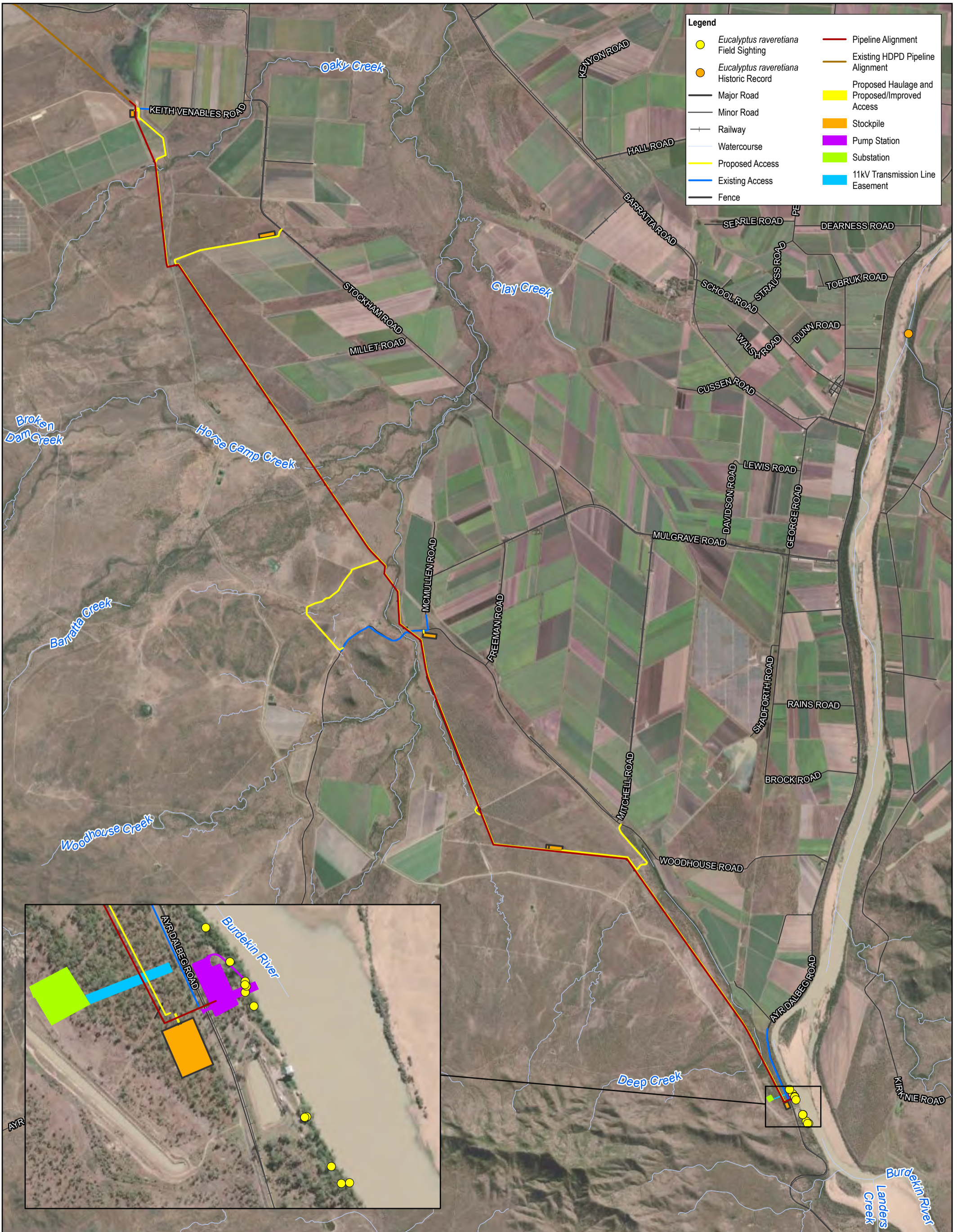
Client TOWNSVILLE CITY COUNCIL
 Project HAUGHTON PIPELINE STAGE 2 PIPELINE
 Status 100% ISSUE

Drawing Title
REHABILITATION MEASURES AVOIDANCE AND IMPACT OF E.PLATYPHYLLA HOLLOWES

Drawing No.
HPS2-GHD-PL-G5054.dwg

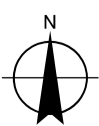
Size
A1
Rev
A

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Paper Size ISO A3
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 Kilometres
 Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 55



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 Houghton Pipeline Stage 2 - MNES Assessment

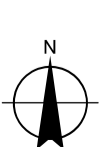
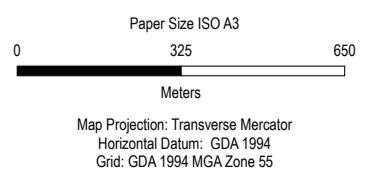
Project No. 12537606
 Revision No. 2
 Date 7/13/2022

Extent of Eucalyptus raveretiana
 within and surrounding the Project area

FIGURE 5-1



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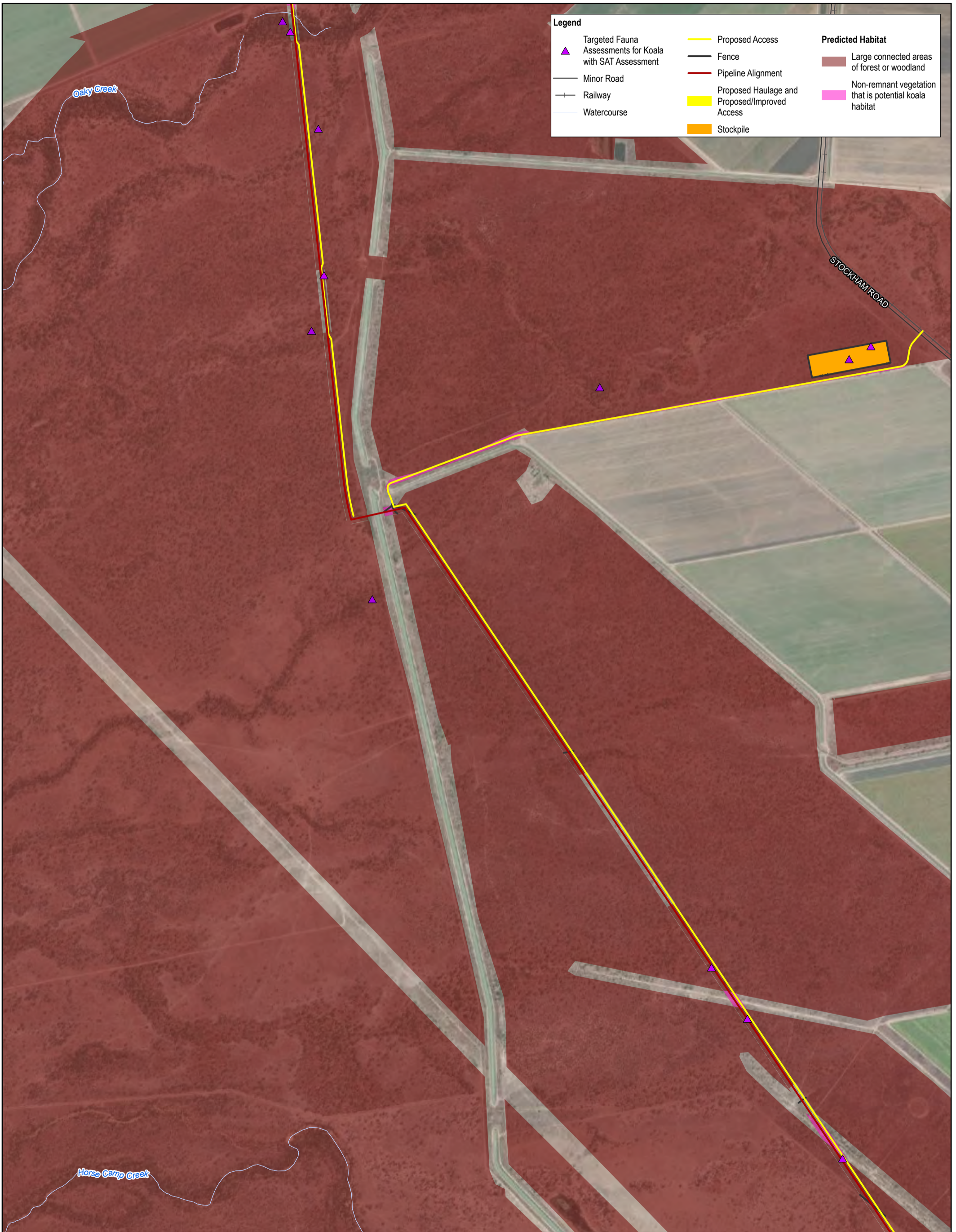


Townsville City Council
Haughton Pipeline Stage 2 - MNES Assessment

Project No. 12537606
Revision No. 3
Date 9/29/2022

Distribution of predicted koala habitat
within and surrounding the Project area

FIGURE 6-1



Legend

▲ Targeted Fauna Assessments for Koala with SAT Assessment	— Proposed Access	Predicted Habitat
— Minor Road	— Fence	■ Large connected areas of forest or woodland
— Railway	— Pipeline Alignment	■ Non-remnant vegetation that is potential koala habitat
— Watercourse	■ Proposed Haulage and Proposed/Improved Access	
	■ Stockpile	

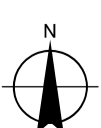
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Paper Size ISO A3

0 325 650

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

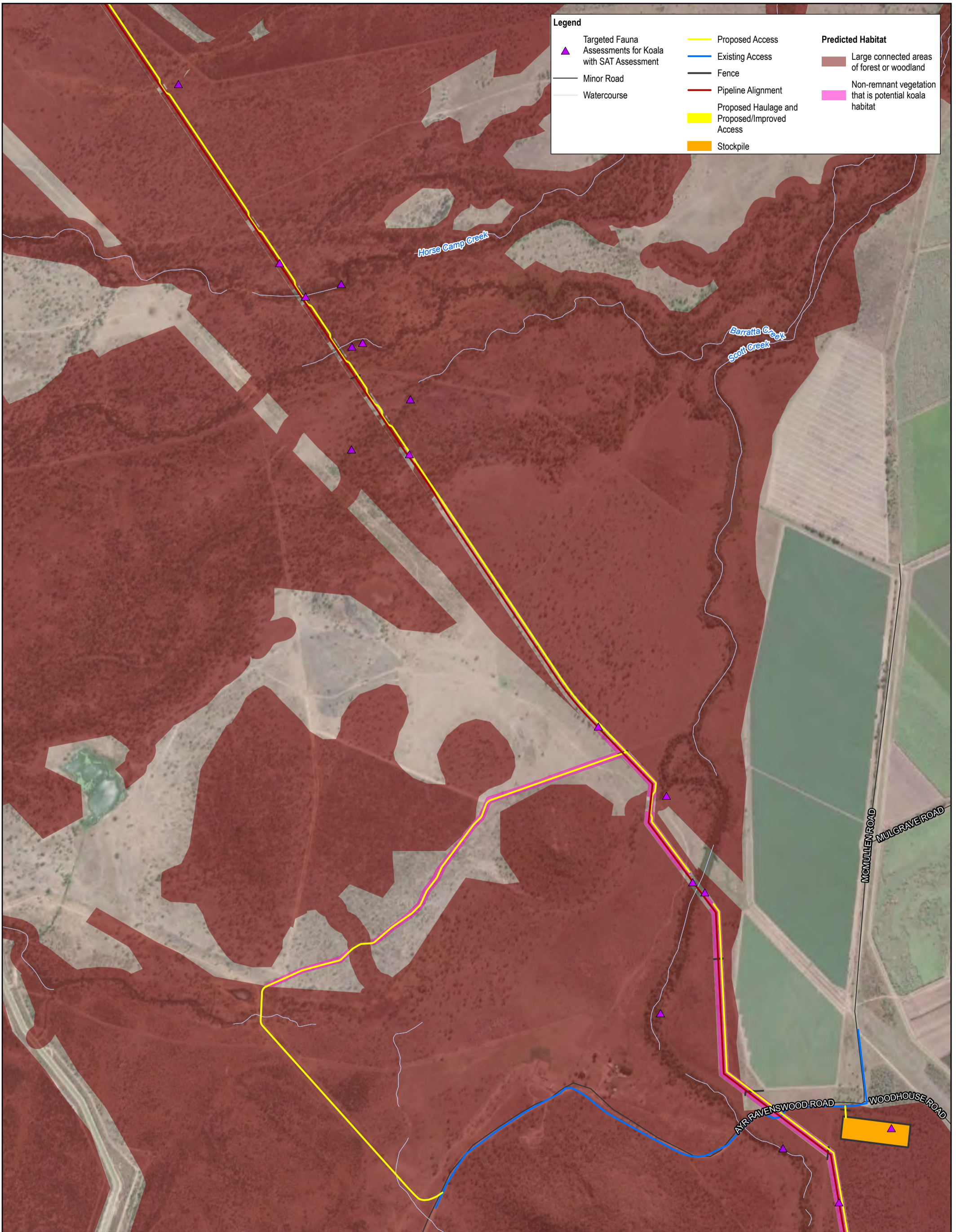


Townsville City Council
Haughton Pipeline Stage 2 - MNES Assessment

Project No. 12537606
Revision No. 3
Date 9/29/2022

Distribution of predicted koala habitat within and surrounding the Project area

FIGURE 6-1



Legend

▲ Targeted Fauna Assessments for Koala with SAT Assessment	— Proposed Access	Predicted Habitat
— Minor Road	— Existing Access	■ Large connected areas of forest or woodland
— Watercourse	— Fence	■ Non-remnant vegetation that is potential koala habitat
	— Pipeline Alignment	
	■ Proposed Haulage and Proposed/Improved Access	
	■ Stockpile	

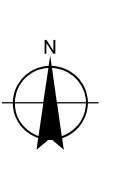
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Paper Size ISO A3

0 325 650

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55



Townsville City Council
Haughton Pipeline Stage 2 - MNES Assessment

Distribution of predicted koala habitat within and surrounding the Project area

Project No. 12537606
Revision No. 3
Date 9/29/2022

FIGURE 6-1



Legend

▲ Targeted Fauna Assessments for Koala with SAT Assessment	— Proposed Access	Predicted Habitat
— Minor Road	— Fence	■ Large connected areas of forest or woodland
— Watercourse	— Pipeline Alignment	■ Non-remnant vegetation that is potential koala habitat

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Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

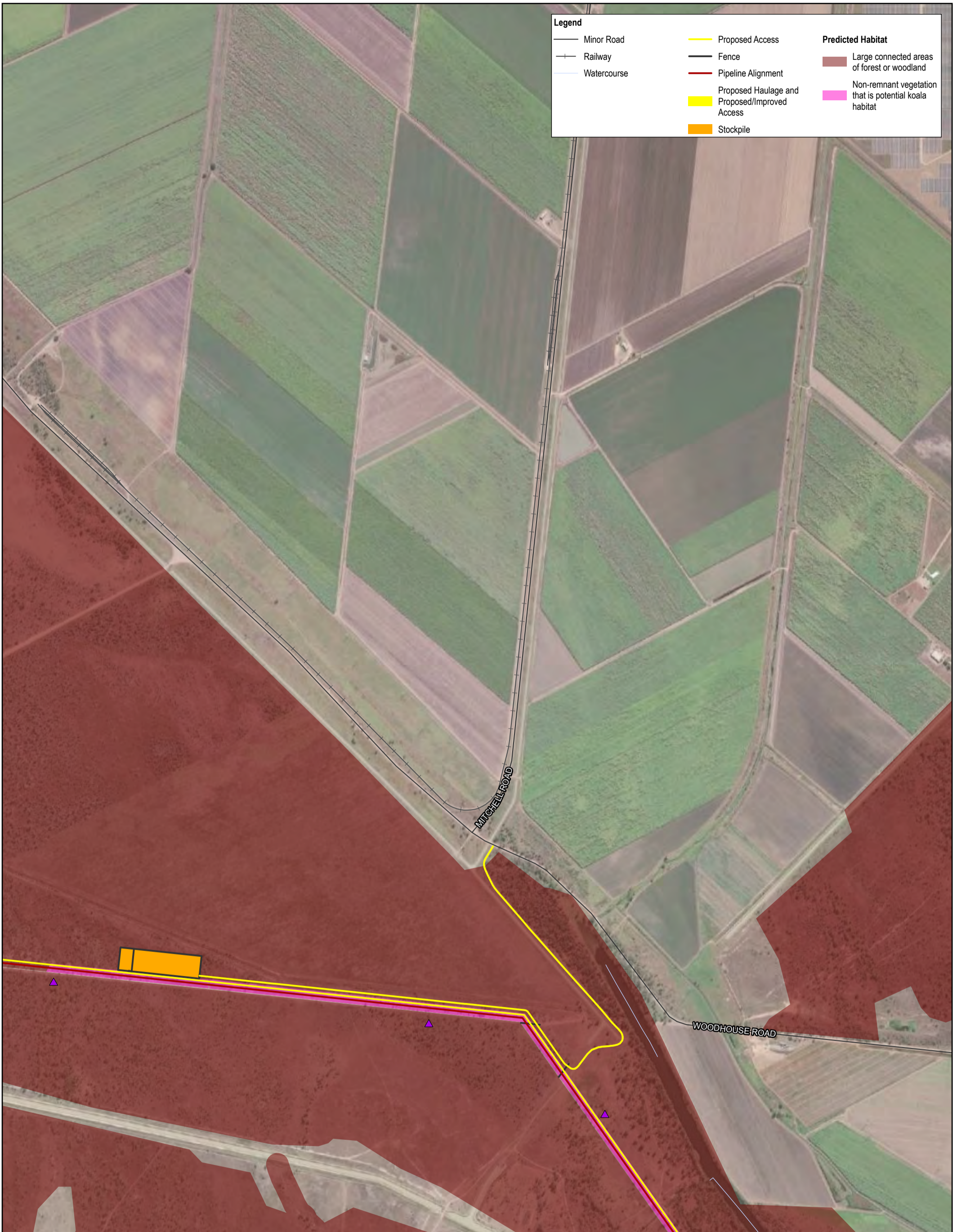


Townsville City Council
Haughton Pipeline Stage 2 - MNES Assessment

Project No. 12537606
Revision No. 3
Date 9/29/2022

Distribution of predicted koala habitat within and surrounding the Project area

FIGURE 6-1



Legend		Predicted Habitat
— Minor Road	— Proposed Access	Large connected areas of forest or woodland
— Railway	— Fence	Non-remnant vegetation that is potential koala habitat
— Watercourse	— Pipeline Alignment	
	Proposed Haulage and Proposed/Improved Access	
	Stockpile	

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Paper Size ISO A3

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Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

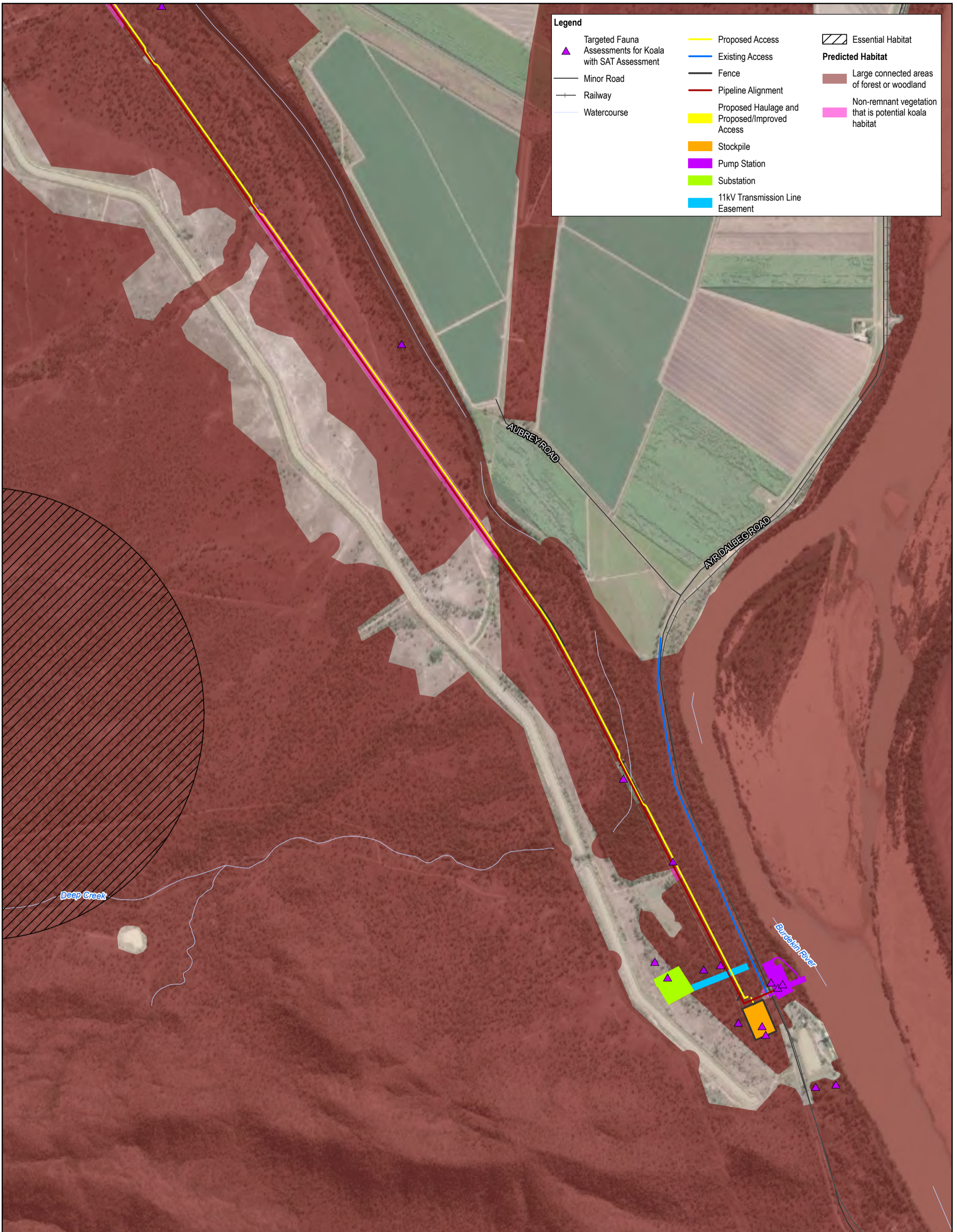


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Haughton Pipeline Stage 2 - MNES Assessment

Project No. 12537606
Revision No. 3
Date 9/29/2022

Distribution of predicted koala habitat within and surrounding the Project area

FIGURE 6-1



Legend

▲ Targeted Fauna Assessments for Koala with SAT Assessment	— Proposed Access	▨ Essential Habitat
— Minor Road	— Existing Access	Predicted Habitat
— Railway	— Fence	■ Large connected areas of forest or woodland
— Watercourse	— Pipeline Alignment	■ Non-remnant vegetation that is potential koala habitat
	■ Proposed Haulage and Proposed/Improved Access	
	■ Stockpile	
	■ Pump Station	
	■ Substation	
	— 11kV Transmission Line Easement	

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Distribution of predicted koala habitat within and surrounding the Project area

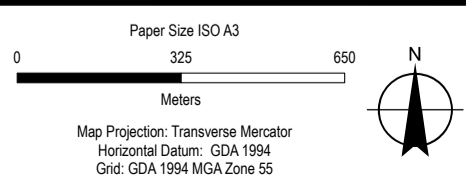
FIGURE 6-1

\\ghdnet\ghd\AU\Townsville\Projects\4212537606\GIS\Maps\APRX\12537606_Ecology.aprx 12537606_MNES_006_KoalaHab_Rev3
Print date: 29 Sep 2022 - 15:07c
Data source: DoR: Roads, Railway, Watercourses, Essential Habitat v10 (2021); GHD: Site Layout, Field Survey, Potential Habitat (2022); DES: Wildnet Records (2021); World Imagery: Maxar. Created by: shaz2



Legend					
	Minor Road		Proposed Access		Essential Habitat
	Railway		Existing Access		Large hollow >30cm diameter
	Watercourse		Fence		Moderate hollow 20cm-30cm diameter
			Pipeline Alignment		Small hollow <10cm-20cm diameter
			Existing HDPD Pipeline Alignment		Stockpile
			Proposed Haulage and Proposed/Improved Access		Foraging Habitat
			Stockpile		Roosting Habitat

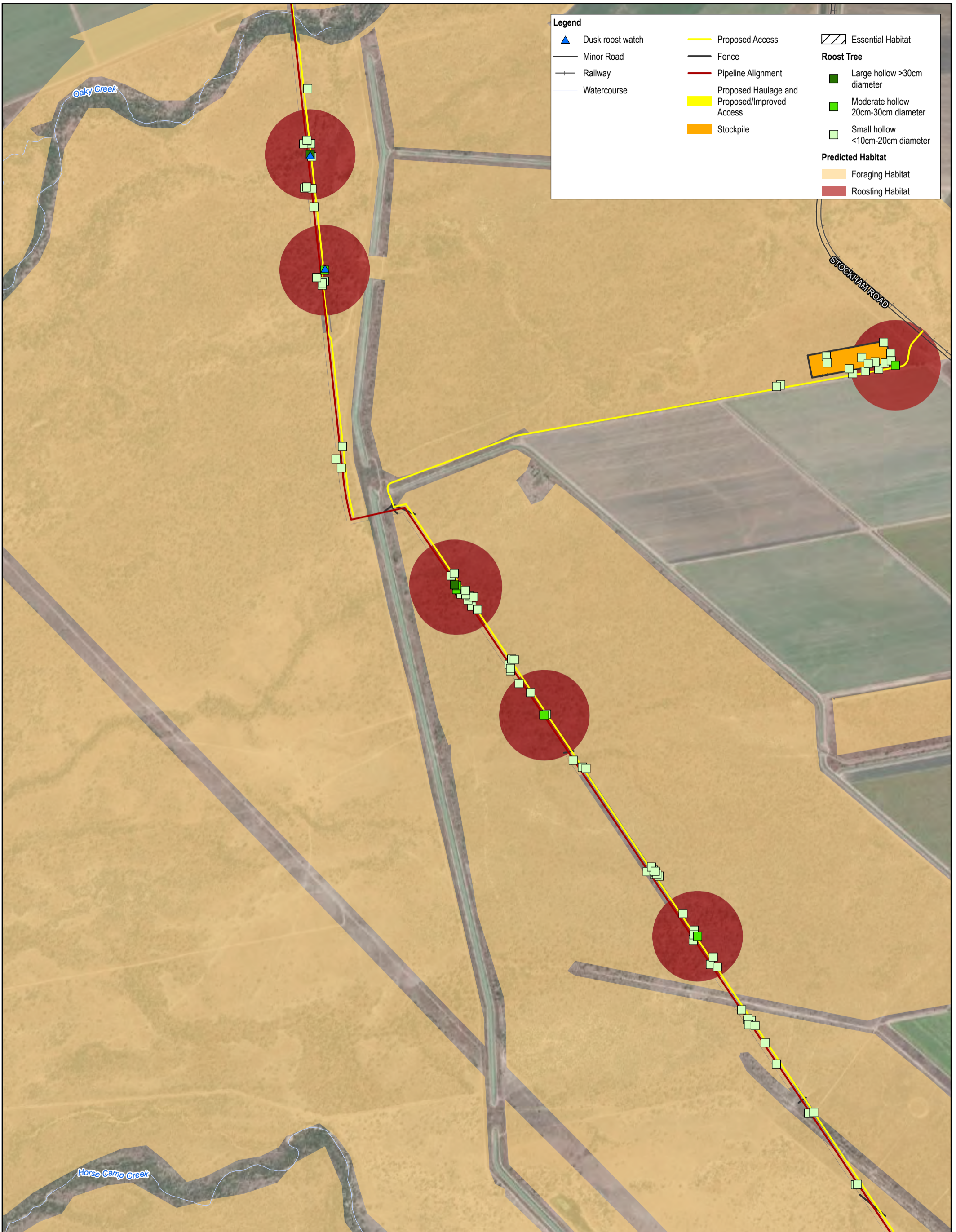
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 Haughton Pipeline Stage 2 - MNES Assessment
Distribution of predicted bare-rumped sheath-tail bat habitat within and surrounding the Project area

Project No. 12537606
 Revision No. 3
 Date 9/25/2022

FIGURE 6-2



Legend

Dusk roost watch	Proposed Access	Essential Habitat
Minor Road	Fence	Roost Tree
Railway	Pipeline Alignment	Large hollow >30cm diameter
Watercourse	Proposed Haulage and Proposed/Improved Access	Moderate hollow 20cm-30cm diameter
	Stockpile	Small hollow <10cm-20cm diameter
		Predicted Habitat
		Foraging Habitat
		Roosting Habitat

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Paper Size ISO A3

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55



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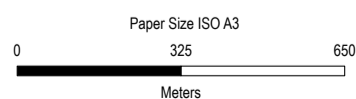
Distribution of predicted bare-rumped sheath-tail bat habitat within and surrounding the Project area

Project No. 12537606
Revision No. 3
Date 9/25/2022

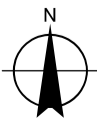
FIGURE 6-2



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Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
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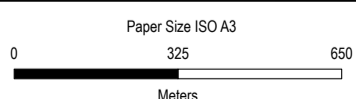
Distribution of predicted bare-rumped sheath-tail bat habitat within and surrounding the Project area

Project No. 12537606
Revision No. 3
Date 9/25/2022

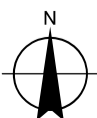
FIGURE 6-2



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Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
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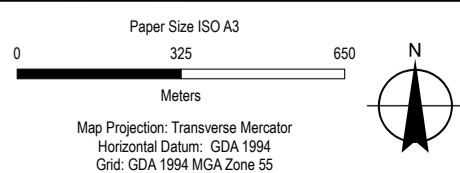
Distribution of predicted bare-rumped sheathtail bat habitat within and surrounding the Project area

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Revision No. 3
Date 9/25/2022

FIGURE 6-2



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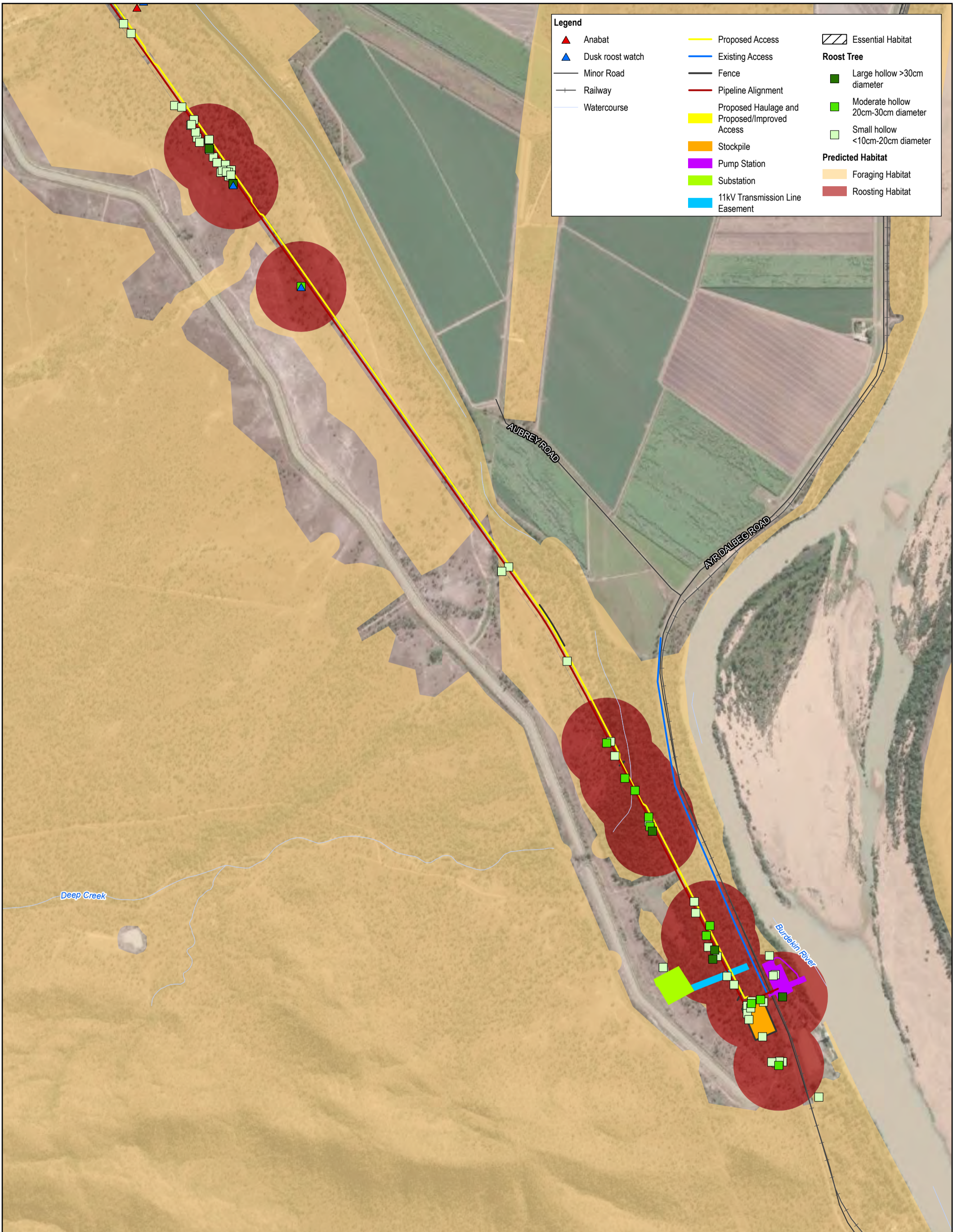


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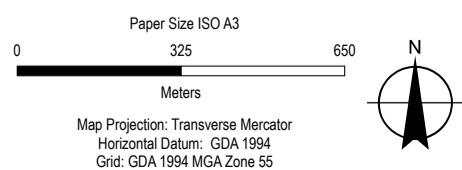
Distribution of predicted bare-rumped sheath-tail bat habitat within and surrounding the Project area

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FIGURE 6-2



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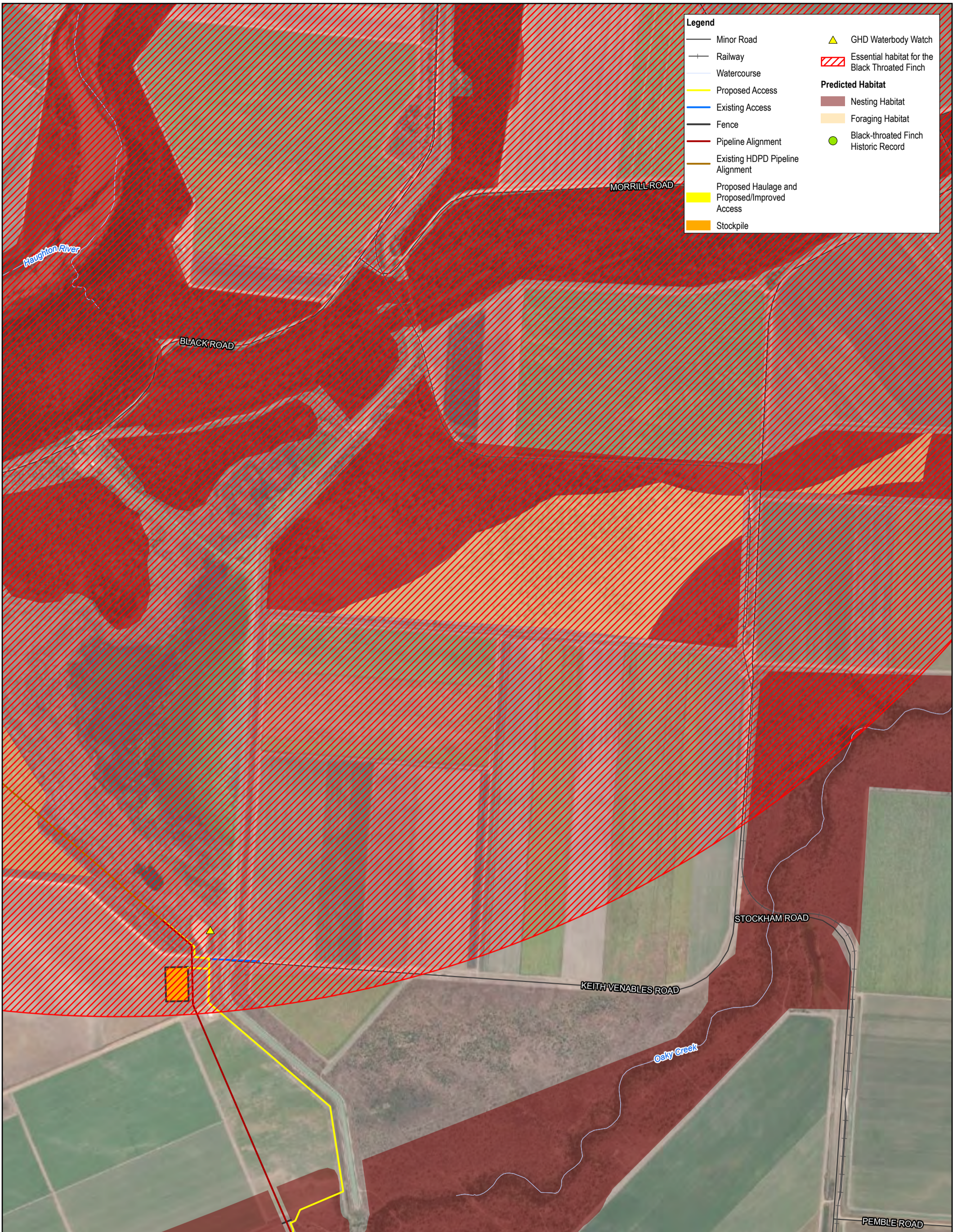


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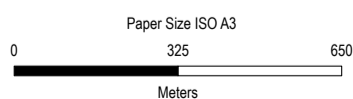
Distribution of predicted bare-rumped sheath-tail bat habitat within and surrounding the Project area

Project No. 12537606
Revision No. 3
Date 9/25/2022

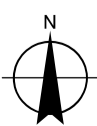
FIGURE 6-2



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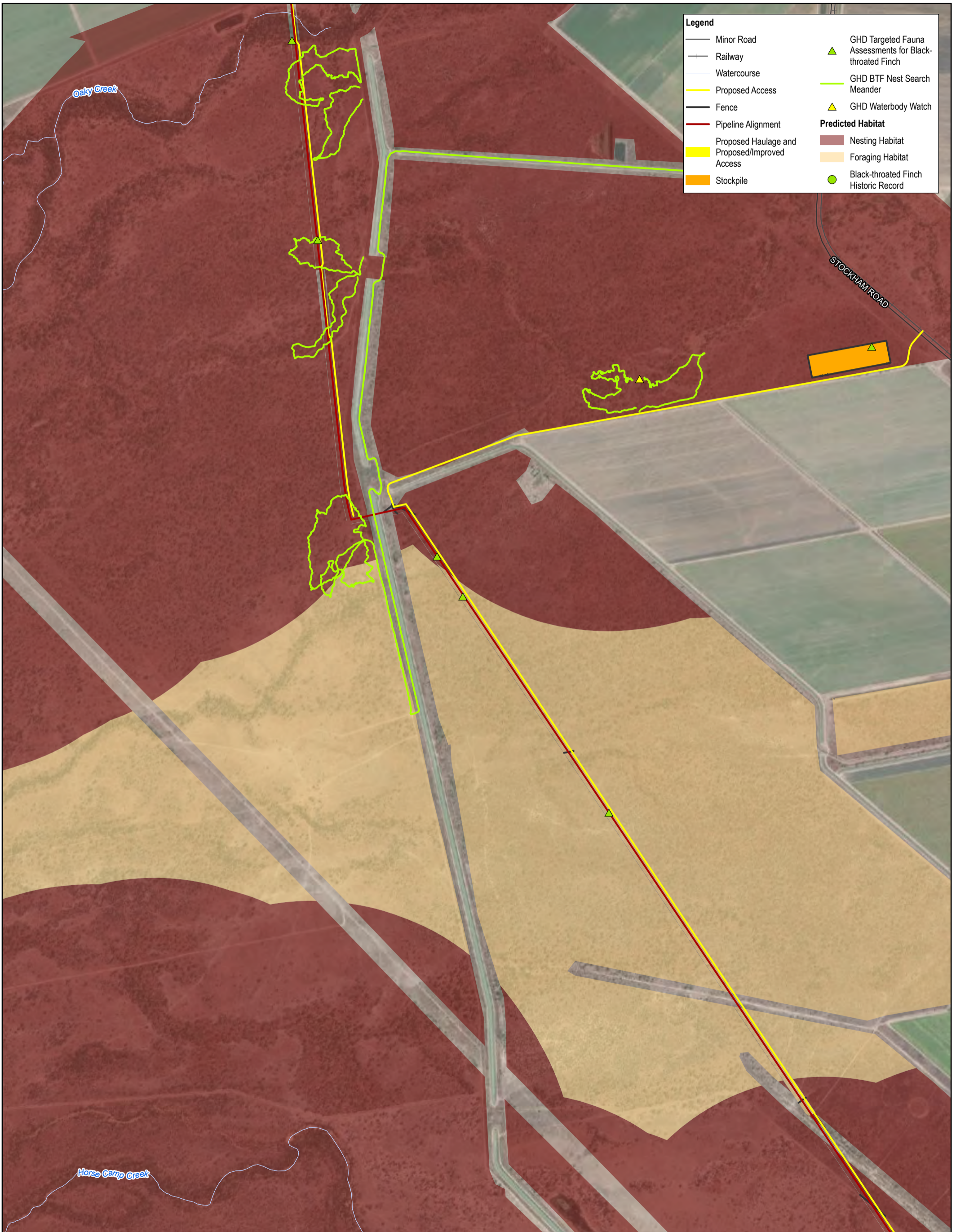
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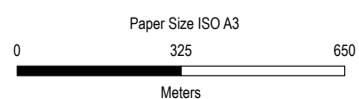
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Distribution of potential black-throated finch (southern) habitat within and surrounding the Project area

Project No. 12537606
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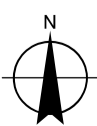
FIGURE 6-3



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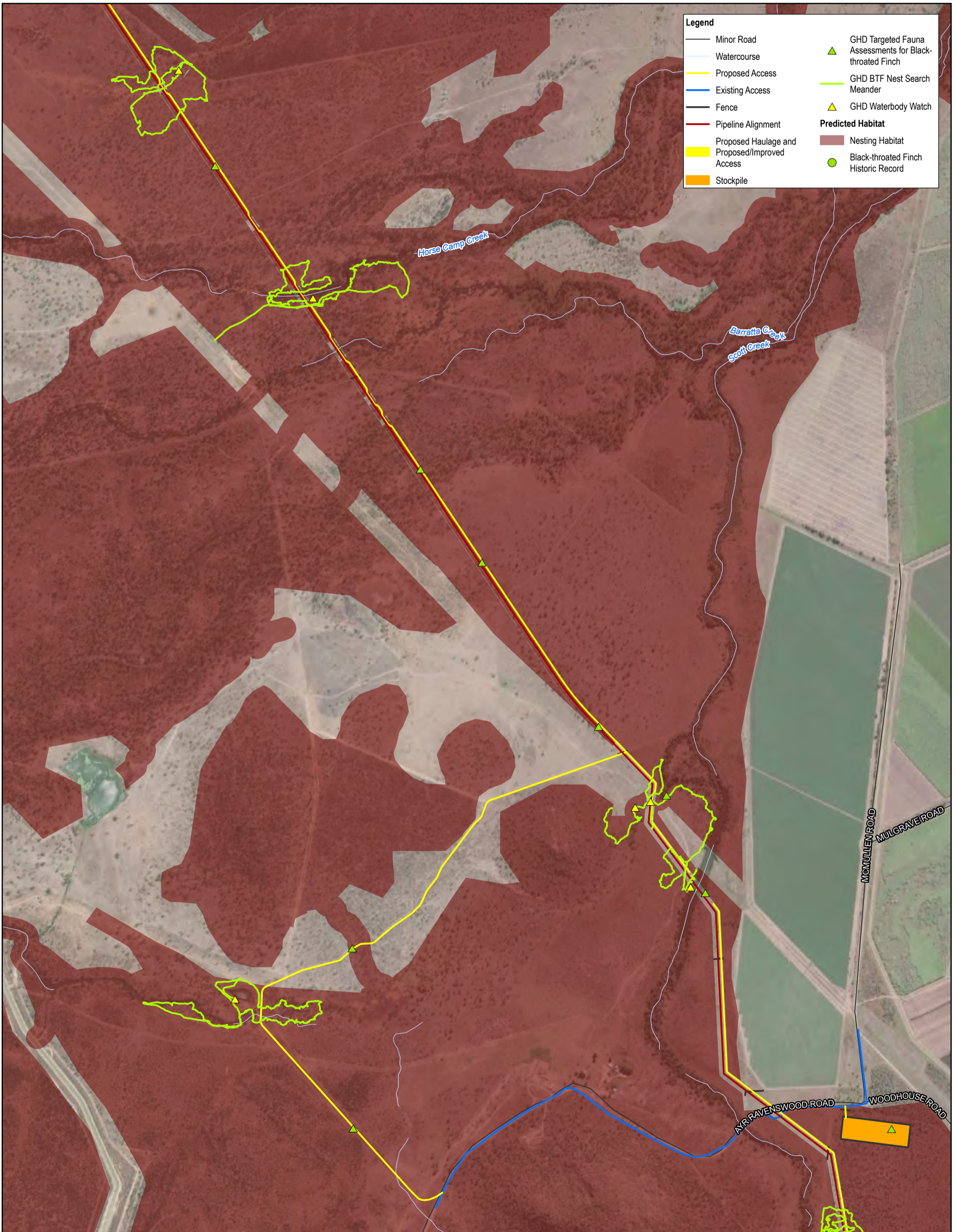
Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55



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Haughton Pipeline Stage 2 - MNES Assessment
Distribution of potential black-throated finch (southern) habitat within and surrounding the Project area

Project No. 12537606
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FIGURE 6-3



Legend

— Minor Road	▲ GHD Targeted Fauna Assessments for Black-throated Finch
— Watercourse	— GHD BTF Nest Search Meander
— Proposed Access	▲ GHD Waterbody Watch
— Existing Access	Predicted Habitat
— Fence	■ Nesting Habitat
— Pipeline Alignment	● Black-throated Finch Historic Record
■ Proposed Haulage and Proposed/Improved Access	
■ Stockpile	

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Paper Size ISO A3

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Horizontal Datum: GDA 1994
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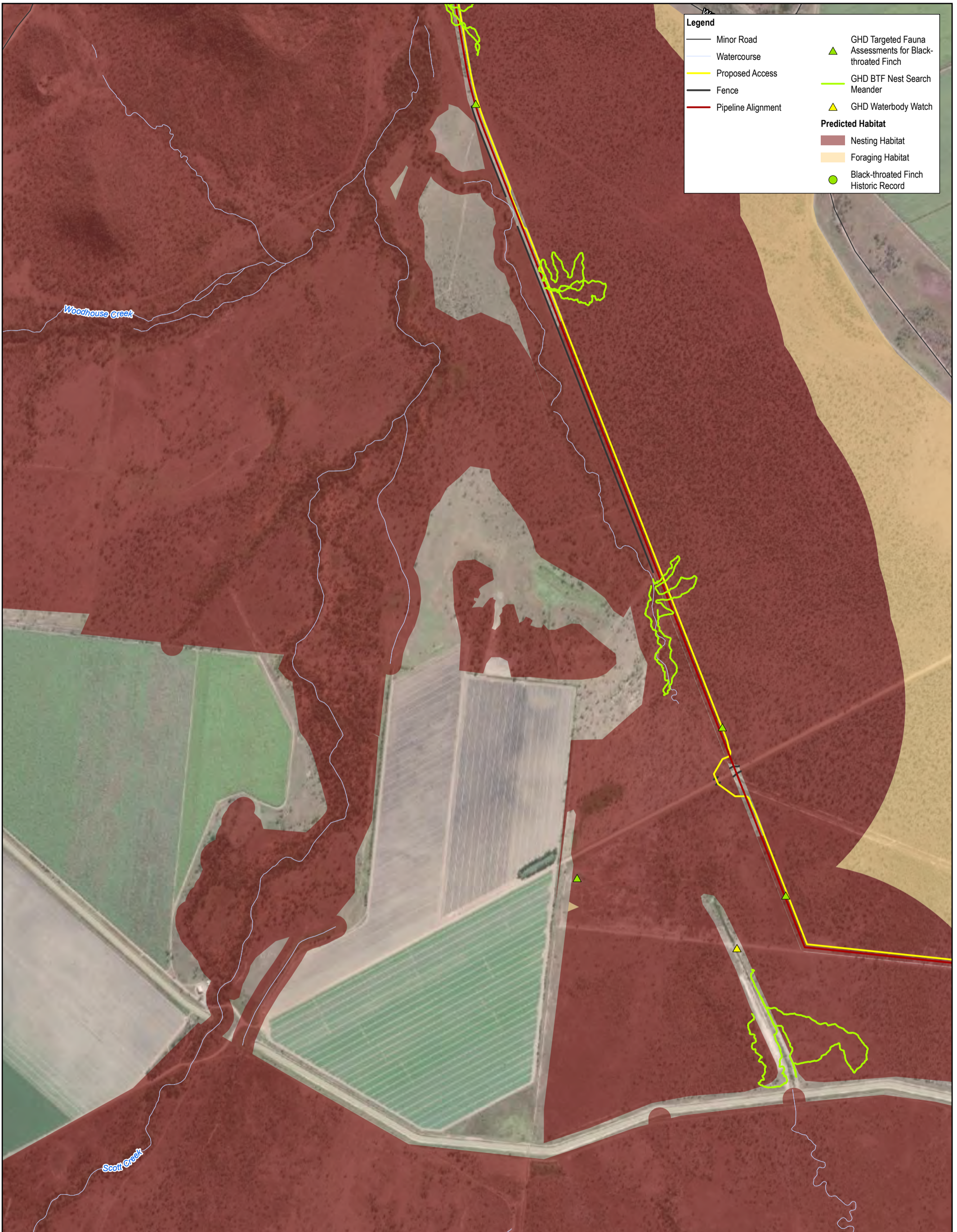


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Distribution of potential black-throated finch (southern) habitat within and surrounding the Project area

Project No. 12537606
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FIGURE 6-3



Legend

- Minor Road
- Watercourse
- Proposed Access
- Fence
- Pipeline Alignment
- GHD Targeted Fauna Assessments for Black-throated Finch
- GHD BTF Nest Search Meander
- GHD Waterbody Watch

Predicted Habitat

- Nesting Habitat
- Foraging Habitat
- Black-throated Finch Historic Record

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
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Distribution of potential black-throated finch (southern) habitat within and surrounding the Project area

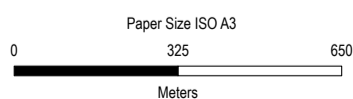
Project No. 12537606
Revision No. 3
Date 9/25/2022

FIGURE 6-3

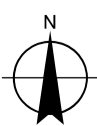


- Legend**
- Minor Road
 - Railway
 - Watercourse
 - Proposed Access
 - Fence
 - Pipeline Alignment
 - Proposed Haulage and Proposed/Improved Access
 - Stockpile
 - ▲ GHD Targeted Fauna Assessments for Black-throated Finch
 - GHD BTF Nest Search Meander
 - ▲ GHD Waterbody Watch
 - Predicted Habitat**
 - Nesting Habitat
 - Foraging Habitat
 - Black-throated Finch Historic Record

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Horizontal Datum: GDA 1994
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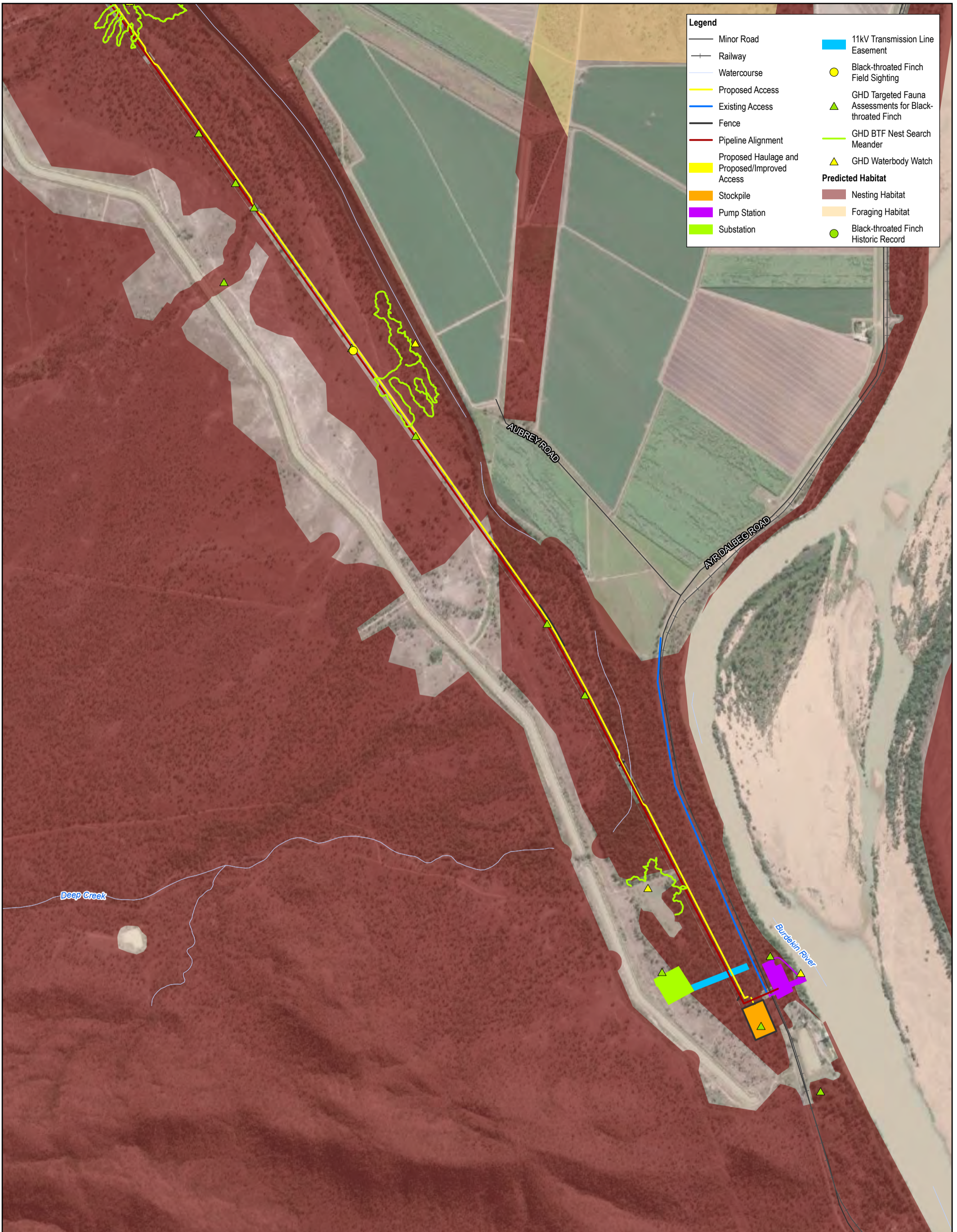


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Distribution of potential black-throated finch (southern) habitat within and surrounding the Project area

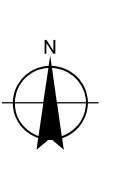
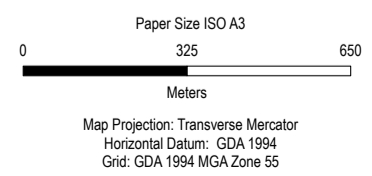
Project No. 12537606
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Date 9/25/2022

FIGURE 6-3



Legend	
— Minor Road	11kV Transmission Line Easement
— Railway	Black-throated Finch Field Sighting
— Watercourse	GHD Targeted Fauna Assessments for Black-throated Finch
— Proposed Access	GHD BTF Nest Search Meander
— Existing Access	GHD Waterbody Watch
— Fence	Predicted Habitat
— Pipeline Alignment	Nesting Habitat
Proposed Haulage and Proposed/Improved Access	Foraging Habitat
Stockpile	Black-throated Finch Historic Record
Pump Station	
Substation	

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Distribution of potential black-throated finch (southern) habitat within and surrounding the Project area

Project No. 12537606
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Date 9/25/2022

FIGURE 6-3



Legend

— Minor Road	— Proposed Access
— Railway	— Existing Access
— Watercourse	— Fence
Potential Habitat	— Pipeline Alignment
■ Breeding Habitat	— Existing HDPD Pipeline Alignment
■ Foraging Habitat	— Proposed Haulage and Proposed/Improved Access
	■ Stockpile
	● Point_edit_layer

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Paper Size ISO A3

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Meters

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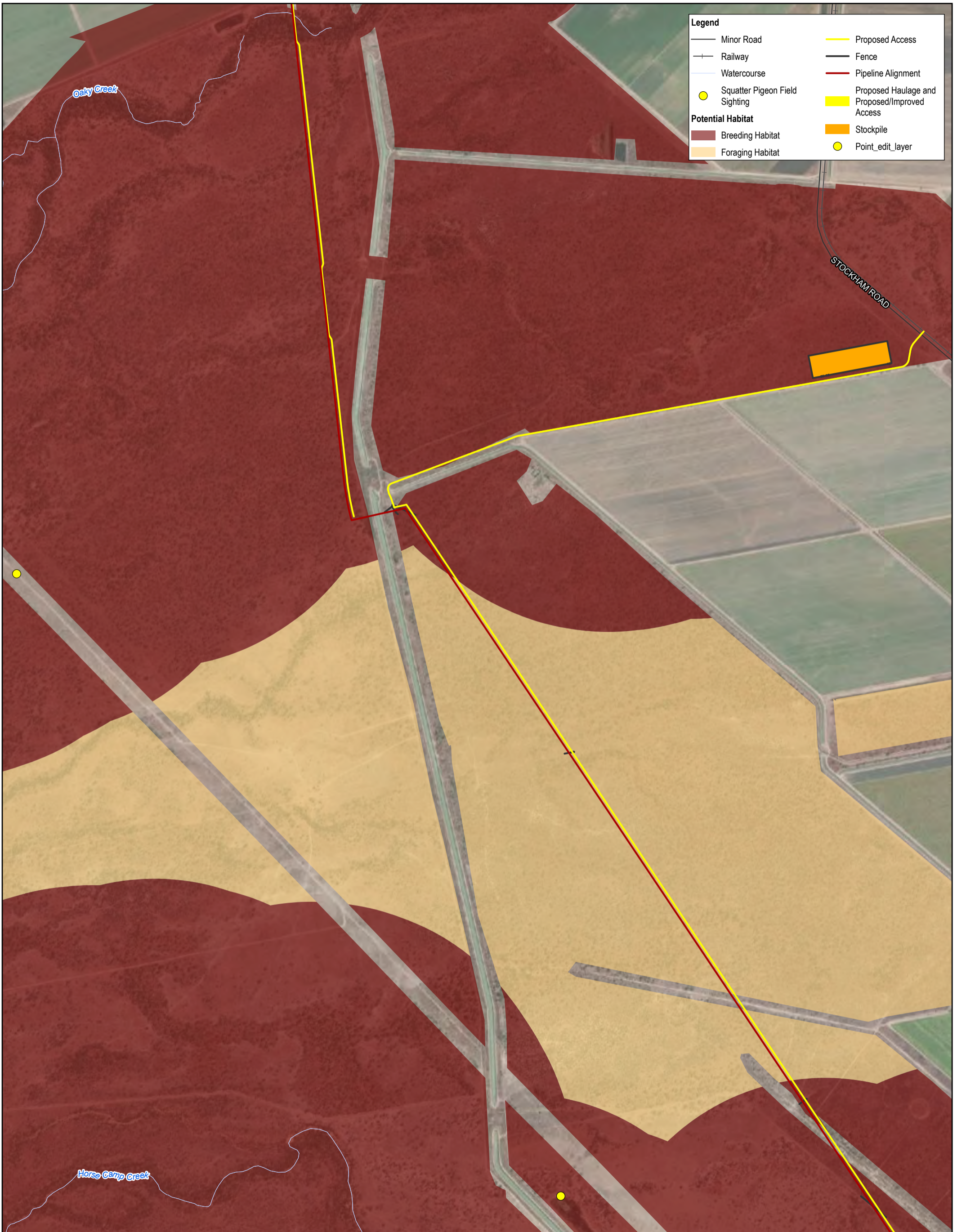


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Distribution of potential habitat for squatter pigeon (southern) habitat within and surrounding the Project area

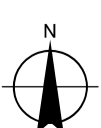
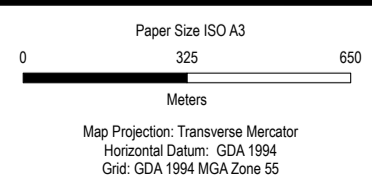
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Revision No. 4
Date 9/25/2022

FIGURE 6-4



Legend	
— Minor Road	— Proposed Access
—+— Railway	— Fence
— Watercourse	— Pipeline Alignment
● Squatter Pigeon Field Sighting	— Proposed Haulage and Proposed/Improved Access
Potential Habitat	
■ Breeding Habitat	■ Stockpile
■ Foraging Habitat	● Point_edit_layer

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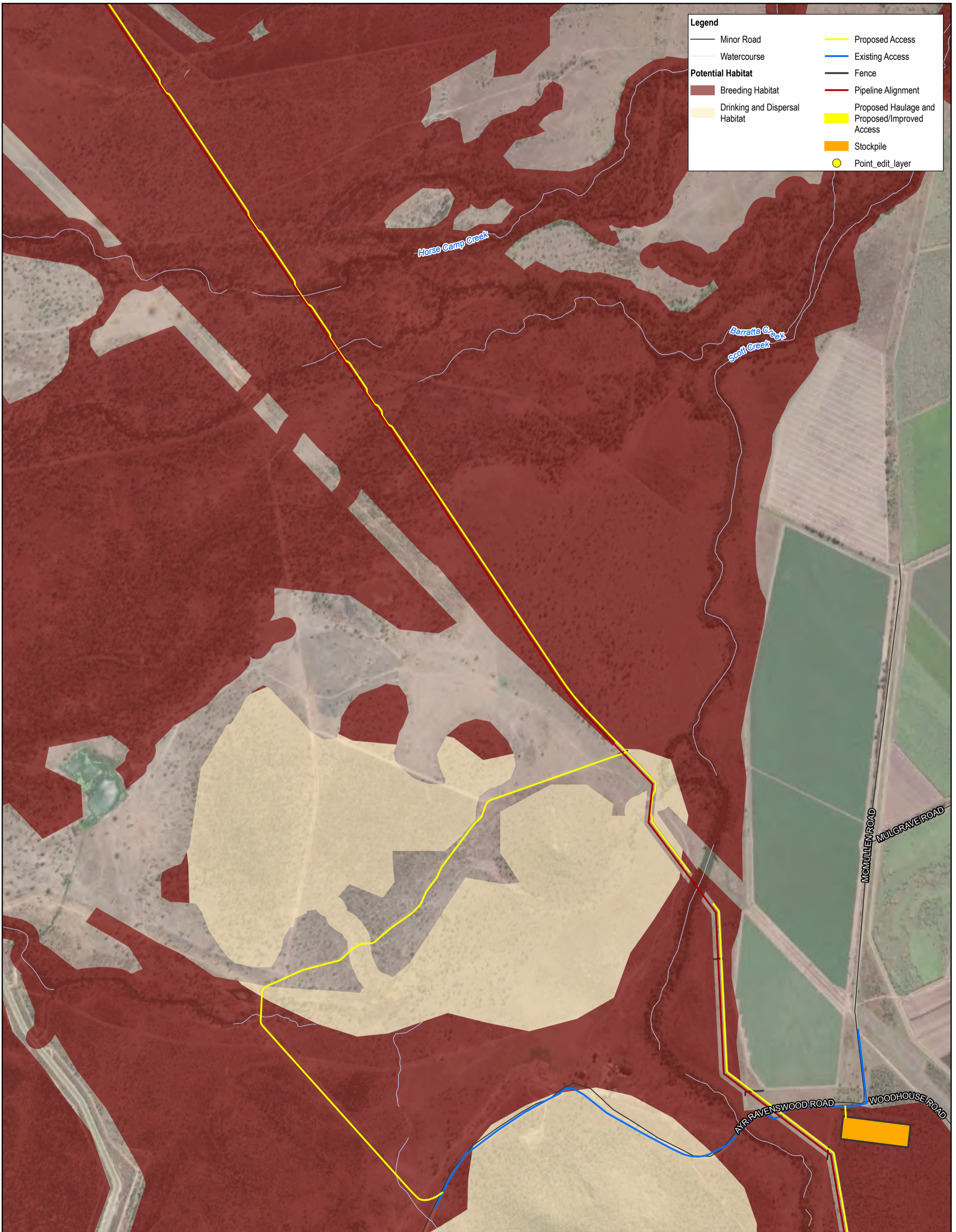


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Distribution of potential habitat for squatter pigeon (southern) habitat within and surrounding the Project area

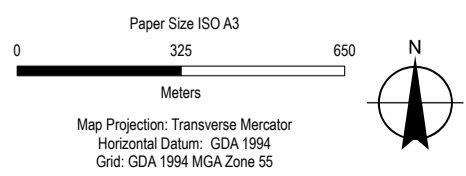
Project No. 12537606
Revision No. 4
Date 9/25/2022

FIGURE 6-4



Legend	
— Minor Road	— Proposed Access
— Watercourse	— Existing Access
Potential Habitat	
■ Breeding Habitat	— Fence
■ Drinking and Dispersal Habitat	— Pipeline Alignment
	■ Proposed Haulage and Proposed/Improved Access
	■ Stockpile
	● Point_edit_layer

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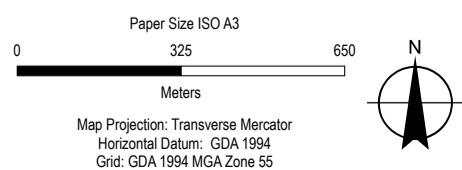
Distribution of potential habitat for squatter pigeon (southern) habitat within and surrounding the Project area

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Date 9/25/2022

FIGURE 6-4



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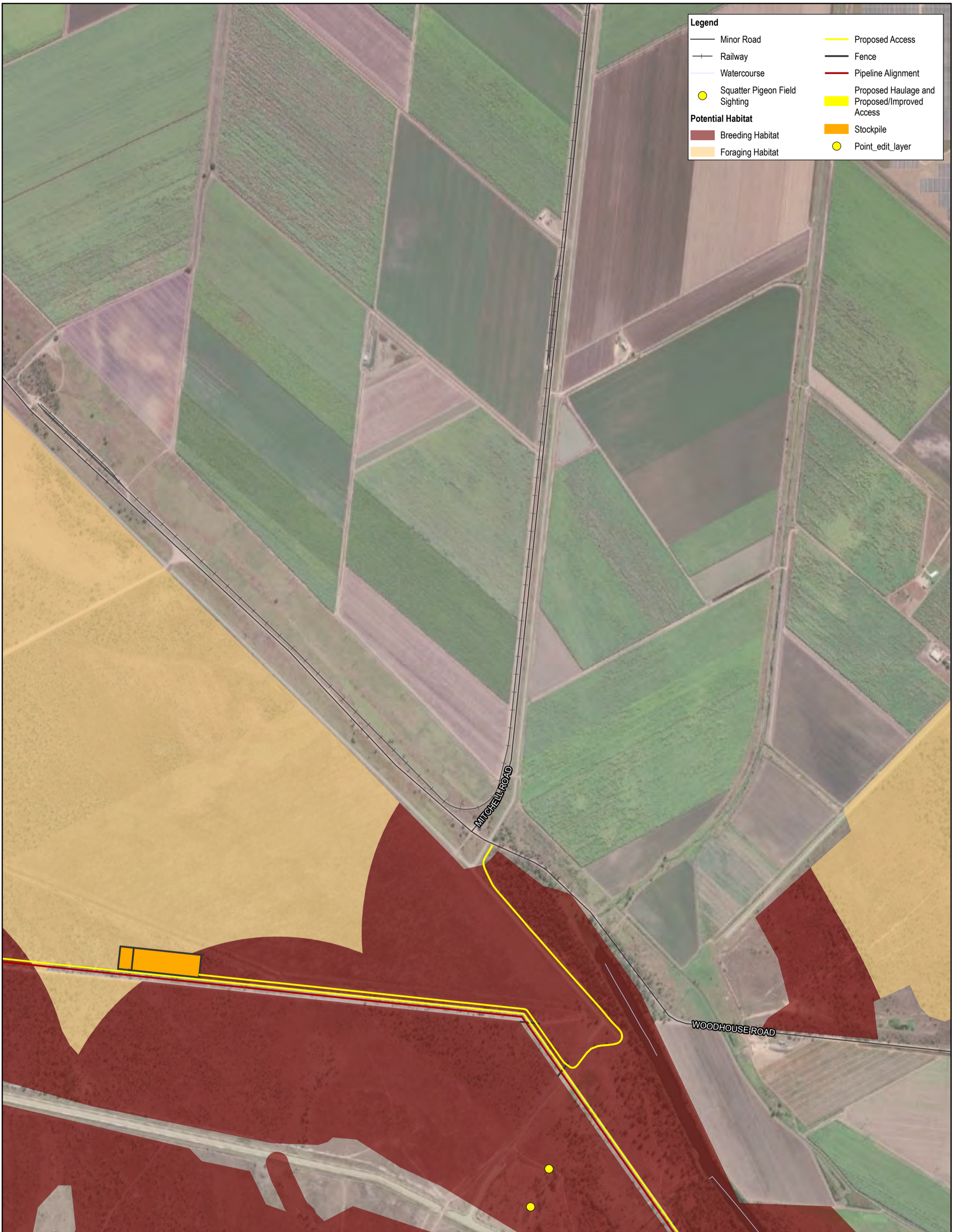


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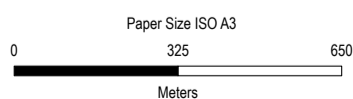
**Distribution of potential habitat for
squatter pigeon (southern) habitat within
and surrounding the Project area**

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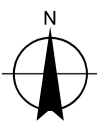
FIGURE 6-4



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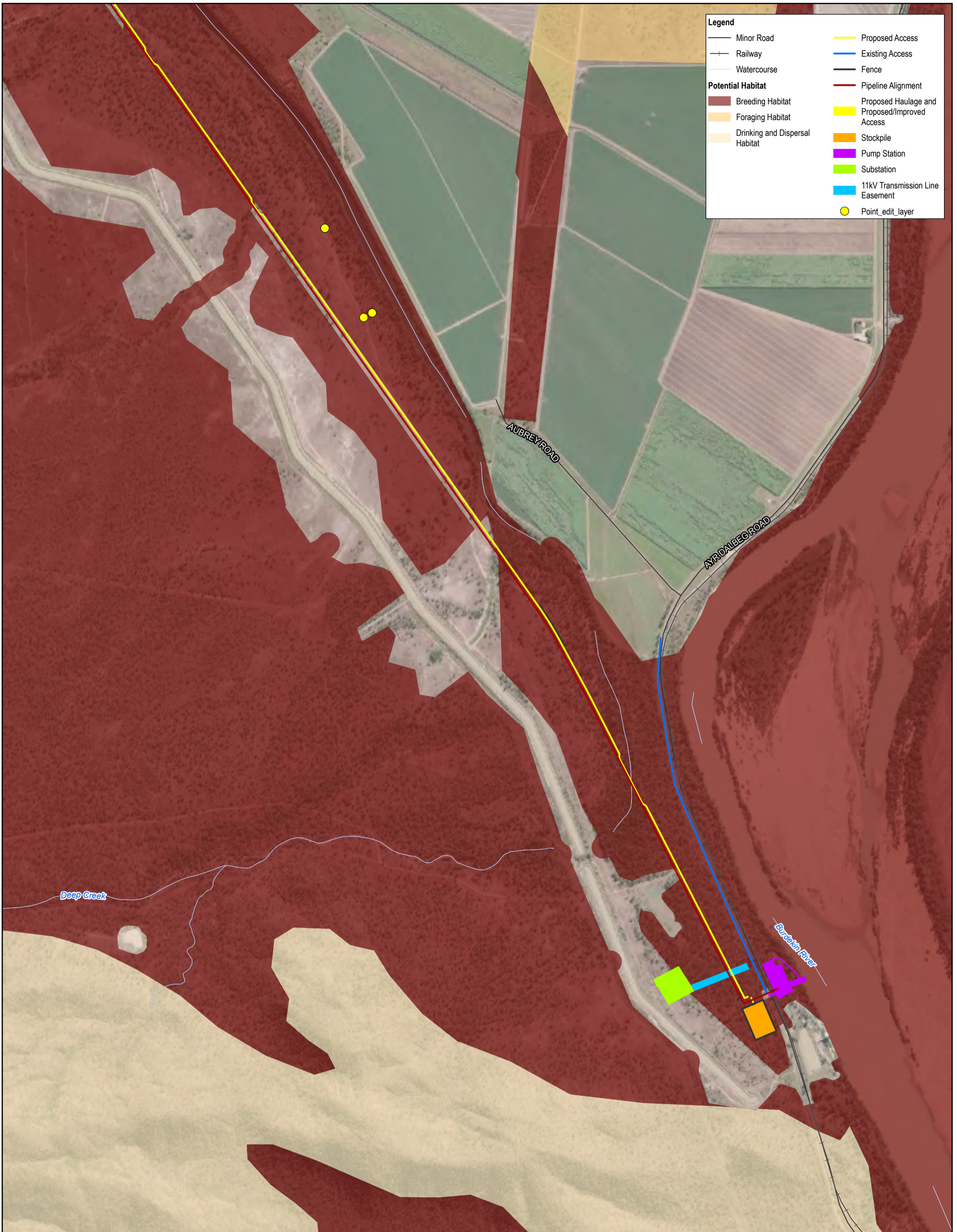


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Haughton Pipeline Stage 2 - MNES Assessment

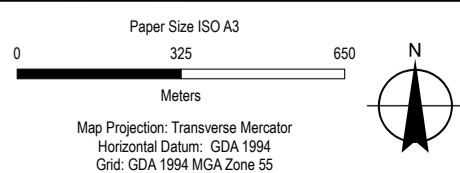
Distribution of potential habitat for
squatter pigeon (southern) habitat within
and surrounding the Project area

Project No. 12537606
Revision No. 4
Date 9/25/2022

FIGURE 6-4



Based on or contains data provided by the State of QLD 2021. In consideration of the State permitting use of this data you acknowledge and agree that the State gives no warranty in relation to the data (including accuracy, reliability, completeness, currency or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data. Data must not be used for marketing or be used in breach of the privacy laws.



Townsville City Council
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