Property Development Plan: Unzoned land clearing application

This Property Development Plan is designed to help you address section 46(3) of the *Planning Act 1999*, and when completed, it is to be submitted online at www.ntlis.nt.gov.au/planning and the correct fee paid. Call 08 8999 6046 for assistance.

In addition to this application template, maps and spatial data are required for assessment; spatial data should be emailed in a zipped folder to landclearing.DEPWS@nt.gov.au.

Primary contact

Division/Department	Contact details
Land Development Coordination, Department of Environment Parks and Water Security	Phone: 08 8999 3631 (Darwin) Email: landclearing.DEPWS@nt.gov.au

Secondary contacts

Division/Department	Contact details
Aboriginal Areas Protection Authority (AAPA)	Phone: 08 8999 4365 (Darwin) Phone: 08 8951 5023 (Alice Springs) Email: enquiries.aapa@nt.gov.au
Flora and Fauna Division, DEPWS	Phone: 08 8995 5000 (Darwin)
Heritage Branch, Department of Territory Families, Housing and Communities (DTFHC) – Darwin office	Phone: 08 8999 5039 (Darwin) Phone: 08 8951 9247 (Alice Springs)
Water Resources Division (DEPWS)	Phone: 08 8999 4613 (Darwin)
Weed Management Branch (DEPWS)	Phone: 08 8999 4567 (Darwin) Phone: 08 8973 8857 (Katherine) Phone: 08 8962 4314 (Tennant Creek) Phone: 08 8951 9210 (Alice Springs)

Checklist of environmental considerations

Please utilise your pre lodgement meeting to determine which considerations are necessary for you address before your application can be lodged.

Environmental considerations	Type	LCG section	Considered	Document attached
Land and vegetation resource assessment	Land type map	4.2.6 *	Y	Y
	Land capability assessment	4.2.7 *	Y	Y
	Land suitability assessment	4.2.8	-	-
Land resource management	Erosion risk	4.3.2 *	Y	Y
	Property boundary buffers	4.3.3 *	Y	Y
	Land management buffers	4.3.4	Y	-
Biodiversity	Biodiversity risk assessment	4.4.3	Y	-
	Threatened and significant species	4.4.4 *	Y	Y
	Conservation areas, natural land features and regional biodiversity (includes regional significance)	4.4.5 *	Y	Y
	Sensitive or significant vegetation types	4.4.6 *	Y	Y
	Riparian areas	4.4.7 *	Y	-
	Wetlands and Groundwater Dependent Ecosystems (GDEs)	4.4.8 *	Y	-
	Sinkholes	4.4.9 *	Y	Y
	Wildlife corridors	4.4.10 *	Y	Y
Water	Water assessment	4.5 *	Y	-
Weeds	Weed assessment	4.6	Y	Y
Cultural Heritage	–	4.7	Y	Y

* This field is mandatory and an application will not be accepted unless this field has been adequately addressed.

1 Proposal, merits and assets

1.1 Parcel details

Address	Details
Location identifier (e.g. NT Portion, Lot or Section):	NT Portion
Parcel number:	2255
Tenure of parcel (e.g. Freehold, crown lease):	Crown Lease in Perpetuity
Property name (if applicable):	-
Size of parcel (ha):	7,9022 ha
Total existing cleared area (ha):	70.14 ha

1.2 Pre lodgement meeting

A pre-lodgement consultation with the Department of Environment Parks and Water Security (DEPWS) is strongly recommended; however, is not required.

Enter the date, DEPWScontact name and any issues raised at the pre-lodgement meeting.
This application document is the second version of the application PA2024/0002. It follows advice from Flora and Fauna Division regarding mitigation of risks to threatened species (refer to Section 5.3 of this application for further information).

1.3 Proposal

Area (polygon) name (paddock or nominated number ID)	Intended use (e.g. specify crops or pasture species to be planted. Will pastures be grazed or used for hay production?)	Proposed area (ha)
MAG-1	Non-irrigated improved pasture for hay and grazing (Jarra finger grass)	371.6
MAG-2	Non-irrigated improved pasture for hay and grazing (Jarra finger grass)	102.5
MAG-3	Non-irrigated improved pasture for hay and grazing (Jarra finger grass)	47.6
GOV-1	Non-irrigated improved pasture for hay and grazing (Jarra finger grass)	101

Area (polygon) name (paddock or nominated number ID)	Intended use (e.g. specify crops or pasture species to be planted. Will pastures be grazed or used for hay production?)	Proposed area (ha)
GOV-2	Non-irrigated improved pasture for hay and grazing (Jarra finger grass)	360.9
ACCESS TRACK 1	Access track	0.2
ACCESS TRACK 2	Access track	0.2
ACCESS TRACK 3	Access track	0.2
	Total	**984.2 ha**

Attach: any relevant information about the intended use. For example, pasture or crop requirements such as preferred soils, fertiliser and/or insecticide requirements and management advice. **ATTACHMENT 2** **Yes** / **No**

1.4 Clearing plan

The clearing plan is a scaled map showing the location of the proposed clearing areas (polygons) identified in the above table, In addition to a clearing plan map, spatial data is required. For more information refer to section 5 of the Land Clearing Guidelines and the unzoned clearing spatial data requirements fact sheet.

1. **Attach:** Clearing plan map. **Yes** / **No**
2. **Attach:** Clearing plan spatial data. **Yes** / **No**

1.5 Previously cleared areas

Have any of the proposed clearing areas (polygons) been previously cleared? **Yes** / **No**

- Yes – provide details below.
- No – Go to section 1.6.

Area (polygon) name	Land use	Permit details	Year cleared	Maintained (y/n)	Area (ha)
				Total	

Attach: Map showing the location of previous clearing within the property. **Yes / No**

1.6 Total clearing on the property

Calculate the total native vegetation clearing which has occurred on the property.

Area (polygon) name	Land use	Permit details	Year cleared	Maintained (y/n)	Area (ha)
UNKNOWN CLEARING AREA	UNKNOWN (Mataranka town services)	(none)	Unknown	Y	2.15
HOMESTEAD AREA	Pastoral infrastructure and buildings	(none)	Unknown	Y	67.99
				Total	**70.14**

Attach: Map showing the location of previous clearing within the property. ***ATTACHMENT 4*** **Yes / No**

1.7 Staged clearing

Will the clearing development be staged (areas cleared in different years)? **Yes / No**

- Yes – provide details below.
- No – Go to section 1.8.

Area (polygon) name	Year	Area (ha)

1.8 Establishment Plan

Outline an Establishment Plan in the table below.

Activity	Timing	Methods/Details
Demolition of vegetation	Approximately March 2025	Wheel bulldozer to push over vegetation working along contours and not with direction of overland flow. Leave felled timber in situ until the dry season (April/May 2025). Clearing to take place once adequate soil moisture is present to ensure a 'clean pull', expected to be late wet season.
Removal of debris	Dry season 2025	Commence May 2025 – Felled timber to be pushed into wind rows perpendicular to contours. Burn windrows and stick-pick any debris from the clearing areas.

Activity	Timing	Methods/Details
Site preparation	Early wet season 2025/2026	Spray broadspectrum herbicide (Glyphosate) to the area once adequate germination of existing seed bank has occurred (late November, early December 2025). Follow with cultivation for ground preparation prior to sowing (1 x chisel plough, 1 x disc plough and 1 x scarifier). Second Glyphosate application prior to sowing in late December 2025.
Planting	Late December 2025 or yearly January 2026	Sow all cleared area to Jarra finger grass (*Chloris gayana*) @ 8kg/ha (coated seed) with 100kg/ha of a suitable NPK+trace compound fertiliser. Plant with a minimum till disc plough.
Weed management	2026 onwards	Application of a broadleaf selective herbicide such as 2,4-D Amine prior to canopy closure to actively growing weeds during the wet season.
Regrowth management	2026 onwards	Spot spray regrowth (1-3m tall) with Grazon Xtra during periods of active growth.
Grazing management (if applicable)	2026	Improved pasture area will not be grazed in the first year after sowing to avoid damage to the plant stand during establishment.
Crop management (if applicable)	2026 ongoing	Broadcast a suitable NPK+trace compound fertiliser early in each wet season @ 120kg/ha.

2 Merits and amenity

2.1 Merits of the proposal

Detail the merits of the proposal and how it will benefit the economy, society or environment.
The development of the area indicated in this application for grazing will be of economic benefit to the applicant, as it will provide greater capacity to be self-sufficient and improve productivity of their operations on the property. It will also enable Crown Land that is reserved for greater use be developed and improved to align with regional land use.

2.2 Impacts to Amenity

Assess the risk to existing and future amenity, including recreation or tourism values associated with the proposed development. Describe how risk will be mitigated.
There are no recreational or tourism values that may be impacted by the proposed development. The proposed land use aligns with the existing land use in surrounding areas. The proposed clearing area is adjacent to Fox Road, however this is a no through road that provides access to NT Portion 2255, and at the proposed clearing area becomes an unsealed property access road with no connectivity to other roads from that point onwards. It is also adjacent to the Stuart Highway, however property boundary buffers have been included in planning that comply with the LCG guidelines, and not expected that the proximity of the proposed clearing area or proposed land use will impact transport user amenity.

2.3 Impacts to Neighbours/community

Assess the risk of chemical spray drift or dust pollution associated with the proposed development and how it may affect neighbours/community.
The nearest residential area is located approximately 313m east of MAG-3, and Venndale Rehab Centre is located 1km west of MAG-1. Property boundary buffers have been included at these locations that comply with the LCG recommendations to mitigate the risk of chemical drift or dust pollution. Clearing and ground preparation activities will be carried out when adequate soil moisture is present, reducing the risk of dust being generated. Aerial applications of chemicals will not be necessary. Herbicides will be ground applied by boom spray or spot spray, with best practice methods being applied in chemical application.

2.4 Distance to public infrastructure, natural features and reserves

Are there any service easements, public facilities, utilities, infrastructure, Public roads, drainage easements, service easements, National Parks or Reserves in the locality? **Yes** / **No**

- Yes - provide details below.
- No – go to Part 2.5.

Feature (e.g. road, stream)	Distance from clearing (m)	Potential impacts and mitigating measures
Stuart Highway	210m	Potential impact is dust, sedimentation or damage Stuart Highway resulting from clearing activities. Clearing activities will be timed when there is adequate soil moisture to achieve a 'clean pull', which will also minimise dust from clearing activities. The distance between the clearing and the roads described consists mostly of native vegetation (except for a firebreak) which will act as a buffer and also mitigate any potential impact.
Fox Road	210m	Potential impact is dust, sedimentation or damage Fox Road resulting from clearing activities. Clearing activities will be timed when there is adequate soil moisture to achieve a 'clean pull', which will also minimise dust from clearing activities. The distance between the clearing and the roads described consists mostly of native vegetation (except for a firebreak) which will act as a buffer and also mitigate any potential impact.

2.5 Road corridors/access

Will the clearing impact on a road corridor and will addition road access be required? **Yes** / **No**

- Yes - provide details below.
- No – go to Part 3.

Detail potential impacts and/or road access.

The proposed clearing will not impact on existing road corridors.

Proposed access tracks to the polygons are as follows:

- ACCESS TRACK 1 – access to GOV-1 via existing track on fenceline
- ACCESS TRACK 2 – access to MAG-2 via existing track on fenceline
- ACCESS TRACK 3 – access to MAG-3 via existing track on fenceline.

Access to parcel at this location is achieved on the northern side of the Stuart Highway via Fox Road (NT Portion 2255 occurs at the end of Fox Road). The applicant also owns NT Portion 6821 (Napier Valley Station) and accesses the parcel on the southern side of the Stuart Highway via NT Portion 6821.

3 Water

3.1 Irrigation

Does the proposal require irrigation? **Yes / No**

- Yes – provide details below.
- No – Go to section 3.3.

What will be the total annual water requirements for the property following establishment of the proposed development?
For example: Mangoes – 100ha – 5x10m spacing = 860 megalitres per year.

3.2 Annual Water requirements

Where will water be sourced and is there adequate supply?
For example: 860 megalitres per year will be sourced from the Tindall Limestone Aquifer from bore RN32140 at 20 litres per second.

3.3 Water Control District

Are you proposing to clear in a Water Control District (WCD)? **Yes / No**

- Yes – provide details below.
- No – Go to section 3.4.

Water Control District	**Daly Roper Beetaloo**

For more information refer to section 4.5.2 of the Land Clearing Guidelines or use NR Maps to view WCDs.

3.4 Water licensing

Do you need a water licence? [1] **Yes / No**

- Yes – provide details below.
- No – Go to section 3.5.

Licence number	
Maximum annual volume	
Licence expiry date	

3.5 Sinkholes, waterways, wetlands and Groundwater Dependent Ecosystems (GDEs)

Are sinkholes, waterways, wetlands or GDEs present within or near the proposed clearing footprint? [2] **Yes / No**

- Yes – provide details below and complete section 3.6.
- No – go to section 4.

Area (polygon) name	Feature	Distance to feature	If buffer is less than LCG recommendations – Risk/reason	If buffer is less than LCG recommendations – Mitigation measures
MAG-3	Sinkhole 1	100m	(complies with LCG recommendations)	NA
GOV-2	Sinkhole 2	100m	(complies with LCG recommendations)	NA

Attach: Show the location of any sinkholes, waterways, wetlands and GDEs and their proposed buffers in relation to the proposed clearing footprint. **ATTACHMENT 5** **Yes / No**

[1] Use NR Maps to view water licensing records.
[2] The Land Clearing Guidelines recommend buffers for sinkholes, waterways, wetlands and GDEs in section 4.4 (tables 18, 19, 20 and 21). Use NR Maps to view sinkhole and spring records, and Stream Order classifications.

3.6 Potential surface and groundwater impacts

What are the potential impacts to surface water and groundwater?

Discuss the risk of chemical sprays or aerial application of fertiliser drifting into and polluting surface water or groundwater, including via sinkholes and describe how risk will be mitigated. Describe the frequency of spraying and application method/s.
There is a low risk of off-site/off-target movement of chemicals and fertilisers to groundwater. This is mitigated through the retention of vegetation buffers between the proposed clearing area and sinkhole site. This risk is also mitigated through the relatively minimal planned use of herbicides and fertilisers, and the application of best management practices in their use.

4 Land

4.1 Land types

Use the pro-forma located at Appendix A of this document, one for each land type identified and summarise each land type description in section 3.2.

For more information go to section 4.2 of the Land Clearing Guidelines and NR Maps to view land system mapping and land unit mapping to assist you with land type mapping.

Note: land type mapping must be at a scale of 1:5,000 to 1:20,000; as such, land system and land unit mapping can only be used as a guide.

1. **Attach:** Map showing land types within the proposed clearing footprint. **Yes / No**
2. **Attach:** Land type spatial data (refer to unzoned clearing spatial data requirements fact sheet). **Yes / No**
3. **Attach:** A completed pro-forma (Appendix D) for each land type which includes detailed vegetation, soil and landform information including site photographs. **Yes / No**

4.2 Land capability/land suitability

The type of assessment required will be at the discretion of the Land Assessment Branch, DEPWS, subject to a pre-lodgement consultation (see section 2.1 of this document).

For more information go to section 4.2.7 and 4.2.8 of the Land Clearing Guidelines.

The following table is only a summary, you must attach all land capability/suitability assessment documentation.

Land type	Description	Land capability class	Land suitability class	Total area (ha)
A	Flat to gently sloping plains with moderately deep red sandy loam soil with a mid-high open woodland of Eucalyptus and Corymbia species.	1	-	594.65

Land type	Description	Land capability class	Land suitability class	Total area (ha)
B	Gently sloping or undulating lateritic plateaux, brown or red sandy to loamy soil with 0 to 10% surface rock as gravel with a Eucalyptus woodland	2	-	388.52

Attach: Land capability/land suitability assessment documentation. **Yes** / **No**

5 Flora and Fauna

5.1 Threatened species

Are there any records of threatened flora and/or fauna species listed under the Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act 1999 or the Territory Parks and Wildlife Conservation (TPWC) Act 1976 within or near the proposed clearing area (minimum 20km radius)? [3]

Yes / **No**

- Yes - provide details below and section 5.2.
- No – go to section 5.3.

Listing codes

- Critically Endangered (CR)
- Endangered (EN)
- Vulnerable (VU)
- Near Threatened (NT)
- Data Deficient (DD)
- Restricted Range (RR).

Common name	Species name	EPBC Act listing	TPWC Act listing	Date of record
Black-footed Tree Rat	*Mesembriomys gouldii gouldii*	EN	EN	2 records, 1973.
Common Brushtail Possum (north-western)	*Trichosurus vulpecula arnhemensis*	VU	-	43 records, 2020.
Crested Shrike-tit (northern)	*Falcunculus frontatus whitei*	VU	NT	1 record, 1998.
Ghost Bat	*Macroderma gigas*	VU	NT	17 records, dated between 1988 and 2006.
Gouldian Finch	*Chloebia gouldiae*	EN	VU	18 records, dated between 1942 and 2003.
Grey Falcon	*Falco hypoleucos*	VU	VU	2 records, one undated and the other 1978.
Mertens' Water Monitor	*Varanus mertensi*	-	VU	4 records, 1967 to 1996.

[3] Use NR Maps to view the Flora Atlas records or Fauna Atlas records.

Common name	Species name	EPBC Act listing	TPWC Act listing	Date of record
Mitchell's Water Monitor	*Varanus mitchelli*	-	VU	1 record, undated.
Partridge Pigeon	*Geophaps smithii smithii*	VU	VU	3 records, undated.
Red Goshawk	*Erythrotriorchis radiatus*	EN	VU	2 records, one undated and the other 2007.
White-throated Grasswren	*Amytornis woodwardi*	VU	VU	(No records)
Curlew Sandpiper	*Calidris ferruginea*	CR	CR	(No records)
Grey Falcon	*Falco hypoleucos*	VU	VU	(No records)
Australian Painted Snipe	*Rostratula australis*	EN	EN	(No records)
Masked Owl (northern)	*Tyto novaehollandiae kimberli*	VU	VU	(No records)
Fawn Antechinus	*Antechinus bellus*	VU	EN	(No records)
Northern Quoll	*Dasyurus hallucatus*	EN	CR	(No records)
Northern Brush-tailed Phascogale	*Phascogale pirate*	VU	EN	(No records)
Bare-rumped Sheath-tailed Bat	*Saccolaimus saccolaimus nudicluniatus*	VU	-	(No records)
Gulf Snapping Turtle	*Elseya lavarackorum*	EN	-	(No records)
Freshwater Sawfish	*Pristis pristis*	VU	VU	(No records)

5.2 Risks to threatened species

Assess the risks, likelihood of impacts occurring and possible consequences to each threatened species associated with the proposed development. Identify any associations that the species may have with landforms, vegetation structure or dominant plant species and how the risks will be minimised (refer to section 4.4 (Table 17) and section 4.4.6 of the Land Clearing Guidelines).

Find out about threatened flora and threatened fauna species.

Species name	Risk	Likelihood of risk	Mitigation measures
Black-footed Tree Rat	Loss of important habitat	Low	Although suitable foraging habitat occurs on this site, the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable foraging at a regional scale, and habitat for the species across the region is relatively intact with high connectivity.
Common Brushtail Possum (north-western)	Loss of habitat	Low	The brushtail possum is known to occupy a variety of habitats from forest and woodlands that provide sufficient trees with hollows, to ground refuges such as hollow logs. Although suitable habitat occurs on these sites, the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable foraging at a regional scale, and habitat for the species is across the region is relatively intact with high connectivity.
Crested Shrike-tit (northern)	Loss of important habitat	Low	The Crested Shrike-tit (northern) typically occurs in open woodlands dominated by Eucalyptus and/or Corymbia species. Although suitable habitat occurs on these sites, the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable foraging at a regional scale, and habitat for the species is across the region is relatively intact with high connectivity.
Ghost Bat	Loss of habitat	Low	The distribution of the Ghost Bat is determined by the availability of suitable caves and mines for roost sites. The footprint of the proposed clearing area at NT Portion 2255 is located approximately 6km from suitable habitat at Cutta Cutta Caves, however suitable habitat is not located within or adjacent to the proposed clearing area, therefore the potential impact on the species is considered to be of low risk.

Species name	Risk	Likelihood of risk	Mitigation measures
Gouldian Finch	Loss of habitat	Low	Although suitable foraging habitat occurs on this site, the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable foraging at a regional scale, and habitat for the species across the region is relatively intact with high connectivity.
Grey Falcon	Loss of nesting habitat	Low	The Grey Falcon occurs at low densities throughout much of the semi-arid and arid Northern Territory and is reliant on tall nesting trees associated with watercourses. Although suitable nesting habitat occurs on the sites, the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable nesting habitat at a regional scale, which is intact with high connectivity.
Mertens' Water Monitor	Loss of important habitat	Low	Suitable habitat will not be disturbed, riparian vegetation is not present within or adjacent to proposed clearing areas.
Mitchell's Water Monitor	Loss of important habitat	Low	Suitable habitat will not be disturbed, riparian vegetation is not present within or adjacent to proposed clearing areas.
Partridge Pigeon	Loss of important habitat	Low	Although suitable foraging habitat occurs on this site, the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable foraging at a regional scale, and habitat for the species across the region is relatively intact with high connectivity.

Species name	Risk	Likelihood of risk	Mitigation measures
Red Goshawk	Loss of nesting habitat	Low	The preferred habitat of the Red Goshawk is tall open eucalypt forest and riparian areas (including paperbark forest and gallery forests). There are no riparian areas within proximity of the proposed clearing areas. Mid-tall open woodland consisting of Eucalyptus species is present within the proposed clearing areas, however the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable nesting habitat on a regional scale. The habitat for the species regionally is relatively intact with high connectivity.
White-throated Grasswren	Loss of important habitat	Low	The habitat of the White-throated Grasswren is confined to hummock grasslands (spinifex), which is occurs within the proposed clearing area at NT Portion 2255. Although suitable foraging habitat occurs on this site, the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable foraging at a regional scale, and habitat for the species across the region is relatively intact with high connectivity.
Curlew Sandpiper	Loss of migratory non-breeding habitat	Low	Curlew Sandpiper migrate to Australia and occur on intertidal mudflats and sandflats, estuaries, coastal brackish lagoons, saltmarshes and occasionally on inland freshwater wetlands. The footprint of the proposed clearing areas at NT Portion 2255 does not contain any wetlands suitable for habitat, and will not impact regional water bodies that may provide suitable habitat. Therefore, the potential impact on the species is considered to be of low risk.

Species name	Risk	Likelihood of risk	Mitigation measures
Grey Falcon	Loss of nesting habitat	Low	The preferred habitat of the Grey Falcon is sparsely timbered lowland plains, typically on inland drainage systems. There are no riparian areas within proximity of the proposed clearing areas. Suitable habitat for the species may be present, however the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable nesting habitat on a regional scale. The habitat for the species regionally is relatively intact with high connectivity.
Australian Painted Snipe	Loss of habitat	Low	The Australian Painted Snipe is known to occupy a wide variety of shallow freshwater wetlands. The footprint of the proposed clearing area at NT Portion 2255 does not contain any wetlands suitable for habitat, and will not impact regional water bodies that may provide suitable habitat. Therefore, the potential impact on the species is considered to be of low risk.
Masked Owl (northern)	Loss of habitat	Low	The Masked Owl occurs mainly in tall open eucalypt forests, and typically roost in tree hollows, which are also used for breeding. This species is also known to forage in grasslands. Although suitable foraging and roosting habitat occurs on these sites, the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable foraging and roosting habitat at a regional scale, and habitat for the species is across the region is relatively intact with high connectivity. Therefore, the potential impact on the species is considered to be of low risk.

Species name	Risk	Likelihood of risk	Mitigation measures
Fawn Antechinus	Loss of important habitat	Low	The Fawn Antechinus is known to occur in savannah woodland and tall open forests in the Top End, and shelter in tree hollows and fallen logs. Although suitable may occur on this site, the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable foraging at a regional scale, and habitat for the species across the region is relatively intact with high connectivity.
Northern Quoll	Loss of important habitat	Low	The Northern Quoll is known to occur in a variety of habitats, including open Eucalypt forests. Although suitable habitat occurs on these sites, the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable foraging at a regional scale, and habitat for the species is across the region is relatively intact with high connectivity.
Northern Brush-tailed Phascogale	Loss of important habitat	Low	Although suitable habitat occurs on these sites, the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable foraging at a regional scale, and habitat for the species is across the region is relatively intact with high connectivity.
Bare-rumped Sheath-tailed Bat	Loss of important habitat	Low	The species has a wide distribution, and although suitable habitat occurs on these sites, the area of habitat that is proposed to be cleared is small in comparison to the area of potentially suitable foraging at a regional scale, and habitat for the species is across the region is relatively intact with high connectivity.
Gulf Snapping Turtle	Loss of important habitat	Low	Suitable habitat will not be disturbed, riparian vegetation is not present within or adjacent to proposed clearing areas.

Species name	Risk	Likelihood of risk	Mitigation measures
Freshwater Sawfish	Loss of habitat	Low	Suitable habitat will not be disturbed, waterways and riparian vegetation is not present within or adjacent to proposed clearing areas.
Terrestrial migratory bird species listed under the *EPBC Act*	Loss of important migratory habitat	Low	Suitable habitat across the property and regionally. The proposed clearing areas do not consist of important habitat, nor do they support ecologically-significant populations of these species.

5.3 Significant or sensitive vegetation communities

Are there any significant or sensitive vegetation communities such as rainforest, monsoon vine forest or vine thicket; sandsheet heath; riparian vegetation; mangroves; and vegetation containing large trees with hollows suitable for fauna within 250m of the proposed clearing?[4] **Yes / No**

- Yes – provide details below and section 5.4.
- No – go to section 5.5.

Description of significant or sensitive vegetation community	Co-ordinate position and datum (e.g. GDA94)	Land Clearing Guidelines recommended buffer	Proposed buffer
Large trees with hollows[5]	(At various locations, see information provided in footnote 5 below).		

Attach: Show the location of significant vegetation communities on a copy of the land type map and clearing plan. **Yes / No**

[4] For information on buffer recommendations refer to section 4.4.6 and 4.4.7 (Tables 18 and 19) of the Land Clearing Guidelines.

[5] ***It was identified that there was a high potential for large trees with hollows suitable for fauna to occur on NT Portion 2255 at this location. Survey work was carried out tree DBH presence/absence and density within the extent of NT Portion 2255 at this location between 25-27 September and 3-5 October 2024. Methodology was developed in consultation with Flora & Fauna Division, and survey was carried out by Range Assist (Matt Fletcher). This information was used to identify high value areas containing large trees with hollows suitable for fauna. As per Section 4.4.6 of the LCG, a combination of exclusion and buffers, and mitigation through large wildlife corridors were applied ensuring ample regional connectivity and retention of large areas with high value significant vegetation, with guidance from the Flora & Fauna Division. See Section 7.2 below for information on wildlife corridors retained.***

5.4 Risks to significant or sensitive vegetation communities

Identify and assess the risks to significant or sensitive vegetation communities associated with the proposed clearing and intended use. Describe how risks will be mitigated. Potential impacts include:

- weed incursion
- fertiliser/chemical inputs
- erosion and/or sedimentation
- reduced wildlife movement to or from community.

Consider any benefits from fire management.

Species name	Risk	Likelihood of risk	Mitigation measures
(Large trees with hollows suitable for fauna)	Weed incursion	Low	The applicant has a weed management plan in place (see Section 9.2 below). The proposed land use of Jarra finger grass production also enables effective broadleaf weed management through the utilisation of selective herbicide application (e.g. 2,4-D Amine), which will also mitigate the risk of weed incursion to significant vegetation communities.
(Large trees with hollows suitable for fauna)	Fertiliser/chemical inputs	Low	There is limited planned fertiliser chemical use for the proposed land use. Fertiliser application occurs once per year, and herbicide application as required during the wet season (usually once per year, or twice if required). Aerial application of fertiliser or chemicals is not necessary, and best practice methods in fertiliser and chemical application will also further reduce the risk of off-site/off-target application of fertiliser or herbicides.
(Large trees with hollows suitable for fauna)	Reduced wildlife movement to or from community	Low	The proposed clearing plan includes large wildlife corridors, that either meet or exceed the LCG recommendations. This will ensure extensive connectivity of habitat, which includes areas identified as having significant presence of large trees with hollows, enabling movement to or from these areas.

Species name	Risk	Likelihood of risk	Mitigation measures
(Large trees with hollows suitable for fauna)	Erosion and/or sedimentation	Low	Proposed clearing areas have a slope of 2% or less, mitigating the risk of erosion and/or sedimentation. After clearing activities take place and sowing of grass pasture occurs, the presence of a perennial grass crop will further ensure soil stabilisation and ground cover.
(Large trees with hollows suitable for fauna)	Risk of increased fire likelihood resulting in damage to old timber with hollows	Low	The Jarra finger grass will be cut and baled for hay directly after the wet season, reducing the fuel load present during high risk fire periods during the dry season. This will mitigate the risk of fire in the region, and do not expect an increased fire risk to significant vegetation as a result of the proposed land use.

5.5 Commercial harvest of threatened flora

An application under the Territory Parks and Wildlife Conservation Act 1976 can be made with this Property Development Plan.

Are any threatened flora species (such as Cycads) intended for commercial harvest? **Yes / No**

- Yes – Contact Parks and Wildlife Permits office 08 8999 4795.
- No – go to section 6.

6 Regional biodiversity

Is the proposed clearing area likely to impact on regional biodiversity?

Is the proposed clearing area:	Yes / No
1. large in total area (e.g. greater than or equal to 5,000ha)	No
2. medium in total area (greater than or equal to 1,000ha) and will remove a high proportion of the total extent of any individual ecosystem or vegetation type from a property or region	No
3. removing or impacting regionally rare or uncommon ecosystems or vegetation type(s)	No
4. resulting in degradation of important riparian systems	No
5. assessed as likely to impact upon significant biodiversity values	No
6. likely to have potential for significant off-site impacts beyond the clearing footprint.	No

- Yes – to any of the above, provide details below.
- No – go to section 6.1.

If you answered 'yes' to any of the above then provide information in the table below on the potential impacts on regional biodiversity of the proposed clearing area.

How will the clearing area impact regional biodiversity?

6.1 Sites of Conservation Significance

Are there any conservation areas or Sites of Conservation Significance (SoCS) located in the area that may be impacted by the proposed clearing? * **Yes / No**

- Yes – complete the table below and section 6.2.
- No – go to section 7.

Description of Conservation Site (SoCS) or area	Distance to proposed clearing	Identified values of SoCS present within clearing area? Y / N

Attach: Show the location of any Conservation Sites in proximity to the proposed clearing footprint on the Land type map and Clearing Plan. **Yes / No**

* Information about Conservation Sites can be found at:

- Section 4.4.5 of the Land Clearing Guidelines
- NT Sites of Conservation Significance
- Directory of Important Wetlands in Australia
- Australia's Ramsar Sites
- SoCS layer on NR Maps.

6.2 Risks to SoCS

Identify and assess the risks to any SoCS associated with the proposed clearing and intended use and describe how risk will be mitigated.

SoCS	Risk	Mitigation measures

6.3 NT EPA referral

To determine whether your proposal will trigger referral, under the *Environment Protection Act 2019*, refer to the following document:

- Referring a proposed action to the NT EPA - Environmental impact assessment guidance for proponents
- NT EPA Environmental Factors and Objectives.

For more information go to section 3.4 of the Land Clearing Guidelines.

Not referred to NT EPA	**Yes / No**
Referred – assessment not required (attach advice from NT EPA)	**Yes / No**
Referred – assessment required (attach advice from NT EPA)	**Yes / No**

7 Property buffers and wildlife corridors

7.1 Property boundary buffers

Are property boundary buffer minimum widths proposed to be retained as recommended in section 4.3.3 (Table 14) of the Land Clearing Guidelines (excluding firebreaks)? **Yes / No**

- Yes – go section 7.2.
- No – Attach and provide details below.

Area (polygon) name	Distance to (cadastre) boundary	If less than LCG recommendations – Risk/reason	If less than LCG recommendations – Mitigation measures

MAG-1	52.5m	NT Portion 1437 is a 0.8 ha parcel contained within the extent of NT Portion 2255 at this location. It hosts a telecommunications tower. There is no foreseen impact of the proposed land use at MAG-1 to NT Portion 1437, and will not impact access to this area, which is accessed via the Stuart Highway through NT Portion 2255 directly south of NT Portion 1437. *Please see additional reasoning below for exclusion of 200m property boundary buffer to the south of MAG-1.*	Best practice measures will be implemented in clearing activities as outlined in *'Section 1.8 – Establishment Plan'* provided. Slope gradient is limited. Permanent ground cover and soil stabilisation to be provided with sown Jarra finger grass improved pasture and zero-till activities ongoing. Wildlife corridors have been included in the Clearing Areas V8 to ensure regional connectivity is maintained, and also provide connectivity and shade. Application of best practice methods and minimal ongoing use of fertiliser and chemicals will mitigate off site movement of products.

Additional reasoning for absence of 200m boundary buffers south of MAG-1 as follows:

<u>Erosion and sediment control</u>

The proposed clearing footprint consists of land with minimal slope, with most areas below 2% slope gradient, therefore the potential for high velocity run off and sedimentation at this location is minimal. In addition to this, the proposed land use is to grow Jarra Finger Grass improved pasture, which is a perennial pasture grass. Once sown and established the resulting plant stand will provide ongoing soil structure and stability, further reducing the potential for erosion and sedimentation at this location.

<u>Dust management</u>

The potential for offsite dust movement will only occur curing clearing operations and preparation for sowing in the first year of development. Once pasture is sown and established there is no potential for offsite dust movement. The potential for dust pollution affecting neighbouring properties and landholders is negligible given the proximity of the proposed clearing site to neighbouring properties and residential areas, with the closest established residential area being at NT Portion 4643, situated approximately 306m east of MAG-3.

<u>Management of chemical spray drift</u>

Forecasted chemical use for the proposed land use is limited to herbicide applications, specifically broadspectrum non-selective herbicide prior to sowing, and application of selective broadleaf herbicides to manage weeds as required in the future. Aerial application is not expected. It is not expected that insecticides and fungicides will be required at all. Again, the proximity of the proposed clearing footprint to neighbouring residential areas further reduces the risk of impact from chemical spray drift. It is not expected that the provision of a 200m boundary buffer at this location would further mitigate chemical spray drift, given the likelihood of it occurring is already very low.

Amenity

The reasoning for the inclusion of 200m boundary buffers for amenity is "assist in maintaining and/or enhancing aesthetic amenity, privacy, noise reduction and reduced complaints from concerned neighbours" (NT Land Clearing Guidelines) and calls for consideration of existing and future amenity of the area in which the proposed clearing footprint is located.

There is no foreseen impact to amenity at NT Portion 1437.

Shade

The Land Clearing Guidelines call for consideration to shade provision via boundary buffers for "humans, livestock, crops, the natural environment and seed viability". A network of shade is provided within the extent of the proposed clearing footprint via wildlife corridors and other areas retained as native vegetation, which provide for ample shade, as does surrounding native vegetation adjacent to NT Portion 2255 at this location, including areas surrounding NT Portion 1437.

Productivity

The Land Clearing Guidelines state "retaining native vegetation property boundary buffers will enhance land use productivity (e.g. crops and livestock) through the benefits of enhanced erosion and sediment control, dust and chemical spray drift management and shade retention".

Due to the explanations provided above, the is no expected benefit to productivity if a 200m boundary buffer were to be included at this location.

Wildlife movement

Wildlife corridors have been incorporated into the proposed clearing plan as recommended by Flora & Fauna, following a thorough vegetation survey of the area and surrounds to determine location of significant habitat for listed fauna species. Survey work to identify significant vegetation for habitat (large trees with hollows) was carried out to develop the proposed Clearing Areas V8 with adequate retention of native vegetation to support wildlife movement and regional connectivity.

In summary, there is no expected significant benefit to the inclusion of the 200m boundary buffer at this location, and has therefore not been proposed.

Note: Firebreaks should not encroach on property boundary buffer widths.

Attach: Show the location and size of any proposed native vegetation property boundary buffers on the clearing plan regardless of their size. **Yes** / **No**

ATTACHMENT 10 – Clearing plan with boundary buffers

7.2 Wildlife corridors

Are native vegetation wildlife corridors proposed to be retained as recommended in section 4.4.10 (Table 22, Figure 8) of the Land Clearing Guidelines? **Yes** / **No**

- Yes –Attach, and provide details below.
- No – go to section 8.

Recommended wildlife corridor minimum width	Proposed minimum width, length and total area (ha) conserved	Describe habitat connectivity (e.g. What do the proposed corridors achieve in terms of habitat retention and wildlife movement? Do they connect existing intact native vegetation?)
200m	CORRIDOR 1: Native vegetation between MAG-1 and MAG-2. 1 to 1.7km length. Total area 133 ha.	CORRIDOR 1 enables extensive connection to habitat south of the Stuart Highway, and north of NT Portion 2255 at this location, and retention of significant vegetation.
200m	CORRIDOR 2: Native vegetation Between MAG-2 and MAG-3. 1.1 to 1.6km length. Total area 131.5 ha.	CORRIDOR 2 enables extensive connection to habitat south of the Stuart Highway, and north of NT Portion 2255 at this location and retention of significant vegetation.
200m	CORRIDOR 3: Between GOV-1 and GOV-2. 200m width. Total area 17 ha.	CORRIDOR 3 enables connectivity to extensive habitat east of GOV-1 and GOV-2 (CORRIDOR 4) to wildlife corridors located west of NT Portion 2255.
200m	CORRIDOR 4: Areas east of GOV-1 and east & south of GOV-2. 222m to 3.6 km length. Total area 335 ha.	CORRIDOR 4 enables extensive regional connection to habitat in areas surrounding NT Portion 255 at this location, and to CORRIDOR 3. It also enables the retention of significant vegetation.

Attach: Show the location length and minimum width of the wildlife corridor on the clearing plan in relation to any retained vegetation depicting landscape connectivity. **Yes** / **No**

8 Erosion and sediment control

8.1 Water and wind erosion

Assess the potential for water and wind erosion associated with each phase of the development. Consider:

- slope in and around the proposed clearing footprint, including slope gradient (%), slope length and slope direction
- the vulnerability of the soil type to overland flow (e.g. vulnerable soils include: loose sands; poorly drained soils; sodic or dispersive soils; and shallow soils)
- the risk of receiving erosive floodwater from adjacent streams or runoff from the surrounding landscape (e.g. rises and hills)
- the proposed land use, including projected minimum groundcover (%), tillage practices, and potential loss of soil structure from trafficking
- the vulnerability of soil type to wind erosion (e.g. sandy soils)
- the distance between windbreaks (where tillage is proposed).

Phase	Risk assessment (Discuss the likelihood of impacts occurring and possible consequences).
Clearing	There is minimal potential for water and wind erosion during clearing. Soils have moderate soil structure, and for much of the clearing area the surface water run length is not excessive, and slope gradient is 0 to 2%. Best practice methods will be applied in clearing processes as per Section 1.8 above.
Establishment/Development	There is low risk of water and wind erosion resulting from establishment/development operations. Tillage in pasture areas is limited and only prior to sowing as per Section 1.8 above.
Operational	There is minimal potential for water and wind erosion post establishment/development phase. Once improved pasture areas have established it will provide ground cover and its root system will further assist soil structure and mitigate wind and water erosion potential. No tillage operations will be required once Jarra finger grass pasture areas are established, reducing potential for soil disturbance and erosion occurring.

For more information refer to section 5 of the Land Clearing Guidelines to assist with proposed clearing area design.

Attach: A map showing slope (%) within and surrounding the proposed clearing footprint as per the following options. ***ATTACHMENT 11 – Slope map with hillshading*** **Yes / No**

Option 1:	**Contour map –** preferable, particularly for smaller proposed clearing footprints. Existing data may not be available for remote locations.

Option 2:	**Raster map** – slope data derived from Digital Elevation Model (DEM), often used for larger proposed clearing footprints. Can be from credible published source (e.g. Geoscience Australia), or professionally generated from field survey. For very large proposed clearing footprints, consider using in conjunction with hillshade layer to indicate landform and direction of slope.
Option 3:	**Land type map** – for small/simple applications where existing contour or DEM data is not available, use a copy of the land type map showing the slope% for each land type and indicate the direction of overland flow (runoff).

Use Slope greater than 2% (DEM) layer at NR Maps.

8.2 Erosion and sedimentation

Assess the potential impacts of erosion or sedimentation associated with the proposed development and the likelihood of affecting adjacent land, including infrastructure, roads, native vegetation, natural resource features (e.g. sensitive or significant vegetation, water features, sinkholes, etc.), and cultural features (e.g. heritage places or sacred sites). Refer to section 3.2 of the Land Clearing Guidelines.

Potential impact	Risk assessment (Discuss the likelihood of impacts occurring and possible consequences).
Erosion and sedimentation of cultural features including heritage places and sacred sites.	Very low risk – no known cultural features within or surrounding the proposed clearing footprint.
Erosion and sedimentation of adjacent land.	Due to the factors discussed in 8.1, the risk of erosion and sedimentation of adjacent features and properties is considered to be very low.
Erosion and sedimentation of streams.	Best practice methods outlined in Section 1.8 will mitigate erosion and sedimentation of adjacent streams, although there are no streams in close proximity to the proposed clearing area. Retention of vegetation buffers as per the LCG recommendations will further mitigate this risk. For this reason the risk of erosion and sedimentation of streams is considered to be very low.

8.3 Erosion and sediment controls

Outline temporary and/or permanent controls that you will implement to minimise the risk of erosion (from wind or rain) and avoid the potential impacts of sedimentation and pollution during each phase of

the development. For more information on controls including management practices and/or structural measures.

Temporary controls - May relate to clearing phase or establishment phase.
Felled timber will be left in field as felled to provide ground cover and stability until the end of the wet season.
Permanent controls - May relate to establishment phase or operational phase, including on-going management associated with the intended land use.
Once the Jarra finger grass pasture areas are sown and established soil erosion risk will be further reduced with improved soil stability and groundcover that the crop offers.

Attach: The location of controls on a copy of the clearing plan (with slope % and direction of runoff indicated as it relates to controls). ***ATTACHMENT 12*** **Yes / No**

9 Weeds

9.1 Location of weeds

Are there any weeds declared under the *Weeds Management Act 2001* on the property? Use NR Maps to view declared weed records. For more information go to section 4.6 of the Land Clearing Guidelines. **Yes / No**

- Yes – provide details below.
- No – Go to section 10.

Species	Date of record	Longitude (GDA94)	Latitude (GDA94)	Infestation size and description
Bellyache bush *Jatropha gossypiifolia*	22/02/2006	133.05799	-14.93395	Juveniles and adult plants present. Infestation size 20m diameter with a density of less than 1%.
Chinee apple *Ziziphus mauritiana*	3 records dated 22/04/2013	132.96776 132.95842 132.95735	-14.8371 -14.8488 -14.85076	Seeds, seedlings, juveniles and adult plants present at all locations. All infestations notes as 20m in diameter with density of 11 to 50%.

Species	Date of record	Longitude (GDA94)	Latitude (GDA94)	Infestation size and description
Gamba grass *Andropogon gayanus*	68 records dated between 2010 and 2022.	(At various locations in southern section of NT Portion 2255 closest to Mataranka).		Infestation areas ranged from 100m to 5m in diameter, with densities ranging from less than 1% to more than 50%.
Grader grass *Themeda quadrivalvis*	28/04/2021	133.09020768	-14.78650715	Juveniles and seed present at site. Infestation size noted as 5m in diameter with a density of less than 1%.
Hyptis *Hyptis suaveolens*	4 records – 1 undated, the other 3 ranging from 2008 to 2021.	132.95724076 132.95538 132.96146734 132.96601	-14.82716095 -14.82681 -14.82905996 -14.83919	3 sites noted as having a diameter of 20m and 1 site 100m. Densities ranged from less than 1% to more than 50%.
Mimosa *Mimosa pigra*	29/11/2011	132.95838	-14.84885	Juveniles, adults and seeds present. Infestation 50m in diameter with a density of 1 to 10%.
Mission grass species *Cenchrus sp.*	4 records dated 24/03/2017	132.9573 132.95971 132.96094 132.96047	-14.82717 -14.82784 -14.82878 -14.82832	Infestation size ranging from 100m to 200m in diameter, with a density of 1 to 50%.
Neem *Azadirachta indica*	2015 and 2022	133.0716336 133.03885	-14.9355261 -14.92461	1 record noted with a infestation size of 50m diameter and a density of 1 to 10%, and the other noted as 50m diameter with density of less than 1%.

Species	Date of record	Longitude (GDA94)	Latitude (GDA94)	Infestation size and description
Rubber bush *Calotropis procera*	28/04/2021	133.0902492	-14.78658423	Adult plants present in an area of 5m diameter with a density of less than 1%.
Rubber vine – ornamental *Cryptostegia madagascariensis*	04/04/2012	133.08802	-14.93633	Infestation size of 100m in diameter, with a density of less than 1%.
Sida – flannel weed *Sida cordifolia*	(Prior record, undated)	132.96601	-14.83919	Infestation size of 20m in diameter, with an unknown density.
Sida – spiny head *Sida acuta*	(Prior record, undated)	132.96601	-14.83919	Infestation size of 20m in diameter, with an unknown plant density.

Attach: Show the location of all Class A and B declared weed species, infestation size and description in relation to the proposed clearing footprint. ***ATTACHMENT 13*** **Yes** / **No**

9.2 Do you have a Weed Management Plan?

Weed Management Plans are required for weeds that have declared management plans. For information on Statutory Weed Management Plans. **Yes** / **No**

- Yes – attach, or provide details below.
- No – go to section 10.

Species	Aims (e.g. contain spread, reduce extent on fences and tracks)	Methods (e.g. monitor and spot spray)
Gamba grass – Class A at location	Eradication and contain spread.	Spot spray seedlings and adults with Glyphosate 360g/L @ 1L/100L + spray adjuvant during periods of active growth. Record and monitor using NT WeedMate App.
Grader grass – Class B	Eradication and contain spread.	Spot spray seedlings and adults with Glyphosate 360g/L @ 1L/100L + spray adjuvant during periods of active growth. Record and monitor using NT WeedMate App.

Species	Aims (e.g. contain spread, reduce extent on fences and tracks)	Methods (e.g. monitor and spot spray)
Hyptis – Class B	Eradication and control spread.	Spot spray seedlings and adults with 2-4,D amine 625g/L @ 320mL/100L + spray adjuvant during periods of active growth. Record and monitor using NT WeedMate App.
Mimosa – Class A (zoned)	Eradication and control spread.	Spot spray seedlings and adults with Starane Advanced @ 300mL/100L + 500mL/100L Uptake spray adjuvant during periods of active growth. Record and monitor using NT WeedMate App.
Mission grass species – Class B (perennial species)	Eradication and control spread.	Spot spray seedlings and adults with Glyphosate 360g/L @ 1L/100L + spray adjuvant during periods of active growth. Record and monitor using NT WeedMate App.
Neem – Class B	Eradication and control spread.	Spot spray seedlings (up to 2m tall) with Triclopyr 300g/L and Picloram 100 /L @ 350mL/100L + non-ionic wetting agent when actively growing. Record and monitor using NT WeedMate App.
Rubber bush – Class B	Eradication and control spread.	Foliar spray with Grazon Extra @ 500-750mL/100L + label spray adjuvant to seedlings less than 2m tall. Adults: Apply Access @ 1L/60L diesel as either a basal bark application (less than 5cm diameter stem) or cut stump application (>5cm stem diameter). Record and monitor using NT WeedMate App.

Species	Aims (e.g. contain spread, reduce extent on fences and tracks)	Methods (e.g. monitor and spot spray)
Rubber vine – ornamental – Class A	Eradication and control spread.	Do not attempt control – contact the Weed Management Branch immediately on (08) 8973 8857 (Katherine) for assistance. Record and monitor using NT WeedMate App.
Sida – flannel weed – Class B	Eradication and control spread.	Spot spray seedlings and adults with 2-4,D amine 625g/L @ 800mL/100L + spray adjuvant during periods of active growth. Record and monitor using NT WeedMate App.
Sida – spiny head – Class B	Eradication and control spread.	Spot spray seedlings and adults with 2-4,D amine 625g/L @ 800mL/100L + spray adjuvant during periods of active growth. Record and monitor using NT WeedMate App.

10 Heritage places or archaeological sites

Are there any declared heritage places or archaeological sites within the meaning of the Heritage Act 2011 on the property? To search for heritage places and archaeological sites, go to the Department of Territory Families, Housing and Communities website. **Yes / No**

- Yes – attach or provide details below.
- No – attach "no heritage places" advice, go to section 11.

Address the likelihood of risk and how the risk will be minimised/mitigated.

The applicant is not carrying out an archaeological survey and a cultural heritage management plan as recommended by the Heritage Branch. There are no known sites of Aboriginal or Macassan archaeological places within proximity to the proposed clearing extent. Both the Heritage Branch and the Australian Aboriginal Protection Authority (AAPA) have confirmed that there is no existing knowledge of any such heritage sites in the area. Furthermore, a 200m boundary buffer between MAG-1, MAG-2 and MAG-3 and the northern boundary was recommended as a suitable risk mitigation measure between the proposed clearing sites and the water feature located north of NT Portion 2255 at this location, as recommended by the Heritage Branch as an alternative to an archaeological survey and cultural heritage management plan.

Given the absence of any known archaeological sites in the vicinity, it is reasonable to conclude that the risk of encountering such sites during the proposed clearing of native vegetation is extremely low. Nevertheless, the applicant is committed to responsible environmental stewardship and cultural heritage preservation. In the unlikely event that archaeological places are unexpectedly discovered during the clearing process, immediate action will be taken. An exclusion zone will be established around the site to protect and preserve the archaeological finds, and the Heritage Branch will be promptly contacted.

Attach: Search results, advice from Heritage Branch and an archaeological survey report if a survey has been conducted. **Yes / No**

Attach: A map showing the location of any heritage places in relation to the proposed clearing footprint. **Yes / No**

11 Sacred or significant sites

Are there any sacred sites or significant sites protected under the Northern Territory Aboriginal Sacred Sites Act 1989 on the property? For more information on sacred sites or significant sites, go to the Aboriginal Areas Protection Authority website. **Yes / No**

- Yes – attach or provide details below.
- No – attach "no sacred or significant sites" advice and go to Part 4.

Address the likelihood of risk and how the risks will be minimised/mitigated.

There are several recorded sacred sites and associated restricted works areas within the extent of NT Portion 2255 in the area of the portion closer to Mataranka. These sites are 35km at their closest range to the proposed clearing areas within the Venn area of NT Portion 2255. Due to their proximity to the proposed clearing areas, there is no foreseen adverse affects or potential impacts to these sites, and further mitigation measures are not necessary.

Attach: A report from the Aboriginal Areas Protection Authority (AAPA) outlining the results of a register inspection. **Yes / No**

Attach: A map showing the location of any sacred sites or significant sites in relation to the proposed clearing footprint. **Yes / No**

Checklist of attachments

Note: You can show more than one feature on a plan (map) or provide spatial; data (i.e. shapefiles) with appropriate attributes to reduce the total number of plans required.

Document/information	Attached Y / N
1) Additional relevant information (e.g. pasture or crop requirements) (section 1.3).	Y
2) Clearing plan (section 1.4): a) geo-referenced map depicting the proposed clearing footprint b) spatial data with appropriate attributes (refer to Appendix C).	Y
3) Copies of the clearing plan showing one or more of the following: a) location of any other areas on the property previously cleared (section 1.5) b) location of Sites of Conservation Significance (section 6.1) c) location and size of all native vegetation buffers (section 7.1) and wildlife corridors (section 7.2) d) location of drainage lines or depressions, waterways (label stream order), wetlands or GDEs, springs or sinkholes adjacent to proposed clearing sites (section 3.13) e) slope and direction of potential overland flow (section 8.1) and location of controls (section 8.3) f) location of Class A and B weeds (section 9.1) g) location of heritage places (section 10) h) location of sacred or significant sites (section 11).	Y
4) Land type map at an appropriate scale of 1:5,000 to 1:20,000 (section 4.1): a) detailed land type map b) land type spatial data with appropriate attributes (refer to Appendix C) c) completed land type pro forma (one per land type) including photographs.	Y
5) Land capability/suitability assessment documentation (section 4.2).	Y
6) Advice regarding threatened species.	Y
7) Advice from NT Government Heritage Branch regarding the presence of declared heritage places or archaeological sites and location of any sites of places.	Y
8) Results/advice from a Register of Sacred and Significant Sites search from the Aboriginal Areas Protection Authority (AAPA) and location of any sites.	Y

Appendix A

Land types Pro forma

In your own words describe each land type within the proposed clearing.

Copy this page and provide details for each land type on a separate sheet.

Land type:* _____

* Use A, B, etc to distinguish each land type and identify on the clearing plan.

Landform
Describe the landform including slope (%), direction the slope faces [e.g. E, SW]. Include information on the extent of surface gravel and rock outcrop.
Soil
Describe the dominant soil in this land type highlighting features such as sand and clay content of the soil, soil depth and colour and gravel contents, surface cracking if present and level of soil waterlogging and/or inundation during wet seasons.
Vegetation
Describe the average height and density of trees [e.g. dense, medium density, sparse or very sparse] and the dominant trees, shrubs, grasses and weeds.

Soil conservation
Is there evidence of erosion in this land type? Rate the risk of erosion if cleared? Consider: rainfall; slope; slope length (or contributing catchment); soil erodibility; and land use (proposed tillage, mounding and projected groundcover).

Insert site photographs that depict the landform, vegetation, soil type of the land type.	
Photo A	Photo B
Photo C	Photo D

Appendix B – Links to reference material

Reference	Section	Link to reference source
Land clearing guidelines	Referred to throughout this form	https://nt.gov.au/__data/assets/pdf_file/0007/236815/land-clearing-guidelines.pdf
Water Control Districts (WCDs)	3.3	https://nrmaps.nt.gov.au/nrmaps.html#acc3d1ee-c5d8-4a1f-b50c-f70913acbabd
Water licensing	3.4	https://nrmaps.nt.gov.au/nrmaps.html#4019cb0a-357a-478b-95f9-e3548d0059e4
Sinkholes (NR Maps)	3.5	https://nrmaps.nt.gov.au/nrmaps.html#5252cb80-37f0-489c-b58f-223571b2a8f3
Springs (NR Maps)	3.5	https://nrmaps.nt.gov.au/nrmaps.html#addbb4ec-544e-4d51-80a6-6f8f02851f86
Stream order (NR Maps)	3.5	https://nrmaps.nt.gov.au/nrmaps.html#e25847a3-d248-4141-acf4-0edb54cecb2d
Land system mapping (NR Maps)	4.1	https://nrmaps.nt.gov.au/nrmaps.html#39fbc19f-7b48-4ed3-a436-4fa2a4c1aa26
Land unit mapping (NR Maps)	4.1	https://nrmaps.nt.gov.au/nrmaps.html#b96cef46-897e-422c-8258-a8d7cbcc6f25
Unzoned clearing spatial data requirements fact sheet	1.4 and 4.1	https://nt.gov.au/property/land-clearing/freehold-land/apply-to-clear-freehold-land/spatial-data-minimum-requirements-for-unzoned-clearing-of-native-vegetation
Flora atlas records (NR Maps)	5.1	https://nrmaps.nt.gov.au/nrmaps.html#5be0667e-80d2-40fc-bf4c-1354b56feb46
Fauna atlas records (NR Maps)	5.1	https://nrmaps.nt.gov.au/nrmaps.html#dd85cd3f-dcc4-4776-b3f5-dbfd2aa1292f
Threatened flora	5.2	https://nt.gov.au/environment/native-plants/threatened-plants
Threatened fauna	5.2	https://nt.gov.au/environment/animals/threatened-animals
Rainforest (NR Maps)	5.3	https://nrmaps.nt.gov.au/nrmaps.html#e0e567e5-630d-4d18-96b5-f4cb890e5d17
Sandsheet heath (NR Maps)	5.3	https://nrmaps.nt.gov.au/nrmaps.html#d7f7c2a6-9f6b-4558-b6a5-5a8be88e62e1
NT Sites of Conservation Significance	6.1	https://nt.gov.au/environment/environment-data-maps/important-biodiversity-conservation-sites/conservation-significance-list

Reference	Section	Link to reference source
Important Wetlands Australia directory	6.1	https://www.environment.gov.au/water/wetlands/australian-wetlands-database/directory-important-wetlands
Australia's Ramsar Sites	6.1	https://www.environment.gov.au/water/wetlands/publications/factsheet-australias-ramsar-sites
SoCS layer (NR Maps)	6.1	https://nrmaps.nt.gov.au/nrmaps.html#3a62bcff-bd1e-4808-bd98-813068d6d781
Referring a proposed action to the NT EPA - Environmental impact assessment guidance for proponents	6.3	https://ntepa.nt.gov.au/__data/assets/pdf_file/0009/805167/referring-proposed-action-to-ntepa-guideline.pdf
NT EPA Environmental Factors and Objectives	6.3	https://ntepa.nt.gov.au/__data/assets/pdf_file/0020/804602/guide-ntepa-environmental-factors-objectives.pdf
Slope greater than 2% (NR Maps)	8.1	https://nrmaps.nt.gov.au/nrmaps.html#0bfd7a90-de41-495e-a6a2-dae352d6edc0
Erosion and sediment controls	8.3	https://nt.gov.au/environment/soil-land-vegetation
Declared weeds (NR Maps)	9.1	https://nrmaps.nt.gov.au/nrmaps.html#8079acb4-f563-4f3a-ac9e-8197d9dbbd12
Statutory Weed Management Plans	9.2	https://nt.gov.au/environment/weeds/how-to-comply-with-the-law/statutory-weed-management-plans
Department of Territory Families, Housing and Communities website	10	https://nt.gov.au/property/land/heritage-listings/heritage-register-search-for-places-or-objects
Aboriginal Areas Protection Authority website	11	https://www.aapant.org.au/

Agnote

No: E55

August 2010

Jarra Finger Grass

(Digitaria milanjiana cv Jarra)

A. G. Cameron, Principal Pastures and Extension Agronomist, Darwin

DESCRIPTION

Finger grass (*Digitaria milanjiana*) is a vigorous stoloniferous (runner) perennial grass. It is similar in appearance to pangola grass (*D. eriantha*) but is leafier.

Leaf blades are hairy, measuring between 15 to 30 cm in length and 3 to13 mm in width. Flowering stems can reach to a height of 2.5 m. The flower head has two to 18 spikes, each 5 to 25 cm long. Seeds are small, numbering about 2 million per kg.

There are two released cultivars available in Australia, Jarra and Strickland.

Jarra is hairy, dark-green and purple in colour. During the wet season, it produces runners up to 5 m long, foliage up to 80 cm tall and flowering stems up to 1.8 m high. Average stem thickness is 1.9 mm and average leaf width is 13.2 mm. The flower head usually has six to11 spikes, each 10 to16 cm long.

Strickland is less hairy than Jarra and is blue-green in appearance. During the wet season, it produces runners up to 2.5 m long, foliage up to 70 cm high and flowering stems up to 1.3 m tall. Its average stem thickness and leaf width are smaller than those of Jarra. See Agnote 740 (E65) *Strickland Finger Grass.*

Figure 1. Jarra finger grass seed head

CLIMATE AND SOILS

Finger grass is a native of tropical Eastern and Southern Africa, from Ethiopia down to South Africa. It is found in semi-arid to wet equatorial areas, with average annual rainfall between 450 to 1700 mm. It grows in grasslands or sandy loam soils and in open woodlands on heavy black or sandy soils.

Jarra is suitable for areas receiving over 1100 mm annual rainfall. Although it will persist in areas with 900 mm annual rainfall, it will be less productive.

It will grow on a wide range of soil types from sands to clays, including solodics, lithosols, yellow earths, red earths and sandy red earths. Jarra will withstand water-logging but not prolonged flooding. Jarra is drought tolerant. Current predictions indicate that Jarra will grow better than Strickland in wetter areas, and Strickland will grow better than Jarra in drier areas.

SOWING

Sow in December or January when there is a good chance of follow up rain. The seed should be sown at 1 to 4 kg/ha, depending on seedbed preparation and proposed end use. For best results, the seed should be sown into a well-prepared, moist, weed-free seedbed.

Freshly-harvested seed has a low germination rate because of post-harvest dormancy. Seed germination improves after a five to six months period of storage.

FERTILISER REQUIREMENTS

While fertiliser requirements have not been studied closely in the Top End, Jarra is very responsive to applied fertilisers. The types and amounts of fertiliser needed will depend on soil type, rainfall, pasture mix and intended use of the pasture.

Generally, the seed should be sown with 100 to 200 kg/ha of superphosphate, or its equivalent. Maintenance applications should be 50 to100 kg/ha, annually. Potassium may be required on some soils, particularly for more intensive use, such as haymaking.

Jarra will respond to split applications of nitrogen during the wet season, producing yields similar to pangola grass.

Figure 2. Jarra finger grass stem and leaf

YIELD

An annual dry matter yield of up to 15 t/ha has been achieved from well fertilised, un-grazed pastures in the Top End.

Established pastures of Jarra produce seed heads throughout the wet season. Three seed crops can be harvested: in December, in February and in late April/early May. This will depend on rainfall, cutting back the pasture and fertiliser applications, particularly nitrogen.

The February seed crop can yield up to 100 kg/ha, the April/May seed crop up to 40 to 50 kg/ha and the December seed crop below that.

The seed crop can be harvested with a beater harvester, a brush harvester or a conventional header. It should be harvested when about 10% of mature seed has been shed from seed heads. The seed crop should be harvested in seven to 10 days, before most of the seed is shed.

GRAZING

Jarra is very palatable to all types of stock as green feed, dry feed or as hay. It can be used in mixed pastures or as a hay crop. It should not be grazed in the wet season of establishment. It should be only lightly grazed in the first dry season.

MIXTURES

Legumes which can be sown in mixtures with Jarra are Glenn, Lee, Wynn, Oolloo, Cavalcade, Bundey, Milgarra, Amiga, Verano, Seca and Siran.

HAY

Good quality hay can be made from Jarra. It is highly digestible and is well accepted by stock.

During haymaking, leaf hairs can become airborne, interfering with machine operations.

PESTS AND DISEASES

Crab grass leaf beetle (*Lema rufotincta*) adults and larvae can severely damage seedlings and young leaf tissue during the early part of the wet season. This problem is generally short-lived as the small beetles are often quickly controlled by natural predators. If necessary, they can be controlled by spraying.

Magpie geese and wallabies find Jarra extremely palatable and can defoliate young pastures early in the wet season, if present in large numbers.

WARNING

Pasture plants have the potential to become weeds in certain situations. To prevent that, ensure that pasture seeds and/or vegetative materials are not inadvertently transferred to adjacent properties or road sides.

Please visit us at our website:

www.nt.gov.au/d

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Agdex No. 125/10

NT PORTION 2255 - Clearing

MAG-1

ACCESS TRACK 2

MAG-2

GOV-1

ACCESS TRACK 1

MAG-3

ACCESS TRACK 3

GOV-2

250 m 1000 m 1750 m

GDA94 / MGA zone

CLEARING AREAS V8

CLEARING AREAS V8

NT PORTION 2255

NT Portion 2255 - Previously cleared areas

N

HOMESTEAD AREA

UNKNOWN CLEARING AREA

0.0 km 5.0 km 10.0 km

PREVIOUSLY CLEARED AREAS
NT PORTION 2255 - CADASTRE BOUNDARY

NT PORTION 2255 - LAND TYPE MAP V2

N

250 m
1000 m
1750 m

GDA94 / MGA zone 53

LAND TYPE A
LAND TYPE B
NT PORTION 2255

Land types in proposed clearing areas at NT Portion 2255

Land type:* A

Landform

Describe the landform including slope (%), direction the slope faces [e.g. E, SW]. Include information on the extent of surface gravel and rock outcrop.

Flat to gently sloping plains. Slope facing north and east with slope range of 0 – 2%

Minor surface gravel observed (i.e. 0 to 2%).

Soil

Describe the dominant soil in this land type highlighting features such as sand and clay content of the soil, soil depth and colour and gravel contents, surface cracking if present and level of soil waterlogging and/or inundation during wet seasons.

Moderately deep and well drained red sandy loam soil. Soil depth at Photo Site 3 was approximately 1m. No surface rock observed.

Vegetation

Describe the average height and density of trees [e.g. dense, medium density, sparse or very sparse] and the dominant trees, shrubs, grasses and weeds.

Mid-high open woodland of *Eucalytus patellaris*, *Corymbia terminalis*, *Corymbia ferruginea*, *Eryhtorphleum chlorostachys*, and *Corymbia dichromophloia* over *Chrysopogon latifolius* (ribbon grass), *Themeda australis* (kangaroo grass), and *Sehima nervosum* (white grass).

Soil conservation

Is there evidence of erosion in this land type? Rate the risk of erosion if cleared? Consider: rainfall; slope; slope length (or contributing catchment); soil erodibility; and land use (proposed tillage, mounding and projected groundcover).

No erosion present and low risk of erosion in proposed clearing area due to low slope gradient, limited run length, moderate soil erodibility and proposed zero till activities and permanent plant/root stand once Jarra finger grass is established. Best management practices described in Section 1.8 (Establishment Plan) will mitigate risk of erosion during clearing activities prior to crop establishment.

Insert site photographs that depict the landform, vegetation, soil type of the land type.

Photo A
14° 34' 21.6480" S, 132° 31' 25.0314" E

Photo B
14° 34' 21.6480" S, 132° 31' 25.0314" E

Photo C
14° 34' 21.6480" S, 132° 31' 25.0314" E

Photo D
14° 34' 21.6480" S, 132° 31' 25.0314" E

Land type:* B

Landform

Describe the landform including slope (%), direction the slope faces [e.g. E, SW]. Include information on the extent of surface gravel and rock outcrop.

Gently sloping or undulating lateritic plateaux. Slope facing mostly west, with areas facing south and north as well. Slope range of 0 – 2%. Minor surface gravel observed in areas (i.e. 0 to 10%).

Soil

Describe the dominant soil in this land type highlighting features such as sand and clay content of the soil, soil depth and colour and gravel contents, surface cracking if present and level of soil waterlogging and/or inundation during wet seasons.

Brown sandy or gravelly soils with red sandy loams and loams present. Soil depth at Photo Site I was approximately 65cm. Surface gravel present ranged from 0% to up to 10%. Well drained to moderately well drained soils.

Vegetation

Describe the average height and density of trees [e.g. dense, medium density, sparse or very sparse] and the dominant trees, shrubs, grasses and weeds.

Woodland consisting of *Eucalyptus tetrodonta*, *E. miniata*, *Corymbia bleeseri*, *Erythrophleum chlorostachys*, *Buchanania obovata*, and *E. tetrodonta*. Tussock and hummock grass layer including *Chrysopogon fallax* (goldern beard grass), *Triodia bitextura* (curly spinifex), and *Sorghum plumosum* (plume sorghum).

Soil conservation

Is there evidence of erosion in this land type? Rate the risk of erosion if cleared? Consider: rainfall; slope; slope length (or contributing catchment); soil erodibility; and land use (proposed tillage, mounding and projected groundcover).

No erosion present and low risk of erosion in proposed clearing area due to low slope gradient, limited run length, moderate soil erodibility and proposed zero till activities and permanent plant/root stand once Jarra finger grass is established. Best management practices described in Section 1.8 (Establishment Plan) will mitigate risk of erosion during clearing activities prior to crop establishment.

Insert site photographs that depict the landform, vegetation, soil type of the land type.

Photo A
14° 36' 00.3594" S, 132° 31' 59.8074" E

Photo B
14° 36' 00.3594" S, 132° 31' 59.8074" E

	
Photo C 14° 36' 00.3594" S, 132° 31' 59.8074" E	Photo D 14° 36' 00.3594" S, 132° 31' 59.8074" E

*****SEE ATTACHMENT 7A FOR ALL SITE PHOTOS*****

NT PORTION 2255 - CLEARING PLAN WITH LAND TYPES AND PHOTO SITES

SITE 5
SITE 3
SITE 6
SITE 7
SITE 23
SITE 8
SITE 9
SITE 22
SITE 10
SITE 11
SITE 12
SITE 21
SITE 20
SITE 26
SITE 13
SITE 18
SITE 27
SITE 1
SITE 17
SITE 14
SITE 25
SITE 24
SITE 28
SITE 16
SITE 29
SITE 2
SITE 15
SITE 30
SITE 4
SITE 33
SITE 19
SITE 32
SITE 31

250 m 1000 m 1750 m

GDA94 / MGA zone 53

CLEARING AREAS V7
LAND TYPE A
LAND TYPE B
NT PORTION 2255
PHOTO SITES.kmz


NT PORTION 2255
SITE 1, 17 January 2023
14° 36' 00.3594" S, 132° 31' 59.8074" E


NT PORTION 2255
SITE 1, 17 January 2023
14° 36' 00.3594" S, 132° 31' 59.8074" E


NT PORTION 2255
SITE 1, 17 January 2023
14° 36' 00.3594" S, 132° 31' 59.8074" E


NT PORTION 2255
SITE 1, 17 January 2023
14° 36' 00.3594" S, 132° 31' 59.8074" E


NT PORTION 2255
SITE 1, 17 January 2023
14° 36' 00.3594" S, 132° 31' 59.8074" E


NT PORTION 2255
SITE 1, 17 January 2023
14° 36' 00.3594" S, 132° 31' 59.8074" E


NT PORTION 2255
SITE 1, 17 January 2023
14° 36' 00.3594" S, 132° 31' 59.8074" E


NT PORTION 2255
SITE 2, 17 January 2023
14° 36' 20.6640" S, 132° 33' 56.9880" E


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SITE 2, 17 January 2023
14° 36' 20.6640" S, 132° 33' 56.9880" E


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SITE 2, 17 January 2023
14° 36' 20.6640" S, 132° 33' 56.9880" E


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SITE 2, 17 January 2023
14° 36' 20.6640" S, 132° 33' 56.9880" E


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SITE 2, 17 January 2023
14° 36' 20.6640" S, 132° 33' 56.9880" E


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SITE 2, 17 January 2023
14° 36' 20.6640" S, 132° 33' 56.9880" E


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SITE 2, 17 January 2023
14° 36' 20.6640" S, 132° 33' 56.9880" E


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SITE 2, 17 January 2023
14° 36' 20.6640" S, 132° 33' 56.9880" E


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SITE 2, 17 January 2023
14° 36' 20.6640" S, 132° 33' 56.9880" E


NT PORTION 2255
SITE 3, 17 January 2023
14° 34' 21.6480" S, 132° 31' 25.0314" E


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SITE 3, 17 January 2023
14° 34' 21.6480" S, 132° 31' 25.0314" E


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SITE 3, 17 January 2023
14° 34' 21.6480" S, 132° 31' 25.0314" E


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SITE 3, 17 January 2023
14° 34' 21.6480" S 132° 31' 25.0314" E


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SITE 3, 17 January 2023
14° 34' 21.6480" S, 132° 31' 25.0314" E


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SITE 3, 17 January 2023
14° 34' 21.6480" S, 132° 31' 25.0314" E


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SITE 3, 17 January 2023
14° 34' 21.6480" S, 132° 31' 25.0314" E


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SITE 3, 17 January 2023
14° 34' 21.6480" S, 132° 31' 25.0314" E


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SITE 3, 17 January 2023
14° 34' 21.6480" S, 132° 31' 25.0314" E


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SITE 4, 17 January 2023
14° 36' 31.9674" S, 132° 34' 31.1880" E


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SITE 4, 17 January 2023
14° 36' 31.9674" S, 132° 34' 31.1880" E


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SITE 4, 17 January 2023
14° 36' 31.9674" S, 132° 34' 31.1880" E


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SITE 4, 17 January 2023
14° 36' 31.9674" S, 132° 34' 31.1880" E


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SITE 4, 17 January 2023
14° 36' 31.9674" S, 132° 34' 31.1880" E


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SITE 4, 17 January 2023
14° 36' 31.9674" S, 132° 34' 31.1880" E


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SITE 4, 17 January 2023
14° 36' 31.9674" S, 132° 34' 31.1880" E


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SITE 4, 17 January 2023
14° 36' 31.9674" S, 132° 34' 31.1880" E


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SITE 5, 15 January 2023
14° 34' 10.4300" S, 132° 31' 24.0500" E


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SITE 5, 15 January 2023
14° 34' 10.4300" S, 132° 31' 24.0500" E


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SITE 6, 15 January 2023
14° 34' 21.4800" S, 132° 31' 55.8500" E


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SITE 6, 15 January 2023
14° 34' 21.4800" S, 132° 31' 55.8500" E


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SITE 7, 15 January 2023
14° 34' 21.7300" S, 132° 32' 30.4600" E


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SITE 8, 15 January 2023
14° 34' 18.5100" S, 132° 32' 40.3500" E


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SITE 8, 15 January 2023
14° 34' 18.5100" S, 132° 32' 40.3500" E


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SITE 9, 15 January 2023
14° 34' 36.0500" S, 132° 32' 39.1900" E


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SITE 9, 15 January 2023
14° 34' 36.0500" S, 132° 32' 39.1900" E


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SITE 10, 15 January 2023
14° 34' 50.0100" S, 132° 32' 48.2000" E


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SITE 10, 15 January 2023
14° 34' 50.0100" S, 132° 32' 48.2000" E


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SITE 11, 15 January 2023
14° 35' 02.9900" S, 132° 33' 06.5500" E


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SITE 12, 15 January 2023
14° 35' 12.4300" S, 132° 33' 19.4600" E


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SITE 12, 15 January 2023
14° 35' 12.4300" S, 132° 33' 19.4600" E


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, SITE 13, 15 January 2023
14° 35' 45.6800" S, 132° 33' 30.9400" E


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SITE 13, 15 January 2023
14° 35' 45.6800" S, 132° 33' 30.9400" E


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SITE 14, 15 January 2023
14° 36' 06.6600" S, 132° 33' 48.0800" E


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SITE 14, 15 January 2023
14° 36' 06.6600" S, 132° 33' 48.0800" E


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SITE 15, 15 January 2023
14° 36' 20.1500" S, 132° 34' 24.0000" E


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SITE 15, 15 January 2023
14° 36' 20.1500" S, 132° 34' 24.0000" E


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SITE 15, 15 January 2023
14° 36' 20.1500" S, 132° 34' 24.0000" E


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SITE 16, 15 January 2023
14° 36' 12.9400" S, 132° 34' 16.7500" E


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SITE 17, 15 January 2023
14° 36' 04.2800" S, 132° 34' 16.4200" E


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SITE 17, 15 January 2023
14° 36' 04.2800" S, 132° 34' 16.4200" E


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SITE 18, 15 January 2023
14° 35' 48.9200" S, 132° 34' 14.5000" E


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SITE 18, 15 January 2023
14° 35' 48.9200" S, 132° 34' 14.5000" E


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SITE 18, 15 January 2023
14° 35' 48.9200" S, 132° 34' 14.5000" E


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SITE 18 15 January 2023
14° 35' 48.9200" S 132° 34' 14.5000" E


NT PORTION 2255
SITE 19, 15 January 2023
14° 36' 23.2400" S, 132° 34' 34.1100" E


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SITE 19, 15 January 2023
14° 36' 23.2400" S, 132° 34' 34.1100" E


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SITE 19, 15 January 2023
14° 36' 23.2400" S, 132° 34' 34.1100" E


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SITE 20, 15 January 2023
14° 35' 33.1500" S, 132° 33' 09.3500" E


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SITE 20, 15 January 2023
14° 35' 33.1500" S, 132° 33' 09.3500" E


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SITE 20, 15 January 2023
14° 35' 33.1500" S, 132° 33' 09.3500" E


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SITE 20, 15 January 2023
14° 35' 33.1500" S, 132° 33' 09.3500" E


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SITE 21, 15 January 2023
14° 35' 21.0500" S, 132° 32' 49.1900" E


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SITE 21, 15 January 2023
14° 35' 21.0500" S, 132° 32' 49.1900" E


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SITE 21, 15 January 2023
14° 35' 21.0500" S, 132° 32' 49.1900" E


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SITE 22, 15 January 2023
14° 34' 39.1600" S, 132° 32' 12.8800" E


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SITE 22, 15 January 2023
14° 34' 39.1600" S, 132° 32' 12.8800" E


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SITE 22, 15 January 2023
14° 34' 39.1600" S, 132° 32' 12.8800" E


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SITE 23, 15 January 2023
14° 34' 31.3700" S, 132° 31' 26.0800" E


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SITE 23, 15 January 2023
14° 34' 31.3700" S, 132° 31' 26.0800" E


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SITE 23, 15 January 2023
14° 34' 31.3700" S, 132° 31' 26.0800" E


NT PORTION 2255
SITE 24, 16 January 2023
14° 36' 10.6300" S, 132° 32' 05.9000" E


NT PORTION 2255
SITE 24 , 16 January 2023
14° 36' 10.6300" S, 132° 32' 05.9000" E


NT PORTION 2255
SITE 24, 16 January 2023
14° 36' 10.6300" S, 132° 32' 05.9000" E


NT PORTION 2255
SITE 24, 16 January 2023
14° 36' 10.6300" S, 132° 32' 05.9000" E


NT PORTION 2255
SITE 25, 16 January 2023
14° 35' 56.4500" S, 132° 32' 11.4000" E


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SITE 25, 16 January 2023
14° 35' 56.4500" S, 132° 32' 11.4000" E


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SITE 25, 16 January 2023
14° 35' 56.4500" S, 132° 32' 11.4000" E


NT PORTION 2255
SITE 26, 16 January 2023
14° 35' 42.1100" S, 132° 32' 20.0800" E


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SITE 26, 16 January 2023
14° 35' 42.1100" S, 132° 32' 20.0800" E


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SITE 26, 16 January 2023
14° 35' 42.1100" S, 132° 32' 20.0800" E


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SITE 26, 16 January 2023
14° 35' 42.1100" S, 132° 32' 20.0800" E


NT PORTION 2255
SITE 27, 16 January 2023
14° 35' 48.7700" S, 132° 32' 37.5400" E


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SITE 27, 16 January 2023
14° 35' 48.7700" S, 132° 32' 37.5400" E


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SITE 27, 16 January 2023
14° 35' 48.7700" S, 132° 32' 37.5400" E


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SITE 27, 16 January 2023
14° 35' 48.7700" S, 132° 32' 37.5400" E


NT PORTION 2255
SITE 28, 16 January 2023
14° 36' 09.3300" S 132° 33' 04.5200" E


NT PORTION 2255
SITE 28, 16 January 2023
14° 36' 09.3300" S, 132° 33' 04.5200" E


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SITE 28, 16 January 2023
14° 36' 09.3300" S, 132° 33' 04.5200" E


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SITE 28, 16 January 2023
14° 36' 09.3300" S, 132° 33' 04.5200" E


NT PORTION 2255
SITE 29, 16 January 2023
14° 36' 15.3500" S, 132° 33' 20.0100" E


NT PORTION 2255
SITE 29 , 16 January 2023
14° 36' 15.3500" S, 132° 33' 20.0100" E


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SITE 29, 16 January 2023
14° 36' 15.3500" S, 132° 33' 20.0100" E


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SITE 29, 16 January 2023
14° 36' 15.3500" S, 132° 33' 20.0100" E


NT PORTION 2255
SITE 30, 16 January 2023
14° 36' 29.8700" S, 132° 33' 42.5300" E


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SITE 30, 16 January 2023
14° 36' 29.8700" S, 132° 33' 42.5300" E


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SITE 30, 16 January 2023
14° 36' 29.8700" S, 132° 33' 42.5300" E


NT PORTION 2255
SITE 31, 16 January 2023
14° 36' 54.5700" S, 132° 33' 18.3600" E


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SITE 31, 16 January 2023
14° 36' 54.5700" S, 132° 33' 18.3600" E


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SITE 31, 16 January 2023
14° 36' 54.5700" S, 132° 33' 18.3600" E


NT PORTION 2255
SITE 32, 16 January 2023
14° 36' 38.2300" S, 132° 32' 56.9300" E


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SITE 32, 16 January 2023
14° 36' 38.2300" S, 132° 32' 56.9300" E


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SITE 32, 16 January 2023
14° 36' 38.2300" S, 132° 32' 56.9300" E


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SITE 32, 16 January 2023
14° 36' 38.2300" S, 132° 32' 56.9300" E


NT PORTION 2255
SITE 33, 16 January 2023
14° 36' 33.1000" S, 132° 32' 20.3000" E


NT PORTION 2255
SITE 33, 16 January 2023
14° 36' 33.1000" S, 132° 32' 20.3000" E


NT PORTION 2255
SITE 33, 16 January 2023
14° 36' 33.1000" S, 132° 32' 20.3000" E

Land Capability Assessment

NT Portion 2255

This Land Capability Assessment forms part of the application documents associated with a Land Clearing Application to clear native vegetation at NT Portion 2255 for the purpose of improved pasture production (Jarra finger grass). The purpose of this land capability assessment is to evaluate the key soil and land resource attributes recorded in Land Types A and B identified in document '*ATTACHMENT 6 – Land Type Map V2'* against a defined set of criteria to determine an overall land capability class.

There are four land capability classes, which are defined in Table 1 as follows:

Class	Land capability	Description
1	High	Land with negligible constraints and requires only simple management practices.
2	Moderate	Land with minor to moderate constraints but requires more than the simple management practices of Class 1.
3	Marginal	Land with severe constraints and requires considerable management practices.
4	Not recommended	Land with extreme constraints too severe to develop. Can only be overcome with major management and/or engineered solutions.

Table 1 - Land capability classes (Department of Environment, Parks and Water Security, 2021)

There are ten soil and land resource attributes that are considered in a land capability assessment. These are:

- Acid sulphate soils
- Flooding
- Microrelief
- Salinity
- Slope
- Soil depth
- Soil drainage
- Surface rock
- Wind erosion
- Soil sodicity

Background information

The following is a description of each attribute per Land Type and provides background to the land capability assessment of each for the intended land use.

Land Type A

Acid Sulfate Soils

There is low probability of acid sulphate soils associated with Land Type A. This is verified by the Atlas of Australian Acid Sulphate Soils, available at https://www.asris.csiro.au/themes/AcidSulfateSoils.html (Australian Collaborative Land Evaluation Program, n.d.)

Class 1 (i.e., high land capability) criteria requires no acid sulfate soils to be associated with a land type.

Flooding

Land Type A not located in proximity to any drainage areas or drainage lines (e.g., streams or rivers).

Land capability Class 1 is associated with land that never floods. (Department of Environment, Parks and Water Security, 2021)

Microrelief

There is no microrelief (i.e., gilgai) present in Land Type A, as shown in the land type photos provided in 'Attachment 7A – All Site Photos' which show that Land Type A has no vertical interval present associated with microrelief, and therefore meets criteria as Class 1 land capability for this attribute. (Department of Environment, Parks and Water Security, 2021)

Salinity

The Northern Territory of Australia Dryland Salinity Hazard Map indicates that there is a very low salinity hazard associated with dryland agriculture in the area overlying Land Type A. This map is provided in Attachment 1 at the end of this document.

Land Type A is not in a coastal or tidal area and therefore has no potential to be affected by salinity.

Sodicity

There is no evidence of existing erosion to suggest soil associated with Land Type A has dispersive properties.

Slope

An overlay of STRM-derived 1 Second Digital Elevation Models Version 1.0 (Gallant, 2011) indicates that the land slope for Land Type A ranges from 0 to 3%. A 2.5m DTM was obtained from NTG that overlay most of Land Type A, which verified that slope present was 0 to 2% in the capture area. Slope indicated in the STRM-derived 1 Second Digital Elevation Model as being over 2% in MAG-3 was field verified to be below 2%.

Land Type A meets the criteria for land capability Class 2, which defines marginally capable land as having a slope of 1 to 2%. (Department of Environment, Parks and Water Security, 2021)

Soil Depth

Observed soil depth using a soil corer at Land Type A was 1m.

A land capability of Class 2 for the attribute of soil depth is defined as having a soil depth of 0.5 to 1m. (Department of Environment, Parks and Water Security, 2021)

Drainage

Land Type A consists of soil that is well drained soil with no evidence of poor/slow drainage or ponding.

Drainage that is defined as well drained is associated with land capability Class 1 (i.e. high land capability). (Department of Environment, Parks and Water Security, 2021)

Surface Rock

No surface rock was observed in Land Type A. Minor gravel was observed in areas (i.e. 0 to 2%).

A land type that is defined as having 0-2% surface rock is associated with land capability Class 2. (Department of Environment, Parks and Water Security, 2021)

Wind Erosion

The mean 9am and 3pm wind speeds (km/hr) recorded at the Bureau of Meteorology location 014902 Katherine Council NT (approximately 28 km from proposed development site and Land Type A) are reported in Attachment 2. (Bureau of Meteorology, 2022)

The Department of Primary Industries and Regional Development (Government of Western Australia) webpage titled *'Diagnosing wind erosion risk'* states that factors (hazards) contributing to wind erosion risk include erosive winds: wind speeds of greater than 28 kilometres per hour are needed to move soil particles and lift dust for significant distances. (Department of Primary Industries and Regional Development, 2021)

Given that the mean 9am and 3pm wind speeds are below 10 km/hr, and that the soil has moderately good soil structure, there is a low risk of wind erosion at Land Type A, which meets the criteria for land capability Class 1. (Department of Environment, Parks and Water Security, 2021)

Land capability assessment of Land Type A

Land Type	Land capability	ASS	Flooding	Microrelief	Salinity	Sodicity	Slope	Soil depth	Drainage	Surface Rock	Wind erosion	Overall land capability class
A	**Initial** assessment of land capability.	Not present	Never	None	Low risk	Low risk	0 to 2%	1m	Well drained	0 - 2%	Low hazard	-
	Initial land capability sub-class	1	1	1	1	1	2	2	1	2	1	2
	Amended land capability sub-class (based on the soil landscape requirements of rainfed annual and perennial cropping activities).	1	1	1	1	1	1 *(Not likely to impact intended land use)*	1 *(Not likely to impact intended land use)*	1	1 *(Not likely to impact intended land use)*	1	**1**

The above land capability assessment identifies slope as being the most limiting factors to the land capability of Land Type A. The final land capacity of was determined to be **Class 1**, with high land capability for the proposed use of improved pasture production (Jarra finger grass).

Land Type B

Acid Sulfate Soils

There is low probability of acid sulphate soils associated with Land Type B. This is verified by the Atlas of Australian Acid Sulphate Soils, available at https://www.asris.csiro.au/themes/AcidSulfateSoils.html (Australian Collaborative Land Evaluation Program, n.d.)

Class 1 (i.e., high land capability) criteria requires no acid sulfate soils to be associated with a land type.

Flooding

Land Type B not located in proximity to any drainage areas or drainage lines (e.g., streams or rivers).

Land capability Class 1 is associated with land that never floods. (Department of Environment, Parks and Water Security, 2021)

Microrelief

There is no microrelief (i.e., gilgai) present in Land Type B, as shown in the land type photos provided in 'Attachment 7A – All Site Photos' which show that Land Type B has no vertical interval present associated with microrelief, and therefore meets criteria as Class 1 land capability for this attribute. (Department of Environment, Parks and Water Security, 2021)

Salinity

The Northern Territory of Australia Dryland Salinity Hazard Map indicates that there is a very low salinity hazard associated with dryland agriculture in the area overlying Land Type B. This map is provided in Attachment 1 at the end of this document.

Land Type B is not in a coastal or tidal area and therefore has no potential to be affected by salinity.

Sodicity

There is no evidence of existing erosion to suggest soil associated with Land Type B has dispersive properties.

Slope

An overlay of STRM-derived 1 Second Digital Elevation Models Version 1.0 (Gallant, 2011) indicates that the land slope for Land Type A ranges from 0 to 3%. A 2.5m DTM was obtained from NTG that overlay most of Land Type A, which verified that slope present was 0 to 2% in the capture area.

Land Type A meets the criteria for land capability Class 2, which defines marginally capable land as having a slope of 1 to 2%. (Department of Environment, Parks and Water Security, 2021)

Soil Depth

Observed soil depth at Land Type B using a soil corer was 65cm.

A land capability of Class 2 for the attribute of soil depth is defined as having a soil depth of 0.5 to 1m. (Department of Environment, Parks and Water Security, 2021)

Drainage

Land Type B consists of soil that is well to moderately well drained with no evidence of poor/slow drainage or ponding.

Drainage that is defined as moderately well drained is associated with land capability Class 2 (i.e. moderate land capability). (Department of Environment, Parks and Water Security, 2021)

Surface Rock

Observed surface rock at Land Type B varied from 0 to 10%, present as surface gravel.

A land type that is defined as having 2 to 10% surface rock is associated with land capability Class 3. (Department of Environment, Parks and Water Security, 2021)

Wind Erosion

The mean 9am and 3pm wind speeds (km/hr) recorded at the Bureau of Meteorology location 014902 Katherine Council NT (approximately 28 km from proposed development site and Land Type B) are reported in Attachment 2. (Bureau of Meteorology, 2022)

The Department of Primary Industries and Regional Development (Government of Western Australia) webpage titled *'Diagnosing wind erosion risk'* states that factors (hazards) contributing to wind erosion risk include erosive winds: wind speeds of greater than 28 kilometres per hour are needed to move soil particles and lift dust for significant distances. (Department of Primary Industries and Regional Development, 2021)

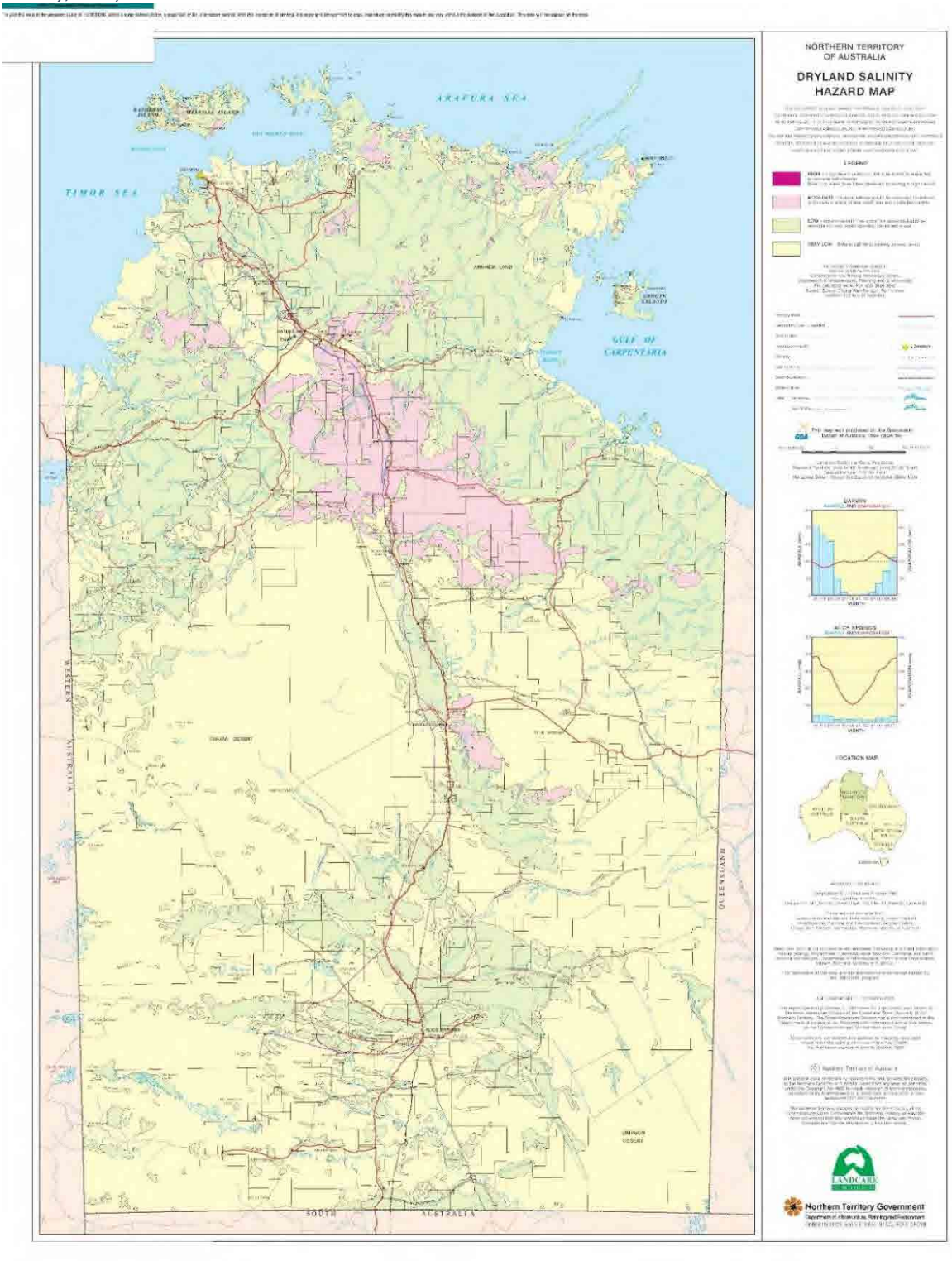
Given that the mean 9am and 3pm wind speeds are below 10 km/hr, and that the soil has moderately good soil structure, there is a low risk of wind erosion at Land Type B, which meets the criteria for land capability Class 1. (Department of Environment, Parks and Water Security, 2021)

Land capability assessment of Land Type B

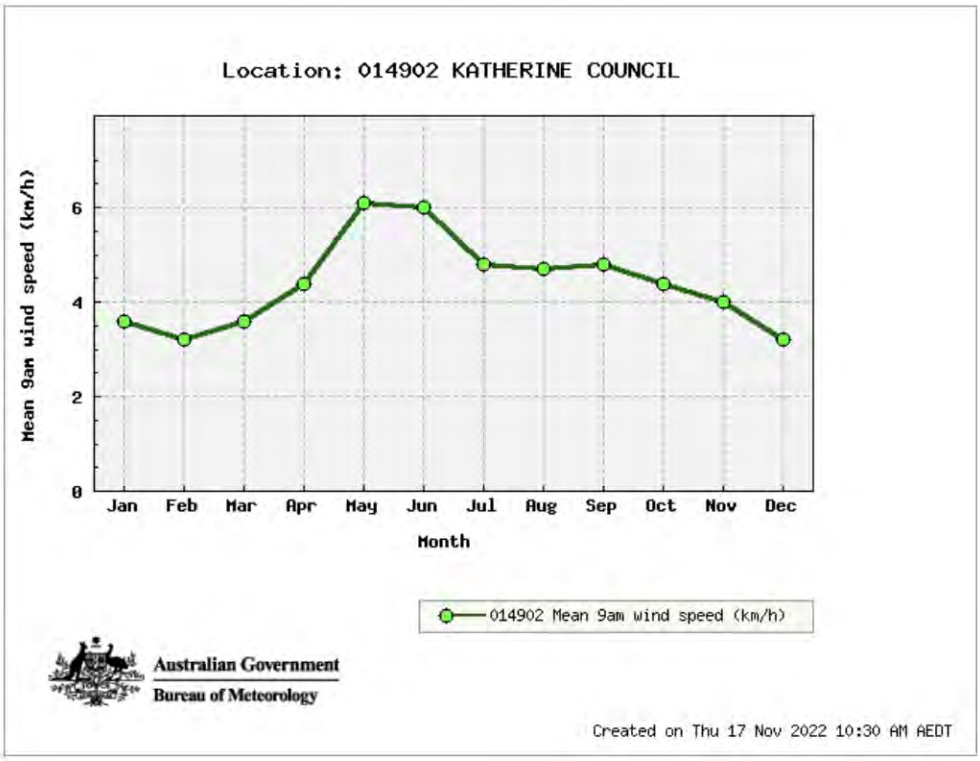
Land Type	Land capability	ASS	Flooding	Microrelief	Salinity	Sodicity	Slope	Soil depth	Drainage	Surface Rock	Wind erosion	Overall land capability class
B	**Initial** assessment of land capability.	Not present	Never	None	Low risk	Low risk	0 to 2%	0.5 to 1m	Moderately well drained	0 to 10%	Low hazard	-
	Initial land capability sub-class	1	1	1	1	1	2	2	2	3	1	3
	Amended land capability sub-class (based on the soil landscape requirements of rainfed annual and perennial cropping activities).	1	1	1	1	1	1 *(Not likely to impact intended land use)*	1 *(Not likely to impact intended land use)*	1 *(Not likely to impact intended land use)*	2 *(Not likely to significantly impact intended land use)*	1	**2**

The above land capability assessment identifies slope and surface rock as being the most limiting factors to the land capability of Land Type B. The final land capacity of was determined to be **Class 2**, with moderate land capability for the proposed use of improved pasture production (Jarra finger grass).

Attachment 1 - Northern Territory of Australian Dryland Salinity Hazard Map (Department of Environment, Parks and Water Security, 2000)



Attachment 2 - Mean 9am and 3pm wind speed (km/hr) at location number 014902 (Katherine Council).



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Referring a proposal to the NT EPA

Environmental impact assessment
Guidance for proponents

ntepa Northern Territory Environment Protection Authority

Document title	Referring a proposal to the NT EPA
Contact details	Environment Division of Department of Lands, Planning and Environment
Approved by	NT EPA Chairperson
Document review	12 months
TRM number	NTEPA2019/0141-009~0034

Version	Date	Author	Changes made
1.0	6 January 2021	NT EPA	NT EPA (Adapted from guidance under the former Act)
2.0	24 August 2022	NT EPA	NT EPA review updates
3.0	17 March 2025	NT EPA	Updated to reflect amendments to EP Act and EP Regulations

Further information

Further information and guidance on the environmental impact assessment process is available on the NT EPA website at: www.ntepa.nt.gov.au

If you require assistance in applying this guidance to your circumstances or you are unsure whether a referral is required for your proposal, please contact the Environment Division of the Department of Lands, Planning and Environment. Appointments with relevant staff can be made through the contacts below:

Email: eia.ntepa@nt.gov.au
Tel: 08 8924 4218

Contents

1. Introduction

1.1. Overview

A proposed action or strategic proposal[1] (hereafter collectively referred to as a *proposal*) that has the potential to have a significant impact on the environment requires referral to the Northern Territory Environment Protection Authority (*NT EPA*) in accordance with the *Environment Protection Act 2019* (*EP Act)* and Environment Protection Regulations 2020 (*EP Regulations*).

The NT EPA is an independent statutory authority responsible for conducting the environmental impact assessment process under the EP Act. On completion of an environmental impact assessment (if one is required) the NT EPA provides advice to the Minister for Lands, Planning and Environment (*Minister*) about the environmental acceptability of a proposal and makes its recommendation to grant, or refuse to grant, an environmental approval.

If a proposal is referred, and the proponent's referral information is accepted, the NT EPA uses the information to:

- decide that environmental impact assessment of a proposal IS NOT required; or
- decide that environmental impact assessment of a proposal IS required, and the method of assessment; or
- make a recommendation to the Minister to refuse to grant an environmental approval.

This guidance document is part of a range of guidance prepared by the NT EPA to provide advice on environmental impact assessment under the EP Act. It should be read in conjunction with other guidance documents that provide advice in relation to the environmental impact assessment process and requirements, as shown in Error! Reference source not found..

1.2. Purpose of the guidance

This document provides guidance to proponents about:

- when a proponent should submit a referral to the NT EPA for consideration
- the matters that must be addressed in the referral (form and report) to allow decision making by the NT EPA and Minister
- expectations for the structure and quality of information in the referral report so that the proposal and its potential significant environmental impacts (direct, indirect and cumulative) can be well understood by all stakeholders
- where to submit the referral documents
- the environmental impact assessment process for a referral, including opportunities for public comment, decision points and timeframes
- how a referral may be considered by the NT EPA to inform its decision about whether assessment is required and the method (tier) of assessment.

[1] See sections 5, 12 and 13 of the EP Act

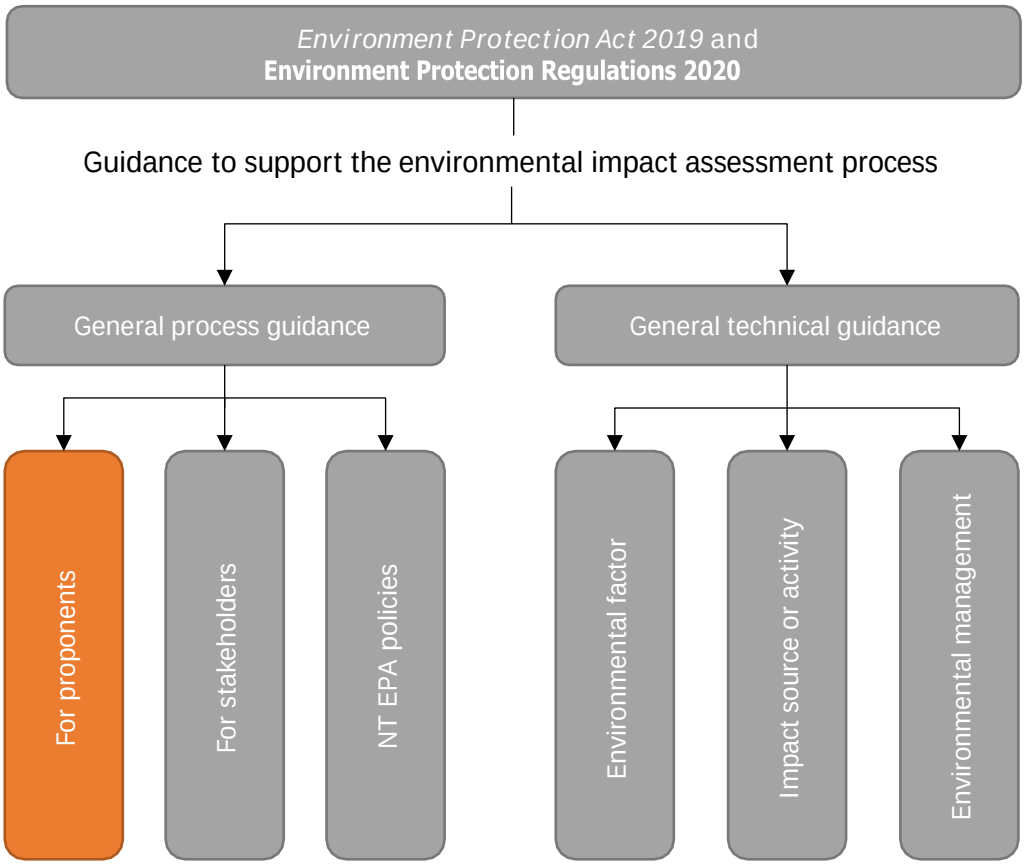

Figure 1 Environmental impact assessment guidance framework

2. When a referral is required

2.1. Legislative requirement

2.1.1. Section 48 of EP Act – standard assessment

Section 48 of the EP Act (for a standard assessment) states that a proponent must refer to the NT EPA a proposal that:

- has the potential to have a significant impact on the environment, or
- meets a referral trigger.

A majority of proposals are likely to be referred under this section.

It is the responsibility of a proponent to satisfy its obligations under the EP Act and EP Regulations. A proponent's consideration will need to include (but not be limited to):

- definitions of *impact* (including direct, indirect and cumulative) and *significant impact*[2]
- any environmental objectives[3] the Minister has declared by *Gazette* notice

[2] See definitions of *impact* and *significant impact* under sections 10 and 11 of EP Act.

[3] Note there are currently no environmental objectives declared by *Gazette* notice under Part 3 of the EP Act.

- NT EPA's Environmental Factors and Objectives guidance
- the pre-referral screening tool in Appendix 1 of this document.

A proponent also has general duties under an environmental impact assessment process (section 43 of the EP Act).

2.1.2. Section 49 of EP Act – strategic proposal

Alternatively, under section 49 of the EP Act, a proponent may refer a strategic proposal to the NT EPA. A strategic proposal can include a policy, program, plan or methodology, and may be a proposal or group of proposals which either individually or in combination with each other:

- will have the potential to have a significant impact on the environment, or
- will meet a referral trigger.

An example of a strategic proposal is a masterplan to facilitate development of a new multi-user area with a range of industry types. The strategic proposal might include site preparation, construction of headworks (utilities and services) and cumulative impact assessment of the masterplan, for example, potential impacts to flora and fauna.

2.1.3. Section 50 of EP Act – statutory decision-maker

Under section 50(2)(c) of the EP Act, if an application has been made to a statutory decision-maker who considers that a proposal should be referred to the NT EPA, and it has not been referred by the proponent, the statutory decision-maker may refer it.

2.1.4. Sections 51 to 52 of EP Act – significant variations

Under section 51 of the EP Act, a proponent must give the NT EPA notice of any variation that has the potential to have a significant impact on the environment (including on any new or additional areas), or that will alter the proposal to the extent that a referral trigger that did not apply would now apply (a *significant variation*[4]).

Alternatively, a proponent may refer an amended action to the NT EPA. If an amended action is referred, the original referral is taken to be withdrawn to the extent that it is modified by the significant variation.

In line with section 51A of the EP Act, a proposed significant variation to a proposal that has never been referred for environmental impact assessment under the EP Act or repealed *Environmental Assessment Act 1982* will be treated as a new referral.

Under section 52 of the EP Act, if an environmental approval holder submits to the NT EPA a significant variation of the proposal to which the environmental approval applies, the significant variation will be treated as a new referral.

2.1.5. Section 53 of the EP Act – call-in notice

Section 53 enables the NT EPA to call-in via written notice (a *call-in notice*):

- a proposal that should be referred
- a significant variation of proposal that should be referred/notified

[4] See definition of *significant variation* under section 12 of the EP Act.

- a significant variation of an action for which an environmental approval is in force.

Call-in notices are required to be published on the EP Act public register.

2.2. Pre-referral screening tool

The NT EPA has developed a screening tool (Appendix 1) to assist proponents and their suitably qualified and experienced persons to predict the potential for significant environmental impact from a proposal and understand their duties under an environmental impact assessment process.

Environmental impact can result from:

- the type of industry or activity proposed
- the location and extent of the proposal or activities associated with the proposal
- the methods and timing of the proposal or activities associated with the proposal
- inputs, emissions, discharges or wastes from the proposal that cause pollution or harm
- the residual or long-term impacts after decommissioning, closure or the end of life of the proposal.

The proponent must examine the potential for environmental impacts within the context of the NT EPA's environmental factors and objectives, which provide the framework for the identification of environmental values, the assessment of the significance of potential impacts to those values, and the setting of benchmarks to protect those values.

It is important for proponents to examine all potential impact sources that relate to the proposal, and the potential impact pathways between the source of an impact and environmental values and sensitivities that may be impacted. These need to be considered for the life of the proposal and after the proposal ceases, both in isolation and cumulatively.

The screening tool applies the above method to self-assess whether a proposal is required to be referred and comprises two parts:

- Part 1 provides a series of questions about the proposal, environmental values and likelihood of impacts
- Part 2 is a checklist to prompt a proponent to consider and justify answers in the context of whether the proposal is likely to impact on environmental values.

The screening tool is a guide only and may not cover the full range of environmental values or impacting activities. The NT EPA recommends the screening tool be completed by a suitably qualified and experienced person, particularly where there is uncertainty, and a lack of information or scientific knowledge.

The public register of environmental impact assessment processes on the NT EPA's website, is also a useful source of information to consider previous NT EPA decisions made in relation to similar proposals or industries. In the case of a unique or novel industry, or future industry sector, proponents can engage with Environment Division staff of DLPE to discuss the required approach.

Where the checklist records:

- 'yes' or 'uncertain' responses, the proposal is likely to require referral to the NT EPA
- 'no', referral to the NT EPA may not be required.

The NT EPA and Environment Division of DLPE do not routinely require the completed checklist to be submitted; however, proponents are advised to retain a copy of the completed screening tool including:

- the scope of the proposal that was considered
- supporting information relied on to inform the answers checked in the form (justification of the evidence and scientific knowledge available)
- the name, qualifications and contact details of the suitably qualified and experienced persons who conducted the screening.

Outputs from the screening tool may be used to communicate environmental impacts under other environmental regulatory regimes (for example, pastoral land clearing applications). Keeping a copy of the completed screening tool is recommended to demonstrate the proponent's process and support the proponent's decision to refer, or to not refer, its proposal. The screening tool output may also assist the proponent and NT EPA regarding proposals which may be considered with regard to a call-in (see 2.1.5).

3. Structure and information to provide in a referral

3.1. Introduction

Information provided in the referral report must be sufficient to address information required under the EP Act and EP Regulations, inform the NT EPA's decision on whether the referral should be accepted and whether the proposal has the potential to have significant impact on the environment.

The proponent is encouraged to provide scientifically valid referral information that clearly describes the proposal, existing environmental values, potential impacts and avoidance and mitigation measures – all substantiated with reliable, scientifically robust information. Early community and stakeholder engagement and consultation is strongly encouraged and outcomes should be incorporated into the development of the proposal and documented in the referral (as relevant to the environment).

The NT EPA may decide that no assessment is required or that assessment can be made based on the referral information (the most efficient assessment methods) if sufficient information is provided in the referral report. In this case, the NT EPA must be satisfied that further information is not required to complete the assessment process, meet the requirements of the EP Act, and provide advice to the Minister.

A referral may comprise several parts, and include:

- a completed referral form - for the NT EPA to accept a referral from a proponent or a decision-making authority, it must be signed by an authorised person – either a CEO or a person with evidence to act on behalf of the organisation
- a referral report including legible maps and figures
- supporting technical appendices
- spatial information and raw data files
- statement of reasons (if a proponent initiated EIS referral)
- draft terms of reference (if a proponent initiated EIS referral).

The referral form can be downloaded from the NT EPA website. The NT EPA requires supporting information in the form of a referral report and spatial files, to be submitted with the completed referral form. The completed referral form will be published following the NT EPA's decision to accept a referral.

Guidance on information to be included in the referral form and report is provided below. In addition, the checklists to be completed in the referral form can be used to assist in taking into account the legislative requirements of the EP Act and EP Regulations in designing the proposal and providing information in the referral report. The Environmental Assessment Unit of the Environment Division of DLPE can also be contacted for further assistance.

3.2. Information to be included in the referral form

The information recorded in the referral form is to provide a standalone summary of the proposal. This information is used by the NT EPA for administration of the environmental impact process. The information is required to be accurate and current throughout the environmental impact process.

Forms and guidance are available on the NT EPA's Environmental management webpage. The referral form must be submitted for referral of any proposal and notification of any significant variation.

3.3. Information to be included in a referral report

3.3.1. Matters to be addressed and structure of referral report

Information required to be addressed in the referral report and a suggested structure is provided in .

An example proposal components table template for a new proposal is provided at Appendix 2.

Table 1.

The pre-referral screening tool in Appendix 1 provides detail on the NT EPA environmental factors and objectives and matters for consideration in the referral. The matters provided in Appendix 1 are not exhaustive and other environmental considerations should be discussed as relevant to the EP Act, EP Regulations, and the proposal.

An example proposal components table template for a new proposal is provided at Appendix 2.

Table 1 Information requirements and suggested item structure

Item	Information to be addressed in the referral
Publication statement	Provide name and qualifications of the suitably qualified and experienced person who has undertaken the environmental impact assessment, prepared the referral, and information on any peer review undertaken.
Executive summary	Overview of the proposal • Brief description of the land tenure and location including a list of section numbers / NT Portion numbers, proximity of the proposal to the nearest resident, community / town and to Darwin • Summary table of the environmental factors potentially significantly impacted • Summary of how the proposal has accounted for key *principles of environment protection and management* (Part 2 of the EP Act) including avoidance, mitigation measures proposed, and a changing climate • Statement about any residual significant environmental impact and offsets proposed • Key conclusions.
Table of contents	Include a clear table of contents (TOC) in the referral to allow the reader to easily find information. Electronic pdf document files should have the TOC bookmarked to allow for ease of navigation. The TOC headings will vary for each type of document and for individual proposals.

Item	Information to be addressed in the referral
Introduction	Include a brief introduction to the proposal and the proponent (noting proponent details are to be included in the referral form).
Proposal description - Key components	Provide a clear and detailed description of the proposal, referencing maps and spatial information. The description should address key physical (for example mine, road, port, dam, pipeline), construction and operational (for example water abstraction, tailings disposal, dredging, emissions) components of the proposal and their purpose. Provide a key components summary table – an example for mining proposals, which can be used as an indication of what is required for other proposals, is provided in Appendix 2. Where applicable, describe: • what the proposal is, and its purpose • physical components and infrastructure, for example vegetation clearing, groundwater extraction, roads, drainage, pipelines, water storage • stages of the proposal and timeframes for example construction, operation, decommissioning, rehabilitation • construction components, activities and aspects for example temporary laydown areas, concrete batching, dredging, tunnelling, pipe laying, trenching, dust management, erosion control, water requirements, materials transport modes, routes, and movements • operational components, activities and aspects for example air emissions, greenhouse gas emissions, marine outfall, discharges, tailings disposal, water extraction, energy requirements, chemical use, waste management, product transport modes, routes, and movements • social and economic details (for example workforce and workforce accommodation requirements, proposed use of existing local services and businesses) • decommissioning, closure, and site rehabilitation components. The NT EPA notes that in some cases, referral information is based on concept designs and detailed design may still need to be completed. In circumstances where proposal components require further refinement or design at the time the referral is submitted, proponents should identify the uncertainties, describe how and when these would be resolved and whether the maximum (or range of) capacity and extent of the component may change as a result, for example area of disturbance, water demand, emissions to air, ore processing capacity.
Proposal description - Location and regional context	Location and regional context • Land tenure type, NT Portion number/lot number and zoning (if applicable) • Street address • Nearest resident/community/town, and distance and direction from Darwin

Item	Information to be addressed in the referral
	• Maps • Regional context • Topographic map/base overlain with proposal infrastructure • Aerial/satellite imagery overlain with proposal infrastructure • Vegetation units overlain with clearing footprint • Latitude/longitude (or other acceptable coordinate system – see s0). Land use, if known, describe the land use history within the proposed footprint and area of impact. The referral information must provide details of land-use history of the proposed footprint, referencing maps and spatial information. Where a site has been developed previously (brownfield site), include the extent and nature of previous activities and whether any soil, surface water and/or groundwater contamination or degradation is present. Where applicable: • discuss the scope and extent of any previous or current investigations into or activities involving, the remediation of soil, surface water or groundwater contamination on site. • advise if the site has been registered as a contaminated site under the *Waste Management and Pollution Control Act 1998.*
Proposal description – Alternatives (options)	Describe any alternatives that were considered or are under consideration in scoping and developing the proposal such as: • location/s (of the site, proposal, or its components) • timeframes and their effects on duration and intensity of impacts/benefits, for example short timeframe might result in greater intensity but shorter duration of impact; long timeframe may have more social and economic benefits • activities for example ore processing vs direct shipping ore; new port facilities vs use of existing port facilities. Describe how the analysis of alternatives accounted for the *Principles of environment protection and management* (Part 2 of the EP Act). For example, discuss the considerations that were undertaken to avoid or mitigate potential environmental impacts and how that influenced the site selection process. The preferred/selected option should be justified. In the case the proponent does not have a preferred option and two options are proposed, the referral must include assessment of both options. Describe any assumptions critical to your assessment, for example risk appropriately identified, mitigation measures or regulatory conditions to be implemented, measures proven and likely to succeed.

Item	Information to be addressed in the referral
Proposal description – Application of the: - *Principles of environment protection and management* (Part 2 of the EP Act) - *General duty of proponents* (s 43 of the EP Act)	Discuss how the design and subsequent phases of the proposal accounts for the *Principles of environment protection and management* (Part 2 of the EP Act) and for the *General duty of proponents* under section 43 of the EP Act. For example, discuss how renewable energy sources are proposed to be used rather than fossil fuels, how water will be reused to avoid wastewater discharge and minimise raw water demand, long-term and short-term environmental considerations, that threatened species surveys were conducted within 12 months of submitting the referral to contribute to evidence-based decision making. Discuss how the proposal has accounted for a changing climate or adapting to a changing climate. For example, the siting of the chemical storage facility is above storm surge inundation areas that include projected seal level rise. Describe to what extent the subsections of section 43 *General duty of proponents* have been considered and addressed prior to the referral being submitted (refer to Referral form).
Consultation *Refer to NT EPA Stakeholder Engagement and Consultation guidance*	The EP Act (sections 3 and 43) puts an obligation on a proponent to consult with stakeholders and the community in the development of the proposal. The referral should describe the stakeholder engagement conducted, noting the depth of such engagement should be proportionate to the impact of the proposal. As an example, the referral should include: • a description of stakeholder engagement and community consultation undertaken regarding the proposal • an outline of the method and process of consultation with stakeholders • a summary of the key matters raised during consultation, how the proponent has taken those into consideration and what action was taken to address the matters raised, for example any changes made because of consultation, alignment of road moved away from residents, pipeline moved to avoid sacred site • the ongoing consultation, and options for stakeholders and the community to provide feedback, throughout various phases of the proposal such as during detailed design, construction, operation, decommissioning, closure • whether the consultation has or hasn't been undertaken in accordance with NT EPA's guidance on *Stakeholder Engagement and Consultation* and address the matters provided in the guidance • whether the consultation has or hasn't been undertaken in accordance with the general duty of proponents (see Referral form).
Strategic and statutory context	Provide a table describing the legislation, policies, and guidelines that are or may be applicable to the proposal, and the sequencing and status of those. The information must be specific to your proposal rather than a list of Acts and the objects of those Acts. Describe the strategic and statutory context of the proposal, and identify:

Item	Information to be addressed in the referral
	• any local, regional, Territory or Australian policies, plans, planning schemes or systems that apply or demonstrate the need for the proposal in a strategic planning context • any related proposals, including those that may involve a potential for expansion or additional development by the proponent, and timeframes • details of how the proposal complies (or does not comply) with the relevant policies and plans • any contribution to net zero emissions by 2050 in accordance with the Northern Territory's Climate Change Response and Large Emitters policies • the requirements related to section 45 (Bilateral Agreement) or section 87 (Accredited process) of the *Environment Protection and Biodiversity Conservation Act 1999* (where relevant) • any approval, licence or authorisation under another regulatory regime that would be required • the status of any application or granted approval, licence or authorisation under another regulatory regime that would be required • whether an approval, licence or authorisation decision by another statutory decision-maker may mitigate the potential significant impacts of the referred proposal.
Environmental Factors	The remaining sections of this table (below) relate to information that describes the potential significant impacts of the proposal on the NT EPA's Environmental factors. The referral report must address the information requirements below, for each environmental factor identified as being relevant to the proposal (i.e. the environmental factors identified by the pre-referral screening tool). The referral information should be supported by evidence such as technical studies and surveys.
Environmental Factors and objectives - Presence/absence of environmental values *(repeat this for each NT EPA Factor and Objective that is being considered for a proposal)*	Verify the presence or absence of environmental values and sensitivities that have the potential to be significantly impacted by the proposal, including aspects of the environment: • where the proposal is located • with the potential to be impacted (negatively and positively) by components of the proposal, or the proposal as a whole, or cumulatively with other proposals • that are sensitive to stressors likely to arise from the proposal • that are likely to influence the significance of environmental impacts. The method of verifying the information should be included to assist in evidence-based decision making and to gain an understanding of currency and certainty of information. For example, specify if the information is based on desktop assessments, and/or field surveys, the methods used, dates, sources,

Item	Information to be addressed in the referral
	and whether the approach is conducted in accordance with relevant regulatory and industry guideline.
Environmental Factors and objectives – Potential impacts and consistency with relevant policy and guidance	Assess the potential impacts (positive, negative, direct, indirect, cumulative, short and long-term) of the proposal, the significance of the impacts, and how the impacts might affect the NT EPA's objective for the environmental factor. Describe relevant policy and guidance that has been considered and applied it in relation to this factor. Include any relevant National or Territory standards, codes of practice and guidelines. Describe any expected residual / remaining impact to the environmental factor that may result after the completion of the proposal including after the management hierarchies[5], have been successfully implemented.
Environmental Factors and objectives – Environment protection and management	Describe in terms of the management hierarchies (sections 26-27 of EP Act): • measures proposed to avoid, mitigate, or offset (if appropriate) the potential adverse impacts • the anticipated effectiveness of proposed measure(s) and the level of confidence that the measure will be implemented • whether by implementing the measure(s) the NT EPA's objective for the environmental factor is likely to be met.
Environmental factors and objectives – Cumulative impacts	The EP Regulations (regulation 79) defines matters that may be included in an environmental impact assessment, including a cumulative impact assessment that considers the combined impact of the action or proposal and other actions. Describe potential cumulative impacts of the proposal taking into account the combined impact of the action or proposal and other actions: • for which environmental approval has been granted; or • that are the subject of environmental impact assessment; or • for which an approval (however described) has been given under another enactment; or • for which an application for approval (however described is being assessed under another enactment; or • that are occurring or proposed in or near the area of the proposal. Provide an account of past, present and reasonably foreseeable future development, operations, or industries that are related directly (expansion of proposal) or indirectly (with other actions or proposals in the region or due to the operation/presence of the current proposal) to the proposal.

[5] the environmental decision-making hierarchy and the waste hierarchy as set out in sections 26 and 27 respectively of the *Environment Protection Act 2019*

3.3.2. References, maps, and raw data

All sources of information in the referral must be appropriately referenced, preferably using the Harvard Standard. A reference list must include the address of any internet pages used as data sources and the date accessed. Referenced supporting documentation and data, or documents cited in the referral, must be available upon request.

Spatial data included in the referral must be provided in GIS format, geo-referenced and conform to the following parameters:

- Data type: closed polygons that represent the proposed boundary and the activity areas for all physical components of the proposal (such as the footprint and threatened species survey areas), line and point data as relevant for surveys (for example, water sampling locations and threatened species records).
- Attribution: name each polygon (development footprint and each activity area) and provide labels for point data in the attribute table of the spatial data.
- Format: ESRI geodatabase or shapefile.
- Coordinate System: Geocentric Datum of Australia (GDA) 2020 (datum) (or as updated) and projected into the appropriate Map Grid of Australia (MGA) zone.

All maps and figures contained in the referral must be clear and readable, of appropriate scale, in either jpg or pdf format and of good resolution (> 300 dpi) to enable interpretation of the content. A scale bar, north arrow and legend or caption to describe all symbols used must be included for all maps. 'Flatten' figures to reduce the size of the referral.

Any raw data collected or generated to support development of the referral must be provided in csv or excel file formats. Data columns must be clearly titled for variables with relevant units.

Any disclaimers included in the referral information must not prevent the NT EPA from using the referral for its assessment in accordance with legislated requirements. For example, there must be no limitation on providing copies of the referral or supporting documents to government authorities, members of the public, or reproducing information to prepare any NT EPA reports on the proposal.

3.4. Confidential information

If a proponent or approval holder does not wish information to be made public, it must apply to the NT EPA for approval to withhold confidential information. This includes information that is commercial-in-confidence; cultural-in-confidence (e.g. matters required to be kept secret according to Aboriginal tradition such as an Aboriginal Areas Protection Authority (AAPA) certificate); subject to legal professional privilege; or otherwise required by law to be withheld from publication, or in the public interest to withhold. An application must be submitted in an approved form (in accordance with sections 281 to 283 of the EP Act and EP Regulation 271). The application form should be accompanied by a stand-alone confidential addendum to the public referral report containing the sensitive information. If approved by the NT EPA, the confidential addendum will not be published during public consultation periods and will not be recorded on the public register. The confidential addendum will be provided to government authorities during submission periods, the NT EPA and the Minister.

An application to withhold information during consultation will stop the statutory timeframe for the NT EPA to consider the referral until the Minister or the NT EPA makes a decision. Please contact the DLPE Environmental Assessment Unit for advice.

3.5. Other information for a significant variation referral

If the referred proposal is a significant variation, this must be identified in the referral form.

In addition to the requirements listed above, a significant variation referral must include the following information:

- Type of significant variation - Identify whether the significant variation relates to a variation to a proposal that is currently undergoing impact assessment or an approved proposal.
- Information of the proposal to be varied - Provide information on the proposal to be varied, so that the NT EPA can consider the environmental impact of the significant variation in the context of the original proposal.
- Combined impacts - Outline the combined effects which the implementation of the original proposal and the significant variation would potentially have on the environment.
- Existing and additional proposed avoidance and mitigation measures, and any approval conditions - Provide an analysis of the existing proposed avoidance and mitigation measures, or approval conditions and whether the proponent considers any changes or additions are required. This should include consideration of whether the existing measures or conditions are adequate to ensure consistency of the ongoing components of the proposal with the NT EPA's environmental factor objectives.

An example of a proposal components table template for a significant variation proposal is provided at Appendix 2.

4. How and where to submit the referral

The referral form and accompanying documentation may be submitted to the NT EPA:

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- by email: eia.ntepa@nt.gov.au (if the referral and supporting documents are less than 20 MB)
- by electronic file upload (all files must be 20 MB or less) - contact staff of the Environment Division at least five business days prior to submitting the referral for more information

Referral document files must be less than 20 MB, optimised for web use, and unsecured/not password protected to allow for web upload.

Electronic copies (pdf format) must be provided both as a single file of the entire document (may be greater than 20MB) and separate files of the referral information (less than 20MB, referral form and relevant supporting documentation).

The following separate pdf files should be provided as relevant:

- Referral-form (completed and signed by the proponent)
- Referral-report (split into Executive Summary, table of contents and chapters if it is a large document)
- Appendix-A
- Appendix-B
- Appendix-C (repeat appendices as necessary)
- Proponent-statement–of-reasons (if submitting a proponent initiated EIS)
- Proponent-draft-terms-of-reference (if submitting a proponent initiated EIS).

Files names are to follow web naming protocols as follows:

- labelled according to the chapter number and name, or appendix number and name
- words separated by hyphens (-), do not use spaces or underscores.

Refer above to section 0 regarding spatial and raw data files.

Once documents have been submitted, a completeness check will be conducted to ensure that the file sizes are less than 20 MB, appendices are attached, figures are readable etc. The completeness check is prior to commencement of statutory timeframes.

5. Decision to accept or refuse a referral

When a referral is first received, an initial consideration of all documentation will be conducted to determine whether:

- the referral is required (only actions with the potential to have a significant impact on the environment are required to be referred to the NT EPA)
- the referral describes an action that is clearly one element of a larger action which should be considered more holistically to appropriately assess the project impacts in their entirety
- the referral contains sufficient information for the NT EPA to consider the referral and to inform stakeholders about the proposal and its potential to have a significant impact on the environment
- additional information is required to address a material omission.

The NT EPA may give a direction requiring additional information within 10 business days after the NT EPA receives the referral. If a direction is made, it will stop the statutory timeframe for the NT EPA to consider the referral until the proponent provides the additional information.

Based on this initial consideration the NT EPA will either accept or refuse to accept the referral, noting that a refusal to accept the referral is not a refusal of an environmental approval. The only basis on which the NT EPA may refuse to accept a referral is:

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- If it was not required.

  [If the NT EPA receives a referral for an action that clearly will not have a significant impact, it can refuse to accept the referral. For example, a referral to build a new house in an existing subdivision would not be required and would be refused on the basis that the referral was not required.]

  The proponent will then need to seek other relevant approvals for the action.

- It did not provide sufficient information about the action.

  [The NT EPA would only be able to refuse to accept a referral on this basis if the information required related to a material omission from the referral. An example of a material omission is where a referral is received for a marina and shopping centre development and the referral omits information on the potential impacts to the marine environment.]

- It only provides information about part of a larger action and information on the whole action is required.

  [For example, a referral for a new water treatment facility associated with a new dam that only provides information relating to the treatment facility (either because the proponent failed to recognise that information on the dam component was necessary for the NT EPA or because of an intent of making a separate referral for the dam at a later date).]

- Relates to an area that is covered by a strategic proposal that has been referred for assessment

  [this may include a proposed action of a kind that will be assessed through the strategic proposal or a proposed action that has been assessed as part of a strategic proposal]

- It was not prepared or certified in accordance with requirements of EP Regulation 263 regarding document and information requirements

  [For example, if following *Gazette* notice, a referral was submitted to the NT EPA that had not prepared by a registered environmental practitioner and was not in the form and manner the NT EPA gazetted.]

The NT EPA will prepare a notice of its decision which will be provided to the proponent and published. If the NT EPA refuses a referral, it will prepare and publish a supporting statement of reasons.

6. Decision on accepted referral

6.1. Overview

After a proponent refers a proposal to the NT EPA and the NT EPA accepts the referral, the referral form, referral report and supporting information will be made available for public comment. After considering the referral and comments, the NT EPA, (or Minister in the case of a strategic proposal) must decide either:

- the proposal will not have a significant impact on the environment, and environmental impact assessment is not required (therefore no requirement for any method of assessment and no requirement for an environmental approval under the EP Act), OR
- the proposal will have a significant impact on the environment and environmental impact assessment is required. If so, the method of assessment must be decided.

If the NT EPA decides that a proposal must undergo environmental impact assessment, an environmental approval, from the Minister is required before it can proceed. If the NT EPA decides that a proposal is unacceptable, it will recommend to the Minister that the Minister refuse to grant an environmental approval for the referred action or strategic proposal.

Indicative steps and timeframes for decisions are included in the environmental impact assessment flowchart.

6.2. How the NT EPA determines significant impact

Before making a decision about whether an accepted referral requires environmental impact assessment, the NT EPA will consider the accepted referral information, any additional information given to the NT EPA, and the submissions received in relation to the referral information.

In determining whether a proposal has the potential for a significant impact on the environment the NT EPA may consider various matters, including the following:

- objects of the EP Act and other NT environmental legislation
- the context and intensity of the impact
- the sensitivity, value and quality of the environment which is likely to be impacted (for example, the existing environment as defined by the NT EPA's environmental factors and objectives)
- duration, magnitude and geographic extent of the impact
- consequence of likely impacts (or change)
- resilience of the environment to cope with the impacts or change
- connections and interactions between parts of the environment to inform a holistic view of impacts to the environment (for example, closure and rehabilitation, adaptive management, cumulative impacts)

- level of confidence in the prediction of impacts and the effectiveness of proposed mitigation measures.

The NT EPA may also consider:

- relevant definitions of significance under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) and national standards, for example National Environment Protection Measures (NEPM), against which a proposal can be assessed
- other statutory decision-making processes that may mitigate the potential environmental impact of a proposal
- previous decisions of the NT EPA on the significance of impacts.

Where the NT EPA determines that a proposal does not have the potential for a significant impact on the environment, an environmental impact assessment will not be required.

6.3. How the NT EPA determines the method of environmental impact assessment

If the NT EPA decides that a proposal has the potential to have a significant impact on the environment, environmental impact assessment is required. The EP Regulations provide for a number of assessment methods:

- assessment by referral information
- assessment by supplementary environmental report (SER)
- assessment by environmental impact statement (EIS)
- assessment by inquiry (either on its own or in combination with one of the above methods).

Indicative steps and timeframes for decisions are included in the environmental impact assessment flowchart.

In accordance with regulation 59, when deciding or recommending a method of environmental impact assessment, the NT EPA must consider the following criteria:

- the significance of the potential impact of the proposal
- the level of confidence in predicting potential significant impacts of the proposal taking into account the extent and currency of existing knowledge
- the level of confidence in the effectiveness of any proposed measures identified in the referral to avoid, mitigate or manage potential significant impacts of the proposal
- the extent of community engagement that has occurred in relation to the proposal
- the capacity of communities and individuals likely to be affected to access and understand information about the proposal and its potential significant impacts.

6.4. Assessment by referral information

The NT EPA may undertake an assessment by referral information method where a proposal has the potential for significant impact (and therefore requires an environmental approval/refusal) and sufficient information has been provided in the referral. This is the quickest method of assessment and provides one opportunity for public consultation (referral documentation).

The NT EPA may decide on assessment by referral information if the referral provides the necessary information to prepare its assessment report, advise the Minister and prepare a draft environmental approval or statement of unacceptable impact. The necessary information for this to occur includes:

- providing sufficient information as outlined in this guidance
- demonstrating that relevant stakeholders have been identified and engaged, and the outcomes of the engagement are reported, in accordance with the NT EPA's guidance on stakeholder engagement and consultation
- assessment of any environmental factor that has the potential to be significantly impacted, in accordance with the NT EPA's guidance on that factor (if available).

6.5. Assessment by supplementary environmental report (SER)

The NT EPA may undertake an assessment by SER method where a proposal has the potential for significant impact and the NT EPA requires public submissions to be addressed by the proponent and any additional information as directed by the NT EPA. SER assessment method provides the public a minimum of two opportunities for consultation; to comment on the referral documentation and on the SER. Separate NT EPA guidance about preparing an SER is available.

6.6. Assessment by environmental impact statement (EIS)

The NT EPA may undertake assessment by EIS method for proposals that have the potential for significant impact on the environment and are considered to be highest risk, where there are a number of matters and/or increased complexity, and/or increased uncertainty requiring further investigation, assessment and review. EIS assessment method is the most intensive level of assessment with four opportunities for public consultation: to comment on the referral documentation, the draft terms of reference, the Draft EIS, and the supplement to the Draft EIS (if applicable). See NT EPA guidance on preparing an EIS.

6.7. Assessment by inquiry

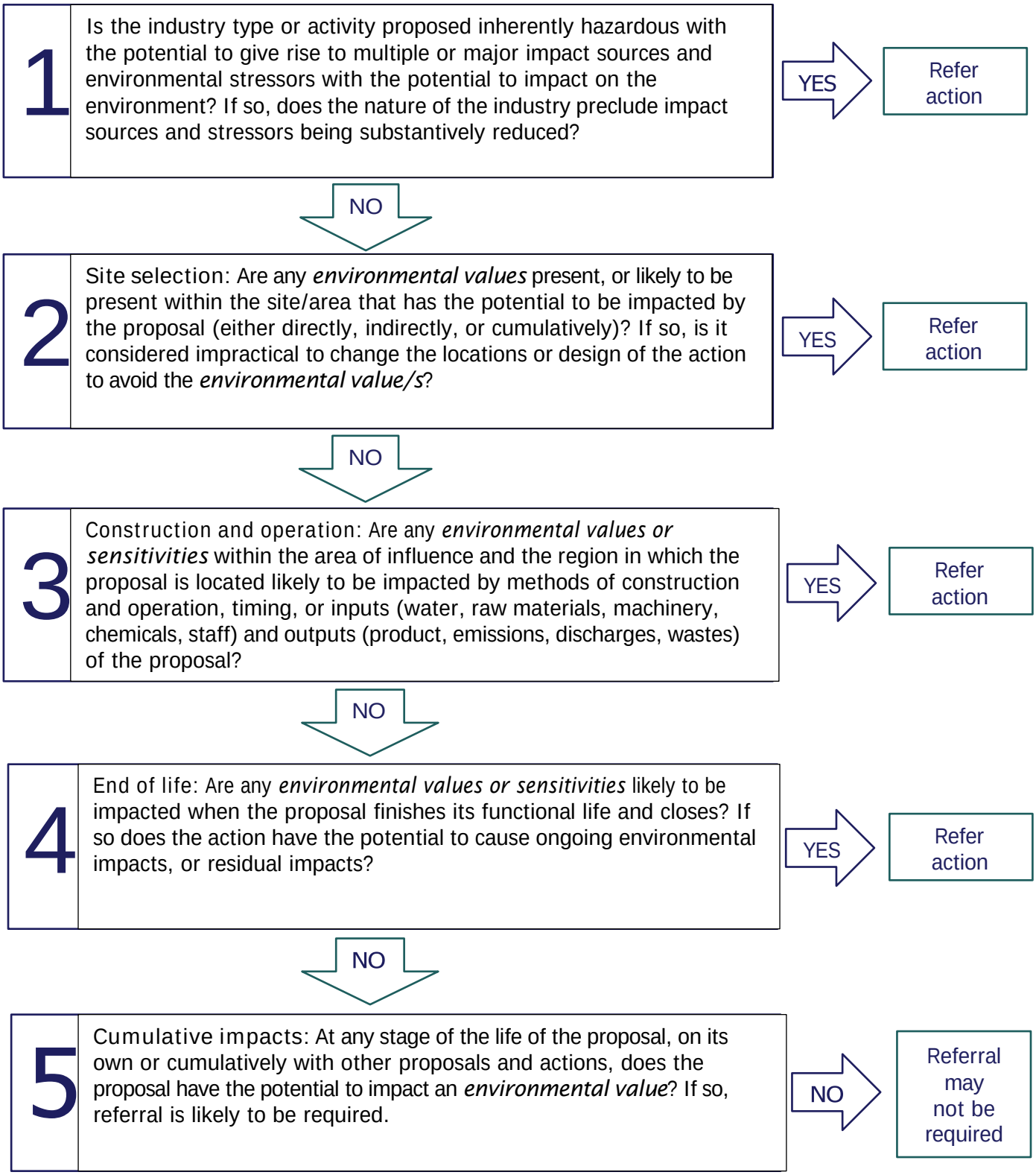
An assessment by inquiry can be used where it is considered to be more appropriate for the stakeholder audience than another environmental assessment approach. For example, cultural or language issues may prohibit potentially impacted communities from easily engaging in a paper-based environmental impact assessment approach.

For some proposals the NT EPA may decide that an assessment by inquiry method is used, combined with another assessment method.

Appendix 1: Pre-referral screening tool

This appendix provides the tools to assist proponents in conducting a pre-referral screening of a new proposal and should be completed after reading all information in the referral guidance.

Part 1 – General screening questions



Guidance for answering screening questions:

Environmental values and sensitivities

While a proponent may exercise a degree of judgement about whether a proposal has the potential to have a significant impact on the environment, it is for the NT **EPA to decide an impact's** significance. Therefore, the screening tool requires the identification of whether the proposal activity/industry type inherently has the potential to impact the environment and has the potential to impact aspects of the environment that are rare, sensitive to stress or important (environmental values and sensitivities). The premise for this approach is that any impacts (including impacts perceived to be minor) to environmental values and sensitivities, have the potential to be significant.

Question 1 – inherent hazardous nature of proposal

If the proposal could be considered inherently hazardous (checkbox = yes), it must be referred to the NT EPA.

Examples of inherently hazardous developments or activities could include (but are not limited to) a uranium mine, aluminium smelter, Liquefied Natural Gas (LNG) plant or gas processing facility. As this question is about the proposal or activity without reference to the receiving environment or environmental values, check boxes for this question, corresponding to environmental factors, have been removed from the checklist at Part B.

Question 2 – site selection

Appropriate site selection is used to avoid environmental impacts by not locating a proposal where environmental values (such as sensitive environments) are present or can be impacted.

The checklist at Appendix 1 – Part 2 indicates the potential environmental values and sensitivities that are associated with each environmental factor to encourage consideration of whether an environmental value or sensitivity is present or absent within the footprint or surrounding environment of the proposal.

If present, a proponent must consider whether the proposal could have a direct, indirect or cumulative impact on it. If an impact to an environmental value or sensitivity has the potential to occur (checkbox = yes or uncertain), the proponent should consider, justify, and/or assess the significance of the impact. If there is potential for significant impact the proponent must refer the proposal to the NT EPA. Alternatively, the proponent could change the location or design of the proposal to avoid the impact (if this occurs, checkbox = no and provide a brief justification for the changes made and residual impact).

Question 3 – construction and operation

The methods of construction and operation may give rise to impact sources and pathways for impacts to environmental values and sensitivities outside the development footprint, in the surrounding environment.

For example, constructing an earthen barge landing or dredging a shipping channel in coastal waters could lead to poor water quality and impacts to marine ecosystems distant from the development; a polymetallic mine that includes processing and therefore a tailings stream, may pose a risk to beneficial uses downstream of the mine through seepage of contaminants to groundwater aquifers.

If the method of construction or operation of a proposal is likely to create impact sources and pathways to environmental values and sensitivities within the area of influence outside the development footprint (checkbox = yes or uncertain), the proponent must refer the proposal to the NT EPA. Alternatively, the proponent may alter the method to avoid the impact (if this occurs, checkbox = no and provide a brief justification for the changes made and residual impact).

Question 4 – residual or ongoing impacts

The state of the impacted area at the end of life of the proposal may give rise to ongoing impacts (legacy issues) that may not be possible to manage actively or effectively.

For example, in the mining industry where resources are finite and physical disturbance of the site is difficult and/or prohibitively expensive to repair.

If at the end of the proposal's life, the proposal footprint is unlikely to be restored, or adverse impacts to environmental values and sensitivities are likely to occur and be ongoing into the longer term (checkbox = yes or uncertain), the proponent must refer the proposal to the NT EPA. Alternatively, the proponent could demonstrate that adverse impacts would be avoided at the end of life of the proposal and into the future (if this occurs, checkbox = no and provide a brief justification for the changes made and residual impact).

Question 5 – cumulative impacts

It is a requirement to consider how the proposal could contribute to impacts to environmental values and sensitivities as a result of a combination of smaller impacts arising from the proposal, and/or that accumulate in conjunction with other developments, or natural events.

If cumulatively, the activities associated with a single proposal, and/or in combination with other proposals or actions or events in the region, impacts to environmental values and sensitivities are likely (checkbox = yes or uncertain), the proponent should consider, justify, and/or assess the significance of the impact, which may lead to referral of the proposal to the NT EPA. Alternatively, the proponent could demonstrate that cumulative impacts resulting from the proposal can be avoided (if this occurs, checkbox = no and provide a brief justification for the changes made and residual impact).

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Part 2 – Answer checklist

How to complete the answer checklist: Use questions 1-5 from Part 1 of the screening tool. Indicate answer to questions 1-5 in corresponding checkbox.

The table below gives an indication of possible *environmental values* and sensitivities for each environmental factor that should be addressed when considering each question. If the answer to a question is 'yes' or 'uncertain', it is possible that the proposal may have the potential to have a significant impact on the environment and the proposal should be referred to the NT EPA. If you answer 'no' to any question, provide a justification why there is no likely impact to that factor.

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	**Proponent's answer to screening** questions 1-5	Q2	Q3	Q4	Q5
Is the industry type or activity proposed inherently hazardous with the potential to give rise to multiple or major impact sources and environmental stressors with the potential to impact on the environment? If so, does the nature of the industry preclude impact sources and stressors being substantively reduced?			No ☑ Yes ☐ No ☐ Yes ☐ NA				
LAND	1) Landforms Objective: Conserve the variety and integrity of distinctive physical landforms.	o distinctive features in the landscape, either geological or anthropogenic o subterranean karstic terrain and faults o craters, gorges, ranges, caves, massifs, escarpments, plateaus o monuments o tourism related to landforms	Yes No Uncertain Not Applicable	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐
	If you answered No to any screening questions for Landforms, provide justification here:	There are no distinctive physical landforms within or close to the proposed clearing area (See Section 4 of application)					
	2) Terrestrial environmental quality Objective: Protect the quality and integrity of land and soils so that environmental values are supported and maintained.	o high quality soils, including chemical, physical, biological, and aesthetic qualities that support life o the biological processes that depend on soil quality	Yes No Uncertain Not Applicable	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	**Proponent's answer to screening** questions 1-5				
				Q2	Q3	Q4	Q5
	If you answered No to any screening questions for Terrestrial environmental quality, provide justification here: There are no foreseen adverse affects or impacts to the quality and integrity of land and soils from the proposed works (Sections 4, 8 & 9)						
	3) Terrestrial ecosystems Objective: Protect terrestrial habitats to maintain environmental values including biodiversity, ecological integrity, and ecological functioning.	o 'sensitive or significant' vegetation or buffers (as defined in the NT Land Clearing Guidelines) o listed threatened species and their habitat (NT and Commonwealth) o listed migratory species and their habitat (Commonwealth) o listed threatened ecological communities (Commonwealth) o locally endemic or restricted species and their habitat o species that are data deficient with unknown protection status o protected area or reserve, including Indigenous Protected Area o biosecurity o high quality biological and functional diversity, integrity, and services	Yes No Uncertain Not Applicable	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐
	If you answered No to any screening questions for Terrestrial ecosystems, provide justification here: The proposed works pose a low risk to terrestrial ecosystems present (Sections 5, 6 & 8)						
WATER	1) Hydrological processes Objective: Protect the hydrological regimes of groundwater and surface water so that environmental values including ecological health, land uses and the welfare and amenity of people are maintained.	o the supply and quantity of water in surface water features including rivers, lakes, wetlands, swamps, creeks, billabongs, intermittent streams, floodplains, mangroves, and drainage lines o the supply and quantity of water in groundwater features including aquifers, aquitards, water tables and the ecosystems they support (stygofauna, vegetation, and groundwater dependent ecosystems) o declared beneficial uses o present and future uses, and users of water o current or potential water supplies, including regional scale aquifers o culturally important water features or other features affected by water level	Yes No Uncertain Not Applicable	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐
	If you answered No to any screening questions for Hydrological processes, provide justification here: No foreseen adverse affects or impacts to hydrological processes from the proposed works (Section 3)						
	2) Inland water environmental quality	o the quality of water in surface water features including rivers, lakes, wetlands, swamps, creeks, billabongs, intermittent streams, floodplains, mangroves, and drainage lines	Yes No	☐ ☑	☐ ☑	☐ ☑	☐ ☑

	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	**Proponent's answer to screening** questions 1-5				
							Q5
	Objective: Protect the quality of groundwater and surface water so that environmental values including ecological health, land uses and the welfare and amenity of people are maintained.	o the quality of water in groundwater features including aquifers and water tables o declared beneficial uses o present and future uses and users of water o current or potential water supplies, including regional scale aquifers o potability / drinkability o culturally important water features	Uncertain Not Applicable	☐ ☐	☐ ☐	☐ ☐	☐ ☐
	If you answered No to any screening questions for Inland water environmental quality, provide justification here:		The proposed works pose a low risk to inland water environmental quality (Section 3)				
	3) Aquatic ecosystems Objective: Protect aquatic habitats to maintain environmental values including biodiversity, ecological integrity, and ecological functioning.	o threatened species o the health of the biota in inland waterways o the habitats that support the lifecycle of aquatic biota o groundwater dependent ecosystems o Ramsar wetlands o high quality biological and functional diversity, integrity, and services	Yes No Uncertain Not Applicable	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐
	If you answered No to any screening questions for Aquatic ecosystems, provide justification here:		The proposed works pose a low risk to aquatic ecosystems in the region (Section 3)				
SEA	1) Coastal processes Objective: Protect the geophysical and hydrological processes that shape coastal morphology so that the environmental values of the coast are maintained.	o processes that support marine ecosystems such as coral reefs and mangroves o processes that support coastal morphology such as beaches, rock bars, and sandbars o tidal creeks, deltas, and river mouths o storm surge protection o unique coastal landforms	Yes No Uncertain Not Applicable	☐ ☐ ☐ ☑	☐ ☐ ☐ ☑	☐ ☐ ☐ ☑	☐ ☐ ☐ ☑
	If you answered No to any screening questions for Coastal processes, provide justification here:		The application area is not in or adjacent to coastal or tidal areas.				
	2) Marine environmental quality	o quality of the water, sediment, and biota o physical parameters that support fishing and aquaculture o physical parameters that support recreation and aesthetics	Yes	☐	☐	☐	☐

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	**Proponent's answer to screening** questions 1-5				
				Q2	Q3	Q4	Q5
	Objective: Protect the quality and productivity of water, sediment, and biota so that environmental values are maintained.	o industrial water supply o cultural and spiritual values	No Uncertain Not Applicable	☐ ☐ ☑	☐ ☐ ☑	☐ ☐ ☑	☐ ☐ ☑
	If you answered No to any screening questions for Marine environmental quality, provide justification here:	The application area is not in or adjacent to coastal or tidal areas.					
	3) Marine ecosystems Objective: Protect marine habitats to maintain environmental values including biodiversity, ecological integrity, and ecological functioning.	o conservation significant marine and coastal fauna and critical habitat such as nesting, breeding or foraging habitat o conservation significant marine and coastal benthos (seagrass meadows, sponge gardens, coral reefs, mangrove communities and salt marshes) o groups of species (species richness and assemblages of species) o ecological functions and processes o high quality biological and functional diversity, integrity and services	Yes No Uncertain Not Applicable	☐ ☐ ☐ ☑	☐ ☐ ☐ ☑	☐ ☐ ☐ ☑	☐ ☐ ☐ ☑
	If you answered No to any screening questions for Marine ecosystems, provide justification here:	The application area is not in or adjacent to coastal or tidal areas.					
AIR	1) Air quality Objective: Protect air quality and minimise emissions and their impact so that environmental values are maintained.	o ambient air quality in the local airshed o the chemical, physical and biological characteristics of quality air o the biological processes that depend on the air quality	Yes No Uncertain Not Applicable	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐
	If you answered No to any screening questions for Air quality, provide justification here:	No foreseen adverse affects or impacts to air quality from the proposed works.					
	2) Atmospheric processes Objective: Minimise greenhouse gas emissions so as to contribute to the	o a contribution to the NT's greenhouse gas emissions through nearing or reaching emission thresholds for: o industrial projects of 100 000 $tCO_{2\text{-}e}$ scope 1 emissions per financial year (not counting emissions generated from land clearing)	Yes No	☐ ☑	☐ ☑	☐ ☑	☐ ☑

	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Proponent's answer to screening questions 1-5				
							Q5
	NT Government's goal of achieving net zero greenhouse gas emissions by 2050.	o land use project/s of 500 000 $tCO_{2\text{-}e}$ scope 1 emissions from single or cumulative land clearing actions.	Uncertain Not Applicable	☐ ☐	☐ ☐	☐ ☐	☐ ☐
	If you answered No to any screening questions for Atmospheric processes, provide justification here: Total calculated Scope 1 emissions = 121,890 tCO2-e						
PEOPLE	1) Community and economy Objective: Enhance communities and the economy for the welfare, amenity and benefit of current and future generations of Territorians.	o communities, towns and suburbs where people live o community aspirations for liveable environment and healthy lifestyles, o affordable access to food, water, electricity, transport and communication networks. o good amenity – air quality, noise, aesthetics o access to social infrastructure and services including transport and logistics o access to natural resources including bush food o recreational use of the natural or built environment (for example fishing, cycling, sports, picnics) o species of social, , livelihood and or economic importance (terrestrial, aquatic and marine biota) o participation in jobs, businesses and education o existing industries such as agriculture, pastoralism, tourism, fisheries o vulnerable sectors of the community.	Yes No Uncertain Not Applicable	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐
	If you answered No to any screening questions for Community and economy, provide justification here: No foreseen adverse affects or impacts to amenity, inidustry, welfare, social values or infrastructure from proposed works (Section 2)						
	2) Culture and heritage Objective: Protect culture and heritage.	o Aboriginal cultural values o sacred sites o the Territory's natural and built heritage o declared heritage places and objects protected under the *Heritage Act 2011* (NT) such as: o any Aboriginal or Macassan archaeological place or object (coastal mounds and middens, rock art, stone arrangements, quarries, artefacts, graves, burial sites and ancestral remains)	Yes No Uncertain Not Applicable	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	**Proponent's answer to screening** questions 1-5				
				Q2	Q3	Q4	Q5
		o underwater cultural heritage (isolated objects, shipwrecks, plane wrecks, underwater cables and evidence of Aboriginal occupation prior to sea level rise) o built heritage (colonial buildings and other historic buildings) o defence structures (defensive positions and airfields) o natural features (meteorite impact sites, palaeontological sites, springs, trees) o world heritage o heritage protected under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) o underwater cultural heritage protected under the *Underwater Cultural Heritage Act 2018* (Cth) o Aboriginal rights and interests, including right of access					
	If you answered No to any screening questions for Culture and heritage, provide justification here:	No registered or recorded heritage or cultural sites within proximity to the proposed development area (Sections 10 & 11)					
	3) Human health Objective: Protect the health of the Northern Territory population.	o drinking water o air quality o bush foods o radiological limits (associated with electromagnetic and particulate radiation) o biting insects	Yes No Uncertain Not Applicable	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐	☐ ☑ ☐ ☐
	If you answered No to any screening questions for Human health, provide justification here:	No foreseen adverse affects or impacts to human health from the proposed works.					

Where the screening has been undertaken by a suitably qualified and experienced person and all responses in the checklist are 'no', a referral to the NT EPA is not likely required. The NT EPA and DLPE does not require the completed checklist to be submitted in this case. However, the checklist and its justifications for no likely impact should be retained by the proponent to demonstrate the screening has been conducted. The proponent should also retain the scope of the proposal that was considered in conducting the screening, the name, qualifications and contact details of the suitably qualified and experienced person(s) who conducted the screening using the table below.

The NT EPA retains to power to "call-in" a proposal under section 53 of the EP Act.

Recommended record keeping: Where a proponent intends to retain this checklist to demonstrate it has given consideration to whether a referral is required, it is recommended that the following details are recorded.

	Details
Proponent name	MARYFIELD STATION PTY LTD
Propose action name	Referring a proposal to the NT EPA - clearing of native vegetation at NT Portion 2255
Description of proposed action	Non-referral

Pre-referral screening has been conducted by: names, qualifications and date of works by suitably qualified and experienced persons[6] engaged by the proponent.

Environmental factor	Name	Qualification / Experience	Signature	Date

Proponent's declaration that the pre-referral screening has been conducted.

Screening declaration by proponent:

I, HELEN GROVES, *(full name)* declare that I am authorised to verify the pre-referral screening of this proposed action/strategic proposal on behalf of.....name of legal entity organisation... Maryfield Station Pty Ltd....., and further declare that:

- the attached environmental impact assessment documents (including attachments) are true; and
- the attached environmental impact assessment documents do not provide false or misleading information and I know it is an offence to provide false and misleading information, noting the penalties under section 260 of the EP Act, and section 119 of the *Criminal Code Act 1983*.

[6] Section 4 of the EP Act provides the meaning of a qualified person. Experience may be provided in years and/or a description of relevant experience.

APPENDIX 2: Key components of proposal in referral report

The following tables provide examples of the detail and structure required to quantify the scope of the proposal in your referral. For industrial, residential and agricultural proposals provide equivalent dimensions for relevant components.

Example template 1 – New proposal

General proposal content description

Proposal title	
Proponent name	
Short description	

Proposal content components

Proposal component	Location / description	Maximum extent, capacity or range
Physical components		
Physical component 1	Figure X	
Physical component 2	Figure X	
Construction components		
Construction component 1	Figure X	
Construction component 2	Figure X	
Operational components		
Operational component 1	Figure X	
Operational component 2	Figure X	
Proposal components with greenhouse gas emissions		
Construction components:		
	Scope 1	
	Scope 2	

	Scope 3	
Operation components:		
	Scope 1	
	Scope 2	
	Scope 3	
Rehabilitation		
details		
Commissioning		
details		
Decommissioning		
details		
Other components which affect extent of effects on the environment		
Proposal time*	Maximum project life	
	Construction phase	
	Operations phase	
	Decommissioning phase	

Tc al calculate

Example template 2 – Significant variation proposal

General proposal content description

Proposal title	
Proponent name	
Short description	

Proposal content components

Proposal component	Location / description	Existing proposal extent, capacity or range	Proposed maximum extent, capacity or range	Combined maximum extent, capacity or range
Physical components				
Physical component 1	Figure X			
Physical component 2	Figure X			
Construction components				
Construction component 1	Figure X			
Construction component 2	Figure X			
Operational components				
Operational component 1	Figure X			
Operational component 2	Figure X			
Proposal components with greenhouse gas emissions				
Construction components:				
	Scope 1			
	Scope 2			
	Scope 3			
Operation components:				
	Scope 1			
	Scope 2			
	Scope 3			
Rehabilitation				
details				

Commissioning				
details				
Decommissioning				
details				
Other components which affect extent of effects on the environment				
Proposal time*	Maximum project life			
	Construction phase			
	Operations phase			
	Decommissioning phase			

Key proposal infrastructure	Component	Size/capacity
Proposal infrastructure	Pits	X.X ha / X.X ML
	Processing plant	X ha / X Mtpa
	Haul road	X km
	Truck workshop	X ha
	Fuel bay	X ha
	Laydown area	X ha
	Landfill	X ha
	Explosives magazine (ANFO facility)	X ha
	Office and workshop complex	X ha
	Power – non-renewable e.g. existing power lines and substation	X MW
	Power – renewable (e.g. solar or hybrid systems)	X MW

Mine water dams	Dam A	X ha / X ML
	Dam B	X ha / X ML
Total area of existing disturbance		X ha
Total area that will be rehabilitated		X ha

Key proposal features	Component	Size / capacity
Whole of Proposal	Proposal area	X ha
	Timing (e.g. Life of mine , construction)	X years
	Workforce (full time equivalents)	X people (construction) X people (operation)
	Closure period	X year
Mining	Mining method	
	Mining rate	XX t/year
	Ore to be extracted	XX t over LOM
	Waste rock extracted from underground	XX t over LOM
Waste rock management	Description	
Processing	Ore type and volume to be extracted	
	Tailings generated and placement	
Water Management	Water requirement for mining, drilling and dust suppression.	XX ML/year
	Process water: • source • wastewater to discharge location	XX ML/year Total XX ML over LOM
	Operational water discharge	XX ML over LOM
	Proposed WDL compliance points	Insert location

Clearing Plan with Boundary Buffers

MAG-1

ACCESS TRACK 2

MAG-2

GOV-1

MAG-3

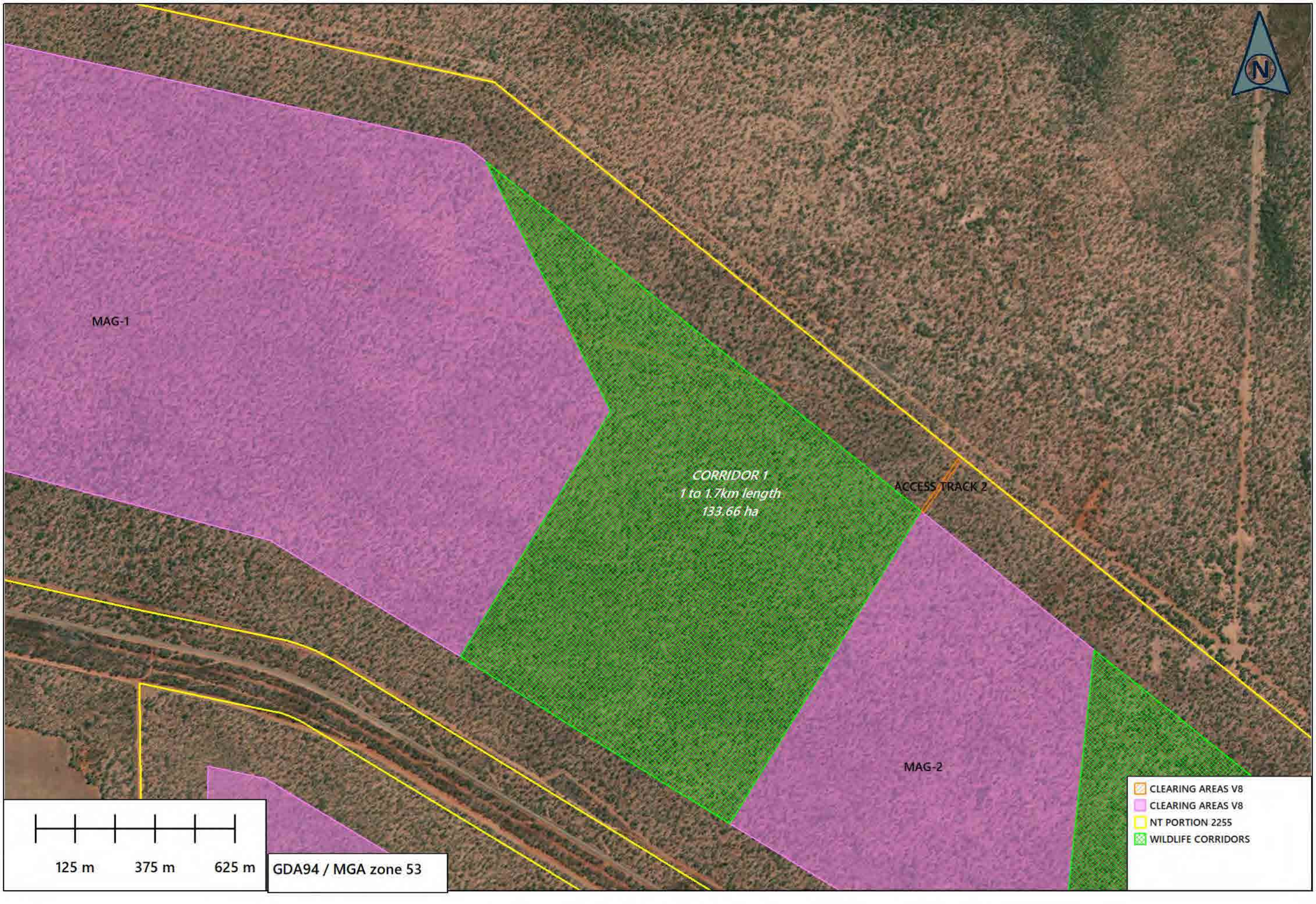
ACCESS TRACK 1

ACCESS TRACK 3

GOV-2

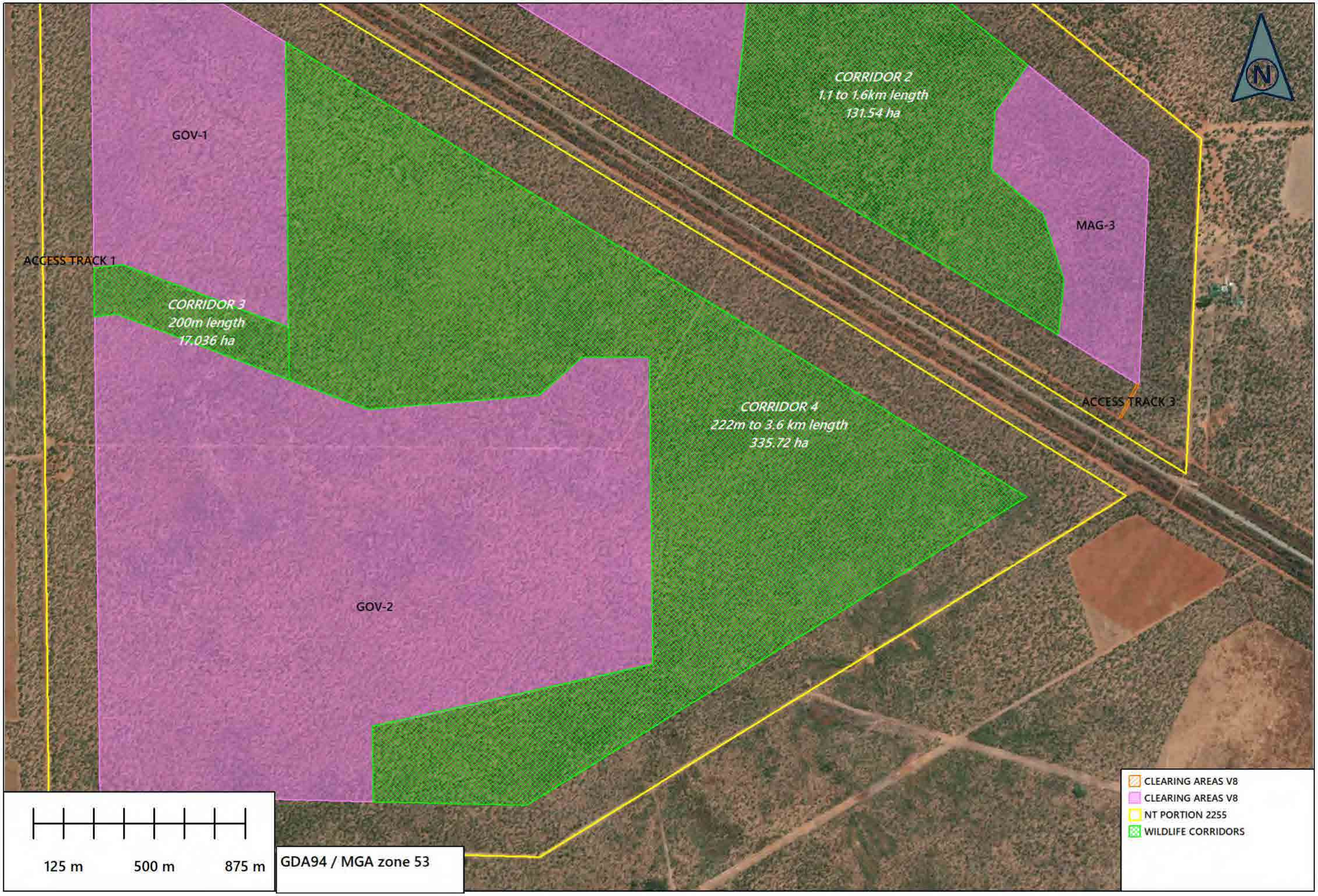
250 m 1000 m 1750 m GDA94 / MGA zone 53

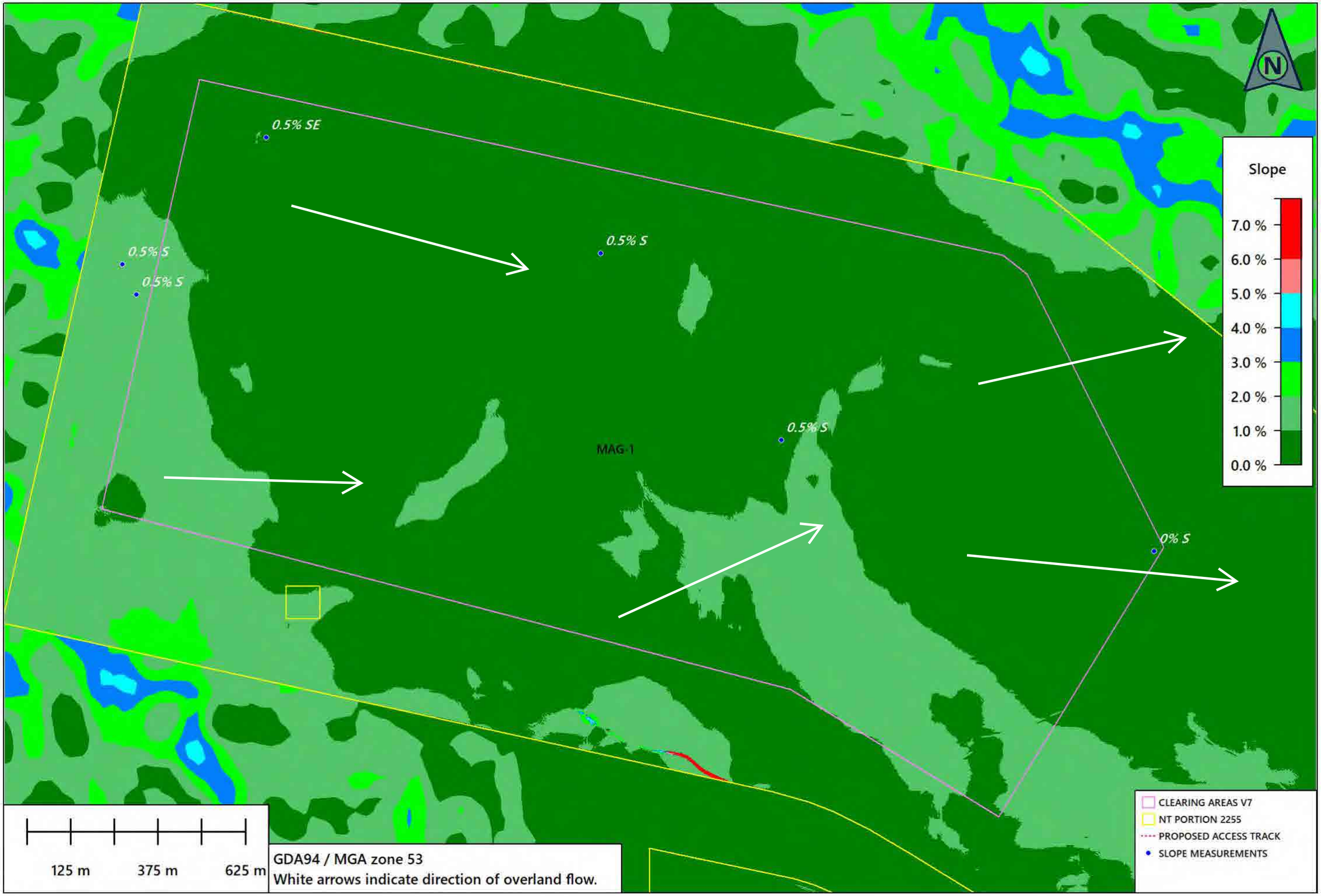
CLEARING AREAS V8
CLEARING AREAS V8
NT PORTION 2255
10M FIRE BREAK
52 TO 180M BOUNDARY BUFFER
200M BOUNDARY BUFFER

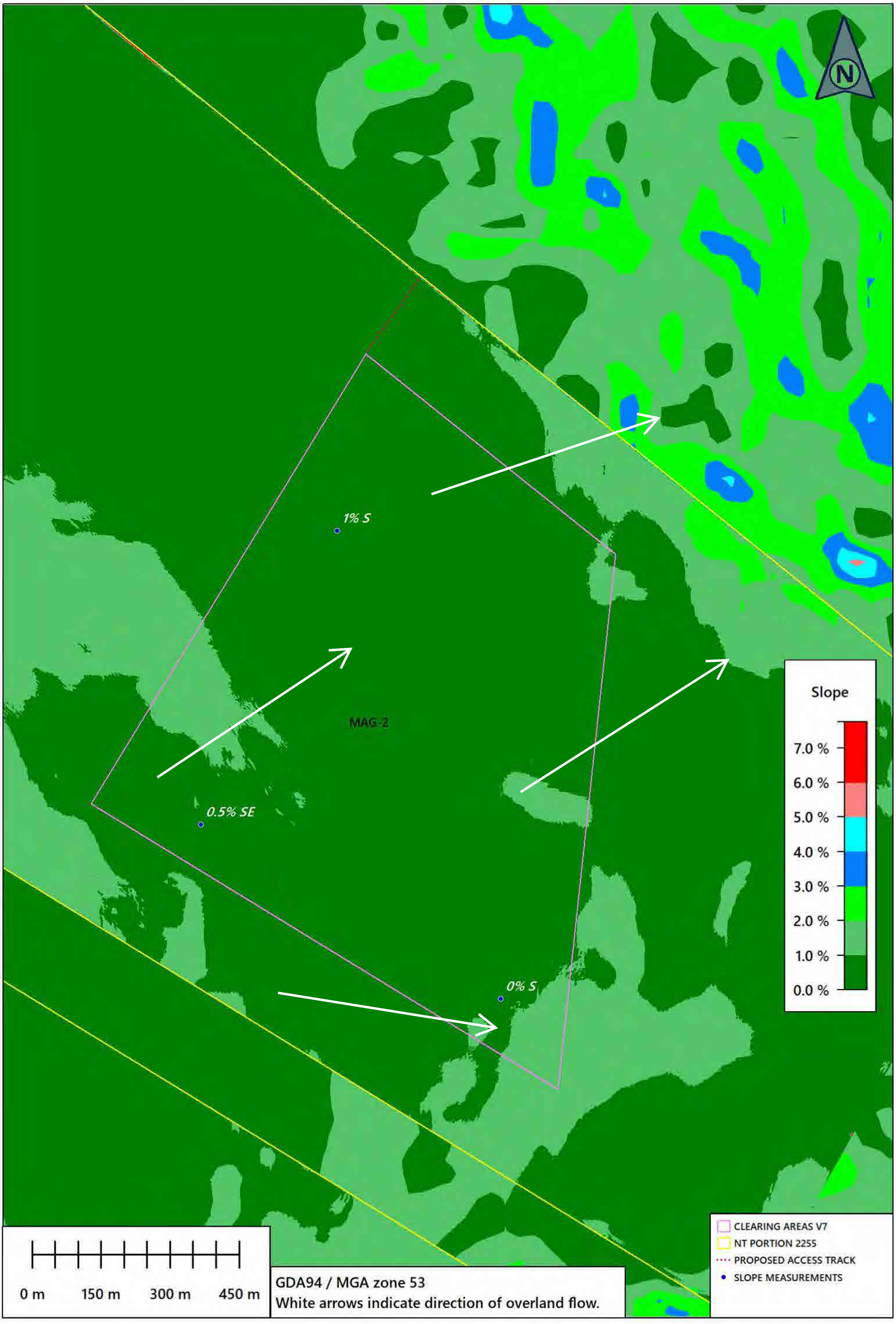

N
MAG-1
CORRIDOR 1
1 to 1.7km length
133.66 ha
ACCESS TRACK 2
MAG-2
CLEARING AREAS V8
CLEARING AREAS V8
NT PORTION 2255
WILDLIFE CORRIDORS
125 m
375 m
625 m
GDA94 / MGA zone 53

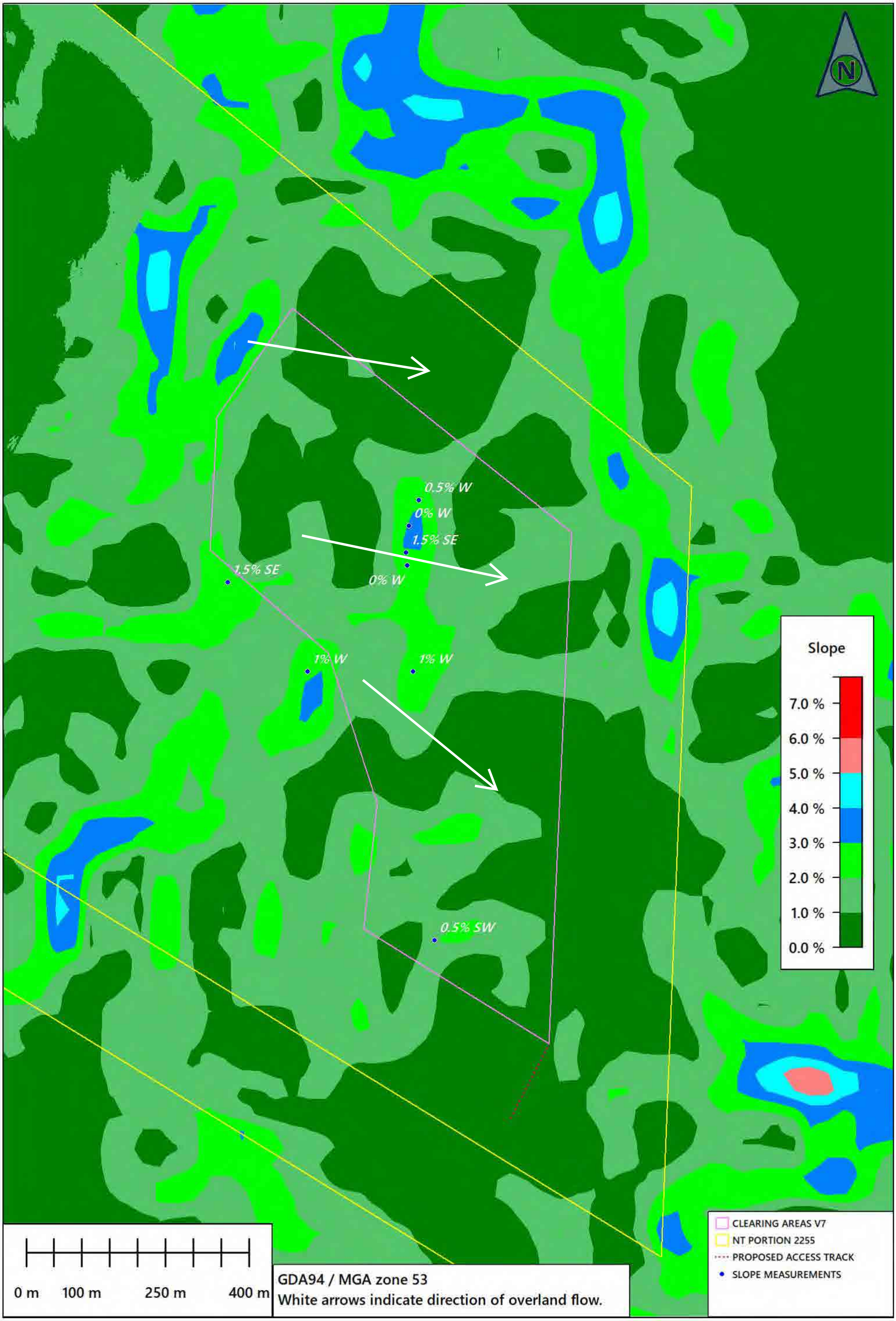

MAG-2
CORRIDOR 2
1.1 to 1.6km length
131.54 ha
MAG-3
ACCESS TRACK 3
125 m
375 m
625 m
GDA94 / MGA zone 53
CLEARING AREAS V8
CLEARING AREAS V8
NT PORTION 2255
WILDLIFE CORRIDORS

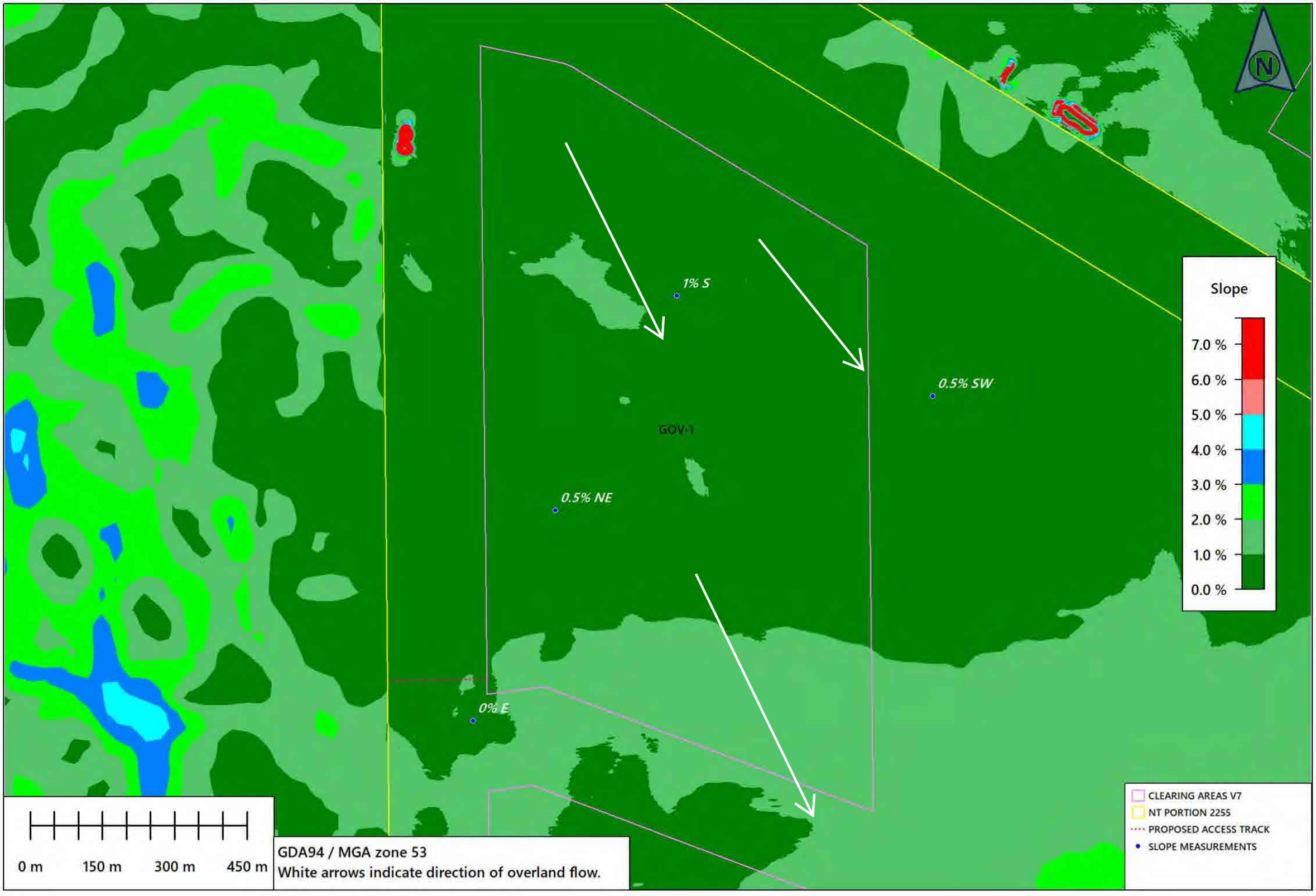

ACCESS TRACK 1
CORRIDOR 3
200m length
17.036 ha
N
50 m
150 m
250 m
350 m
GDA94 / MGA zone 53
CLEARING AREAS V8
CLEARING AREAS V8
NT PORTION 2255
WILDLIFE CORRIDORS

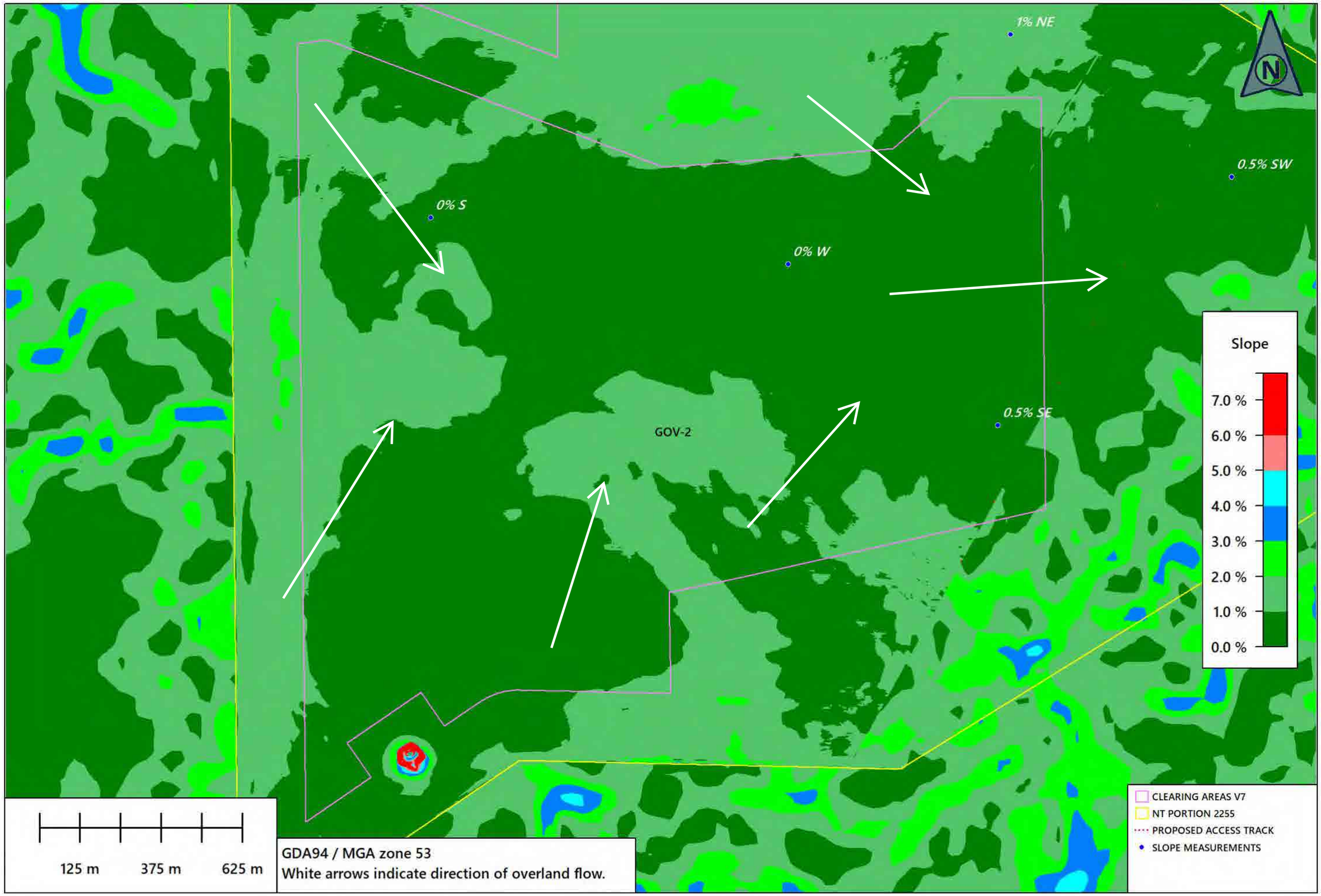

GOV-1
ACCESS TRACK 1
CORRIDOR 3
200m length
17.036 ha
CORRIDOR 2
1.1 to 1.6km length
131.54 ha
MAG-3
ACCESS TRACK 3
CORRIDOR 4
222m to 3.6 km length
335.72 ha
GOV-2
N
125 m
500 m
875 m
GDA94 / MGA zone 53
CLEARING AREAS V8
CLEARING AREAS V8
NT PORTION 2255
WILDLIFE CORRIDORS


N
0.5% SE
0.5% S
0.5% S
0.5% S
0.5% S
MAG-1
0% S
Slope
7.0 %
6.0 %
5.0 %
4.0 %
3.0 %
2.0 %
1.0 %
0.0 %
CLEARING AREAS V7
NT PORTION 2255
PROPOSED ACCESS TRACK
SLOPE MEASUREMENTS
125 m
375 m
625 m
GDA94 / MGA zone 53
White arrows indicate direction of overland flow.

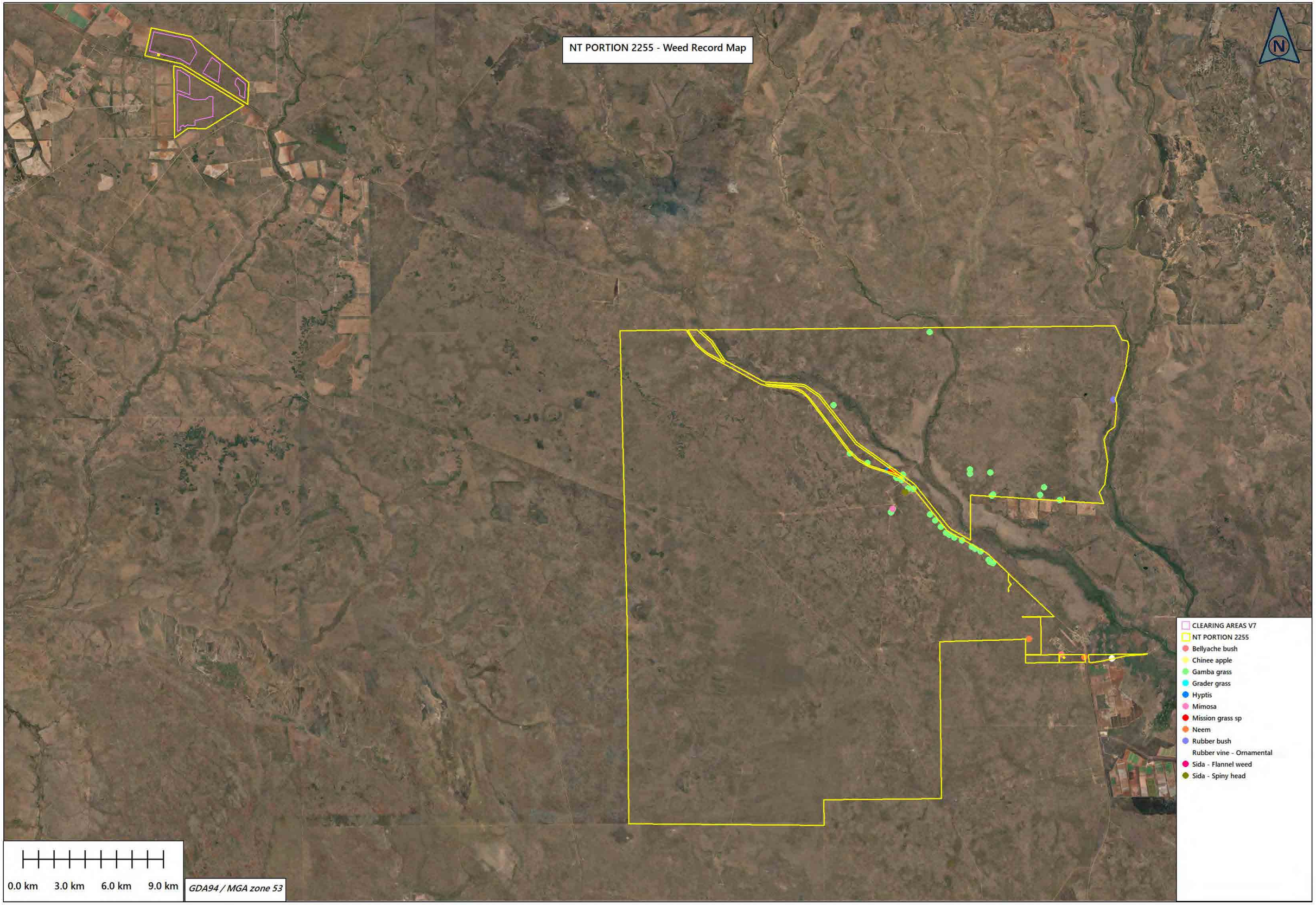

N
1% S
MAG-2
0.5% SE
0% S
Slope
7.0 %
6.0 %
5.0 %
4.0 %
3.0 %
2.0 %
1.0 %
0.0 %
0 m
150 m
300 m
450 m
GDA94 / MGA zone 53
White arrows indicate direction of overland flow.
CLEARING AREAS V7
NT PORTION 2255
PROPOSED ACCESS TRACK
SLOPE MEASUREMENTS


N
0.5% W
0% W
1.5% SE
1.5% SE
0% W
1% W
1% W
0.5% SW
Slope
7.0 %
6.0 %
5.0 %
4.0 %
3.0 %
2.0 %
1.0 %
0.0 %
0 m
100 m
250 m
400 m
GDA94 / MGA zone 53
White arrows indicate direction of overland flow.
CLEARING AREAS V7
NT PORTION 2255
PROPOSED ACCESS TRACK
SLOPE MEASUREMENTS


N
1% S
0.5% SW
GOV-1
0.5% NE
0% E
Slope
7.0 %
6.0 %
5.0 %
4.0 %
3.0 %
2.0 %
1.0 %
0.0 %
0 m
150 m
300 m
450 m
GDA94 / MGA zone 53
White arrows indicate direction of overland flow.
CLEARING AREAS V7
NT PORTION 2255
PROPOSED ACCESS TRACK
SLOPE MEASUREMENTS


1% NE
0.5% SW
0% S
0% W
0.5% SE
GOV-2
N
Slope
7.0 %
6.0 %
5.0 %
4.0 %
3.0 %
2.0 %
1.0 %
0.0 %
CLEARING AREAS V7
NT PORTION 2255
PROPOSED ACCESS TRACK
SLOPE MEASUREMENTS
125 m
375 m
625 m
GDA94 / MGA zone 53
White arrows indicate direction of overland flow.

NT PORTION 2255 - Weed Record Map



hgroves@magnatagriservices.com.au

From: Fiona Earl <Fiona.Earl@nt.gov.au> on behalf of Heritage Branch <Heritage.Branch@nt.gov.au>
Sent: Wednesday, 7 May 2025 1:26 PM
To: Helen Groves; landclearing DLPE
Cc: Julie Hillier
Subject: RE: Request for information - NT Portion 2255

Hi Helen,

This initial advice is provided following a request for information from the Heritage Branch.

The Heritage Branch administers the *Heritage Act 2011* which protects all Aboriginal and Macassan archaeological sites and all declared and provisionally declared heritage places.

For requests related to sacred sites, contact the Aboriginal Areas Protection Authority https://www.aapant.org.au.

Work details

Name of proponent (company or department)	Magnat Agri Services
Contact person (name and title)	Helen Groves
Date enquiry received	16 April 2025
Location of work	NT Portion 2255
Brief description of work as provided	Land clearing
Date of Heritage Branch response	7 May 2025
Our reference	42-F25-98

The context of Heritage Branch advice
The Northern Territory Government's Heritage Branch administers the *Heritage Act 2011* and provides authoritative advice about obligations under the *Heritage Act 2011,* including steps to take to manage the impact of proposed work on Aboriginal and Macassan archaeological places and objects
It is important that advice given by the Heritage Branch is followed. A failure to follow advice received from the Heritage Branch may be considered as evidence in an investigation if damage occurs to an Aboriginal or Macassan archaeological place or object.

Relevant parts of the Northern Territory's *Heritage Act* 2011
Under the Northern Territory's *Heritage Act 2011* (the Act):

1. All provisionally declared and declared heritage places and objects are protected under the Act;
2. All Aboriginal or Macassan archaeological places and objects are automatically protected - this includes places and objects not previously recorded;
3. Places and objects include an artefact or thing given shape by a person - examples include stone tools, stone arrangements, fish traps, rock art, modified trees, and shell middens;
4. Ancestral remains are also protected;
5. Underwater Cultural Heritage is protected, up to three nautical miles from the coast;
6. There is an obligation to notify of the discovery of Aboriginal or Macassan archaeological places or objects;
7. Work carried out to a heritage place or object must follow the Heritage Act 2011.

Conditions of advice

1. This advice is based on the description of the work provided to the Heritage Branch. If the work expands or changes significantly seek further advice.
2. In preparing this advice, the Heritage Branch has referred to an archaeological database which includes information about Aboriginal and Macassan archaeological places and objects in the Northern Territory. However, the database only includes information about known archaeological places. The fact that there

are no known archaeological places recorded may be because no archaeological surveys have been conducted in that particular area, and is not necessarily an indication they do not exist.

Actions

The following actions have been taken in relation to the enquiry.

- A search of the Northern Territory Heritage Register;
- A search for known archaeological places located within the subject site on the Heritage Branch archaeological database;
- A search for known archaeological places located within the proximity of the subject site on the Heritage Branch archaeological database;
- The extent of pre-existing ground disturbance;
- The scale and nature of the work proposed (major, moderate or minor);
- Areas identified as being excluded from the work footprint e.g. riparian buffers; and
- An assessment of the likelihood of unrecorded archaeological places existing within the subject site, based on landscape features, known archaeological places in the vicinity, and other predictive tools.

Advice for Aboriginal or Macassan archaeological places and objects

The search has found that there are no known Aboriginal or Macassan archaeological places and objects within the subject site. The likelihood of possible unrecorded Aboriginal or Macassan archaeological places has been assessed as *possible*. The extent of pre-existing disturbance and the nature of the work itself has also been considered. The Heritage Branch has consulted with the proponent and other government departments regarding nearby water sources. An unexpected finds protocol is recommended for the site prior to works occurring. The unexpected finds protocol will assist with any discoveries of archaeological places during the proposed works. If archaeological places are discovered over the course of the work, follow the unexpected finds protocol and establish an exclusion zone around the site and contact the Heritage Branch immediately.

Advice for declared or Provisionally Declared heritage places and objects

The search has found that there are no nominated, provisionally declared or declared heritage places or objects within the subject area.

Further comments

Further information can also be found on our website:
https://nt.gov.au/property/building/heritage-properties/heritage-properties-building-works-and-development
Aboriginal heritage information | NT.GOV.AU

Thanks,

Fi

Dr Fiona Earl
Heritage Officer
Heritage Branch
Department of Lands, Planning and Environment
Northern Territory Government

Ground Floor, Arnhemica House
16 Parap Road, Parap

PO Box 3675, Darwin, NT 0801

P: **+61 8 8999 5051**
E: fiona.earl@nt.gov.au

NORTHERN TERRITORY GOVERNMENT

From: Helen Groves <hgroves@magnatagriservices.com.au>
Sent: Wednesday, 16 April 2025 1:16 PM
To: Heritage Branch <Heritage.Branch@nt.gov.au>
Cc: Julie Hillier <Julie.Hillier@nt.gov.au>
Subject: Re: Request for information - NT Portion 2255

Good afternoon all,

Please find attached the updated/ amended spatial file for an application to clear native vegetation at NTP 2255, Venn. Historical advice relating to this application is provided below.

Can you please provide updated advice based on the spatial files provided, which include to recommended 200m boundary buffers North of the proposed clearing polygons identified as MAG-1, MAG-2 & MAG-3?

Best regards,
Helen Groves

Helen Groves
Magnat Agri Services

hgroves@magnatagriservices.com.au
0439 937 802

On Tue, 14 Nov 2023, 1:31 pm Heritage Branch, <Heritage.Branch@nt.gov.au> wrote:

> Hi Helen,
>
> Thanks for the link to the photos. Unfortunately we can't open Google Drive links through our network.
>
> This initial advice is provided following a request for information from the Heritage Branch.
>
> For requests related to sacred sites, contact the Aboriginal Areas Protection Authority https://www.aapant.org.au.
>
> **Work details**

Name of proponent (company or department)	Magnat Agri Services
Contact person (name and title)	Helen Groves
Date enquiry received	6 November 2023
Location of work	NT Portion 2255
Brief description of work as provided	Clear land to sow Jarra Finger Grass
Date of Heritage Branch response	14 November 2023
Our reference	HCD2023/00236

The context of Heritage Branch advice

The Northern Territory Government's Heritage Branch administers the *Heritage Act 2011* and provides authoritative advice about obligations under the *Heritage Act 2011,* including steps to take to manage the impact of proposed work on Aboriginal and Macassan archaeological places and objects

It is important that advice given by the Heritage Branch is followed. A failure to follow advice received from the Heritage Branch may be considered as evidence in an investigation if damage occurs to an Aboriginal or Macassan archaeological place or object.

Relevant parts of the Northern Territory's *Heritage Act* 2011

Under the Northern Territory's *Heritage Act 2011* (the Act):

1. All provisionally declared and declared heritage places and objects are protected under the Act;

2. All Aboriginal or Macassan archaeological places and objects are automatically protected - this includes places and objects not previously recorded;

3. Places and objects include an artefact or thing given shape by a person - examples include stone tools, stone arrangements, fish traps, rock art, modified trees, and shell middens;

4. Ancestral remains are also protected;

5. Underwater Cultural Heritage is protected, up to three nautical miles from the coast;

6. There is an obligation to notify of the discovery of Aboriginal or Macassan archaeological places or objects

Conditions of advice

1. This advice is based on the description of the work provided to the Heritage Branch. If the work expands or changes significantly seek further advice.

2. In preparing this advice, the Heritage Branch has referred to an archaeological database which includes information about Aboriginal and Macassan archaeological places and objects in the Northern Territory. However the database only includes information about known archaeological places. The fact

that there are no known archaeological places recorded may be because no archaeological surveys have been conducted in that particular area, and is not necessarily an indication they do not exist.

Actions

The following actions have been taken in relation to the enquiry.

- A search of the Northern Territory Heritage Register;
- A search for known archaeological places located within the subject site on the Heritage Branch archaeological database;
- A search for known archaeological places located within the proximity of the subject site on the Heritage Branch archaeological database;
- The extent of pre-existing ground disturbance;
- The scale and nature of the work proposed (major, moderate or minor);
- Areas identified as being excluded from the work footprint e.g. riparian buffers; and
- An assessment of the likelihood of unrecorded archaeological places existing within the subject site, based on landscape features, known archaeological places in the vicinity, and other predictive tools.

Advice

The search has found that there are no known Aboriginal or Macassan archaeological places within the subject site. However the likelihood of possible unrecorded Aboriginal or Macassan archaeological places has been assessed as *possible or likely*. The extent of pre-existing disturbance and the nature of the work itself has also been considered.

The Heritage Branch recommends that an archaeological survey and cultural heritage management plan are required to identify and mitigate the impact to Aboriginal or Macassan archaeological places.

1. The Heritage Branch can provide a list of qualified archaeologists on request.
2. The Heritage Branch can provide advice in regard to the scope of the survey and plan on request.
3. The Heritage Branch must receive a copy of the final report for our records.

Declared Heritage Advice

The search has found that there are no nominated, provisionally declared or declared heritage places or objects within the subject area.

Further comments

Further information can also be found on our website:

https://nt.gov.au/property/building/heritage-properties/heritage-properties-building-works-and-development

Aboriginal heritage information | NT.GOV.AU

Thanks,

Fi

Dr Fiona Earl

Heritage Officer

Heritage Branch

Community Participation and Inclusion

Territory Families, Housing and Communities

Level 1 Building JHV2,

Jape Homemaker Village, 356 Bagot Road Millner

PO Box 37037, Winnellie, NT 0821

t. 08 8999 5051

w .tfhc.nt.gov.au

I acknowledge Aboriginal people as the Traditional Owners of the country I work on, and their connection to land and community. I pay my respect to all Traditional Owners, and to the Elders both past and present.

NORTHERN TERRITORY GOVERNMENT | TERRITORY FAMILIES, HOUSING AND COMMUNITIES

From: hgroves@magnatagriservices.com.au <hgroves@magnatagriservices.com.au>
Sent: Monday, 6 November 2023 9:39 AM
To: Heritage Branch <Heritage.Branch@nt.gov.au>
Subject: Request for information - NT Portion 2255

Good morning all,

I am currently working on an application to clear native vegetation at NT Portion 2255 in the Venn region (south of Katherine). Intended land use of cleared area is to sow the area to Jarra Finger Grass for non-irrigated production of fodder for grazing and hay, and total application area is 1,107.7 ha. Attached is the area associated with the proposed clearing plan. Can you please advise if there are any declared heritage places or archaeological sites within the meaning of the Heritage Act 2011 at this NT Portion?

To assist with site specific information, photo sites can be accessed via the following link - https://drive.google.com/file/d/1lh1sPKKfZ4R41lypqa0ld1TFz4LPci-l/view?usp=drive_link

Photo site locations can be accessed via the attached PHOTO SITES spatial file.

Best regards,

Helen Groves

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Magnat Agri Services

0439 937 802 I hgroves@magnatagriservices.com.au

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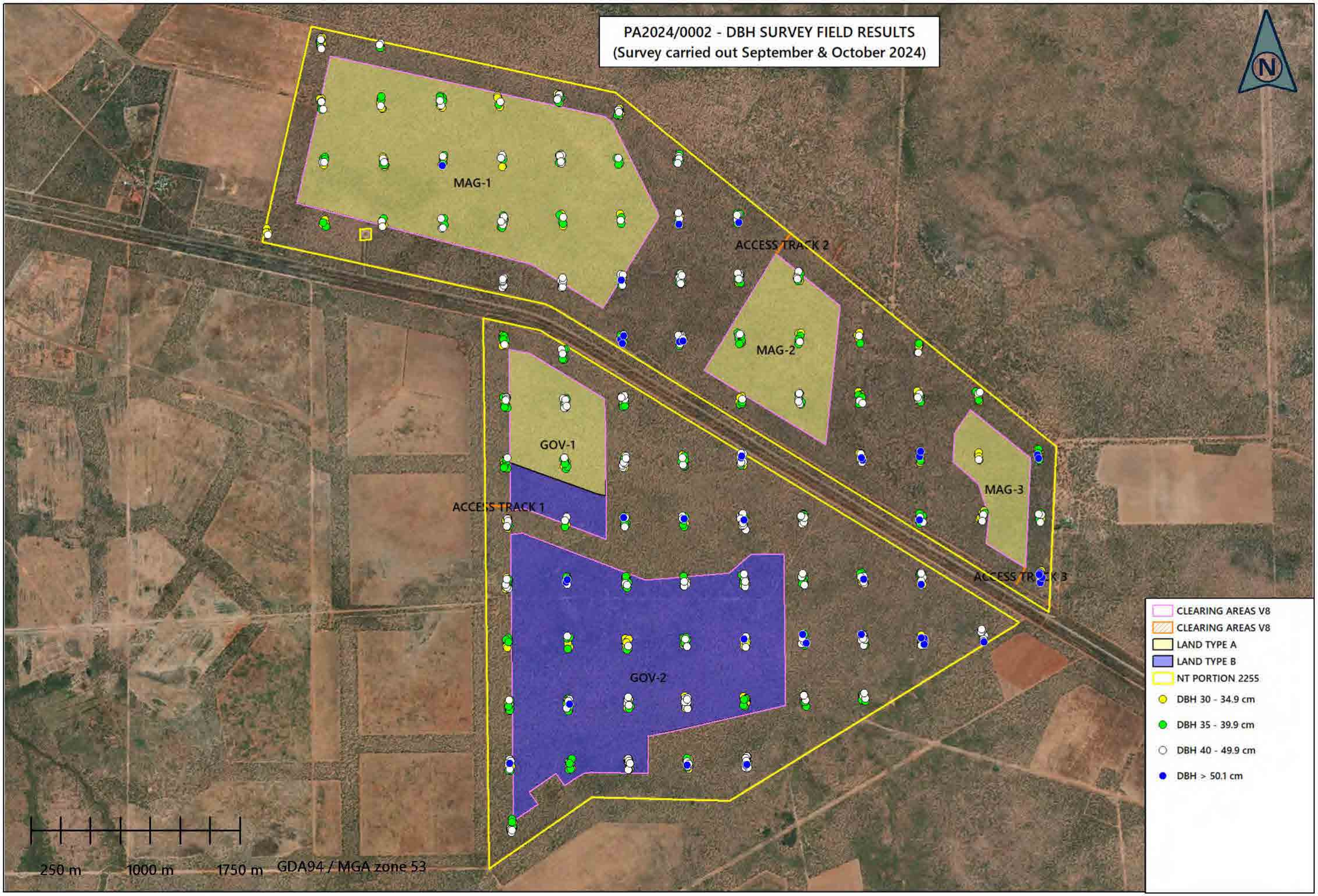
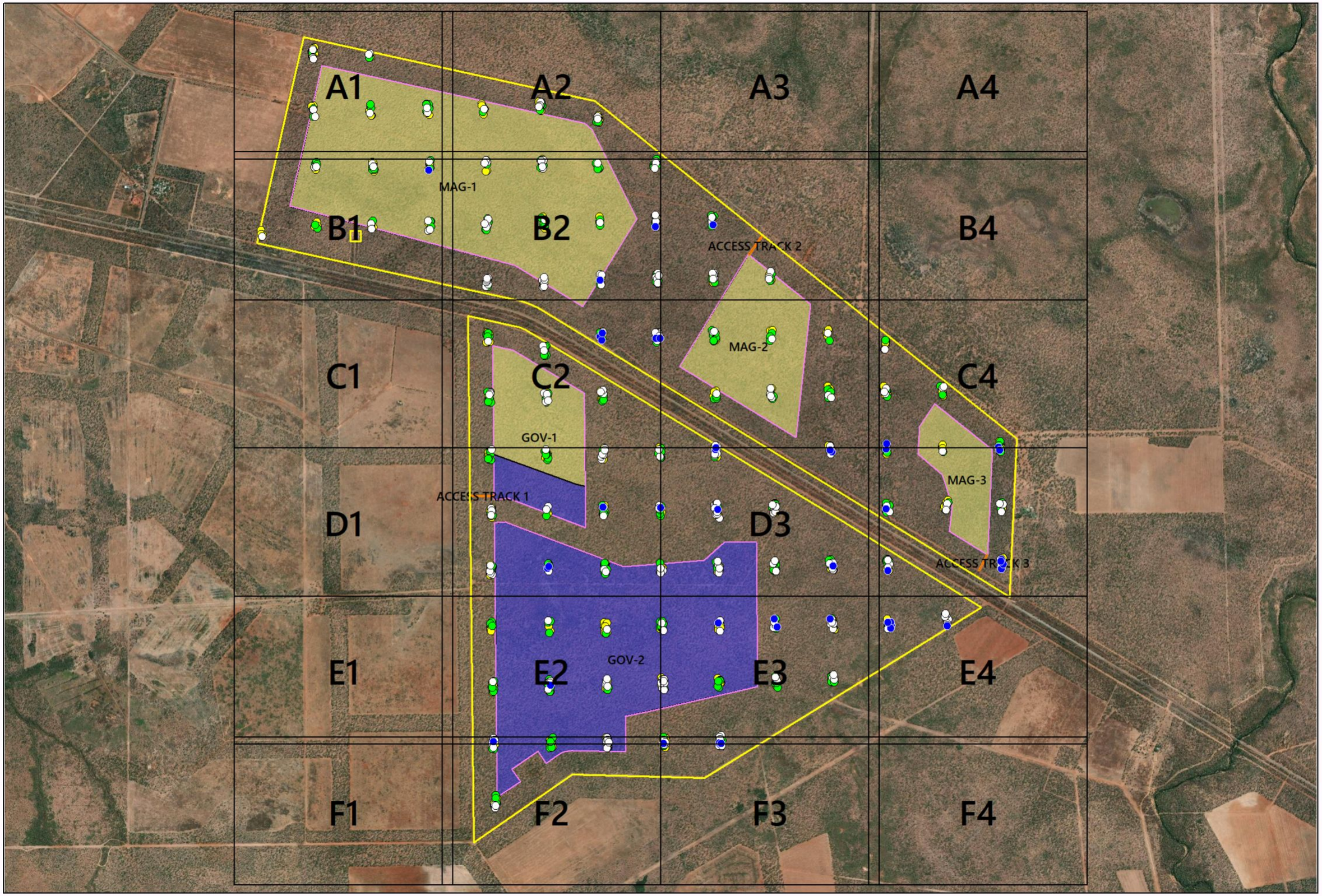
PA2024/0002 - DBH SURVEY FIELD RESULTS
(Survey carried out September & October 2024)




A1
A2
A3
A4
MAG-1
B1
B2
B4
ACCESS TRACK 2
MAG-2
C1
C2
C4
GOV-1
MAG-3
ACCESS TRACK 1
D1
D3
ACCESS TRACK 3
GOV-2
E1
E2
E3
E4
F1
F2
F3
F4


N
CLEARING AREAS V8
CLEARING AREAS V8
LAND TYPE A
LAND TYPE B
NT PORTION 2255
DBH 30 - 34.9 cm
DBH 35 - 39.9 cm
DBH 40 - 49.9 cm
DBH > 50.1 cm
0 m
100 m
200 m
300 m
GDA94 / MGA zone 53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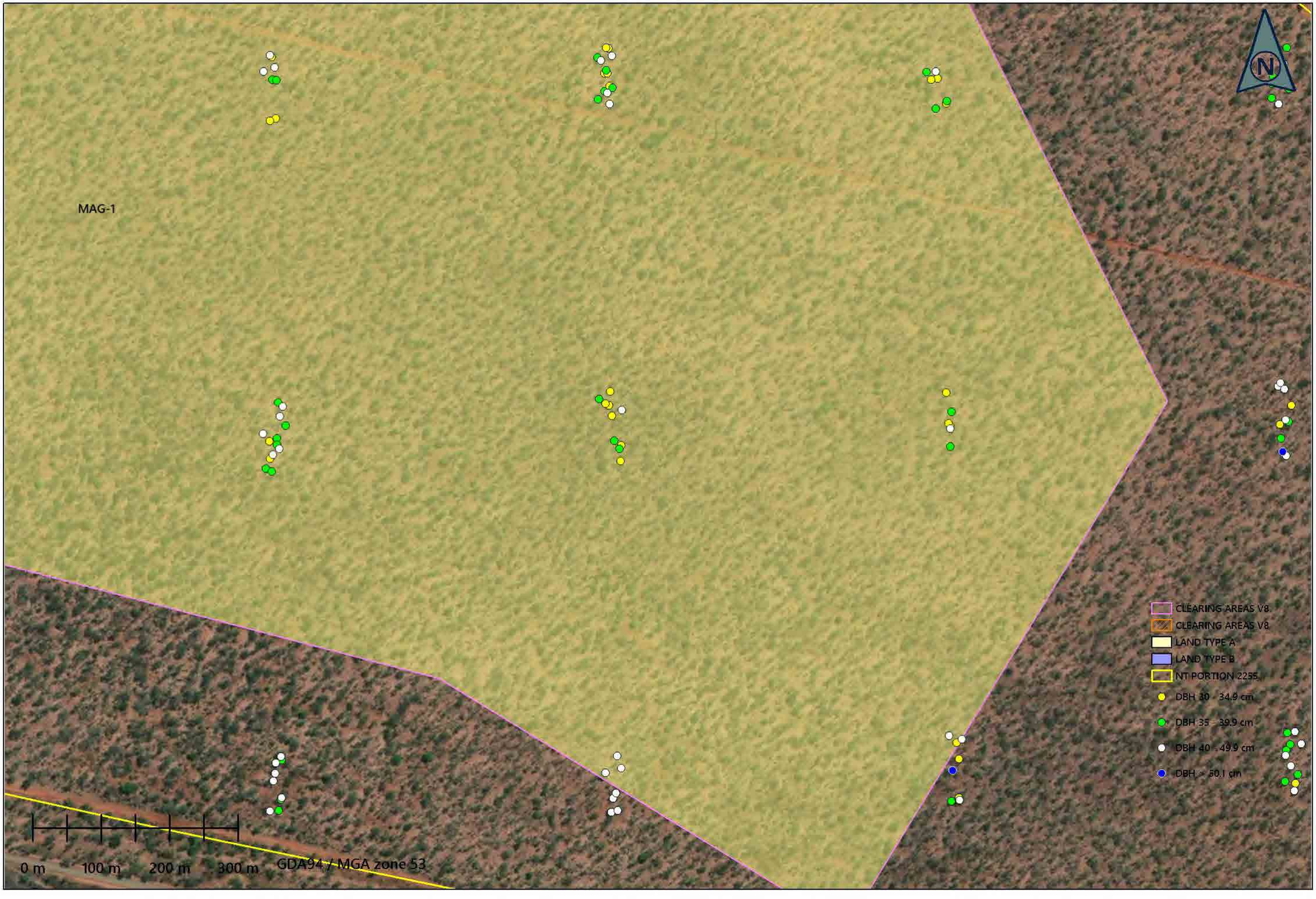
MAG-1
N
CLEARING AREAS V8
CLEARING AREAS V8
LAND TYPE A
LAND TYPE B
NT PORTION 2255
DBH 30 - 34.9 cm
DBH 35 - 39.9 cm
DBH 40 - 49.9 cm
DBH > 50.1 cm
0 m
100 m
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ACCESS TRACK 2
CLEARING AREAS V8
CLEARING AREAS V8
LAND TYPE A
LAND TYPE B
NT PORTION 2255
DBH 30 - 34.9 cm
DBH 35 - 39.9 cm
DBH 40 - 49.9 cm
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CLEARING AREAS V8
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CLEARING AREAS V8
CLEARING AREAS V8
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LAND TYPE B
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DBH 35 - 39.9 cm
DBH 40 - 49.9 cm
DBH > 50.1 cm
0 m
100 m
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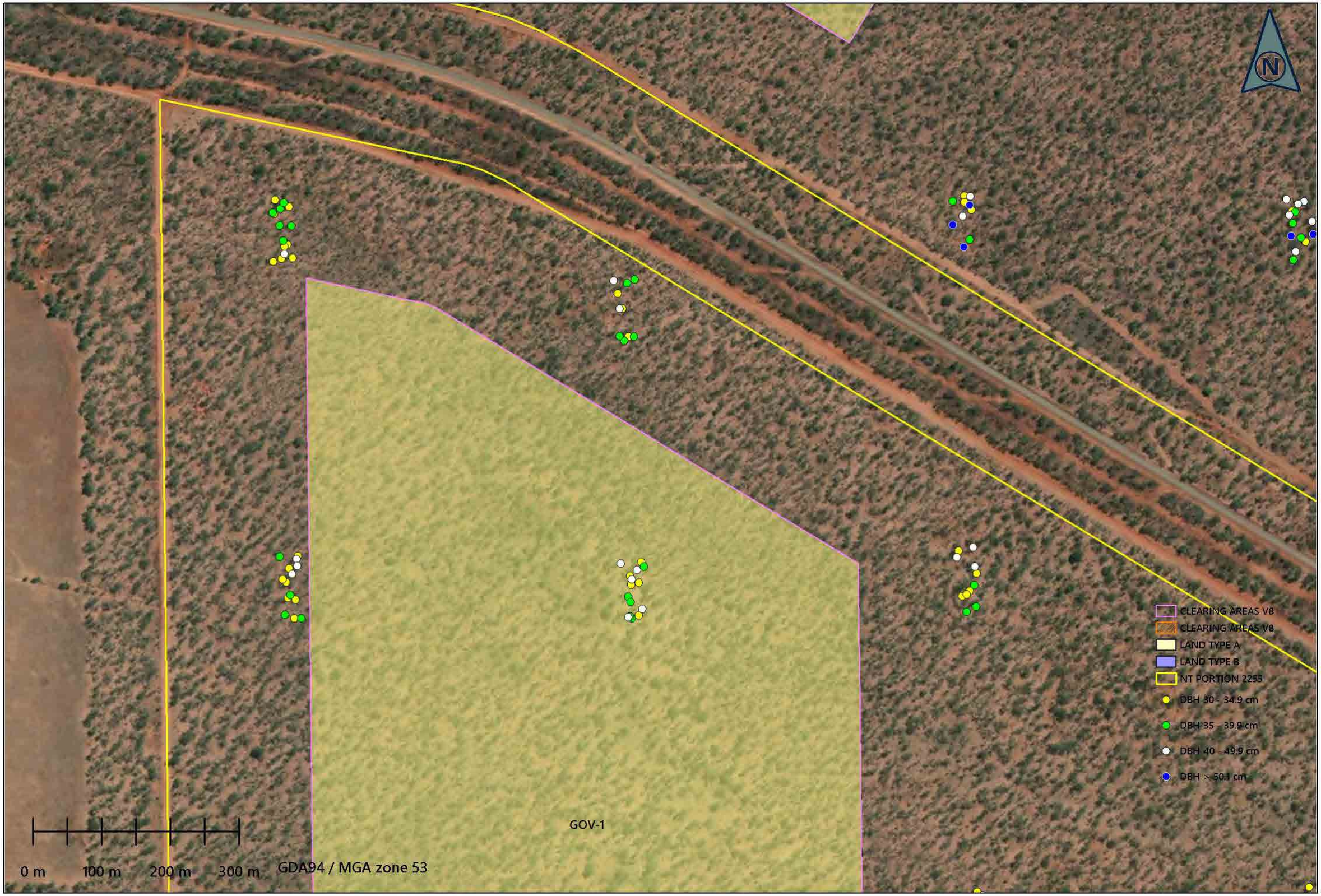
GDA94 / MGA zone 53


N
CLEARING AREAS V8
CLEARING AREAS V8
LAND TYPE A
LAND TYPE B
NT PORTION 2255
DBH 30 - 34.9 cm
DBH 35 - 39.9 cm
DBH 40 - 49.9 cm
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GOV-1
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100 m
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GDA94 / MGA zone 53


MAG-2
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CLEARING AREAS V8
CLEARING AREAS V8
LAND TYPE A
LAND TYPE B
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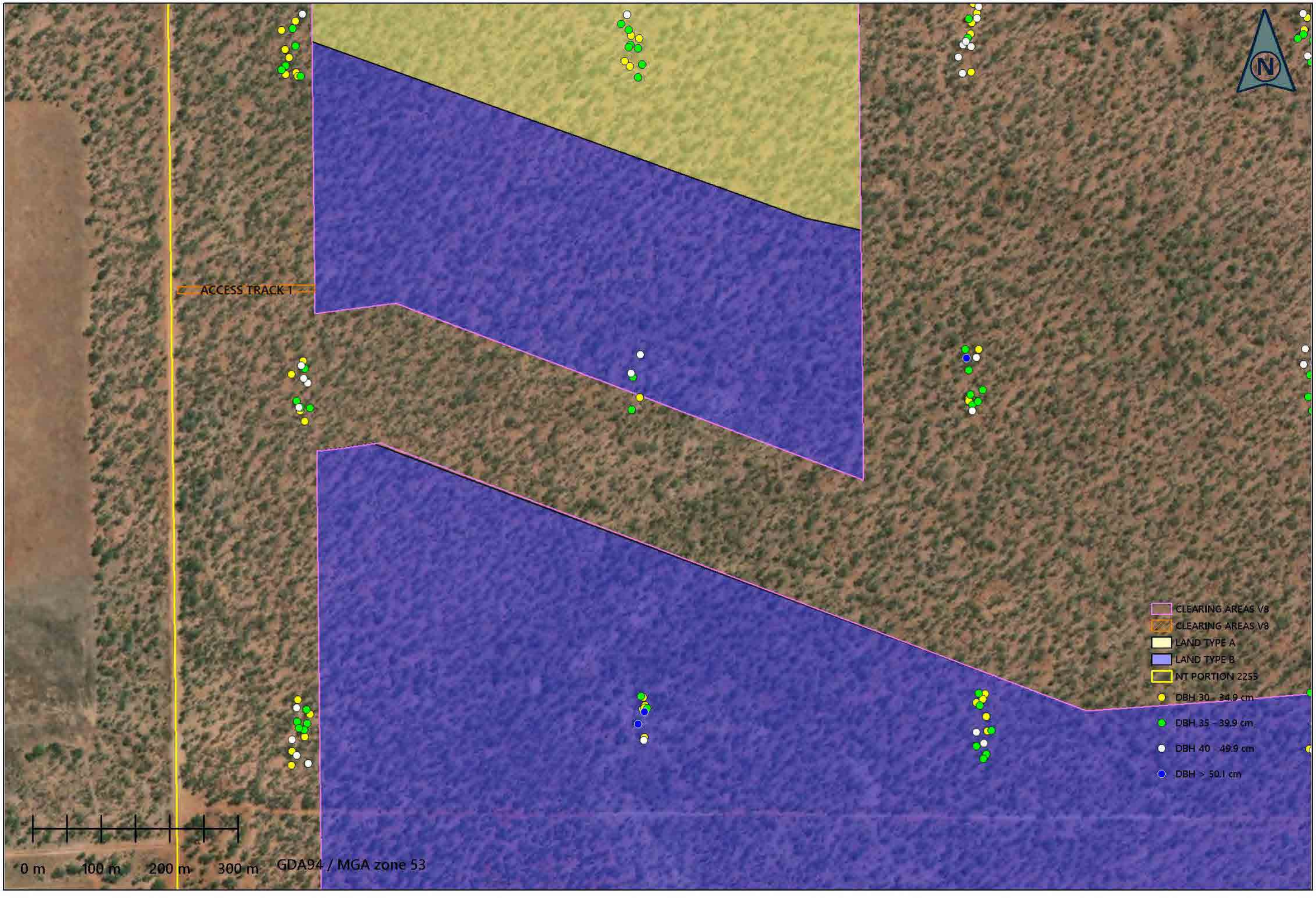
ACCESS TRACK 1
N
CLEARING AREAS V8
CLEARING AREAS V8
LAND TYPE A
LAND TYPE B
NT PORTION 2255
DBH 30 - 34.9 cm
DBH 35 - 39.9 cm
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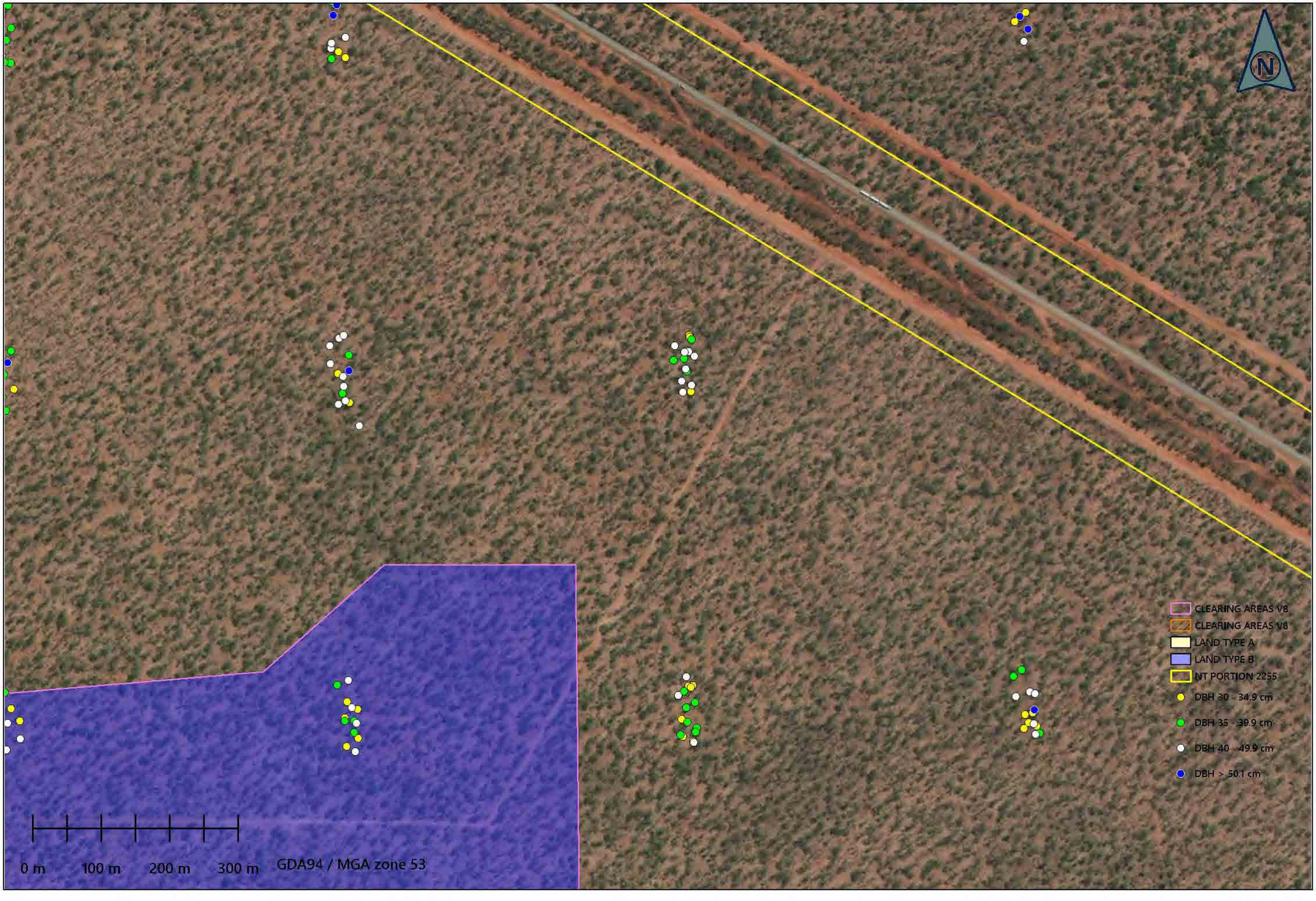
N
CLEARING AREAS V8
CLEARING AREAS V8
LAND TYPE A
LAND TYPE B
NT PORTION 2255
DBH 30 - 34.9 cm
DBH 35 - 39.9 cm
DBH 40 - 49.9 cm
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MAG-3
ACCESS TRACK 3
N
CLEARING AREAS V8
CLEARING AREAS V8
LAND TYPE A
LAND TYPE B
NT PORTION 2255
DBH 30 - 34.9 cm
DBH 35 - 39.9 cm
DBH 40 - 49.9 cm
DBH > 50.1 cm
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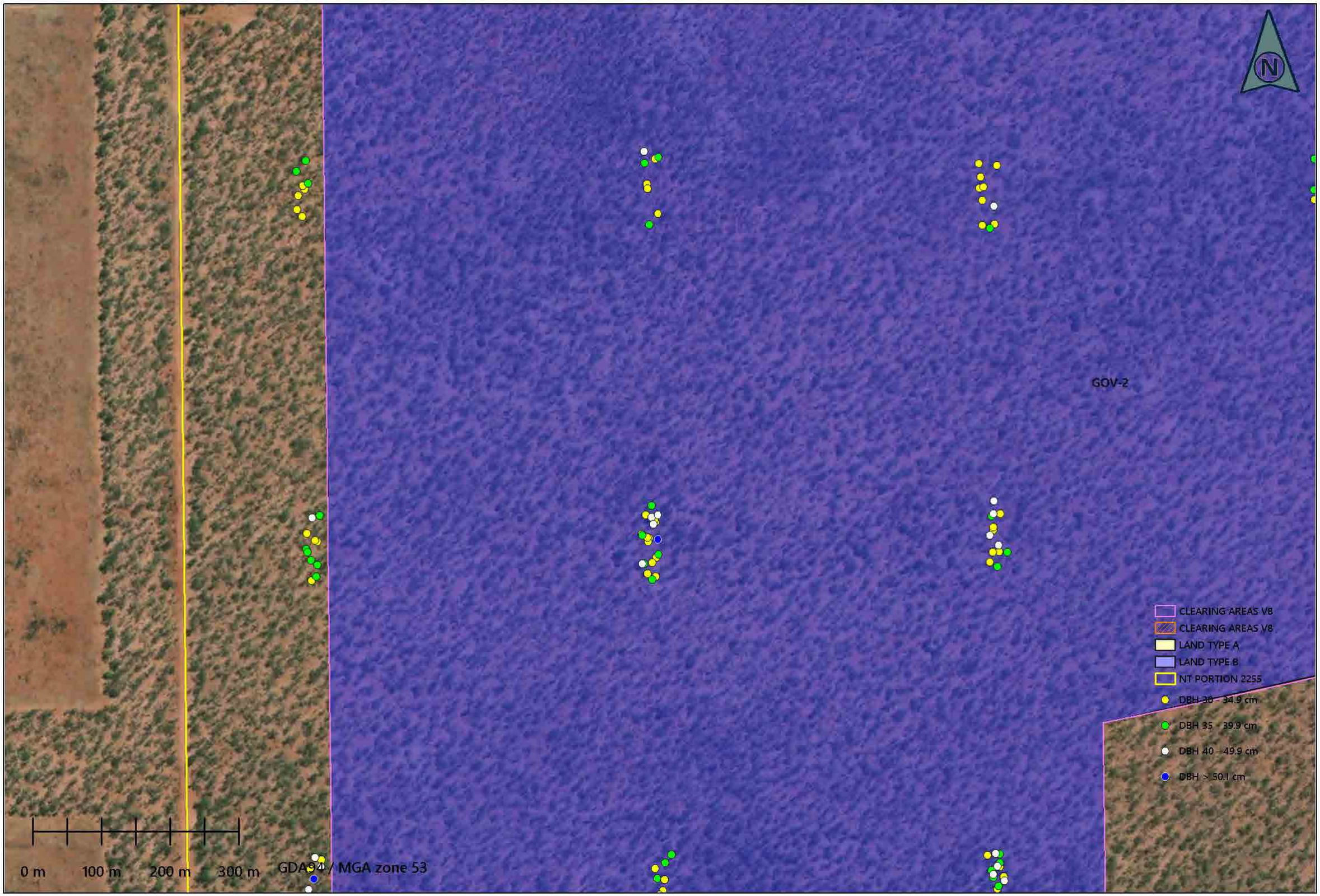
N
GOV-2
CLEARING AREAS V8
CLEARING AREAS V8
LAND TYPE A
LAND TYPE B
NT PORTION 2255
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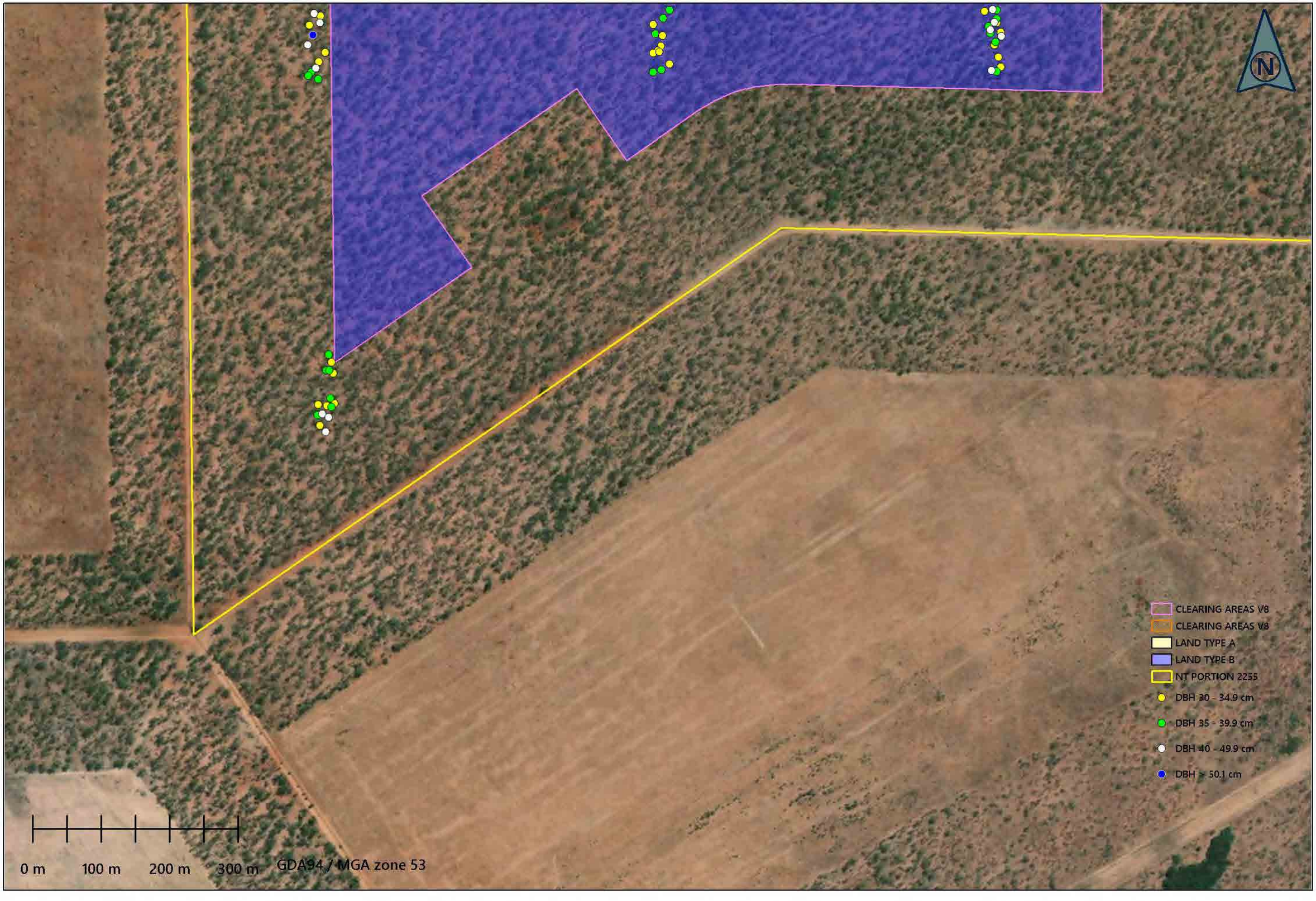
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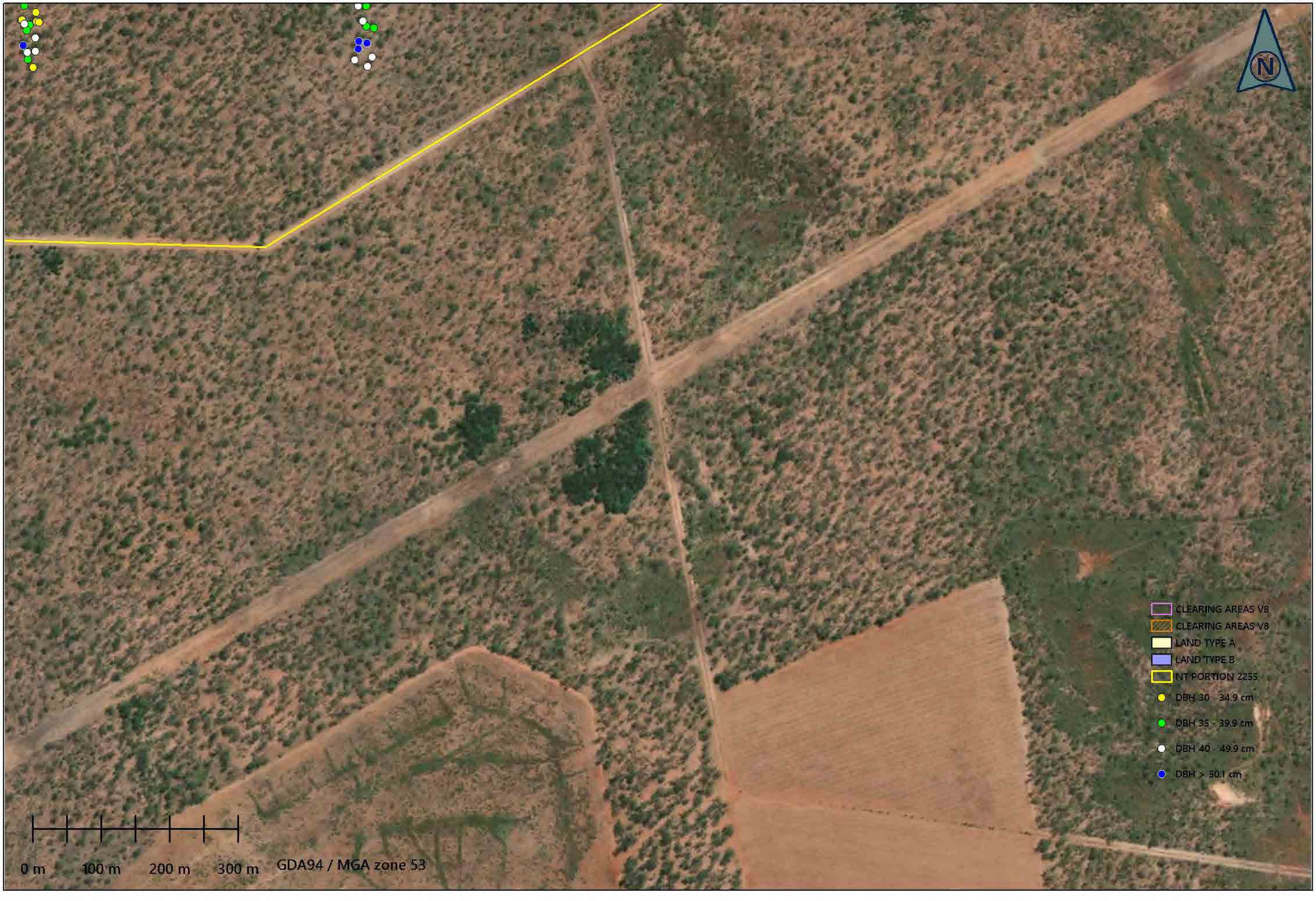
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Attachment - Results/advice from a Register of Sacred and Significant Sites search from the Aboriginal Areas Protection Authority (AAPA) and location of any sites.

Abstract of Records from Aboriginal Areas Protection Authority (AAPA) - 202505676

This document is not for public display.

A copy has been provided to the Native Vegetation Assessment Panel and relevant organisations for review.