Standard Pastoral Land Clearing Application - Section 91F Pastoral Land Act 1992

CONTEXT: This form should be used for pastoral land clearing (PLC) applications that do not qualify for the simplified assessment process outlined in Schedule 1 of the PLC Guidelines, as published by the Pastoral Land Board in accordance with the *Pastoral Land Act 1992*. The questions in this application form seek to address the 'Matters to be taken into account' by the Pastoral Land Board as specified in the PLC Guidelines. For further information contact the Vegetation Assessment Unit, Department of Environment, Parks and Water Security (DEPWS) on (08) 8999 4454 or refer to the following website https://nt.gov.au/property/land-clearing/pastoral-land/clearing-native-vegetation-on-pastoral-land.

PRE-LODGEMENT: Applications will be screened by the Vegetation Assessment Unit before being accepted for assessment to ensure applications contain all the information required to enable assessment. Incomplete applications will not be accepted. Applicants are encouraged to contact the Vegetation Assessment Unit to discuss their application prior to submission.

LODGEMENT: Submit the completed form with all required attachments and associated spatial data (e.g. proposed clearing shapefile/kml, land types shapefile/kml.) through Development Applications Online.

1. Application details

Station Name:	Ammaroo Station
NT Portion/s:	NT Portion 5162, 5163, 4868, 749, 7492 and 1290
Pastoral District:	**Plenty**
Pastoral Lease No:	**1105**
Proposed Clearing Area (ha)	*662.49* **ha**
Document Version Number:	**2**
Date:	**07/05/2025**

2. Applicant details

For an application to be correctly made under section 91F of the *Pastoral Land Act 1992*, it must be lodged by the pastoral lessee or a person authorised by written consent from the pastoral lessee. Once the application has been accepted, payment of the application fee should be made to the Receiver of Territory Monies and the receipt forwarded to PastoralAssessment.DEPWS@nt.gov.au.

Form completed by:	Department of Logistics and Infrastructure
Name of consultant:	Kimberley Doukas
Name of lessee:	Ammaroo Station
Applicant* name:	Department of Logistics and Infrastructure
Applicant* telephone:	0476118037
Applicant* email:	Environment.DLI@nt.gov.au
Applicant* postal address:	Level 3, Highway House, Palmerston, 0830

*All correspondence regarding the application will be directed to the applicant.

☒ Attach Lessee/s Authorisation form. Attachment No: 1

3. Description of proposal

The Department of Logistics and Infrastructure (DLI) has funding to upgrade the Sandover Highway between Ch170km to Ch192km to a two-lane bitumen seal.

Clearing is required as an ancillary activity to gravel extraction for these roadworkses, DLI therefore applies on behalf of the lessee of the Perpetual Pastoral Lease over NT Portion 5162, 5163, 4868, 749, 7492 and 1290, Ammaroo station, for a clearing permit to clear land on NT Portion 5163, 749 and 1290 under the Pastoral Land Act 1992.

The area to be cleared consists of four (4) areas totalling 662.49 Hectares (ha), which shown in *Attachment 3 Location Map*, and defined in detail in *Attachments 3a, 3b,3c, 3d*

An area of 486ha has been identified for borrow pits and a detour. Exact locations of the detour and borrow pits have not yet been determined and are subject to on ground verification by the successful contractor. Borrow pits will be located approximately every 500m of the road, offset 150m north of the road centreline, and will be 300m long by 100m wide. For the purpose of this application, the whole area has been included.

It should be noted that within the 662.49 ha, clearing will only occur within areas which are suitable for a detour, areas containing suitable quality gravel resources, or that facilitate access to such gravel resources. The nominated clearing areas are larger than usually required due to inconsistent gravel quality in the area. Within these areas, the application of DIPL standard specifications further reduces the cleared area and require areas to be rehabilitated after extraction.

It is not economically viable to freight gravel long distances, if gravel resources are not available in the vicinity of the works, then the works will not proceed. Additionally works cannot be undertaken without the use of a detour.

4. Existing clearing

4.1 Provide details of the extent of existing clearing within the lease.

Note: All PLC permits are published online at https://nt.gov.au/property/land-clearing/pastoral-land/pastoral-land-clearing-applications-and-permits

Site	Area (ha)	Year cleared	Permit No.	Area within proposed clearing extent (ha)	Description
Example: Site 1 Front paddock	*10.5ha*	*1980*	*NA*	*7.5*	*Western half of front paddock cleared in 1980 for improved pasture, now contains regrowth. This area (excluding stream buffer) is proposed to be cleared.*
Site 1	46.91	Unknown	NA	46.91	Sandover Highway section 1 within Ammaroo Station PPL
Site 2	2.02	Unknown	NA	2.02	Historical gravel pit within Gravel Pit 1
Site 3	1.08	Unknown	NA	0	Existing turkeys adjacent to Gravel Pit 1 to the north

Site 4	0.38	Unknown	NA	0	Pumping infrastructure adjacent to site 3 turkeys' nest
Site 5	0.48	Unknown	NA	0	Historical gravel pit 2.5km northwest of Sandover Highway
Site 6	8.00	Unknown	NA	0	Sandover Highway section 2 within Ammaroo Station PPL
Site 7	0.61	Unknown	NA	0	Turkeys nest 1.8km west of station homestead
Site 8	0.45	Unknown	NA	0	Existing station infrastructure
Site 9	13.22	Unknown	NA	0	Station homestead
Site 10	17.15	Unknown	NA	0	Station Airstrip
Site 11	0.23	Unknown	NA	0	Existing sump adjacent to NTG road reserve
Site 12	4.01	Unknown	NA	4.1	Historical clearing withing Gravel Pit 3
Total:	94.54ha			53.03ha	

☒ Attach a map showing areas of existing clearing within the property

Attachment No: 2

5. Proposed clearing

5.1 Provide details of the proposed clearing extent.

Site Id	Proposed Use	Area (ha)
Pit 1 Ch 177L	Clearing to facilitate gravel extraction for roadworks (ancillary activity). Area to be rehabilitated after extraction	74.38
Pit 2 Ch 13R	Clearing to facilitate gravel extraction for roadworks (ancillary activity). Area to be rehabilitated after extraction	54.90
Pit 3 Ch 16R	Clearing to facilitate gravel extraction for roadworks (ancillary activity). Area to be rehabilitated after extraction	47.21
Detour 1	Clearing to facilitate road works and detour	486
Total:		662.49

5.2 Provide a proposed Clearing Plan.

The proposed Clearing Plan is a map showing the geo-referenced location of the proposed clearing areas as identified in Section 5.1. The maps should include:

- The map datum (e.g. GDA94)
- The map projection or zone
- A north arrow
- A grid or scale bar
- A suitable background (e.g. cadastre and aerial/satellite imagery)

☒ Attach proposed Clearing Plan. Attachment No: 3 Location Map, Detail 3a,3b,3c,3d,3e

An indicative map is provided in Attachment 3e and includes a likely detour area and location of borrow pits.

6. Water Resources

6.1 Does the proposed use require irrigation?

☐ Yes ☒ No

6.2 Provide details regarding the proposed water requirements for each proposed crop/use.

Note: If the proposal requires irrigation and a Water Extraction Licence (WEL) has not been issued, refer to https://nt.gov.au/environme nt/water or contact the Water Resources Division, DEPWS by email waterresources@nt.gov.au or telephone: (08) 8999 4455.

Crop/Use & Polygon	Area (ha)	Water required (ML/yr)	Water source	Licence required (yes/no)	Licence No. or application status
TOTAL:					

☐ Attach a copy of any relevant licences or bore reports. Attachment No: _____

7. Land Resources

Note: Most published land resource mapping and soil site data is available on NR Maps at: https://nrmaps.nt.gov.au/nrmaps.html. This broad scale mapping can provide useful information and guidance with respect to planning a more detailed site-specific resource assessment to prepare a Land Type map*. For further information view: https://depws.nt.gov.au/rangelands/information-and-requests/land-soil-vegetation-information

*Applicants may be asked to provide site inspection data (e.g. inspection track, sites and data) to aid assessment.

7.1 Provide a Land Type map for the proposed clearing extent.

Note: Consideration of an application cannot proceed without the collection and orderly presentation of field-verified site-specific data and mapping. In accordance with the Northern Territory Planning Scheme (NTPS) Land Clearing Guidelines (LCG) (refer to Land and Vegetation Resource Assessment - sections 4.2.3 to 4.2.6) all clearing applications need to be accompanied by an appropriate soil, vegetation and land resource assessment in the form of a Land Type map at a scale of 1:5,000 to 1:20,000.

☒ Attach a Land Type map for proposed clearing extent. Attachment No: 4 Land Type Overview 4a 4b 4c 4d

☐ Attach one Land Type description for each Land Type unit (use proforma at **Appendix A**).

Attachment No: Not relevant to gravel extraction for engineered roads

7.2 Determine whether a Land Capability Assessment (LCA) or a Land Suitability Assessment (LSA) is required.

Note: In accordance with Land capability and land suitability classifications (section 4.2.2) of the NTPS LCG; land capability evaluates a common set of broad land-based development constraints and determines the appropriateness of the land in general for a broad range of land uses, whereas land suitability assesses the potential of a soil or land resource for a specific irrigated agricultural land use. To determine the type of assessment required, contact the Land Assessment Branch, DEPWS (08) 8999 4443.

☒ LCA required (complete Question 7.3); **OR**

☐ LSA required (complete Question 7.4)

7.3 Provide a LCA for Land Types within the proposed clearing extent.

Note: In accordance with the LCG, LCA (section 4.2.7) evaluates the key soil and land resource attributes recorded within a Land Type map against a defined set of criteria to determine an overall Land Capability Class.

☒ Attach a LCA table for Land Types within the proposed clearing extent (use proforma at **Appendix B**).

Attachment No: 5

☐ Attach a map of the proposed clearing extent showing the Land Types' overall Land Capability Classes.

Attachment No: Not relevant to gravel extraction for engineered roads

7.4 Provide a LSA report for Land Types within the proposed clearing extent.

Note: In accordance with LCG (section 4.2.8), LSA involves the assessment of the requirements for a particular land use against soil and landscape attributes that influence sustainable production. LSA is crop-specific and uses a defined set of standard land use requirements to evaluate plant growth limitations, machinery use restrictions, land preparation factors, irrigation efficiency and susceptibility to land degradation. DEPWS has published a series of LSA frameworks describing the limitations, attribute values and decision rules required to assess the suitability of soil and land resources within a region for a range of specific irrigated agricultural land uses.

☐ Attach a LSA report for the proposed clearing extent.

Attachment No: Not relevant to gravel extraction for engineered roads

☐ Attach a map of the proposed clearing extent showing the Land Types' overall Land Suitability classes.

Attachment No: Not relevant to gravel extraction for engineered roads

8. Biodiversity

8.1 Describe any records of threatened flora and fauna species or migratory species listed under the *Territory Parks and Wildlife Conservation Act 1976* (TPWC) or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC) within 10km of the proposed clearing extent. Also describe any such species for which there are no records but have a reasonable likelihood of occurring within the habitats (i.e. Land Types) comprising the proposed clearing extent.

Note: For further information, refer to the following websites or contact the Flora and Fauna Division, DEPWS via email Biodiversity.Assessments@nt.gov.au or telephone: 08 8995 5000. Add additional rows to the table as needed.

http://nrmaps.nt.gov.au/

www.nt.gov.au/environment/animals/classification-of-wildlife

http://www.environment.gov.au/epbc/protected-matters-search-tool

Common name	Species	TPWC	EPBC	Location
See attachment 6 – Threatened and significant species				
Australian Painted Snipe	*Rostratula australis*	Endangered	Endangered	PMST - In feature area
Central Australian Rock-wallaby	*Petrogale lateralis centralis*	Vulnerable	Vulnerable	PMST - In feature area
Central Rock-rat, Antina	*Zyzomys pedunculatus*	Near Threatened	Critically Endangered	PMST- In buffer area only
Common Brushtail Possum	*Trichosurus vulpecula vulpecula*	Endangered	Not Listed	NR Maps, approximately 13km south of Gravel pit 2
Curlew Sandpiper	*Calidris ferruginea*	Critically Endangered	Critically Endangered	PMST - In feature area
Ghost Bat	*Macroderma gigas*	Near Threatened	Vulnerable	PMST - In feature area
Great Desert Skink	*Liopholis kintorei*	Vulnerable	Vulnerable	PMST - In feature area
Grey Falcon	*Falco hypoleucos*	Vulnerable	Vulnerable	PMST - In feature area
Greater Bilby	*Macrotis lagotis*	Vulnerable	Vulnerable	NR Maps, approximately 3.5km south of Gravel pit 2
Mala	*Lagorchestes hirsutus*	Extinct	Endangered	NR Maps, approximately 13km south of Gravel pit 2
Night Parrot	*Pezoporus occidentalis*	Endangered	Endangered	PMST - In feature area
Princess Parrot	*Polytelis alexandrae*	Vulnerable	Vulnerable	PMST - In feature area
Red Goshawk	*Erythrotriorchis radiatus*	Vulnerable	Endangered	PMST - In feature area
Sharp-tailed Sandpiper	*Calidris acuminata*	Vulnerable	Vulnerable	PMST - In feature area
Southern Whiteface	*Aphelocephala leucopsis*	Least Concern	Vulnerable	PMST - In feature area
Western Quoll	*Dasyurus geoffroii*	Extinct	Vulnerable	NR Maps, approximately 13km south of Gravel pit 2

8.2 Describe potential impacts to species identified above from the proposed clearing.

Note: To determine the risk to threatened species, information should be considered at the scale of the proposed clearing and at a regional context. Consider any associations that the species may have with landforms, vegetation structure or dominant plant species proposed for clearing.

Common name	Potential Occurrence	Potential impact	Risk*	Justification
See attachment 6– Threatened and significant species		Not detectable	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species
Australian Painted Snipe	Possible	Not detectable	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species
Central Australian Rock-wallaby	Likely	Although species is likely to occur within the area, due to the transient nature of the species it is likely it would move away from disturbance.	Medium	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species
Central Rock-rat, Antina	Unlikely	Not detectable	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species
Common Brushtail Possum	Possible	Not detectable	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species
Curlew Sandpiper	Possible	Not detectable	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species

Ghost Bat	Unlikely	Not detectable	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species
Great Desert Skink	Unlikely	Not detectable	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species
Grey Falcon	Likely	Small impact if nesting tree/s are removed. However, impact is likely to be minimal as all trees are surveyed for nests and hollows before removal and appropriate action will be taken if found as per DIPL Standard Specifications for Environmental Management	Medium	• It may support the identified species, however the local occurrence of the species may not be considered significant as the species is widespread. • Risk to the species is lowered based on controls detailed in DIPL Standard Specifications for Environmental Management (DIPL SSEM) which will be implemented throughout clearing.
Greater Bilby	Unlikely	Not detectable	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species
Mala	Unlikely	Not detectable	Low	• It is a relatively small area • Extinct in the wild in the NT • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species
Night Parrot	Unlikely	Not detectable	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species

Princess Parrot	Unlikely	Not detectable	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species
Red Goshawk	Unlikely	Not detectable	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species
Sharp-tailed Sandpiper	Unlikely	Not detectable	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species
Southern Whiteface	Unlikely	Not detectable	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species
Western Quoll	Unlikely	Not detectable	Low	• It is a relatively small area • Species extinct in the wild in the NT • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species

*Use the following risk matrix (adapted from Table 17 in the LCG):

Risk rating	Characteristics
Low	The proposed clearing extent is characterised by a combination of factors such as: • It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species.
Medium	The proposed clearing extent has characteristics between the Low and High-risk classes. (e.g. it may support the identified species, however the local occurrence of the species may not be considered significant or the extent of clearing as a proportion of habitat available to the species may be sufficiently small enough to not pose a High risk).

High	The proposed clearing extent is important habitat for the identified species. Note: If the clearing has the potential to negatively impact the species identified, even a small clearing extent could be categorised as high risk.

8.3 Identify which of the following types of sensitive features are present within proximity of the proposed clearing extent.

Feature	LCG	Present/Absent
Drainage depressions and streams	Section 4.4.7	Present
Wetlands	Section 4.4.8	Absent
Groundwater Dependent Ecosystems	Section 4.4.8	Absent
Sinkholes	Section 4.4.9	Absent
Other sensitive or significant vegetation	Section 4.4.6	Absent

8.4 Identify the individual sensitive features within proximity of the proposed clearing extent and the associated Land Type.

Note: Refer to the relevant sections of the LCG (identified above) for information regarding recommended native vegetation buffer widths and value attribution.

Feature	Land Type	Value / Order	Location in relation to proposed clearing extent	LCG recommended buffer width (m)	Proposed buffer width (m)
See attachment 7 –Stream Buffers					
Detour - Drainage depressions and streams		1	Adjacent to detour/ borrow pit buffer, 2.8km northeast of Gravel Pit 1	25	25
Sandover River		6	Closest point 80m southeast of proposed detour, 60m from existing road and 120m southeast of Gravel Pit 1.	250	250

Buffer widths are taken from edge of riparian vegetation or from the channel bank where no vegetation is present. In the case of braided streams, the outermost channel bank is used.

8.5 Provide reasons for discretion and describe proposed mitigation measures for any proposed buffers that are not consistent with LCG recommendations.

Note: Additional supporting evidence should be attached.

Feature	Reasons for discretion	Proposed mitigation
N/A		

☐ Attach relevant supporting evidence. Attachment No: _____

8.6 Identify the wildlife corridors to be retained within proximity of the proposed clearing extent and reasons for siting and design.

Note: A corridor of 100m is considered the minimum width to be viable in the NT context for general application and as a default, corridor density should be at a rate of one corridor per linear kilometre of clearing or equivalent – refer to LCG section 4.4.10. Question 3 in the Land Management Plan (template available at Appendix E) addresses property boundary buffers.

Corridor Id.	Location	Proposed width (m)	Justification
NA			

8.7 Assess the risk of the proposed clearing to regional biodiversity and provide an overall risk rating.

Note: To determine the risk to regional biodiversity, information is to be considered at the scale of the proposed clearing footprint and evaluated within a regional context. Refer to Section 4.2 and 4.3 of the LCG or contact the Flora and Fauna Division, DEPWS (telephone: 08 8995 5000).

Consideration	Yes/No	Explain
Are there any important biodiversity values within the proposed clearing extent?	No	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide important habitat for the identified Threatened and significant species • It is unlikely to cause offsite impacts to the identified species Refer **attachment** ***6– Threatened and significant species***
Are there any important biodiversity values within proximity of the proposed clearing extent?	No	The proposed disturbance areas are not within any Sites of Conservation or Botanical significance.

Does the proposed clearing have the potential to impact any important biodiversity values?	No	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species • Any potential impacts are mitigated Refer **attachment *6a – Threatened species***
Have all reasonable alternatives been considered to avoid impacts to important biodiversity values?	NA	The Sandover Highway cannot be upgraded without access to gravel.
What is the overall biodiversity risk rating (Low, Medium High)?	Low	• It is a relatively small area • It does not contain sensitive or significant vegetation • It is unlikely to provide habitat for the identified species • It is unlikely to cause offsite impacts to the identified species • Any potential impacts are mitigated

9. Infrastructure and Amenity

9.1 Describe any public facilities, utilities or infrastructure within the locality and how any potential impacts from the proposed clearing development will be managed.

Infrastructure	Location	Potential impacts	Proposed mitigation
Sandover Highway Upgrades	Chainage 170km to 192km	Road safety improved. Stock and other transport costs reduced.	NA – Impact positive

9.2 Identify any public roads or public facilities within 200m of the proposed clearing extent.

Note: Refer to LCG sections 4.3.5 and 4.3.5.1.

Feature	Distance from proposed clearing extent (m)
Sandover Highway Chainage 170km to 192km	Gravel pits to be offset 125m, detours to be at least 50m from centreline

9.3 Assess the risks posed to the following public values and the proposed mitigation measures.

Note: Risk assessment should describe the likelihood of impacts occurring and the potential consequences.

Value	Risk	Mitigation
Amenity	Roadside visual amenity	Vegetation buffers to the greater of line of sight or 50 metres. Gravel pits to be offset a minimum of 125m from the road centreline
Recreation	Nil	NA
Tourism	Access and safety improved.	NA
Parks / Reserves	Nil	NA

10. Land Management

10.1 Attach a proposed Establishment Plan (see template at Appendix C).

☒ Attach the Establishment Plan Attachment No: 8

10.2 Attach a proposed Staging Plan (see template at Appendix D).

☒ Attach the Staging Plan Attachment No: 9

10.3 Attach a proposed Land Management Plan (see template at Appendix E).

☒ Attach a proposed Land Management Plan Attachment No: 10 and 10a

11. Weed Management

11.1 List all weeds declared under the *Weeds Management Act 2001* present within the property and describe the proximity of species to the proposed clearing extent.

Note: For information refer to: https://nt.gov.au/environment/weeds and NR Maps https://nrmaps.nt.gov.au/nrmaps.html.

Weed species	Class	Location	Density
Example: Grader grass	*Class B*	*Along verge of main station road; 200m upslope of proposed clearing polygon X at closest point.*	*Uncommon. Occasional individual plants only.*
See attachment 11 Weeds			
Athel Pine	Class A/B and WoNs	Closest records approximately 1km west of the proposed detour, records located on either side of the Sandover River.	Category 3 – 1-10% Other scattered records in the general area with a density rating between 2 (<1%) to 3 (1-10%)
Barnyard grass - colona	NA	Single record located 10km southeast of the proposed clearing area on Irrultja road.	Category 6 – Present but density not known

Buffel grass	Declared Weed	Scattered records throughout the area, closest record approximately 2.2km south of the proposed detour/borrow pits areas.	All records category 6 - Present but density not known
Burr - Noogoora	NA	Records located to the east of the works. Closest record is over 40km southeast of Gravel pit 2.	All records category 6 - Present but density not known
Caltrop - terrestris	Class B	One record approximately 2.2km southeast of the proposed detour/ borrow pits. One record approximately 3.4km southwest of Gravel pit 1	Category 3 (1-10%) and category 6 (present but density not known), respectively
Castor oil plant	Class B	Three records in proximity to the works. Closest record approximately 10km northwest of proposed detour/borrow pit area.	Category 4 (11 – 50%)
Couch grass	NA	Number of records throughout the area, closest record over 2km southeast of the proposed detour/borrow pit area.	All records category 6 - Present but density not known
Lovegrass - minor	NA	One record located approximately 2.2km southeast of the proposed detour/borrow pit area.	Category 6 - Present but density not known
Parkinsonia	Class B and WoNs	Records scattered throughout the area. Closest record located approximately 1.3km southwest of the proposed detour/ gravel pit area	Closest record category 2 (<1%). Other records in the general area category 2 (<1%), 3 (1-10%) and 6 (present but density not known).
Rubber bush	Class B	Six records scattered throughout the area. Closest record within the proposed detour/ borrow pit area.	Closest record category 3 (1-10%). Other records in the general area category 2 (<1%), 3 (1-10%) and 6 (present but density not known).

11.2 Provide details of weed management on the property.

Note: Consider whether the weed has a statutory Weed Management Plan https://nt.gov.au/environment/weeds/how-to-comply-with-the-law/statutory-weed-management-plans

Weed species	Management Aim	Method	Current / Proposed
All	Prevent spread	See *Attachment 12 Standard Specifications*	Proposed

12. Cultural Heritage

12.1 Provide details of any heritage or archaeological surveys conducted within the property and any findings relevant to the proposed clearing extent.

Survey name	Year conducted	Completed by	Findings relevant to the proposed clearing extent
AAPA certificate C2013/231 and C2010/230	2010, 2013	AAPA	AAPA certificates for proposed works
Heritage search	2024	NTG Heritage Unit	One heritage location offset from the proposed works area

☒ Attach relevant information (e.g. maps, site descriptions, etc.) from the survey relevant to the proposed clearing extent.

Attachment No: 13a, 13b,13c

12.2 Provide details of any known (i) places, (ii) archaeological places, or (iii) Aboriginal or Macassan archaeological places, within the meaning of the *Heritage Act 2011* located within the property.

Note: Risk assessment should describe the likelihood of impacts occurring and the potential consequences. For more information go to https://nt.gov.au/property/land/heritage-listings/heritage-register-search-for-places-or-objects .

Place / Site	Location in relation to the proposed clearing extent	Risk	Mitigation

NA	Stone artifact scatter, 140m south of Gravel pit 1, adjacent to the detour/borrow pit buffer.	Low Heritage Branch Advice: *"The search has found that there are no known Aboriginal or Macassan archaeological places within the subject site, and the likelihood of unrecorded Aboriginal or Macassan archaeological places existing is unlikely."*	• No works are to occur in proximity to the site. Disturbance will avoid this area; detour will likely be located to the north. • Should works occur in proximity to the artefact scatter, establish a 50m buffer with highly visible flagging tape and prohibit entry to the Archaeological site. • Include information regarding the heritage site in site inductions.

☒ Attach a map showing the location of any declared sites/places in proximity to the proposed clearing extent.

Attachment No: 13d

12.3 Contact the Heritage Branch, Department of Territory Families, Housing and Communities for advice regarding the proposed clearing in relation to the *Heritage Act 2011*.

Note: The Heritage Branch can be contacted via email: heritage.branch@nt.gov.au or telephone 08 8999 5039.

☒ Attach a copy of the advice. Attachment No: 13c, Unexpected finds procedure located in attachment 13e

12.4 Provide details of any sacred sites within the meaning of the *Northern Territory Aboriginal Sacred Sites Act 1989* located within proximity of the proposed clearing extent.

Note: Risk assessment should describe the likelihood of impacts occurring and the potential consequences. For more information go to https://www.aapant.org.au/ .

Site	Location in relation to the proposed clearing extent	Risk	Mitigation
C2013/231 RWA 1	1.5km Southwest of gravel pit 1 and the proposed detour	Low	As per DIPL SSEM Guidelines
C2013/231 RWA 2	665m southeast of gravel pit 1 and the proposed detour	Low	As per DIPL SSEM Guidelines
C2013/231 RWA 3 & 4	Abuts the proposed detour	Medium	As per DIPL SSEM Guidelines

☒ Attach a map showing the location of any declared sites in proximity to the proposed clearing extent.

Attachment No: 13d

12.5 Aboriginal Areas Protection Authority

Contact the Aboriginal Areas Protection Authority to obtain an Abstract of Records and consent to use the information for the purposes of this application.

☒ Attach the Abstract of Records Attachment No: No included in this assessment as the document cannot be shared

Have you, or do you intend to apply for an Authority Certificate?

☒ Yes Attachment No: 13a, 13b

If yes, please provide a copy of the Authority Certificate as part of the application or before the Pastoral Land Board determines the application.

☐ No

If an Authority Certificate is not provided and you do not intend to apply for an Authority Certificate, please explain why an Authority Certificate has not been included as part of the application.

NA

13. Greenhouse Gas Emissions

13.1 Estimate the emissions (tonnes $CO_{2\text{-}e}$) from the clearing.

22,678.54 **tCO_2-e**

Note: Under the NT Government's Greenhouse Gas Emissions Management for New and Expanding Large Emitters' Policy, which came into effect in September 2021, a land use project generating over **500 000 tCO_2-e** from a single clearing event, OR cumulatively from multiple land clearing actions on a property over time is required to develop a Greenhouse Gas Abatement Plan (GGAP) which demonstrates how emissions will be managed and reduced.

Information on how to obtain an estimate of the average emissions ($tCO_{2\text{-}e}$) per hectare for your project can be found here or by accessing the link at https://nt.gov.au/property/land-clearing/pastoral-land/clearing-native-vegetation-on-pastoral-land

14. Environment Protection

14.1 Has the application been referred for assessment under the *Environment Protection Act 2019?*

Note: Refer to the document 'Referring a proposal to the NT EPA' available on the following website https://ntepa.nt.gov.au/your-business/environment-impact-assessment or contact the Environment Division, DEPWS via telephone 08 8924 4218 or email eia.ntepa@nt.gov.au

☒ Not referred;

☐ Attach a completed referral checklist located in Appendix 1 of Referring a proposal to the NT EPA

Attachment No: Does not reach screening requirements, see Attachment 13

☐ Referred;

☐ Attach advice from the NT EPA Attachment No: 14

14.2 Assess the risks associated with the following potential pollutants from clearing and development works and describe the proposed mitigation measures. Consideration of risk should include potential sources, the likelihood of impacts occurring and the potential consequences.

Note: Under the *Waste Management and Pollution Control Act 1998* everyone in the NT has a 'general environmental duty' to not carry out any activity that causes or is likely to cause environmental harm, unless measures to prevent or minimise the harm have been taken. For more information refer to the following website https://ntepa.nt.gov.au/your-business/environmental-obligations-and-duties or contact the Environment Division, DEPWS via telephone 08 8924 4218 or email pollution@nt.gov.au.

For information regarding spray drift and the *Agricultural and Veterinary Chemical (Control of Use) Act 2004* contact Chemicals Services, DITT via email chemicals@nt.gov.au or telephone 08 8999 2344.

Potential pollutants	Risk	Mitigation
Dust	Low	See *Attach 12 Standard Specifications*
Chemical spray drift	NA	
Chemical runoff (to surrounding land or riparian systems)	NA	
Groundwater contamination	Low	See *Attach 12 Standard Specifications*

15. Other relevant information

15.1 Provide any additional relevant information not addressed above and outline in the table below.

Attachment No.	Description
Attach 12 Standard Specifications	Minimum contractual standard for environmental management

16. Checklist of Attachments and Required Spatial Data

Complete the following checklist.

Note: Spatial data for the items indicated must be provided before the application will be accepted. ESRI shapefile is the preferred format - kml/kmz also accepted. Contact: PastoralAssessment.DEPWS@nt.gov.au

Attachment No.	Name	Question No.	Item attached	Spatial data
	Lessee/s Authorisation form	2	1	NA
	Map of existing clearing	4.1	2	**Required**
	Proposed Clearing Plan	5.2	3,3a,3b,3c,3d, 3e	**Required**
	Water licence &/or bore reports	6.2	n/a	NA
	Land Type map	7.1	4	**Required**
	Land Type descriptions	7.1	4a,4b,4c, 4d	NA
	LCA table	7.3	5	NA
	LCA map	7.3		NA
	LSA report	7.4		NA
	LSA map	7.4		NA
	Buffer discretion – supporting evidence	8.5	6a, 6b, 7a	NA
	Establishment Plan	10.1/Appendix C	8	NA
	Staging Plan	10.2/ Appendix D	9	NA
	Land Management Plan	10.3/ Appendix E	10, 11	NA
	Slope & runoff map	10.3/ Appendix E-2	10a	NA
	ESC map	10.3/ Appendix E-9		NA
	ESC details	10.3/ Appendix E-10		NA
	Map of heritage/archaeological places	12.2	13d	NA
	Heritage Branch advice	12.3	13c, 13e	NA
	Map of sacred sites	12.4	13a 13b 13c 13d	NA
	Abstract of Records or Authority Certificate	12.5	13a 13b	NA
	EPA referral checklist	13.1	14	NA
	EPA advice	13.1		**Optional**
	Other additional info	14	12	**Optional**

Appendix A – Land Type description proforma

Note: Complete one table per Land Type. Data generated from Land Type field investigations may be requested – refer to the LCG – Vegetation Data (section 4.2.5).

☐ Attach map showing site inspection track, site locations, photo points and Land Types.

Attachment No: _____

Attribute	Description
Land Type	*E.g. Use a letter or number to distinguish each Land Type.*
Landform	*E.g. Describe the landform, slope range, extent of surface rock. Refer to LCG Section 4.2.4 (Yellow Book).*
Soil	*E.g. Describe the dominant soil in this Land Type highlighting features such as soil texture, depth, colour, occurrence of surface gravel or cracking, Wet season drainage. Refer to LCG Section 4.2.4 (Yellow Book).*
Vegetation	*E.g. Describe the average height and cover of the upper-storey (e.g. individual tree canopies generally overlapping, partially separated, clearly separated or very sparse) and the dominant trees, shrubs, grasses and weeds. Refer to Section 4.2.5 (NVIS level 5).*
Photo No.	*E.g. Insert numbered photo (representative of Land Type) and show location on map.*

Appendix B – Land Capability Assessment table

Note: Refer to the LCG – Land Capability Assessment (section 4.2.7.1).

Land Type	ASS	Flooding	Microrelief	Salinity	Sodicity	Slope	Soil depth	Drainage	Surface Rock	Wind erosion	Initial capability class	Overall capability class

Appendix C – Establishment Plan

Note: Refer to LCG sections 4.3.2.3 and 4.3.2.4.

Activity	E.g.	Timing (month & year)	Method (describe)
Preparatory works	Boundary marking, implementation of erosion and sediment controls, weed management		
Felling of vegetation	Machinery and techniques		
Removal of felled vegetation	Machinery and techniques, in-situ or pushed-up, burning, mulching, windrow management, etc.		
Site preparation	Machinery and techniques, levelling/contouring, installation of banks or soil conservation measures, cultivation		
Planting	Method for each pasture / crop type, spelling, rotations, cover crops, etc.		
Harvesting	Method for each pasture / crop type, stubble retention		
Grazing	Cattle introduction and subsequent stocking regime		
Maintenance	Regrowth control, weed management, erosion monitoring		

Appendix D – Staging Plan

Note: Standard PLC permits are valid for 10 years. Refer to LCG section 4.3.2.4.

Year	Site Id (e.g. polygon / paddock)

Appendix E – Land Management Plan

Note: The following Land Management Plan (LMP) should be developed with reference to the proposed Establishment and Staging Plan. It is not an Erosion and Sediment Control Plan (ESCP). For large or complex clearing areas, preparation and implementation of an Erosion and Sediment Control Plan (ESCP) can be an effective way of managing erosion risk - however it is not an alternative to retaining native vegetation which should otherwise be retained in accordance with the LCG, or used as a "catch-all" means of mitigating other risks the clearing may pose (see LCG section 4.3.2.5). Whether a formal ESCP is required as a condition of a PLC permit will be at the discretion of the PLB/Delegate based on the advice of the Land Management Unit, DEPWS and will depend on the level of detail provided in this LMP and the erosion risk associated with the proposal. For further information, contact the Land Management Unit on 08 8999 4404.

1 Provide a general description of the soil loss factors for the proposed clearing extent:

Note: Refer to Section 4.3.2 of the LCG.

Factor:	E.g.	Description
Rainfall	Consider the climatic zone, seasonal outlook and proposed timing of works.	
Soil	Consider the erodibility of soil types present based on soil type texture and structure. Note whether soils are dispersive or sodic.	
Length of slope	Indicate the average length of slope within the proposed clearing extent and areas that exceed this.	
Slope gradient (%)	Indicate the range of slope within the proposed clearing extent (e.g. 0-2%) and areas that exceed 2%.	
Groundcover	Consider the timing, duration and frequency of soil exposure.	
Management	Consider the level of soil disturbance associated with the proposed method of clearing and land use.	

2 Describe where rainfall runoff flows within the proposed clearing extent.

Polygon	Direction of runoff	Receiving environment

☐ Attach map showing slope % and the direction of runoff within the proposed clearing extent.

Attachment No: _____

3 Identify whether property boundary buffers will be retained in accordance with the LCG and provide reasons for discretion (if required)

Note: Valid reasons must be provided for instances where no property boundary buffers or buffers less than 210m wide (including 10m wide firebreaks) will be retained. Refer to section 4.3.3 of the LCG.

Property Boundary	Proposed buffer width (m)	Reasons for discretion

4 Describe any land management buffers to be retained within proximity of the proposed clearing extent.

Note: A land management buffer is different to a wildlife corridor or property boundary buffer – refer to section 4.3.4 of the LCG.

Buffer Id.	Location	Width (m)	Purpose and design justification

5 Describe any existing erosion within the proposed clearing extent.

Note: Erosion types include: wind, sheet, rill, gully or tunnel erosion.

Erosion Site	Location	Cause	Erosion type & description	Mitigation

6 Considering all information provided above; describe the potential risk, likelihood and impact of erosion associated with the proposed development.

Source of risk	Likelihood of occurring	Potential impacts

7 Considering all information provided above; describe the proposed erosion and sediment control (ESC) measures to be implemented during the clearing and establishment phase of the development.

ESC measure	Location	Temporary/Permanent	Description

8 Considering all the information provided above; describe the proposed erosion and sediment control (ESC) measures to be implemented during the operational phase of the development.

ESC measure	Location	Temporary/Permanent	Description

9 Provide an erosion and sediment control (ESC) map showing the location of the following information.

☐ Attach an ESC map showing the location of the following within the proposed clearing extent:

- Land management buffers (Question 4)
- Existing erosion (Question 5)
- Temporary ESC measures to be installed (Question 7 & 8)
- Permanent ESC measures to be installed (Question 7 & 8)
- Firebreaks, tracks and fences.

Attachment No: _____

10 Provide any ESC standard drawings or design details.

Note: The level of information required will depend on the complexity of the proposed measures. Information is available on the following website: https://nt.gov.au/environment/soil-land-vegetation

☐ Attach ESC standard drawings / design details

Attachment No: _____

NORTHERN TERRITORY GOVERNMENT
Department of LOGISTICS AND INFRASTRUCTURE

Level 1
Greenwell Building
50 Bath Street Alice Springs NT 0870

Postal address
P O Box 2130
Alice Springs NT 0870

E Jarrod.Tregenza@nt.gov.au

T 08 8951 5094

File reference
<FRA03950-06.008>

2 April 2025

Anna and Stewart Weir/ Owners – Ammaroo Station

PMB 154
Alice Springs, NT, 0870

Dear Anna and Stewart Weir

Re: Sandover Highway Upgrades – Ch.170-192km - Extraction of Water and Gravel and Construction of Detour

The Department of Logistics and Infrastructure (DLI) are the upgrade of a 21km seal extension section on the Sandover Highway between chainage 170-192km. To achieve this work successfully, we are required to have agreement between DLI and Ammaroo Station for construction of a detour and extract water and gravel at nominated locations.

This letter is just to formalise discussions regarding the project requirements with Stewart Weir at Ammaroo Station on 5 July 2022.

This agreement will form part of the contract T22-1121 for a contractor to carry out all road upgrade works, including construct detour, extract water and gravel in meeting the requirements.

An Environmental Risk Assessment document has been developed and implemented specifically to this project. This document forms part of the contract and the contractor is to review and understand the document.

Scope of Works;

The upgrade generally involves the construction of a 9.0m sealed rural arterial road on a 9.0m formation, within the extents of the existing road alignment and subject chainages.

Gravel Extraction

Nominated gravel pits are detailed below:

Location / Description	Chainage (km)	X	Y	Size of Pit Area (Ha)
Gravel Area 1	177	134.899409	-21.898117	74.38
		134.901525	-21.901854	
		134.895082	-21.90553	
		134.887923	-21.907983	
		134.886392	-21.90419	

Location / Description	Chainage (km)	X	Y	Size of Pit Area (Ha)
Gravel Area 2	13	135.255733	-21.633661	54.90
		135.254914	-21.622535	
		135.259182	-21.622099	
		135.259903	-21.633583	
Gravel Area 3	16	135.252494	-21.586575	47.21
		135.256082	-21.586346	
		135.257028	-21.597832	
		135.253453	-21.59798	
Detour 1/ Sandover Highway Extent within Ammaroo	175-193	Refer to attached .kml file and associated mapping.		218.54

It is acknowledged that although the size of these proposed pit areas is significant, the actual area cleared for gravel extraction will be a fraction of this and will be subject to initial investigation and confirmation of available materials.

Water Extraction

Two bores have been identified within the project area, no additional clearing will be required to utilise these bores. See locations in the table below:

Location / Description	Yield (L/s)	X (GDA94)	Y (GDA94)
RN015867	3	135.266013	-21.71861
RN050053	5	135.26639	-21.718571

The Department proposes to undertake a drilling campaign to construct new bores to resource the works. Proposed water investigation/drilling locations are proposed to be within the nominated gravel and borrow pits to minimise disturbance.

Remote Camp

Nominated camp will be in a cleared section of one of the gravel pits at the GPS Coordinates detailed above. Alternatively camping may be within Aboriginal Land, subject to approvals. Exact location will be determined by the contractor upon contract award in consultation with the station.

Detours/ Borrow Pits

A detour is required for the works and is to be located 40-70m to the north of the road centreline. In addition, in order to facilitate road construction, borrow pits are required. These are to be spaced every 500m, are to be offset 150m north of the road centreline and are to be 300m long by 100m wide.

Exact location of the detour and borrow pits is subject to on ground assessment and further discussion with the station; however, the area of potential disturbance is presented in the attached shapefiles.

Contractors Responsibilities

Contractor will have all the necessary resources, equipment and plant to carry out and complete the works.

Contractor will supply their own equipment to extract water for the upgrade works.

This agreement includes permission for the contractor to establish a remote camp on Sandover Highway. Location will be determined after award of contract and will be within one of the above defined locations.

The contractor on site will be advised to coordinate with Ammaroo Station on cattle movements in and out of the station to minimise delays.

At completion of works the contractor will rehabilitate areas that were disturbed.

DLI request agreement with Ammaroo Station to construct a detour, drill bore and extract gravel and fill material along the Sandover Highway, including permission for the contractor establish remote camp, and at no cost to DLI or contractor.

Agreed from Ammaroo Station:

Name: Stewart Weir

Signed: DSWeir

Date: 27/4/25

Yours sincerely,

Jarrod Tregenza
Manager Projects Engineering

Lessee/s Authorisation to lodge an application – Pastoral Land Act 1992

The lessee and/or persons duly authorised as signatory on behalf of the lessee hereby authorise:		
Applicant / Consultant:	Environmental and Sustainability Unit, Department of Logistics, and Infrastructure	
Telephone:	(08) 8999 4440	
Email:	Environment.DLl@nt.gov.au	
To lodge an application under the *Pastoral Land Act 1992* over the property described as:		
Station Name:	Ammaroo Station	
NT Portions/s:	NT Portion 5163, 749 and 1290	
Pastoral District:	Plenty	
Pastoral Lease No:	1105	
For the purpose of:		
Application type:	☒ Pastoral Land Clearing (PLC) ☐ PLC Permit Variation	☐ Non-Pastoral Use (NPU) ☐ NPU Permit Variation

Declaration:

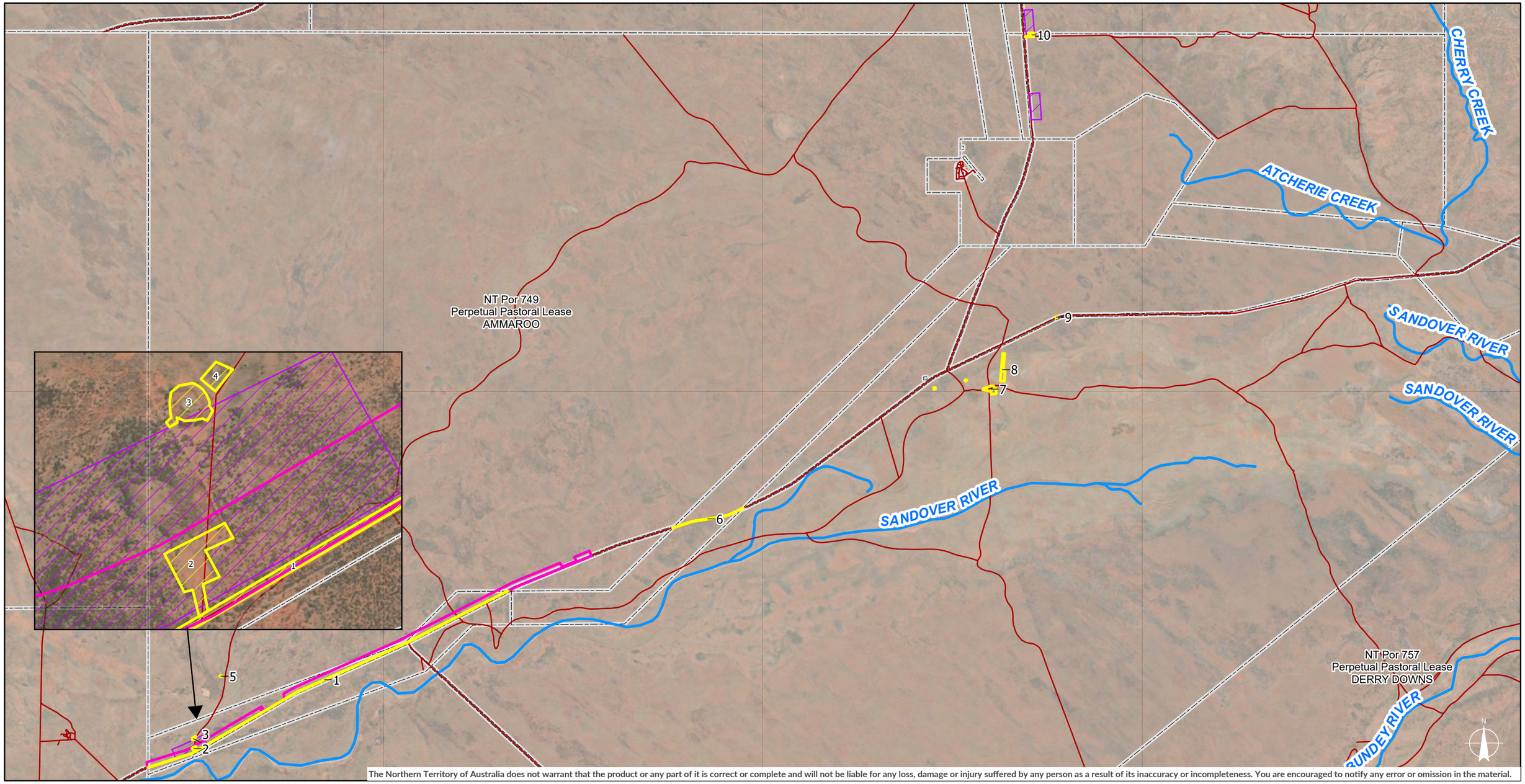
I make this application as the pastoral lessee for the pastoral lease indicated above. If the pastoral lease is a company I warrant that I am properly authorised by the pastoral lessee to make this application.

Signatures of lessee / authorised person:	See signature on letter above.
Name:	**Stewart Weir**
Company position (if required):	**Station Owner**
Company (if required):	**NA**
Date:	**27/04/2025**
Supporting evidence (if required):	*Applicants should include sufficient evidence in support of their authorisation to make the application on behalf of the body corporate pastoral lessee.*

Attach supporting evidence:

☐ Other: _____

Note: Add additional signature blocks as required.



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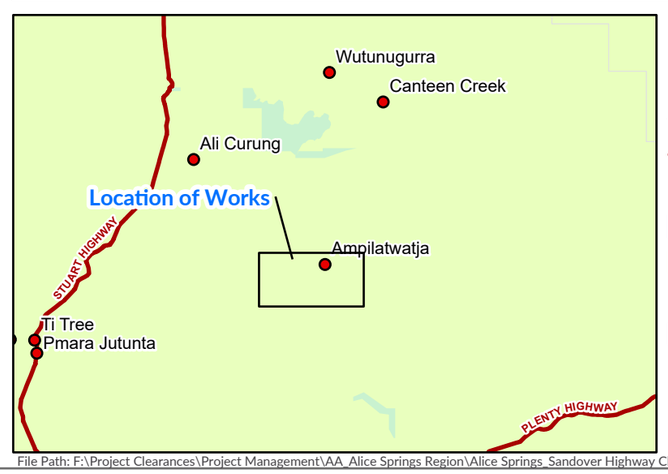

Legend

- Roads
- Major NT Roads
- Rivers/Creeks
- Clearing Area
- Existing Clearing
- Cadastre
- Detour/ Borrow Pit Area

Northern Territory Government

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Projection: Universal Transverse Mercator (UTM) - Map Grid of Australia (MGA), Zone 52
Horizontal Datum: Geodetic Datum of Australia (GDA94)

5 2.5 0 5
Kilometres

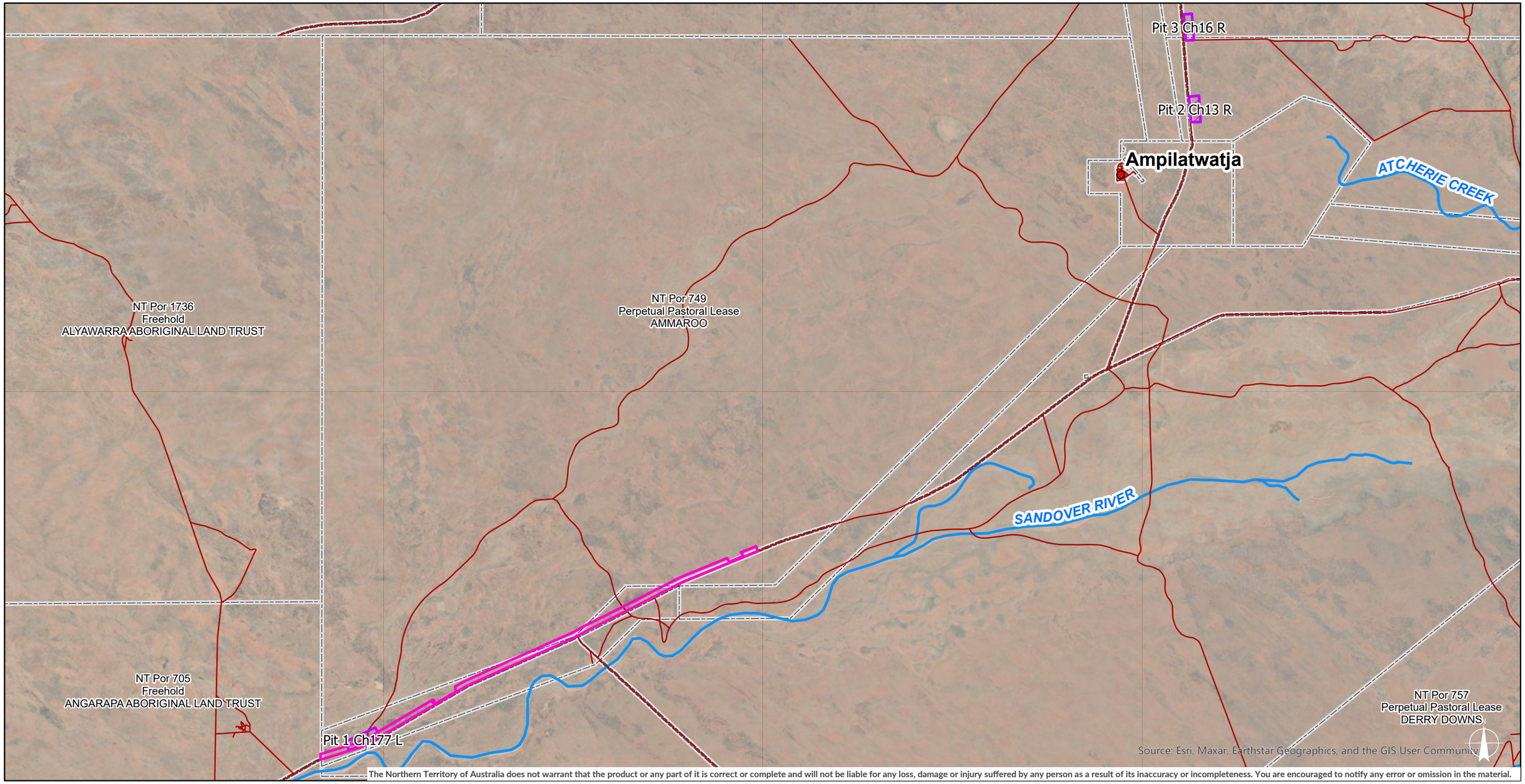
Scale @ A4 size: 1:182,000
Map Compiled: 25/03/2025

Sandover Highway Ch 170-192km
Land Clearing Application
Existing Clearing

DATA SOURCE:
Water Resources - Natural Resources Division, DLPE
Cadastre / Roads - Land Information, DLI
Drainage - 1:250,000 Geoscience Australia

For further information, please contact:
Environment Services
Department of Logistics and Infrastructure (DLI)
Phone: (08) 8999 4779
Level 3, Highway House, Palmerston
Web: www.nt.gov.au/infrastructure

File Path: F:\Project Clearances\Project Management\AA_Alice Springs Region\Alice Springs_Sandover Highway Ch 170-195km_KD\Native Veg Application\Nativeveg\Nativeveg.aprx



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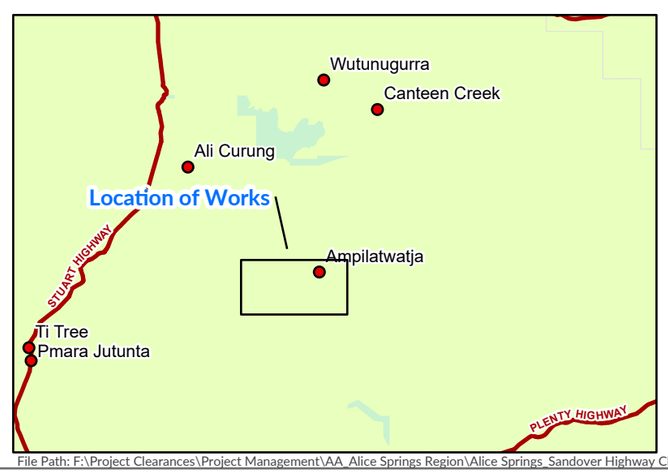

Legend

- Clearing Area
- Detour/ Borrow Pit Area
- Cadastre
- Roads
- Rivers/Creeks

Northern Territory Government

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Projection: Universal Transverse Mercator (UTM) - Map Grid of Australia (MGA), Zone 52
Horizontal Datum: Geodetic Datum of Australia (GDA94)

5 2.5 0 5
Kilometres
Scale @ A4 size: 1:185,000
Map Compiled: 25/03/2025

Sandover Highway Ch170-192km
Land Clearing Application
Clearing Areas

DATA SOURCE:
Water Resources - Natural Resources Division, DLPE
Cadastre / Roads - Land Information, DLI
Drainage - 1:250,000 Geoscience Australia

For further information, please contact:
Environment Services
Department of Logistics and Infrastructure (DLI)
Phone: (08) 8999 4779
Level 3, Highway House, Palmerston
Web: www.nt.gov.au/infrastructure

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6	135.0112151	-21.8460483
7	135.0097611	-21.84685381
8	135.0024756	-21.85051759
9	134.9896661	-21.85710361
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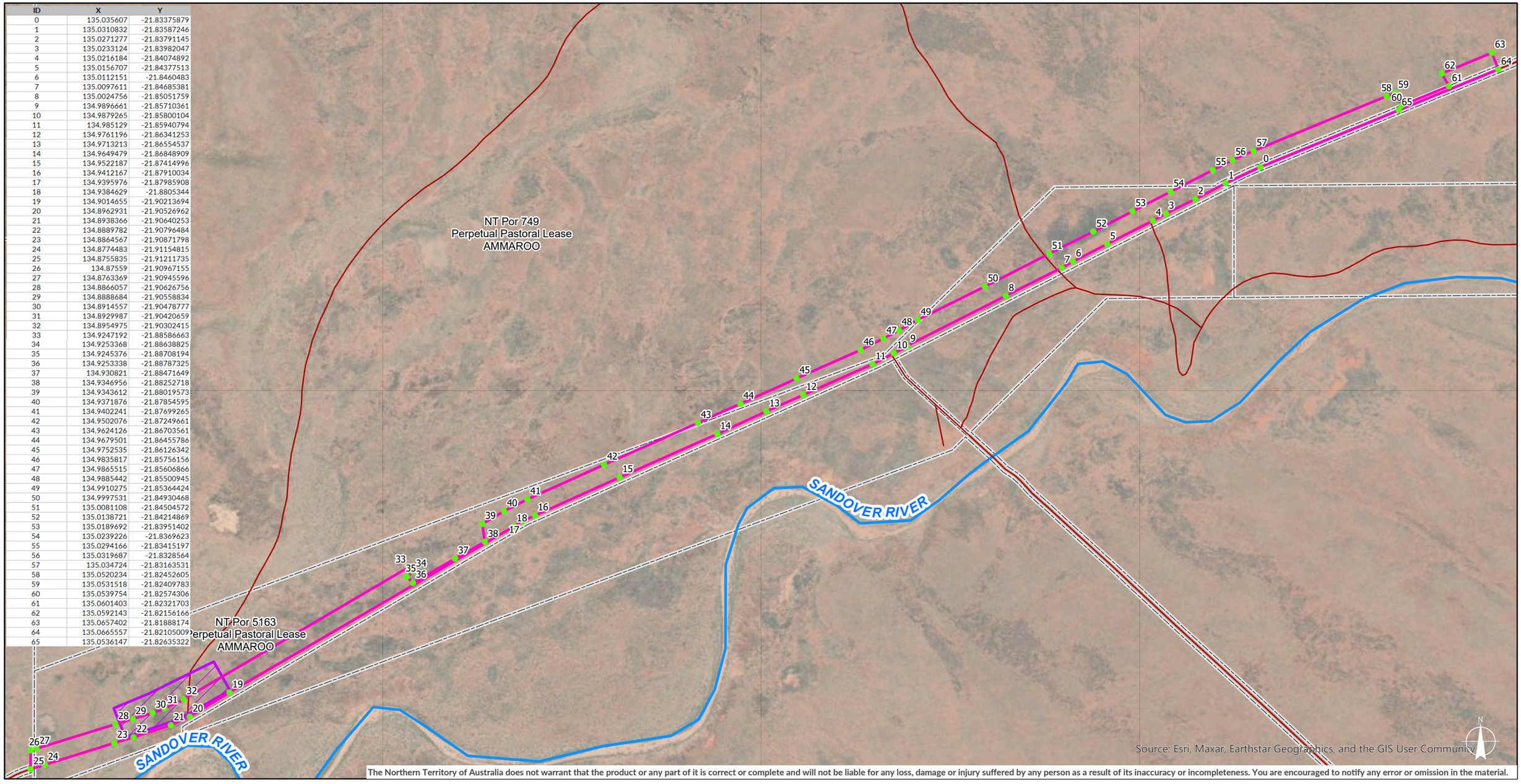

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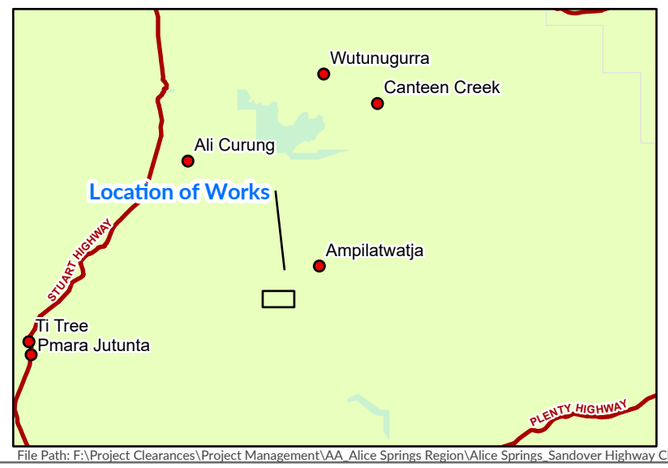

Legend

- Clearing Area
- Detour/ Borrow Pit Area
- Cadastre
- Roads
- Rivers/Creeks
- Clearing Points

Sandover Highway Ch 170-192km Land Clearing Application Detour/ Borrow Pit Coordinates

Northern Territory Government

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Horizontal Datum: Geodetic Datum of Australia (GDA94)

1.55 0.78 0 1.55
Kilometres
Scale @ A4 size: 1:55,000
Map Compiled: 25/03/2025

DATA SOURCE:
Water Resources - Natural Resources Division, DLPE
Cadastre / Roads - Land Information, DLI
Drainage - 1:250,000 Geoscience Australia

For further information, please contact:
Environment Services
Department of Logistics and Infrastructure (DLI)
Phone: (08) 8999 4779
Level 3, Highway House, Palmerston
Web: www.nt.gov.au/infrastructure

File Path: F:\Project Clearances\Project Management\AA_Alice Springs Region\Alice Springs_Sandover Highway Ch 170-195km_KD\Native Veg Application\Nativeveg\Nativeveg.aprx

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2: 134.901525,-21.901854

3: 134.895082,-21.90553

4: 134.887923,-21.907983

5: 134.886392,-21.90419

6: 134.890968,-21.902283

NT Por 5163
Perpetual Pastoral Lease
AMMAROO

NT Por 3802
Freehold
ATNWENGERRPE ABORIGINAL LAND TRUST

NT Por 749
Perpetual Pastoral Lease
AMMAROO

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

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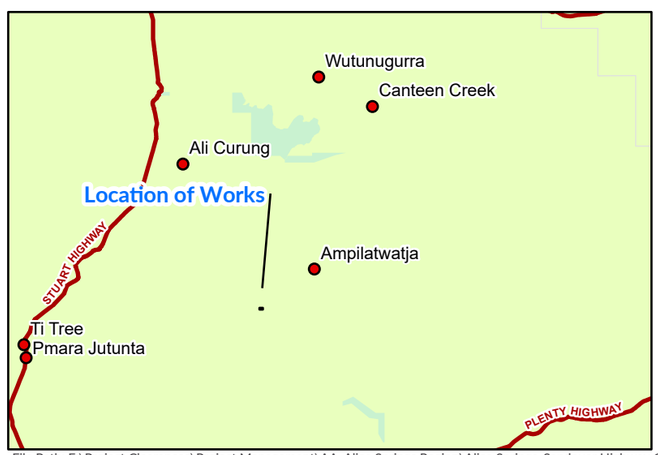

Legend

- Clearing Points
- Clearing Area
- Detour/ Borrow Pit Area
- Cadastre
- Roads
- Rivers/Creeks

Sandover Highway Ch 170-192km Land Clearing Application Gravel Pit 1 Coordinates

Northern Territory Government

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Horizontal Datum: Geodetic Datum of Australia (GDA94)

150 75 0 150
Metres
Scale @ A4 size: 1:5,900
Map Compiled: 25/03/2025

DATA SOURCE:
Water Resources - Natural Resources Division, DLPE
Cadastre / Roads - Land Information, DLI
Drainage - 1:250,000 Geoscience Australia

For further information, please contact:
Environment Services
Department of Logistics and Infrastructure (DLI)
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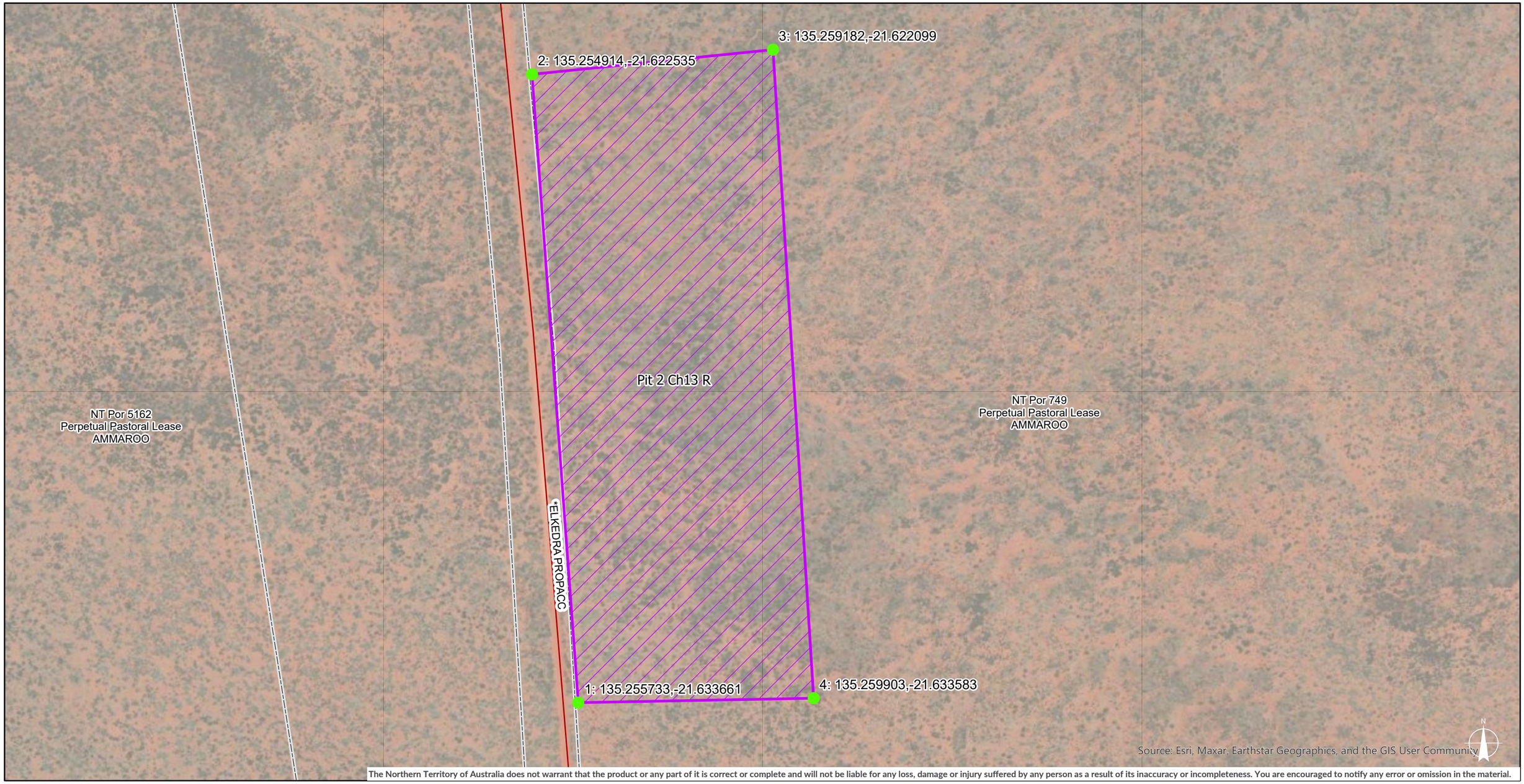
File Path: F:\Project Clearances\Project Management\AA_Alice Springs Region\Alice Springs_Sandover Highway Ch 170-195km_KD\Native Veg Application\Nativeveg\Nativeveg.aprx



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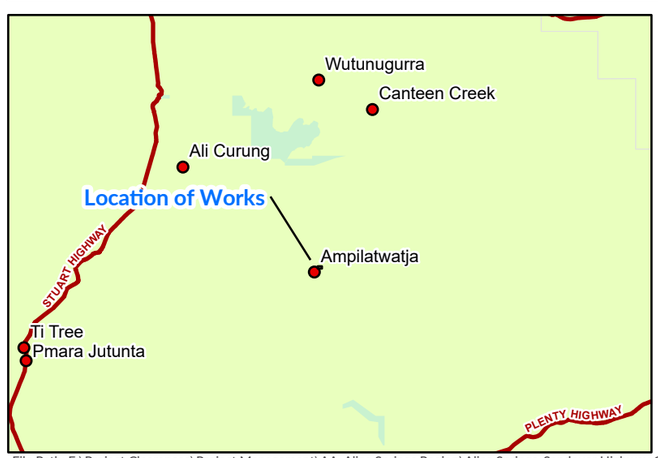

Legend

- Clearing Points
- Clearing Area
- Cadastre
- Roads
- Rivers/Creeks

Sandover Highway Ch 170-192km
Land Clearing Application
Pit 2 - Coordinates

Northern Territory Government

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200 100 0 200
Metres
Scale @ A4 size: 1:7,500
Map Compiled: 11/03/2025

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1: 135.252494,-21.586575

2: 135.256082,-21.586346

3: 135.257028,-21.597832

4: 135.253453,-21.59798

Pit 3 Ch16 R

*ELKEDRA PROPACC

*PASTORAL ROAD

NT Por 1290
Perpetual Pastoral Lease
AMMAROO

NT Por 5162
Perpetual Pastoral Lease
AMMAROO

NT Por 749
Perpetual Pastoral Lease
AMMAROO

N

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

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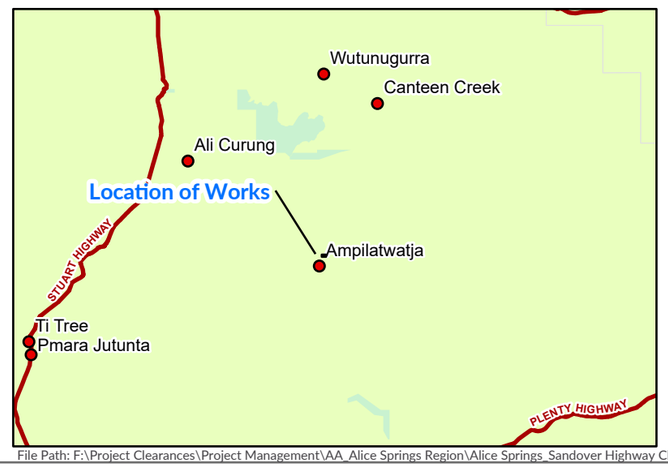

Legend

- Clearing Points
- Clearing Area
- Cadastre
- Roads
- Rivers/Creeks

Sandover Highway Ch 170-192km
Land Clearing Application
Pit 3 - Coordinates

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200 100 0 200
Metres
Scale @ A4 size: 1:7,500
Map Compiled: 11/03/2025

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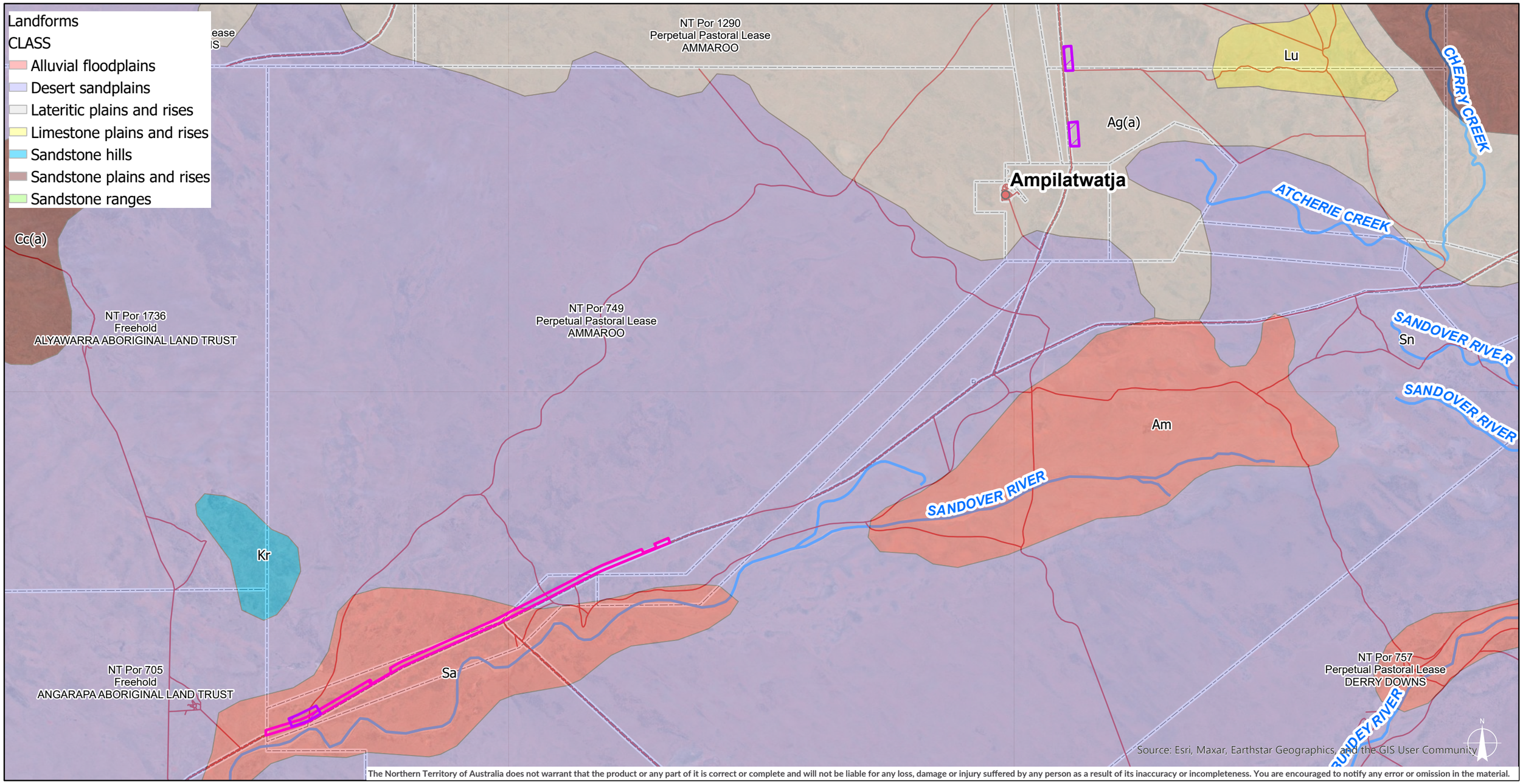

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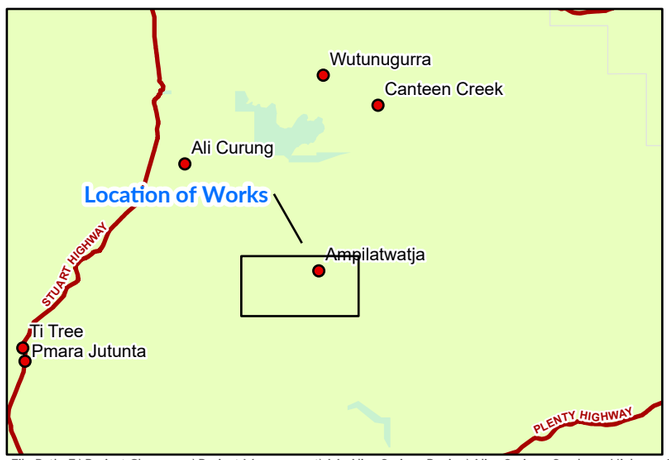

Legend

- Clearing Area
- Detour/ Borrow Pit Area
- Cadastre
- Major Locations
- Roads
- Major NT Roads
- Rivers/Creeks

Sandover Highway Ch 170-192km
Land Clearing Application
Land Systems

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5 2.5 0 5
Kilometres
Scale @ A4 size: 1:200,000
Map Compiled: 6/05/2025

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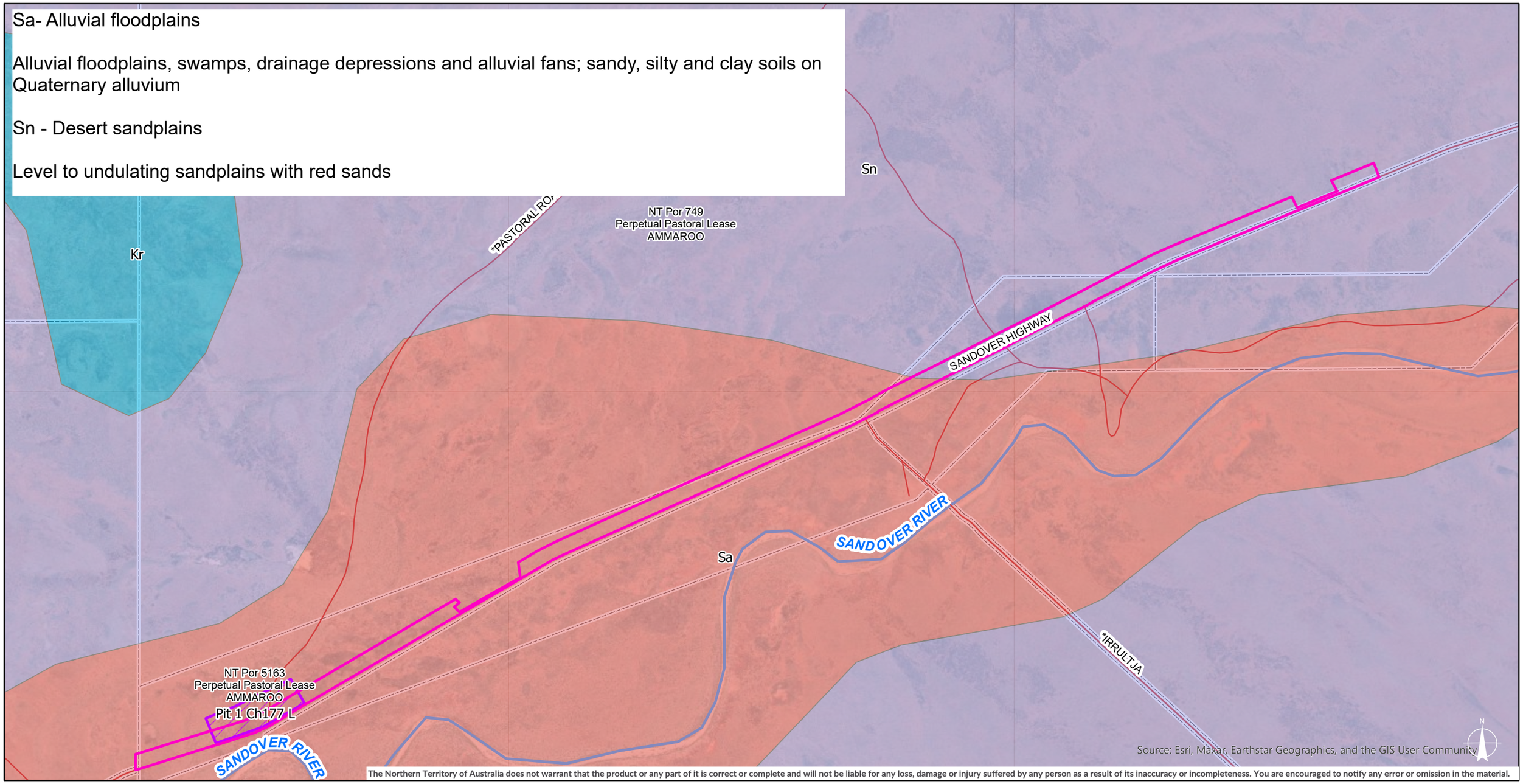
Sa- Alluvial floodplains

Alluvial floodplains, swamps, drainage depressions and alluvial fans; sandy, silty and clay soils on Quaternary alluvium

Sn - Desert sandplains

Level to undulating sandplains with red sands



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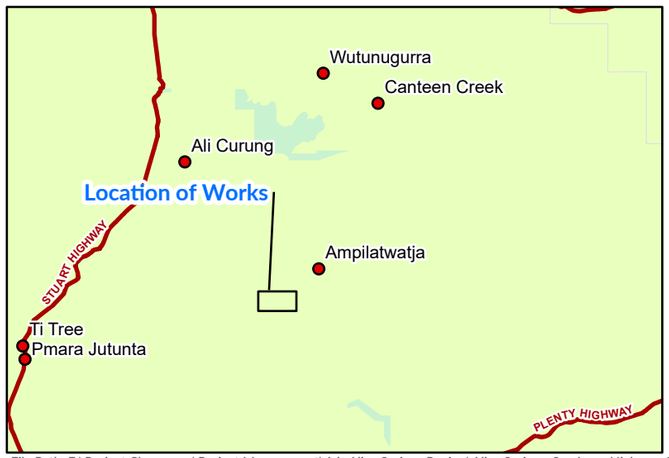

Legend

- Clearing Area
- Detour/ Borrow Pit Area
- Cadastre
- Roads
- Major NT Roads
- Rivers/Creeks

Sandover Highway Ch 170-192km
Land Clearing Application
Detour/Borrow Pits - Land Capability

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1.5 0.75 0 1.5
Kilometres
Scale @ A4 size: 1:65,000
Map Compiled: 6/05/2025

DATA SOURCE:
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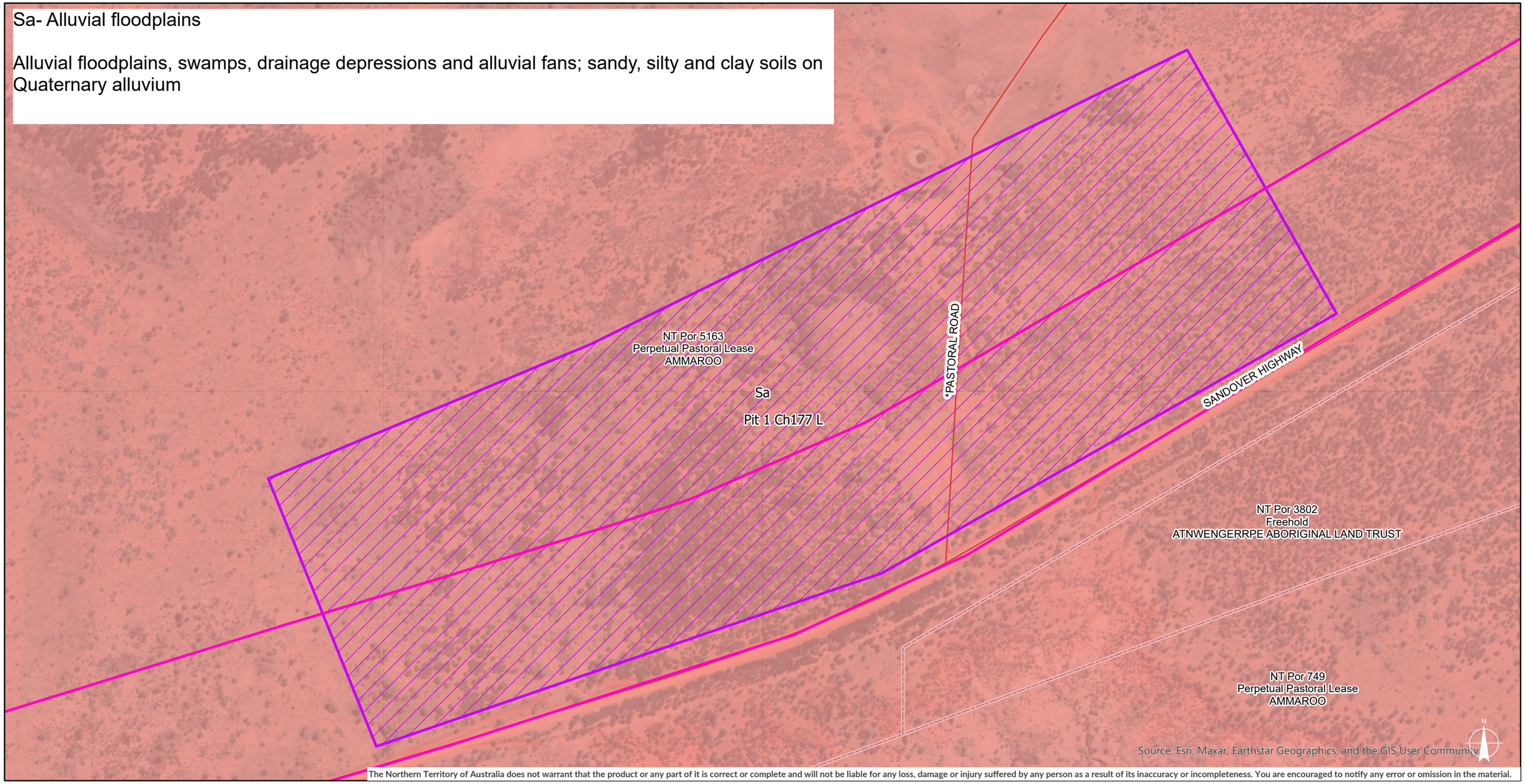
Sa- Alluvial floodplains

Alluvial floodplains, swamps, drainage depressions and alluvial fans; sandy, silty and clay soils on Quaternary alluvium



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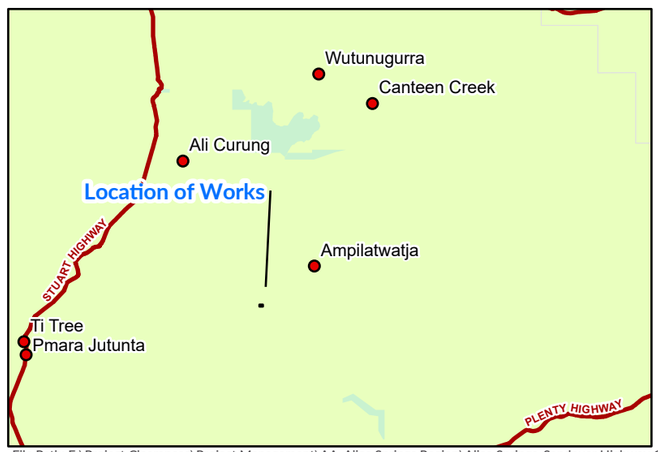

Legend

- Clearing Area
- Detour/ Borrow Pit Area
- Cadastre
- Roads
- Major NT Roads

Sandover Highway Ch170-192km
Land Clearing Application
Pit 3 - Land Capability

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140 70 0 140
Metres
Scale @ A4 size: 1:6,000
Map Compiled: 25/03/2025

DATA SOURCE:
Water Resources - Natural Resources Division, DLPE
Cadastre / Roads - Land Information, DLI
Drainage - 1:250,000 Geoscience Australia

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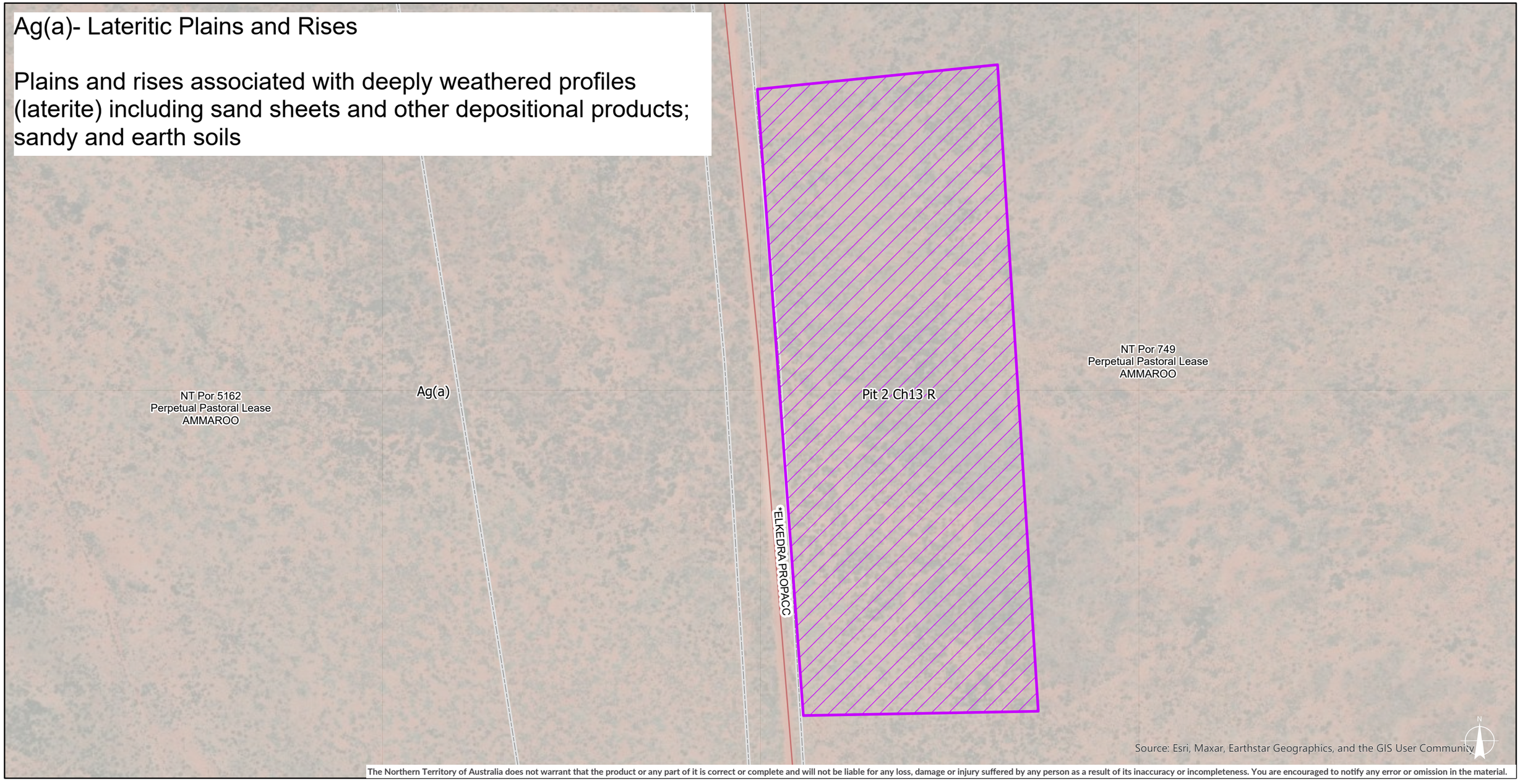
File Path: F:\Project Clearances\Project Management\AA_Alice Springs Region\Alice Springs_Sandover Highway Ch 170-195km_KD\Native Veg Application\Nativeveg\Nativeveg.aprx

Ag(a)- Lateritic Plains and Rises

Plains and rises associated with deeply weathered profiles (laterite) including sand sheets and other depositional products; sandy and earth soils



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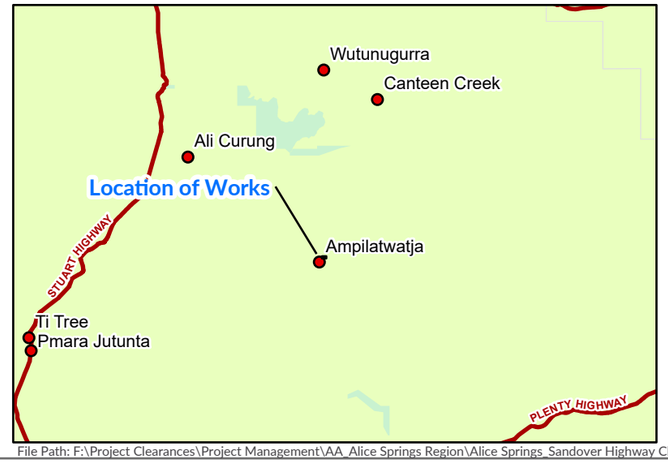

Legend

- Clearing Area
- Roads
- Major NT Roads
- Cadastre

Sandover Highway Ch170-192km
Land Clearing Application
Pit 2 - Land Capability

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200 100 0 200
Metres
Scale @ A4 size: 1:7,500
Map Compiled: 11/03/2025

DATA SOURCE:
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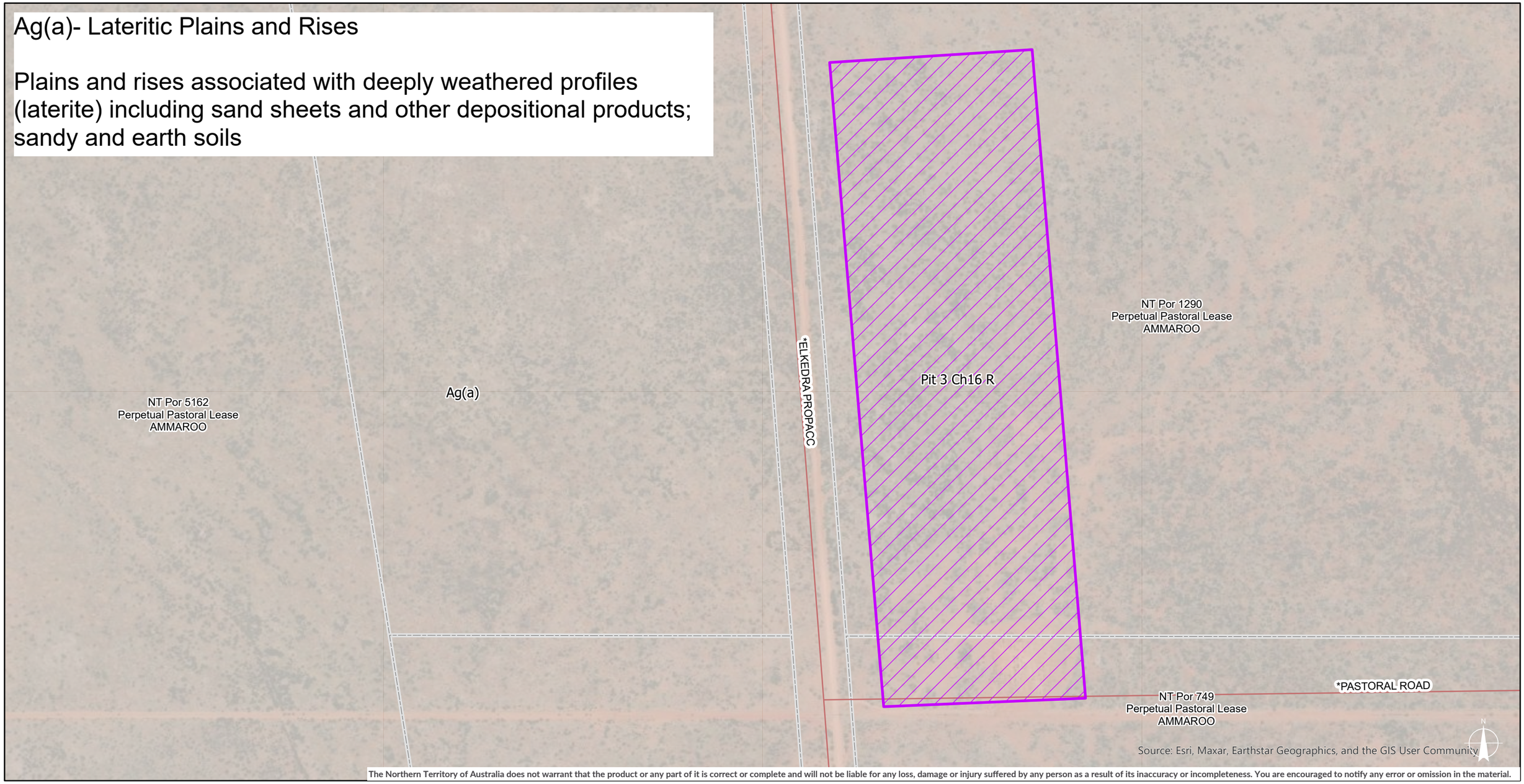
Ag(a)- Lateritic Plains and Rises

Plains and rises associated with deeply weathered profiles (laterite) including sand sheets and other depositional products; sandy and earth soils



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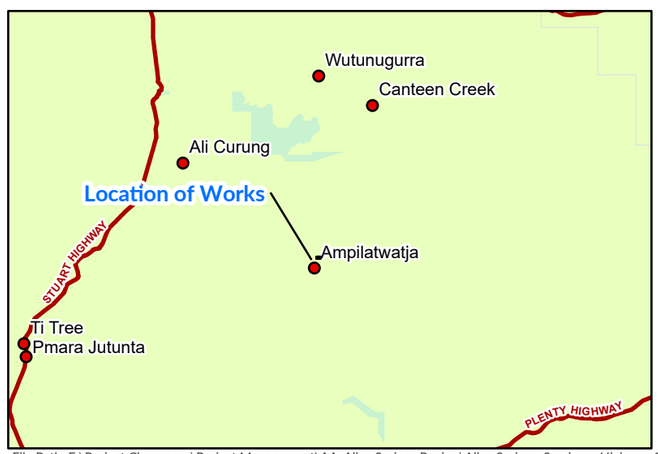

Legend

- Clearing Area
- Roads
- Major NT Roads
- Cadastre

Sandover Highway Ch170-192km
Land Clearing Application
Pit 3 - Land Capability

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Horizontal Datum: Geodetic Datum of Australia (GDA94)

200 100 0 200
Metres
Scale @ A4 size: 1:7,500
Map Compiled: 11/03/2025

DATA SOURCE:
Water Resources - Natural Resources Division, DLPE
Cadastre / Roads - Land Information, DLI
Drainage - 1:250,000 Geoscience Australia

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Attachment 5– Land Capability Assessment table

Note: Refer to the LCG – Land Capability Assessment (section 4.2.7.1).

Land Type	ASS	Flooding	Microrelief	Salinity	Sodicity	Slope	Soil depth	Drainage	Surface Rock	Wind erosion	Initial capability class	Overall capability class

The land capability assessment table above is not relevant in the context of gravel extraction areas for engineered roads.

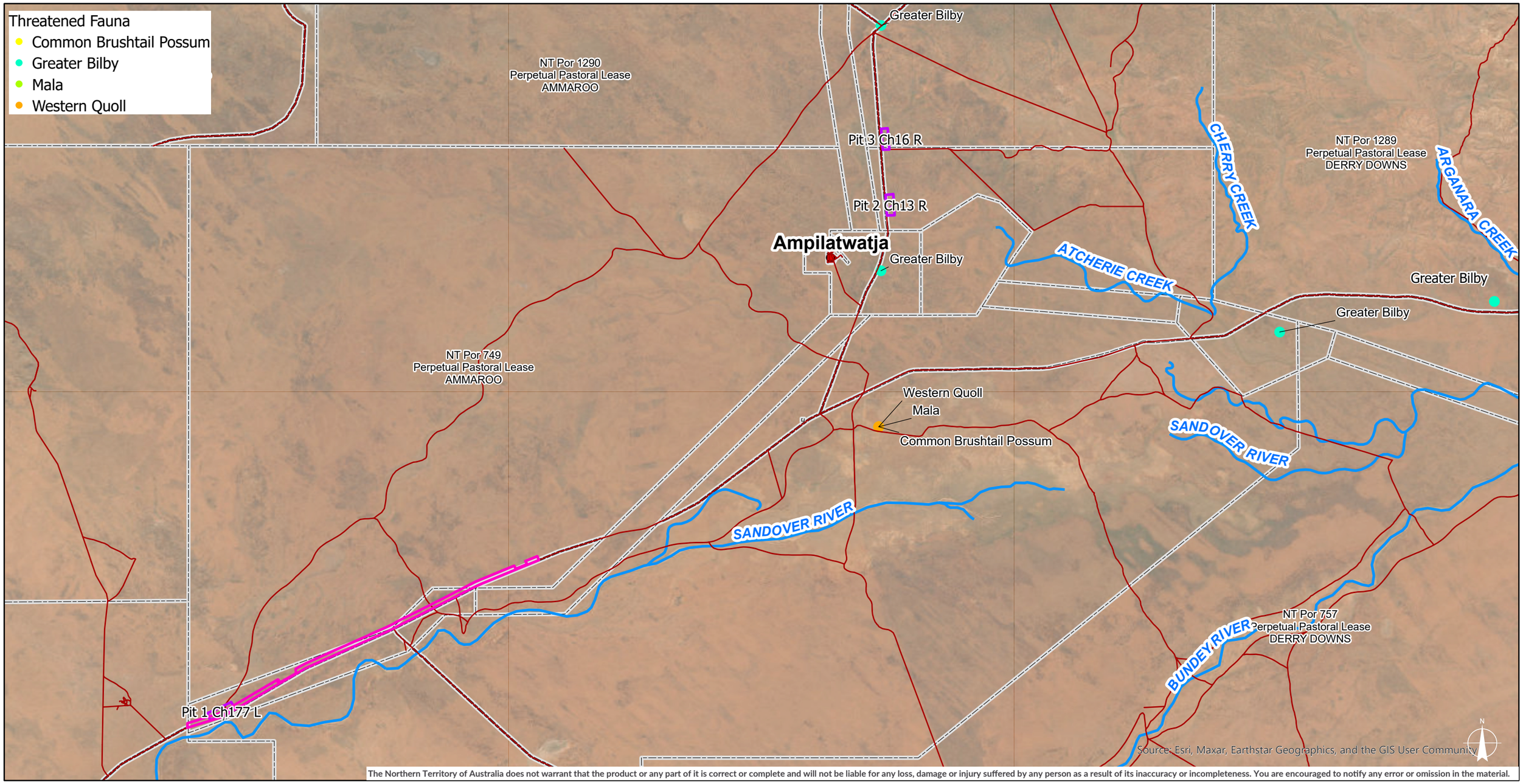
Addressing key concerns

Suitability

1. Clearing areas have been selected on the basis of field scoping. Geotechnical studies will be undertaken prior to gravel extraction to ensure the pits provide adequate volume and quality of material to complete the specified road upgrade works.
2. Acid sulfate soils, and adverse Sodicity are incompatible with acceptable road material
3. Flooding does not impact operations. The wet season is not suitable for roadworks, seasonal operational closure is the standard practice.

Erosion

1. Drainage areas are excluded as per recommended buffers.
2. Amaroo Station is located Southern parts of the NT and experiences a semi-arid climate. The wettest months fall between December and February. The works are expected to start in mid 2025 during the drier months. If the project extends into the wet season then an ESCP is required to manage all aspects of the project where required.
3. Slope, soil depth, surface rock are subject to the extraction operation. The pre-extraction slope of gravel resource areas frequently have slopes in excess of 2%; however, after extraction these slopes are less than 2%, or are inverted. Rock is valuable component of gravel. Top soil is removed and replaced after gravel extraction.
4. Soils selected for road construction typically present low erosion risks.
5. Standard Specification For Environmental Management and contract requirements specify management of dust for both amenity and erosion.



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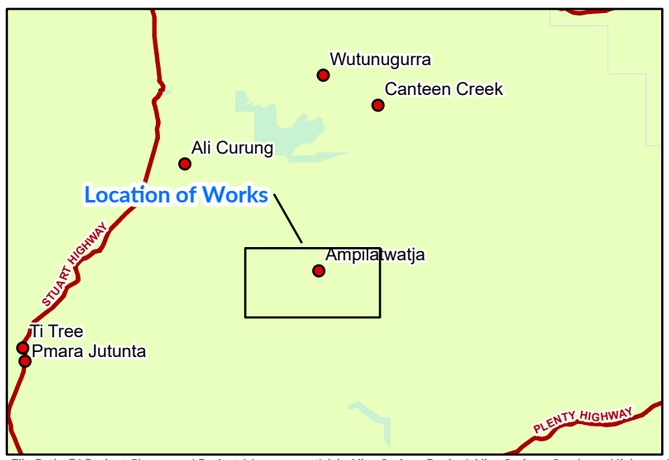

Legend

- Clearing Area
- Cadastre
- Detour/ Borrow Pit Area
- Roads
- Major NT Roads
- Rivers/Creeks

Sandover Highway Ch 170-197km
Land Clearing Application
Threatened Species

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6.5 3.25 0 6.5
Kilometres

Scale @ A4 size: 1:230,000
Map Compiled: 6/05/2025

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Cadastre / Roads - Land Information, DLI
Drainage - 1:250,000 Geoscience Australia

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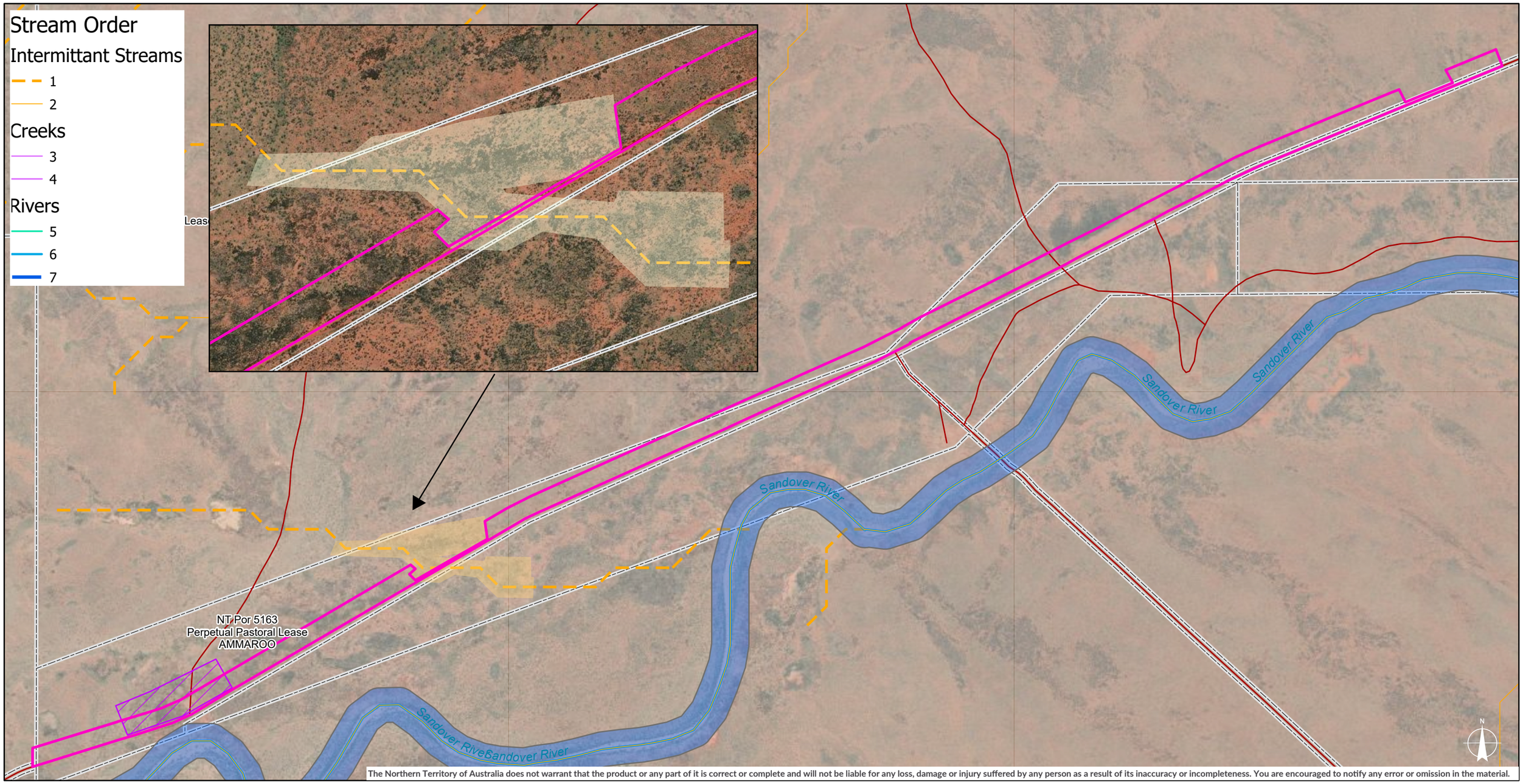

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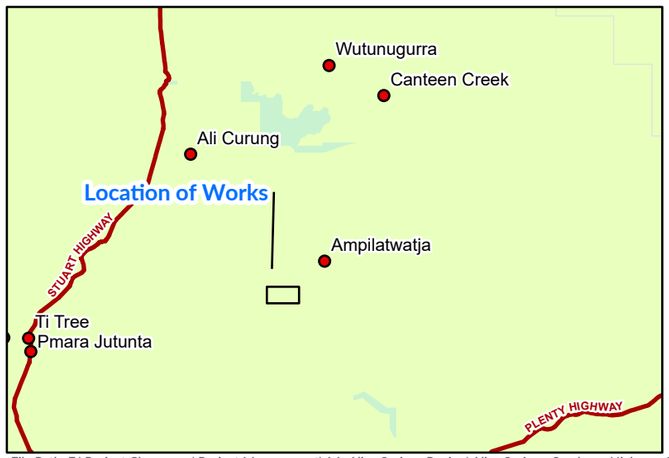

Legend

- Clearing Area
- Detour/ Borrow Pit Area
- Stream Buffer
- Cadastre
- Roads
- Major NT Roads

StreamOrder_ExportFeatures

Intermittant Streams

- 2

- Sandover River Buffer

Sandover Highway Ch 170-192km
Land Clearing Application
Drainage Buffers

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1,000 500 0 1,000
Metres
Scale @ A4 size: 1:55,000
Map Compiled: 6/05/2025

DATA SOURCE:
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Appendix 7 – Establishment Plan

Note: Refer to LCG sections 4.3.2.3 and 4.3.2.4.

Activity	E.g.	Timing (month & year)	Method (describe)
Preparatory works	Boundary marking, implementation of erosion and sediment controls, weed management	August 2025	See Attachment 12 Standard Specification for Environmental Management section 8, 19.1, 26.3
Felling of vegetation	Machinery and techniques	Progressive – September 2025 – October2025	See Attachment 12 Standard Specification for Environmental Management section 19.1, 26.3
Removal of felled vegetation	Machinery and techniques, in-situ or pushed-up, burning, mulching, windrow management, etc.	Progressive – September 2025 – October2025	See Attachment 12 Standard Specification for Environmental Management section 19.1, 21, 26.3
Site preparation	Machinery and techniques, levelling/contouring, installation of banks or soil conservation measures, cultivation	Progressive – September 2025 – February 2026	See Attachment 12 Standard Specification for Environmental Management section 19.1, 21, 26.3
Planting	Method for each pasture / crop type, spelling, rotations, cover crops, etc.	NA	No Planting. Pits to be rehabilitated by re-establishment of preserved topsoil
Harvesting	Method for each pasture / crop type, stubble retention	NA	No Harvesting
Grazing	Cattle introduction and subsequent stocking regime	NA	No grazing
Maintenance	Regrowth control, weed management, erosion monitoring	NA	Pit closure and rehabilitation is a contractual requirement

Attachment 8 – Staging Plan

Note: Standard PLC permits are valid for 10 years. Refer to LCG section 4.3.2.4.

Year	Site Id (e.g. polygon / paddock)
2025/2027	Pit 1 Ch 177L
2025/2027	Pit 2 Ch 13R
2025/2027	Pit 3 Ch 16R
2025/2027	Detour/ Borrow Pit Area

Standard specifications for Environmental Management (attachment 12) state individual gravel pits should be 1ha maximum. Progressively rehabilitation of extraction areas is to occur i.e. rehabilitate one pit before moving to the next.

Clearing polygons above are substantially larger than the area likely to be cleared. Flexibility within the actual cleared area is required to enable contractors to follow and obtain material of varying properties to blend into the exact technical properties of gravel required. Extraction areas are not cleared until such time as the gravel is required, areas not required for volume or yielding the required blend are not to be cleared.

For significant projects, larger gravel pits are more practical and economic. The DLI superintendent can approve larger gravel pits, individual pits of up to 20ha have been approved for major works.
Where such approval is provided contractors must provide a Pit Management Plan with detail such as:

- How the Contractor plans to clear, work and rehabilitate pits during the life of the project.
- Diagrams showing the pits to be used,
- Location of stockpile sites, drainage lines and
- Location and type of erosion and sediment
- Details regarding pit staging and rehabilitation.

Closure and rehabilitation of gravel extraction areas prior to completion is a contractual requirement.

Attachment 10 – Land Management Plan

Note: The following Land Management Plan (LMP) should be developed with reference to the proposed Establishment and Staging Plan. It is not an Erosion and Sediment Control Plan (ESCP). For large or complex clearing areas, preparation and implementation of an Erosion and Sediment Control Plan (ESCP) can be an effective way of managing erosion risk - however it is not an alternative to retaining native vegetation which should otherwise be retained in accordance with the LCG, or used as a "catch-all" means of mitigating other risks the clearing may pose (see LCG section 4.3.2.5). Whether a formal ESCP is required as a condition of a PLC permit will be at the discretion of the PLB/Delegate based on the advice of the Land Management Unit, DEPWS and will depend on the level of detail provided in this LMP and the erosion risk associated with the proposal. For further information, contact the Land Management Unit on 08 8999 4404.

1 Provide a general description of the soil loss factors for the proposed clearing extent:
Note: Refer to Section 4.3.2 of the LCG

Factor:	E.g.	Description
Rainfall	Consider the climatic zone, seasonal outlook and proposed timing of works.	Ammaroo Station is located in a semi-arid climate region. The region does not receive a lot of rainfall with long-term average rainfall amount only 345mm. The highest rainfall amounts occurring from November through to March. If the project occurs during the wetter months a ESCP will be required.
Soil	Consider the erodibility of soil types present based on soil type texture and structure. Note whether soils are dispersive or sodic.	Geotechnical studies will be undertaken prior to gravel extraction to ensure that adequate volume and quality of material is present to complete the specified road upgrade works. Soils selected for road construction typically present low erosion risks. Where large projects stage over a wet season an ESCP is required.
Length of slope	Indicate the average length of slope within the proposed clearing extent and areas that exceed this.	Clearing areas will be subject to gravel extraction which disrupts existing slopes. Rehabilitation and closure requires consideration of surface flows.
Slope gradient (%)	Indicate the range of slope within the proposed clearing extent (e.g. 0-2%) and areas that exceed 2%.	The pre-extraction slope of gravel resource areas frequently have slopes in excess of 2%. However, after extraction these slopes are less than 2%, or are inverted.
Groundcover	Consider the timing, duration and frequency of soil exposure.	See Attachment 12 Standard Specification For Environmental Management section 19.1, 21, 26.3
Management	Consider the level of soil disturbance associated with the proposed method of clearing and land use.	See Attachment 12 Standard Specification For Environmental Management section 19.1, 21, 26.3

2 Describe where rainfall runoff flows within the proposed clearing extent.

Property Boundary	Proposed buffer width (m)	Reasons for discretion

☒ Attach map showing slope % and the direction of runoff within the proposed clearing extent.
Attachment No: 10a

3 Identify whether property boundary buffers will be retained in accordance with the LCG and provide reasons for discretion (if required)

Note: Valid reasons must be provided for instances where no property boundary buffers or buffers less than 210m wide (including 10m wide firebreaks) will be retained. Refer to section 4.3.3 of the LCG.

Vegetation buffers from the road are, from the DLI perspective, measured from the road edge with the location of the property boundary not being relevant to this measure. This is because the road centreline is not a consistent distance from the property boundary and the DLI amenity guidelines are for no direct line of sight to the pit or a distance of 50 metres. While not expert in pastoral matters, the vegetation buffer does not seem relevant to pastoral station operations. Without a practical reason for such a buffer relevant to this situation it is difficult to see why it should apply.

4 Describe any land management buffers to be retained within proximity of the proposed clearing extent.

Note: A land management buffer is different to a wildlife corridor or property boundary buffer – refer to section 4.3.4 of the LCG.

Buffer Id.	Location	Width (m)	Purpose and design justification

5 Describe any existing erosion within the proposed clearing extent.

Note: Erosion types include: wind, sheet, rill, gully or tunnel erosion.

Erosion Site	Location	Cause	Erosion type & description	Mitigation

6 Considering all information provided above; describe the potential risk, likelihood and impact of erosion associated with the proposed development.

Source of risk	Likelihood of occurring	Potential impacts

7 Considering all information provided above; describe the proposed erosion and sediment control (ESC) measures to be implemented during the clearing and establishment phase of the development.

An approved ESC plan is a contractual requirement for the successful tenderer.

ESC measure	Location	Temporary/Permanent	Description

8 Considering all the information provided above; describe the proposed erosion and sediment control (ESC) measures to be implemented during the operational phase of the development.

ESCP measures with be implemented as per the approved ESC plan which is a contractual requirement for the successful tenderer.

ESC measure	Location	Temporary/Permanent	Description

9 Provide an erosion and sediment control (ESC) map showing the location of the following information.

This information is subject to the approved ESC plan which is a contractual requirement for the successful tenderer.

☐ Attach an ESC map showing the location of the following within the proposed clearing extent:

- Land management buffers (Question 4)
- Existing erosion (Question 5)
- Temporary ESC measures to be installed (Question 7 & 8)
- Permanent ESC measures to be installed (Question 7 & 8)
- Firebreaks, tracks and fences.

Attachment No: _____

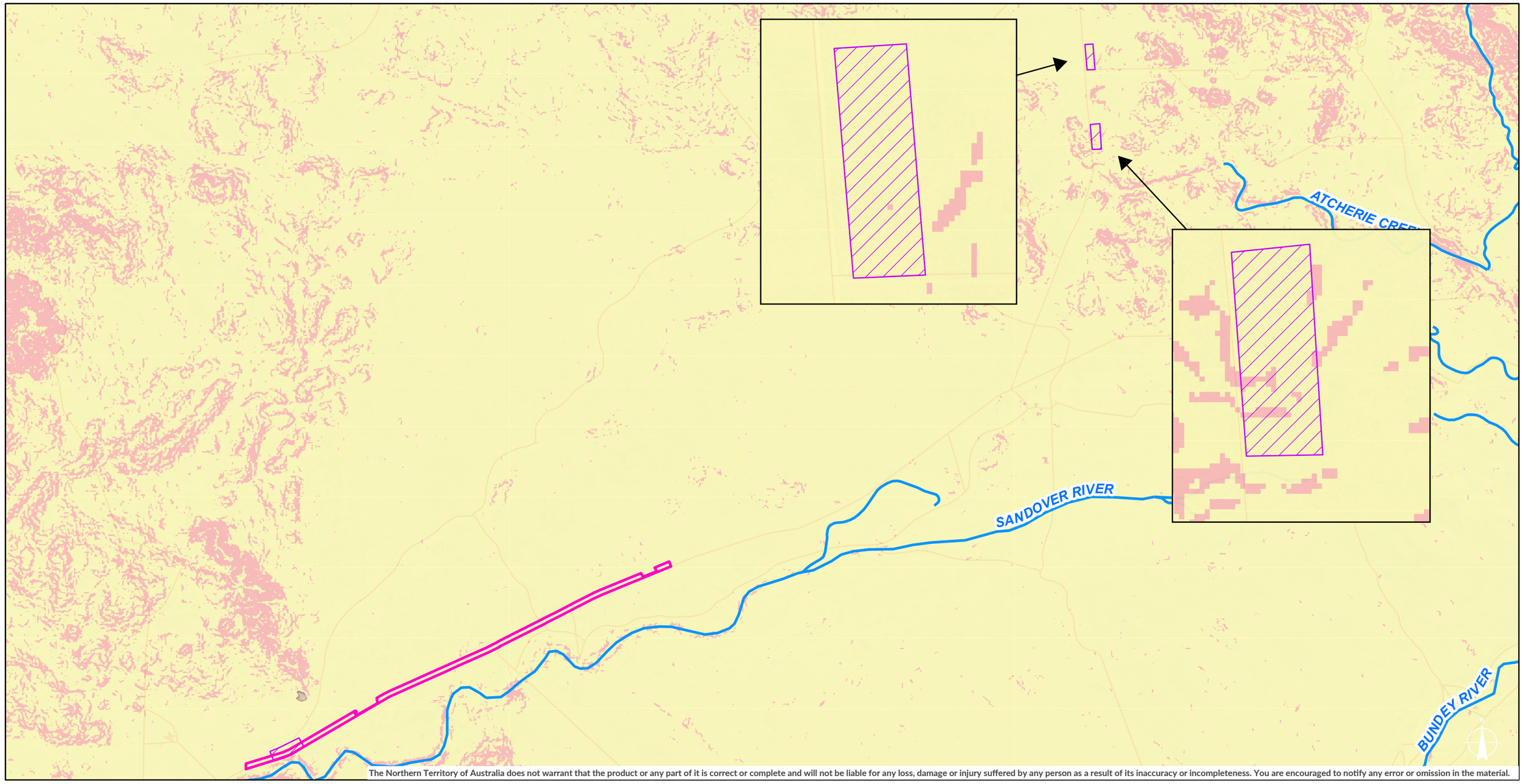
10 Provide any ESC standard drawings or design details.

This information is subject to the approved ESC plan which is a contractual requirement for the successful tenderer.

Note: The level of information required will depend on the complexity of the proposed measures. Information is available on the following website: https://nt.gov.au/environment/soil-land-vegetation

☐ Attach ESC standard drawings / design details

Attachment No: _____



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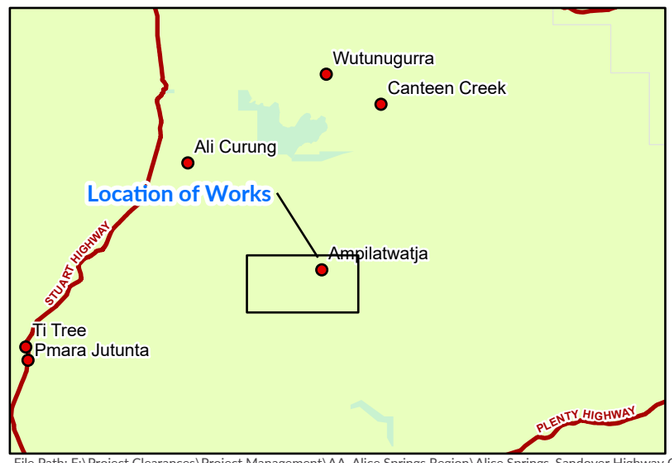

Legend

- Clearing Area
- Detour/ Borrow Pit Area

Slope Percent - 2 classes

- Slope less than or equal to 2%
- Slope greater than 2%
- Rivers/Creeks

Sandover Highway Ch 170-192km
Land Clearing Application
Slopes

Northern Territory Government

© Northern Territory of Australia

Projection: Universal Transverse Mercator (UTM) - Map Grid of Australia (MGA), Zone 52
Horizontal Datum: Geodetic Datum of Australia (GDA94)

5 2.5 0 5
Kilometres
Scale @ A4 size: 1:190,000
Map Compiled: 6/05/2025

DATA SOURCE:
Water Resources - Natural Resources Division, DLPE
Cadastre / Roads - Land Information, DLI
Drainage - 1:250,000 Geoscience Australia

For further information, please contact:
Environment Services
Department of Logistics and Infrastructure (DLI)
Phone: (08) 8999 4779
Level 3, Highway House, Palmerston
Web: www.nt.gov.au/infrastructure

File Path: F:\Project Clearances\Project Management\AA_Alice Springs Region\Alice Springs_Sandover Highway Ch 170-195km_KD\Native Veg Application\Nativeveg\Nativeveg.aprx

NT Por 2286
Perpetual Pastoral Lease
MURRAY DOWNS

NT Por 1290
Perpetual Pastoral Lease
AMMAROO

NT Por 1289
Perpetual Pastoral Lease
DERRY DOWNS

NT Por 749
Perpetual Pastoral Lease
AMMAROO

NT Por 1736
Freehold
ALYAWARRA ABORIGINAL LAND TRUST

NT Por 705
Freehold
ANGARAPA ABORIGINAL LAND TRUST

NT Por 757
Perpetual Pastoral Lease
DERRY DOWNS

Castor oil plant
Parkinsonia
Athel pine
Athel pine
Athel pine
Parkinsonia
Castor oil plant
Rubber bush
Athel pine
Caltrop - terrestris
Rubber bush
Parkinsonia
Parkinsonia
Rubber bush
Caltrop - terrestris
Lovegrass - minor
Couch grass
Barnyard grass - colona
Buffel grass
Athel pine
Buffel grass
Parkinsonia
Athel pine
Couch grass
Parkinsonia
Rubber bush
Rubber bush

ATCHERIE CREEK
SANDOVER RIVER
SANDOVER RIVER
SANDOVER RIVER
BUNDEY RIVER

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

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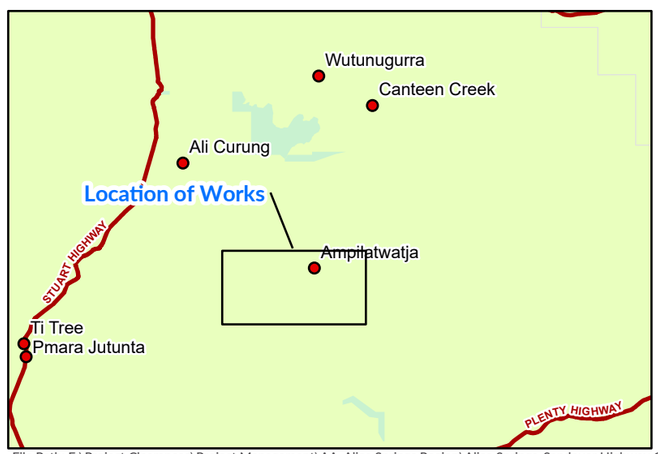

Legend

- Clearing Area
- Cadastre
- Detour/ Borrow Pit Area
- Roads
- Major NT Roads
- Rivers/Creeks
- Weeds

Northern Territory Government

© Northern Territory of Australia

Projection: Universal Transverse Mercator (UTM) - Map Grid of Australia (MGA), Zone 52
Horizontal Datum: Geodetic Datum of Australia (GDA94)

6 3 0 6
Kilometres
Scale @ A4 size: 1:250,000
Map Compiled: 25/03/2025

Sandover Highway Ch 170-197km
Land Clearing Application
Weeds

DATA SOURCE:
Water Resources - Natural Resources Division, DLPE
Cadastre / Roads - Land Information, DLI
Drainage - 1:250,000 Geoscience Australia

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File Path: F:\Project Clearances\Project Management\AA_Alice Springs Region\Alice Springs_Sandover Highway Ch 170-195km_KD\Native Veg Application\Nativeveg\Nativeveg.aprx

NORTHERN TERRITORY GOVERNMENT

DEPARTMENT OF INFRASTRUCTURE, PLANNING AND LOGISTICS

standard specification for environmental management

version 2.0

general ■ responsibility ■ references ■ statutory requirements ■
contractors environmental management plan ■
erosion and sediment control plan ■ acid sulfate soils management plan ■
weed management plan ■ asbestos management plan ■
other management plans ■ clearances and approvals ■
licenses permits and permissions ■ land access ■
materials extraction approval clearance ■
requirements for extractive operations in northern land council areas ■
stockpile management ■ water extraction licence ■
water extraction approval ■ cultural and heritage clearances ■
protection of cultural and heritage items and places ■
permit to clear native vegetation ■ site control approval ■
camp site compound workshop permission ■ water quality ■
construction site dewatering ■ vegetation management ■
fauna management ■ animal management ■ community liaison ■
air quality ■ noise control ■ preserve visual values ■
contamination management ■ waste management ■
rehabilitation of extraction areas, detours and access tracks ■
environmental monitoring ■ audits ■ non conformance ■
environmental legislation and regulations ■
standards ■ publications ■ definitions and acronyms ■
hold points and witness points schedules ■ updates overview ■

this document specifies the minimum standards of environmental controls and workmanship required for civil and buildings works projects managed by the department

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NORTHERN TERRITORY GOVERNMENT

DEPARTMENT OF INFRASTRUCTURE, PLANNING AND LOGISTICS

PO Box 61
Palmerston NT 0831

ABOUT THIS SPECIFICATION

This document was prepared by the Department of Infrastructure, Planning and Logistics, and specifies the minimum environmental management requirements for Northern Territory Government projects.

The Department has a commitment to undertaking all of its activities in an environmentally responsible manner and effectively managing risks that may lead to an impact on the environment. The Department seeks to be recognised as the expert in government infrastructure programming, procurement and construction.

Environmental management is an integral part of providing a high level of service delivery, continual improvement of processes, and quality project outcomes that meet legislative requirements

This is the second edition of the Standard Specification for Environmental Management.

INFORMATION

For further information regarding this Standard Specification contact:

Manager Specification Services
Department of Infrastructure, Planning and Logistics
PO Box 61, Palmerston NT 0831

Email: Specification.Services@nt.gov.au

Manager Environment Services
Department of Infrastructure, Planning and Logistics
PO Box 61, Palmerston NT 0831

Telephone: (08) 8999 4550
Email: Environment.DIPL@nt.gov.au

NORTHERN TERRITORY GOVERNMENT

DEPARTMENT OF INFRASTRUCTURE, PLANNING AND LOGISTICS

STANDARD SPECIFICATION FOR ENVIRONMENTAL MANAGEMENT V 2.0 REFERENCE TEXT

REFERENCE: Read this Standard Specification in conjunction with project specific requirements and drawings, if any. This document may be used as a blanket, overarching, reference specification referring generally to the standards of materials and workmanship of environmental management required by the Department for all projects. It is a contractual obligation to comply with this specification. Only parts of this Standard Specification which refer to the works being carried out apply.

PROJECT SPECIFIC REQUIREMENTS: The selection of specific items or materials for the works being carried out are specified in project specific requirements or shown as notes on the drawings.
OR
If there are no separate project specific requirements, refer to the drawings or scope of work if any, for specific items or materials for the works being carried out.

HOLD POINTS AND WITNESS POINTS; Hold Points and Witness Points apply to the project whether Project Control or Quality Assurance are included in the project or not. Tables of Hold Points and Witness Points are available in a stand-alone Word document available via: https://transport.nt.gov.au/infrastructure/specification-services/technical-specifications/environmental-management
The tables should be edited to suit the requirements of the project. The tables can be copied and pasted in to the RFT.

HOLD POINTS: A Hold Point is a mandatory verification point. Work cannot proceed beyond this point until the Superintendent is able to verify the quality of the completed work and releases the Hold Point.

WITNESS POINTS: A Witness Point is an identified point in the project where the Superintendent may review, witness, inspect or undertake tests on any component, method or process of works. The Contractor is required to give notice in advance to the Superintendent who may or may not take the opportunity. The project however, may proceed.

SITE COPY: Retain a copy of this document on site for the duration of works.

ELECTRONIC COPY: An electronic copy of this document is available through Specification Services website: https://transport.nt.gov.au/infrastructure/specification-services/technical-specifications/environmental-management

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ISSN 2203-563X On-line edition

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STANDARD SPECIFICATION FOR ENVIRONMENTAL MANAGEMENT V 2.0

REFERENCE TEXT

CONTENTS

1. GENERAL

1.1 GENERAL

Conduct all project activities in an environmentally responsible manner and effectively manage risks to minimise any impact on the environment.

Obtain required approvals before commencing works. Identify and implement relevant controls.

This specification outlines requirements for:

- Environmental approvals,
- Cultural approvals,
- Mineral and water extraction approvals,
- Environmental management of projects including general environmental controls,
- Environmental Management Plans and any sub-plans required,
- Site specific requirements such as soil erosion control, weed and waste management.

Use this document on all Northern Territory Government (NTG) construction and demolition works managed by the department, including civil and building construction and maintenance works. Only clauses applicable to the environmental risk of the project will apply to works being carried out.

This Standard Specification is supported by guidance material, available via (https://dipl.nt.gov.au/infrastructure/technical-standards-guidelines-and-specifications/technical-specifications).

A reference to the Superintendent includes a reference to the Superintendent's Representative, and to any nominee of the Superintendent, and to any nominee of the Superintendent's Representative.

1.2 TIME ALLOWED FOR ASSESSMENT OF SUBMITTED DOCUMENTS

This clause is related to documents which are to be submitted by the Contractor to the Superintendent for assessment and/or acceptance and/or approval.

The documents subject to this clause include, but are not limited to:

- Traffic Management Plan,
- Inspection and Test Plans,
- Project Control Plan,
- Quality Assurance Plan,
- Work Health and Safety Plan, which includes, but is not limited to,
  - Risk assessment and mitigation measures proposed
  - Project targets and how they will be achieved
  - Induction training sessions for all site personnel, including sub-contractors, suppliers, and the Principal's representatives
  - Cultural Heritage inductions by Cultural Monitors
- Indigenous Development Plan,
- Contractor's Environmental Management Plan which includes, but is not limited to,
  - Erosion and Sediment Control Plan,
  - Acid Sulfate Soils Management Plan,
  - Weed Management Plan,
  - Asbestos Management Plan,
  - Waste Management Plan,
  - Cultural Heritage Management Plan.

The Superintendent will provide a response in respect to the submitted documents to the Contractor within a reasonable time. The length of time considered reasonable will depend on the complexity of the documents, the amount of information in the documents and the workload of the Department's personnel who will assess, accept or approve the documents. The length of time considered reasonable can be negotiated between the Contractor and the Superintendent. Any such negotiated time must be fair to both parties.

If the documents are rejected, not accepted, not approved, or returned for modification, the Superintendent will have an additional reasonable time period to assess the amended documents.

The time taken by the Superintendent to assess submitted documents, or to assess re-submitted documents, and to respond to the Contractor will not be accepted as a reason for the Contractor to claim an extension of time, nor to claim a variation for costs related to the preparation of, or modification to, documents to be submitted or re-submitted.

These time frames do not apply in emergency situations where faster responses are appropriate.

Re-submitted documents must be sent with the changes made clearly marked. Changes should only be made to the documents to the extent required by the Superintendent. Any changes not explicitly requested by the Superintendent but made in the re-submitted documents must be clearly visible in the documents and the reasons for making the changes must be explained in a separate document or the covering email. Changes not made obvious and not explained, or made obvious but not explained, will not be accepted under the contract whether this is advised to the Contractor or not. Changes which were not requested but are made obvious and which are explained will be assessed during the re-assessment process.

Documents required in respect to works in specialised facilities such as health care facilities and secure facilities will be subject to responses in time frames to be negotiated.

2. RESPONSIBILITY

Comply with the provisions of this specification and any other environmental protection provisions in the Contract and observe the requirements of any applicable statute, by-law, standard etc. related to environment protection.

The environment protection requirements in this Standard Specification, together with the Conditions of Contract, are complementary to, and not in substitution for, any statutory requirements, nor in substitution for any of the technical requirements shown in the specifications and on the drawings. The accuracy of these legal obligations, including all approvals licences and all ancillary documentation, is the responsibility of the Contractor and should be checked for relevance and currency.

Comply with environmental statutory requirements and with procedures defined within the Contractor's Environmental Management Plan (CEMP) and supplementary plans.

3. REFERENCES

Read this document in conjunction with those documents listed below which apply to the project:

- Request for Tender (RFT) or Request for Quotation (RFQ) for the project,
- *Standard Specification for Roadworks* (https://dipl.nt.gov.au/infrastructure/technical-standards-guidelines-and-specifications/technical-specifications/roads),
- *Standard Specification for Road Maintenance* (https://dipl.nt.gov.au/infrastructure/technical-standards-guidelines-and-specifications/technical-specifications/roads),
- *Standard Specification for Small Building Works* (https://dipl.nt.gov.au/infrastructure/technical-standards-guidelines-and-specifications/technical-specifications/buildings),
- *NT EPA Environmental Guidelines* https://ntepa.nt.gov.au/waste-and-pollution/waste-and-pollution-guidelines/guidelines,
- *Land Clearing Guidelines* and *NT Land Suitability Guidelines*, Northern Territory Planning Scheme, available via https://nt.gov.au/property/building-and-development/northern-territory-planning-scheme/referenced-documents-guidelines, and
- Any other Specification, Code of Practice (COP), Guideline, or other cited document, applicable to the project.

The edition of the Standard Specification current on the day tenders close is the version which applies to the Contract.

4. STATUTORY AND OTHER REQUIREMENTS

Comply with the following where applicable:

- Northern Territory legislation (Acts and Regulations),
- Federal legislation (Act and Regulations),
- Australian Standards,
- Other International Standards where Australia does not have a relevant Standard,
- Australian and New Zealand Environmental and Conservation Council Publications (ANZECC),
- Codes of Practice,
- Interstate and other Publications,
- NTG Guidelines.

Use Australian Standards, and their amendments, current 3 months before the date for the close of tenders except where different editions and/or amendments are required by statutory authorities, including, but not limited to, NATA and the National Construction Code including the Building Code of Australia.

Refer to ENVIRONMENTAL LEGISLATION AND REGULATIONS, AND STANDARDS.

5. CONTRACTOR'S ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

5.1 SUBMISSION OF CEMP - HOLD POINT

Hold Point - Submit for assessment a copy of a site specific and project specific Contractor's Environmental Management Plan (CEMP) prior to establishment and commencement of work on site.

This Hold Point will only be released after the Superintendent has been provided with, and endorses as fit for purpose, the CEMP, or any required revised CEMP, and relevant sub-plans, or any required revised sub-plans, that meet the conditions of the Contract and the specifications for the contract.

Refer to **Time Allowed for Assessment of Submitted Documents** in this work section.

Refer to the Environmental Management Project Specific Requirements clause in ENVIRONMENTAL MANAGEMENT in the RFT/RFQ. Refer to the Environmental Risk Assessment and/or to the Notice of Intent.

5.2 WHEN A CEMP IS REQUIRED

Unless specified otherwise, a CEMP is required for all contracts.

Supporting material is available via the Department's internet page https://transport.nt.gov.au/infrastructure/technical-standards-guidelines-and-

specifications/technical-specifications/environmental-management.

Submit the completed CEMP for the project within 5 days of the awarding of the contract and before any work commences on site.

5.3 PURPOSE OF THE CEMP

The CEMP must identify potential adverse environmental effects, describe environmental protection practices, resources, sequence of activities required to comply with relevant environmental legislation, conditions of any applicable licence, approval and permit and all the requirements of this Specification. Appropriate environmental protection measures proposed to keep environmental effects within compliance limits must be documented and must show the responsibility for implementation in each case.

The CEMP must be project and site specific and identify, address and mitigate all environmental risks associated with the execution of the works.

Before commencement of works, the CEMP and associated relevant documents will be reviewed by the Superintendent and comment provided to the Contractor.

After endorsement of the CEMP is given, the Contractor must submit one controlled copy of the CEMP to the Department for use by the Superintendent during the Contract.

5.4 DETAILS REQUIRED IN THE CEMP

The following are to be addressed in the CEMP:

- Description of the works,
- Legislative obligations,
- Approvals, licences and permits,
- Assignment of responsibility for environmental controls,
- Assessment of potential environmental impacts and operational control measures to be implemented,
- A site diagram showing the location(s) and extent(s) of:
    - no-go zones,
    - site camp, compound and workshop areas,
    - works areas,
    - cleared areas,
    - access tracks and turn-around areas,
    - stockpiles,
    - laydown areas,
    - environmental controls, and
    - any environmentally sensitive areas.
- Non-conformance control and corrective action procedures for all of the control measures that are to be implemented,
- Details of how the environment will be protected for each and every Contractor and Subcontractor activity,
- Hours of work,
- Communication procedures,
- Complaints handling procedures,
- Emergency response procedures,
- Environmental incident notification and reporting,
- Environmental training and inductions,
- Environmental monitoring,
- Audit program,
- Waste and recycling reporting,
- Reporting requirements,
- Water extraction quantities.

Environmental aspects that may be relevant to a project include:

- Air pollution,
- Flora and fauna disturbance,
- Weed management,
- Soil erosion and sediment control,
- Acid Sulfate Soils (if there is a risk of occurrence in the project area),
- Asbestos handling and disposal (if there is a risk of exposure in the project area),
- Water pollution,
- Waste management,
- Hazardous materials and dangerous goods,
- Fuels and chemicals,
- Heritage – cultural and historical,
- Sacred site protection,
- Noise and vibration,
- Community consultation,
- Social aspects,
- Environmentally sensitive areas,
- Fire management.

NOTE: Environment Services Branch can provide assistance in the development of the CEMP.

More information is available at:

https://dipl.nt.gov.au/infrastructure/technical-standards-guidelines-and-specifications/technical-specifications/environmental-management

and

https://ntepa.nt.gov.au/__data/assets/pdf_file/0003/284880/draft_guideline_for_emp.pdf .

5.5 LIABILITY OF PRINCIPAL LIMITED

Receipt of the CEMP will in no way relieve the Contractor of responsibility under the Contract to ensure compliance with environmental legislation and any approvals issued by other authorities as may be required in respect to work under the Contract.

Endorsement of the CEMP is provided on the basis that the Contractor (including Sub-contractor(s)) is not absolved from full responsibility for the correctness and accuracy of the design and/or documents provided and the implementation of effective environmental management.

6. EROSION AND SEDIMENT CONTROL PLAN (ESCP)

6.1 WHEN AN ESCP IS REQUIRED

Provide a copy of a site specific and project specific Erosion and Sediment Control Plan (ESCP), in accordance with best practice guidelines and before commencing works, when:

- Stated in the Environmental Management Project Specific Requirements clause in ENVIRONMENTAL MANAGEMENT in the RFT/RFQ. and/or in the Environmental Risk Assessment and/or in the Notice of Intent, and/or
- Works are to be undertaken during the Top End Wet Season (1 October to 30 April), and/or
- Works are to be undertaken in a drainage line / waterway, and/or
- Rainfall is likely to occur during the works and/or,
- Runoff is likely over the works area.

An ESCP is a supplement of the CEMP.

The ESCP is to be produced and submitted by electronic means to the Superintendent.

6.2 ESCP DESIGNER QUALIFICATIONS

To enable Northern Territory Government endorsement of the ESCP, it is to be designed by a professional with one of the following qualifications:

- Certified Professional in Erosion and Sediment Control (CPESC), or
- Certified Professional Soil Scientist (CPSS), or
- A suitably qualified and experienced professional, having completed an advanced specialised training course in erosion and sediment control, provided under the auspices of a reputable body such as the International Erosion Control Association (IECA) Australia, Australian Society of Soil Science, or equivalent, and be able to give evidence of training in erosion and sediment control principles, and experience in implementing and designing erosion and sediment control plans and controls on site.

For projects where there is a high risk of erosion and sedimentation and/or sensitive receptors downstream, there may be the requirement for an ESCP to be designed by a CPESC or CPSS only.

The ESCP designer must monitor the performance of the ESCP throughout the duration of the contract, modifying the plan as required to meet the changing conditions and non-performance issues identified.

The ESCP is to be designed in conformance with the requirements set out in best practice guidelines of the IECA Australia Best Practice Erosion and Sediment Control documents available via http://www.austieca.com.au/publications/best-practice-erosion-and-sediment-control-bpesc-document .

6.3 ESCP MANAGEMENT PRINCIPLES

The IECA Australia Best Practice Erosion and Sediment Control documents provide an overview of principles of best practice erosion and sediment control. The principles broadly apply to the planning, design, construction and maintenance of all types of erosion and sediment control for construction works including roads, buildings, barge landings and other projects. The principles can be paraphrased as:

- Assess the implications of a project for soil loss and water quality at the planning stage,
- Plan to control erosion and sediment during the design phase and before any earthworks begin,
- Minimise the area and duration of soil disturbed and exposed to erosion,
- Conserve topsoil for later site rehabilitation / regeneration,
- Control water flow from the top of and through the project area – divert up-slope ‘clean’ water away from disturbed areas and ensure concentrated flows are below erosive levels,
- Maximise sediment retention on the site,
- Rehabilitate disturbed lands quickly,
- Maintain erosion and sediment control measures appropriately.

Some long-term erosion and sedimentation from works is inevitable given the climatic conditions of the Northern Territory. However, construction works and the subsequent operation of assets should at all times minimise the potential for erosion. The above principles provide a basis for minimising these problems with construction projects in the Northern Territory. They also provide a framework to account for the influence of factors such as climate, topography and soil types. These principles should be adopted in any construction project and incorporated into any environmental management plan and/or ESCP.

There are a number of Australian publications that detail what is required for effective erosion and sediment control including information on the Northern Territory Government’s website at https://nt.gov.au/environment/soil-land-

vegetation. The Northern Territory Government references and bases its standards on the IECA Australasia Best Practice Erosion and Sediment Control documents.

7. ACID SULFATE SOILS MANAGEMENT PLAN (ASSMP)

7.1 WHEN AN ASSMP IS REQUIRED

Provide a copy of a site specific and project specific Acid Sulfate Soil Management Plan (ASSMP), prepared in accordance with best practice guidelines, when works are to occur in areas where Potential Acid Sulfate Soils or actual Acid Sulfate Soils are present, or suspected to be present, before commencing works.

Unmanaged disturbance of areas containing Acid Sulfate Soils (ASS) can consequently result in acidic drainage potentially causing adverse impacts to the terrestrial and inter-tidal environment including infrastructure.

Where Potential Acid Sulfate Soils (PASS) and actual ASS are likely to be present in sediments on the site, the Contractor shall develop and implement procedures through an ASSMP to prevent acidic discharge and odour from any exposed soils within the construction site and/or from soils removed from the site.

The ASSMP is a supplement of the CEMP. Refer to the Environmental Management Specific Requirements clause in ENVIRONMENTAL MANAGEMENT in the RFT/RFQ.

A copy of the plan is to be submitted to the Superintendent. No excavation of known PASS or ASS is to commence before submission of the ASSMP to the Department.

7.2 DETAILS REQUIRED IN AN ASSMP

The ASSMP is to address the requirements of the Queensland Acid Sulfate Soil Technical Manual, Soil Management Guidelines Version 4.0, for handling, treatment and disposal of ASS.

The ASSMP is to be developed, implemented, and monitored by a suitably qualified independent organisation.

8. WEED MANAGEMENT PLAN (WMP)

8.1 WHEN A WMP IS REQUIRED

Provide a copy of a site specific and project specific Weed Management Plan (WMP) in accordance with Australian Government and Northern Territory Government guidelines. A WMP is required if Declared Weeds or Weeds of National Significance (WoNS) are known to be present or have potential to be established and/or spread on site.

Land managers, including the Department and its Contractors, are legally responsible for the prevention of spread and control of Declared Weeds in accordance with the *Weeds Management Act* regardless of the size of project.

For all projects, Contractors must:

- Survey for declared weeds and assess risk of spread,
- Consult with Local Council and the Department of Environment and Natural Resources (DENR) Weed Management Branch about management procedures to be implemented by the Contractor,
- Eliminate the seed source where possible,
- Establish weed control protocols to prevent spread of weeds and their seeds, and
- Practise on-going weed hygiene.

If DECLARED WEEDS (plants identified by DENR requiring control, eradication or prevention), and/or ALERT WEEDS (to be immediately reported to DENR), and/or Weeds of National Significance (WoNS), are identified on site, a detailed WMP is to be submitted with the CEMP.

In addition, if the RFT/RFQ specifically relates to weed management, the response schedule is to outline the development of a WMP.

A list of declared species and their Weed Management Plans can be found at https://nt.gov.au/environment/weeds/weeds-in-the-nt/A-Z-list-of-weeds-in-the-NT.

A list of WoNS is at https://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html

Some declared weeds also need to be reported immediately to the DENR Weed Management Branch and expert help is required for disposal and control of the weeds. Alert weeds are listed under https://nt.gov.au/environment/weeds/current-alert-weeds-how-to-report.

The WMP is to supplement the CEMP.

DENR Weed Management Branch can also help with information on weed management. Contact weedinfo@nt.gov.au.

8.2 DETAIL REQUIRED IN A WMP – WITNESS POINT

Detail required in a WMP must:

- Prioritise declared weed species and locations for control based on previous mapping and any site survey (if available),
- Detail chemical type, rates, method of application and process to collect data for priority species. Refer to (https://nt.gov.au/environment/weeds/how-to-manage-weeds/weed-management-handbook),

- Address seasonal restrictions to access and weed reproductive cycles to prevent weed seeding,
- Integrate chemical control with slashing and burning requirements,
- Incorporate monitoring so control effectiveness and spread prevention can be evaluated,
- Enforce weed hygiene protocols.

The reuse of weed contaminated topsoil by surface spreading is not permitted.

Witness Point - The use of hay bales on site can only occur if written approval is received from the Superintendent.

In general, the use of hay bales for environmental control is not permitted.

8.3 PREVENTION OF WEED SPREAD WHEN USING MACHINERY

The main methods to ensure that weeds are not spread are:

- Clean machines before moving between sites,
- Don't use or move materials contaminated with weeds and/or their seeds,
- Avoid travelling through weeds that are seeding.

The use or movement of topsoil or vegetation waste contaminated with a Declared Weed is not permitted under the *Weeds Management Act*. If there are weeds present above ground there will also be seeds in the soil. Seek advice from DENR Weed Management Branch if you are unsure. Collect and dispose of the soil by burying or stockpiling in an accessible area identified in the WMP, and then control any germinating weeds. An alternative way of reducing germination is to use a residual pre-emergent herbicide.

An easy way to prevent weed spread is to identify flowering or seeding weeds and avoid driving through them. If this is not possible, cut seed heads off and dispose of them appropriately. Treatment of weeds on or adjacent to roads or thoroughfares will reduce the probability of moving weed seed. Modifications to machines such as canopies over slasher decks can reduce seed spread.

8.4 CLEANING OF VEHICLES AND PLANT – WITNESS POINT

Comply with the weed spread prevention aspects of the Statutory Weed Management Plans for the weeds listed on the web site https://nt.gov.au/environment/weeds/weed-management-planning .

Comply with the weed spread prevention aspects of the Regional Weed Management Plans for works in the regions listed on the web site https://denr.nt.gov.au/land-resource-management/rangelands/guidelines-and-management-plans/weed-management-plans .

Ensure that vehicles and plant are steam cleaned or high pressure water cleaned removing all earth/soil to prevent the spread of weeds and pest animals before moving them on to and off the works site. The undertaking of cleaning processes will be enforced in high risk sites with weed infestations or in areas of high ecological significance such as National Parks. Cleaning is not mandatory for weed free areas but it is encouraged for best practice.

Witness Point - Provide evidence that the area is weed free or provide advice of the weeds present in the areas of the works.

Witness Point - Provide evidence that the vehicles and plant brought on to the site of the works are free of weeds and their seeds and are soil free.

Witness Point - Provide evidence that organic matter transported to site is free of weeds and/or their seeds.

Witness Point: Provide the Superintendent with a signed statement certifying that cleaning took place.

The statement certifying that cleaning took place should include the following information:

- Vehicle or Plant Identification Number,
- Method of Cleaning,
- The time and date carried out,
- The location of cleaning operations,
- The name of the cleaning operator.

Collect and dispose of the removed earth and organic material by a method that will ensure that it does not infest any river, stream, wetland or property.

If declared weeds are present within the work area ensure vehicles, machinery, plant and equipment are free of weeds and their seeds, and free of earth and organic matter before those vehicles, machinery, plant and equipment are moved from one area to another.

Use high pressure water, compressed air or a stiff brush and leaf blower before leaving the designated infested area and/or transportation of vehicles, machinery, plant and equipment from the site.

Clean down vehicles, machinery plant and equipment into an accessible, flat area from which wash-down water or rain water will not run into a waterway.

Check clean down area after rain and treat emerging weeds.

9. ASBESTOS MANAGEMENT PLAN (AMP)

9.1 WHEN AN AMP IS REQUIRED

An Asbestos Management Plan (AMP) is required if Contractors are engaged to conduct works at locations where the nature of their works will, or are likely to, disturb any asbestos or asbestos containing material (ACM). An AMP will also be required in the event asbestos or ACM is unexpectedly exposed during works.

The AMP is a supplement of the CEMP.

9.1.1 Asbestos Management for Assets Controlled by the Department

Asbestos management plans and asbestos registers have been prepared for assets under the Department's direct management and control.

Prior to commencement of work on assets controlled by the Department, Contractors must:

- Complete a Work Request form, available via https://dipl.nt.gov.au/infrastructure/infrastructure-nt/asbestos-management AND
- Submit the completed form to officeservices.DIPL@nt.gov.au

A list of sites controlled by the Department is shown at https://dipl.nt.gov.au/infrastructure/infrastructure-nt/asbestos-management.

9.2 STATUTORY REQUIREMENTS FOR ASBESTOS MANAGEMENT

For all works, irrespective of ownership of, control over, or the assets subject to the works, comply with:

- *Work Health and Safety (National Uniform Legislation) Act 2011* and its Regulations,
- *Public and Environmental Health Act*,
- *Waste Management and Pollution Control Act 1998* and its Regulations,
- NT WorkSafe Code of Practice How to manage and control asbestos in the workplace
- NT WorkSafe Code of Practice How to safely remove asbestos,
- The Northern Territory Government's Asbestos Management Policy for the built environment, available via https://dipl.nt.gov.au/infrastructure/infrastructure-nt/asbestos-management,
- NT EPA requirements for the Disposal of Asbestos in the Northern Territory which are available via https://ntepa.nt.gov.au/waste-pollution/guidelines/guidelines .

9.3 DETAIL REQUIRED IN AN AMP

An AMP must include details of:

- Any asbestos and/or ACM known to exist in the site of the works,
- The location of, or a copy of, any existing Asbestos Register for the site of the works,
- Any asbestos and/or ACM recorded in an existing asbestos register for the site of the works,
- Legislative and/or statutory requirements,
- Evidence of permits, approvals, licences having been obtained to enable the execution of the works in relation to asbestos and/or ACM,
- Organisational responsibilities for the control and management of the processes and procedures for dealing with asbestos and/or ACM,
- Proposed work activities and safe work method statements for dealing with asbestos and/or ACM,
- Occupational hygiene practices which will be followed for dealing with asbestos and/or ACM,
- Proposed methods for transport and disposal of asbestos and/or ACM waste,
- Emergency procedures for accidental damage to, or discovery of, asbestos and/or ACM,
- Signage and labelling on site and on asbestos and/or ACM packaged, stored and/or transported. Refer to the *Code of Practice: How to manage and control asbestos in the workplace* and to AS 1319 *Safety Signs for the Occupational Environment*.

Asbestos removal work is to be carried out only by a licensed asbestos removalist who is appropriately licenced to carry out the work, unless specified in the *Work Health and Safety (NUL) Regulations* that a licence is not required.

The licenced Asbestos Removalist must prepare an Asbestos Management Plan/Asbestos Removal Control Plan for any licenced asbestos removal work they are commissioned to undertake.

Asbestos and ACM waste must be disposed of legally at a waste disposal site licenced to accept asbestos and ACM.

Failure to comply with these requirements may result in remedial action being taken at your cost and may result in legal action being taken.

10. OTHER MANAGEMENT PLANS

The project risk assessment will indicate if other pollutants may be present. These may require management plans. These include, but are not limited to; PFAS compounds, heavy metals,

and/or hydrocarbon compounds. Details to be included in the plans will be outlined in the Risk Assessment.

11. CLEARANCES AND APPROVALS

The Department will usually obtain the following clearances and approvals:

- Aboriginal Areas Protection Authority (AAPA) Certificate for the protection of sacred sites,
- Consent from the relevant Land Council that allows for works on Aboriginal land (if applicable),
- Clearances from the relevant Land Council for the extraction of gravel and water on Aboriginal land (if applicable).

The clearances and approvals that are obtained by the Department will be for areas nominated by the Project Manager during project planning. If additional areas require AAPA or Land Council clearance/approval, then these may be obtained by the Department where relevant. The time required to obtain clearances/approvals must be taken into account and cannot be used by the Contractor to vary the contract with respect to time and associated costs.

It is the responsibility of the Contractor to check that all clearances and approvals have been obtained, that they have copies of all clearances and approvals, and that they comply with the conditions associated with all clearances and approvals.

12. LICENCES, PERMITS AND PERMISSIONS

Ascertain which licences, permits and permissions are required and obtain, and comply with, the licences and permits required to conduct works for the duration of the contract.

These include, but are not limited to:

- Permission to access pastoral, private or Aboriginal owned land,
- Permissions to extract water and/or minerals from pastoral or private land,
- Swipe card or Power and Water Corporation (PWC) Meter number for use,
- Permits from the relevant Land Council that allows for Contractors to enter and remain on Aboriginal land,
- Permits from the entities with jurisdiction over the land to carry out the works, and/or activities associated with the works, on that land.
- Approval from Department of Health (DoH) for on-site effluent disposal system. For remote areas certification from a licenced plumber is acceptable.
- Registration with DoH for a camp commercial food preparation area in accordance with the *Food Act*,
- The Department's Environment Services Branch endorsement of Contractor's Environmental Management Plan (CEMP).

13. LAND ACCESS

13.1 SUBMISSION OF PERMISSION TO ENTER LAND - HOLD POINT

Hold Point - Provide a copy of the written permission to enter land prior to entering land not owned by the Northern Territory Government or land outside a road reserve, unless permission is provided by the Superintendent.

Obtain the written permission from the owner, the lessee, the government operator, or, in the case of Aboriginal Land, a permit from the relevant Land Council.

14. CULTURAL AND HERITAGE CLEARANCES

14.1 CLEARANCE FROM LAND COUNCIL – HOLD POINT

Hold Point - Provide a copies of written clearance(s)/consent(s) from Aboriginal Land Council(s) with jurisdiction over the site(s) of the works for all works on Aboriginal Land before commencing works.

This Hold Point does not apply if the Principal or Superintendent has obtained and provides the required clearance(s).

Under the *Aboriginal Land Rights (Northern Territory) Act 1976* (ALRA) access to Aboriginal Land will require clearances from the relevant Land Council. These may include the area of proposed works, nominated extraction areas, nominated workers camp location and water points.

The Principal will generally obtain Land Council clearances for the project. If the Contractor elects to work outside the areas covered by the clearances it is the responsibility of the Contractor to apply for and obtain a Land Council Clearance under the ALRA before commencing works.

Hold Point - Provide copies of permits to access Aboriginal Land(s) issued by the Aboriginal organisation(s) with jurisdiction over the land(s) to which access is required for execution of the works.

The four Land Councils in the Northern Territory are:

- Northern Land Council
- Central Land Council
- Tiwi Land Council
- Anindilyakwa Land Council (Groote Eylandt).

14.2 ABORIGINAL AREAS PROTECTION AUTHORITY CERTIFICATE – HOLD POINT

Hold Point - Provide copies of AAPA Certificate(s) prior to commencing works. This Hold Point does not apply if the Principal or the Superintendent has obtained and provides the required AAPA Certificate(s).

The Principal has obtained or will obtain AAPA Certificate(s) under the *Northern Territory Aboriginal Sacred Sites (NTASS) Act*. The certificate(s) provide the Principal and it's Contractor, including sub-contractors, with indemnity from prosecution under the NTASS Act as long as the following are adhered to:

- All works are confined to the 'subject land' identified on the Certificate,
- All activities conducted by the Contractor are covered in the 'Proposed Work or Use' on the Certificate,
- All conditions on the certificate,
- All Contractors, employees and sub-contractors are aware of the conditions of the Certificate.

If the Contractor elects to work outside the areas covered by the Certificate provided, it is the responsibility of the Contractor to apply for and obtain an AAPA Certificate under the NTASS Act before commencing works. Approval of the Superintendent will also be required.

14.3 APPROVAL FROM HERITAGE BRANCH

Any construction work or proposed development on a heritage-listed property in the Northern Territory is regulated and controlled under the *Heritage Act*.

Some temporary work or routine maintenance on a heritage property does not need approval.

All Aboriginal and Macassan archaeological places and sites are automatically protected under the *Heritage Act*, whether they are recorded or not.

Where an *Environmental Risk Assessment* or *Notice of Intent* has been undertaken by the Department, any known/registered cultural and heritage items or places will be listed in the document. Any conditions relevant to the sites are to be adhered to at all times.

Contact the Department of Tourism and Culture (DTC), Heritage Branch on (08) 8999 5039 for more information. Information is also available at https://nt.gov.au/property/building-and-development/heritage-properties-building-works-and-development.

15. PROTECTION OF CULTURAL AND HERITAGE ITEMS AND PLACES

15.1 GENERAL - HOLD POINT

European Heritage and Aboriginal Cultural areas and items are protected under the *Heritage Act 2011* and *Northern Territory Aboriginal Sacred Sites Act 1989* (NTASS Act) respectively. Listed Matters of National Environmental Significance are protected under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Where an Environmental Risk Assessment or Notice of Intent has been undertaken by the Department, any known/registered cultural and heritage items or places will be listed in the document. Any conditions relevant to the items and places are to be adhered to at all times.

Hold Point - Should any item or artefact or material or relic be encountered which might be of heritage value or any item or relic or artefact or material which might be of Aboriginal origin, cease all construction work that might affect the item or artefact or material or relic and protect the item or artefact or material or relic from damage or disturbance. Notify the Superintendent immediately. The Superintendent will arrange for appropriate specialists and community representatives to inspect the site.

In the event any potential archaeological sites are encountered, works in the immediate area should cease and the Heritage Branch of Department of Tourism and Culture be contacted for advice. Advise the Superintendent that this has occurred.

Ensure that all personnel working on site have received training regarding their responsibilities regarding cultural heritage and are made aware of any sites/areas which must be avoided or protected including Sacred Sites identified on the AAPA Certificates.

Sites or areas which must be avoided or protected during works must be identified on a site map. The map must be made available to all relevant personnel during the works.

The protection of sites may require the installation of temporary protection fencing and maintenance of that fencing. Provide the temporary protection fencing and maintain it for the duration of the contract.

15.2 BREACH OF THE NT ABORIGINAL SACRED SITES ACT OR HERITAGE ACT

If AAPA, Aboriginal Land Council, or Department of Tourism and Culture notifies the Superintendent that a Certificate condition or any other condition applying to the protection of a sacred site or cultural heritage site has allegedly been breached, the Superintendent will instruct

the Contractor to stop work at or near the affected site.

The Superintendent will arrange for a meeting for the following purposes:

- To view the affected site,
- To discuss when work might resume in the vicinity of the sacred site or heritage site,
- Agree to any restorative measures that may be needed.

The parties that attend that meeting may include traditional custodians, the Contractor, AAPA representatives, representatives of the Principal, the Superintendent or a nominee of the Superintendent, and representatives of the Heritage Branch.

Works cannot recommence in the affected area until notification that works may recommence is given by the Superintendent.

If restorative measures are required the Superintendent will document the requirements and issue a letter to all parties specifying the restorative measures which are to be implemented together with a timetable for implementation. All parties are to respond to the letter to confirm agreement. The Superintendent will give instructions on the restorative measures which are to be implemented.

Meet the reasonable costs of:

- AAPA representatives and the custodians to attend the site meeting in accordance with Section 19G of the *NTASS Act,* and with the NTASS Regulations, and
- Any restorative measures agreed upon between AAPA and the custodians, or Heritage Branch, and
- The Principal, if any.

AAPA will independently investigate whether a prosecution should also be pursued under the *NTASS Act*.

16. PERMIT TO CLEAR NATIVE VEGETATION

16.1 SUBMISSION OF PERMITS / PERMISSIONS TO CLEAR NATIVE VEGETATION - HOLD POINT

Hold Point - Provide a copy/copies of permit(s) to clear native vegetation, for the execution of the works, from the permit authority under the *Planning Act* and/or the *Pastoral Land Act*, before commencing works.

Hold Point - Provide a copy/copies of written permission to clear native vegetation from the owner(s) or lessee(s) of the land, proposed to be cleared for the execution of the works, before commencing works.

Freehold land, which includes most rural areas of Darwin, Katherine and Alice Springs, as well as Aboriginal land and Crown land, is controlled by the *Planning Act*.

Land clearing on pastoral land is controlled by the *Pastoral Land Act*.

A permit to clear native vegetation may be required in accordance with the *Planning Act* or *Pastoral Land Act*.

Refer to the DENR webpage for more information https://nt.gov.au/property/land-clearing/application-process-and-legislation .

Refer to VEGETATION MANAGEMENT.

17. SITE CONTROL APPROVAL

17.1 APPROVAL FOR ANCILLARY AREAS - WITNESS POINT

Witness Point - Obtain written approval from the Superintendent for the establishment and use of any detours, turnarounds or equipment lay down areas. Use existing cleared areas where possible.

Site works and facilities must be located and managed to minimise impacts on the environment and on the community.

Do not form any new tracks, alter any existing tracks, erect any camps, remove any trees or shrubs, cut any fences or water, sewer, power or telecommunications lines or perform other activities not specified or indicated on the drawings or otherwise required under the Contract without the prior written approval of the Superintendent.

17.2 SITE STAFF FOR ENVIRONMENTAL MANAGEMENT

For Tier 4 and Tier 5 contracts, have at least one representative on-site at all times when works are being undertaken who has relevant experience and/or a Certificate level Qualification in Environmental Management for construction sites.

17.3 STAGING OF WORKS

All works are to be staged appropriately to minimise potential risks and impacts to the environment. Staging of the works must be addressed in the project timeline.

All works within waterways/drainage lines are to be completed and the site stabilised prior to the start of the Wet Season, nominally 1st October. If this is not possible and works will continue in the Wet Season, appropriate controls to manage environmental impacts are required to be established by 30th September.

18. CAMP SITE / COMPOUND / WORKSHOP PERMISSION

Pay all costs associated with the use of the site(s).

Maintain all facilities in good condition.

Maintain buildings in relation to fire protection in accordance with the Northern Territory *Building Act 1993* and Northern Territory *Fire and Emergency Act 1996* and associated Regulations.

18.1 SUBMISSION HEALTH DEPARTMENT PERMITS - HOLD POINT

Refer to the *Department of Health - Health Requirements for Mining and Construction Camps*

https://nt.gov.au/property/building-and-development/health-and-safety/health-requirements-mining-construction-projects.

Hold Point - Provide a copy of written approval from DoH for any proposed on-site effluent disposal system, before commencing works. For remote areas certification by a licensed certifying plumber is acceptable.

Hold Point - Provide a copy of written approval from DoH for any proposed kitchen and/or food handling facility.

18.2 APPROVAL OF REHABILITATION - HOLD POINT

On completion of the works remove all facilities, unless otherwise agreed in writing with the owner or lessee of the land and restore the site to a clean and tidy condition.

Rehabilitate the site to its condition prior to conducting site works for establishing the camp ground, compound and/or workshop unless another course of action is approved by the Superintendent. Where the camp site/compound /workshop is located within an extraction area, rehabilitation as per REHABILTIATION OF EXTRACTION AREAS DETOURS AND ACCESS TRACKS is to be undertaken and approved by Superintendent prior to final demobilisation.

Assume all responsibility for any current and consequential damage caused to the site as a result of occupation and pay for all remedial action required.

Refer to ENVIRONMENTAL LEGISLATION, REGULATIONS AND STANDARDS.

Hold Point - Obtain approval from the Superintendent for the completed rehabilitation of the camp site/compound/workshop before final demobilisation.

19. MATERIALS EXTRACTION APPROVAL/CLEARANCE

19.1 SUBMISSION OF APPROVALS AND CLEARANCES - HOLD POINT

Hold Point - Provide documented evidence that the appropriate approvals and clearances have been obtained, for extraction of materials/minerals including sand, and/or gravel, and/or fill, prior to commencing any work on or in material extraction areas, either new or existing.

The types of approvals include, but are not limited to, those from:

- Aboriginal Areas Protection Authority (AAPA),
- Northern Territory Environment Protection Authority (NT EPA),
- Heritage Branch - Department of Tourism and Culture,
- Relevant Land Councils,
- Land owner (freehold) or lessee of any land affected,
- Service Authorities,
- The Department's Environment Services Branch endorsement of Pit Management Plans,
- Any other relevant approving authority.

Creation or use of existing extraction areas for fill or gravel within the road reserve not supplied/nominated by the Department require the written approval from the Superintendent before use. Use of extraction areas will be allowed provided that all applicable requirements listed in this Specification are fulfilled and all permits and permissions are obtained.

Comply with the requirements stated in (Material) Extraction Areas and Water Sources clauses in the MISCELLANEOUS PROVISIONS and/or GENERAL REQUIREMENTS sections of the applicable project specification(s) which may be one or more of the following; the Standard Specification for Road Maintenance, and/or the Standard Specification for Roadworks, and/or the RFT/RFQ.

The Department's standard requirements for the operation of extraction areas are as follows:

Access

- Construct only one access road to each pit. Additional access roads require written approval from the Superintendent prior to construction,
- Confine all transport operations to the access road, the extraction area, the site of the works and/or existing public roads,
- Provide and maintain adequate road drainage to the access road.

Limit of excavation

- Not within 6m of any fence line or utility service line or point,
- Not within any gas pipeline easement,
- Not within 125m of any road or railway centre line,
- Not within 25m of a water course (refer to Northern Territory Land Clearing Guidelines 2010 for water course buffers),
- Not within 200m of a defined waterway crossing,
- Not within vegetative buffers,

- Pit should be 1ha maximum.

Hold Point – Obtain Superintendent approval to exceed 1ha pit size.

Extraction

- Stockpile cleared vegetation for use in pit rehabilitation,
- Strip 100mm depth top layer throughout the extraction area of operation and stockpile,
- Stockpiled material to be clear of drainage lines, and other vegetated areas, to a maximum height of 2m,
- Side slopes of sand or gravel to be no steeper than one vertical to two horizontal at any time when the excavation is unattended,
- Remove or bury by-products of the excavation operation unless otherwise specified,
- Progressively rehabilitate extraction areas i.e. rehabilitate one pit before moving to the next.

No deviation from the above requirements will permitted without written approval from the Superintendent to proceed.

The Department may require a Pit Management Plan be developed for large or high risk projects. The Pit Management Plan is to provide detail as to how the Contractor plans to clear, work and rehabilitate pits during the life of the project. The Pit Management Plan is to include, as a minimum, diagrams showing the pits to be used, location of stockpile sites, drainage lines and location and type of erosion and sediment controls, and details regarding pit staging and rehabilitation.

Rehabilitation of extraction areas is to be undertaken to REHABILTIATION OF EXTRACTION AREAS, DETOURS AND ACCESS TRACKS.

20. REQUIREMENTS FOR EXTRACTIVE OPERATIONS IN NORTHERN LAND COUNCIL AREAS

These conditions take precedence over any conflicting provision in this specification for mineral extraction operations taking place in land under the jurisdiction of the Northern Land Council and its Aboriginal Land Trusts.

These conditions apply to all personnel who enter the site of the extractive area.

Extractive operations are only permitted for gravel and sand.

The extracted minerals are to be used only for the works subject to the contract.

The rights to extract minerals, and the rights to the minerals extracted, cannot be assigned to any other person or entity. Any extracted minerals cannot be sold.

Use the extracted gravel and sand for roads and associated drainage, aerodromes, barge landings and essential services infrastructure only.

Top soil and rock are not to be removed from the site of the extractive area but may be relocated within the extractive area.

The quantities of gravel and sand removed must be measured in compacted cubic metres.

Record quantities of gravel and sand removed, in compacted cubic metres, and send this information to the Superintendent on a monthly basis.

Allow a Land Trust nominee access to the site of the extractive operations provided at least 7 days' notice is given by the Land Trust or its nominee.

Do not take firearms, alcohol or animals onto the extractive area.

Do not enter a building area, a living area or an occupied or currently in use camp site unless invited to do so by the occupier.

Do not enter or disturb a sacred site or a recorded site of significance or human remains or an archaeological site.

Do not disturb, interfere with, photograph or otherwise record any sacred object, Aboriginal painting or Aboriginal ritual or ceremony.

Do not commit an offence under the laws of the Northern Territory.

Do not act in a manner which offends against the rights of others, including Traditional Owners, with rights of access to the extractive area.

Provide a list of the names of all personnel who will enter the extractive area. This list can be provided in the application for a permit to work made under the *Aboriginal Land Rights Act*.

Do not take up residence in the extractive area.

Extractive areas must be at least 50m away from any watercourse.

Extractive areas must have a buffer zone of at least 50m width of native vegetation from adjacent land, existing roads, and water courses.

Provide an Environmental Management Plan which details the measures in place for sediment and erosion control.

Do not carry out, or allow to be carried out, any activity which is noisome, dangerous or offensive and which may become a nuisance to the Land Trust or persons living in the vicinity of the Extractive area, having regard to the nature of Extractive Operations, including the use of heavy plant and equipment.

Comply with any restrictions or conditions stated in any AAPA clearances related to the works.

21. STOCKPILE MANAGEMENT

Install all necessary erosion and sediment control measures to effectively manage sediment laden runoff or wind erosion from stockpile areas.

Do not place stockpiled materials inside vegetation protection areas or within 10m of retained trees or within the drip line of any trees. Comply with *AS 4970 Protection of trees on development sites.*

Do not place stockpiles within 50m of any drains, drainage lines, creeks or other waterways.

Locate the stockpiles so that any slump of the stockpile would not affect erosion and sediment control measures or infringe upon specified minimum clearance requirements.

Top soil stockpiles are not to be more than 2m in height. All other stockpiles should not be more than 3m in height.

21.1 SUBMISSION OF APPROVALS – HOLD POINT

Hold Point - Obtain approval from the Principal or Superintendent for the stockpiling of material more than 2m in height. The approval is to include the reason for stockpiling at this height and also provide measures to mitigate dust, erosion and sedimentation.

Topsoil that is not contaminated by declared weeds must be stockpiled for later spreading on batters and other disturbed areas. Other material may also be stockpiled but separated from the topsoil stockpiles.

Stockpiles in residential areas or adjacent to sensitive receivers are not to exceed 2m in height.

Maintain the stockpiles to prevent the growth of weeds on the stockpiles.

22. WATER EXTRACTION LICENCE

Pay all fees and costs associated with the extraction of water.

22.1 SUBMISSION OF WATER EXTRACTION LICENCE - HOLD POINT

Hold Point - Provide a copy of a Water Extraction Licence for the taking of groundwater and/or surface water outside urban areas for the works subject to the contract unless a permit has been obtained by the Superintendent. This Hold Point does not apply to the extraction of water to be used for road works on Northern Territory Government owned public roads.

Obtain a Water Extraction Licence under the *Water Act 1992* from Department of Environment and Natural Resources (DENR) to extract water for all works, including building construction, outside the urban areas.

The Northern Territory Administrator signed an exemption to Section 45 of the *Water Act* for extraction of water for the purpose of road works on public roads. This exempts the Department and its Contractors from the requirement to obtain a water extraction licence when undertaking water extraction associated with road works on public roads.

NOTE: Although a licence from DENR to extract water for road works is not required, approvals to use or extract water from a waterway may still be required as specified below.

23. WATER EXTRACTION APPROVAL

23.1 SUBMISSION OF WATER EXTRACTION APPROVAL - HOLD POINT

Hold Point - Obtain written permission from the owner or lessee if water extraction is proposed from a private bore, dam, Power and Water Corporation (PWC) hydrant or stand pipe, or waterway, for all works. Provide a copy of the written permission, or a copy of the PWC swipe card, to the Superintendent. Include this information in the CEMP.

For projects other than roadworks, including civil and building projects, apply to the relevant authority for approval to use and draw water from any surface or subsurface body. Generally this is either Water Resource Branch DENR https://nt.gov.au/environment/water/apply-for-water-extraction-licence or PWC. Allow at least 3 weeks for this process.

Water extraction procedures must include regular testing of the source if water from a sewage treatment works or another source other than a town water supply or natural water source is to be used. Testing must ensure that the water is suitable for the purpose and is not hazardous to health and the environment.

23.2 EXTRACTION FROM HYDRANTS AND STANDPIPES

Where water extraction is required within an urban or peri-urban area for projects, the relevant PWC permit, swipe card or meter number is to be provided to the Superintendent and included in the CEMP.

23.3 EXTRACTION FROM BORES - HOLD POINT

Hold Point - Provide documentary evidence of approvals and clearances to extract water from any bore which is not an NTG Road Bore and for which the Principal or Superintendent has not provided an approval. Provide these before commencing any water extraction activities.

Hold Point - Provide copies of written permission to gain access to the land where the water bodies or bores which are to be used for extraction of water are located.

Where possible the Principal will nominate bores for projects. NTG Road Bores are to be utilised where possible, but where this is not practical, private bores may be nominated. Any approval to access private or leasehold land to extract water from a bore is the responsibility of the Contractor.

If the Principal nominates a bore for water extraction on Aboriginal Land, the Principal will provide the relevant clearances. If the Contractor nominates a bore other than those provided in the tender documentation, it is the responsibility of the Contractor to obtain all relevant approvals, including AAPA and Land Council clearances.

Resources are available to assist the Contractor in locating suitable locations to extract water. e.g., the DENR internet page for bore locations. These services should be used where possible to find appropriate bores to service works.

Where the extraction from a bore within 1 km of PWC production bores, in close proximity to a remote community, is required for project works, the PWC Remote Operations Senior Hydrogeologist is to be contacted on 1800 245 092 during normal business hours. PWC needs to ensure that the taking of groundwater from aquifer systems developed for Remote Community water supply will not place unsustainable stress on that water supply during the works.

23.4 SURFACE WATER EXTRACTION - HOLD POINT

Hold Point - Provide copies of approvals and clearances to extract surface water before commencing water extraction activities.

Hold Point - Do not form sumps or dams in water courses or water bodies unless permission is given by the Superintendent.

Surface water may be used for projects where groundwater sources are unavailable. If a project requires the extraction of water from a water body, where available the Principal will nominate the water point and provide the relevant cultural clearances.

Obtain approval to access the water point where a water point on Private or Leasehold Land is nominated.

If the Contractor nominates a water point other than those provided in the tender, approval from the Department may be granted provided the following conditions are adhered to:

- Notify the Superintendent of the location, expected water use and how it will be extracted for each and every proposed occasion. This must be done prior to extracting any water. The Superintendent will review the information prior to providing approval. Do not extract water until permission to extract water is granted.
- All relevant cultural clearances are to be valid and allow for access to and extraction of water.
- For all water bodies, ensure that any water extraction will not reduce the supply utilised by local landholders to the point where such users are adversely affected. For all water bodies, ensure that any water extraction will not reduce the supply to the natural environment to the point where the natural environment is adversely affected. The general guideline is that only 20% of any flow in a river or 20% of any standing water body should be used in the Top End and 5% for Southern Regions. Generally, construction of sumps or dams is not permitted.
- Where a standing water body is less than 500mm deep or extraction from the water body (river or waterhole) is likely to exceed 20% as detailed above, source an alternative water supply. Should alternative water supply not be available contact the Department's Environment Services Branch for advice and guidance.
- Protect the banks and beds of any waterhole or river, including soaks used from seasonally dry river beds, used for water extraction. Any damage is to be repaired immediately. Pads and tracks likely to contribute to erosion must be rehabilitated.
- No fuels, lubricants or equipment, other than pumping equipment are permitted to enter or remain at the water body.
- Non-permeable bunding in accordance with AS 1940 is to be provided around pump and generator equipment.

24. WATER QUALITY

Comply with all relevant legislative requirements and requirements of local water authorities and all other relevant laws and by-laws in force in the Northern Territory.

Provide controls, including soil erosion and sediment controls, to ensure that all water leaving the site complies with any water quality criteria nominated by DENR and/or NT EPA and/or as specified under the Environmental Management Specific Requirements clause in ENVIRONMENTAL MANAGEMENT in the RFT/RFQ.

Water quality of the downstream environment is to remain as close as possible in quality as those upstream environments above the designated works area.

In the urban environment measures are to be implemented to prevent contaminated water leaving the worksite and entering stormwater infrastructure.

Where specified under the Environmental Management Specific Requirements clause in ENVIRONMENTAL MANAGEMENT in the RFT/RFQ water quality monitoring is to follow basic scientific methodology as detailed in the ANZECC publication *National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting* (October 2000) available via http://webarchive.nla.gov.au/gov/20130904202327/http://www.environment.gov.au/water/publications/quality/nwqms-monitoring-reporting.html

Baseline measurements of, as a minimum, upstream and downstream flow rates, turbidity and pH levels, are to be undertaken prior to commencement of the works.

During construction monitoring is to occur at the same locations upstream and downstream at approximately 100m away from either side of the boundary of the works area and at the same time weekly to ensure consistency. A proposed time of the day and day of the week for testing to be carried out is to be approved by the Superintendent prior to works commencing (for example: Wednesday 10.00am each week). Test results are to be provided to the Department within 24 hours of the test having been carried out.

The water testing is to include the upstream and downstream flow rates, turbidity and pH levels.

The weekly reporting is to include:

- The date and time the monitoring was undertaken at each location,
- The details of the person undertaking the monitoring (name, title and contact phone number),
- The GPS location of the sampling site,
- The flow rate in m^3/s,
- The quantity of water extracted from the waterway during the previous week (if any),
- The turbidity in Nephelometric Turbidity Units (NTUs),
- The pH level.

24.1 POTABLE WATER PIPEWORK COMMISSIONING MANAGEMENT

Standard to PowerWater requirements.

Flush the pipework to clear dirt and debris.

Disinfect the pipework.

De-chlorinate the pipework.

Test the pipework for residual chlorine levels and for the presence of bacteria.

If the pipework fails a test the process is to be repeated as often as necessary to achieve a pass on the test.

The environment to which the chlorinated water is to be discharged must be inspected and approved by the relevant authorities.

Flushing/discharge must be managed to prevent damage/impacts to the environment. If chlorinated discharge may damage/affect the environment, neutralising chemicals must be used.

Disinfection and de-chlorination of water service connections larger than 20mm is required for all new reticulated pipework.

After successful completion of chlorination process, adequately flush the new water main at high flow using mains water through an approved PWC meter with the appropriate backflow prevention device to remove debris until chlorine residuals are equivalent to town water (less than 1mg/L). PWC must be notified a minimum of 24 hours prior to flushing. The certifying consultant shall collect and deliver the water sample for bacteriological test.

Engage a Consultant to undertake pressure, chlorination and bacteriological tests. If the tests indicate that the pressures or chlorination or bacteria levels in the tested water do not meet PWC requirements undertake rectification actions and re-test, at no cost to the Principal, until the required levels are achieved. The consultant shall provide the pressure, chlorination and bacteriological test results from all tests to the Superintendent. The consultant shall provide the final, compliant, pressure, chlorination and bacteriological test results to PWC prior to the handover meeting. The chlorine results will only remain valid for a maximum period of 14 days from date of testing.

Once tests have been completed to the satisfaction of PWC requirements, the chlorinated water shall be discharged to prevent damage to pipe lining or prevent corrosion to the new pipework. The environment to which the chlorinated water is to be discharged must be inspected and approved by the relevant authorities. If chlorinated discharge may damage or affect the environment, neutralising chemicals must be used.

24.2 SURFACE WATER MANAGEMENT

The natural channel geometry and meander form of perennial and non-perennial streams must not be altered, nor riparian vegetation disturbed except where written approval is given by the Superintendent.

Temporary hydraulic structures such as open channels, drainage lines, batter chutes, release points into streams, and vehicle crossings, are to be designed to carry flows and remain stable, without causing erosion damage, in at least the 5-year Average Recurrence Interval (ARI) event of critical duration.

Flow in channels and drainage lines must be managed to non-erosive velocities, or channels lined with suitable protective material as necessary to prevent scouring.

Works in waterways and stormwater drainage lines are to be timed to minimise the potential for exposure to rain or flood events, have minimal disruption with disturbed areas and be rehabilitated within 10 days following completion of works in these areas.

Table drains are to be top-dressed with stripped topsoil from the project to promote the re-establishment of grasses along batters. Where specified in the project RFT/RFQ the batters are to be hydro-mulched with native or exotic species as listed in the document.

25. CONSTRUCTION SITE DEWATERING

25.1 APPROVAL OF DEWATERING ACTIVITIES - HOLD POINT

Hold Point - Superintendent to approve any proposed dewatering activities prior to commencement of the activity.

25.2 DEWATERING REQUIREMENTS

Dewatering includes any activity that involves the removal of clean ponded stormwater or infiltrated groundwater from any location on site and the subsequent reuse or discharge of that clean water.

Conduct all dewatering activities in a manner that does not pollute the environment.

Water quality is to be adequately and continuously protected through all phases of development and construction of the project. Water discharged from the site is to be of a standard to ensure no detrimental impacts on water quality and the environment occur during the construction phase. An increase in suspended solids within surface waters discharged from a work site is not to exceed a 10% increase from upstream to downstream of the site, where water quality up stream of the site has not been impacted on by other soil disturbing activities.

The NT EPA has developed the *Guidelines to Prevent Pollution from Building Sites* (NT EPA 2015) available via https://ntepa.nt.gov.au/waste-pollution/guidelines/guidelines .

According to the NT EPA Guidelines, on-site dewatering water quality release criteria are:

Indicators	Criteria
Turbidity	<20NTU
Total suspended solids	<50mg/L
pH	6.5 - 8.5
Dissolved Oxygen	90th percentile > 80% saturation or 6 mg/L
Litter	No visible litter washed from site
Oil and Grease	No visible oil or grease

Ensure water released from site conforms to these criteria as a minimum. Water released from site must also conform to PWC requirements. Water released from site must conform to the more stringent requirements if there are differences in the two sets of requirements.

26. VEGETATION MANAGEMENT

26.1 OVERVIEW

Do not destroy, remove or clear vegetation to an extent greater than is necessary for the execution of works.

Minimise environmental risks by following vegetation management strategies such as:

- Excluding access to significant vegetation areas,
- Excluding access to sacred sites, sacred trees, sacred features, sacred areas and the like in accordance with PROTECTION OF CULTURAL AND HERITAGE ITEMS AND PLACES,
- Selecting appropriately sized clearing machinery and equipment,
- Minimising worksite area,
- Protecting vegetation drip lines,
- Locating ancillary activities, such as stockpile sites, camps, parking locations, vehicle hardstands and the like, within existing disturbed areas.

Where trees are to remain on site within the construction zone, meet the requirements of AS 4970 *Protection of trees on development sites*. The radius of the Tree Protection Zone (TPZ) is determined using the formula TPZ = Trunk Diameter at Breast Height (1.4m above ground) x 12.

26.2 ACTION REQUIRED IF A THREATENED SPECIES IS DISCOVERED - HOLD POINT

Hold Point - Should a threatened species be identified onsite, in addition to those identified in the relevant Environmental Risk Assessment, Notice Of Intent, or other Department gained approval, stop works in the immediate area, notify the Principal and the Superintendent, and install a temporary protective barrier to protect the species. Do not recommence works in that area until protection measures required by the appropriate authority have been implemented and the Superintendent advises that work can resume in that area.

26.3 SITE CLEARING – WITNESS POINT

Witness Point - Prior to clearing any area, it is to be demarcated with fencing, flagging tape, spray paint or other method approved by the Superintendent. Provide documented advice of the proposed methods for demarcation of areas to be cleared.

Do not install any demarcation indicators (tapes, spray paint or other) outside the clearing limits shown on the drawings, and do not install any demarcation indicators outside any other clearing limits approved in writing by the Superintendent. Contain the extent of site clearing to within the limits specified or indicated on the drawings or otherwise approved in writing by the Superintendent. Ensure that all site personnel observe the limits of clearing.

Should works or disturbance be proposed in areas outside the previously approved works boundaries, permission must be obtained in writing from the Superintendent. Justify the need to enter any areas outside of the previously approved site boundaries and detail the works proposed within the new limits on plans.

If any areas of vegetation within the limits of clearing are to be retained, fence off with temporary fencing.

Clearing should be staged so that land disturbance is confined to minimum areas of manageable size, thereby limiting the extent and duration of exposure. Control measures should be applied progressively as each stage is cleared.

All areas to be cleared must be identified on clearing plans. These clearing plans must be approved by the Superintendent. These approved clearing plans must be provided to the personnel undertaking the clearing works. The areas to be cleared must be clearly demarcated on the ground prior to any clearing activities commencing.

Methods and timing of clearing is to be implemented in a manner that minimises the potential for erosion to occur. All machinery operators should be trained in best practices for clearing to minimise erosion.

Cleared vegetation, excluding weeds and their seeds, may be stockpiled and reused on site for rehabilitation of disturbed areas such as, extraction areas, vehicle turn around areas, detours etc.

Where applicable, cleared vegetation, excluding weeds and their seeds, can also be mulched on site and re-used on site where appropriate as ground cover or environmental control measures, if suitable.

Storage of cleared vegetation and stripped topsoil is not to impact on areas outside of that documented as the site area for project works.

Clearing of native vegetation, particularly within extraction areas, is to adhere to the buffer requirements to waterways stated in the *NT Land Clearing Guidelines 2010* available via https://nt.gov.au/property/building-and-development/northern-territory-planning-scheme/referenced-documents-guidelines.

Any variation to the buffers distances outlined in the *NT Land Clearing Guidelines* will require prior written approval from the Superintendent.

Remove excess or unwanted material from the site and dispose in accordance with local authority requirements and guidelines.

Refer to REFERENCES and to PERMIT TO CLEAR NATIVE VEGETATION.

26.4 PRUNING OF AMENITY TREES

Carry out tree pruning operations in accordance with AS 4373. Include at least one qualified arborist in each tree pruning team.

Tree lopping or heavy pruning practices are not acceptable, except on the written recommendation of a qualified arborist. Obtain written approval from the Superintendent if tree lopping and/or heavy pruning is required.

Tree removal operations do not require a qualified arborist to be included in the work team.

26.5 LIGHTING OF FIRES

The lighting of fires for clearing of vegetation or disposal of rubbish is not permitted under any circumstances.

Where fires are accidentally started, extinguish the fires immediately if safe to do so. Camp fires are not permitted on site without written consent from the Superintendent. Where campfires are permitted, control of campfires are strictly the Contractor's responsibility. Fires are not permitted during fire bans.

The provision of containers or sand buckets are required around workers' compounds and camp sites and, where practical, in the worksite, for the disposal of cigarette butts.

27. FAUNA MANAGEMENT

All native wildlife must be protected.

All trees to be removed are to be inspected to establish whether nesting native fauna are present. If present, disturbance should only proceed after approval from the Superintendent.

Fauna spotters/handlers are required where projects require the clearing of mature trees that have a high risk of nesting or roosting opportunities for wildlife and/or where greater than 1 hectare of native vegetation is required to be cleared.

27.1 NOTICE OF THREATENED OR NESTING FAUNA - HOLD POINT

Hold Point - Advice must be sought from DENR or the Department's Environment Services Branch if nesting fauna are sighted. Ensure sufficient time is available to allow any required specialist to make a determination and give advice to the Superintendent.

Hold Point - Should a threatened species be identified onsite, stop works in the immediate area, notify the Superintendent, and install temporary protective barriers to protect the species.

28. ANIMAL MANAGEMENT

All necessary measures are to be implemented to prevent the establishment of suitable environments for mosquito breeding habitat. Where works are undertaken in areas known for biting insects, personal protective measures are to be made available to workers and visitors.

Ensure that all necessary measures are undertaken to prevent the introduction and spread of pest animals. No domestic pets, including dogs, are to be brought to the construction site by construction personnel without written approval from the Superintendent. If approved, pets must be under control and safely secured at all times.

28.1 NOTICE OF PETS - WITNESS POINT

Witness Point - Provide evidence that pets will be under control and safely secured at all times.

29. COMMUNITY LIAISON

29.1 NOTIFY RESIDENTS AND BUSINESSES

Notify local residents and businesses, including Aboriginal communities, about new or changed construction activities which will affect access to their properties or otherwise significantly disrupt residents or occupiers use of their premises.

Unless the work is of an urgent nature for safety reasons, notification of residents must be at least 5 working days before commencing the work and must advise of the following:

- The nature of the work,
- Why it is necessary,
- The expected duration,
- Changes to arrangements for traffic or property access,
- The name and contact telephone number of the Contractor's representative who can respond to resident concerns and who can be contacted 24 hours a day, 7 days a week.

The Superintendent will provide the Contractor with a contact point for Aboriginal communities.

29.2 COMPLAINTS

Within 1 working day of receiving a complaint about any environmental issue, including pollution, supply a written report to the Superintendent detailing the complaint and action taken to alleviate the problem. Keep a register of all such complaints, together with the following records:

- Date and time of complaint,
- The method by which the complaint was made (telephone, letter, meeting, etc.),
- Name, address, contact telephone number of complainant (if no such details were provided, a note to that effect),
- Details of complaint,
- Action taken in response including follow up contact with the complainant,
- Any monitoring to confirm that the complaint has been satisfactorily resolved,
- If no action was taken, the reasons why no action was taken.

30. AIR QUALITY

Construction facilities are to be designed and operated to minimise the emission of smoke, dust, pesticides and other substances into the atmosphere.

Comply with the requirements of the WMPC Act and any conditions of licences, notifications, approvals or permits in relation to maximum air pollutant levels.

Where monitoring is required, the monitoring must comply with the NT EPA air quality guidelines.

Employ construction methods that will keep the air pollution to a minimum. Apply appropriate measures to ensure that airborne pollutants from all activities do not cause undue disruption or inconvenience in the vicinity of the Site.

The following measures, where applicable, are to be conducted to minimise this risk to the environment:

- Spraying of earthwork formations and roads with water or other suitable liquids approved by the Superintendent,
- Removal of mud from the wheels and bodies and undercarriages of haulage equipment before it enters public roads or other sealed pavements,
- Quick removal of mud spilt or deposited by the transport of materials on to public roads or other sealed pavements,
- Limit vehicle speeds on unsealed roads/surfaces to control the generation of dust by vehicles,

- Establishment of suitable cover crop or provision of other covering over topsoil stockpiles,
- Erection of dust screens around stockpiles, and/or spraying of stockpiles with suitable stabilising agents,
- Stopping dust generating activities which cannot be adequately controlled by water or other means,
- Transportation of materials which are suitably covered and loaded in a manner that will prevent dropping of materials,
- Maintaining dust control equipment so that this equipment is available when required, including periods of dust generating activities or high wind speed,
- Maintaining exhaust systems of construction plant, vehicles and machinery in accordance with manufacturer's specifications and undertaking periodic visual checks of exhaust systems' emissions,
- Treating topsoil stripped areas with no scheduled activities within two weeks to prevent dust generation.

31. NOISE CONTROL

Operate within the requirements of the *NT EPA Noise Guidelines for Development Sites* in the Northern Territory available via https://ntepa.nt.gov.au/waste-pollution/guidelines/guidelines , and the *WMPC Act*, or where operation outside of these guidelines is required obtain approval from the Superintendent.

Take all practical precautions to minimise noise resulting from the work activities. Fit noise suppressors to all construction equipment so that noise is minimised.

Do not use loud hailers in built up areas.

Where applicable the following measures should be applied to minimise the impact of noise:

- Substitution by an alternative process,
- Restricting times when noisy work is carried out,
- Placement of work compounds, parking areas, equipment and material stockpile sites away from noise-sensitive locations,
- Where noise barriers/walls are to be constructed, programming this as early as possible to reduce noise impacts from other construction work on neighbouring residents,
- Screening or enclosures,
- Consultation with affected residents.

31.1 COMPRESSOR SILENCING

Fit all compressor sets used in the performance of this work with effective acoustic canopies and engine exhaust silencers of a type as recommended by the compressor manufacturer.

Alternatively, compressor sets specially designed for quiet operation may be used. Keep compressor sets and canopies in effective operating condition at all times. Keep any access panels in acoustic canopies closed at all times while the sets are running.

31.2 JACKHAMMER SILENCING

Fit all jackhammers used in the performance of this work with effective silencers of a type as recommended by the jackhammer manufacturer. Service and maintain all tools to manufacturers recommendations at all times.

31.3 GROUND VIBRATION AND AIR BLAST

Take due care in all construction activities to prevent damage to adjacent public utilities, structures and buildings resulting from construction vibration and air blast. To protect the amenity of the occupiers of buildings, the activities must be carried out to meet appropriate standards and guidelines such as AS 2436 and AS 2187.2, British Standards BS ISO 4866 and BS 7385.2 and ANZECC publication *Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration, September 1990*, available via http://www.nepc.gov.au/resource/anzecc-reports

Consider measures to minimise the impact of vibration and air blast, such as:

- Substitution by an alternative process,
- Restricting times when work is carried out,
- Screening or enclosures.

Consult with affected residents before commencing any activities likely to cause ground vibration or air blast.

32. PRESERVE VISUAL VALUES

Maintain the visual amenity of adjacent land owners at all times during the construction. Keep the site neat and tidy at all times.

Design and erect temporary lighting, including compound security lighting, in such a way that it minimises nuisance to residents, but conforms to the safety requirements for the illumination of the site. Ensure that adjoining residents or passing traffic is not affected by glare.

Rehabilitate land disturbed during the course of works as soon as possible.

33. CONTAMINATION MANAGEMENT

Comply with the WMPC Act in relation to disturbance or treatment of potentially contaminated land.

Immediately implement any control measures needed to divert surface runoff away from

contaminated land and to capture and manage any surface runoff contaminated by exposure to contaminated land.

33.1 CHEMICALS, DANGEROUS GOODS AND OTHER POTENTIAL CONTAMINANTS

Transportation of chemicals and dangerous goods is to be undertaken in accordance with relevant NT and National legislation, codes and standards including *Transport of Dangerous Goods by Road and Rail (National Uniform Legislation) Act 2010*.

Plan and execute all works to minimise the possibility of pollution of the Site and adjoining areas from chemicals, dangerous goods and other potential contaminants.

Use, store and handle chemicals and dangerous goods in accordance with all relevant legislation, manufacturer's instructions and the relevant Safety Data Sheets (SDS). Employ transporting, handling, storage and application methods that will prevent chemical, fuel and lubricant spillage on the site and adjoining areas.

Do not pollute or permit pollution of land or waterways by a chemical, fuel or lubricant, or any waste material or imported fill.

Failure to comply with these requirements may result in remedial action being taken at your cost and may result in legal action being taken.

33.2 SPILLAGE PREVENTION AND CONTAINMENT

Storage of chemicals and fuels is to meet requirements under AS 1940 *The Storage and Handling of Flammable and Combustible Liquids*. As a minimum the capacity of the bunded area (spillage containment compound) shall be at least 100% of the volume of the largest package plus 25% of the storage capacity up to 10,000 Litres (L), together with 10% of the storage capacity between 10,000L and 100,000L, and 5% above 100,000L.

The bunded storage area shall be sufficiently impervious to retain spillage and to enable recovery of any such spillage.

Do not locate storage areas within 50m of natural or built drainage lines, flood prone areas, or on slopes steeper than 1:10.

Do not leave refuelling operations unattended.

Do not refuel or maintain plant and equipment, mix cutting oil with bitumen, or carry out any other activity which may result in the spillage of a chemical, fuel or lubricant on any location with direct drainage to a waterway or environmentally sensitive areas without appropriate temporary bunding.

Vehicles and machinery are to be maintained to manufactures specifications to reduce the risk of fuel, oil or hydraulic fluid spills into the surrounding environment.

Do not use vehicles, machinery, plant or equipment which have fuel or oil leaks.

Where possible, workshops are to have impermeable floors to prevent hydrocarbon spills into the soils. If not, contaminated soils from the workshop area are to be disposed of in accordance with the WMPC Act.

Before discharging any water from bunded areas, verify that the water complies with any applicable legislation or water quality criteria nominated by the NT EPA and/or DENR. Arrange appropriate treatment if the water quality is not suitable for discharge.

Spill clean-up equipment and materials, appropriate for the type and quantities of chemicals used on site, must be kept on site at all times during the works and in a readily accessible location.

The equipment and materials for spill clean-up and containment must be maintained and replenished as needed.

All site personnel must be trained in the use of spill clean-up equipment, and containment of materials, including appropriate storage of chemicals if materials must be on site whilst any works are conducted on site. All site personnel must be aware of the location of spill kits on sites.

Clean up all chemical spills immediately. This may require the excavation of contaminated soil and appropriate remediation or disposal at a waste disposal facility. Dispose of contaminated materials in a legal site using legal methods.

Failure to comply with these requirements may result in remedial action being taken at your cost and may result in legal action being taken.

If spills result in an environmental incident, ensure that the incident is reported in accordance with reporting procedures and legislative requirements.

Do not dispose of liquid paint materials or other hazardous materials by flushing down any sewer, stormwater system or natural waterway.

Keep records of all water quality checks, discharges and any remedial actions.

Report all chemical spills to the Superintendent. Where appropriate, also report spills to the NT Pollution Hotline, phone 1800 064 567.

34. WASTE MANAGEMENT

Comply with the requirements of the WMPC Act.

Remove from the site and dispose of all waste materials, including green waste, food scraps and other putrescible wastes, construction waste, chemicals and effluent in an appropriate manner, in approved legal waste disposal sites or facilities.

Failure to comply with these requirements may result in remedial action being taken at your cost and may result in legal action being taken.

Recycle waste materials where appropriate.

34.1 WASTE MANAGEMENT REGISTER

Maintain a Waste Management Register for the duration of the Contract, to record the types, amounts and locations of waste reused, recycled, stockpiled and / or disposed of. The Waste Management Register must include the following details:

- Type of waste and its classification according to the WMPC Act and/or Regulations. A list of wastes in Schedule 2 of the WMPC Regulations can be seen via https://ntepa.nt.gov.au/waste-pollution/approvals-licences/listed-waste
- or via http://www.austlii.edu.au/au/legis/nt/consol_reg/wmapcr659/. See also Waste Classification Codes in the NT EPA documents titled *Completing a Waste Transport Certificate* and *Controlled Waste Consignment Authorisation (CWCA) Form*, both accessible via https://ntepa.nt.gov.au/waste-pollution/guidelines/guidelines ,
- Tonnes of waste,
- How and where the waste was reused, recycled, stockpiled or disposed,
- Date when the waste was reused, recycled, stockpiled or disposed,
- Name of the transporter used (Person or Business name),
- Be able to produce receipt of commercial disposal if requested.

34.2 MATERIALS WITH RECYCLED CONTENT

Implement measures to reduce, re-use and recycle waste products/materials including soil, road pavement materials, concrete, oils and vegetation.

Demonstrate the priority use of materials and products that maximise the use of recycled content wherever these are cost and performance competitive, and are at least the environmental equivalent of the non-recycled alternative. Assess the cost competitiveness of a product or material on a project lifecycle basis, considering issues such as impacts on construction practices, future maintenance and disposal requirements.

34.3 HAZARDOUS WASTE AND MATERIALS

There is the potential, within a variety of workplaces, for persons to be exposed to hazardous waste materials and viruses. Exposure to these hazards can be managed by following the principles of a three-step risk management process:

1. Hazard identification,
2. Risk assessment,
3. Risk control.

Notify the Superintendent of any occurrence of any persons having been exposed to hazardous waste.

Exposure to asbestos and/or asbestos containing material (ACM) is identified as a risk to projects involving new construction associated with, demolition of and refurbishment of buildings in the Northern Territory.

Exposure to asbestos and/or ACM is an identified risk to projects involving excavation works, especially near areas where buildings were demolished after Cyclone Tracy.

34.4 EFFLUENT DISPOSAL

Ensure that all effluent from amenities is discharged into an approved facility or, if permitted by the controlling authority, the local sewerage system. Effluent disposal direct to ground or water is NOT permitted.

Septic tanks and portable self-contained toilets of suitable capacity may be used subject to suitable arrangements for the disposal of effluent.

Do not create new pit toilets. Do not use existing pit toilets.

All septic tank installations or alternative septic systems servicing buildings both within and outside of declared building control areas, apart from installations subject to the *Building Act*, must be approved by the Chief Health Officer (CHO) or the CHO's delegate for the area in which the works are to be carried out, or, in remote areas, by a licensed certifying plumber. Further information may be obtained from the relevant Environmental Health Officer in whose area the works are to be located. Regional contacts are contained within the *Code of Practice for On-Site Waste Water Managemen*t accessible via https://nt.gov.au/property/building-and-development/wastewater-management/codes-and-guidelines .

34.5 ILLEGAL DUMPING

Illegal dumping is not permitted.

Do not litter, dump or dispose of unwanted waste or dispose of surplus construction materials including bitumen, asphalt or concrete or permit such activities, on any land on or around the site.

All waste must be removed from site and disposed legally at a licenced, legal waste facility.

34.6 NOTIFICATION OF THE TRANSPORTING AND DEPOSITING OF WASTE – HOLD POINT

Hold Point - Written approval from the Superintendent is required prior to transporting wastes generated by or for the Principal to an area that is not a licensed waste facility or a place owned by the Principal. This includes waste transported for reuse, recycling, disposal or stockpiling.

Hold Point - The transport and disposal of prescribed waste specified in Schedule 2 of the Waste Management and Pollution Control (Administration) Regulations will require prior approval from the NT EPA.

35. REHABILITATION OF EXTRACTION AREAS, DETOURS AND ACCESS TRACKS

Progressively rehabilitate extraction areas to reduce the area of exposed soil during construction works.

Following excavation of the required material, any unused rock and gravel material is to be spread back over the extraction area. The extraction area “floor” is to be ripped using dozer or grader tynes to a depth of 100mm to 200mm to loosen the floor to encourage new plants to establish. Ripping is to be carried out along contour lines to reduce erosion.

The previously stripped and stockpiled material including topsoil and overburden is to be pushed back over the excavation, detour or access track. The stockpiled topsoil is to be spread over the disturbed areas to encourage regrowth from the soil’s seed store. The surface of the topsoil is to be scarified along the contours which will further enhance the ability of the material to trap mobile seeds, dust and moisture.

Where specified in the RFT/RFQ native seed will be broadcast either by hand or machine across disturbed areas.

Cleared vegetation from the project areas, detours, access tracks, and extraction areas is to be spread over areas being rehabilitated prior to demobilisation to assist the re-colonisation of flora and fauna across the site.

36. ENVIRONMENTAL MONITORING

Comply with the requirements of this Specification for document, and any Environmental Management sections in the RFT/RFQ, and any requirements specified in the approved CEMP. Carry out continuous environmental monitoring throughout the duration of the Contract. This is in addition to other monitoring requirements detailed elsewhere.

Monitoring is to be tailored to the specific project and may include a daily or weekly site walk-over inspection, through to detailed air quality monitoring for dust particles or exhaust fumes from machinery, in stream water quality monitoring, sediment basin water release testing for turbidity, mapping and measuring weed growth, spread and control, and the like.

Records of environmental monitoring are to be maintained, including the effectiveness of any corrective action taken.

Copies of records of environmental monitoring are to be made available to the Superintendent on request.

37. AUDITS

Develop and implement a risk-based self-auditing program to verify that all works are in compliance with this Specification.

The Contractor self-audits are to be based on the key risks identified in the Environmental Risk Assessment as provided in the tender documentation and the CEMP developed by the Contractor.

Maintain records of the results of the self-audits including non-conformances and the effectiveness of any remedial action taken.

Copies of records of the self-audits are to be made available to the Superintendent on request.

Contractor self-audits need not be carried out by a qualified Auditor, but can be conducted by a competent person.

The Superintendent, or representatives of the Superintendent, will undertake scheduled and unscheduled environmental audits. These are to determine if the Contractor is conforming to contract requirements as outlined in tender documents and to determine if the Contractor is meeting minimal requirements in environmental management as described in this document.

Environmental audits may be scheduled for every calendar month with 5 working days’ notice being given to the Contractor.

Unscheduled environmental audits may be conducted with 1 working days’ notice.

Scheduled environmental audits will be conducted following the start of the works.

Provide access and co-operation and all necessary documentation to allow the audit team to conduct the environmental audits.

38. NON CONFORMANCE

A failure to comply with, or a breach of, any condition will result in the issue of an Instruction to Contractor, or a Corrective Action Request or a Non-Conformance Report or any combination of these.

Non-conformances will be recorded and taken into account in the Contractor’s Performance Report rating.

39. ENVIRONMENTAL LEGISLATION AND REGULATIONS

Comply with, but do not be limited to, the following as applicable.

39.1 NORTHERN TERRITORY LEGISLATION

- *Aboriginal Land Act*
- *Bushfires Act*
- *Building Act*
- *Dangerous Goods Act*
- *Environmental Assessment Act*
- *Environmental Offences and Penalties Act*
- *Fire and Emergency Act*
- *Food Act*
- *Heritage Act*
- *Northern Territory Aboriginal Sacred Sites Act*
- *Soil Conservation and Land Utilisation Act*
- *Territory Parks and Wildlife Conservation Act*
- *Transportation of Dangerous Goods by Road and Rail (National Uniform Legislation)Act*
- *Waste Management and Pollution Control Act*
- *Water Act*
- *Weeds Management Act*
- *Work Health and Safety (National Uniform Legislation) Act*

39.2 NORTHERN TERRITORY REGULATIONS

- Building Regulations
- Dangerous Goods Regulations
- Environmental Offences and Penalties Regulations
- Fire and Emergency Regulations
- Heritage Regulations
- Territory Parks and Wildlife Conservation By-Laws
- Territory Parks and Wildlife Conservation Regulations
- Transportation of Dangerous Goods by Road and Rail (National Uniform Legislation)Regulations
- Waste Management and Pollution Control (Administration) Regulations
- Water Regulations
- Weeds Management Regulations
- Work Health and Safety (National Uniform Legislation) Regulations

39.3 FEDERAL LEGISLATION

- *Aboriginal and Torres Strait Islander Act*
- *Aboriginal and Torres Strait Islander Commission Amendment Act*
- *Aboriginal and Torres Strait Islander Heritage Protection Act*
- *Aboriginal Land Rights (Northern Territory) Act*
- *Aboriginal Land Rights (Northern Territory) Amendment Act*
- *Environment Protection and Biodiversity Conservation Act*
- *Native Title Act*

39.4 FEDERAL REGULATIONS

- Aboriginal and Torres Strait Islander Heritage Protection Regulations
- Aboriginal Land Rights (Northern Territory) (Land Description) Regulations
- Aboriginal Land Rights (Northern Territory) Regulations
- Environment Protection and Biodiversity Conservation Regulations

40. STANDARDS

40.1 AUSTRALIAN STANDARDS

Use Standards, and their amendments, current 3 months before the date for the close of tenders except where different editions and/or amendments are required by statutory authorities, including, but not limited to, NATA and the National Construction Code including the Building Code of Austral		
Dates entered like this (R2013) indicate that a Standard was reviewed and re-issued unaltered in the year cited in the parentheses.		
Entries in Times New Roman italics indicate Standards not cited in this document but which may be useful references.		
AS 1319	1994 (R2018)	Safety signs for the occupational environment
AS 1692	*2006 (R2016)*	*Steel tanks for flammable and combustible liquids*
AS 1940	2017	The storage and handling of flammable and combustible liquids
AS 2187	-	Explosives – Storage and use
AS 2187.1	1998	– Storage (Includes Amendment 1:2000)
AS 2187.2	2006	– Use of explosives
AS 2436	2010 (R2016)	Guide to noise and vibration control on construction, maintenance and demolition sites
AS 4373	2007	Pruning of Amenity Trees
AS 4970	2009	Protection of trees on development sites
AS/NZS ISO 14001	*2016*	*Environmental management systems - Requirements with guidance for use*
BS 7385.2	1993	Evaluation and measurement for vibration in buildings - Part 2: Guide to damage levels from groundborne vibrations
BS ISO 4866	2010	Mechanical vibration and shock - Vibration of fixed structures - Guidelines for the measurement of vibrations and evaluation of their effects on structures

40.2 OTHER STANDARDS

- ASTMD 2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
- ASTMD 7208-6 - Standard Test Method for Determination of Temporary Ditch Check Performance in Protecting Earthen Channels from Stormwater-Induced Erosion
- Code of Practice for Small On-Site Sewage and Sullage Treatment Systems and the Disposal or Reuse of Sewage Effluent also known as The Code of Practice for On-Site Waste Water Management https://nt.gov.au/property/building-and-development/wastewater-management/codes-and-guidelines
- The Australian Dangerous Goods Code Edition 7.6 (2018) https://www.ntc.gov.au/heavy-vehicles/safety/australian-dangerous-goods-code/

41. PUBLICATIONS

41.1 ANZECC PUBLICATIONS

- Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration, 1990 http://www.nepc.gov.au/resource/anzecc-reports
- ANZECC Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Document 4) http://webarchive.nla.gov.au/gov/20130904113854/http://www.environment.gov.au/water/publications/quality/index.html
- ANZECC Australian Guidelines for Water Quality Monitoring and Reporting (Document 7) http://webarchive.nla.gov.au/gov/20130904113854/http://www.environment.gov.au/water/publications/quality/index.html or http://webarchive.nla.gov.au/gov/20130904202327/http://www.environment.gov.au/water/publications/quality/nwqms-monitoring-reporting.html

41.2 OTHER PUBLICATIONS

- International Erosion Control Association (IECA) Australasia Best Practice Erosion and Sediment Control. http://www.austieca.com.au
- Queensland Maroon Book for urban storm water management - Manual for Erosion & Sediment Control, Version 1.2, Sunshine Coast Regional Council https://www.sunshinecoast.qld.gov.au/en/Environment/Rivers-and-Coast/Erosion-and-Sediment-Control/Erosion-and-Sediment-Control-Manual-Version-12
- Blue Book – Managing Urban Stormwater: Soils and Construction, Volume 1, 4th edition, Volume 2a – Installation of services, Volume 2b Waste Landfills, Volume 2c Unsealed Roads, Volume 2d Main Road Construction and Volume 2e Mines and Quarries https://www.environment.nsw.gov.au/stormwater/publications.htm
- Queensland Acid Sulfate Soil Technical Manual, Soil Management Guidelines, Version 4, SE Dear, LE O'Brien, AE McElnea, NG Moore, SK Dobos, KM Watling and CR Ahern -
- RTA Code of Practice for Water Management http://www.rms.nsw.gov.au/about/environment/soil-water-quality/index.html
- Environmental Noise Management Manual - http://www.rms.nsw.gov.au/about/environment/reducing-noise/index.html
- Soil Survey Standard Test Method, Unified Soil Classification System: Field Method - http://www.environment.nsw.gov.au/resources/soils/testmethods/usc.pdf
- Spray drift fact Sheet-APVMA - http://www.apvma.gov.au/use_safely/spray_drift/index.php
- Why do fish need to cross the road? - NSW DPI - http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0004/202693/Why-do-fish-need-to-cross-the-road_booklet.pdf
- QLD standard work method for the assessment of the lawfulness of releases to waters from construction sites- SEQ https://environment.des.qld.gov.au/licences-permits/business-industry/pdf/lawful-water-release-construction-sites-em1135.pdf
- Australian Rainfall and Runoff – Flood analysis and design – www.arr.org.au
- Declared weeds of the Northern Territory - https://nt.gov.au/environment/weeds/weeds-in-the-nt/A-Z-list-of-weeds-in-the-NT
- Weeds of National Significance (WONS) - http://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html
- DLRM Land Clearing Guidelines NT Planning Scheme 2010 – https://nt.gov.au/__data/assets/pdf_file/0007/236815/land-clearing-guidelines.pdf
- NT EPA - Noise Guidelines for Development Sites in the Northern Territory - https://ntepa.nt.gov.au/waste-pollution/guidelines/guidelines
- NT EPA - Keeping our Stormwater clean – a Builder's Guide http://www.ntepa.nt.gov.au/waste-pollution/guidelines/guidelines
- NT EPA – Prevent Pollution from Building Sites https://ntepa.nt.gov.au/__data/assets/pdf_file/0005/284684/noise_guidelines_for_development_sites.pdf
- NT WorkSafe – How to Safely remove asbestos – Code of Practice http://www.worksafe.nt.gov.au/SafetyAndPreventions/Asbestos/Pages/default.aspx
- Power and Water Corporation – Disinfection Procedures for Water Mains and Services https://www.powerwater.com.au/__data/assets/pdf_file/0008/162674/Disinfection_procedure_for_water_mains_and_services_and_including_water_test_report.pdf

42. DEFINITIONS AND ACRONYMS

References to Acts include any amendments to those Acts, and the Acts' Regulations, and instruments made under the Acts and under the Regulations.

Reference to something in the singular includes a reference to it in the plural, and reference to something in the plural includes a reference to it in the singular, unless the context clearly indicates otherwise.

Reference to something in the masculine includes a reference to it in the feminine, and reference to something in the feminine includes a reference to it in the masculine, unless the context clearly indicates otherwise.

The following definitions apply;

AAPA - Aboriginal Areas Protection Authority

Aboriginal - a person who is a member of the Aboriginal race of Australia.

Aboriginal tradition - the same meaning as in the Aboriginal Land Rights Act.

Acid Sulfate Soils (ASS) - Coastal and near-coastal soils, sediments or other materials containing iron sulfides. They are environmentally benign when left undisturbed in an aqueous, anoxic environment, but when exposed to oxygen the iron sulfides break down, releasing sulfuric acid and soluble iron. Both substances have considerable ability to degrade the natural and built environment, and the acid may additionally mobilise other pollutants (e.g. aluminium, lead, zinc) if present in the soil (Source: Queensland Acid Sulfate Soil Technical Manual: Soil Management Guidelines). Refer to Actual Acid Sulfate Soils and to Potential Acid Sulfate Soils.

ACM - Asbestos containing material.

Actual Acid Sulfate Soils (AASS) - Partly or fully oxidised ASS with very low pH is commonly referred to as actual ASS (AASS) (Source: Queensland Acid Sulfate Soil Technical Manual: Soil Management Guidelines). Refer to Acid Sulfate Soils and to Potential Acid Sulfate Soils.

Alert Weeds - Weeds, the presence of which are to be immediately reported to DENR, Weed Management Branch. Refer to https://nt.gov.au/environment/weeds/current-alert-weeds-how-to-report .

Approved - Approved by the Superintendent unless otherwise specified.

Aquifer - a geological structure or formation, or an artificial land-fill, permeated or capable of being permeated permanently or intermittently with water.

Archaeological object - a relic pertaining to the past occupation by Aboriginal or Macassan people of any part of Australia which is now in the Northern Territory, being:

- an artefact or thing of any material given shape to by man;
- a natural portable object of any material sacred according to Aboriginal tradition;
- human or animal skeletal remains; or
- such objects, or objects of a class of objects, as are prescribed; but does not include an artefact made for the purposes of sale or an object, or objects of a class of objects, excluded by the Regulations from the ambit of this definition.

Archaeological place - a place pertaining to the past occupation by Aboriginal or Macassan people that has been modified by the activity of such people and in or on which the evidence of such activity exists, and includes such places, or place of a class of places, as are prescribed, but does not include a place, or a place of a class of places, excluded by the Regulations from the ambit of this definition.

ARI - Average Recurrence Interval

Authority Certificate - a certificate issued under section 22(1) of the *Northern Territory Aboriginal Sacred Sites Act*.

Bore - a bore, hole, well, excavation or other opening in the ground, or a natural or artificially constructed or improved underground cavity, which is or could be used for the purpose of intercepting, collecting, obtaining or using ground water or for the purpose of disposing of water or waste below the surface of the ground, or which extends to an aquifer.

CEMP - Contractor's Environmental Management Plan

Clearance – Permission, licence, and/or consent to do something. Usually provided in writing. Issued by a person or entity with authority to do so.

Contaminant means a solid, liquid or gas or any combination of such substances and includes:

- noise, odour, heat and electromagnetic radiation;

- a prescribed substance or prescribed class of substances; and
- a substance having a prescribed property or prescribed class of properties.

Contaminated land - land with the presence of a substance in, on or under the land at a concentration above that which it is normally found in that locality, such that there presents a risk of harm to human health or to the environment.

Construction site - a place at which construction work is undertaken, and any other area in the vicinity where plant or other material used or to be used in connection with the construction work is located or kept during the construction work. It does not include a place where elements are manufactured 'off site' or where construction material is stored as stock for sale or for hire.

Construction project - a project involving construction work, and includes design, preparation, and planning.

Contractor - as defined in the contract

Corrective action - Measures, including preventative measures, taken to rectify conditions which have caused or might cause nonconformity.

Corrective action request (CAR) - A formal advice/instruction from the Administrating authority regarding departures from the Quality system or methods as approved in the Quality plan.

CPESC - Certified Professional in Erosion and Sediment Control.

CPSS - Certified Professional Soil Scientist

Custodian – An Aboriginal person who, by Aboriginal tradition, has responsibility for a sacred site.

Dangerous goods- the same meaning as within the *Dangerous Goods Act* meaning substances or things:

- declared by the Competent Authority under section 6; or
- prescribed by the Regulations, to be dangerous goods.

Day(s) - Normal business working days. Does not include Saturdays, Sundays or Public Holidays.

Declared Weed (and **plant**) - is a plant species that is declared under Section 7 of the *Weeds Management Act*. The presence of these weeds is to be immediately reported to DENR, Weed Management Branch. Refer to https://nt.gov.au/environment/weeds/weeds-in-the-nt/A-Z-list-of-weeds-in-the-NT .

DENR - Department of Environment and Natural Resources

Dewatering- any activity that involves the removal of ponded stormwater or infiltrated groundwater from any location on Site and the subsequent reuse or discharge of that water.

Disposition - Action to be taken to resolve non-conformance.

DIPL or **the Department** (without a department named) - Department of Infrastructure, Planning and Logistics

DoH - Department of Health

DTC - Department of Tourism and Culture

Ecologically sustainable development- development that improves the total quality of life both in the present and in the future in a way that maintains the ecological processes on which life depends.

Emergency - An unexpected situation where life or property are at risk or where major disruption to regular community activities occur caused by events such as vehicle collision, unanticipated fire or unanticipated flood.

Environment - land, air, water, organisms, ecosystems and the built environment and includes:

- external factors which affect the well-being of humans;
- structures made or modified by humans;
- the physical and visual amenity values of an area; and
- economic, cultural and social conditions.

Environmental incident - a discrete (one-off) occurrence that may result in an adverse impact (or impacts) on the environment or a breach of legislation.

Environmental harm - As defined by the *Waste Management and Pollution Control Act*, including nuisance, serious and material environmental harm, environmental harm means:

- any harm to or adverse effect on the environment; or
- any potential harm (including the risk of harm and future harm) to or potential adverse effect on the environment, of any degree or duration and includes environmental nuisance.

Environmental nuisance - means:

- An adverse effect on the amenity of an area that:
  a) Is caused by noise, smoke, dust, fumes or odour; and
  b) Unreasonably interferes with or is likely to irrationally interfere with the enjoyment of the area by persons who occupy a place within the area or are otherwise lawfully in the area; or
  c) An unsightly or offensive condition caused by contaminants or waste.

EPA - Environment Protection Authority

EPBC - *Environment Protection and Biodiversity Conservation Act 1999*

ESCP - Erosion and Sediment Control Plan

Excavation - includes any earthwork, trench, well, shaft, tunnel or underground work.

Exclusion zone - an area not to be entered by any person or machine for the duration of the contract or otherwise designated period of time.

GPS – Global Positioning System

Groundwater - water occurring or obtained from below the surface of the ground (other than water contained in works, not being a bore, for the distribution, reticulation, transportation, storage or treatment of water or waste) and includes water occurring in or obtained from a bore or aquifer.

Hazard - anything (including an intrinsic property of a thing), or situation with the potential to cause harm to people, property or the environment. Hazardous material means a substance or thing that is a dangerous good, within the meaning of the *Dangerous Goods Act*, or a product or substance that has the potential to harm life, health, property or the environment.

Heritage item - an object declared under section 18 of the *Heritage Act* to be a heritage object.

Heritage site - a place in the Northern Territory (whether or not covered by water) declared under section 17 of the *Heritage Act* to be a heritage place.

Hold Point - A Hold Point is a mandatory verification point beyond which a work process cannot proceed without authorisation by the Superintendent. The work cannot proceed until the Superintendent is able to verify the quality of the completed work and releases the Hold Point.

IECA - International Erosion Control Association

Land - includes water and air on, above or under land.

Licensed Certifying Plumber - A plumber registered and licensed to be a Certifying Plumber in the NT under the NT Building Act.

Material environmental harm - environmental harm that:

- is not trivial or negligible in nature;
- consists of an environmental nuisance of a high impact or on a wide scale;
- results, or is likely to result, in not more than $50,000 or the prescribed amount (whichever is greater) being spent in taking appropriate action to prevent or minimise the environmental harm or rehabilitate the environment; or
- results in actual or potential loss or damage to the value of not more than $50,000 or the prescribed amount (whichever is greater).

Monitor - Observe, check and record the progress and quality of environmental management measures implemented over the duration of the project.

Non-conformance report (NCR) - A mandatory (standard format) report submitted by the contractor that details the nonconforming work and the contractor's proposed disposition of the non-conformance.

NT EPA - Northern Territory Environment Protection Authority

NTU - Nephelometric Turbidity Units

Pipework - Pipes, connectors, valves and the like which form a water reticulation system or part of a water reticulation system.

Peri-urban - The area of transition between urban and rural areas. For the purpose of this document peri-urban areas are areas where reticulated water supply is provided by the public utility entity, currently Power and Water Corporation.

Permit - Permission, licence, clearance, and/or consent to do something. Usually provided in writing. Issued by a person or entity with authority to do so.

Pesticide - the same meaning as within the Waste Management and Pollution Control regulations.

PFAS - Per- and poly-fluoroalkyl substances.

Pollution - means:

- a contaminant or waste that is emitted, discharged, deposited or disturbed or that escapes; or
- a contaminant or waste, effect or phenomenon, that is present in the environment as a consequence of an emission, discharge, deposition, escape or disturbance of a contaminant or waste.
- in relation to water (from the Water Act), means directly or indirectly to alter the physical, thermal, chemical, biological or radioactive properties of the water so as to render it less fit for a prescribed beneficial use for which it is or may reasonably be used, or to cause a condition which is hazardous or potentially hazardous to:
  a) public health, safety or welfare;
  b) animals, birds, fish or aquatic life or other organisms; or
  c) plants.

Potential Acid Sulfate Soils (PASS) - Unoxidised ASS is commonly referred to as potential ASS (PASS), due to its potential to produce acid if disturbed. (Source: Queensland Acid Sulfate Soil Technical Manual: Soil Management Guidelines) Refer to Acid Sulfate Soils and to Actual Acid Sulfate Soils.

Principal – As defined in the Contract

Provide - Supply, transport, install, connect, commission, test and leave ready for use.

PWC – Power and Water Corporation of the Northern Territory

Remote Area - Any area of the NT considered as remote or very remote by the Australian Bureau of Statistics, Accessibility/Remoteness Index of Australia.

RFQ - Request For Quotation. Conditions in this document applicable to an RFQ are equally applicable to an RFT.

RFT - Request For Tender. Conditions in this document applicable to an RFT are equally applicable to an RFQ.

Sacred Site - that defined with the *Northern Territory Aboriginal Sacred Sites Act* and the *Land Rights Act*.

SDS Safety Data Sheets - formerly known as Material Safety Data Sheets (MSDS)

Sensitive Receiver / **Receptor** – Anything which can be adversely affected by exposure to any pollutants. The receivers / receptors include, but are not limited to, people, animals, plants, sites, objects, air, water, buildings and structures, and eco-systems and habitats.

Serious environmental harm - environmental harm that is more serious than material environmental harm and includes environmental harm that:

- is irreversible or otherwise of a high impact or on a wide scale;
- damages an aspect of the environment that is of a high conservation value, high cultural value or high community value or is of special significance;
- results or is likely to result in more than $50,000 or the prescribed amount (whichever is greater) being spent in taking appropriate action to prevent or minimise the environmental harm or rehabilitate the environment; or
- results in actual or potential loss or damage to the value of more than $50,000 or the prescribed amount (whichever is greater).

Shall - Is indicative of a mandatory requirement unless the context clearly indicates otherwise.

Southern Regions - The regions designated in the BCA as Climate Zone 3 - roughly south of latitude 17° South, but at least 150km inland from the coast of the Gulf of Carpentaria.

Structure - means:

- any building, steel or reinforced concrete construction, railway line or siding, tramway line, dock, ship, submarine, harbour, inland navigation channel, tunnel, shaft, bridge, viaduct, waterworks, reservoir, pipe or pipeline (whatever it contains or is intended to contain), structural cable, aqueduct, sewer, sewerage works, gasholder, road, airfield, sea defence works, river works, drainage works, earthworks, constructed lagoon, dam, wall, mast, tower, pylon, underground tank, earth retaining construction, fixed plant, construction designed to preserve or alter any natural feature, and any other similar construction, and
- any formwork, false work, scaffold or other construction designed or used to provide support or access during construction work.

Superintendent - As defined in the Contract.

Top End, The - The regions designated in the BCA as Climate Zone 1 - roughly north of latitude 17° South but up to 150 km inland from the coast of the Gulf of Carpentaria.

TPZ - Tree Protection Zone – As determined under Section 3 and Appendix A of AS 4970-2009 Protection of trees on development sites. Generally determined as TPZ = Trunk Diameter at 1.4 m above ground level (DBH) x 12.

Urban Areas Urban area for Darwin region is nominated as – North of Cox Peninsula Road (Stuart Highway), West of Trippe Road (Arnhem Highway) and the end of seal on Gunn Point Road.

Other urban areas are nominated as being within, and extending to, town boundaries.

Waste - as defined by the *Waste management and Pollution Control Act*,:

- a solid, a liquid or a gas; or
- a mixture of such substances, that is or are left over, surplus or an unwanted by-product from any activity (whether or not the substance is of value) and includes a prescribed substance or class of substances.

Water - includes:

- surface water, ground water and tidal waters;
- coastal waters of the Territory, within the meaning of the *Coastal Waters (Northern Territory Powers) Act 1980* of the Commonwealth; and
- water containing an impurity.

Weed (and **Declared plant)** - is a plant species that is declared under Section 7 of the *Weeds Management Act*.

Weeds of National Significance (WoNS) - Thirty two Weeds of National Significance (WoNS) have been agreed by Australian governments based on an assessment process that prioritised these weeds based on their invasiveness, potential for spread and environmental, social and economic impacts. Consideration was also given to their ability to be successfully managed. Refer to http://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html .

Witness Point - A Witness Point is an identified point in the process where the Superintendent may review, witness, inspect or undertake tests on any component, method or process of works. The contractor is required to notify the Superintendent who may or may not take the opportunity. The project however, may proceed.

WMPC - *Waste Management and Pollution Control Act*

WoNS - Weeds of National Significance as declared by the Australian governments

Working Day – Means the same as **Day**.

Worksite(s) / **works area(s)** - the areas in which any works take place including the works to be undertaken under the contract and any associated side tracks, hardstands, extraction areas, access tracks, vehicle turn around areas, camps, compounds, stockpile sites, locations of plant and equipment etc.

43. HOLD POINTS AND WITNESS POINTS SCHEDULES

43.1 SCHEDULE 1 - HOLD POINTS

SCHEDULE 1 – HOLD POINTS				
CLAUSE TITLE	**SECTION**	**PAGE**	**INITIALS**	**DATE**
5. - CONTRACTOR'S ENVIRONMENTAL MANAGEMENT PLAN (CEMP) - 5.1 - SUBMISSION OF CEMP Submit for assessment a copy of a site specific and project specific Contractor's Environmental Management Plan (CEMP) prior to establishment and commencement of work on site.	5.1	7		
13. - LAND ACCESS - 13.1 - SUBMISSION OF PERMISSION TO ENTER LAND Provide a copy of the written permission to enter land prior to entering land not owned by the Northern Territory Government or land outside a road reserve, unless permission is provided by the Superintendent.	13.1	13		
14. - CULTURAL AND HERITAGE CLEARANCES - 14.1 - CLEARANCE FROM LAND COUNCIL Provide a copies of written clearance(s)/consent(s) from Aboriginal Land Council(s) with jurisdiction over the site(s) of the works for all works on Aboriginal Land before commencing works. These are in addition to any AAPA Certificates applicable to the site(s) of the works. This Hold Point does not apply if the Principal or Superintendent has obtained and provides the required clearance(s)	14.1	13		
14. - CULTURAL AND HERITAGE CLEARANCES - 14.1 - CLEARANCE FROM LAND COUNCIL Provide copies of permits to access Aboriginal Land(s) issued by the Aboriginal organisation(s) with jurisdiction over the land(s) to which access is required for execution of the works.	14.1	13		
14.2 - ABORIGINAL AREAS PROTECTION AUTHORITY CERTIFICATE Provide copies of AAPA Certificate(s) prior to commencing works. This Hold Point does not apply if the Principal or the Superintendent has obtained and provides the required AAPA Certificate(s).	14.2	14		
15. - PROTECTION OF CULTURAL AND HERITAGE ITEMS AND PLACES - 15.1 - GENERAL Should any item or artefact or material or relic be encountered which might be of heritage value or any item or relic or artefact or material which might be of Aboriginal origin, cease all construction work that might affect the item or artefact or material or relic and protect the item or artefact or material or relic from damage or disturbance. Notify the Superintendent immediately. The Superintendent will arrange for appropriate specialists and community representatives to inspect the site	15.1	14		

SCHEDULE 1 – HOLD POINTS				
CLAUSE TITLE	**SECTION**	**PAGE**	**INITIALS**	**DATE**
16. - PERMIT TO CLEAR NATIVE VEGETATION - 16.1 - SUBMISSION OF PERMITS/PERMISSIONS TO CLEAR NATIVE VEGETATION Provide a copy/copies of permit(s) to clear native vegetation, for the execution of the works, from the permit authority under the Planning Act and/or the Pastoral Land Act, before commencing works.	16.1	15		
16. - PERMIT TO CLEAR NATIVE VEGETATION - 16.1 - SUBMISSION OF PERMITS/PERMISSIONS TO CLEAR NATIVE VEGETATION Provide a copy/copies of written permission to clear native vegetation from the owner(s) or lessee(s) of the land, proposed to be cleared for the execution of the works, before commencing works.	16.1	15		
18.- CAMP SITE/COMPOUND/WORKSHOP PERMISSION - 18.1 - SUBMISSION HEALTH DEPARTMENT PERMITS Provide a copy of written approval from DoH for any proposed on-site effluent disposal system, before commencing works. For remote areas certification by a licensed certifying plumber is acceptable.	18.1	16		
18. - CAMP SITE/COMPOUND/WORKSHOP PERMISSION - 18.1 - SUBMISSION HEALTH DEPARTMENT PERMITS Provide a copy of written approval from DoH for any proposed kitchen and/or food handling facility.	18.1	16		
18. - CAMP SITE/COMPOUND/WORKSHOP PERMISSION - 18.2 - APPROVAL OF REHABILITATION Obtain approval from the Superintendent for the completed rehabilitation of the camp site/compound/workshop before final demobilisation.	18.2	16		
19. - MATERIALS EXTRACTION APPROVAL/CLEARANCE - 19.1 - SUBMISSION OF APPROVALS AND CLEARANCES Provide documented evidence that the appropriate approvals and clearances have been obtained, for extraction of materials/minerals including sand, and/or gravel, and/or fill, prior to commencing any work on or in material extraction areas, either new or existing.	19.1	16		
19. - MATERIALS EXTRACTION APPROVAL/CLEARANCE - 19.1 - SUBMISSION OF APPROVALS AND CLEARANCES Obtain Superintendent approval to exceed 1ha pit size.	19.1	16 & 17		
21 - STOCKPILE MANAGEMENT - 21.1 - SUBMISSION OF APPROVALS Obtain approval from the Principal or Superintendent for the stockpiling of material more than 2m in height. The approval is to include the reason for stockpiling at this height and also provide measures to mitigate dust, erosion and sedimentation.	21.1	18		

SCHEDULE 1 – HOLD POINTS				
CLAUSE TITLE	**SECTION**	**PAGE**	**INITIALS**	**DATE**
22. - WATER EXTRACTION LICENCE - 22.1 - SUBMISSION OF WATER EXTRACTION LICENCE Provide a copy of a Water Extraction Licence for the taking of groundwater and/or surface water outside urban areas for the works subject to the contract unless a permit has been obtained by the Superintendent. This Hold Point does not apply to the extraction of water to be used for road works on Northern Territory Government owned public roads.	22.1	18		
23. - WATER EXTRACTION APPROVAL - 23.1 - SUBMISSION OF WATER EXTRACTION APPROVAL Obtain written permission from the owner or lessee if water extraction is proposed from a private bore, dam, Power and Water Corporation (PWC) hydrant or stand pipe, or waterway, for all works. Provide a copy of the written permission, or a copy of the PWC swipe card, to the Superintendent. Include this information in the CEMP.	23.1	18		
23. - WATER EXTRACTION APPROVAL - 23.3 - EXTRACTION FROM BORES Provide documentary evidence of approvals and clearances to extract water from any bore which is not an NTG Road Bore and for which the Principal or Superintendent has not provided an approval. Provide these before commencing any water extraction activities.	23.3	18		
23. - WATER EXTRACTION APPROVAL - 23.3 - EXTRACTION FROM BORES Provide copies of written permission to gain access to the land where the water bodies or bores which are to be used for extraction of water are located.	23.3	18		
23. - WATER EXTRACTION APPROVAL - 23.4 - SURFACE WATER EXTRACTION Provide copies of approvals and clearances to extract surface water before commencing water extraction activities.	23.4	19		
23. - WATER EXTRACTION APPROVAL - 23.4 - SURFACE WATER EXTRACTION Do not form sumps or dams in water courses or water bodies unless permission is given by the Superintendent.	23.4	19		
25. - CONSTRUCTION SITE DEWATERING – 25.1 - APPROVAL OF DEWATERING ACTIVITIES Superintendent to approve any proposed dewatering activities prior to commencement of the activity	25.1	21		
26. - VEGETATION MANAGEMENT - 26.2 - ACTION REQUIRED IF A THREATENED SPECIES IS DISCOVERED Should a threatened species be identified onsite, in addition to those identified in the relevant Environmental Risk Assessment, Notice Of Intent, or other Department gained approval, stop works in the immediate area, notify the Principal and the Superintendent, and install a temporary protective barrier to protect the species. Do not recommence works in that area until protection measures required by the appropriate authority have been implemented and the Superintendent advises that work can resume in that area.	26.2	21		

SCHEDULE 1 – HOLD POINTS				
CLAUSE TITLE	**SECTION**	**PAGE**	**INITIALS**	**DATE**
27. - FAUNA MANAGEMENT - 27.1 - NOTICE OF THREATENED OR NESTING FAUNA Advice must be sought from DENR or the Department's Environment Services Branch if nesting fauna are sighted. Ensure sufficient time is available to allow any required specialist to make a determination and give advice to the Superintendent.	27.1	23		
27. - FAUNA MANAGEMENT - 27.1 - NOTICE OF THREATENED OR NESTING FAUNA Should a threatened species be identified onsite, stop works in the immediate area, notify the Superintendent, and install temporary protective barriers to protect the species.	27.1	23		
34. - WASTE MANAGEMENT - 34.6 - NOTIFICATION OF THE TRANSPORTING AND DEPOSITING OF WASTE Written approval from the Superintendent is required prior to transporting wastes generated by or for the Principal to an area that is not a licensed waste facility or a place owned by the Principal. This includes waste transported for reuse, recycling, disposal or stockpiling.	34.6	27		
34. - WASTE MANAGEMENT - 34.6 - NOTIFICATION OF THE TRANSPORTING AND DEPOSITING OF WASTE The transport and disposal of prescribed waste specified in Schedule 2 of the Waste Management and Pollution Control (Administration) Regulations will require prior approval from the NT EPA.	34.6	27		

43.2 SCHEDULE 2 - WITNESS POINTS

SCHEDULE 2 – WITNESS POINTS				
CLAUSE TITLE	**SECTION**	**PAGE**	**INITIALS**	**DATE**
8. - WEED MANAGEMENT PLAN (WMP) - 8.2 - DETAIL REQUIRED IN A WMP The use of hay bales on site can only occur if written approval is received from the Superintendent.	8.2	10 & 11		
8. - WEED MANAGEMENT PLAN (WMP) - 8.4 - CLEANING OF VEHICLES AND PLANT Provide evidence that the area is weed free or provide advice of the weeds present in the areas of the works.	8.4	11		
8. - WEED MANAGEMENT PLAN (WMP) - 8.4 - CLEANING OF VEHICLES AND PLANT Provide evidence that the vehicles and plant brought on to the site of the works are free of weeds and their seeds and are soil free.	8.4	11		
8.- WEED MANAGEMENT PLAN (WMP) - 8.4 - CLEANING OF VEHICLES AND PLANT Provide evidence that organic matter transported to site is free of weeds and/or their seeds.	8.4	11		
8. - WEED MANAGEMENT PLAN (WMP) - 8.4 - CLEANING OF VEHICLES AND PLANT Provide the Superintendent with a signed statement certifying that cleaning took place.	8.4	11		
17.- SITE CONTROL APPROVAL - 17.1 - APPROVAL FOR ANCILLARY AREAS Obtain written approval from the Superintendent for the establishment and use of any detours, turnarounds or equipment lay down areas. Use existing cleared areas where possible.	17.1	15		
26.- VEGETATION MANAGEMENT - 26.3 - SITE CLEARING Prior to clearing any area, it is to be demarcated with fencing, flagging tape, spray paint or other method approved by the Superintendent. Provide documented advice of the proposed methods for demarcation of areas to be cleared.	26.3	22		
28.- ANIMAL MANAGEMENT - 28.1 - NOTICE OF PETS Provide evidence that pets will be under control and safely secured at all times.	28.1	23		

44. UPDATES OVERVIEW

The significant updates to the Standard Specification for Environmental Management 2019 are shown below.

FEEDBACK

If you have any suggestions for improvement, such as additional or modified text for the Roadworks specification, please contact the Manager Specification Services, e-mail specification.services@nt.gov.au

UPDATES

Table – Overview of Updates to Standard Specification for Environmental Management - March 2019		
CLAUSE		**CHANGE**
Major reorganization of the order of the sections in the specification. Major and minor editorial changes, updates to web page URLs, updates to Australian Standards and other cited documents and organizations.		
1. GENERAL		
1.2	Time Allowed for Assessment of Submitted Documents	New clause
3. REFERENCES		
		New section
6. EROSION AND SEDIMENT CONTROL PLAN (ESCP)		
6.1	When an ESCP is Required	New clause
6.2	ESCP Designer Qualifications	Clause relocated. Significant changes.
7. ACID SULFATE SOILS MANAGEMENT PLAN (ASSMP)		
		New section
8. WEED MANAGEMENT PLAN (WMP)		
		Significant changes
8.3	Prevention of Weed Spread When Using Machinery	New clause
9. ASBESTOS MANAGEMENT PLAN (AMP)		
		New section
10. OTHER MANAGEMENT PLANS		
		New section
11. CLEARANCES AND APPROVALS		
		New section
12. LICENCES, PERMITS AND PERMISSIONS		
		New section
13. LAND ACCESS		
		New section
14. CULTURAL AND HERITAGE CLEARANCES		
		Significant changes
15. PROTECTION OF CULTURAL AND HERITAGE ITEMS AND PLACES		
15.1	General	Significant changes
16. PERMIT TO CLEAR NATIVE VEGETATION		
		New section

Table – Overview of Updates to Standard Specification for Environmental Management - March 2019		
CLAUSE		**CHANGE**
17. SITE CONTROL APPROVAL		
17.2	Site Staff for Environmental Management	New clause
18. CAMP SITE/COMPOUND/WORKSHOP PERMISSION		
18.2	Approval of Rehabilitation	New clause
19. MATERIALS EXTRACTION APPROVAL/CLEARANCE		
		Significant changes
20. REQUIREMENTS FOR EXTRACTIVE OPERATIONS IN NORTHERN LAND COUNCIL AREAS		
		New section
23. WATER EXTRACTION APPROVAL		
		Significant changes
24. WATER QUALITY		
		Significant changes
24.1	Potable Water Pipework Commissioning Management	New clause
25. CONSTRUCTION SITE DEWATERING		
		Significant changes. Additional content.
26. VEGETATION MANAGEMENT		
26.3	Site Clearing	Additional content
27. FAUNA MANAGEMENT		
27.1	Notice of Threatened or Nesting Fauna	New clause
28. ANIMAL MANGEMENT		
		Additional content
31. NOISE CONTROL		
		Additional content
33. CONTAMINATION MANGEMENT		
		Significant additional content
34. WASTE MANAGEMENT		
		Additional content
34.4	Effluent Disposal	Significant changes
34.6	Notification of the Transportation and Depositing of Waste	Significant additional content
35. REHABILITATION OF EXTRACTION AREAS, DETOURS AND ACCESS TRACKS		
		New section
36. ENVIRONMENTAL MONITORING		
		Significant additional content
37. AUDITS		
		Significant additional content

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From: Sarah Hubbard on behalf of Heritage Branch
To: Kimberley Doukas
Cc: Doukas, Kimberley L.
Subject: RE: Heritage Check- Sandover Highway Upgrade
Date: Wednesday, 10 July 2024 3:13:26 PM

Hi Kimberley,

The information as provided in our earlier advice is still current. I do not that there was a typo when referring to the presence of declared heritage places and this should read;

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

I would like to add that we have identified a shortfall in our responses when advising; If archaeological places are discovered over the course of the work, establish an exclusion zone around the site and contact the Heritage Branch immediately. There is the expectation that an unexpected finds protocol is used and forms part of a site induction. This would include an understanding of archaeological sites in the region and would include the exclusion clause and reporting procedures that we have previously identified.

Regards,

Sarah Hubbard
Senior Heritage Officer, Heritage Branch
Community Participation and Inclusion
Territory Families, Housing and Communities

Level 1, JHV2, Jape Home Maker Village, 356 Bagot Road, Millner
PO Box 37037, Winnellie, NT 0821

t. 08 8999 5055
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

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From: Kimberley Doukas <Kimberley.Doukas@nt.gov.au>
Sent: Wednesday, July 3, 2024 9:47 AM
To: Heritage Branch <Heritage.Branch@nt.gov.au>
Cc: Doukas, Kimberley L. <doukaskl@cdmsmith.com>

Subject: Heritage Check- Sandover Highway Upgrade

Hi Heritage team,

These works were put on hold and have now come back up again.
Can I please get an updated heritage check which also encompasses the newly propose extraction pits and bore?

Works aim to maintain road user safety by upgrading to seal standard a 27km section of the Sandover Highway between Chainage (Ch) 170km and 197km.

Works include:

- Subgrade preparation and gravel resheet to 6m pavement to civil standard drawing CS-3609 - Typical Cross-Section for Unsealed Rural Roads
- Extraction and transportation of resources including gravel and water
- Vegetation clearing required in gravel pits
- Camp within designated areas
- Works will be constructed under traffic.

Thankyou in advance ☺

Kind regards,
Kimberley

Available Tuesday and Wednesday
Consultant Project Officer | Environment Services | Department of Infrastructure, Planning and Logistics
P 0476 118 037 | E Kimberley.doukas@nt.gov.au P Think green before you print this screen
Floor 1, Greenwell Building, 50 Bath Street, Alice Springs
GPO Box 2130, Alice Springs, NT 0871

From: Sarah Hubbard on behalf of Heritage Branch
Sent: Wednesday, 13 September 2023 2:52 PM
To: Kimberley Doukas
Subject: RE: Heritage Check- Sandover Highway Upgrade

Hi Kimberley,

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)	CDM Smith Australia
Contact person (name and title)	Kimberley Doukas
Date enquiry received	1/09/23
Location of work	Sandover Highway Upgrade
Brief description of work as provided	Works include upgrading a 27km section of the Sandover Highway between Chainage (Ch) 170km and 197km.
Date of Heritage Branch response	13/09/23
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, and the likelihood of unrecorded Aboriginal or Macassan archaeological places existing is *unlikely*. No further work is required, however I have provided the location of a known site within approximately 50m of the project footprint to ensure the project works do not impact this site and to give information about site types in the area.

If archaeological places are discovered over the course of the work, establish an exclusion zone around the site and contact the Heritage Branch immediately.

The search has also found that there are nominated, provisionally declared or declared heritage places or objects within the subject area;

Regards,

Sarah Hubbard

Senior Heritage Officer, Heritage Branch

Community Participation and Inclusion

Territory Families, Housing and Communities

Level 1, JHV2, Jape Home Maker Village, 356 Bagot Road, Millner

PO Box 37037, Winnellie, NT 0821

t. 08 8999 5055

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.

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From: Kimberley Doukas <Kimberley.Doukas@nt.gov.au>
Sent: Friday, 1 September 2023 2:55 PM
To: Heritage Branch <Heritage.Branch@nt.gov.au>
Subject: Heritage Check- Sandover Highway Upgrade

Hi Heritage Team,

Can I please get a heritage check for upcoming works at Sandover Highway? Works aim to maintain road user safety by upgrading to seal standard a 27km section of the Sandover Highway between Chainage (Ch) 170km and 197km.

Works include:

- Subgrade preparation and gravel resheet to 6m pavement to civil standard drawing CS-3609 - Typical Cross-Section for Unsealed Rural Roads
- Extraction and transportation of resources including gravel and water
- Vegetation clearing required in gravel pits
- Camp within designated areas
- Works will be constructed under traffic.

I have attached the KMLs and Shape files detailing area of works, gravel pits and water extraction location.

Have a great weekend ☺

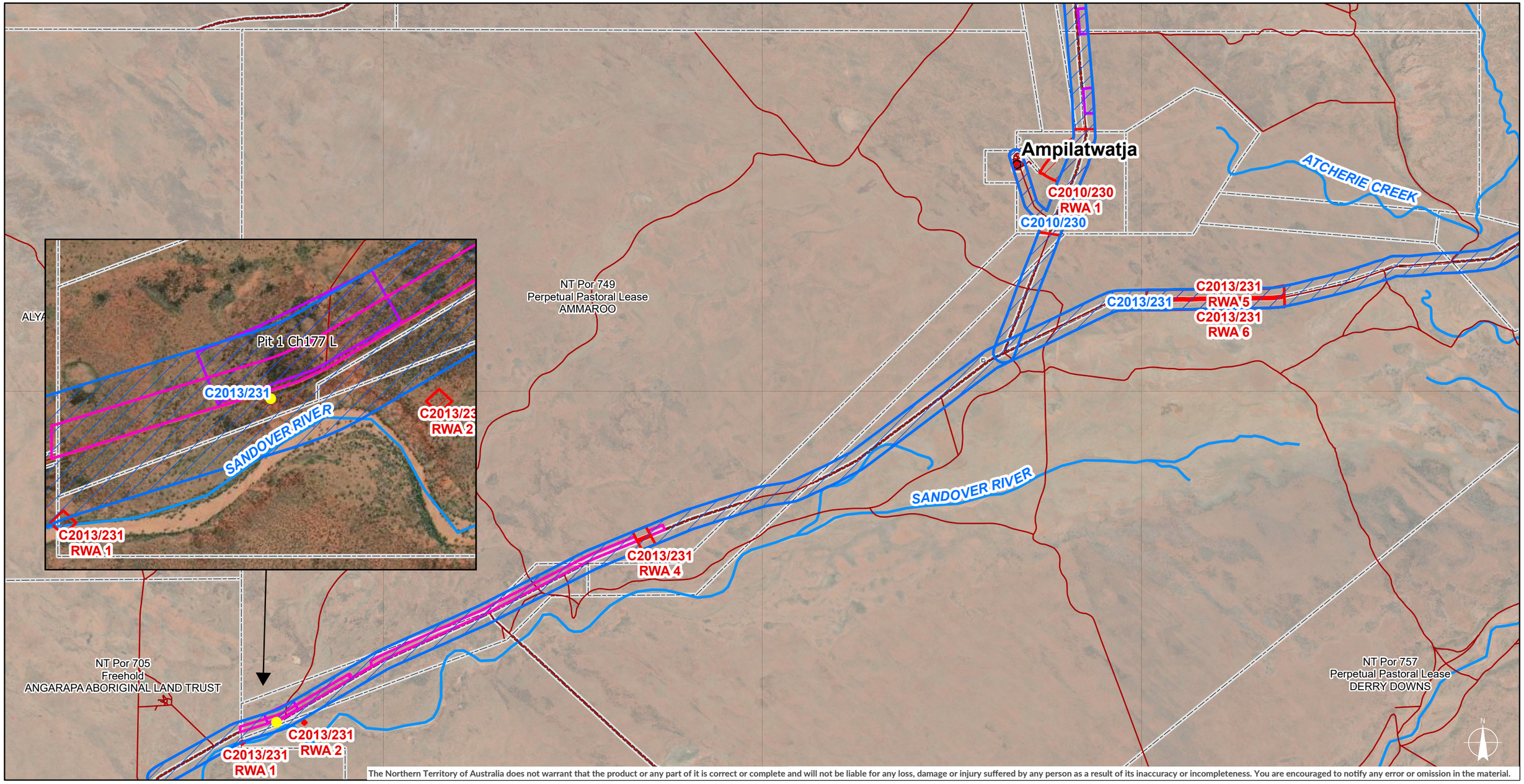
Kind regards,

Kimberley Doukas

CDM Environmental Consultant
Transport & Civil Services, Alice Springs
Department of Infrastructure, Planning & Logistics
Northern Territory Government

Floor 1, Greenwell Building, 50 Bath Street, Alice Springs
GPO Box 2130, Alice Springs, NT 0871

p ... 0476 118 037
e ... Kimberley.Doukas@nt.gov.au
w ... www.nt.gov.au



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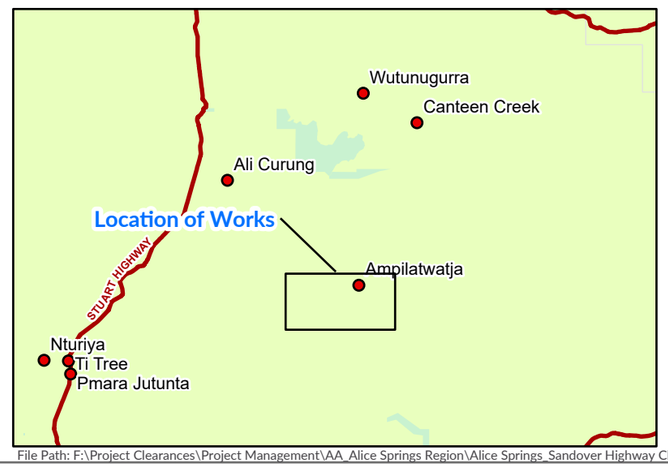


Legend

- Heritage Location
- Major Locations
- Roads
- Rivers/Creeks
- Cadastre
- Clearing Area
- Restricted Work Areas
- AAPA Certificates
- Detour/ Borrow Pit Area

Sandover Highway Ch 170-197km
Land Clearing Application
Heritage/ RWAs

Northern Territory Government

© Northern Territory of Australia

Projection: Universal Transverse Mercator (UTM) - Map Grid of Australia (MGA), Zone 52
Horizontal Datum: Geodetic Datum of Australia (GDA94)

5 2.5 0 5
Kilometres

Scale @ A4 size: 1:190,500
Map Compiled: 25/03/2025

DATA SOURCE:
Water Resources - Natural Resources Division, DLPE
Cadastre / Roads - Land Information, DLI
Drainage - 1:250,000 Geoscience Australia

For further information, please contact;
Environment Services
Department of Logistics and Infrastructure (DLI)
Phone: (08) 8999 4779
Level 3, Highway House. Palmerston
Web: www.nt.gov.au/infrastructure

File Path: F:\Project Clearances\Project Management\AA_Alice Springs Region\Alice Springs_Sandover Highway Ch 170-195km_KD\Native Veg Application\Nativeveg\Nativeveg.aprx

Unexpected Finds Protocol – Aboriginal archaeological places and objects

Aboriginal archaeological places and objects may be discovered at any point, including in areas that have been previously assessed as being free of archaeological materials. Under the *Heritage Act 2011*, all Aboriginal archaeological places and objects are protected in-situ. The following steps should be actioned if a suspected Aboriginal archaeological place or object is discovered:

1. Refer to **Discovery of Potential Human Remains** procedure below if the discovery is suspected of being human remains.

2. All work within the vicinity of suspected archaeological materials must cease immediately and the area flagged/fenced appropriately to ensure that no further work can be undertaken within it.

3. The discovery must be reported immediately to the Site Supervisor, who must notify the Department of Logistics and Infrastructure (DLI) Superintendent

4. The DLI Superintendent will report the matter to the Environment and Sustainability Unit of DLI who notify the NT Heritage Branch on (08) 8999 5039 or at Heritage.Branch@nt.gov.au.

   A report in writing on the discovery will be submitted by the ESU, as soon as practical, to the CEO of the Heritage Branch (Section 114). The report must include:

   a. a description of the place or object [ideally photographs with a scale];

   b. its location [including spatial data];

   c. the person's name and address; and

   d. if known by the person – the name and address of the owner or occupier of the place or place where the object is located.

5. Work is not to recommence in the vicinity of the find until directed by the DLI Superintendent. The DLI will not be able to provide a direction to proceed until approval is provided by the Heritage Branch of the Northern Territory Government.

Note the following:

1. It is an offence to remove or engage in conduct that results in damage to Aboriginal archaeological places or objects (Section 112).

2. If works are to continue within the area of an identified archaeological place or object, an Application to Carry out Works must be submitted on the approved form to the Northern Territory Heritage Council for consideration (Section 72).

   The recognised Aboriginal traditional owners or custodians of a place or object should be consulted as part of the Application to Carry Out Work process.

3. For major works, the Minister will consider the recommendations of the Heritage Council and determine whether a protected Aboriginal archaeological place or object can be impacted. Works cannot recommence within the area until this determination is made.

Unexpected Finds Protocol: Suspected Human Remains

If suspected human remains are discovered:

1. All work within a 50 m radius of potential human remains must stop immediately.
2. The discovery must be immediately reported to the Site Supervisor who must immediately notify the Northern Territory Police on 131 444 and the Department of Logistics and Infrastructure (DLI) Superintendent.

   No temporary fencing should be erected unless directed to do so by the police.
3. The Police will take control of the site as a potential crime scene.
4. If there are reasonable grounds to believe that the remains are:
   a. A crime scene – the Police will provide direction on the management of the discovery.
6. If remains are suspected to be Aboriginal ancestral or historical remains rather than a crime scene, The DLI Superintendent will report the matter to the Environment and Sustainability Unit of DLI.

   The ESU will immediately notify:

   i. A Heritage Officer at NT Heritage Branch on (08) 8999 5039 or at Heritage.Branch@nt.gov.au, and;

   ii. The Aboriginal Areas Protection Authority at (08) 8999 4365, and;

   iii. A report in writing on the discovery must be made as soon as practical to the CEO of the Heritage Branch (Section 114). The report must include:

      1. a description of the place or object [ideally photographs with a scale];
      2. its location [including spatial data];
      3. the person's name and address; and
      4. if known by the person – the name and address of the owner or occupier of the place or place where the object is located.

      This report can be sent directly to heritage.branch@nt.gov.au
5. Work is not to recommence in the vicinity of the find until directed by the DLI Superintendent. The DLI will not be able to provide a direction to proceed until direction is provided by the relevant authorities (NT Police, Aboriginal Areas Protection Authority, and the NT Heritage Branch).

Section 1 Development Overview

The Department of Infrastructure, Planning and Logistics (DLI) are proposing to undertake strengthening and widening of the Sandover Highway between Chainage (Ch) 170km and Ch 197km.

To facilitate the works gravel extraction and a detour is required which subsequently means vegetation clearing is required.

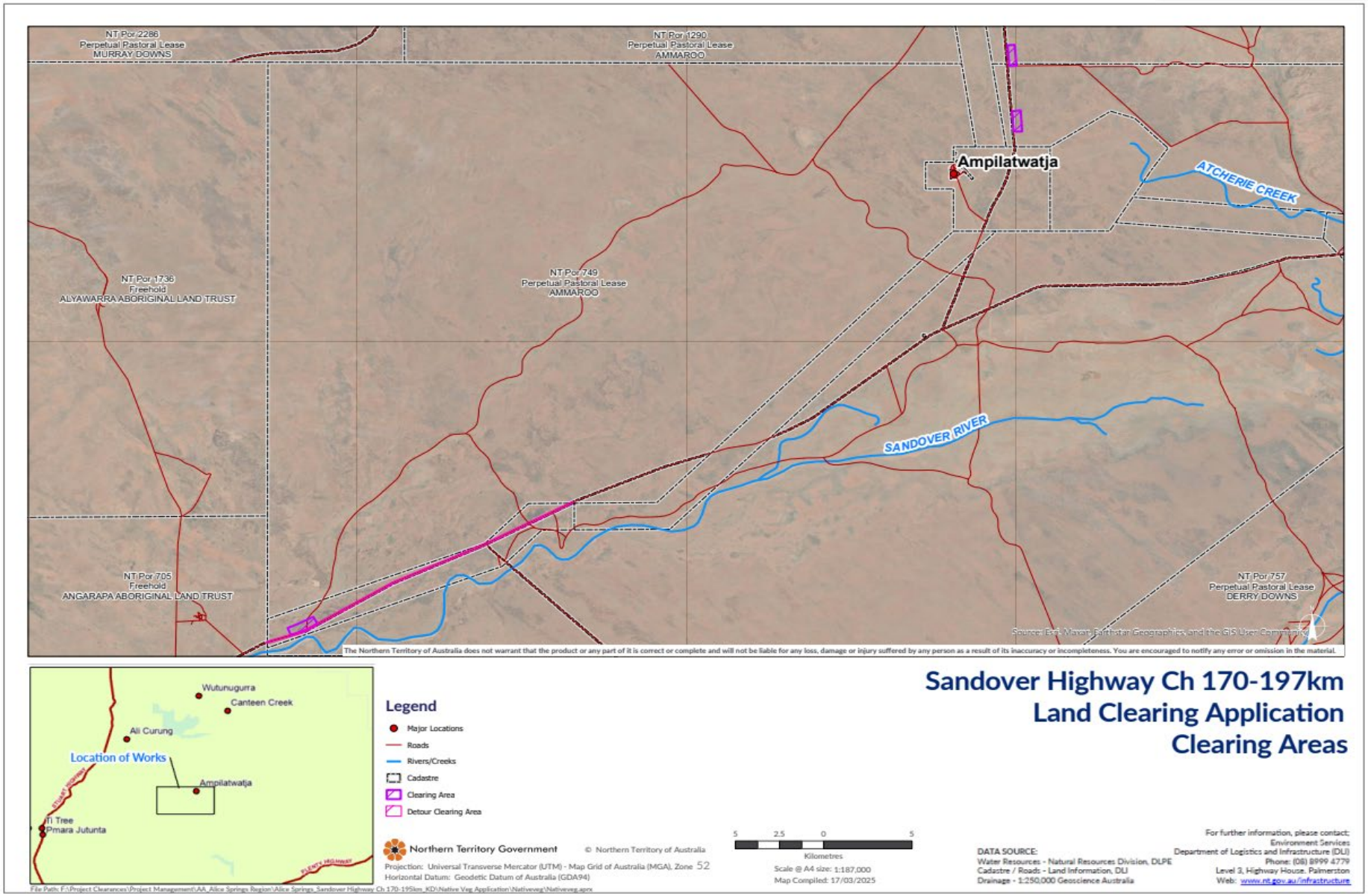
The works aim to improve connectivity between people with jobs and services; improve road safety; freight efficiency; connectivity; travel time; economic productivity; and flood immunity on a key route in the region.

The scope of works includes (but is not limited to) the following:

- Clearing of vegetation to construct a detour, establish borrow pits and allow gravel extraction
- Construction of floodways and culvert structures for drainage
- Upgrade of single lane seal to dual lane seal standard
- Establish borrow pits for use of fill materials adjacent to the road formation
- Extraction and transportation of gravel material from gravel pits
- Extraction and transportation of construction water from water points
- Sealing of new road carriageway to design specifications including drainage and installation of road
- furniture
- Establishment, use and rehabilitation of camp/laydown areas
- Drilling of new bores

1.1 Clearing Extent

Three gravel pits and one detour are proposed to facilitate the works, consisting of a total 662.49 ha. It should be noted that within the 662.49 ha, clearing will only occur within areas containing suitable quality gravel resources, or that facilitate access to such gravel resources. ***The nominated clearing areas are larger than usually required due to inconsistent gravel quality of the area/ uncertain placement of borrow pits and a detour.*** Within these areas, the application of DLI standard specifications further reduces the cleared area and require areas to be rehabilitated after extraction.


NT Por 2286
Perpetual Pastoral Lease
MURRAY DOWNS
NT Por 1290
Perpetual Pastoral Lease
AMMAROO
Ampilatwatja
ATCHERIE CREEK
NT Por 1736
Freehold
ALYAWARRA ABORIGINAL LAND TRUST
NT Por 749
Perpetual Pastoral Lease
AMMAROO
SANDOVER RIVER
NT Por 705
Freehold
ANGARAPA ABORIGINAL LAND TRUST
NT Por 757
Perpetual Pastoral Lease
DERRY DOWNS
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Wutunugurra
Canteen Creek
Ali Curung
Location of Works
Ampilatwatja
Ti Tree
Pmara Jutunta
Legend
Major Locations
Roads
Rivers/Creeks
Cadastre
Clearing Area
Detour Clearing Area
Northern Territory Government
© Northern Territory of Australia
Projection: Universal Transverse Mercator (UTM) - Map Grid of Australia (MGA), Zone 52
Horizontal Datum: Geodetic Datum of Australia (GDA94)
5 2.5 0 5
Kilometres
Scale @ A4 size: 1:187,000
Map Compiled: 17/03/2025
Sandover Highway Ch 170-197km
Land Clearing Application
Clearing Areas
DATA SOURCE:
Water Resources - Natural Resources Division, DLPE
Cadastre / Roads - Land Information, DLI
Drainage - 1:250,000 Geoscience Australia
For further information, please contact:
Environment Services
Department of Logistics and Infrastructure (DLI)
Phone: (08) 8999 4779
Level 3, Highway House, Palmerston
Web: www.nt.gov.au/infrastructure

Section 2 Northern Territory – Screening Tool

The Northern Territory Environmental Protection Authority (NT EPA) has developed a screening tool to assist proponents in determining whether a proposed action requires formal referral (NT EPA, 2021a).

The screening tool is comprised of two parts namely, Part 1 (Screening questions) (Figure 2-1) and Part 2 (Checklist). Part 1 and Part 2 have been completed below in the establishing gravel pits within Amarroo Station Pastoral Lease.

2.1 Part 1 – Screening Questions

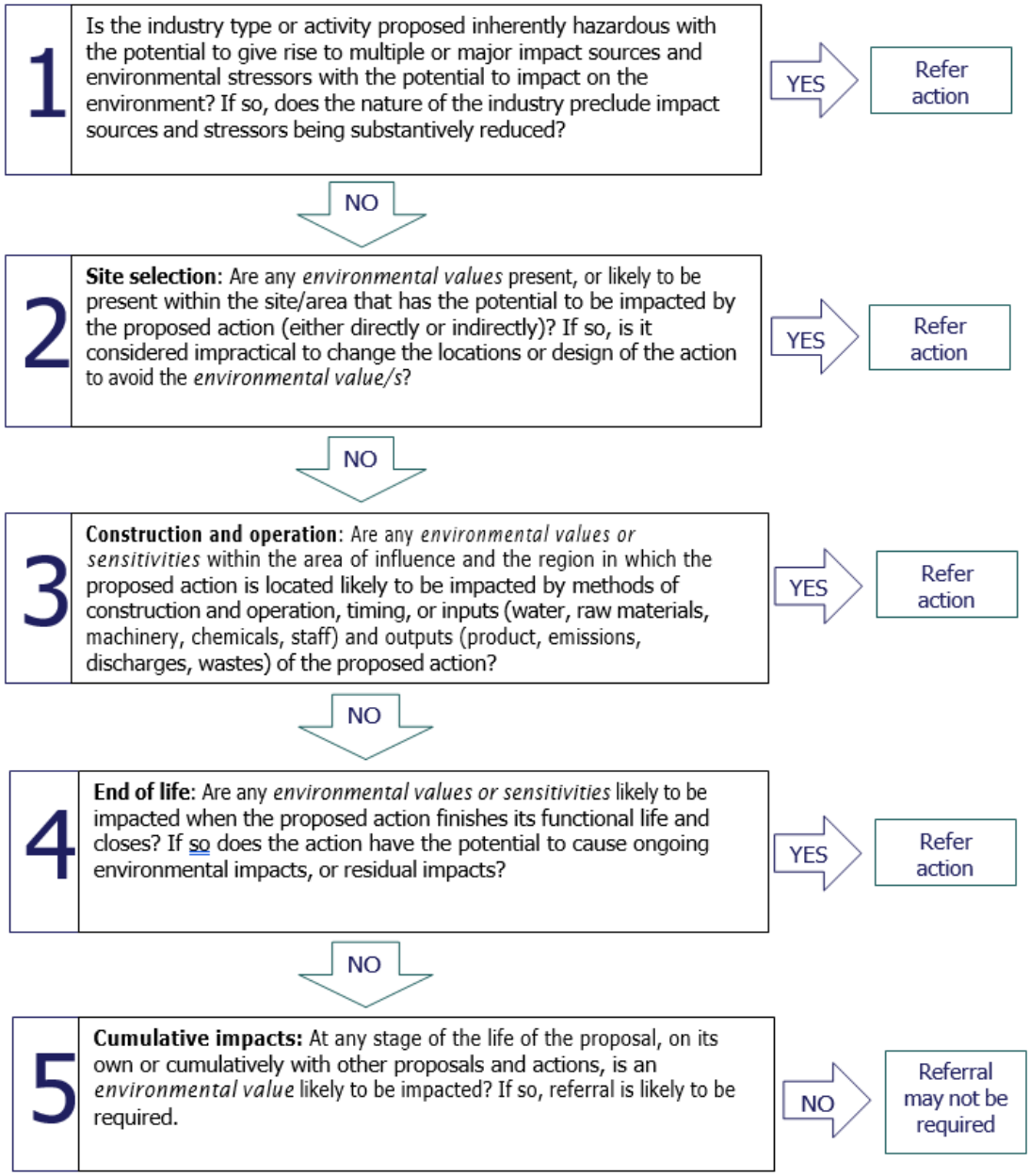


Figure 2-1 NT EPA Pre-referral screening tool Part 1 Screening questions for the Development (NT EPA, 2021a)

2.2 Part 2 – Checklist

Table 2-1 has been adapted from the NT EPA Pre-referral screening tool checklist (NTEPA, 2021a). It provides a preliminary evaluation of whether the works have the potential to result in a significant impact on the environment and if formal referral to the NT EPA is necessary. Table 2-1 has been reviewed within the context and framework of the NT EPA's environmental factors and objectives (NTEPA, 2021b).

To undertake a preliminary evaluation of impacts on the NT EPA factors and objectives of the proposed development, it is important to understand the definition of 'significant impact'. Refer to Section 2.3 for the definition of a 'significant impact' in relation to the Northern Territory *Environment Protection Act 2019* (EP Act) and the NT EPA's contemporary guidance.

Explanation: *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 the possible environmental values for each environmental factor that should be considered when considering each question. If the answer to a question is 'yes', it is possible that the proposal may have the potential to have a significant impact on the environment and the proposal should, 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 (NTEPA, 2021a).*

Table 2-1 NTEPA Pre-referral screening tool Part 2 Checklist for the Amarroo Station Proposed Clearing (adapted from NTEPA, 2021a)

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Summary of key environmental values and sensitivities of relevance to the development	Proponent's answer to screening questions 1-5. If answer is 'yes' consider, justify or assess the significance (Yes/ No/ Uncertain or Not Applicable (N/A))					Preliminary evaluation of significance (Nature, scale, context and sensitivity; refer definition provided below table)
				Q1	Q2	Q3	Q4	Q5	
LAND	1) Landforms Objective: Conserve the variety and integrity of distinctive physical landforms.	• distinctive features in the landscape, either geological or anthropogenic • subterranean karstic terrain and faults • craters, gorges, ranges, caves, massifs, escarpments, plateaus • monuments • tourism related to landforms	• The proposed clearing areas are within desert sandplains, alluvial floodplains and lateric plains and rises which can be considered scenic. However, these landforms are widespread in region and are not distinctive. • The site is not in close proximity to National Parks nor high tourism areas.	N/A	N/A	N/A	N/A	N/A	**Potential impacts are not considered significant.** • No key distinctive physical landforms relevant to the development for the NT EPA 'Landforms' factor. • The extent of disturbance to the non-distinctive plains and rises landform is not considered significant.
	2) Terrestrial environmental quality Objective: Protect the quality and integrity of land and soils so that environmental values are supportedand maintained.	• good quality soils, including chemical, physical, biological and aesthetic qualities thatsupport life • the biological processes that depend on soil quality	• Soils within development area is consistent with the broader Sandover region. • There are no known areas of contaminated soils within the development area as it has only been minimally developed. There has been limited previous disturbance to the area involving access tracks.	N/A	No-	No	No	No	**Potential impacts are not considered significant.** • The development type is not inherently hazardous and will not contain activities or chemicals that would degrade soil quality. Small volumes of diesel will be stored for the equipment; however, this will be managed in accordance with the DIPL Standard Specifications for Environmental Management (DIPL SSEM) guidelines. Standard manufacture maintenance procedures are sufficient to maintain a low risk of leaks. • There is no known presence of contamination that could be mobilised to air or water during land clearing and construction.
	3) Terrestrial ecosystems Objective: Protect terrestrial habitats to maintain environmental values including biodiversity, ecological integrity and ecological functioning.	• 'sensitive or significant' vegetation or buffers (as defined in the NT Land ClearingGuidelines) • vegetation that provides an important ecological function • listed threatened species and their habitat (NT and Commonwealth) • listed migratory species and their habitat (Commonwealth) • listed threatened ecological communities (Commonwealth) • locally endemic species or species with restricted habitat • species of social, cultural, livelihood and/or economic significance • species that are data deficient and their status is unknown • protected area or reserve, including Indigenous Protected Area • existing conservation and management activities	• The development area is outside mapped 'significant vegetation' as per NR Maps. • There have been no protected flora species identified in the area. • Listed Migratory species under the EPBC Act have been sighted adjacent to the development area (Curlew sandpiper and Sharp-tailed sandpiper) but the environment of the gravel pits/detour is not suitable for migratory species. • Introduced plants were observed at several locations within the study area. The most commonly observed species at these locations were Buffel Grass, Athel Pine and Rubber bush. • Several threatened fauna species listed under the *Territory Parks and Wildlife Conservation Act 2001* (NT) (TPWC Act) are known to occur with others having potential to occur within the area and surrounds: - Common brushtail possum	N/A	No – refer to eval	No	No	No	**Potential impacts are not considered significant.** • Potential for increase in dust, noise and light emissions during construction, which may indirectly effect fauna within the area. However, most impacts are temporary or can be managed through standard controls. • General construction environmental management controls will be developed and include controls for introduced species (weeds), dust and noise as per DIPL SSEM guidelines.

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Summary of key environmental values and sensitivities of relevance to the development	Proponent's answer to screening questions 1-5. If answer is 'yes' consider, justify or assess the significance (Yes/ No/ Uncertain or Not Applicable (N/A))					Preliminary evaluation of significance (Nature, scale, context and sensitivity; refer definition provided below table)
				Q1	Q2	Q3	Q4	Q5	
		• introduced species and/or invasive species • integrity of terrestrial ecosystems and the ecological services they provide • biological and functional diversity • provision of refuge • food supply	- Greater Bilby • It is not anticipated that clearing activities will have significant impacts on the species. • No protected areas or reserves occur within the vicinity of the development area. • No nominated, provisional or declared heritage places located within, the clearing extents however there are a number of Restricted Work Areas in the general area.						
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.	• the supply and quantity of water in surface water features including rivers, lakes, wetlands, swamps, creeks, billabongs, intermittent streams, floodplains, mangroves and drainage lines • the supply and quantity of water in groundwater features including aquifers, aquitards and water tables • declared beneficial uses • present and future uses, and users of water • current or potential water supplies, including regional scale aquifers • culturally important water features or other features affected by water level	• The proposal area would only be subject to sheet flow during precipitation events. • Water consumption is not sufficient to have a measurable impact • The proposal area is not within a Water Control District, Water Allocation Plan Area or Water Plan Management Zone, Water Plan Protection Area.	N/A	No	No	No	No	**Potential impacts are not considered significant.** • Only limited groundwater will be taken during construction activities. • The extraction areas have experienced some disturbance. • No permanent surface water features within the development area and surrounds. • No mapped groundwater dependent ecosystems within the area. • The development is outside all use and management control areas. • All activities will be undertaken in a limited disturbance footprint with limited scale and extent. There will be no significant, permanent changes to the surfaces and therefore no risk of significantly altering the existing hydrological regime. • General construction environmental management controls will be developed and implemented (including erosion and sediment controls) (as per DIPL SSEM Guidelines).
	2) Inland water environmental quality 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.	• the quality of water in surface water features including rivers, lakes, wetlands, swamps, creeks, billabongs, intermittent streams, floodplains, mangroves and drainage lines • the quality of water in groundwater features including aquifers and water tables • declared beneficial uses • present and future uses and users of water • current or potential water supplies, including regional scale aquifers • potability / drinkability • culturally important water features	• The closest surface water features are unnamed drainage lines. • The Sandover river is located to the south of the works however no works are anticipated to occur on the southern side of the road, so no impact is anticipated. • The site is outside areas suspectable to flooding although could experience overland sheet flow and some localised pooling during extreme rainfall events.	N/A	No	No	No	No	**Potential impacts are not considered significant.** • Stream and drainage buffers prevent clearing in proximity to waterways • The clearing areas are outside major flood hazard areas. • The development is outside all use and management control areas. • All activities will be undertaken in a limited disturbance footprint with limited scale and extent. There will be no significant changes to the surfaces and therefore no risk of significantly altering the existing hydrological regime. • General construction environmental management controls will be developed and implemented (including erosion and sediment controls) (as per DIPL SSEM guidelines).
	3) Aquatic ecosystems Objective: Protect aquatic habitats to maintain environmental values including biodiversity, ecological integrity and ecological	• threatened species • the health of the biota in inland waterways • the habitats that support the lifecycle of aquatic biota • groundwater dependent ecosystems • Ramsar wetlands • species of social, cultural, livelihood and/or economic significance • integrity of aquatic ecosystems and the	• No inland aquatic habitats (i.e. lakes, wetlands, creeks) present within the development area. • No known groundwater dependent ecosystems present. • No Ramsar wetlands occur within the vicinity of the development area. • The closest surface water features includes highly ephemeral drainage lines	N/A	No	No	No	No	**Potential impacts are not considered significant.** • There are no inland aquatic environments within the boundaries of the development area or in close proximity. • With the implementation of standard construction and operational management controls there is little to no identifiable risk to downstream aquatic ecosystems values, should there be any that occur (DIPL SEEM).

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Summary of key environmental values and sensitivities of relevance to the development	Proponent's answer to screening questions 1-5. If answer is 'yes' consider, justify or assess the significance (Yes/ No/ Uncertain or Not Applicable (N/A))					Preliminary evaluation of significance (Nature, scale, context and sensitivity; refer definition provided below table)
				Q1	Q2	Q3	Q4	Q5	
	functioning.	ecological services they provide • biological and functional diversity • provision of refuge							
SEA	1) Coastal processes <u>Objective</u>: Protect the geophysicaland hydrological processes that shape coastal morphology so thatthe environmental values of the coast are maintained.	• processes that support marine ecosystems (see Marine Ecosystems Factor below) such as coral reefs, mangroves, salt marshes, seagrass meadows and sponge gardens • primary productivity • nutrient cycling • carbon storage • climate regulation • conservation significant low lying areas including tidal creeks, deltas and river mouths • storm surge protection • unique coastal landforms • cultural and aesthetic values • active or passive recreation	• N/A - Works will not be undertaken in proximity to the coast.	N/A	N/A	N/A	N/A	N/A	**Potential impacts are not considered significant.** • N/A - Works will not be undertaken in proximity to the coast.
	2) Marine Environmental Quality <u>Objective</u>: Protect the quality and productivity of water, sediment and biota so that environmental valuesare maintained.	• quality of the water, sediment and biota • ecosystem health condition • physical parameters that support fishing and aquaculture • physical parameters that support recreation and aesthetics • industrial water supply • cultural and spiritual values	• N/A - Works will not be undertaken in proximity to the marine environment.	N/A	N/A	N/A	N/A	N/A	**Potential impacts are not considered significant.** • N/A - Works will not be undertaken in proximity to the marine environment.
	3) Marine ecosystems <u>Objective:</u> Protect marine habitats to maintain environmental values including biodiversity, ecological integrity and ecological functioning.	• conservation significant marine and coastal fauna and critical habitat such as nesting, breeding or foraging habitat • conservation significant marine and coastal benthos, flora and vegetation (seagrass meadows, sponge gardens, coral reefs, mangrove communities and salt marshes) • groups of species (species richness and assemblages of species) • ecological functions and processes • species of social, cultural, livelihood and/or economic significance. • integrity of marine ecosystems and the ecological services they supply • biological diversity • functional diversity • provision of refuge • food supply	• N/A - Works will not be undertaken in proximity to the marine environment.	N/A	N/A	N/A	N/A	N/A	**Potential impacts are not considered significant.** • N/A - Works will not be undertaken in proximity to the marine environment.

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Summary of key environmental values and sensitivities of relevance to the development	Proponent's answer to screening questions 1-5. If answer is 'yes' consider, justify or assess the significance (Yes/ No/ Uncertain or Not Applicable (N/A))					Preliminary evaluation of significance (Nature, scale, context and sensitivity; refer definition provided below table)
				Q1	Q2	Q3	Q4	Q5	
AIR	1) Air quality Objective: Protect air quality and minimise emissions and their impactso that environmental values are maintained.	• the chemical, physical and biological characteristics of quality air • the biological processes that depend on the air quality	• There are no permanent sources of air pollution in the existing environment and therefore air quality within Ammaroo Station is likely to be high quality. • Minor influence may include vehicles, seasonal bushfires.	N/A	No	No	No	No	**Potential impacts are not considered significant.** • Impacts from the project are to be managed as per DIPL Standard Specification for Environmental Management. • Air emissions from vehicles will be localised and temporary (during construction) with no impact on the ambient air quality. • There are no proposed point source emissions from the development. • Given the relatively remote location of the site air quality is expected to be good most of the year and the development would not alter the local or regional quality. • Generation of dust associated with construction however, impacts will be minimal and clearing will be progressive with limited exposure of soils. • Appropriate dust control measures (DIPL SSEM Guidelines) are considered to be effective in mitigating potential impacts.
	2) Atmospheric processes Objective: Minimise greenhouse gas emissions so as to contribute to the NT Government's goal of achieving net zero greenhouse gas emissions by 2050.	• a contribution to the NT's greenhouse gas emissions • adaptation to a changing climate • capacity of communities and country to respond or adapt to climate change	• Emissions from the development will be minimal in a local scale greenhouse emissions context.	N/A	No	No	No	No	**Potential impacts are not considered significant.** • Increase in greenhouse gas emissions associated with proposal related vehicle movements and construction will be minimal and certainly not significant. • The development would not exceed trigger values in the large emitter policy. • Worst case GHG calculated in order of 22,678.54 tCO2, however as clearing will likely be significantly less than the 662.49 ha being applied for, emissions are likely to be much lower.

PEOPLE	1) Community and economy
	
	Objective: Enhance communities and the economy for the welfare, amenity and benefit of current and future generations of Territorians.
		• dwellings, homelands, communities, towns and suburbs where people live
		• liveable environment
		  ○ good amenity – air quality, noise, aesthetics
		  ○ access to natural resources including bush food
		  ○ recreational use of the natural or built environment (e.g. fishing, cycling, sports, picnics)
		  ○ access to social infrastructure and services including transport and logistics
		• Healthy lifestyles
		  ○ sense of wellbeing
		  ○ good mental health
		  ○ community aspirations
		• Financial security
		  ○ affordable access to food, water, electricity, transport and communication networks
		  ○ livelihoods
		• participation in jobs, businesses and education
		• existing industries such as agriculture,
			• N/A	N/A	No	No	No	No	**Potential impacts are not considered significant.**
									
									• The are no existing commercial operations in the development area or that will be impacted by the development.
									• No sites of cultural heritage significance within the gravel pits.
									• The development may increase employment opportunities within the local community during the construction period. The proposal will not propose a significant change to the existing activities/uses and are unlikely to result in a long-term adverse impact on the local community and economy.
									• Temporary increase in vehicles during construction activities, but manageable impacts on locals.
									• The operation provides potential social and economic benefits associated with the upgrading of the road.
									• Temporary increase in traffic, including heavy haulage for machinery and equipment.

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Summary of key environmental values and sensitivities of relevance to the development	Proponent's answer to screening questions 1-5. If answer is 'yes' consider, justify or assess the significance (Yes/ No/ Uncertain or Not Applicable (N/A))					Preliminary evaluation of significance (Nature, scale, context and sensitivity; refer definition provided below table)
				Q1	Q2	Q3	Q4	Q5	
		pastoralism, tourism, fisheries • vulnerable sectors of the community • connections to culture and community (that are not explicitly protected under cultureand heritage legislation addressed in the Culture and heritage factor) o Aboriginal rights and interests, including right of access o cultural practices o sense of belonging, inclusion, connectedness and cohesion o healthy social relationships							
	2) Culture and heritage Objective: Protect sacred sites,culture and heritage.	• sacred sites • historic heritage and places • world heritage	• AAPA Certificates have been obtained for the proposed clearing areas and do not detail any restrictions within the clearing footprints. • There are no significant European heritage sites within the proposed gravel pits.	N/A	No	No	No	No	**Potential impacts are not considered significant.** • There are no Aboriginal sites of significance within the development area. • Potential for accidental entry to sacred sites during construction is low. • The development will not extend into the marine environment and therefore considerations such as shipwrecks are not necessary. • AAPA authority certificates have been obtained for the development areas. The authority contains a conditions to prevent adverse impacts to culture and heritage.
	3) Human health Objective: Protect the health of the Northern Territory population.	• drinking water • recreational water • air quality • bush tucker • radiological limits • biting insects	• The site is not within a Public Drinking Water Area. • Air quality in the area is anticipated to be relatively unimpacted from anthropogenic activities (i.e., no point source emissions as part of the development)	N/A	No	No	No	No	**Potential impacts are not considered significant.** • Given the location it is considered unlikely that significant impacts would occur to human health. • The development works are not expected to cause a significant long-term change to the existing activities/uses of the area and are therefore unlikely to impact on human health.

2.3 Definition of 'Significant Impact'

The Northern Territory *Environment Protection Act 2019* (EP Act) defines a significant impact as:

"A significant impact of an action is an impact of major consequence having regard to:
(a) the context and intensity of the impact; and
(b) the sensitivity, value and quality of the environment impacted on and the duration, magnitude and geographic extent of the impact".

The NT EPA guidance on referral of a proposal (NTEPA, 2021a) outlines how the NT EPA determines that environmental impact assessment of a proposal is not required. The NT EPA will consider the proposal in terms of its potential for significant environmental impacts. In its consideration, the NT EPA will examine:

- Context and intensity of the impact.
- Duration, magnitude and geographic extent of the impact.
- Sensitivity, value and quality of the environment impacted on.

Environmental impact assessment is unlikely to be required where:

- The type of proposal is not considered hazardous in nature.
- Environmental impacts from activities associated with a proposal are readily understood.
- The potential impacts are limited in extent and duration.
- Environmental values and sensitivities are not present or are unlikely to be significantly impacted by proposed activities.
- Impact mitigation is readily available and proven to be effective in limiting significant impacts to the environment.
- Relevant stakeholders have been identified and engaged.

The proposed gravel pits are considered to align with the above criteria.

Section 3 Commonwealth Government - Matters of National Environmental Significance Screening

Under the EPBC Act an action will require approval from the commonwealth minister if the action has, will have, or is likely to have, a significant impact on a Matter of National Environmental Significance (MNES). A search of the Commonwealth Protected Matters Search Tool (PMST) (including a 10 km buffer) was undertaken for the Project (DCCEEW 2023). A summary of the results of the PMST are provided in Table 3-1 and Table 3-2. The full PMST results are attached. The MNES relevant to the Project included listed threatened species and listed migratory species. An assessment of the likelihood of these threatened and migratory species to occur on site and an assessment of the action against Significant Impact Guidelines 1.1 criteria was undertaken.

Table 3-1 Matters of National Environmental Significance (10 km Buffer)

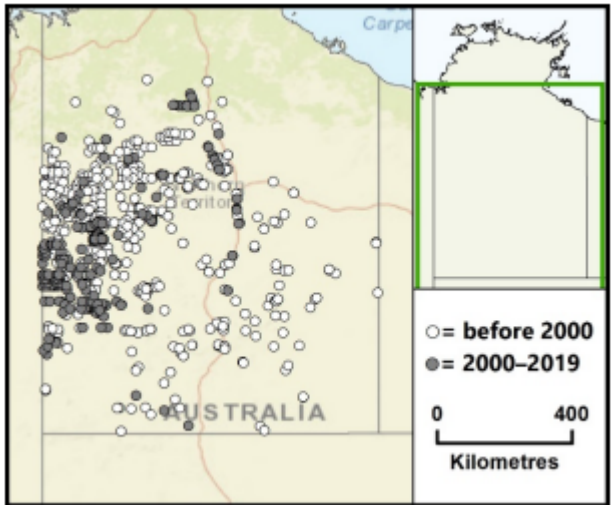
Matters of National Environmental Significance	Relevant	Description
World Heritage Properties	No	There are no world heritage properties in close proximity to the proposal area. The closest world heritage place is Davenport Ranges National Park, approximately 70km north of the Project area.
National Heritage Properties	No	There are no national heritage places in close proximity to the proposal area. The closest national heritage place is Davenport Ranges National Park, approximately 70 km south-west of the proposal area.
Wetlands of international importance/Ramsar wetlands	No	There are no wetlands of international importance / Ramsar wetlands in close proximity to the Project area.
Great Barrier Reef Marine Park	No	The proposal area is not within the Great Barrier Reef Marine Park. The proposal area is located over 1000 km east of the proposal area.
Commonwealth Marine Area	No	The proposal is not located within a Commonwealth marine area.
Nationally Threatened Ecological Communities	No	No threatened ecological communities have been identified in the proposal area and none are considered likely to occur.
Nationally Threatened Species	Yes	The PMST identified 13 threatened species as potentially occurring within 10 km of the Project area (refer to Attachment 1). The of existing data determined 6 terrestrial threatened fauna species are known to occur or possibly occur within the development area.
Migratory Species	Yes	The Project area is not listed on the Ramsar Convention, in which Australia has entered into international agreements to protect the breeding and summer grounds of migratory birds. A PMST showed there were nine migratory species with the potential to occur within 10 km of the proposed clearing areas (refer to Attachment 4).
Nuclear Actions (including Uranium Mining)	No	Not applicable
A water resource, in relation to coal seam gas development and large coal mining development	No	Not applicable

Table 3-2 Likelihood of Occurrence of Threatened Species in the PMST and Other Potential or Confirmed Species

Common Name	Scientific Name	EPBC Status	TPWC Status	Potential Occurrence	Species Summary
Australian Painted Snipe	*Rostratula australis*	E	E	Possible	The Australian Painted-snipe is endemic to Australia, where it is widely distributed; though the species is most frequently recorded in the Murray-Darling Basin. Records from last century are scattered across the Northern Territory (NT). Contemporary NT records have come from McMinns Lagoon near Darwin, Yellow Waters in Kakadu, the Sturt Plateau, the Barkly, the Tanami Desert, and the Alice Springs waste stabilisation ponds. Australian Painted snipes were recorded breeding at Tarrabool Lake on the Barkly Tablelands in 1993. The species occurs in a wide variety of shallow freshwater (and occasionally brackish) wetlands, both permanent and ephemeral, including swamps, inundated claypans and waterlogged grasslands. No preferred habitat in project area however the species may use the proposed gravel pits for foraging (DEPWS 2021a).
Central Australian Rock-wallaby	*Petrogale lateralis centralis*	V	NT	Likely	The central Australian subspecies is centred on the MacDonnell Ranges bioregion of the southern Northern Territory (NT). In the NT, its range extends north to the Davenport and Murchinson Ranges, east to the Jervois Range, west to the Western Australian border and south to the South Australian border. The species occurs in rocky ranges, cliffs, gorges outcrops and associated steep rocky slopes and boulder fields. Preferred habitat including rocky ranges and slopes occur in the project area and there are a number of records within 10km of the proposed Gravel Pits (DEPWS, 2021b).
Central Rock-rat, Antina	*Zyzomys pedunculatus*	E	CE	Unlikely	The Central Rock-rat is endemic to the southern Northern Territory (NT); though subfossil and fossil material indicate it was once more widely distributed across central Western Australia and the NT. The species occupies a range of habitats within the West MacDonnell Ranges, including tussock and hummock grasslands, low shrublands and low open woodlands. These habitats occur on ridge tops, cliffs, scree slopes, hills and valley floors (DEPWS, 2021c). Known records predominantly occur within West Macdonnell National Park with no records within the general area surrounding the proposed clearing extents.

Common Name	Scientific Name	EPBC Status	TPWC Status	Potential Occurrence	Species Summary
Common Brushtail Possum	*Trichosurus vulpecula vulpecula*	NL	E	Possible	The common brushtail Possum was historically widely distributed across Australia however the population has declined significantly as of the 1990s. The population of the species is currently restricted to the ranges west and north-east of Alice Springs, Irving Creek (Petermann Ranges) and the Burt Plain in the Northern Territory. The species has become restricted to riverine habitats close to rocky outcrops, moist gullies within ranges and rocky slopes in recent years (DEPWS, 2021d). Although there is one record within the clearing area, this record dates back to the 1960s. Recent records of the species are to the west of Alice springs. Although it is possible that some isolated records of the species may be within the general area, it is unlikely that proposed clearing would impact the species.
Curlew Sandpiper*	*Calidris ferruginea*	E	CE	Possible	Curlew sandpipers have a widespread distribution in Australia during the non-breeding season; most birds occupy coastal areas, but records of the species are scattered across most inland regions. In the Northern Territory (NT), Curlew Sandpipers have been recorded from most coastal areas, which are important non-breeding and staging grounds. Shorebird, no preferred habitat in project area (DEPWS 2021e). Regional records at throughout the central desert but present in low numbers. Habitat within the Gravel pits does not represent significant habitat for the species.
Ghost Bat	*Macroderma gigas*	V	NT	Unlikely	The Ghost Bat has a limited distribution across the Northern Territory (NT), It predominantly occurs at the Top End of the NT. The species also occurred widely, albeit sparsely, across Central Australia, but became extinct there in the 1960s to 1980s. Ghost Bats use several roosts or perches each night, but often return to the same daytime roost. Daytime roosts are often in a deep crack or cave and may change seasonally. Females usually aggregate in maternity roosts when breeding, but few such sites are known. The largest known site is near Pine Creek. No preferred roosts of cracks or caves within the project area. Additionally, majority of the records within the greater area date back to the 1980s (DEPWS, 2021f).

Common Name	Scientific Name	EPBC Status	TPWC Status	Potential Occurrence	Species Summary
Great Desert Skink	*Liopholis kintorei*	V	V	Unlikely	In the Northern Territory (NT), most records of the species after 1980 were collected within the western deserts' region, from UluṟuKata Tjuṯa National Park north to Rabbit Flat in the Tanami Desert. The Tanami Desert and Uluṟu populations are strongholds for the species. The Great Desert Skink occupies a range of vegetation types, with the major habitat being sandplain and adjacent swales that support hummock grassland and scattered shrubs. In the Tanami Desert, it also occupies paleodrainage lines on lateritic soils supporting Melaleuca shrubs. Hummock grassland and scattered shrubs occur in the project area however known records are predominantly located to the west of the Stuart highway with no known records near Sandover Highway (DEPWS, 2021g).
Grey Falcon	*Falco hypoleucos*	V	V	Likely	The species has been recorded across the Northern Territory (NT), including on the Tiwi Islands and Groote Eylandt, but the majority of records have been collected from southern arid areas. Prefers areas of sparsely timbered lowland plains, typically on inland drainage systems, where the average annual rainfall is less than 500 mm. Records are scattered all across central Australia. Although the species may use the proposed clearing areas for foraging, the areas are not likely to represent significant habitat for the species. Due care to be taken around large trees with potential hollows as per DIPL SSEM Guidelines. (DEPWS 2021h).

Common Name	Scientific Name	EPBC Status	TPWC Status	Potential Occurrence	Species Summary
Greater Bilby	*Macrotis lagotis*	V	V	Unlikely	The Greater Bilby once occurred widely across Australia, primarily in arid and semi-arid regions, but declined dramatically following European settlement, disappearing from 80% of its former range. It is now restricted to the western deserts region of the Northern Territory (NT) and Western Australia. The Greater Bilby now occurs primarily in open tussock grasslands, Mulga Acacia aneura woodlands and shrublands (including mixed associations with Witchetty Bush A. kempeana), and hummock grasslands. These habitats occur on a variety of landforms, including uplands, rises, sand plains, dunes, drainage systems and other alluvial areas (DEPWS, 2021i). Although there are known records in the area of clearing, in recent years the populations on the east of the NT have disappeared. Currently the species is predominantly located to the west of the Stuart Highway as can be seen below: 

Common Name	Scientific Name	EPBC Status	TPWC Status	Potential Occurrence	Species Summary
Mala	*Lagorchestes hirsutus*	E	E (Extinct in the wild)	Unlikely	The Mala was formerly widespread in central Australia, primarily in the western and central deserts. It became extinct in the wild in 1991, but fortunately a captive population was established in the early 1980s. Mala were once locally common, though patchily distributed, across the central and western deserts and surrounding semi-arid areas. Habitats used included sandplains, gravelly plains and dunes dominated by spinifex or tussock grasses (AWC, 2025). Although suitable habitat and historical records exist in the area, as the species is deemed extinct in the wild, it is not likely that the species would be present.
Night Parrot	*Pezoporus occidentalis*	E	E	Unlikely	The Night Parrot was evidently distributed widely across arid and semi-arid regions of Australia in the mid-1800s to early 1900s. Its current distribution is poorly known. Confirmed contemporary records of Night Parrots have come from widely separated localities in Western Australia and western Queensland. The Night Parrot occurs in spinifex grasslands in stony or sandy areas, and in ephemeral herb-lands, samphire, and chenopod shrublands on floodplains, salt lakes and clay pans. A landscape scale mosaic of foraging, roosting and nesting habitats may be an important determinant of the suitability of an area for the species. No preferred habitat occurs within the project area. Only a single, undated record within the project area/ greater region over 100km to the west with no known populations in the project area (DEPWS 2021j).
Princess Parrot	*Polytelis alexandrae*	V	V	Unlikely	This species has a patchy and irregular distribution across the Northern Territory (NT), it occurs in the southern section of the Tanami Desert south to Angas Downs and Yulara and east to Alice Springs. The exact distribution within this range is not well understood, and it is unclear whether the species is resident in the NT. The Princess Parrot usually occupies swales between sand dunes and is occasionally seen on the slopes and crests of dunes. This habitat consists mostly of shrubs with scattered trees. Some records are from riverine forest, woodland and shrubland (DEPWS, 2021k) Although habitat consisting of scattered shrubs and dunes is present, the species is known to be more common to the west of central Australia with the closest record over 100km southwest of the project area.

Common Name	Scientific Name	EPBC Status	TPWC Status	Potential Occurrence	Species Summary
Red Goshawk	*Erythrotriorchis radiatus*	V	V	Unlikely	The red goshawk occurs across much of northern Australia, from near Broome in the south-west Kimberley to south-eastern Queensland. Within this range it generally occurs in taller forests characteristic of higher rainfall areas, but there are some isolated recent records from central Australia. The preferred habitat is tall open eucalypt forest and riparian areas (including paperbark forest and gallery forests). The conspicuous basket-shaped stick nest is typically placed in large trees near watercourses. No records since the 1990s within Central Australia (Woinarski, 2006). No previous records within the project area.
Sharp-tailed Sandpiper*	*Calidris acuminata*	V	LC	Unlikely	In the Northern Territory (NT), this species mostly occurs in the northern coastal regions, generally in the east around Groote Eylandt and Gove Peninsula but also around the McArthur River and east of Borroloola. The species is widely but sparsely scattered inland. The species utilises fresh and hypersaline environments, feeding along the edge of water on mudflats, coastal and inland wetlands, and sewage ponds. On migration, the species forages and roosts on rocky and sandy beaches, freshwater habitats, and inland saltwater habitats. Although the species may be present on occasion, the habitat within the Gravel pits does not represent significant habitat for the species (DCCEEW, 2024a). Additionally, the closest known record of the species dates back to the 1980s and was located over 80km south of the works area.
Southern Whiteface	*Aphelocephala leucopsis*	V	LC	Unlikely	This species has a wide distribution across all of Australia south of the tropics, from the north- eastern edge of the Western Australian wheatbelt, east to the Great Dividing Range. In the Northern Territory (NT) the species is marked as known or likely to occur in the southern, arid regions (DCCEEW, 2023) Southern whitefaces live in a wide range of open woodlands and shrublands where there is an understorey of grasses or shrubs, or both. These areas are usually in habitats dominated by acacias or eucalypts on ranges, foothills and lowlands, and plains. The species is known to have a broad distribution throughout Central Australia however the current known distribution is further south of the project area.

Common Name	Scientific Name	EPBC Status	TPWC Status	Potential Occurrence	Species Summary
Western Quoll	*Dasyurus geoffroii*	V	EX	Unlikely	The western quoll formerly had an extensive range from western Queensland and New South Wales across central Australia to the Western Australian coast. The species now only occurs in jarrah forests, woodlands and mallee shrublands in the southwest corner of Western Australia (DENR, 2006). No longer located in the wild in the NT, therefore likelihood is low.

*Listed as migratory at the species level

^Species not in the PMST, but included as other potential or confirmed threatened species

Section 4 Management Measures and Controls

Numerous desktop studies have informed the self-assessment. The self-assessment assumes the accuracy of the information obtained in the studies and is predicated on implementing both standard management and control measures. The following is a compilation of measures that should be implemented. If the development inclusions or extent change, or the following management measures cannot be implemented, the conclusions in this self-assessment should be reviewed for accuracy:

- The following management reports/ guides will be strictly adhered to for all construction and operational activities associated with the Project:
  - DIPL Standard Specification for Environmental Management (2019)
  - Site Specific Environmental Risk Assessment
- Erosion and Sediment Controls will be kept on site at all times and implemented when rain is forecast.
- Limit clearing to the minimum extent required to extract gravel. and infrastructure and retain the existing natural environment throughout, with lots to be on natural grade.
- Identified moderate and high-quality hollow-bearing trees within the clearing areas will be retained as part of the onsite natural vegetation and landscape.
- Where possible, avoid removal or disturbance of hollow logs, standing dead trees and large hollow bearing habitat trees, as these provide potential denning sites for wildlife, including northern quolls and masked owls
- must be undertaken within the exclusion zone until the fauna has self-relocated or been relocated out of the
- Clearly mark limits of clearing and the clearing or earthworks activities
- Revegetation of exposed areas post gravel extraction.
- In order to facilitate fauna movement, there shall be no fences installed during clearing.
- Monitor access roads, introduce controls to minimise roadkill.

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Attachment 1 – Protected Matters Search Tool Report