GOVERNMENT OF WESTERN AUSTRALIA

Environmental Protection Authority

EPA REFERRAL FORM PROPONENT

Referral of a Proposal by the Proponent to the Environmental Protection Authority under Section 38(1) of the *Environmental Protection Act 1986*.

PURPOSE OF THIS FORM

Section 38(1) of the *Environmental Protection Act 1986* (EP Act) provides that where a development proposal is likely to have a significant effect on the environment, a proponent may refer the proposal to the Environmental Protection Authority (EPA) for a decision on whether or not it requires assessment under the EP Act. This form sets out the information requirements for the referral of a proposal by a proponent.

Proponents are encouraged to familiarise themselves with the EPA's *General Guide on Referral of Proposals* [see Environmental Impact Assessment/Referral of Proposals and Schemes] before completing this form.

A referral under section 38(1) of the EP Act by a proponent to the EPA must be made on this form. A request to the EPA for a declaration under section 39B (derived proposal) must be made on this form. This form will be treated as a referral provided all information required by Part A has been included and all information requested by Part B has been provided to the extent that it is pertinent to the proposal being referred. Referral documents are to be submitted in two formats – hard copy and electronic copy. The electronic copy of the referral will be provided for public comment for a period of 7 days, prior to the EPA making its decision on whether or not to assess the proposal.

CHECKLIST

Before you submit this form, please check that you have:

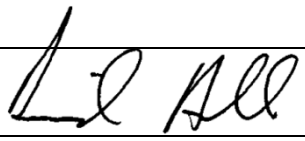
	Yes	No
Completed all the questions in Part A (essential).	✓	
Completed all applicable questions in Part B.	✓	
Included Attachment 1 – location maps.	✓	
Included Attachment 2 – additional document(s) the proponent wishes to provide (if applicable).	✓	
Included Attachment 3 – confidential information (if applicable).		
Enclosed an electronic copy of all referral information, including spatial data and contextual mapping but excluding confidential information.	✓	

Following a review of the information presented in this form, please consider the following question (a response is optional).

Do you consider the proposal requires formal environmental impact assessment? ☒ Yes ☐ No ☐ Not sure
If yes, what level of assessment? ☐ Assessment on Proponent Information ☒ Public Environmental Review

PROPONENT DECLARATION (to be completed by the proponent)

I, David Hall, *(full name)* declare that I am authorised on behalf of Lost Sands Pty Ltd (being the person responsible for the proposal) to submit this form and further declare that the information contained in this form is true and not misleading.

Signature 	Name (print) David Hall
Position Director	Company Lost Sands Pty Ltd
Date 22 February 2013	

PART A - PROPONENT AND PROPOSAL INFORMATION
(All fields of Part A must be completed for this document to be treated as a referral)

1 PROPONENT AND PROPOSAL INFORMATION

1.1 Proponent

Name	Lost Sands Pty Ltd
Joint Venture parties (if applicable)	Not Applicable
Australian Company Number (if applicable)	101 269 747
Postal Address (where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State)	Level 2 87 Wickham Tce Spring Hill, QLD, 4000
Key proponent contact for the proposal: • name • address • phone • email	Corporate Enquiries and Correspondence: Phil McMurtrie Consultant Project Manager Lost Sands Pty Ltd Mob. 0417 715 228 Ph. (07) 3832 5666 Email: phil.mcmurtrie@bigpond.com
Consultant for the proposal (if applicable): • name • address • phone • email	Project and Technical Enquiries: John Nielsen Principal Environmental Advisor Sustainability Pty Ltd Mob. 0408 945 321 Ph. (08) 9246 6666 Email: john.nielsen@sustainability.net.au

1.2 Proposal

Title	Cyclone Mineral Sands Project
Description	The Cyclone Mineral Sands Project involves open cut mining of the Cyclone Mineral Sands Deposit, which contains zircon, rutile and other titanium minerals. The project comprises the mine, processing infrastructure, an accommodation camp, airstrip, water supply infrastructure, access roads and a haul road. The Cyclone Mineral Sands Deposit is located within the Eucla Basin of WA, approximately 220 kilometres north of Forrest (on the Trans Australian Rail line) and 25 kilometres west of the South Australian border (refer to Attachment 1).

	The project is located in the Shire of Laverton in WA and within Paupiyala Tjarutja Aboriginal Corporation (PTAC) tribal lands where the Pila Nguru (Spinifex) People are the local custodians (Attachment 2). The mine pit and processing infrastructure will be located within Tenement M69/141 (Attachment 3) in the Shire of Laverton. Supporting infrastructure such as the accommodation camp, airstrip and access roads will be located within a Miscellaneous License. An application for a Miscellaneous License has not yet been lodged with the Department of Mines and Petroleum (DMP). The supporting haul road infrastructure will be located within a Miscellaneous License. An application for a Miscellaneous License has not yet been lodged with the DMP. Part of the haul road corridor traverses the Great Victoria Desert Nature Reserve. The water supply is yet to be determined but is expected to be a deep aquifer within the Murnaroo Formation in the Officer Basin. The locations of the borefield and pipeline infrastructure corridor are yet not determined.
Extent (area) of proposed ground disturbance.	1270ha
Timeframe in which the activity or development is proposed to occur (including start and finish dates where applicable).	Pre-Feasibility Study: Completed March 2012 Definitive Feasibility Study: Quarter 2, 2014 Construction & Development: 2014 - 2015 Mining & Production: 2015
Details of any staging of the proposal.	Not Applicable
Is the proposal a strategic proposal?	No
Is the proponent requesting a declaration that the proposal is a derived proposal? If so, provide the following information on the strategic assessment within which the referred proposal was identified: • title of the strategic assessment; and • Ministerial Statement number.	No
Please indicate whether, and in what way, the proposal is related to other proposals in the region.	Not Applicable
Does the proponent own the land on which the proposal is to be established? If not, what other arrangements have been established to access the land?	Land access will occur on land defined by Tenement M69/141 under the *Mining Act 1978* (WA). Lost Sands Pty Ltd is the holder of this Tenement. Separate Miscellaneous Licenses will be sought under the *Mining Act 1978* (WA)

	for supporting infrastructure (airstrip, accommodation camp and access roads); water infrastructure; and haul road. The areas of these Miscellaneous Licenses are yet to be determined but are expected to be in the order of 200ha, 100ha and 1000ha, respectively. The proposed mine and northern section of the haul road is located within the Pila Nguru lands Determination Area (WC95/51). Lost Sands is currently developing a mining agreement (i.e. Indigenous Land Use Agreement (ILUA)) with the Traditional Owners to facilitate development of the project on land that coincides with the Pila Nguru lands Determination Area (WC95/51). Part of the proposed haul road corridor traverses the Great Victoria Desert Nature Reserve (GVDNR). DEC has been consulted with respect to the haul road and GVDNR, which has culminated in level 1 flora and fauna surveys, consultation with the OEPA and this referral to the EPA.
What is the current land use on the property, and the extent (area in hectares) of the property?	Tenement M69/141 under the *Mining Act 1978* (WA) has an area of 1558.3ha. Miscellaneous Licenses will be sought under the *Mining Act 1978* (WA) for supporting infrastructure (airstrip, accommodation camp and access roads); water infrastructure; and haul road. The areas of these Miscellaneous Licenses are yet to be determined but are expected to be in the order of 200ha, 100ha and 1000ha, respectively. The current land uses on these existing and proposed tenements includes mineral exploration and traditional Aboriginal activities and, for part of the haul road, nature conservation.

1.3 Location

Name of the Shire in which the proposal is located.	Shire of Laverton
For urban areas: • street address; • lot number; • suburb; and • nearest road intersection.	Not applicable
For remote localities: • nearest town; and	The Cyclone Mineral Sands Project is located approximately 620km east of the town of

• distance and direction from that town to the proposal site.	Laverton and 170km east-northeast of the Aboriginal Settlement of Tjuntjuntjarra.
Electronic copy of spatial data - GIS or CAD, geo-referenced and conforming to the following parameters: • GIS: polygons representing all activities and named; • CAD: simple closed polygons representing all activities and named; • datum: GDA94; • projection: Geographic (latitude/longitude) or Map Grid of Australia (MGA); • format: Arcview shapefile, Arcinfo coverages, Microstation or AutoCAD.	Electronic copies of spatial data enclosed (Refer to Cyclone_Deposit_Spatial_Data.zip file). The spatial data enclosed comprises of two ArcView© shapefiles. One depicts the indicative layout of the minesite and entire haul road corridor as shown in Attachments 1 and 3, the other is a copy of Tenement M69/141 downloaded from the DMP website on the 1st February 2013. Data in both shapefiles is represented by named polygons projected in (Geocentric Datum of Australia) GDA 1994, Map Grid of Australia (MGA) Zone 52.

1.4 Confidential Information

Does the proponent wish to request the EPA to allow any part of the referral information to be treated as confidential?	No request for confidentiality
If yes, is confidential information attached as a separate document in hard copy?	Not applicable

1.5 Government Approvals

Is rezoning of any land required before the proposal can be implemented? If yes, please provide details.		No	
Is approval required from any Commonwealth or State Government agency or Local Authority for any part of the proposal? If yes, please complete the table below.		Yes	
Agency/Authority	Approval required	Application lodged Yes / No	Agency/Local Authority contact(s) for proposal
Department of Mines and Petroleum	Mining Proposal approval under the Mining Act 1978 (WA)	No	To Be Advised
Department of Mines and Petroleum	Miscellaneous License under the Mining Act 1978 (WA)	No	To Be Advised
Shire of Laverton	Development Approval under the Planning and Development Act 2005 (WA)	No	To Be Advised

Department of Environment and Conservation	Works Approval and License under the Environmental Protection Act 1986 (WA)	No	To Be Advised
Department of Water	License to construct a bore and License to take water under the Rights in Water and Irrigation Act 1914 (WA)	No	To Be Advised

PART B - ENVIRONMENTAL IMPACTS AND PROPOSED MANAGEMENT

2. ENVIRONMENTAL IMPACTS

Describe the impacts of the proposal on the following elements of the environment, by answering the questions contained in Sections 2.1-2.11:

2.1 flora and vegetation;

2.2 fauna;

2.3 rivers, creeks, wetlands and estuaries;

2.4 significant areas and/ or land features;

2.5 coastal zone areas;

2.6 marine areas and biota;

2.7 water supply and drainage catchments;

2.8 pollution;

2.9 greenhouse gas emissions;

2.10 contamination; and

2.11 social surroundings.

These features should be shown on the site plan, where appropriate.

For all information, please indicate:

(a) the source of the information; and

(b) the currency of the information.

Key Proposal Characteristics

The key characteristics of the Cyclone Mineral Sands Project are identified in the table below:

ELEMENT	DESCRIPTION
GENERAL	
Location	620km east of Laverton and 230km north-northeast of Forest Siding (on the Trans-Australian Railway line), in the Shire of Laverton, Western Australia.
Mining Life	10 years (approximately)
Mining Method	Open Cut
Mineable Reserve	Approximately 97 million tonnes
Heavy Mineral Concentrate Production	Approximately 0.15 million tonnes per annum (1.5 million tonnes over the life of the project)
Area	1270ha (as per the components listed below)
COMPONENTS	
Mine Pits	
Location	Tenement M69/141
Area	485ha
Depth	To 40m below ground level
Dewatering	Not applicable. The Cyclone Deposit is located above the water table.
Mining and processing infrastructure	
Location	Tenement M69/141
Area	135ha
Support Infrastructure	
Location	Tenement yet to be determined (Miscellaneous License approximately 200ha in area)
Area	50ha disturbance footprint within an approximately 200ha Miscellaneous License
Haul Road	
Location	Tenement yet to be determined (Miscellaneous License approximately 1000ha in area)
Area	500ha disturbance footprint within an approximately 1000ha Miscellaneous License
Length	250km (approximately)
Width	20m (approximately) within a 40m wide Miscellaneous License
Water Supply	
Aquifer(s)	Shallow and deep Officer Basin sediments currently undergoing evaluation.

ELEMENT	DESCRIPTION
Volume	Approximately 7.9GL/y (250L/s)
Location	Tenement yet to be determined (Miscellaneous License approximately 100ha in area)
Area	Disturbance area yet to be determined. Miscellaneous License approximately 100ha in area.

Abbreviations

Ha: hectares

Km: kilometres

GL/y: gigalitres per year

L/s: litres per second

Attachments

To assist in understanding the environmental values, potential environmental impacts and proposed environmental management strategies for the Cyclone Minerals Sands Project, the following information is provided at Attachments 1 to 14:

Attachment		Format
1.	Cyclone Mineral Sands Project location	Map
2.	Cyclone Mineral Sands Project location in relation to Native Title Determination Areas	Map
3.	Cyclone Mineral Sands Project indicative mine layout	Map
4.	*Cyclone Project – Preliminary Flora and Vegetation Survey* (Woodman Environmental Consulting 2012)	Document
5.	*Cyclone Project Flora and Vegetation Desktop Review* (Woodman Environmental Consulting 2011)	Document
6.	Cyclone Mineral Sands Project Haul Road Native Vegetation Atlas (Refer to enclosed CD)	Map (CD)
7.	Cyclone Mineral Sands Project haul road options	Map
8.	Cyclone Mineral Sands Project – Transport Corridor Options Assessment (Sustainability 2012)	Document
9.	*Fauna Assessment of Transport Corridor Options for the Lost Sands Project (Cyclone Deposit)* (Bamford Consulting Ecologists 2012)	Document
10.	*Desktop Fauna Assessment of the Cyclone Deposit Project* (Bamford Consulting Ecologists 2011)	Document
11.	Cyclone Mineral Sands Project location in relation to groundwater features	Map
12.	*Cyclone Zircon Project Groundwater Feasibility Study* (AGT 2012)	Document
13.	Cyclone Mineral Sands Project location in relation to indigenous heritage features	Map
14.	*Environmental Report for the Pre-Feasibility Study of the Cyclone Mineral Sands Project in the Great Victoria Desert, Western Australia* (Sustainability 2011)	Document

2.1 Flora and Vegetation

2.1.1 Do you propose to clear any native flora and vegetation as a part of this proposal?

[A proposal to clear native vegetation may require a clearing permit under Part V of the EP Act (Environmental Protection (Clearing of Native Vegetation) Regulations 2004)]. Please contact the Department of Environment and Conservation (DEC) for more information.

(please tick)

✓ **Yes** — **If yes**, complete the rest of this section.

☐ No — **If no**, go to the next section

2.1.2 How much vegetation are you proposing to clear (in hectares)?

The Cyclone Mineral Sands Project will require the clearing of approximately 1270 hectares of land containing native vegetation.

2.1.3 Have you submitted an application to clear native vegetation to the DEC (unless you are exempt from such a requirement)?

☐ Yes

✓ **No** — **If yes**, on what date and to which office was the application submitted of the DEC?

2.1.4 Are you aware of any recent flora surveys carried out over the area to be disturbed by this proposal?

✓ **Yes**

☐ No

If yes, please attach a copy of any related survey reports and provide the date and name of persons / companies involved in the survey(s).

If no, please do not arrange to have any biological surveys conducted prior to consulting with the DEC.

The following reports are provided as Attachment 4 and 5 in relation to the flora and vegetation within and surrounding the area of the Cyclone Mineral Sands Project.

- *Cyclone Project – Preliminary Flora and Vegetation Survey* (Woodman Environmental Consulting 2012); and
- *Cyclone Project Flora and Vegetation Desktop Review* (Woodman Environmental Consulting 2011).

Attachment 6 presents a Native Vegetation Atlas for the haul road corridor from the Cyclone Mineral Sands mine to the Forrest rail siding.

The Pre-Feasibility Study of the Project was conducted which included a review of eight potential transport corridor options. From these eight, three were identified as being feasible and warranting further assessment: Loongana (the most westerly option), Forrest (central) and Deakin (the most easterly option). A map of these options is included as Attachment 7. Sustainability (2012) assessed the environmental and social implications of each of the three options (refer to Attachment 8). The assessment identified the Forrest (central) option as having the least potential impact to vegetation, flora, fauna and cultural values of the region. Consequently, the haul road for Cyclone Mineral Sands Project is based on the Forrest (central) option.

2.1.5 Has a search of DEC records for known occurrences of rare or priority flora or threatened ecological communities been conducted for the site?

✓ **Yes** ☐ No

If you are proposing to clear native vegetation for any part of your proposal, a search of DEC records of known occurrences of rare or priority flora and threatened ecological communities will be required. Please contact DEC for more information.

2.1.6 Are there any known occurrences of rare or priority flora or threatened ecological communities on the site?

✓ **Yes** ☐ No

If yes, please indicate which species or communities are involved and provide copies of any correspondence with DEC regarding these matters.

The following reports are provided as Attachments 4 and 5 in relation to the flora and vegetation within and surrounding the area of the Cyclone Mineral Sands Project:

- *Cyclone Project – Preliminary Flora and Vegetation Survey* (Woodman Environmental Consulting 2012); and
- *Cyclone Project Flora and Vegetation Desktop Review* (Woodman Environmental Consulting 2011).

Based on current knowledge, the Project will not impact any known populations of '*Rare Flora*' as defined under the *Wildlife Conservation Act 1950*.

Based on current knowledge, the Project will not impact any known *'Threatened Ecological Communities'* protected under the *Environment Protection and Biodiversity Conservation Act 1999* (C'th).

The Project may impact the following flora species listed as '*Priority*' by the Department of Environment and Conservation that have been recorded in the area within and surrounding the Cyclone Mineral Sands Project:

- *Acacia eremophila numerous nerved variant* (A.S. George 11924) (P3);
- *Dampiera eriantha* (P1);
- *Eremophila attenuata* (P1);
- *Eucalyptus pimpiniana* (P3);

- *Lepidium fasciculatum* (P3); and
- *Ptilotus blackii* (P3).

The information presented in Attachment 4 represents Level 1 Reconnaissance Surveys (EPA 2004a, b) conducted in order to inform Project infrastructure location decisions. Detailed Level 2 surveys are anticipated to be conducted upon finalisation of Project infrastructure locations to help inform the development of a detailed Environmental and Social Impact Assessment (ESIA) for the Project. These surveys will include detailed floristic data analysis to further delineate vegetation types.

2.1.7 If located within the Perth Metropolitan Region, is the proposed development within or adjacent to a listed Bush Forever Site? (You will need to contact the Bush Forever Office, at the Department for Planning and Infrastructure)

☐ Yes ✓ **No** **If yes**, please indicate which Bush Forever Site is affected (site number and name of site where appropriate).

The Cyclone Mineral Sands Project is not located within or near a Bush Forever Site.

2.1.8 What is the condition of the vegetation at the site?

As described in Woodman Environmental Consulting (2012) (Attachment 4), the vegetation condition within and surrounding the Project area is classified as mostly Excellent in the northern half of the Project area. In the southern half, the vegetation condition was classified as Excellent to Good.

2.2 Fauna

2.2.1 Do you expect that any fauna or fauna habitat will be impacted by the proposal?

(please tick) ✓ Yes **If yes**, complete the rest of this section.

☐ No **If no**, go to the next section.

2.2.2 Describe the nature and extent of the expected impact.

The Cyclone Mineral Sands Project will involve the clearing of up to 1270ha of land containing native vegetation during its implementation. This native vegetation is habitat for fauna. The Project will also involve the construction and operation of a transport corridor for the haulage of mineral resource to the Trans-Australian Railway Line. It is likely that the construction, operation and maintenance of this corridor will have the most potential impacts to fauna species occurring in the Project area.

Up to 770ha of native vegetation and associated habit may be cleared in relation to the mine pits, mining and processing infrastructure, support infrastructure and water supply infrastructure. A further 500ha may be cleared for the purposes of the haul road. Fauna impacts in relation to the mine and associated infrastructure is expected to be localised and negligible. Habitat will be restored at the end of mine life through mine decommissioning and land rehabilitation activities.

In relation to the haul road, the loss of habitat from any one location is small as the disturbance zone is long and narrow, and most vegetation assemblages are widely distributed. As such, impacts to fauna resulting from loss of habitat are expected to be negligible to minor. The corridor will pass also through a series of east-west oriented dunes. These dunes are potentially utilised by Specially Protected fauna such as Great Desert Skink, Marsupial Moles and Sandhill Dunnarts. The construction and operation of the transport corridor has the potential to locally disrupt the movement of these species through the landscape. However, it is likely any impact will be minor. Habitat degradation due to introduction of invasive species is a potential minor to moderate impact. Vehicle movements along the corridor have a high potential to spread weeds through the Project area. However, appropriate hygiene controls will mitigate this risk substantially. Habitat degradation due to erosion of the dune system is also possible as a result of transport corridor construction.

Fauna mortality as a result of operating the transport corridor is considered a potential moderate impact. Specially Protected fauna such as the Woma or Malleefowl (if present) would be susceptible to vehicle strike, with the loss of one or two individuals potentially significant. However, considering the large area of suitable habitat surrounding the Project area and the likely low, if at all, occurrence of such species, the risk of this impact occurring are considered low. Other '*Priority*' avian species occurring in the Project area are also at risk of increased mortality due to vehicle strike, but similarly, impacts to these species are expected to be negligible due to the high mobility of these species and the area of suitable habitat being extensive in the region.

The construction of the transport corridor is not expected to lead to an increase in the number feral species within the Project area; however it may aid their distribution through the landscape. This may lead to a potential increase in predation of Conservation Significant fauna species by feral cats/foxes, alteration of local habitat or increased competition for food and water resources. Overall, these impacts are expected to be minor.

2.2.3 Are you aware of any recent fauna surveys carried out over the area to be disturbed by this proposal?

✓ Yes ☐ No

If yes, please attach a copy of any related survey reports and provide the date and name of persons / companies involved in the survey(s).

If no, please do not arrange to have any biological surveys conducted prior to consulting with the DEC.

The following reports are provided as Attachment 9 and 10 in relation to the fauna within and surrounding the area of the Cyclone Mineral Sands Project:

- *Fauna Assessment of Transport Corridor Options for the Lost Sands Project (Cyclone Deposit)* (Bamford Consulting Ecologists 2012);
- *Desktop Fauna Assessment of the Cyclone Deposit Project* (Bamford Consulting Ecologists 2011);

2.2.4 Has a search of DEC records for known occurrences of Specially Protected (threatened) fauna been conducted for the site?

✓ Yes ☐ No (please tick)

2.2.5 Are there any known occurrences of Specially Protected (threatened) fauna on the site?

✓ Yes ☐ No **If yes**, please indicate which species or communities are involved and provide copies of any correspondence with DEC regarding these matters.

Table 1 summarises the Specially Protected fauna species that do or are likely to occur within and surrounding the Project area.

Table 1. Conservation status of significant fauna species expected to occur in the study (based on desktop review and field investigation). Species recorded are indicated and the predicted status of each species in the project is also given.

COMMON NAME	SPECIES NAME	EPBC Act	WC Act	Description
REPTILES				
Woma	*Aspidites ramsayi*		S4	**Probable Resident** Possibly present throughout the northern sections of the transport corridor i.e. the sandplains of the Great Victoria Desert and the Carlisle Plain.
South-western Carpet Python	*Morelia spilota imbricata*		S4	**Probable Resident** Probably present throughout the northern sections of the transport corridor.
Great Desert Skink	*Liopholis* (*Egernia*) *kintorei*	VU	S1 (VU)	**Probable Resident** Possibly present throughout the northern sections of the transport corridor.
BIRDS				
Malleefowl	*Leipoa ocellata*	VU/Mig	S1 (VU)	**Possible Resident** (at very low densities) Known to occur in the Great Victoria Desert.
Eastern Cattle Egret	*Ardea ibis*	Mig	S2 (Mig)	**Irregular Visitor** Listed under the CAMBA and JAMBA agreements as a migratory species.
Peregrine Falcon	*Falco peregrinus*		S4	**Probable Resident** Probably present throughout the northern sections of the transport corridor
Common Greenshank, Wood Sandpiper, Common Sandpiper, Red-necked Stint, Curlew Sandpiper	*Tringa nebularia* *Tringa glareola* *Actitis hypoleucos* *Calidris ruficollis* *Calidris ferruginea*	Mig	S2 (Mig)	**Occasional visitors to the area** (following suitable weather conditions) All migratory waterbirds that may utilise salt-lakes and depressions within the study area during wet years
Major Mitchell's Cockatoo	*Cacatua leadbeateri*		S4	**Possible resident** Probably a scarce resident of the Great Victoria Desert and northern edges of the Nullarbor
Naretha Blue-bonnet	*Northiella haematogaster narethae*		S4	**Resident** (common in the Myall woodlands bordering the true Nullarbor Plain) Moderately common in this vegetation type during the March 2012 survey.

COMMON NAME	SPECIES NAME	EPBC Act	WC Act	Description
Night Parrot	*Pezoporus occidentalis*	EN	S1 (CR)	**Possible irregular visitor** Possibly visits the area during suitable conditions, utilising salt-lake margins and surrounds.
Rainbow Bee-eater	*Merops ornatus*	Mig	S2 (Mig)	**Regular visitor** Summer breeding visitor throughout project area. May construct nesting burrows on the edge of tracks or in sand-dunes.
MAMMALS				
Crest-tailed Mulgara	*Dasycercus cristicauda*	VU	S1 (VU)	**Possible Resident** Status unknown within the study area. There is taxonomic uncertainty between the Crest-tailed and Brush-tailed Mulgara's, with records of both from nearby to the project area. If one or both species are present, it is likely to be within the north of the project area, where areas of mature Spinifex were recorded.
Sandhill Dunnart	*Sminthopsis psammophila*	EN	S1 (EN)	**Probable Resident** Possibly occurs within the dune fields at the northern end of the project area. Known to utilise areas of mature Spinifex grassland.
Marsupial Mole	*Notoryctes typhlops*	EN	S1 (EN)	**Resident** Resident within dune fields at the northern end of the project area. Evidence, in the form of "moleholes", was recorded from within the Cyclone deposit during this survey.
INVERTEBRATES				
Short Range Endemic (SRE) invertebrates				Some rare/unusual habitat assemblages have features suitable for SRE species

2.3 Rivers, Creeks, Wetlands and Estuaries

2.3.1 Will the development occur within 200 metres of a river, creek, wetland or estuary?

(please tick) ☐ Yes **If yes**, complete the rest of this section.

✓ No **If no**, go to the next section.

2.3.2 Will the development result in the clearing of vegetation within the 200 metre zone?

☐ Yes ☐ No **If yes**, please describe the extent of the expected impact.

2.3.3 Will the development result in the filling or excavation of a river, creek, wetland or estuary?

☐ Yes ☐ No **If yes**, please describe the extent of the expected impact.

2.3.4 Will the development result in the impoundment of a river, creek, wetland or estuary?

☐ Yes ☐ No **If yes**, please describe the extent of the expected impact.

2.3.5 Will the development result in draining to a river, creek, wetland or estuary?

☐ Yes ☐ No **If yes**, please describe the extent of the expected impact.

2.3.6 Are you aware if the proposal will impact on a river, creek, wetland or estuary (or its buffer) within one of the following categories? (please tick)

Conservation Category Wetland	☐ Yes	☐ No	☐ Unsure
Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998	☐ Yes	☐ No	☐ Unsure
Perth's Bush Forever site	☐ Yes	☐ No	☐ Unsure
Environmental Protection (Swan & Canning Rivers) Policy 1998	☐ Yes	☐ No	☐ Unsure
The management area as defined in s4(1) of the *Swan River Trust Act 1988*	☐ Yes	☐ No	☐ Unsure
Which is subject to an international agreement, because of the importance of the wetland for waterbirds and waterbird habitats (e.g. Ramsar, JAMBA, CAMBA)	☐ Yes	☐ No	☐ Unsure

2.4 Significant Areas and/ or Land Features

2.4.1 Is the proposed development located within or adjacent to an existing or proposed National Park or Nature Reserve?

✓ Yes ☐ No **If yes**, please provide details.

Part of the proposed haul road corridor passes through the Great Victoria Desert Nature Reserve (GVDNR), managed by the Department of Environment and Conservation. The location of the haul road in relation to the GVDNR is shown in Attachment 1. The GVDNR is listed on the Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) Register of the National Estate.

2.4.2 Are you aware of any Environmentally Sensitive Areas (as declared by the Minister under section 51B of the EP Act) that will be impacted by the proposed development?

Yes ✓ No **If yes**, please provide details.

2.4.3 Are you aware of any significant natural land features (e.g. caves, ranges etc) that will be impacted by the proposed development?

✓ Yes ☐ No **If yes**, please provide details.

Mallee eucalypt woodlands on sand dunes are expected to have a rich overall species with a variety of reptiles (especially fossorial species), woodland birds and numerous mammals, including conservation significant species (Bamford Consulting Ecologists 2012). As previously discussed, these dunes are potentially utilised by Specially Protected fauna such as Great Desert Skink, Marsupial Moles and Sandhill Dunnarts and may require further, targeted investigation.

Although not recorded during the Level 1 reconnaissance survey, there is potential for karst features in the southern end of the Project area (related to the transport corridor), with numerous caves known from the Nullarbor bioregion (Bamford Consulting Ecologists 2012). These caves are recognised for their unique assemblages of troglodytes and stygofauna. The only aspect of the Project that could influence these features is the transport corridor, and impacts are considered highly unlikely.

2.5 Coastal Zone Areas (Coastal Dunes and Beaches)

2.5.1 Will the development occur within 300metres of a coastal area?

(please tick) ☐ Yes **If yes**, complete the rest of this section.

✓ No **If no**, go to the next section.

2.5.2 What is the expected setback of the development from the high tide level and from the primary dune?

2.5.3 Will the development impact on coastal areas with significant landforms including beach ridge plain, cuspate headland, coastal dunes or karst?

☐ Yes ☐ No **If yes**, please describe the extent of the expected impact.

2.5.4 Is the development likely to impact on mangroves?

☐ Yes ☐ No **If yes**, please describe the extent of the expected impact.

2.6 Marine Areas and Biota

2.6.1 Is the development likely to impact on an area of sensitive benthic communities, such as seagrasses, coral reefs or mangroves?

☐ Yes ✓ No **If yes**, please describe the extent of the expected impact.

2.6.2 Is the development likely to impact on marine conservation reserves or areas recommended for reservation (as described in *A Representative Marine Reserve System for Western Australia*, CALM, 1994)?

☐ Yes ✓ No **If yes**, please describe the extent of the expected impact.

2.6.3 Is the development likely to impact on marine areas used extensively for recreation or for commercial fishing activities?

☐ Yes ✓ No **If yes**, please describe the extent of the expected impact, and provide any written advice from relevant agencies (e.g. Fisheries WA).

2.7 Water Supply and Drainage Catchments

2.7.1 Are you in a proclaimed or proposed groundwater or surface water protection area?

(You may need to contact the Department of Water (DoW) for more information on the requirements for your location, including the requirement for licences for water abstraction. Also, refer to the DoW website)

✓ Yes ☐ No **If yes**, please describe what category of area.

A search of the DoW website (Surface Water Proclamation Areas 2009 and Groundwater Proclamation Areas 2009), indicates that the Project location is not within a surface water area but is within a groundwater proclamation area (refer to Attachment 11). A licence to use this water will be required.

2.7.2 Are you in an existing or proposed Underground Water Supply and Pollution Control area?

(You may need to contact the DoW for more information on the requirements for your location, including the requirement for licences for water abstraction. Also, refer to the DoW website)

☐ Yes ✓ No **If yes**, please describe what category of area.

2.7.3 Are you in a Public Drinking Water Supply Area (PDWSA)?

(You may need to contact the DoW for more information or refer to the DoW website. A proposal to clear vegetation within a PDWSA requires approval from DoW.)

☐ Yes ✓ No **If yes**, please describe what category of area.

2.7.4 Is there sufficient water available for the proposal?

(Please consult with the DoW as to whether approvals are required to source water as you propose. Where necessary, please provide a letter of intent from the DoW)

✓ Yes ☐ No (please tick)

Pre-Feasibility Studies estimate a process water supply requirement of 250L/s (approximately 7.9GL/yr). Australian Groundwater Technologies (AGT) was engaged to conduct a groundwater feasibility study of Project water requirements (Attachment 12):

- *Cyclone Zircon Project Groundwater Feasibility Study* (AGT 2012)

The study identified 4 potential target aquifers in the Project area:

- Tertiary Palaeochannels;
- Shallow Officer Basin sediments;
- Deep Officer Basin sediments; and
- Eucla Basin sediments.

It is believed that adequate water supplies can be developed for the project. Further studies are needed in order to determine the best source of water for the Project operations. Upon a decision being reached, discussions with the DoW will be initiated to apply for a Groundwater Licence.

2.7.5 Will the proposal require drainage of the land?

☐ Yes ✓ No **If yes**, how is the site to be drained and will the drainage be connected to an existing Local Authority or Water Corporation drainage system? Please provide details.

2.7.6 Is there a water requirement for the construction and/ or operation of this proposal?

(please tick) ✓ Yes **If yes**, complete the rest of this section.

☐ No **If no**, go to the next section.

2.7.7 What is the water requirement for the construction and operation of this proposal, in kilolitres per year?

The estimated water supply requirement for the construction is 4 litres per second (0.3ML per day; 0.1GL for the entire construction phase). The estimated water supply requirement for the operations is 250 litres per second (7.9 GL per year).

2.7.8 What is the proposed source of water for the proposal? (e.g. dam, bore, surface water etc.)

A groundwater borefield will be constructed at a yet to be determined source, to be decided after further investigations from the 4 options below:

- Tertiary Palaeochannels;
- Shallow Officer Basin sediments;
- Deep Officer Basin sediments; and
- Eucla Basin sediments.

Upon finalisation of a chosen water source, it is intended that a dedicated generator will supply electricity for operation of the bore pumps and the transfer pumps. A pipeline will be constructed to link the borefield to the mine.

2.8 Pollution

2.8.1 Is there likely to be any discharge of pollutants from this development, such as noise, vibration, gaseous emissions, dust, liquid effluent, solid waste or other pollutants?

(please tick) ✓ Yes **If yes**, complete the rest of this section.

☐ No **If no**, go to the next section.

2.8.2 Is the proposal a prescribed premise, under the Environmental Protection Regulations 1987?

(Refer to the EPA's *General Guide for Referral of Proposals to the EPA under section 38(1) of the EP Act 1986* for more information)

✓ Yes ☐ No **If yes**, please describe what category of prescribed premise.

The Cyclone Mineral Sands Project is a prescribed premise under Category 8 (Mineral sands mining or processing) of Schedule 1 of the *Environmental Protection Regulations 1987*. The Cyclone Mineral Sands Project may also trigger Schedule 1 of the *Environmental Protection Regulations 1987* in terms of sewage treatment and disposal, used tyre disposal, solid or putrescible wastes (landfill), and power generation.

2.8.3 Will the proposal result in gaseous emissions to air?

✓ Yes ☐ No **If yes**, please briefly describe.

Air emissions arising from the Cyclone Mineral Sands Project are likely to arise from point sources such as power generation and diffuse sources such as mine vehicle exhausts and dust emissions.

A small remote area power station will be required for the project. The average demand for the site is estimated to be less than 5MW. To allow for redundancy, maintenance and variations in peak demand, the power station would be in the order of 8MW total installed power. Diesel powered generators are proposed due to the convenience of storage and handling. Power generation and vehicle exhausts would result in emissions of sulphurous oxides, greenhouse gases and particulates. Dust emissions would occur during land clearing, mining of mineral sands and the transport of materials and product along the haul road.

2.8.4 Have you done any modelling or analysis to demonstrate that air quality standards will be met, including consideration of cumulative impacts from other emission sources?

☐ Yes ✓ No **If yes**, please briefly describe.

There are no sensitive premises in the vicinity and the modelling and analysis of projected air emissions from the Cyclone Mineral Sands Project is not considered necessary.

2.8.5 Will the proposal result in liquid effluent discharge?

✓ Yes ☐ No **If yes**, please briefly describe the nature, concentrations and receiving environment.

Tailings will be generated from the Wet Concentration Plant as high density slurry and deposited in initially into a tailings storage facility (TSF). As mining progresses, the tailings will be deposited as backfill into the mined-out pit areas.

2.8.6 If there is likely to be discharges to a watercourse or marine environment, has any analysis been done to demonstrate that the State Water Quality Management Strategy or other appropriate standards will be able to be met?

☐ Yes ✓ No **If yes**, please describe.

2.8.7 Will the proposal produce or result in solid wastes?

✓ Yes ☐ No **If yes**, please briefly describe the nature, concentrations and disposal location/ method.

The Cyclone Mineral Sands Project includes the disposal of overburden (unmineralised soil and rock material) initially to a designated overburden landform. Initially overburden will be used to construct the tailing storage facilities and as mining progresses, overburden will be back-filled with deposited tailings into previously mined-out pit areas.

The Cyclone Mineral Sands Project would also result in solid and putrescible wastes from the accommodation camp. An application for a Works Approval and Registration for the landfill under the *EP Act 1986* (WA) will be made to the DEC following the completion of the environmental impact assessment process with the EPA.

2.8.8 Will the proposal result in significant off-site noise emissions?

☐ Yes ✓ No **If yes**, please briefly describe.

2.8.9 Will the development be subject to the Environmental Protection (Noise) Regulations 1997?

✓ Yes ☐ No **If yes**, has any analysis been carried out to demonstrate that the proposal will comply with the Regulations?

Please attach the analysis.

The *Environmental Protection (Noise) Regulations 1997* (WA) will apply to the Cyclone Mineral Sands Project. There are no noise sensitive premises in the vicinity and the modelling and analysis of projected noise emissions from the Cyclone Mineral Sands Project is not considered necessary.

2.8.10 Does the proposal have the potential to generate off-site, air quality impacts, dust, odour or another pollutant that may affect the amenity of residents and other "sensitive premises" such as schools and hospitals (proposals in this category may include intensive agriculture, aquaculture, marinas, mines and quarries etc.)?

☐ Yes ✓ No **If yes**, please describe and provide the distance to residences and other "sensitive premises".

2.8.11 If the proposal has a residential component or involves “sensitive premises”, is it located near a land use that may discharge a pollutant?

☐ Yes ☐ No ✓ Not Applicable

If yes, please describe and provide the distance to the potential pollution source

2.9 Greenhouse Gas Emissions

2.9.1 Is this proposal likely to result in substantial greenhouse gas emissions (greater than 100 000 tonnes per annum of carbon dioxide equivalent emissions)?

☐ Yes ✓ No **If yes**, please provide an estimate of the annual gross emissions in absolute and in carbon dioxide equivalent figures.

2.9.2 Further, if yes, please describe proposed measures to minimise emissions, and any sink enhancement actions proposed to offset emissions.

2.10 Contamination

2.10.1 Has the property on which the proposal is to be located been used in the past for activities which may have caused soil or groundwater contamination?

☐ Yes ✓ No ☐ Unsure **If yes**, please describe.

2.10.2 Has any assessment been done for soil or groundwater contamination on the site?

☐ Yes ✓ No **If yes**, please describe.

2.10.3 Has the site been registered as a contaminated site under the *Contaminated Sites Act 2003*? (on finalisation of the CS Regulations and proclamation of the CS Act)

☐ Yes ✓ No **If yes**, please describe.

2.11 Social Surroundings

2.11.1 Is the proposal on a property which contains or is near a site of Aboriginal ethnographic or archaeological significance that may be disturbed?

✓ Yes ☐ No ☐ Unsure **If yes**, please describe.

A search on the Department of Indigenous Affairs' (DIA) Register of Aboriginal Sites database (DIA 2011) indicated the presence of some registered Aboriginal heritage sites in the region that are protected under the *Aboriginal Heritage Act 1972* (refer to Attachment 13). Further investigations are required to determine if approval under Section 18 of the Act is required to impact on an Aboriginal place, site or object.

Site ID	Distance from Project	Description
2628: Tjatju	Approx. 12km north of the Serpentine Lakes borefield option	Water source
2627: Wipuwara	Approx. 2km north of the Serpentine Lakes borefield option	Water source
3061: Boo-Yoo-Noo Rock Hole	Approx. 10km east of the proposed haul road	Ceremonial, Mythological, Man-Made Structure, Quarry

2.11.2 Is the proposal on a property which contains or is near a site of high public interest (e.g. a major recreation area or natural scenic feature)?

☐ Yes ✓ No **If yes**, please describe.

2.11.3 Will the proposal result in or require substantial transport of goods, which may affect the amenity of the local area?

☐ Yes ✓ No **If yes**, please describe.

3. PROPOSED MANAGEMENT

3.1 Principles of Environmental Protection

3.1.1 Have you considered how your project gives attention to the following Principles, as set out in section 4A of the EP Act? (For information on the Principles of Environmental Protection, please see EPA Position Statement No. 7, available on the EPA website)

1. The precautionary principle.	✓ Yes	☐ No
2. The principle of intergenerational equity.	✓ Yes	☐ No
3. The principle of the conservation of biological diversity and ecological integrity.	✓ Yes	☐ No
4. Principles relating to improved valuation, pricing and incentive mechanisms.	✓ Yes	☐ No
5. The principle of waste minimisation.	✓ Yes	☐ No

The following table describes Lost Sands' consideration of the Principles of Environmental Protection.

Principle	How the proposal addresses the principle
1. The precautionary principle Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, decisions should be guided by — a) careful evaluation to avoid, where practicable, serious or irreversible damage to the environment; and b) an assessment of the risk-weighted consequences of various options.	Level 1 flora and fauna surveys have been undertaken for the mine and infrastructure area and three haul road corridor options to determine the potential environmental values of the project area. The results of the Level 1 survey identified the central haul road option as representing the least environmental and social impact relative to the other (western and eastern) options (Sustainability 2012; Attachment 8). Level 2 flora and fauna surveys will be carried out of the mine area and the preferred haul road corridor option. The results of these surveys will be used to determine the locations of "movable" infrastructure (e.g. camp, airstrip, access roads, processing plant, stockpiles, haul road) so as to minimise the clearing of native vegetation and avoid impacts to conservation significant vegetation and flora. The water supply has not yet been determined. However, similar flora and fauna surveys would be carried out in relation to the water supply to determine the potential impacts of groundwater abstraction and to position the

Principle	How the proposal addresses the principle
	water pipeline corridor in a location with the least environmental impact.
2. The principle of intergenerational equity The present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.	Potential environmental impacts have been identified at a high level during the Pre-Feasibility Study and associated Level 1 flora and fauna surveys. Further environmental studies are to be carried out e.g. Level 2 flora and fauna studies, water abstraction impact studies as project planning and detailed impact assessment advances. As project planning and the impact assessment advances, environmental management strategies will continue to be developed to manage potential impacts of the proposal and ensure these impacts have no long-term effects on the health, diversity and productivity of the environment. These will include minimising the clearing of native vegetation, avoiding impacts on conservation significant flora, measures to minimise impacts on fauna during construction, and implementation of rehabilitation works progressively during the mine life. These measures will be aimed at ensuring the health, diversity and productivity of native fauna and flora and sensitive or unique environmental features in the region are not compromised by the project for the benefit of future generations.
3. The principle of the conservation of biological diversity and ecological integrity Conservation of biological diversity and ecological integrity should be a fundamental consideration.	The conservation of biological diversity and ecological integrity was fundamental to identifying the central haul road corridor as the preferred option. The conservation of biological diversity and ecological integrity will be fundamental to the planning of all "movable" infrastructure. Further (Level 2) flora and fauna surveys will be undertaken to facilitate the placement of movable infrastructure in areas with the least environmental impact and to avoid impacts to conservation significant vegetation and flora.

Principle	How the proposal addresses the principle
4. Principles relating to improved valuation, pricing and incentive mechanisms a) Environmental factors should be included in the valuation of assets and services. b) The polluter pays principle — those who generate pollution and waste should bear the cost of containment, avoidance or abatement. c) The users of goods and services should pay prices based on the full life cycle costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any wastes. d) Environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, which enable those best placed to maximise benefits and/or minimise costs to develop their own solutions and responses to environmental problems.	The use of natural resources and assets and the ultimate disposal of any wastes and decommissioning and closure of operations have been considered in the project capital and operating costs. All costs associated with the proposal (including provision of environmental staff, implementation of environmental management actions, decommissioning and rehabilitation) will be borne exclusively by Lost Sands. Funding of the costs will be obtained from customers purchasing the minerals sands product. The polluter pays principle is recognised and the project has been designed to avoid pollution and minimise emissions. The project has considered full life cycle costs including waste treatment and disposal. The environmental impact assessment will be used for the setting of environmental goals and the development of management plans and procedures for the construction and operation phases. The overarching environmental goal of the project is to avoid, minimise or mitigate environmental impacts to the lowest level possible whilst still allowing for efficient and profitable operations.

Principle	How the proposal addresses the principle
5. The principle of waste minimisation All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.	The project design includes the use of a slimes-tailings thickener to produce a high density tailings stream. The ore contains about 4% slimes. All slimes produced during the Wet Concentrator Plant (WCP) processing are pumped to the thickener. The thickener receives a high flow of dirty water and creates a clean high flow of stream of clean water suitable for re-use in the process, and a low flow of high density slimes tailings for disposal. The thickener has been introduced into the process for water conservation and tailings management. Furthermore, water will be recovered from the tailings storage facility for use to move ore from the pit to the WCP, thereby reducing waste water emissions to the environment. A waste management plan will be included in the construction and operation management plans to ensure no waste (domestic or industrial) is unnecessarily produced or released to the environment. A Construction Environmental Management Plan will include waste minimisation obligations on contractors.

3.1.2 Is the proposal consistent with the EPA's Environmental Protection Bulletins/Position Statements and Environmental Assessment Guidelines/Guidance Statements (available on the EPA website)?

✓ Yes ☐ No

Lost Sands has identified the legislative framework and relevant EPA Guidance Statements relevant to the Cyclone Mineral Sands Project in its Pre-Feasibility Study Report: *Environmental Report for the Pre-Feasibility Study of the Cyclone Mineral Sands Project in the Great Victoria Desert, Western Australia* (Sustainability 2011) (refer to Attachment 14).

Flora and fauna studies of the proposed mine site and transport corridor options were planned to fulfil the requirements of a Level 1 survey as defined in EPA Guidance Statements 51 (Terrestrial Flora and Vegetation) and 56 (Terrestrial Fauna).

3.2 Consultation

3.2.1 Has public consultation taken place (such as with other government agencies, community groups or neighbours), or is it intended that consultation shall take place?

✓ Yes ☐ No **If yes**, please list those consulted and attach comments or summarise response on a separate sheet.

Lost Sands has undertaken consultation with the following stakeholders regarding this Proposal:

- Environmental Protection Authority (M. Jeffries, 16 January 2013);
- Department of Environment and Conservation (N. Caporn, S. Thomas, 14 September 2011);
- Department of Mines and Petroleum (M. Freeman, 14 September 2011; V. Sims, 16 January 2013);
- Department of Water (Kelly Joyce, 30 May 2012; Aimee Martin, 13 November 2012);

The preliminary consultation discussions provided general information on the Cyclone Mineral Sands Project; its location and infrastructure; surveys undertaken; and government assessment processes.

Lost Sands has been holding regular consultative meetings with the Paupiyala Tjarutja Aboriginal Corporation, the Native Title representative for the Pila Nguru People and the Central Desert Native Title Services since before exploration tenements over the Cyclone Mineral Sands Project area were granted. Specific negotiation meetings were begun with the parties regarding access and potential transport routes (amongst other matters) to tenement M69/141 in December 2011. Lost Sands also involved representatives from the Pila Nguru People in Level 1 flora and fauna surveys of transport corridor options, carried out in March 2012.

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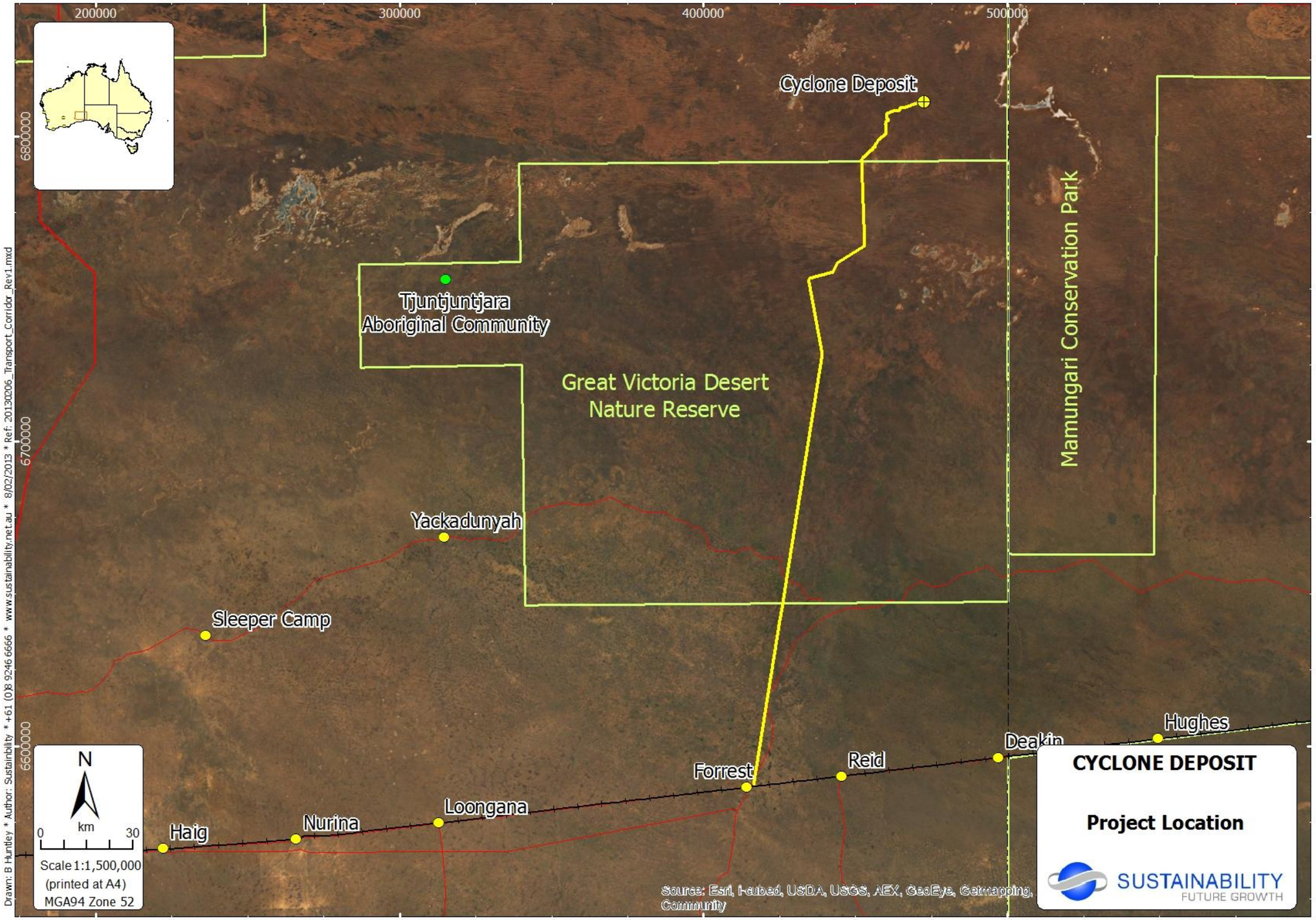
Attachment 1 Cyclone Mineral Sands Project location



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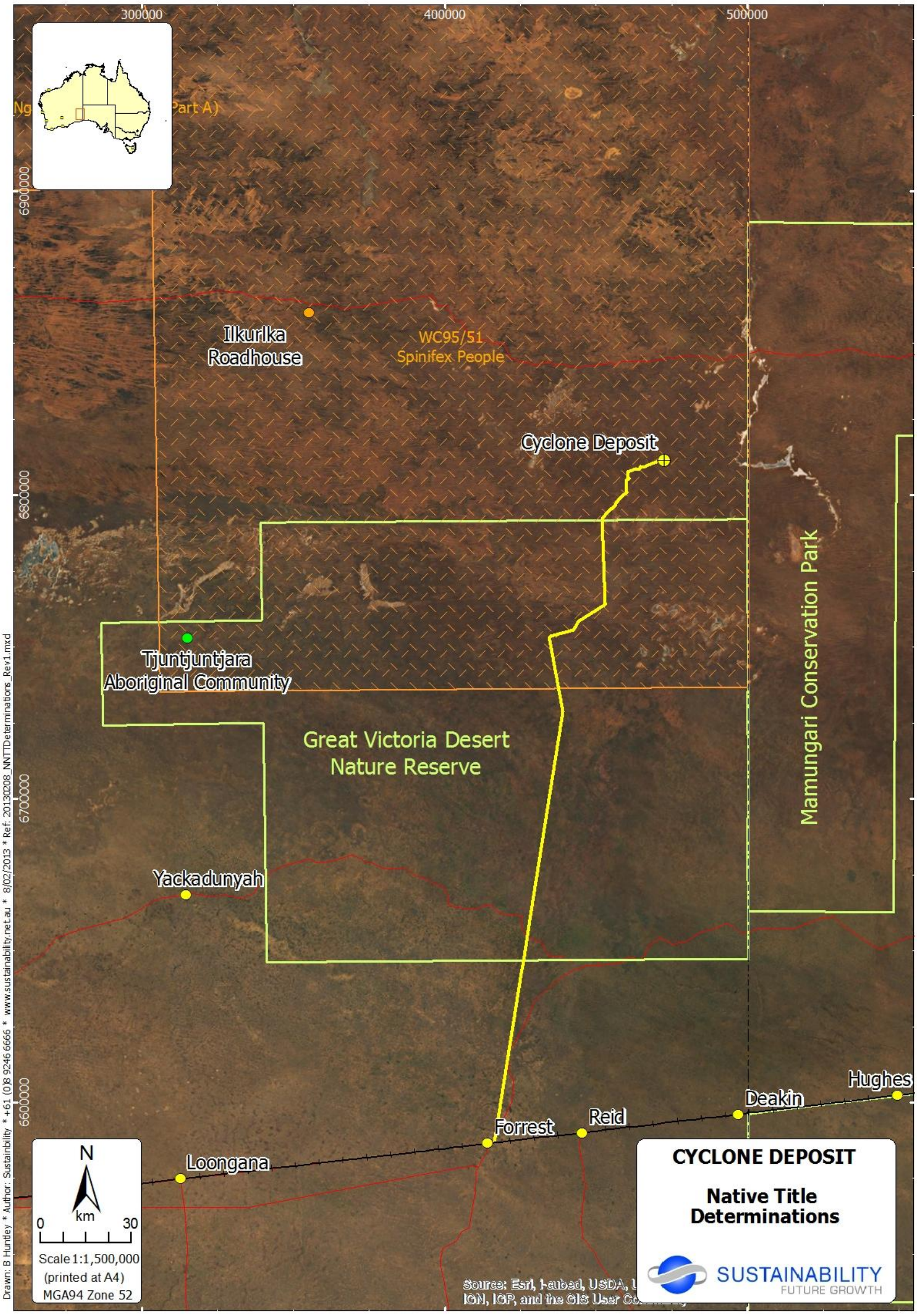
Attachment 2 Cyclone Mineral Sands Project location in relation to Native Title Determination Areas



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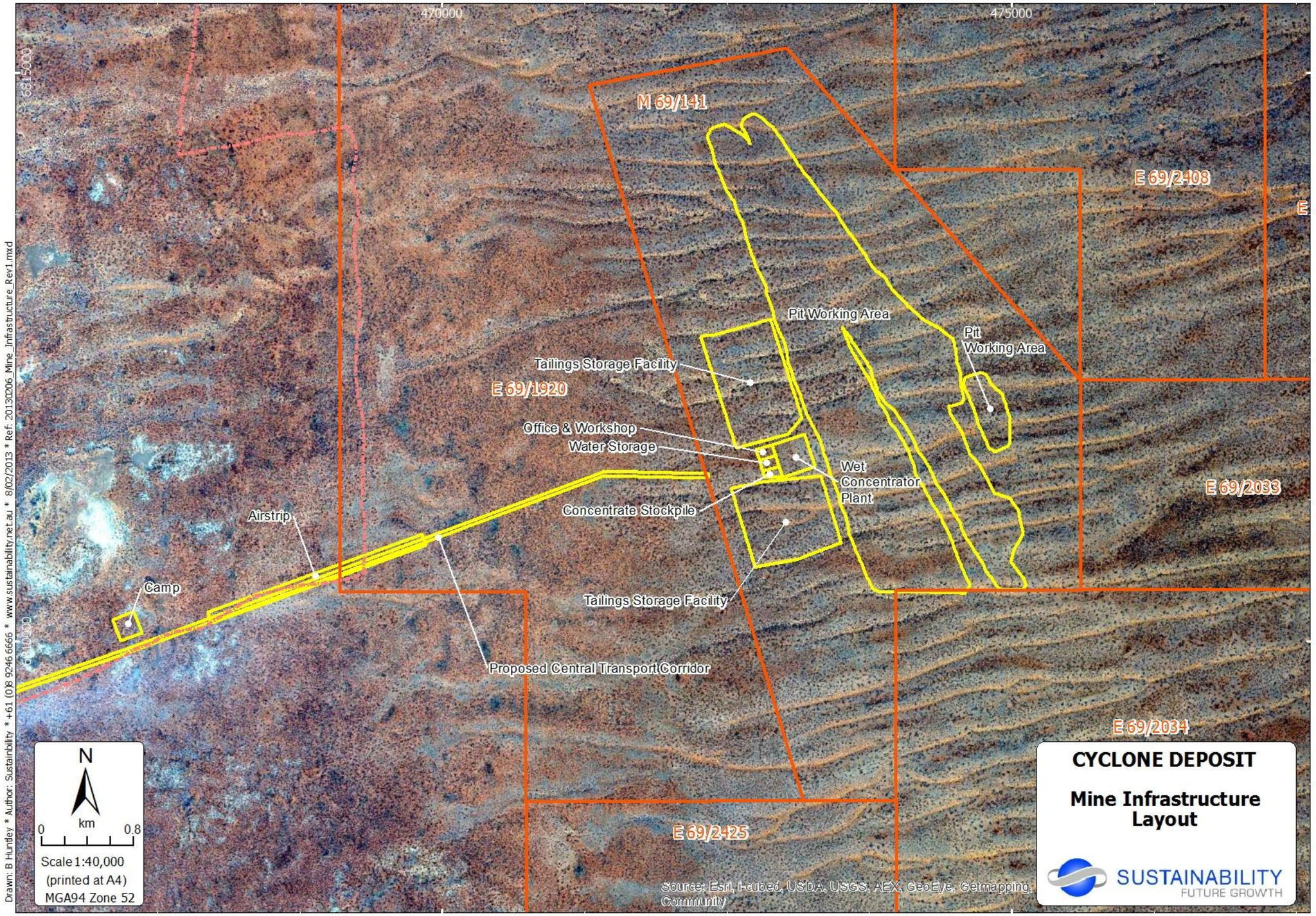
Attachment 3 Cyclone Mineral Sands Project indicative mine layout



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Attachment 4 *Cyclone Project – Preliminary Flora and Vegetation Survey* (Woodman Environmental Consulting 2012)

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Attachment 5 *Cyclone Project Flora and Vegetation Desktop Review* (Woodman Environmental Consulting 2011)

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Attachment 6 Cyclone Mineral Sands Project Haul Road Native Vegetation Atlas

Refer to enclosed CD

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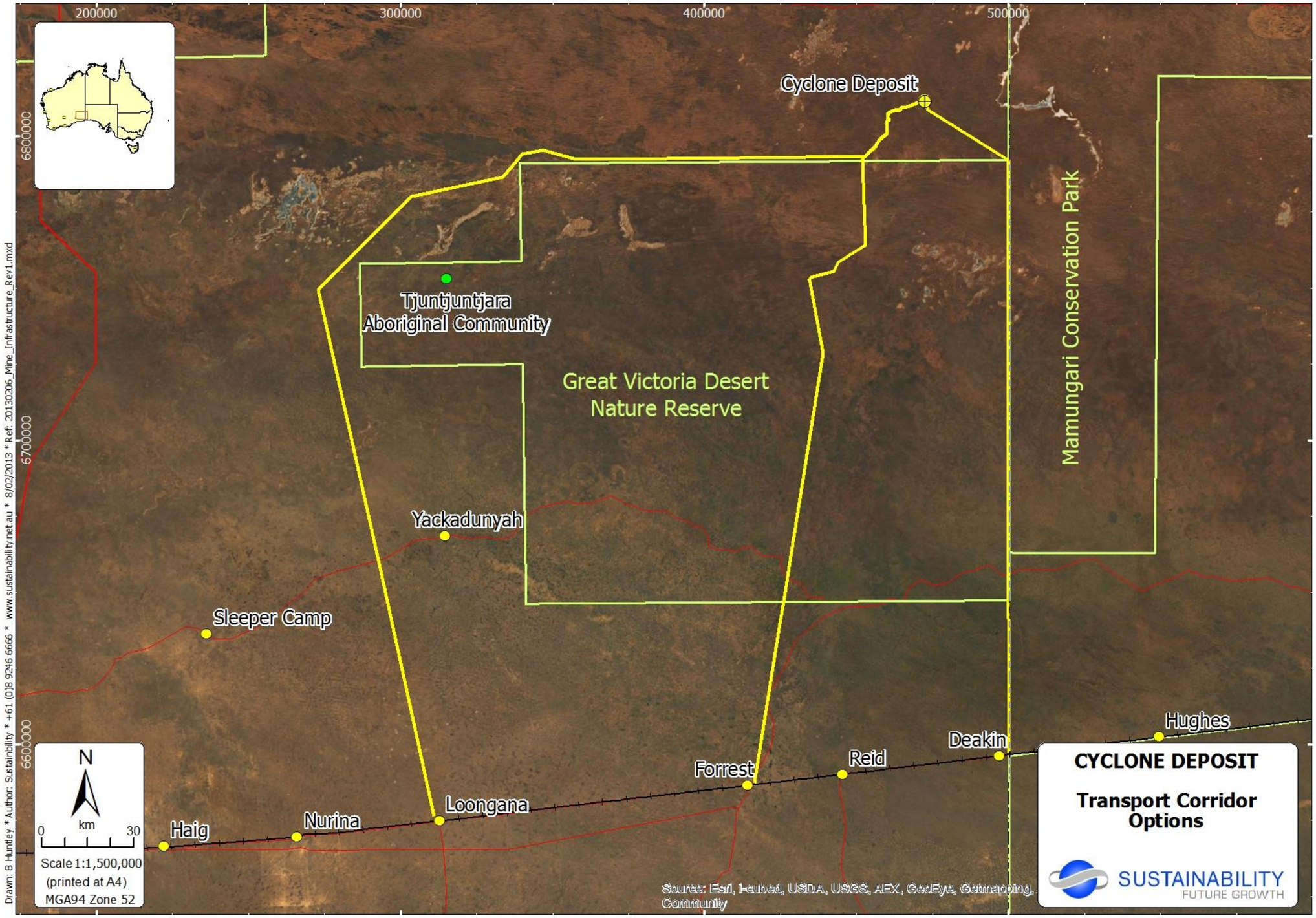
Attachment 7 Cyclone Mineral Sands Project haul road options



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Attachment 8 Cyclone Mineral Sands Project – Transport Corridor Options Assessment (Sustainability 2012)

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Attachment 9 *Fauna Assessment of Transport Corridor Options for the Lost Sands Project (Cyclone Deposit)* (Bamford Consulting Ecologists 2012)

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Attachment 10 *Desktop Fauna Assessment of the Cyclone Deposit Project* (Bamford Consulting Ecologists 2011)

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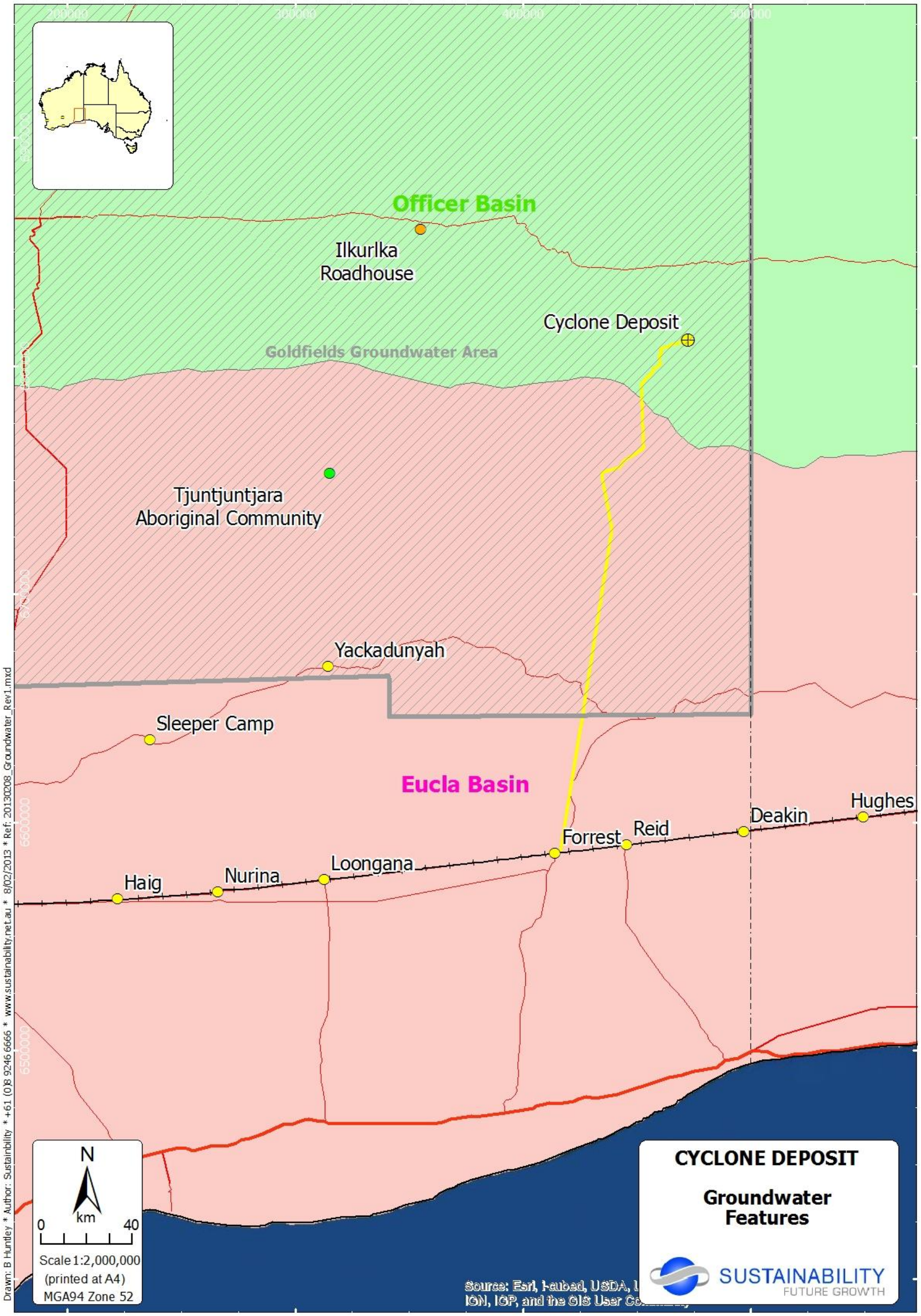
Attachment 11 Cyclone Mineral Sands Project location in relation to groundwater features



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Attachment 12 *Cyclone Zircon Project Groundwater Feasibility Study* (AGT 2012)

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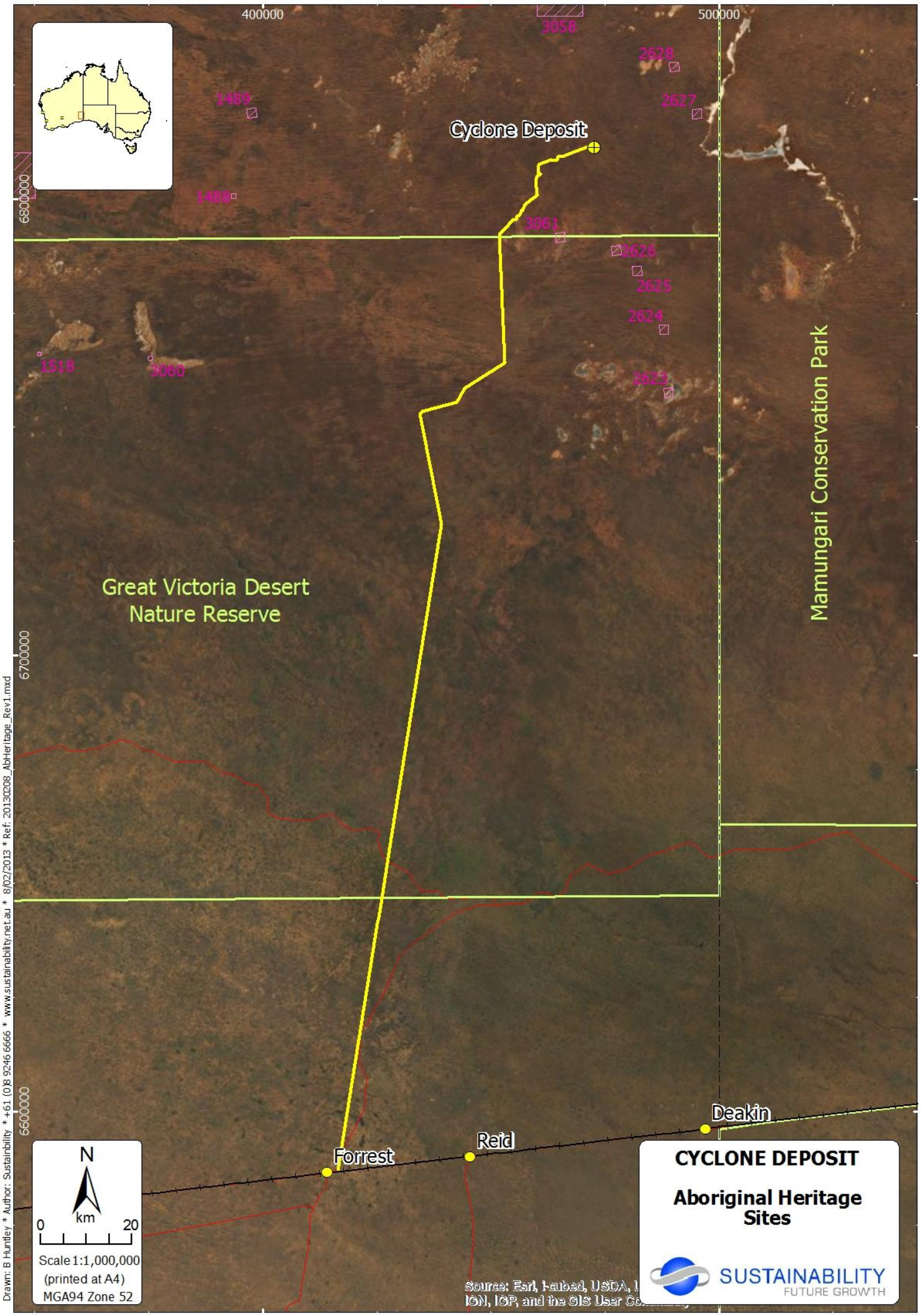
Attachment 13 Cyclone Mineral Sands Project location in relation to indigenous heritage features



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Attachment 14 *Environmental Report for the Pre-Feasibility Study of the Cyclone Mineral Sands Project in the Great Victoria Desert, Western Australia* (Sustainability 2011)

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