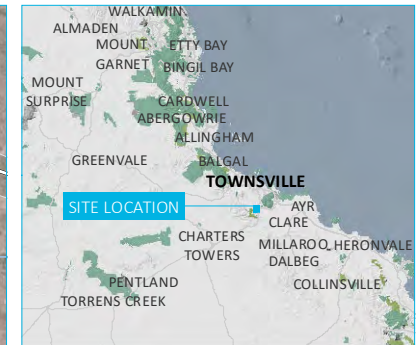
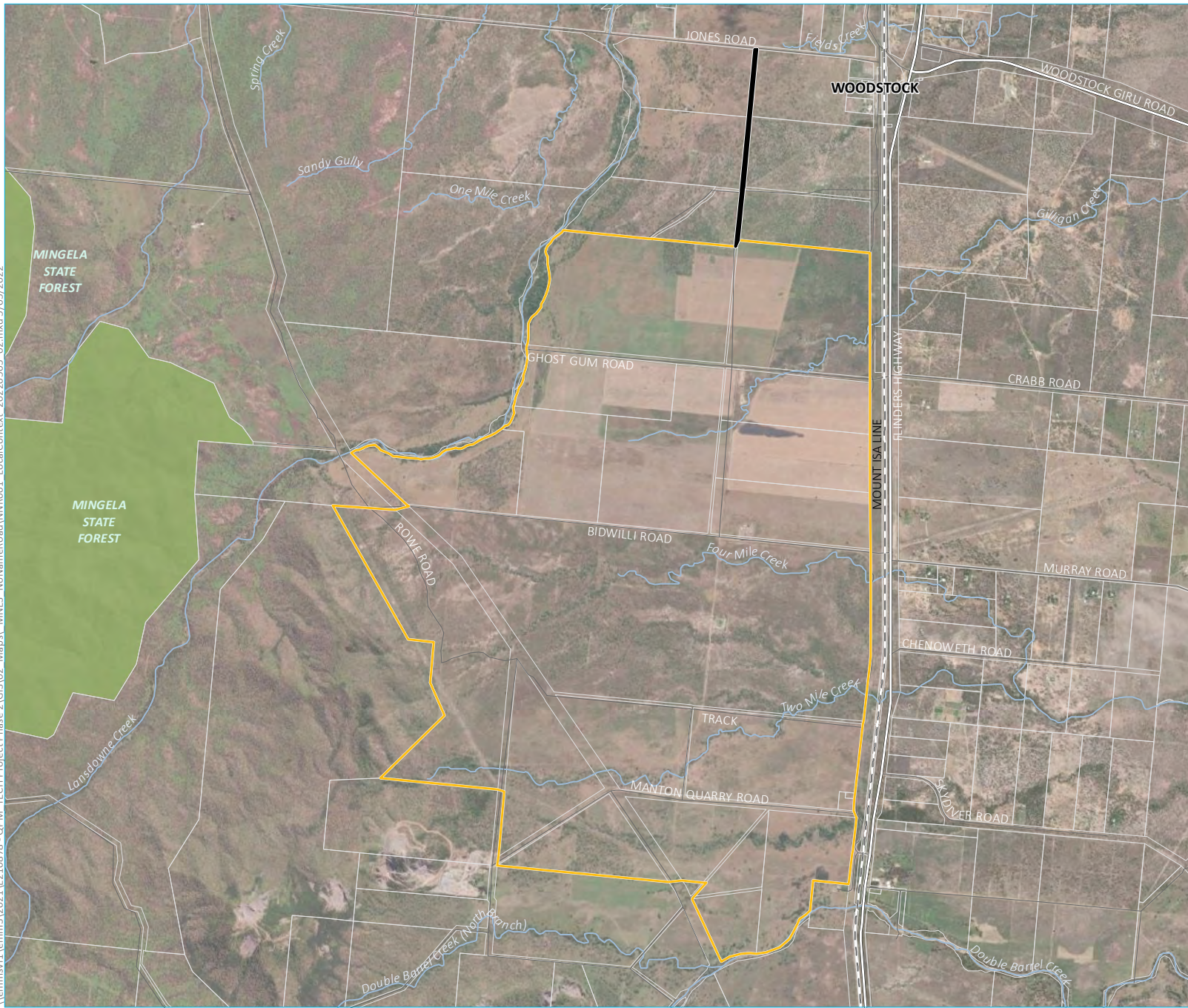


## **Appendix H Survey Effort Locations**

# EMM Ecology Survey: No Name Road (north)



- KEY**
- Survey area
  - Lansdown Eco Precinct
  - Rail line
  - Major road
  - Minor road
  - Named watercourse
  - Cadastral boundary
  - State forest
- INSET KEY**
- Main road
  - National park
  - State forest

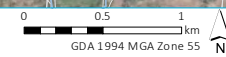
Local context

Lansdown Industrial Precinct  
 Northern access road  
 MNES report - No named road  
 Figure 1.1



\\lemmsvr1\emms3\2021\EZ10878-QPM TECH Project Phase 2\GIS\02\_Maps\ MNES - NoNameRoad\NNR001\_LocalContext\_20220505\_02.mxd 5/05/2022

Source: EMM (2022); DNRME (2021); DES (2019); GA (2011); ASGC (2006)





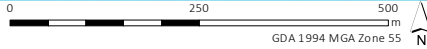
# EMM Ecology Survey: No Name Road (north)



- KEY**
- Survey area
  - Minor road
  - Named watercourse
  - Cadastral boundary
- Survey sites**
- Quaternary site assessment
  - Habitat assessment
  - Anabat location
  - ▲ Dam bird survey

\\emmsvr1\emms3\2021\EZ10878 - QPM TECH Project Phase 2\GIS\02\_Maps\ MNES - NoNameRoad\NNR003 - Survey\Sites - 20220505 - 02.mxd 5/05/2022

Source: EMM (2022); DNRME (2021)



Survey sites

Lansdown Industrial Precinct  
Northern access road  
MNES report - No named road  
Figure 4.1

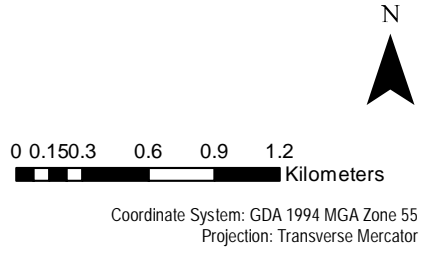




# First Ecology Survey: Field Survey Effort (Vegetation)



- Legend
- Water pipeline alignment and dam
  - Road
  - GPS Tracklog
  - Transects
  - Quaternary points



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



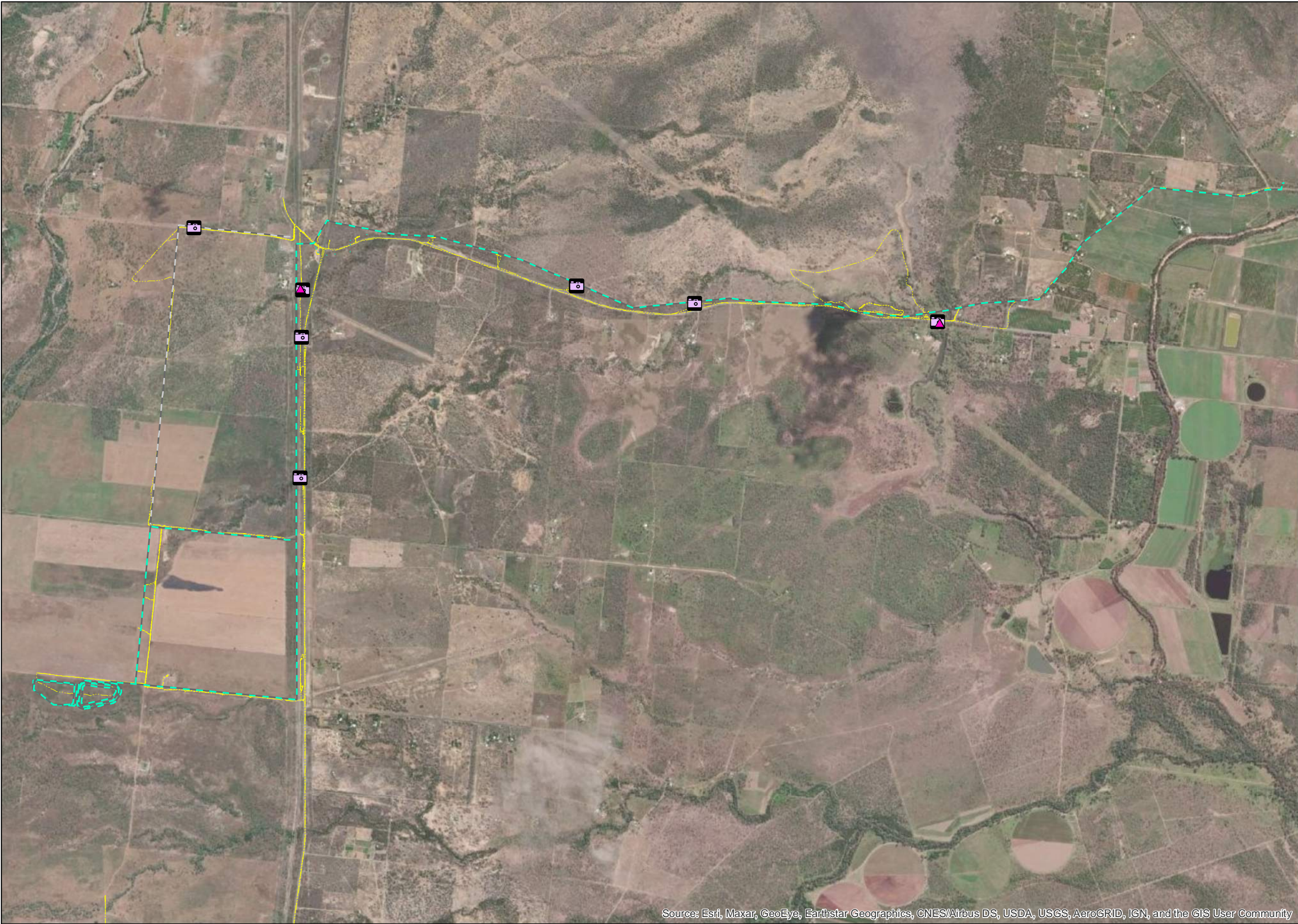
Issue	Date	Description	Drawn	Checked
A	14/04/2022	Preliminary	AL	AH

## Lansdown Eco-Industrial Precinct

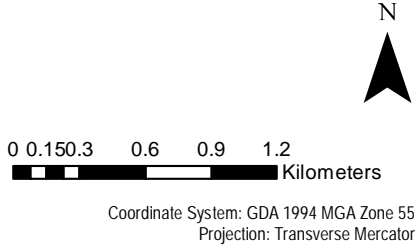
Date: 14/04/2022  
Plan 1 Field Survey Effort Lansdown A



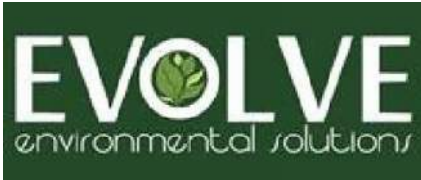
# First Ecology Survey: Field Survey Effort (Fauna)



- Legend**
- Water pipeline alignment and dam
  - Road Alignment
  - ▲ Audiomoth
  - 📷 Motion Sensor Camera
  - GPS Tracklog



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



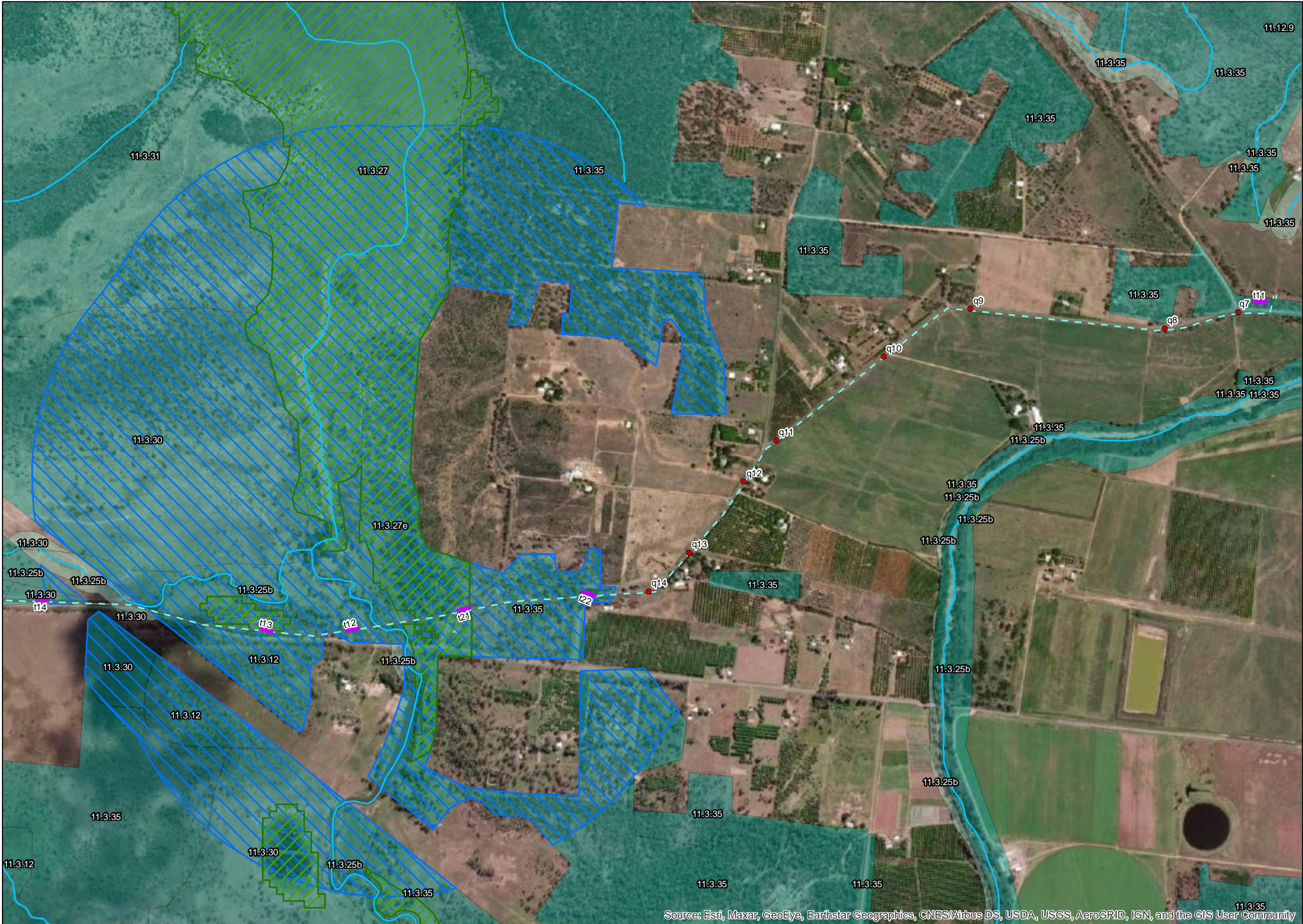
Issue	Date	Description	Drawn	Checked
A	13/04/2022	Preliminary	AL	AH

## Lansdown Eco-Industrial Precinct

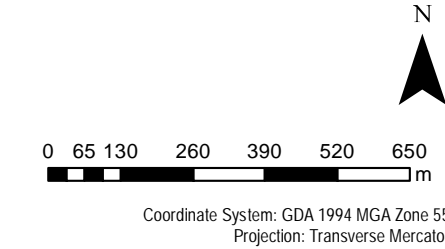
Date: 13/04/2022  
Plan 2 Field Survey Effort Fauna Lansdown A



# First Ecology Survey: Regional Ecosystems



- Legend**
- Water pipeline alignment and dam
  - Road Alignment
  - Quaternary points
  - Transects
  - VM Watercourses
  - VM Wetlands
  - VM Essential Habitat
- Regional Ecosystems v12**
- VMA STATUS**
- hvr\_end
  - hvr\_leastc
  - hvr\_oc
  - rem\_end
  - rem\_leastc
  - rem\_oc



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



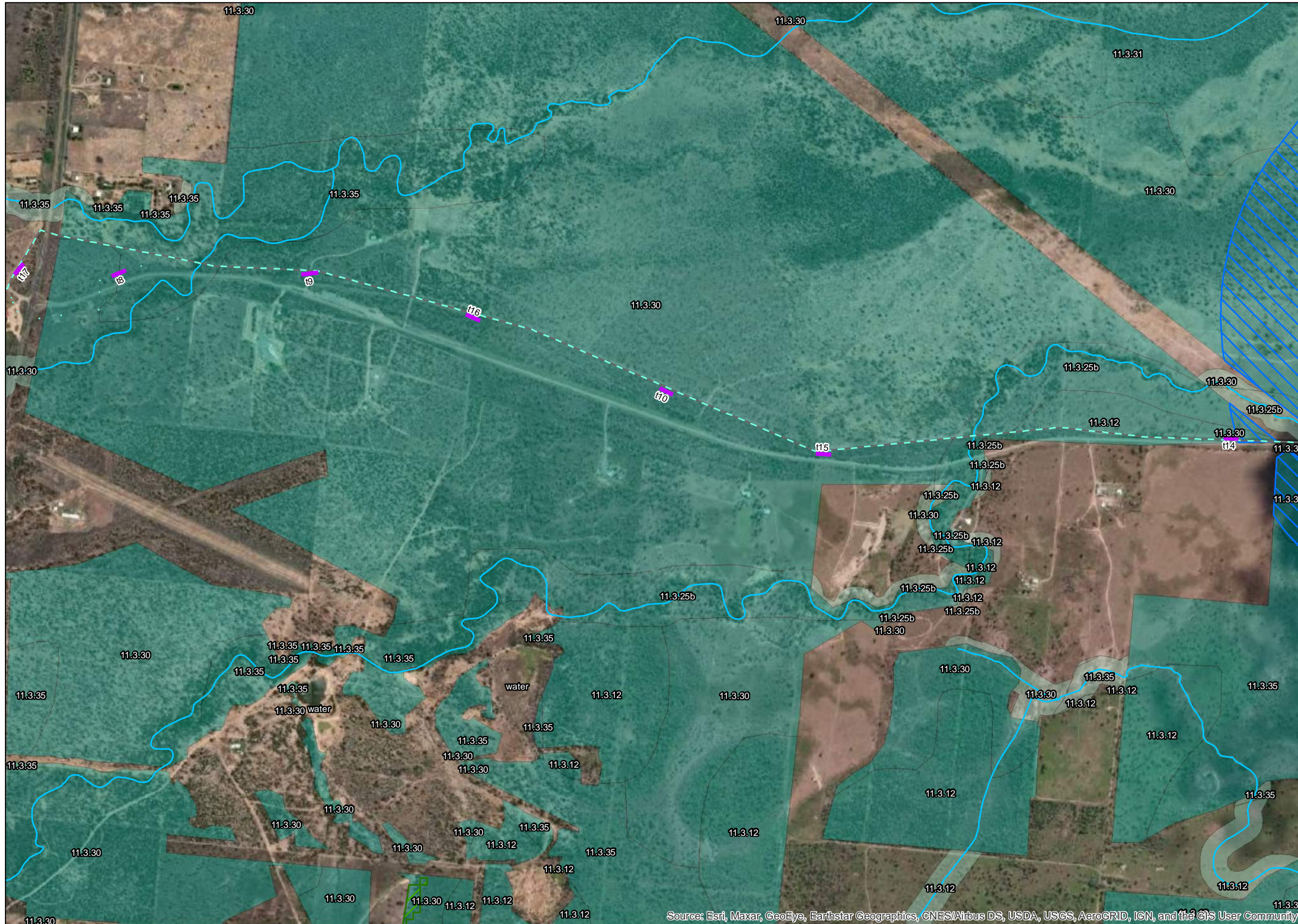
Issue	Date	Description	Drawn	Checked
A	13/04/2022	Preliminary	AL	AH

## Lansdown Eco-Industrial Precinct

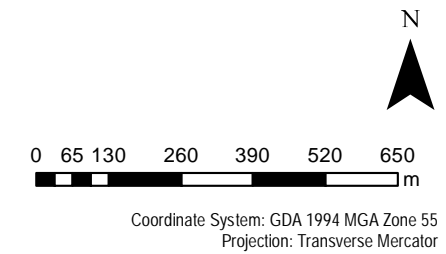
Date: 13/04/2022  
Plan 3A RE's Lansdown A



# First Ecology Survey: Regional Ecosystems



- Legend**
- Water pipeline alignment and dam
  - Road Alignment
  - Quaternary points
  - Transects
  - VM Watercourses
  - VM Wetlands
  - VM Essential Habitat
- Regional Ecosystems v12**
- VMA STATUS**
- hvr\_end
  - hvr\_leastc
  - hvr\_oc
  - rem\_end
  - rem\_leastc
  - rem\_oc



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Issue	Date	Description	Drawn	Checked
A	13/04/2022	Preliminary	AL	AH

Lansdown Eco-Industrial Precinct

Date: 13/04/2022  
Plan 3B RE's Lansdown A



# First Ecology Survey: Regional Ecosystems



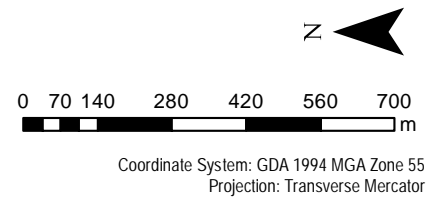
**Legend**

- Water pipeline alignment and dam
- Road Alignment
- Quaternary points
- Transects
- VM Watercourses
- VM Wetlands
- VM Essential Habitat

**Regional Ecosystems v12**

**VMA STATUS**

- hvr\_end
- hvr\_leastc
- hvr\_oc
- rem\_end
- rem\_leastc
- rem\_oc



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGR



Issue	Date	Description	Drawn	Checked
A	14/04/2022	Preliminary	AL	AH






Lansdown Eco-Industrial Precinct

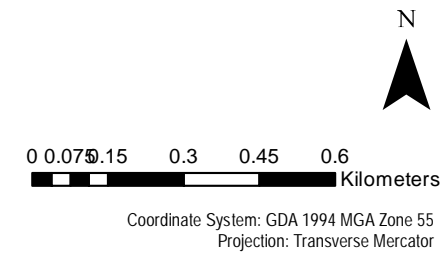
Date: 14/04/2022  
Plan 3C RE's Lansdown A



# First Ecology Survey: Wetland Assessment



- Legend**
-  Water pipeline alignment and dam
  -  Road Alignment
  -  t21s: Wetland observation points; wetland; wetland adjacent to pipeline
  -  Ground-truthed wetland area
  -  Wetlands of High Ecological Significance



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



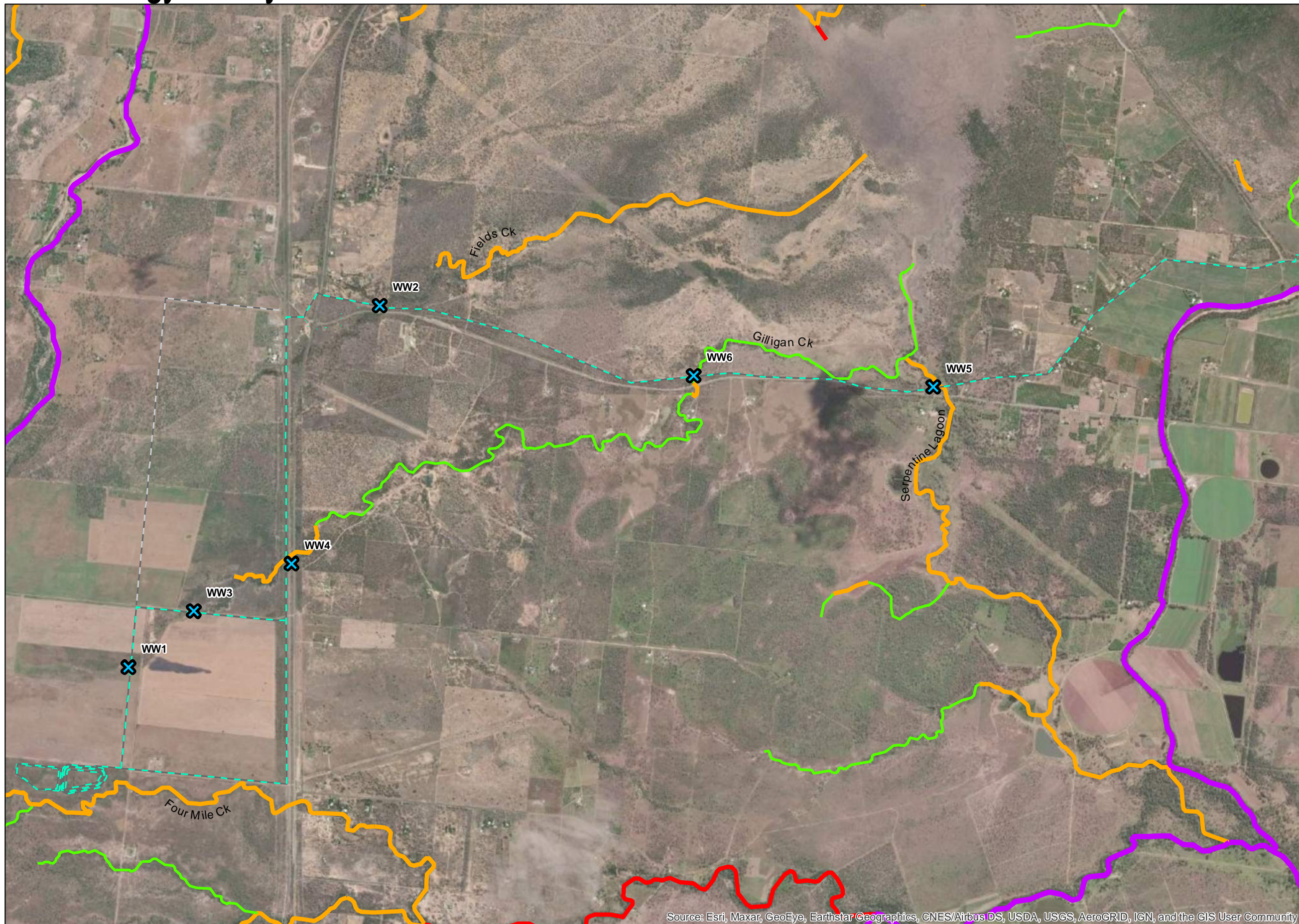
Issue	Date	Description	Drawn	Checked
A	13/04/2022	Preliminary	AL	AH

## Lansdown Eco-Industrial Precinct

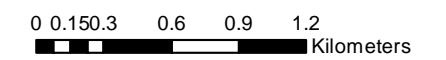
Date: 13/04/2022  
Plan 4 Wetland Lansdown A



# First Ecology Survey: Fisheries Assessment



- Legend**
- Water pipeline alignment and dam
  - Road Alignment
  - Waterway observation points
- Old Waterways for WWBW
- Risk of Impact
- 1 - Low
  - 2 - Moderate
  - 3 - High
  - 4 - Major



Coordinate System: GDA 1994 MGA Zone 55  
Projection: Transverse Mercator

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



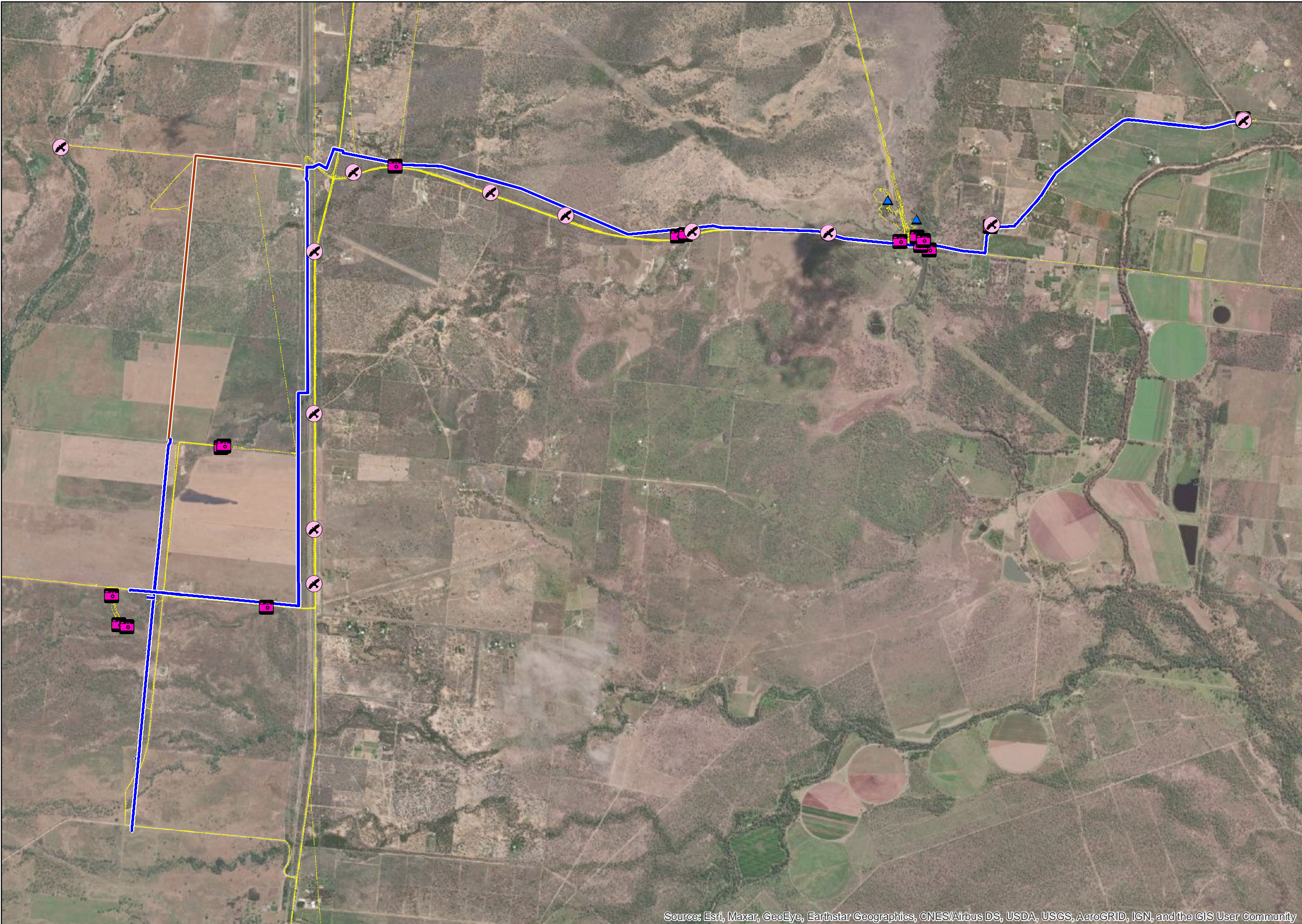
Issue	Date	Description	Drawn	Checked
A	13/04/2022	Preliminary	AL	AH

Lansdown Eco-Industrial Precinct

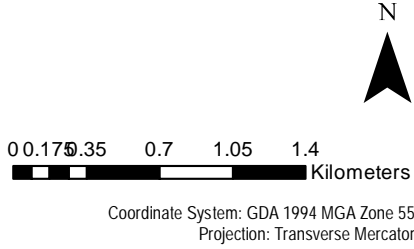
Date: 13/04/2022  
Plan 5A Fisheries Lansdown A



# Second Ecology Survey: Field Survey Effort (Fauna)



- Legend**
- Water trunk alignment
  - Road Alignment
  - GPS Tracklog (May)
  - ▲ Morning Watercourse surveys
  - X Diurnal Bird Survey Points
  - 📷 Camera Trap Locations (additional)



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



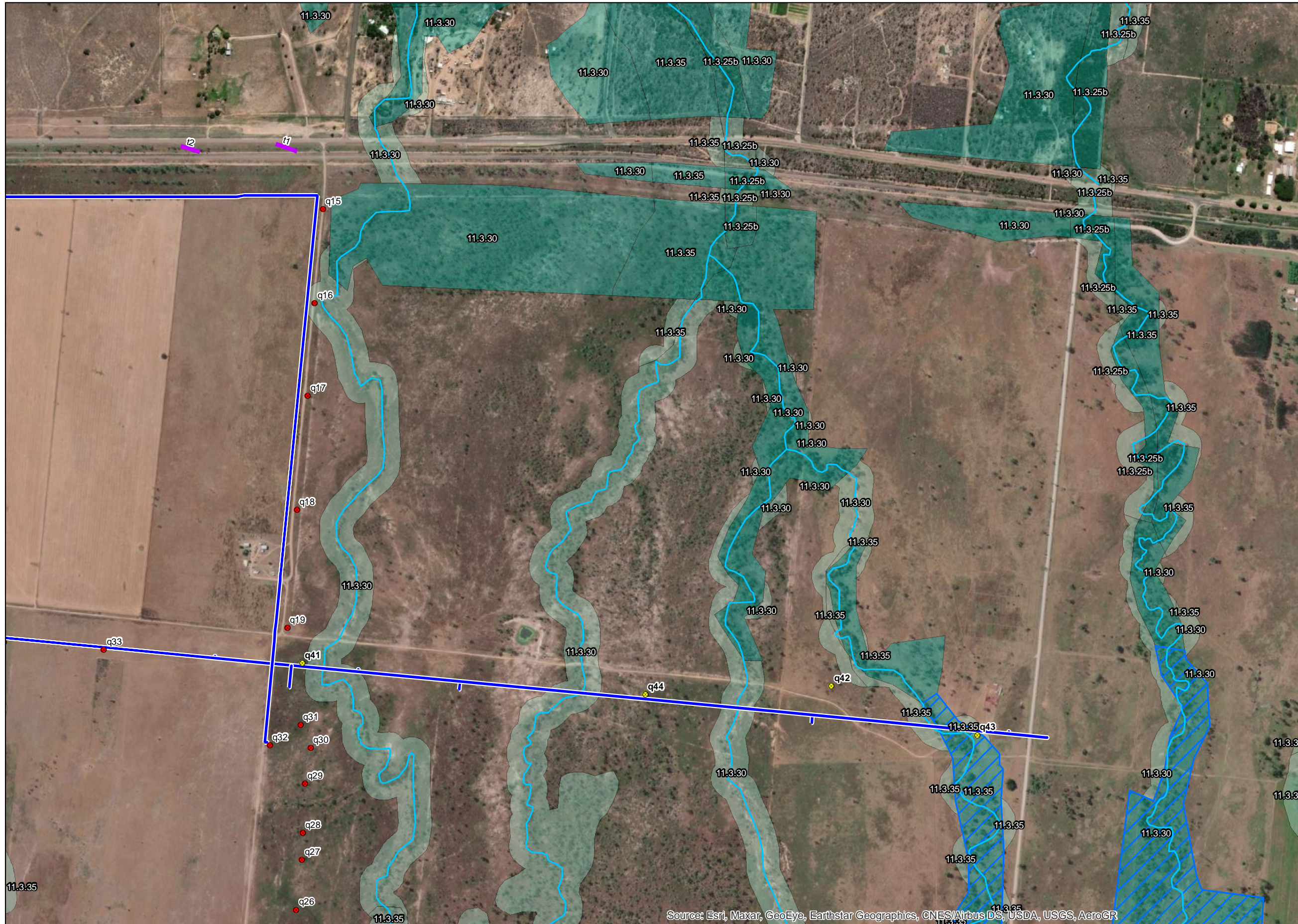
Issue	Date	Description	Drawn	Checked
A	14/06/2022	Preliminary	AL	AH

Lansdown Eco-Industrial Precinct

Date: 14/06/2022  
Plan 2 Field Survey Effort Fauna Lansdown May A



# Second Ecology Survey: Regional Ecosystems



**Legend**

- Water trunk alignment
- Quaternary points (additional)
- Quaternary points
- Transects
- VM Watercourses
- VM Wetlands
- VM Essential Habitat

**Regional Ecosystems v12**

**VMA STATUS**

- hvr\_end
- hvr\_leastc
- hvr\_oc
- rem\_end
- rem\_leastc
- rem\_oc

0 55 110 220 330 440 550 m

Coordinate System: GDA 1994 MGA Zone 55  
Projection: Transverse Mercator

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGR



Issue	Date	Description	Drawn	Checked
A	8/06/2022	Preliminary	AL	AH

## Lansdown Eco-Industrial Precinct

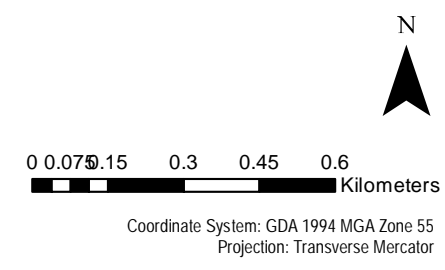
Date: 8/06/2022  
Plan 3 RE's Lansdown May A



# Second Ecology Survey: Wetland Assessment



- Legend**
- Water trunk alignment (May)
  - Wetlands of High Ecological Significance
  - ✕ Wetland Observation Point (additional)
  - ✕ Wetland Observation Points
  - Ground-truthed wetland area



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



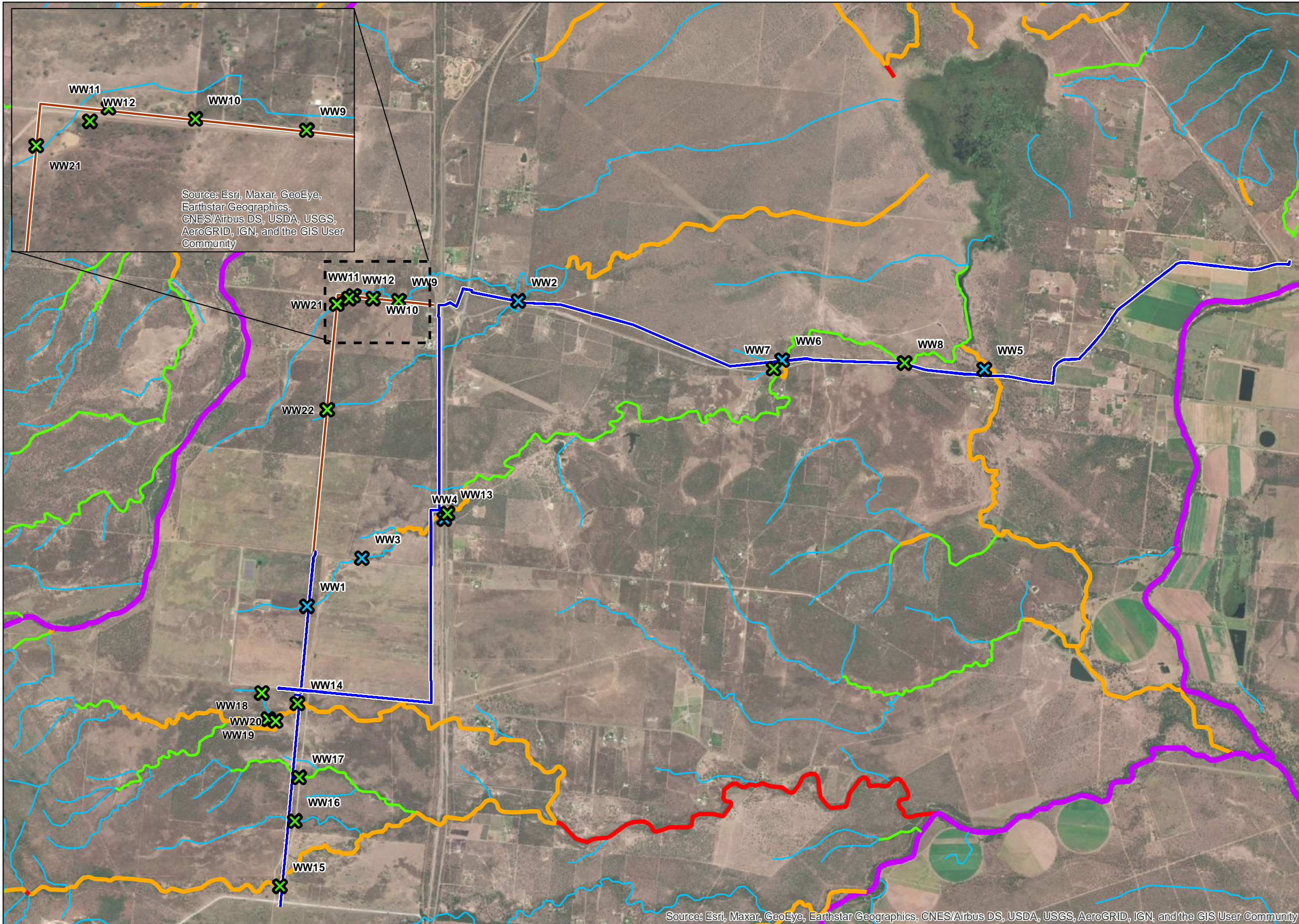
Issue	Date	Description	Drawn	Checked
A	14/06/2022	Preliminary	AL	AH

Lansdown Eco-Industrial Precinct

Date: 14/06/2022  
Plan 4 Wetland May Lansdown A



# Second Ecology Survey: Fisheries Assessment



**Legend**

- Water trunk alignment
- Road Alignment
- ✕ Waterway observation points (additional)
- ✕ Waterway observation points

Old Waterways for WWBW

Risk of Impact

- 1 - Low
- 2 - Moderate
- 3 - High
- 4 - Major
- Ordered drainage 100K

N

0 0.2 0.4 0.8 1.2 1.6 Kilometers

Coordinate System: GDA 1994 MGA Zone 55  
Projection: Transverse Mercator

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



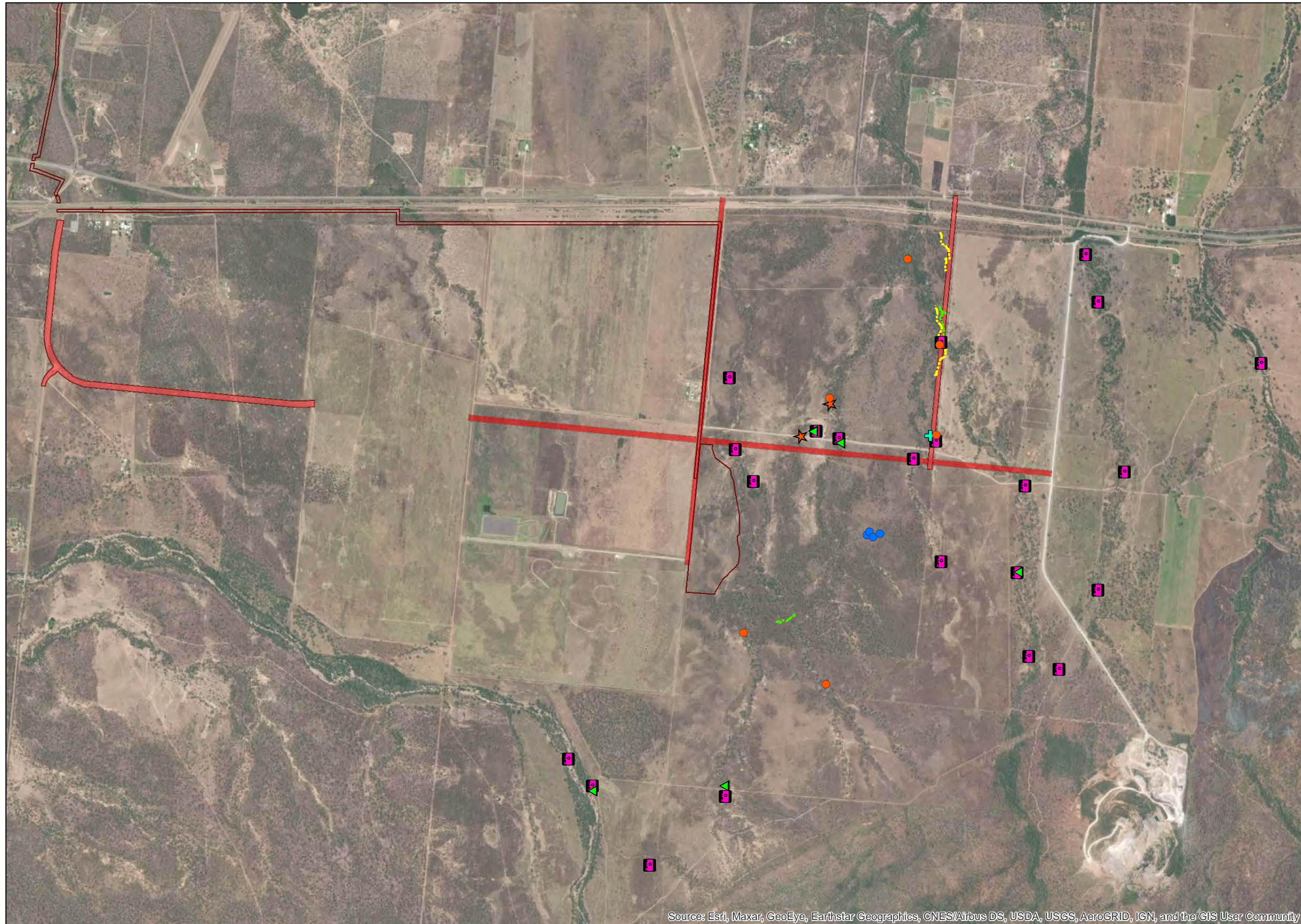
Issue	Date	Description	Drawn	Checked
A	5/10/2022	Preliminary	AL	AH

Lansdown Eco-Industrial Precinct

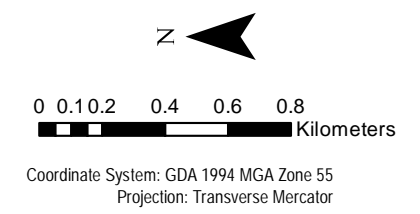
Date: 5/10/2022  
Plan 5 Fisheries Lansdown May A



# Third Ecology Survey: Fauna Assessments



- Legend
- Roads subject to survey
  - LEIP Enabling Infrastructure R4
  - Finch nests
  - Potential microbat roosting habitat
  - + Diurnal survey additional
  - ★ Squatter Pigeon sightings
  - Camera locations
  - ▲ Audiomoth locations
  - Koala scat meander
  - Spotlight track



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



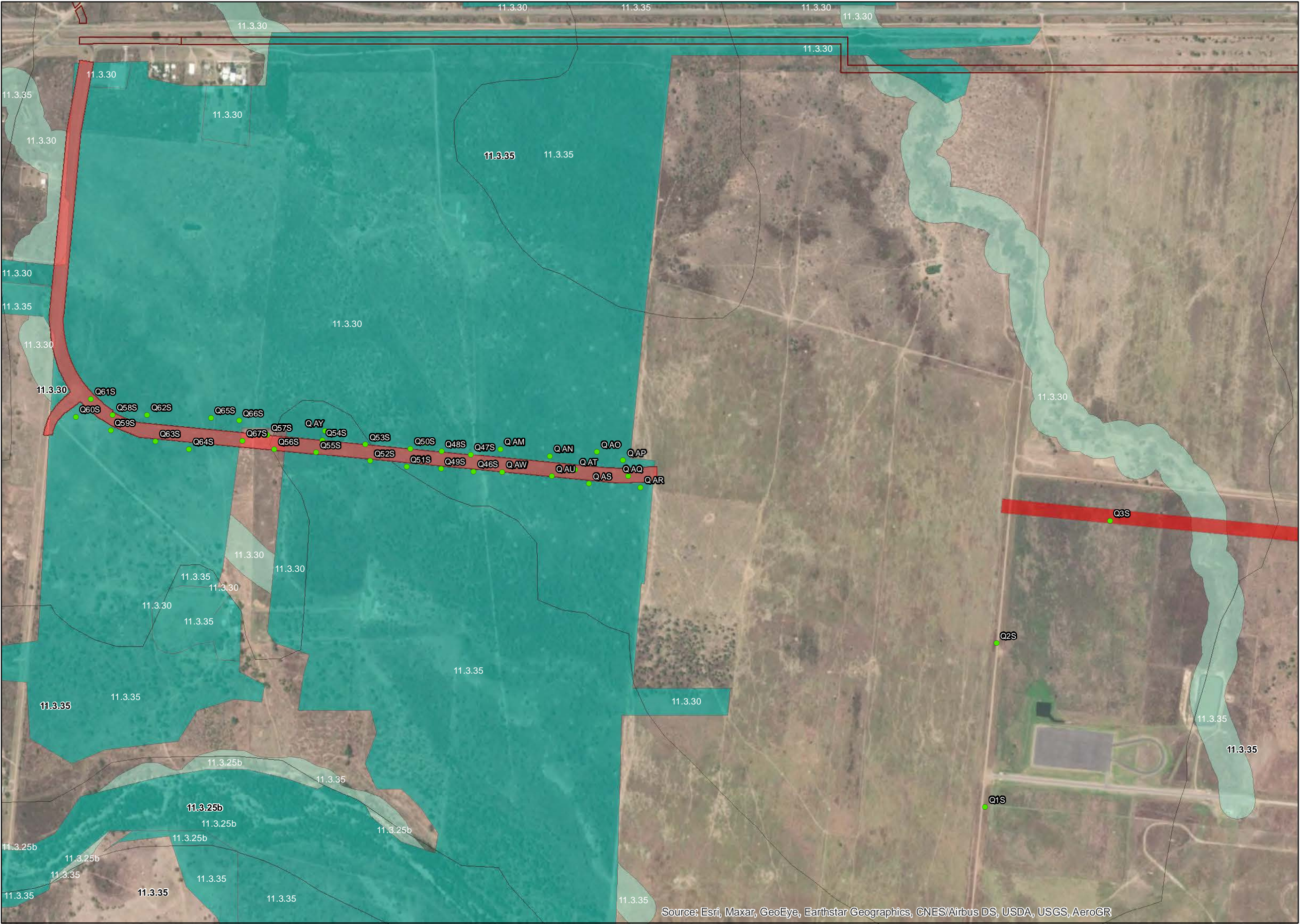
Issue	Date	Description	Drawn	Checked
A	27/10/2022	Preliminary	AL	AH

Lansdown Eco-Industrial Precinct

Date: 27/10/2022  
Plan 2 Fauna Assessments Road Lansdown A



# Third Ecology Survey: Vegetation Assessments



**Legend**

- Vegetation Assessment Points
- Roads subject to survey
- LEIP Enabling Infrastructure R4
- Pre-clear vegetation mapping

**VMA STATUS**

- hvr\_end
- hvr\_leastc
- hvr\_oc
- rem\_end
- rem\_leastc
- rem\_oc

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGR



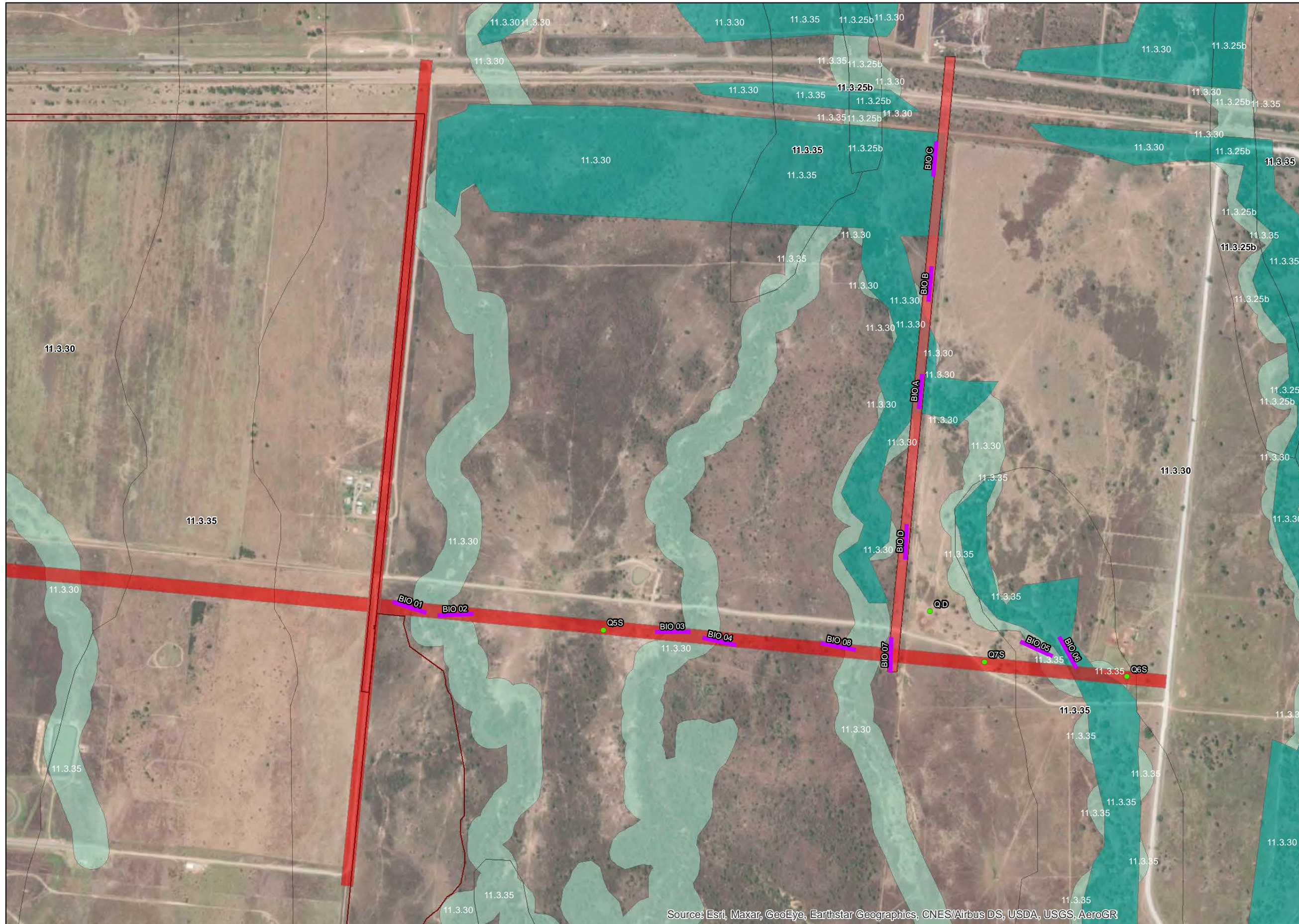
Issue	Date	Description	Drawn	Checked
A	7/11/2022	Preliminary	AL	AH

## Lansdown Eco-Industrial Precinct

Date: 7/11/2022  
Plan 1 Vegetation Assessments Road Lansdown A



# Third Ecology Survey: Vegetation Assessments



**Legend**

- Vegetation Assessment Points
- BioCondition Transects
- Roads subject to survey
- LEIP Enabling Infrastructure R4
- Pre-clear vegetation mapping

**VMA STATUS**

- hvr\_end
- hvr\_leastc
- hvr\_oc
- rem\_end
- rem\_leastc
- rem\_oc

N

0 0.05 0.1 0.2 0.3 0.4  
Kilometers

Coordinate System: GDA 1994 MGA Zone 55  
Projection: Transverse Mercator

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGR



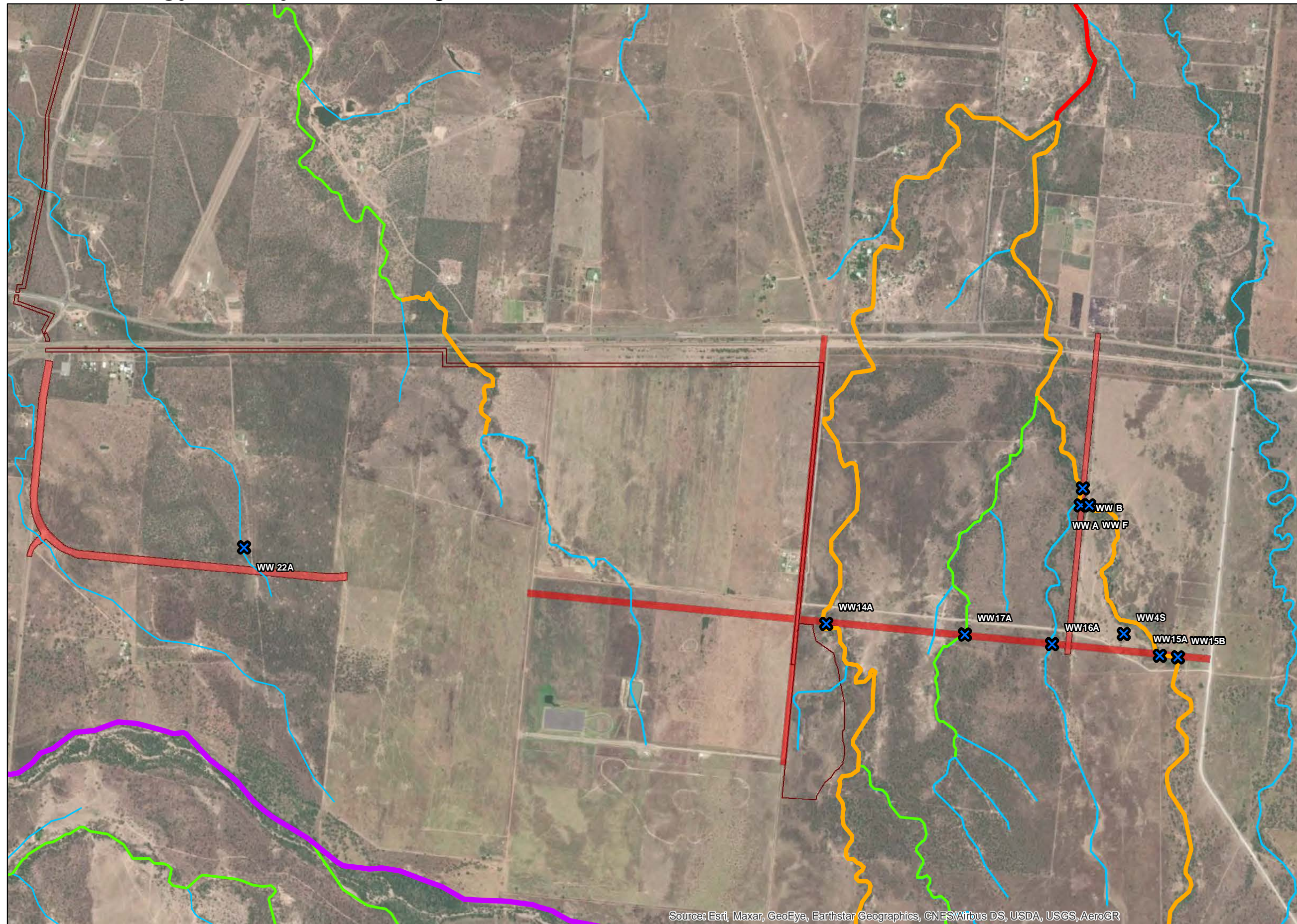
Issue	Date	Description	Drawn	Checked
A	7/11/2022	Preliminary	AL	AH

## Lansdown Eco-Industrial Precinct

Date: 7/11/2022  
Plan 1B Vegetation Assessments Road Lansdown A



# Third Ecology Survey: Waterway Fisheries Assessments



**Legend**

- Waterway Observation Points
- Roads subject to survey
- LEIP Enabling Infrastructure R4
- Old Waterways for WWBW
- Risk of Impact
  - 1 - Low
  - 2 - Moderate
  - 3 - High
  - 4 - Major
- Ordered drainage mapping

N

0 0.1 0.2 0.4 0.6 0.8 Kilometers

Coordinate System: GDA 1994 MGA Zone 55  
Projection: Transverse Mercator

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGR



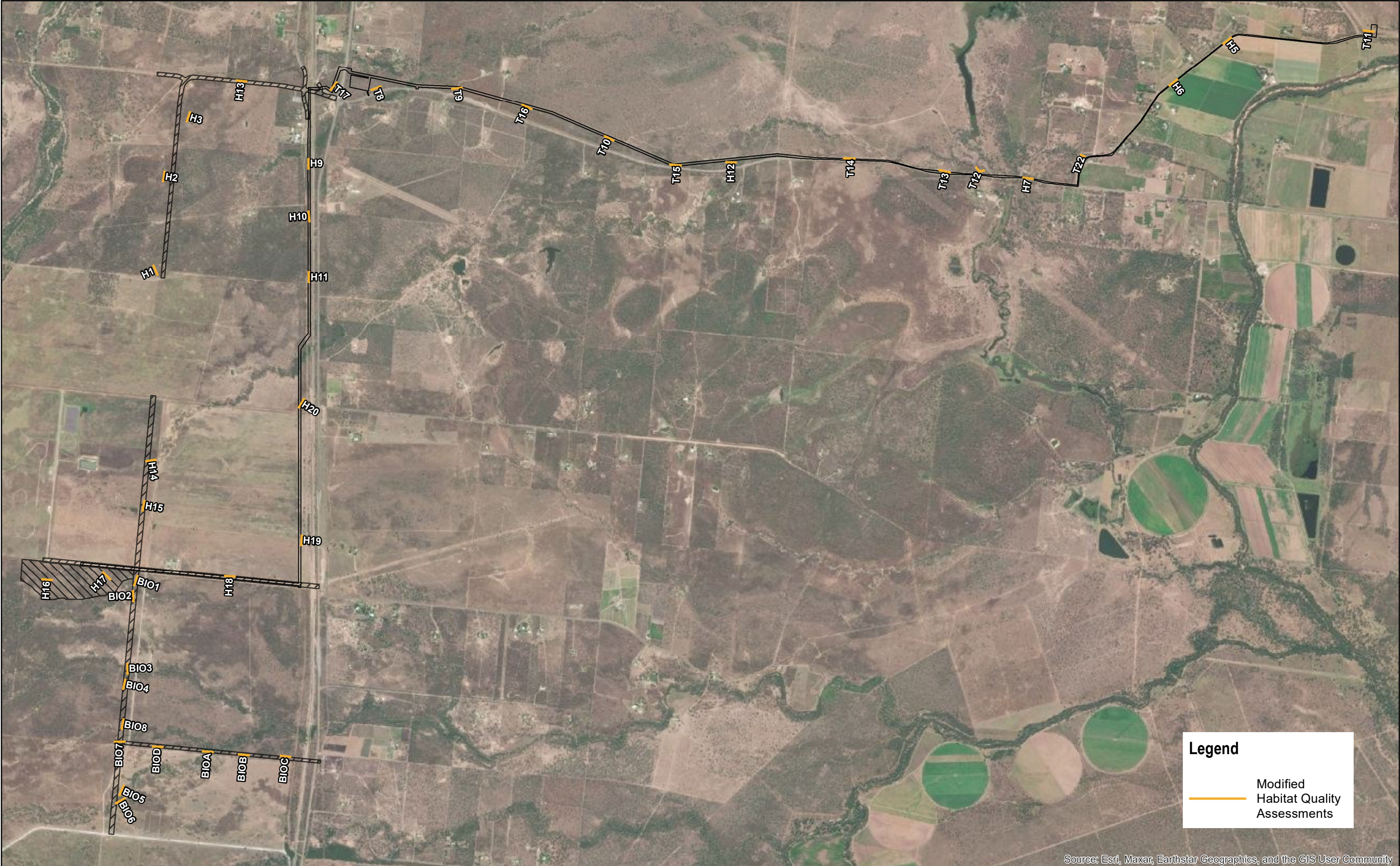
Issue	Date	Description	Drawn	Checked
A	7/11/2022	Preliminary	AL	AH

Lansdown Eco-Industrial Precinct

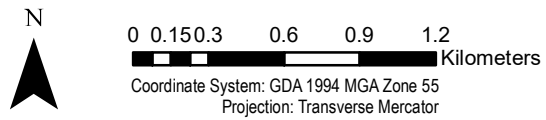
Date: 7/11/2022  
Plan3 Waterway Assessments Road Lansdown A



# Fourth Ecology Survey: Habitat Assessment Locations



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



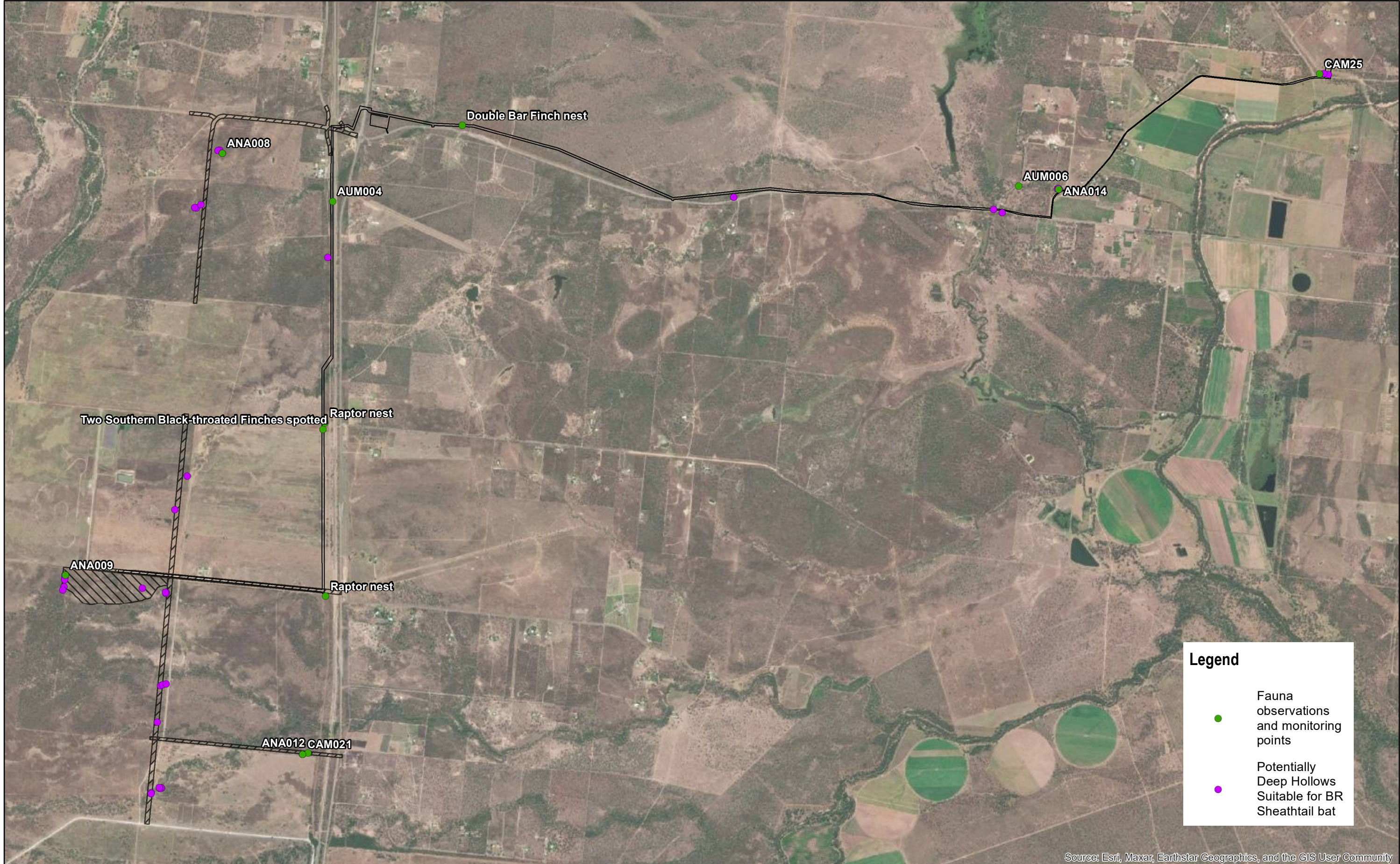
Issue	Date	Description	Drawn	Checked
A	13/03/2023	Preliminary	RH	AH

## Lansdown Eco-Industrial Precinct

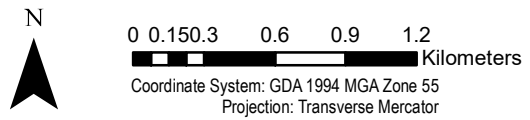
Date: 13/03/2023  
Plan 1 Habitat Quality Assessments A



# Fourth Ecology Survey: Fauna Observation Points



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



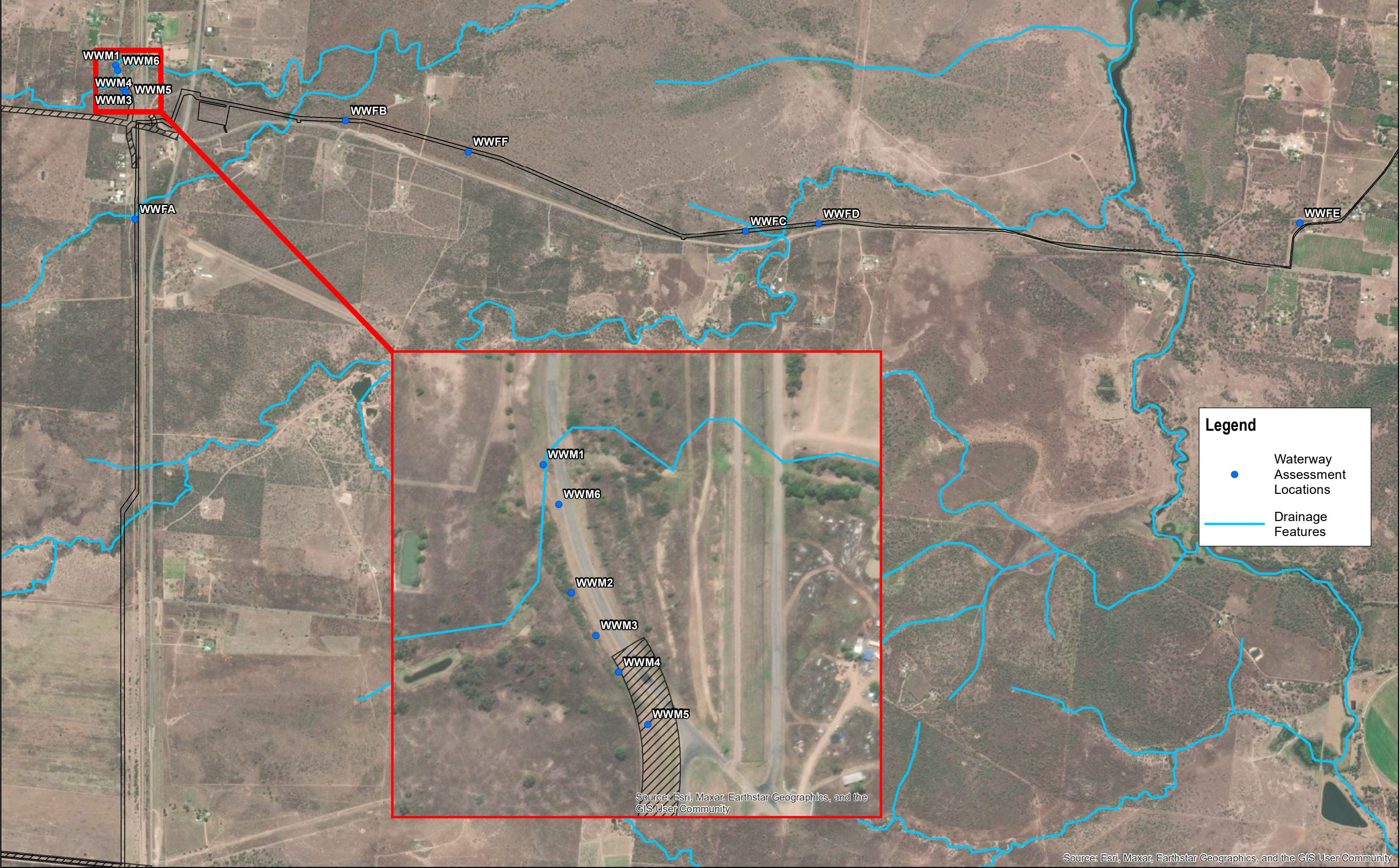
Issue	Date	Description	Drawn	Checked
A	14/03/2023	Preliminary	RH	AH

## Lansdown Eco-Industrial Precinct

Date: 14/03/2023  
Plan 2 Fauna Survey Locations A



# Fourth Ecology Survey: Waterway Assessment Locations

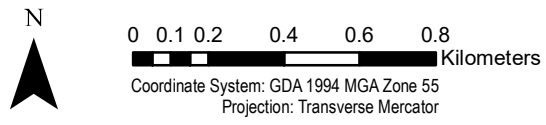


**Legend**

- Waterway Assessment Locations
- Drainage Features

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



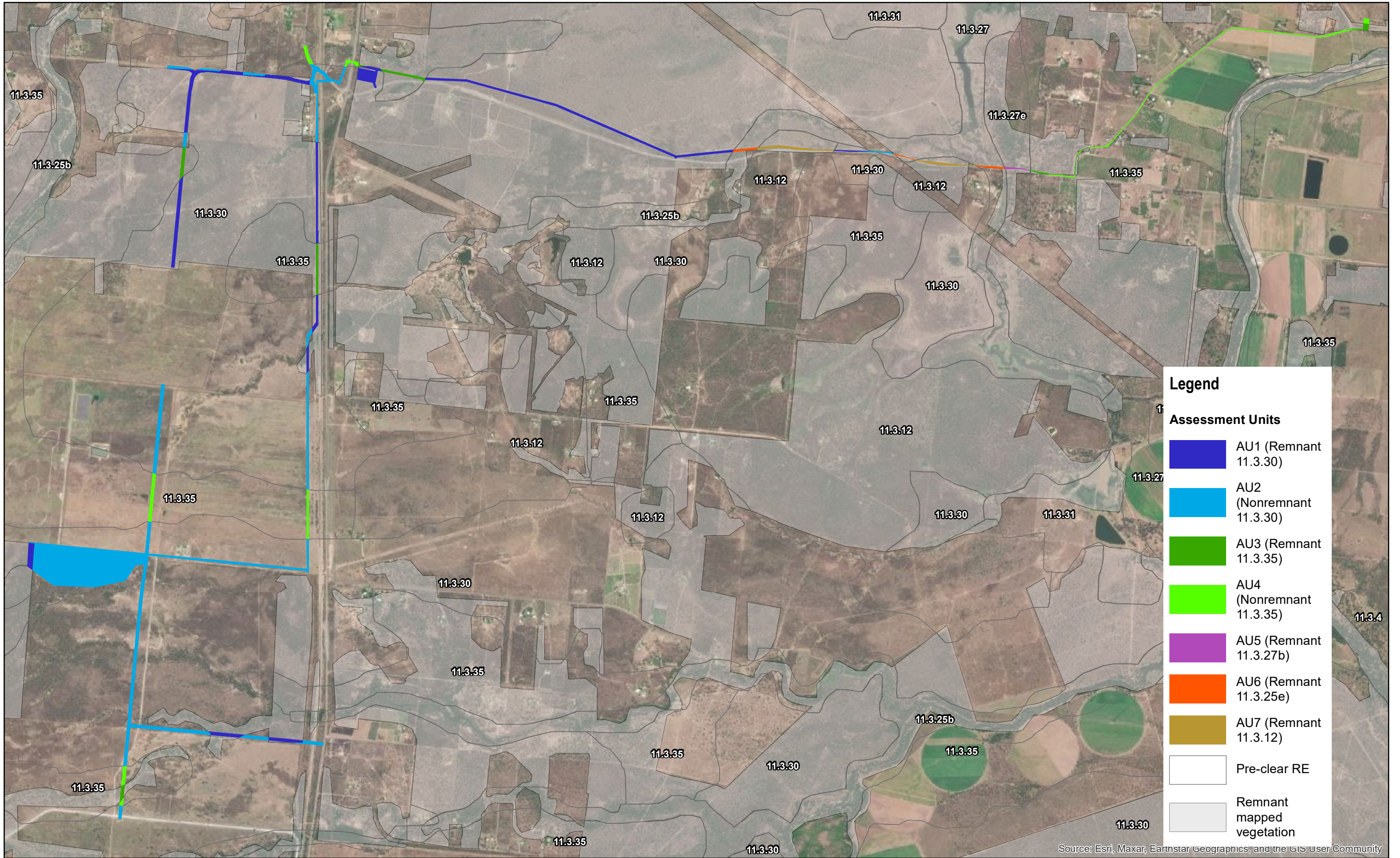
Issue	Date	Description	Drawn	Checked
A	14/03/2023	Preliminary	RH	AH

## Lansdown Eco-Industrial Precinct

Date: 14/03/2023  
 Plan 3 Waterway Assessments A



# Fourth Ecology Survey: Assessment Units

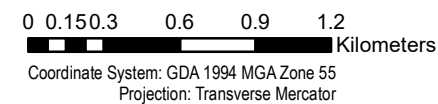


**Legend**

**Assessment Units**

- AU1 (Remnant 11.3.30)
- AU2 (Nonremnant 11.3.30)
- AU3 (Remnant 11.3.35)
- AU4 (Nonremnant 11.3.35)
- AU5 (Remnant 11.3.27b)
- AU6 (Remnant 11.3.25e)
- AU7 (Remnant 11.3.12)
- Pre-clear RE
- Remnant mapped vegetation

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Issue	Date	Description	Drawn	Checked
A	14/03/2023	Preliminary	RH	AH

## Lansdown Eco-Industrial Precinct

Date: 14/03/2023  
Plan 4 Assessment Units A