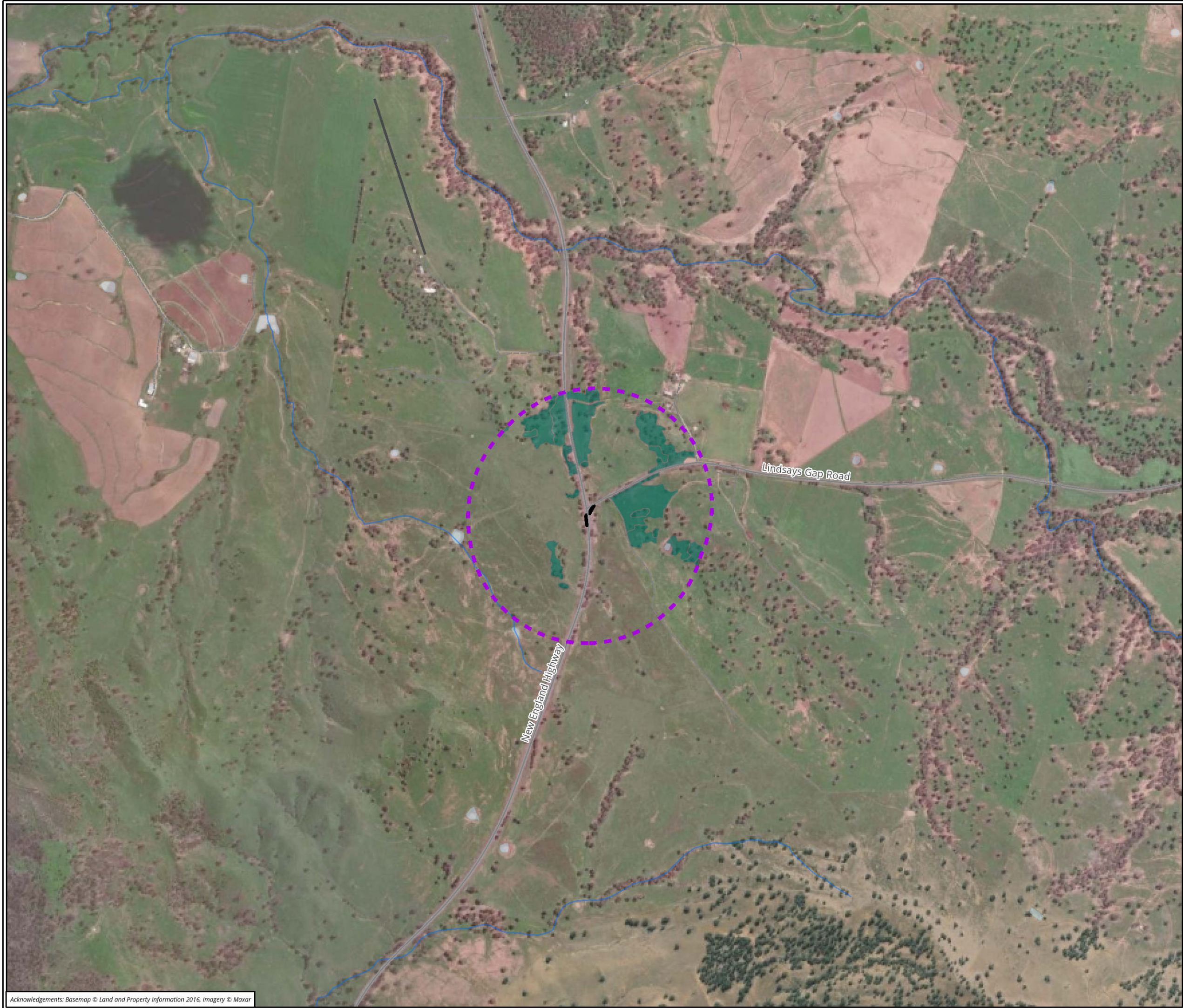




APPENDIX F.2 UPDATED BDAR



- Legend**
- Infrastructure footprint
 - Native vegetation
 - Landscape assessment buffer (study area)

Figure 5 Location map native vegetation cover, Page 13

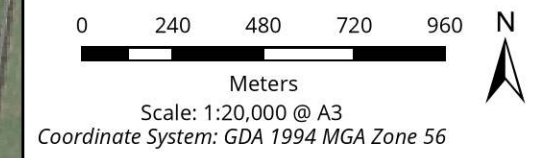
0 180 360 540 720
Meters
Scale: 1:15,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56





- Legend**
- Infrastructure footprint
 - Native vegetation
 - Landscape assessment buffer (study area)

Figure 5 Location map native vegetation cover, Page 14





Legend

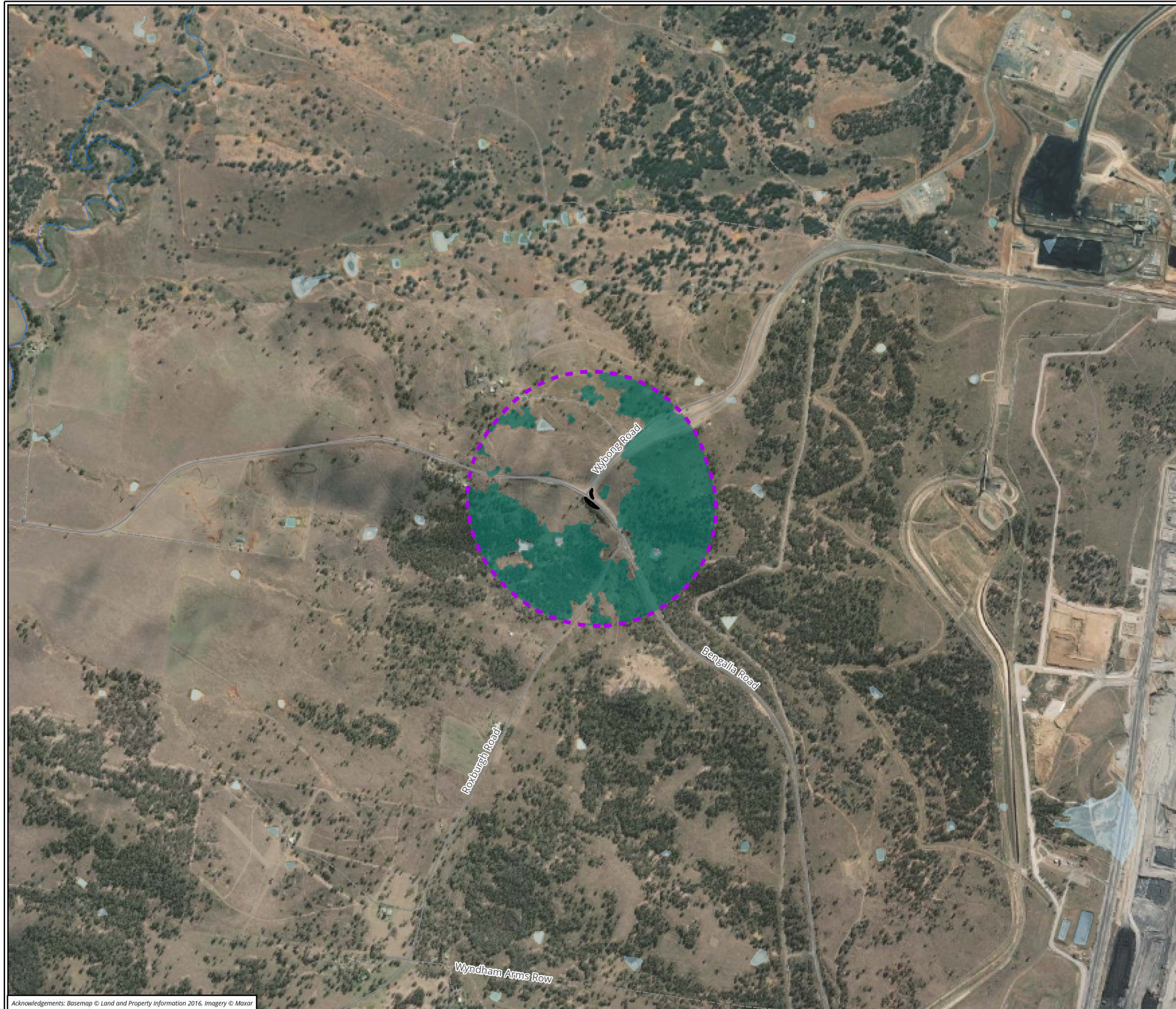
- Infrastructure footprint
- Native vegetation
- Landscape assessment buffer (study area)

Figure 5 Location map native vegetation cover, Page 15

0 180 360 540 720 N
Meters
Scale: 1:15,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56

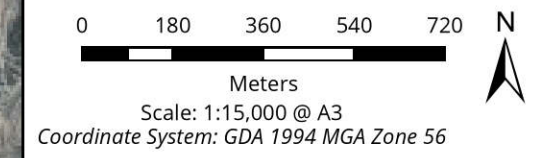
biosis

Matter: 34963,
Date: 24 October 2022 ,
Prepared for: CW, Prepared by: AM, Last edited by: amackegard
Layout: 34963_F5_NativeVeg
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_AM.aprx



- Legend**
- Infrastructure footprint
 - Native vegetation
 - Landscape assessment buffer (study area)

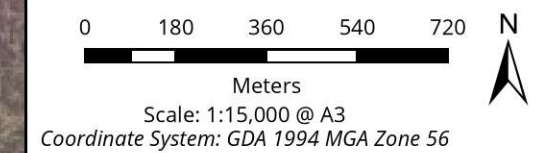
Figure 5 Location map native vegetation cover, Page 16

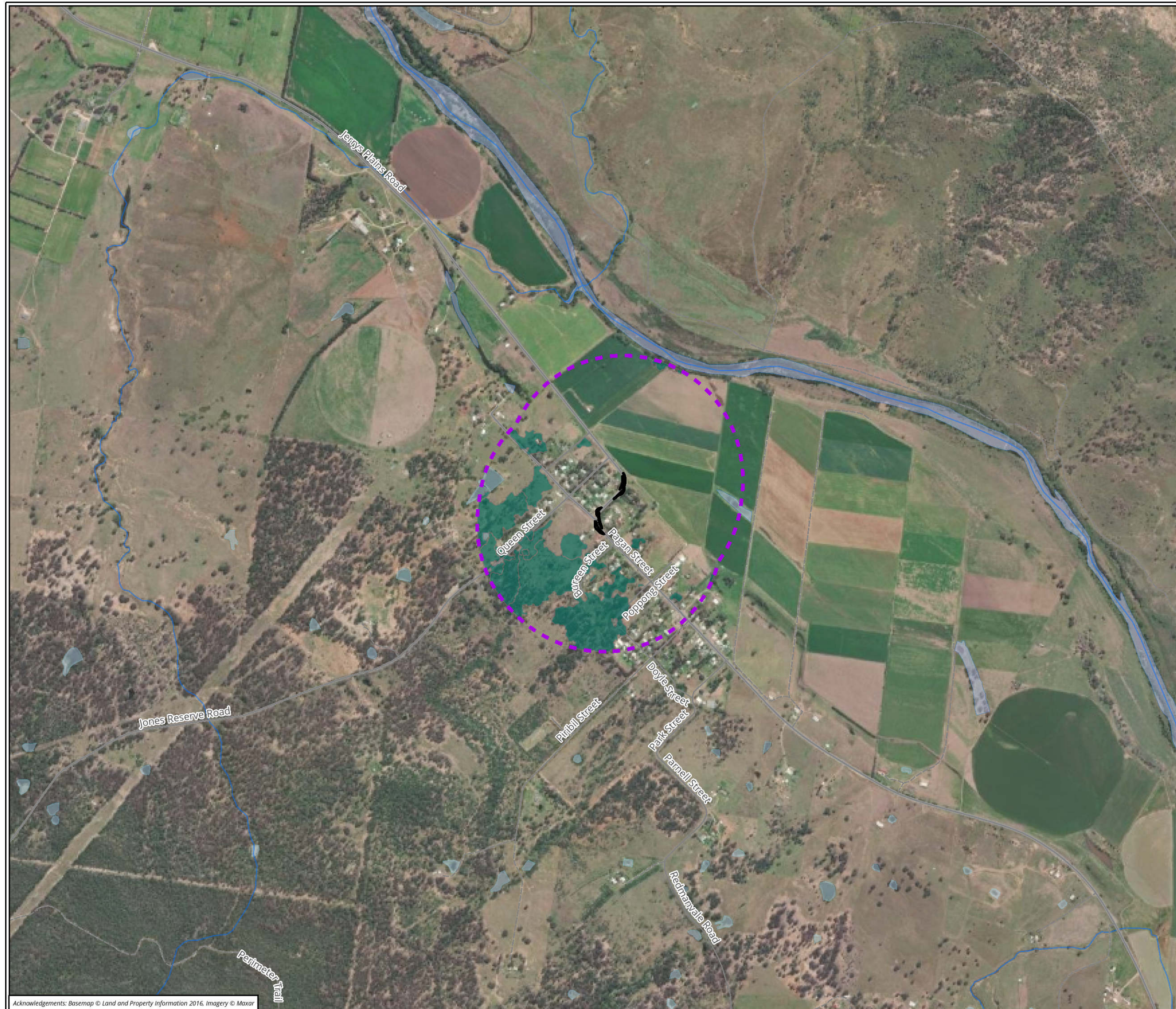




- Legend**
- Infrastructure footprint
 - Native vegetation
 - Landscape assessment buffer (study area)

Figure 5 Location map native vegetation cover, Page 17





Legend




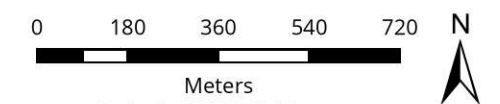
-  Infrastructure footprint
-  Native vegetation
-  Landscape assessment buffer (study area)

Figure 5 Location map native vegetation cover, Page 18



Scale: 1:15,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56



Matter: 34963,
Date: 24 October 2022 ,
Prepared for: CW, Prepared by: AM, Last edited by: amackegard
Layout: 34963_F5_NativeVeg
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_AM.aprx



Legend

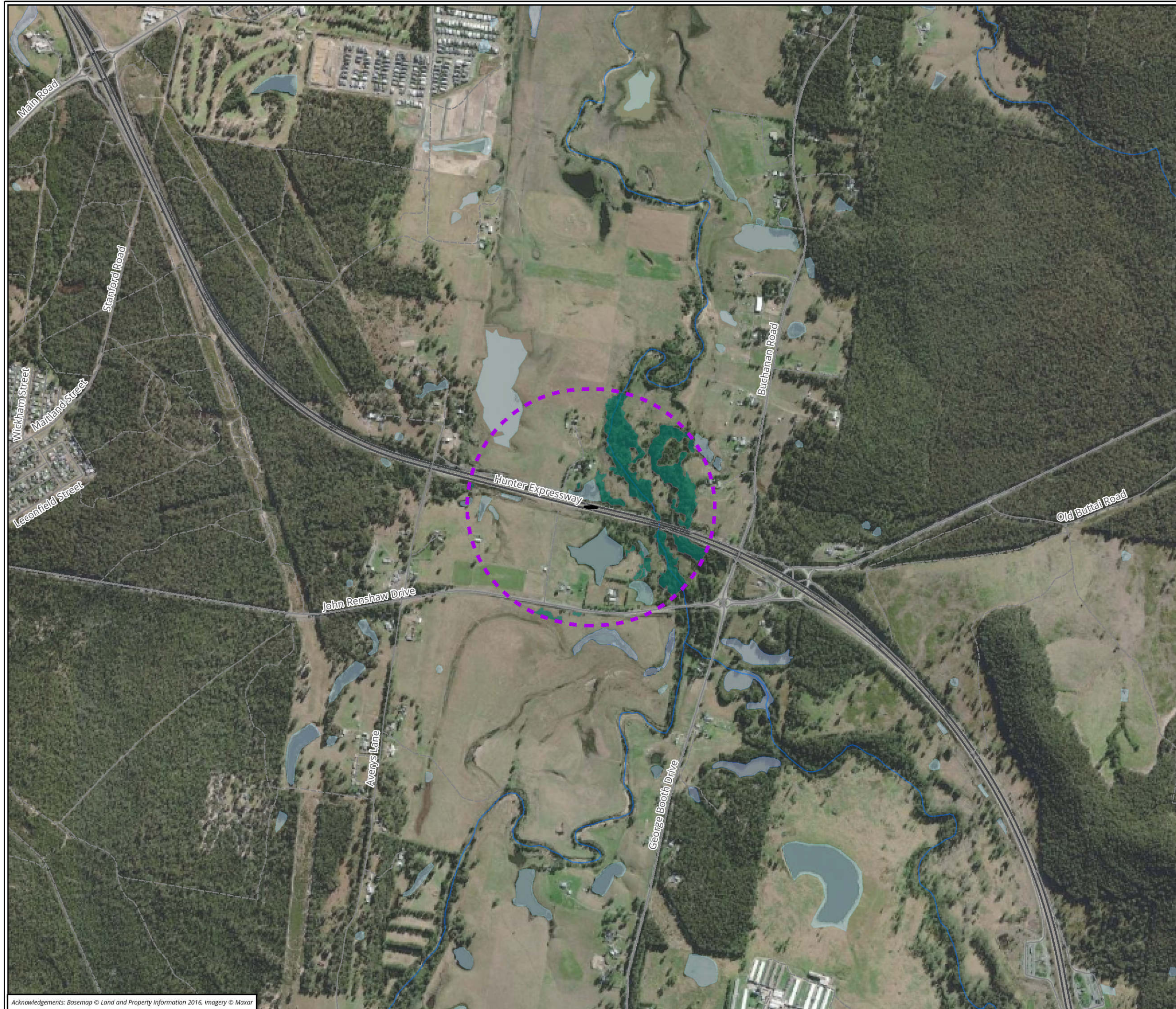
- Infrastructure footprint
- Native vegetation
- Landscape assessment buffer (study area)

Figure 5 Location map native vegetation cover, Page 19

0 300 600 900 1,200 N
Meters
Scale: 1:25,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56



Matter: 34963,
Date: 24 October 2022 ,
Prepared for: CW, Prepared by: AM, Last edited by: amackegard
Layout: 34963_F5_NativeVeg
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_AM.aprx



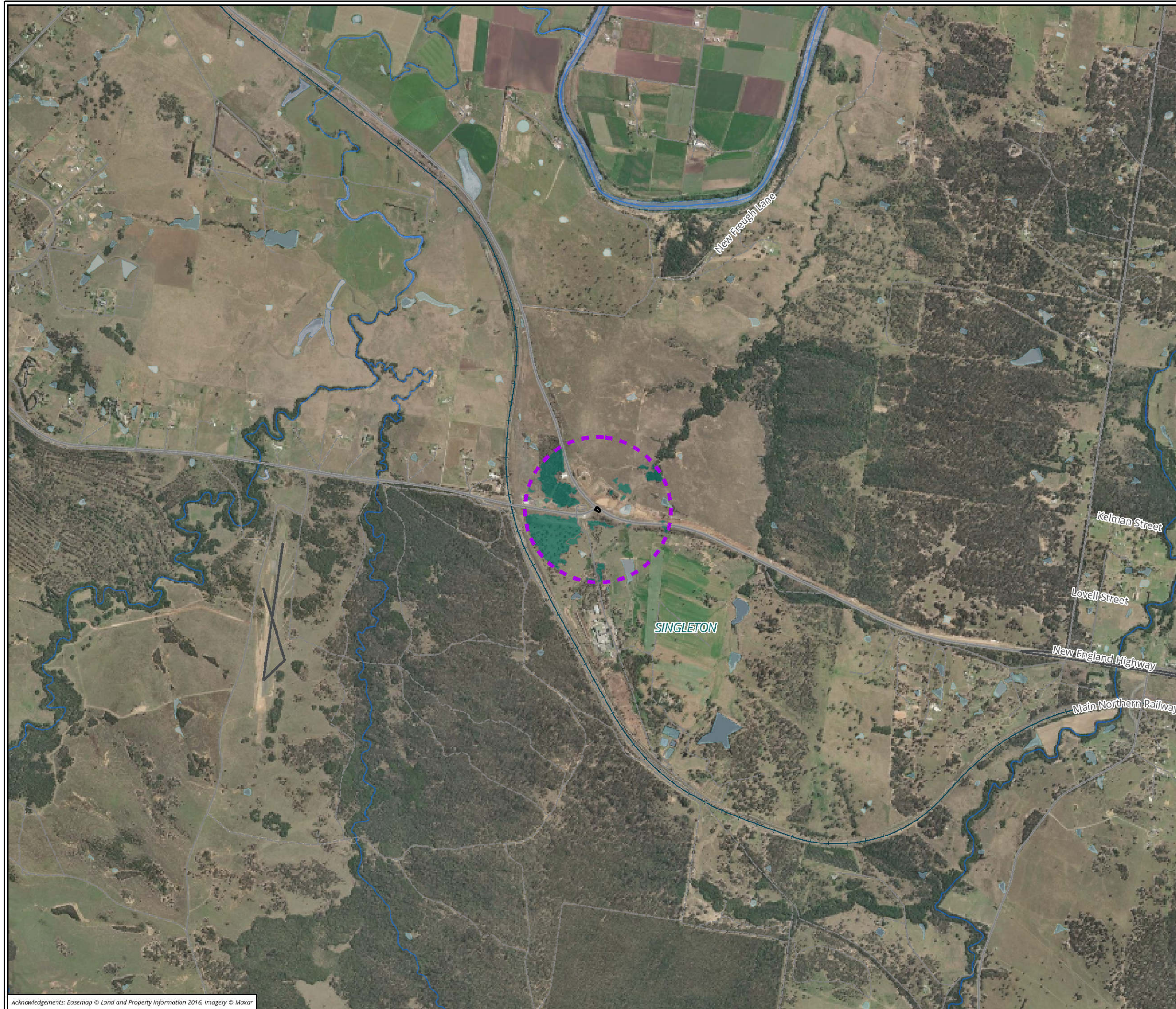
- Legend**
- Infrastructure footprint
 - Native vegetation
 - Landscape assessment buffer (study area)

Figure 5 Location map native vegetation cover, Page 20

0 180 360 540 720
Meters
Scale: 1:15,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56

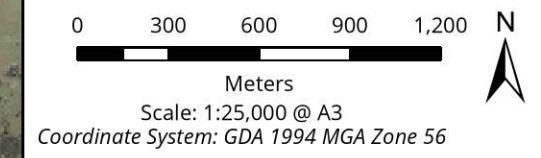


Matter: 34963,
Date: 24 October 2022 ,
Prepared for: CW, Prepared by: AM, Last edited by: amackegard
Layout: 34963_F5_NativeVeg
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_AM.aprx



- Legend**
- Infrastructure footprint
 - Native vegetation
 - Landscape assessment buffer (study area)

Figure 5 Location map native vegetation cover, Page 21





Legend

- Infrastructure footprint
- Native vegetation
- Landscape assessment buffer (study area)

Figure 5 Location map native vegetation cover, Page 22

0 240 480 720 960 N
 Meters
 Scale: 1:20,000 @ A3
 Coordinate System: GDA 1994 MGA Zone 56



Matter: 34963,
 Date: 24 October 2022 ,
 Prepared for: CW, Prepared by: AM, Last edited by: amackegard
 Layout: 34963_F5_NativeVeg
 Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_AM.aprx

4 Native vegetation

4.1 Methodology

4.1.1 Data gathering

Existing spatial datasets and documentation relevant to terrestrial vegetation communities within the assessment area was gathered to inform plant community mapping and requirements for more targeted field surveys. Relevant information sources for the review are outlined in Section 1.8 of this document.

4.1.2 Vegetation surveys and timing

Plant community delineation and mapping of vegetation zones involved review and field validation of OEH mapped vegetation communities over numerous field events as follows:

- An initial survey of the wind farm development footprint from 12 November 2018 to 15 November 2018 by two ecologists totalling 60 person hours.
- Subsequent winter survey of the wind farm development footprint over 5 days in August 2019 by two ecologists totalling 80 person hours.
- Subsequent spring survey over 5 days in November 2019 for the proposed transmission line and wind farm development footprint by two ecologists totalling approximately 80 person hours.
- Subsequent summer survey over 5 days in February 2020 for the proposed transmission line and wind farm development footprint totalling approximately 50 person hours.
- Supplementary winter survey completed 17-21 August 2020 for the proposed access/transportation routes, adjusted transmission line corridor and within Ben Halls Gap Nature Reserve, extending 100m buffer from the development footprint, by two ecologists totalling 100 person hours.
- Additional survey of property north of turbines WP5 and WP6 in January 2021 where optional BESS / substation / batching plant and associated transmission line areas has been included in the updated development footprint. Surveys completed by two senior botanist/ecologists over one day.
- Additional surveys to collect BAM plot data in March 2021 by two senior botanists over 80 person hours and 24 additional plots. This included collection of detailed flora plot data within the sections of 'Devil's Elbow' proposed for re-alignment, as well as along Morrisons Gap Road.
- Field survey of relocated site access route from Crawney Road, ancillary transmission line areas and the proposed quarry in May and September 2022 by senior botanists/ecologists.

Each field event incorporated the rapid survey of vegetation at locations where distinct PCTs could be observed within the development footprint, noting the extent and structure of existing vegetation and dominant species within each stratum. This data was used to assign PCTs and condition states that were then subject to further detailed survey. Signs of disturbance such as clearing, fire damage or weed invasion were also noted. Weather conditions (BOM, 2020) during the field surveys are provided in Table 20.

Table 20 Weather observations during flora and vegetation surveys

Survey date	Temperature (°C) ¹		Rainfall to 0900 hrs (mm) ¹
	Minimum	Maximum	
12 November 2018	10.0	26.3	0.0
13 November 2018	13.8	27.8	0.0
14 November 2018	17.3	22.4	0.0
15 November 2018	16.8	28.6	0.0
27 August 2019	8.3	19.3	0.0
28 August 2019	6.4	18.7	0.0
29 August 2019	6.2	15.5	0.0
30 August 2019	5.8	11.1	0.0
31 August 2019	6.3	12.0	0.0
18 November 2019	10.0	26.5	0.0
19 November 2019	16.3	32.5	0.0
20 November 2019	14.0	29.5	0.0
21 November 2019	11.9	32.1	0.0
25 February 2020	15.4	25.5	2.0
26 February 2020	17.9	25.9	5.2
27 February 2020	15.8	30.5	11.4
28 February 2020	13.9	22.1	0.2
29 February 2020	11.9	26.2	0.0
17 August 2020	4.1	11.9	0.2
18 August 2020	4.0	14.0	0.2
19 August 2020	6.2	15.6	0.0
20 August 2020	5.6	10.9	0.0
21 August 2020	3.3	11.6	0.4
March 2021	N/A	N/A	N/A
30 May 2022	4.5	10	0.0
13 September 2022	5.8	15.7	0.0

¹ Recorded at Murrurundi Gap AWS, BOM station 061392

4.1.3 PCT confirmation and condition classification

Vegetation confirmed within the site was classified using the BioNet Vegetation Classification application and stratified according to broad condition state to map vegetation zones across the development footprint. Each PCT and associated condition class was mapped for the development footprint as a separate vegetation zone based on vegetation structure and condition attributes. In accordance with Section 4.3.1 of the BAM, condition

classes were assigned from recorded observations of tree, shrub and ground cover, grazing pressure and weed extent. The factors used to assign a condition class to each PCT are described in Table 21.

Table 21 Criteria used to assign vegetation condition class

Condition class	Criteria
Non-native exotic grassland	Ground layer dominated by exotics, no native overstorey present. If trees are present in the overstorey they are non-native or outside of known species range.
Non-native planted/urban vegetation	Clearly modified vegetation that is subject to regular maintenance, such as slashing. Vegetation species composition not composed of locally occurring species.
Derived Native Grassland (DNG)	Trees and shrubs absent to very sparse and ground layer dominated native grass (and/or other groundcover) species.
Native vegetation – Low condition	Low canopy cover, young age class of trees (regrowth), moderate shrub and ground layer diversity. No old growth canopy trees. Grazing pressure moderate to high. Moderate to high presence of exotic species.
Native vegetation – moderate condition	Generally intact canopy cover, advanced tree age class, moderate to high shrub and ground layer diversity. Limited old growth canopy trees with hollows Grazing pressure low. Low cover of exotic species.
Native vegetation – High condition	High structural and floristic diversity. Old growth canopy trees with hollows present. Grazing pressure very low to absent.

Preliminary mapping of native and non-native vegetation communities was conducted in the field using tablet computers (Samsung Galaxy Tab 3) running the ArcGIS Collector application in the field, with spatial data collection on the boundaries of each PCT and attribute data collected on dominant flora species and vegetation condition. A PCT and vegetation zone maps was prepared using the data collection from the field verification surveys and aerial photograph interpretation. The mapping process involved using ArcMap to draw vegetation polygons around areas of vegetation using aerial photograph interpretation, then assigning each polygon a PCT and condition class. Aerial photographs utilised included a high resolution photograph captured by drone.

Areas of native vegetation for which a PCT could validly be assigned were identified and delineated in the field, and their condition determined. Identification of PCTs within the assessment area was confirmed with reference to the community profile descriptors held within the OEH (2012) mapping Project and the NSW the BioNet Vegetation Classification).

General classification of native vegetation in NSW used in this report is based on the classification system in Keith (2004) which uses three groupings of vegetation: vegetation formation, vegetation class and vegetation type (PCT), with vegetation type the finest grouping. The grouping referred to in this report is PCT.

4.1.4 Vegetation condition plots

Vegetation zones and minimum plot requirements are detailed in Table 22, based on the development footprints.

In consideration of this, a total of 49 vegetation integrity plots carried out in accordance with the BAM (Figure 6), including 24 additional vegetation integrity plots were completed in March 2021, to support the improved PCT and vegetation zone mapping in this Updated BDAR. This additional data was used to improve the assignment of PCTs to vegetation zones and to provide a more accurate dataset on the vegetation integrity score of the vegetation zones within the development footprint.

Where minimum plot requirements have not been met under the BAM, benchmark condition has been assumed for the required plots and for relevant PCTs that were not mapped as derived native grasslands. Where derived native grasslands were mapped and no plot data existed, the required vegetation condition scores were amended so that benchmark values for grasses were used, but no shrub or canopy trees were recorded in the plot data.

This approach assumes the best possible vegetation integrity score is allocated to vegetation zones that do not have sufficient plot data. By including benchmark data where there are insufficient BAM plots, the vegetation condition scores obtained in the BAM Calculator reflect the highest possible condition value.

The assessment of plot requirements summarised in Table 22 is only calculated on the area of impact within the development footprint to those vegetation communities that can be allocated to a PCT. It does not include vegetation communities that have been mapped as excluded from the BAM assessment.

Table 22 Vegetation zones and BAM plot requirements

Vegetation Zones (PCT and condition class)	Vegetation zone impact area (ha)	Minimum plot requirements	No. plots surveyed
84 - Low	0.07	1	0
433 - Low	0.01	1	0
433 - Moderate	0.01	1	0
434 - Low	0.01	1	0
486 - High	0.54	1	0
486 - Moderate	3.24	2	0
486 - Low	0.66	1	0
486 - DNG	0.08	1	0
490 - Low	1.88	1	0
492 - High	0.01	1	3
492 - Moderate	1.42	1	2
492 - Low	0.63	1	1
492 - DNG	1.10	1	0
507 - Moderate	0.09	1	1
526 - High	0.39	1	0

Vegetation Zones (PCT and condition class)	Vegetation zone impact area (ha)	Minimum plot requirements	No. plots surveyed
526 - Moderate	0.37	1	0
538 - Low	0.06	1	0
540 - High	16.45	3	3
540 - Moderate	29.91	4	4
540 - Low	8.06	3	2
540 - DNG	13.76	3	1
541 - High	11.24	3	4
541 - Moderate	9.12	2	2
541 - Low	7.96	3	2
541 - DNG	2.53	2	0
586 - Low	2.56	2	3
599 - High	0.81	1	0
599 - Moderate	0.50	1	0
599 - Low	3.66	2	0
931 - High	0.83	1	1
931 - Moderate	3.40	2	3
931 - Low	0.22	1	1
934 - High	6.44	3	2
934 - Moderate	0.31	1	0
934 - Low	1.32	1	0
934 - DNG	16.53	3	2
954 - High	1.23	1	0
1194 - High	16.25	3	6
1194 - Moderate	15.63	3	3
1194 - Low	6.48	2	3
1194 - DNG	5.42	3	2
1604 - Low	0.02	1	0
1691 - Low	0.04	1	0

During the planning and implementation of the field survey, BAM plots have been located as much as possible within the development footprint. Due to the multiple revisions to the development footprint, there are some instances where plots are no longer located within the final development footprint assessed in this

Updated BDAR (Figure 6). Where BAM plots have not been located within the development footprint, they have been located within a contiguous and/or representative patch of vegetation suitable for collection of data commensurate with the impacted vegetation zone. This allows the vegetation integrity scores to be included in the BAM-Calculator to be consistent with the area impacted in the development footprint. Table 23 provides additional justification of the suitability of BAM plots located outside the final development footprint to represent the vegetation directly impacted by the project. All but two plots occur within patches of vegetation directly impacted by, or ≤ 1 metre from, the final development footprint. Additional justification is also provided for those two plots that occur further from the footprint.

Table 23 BAM plots captured outside final development footprint

BAM plot #	Dist. to footprint	Dist. of patch to footprint	Justification
1	70m	1m	Plot located within an earlier iteration of the development corridor. Vegetation mapping was completed in this area as part of the overall project vegetation mapping, and therefore was mapped to the same standard and criteria as the vegetation within the remainder of the subject land, whether it occurred within the final development footprint or not.
5	170m	0m	Plot located within an earlier iteration of the development corridor. Vegetation mapping was completed in this area as part of the overall project vegetation mapping, and therefore was mapped to the same standard and criteria as the vegetation within the remainder of the subject land, whether it occurred within the final development footprint or not.
6	305m	0m	Plot located immediately adjacent to, and within a patch contiguous with, vegetation present within the development footprint.
8	200m	0m	Plot located within an earlier iteration of the development corridor. Vegetation mapping was completed in this area as part of the overall project vegetation mapping, and therefore was mapped to the same standard and criteria as the vegetation within the remainder of the subject land, whether it occurred within the final development footprint or not.
9	50m	0m	Plot located within an earlier iteration of the development corridor. Vegetation mapping was completed in this area as part of the overall project vegetation mapping, and therefore was mapped to the same standard and criteria as the vegetation within the remainder of the subject land, whether it occurred within the final development footprint or not.
10	20m	0m	Plot located immediately adjacent to, and within a patch contiguous with, vegetation present within the development footprint.
12	60m	0m	Plot located within an earlier iteration of the development corridor. Vegetation mapping was completed in this area as part of the overall project vegetation mapping, and therefore was mapped to the same standard and criteria as the vegetation within the remainder of the subject land, whether it occurred within the final development footprint or not. Plot also located in a patch of vegetation contiguous with the development footprint.
13	30m	0m	Plot located immediately adjacent to, and within a patch contiguous with, vegetation present within the development footprint.
15	15m	0m	Plot located immediately adjacent to, and within a patch contiguous with, vegetation present within the development footprint.

BAM plot #	Dist. to footprint	Dist. of patch to footprint	Justification
17	10m	0m	Plot located immediately adjacent to, and within a patch contiguous with, vegetation present within the development footprint.
18	30m	0m	Plot located immediately adjacent to, and within a patch contiguous with, vegetation present within the development footprint.
21	150m	150m	<p>Plot located within an earlier iteration of the development corridor. Vegetation mapping was completed in this area as part of the overall project vegetation mapping, and therefore was mapped to the same standard and criteria as the vegetation within the remainder of the subject land, whether it occurred within the final development footprint or not.</p> <p>Plot data shows vegetation patch supports a similar total cover and species richness across all growth form groups as other plots in this vegetation zones (Plots 18 and 38). Floristic composition is also similar between plots, with species characteristic to the PCT throughout, despite the lower condition nature of the vegetation.</p>
24	210m	135m	<p>Plot located within an earlier iteration of the development corridor. Vegetation mapping was completed in this area as part of the overall project vegetation mapping, and therefore was mapped to the same standard and criteria as the vegetation within the remainder of the subject land, whether it occurred within the final development footprint or not.</p> <p>Plot located under transmission line alignment, and was within footprint prior to re-assessment of spanning impacts from AECOM (Appendix I)</p>
25	20m	0m	Plot located immediately adjacent to, and within a patch contiguous with, vegetation present within the development footprint.
26	170m	0m	Plot located within an earlier iteration of the development corridor. Vegetation mapping was completed in this area as part of the overall project vegetation mapping, and therefore was mapped to the same standard and criteria as the vegetation within the remainder of the subject land, whether it occurred within the final development footprint or not. Plot also located in a patch of vegetation contiguous with the development footprint.
32	40m	0m	Plot located immediately adjacent to, and within a patch contiguous with, vegetation present within the development footprint.
33	160m	0m	Plot located within an earlier iteration of the development corridor. Vegetation mapping was completed in this area as part of the overall project vegetation mapping, and therefore was mapped to the same standard and criteria as the vegetation within the remainder of the subject land, whether it occurred within the final development footprint or not.

BAM plot #	Dist. to footprint	Dist. of patch to footprint	Justification
39	30m	0m	Plot located immediately adjacent to, and within a patch contiguous with, vegetation present within the development footprint.
43	15m	0m	Plot located immediately adjacent to, and within a patch contiguous with, vegetation present within the development footprint..
45	15m	0m	Plot located immediately adjacent to, and within a patch contiguous with, vegetation present within the development footprint
48	110m	1m	Plot located within an earlier iteration of the development corridor. Vegetation mapping was completed in this area as part of the overall project vegetation mapping, and therefore was mapped to the same standard and criteria as the vegetation within the remainder of the subject land, whether it occurred within the final development footprint or not.
49	70m	0m	Plot located immediately adjacent to, and within a patch contiguous with, vegetation present within the development footprint.
50	10m	0m	Plot located immediately adjacent to, and within a patch contiguous with, vegetation present within the development footprint.

4.1.5 Plant identification and nomenclature

All vascular flora recorded during vegetation surveys were identified to species level where possible. Species that could not be identified in the field were recorded to the nearest possible family or genus and collected for later identification. Where they could not be identified confidently, specimens were lodged with the NSW Herbarium for identification.

Nomenclature, including common names, follows Harden (1990-1993, and revised editions 2000-2002). Recent taxonomic revisions were identified using the PlantNET website, developed by the Royal Botanic Gardens (n.d.).

4.2 Vegetation communities

4.2.1 Exotic vegetation

Section 6.8(3) of the *Biodiversity Conservation Act 2016* (BC Act) provides that the Biodiversity Assessment Method (BAM) is to exclude the assessment of the impacts of clearing of native vegetation on Category 1-Exempt Land (within the meaning of Part 5A of the *Local Land Services Act 2013*).

- **BC Act s6.8(3):** The biodiversity assessment method is to exclude the assessment of the impacts of any clearing of native vegetation and loss of habitat on Category 1-Exempt Land (within the meaning of Part 5A of the LLS Act), other than any impacts prescribed by the regulations under section 6.3;
- **BAM cl11.5 (BAM2020):** Biodiversity values not assessed under the BAM include: (d) biodiversity values associated with the assessment of the impacts of any clearing of native vegetation and loss of habitat on category 1-Exempt Land (within the meaning of Part 5A of the LLS Act), other than the additional biodiversity impacts in accordance with clause 6.1 of the BC regulation; (that being prescribed impacts).

Boundaries mapping Category 1-Exempt Land on the NVR Map are not yet publicly available. During the current transitional period, or until the maps are publicly released, accredited assessors may establish the categorisation of land for the agency head or consent authority to consider, following the method utilised to develop the NVR Map as far as practicable. Due to the complexities of the development, and in conjunction with multiple field investigations, Table 24 demonstrates the overall methods used to determine potential land categories and to further determine and map areas of exotic vegetation.

Table 24 Summary of methods utilised to determine land categories and exotic vegetation

Data Sources	Category 1 – Exempt Land	Category 2 – Regulated Land	Excluded Land
2017 Land Use Dataset	<p>Land use identified as;</p> <ul style="list-style-type: none"> Grazing modified pastures (excluding woody vegetation) where clear evidence of significant groundcover modification has occurred post 1990 Grazing native vegetation where clear evidence of significant groundcover modification has occurred post 1990 and dominated by exotic species as evidenced by field data Cropping Grazing irrigated modified pasture Intensive animal production Irrigated perennial horticulture Manufacturing and industrial Residential and farm infrastructure Services Mining Reservoir/dam Exotic areas >90% areas identified as vulnerable regulated land in relation to slope Areas observed (or assumed) to be recently cleared under rural allowable activities 	<p>Land use identified as;</p> <ul style="list-style-type: none"> Managed resource protection Other minimal use Grazing native vegetation Grazing modified pastures where evidence of significant groundcover modification is absent (precautionary principle applied) Transport and communication Rivers 	N/A
NSW Woody vegetation extent	Areas of woody vegetation regrowth that has occurred post 1990 following previous clearing events	Woody vegetation present as at 1990 in conjunction with historic aerial imagery	N/A
Native regulatory map Sensitive regulated land Vulnerable regulated land Excluded land	N/A	<p>Native dominated areas identified as vulnerable regulated land</p> <p>All areas identified as sensitive regulated land</p>	Areas identified as excluded on the native regulatory maps such, National Parks, as well as nature conservation

Data Sources	Category 1 – Exempt Land	Category 2 – Regulated Land	Excluded Land
			and production native forestry land use

Exotic grassland vegetation was mapped where it was considered to meet the criteria for Category 1 – Exempt Land in accordance with the table above, and in areas where non-native species were clearly dominant in the ground layer. This includes paddocks that have undergone a long history of moderate to high intensity grazing leading to a dominance of non-native species, nutrification and compaction, further reducing the resilience and regeneration potential of native grass species. Large areas of exotic grassland were found to be present along the top of the ridge line, which has been subject to vegetation clearing followed by use for ongoing access and grazing over the recent past. Areas away from retained trees hold little natural resilience and are dominated by exotic species such as Prairie Grass *Bromus catharticus*, Cocksfoot *Dactylis glomerata*, Ryegrass *Lolium spp.*, Sweet Vernal Grass *Anthoxanthum odoratum*, White Clover *Trifolium repens*, Broad-leaved Carpet Grass *Axonopus compressus*, Squirrel Tail Fescue *Vulpia bromoides*, Red-flowered Mallow *Modiola caroliniana* and Lamb's Tongues *Plantago lanceolata*. Where native grasses and other groundcover species made up more than a minor/negligible component of the vegetation cover, the vegetation was mapped as a Low, or Derived Native Grassland (DNG) condition PCT.

4.2.2 Development footprint

Within the total combined development footprint, a total of 427.16 hectares of vegetation was mapped, which includes vegetation communities classified as native vegetation, exotic grassland and planted/urban vegetation.

The majority (55.5% or 236.62 hectares) of the mapped vegetation within the development footprint is composed of exotic grassland or planted/urban vegetation, with 44.5% of the mapped vegetation being classified as native (Table 25). As outlined below, the Project has been designed and optimised to ensure Project infrastructure is located predominately within non-native vegetation, with Project elements being located outside of native vegetation where practicable.

The 190.54 hectares of mapped native vegetation within the development footprint, occurs across 19 separate PCTs with varying levels of disturbance and condition, stratified into 45 vegetation zones.

The native vegetation within the development footprint comprises isolated patches of vegetation in a predominantly agricultural land-use matrix. While isolated, patches were generally within 100 metres of other patches of native vegetation and in some locations directly connected to areas of larger, contiguous areas of native vegetation.

The condition of these patches of native vegetation ranges from low, with heavy weed infestation (especially Blackberry, *Rubus spp.*) supporting little native species richness or diversity, to high condition areas with high native species floristic and structural diversity and low weed infestation. Zones in lower condition also show high levels of modification and fragmentation.

Poor condition vegetation zones are characterised by a canopy of mature and semi mature native trees over an understorey dominated by exotic pasture grasses. Resilience in the understorey in these zones was seen to be low, with a low cover and abundance of native species. Higher condition vegetation condition zones are

characterised by complex vegetation structure with a high diversity and abundance of native species within each strata.

Table 25 Vegetation condition class within combined development footprint

Vegetation condition class	2020 BDAR Area (ha)	Updated BDAR Area (ha)	% Reduction	% of mapped vegetation
Planted or urban vegetation	7.39	0.84	89	0.02
Exotic grassland	272.36	235.78	13	55.2
Derived Native Grasslands	30.91	39.43	-28	9.2
Native vegetation – Low condition	37.11	33.68	9	7.9
Native vegetation – Moderate condition	73.8	63.29	14	14.8
Native vegetation – High condition	64.88	54.19	16	12.7
Total	486.45	427.16	12	100%

4.2.3 Vegetation communities and infrastructure type

There is also substantial variation in the composition of the vegetation communities within the infrastructure types that compose the development footprint. To show the contribution that each infrastructure element has to the overall impacts within the development footprint, a breakdown of the area of each condition class of vegetation is provided in Table 26.

This summary shows that the majority of the impacts associated with the wind turbines infrastructure, internal roads and transmission line access tracks, are to non-native vegetation, with exotic grassland being the most common vegetation community mapped in these areas. This reflects both the ongoing efforts made to design the Project to avoid areas of native vegetation to the extent practicable and the history of disturbance on the ridgeline from the historical and ongoing use as a grazing property. The concept alignment for the transmission line access tracks have also followed existing farm tracks and trails as much as practicable to minimise impacts on native vegetation.

Within the transmission line corridor, most of the vegetation (63%) has been mapped and classified as native vegetation. This is due to the requirement for the transmission line to traverse steeper areas of terrain where open eucalypt forest and woodland has been retained. The original concept design had proposed complete clearing of the required 60 metre corridor along the transmission line, however this has been revised during ongoing detailed design and clearing limited where practicable and where required operational and safety clearances to the wires can be achieved.

In particular, the expected ability to avoid impact along stretches of the transmission line that have adequate separation to avoid impacts to native vegetation from the proposed line and removal of two turbines has been assessed, as well as other design refinements to access tracks to minimise impacts. This has resulted in an overall material reduction in the extent of clearing required of native vegetation.

Table 26 below provides a summary of vegetation impacts broken down by infrastructure type. It can be seen that five of the eight different infrastructure types will impact more on exotic vegetation than native, with only the transmission line, transmission line access tracks, and ancillary infrastructure components predominantly impacting native vegetation. This is largely due to the nature of the footprint along the transmission line, where impacts are generally associated more with areas of native vegetation that requires removal, with areas of exotic grassland not required to be cleared. Furthermore the ancillary infrastructure components include two options for substation and BESS facilities, and three options for operations and maintenance buildings, of which only one options will be built.

Table 26 Summary of vegetation and condition type for each infrastructure type

Vegetation condition class	Infrastructure element vegetation extent (ha and percentage within each infrastructure type)							
	Temporary construction footprint	Wind turbine infrastructure	Internal roads	Quarry	Transmission line	Transmission line access tracks	Transport route upgrades	Ancillary
Planted or urban vegetation	-	-	-	-	-	-	0.84	-
Exotic grassland	62.38	32.26	29.58	21.26	46.47	20.20	10.60	13.02
Derived Native Grasslands	8.69	4.02	3.31	-	29.16	1.36	4.01	3.63
Native vegetation – Low condition	11.51	2.90	12.04	-	26.27	3.10	5.40	2.06
Native vegetation – Moderate condition	2.19	0.90	5.98	-	13.49	2.72	6.55	1.80
Native vegetation – High condition	7.45	5.59	1.82	-	5.53	2.55	0.59	15.90
Total native vegetation (ha)	29.85	13.40	23.15		74.45	9.74	16.56	23.39
Total area planted or exotic (ha)	62.38	32.26	29.58	21.26	46.47	20.20	11.44	13.02

4.2.4 Vegetation zones within the combined development footprint

Table 27 provides a detailed summary of the PCTs, vegetation zones, condition, extent, vegetation integrity score and associated TECs for the total combined development footprint, which has been used in assessing the impacts of the project. This information was used as the basis for a combined native vegetation map for the entire development footprint (Figure 6).

PCT descriptions, justifications, characteristic species and photographs are provided in Appendix B.

As outlined in Section 4.1.4 where minimum plot requirements have not been met under the BAM, benchmark condition has been assumed for the shortfall in required plots and for relevant vegetation zones. This is a conservative approach that ensures the best possible vegetation integrity score is allocated to vegetation zones lacking sufficient plot data. By including benchmark data where there are insufficient BAM plots, the vegetation condition scores generated by the BAM Calculator reflect the highest possible condition value.

The use of benchmark data has had the effect of skewing the resultant Vegetation Integrity (VI) scores, as presented in Table 27, whereby vegetation zones that represent ground-validated vegetation in lower condition, may present benchmark or near benchmark VI scores. This is particularly evident where, as a result of the use of benchmark plot data, a Moderate condition zone presents a higher VI score than a High condition zone for the same PCT (i.e. PCT 540 Moderate and PCT 540 High vegetation zones). This increase in VI scores ensures impacts and threatened species associates are over-estimate as a result of a shortfall in plot data, and ensures a more conservative impact assessment.

All vegetation within the subject land has been mapped and stratified in accordance with the BAM, and as detailed in Table 21 above, however the use of benchmark plot data has resulted in misrepresentation of expected VI scores (and therefore inferred condition). Condition states (and therefore vegetation zones) were assigned in the field, based on the presence of *relatively homogeneous areas of native vegetation that were the same PCT and in the same broad condition state* (DPIE 2020). Whilst it is acknowledged that condition classes for vegetation zones within which BAM plot data has not been collected have not been assessed against this floristic data, the on-ground mapping undertaken by experienced botanists during the field campaign was accurate, detailed, and sufficient to define vegetation zones as required by the BAM. All layout decisions relevant to avoidance of impacts (or conversely locating impacts in areas of lower condition) have been based on the ground-validated condition of the vegetation zones, not the artificially inflated VI scores. Furthermore any effect that inflated VI scores may have on threatened species associations are conservative in nature and would mean more species are required to be addressed, rather than less. Vegetation condition classes that inform the vegetation zones for this assessment reflect the ground-validated condition of the vegetation, not the inflated VI scores.

Vegetation zones that have had their VI scores calculated using benchmark data, to supplement a shortfall in data of one or more BAM plots (and thus their VI scores artificially inflated), are highlighted in Table 27 below for additional context.

Table 27 Vegetation zones within the development footprint

PCT	TEC	Vegetation Zones (PCT and condition)	VI score by IBRA subregion	Vegetation zone impact area (ha)
84 - River Oak - Rough-barked Apple - red gum - box riparian tall woodland (wetland) of the Brigalow Belt South Bioregion and Nandewar Bioregion		84 - Low	Nandewar-Peel 99.9	0.07
		Total		0.07
433 - White Box grassy woodland to open woodland on basalt flats and rises in the Liverpool Plains sub-region, BBS Bioregion	<i>White Box Yellow Box Blakely's Red Gum Woodland</i>	433 - Low	Nandewar-Peel 99.9	0.01
		433 - Moderate*	Nandewar-Peel 99.9	0.01
		Total		0.02
434 - White Box grass shrub hill woodland on clay to loam soils on volcanic and sedimentary hills in the southern Brigalow Belt South Bioregion	<i>White Box Yellow Box Blakely's Red Gum Woodland</i>	434 - Low	Nandewar-Peel 99.9	0.01
		Total		0.01
486 - River Oak moist riparian tall open forest of the upper Hunter Valley, including Liverpool Range		486 - High*	NSW NC- Tomalla 99.8	0.54
		486 - Moderate*	Nandewar-Peel 99.1 NSW NC- Tomalla 99.8	1.80 1.44
		486 - Low*	Nandewar-Peel 99.1	0.66
		486 - DNG*	Nandewar-Peel 69.2	0.08
		Total		4.53
490 - Silvertop Stringybark - Forest Ribbon Gum very tall moist open forest on basalt plateau on the Liverpool Range, Brigalow Belt South Bioregion		490 - Low*	Nandewar-Peel 98.3	1.88
		Total		1.88
492 - Silvertop Stringybark - Yellow Box - Apple Box - Rough-barked Apple shrub grass open forest mainly on southern slopes of the Liverpool Range, Brigalow	<i>White Box Yellow Box Blakely's Red Gum Woodland</i>	492 - High	Nandewar-Peel 93	0.01
		492 - Moderate	Nandewar-Peel 93 NSW NC- Tomalla 89.1	0.03 1.40

PCT	TEC	Vegetation Zones (PCT and condition)	VI score by IBRA subregion	Vegetation zone impact area (ha)
Belt South Bioregion		492 - Low	Nandewar-Peel 60.3	0.63
		492 - DNG*	Nandewar-Peel 59.9	1.10
		Total		3.15
507 - Black Sallee - Snow Gum grassy woodland of the New England Tableland Bioregion		507 - Moderate	NSW NC- Tomalla 57.6	0.09
		Total		0.09
526 - Mountain Ribbon Gum - Messmate - Broad-leaved Stringybark open forest on granitic soils of the New England Tableland Bioregion		526 - High*	NET- Walcha 99.3	0.39
		526 - Moderate*	NET- Walcha 99.3	0.37
		Total		0.75
538 - Rough-barked Apple - Blakely's Red Gum open forest of the Nandewar Bioregion and western New England Tableland Bioregion			Nandewar-Peel 99.1	0.06
		Total		0.06
540 - Silvertop Stringybark - Ribbon Gum - Rough-barked Apple open forest on basalt hills of southern Nandewar Bioregion, southern New England Tableland Bioregion and NSW North Coast Bioregion	<i>Ribbon Gum— Mountain Gum— Snow Gum Grassy Forest/Woodland of the New England Tableland Bioregion**</i>	540 - High	Nandewar-Peel 80.3	5.15
			NET- Walcha 73.3	0.49
			NSW NC- Tomalla 72.9	10.81
		540 - Moderate	Nandewar-Peel 86.1	11.63
			NET- Walcha 82.1	0.89
			NSW NC- Tomalla 78	16.67
		540 - Low*	Nandewar-Peel 95.9	4.33
541 - Silvertop Stringybark - Rough-barked Apple		540 - DNG*	NET- Walcha 95.4	0.03
			NSW NC- Tomalla 94.9	3.70
			Nandewar-Peel 45.9	8.44
		Total	NSW NC- Tomalla 28.6	5.32
				67.47
541 - Silvertop Stringybark - Rough-barked Apple		541 - High	Nandewar-Peel 88.7	3.55

PCT	TEC	Vegetation Zones (PCT and condition)	VI score by IBRA subregion	Vegetation zone impact area (ha)
grassy open forest of southern Nandewar Bioregion, southern New England Tableland Bioregion and NSW North Coast Bioregion			NSW NC- Tomalla 79.9	7.69
		541 - Moderate	Nandewar-Peel 83.6 NSW NC- Tomalla 76.9	4.89 4.22
		541 - Low	Nandewar-Peel 69.4 NSW NC- Tomalla 61.5	6.84 1.12
		541 – DNG*	Nandewar-Peel 54.7	2.53
		Total		30.85
586 - Snow Grass - Swamp Foxtail tussock grassland sedgeland of cold air drainage valleys of the New England Tableland Bioregion		586 - Low	NET- Walcha 59.6	2.56
		Total		2.56
599 - Blakelys Red Gum - Yellow Box grassy tall woodland on flats and hills in the Brigalow Belt South Bioregion and Nandewar Bioregion	<i>White Box Yellow Box Blakely's Red Gum Woodland</i>	599 – High*	Nandewar-Peel 99.9	0.81
		599 – Moderate*	Nandewar-Peel 99.9	0.5
		599 – Low*	Nandewar-Peel 99.9	3.66
		Total		4.96
931 - Messmate - Mountain Gum tall moist forest of the far southern New England Tableland Bioregion		931 - High	NET- Walcha 44.4	0.83
		931 - Moderate	NET- Walcha 55.1 NSW NC- Tomalla 45	1.2 1.98
		931 - Low	NET- Walcha 26.9	0.22
		Total		4.45
934 - Messmate open forest of the tableland edge of the NSW North Coast Bioregion and New England Tableland Bioregion		934 – High*	NET- Walcha 91.2 NSW NC- Tomalla 87	2.22 4.21
		934 – Moderate*	NET- Walcha 99.6 NSW NC- Tomalla 99.7	0.13 0.19

PCT	TEC	Vegetation Zones (PCT and condition)	VI score by IBRA subregion	Vegetation zone impact area (ha)
		934 – Low*	NET- Walcha 99.6 NSW NC- Tomalla 19.1	0.40 0.92
		934 – DNG*	NET- Walcha 21.9 NSW NC- Tomalla 20.1	16.36 0.17
		Total		24.60
954 - Mountain Ribbon Gum - Messmate open forest of escarpment ranges of the NSW North Coast Bioregion and New England Tableland Bioregion		954 – High*	NSW NC- Tomalla 99.8	1.23
		Total		1.23
1194 - Snow Gum - Mountain Gum - Mountain Ribbon Gum open forest on ranges of the NSW North Coast Bioregion and eastern New England Tableland Bioregion	<i>Ribbon Gum— Mountain Gum— Snow Gum Grassy Forest/Woodland of the New England Tableland Bioregion**</i>	1194 - High	NET- Walcha 72.6 NSW NC- Tomalla 72.1	5.45 10.80
		1194 - Moderate	NET- Walcha 64.6 NSW NC- Tomalla 65.7	7.20 8.43
		1194 - Low	NET- Walcha 37.5 NSW NC- Tomalla 38	3.19 3.29
		1194 – DNG*	NET- Walcha 7.4 NSW NC- Tomalla 7.8	1.74 3.68
		Total		43.77
1604 - Narrow-leaved Ironbark - Grey Box - Spotted Gum shrub - grass woodland of the central and lower Hunter		1604 – Low*	Sydney – Hunter 99.7	0.02
		Total		0.02
1691 - Narrow-leaved Ironbark - Grey Box grassy woodland of the central and upper Hunter		1691 – Low*	Sydney – Hunter 99.7	0.04
		Total		0.04

*Note: Vegetation zones with VI score affected by inclusion on benchmark plot data have been marked with an asterisk *

*Note: PCT 540 and PCT1194 represent the Ribbon Gum—Mountain Gum—Snow Gum Grassy Forest TEC only when the PCT is present within, or as part of a patch contiguous with, the New England Tableland IBRA Bioregion. Refer Section 4.3.1 for more detail.



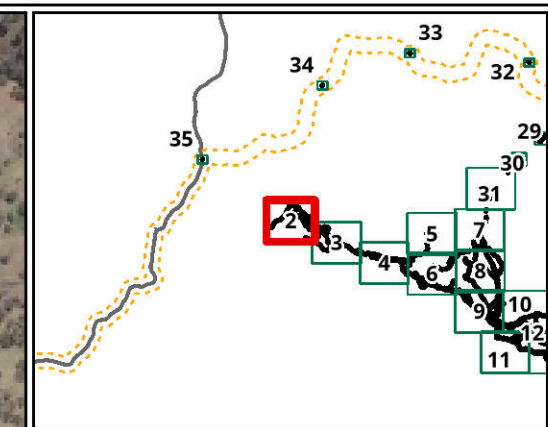
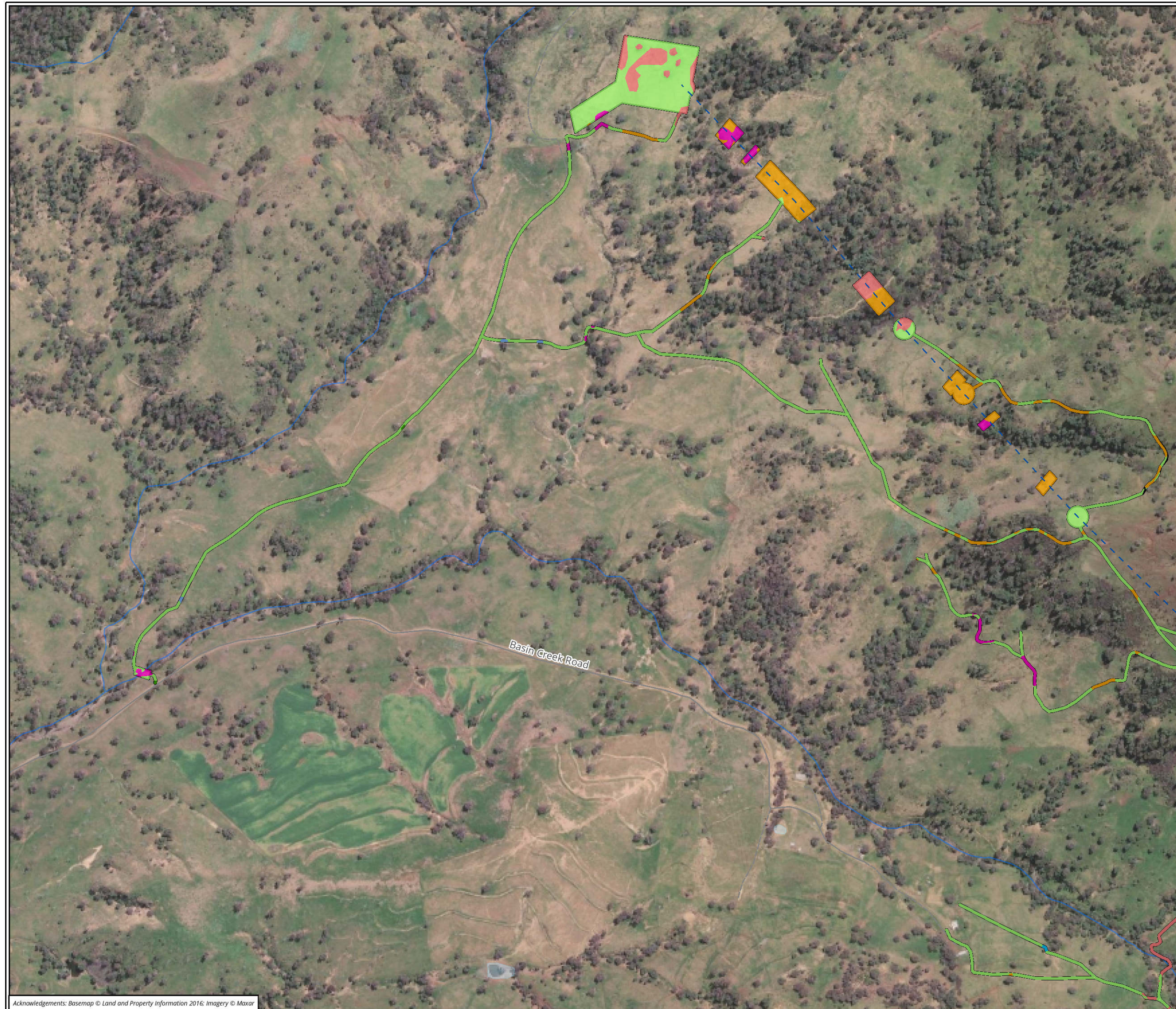
- Legend**
- Infrastructure footprint
 - Transport haul routes
 - Transmission line
 - Survey tracks
 - BAM plot

Figure 6 Plant community types, Page 1

0 1,000 2,000 3,000 4,000
Meters
Scale: 1:100,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56



Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

- Infrastructure footprint
- Transport haul routes
- Transmission line

Plant community type

- 433
- 434
- 486
- 540
- 541
- 599
- Exotic grassland

Figure 6 Plant community types, Page 2

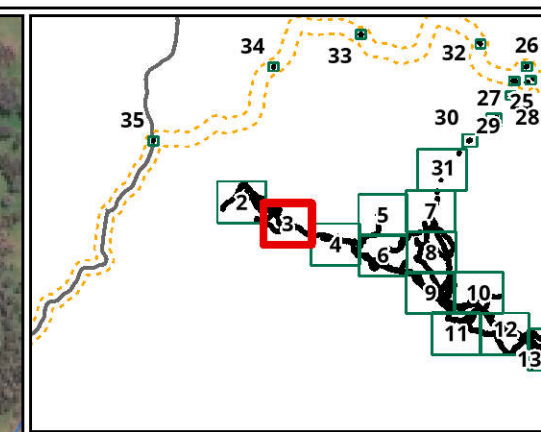
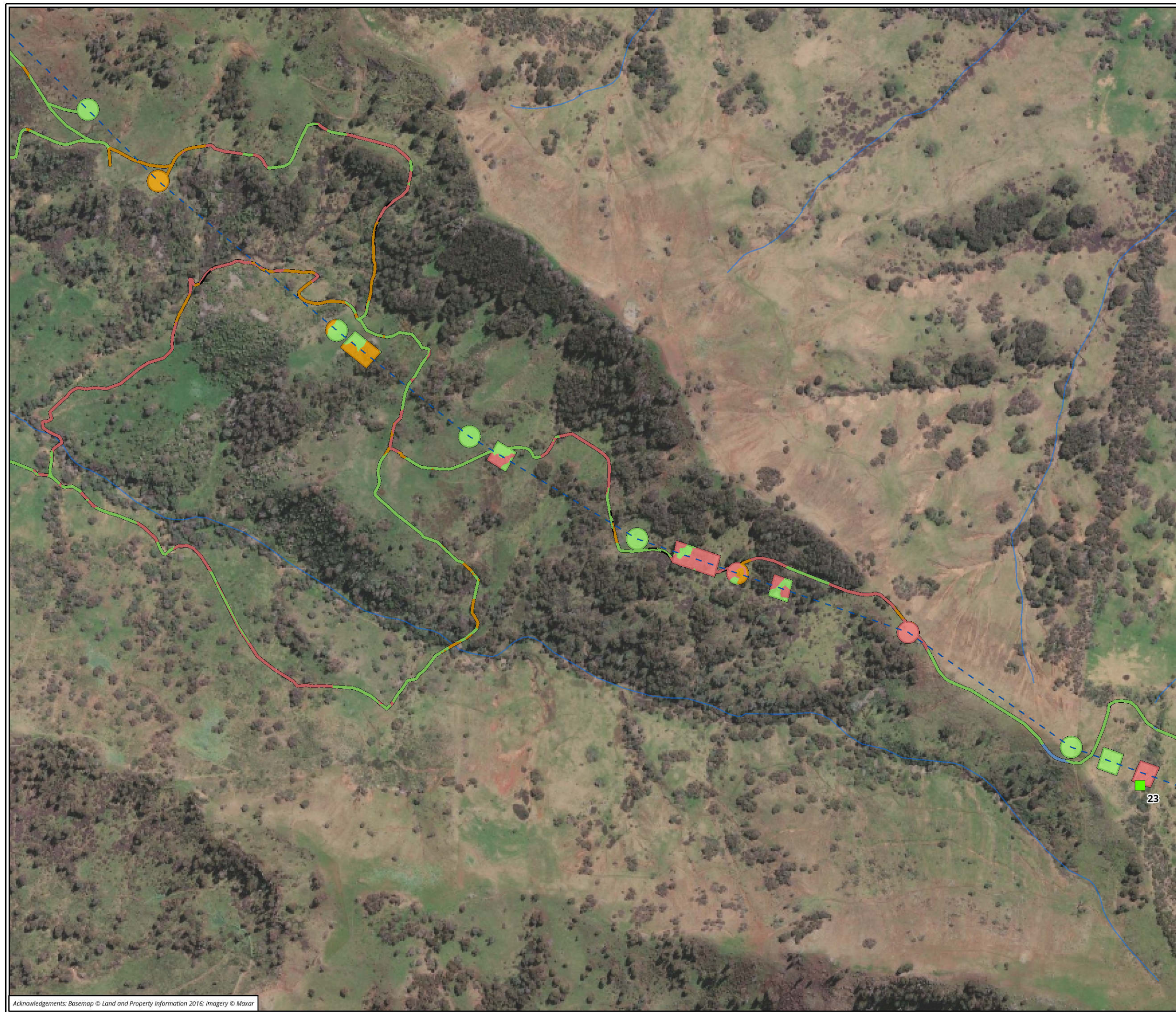
0 125 250 375 500 Meters

Scale: 1:10,000 @ A3

Coordinate System: GDA 1994 MGA Zone 56

biosis

Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

- Infrastructure footprint
- Transport haul routes
- Transmission line
- BAM plot

Plant community type

- 540
- 541
- 599
- Exotic grassland

Figure 6 Plant community types, Page 3

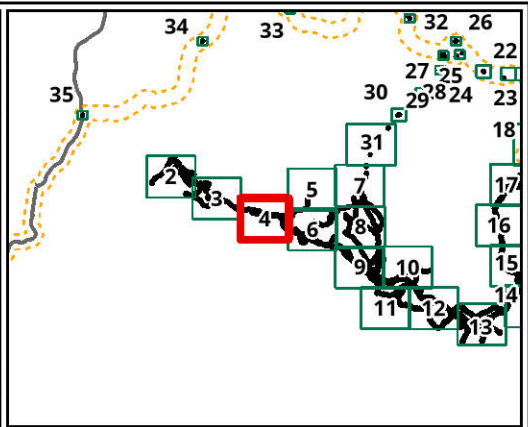
0 125 250 375 500 Meters

Scale: 1:10,000 @ A3

Coordinate System: GDA 1994 MGA Zone 56

biosis

Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

- Infrastructure footprint
- Transport haul routes
- Transmission line
- BAM plot

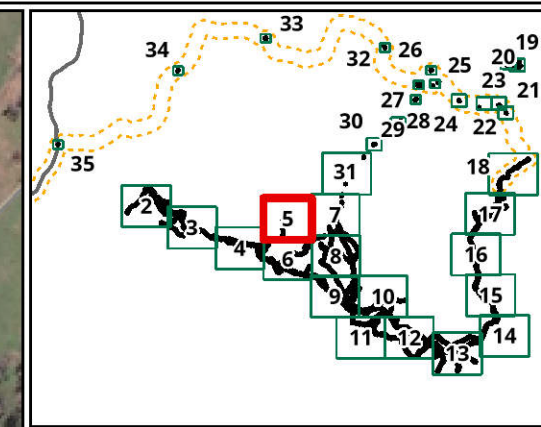
Plant community type

- 486
- 490
- 492
- 540
- 541
- Exotic grassland

Figure 6 Plant community types, Page 4

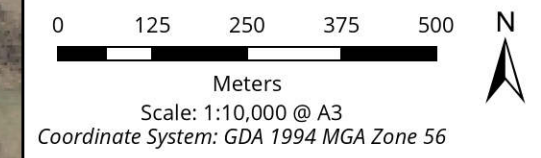
0 125 250 375 500
Meters
Scale: 1:10,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56

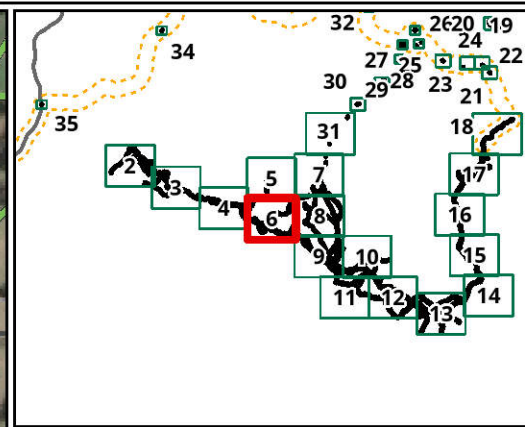
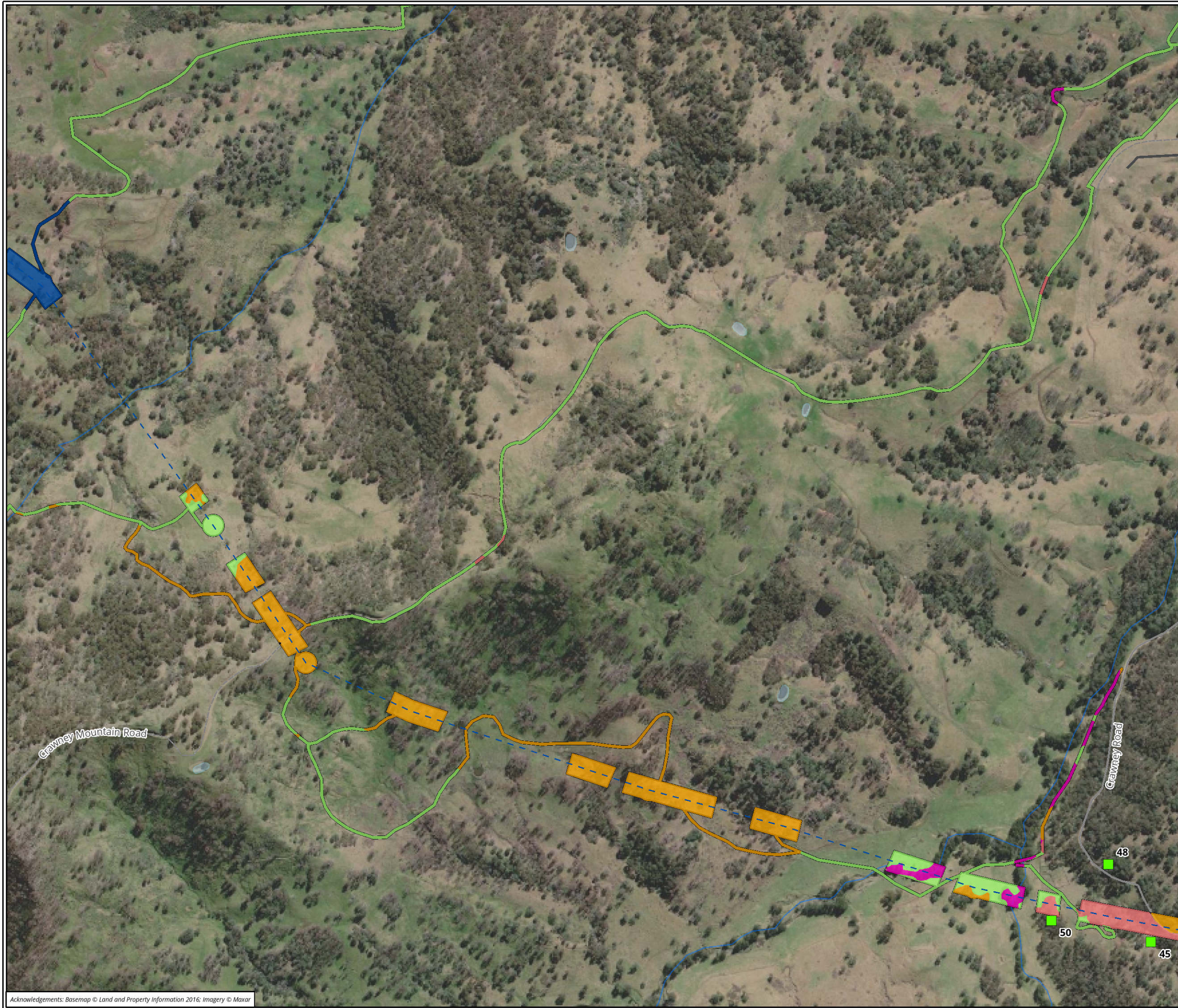

Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



- Legend**
- Infrastructure footprint
 - Transport haul routes
- Plant community type**
- 540
 - Exotic grassland

Figure 6 Plant community types, Page 5





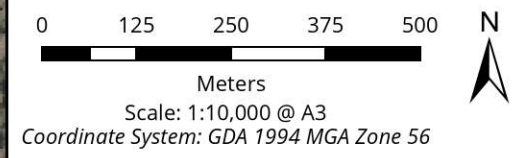
Legend

- Infrastructure footprint
- Transport haul routes
- Transmission line
- BAM plot

Plant community type

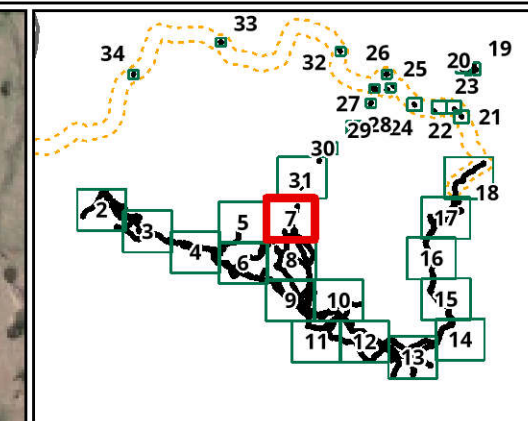
- 486
- 490
- 540
- 541
- Exotic grassland

Figure 6 Plant community types, Page 6



biosis

Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

Infrastructure footprint

Transport haul routes

Plant community type

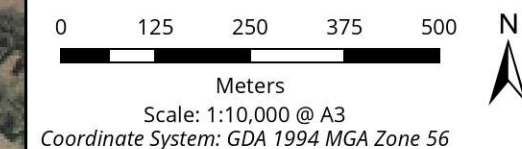
486

541

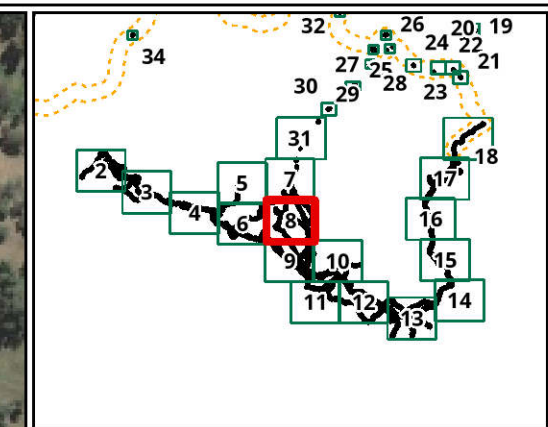
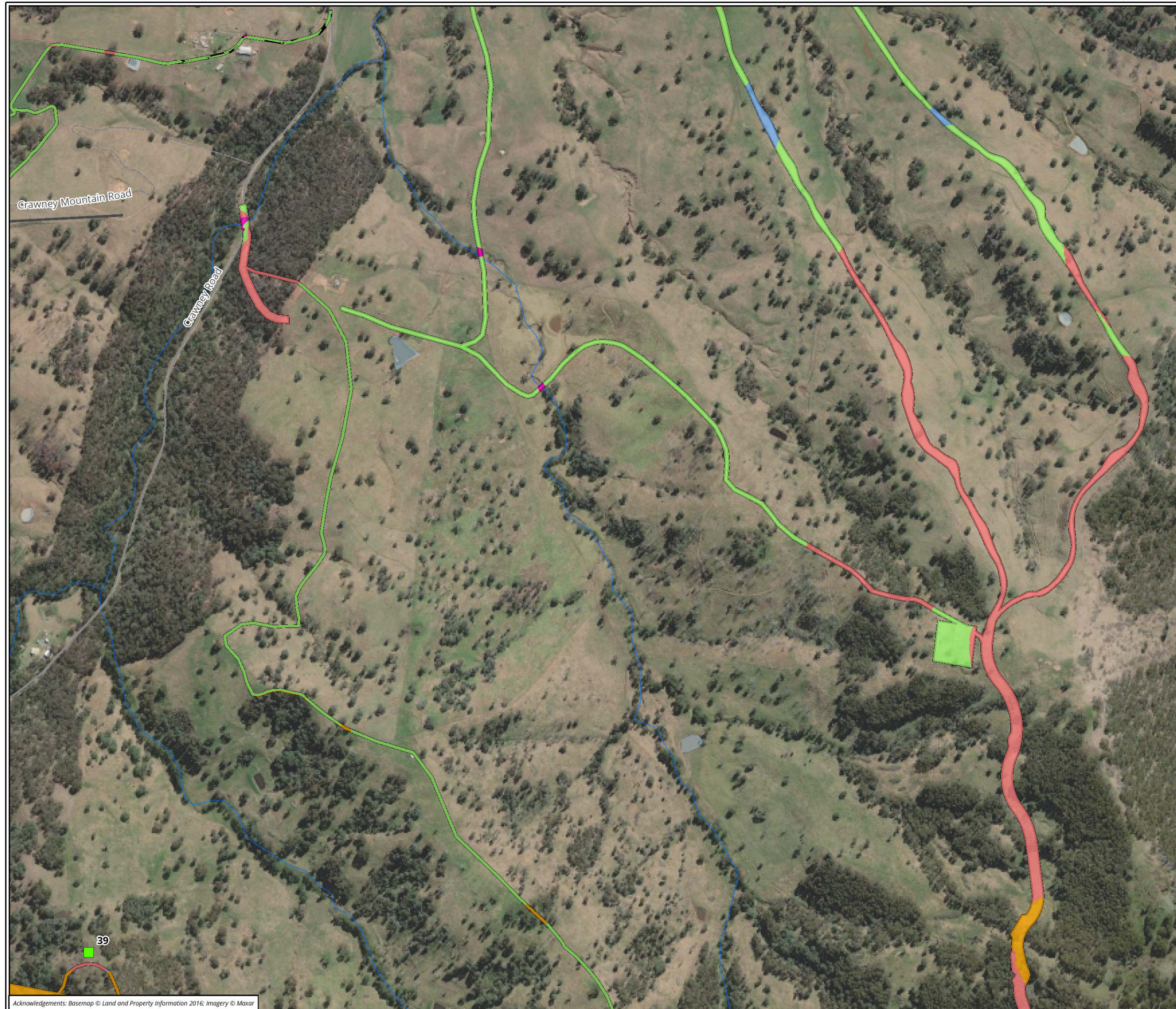
599

Exotic grassland

Figure 6 Plant community types, Page 7



Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

- Infrastructure footprint
- Transport haul routes
- Transmission line
- BAM plot

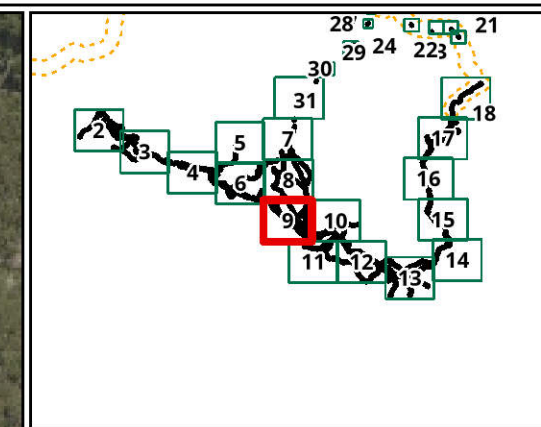
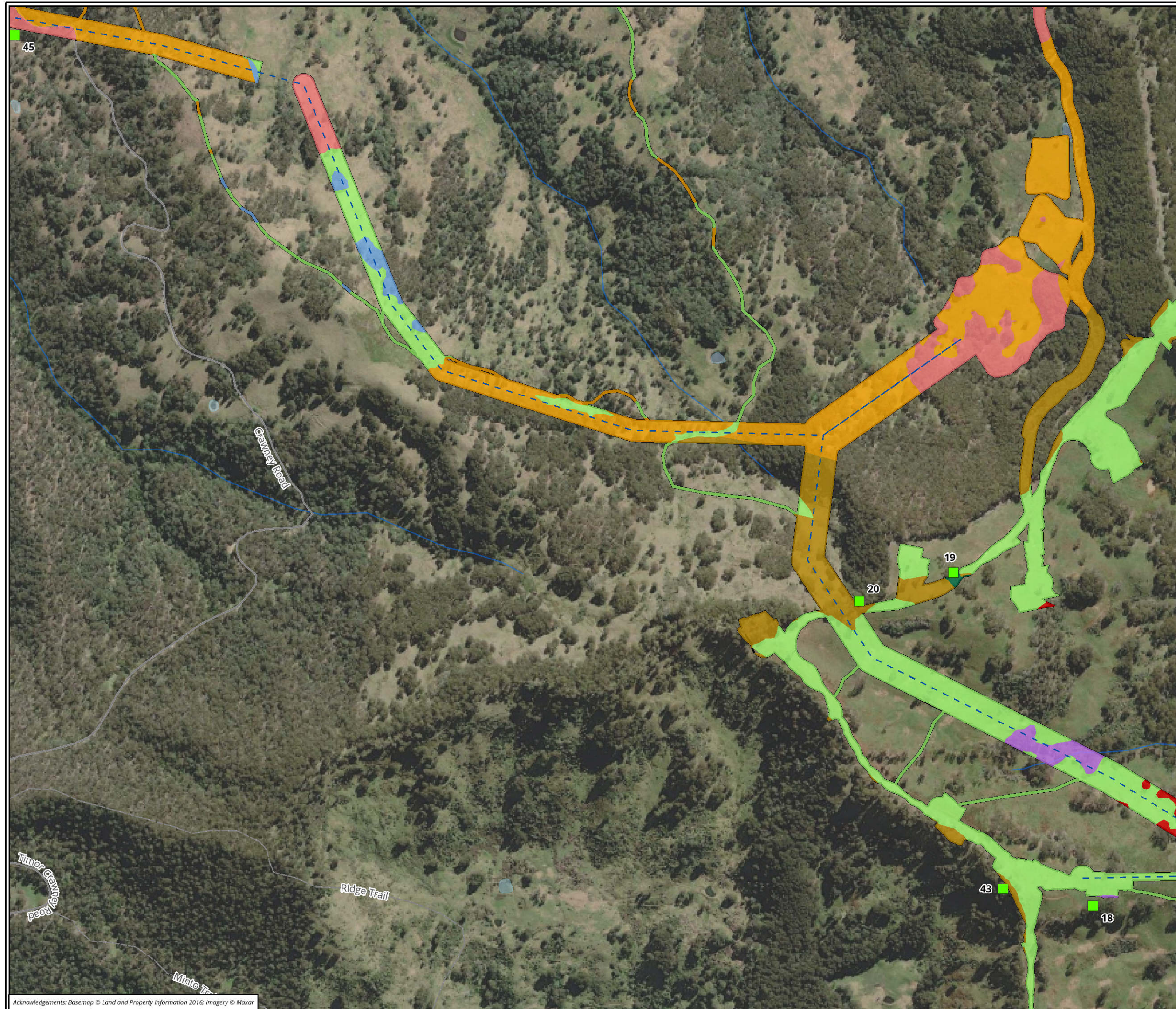
Plant community type

- 486
- 540
- 541
- 599
- Exotic grassland

Figure 6 Plant community types, Page 8

0 125 250 375 500
Meters
Scale: 1:10,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56


Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



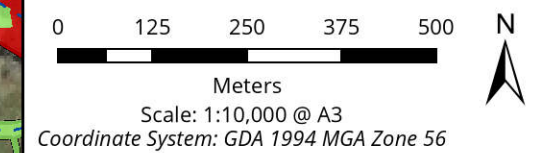
Legend

- Infrastructure footprint
- Transport haul routes
- Transmission line
- BAM plot

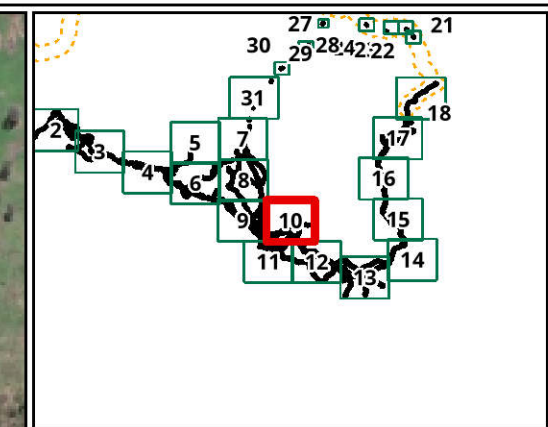
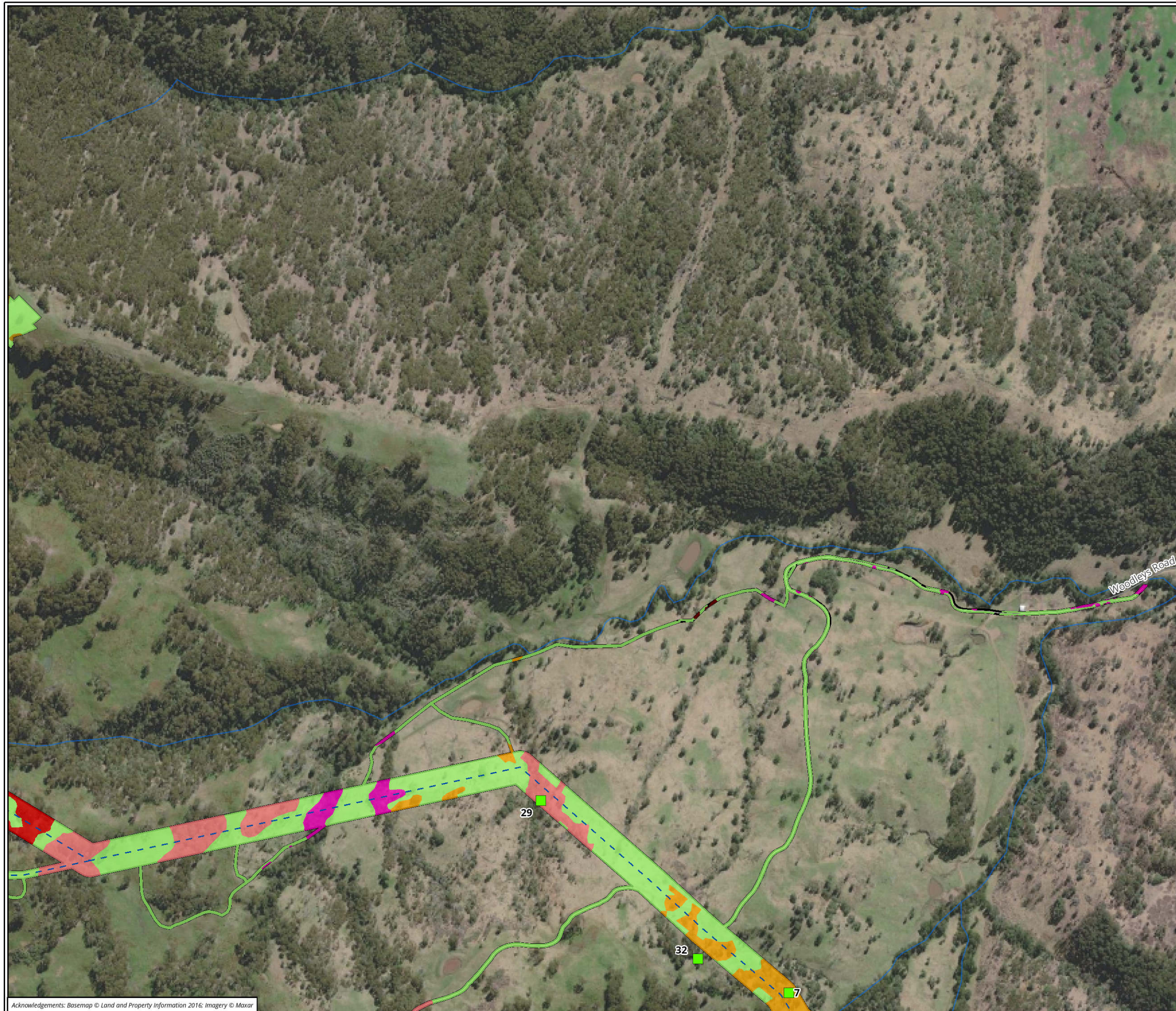
Plant community type

- 507
- 540
- 541
- 599
- 931
- 934
- 1194
- Exotic grassland

Figure 6 Plant community types, Page 9



Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

- Infrastructure footprint
- Transport haul routes
- Transmission line
- BAM plot

Plant community type

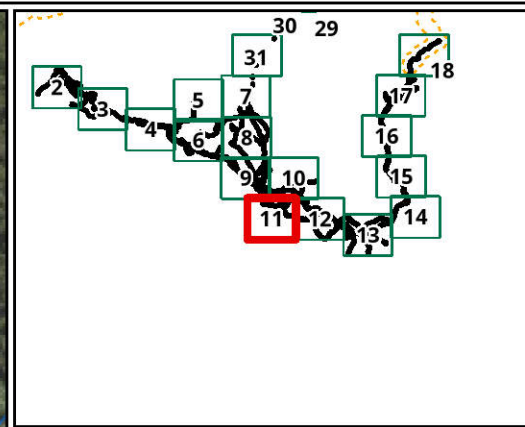
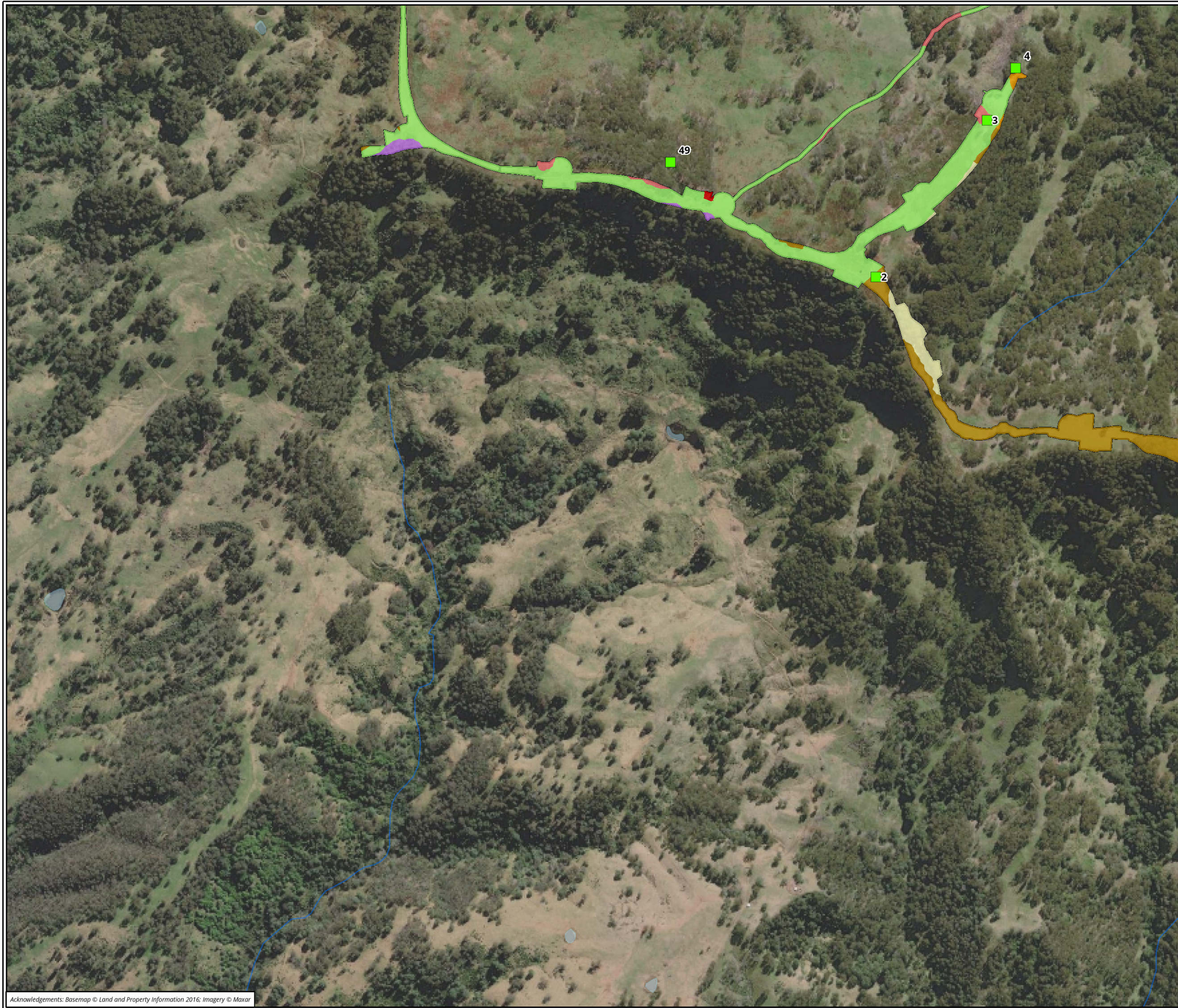
- 486
- 492
- 540
- 541
- 934
- 1194
- Exotic grassland

Figure 6 Plant community types, Page 10

0 125 250 375 500
Meters
Scale: 1:10,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56

biosis

Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



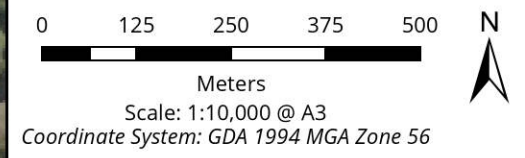
Legend

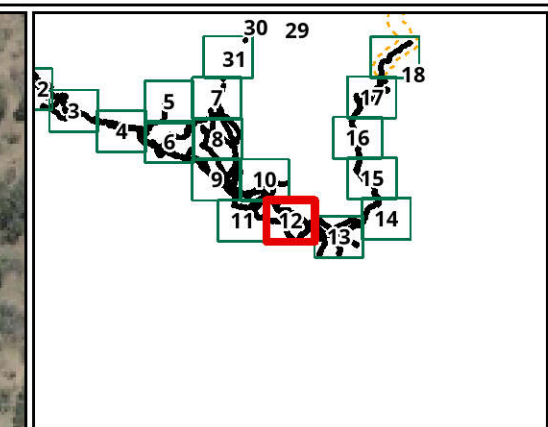
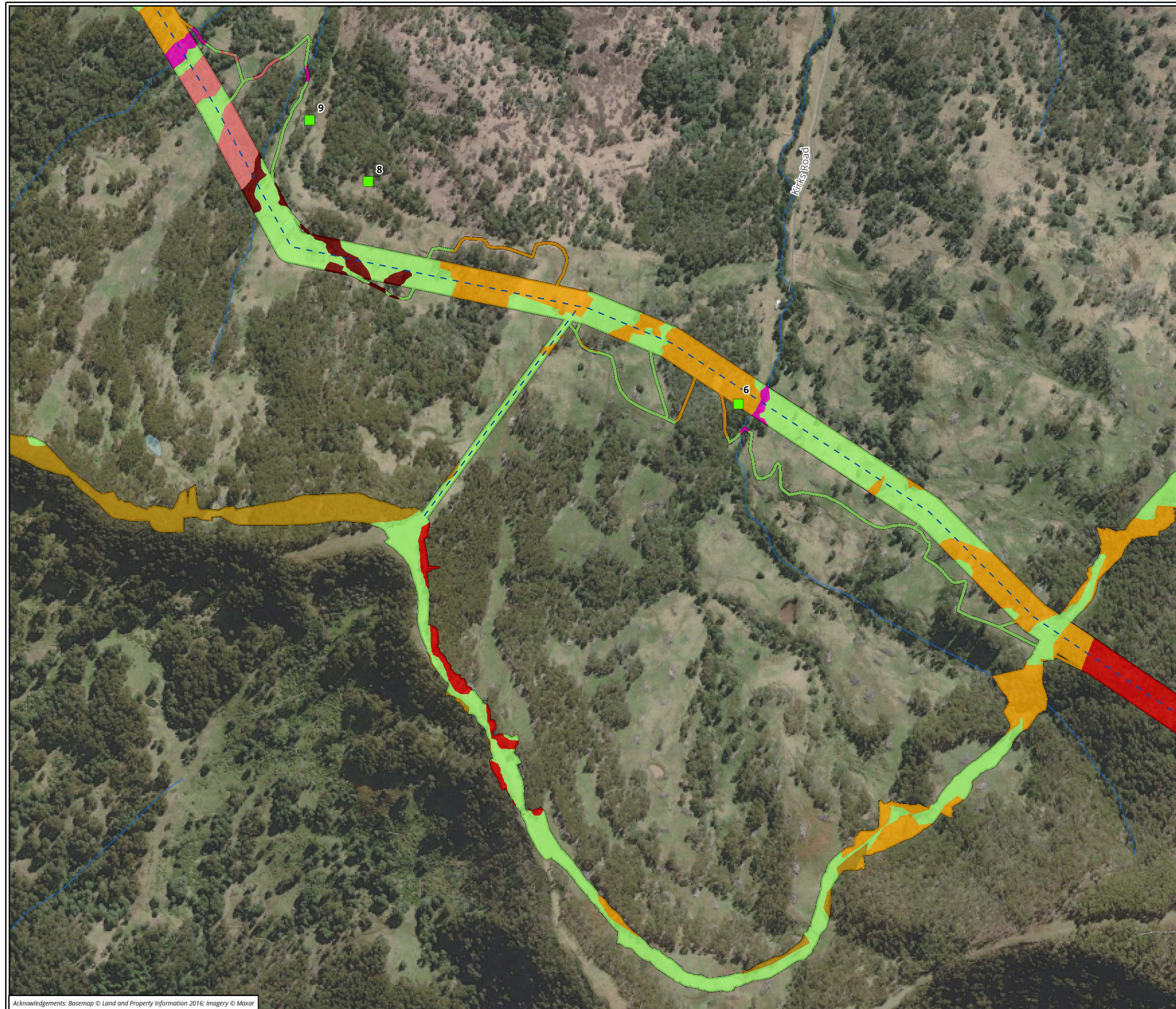
- Infrastructure footprint
- Transport haul routes
- BAM plot

Plant community type

- 540
- 541
- 931
- 934
- 954
- 1194
- Exotic grassland

Figure 6 Plant community types, Page 11





Legend

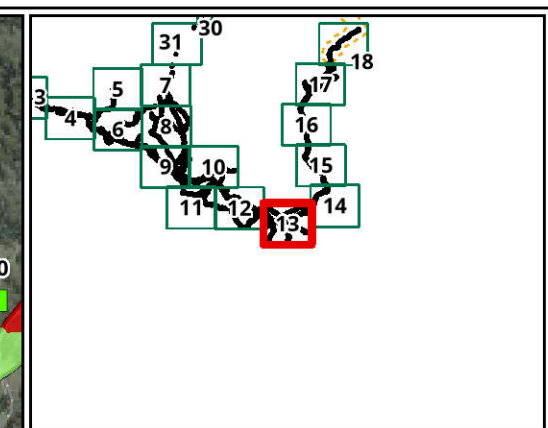
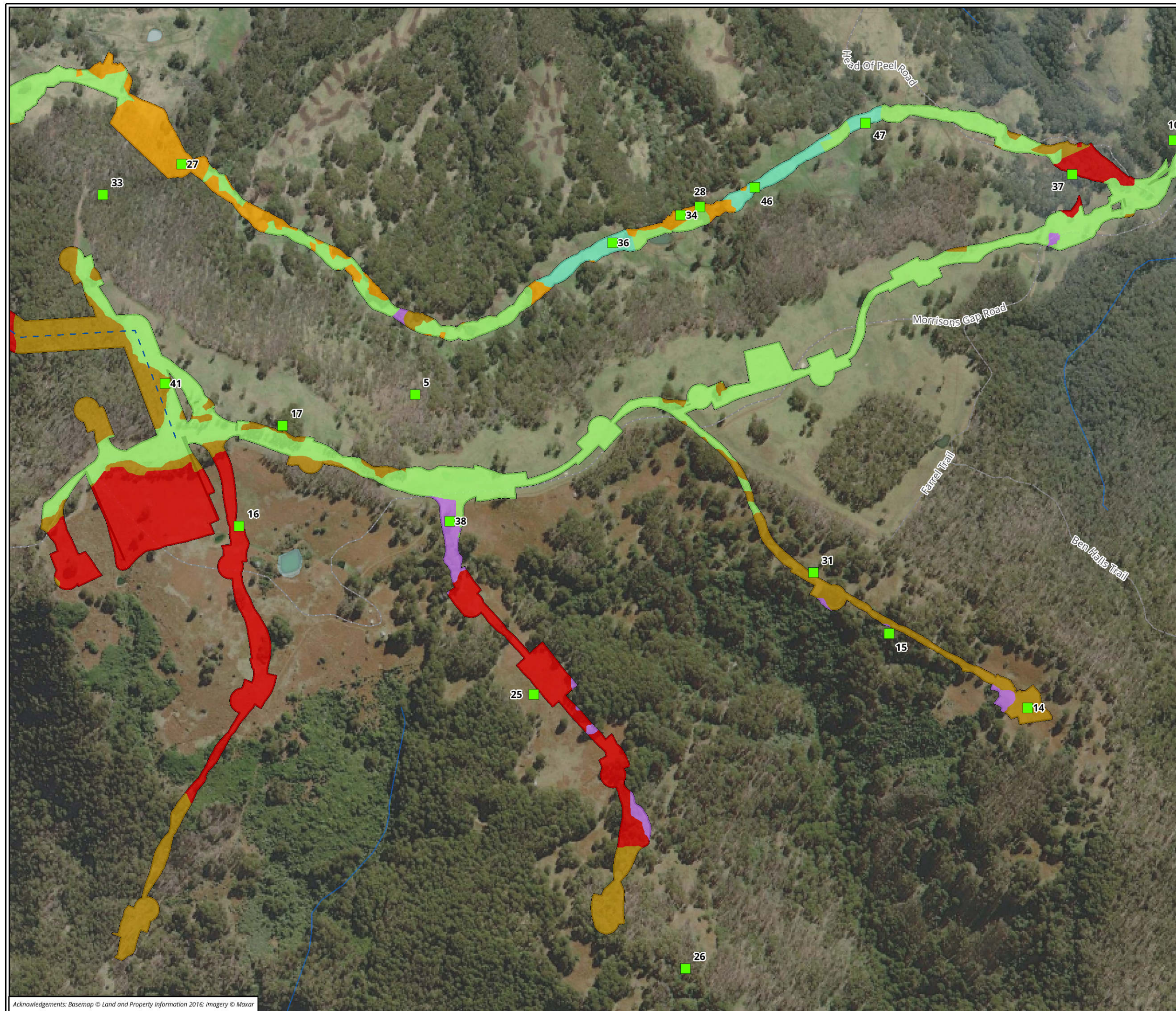
- Infrastructure footprint
- Transport haul routes
- Transmission line
- BAM plot

Plant community type

- 486
- 492
- 540
- 541
- 934
- 1194
- Exotic grassland

Figure 6 Plant community types, Page 12

0 125 250 375 500
Meters
Scale: 1:10,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56



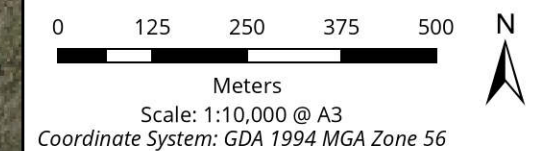
Legend

- Infrastructure footprint
- Transport haul routes
- Transmission line
- BAM plot

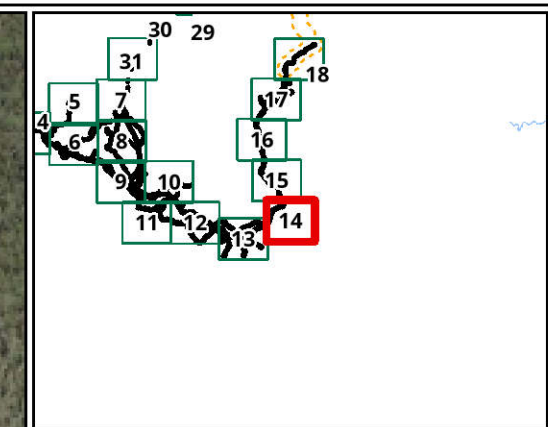
Plant community type

- 526
- 540
- 586
- 931
- 934
- 1194
- Exotic grassland

**Figure 6 Plant community types,
Page 13**



Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

- Infrastructure footprint
- Transport haul routes
- BAM plot

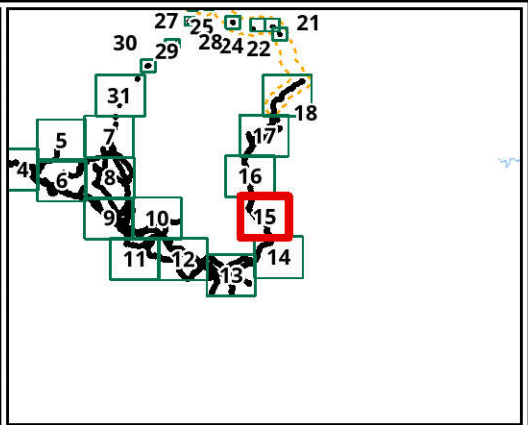
Plant community type

- 934
- 1194
- Exotic grassland

Figure 6 Plant community types, Page 14

0 125 250 375 500
Meters
Scale: 1:10,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56


Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

- Infrastructure footprint
- Transport haul routes
- BAM plot

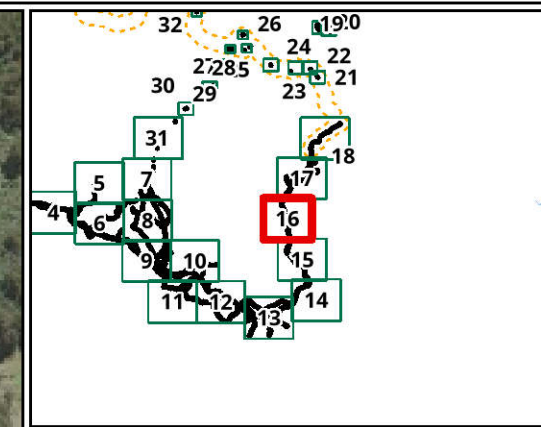
Plant community type

- 1194
- Exotic grassland

Figure 6 Plant community types, Page 15

0 125 250 375 500
Meters
Scale: 1:10,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56


Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

Infrastructure footprint

Transport haul routes

Plant community type

1194

Exotic grassland

Figure 6 Plant community types, Page 16

0 125 250 375 500

Meters

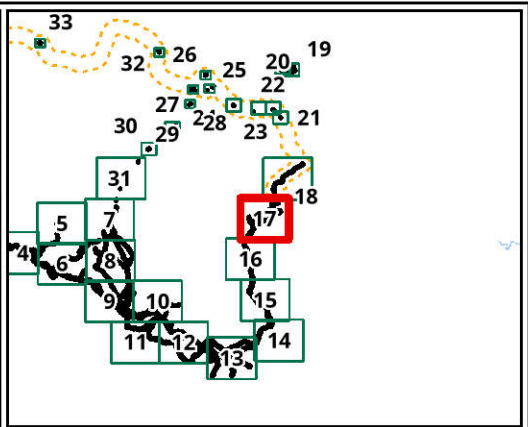
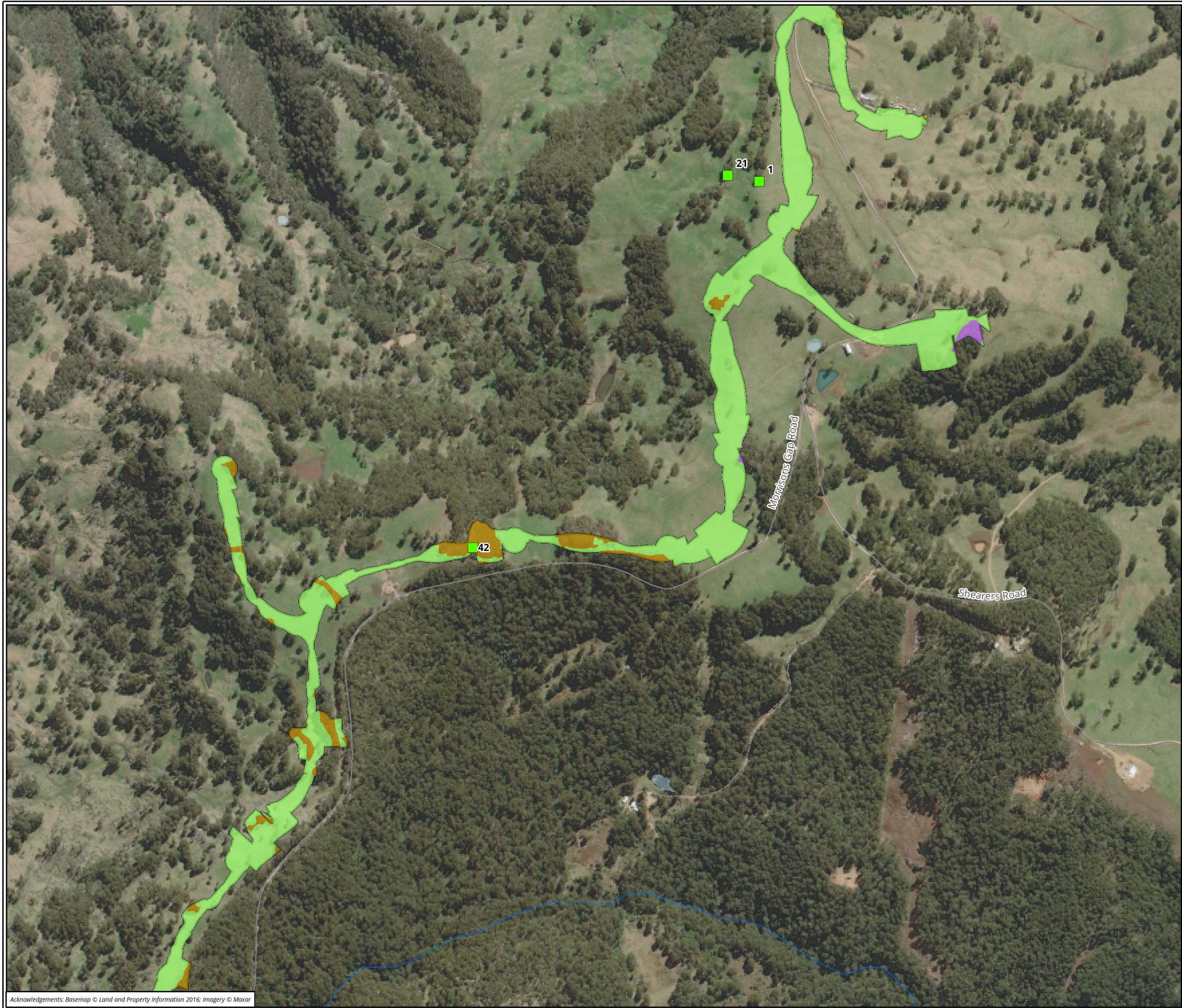
Scale: 1:10,000 @ A3

Coordinate System: GDA 1994 MGA Zone 56

N



Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

- Infrastructure footprint
- Transport haul routes
- BAM plot

Plant community type

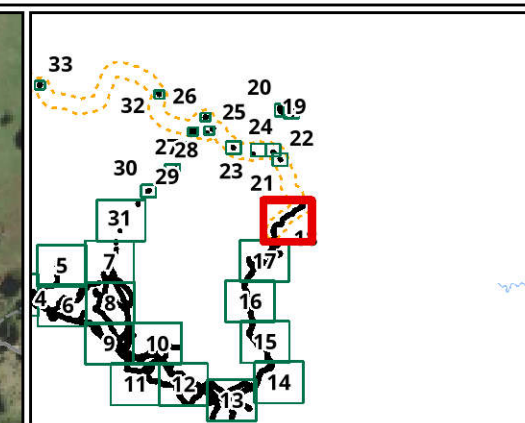
- 931
- 1194
- Exotic grassland

Figure 6 Plant community types, Page 17

0 125 250 375 500
Meters
Scale: 1:10,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56


Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx

Acknowledgements: Basemap © Land and Property Information 2016; Imagery © Maxar



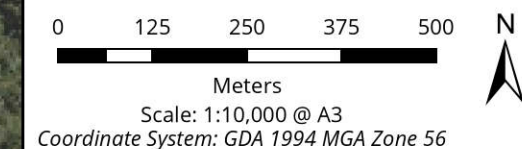
Legend

- Infrastructure footprint
- Transport haul routes
- BAM plot

Plant community type

- 490
- 526
- 931
- 1194
- Urban Native/Exotic
- Exotic grassland

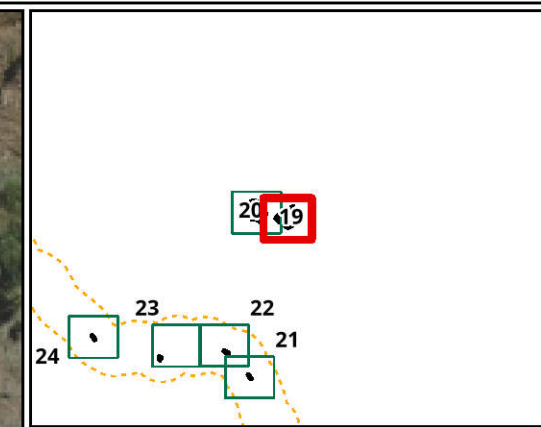
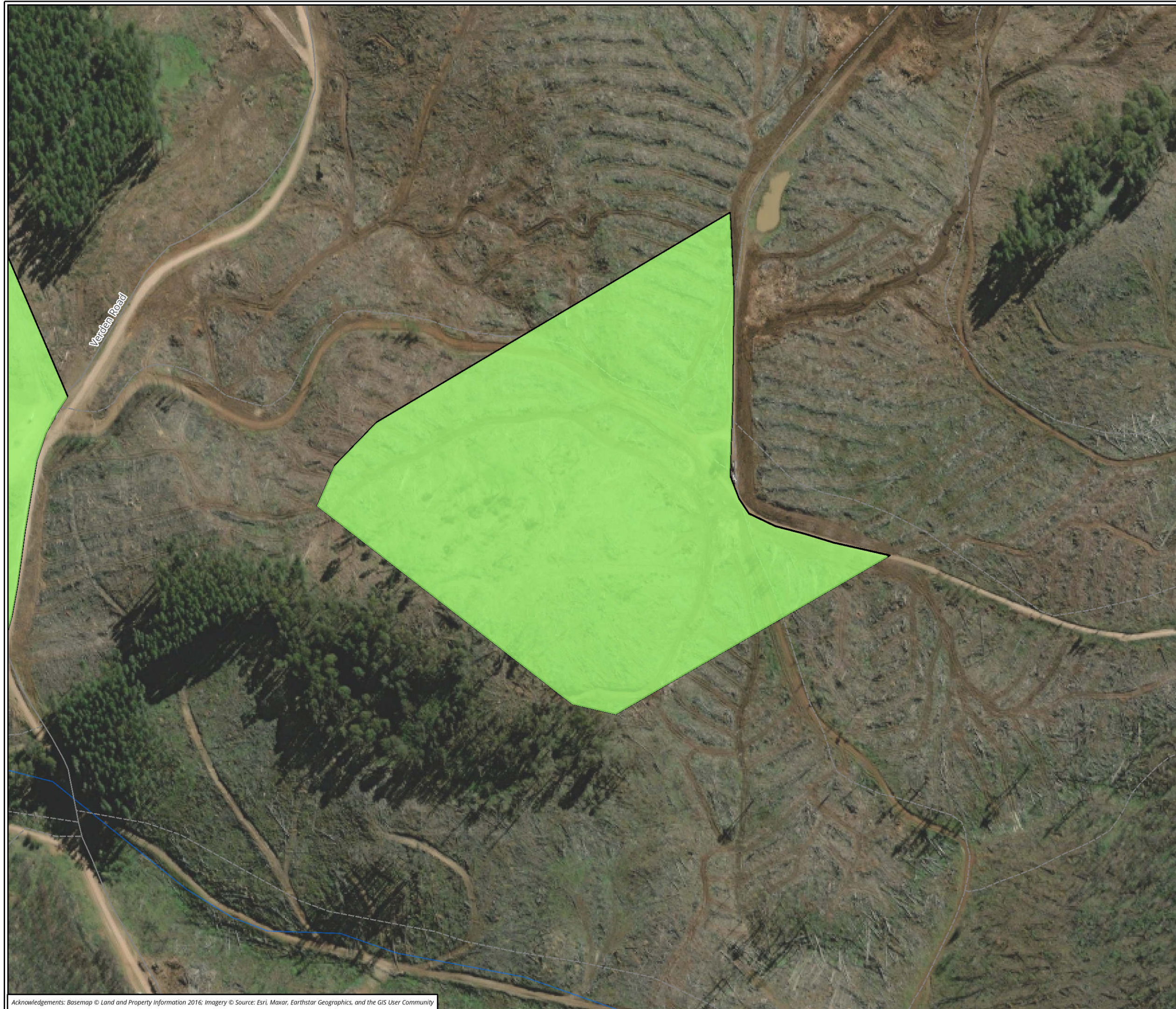
Figure 6 Plant community types, Page 18



Scale: 1:10,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56



Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

Infrastructure footprint

Transport haul routes

Plant community type

Exotic grassland

Figure 6 Plant community types, Page 19

0 30 60 90 120

Meters

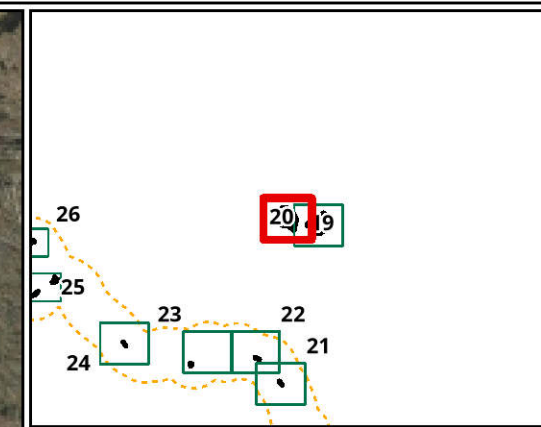
Scale: 1:3,000 @ A3

Coordinate System: GDA 1994 MGA Zone 56

N



Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

Infrastructure footprint

Transport haul routes

Plant community type

Exotic grassland

Figure 6 Plant community types, Page 20

0 30 60 90 120

Meters

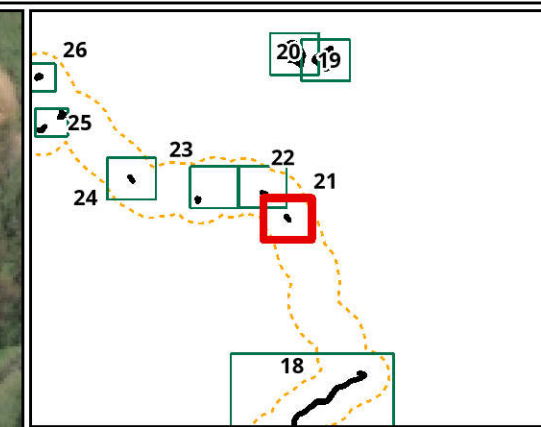
Scale: 1:3,000 @ A3

Coordinate System: GDA 1994 MGA Zone 56

N

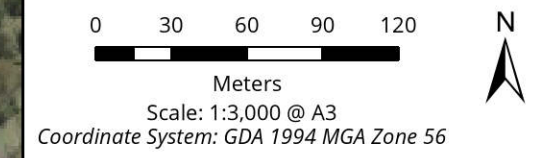


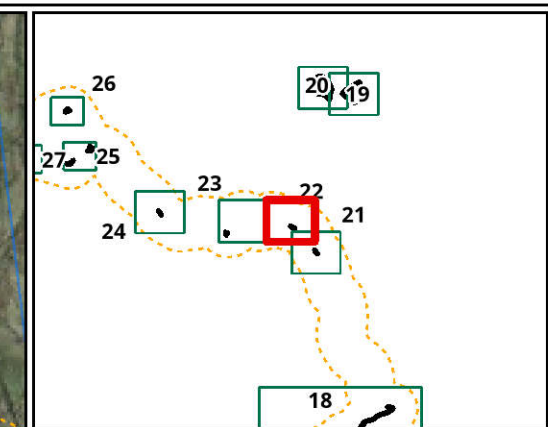
Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



- Legend**
- Infrastructure footprint
 - Transport haul routes
- Plant community type**
- Exotic grassland

Figure 6 Plant community types, Page 21





Legend

Infrastructure footprint

Transport haul routes

Plant community type

492

Figure 6 Plant community types, Page 22

0 30 60 90 120

Meters

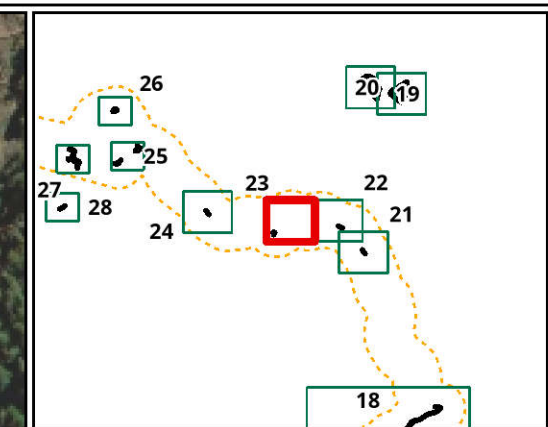
Scale: 1:3,000 @ A3

Coordinate System: GDA 1994 MGA Zone 56

N

 **biosis**

Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

- Infrastructure footprint
- Transport haul routes
- BAM plot

Plant community type

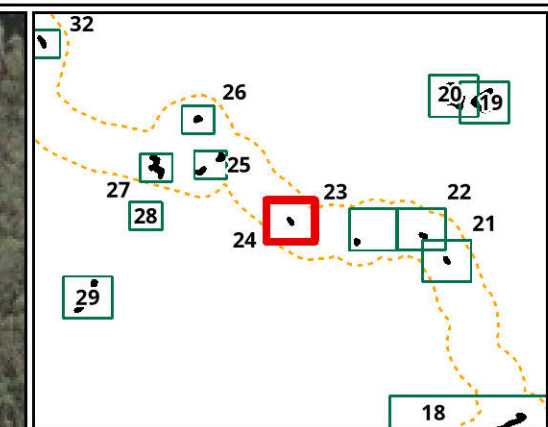
- 492

Figure 6 Plant community types, Page 23

0 30 60 90 120
Meters
Scale: 1:3,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56



Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

Infrastructure footprint

Transport haul routes

Plant community type

Exotic grassland

Figure 6 Plant community types, Page 24

0 30 60 90 120

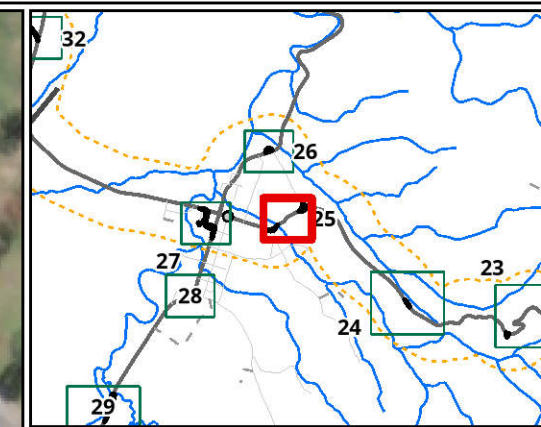
Meters

Scale: 1:3,000 @ A3

Coordinate System: GDA 1994 MGA Zone 56

biosis

Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

Infrastructure footprint

Transport haul routes

Plant community type

599

Exotic grassland

Figure 6 Plant community types, Page 25

0 25 50 75 100

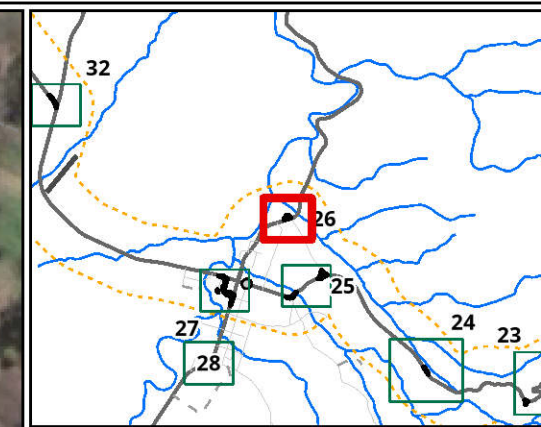
Meters

Scale: 1:2,000 @ A3

Coordinate System: GDA 1994 MGA Zone 56

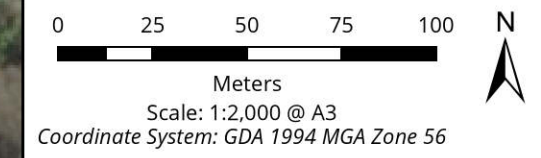
biosis

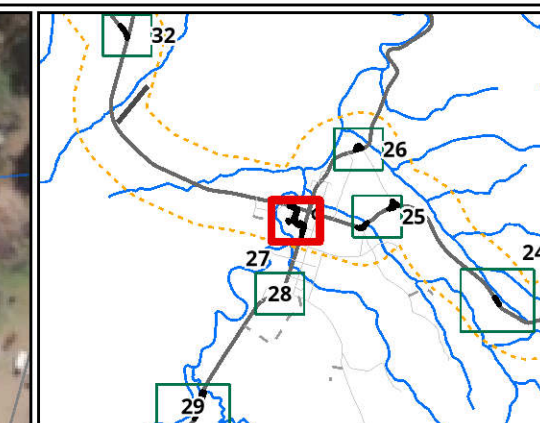
Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



- Legend**
- Infrastructure footprint
 - Transport haul routes
- Plant community type**
- Exotic grassland

Figure 6 Plant community types, Page 26





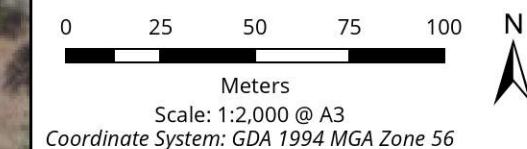
Legend

- Infrastructure footprint
- Transport haul routes

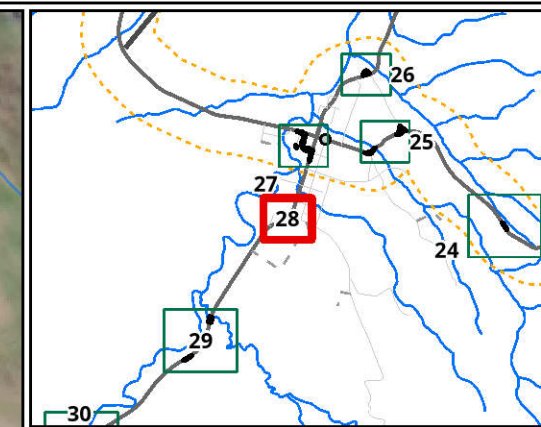
Plant community type

- Urban Native/Exotic
- Exotic grassland

**Figure 6 Plant community types,
Page 27**

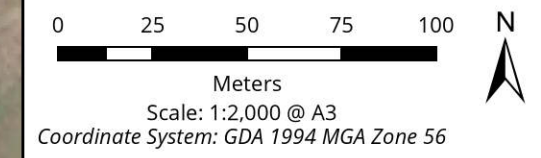


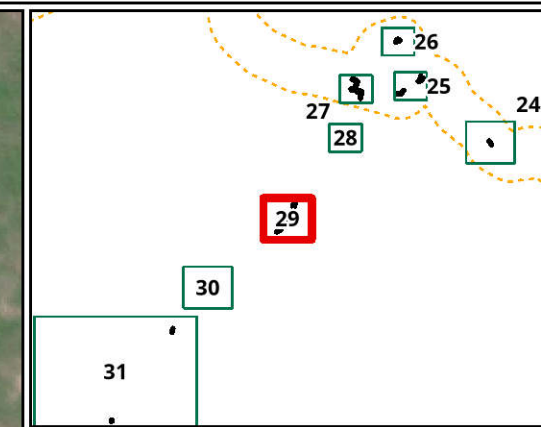
Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



- Legend**
- Infrastructure footprint
 - Transport haul routes
- Plant community type**
- Exotic grassland

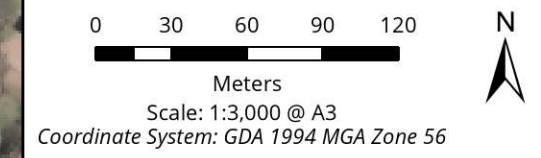
Figure 6 Plant community types, Page 28

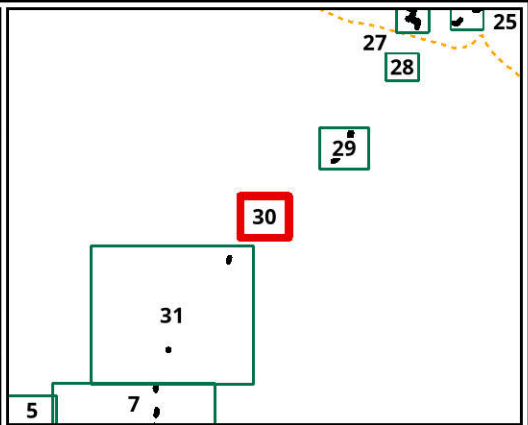




- Legend**
- Infrastructure footprint
 - Transport haul routes
- Plant community type**
- 486
 - 599
 - Exotic grassland

Figure 6 Plant community types, Page 29





Legend

Infrastructure footprint

Transport haul routes

Plant community type

486

Exotic grassland

Figure 6 Plant community types, Page 30

0 30 60 90 120

Meters

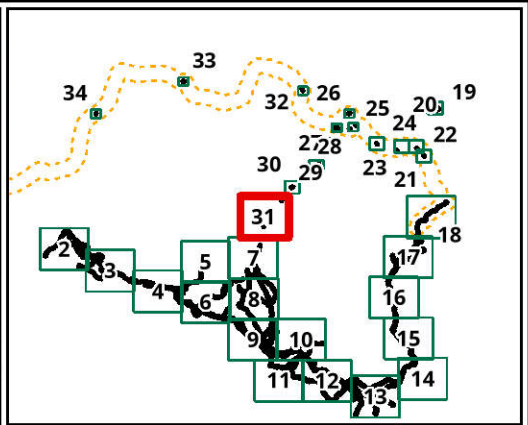
Scale: 1:3,000 @ A3

Coordinate System: GDA 1994 MGA Zone 56

N



Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

Infrastructure footprint

Transport haul routes

Plant community type

486

Exotic grassland

Figure 6 Plant community types, Page 31

0 125 250 375 500

Meters

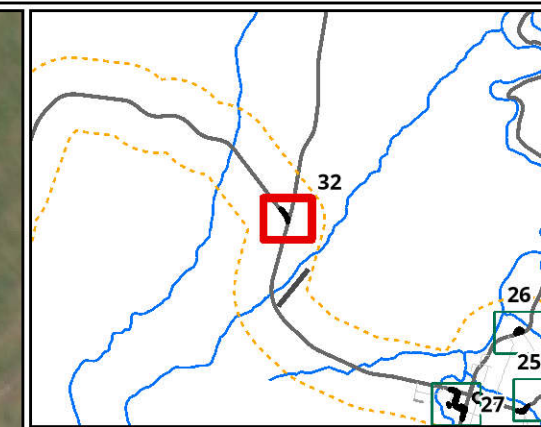
Scale: 1:10,000 @ A3

Coordinate System: GDA 1994 MGA Zone 56

N

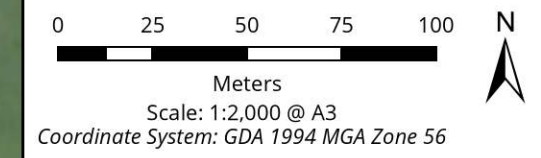
 **biosis**

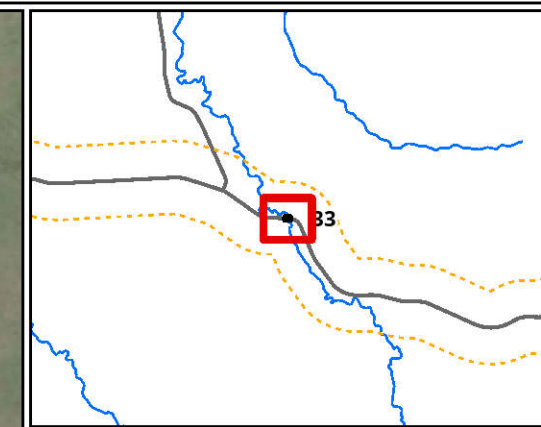
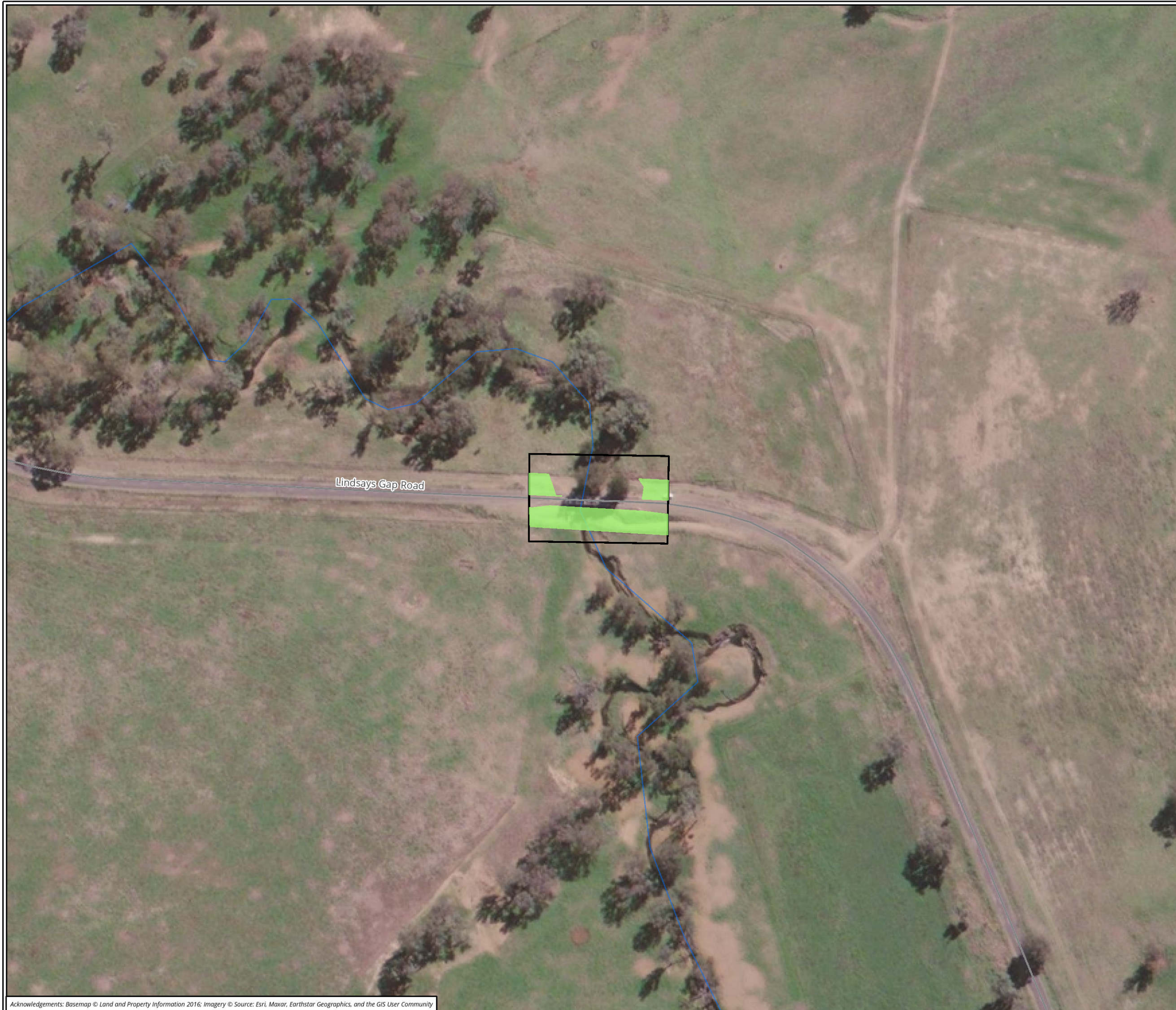
Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



- Legend**
- Infrastructure footprint
 - Transport haul routes
- Plant community type**
- Exotic grassland

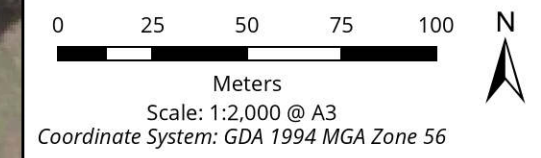
Figure 6 Plant community types, Page 32

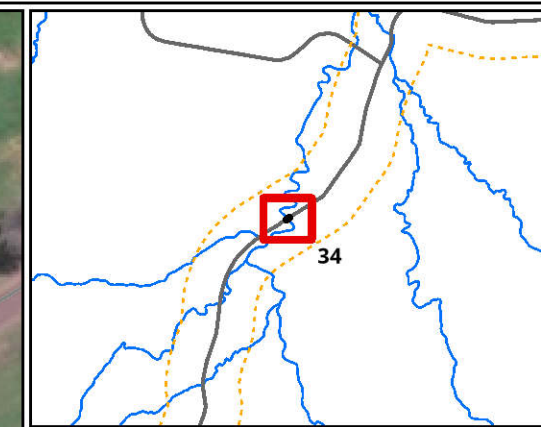




- Legend**
- Infrastructure footprint
 - Transport haul routes
 - Plant community type**
 - Exotic grassland

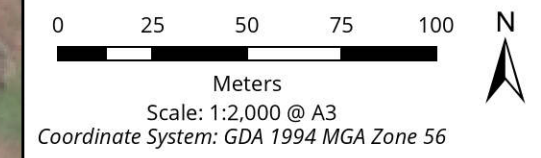
Figure 6 Plant community types, Page 33

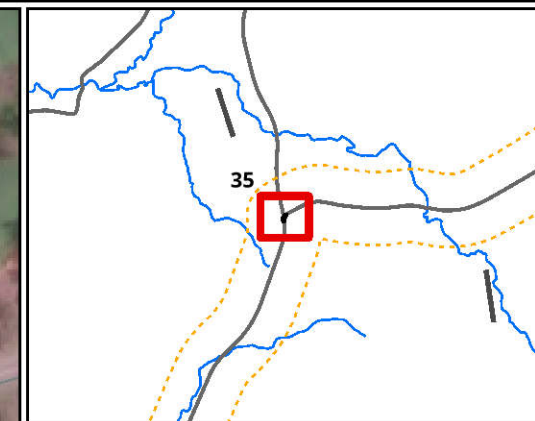




- Legend**
- Infrastructure footprint
 - Transport haul routes
- Plant community type**
- Exotic grassland

Figure 6 Plant community types, Page 34





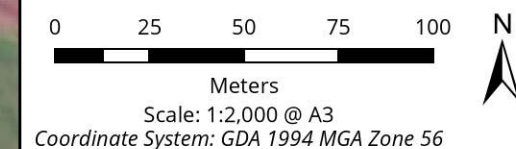
Legend

- Infrastructure footprint
- Transport haul routes

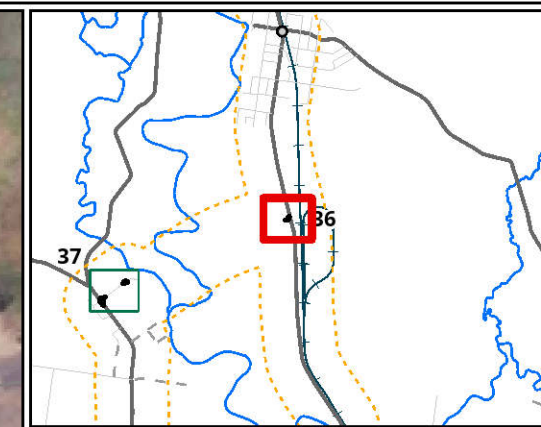
Plant community type

- 433
- Exotic grassland

Figure 6 Plant community types, Page 35

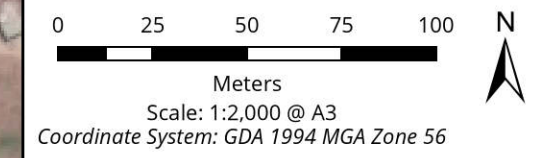


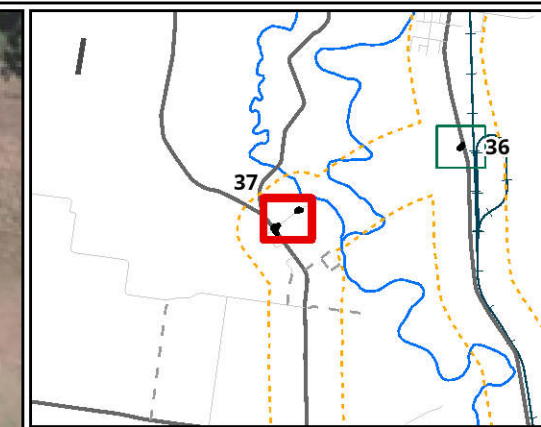
Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



- Legend**
- Infrastructure footprint
 - Transport haul routes
- Plant community type**
- Exotic grassland

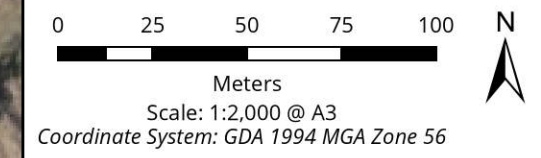
Figure 6 Plant community types, Page 36

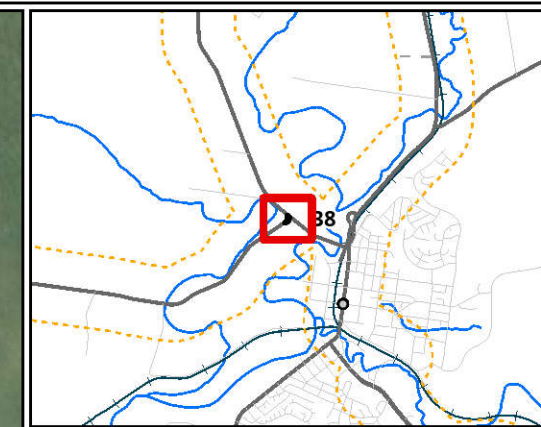




- Legend**
- Infrastructure footprint
 - Transport haul routes
 - Plant community type**
 - Exotic grassland

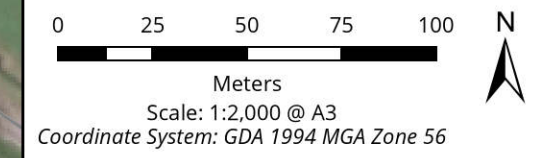
Figure 6 Plant community types, Page 37

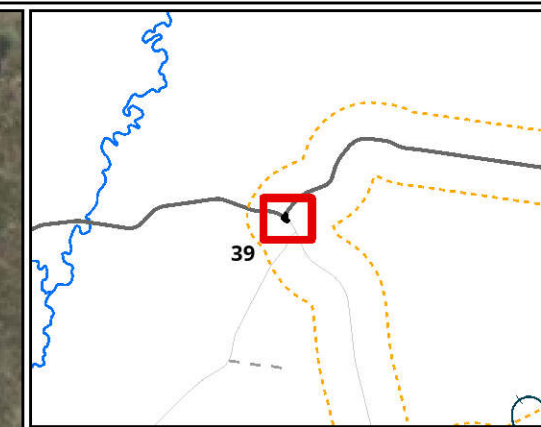




- Legend**
- Infrastructure footprint
 - Transport haul routes
- Plant community type**
- Exotic grassland

Figure 6 Plant community types, Page 38





Legend

Infrastructure footprint

Transport haul routes

Plant community type

1604

Exotic grassland

Figure 6 Plant community types, Page 39

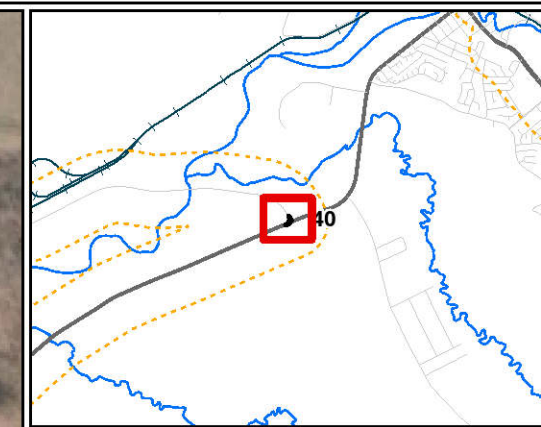
0 25 50 75 100 Meters

Scale: 1:2,000 @ A3

Coordinate System: GDA 1994 MGA Zone 56



Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

Infrastructure footprint

Transport haul routes

Plant community type

1691

Urban Native/Exotic

Exotic grassland

Figure 6 Plant community types, Page 40

0 25 50 75 100

Meters

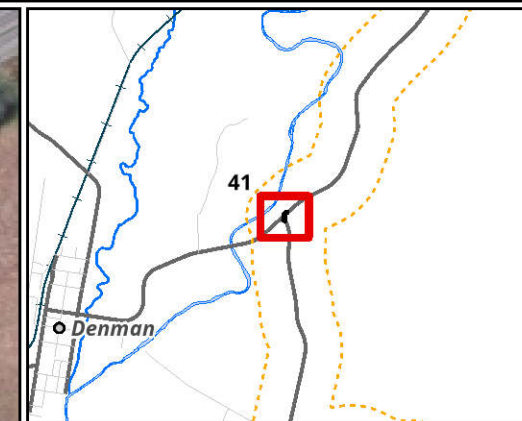
Scale: 1:2,000 @ A3

Coordinate System: GDA 1994 MGA Zone 56

N

biosis

Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

Infrastructure footprint

Transport haul routes

Plant community type

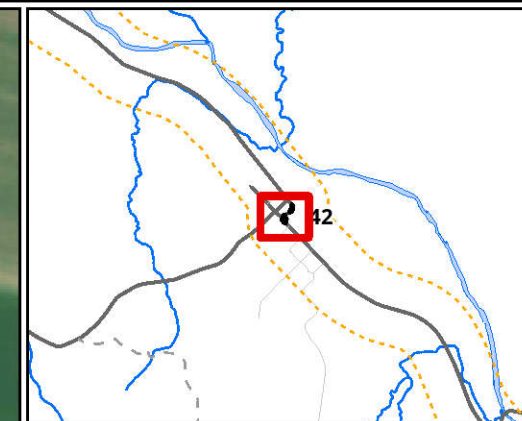
Exotic grassland

Figure 6 Plant community types, Page 41

0 25 50 75 100
Meters
Scale: 1:2,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56



Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



Legend

- Infrastructure footprint
- Transport haul routes

Plant community type

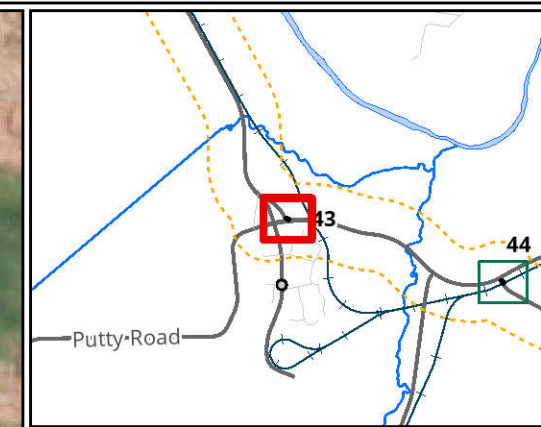
- Urban Native/Exotic
- Exotic grassland

Figure 6 Plant community types, Page 42

0 25 50 75 100
Meters
Scale: 1:2,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56

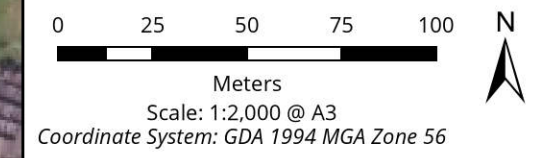


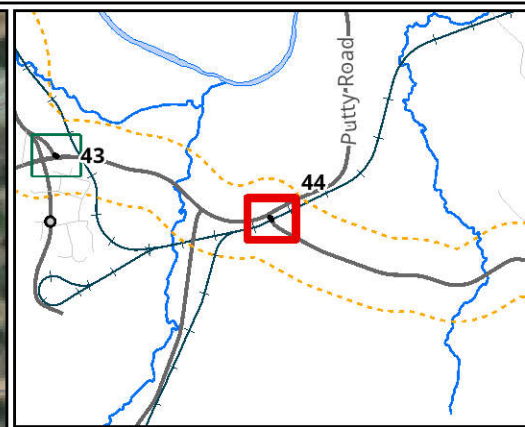
Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx



- Legend**
- Infrastructure footprint
 - Transport haul routes
 - Plant community type**
 - Exotic grassland

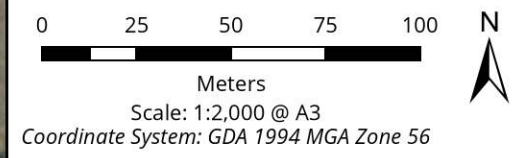
Figure 6 Plant community types, Page 43

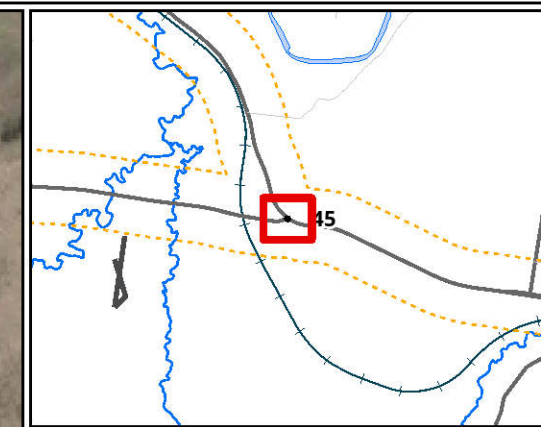




- Legend**
- Infrastructure footprint
 - Transport haul routes
- Plant community type**
- Exotic grassland

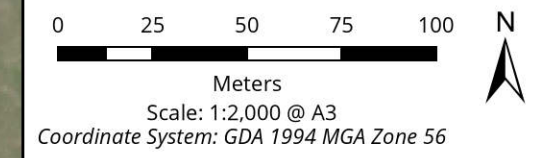
Figure 6 Plant community types, Page 44

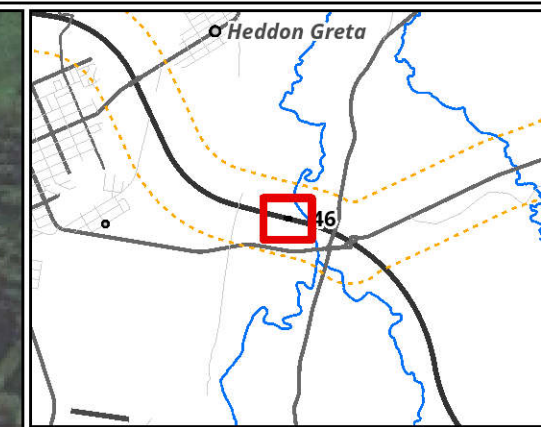




- Legend**
- Infrastructure footprint
 - Transport haul routes
 - Plant community type**
 - Exotic grassland

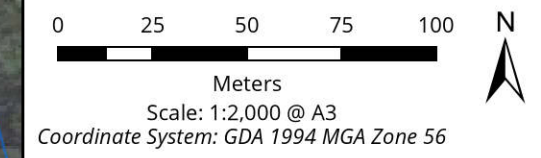
Figure 6 Plant community types, Page 45

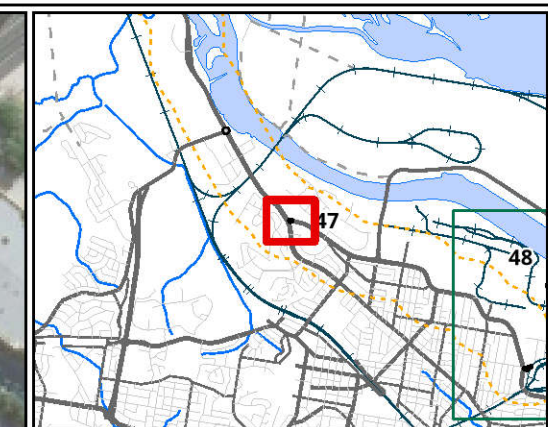




- Legend**
- Infrastructure footprint
 - Transport haul routes

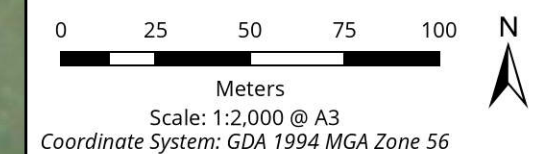
Figure 6 Plant community types, Page 46





- Legend**
- Infrastructure footprint
 - Transport haul routes

Figure 6 Plant community types, Page 47



Matter: 34963,
Date: 21 October 2022 ,
Prepared for: CW, Prepared by: LH, Last edited by: amackegard
Layout: 34963_F6_PCT
Project: P:\34900s\34963\Mapping\34963_ArcGISPro\34963_BDAR\34963_HoG_BDAR_LH.aprx