COTERRA ENVIRONMENT

Jinbi Wastewater Treatment Facility

Works Approval Application – Supporting Document

Rev A May 2025

CALIBRE | COMMITMENT | COLLABORATION

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1 Introduction

1.1 Background

Yindjibarndi Energy Corporation Pty Ltd (YEC) is proposing to develop the Jinbi Solar Facility on Yindjibarndi Ngurra (country), within the Shire of Ashburton (Figure 1). The Jinbi Solar Facility will comprise a series of solar arrays of up to 150 Megawatts, as well as associated hardware and infrastructure across an approximately 527.21 hectare (ha) project area.

To facilitate the Jinbi Solar Facility's construction, YEC proposes to establish a long-term worker's accommodation camp within the southern half of the project area with a maximum capacity of up to 272 personnel. To service the camp, YEC propose to install a dedicated Waste Water Treatment Plant (WWTP), which will treat raw sewage and convert to an appropriate standard of effluent that will be disposed of via a dedicated irrigation area. It is anticipated that the WWTP will receive sewage influent of up to 68,000 Litres (L) (68 cubic meters [m^3]) from the camp, per day, and will have a design capacity of 81,600 L (81.6 m^3]) per day.

It is understood that the proposed WWTP and associated irrigation area meet the description of a Category 85 prescribed premise, as specified in schedule 1 of the *Environmental Protection Regulations 1987*. YEC is therefore seeking approval for the proposed works through the issuance of a works approval under Part V of the *Environmental Protection Act 1986* (EP Act).

The proposed prescribed premise boundary which contains the WWTP and associated irrigation area is shown on Figure 1.

1.2 Yindjibarndi Energy Corporation

YEC was formed to develop, own and operate large scale renewable energy projects on Yindjibarndi Ngurra in Western Australia's Pilbara Region. YEC represents a partnership between Yindjibarndi people (through Yiyangu Pty Ltd) and renewable energy company, ACEN Corporation. The Yindjibarndi people are an equity owner of YEC, through Yiyangu Pty Ltd, which is 100% owned by the Yindjibarndi Wealth Trust.

Further information on YEC's structure and renewable energy and social goals is available online at https://yindjibarndienergy.com.au/.

2 Other Approvals and Consultation

2.1 Tenure and Planning

On 1 August 2023, authorisation to enter upon and use the project area for feasibility and investigative works was granted to Yiyangu Pty Ltd (an equity owner of YEC) under section 91 of the *Land Administration Act 1997* (LA Act). The license was subsequently extended for a period of two years on 27 February 2025, and is applicable to an area encompassing:

- Portion Lot 33 on Deposited Plan 240249 currently comprising a portion of Reserve 38991
- Portion Lot 190 on Deposited Plan 240249 currently comprising a portion of Reserve 38991
- Reserve 5510
- Portions Unallocated Crown Land (UCL) comprising PINs 1017635, 1017648, 1017652 and 1017640

The project area is located exclusively within UCL PIN 1017635 and 1017648.

Development and environmental approvals are identified as one of the licensee's works (Milestones in Annexure B).

Authority to apply for Part V approval for the treatment of sewage within the project area was provided to YEC from Yiyangu Pty Ltd, and has been provided with this application (Appendix 6).

In addition, YEC are currently progressing an Option to Lease crown land under Section 88 of the LA Act, which will be converted to a Crown Lease, pending an Access Agreement with Rio Tinto who hold a State Agreement lease over the Deep Dale Road.

Development approval was issued for the broader Jinbi Solar Facility by the Regional Development Assessment Panel (RDAP) on 4 December 2024, subject to conditions. A separate development approval application is proposed to be lodged specifically for the proposed workers accommodation camp, which is anticipated to be considered concurrently with this works approval application.

2.2 Environmental Approvals

Construction of the Jinbi Solar Facility, including the workers accommodation camp, WWTP and irrigation area, will necessitate the clearing of up to 516.85 hectares of native vegetation. In accordance with its obligations under the EP Act and associated *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations), YEC sought a Native Vegetation Clearing Permit from the DWER in February 2024. On the 3rd of May 2024, a clearing permit was granted to YEC which authorises the required clearing, subject to 17 conditions (CPS 10494/1). A copy of clearing permit CPS 10494/1 is provided at Appendix 1. The approved clearing area corresponds with the Jinbi Solar Facility project area, for the purpose of this application.

The Jinbi Solar Facility will involve the construction of up to four culverts across mapped tributaries in the upper Maitland River catchment, which will necessitate disturbance to these tributaries' beds and banks. Pursuant to the *Rights in Water and Irrigation Act 1914* (RIWI Act), YEC sought a Beds and Banks Permit from DWER in July 2024, which was subsequently approved with conditions on the 25th of October 2024 (PMB211032(1)). A copy of PMB211032(1) is provided at Appendix 3.

To address the water use needs of the Jinbi Solar Facility, YEC are looking to identify and abstract from an appropriate source of groundwater within the Jinbi project area, for use during the project's construction and operation. Recognising that the Jinbi Solar Facility is located within the Pilbara proclaimed groundwater area, YEC sought licenses to construct or alter a well and to take groundwater under sections 26D and 5C of the RIWI Act, respectively. On the 13th of February 2025, two conditional licenses were issued to YEC under section 26D of the RIWI Act, authorising the construction of six exploratory and six non-artesian wells in each

of the Hamersley – Fractured Rock and Pilbara – Fractured Rock water resources, respectively (CAW211465(1) and CAW211466(1)). In addition, on the 20th of February 2025, two conditional licenses were issued to YEC under section 5C of the RIWI Act, authorising the taking of a combined total of 100,000 kilolitres (kL) of water across each water resource (GWL211498(1) and GWL211499(1)).

The Department of Health (DoH)assesses public health risks associated with WWTP's in accordance with the *Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974.* A separate application for approval will be submitted to the DoH for consideration concurrently with this works approval application.

2.3 Consultation

YEC understands that stakeholder engagement and consultation is fundamental to ensuring that the voices and concerns of all stakeholders are heard and addressed, leading to more inclusive and sustainable project outcomes. By actively involving the community, YEC aims to better understand and mitigate potential social impacts, fostering trust and collaboration.

YEC commenced engagement with key stakeholders regarding the Jinbi Solar Facility in 2023. The key objectives if the engagement to-date have been:

- To inform stakeholders of the Jinbi Solar Facility and its potential impacts on the environment and community (positive and negative)
- To identify community values and aspirations in relation to the Jinbi Solar Facility
- To understand the perspectives of local community stakeholders and stakeholder groups such that these perspectives can be considered as part of the project's design evolution
- To engage early with regulators to understand areas of interest and potential concerns such that these can be considered as part of the project's design evolution.

Significant consultation has been undertaken with key federal, state and local regulatory authorities in addition to extensive and ongoing consultation with the traditional owners – the Yindjibarndi people. A detailed record of YEC's stakeholder engagement to-date can be provided upon request.

3 Site Features

3.1 Siting and Location

The prescribed premises boundary for the WWTP and associated irrigation area is located within the Shire of Ashburton, and is approximately 55 km south of the City of Karratha.

There are no sensitive land uses in proximity to the prescribed premises boundary such as residential dwellings or other land uses which may be affected by an emission or discharge associated with the proposed works. The nearest residence is associated with the Ngurrawaana Aboriginal Community, which is located approximately 17 km south of the premises boundary.

It should be noted that Yiyangu Pty Ltd as an equity owner of YEC has agreed it will consult with Yindjibarndi Aboriginal Corporation (YAC) and Yindjibarndi Ngurra Aboriginal Corporation (YNAC) in relation to the proposed located of renewable energy projects, and that it will not develop a project in areas that are culturally, socially, or environmentally unacceptable to YAC and YNAC. Yiyangu Pty Ltd has also agreed not to carry out any activities for a renewable energy project (including the proposed works) without first complying with the Indigenous Land Use Agreement and Heritage Protection Agreement established between these parties.

On 6 September 2023, Yiyangu Pty Ltd requested that YAC and YNAC consider whether the proposed location for the Jinbi Solar Facility (i.e. the project area) is culturally, socially and environmentally acceptable to YAC and YNAC. On the same date, YAC and YNAC resolved that, subject to a detailed cultural heritage survey being completed, the project area is a location which is culturally, socially and environmentally acceptable to YAC and YNAC.

The following key environmental considerations were used to select the proposed location for the WWTP and irrigation area:

- The WWTP irrigation area must not be positioned in any area mapped as having flood potential.
- The base of the disposal area (surface level for spray/drip irrigation), must be at least 0.6 m above the maximum groundwater level. Based on the groundwater and subsurface information, the maximum groundwater level should be taken as the rock level at this site.
- Establishment of an appropriate buffer between the prescribed premises boundary and any ephemeral creek line (approximately 250 m at the narrowest point; Vegetation types A and D; Figure 2)

3.2 Existing Environment

3.2.1 Landforms, Soils and Topography

At a landscape scale, land systems of the Pilbara were classified and mapped by Van Vreeswyk et al. (2004) according to similarities in landform, soil, vegetation, geology and geomorphology. The Jinbi Solar Facility project area predominately lies at the intersection of two land systems, being the Capricorn and Macroy systems, with a minor intersection with the Boolaloo system, descriptions of which are presented in Table 1 below. The prescribed premises boundary is located exclusively within the Capricorn system.

Table 1: Land systems mapped within the project area

Land System	Description
Capricorn System	Rugged sandstone hills, ridges, stoney footslopes and interfluves supporting low acacia shrublands or hard spinifex grasslands with scattered shrubs

Land System	Description
Macroy System	Stony plains and occasional tor fields based on granite supporting hard and soft spinifex shrubby grasslands
Boolaloo System	Granite hills, domes, tor fields and sandy plains supporting spinifex grasslands with scattered shrubs

Geology across the project area is represented by recent and Quaternary sediments, intrusive and extrusive volcanic rock, as well as volcanoclastic sedimentary rocks (DMIRS 2000).

Topography across the Jinbi Solar Facility project area is gently undulating, with a generally smoother terrain at lower elevations in the north and western parts of the project area, and elevated, hillier areas in the south. Isolated steep slopes are present in association with a gorge located in the centre of the project area. Elevation ranges from approximately 170 meters Australian Height Datum (mAHD) in the north to approximately 203 mAHD in the south.

A geotechnical investigation undertaken for the proposed camp location indicated that the soil profile comprised approximately 700 mm (as low as 500 mm) of a clayey sand mixture overlying igneous rock. Borehole drilling indicated that the igneous rock is likely a dolerite and is present to at least 4 m to 6 m below the current site surface levels (Galt Geotechnics, 2025, after STATS Australia, 2024).

Based on the geotechnical findings and associated laboratory testing, the soil category applicable to the upper soils at the site were soil category 3 (Weakly structured or massive) with an indicative permeability of 0.5 m/day to 1.5 m/day (Galt Geotechnics, 2025, after STATS Australia, 2024).

3.2.2 Hydrology

The Jinbi Solar Facility project area is transected by two water courses which flow from the south west and south east to the north respectively, and which serve as tributaries of the Maitland River (vegetation types A and D; Figure 2). Surface water was observed to be generally absent from both water courses in November and December 2023 at the time that ecological investigations were conducted (see section 3.2.3 and 3.2.4), indicating that each water course is ephemeral, with flow likely based on the extent of rainfall.

The closest watercourse to the prescribed premise boundary is located approximately 250 m to the west (Figure 1).

The centre of the Jinbi Solar Facility project area (but outside of it) is defined by the presence of a small gorge located along the eastern most watercourse, within which are a series of Jinbi (freshwater springs), During an information sharing session held between YEC, Mattiske and the Yindjibarndi community on the 31st of October, the Yindjibarndi community confirmed that the Jinbi represent permanent water sources, and are of cultural heritage value to the Yindjibarndi. It is to this area that the Jinbi project owes its name, in recognition of the site's cultural, hydrological and environmental importance.

Generally, localised perched water or shallow groundwater is anticipated to be limited to the central Jinbi area and along the two drainage lines transecting the project area, particularly following heavy rainfall events.

The presence of groundwater was not encountered during the geotechnical investigation undertaken at the prescribed premise site, with true groundwater expected to be at significance depth (Galt Geotechnics, 2025, after STATS Australia, 2024).

The Harding Dam catchment area (public drinking water source area) is located approximately 1.6 km east of the prescribed premise boundary.

3.2.3 Flora and vegetation

A reconnaissance flora and vegetation survey was undertaken by Mattiske Consulting Pty Ltd of a 1,606.7 ha area, including the premises boundary between the 30th of October and 3rd November 2023. The survey was supported by an information sharing session held between Mattiske and six members of the Yindjibarndi community. Information on traditional uses and stories for flora of interest were shared, with particular focus on those occurring in associated with the semi-permanent freshwater springs (Jinbi) in the centre of the survey area.

The survey included 18 quadrats and three releve's, and recorded a total of four vegetation communities (Table 2; Figure 2).

Table 2: Vegetation communities identified within the Jinbi Solar Facility survey area

Vegetation Community	Description	Mapped extent (ha)
Creekline 1 (A)	*Eucalyptus victrix* low open woodland over *Melaleuca linophylla, Melaleuca glomerata, Acacia bivenosa* mid sparse shrubland over *Stemodia grossa, Cyperus vaginatus* low sparse shrubland in ephemeral drainage channels.	98.87
Creekline 2 (D)	*Melaleuca argentea, Eucalyptus ?camaldulensis* mid woodland over *Acacia ampliceps, Acacia coriacea* subsp. *pendens, Acacia pyrifolia* var. *pyrifolia* mid open shrubland over *Typha domingensis*, *Cyperus vaginatus*, *Schoenoplectus subulatus* open sedgeland surrounding permanent pools.	3.95
Grassland 1 (B)	*Acacia ancistrocarpa*, *Acacia pyrifolia* var. *pyrifolia, Acacia bivenosa* mid sparse shrubland over *Triodia wiseana*, *Triodia epactia* low hummock grassland on rugged sandstone hilltops.	485.01
Shrubland 1 (C)	*Corymbia hamersleyana, Terminalia circumalata* low isolated trees over *Acacia ancistrocarpa, Acacia pyrifolia* var. *pyrifolia, Acacia inaequilatera* mid sparse shrubland over *Triodia epactia*, *Aristida contorta* low hummock grassland on stony plains and granite tor fields.	1018.92
Total		**1,606.7**

Of the above vegetation types, only vegetation type B was recorded within the prescribed premises boundary.

The vegetation type C2 was considered likely to align with the Priority Ecological Community (PEC) *Riparian Flora and Plant Communities of Springs and River Pools with High Water Permanence of the Pilbara Region,* which is a Priority 2 community. YEC has committed to the complete avoidance of this area and an associated buffer to mitigate direct and indirect impacts. The buffer will be variably sized, with a minimum distance of 23 m where the project area is also vertically separated by a gorge wall and is larger where the vertical separation from the project area is not so pronounced.

One Priority 2 listed flora individual was recorded during the survey (*Pentalepis trichodesmoides* subsp. Hispida), located along the windrow of an existing access track. YEC has committed to the complete avoidance of this flora, with a 10 m buffer. The closest occurrence of this flora species to the prescribed premise site is approximately 1.4km to the north.

3.2.4 Fauna

Bamford Consulting Ecologists undertook a level 1 ('basic') fauna and habitat assessment on the 6th and 7th of December 2023 across the same 1,606.7 ha area as the flora and vegetation survey. The survey was also supported by an information sharing session between YAC, Bamford Consulting Ecologists, and Coterra

Environment, which provided context and insight into Yindjibarndi relationships with culturally and environmentally significant native fauna potentially occurring in the area.

A total of 26 fauna species were confirmed to be present within the survey area during the survey, including one fish, at least two frogs, five reptiles, 16 birds, and three native mammals. Six threatened fauna species were considered to potentially occur at the site, based on the desktop assessment component of the survey. Of these, only the Yirriwardu (Northern Quoll) was confirmed to be present during the site inspection. The Bargunyji (Pilbara Olive Python) is also expected to be a resident of the survey area. Preferred habitat for both species is anticipated to be focused around the central Jinbi area, where rocky overhangs, granite boulders and permanent water bodies are prevalent. This area aligns with the mapped extent of the C2 vegetation community which along with an associated buffer will be completely avoided (Figure 2).

The highest value fauna habitat located in proximity to the prescribed premises is the creek line located approximately 250m to the west (Figure 1 and Figure 2).

3.2.5 Heritage

To date, three cultural heritage surveys have been undertaken of the premises boundary and broader approved project area by Echoes Cultural Heritage Management, in collaboration with Yindjibarndi representative organisations YAC and YNAC. No disturbance to any sites identified in the course of these surveys will occur without the express consent of YAC and YNAC.

One cultural heritage site adjacent to (but outside of) the approved Jinbi Solar Facility project area is a registered site. The site (Place ID: 10937) is registered as a ‘Grinding areas / Grooves’ place type, and was recorded in February 2001. The clearing area for the overall project has been reduced so as to completely avoid this heritage site. This site is located approximately 190 m to the south west of the proposed prescribed premise boundary (Figure 2).

The Yindjibarndi community has also voiced through two information sharing sessions, the cultural importance of permanent and semi-permanent freshwater springs (Jinbi) in the centre (but outside of) the Jinbi Solar Facility project area. While not a registered site, YEC has committed to the complete avoidance of this area and an associated buffer to mitigate direct and indirect impacts.

To ensure the promotion, preservation and management of Yindjibarndi cultural heritage within and in the vicinity of the Jinbi Solar Facility, YEC has prepared a dedicated Cultural Heritage Management Plan (CHMP) which will be implemented throughout the project’s development. The CHMP is a collaborative document between YEC and YAC/YNAC, which will be continually updated for the duration of its implementation based on ongoing consultation with Yindjibarndi representatives.

4 Proposed Activities

YEC propose to install a WWTP appropriate for the treatment of sewage from a 272 person camp. Assuming a hydraulic load of 250 L/day per person (Waste Water Services 2025), it is anticipated that up to 68,000 L (68 m^3) will be treated per day.

The camp and associated WWTP are proposed to have a design life of around 5-10 years. Notwithstanding, it is anticipated that the camp will only operate near capacity during the Jinbi Solar Facility's construction (approximately 2 years), with longer term usage being limited to a smaller operational workforce of approximately 20.

4.1 Waste Water Treatment Plant

4.1.1 Key Components

YEC propose to install a skid mounted temporary WWTP, which will utilise the Fixed Film process to treat raw sewage received from the camp. The WWTP will consist of the following main components:

- Skid mounted fixed film sewage treatment reactor, including:
  - 4 x 50,000L Primary Settlement and Balance Tanks
  - 2 x 55,000L Aerobic Reactor
  - 1 x 50,000L Chlorine Contact tank
- Containerised, insulated and airconditioned plant room with;
  - Duty standby influent feed pumps
  - Duty standby effluent pumps
  - Duty standby air blowers
  - Precipitant dosing pump
  - Influent and effluent flowmeters
  - AS3000 compliant control panel

The WWTP will be a containerised system with enclosed tanks to ensure odour levels are kept to a minimum.

As noted above, while the treatment plant will be required to treat up to 68 m^3/day, the package system proposed has additional capability to treat up to 81.6 m^3/day.

All WWTP components will be installed on a compacted earth pad, which will be bunded to prevent uncontrolled loss of effluent in the event of an accidental spills and/or releases (Appendix 1).

An indicative WWTP and associated holding tanks are presented at Plate 1 and described further below. An indicative WWTP configuration is presented in Appendix 1.

Plate 1: Indicative Waste Water Treatment Plant

Plate 2: Indicative waste water holding tanks

4.1.2 Plant configuration

Sewage from the camp is pumped to the interconnected primary settlement tanks. Readily settleable solids settle to the bottom of each tank as clear liquid overflow to each of the subsequent tanks.

As the liquid from the primary settlement tank flows into the balance tank, the hi-level control switch activates. This activates the influent feed pump to draw liquid from the balance tank and feed it into a fixed film aerobic treatment unit. The balance tank also receives an intermittently operating stream of recycled nitrified liquor from the clarifier zone of the fixed film aerobic treatment unit via an airlift. This ensures that malodours are prevented from developing due to the effects of contact stabilisation. When the level in the balance tank drops to a low level, the low level control switch hangs causing the influent feed pumps to pause operation to prevent dry running. In an emergency situation or in case of a hi level control switch activation due to high flow conditions, the standby feed pump is also activated along with the duty feed pump, so as to prevent tank overflow from occurring.

4.1.3 Treatment train

The liquid from the balance tank enters the aerobic chamber. Here the sewage is aerated via coarse bubble diffusers in presence of fixed media. This vigorous aeration transfers oxygen to the sewage to satisfy the biochemical oxygen demand (BOD). Once BOD is satisfied, the liquid is then nitrified. The aeration is turned off periodically to allow for dissolved oxygen to be depleted and for an anoxic zone to develop. This promotes denitrification to occur.

After the denitrification phase, the aerators are restarted. The liquid then flows into the clarification section of the plant via a sludge well. A polymer is dosed into the sludge well of the clarifier to aid in agglomerating the particles to enhance the settling. Heavier particles settle to the bottom of the clarifier. The clarifier operates two scum skimmers and a return sludge line for internal recycle via airlift. Any surface scum is removed and returned to the head of the reactor and the primary settlement tank via air lift. Settled sludge is also returned to upstream primary settlement tank, from where it will be periodically removed using a vacuum tanker for disposal offsite by a licensed waste disposal contractor.

Clear supernatant leaves the top of the clarifier zone via overflow weirs through the effluent launder and flows out to the Chlorine Contact Tank. This tank receives continuous flow from the outlet of the reactor clarifier. Chlorine is used for chlorination to maintain the level of chlorine between 0.2 mg/L and 2.0 mg/L. The duty/standby Effluent Pump draws chlorinated effluent from the Chlorine Contact Tank and delivers it to the irrigation area.

The treated effluent quality produced by the proposed WWTP system is discussed in Section 5.1.

4.1.4 Waste Sludge Removal

It is expected that there will be settled sludge build up in the primary settlement tanks and anaerobic zone of the fixed film unit over time. This will need to be periodically removed using a vacuum tanker for disposal offsite by a licensed waste disposal contractor.

Removal of waste sludge is expected to be required approximately every three months depending on the level of loading on the sewage plants.

4.2 Irrigation Area

4.2.1 Location and Sizing

YEC proposes to dispose of treated wastewater to a fenced irrigation area, approximately 66 m north east of the proposed camp (Figure 1). Access to the irrigation area would be restricted to authorised personnel only.

Treated wastewater will be transferred from the WWTP to the irrigation area via poly pipe in either an above or below-ground capacity. Where wastewater piping is buried underground it will be surrounded by bedding

sand. At the irrigation area, treated waste water will be distributed through impact type sprinklers, per the indicative arrangement presented in Plate 3 below.

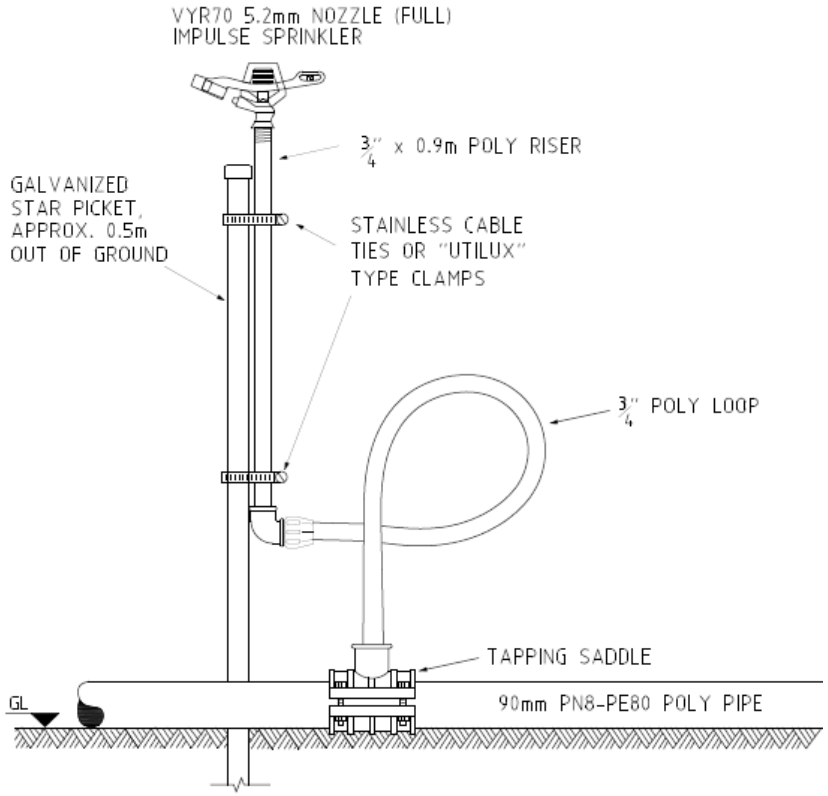

Plate 3: Indicative sprinkler arrangement

As recommended by Galt Geotechnics (2025) the irrigation area will be designed and graded to ensure there will be no surface ponding of water. Diversion bunds and curbs will be used to prevent rainfall run-on to the irrigation area from adjacent areas, and to prevent run-off from the irrigation area to habitat areas of the site.

In terms of the required land for irrigation, the Government Sewerage Policy (Department of Planning Lands and Heritage 2019) provides the following calculation to determine the land application area:

Hydraulic load (L/day) X conversion factor for the soil texture

The conversion factor for secondary treatment units for category 4 soils, as identified through the Site and Soil Evaluation (Galt Geotechnics 2025; Appendix 5), is 0.286. Assuming a hydraulic load of 68,000 L, the calculated land application area is 19,448 m^3. Noting that an area of approximately 35,000 m^2 has been set aside for the proposed irrigation area, it is considered that the irrigation area will be of a sufficient extent necessary for the appropriate disposal of treated waste water.

4.2.2 Additional Considerations

The Site and Soil Evaluation (Galt Geotechnics, 2025) noted the following would require further assessment during construction:

- The clearance to rock at the proposed land application area must be assessed by potholing at a frequency of 1 test per 250 m^2 to ensure that there is a minimum of 0.6 m of soil from the underside of the disposal area (either base of leach drain or surface for drip/spray irrigation)

- Where there is insufficient clearance to rock, either over-excavation of the rock must be done, or the area should be filled (with soil derived from within or nearby the land application area) to enable this 0.6 m clearance to be met
- The permeability, soil particle distribution and phosphorous retention index at the proposed LAA must be tested at a frequency of 1 test per 2,000 m^2 to confirm the soil category and design loading rate assessment
- The outcomes of this testing may require the soil category to be updated for detailed design and a smaller or larger land application area may be required. Galt Geotechnics (2025) considered it unlikely that the required land application area would be required to change substantially.

In order to allow for the possibility that the size of the land application area may need to be increased as a results of these tests, an irrigation area of approximately 35,000 m^2 has been set aside within the prescribed premises area, which is approximately 15,552 m2 larger than necessary, based on the assessed soil texture (section 4.2.1). This would allow for expansion of the irrigation area, should this be required.

5 Emissions, Discharges and Waste

5.1 Influent and Treated Effluent Quality

The secondary treatment system will provide a treated effluent quality to meet the following specifications (Table 3):

Table 3: Influent and Treated effluent quality

Parameter	Anticipated Influent Quality	Treated Effluent Quality
Suspended solids	<300mg/L	<30mg/L
Biochemical Oxygen Demand (BOD_5)	<300mg/L	<20mg/L
Total Nitrogen	<60mg/L	<50mg/L
Phosphorus	<18mg/L	<12mg/L
Residual chlorine	-	0.2-2.0mg/L
Coliforms	-	<1,000cfu/100mL

As noted above the maximum volume of treated effluent to be emitted from the facility based on an occupancy of 272 people is 68 m^3/day.

5.2 Management and Mitigation

YEC proposes to implement the following controls to mitigate potential environmental impacts:

- A minimum separation of 792 m will be established between the proposed irrigation area and the central Jinbi spring
- A minimum separation of 66 m will be established between the proposed irrigation area and the broader camp
- The irrigation layout will be designed in a manner that ensures that no run-off, spray drift or other discharge does not occur beyond the boundary of the irrigation area.
- The irrigation layout will be designed in a manner that ensures a minimum of 0.6 m between the surface level and the maximum groundwater level (taken as the top of rock)
- Any fill imported to the irrigation area to establish a minimum 0.6 m proximity to the maximum groundwater level will be at least as permeable as the existing on-site soils
- Appropriate fencing and signage will be installed around the irrigation area to mitigate the potential for unauthorised access
- No irrigation will occur during adverse weather conditions, such as cyclonic events
- WWTP tanks will be installed on compacted ground with an earth bund around the facility
- Bunding of WWTP and irrigation area
- Use of hi-level control alarms to prevent tank overflows
- Removal of waste sludge will be undertaken approximately every three months depending on the level of loading for offsite disposal.

5.3 Monitoring

YEC propose to implement the following monitoring regime to ensure that the proposed controls are effective in mitigating potential environmental impacts:

- Prior to the commencement of the irrigation area's operation, potholing will be undertaken at a frequency of 1 test per 250 m^2 to ensure a minimum of 0.6 m between the surface to the top of rock
- Prior to the commencement of the irrigation area's operation, soil type permeability testing will be undertaken to ensure the irrigation area's extent is appropriate. This testing will involve:
  - In situ constant head testing
  - Particle size distribution testing
  - Phosphorous retention index testing
- Operational monitoring will be conducted monthly in accordance with Department of Health guidelines (DoH 2011) and future license requirements, in accordance with AS/NZ 5667.1

6 References

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Figures

IRRIGATION AREA

WWTP

CAMP

LEGEND

- Premises Boundary
- Approved Clearing Area
- Camp
- Railway
- Road

N

0 100 200 400 600 800 m

Scale: 1:15,000 @ A3
GDA2020 MGA Zone 50

ENVIRONMAPS| t: 0406 590 006
Environmental Mapping Solutions | www.environmaps.com.au

C:\GIS\Jobs\CoTerra\YECREN05 - Jinbi Solar Facility, WAASD\Figures\YECREN05_F01 Site Location_240512.mxd

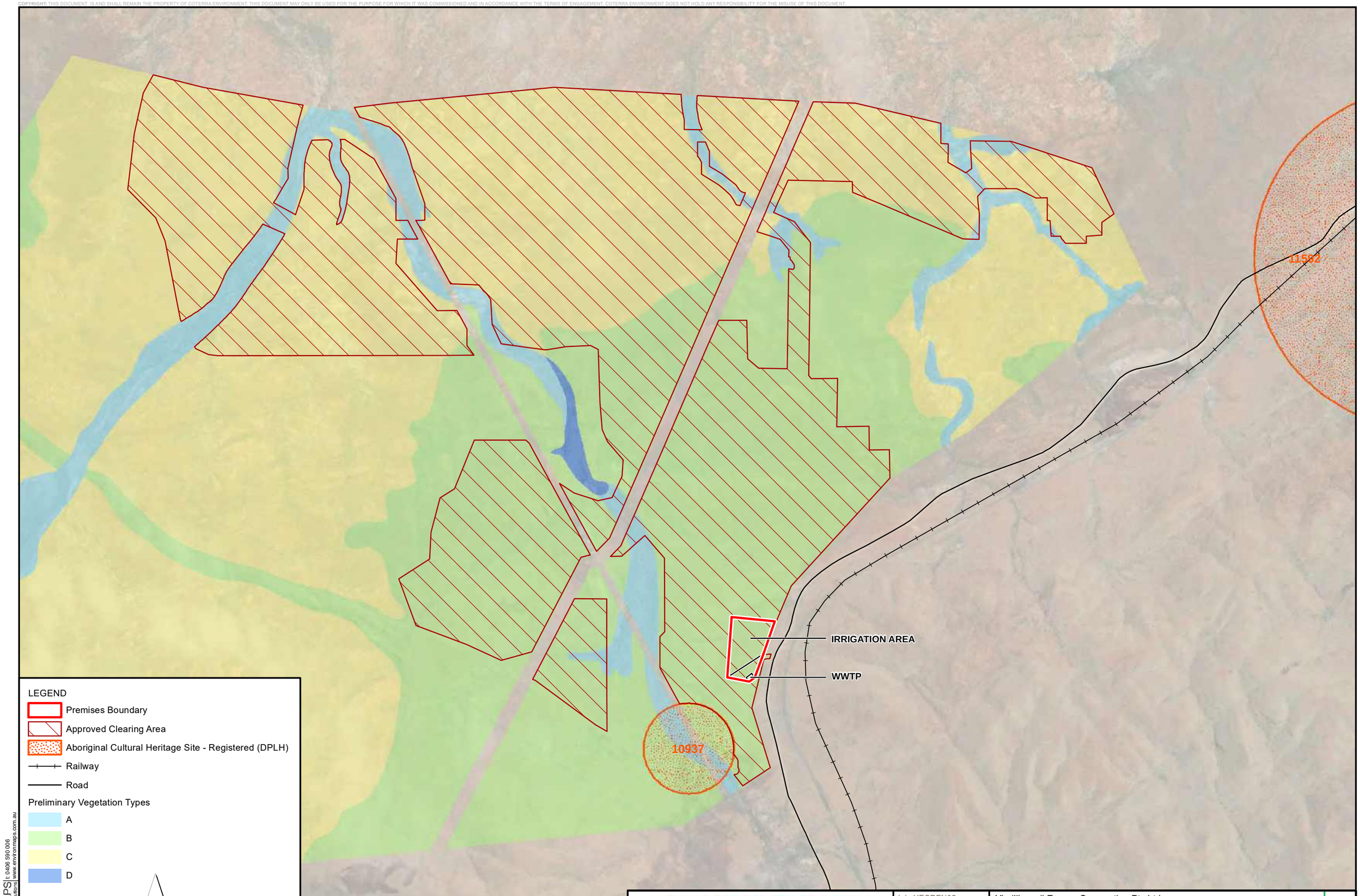
COTERRA ENVIRONMENT

Job: YECREN05
Doc: 001
Date: 12/05/2025
Ph: (08) 9381 5513
Fax: (08) 9381 5514
E: info@coterra.com.au

Yindjibarndi Energy Corporation Pty Ltd
WORKS APPROVAL APPLICATION SUPPORTING DOCUMENT
JINBI SOLAR FACILITY

SITE LOCATION

Figure 1



ENVIRONMAPS | t: 0406 590 006 | Environmental Mapping Solutions | www.enviromaps.com.au

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COTERRA ENVIRONMENT

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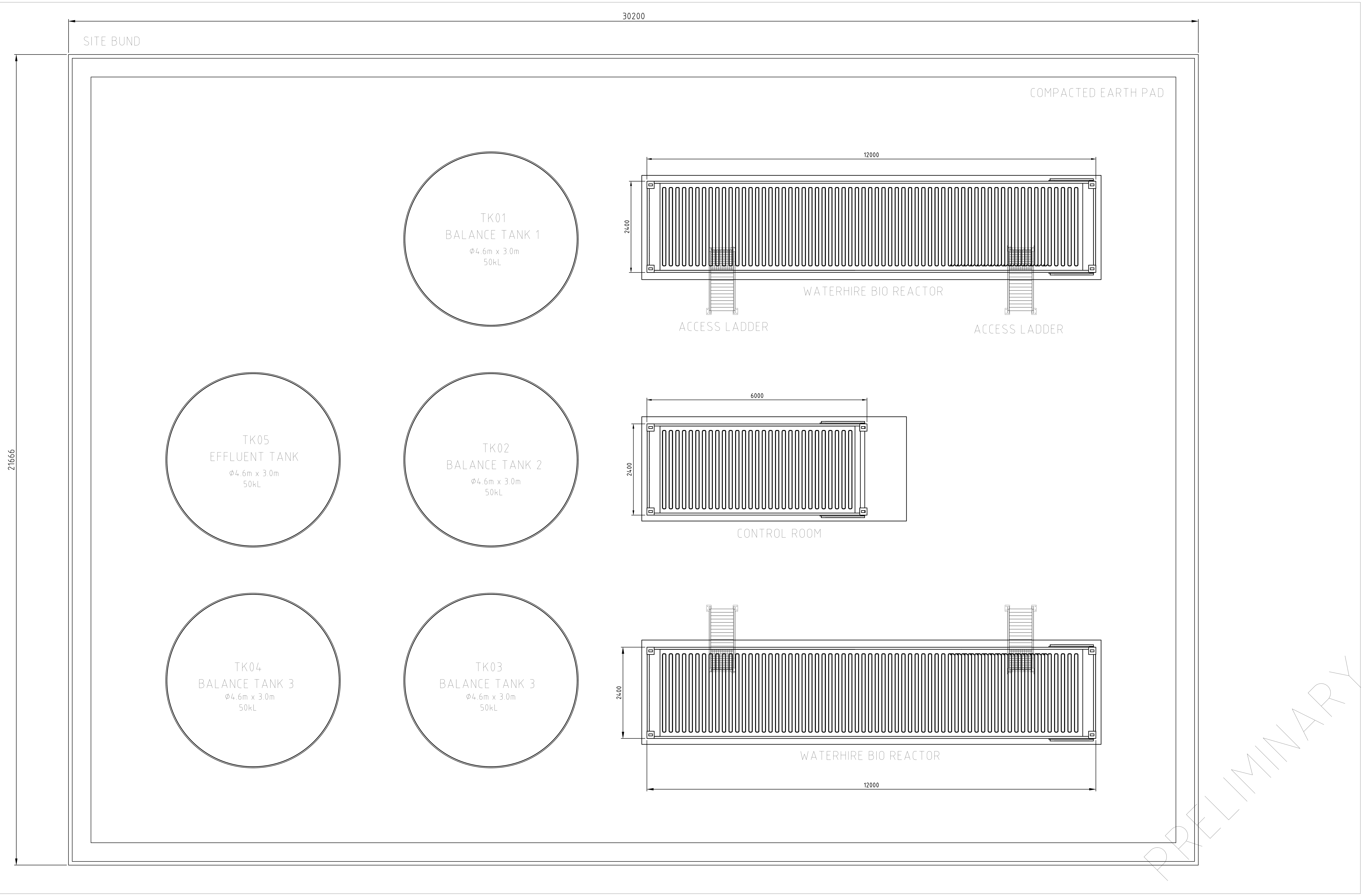
Yindjibarndi Energy Corporation Pty Ltd
WORKS APPROVAL APPLICATION SUPPORTING DOCUMENT
JINBI SOLAR FACILITY

ENVIRONMENTALLY SENSITIVE RECEPTORS

Figure 2

Appendix 1 Waste Water Treatment Plant – Indicative Configuration



DRG No	REFERENCES

REV	DATE	DESCRIPTION	DRAWN	CHECKED	DESIGNED	APPROVED	PLS APP
A	26.02.25	ISSUED FOR REVIEW	[redacted]	-	-		

Rapid Camps Australia

WWS WASTE WATER SERVICES

PROJECT: JINBI WORKERS CAMP - 272 PAX

TITLE: RAPID CAMPS
TEMPORARY WASTE WATER TREATMENT PLANT
GENERAL ARRANGEMENT OPTION 2

SHEET	SCALE	DRG No	REVISION
A1	1:100	XX-XXXX-DRG-GN-XXX	A

Appendix 2 DWER Native Vegetation Clearing Permit – CPS 10494/1

GOVERNMENT OF WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10494/1
Permit Holder:	Yindjibarndi Energy Corporation Pty Ltd
Duration of Permit:	From 28 May 2024 to 28 May 2034

The permit holder is authorised to clear *native vegetation* subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of constructing a solar facility and associated infrastructure.

2. Land on which clearing is to be done

Unallocated Crown Land PIN 1017635, Fortescue

Unallocated Crown Land PIN 1017648, Fortescue

3. Clearing authorised

The permit holder must not clear more than 516.85 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 28 May 2029.

PART II – MANAGEMENT CONDITIONS

5. Avoid, minimise, and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

(i) avoid the clearing of *native vegetation*;

(ii) minimise the amount of *native vegetation* to be cleared; and

(iii) reduce the impact of clearing on any environmental value.

6. Weed management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds*:

(i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

(ii) ensure that no known *weed*-affected soil, *mulch*, *fill*, or other material is brought into the area to be cleared; and

(iii) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

7. Wind erosion management

The permit holder must commence construction of the solar farm no later than three (3) months after undertaking the authorised clearing activities to reduce the potential for wind erosion by minimising the exposure time of soils prior to construction.

8. Directional clearing

The permit holder must:

(a) conduct clearing activities in a slow, progressive manner towards adjacent *native vegetation*; and

(b) allow reasonable time for fauna present within the area being cleared to move into adjacent *native vegetation* ahead of the clearing activity.

9. Vegetation management – drainage line surface flow

The permit holder must:

(a) avoid clearing within drainage lines, where practicable; and

(b) maintain the existing surface flow of any drainage line that is to be impacted by the authorised clearing.

10. Vegetation management – watercourse surface flow

The permit holder must not clear *native vegetation* within the areas cross-hatched red in Figure 1 of Schedule 1, except for the purposes of constructing access tracks and crossings, and/or transmission infrastructure. Where *native vegetation* clearing is required within the area(s) cross-hatched red in Figure 1 of Schedule 1, the permit holder must:

(a) not clear more than 1 hectare of *native vegetation* in total;

(b) reduce the number of access tracks and crossings to a minimum, and consolidate watercourse crossings with other infrastructure where practicable;

(c) ensure that surface flow is maintained, or is reinstated downstream into the existing natural watercourse; and

(d) ensure that fauna movement and dispersal along the watercourse is maintained or reinstated.

11. Fauna management- backfilling

(a) The permit holder must:

(i) backfill all excavations with excavated material on the day of excavating; or

(ii) fence all excavations on the day of excavating with fine mesh to prevent fauna access; or

(iii) cover all excavations on the day of excavating with a cover which prevents entry to the excavation by fauna species.

(b) In areas where backfilling or fencing or covering of excavations in accordance with condition 11(a) is not possible for longer than 24 hours, the permit holder must:

(i) conduct a daily fauna inspection before 7am of any open, unfenced and uncovered excavations left for longer than 24 hours; and

(ii) ensure that fauna egress points appropriate for Northern Quoll (*Dasyurus hallucatus*), Western Pebble-mound Mouse *(Pseudomys chapmani)*, Northern Short-tailed Mouse (*Leggadina lakedownensis*), Pilbara Olive Python (*Liasis olivaceus barroni*) and Lined Soil-crevice Skink (*Notoscincus butleri*) are installed every 500 metres at a minimum; and

(iii) if any trapped fauna is discovered, it is to be handled and relocated to an area of *native vegetation* outside of the disturbance footprint by a *fauna specialist*, and for any threatened fauna discovered, in accordance with a section 40 authorisation under the *Biodiversity Conservation Act 2016.*

12. Fauna management – pre-clearance surveys

(a) *Immediately prior* to undertaking any clearing authorised under this permit, the permit holder shall engage a *fauna specialist* to undertake clearance surveys within the area to be cleared for the Northern Quoll, Western Pebble Mound Mouse, Northern Short-tailed Mouse and Pilbara Olive Python, including the identification and inspection of burrows, mounds and dens, and determination of whether burrows and/or dens and/or mounds are being utilised.

(b) Where evidence of recent burrow, den or mound use is identified under condition 12(a) of this permit, the permit holder shall;

(i) engage a *fauna specialist* to flag the location of the burrow/s and/or den/s and/or mounds showing signs of recent use;

(ii) not clear within five metres of the flagged burrow/s and/or den/s and/or mounds;

(iii) engage a *fauna specialist* to monitor with cameras, the flagged burrow/s and/or den/s and/or mounds for a maximum of five days, or until such time that the relevant fauna have been observed to independently move on from the burrow/s and/or den/s and/or mounds; and

(iv) prior to clearing, engage a *fauna specialist* to re-inspect any flagged burrow/s and/or den/s and/or mounds for the presence of Northern Quoll, Western Pebble-mound Mouse or Northern Short-tailed Mouse.

(c) If Northern Quoll are identified utilising any flagged burrow/s and/or den/s under condition 12 (b)(iv) of this permit and cannot be avoided in accordance with condition 5 of this permit, the permit holder shall engage a *fauna specialist* to remove and relocate the identified Northern Quoll to an area of *suitable habitat*, in accordance with a section 40 authorisation under the *Biodiversity Conservation Act 2016.*

(d) Where active Northern Quoll burrows and or dens are identified under condition 12(a) of this permit, and/or Northern Quoll are relocated under condition 12(c) of this permit, the permit holder shall include the following in a report submitted to the *CEO* within two months of undertaking any *clearing* authorised under this permit:

(i) The location of any active Northern Quoll burrows and/or dens identified, using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;

(ii) a description of the camera monitoring measures undertaken under condition 12(b)(iii) of this permit;

(iii) the date and time of Northern Quoll are recorded as independently moving from a flagged burrow or den;

(iv) the location of any Northern Quoll, as referred to under condition 12(a) of this permit, captured using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;

(v) the date, time, vegetation type and weather conditions at each location where Northern Quoll are captured under condition 12(d)(iv) of this permit;

(vi) the location of any Northern Quoll, identified in accordance with condition 12(a) of this permit, relocated using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;

(vii) the date, time, vegetation type and weather conditions at each location where Northern Quoll are relocated under condition 12(c) of this permit;

(viii) the name of the *fauna specialist* that relocated fauna under condition 12(c) of this permit; and

(ix) a copy of the fauna licence authorising the relocation of fauna under condition 12(c) of this permit.

13. Fauna management – time of clearing

The permit holder must undertake all activities authorised under this permit during day-time hours, to reduce the potential for vehicular fauna strike.

14. Flora management – pre-clearance surveys

(a) Prior to undertaking any clearing within the areas cross-hatched red in Figure 1 of Schedule 1, the permit holder must engage a *botanist* to conduct a *targeted flora survey* of the areas to be cleared for the presence of *Trianthema* sp. Python Pool (G.R. Guerin & M.E. Trudgen GG 1023) and *Tephrosia lithosperma*.

(b) Where *threatened flora* is identified under condition 14(a), the permit holder must not cause or allow:

(i) clearing within 50 metres of the identified threatened flora; unless approved by the *CEO*; and

(ii) clearing of the identified threatened flora, unless approved by the *CEO*.

(c) Where *priority flora* is identified under condition 14(a), the permit holder must not cause or allow:

(i) clearing within 10 metres of the identified priority flora, unless approved by the *CEO*; and

(ii) clearing of the identified priority flora, unless approved by the *CEO*.

(d) Where *threatened flora* or *priority flora* are identified under condition 14(a) of this permit, the permit holder must include the following in a report submitted to the *CEO* within three months of undertaking any clearing authorised under this permit:
  (i) the species name of each *threatened flora* and *priority flora* individual(s) identified under condition 14(a);
  (ii) the number of individuals identified;
  (iii) the date each individual was identified;
  (iv) the location of each *threatened flora* and *priority flora*, identified under condition 14(a), either as the location of individual plants, or where this is not practical, the areal extent of the population and an estimate of the number of plants, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
  (v) the name of the botanist that undertook clearance surveys under condition 14(a) of this permit; and
  (vi) the methodology used to survey the permit area.

15. Retain vegetative material and topsoil, revegetation and rehabilitation

The permit holder must:

(a) retain the vegetative material and topsoil removed by clearing authorised under this permit and stockpile the vegetative material and topsoil in an area that has already been cleared.

(b) within six months following completion of clearing authorised under this permit, *revegetate* and *rehabilitate* areas not required for the purpose for which they were cleared by laying the vegetative material and topsoil retained under condition 15(a) on the cleared area(s).

(c) Within 24 months of undertaking *revegetation* and *rehabilitation* in accordance with condition 15(b) of this permit:
  (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
  (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 15(c)(i) of this permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, revegetate the area by deliberately *planting* and/or direct seeding *native vegetation* that will result in a similar species composition, structure and density of *native vegetation* to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.

(d) where additional *planting* or direct seeding of *native vegetation* is undertaken in accordance with condition 15(c)(ii) of this permit, the permit holder shall repeat condition 15(c)(i) and 15(c)(ii) within 24 months of undertaking the additional *planting* or direct seeding of *native vegetation*.

(e) where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 15(c)(i) and (ii) of this permit, that determination shall be submitted for the *CEO*'s consideration. If the *CEO* does not agree with the determination made under Condition 15(c)(ii), the *CEO* may require the permit holder to undertake additional *planting* and direct

seeding in accordance with the requirements under condition 15(c)(ii).

PART III - RECORD KEEPING AND REPORTING

16. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 5; (f) actions taken to minimise the risk of the introduction and spread of *weeds* in accordance with condition 6; (g) actions taken to minimise impacts of wind erosion in accordance within condition 7; (h) actions taken to undertake directional clearing and minimise impacts to fauna in accordance with condition 8; and (i) actions take in accordance with condition 9 to maintain the existing surface flow of any drainage line that is to be impacted by the authorised clearing.
2.	In relation to vegetation management pursuant to condition 10	(a) the size of the area(s) cleared (in hectares) within the areas cross-hatched red in Figure 1 of Schedule 1 of this permit; (b) the total number of access tracks and/or crossovers constructed; (c) actions taken to ensure that surface water flow is maintained, or reinstated downstream into the existing natural watercourse; and (d) actions taken to ensure that fauna movement and dispersal along the watercourse is maintained or reinstated.
3.	In relation to fauna management pursuant to condition 11	(a) evidence of backfilling/fencing/covering all excavations; (b) records of daily inspections undertaken in accordance with condition 11(b)(i); (c) evidence of installing fauna egress points in accordance with condition 11(b)(ii); and (d) records of any fauna discovered and the *fauna specialists* report of any relocation actions undertaken in accordance with condition 11(b)(iii).

No.	Relevant matter	Specifications
4.	In relation to flora management pursuant to condition 14	(a) actions taken to *demarcate* each *threatened flora* and/or *priority flora* species recorded and their relevant *buffers*; and (b) actions taken to avoid the clearing of *threatened flora* and/or *priority* flora species; (c) the name and location of each *threatened flora* and/or *priority* flora species, recorded using a GPS unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings; and (d) a copy of the *botanist*'s report in accordance with condition 14(d).
5.	In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 15	(a) the location of any *revegetated* and *rehabilitated* areas, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees; (b) a description of the *revegetation* and *rehabilitation* activities undertaken; (c) the size of the area *revegetated* and *rehabilitated* (in hectares); (d) the date(s) on which the *revegetation* and *rehabilitation* was undertaken; (e) action and timing of remedial actions undertaken within the area(s) that was *revegetated* and *rehabilitated* in accordance with condition 15(c)(ii) to 15(e); and (f) a copy of the *environmental specialist*'s report in accordance with condition 15©(ii) and 15(e).

17. Reporting

The permit holder must provide to the *CEO* the records required under condition 16 of this permit when requested by the *CEO*.

DEFINITIONS

In this permit, the terms in Table have the meanings defined.

Table 2: Definitions

Term	Definition
botanist	means a person who holds a tertiary qualification specialising in environmental science or equivalent and has a minimum of two (2) years' work experience in Western Australian flora identification and undertaking flora surveys native to the bioregion being inspected or surveyed, or who is approved by the *CEO* as a suitable environmental specialist for the bioregion, and who holds a valid flora licence issued under the *Biodiversity Conservation Act 2016*.
buffer	means 50 metres for *threatened flora* and 20 metres for *priority flora*.
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit, or who is approved by the *CEO* as a suitable environmental specialist.
EP Act	*Environmental Protection Act 1986* (WA)
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
fauna specialist	means a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the *CEO* as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Biodiversity Conservation Act 2016*.
fill	means material used to increase the ground level, or to fill a depression.
immediately prior	means the pre-clearance surveys must be undertaken within 72 hours prior to clearing, unless otherwise approved by the CEO.
local provenance	means native vegetation seeds and propagating material from natural sources within 200 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.

Term	Definition
priority flora	means those plant taxa described as priority flora classes 1, 2, 3, or 4 in the Department of Biodiversity Conservation and Attractions *Threatened and Priority Flora List for Western Australia* (as amended).
revegetate/ed/ion and *rehabilitate/ed/ion*	means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.
suitable habitat	means habitat known to support the Northern Quoll within the known current distribution of the species.
targeted flora survey	means a field-based investigation, including a review of established literature, of the biodiversity of flora and vegetation of the permit area, focusing on habitat suitable for flora species that are being targeted and carried out during the optimal time to identify those species. Where target flora are identified in the permit area, the survey must also include a minimum of a 10 metre radius of the surrounding areas to place the permit area into local context.
threatened flora	means those plant taxa listed as threatened flora under the *Biodiversity Conservation Act 2016*.
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

[redacted]
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

3 May 2024

Schedule 1

The boundary of the area authorised to be cleared is shown in the map below (Figure 1).

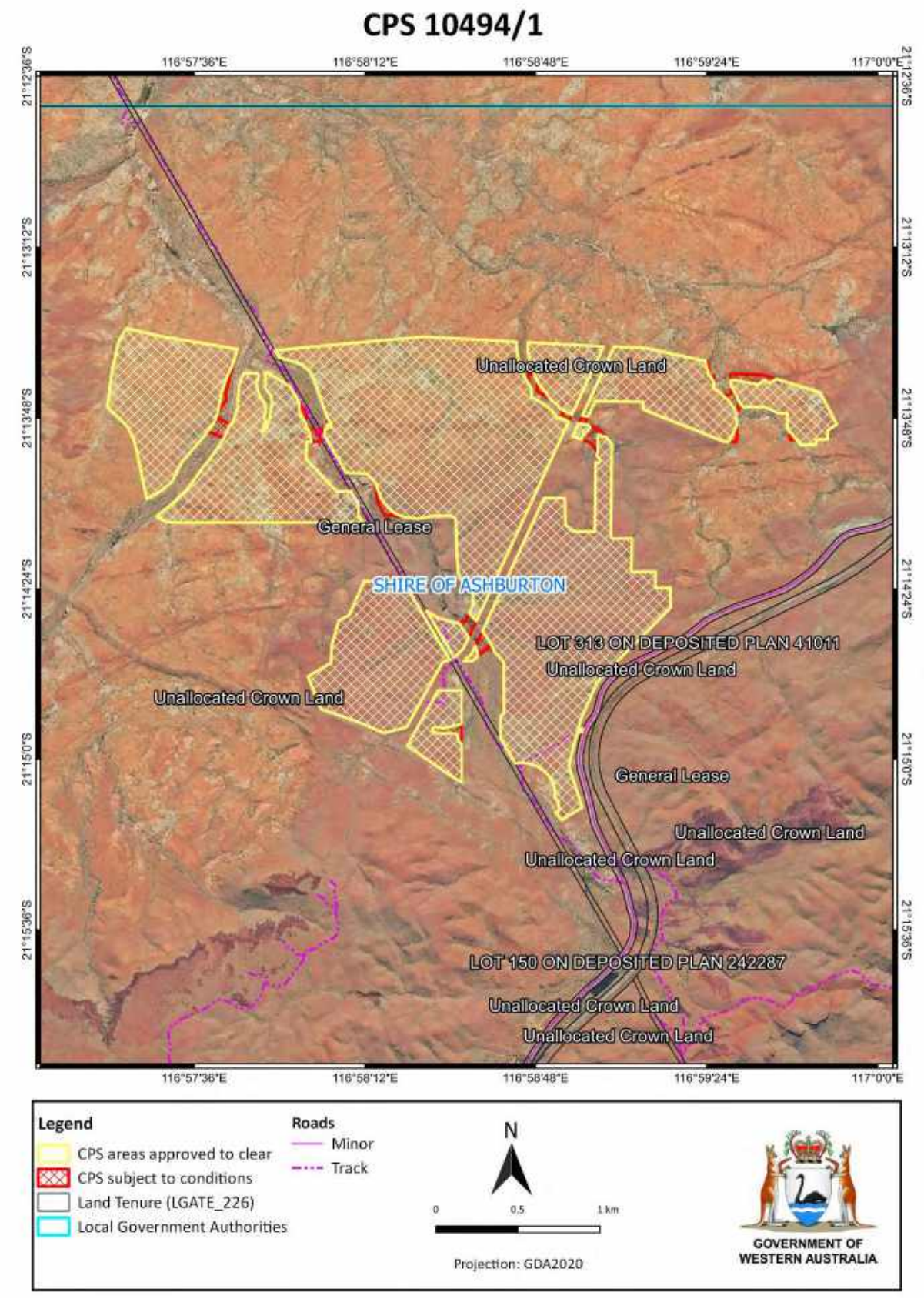


Figure 1: Map of the boundary of the area within which clearing may occur (yellow) and which is subject to conditions (red)

Appendix 3 DWER Beds and Banks Permit - PMB211032(1)

PERMIT TO OBSTRUCT OR INTERFERE (S17)

Granted by the Minister under section 17 of the Rights in Water and Irrigation Act 1914

Permit Holder(s)	Yindjibarndi Energy Corporation Pty Ltd
Description of Water Resource	Karratha Coast Karratha Coast
Location of Water Source	Section 91 of the Land Administration Act 1997 00196/2022_A12688668

Authorised Activities	**Activity**	**Location of Activity**
	Construction of four culverts at minor tributaries in the upper Maitland river catchment.	Section 91 of the Land Administration Act 1997 00196/2022_A12688668
Duration of Permit	From 12 February 2025 to 30 June 2027	

This Permit is subject to the following terms, conditions and restrictions:

1. The permit holder shall ensure that the works does not act as an artificial barrier or levee, causing water to pond upstream.

2. The permit holder must comply with the commitments of Coterra Environment report "Application for a Permit to Interfere with Bed and Banks, Yindjibarndi Energy Corporation Jinbi Solar Facility, Rev 0, July 2024", submitted with the application dated 16 July 2024.

End of terms, conditions and restrictions

Appendix 4 ASIC Company Extract

ASIC
Australian Securities & Investments Commission

Current & Historical Company Extract

EXTRACT

Name: YINDJIBARNDI ENERGY CORPORATION PTY LTD
ACN: 667 821 865

Date/Time: 04 December 2024 AEST 07:06:11 PM

This extract contains information derived from the Australian Securities and Investments Commission's (ASIC) database under section 1274A of the Corporations Act 2001.

Please advise ASIC of any error or omission which you may identify.

Organisation Details		Document Number
Current Organisation Details		
Name:	YINDJIBARNDI ENERGY CORPORATION PTY LTD	5EHQ66118
ACN:	667 821 865	
ABN:	23667821865	
Registered in:	Western Australia	
Registration date:	09/05/2023	
Next review date:	09/05/2025	
Name start date:	09/05/2023	
Status:	Registered	
Company type:	Australian Proprietary Company	
Class:	Limited By Shares	
Subclass:	Proprietary Company	

Address Details		Document Number
Current		
Registered address:	Unit 2 Level 13, 1 Spring Street, PERTH WA 6000	9EAB01578
Start date:	10/06/2024	
Principal Place Of Business address:	Unit 2 Level 13, 1 Spring Street, PERTH WA 6000	9EAB01578
Start date:	03/06/2024	
Historical		
Registered address:	Level 2 Suite 2, 15 Castray Esplanade, BATTERY POINT TAS 7004	7ECI63298
Start date:	21/09/2023	
Cease date:	09/06/2024	
Registered address:	[redacted]	5EHQ66118
Start date:	09/05/2023	
Cease date:	20/09/2023	
Principal Place Of Business address:	Level 2 Suite 2, 15 Castray Esplanade, BATTERY POINT TAS 7004	7ECI63298
Start date:	13/09/2023	
Cease date:	02/06/2024	
Principal Place Of Business address:	[redacted]	5EHQ66118
Start date:	09/05/2023	
Cease date:	12/09/2023	

Officeholders and Other Roles		Document Number
Director		
Name:	[redacted]	5EHQ66118
Address:	[redacted]	
Born:	[redacted]	
Appointment date:	09/05/2023	

Name:	[redacted]	7ECI34570
Address:	[redacted]	
Born:	[redacted]	
Appointment date:	03/07/2023	
Name:	[redacted]	7ECI34570
Address:	[redacted]	
Born:	[redacted]	
Appointment date:	03/07/2023	
Name:	[redacted]	7ECI34570
Address:	[redacted]	
Born:	[redacted]	
Appointment date:	05/07/2023	
Name:	[redacted]	7ECI34570
Address:	[redacted]	
Born:	[redacted]	
Appointment date:	18/08/2023	

Secretary

Name:	[redacted]	5EHQ66118
Address:	[redacted]	
Born:	[redacted]	
Appointment date:	09/05/2023	
Name:	[redacted]	9EAB01578
Address:	[redacted]	
Born:	[redacted]	
Appointment date:	03/06/2024	

Previous Secretary

Name:	[redacted]	7ECI16293
Address:	[redacted]	
Born:	[redacted]	
Appointment date:	01/09/2023	
Cease date:	22/05/2024	

Appointed Auditor

Name:	[redacted]	7ECU53187
Address:	[redacted]	
Start date:	23/07/2023	

Share Information

Share Structure

Class	Description	Number issued	Total amount paid	Total amount unpaid	Document number
ORD	ORDINARY SHARES	1000	[redacted]	0.00	7ECI34570

Members

Note: For each class of shares issued by a proprietary company, ASIC records the details of the top twenty

members of the class (based on shareholdings). The details of any other members holding the same number of shares as the twentieth ranked member will also be recorded by ASIC on the database. Where available, historical records show that a member has ceased to be ranked amongst the top twenty members. This may, but does not necessarily mean, that they have ceased to be a member of the company.

Name: YIYANGU PTY LTD
ACN: 659 775 505
Address: LETIZIA PALMER, Level 1, 544 Beaufort Street, MOUNT LAWLEY WA 6050

Class	Number held	Beneficially held	Paid	Document number
ORD	250	yes	FULLY	7ECI34570

Name: ACEN INVESTMENTS AUSTRALIA PTY LTD
ACN: 640 077 747
Address: Level 2 Suite 2, 15 Castray Esplanade, BATTERY POINT TAS 7004

Class	Number held	Beneficially held	Paid	Document number
ORD	750	yes	FULLY	7ECI34570

Financial Reports

Balance date	Report due date	AGM due date	Extended AGM due	AGM held date	Outstanding	Document number
31/12/2023	30/04/2024				no	7ECU53187

Documents

Note: Where no Date Processed is shown, the document in question has not been processed. In these instances care should be taken in using information that may be updated by the document when it is processed. Where the Date Processed is shown but there is a zero under No Pages, the document has been processed but a copy is not yet available.

Date received	Form type	Date processed	Number of pages	Effective date	Document number
09/05/2023	201C Application For Registration As A Proprietary Company	09/05/2023	3	09/05/2023	5EHQ66118
18/05/2023	484N Change To Company Details Changes To (Members) Share Holdings	26/06/2023	2	18/05/2023	9EAA82692
19/06/2023	902 Supplementary Document	26/06/2023	3	09/05/2023	031919034
06/07/2023	106 Notice Of Cancellation Or Revocation Of A Lodged	21/09/2023	5	06/07/2023	030960806

	Document				
06/09/2023	484E Change To Company Details Appointment Or Cessation Of A Company Officeholder	06/09/2023	2	06/09/2023	7ECI16293
08/09/2023	484 Change To Company Details 484E Appointment Or Cessation Of A Company Officeholder 484O Changes To Share Structure 484G Notification Of Share Issue 484N Changes To (Members) Share Holdings	08/09/2023	4	08/09/2023	7ECI34570
14/09/2023	484 Change To Company Details 484B Change Of Registered Address 484C Change Of Principal Place Of Business (Address)	14/09/2023	2	14/09/2023	7ECI63298
29/05/2024	370 Notification By Officeholder Of Resignation Or Retirement	30/05/2024	3	29/05/2024	032045007
03/06/2024	484 Change To Company Details 484B Change Of Registered Address 484C Change Of Principal Place Of Business (Address) 484E Appointment Or Cessation Of A Company Officeholder	03/06/2024	2	03/06/2024	9EAB01578
26/06/2024	388 (FR 2023) Financial Report 388I Financial Report - Small Proprietary Company That Is Controlled By A Foreign Company 388E Company - Appoint Change Name/address Of Auditor	26/06/2024	27	31/12/2023	7ECU53187

End of Extract of 5 Pages

Appendix 5 Galt Geotechnics (2025). Site and Soil Evaluation: Proposed Construction Camp: Jinbi Solar Farm.

Report on:

SITE AND SOIL EVALUATION
PROPOSED CONSTRUCTION CAMP
JINBI SOLAR FARM
UNALLOCATED CROWN LAND – ID 3115653 & 3115647

WAG240620-01 001 R Rev0

Submitted to:

Yindjibarni Energy Pty Ltd
Unit 2, Level 13, 1 Spring Street
PERTH WA 6000

12 February 2025

CONTENTS

1. INTRODUCTION

This report presents the outcomes of Galt Geotechnics' (Galt's) site and soil evaluation (SSE) for the proposed construction camp, at unallocated crown land (ID 3115653 & 3115647) in Chichester ("the site").

This report is to be read in conjunction with the appended "Requirements and Limitations" found at the back of this report.

2. KEY FINDINGS

The site is suitable for disposal of wastewater in accordance with AS1547-2012 and the Government Sewerage Policy (2019). We note the following:

- The design soils will be either Category 4 (proposed camp location 1 at the south) or Category 3 (proposed camp location 2 at the north) in accordance with AS1547-2012.
- Primary or secondary treatment of wastewater may be done, with disposal of treated effluent via leach drains or drip/spray irrigation. If drip/spray irrigation is done, secondary treatment must be done.
- The required land application area (LAA) for the permanent camp will require either 7,875 m^2 (north) or 9,009 m^2 (south). This LAA must be positioned outside of the ephemeral creeks modelled by Hydrologia as being inundated by around 0.5 m of flood water during a 10% AEP flood event. A 100 m setback applies to the larger ephemeral creeks identified by Hydrologia as being inundated with up to 1 m of flood water.
- The site is not mapped as being a sewerage sensitive area (SSA) or being within a public drinking water source area (PDWSA).
- Civil design must be done to minimise rainfall run-on and any rainfall ponding over the LAA.

This SSE has been completed using the outcomes of a geotechnical investigation (by others). We consider that wastewater disposal will be possible, however there are two outcomes that must be assessed (during construction) to confirm the detailed design for this site:

- The clearance to rock at the proposed LAA must be assessed by potholing at a frequency of 1 test per 250 m^2 to ensure that there is a minimum of 0.6 m of soil from the underside of the disposal area (either base of leach drain or surface for drip/spray irrigation); and
- The permeability, soil particle distribution and phosphorous retention index at the proposed LAA must be tested at a frequency of 1 test per 2,000 m^2 to confirm the soil category and design loading rate assessment made in this report.

This additional testing is required based on the types and frequency of testing done in the geotechnical report.

3. DEFINITIONS

Site and Soil Evaluation (SSE): an assessment of all relevant constraints and the risks to public health and the environment in accordance with AS1547-2012 "On-site domestic wastewater management". This SSE is a general assessment SSE, with the purpose being to undertake a site suitability assessment for onsite wastewater management and to recommend the type of onsite wastewater system for the proposed development.

A specific assessment is required to support an "application to install" an onsite wastewater system. This is for when a particular type of system/model is proposed, and a detailed design, including management recommendations and operation requirements. This document is not a specific assessment.

Land Application Area (LAA): The unencumbered plan area to which treated sewage from an on-site sewage system is distributed for further in-soil treatment and absorption or evaporation. This area is restricted to the distribution of treated sewage and may not be developed for other purposes.

Land Application System (LAS): The system used to apply effluent from a wastewater treatment unit into or onto the soil for further in-soil treatment and absorption or evaporation.

Effluent: The liquid discharged from a wastewater treatment unit.

Primary Treatment: The separation of suspended material from sewage in septic tanks, primary settling chambers or other structures before discharge to either a LAS or secondary treatment process.

Secondary Treatment: Microbiological digestions and physical settling and filtering processes and decomposition of sewage constituents following primary treatment.

Sewage: Any kind of sewage, faecal matter or urine, and any waste composed wholly or in part of liquid.

Infiltrative Area: Is the area within an LAA that has treated effluent directly discharged onto, and does not include setback areas. I.e., the base of leach drains, evapotranspiration beds etc.

4. GOVERNING STANDARDS, REGULATIONS AND POLICIES

SSEs are governed by various National and State Standards, Regulations and Policies, including:

- AS/NZS 1547:2012, On-site domestic wastewater management.
- Western Australia Government Sewerage Policy (2019)
- Western Australia Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations (1974)
- Western Australia State Planning Policy 2.9, Water Resources (2005)

Other regulatory requirements may become relevant depending on the outcomes of any SSE.

SSEs can be rejected on the basis of not meeting the regulatory requirements of the above. This report is intended to address all these various requirements.

5. SITE DESCRIPTION

The location and extent of the site is shown on Figure 1, Site and Location Plan. The total area of the site is around 716 ha.

Supplied information indicates that the site surface levels range from around RL 300 m AHD (at the south) to around RL 155 m AHD. The general grade of the site is flat, with most of the site being between RL 170 m and RL 200 m AHD.

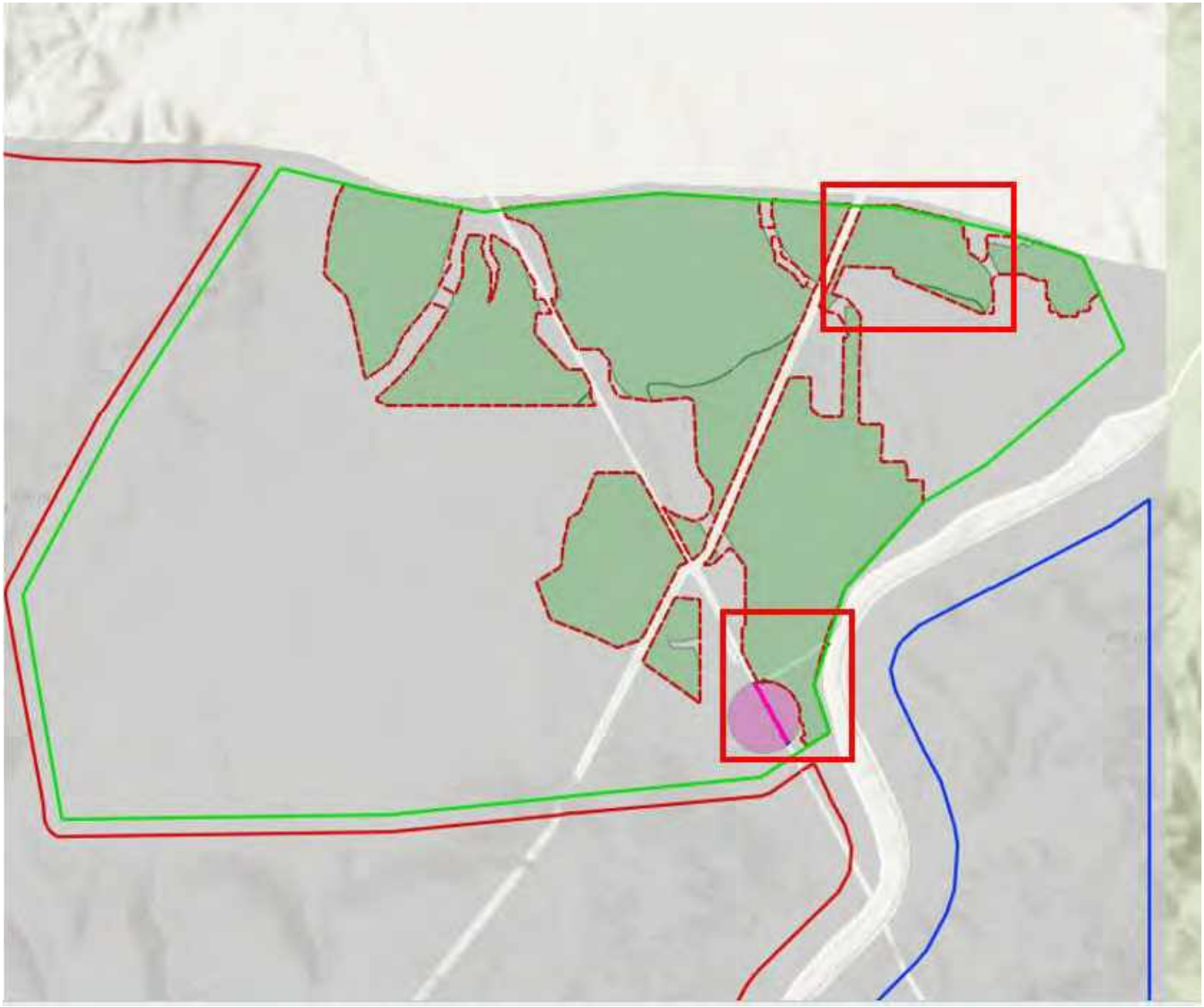
Ephemeral creeks run through much of the site likely associated with heavy rain (flood) events.

6. PROPOSED DEVELOPMENT

A camp is proposed to facilitate construction of the Jinbi solar farm project. A temporary camp will be used for the construction of the main camp.

Two locations are being considered for the camp, at the northeast (“north”) and the southeast (“south”). We understand that the southern location is preferred. These locations are shown on the inline image below.

Inline Image 1: Proposed Camp Locations – Proposed Camp Location 1 (South) and Proposed Camp Location 2 (North)



7. PRELIMINARY HYDRAULIC LOADING

We understand that the long-term camp will have a capacity of 160 persons with up to 15 operational staff. The temporary camp will have a capacity of around 160 persons. Regulation 29 of the Department of Health regulations indicates that the following hydraulic loadings are applicable:

- Construction camps (temporary) – 45 L/person/day
- Minesite accommodation camp units – 180 L/person/day.

We understand that the long-term camp will have a design life of around 5-10 years. We consider that at this design life, the higher "minesite accommodation camp units" hydraulic loading will apply.

Table 1: Summary of Design Hydraulic Loading

Camp	Persons	Loading Rate (L/person/day)	Design Hydraulic Loading (L/day)
Temporary Camp	36	45	1,620
Long-term Camp	175	180	31,500

8. GEOTECHNICAL INVESTIGATION

A geotechnical investigation at the site was carried out by STATS Australia with outcomes presented in their report reference 102843 Revision 0 dated 4 April 2024. The STATS report is not included in this SSE but should be read and provided in conjunction with this SSE. The investigation comprised:

- Test pitting.
- Drilling of boreholes.
- Dynamic cone penetrometer (DCP) testing.
- Laboratory testing of undisturbed and disturbed samples.

We highlight that in situ or laboratory permeability testing of the soils has not been done.

The outcomes of the report can be summarised for the two camp option areas:

Proposed Camp Location 1 (South)

Test pitting typically indicates that there is around 700 mm (as low as 500 mm) of a clayey sand mixture overlying igneous rock (grading from highly weathered to a state that was not able to be excavated). Particle size distribution testing on the upper zone indicate a fines percent of between 12% and 26%, with a plasticity index of around 18%. The upper soil has a high proportion of gravels (up to 78%).

Borehole drilling indicates that the igneous rock is likely a dolerite and is present to at least 4 m to 6 m below the current site surface levels.

DCP testing indicates that the soils are in a dense to very dense state.

The modified maximum dry density (MMDD) for the upper clayey sand material was 2.13 t/m^3.

Proposed Camp Location 2 (North)

Test pitting typically indicates that there is around 1,000 mm of variable clayey/gravelly/silty sand at the site over inferred rock. Laboratory testing on this upper soil unit indicates a fines percent of between 5% and 11%, with a plasticity index of around 5%. The gravel content appears to range from 20% to 80%.

Borehole drilling indicates that this soil unit is underlain by metamorphic gneiss rock to at least 6 m below the current site surface levels.

DCP testing indicates that the soils are in a typically dense state.

The MMDD for the upper soil unit was between 1.77 t/m^3 and 1.73 t/m^3.

9. SITE CONDITIONS

9.1. Geology

The geology in the area is known to be complex which is reflected in available mapping.

Table 2: Summary of Geology Mapping

Map Sheet	Map Scale	Mapped Soils	Site Findings
Cooya Pooya / Pyramid & Pinderi Hills	1:250,000	SOUTH – Colluvium, sand, silt and gravel in outwash fans and scree slopes NORTH – Hardey Formation (sandstone/siltstone/conglomerate) and Lyre Creek Member	SOUTH - Colluvial (inferred) clayey sand over DOLERITE. NORTH – gravelly/silty sand over GNEISS

9.2. Groundwater and Surface Water

A hydrological study for the flood extents has been done by Hydrologia and is presented in their report J0100183 dated 23 May 2024. Relevant extracts from this report are included in Appendix A, Hydrologia Flood Modelling Outputs.

Table 3: Summary of Groundwater and Surface Water Levels

Item	Date	Depth Range (m)	Elevation Range (m AHD)	Comment
Site observations (STATS)	January and February 2024	GNE	-	Groundwater not encountered. We note that the majority of rainfall occurs between December to March in the area.
Flood Depth	-	-	-	Hydrologia's modelling indicates that under the 10% AEP flooding event, the maximum water depth will be up to 0.5 m above current site levels, with flows through topographic low channels (ephemeral creeks). Major flow channels are modelled with water depths up to 1.5 m generally flowing north to south.
True Groundwater	-	>10	-	Based on elevation of the site (above RL 180 m AHD, typically), the geology of the area, nearby WINsites and our experience in the area, true groundwater is expected to be at significant depth. Water will tend to flow over impermeable layers in the area (e.g., rock and clay).

9.3. Soil Type (AS1547)

Based on the visual-tactile logging by STATS and laboratory testing, we consider that the following soil categories apply to the upper soil units at the site:

- Proposed Camp Location 1 (North) – Soil Category 4 (Massive) with an indicative permeability of 0.06 m/day to 0.12 m/day.
- Proposed Camp Location 2 (South) – Soil Category 3 (Weakly structured or massive) with an indicative permeability of 0.5 m/day to 1.5 m/day.

We note that STATS did not undertake permeability testing of the soils. However, we have reviewed the visual-tactile logging against the categories as presented in AS1547-2012, as well as comparing the laboratory test results against Galt's in-house correlations for fines and density against saturated permeability. We have taken a conservative approach to the design soil category based on this.

Additional field assessment of the soil (permeability and particle size distribution) will be done during construction to confirm these soil categories and associated design loading rates.

10. SITE ASSESSMENT

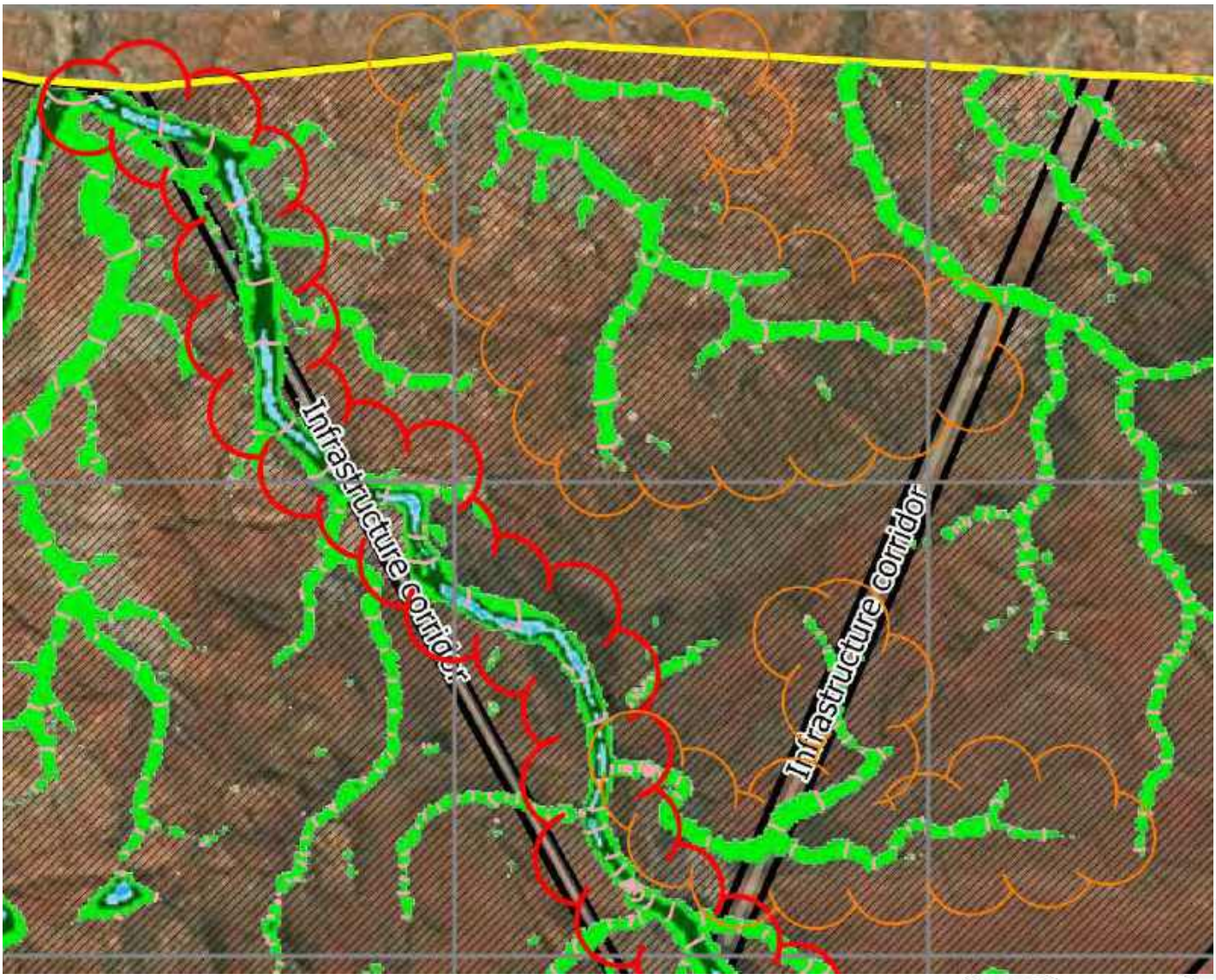
10.1. General

The results of our site assessment are presented in Attached Table 3 at the end of the text.

10.2. Ephemeral Streams

The Hydrologia 10% AEP modelling outputs are presented in Appendix A. We consider that there are minor ephemeral creeks with flood depths up to 0.5 m, which carry water (during flood events) to major ephemeral creeks ("streams"). This is shown on the inline image below.

Inline Image 2: Hydrologia 10% AEP Modelling Outputs Interpretation – Major Ephemeral Creek (Stream) in Red with up to 1 m Flood Depth and Minor Ephemeral Creeks in Orange with up to 0.5 m Flood Depth.



We consider that:

- A 100 m setback applies to the major ephemeral creeks, as identified by Hydrologia with >0.5 m of flood depth.
- No setback applies to the smaller creeks (up to 0.5 m flood depth), but the LAA must be positioned outside any of these mapped areas with appropriate civil design to minimise run-on.

The 1% AEP modelling by Hydrologia is not applicable based on the camp design life and the requirements of the GSP which specifically identifies the design event as 10% AEP for floods.

10.3. Horizontal Setbacks

Table 4: Required Horizontal Setback Distances (AS1547)

Feature	Sub-Type	Horizontal Setback Distances (m)
Treatment tanks to buildings, property boundaries, driveways, paths and other tanks	-	1.2
Trenches, beds and soak wells to boundary, building, tanks and other land application systems	-	1.8
Trenches, beds and soak wells to trafficable areas	-	1.2
Any land application system to wells, streams, private bores or underground source of water intended for human consumption	-	30.0
Trenches, beds and soak wells to subsoil drains or open drainage channels	-	6.0
Spray irrigation	Boundaries, buildings, driveways etc.	1.8
	Subsoil and open drains	6.0
	Swimming pools	3.0
	Treatment tanks	1.2
Subsurface Drippers	Boundaries, buildings, driveways etc.	0.5
	Subsoil and open drains	3.0
	Swimming pools	2.0
	Garden bore	10.0
On-site waste system to water resources (river, stream etc.)	-	100.0

10.4. Land Application Areas

10.4.1. Government Sewerage Policy (GSP, 2019)

The minimum LAA size (per subdivided lot) in accordance with the GSP (2019) has been calculated and is shown below. The LAA may need to be resized if the hydraulic loading changes. This is based on an assumption that the disposal will be into category 4 soils (clayey sand) on proposed Lot 1 and category 5 soils (sandy clay) on proposed Lot 3.

Table 5: GSP LAA Calculation

Area	Soil Category (AS1547)	Camp	Conversion Factors (Table 2 of GSP)		Hydraulic Loading (L/day)	Minimum LAA (m^2)
			Primary Treatment	Secondary Treatment		
South	4	Temporary	0.689		1,620	1,117
				0.286		463
		Long-term	0.689		31,500	21,703
				0.286		9,009
North	3	Temporary	0.477		1,620	773
				0.25		405
		Long-term	0.477		31,500	15,026
				0.25		7,875

10.4.2. Water Balance

Water balance calculations are presented in Appendix B (note that only the water balance for the drip/spray irrigation are presented). The calculations are summarised below.

Table 6: Water Balance Calculations

Area	Soil Category (AS1547)	Wastewater Disposal			Hydraulic Loading (L/day)	Minimum LAA (m^2)
		Camp	Method	Design Loading/Irrigation Rate (mm/day)		
South	4	Temporary	Primary[1]	4	1,620	273
			Secondary[2]	10		136
			Drip/Spray[3]	3.5		298
		Long-term	Primary	4	31,500	5,295
			Secondary	10		2,636
			Drip/Spray	3.5		5,780
North	3	Temporary	Primary	10	1,620	136
			Secondary	30		51
			Drip/Spray	4		273
		Long-term	Primary	10	31,500	2,636
			Secondary	30		986
			Drip/Spray	4		5,295

NOTE: ***1.*** Primary treated effluent disposed via leach drains or similar.

2. Secondary treated effluent disposed via leach drains or similar.

3. Drip/spray irrigation is assumed to be secondary treated.

10.4.3. Summary

The minimum LAAs required for the proposed camps (and each option area) are summarised below.

Table 7: Summary of Required Land Application Areas

Area	Soil Category (AS1547)	Camp	Disposal/Treatment Method	Hydraulic Loading (L/day)	Land Application Area (m^2)		
					GSP	Water Balance	Minimum
South	4	Temporary	Primary[1]	1,620	1,117	273	1,117
			Secondary[2]		463	136	463
			Drip/Spray[3]		463	298	463
		Long-term	Primary	31,500	21,703	5,295	21,703
			Secondary		9,009	2,636	9,009
			Drip/Spray		9,009	5,780	9,009
North	3	Temporary	Primary	1,620	773	136	773
			Secondary		405	51	405
			Drip/Spray		405	273	405
		Long-term	Primary	31,500	15,026	2,636	15,026
			Secondary		7,875	986	7,875
			Drip/Spray		7,875	5,295	7,875

NOTE: ***1.*** Primary treated effluent disposed via leach drains or similar.

2. Secondary treated effluent disposed via leach drains or similar.

3. Drip/spray irrigation is assumed to be secondary treated.

11. SOIL ASSESSMENT

Details of our soil assessment are presented in Attached Table 4.

12. SITE SUITABILITY AND RECOMMENDATIONS

Based on our assessment, the site is suitable for disposal of wastewater. Wastewater disposal for either of the proposed camps may be disposed of in the following ways:

- Leach drains with primary treated effluent.
- Leach drains with secondary treated effluent.
- Spray or drip irrigation with secondary treated effluent.

The size of the required LAA will vary depending on the selected site, but is expected to be either 9,009 m^2 or 7,875 m^2.

Any proposed LAA will need to satisfy the setback requirements, including meeting the appropriate distances from site boundaries, buildings, trafficable areas and driveways.

Flood Separation

Hydrologia's 10% AEP flood mapping must be used to select the LAA location. The LAA must not be positioned in any area mapped as having flood potential (e.g., the ephemeral creeks that will have up to 0.5 m water during a 10% AEP flood event).

Separation to Groundwater and LAA Surface Level

The base of the disposal area (either the underside of leach drains, or surface level for spray/drip irrigation), must be at least 0.6 m above the maximum groundwater level. Based on the groundwater and subsurface information, the maximum ground level should be taken as the rock level at this site. From the information in the geotechnical report, this is likely to be met, but the frequency of testing may not capture elevated rock elevation. To confirm that the level is met:

- potholing (e.g., hand excavation, hand auger or an excavator) must be done at a frequency of 1 test per 250 m^2 to confirm that there is a minimum 0.6 m of soil from the base of the disposal area to top of rock.

Where there is insufficient clearance to rock, either over-excavation of the rock must be done, or the area should be filled (with soil derived from within or nearby the LAA) to enable this 0.6 m clearance to be met.

Permeability and Soil Type

The permeability of the soil has not been assessed. We have assessed the soil class in accordance with AS1547 based on the visual-tactile logging and laboratory testing done in the geotechnical investigation (by others). We highlight that Appendix B of AS1547-2012 ("Site-and-Soil Evaluation Procedures) states in item B6 that:

"A hydraulic soil conductivity measurement shall be undertaken where there is a dispute or substantial doubt about the field assessment of soil category, or where the site evaluator/assessor wishes to use values of measured permeability to assist in determining the soil category for determination of the DLR (design loading rate)."

We have conservatively assessed the soil category based on the lack of permeability testing. However, given the required size of the LAA, additional testing must be done during construction (and after selection of the preferred site and LAA) to confirm that the soil category assessment in this report reflects the in situ conditions. The additional testing is to comprise:

- In situ constant head (e.g., Guelph permeameter) testing or remoulded laboratory testing at a frequency of 1 test per 2,000 m^2 (not less than 2 total for any LAA);
- Particle size distribution testing at a frequency of 1 test per 2,000 m^2 (not less than 2 total for any LAA); and
- Phosphorous retention index (PRI) testing at a frequency of 1 test per 2,000 m^2 (not less than 2 total for any LAA).

The outcomes of this testing may require the soil category to be updated for detailed design and a smaller or larger LAA may be required. We consider it unlikely that the required LAA will change substantially.

Civil Design

The surface of the LAA should be designed and graded such that there will be no surface ponding of water on the LAA itself.

Diversion bunds and curbs should be used to prevent rainfall run-on to the LAA from adjacent areas, and to prevent rain-off from the LAA to habitable areas of the site (e.g, the camp or roads etc.).

Treatment Units

The wastewater may be treated using a conventional septic system (primary treatment) or an ATU (secondary treatment), also known as aerated wastewater treatment systems (AWTS). ATU's use the processes of aeration followed by clarification to achieve biological treatment of wastewater.

A conventional septic system or an ATU (or any other proposed system) must be certified to AS1546.3 (2008) and require approval by the Chief Health Officer. A list of approved ATU's is presented in Table 2 on the Department of Health website. The selected ATU must meet the hydraulic loading for the site and must treat sewage to achieve the following nutrient targets:

- Phosphorous: <1 mg/L
- Nitrogen: <10 mg/L

13. CLOSURE

GALT GEOTECHNICS

[redacted]

Geotechnical Engineer

[redacted]

Attached Table 1: Site Assessment

Consideration	Assessment / Discussion	Reference	Level of Constraint	Mitigation Measures
Geology	Quartz-feldspar- biotite (garnet) Gneiss – generally predominantly well banded, includes blastomylonite along Darling Scarp; and Quartz-magnitite-gunderite assemblages – banded iron formation	Collie Sheet of the 1:250,000 Regional Geology Series Maps	Nil	-
Climate	To satisfy zero storage requirements, minimum LAAs to be sized as required for hydraulic loading.	Appendix B, Water Balance Calculation	Low	LAA will be greater than area required to meet zero storage requirement.
Exposure	Site has minimal vegetation and will have significant exposure.	-	Low	-
Vegetation	Assume light grass and scrub at surface, no significant vegetation	-	Moderate	LAA designed to accommodate water balance and soils have nutrient stripping capabilities.
Landform and Drainage	The sites slope towards ephemeral creeks.	-	Moderate	Civil design to minimise rainfall run-on and run-off (using bunds/curbs etc.) onto and from the designated LAA.
Slope	Both proposed sites have relatively gentle slopes.	-	Moderate	Civil design to incorporate bunding or interception drains to minimise run-on and run-off, as above.
Fill (Imported)	Fill is not currently present and is not expected to be required at this site, other than site-derived cut-fill to create level surfaces (where required).	-	Low	Any fill must be at least as permeable as the existing on site soils.
PDWSAs	The site is **not** mapped as being within a public drinking water source area. A P1 public drinking water source area (Harding Dam Catchment) is mapped as being around 1.6 km from the site.	Department of water (DoW) mapping service	-	The site is outside mapped PDWSA and will not impact drinking water sources.
SSAs	The site is **not** mapped as being within a Sewage Sensitive Area.	Department of lands and heritage (DPLH) mapping service.	-	-

Consideration	Assessment / Discussion	Reference	Level of Constraint	Mitigation Measures
Groundwater Level	Encountered groundwater levels are summarised in Section 10.2.	Section 10.2	Moderate	The underside of any disposal area (i.e. leach drains, or surface for spray/drip irrigation) must be at least 0.6 m above maximum groundwater levels. For the purposes of this site, the top of rock from test pits and boreholes shall be taken as the groundwater level (to facilitate instances where water will flow along this impermeable layer).
Groundwater Separation	The base of any leach drain or other disposal unit must be at least 0.6 m above the design groundwater level.	Government Sewerage Policy (2019)	High	The top of rock shall be taken as the maximum groundwater level at this site. This will require potholing at a frequency of test per 250 m^2 during construction and potential minor cut-fill works to facilitate achieving 0.6 m clearance from the underside of a disposal unit to the top of rock.
Rainfall Run-on/Seepage	The slopes at the site are relatively gentle, though in general all areas of the site will grade towards ephemeral creeks.	-	Moderate	Incident rainfall must be diverted away from LAAs using curbs or diversion bunds. Similarly, any run-off must be prevented by either having a level LAA, or by using retention bunds.
Surface Water/Water Resources	We consider that the major ephemeral creeks (modelled by Hydrologia as having up to 1 m of flood water) should be considered "streams or creeks", and a 100 m setback will apply to these.	-	High	The required minimum setbacks to water resources must be met for the proposed LAA configurations. Control of surface water across the development to be assessed as part of civil design. 100 m setback to the major ephemeral creeks is required.
Flood Potential	Hydrologia's flood mapping indicates that under a 10% AEP event, there is a flood depth of up to 0.5 m through ephemeral creeks within the site.	Hydrologia Flood Report	High	The LAA must be positioned outside of the areas as mapped by Hydrologia for the 10% AEP events.
Setbacks	All setbacks to be met.	Section 10.3	High	LAAs will meet setback requirements. The critical setback will be from the edge of the LAAs to the ephemeral creeks. This must be shown on plans.
LAA	The minimum LAA sizes are presented in this report and vary based on treatment/disposal and disposal location.	Section 10.4.3	High	LAAs to be sized to meet the minimum required infiltrative area and setbacks. Design Loading Rate to be confirmed during construction.

Attached Table 2: Soil Assessment

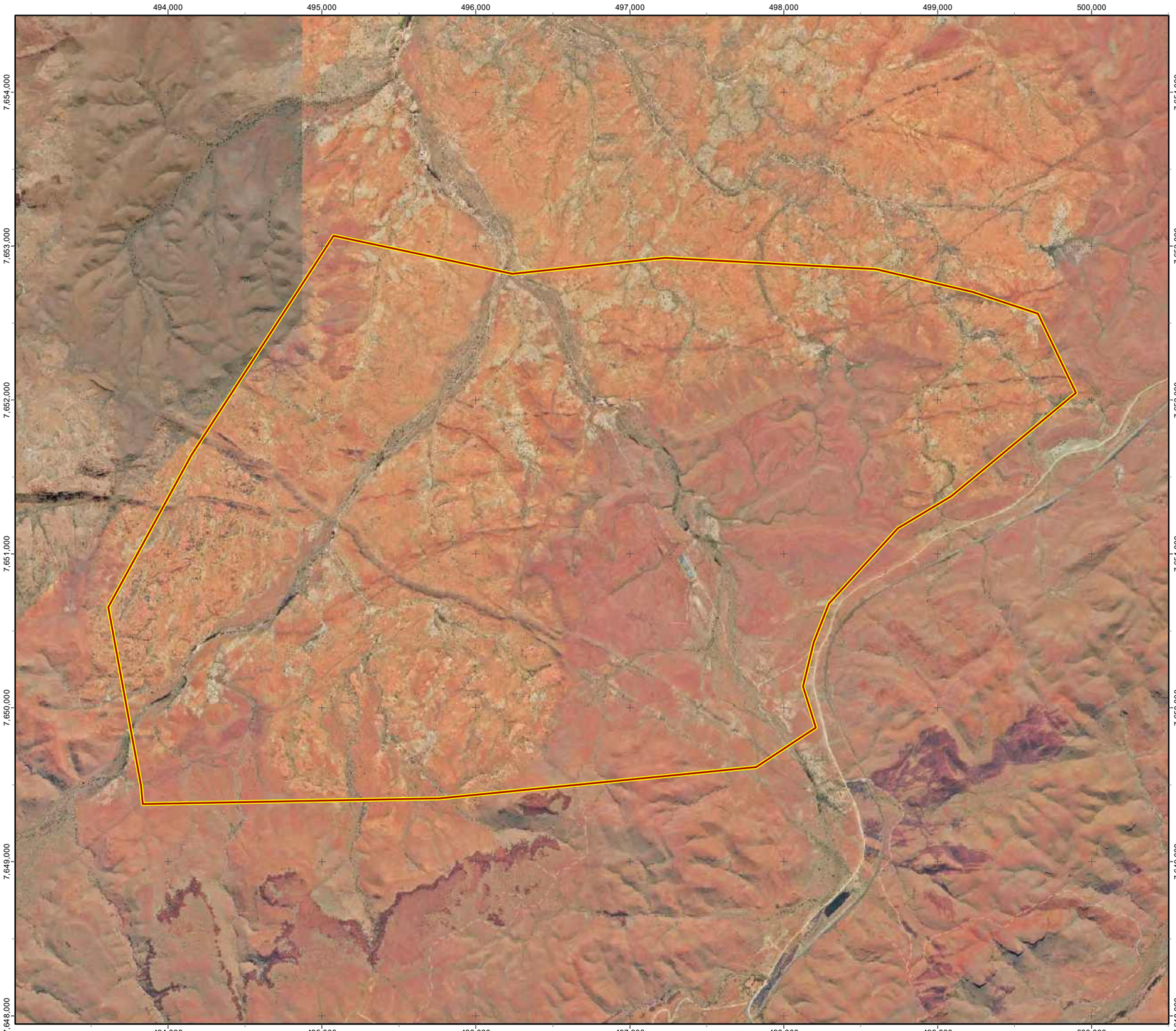
Consideration	Assessment / Discussion	Reference	Level of Constraint	Mitigation Measures
Subsurface Soil Conditions	Proposed Camp Location 1: Around 0.7 m of clayey sand (Category 4) over dolerite (Rock). Proposed Camp Location 2: Around 1.0 m of gravelly/silty sand (Category 3) over gneiss (Rock).	Section 8	Low	The system has been designed in accordance with a Category 3 and Category 4 soil. Index testing and permeability testing to be done at selected LAA at a frequency of 1 test per 2,000 m^2 to confirm the soil category for detailed design.
Acid Sulfate Soils	The site is not mapped as having ASS risk.	Department of Environmental Regulation (DER) mapping	Low	Based on the soil and groundwater conditions, ASS is not considered a risk for the development.
Soil Category	The soils are “Category 4” (clay loams) and “Category 3” (loams), with design permeability ranges of 0.06 – 0.12 m/day and 0.5 – 1.5 m/day respectively.	AS1547-2012	Moderate	LAA is designed in accordance with these soil categories.
Design Loading Rates	Proposed Camp Location 1: ▪ Primary Treatment: 4 mm/day ▪ Secondary Treatment: 10 mm/day ▪ Drip/Spray Irrigation: 3.5 mm/day Proposed Camp Location 2: ▪ Primary Treatment: 10 mm/day ▪ Secondary Treatment: 30 mm/day ▪ Drip/Spray Irrigation: 4 mm/day	Table L1 and M1, AS1547-2012	Moderate	Index testing and permeability testing to be done at selected LAA at a frequency of 1 test per 2,000 m^2 to confirm the soil category for detailed design.

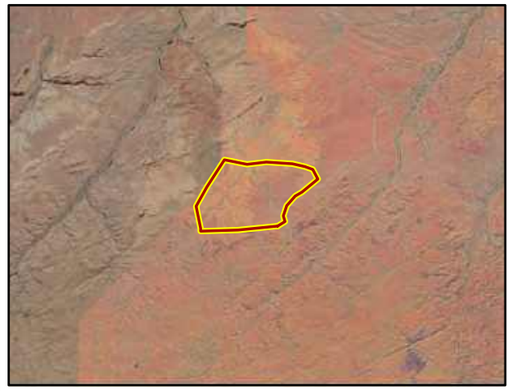
Consideration	Assessment / Discussion				Reference	Level of Constraint	Mitigation Measures
Laboratory Testing	**Level of Constraint**						
	Result	**Low**	**Medium**	**High**			
Coarse Fragments[1]	10% to 80%	<10%	10-40%	>40%	-	Moderate	Erosion risk will be managed by a relatively flat LAA with minimal run-on / run-off. Index testing to be done at selected LAA at a frequency of 1 test per 2,000 m^2 to confirm the soil category for detailed design.
Phosphorous Retention Index (PRI)[2]	Not Tested	>20	5-20	<5		Moderate	PRI testing must be done at a frequency of test per 2,000 m^2 across the LAA. Where the PRI is less than 5, soil modification (e.g., using gypsum) must be done to improve the phosphorous retention of the soil.
Exchangeable Sodium Percentage[1]	Not Tested	<10	10-20	<20		Low	In situ soil not considered to have significant erosion risk due to a flat LAA with minimal run-on/run-off (i.e., the erosion potential is very low).
Emerson Class[1]	Not Tested	> 4	4	1 - 3		Low	

Notes

1. *Level of constraint based on our interpretation of AS1547 description of "non-dispersive soils".*
2. *Phosphorus retention index requirements are based on our interpretation of The Department of Primary Industries and Regional Development Standards for Land Resource Mapping (2005), as this is not specified in AS1547.*

Figures





Legend

Site Boundary

N

0 400 800 1200 1600 2000

Meters

[redacted]

SCALE	[redacted] (A3)
DRAWN	CED
DATE DRAWN	3/12/2024
CHECKED	_
DATE CHECKED	_
PROJECTION	GDA 1994 MGA Zone 50

Galt Geotechnics Pty Ltd
ACN : 138 490 865
Tel : +61 (0)8 6272-0200
Address : 50 Edward Street
Osborne Park WA 6017

[redacted]

LOCATION	CROWN LAND (UCL) PIN 3115653 & 3115647 SHIRE OF ASHBURTON
TITLE	SITE & LOCATION PLAN
Job No	WAG240620
Fig No	FIGURE 1
Rev	A

[redacted]

GEOLOGY MAP

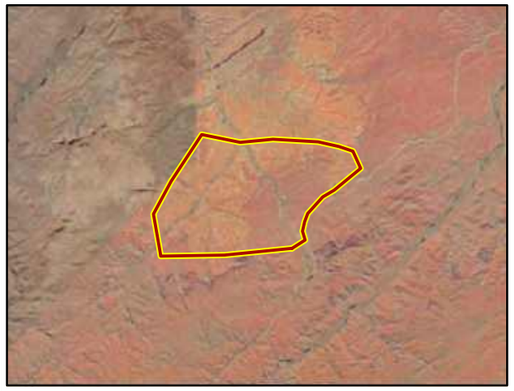
COOYA POOYA:2355 CODE, NARRATIVE

AFh	AFh ; HARDEY FORMATION: sandstone, conglomerate, siltstone, shale, and tuff
AFhy	AFhy ; Lyre Creek Member: felsic tuff and agglomerate, and volcaniclastic sandstone and conglomerate with acid to intermediate rock clasts; local abundant accretionary lapilli
AFk	AFk ; KYLENA FORMATION: massive or amygdaloidal basalt, basaltic andesite, and dacite; local high-Mg basalt and rhyolite
AgCm	AgCm ; Syenogranite and monzogranite; locally biotite-rich, foliated
Qc	Qc ; Colluvium - sand, silt, and gravel in outwash fans and scree slopes

PYRAMID:SF5007 CODE, NARRATIVE

AFhst	AFhst ; Medium- to coarse-grained, poorly sorted sandstone and minor well-laminated siltstone
AFhy	AFhy ; Lyre Creek Member: felsic agglomerate and felsic pyroclastic rocks
AFk	AFk ; KYLENA FORMATION: massive or amygdaloidal basalt, basaltic andesite, and dacite; local komatiitic basalt and rhyolite

GEOLOGY MAP LEGEND *Geology sourced from the GSWA 1:250 000 mapsheet PYRAMID(SF 50-7)*



Legend

Site Boundary

100K DIGITAL GEOLOGY

AVAILABLE
- COOYA POOYA(2355)
- PINDERI HILLS(2255)

250K DIGITAL GEOLOGY

AVAILABLE
- PYRAMID(SF 50-7)

ACQUIRED
- PYRAMID(SF 50-7)

NOT AVAILABLE
- YARRALOOLA(SF 50-6)

N

0 400 800 1200 1600 2000
Meters

NOTES

Aerial Imagery and Cadastre sourced from Landgate/SLIP

SCALE	1:25,000 (A3)
DRAWN	CED
DATE DRAWN	3/12/2024
CHECKED	_
DATE CHECKED	_
PROJECTION	GDA 1994 MGA Zone 50

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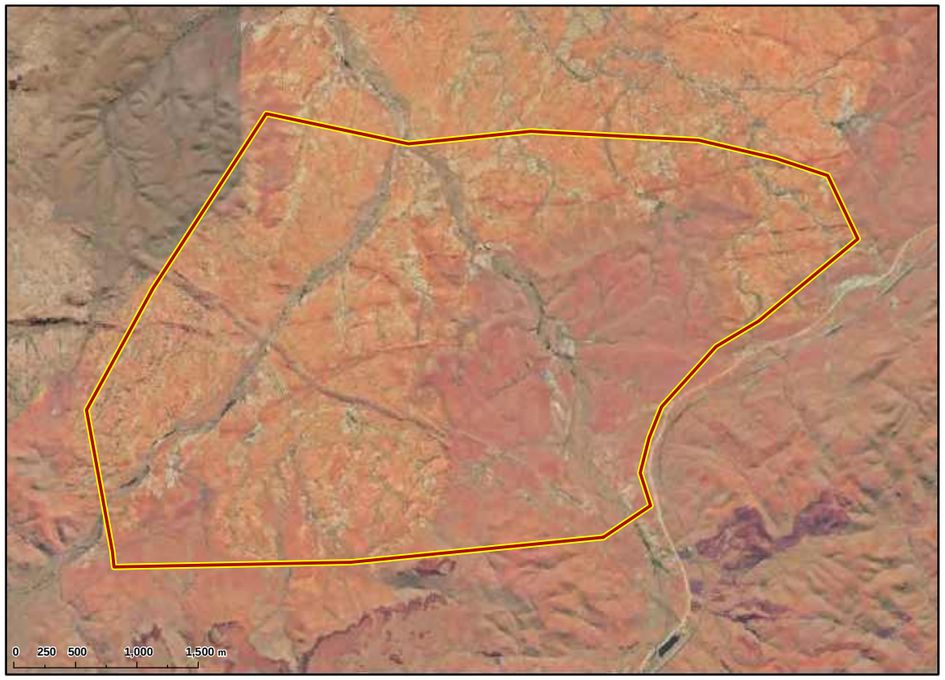
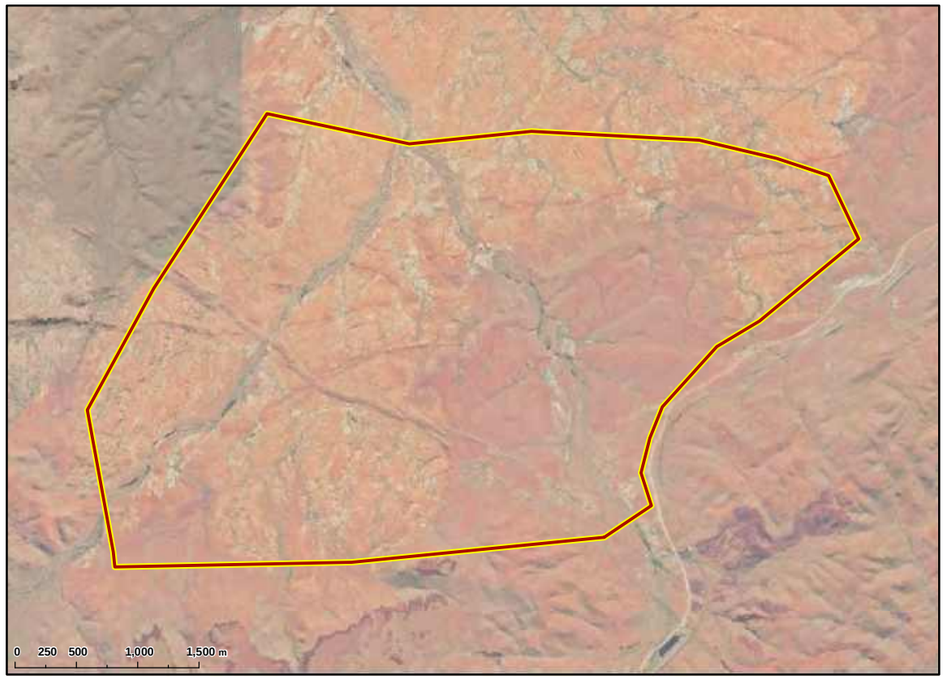
SITE	YINDJIBARNDI CHICHESTER
LOCATION	CROWN LAND (UCL) PIN 3115653 & 3115647 SHIRE OF ASHBURTON
TITLE	GEOLOGY
Job No	WAG240620
Fig No	FIGURE 2
Rev	A



ACID SULFATE SOIL RISK MAPPING

- High to moderate risk
- Moderate to low risk
- High Risk of ASS (CSIRO NatASS_1902103)
- Low Risk of ASS (CSIRO NatASS_1902103)

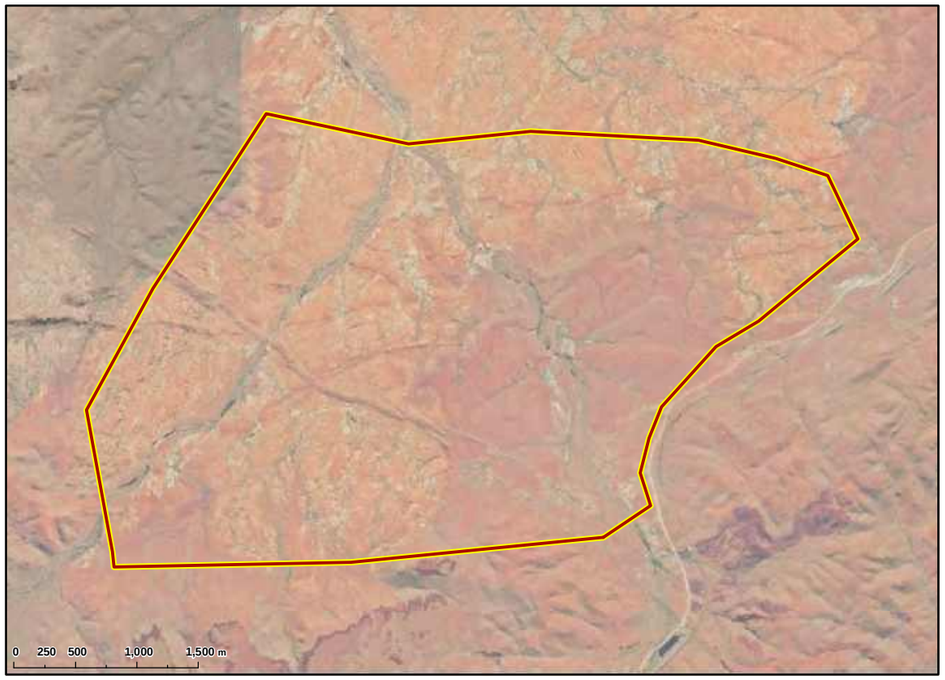
ACID SULFATE SOIL RISK MAPPING information sourced from DER datasets DER-003, DER-004, DER-008, DER-009, DER-010, DER-011. The information shows the risk of Acid Sulfate Soil (ASS) materials being disturbed by land development activities based on the likelihood of ASS materials occurring within soil profiles. This data was developed to assist planners in assessing whether development applications require additional conditions for sites where there is a risk disturbing ASS. The NatASS_1902103 was sourced from the CSIRO and covers the areas not subject to mapping by DER.



CONTAMINATED SITES

- Contaminated - remediation required
- Contaminated - restricted use
- Remediated for restricted use
- Contaminated - remediation required
- Contaminated - restricted use
- Remediated for restricted use

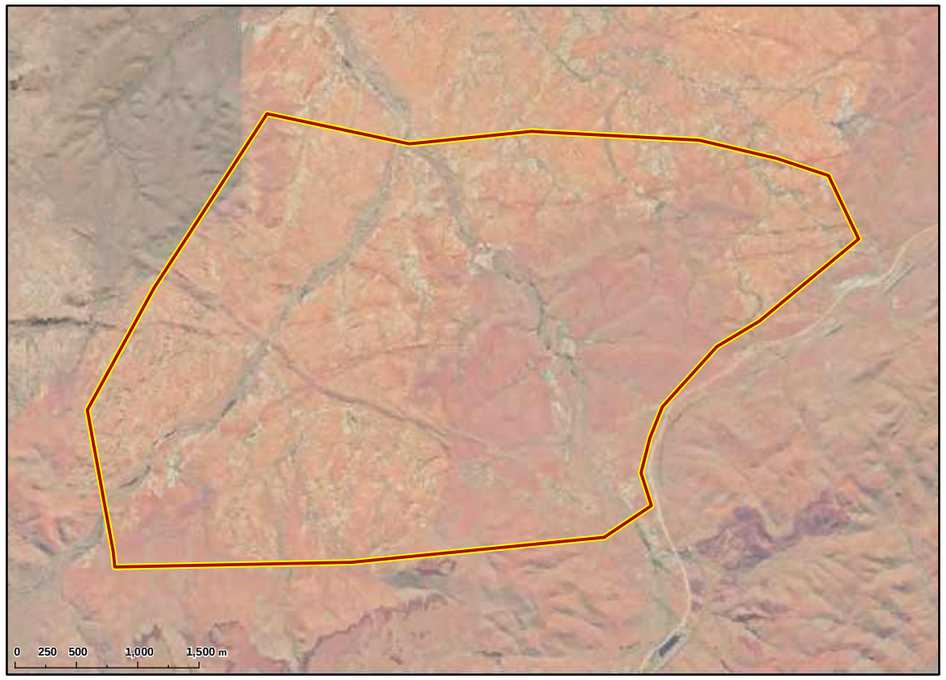
CONTAMINATED SITES information sourced from Contaminated - Reported Sites (DER-015) dataset.
The Contaminated Sites Database holds information on confirmed contaminated sites (those classified 'contaminated-remediation required', 'contaminated-restricted use' and remediated for restricted use').
Information on all other reported sites is recorded on the Reported Sites Register



RAMSAR SITES

- RAMSAR site
- Directory of Important Wetlands

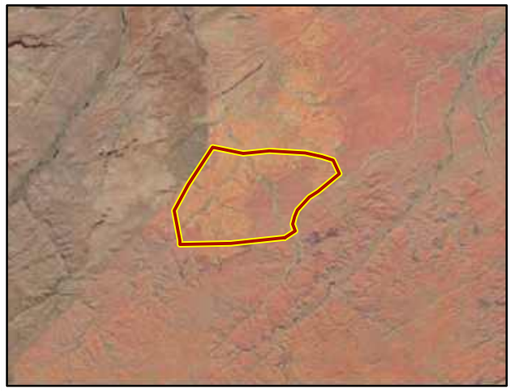
This RAMSAR SITES dataset describes the official boundaries of the nine wetland areas initially proposed in February 1990 by the Government of Western Australia for listing as Wetlands of International Importance under the Convention on Wetlands of Importance especially as Waterfowl Habitat, otherwise known as the Ramsar Convention. These nine sites were added to the Ramsar Convention official List of Wetlands of International Importance in June 1990.
The Directory of Important Wetlands is a polygon coverage representing the Western Australian wetlands cited in the "A Directory of Important Wetlands in Australia" Third Edition (EA, 2001), plus various additions for wetlands listed after 2001. The full dataset is collated by the Australian Government Department of the Environment from various datasets supplied by the relevant State agencies. A subset of the WA Important Wetlands are listed as RAMSAR wetlands.



GEOMORPHIC WETLANDS

- Multiple Use
- Resource Enhancement
- Conservation
- Not Applicable
- Not Assessed

GEOMORPHIC WETLANDS information sourced from datasets DBCA-013, - DBCA-019, DBCA-040, DBCA-43 & DBCA-44. Refer to https://catalogue.data.wa.gov.au/organization/department-of-biodiversity-conservation-and-attractions for additional information.



Legend

- Site Boundary

N

0 810 1620 2430 3240 4050
Meters

NOTES
Aerial Imagery sourced from Landgate / SLIP

SCALE	1:50,000	(A3)
DRAWN	CED	
DATE DRAWN	3/12/2024	
CHECKED	–	
DATE CHECKED	–	
PROJECTION	GDA 1994 MGA Zone 50	

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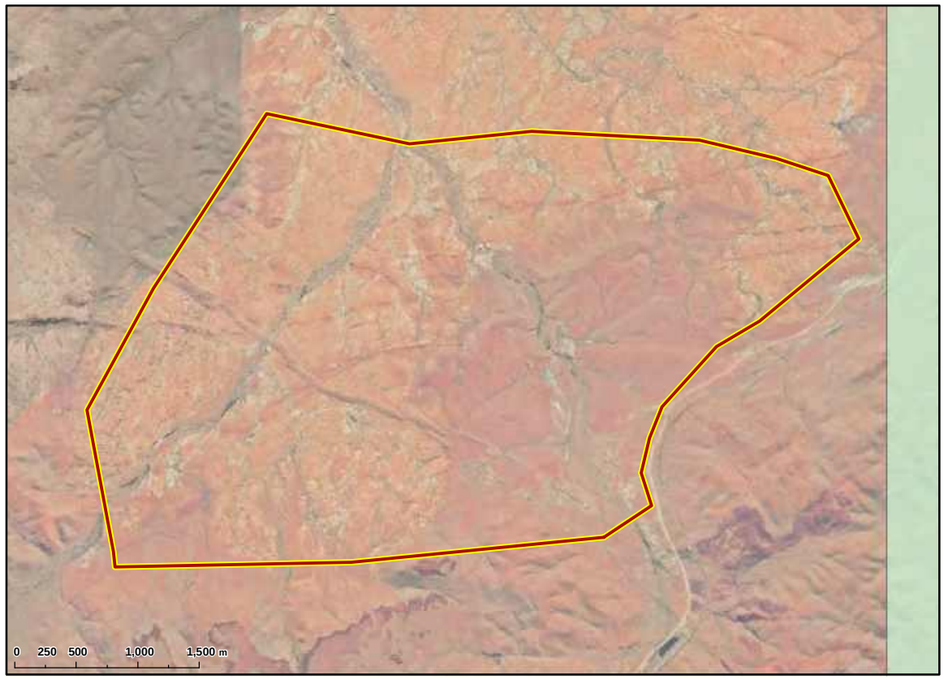
Address : 50 Edward Street
Osborne Park WA 6017

SITE	YINDJIBARNDI CHICHESTER		
LOCATION	CROWN LAND (UCL) PIN 3115653 & 3115647 SHIRE OF ASHBURTON		
TITLE	INDICATIVE ENVIRONMENTAL ASPECTS (1 OF 4)		
Job No	WAG240620	Fig No FIGURE 3A	Rev A



CLEARING REGULATIONS - ENVIRONMENTALLY SENSITIVE AREAS & GOVERNMENT SEWERAGE POLICY

Environmentally Sensitive Areas

Government Sewerage Policy

a) Estuary catchments on the Swan and Scott Coastal Plains

b) The Brockman River catchment

c) Within 2km of selected estuaries and inlets

d) Within 2km of the estuarine areas of selected rivers

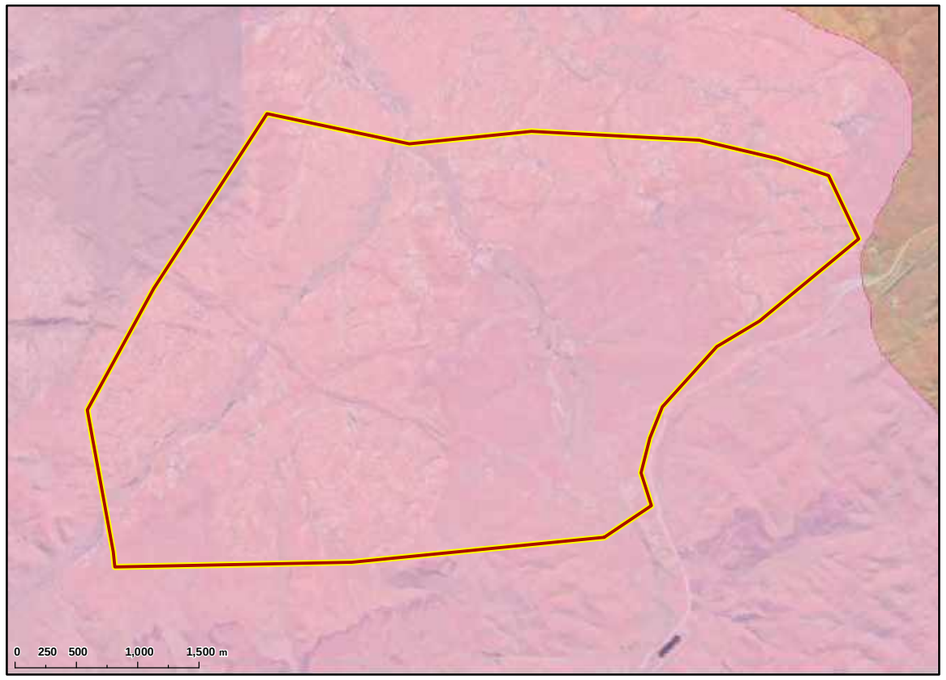
e) 2km of coastal embayments

f) 1km of significant wetlands

g) Habitats of specially protected water-dependent fauna, and within 1km of groundwater dependent threatened and priority ecological communities

h) Wild rivers catchment

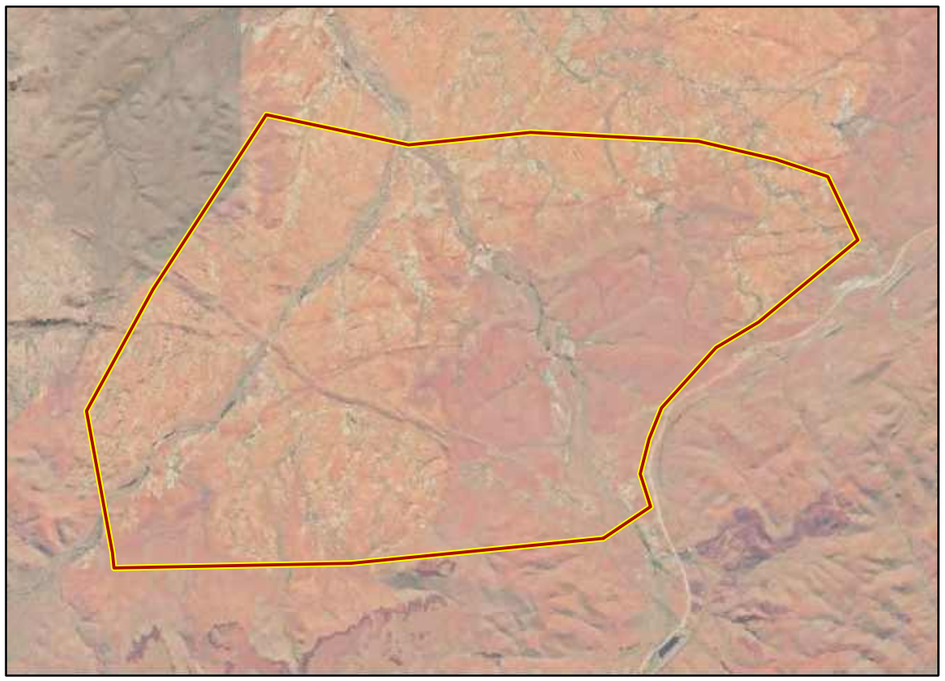
CLEARING REGULATIONS - ENVIRONMENTALLY SENSITIVE AREAS & GOVERNMENT SEWERAGE POLICY information sourced from Clearing Regulations - Environmentally Sensitive Areas (DER-016). Environmentally Sensitive Areas as declared in Environmental Protection (Environmentally Sensitive Areas) Notice 2005, Government Gazette No. 55. This dataset is provided to assist landowners and managers in determining the location of environmentally sensitive areas under the Environmental Protection Act 1986. It is not a substitute for any requirement of the legislation.



BUSH FIRE PRONE AREAS

Bush Fire Prone Areas 2021 (OBRM-019)

BUSH FIRE PRONE AREAS information sourced from Bush Fire Prone Areas 2019 dataset (OBRM-015) and identifies bush fire prone areas of Western Australia as designated by the Fire and Emergency Services (FES) Commissioner on 31 July 2019. Bush fire prone areas are subject to, or likely to be subject to, bush fire attack. A bush fire prone area is identified by the presence of and proximity to bush fire prone vegetation, and includes both the area containing the bush fire prone vegetaion and a 100 metre buffer zone immediately surrounding it.



EUROPEAN HERITAGE

European Heritage (Heritage Council WA)

Protection Order (DPLH_004)

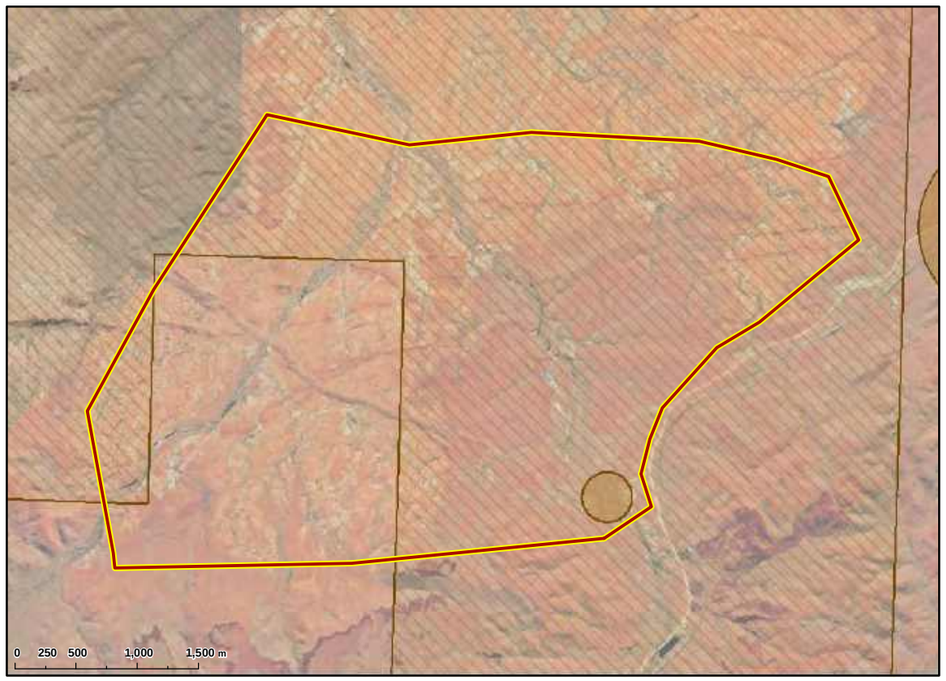
Heritage Agreements (DPLH_005)

State Register (DPLH_006)

Assessment Program (DPLH_007)

Local Heritage Survey (DPLH_008)

EUROPEAN HERITAGE datasets Protection Order (DPLH_004) protect places of cultural heritage significance to Western Australia from damage. Heritage Agreements (DPLH_005) are entered into between a property owner and the Heritage Council or another public authority on behalf of the State in return for planning approval or other concessions granted to the owner. The State Register of Heritage Places (DPLH_006) recognises a place's value and importance to Western Australia. It includes buildings, structures, gardens, cemeteries, landscapes and archaeological sites and has more than 1,300 places listed in it. The State Register is managed by the Heritage Council and provides a place with statutory protection to ensure that any proposed demolition, relocation, subdivision, amalgamation, alteration, addition or new development is in harmony with its cultural heritage values. When a place is on the Heritage Council's Assessment Program (DPLH-007), it means that the Heritage Council has an interest in the place and it will be assessed and considered for inclusion on the State Register of Heritage Places. The Local Heritage Survey (DPLH_008)[Previously called Municipal Inventory] is a list of places within a local district which are, or may become, of cultural heritage significance. For further information about Local Heritage Surveys, contact the relevant Local Government.



ABORIGINAL HERITAGE

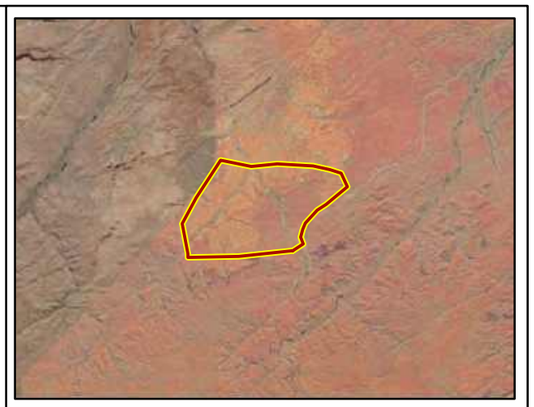
Contact DAA

Lodged

Registered Site

Stored Data / Not a Site

ABORIGINAL HERITAGE sourced from Aboriginal Heritage Places (DPLH-001) contains places within Western Australia that have been reported to the Registrar of Aboriginal Sites as possible Aboriginal sites within the meaning of the Aboriginal Heritage Act 1972 (AHA).This includes: Registered Sites – being places assessed by the Aboriginal Cultural Material Committee (ACMC) as meeting the criteria for section 5 of the AHA. Lodged Places - being places that are yet to be formally assessed by the ACMC against the criteria of section 5 stored Data – being places the ACMC has assessed to which section 5 of the AHA does not apply.



Legend

Site Boundary

N

0 810 1620 2430 3240 4050

Meters

NOTES

Aerial Imagery sourced from Landgate / SLIP

SCALE	1:50,000 (A3)
DRAWN	CED
DATE DRAWN	3/12/2024
CHECKED	–
DATE CHECKED	–
PROJECTION	GDA 1994 MGA Zone 50

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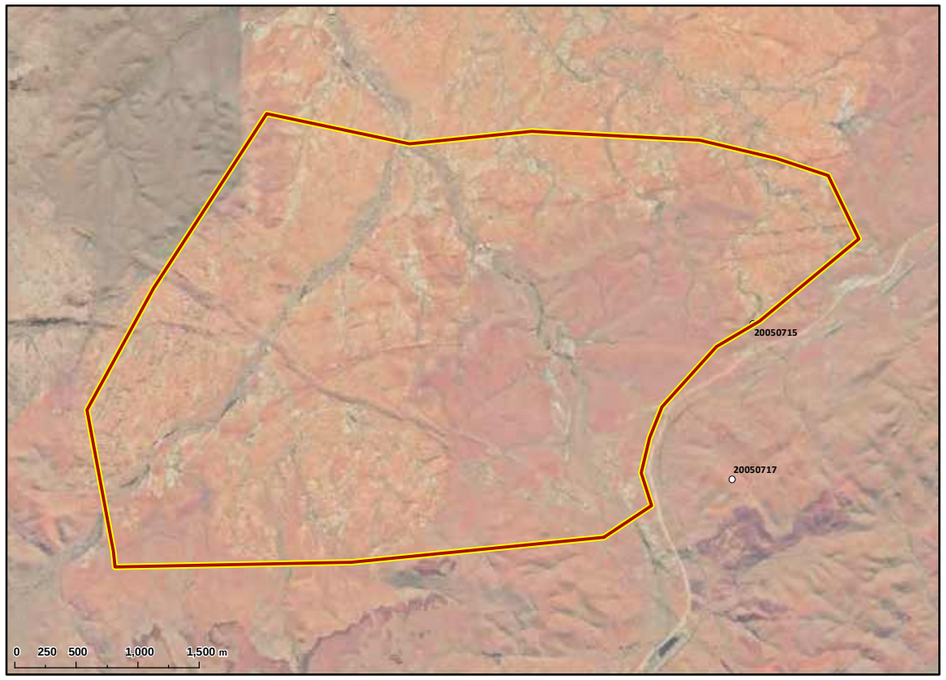
Tel : +61 (0)8 6272-0200
Address : 50 Edward Street
Osborne Park WA 6017

SITE	YINDJIBARNDI CHICHESTER
LOCATION	CROWN LAND (UCL) PIN 3115653 & 3115647 SHIRE OF ASHBURTON
TITLE	INDICATIVE ENVIRONMENTAL ASPECTS (2 OF 4)

Job No	Fig No	Rev
WAG240620	FIGURE 3B	A



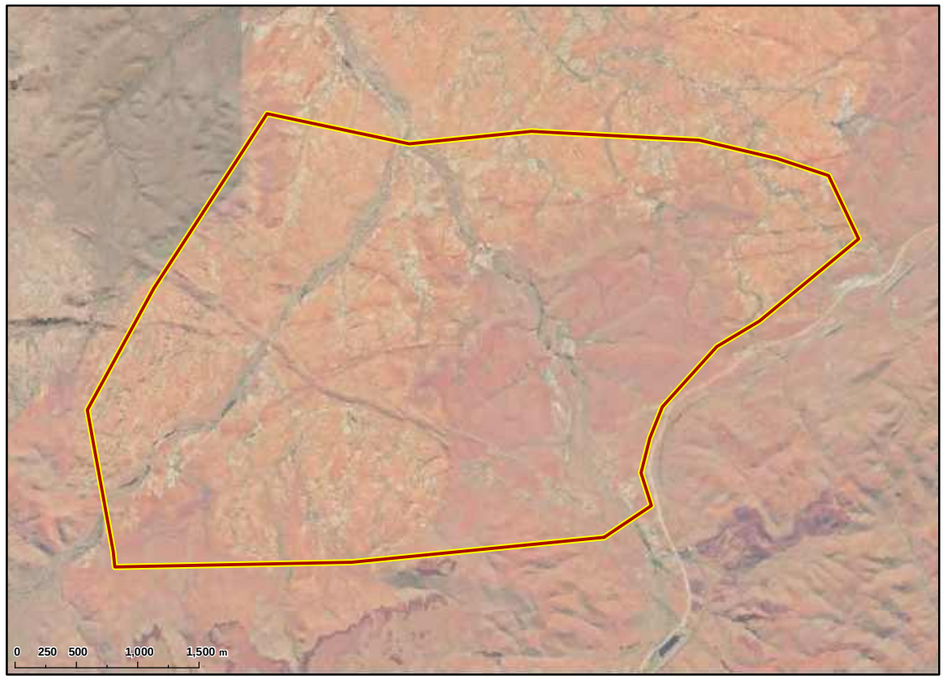
GROUNDWATER CONTOURS & WIN SITES

Historical Maximum (1997)
- 5m
- 1m

End of Summer (2003)
- 5m
- 1m

WIN Sites
- Ground, Borehole or Well
- Other

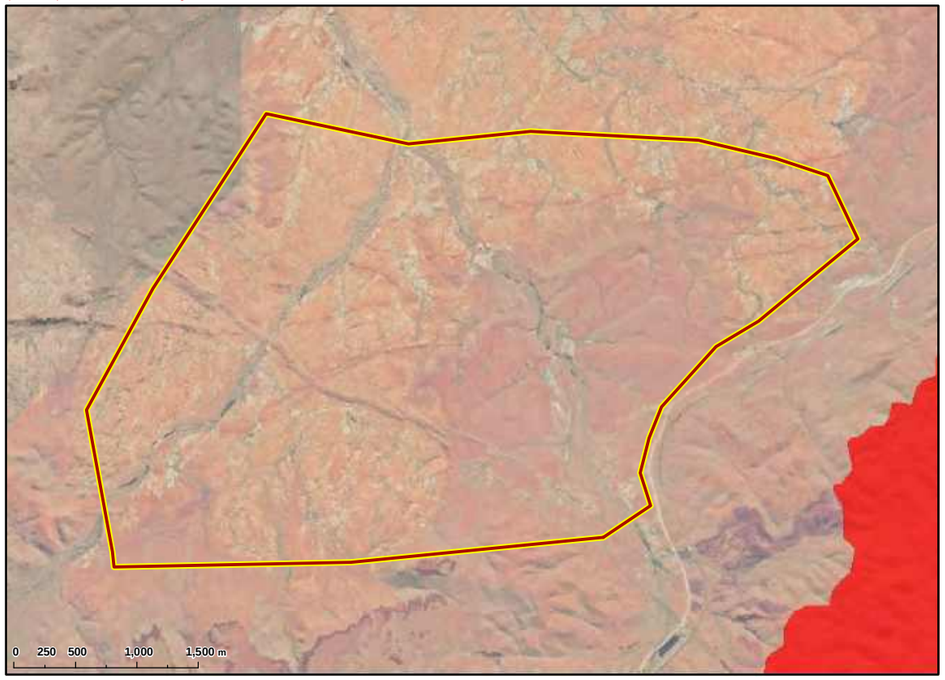
GROUNDWATER CONTOURS & WIN SITES information sourced from the Department of Water. The Perth Groundwater Atlas (1997) shows the historical maximum groundwater level. The Perth Groundwater Atlas (2004) shows the May 2003 (late summer) groundwater level. We note that the 2004 atlas typically reflects the seasonal minimum groundwater levels and the historical maximum groundwater level is likely to be significantly higher. EXISTING GROUND CONTOURS (2m) sourced from the DPIRD-072 and are Interpolated contours lines at 2 metre intervals produced by DPIRD (formerly DAFWA) from the Land Monitor project (1998-2000) DEM based on a 10 metre grid.



FLOODPLAIN MAPPING

- Floodplain Development Control Area
- Not a Floodplain Development Control Area
- Flood Fringe
- Floodway
- FPM 1 in 100 (1%) AEP Flood Fringe Line
- 1 in 10 (10%) AEP floodplain
- 1 in 20 (5%) AEP floodplain
- 1 in 25 (4%) AEP floodplain
- 1 in 50 (2%) AEP floodplain
- 1 in 100 (1%) AEP floodplain
- 1 in 200 (0.5%) AEP floodplain
- 1 in 500 (0.2%) AEP floodplain
- Designated flood event floodplain
- Maximum Channel Capacity
- Probable maximum flood

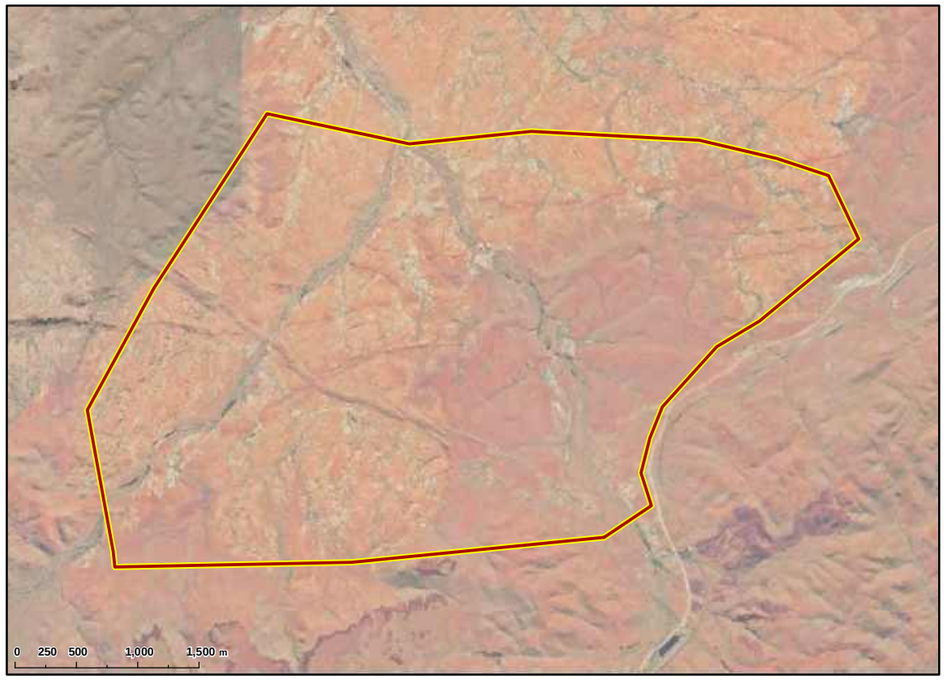
FLOODPLAIN MAPPING information sourced from Department of Water datasets (DOW-032), (DOW-041), (DOW-043), (DOW-054). The Dept of Water produces 100 year ARI floodplain mapping of rivers and major watercourses. The 100 year ARI flood level is expected to occur, on average, once every 100 years. Floods higher than this level will occur but will be less frequent. Floodplain development strategies are then developed to ensure that proposed floodplain development has adequate flood protection and does not impact on the existing flood regime of the area.



PUBLIC DRINKING WATER SOURCE AREAS

- P1 AREA
- P2 AREA
- P3 AREA
- P3* AREA
- PRIORITY NA

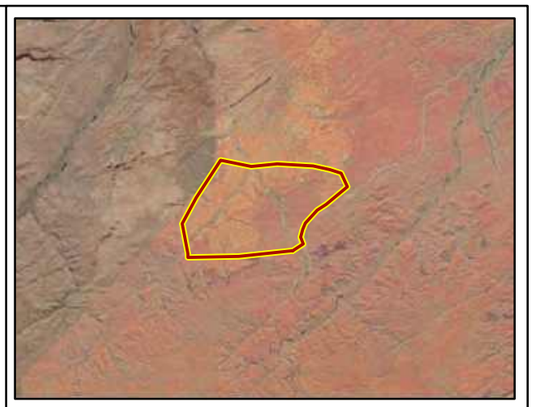
PUBLIC DRINKING WATER SOURCE AREAS information sourced from datasets Public Drinking Water Source Areas (DWER-033) Public drinking water source areas (PDWSAs) are surface water catchments and groundwater areas that provide drinking water to cities, towns and communities throughout the state. PDWSAs are proclaimed under the Metropolitan Water Supply, Sewerage, and Drainage Act 1909 or the Country Areas Water Supply Act 1947. Groundwater sources are normally referred to as underground water pollution control areas or water reserves. Surface water sources are generally referred to as catchment areas. In response to the 2010-11 dry season, the Department of Water updated the areas suitable/unsuitable for additional garden bores in the Perth region.



GARDEN BORE SUITABILITY

- Suitable
- Unsuitable

GARDEN BORE SUITABILITY information sourced from datasets Garden Bore Suitability (DWER-025). In response to the 2010-11 dry season, the Department of Water updated the areas suitable/unsuitable for additional garden bores in the Perth region. Areas designated unsuitable for additional garden bores have included the following factors: - salinity levels likely to be 1500 mg/L TDS or greater (in some instances >1000 mg/L TDS) because of proximity to river or ocean; - proximity to conservation wetlands (EPP 2004, Conservation, and Resource Enhancement); - potential for unreliable supply to clay soils (Guildford Clay); areas of thin superficial formations underlain by Rockingham Sand and/or Leederville Formation; and - potential for development of acid sulphate soils. - current Gnangara Mound groundwater abstraction risk map plus buffers around wetlands recommended for protection in the Gnangara Sustainability Strategy.



Legend

- Site Boundary

N

0 810 1620 2430 3240 4050
Meters

NOTES

Aerial Imagery sourced from Landgate / SLIP

SCALE	1:50,000 (A3)
DRAWN	CED
DATE DRAWN	3/12/2024
CHECKED	_
DATE CHECKED	_
PROJECTION	GDA 1994 MGA Zone 50

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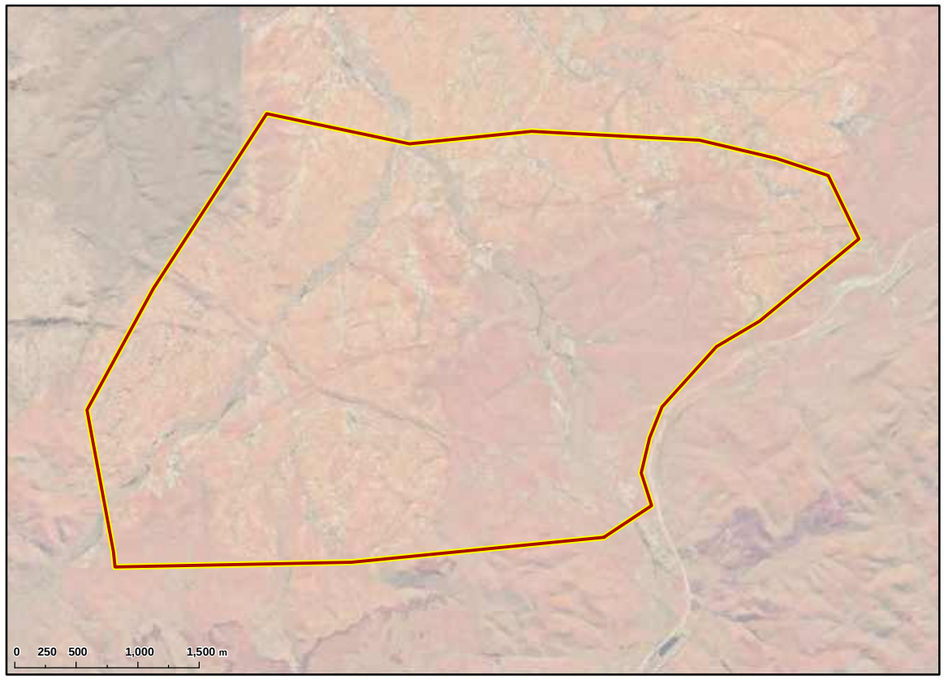
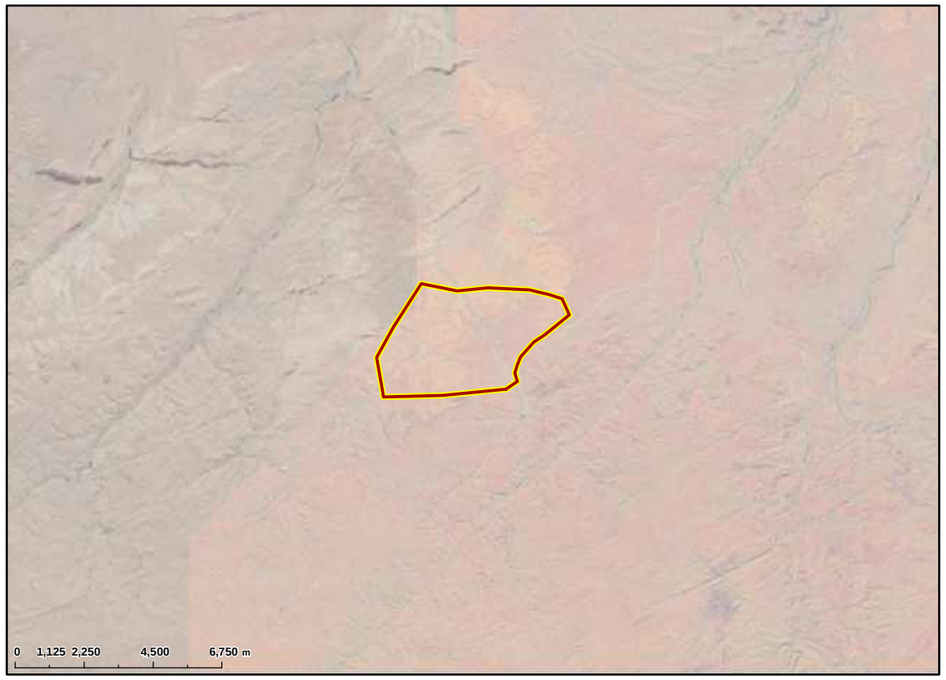
LOCATION	CROWN LAND (UCL) PIN 3115653 & 3115647 SHIRE OF ASHBURTON
TITLE	INDICATIVE ENVIRONMENTAL ASPECTS (3 OF 4)
Job No	WAG240620
Fig No	FIGURE 3C
Rev	A



SIGNIFICANT VEGETATION

Bush Forever Areas 2000 (DOP-071)
Forest Disease Risk Areas (DBCA-024)
Native Vegetation Extent (DPIRD-005)
Tuart Woodlands (DBCA-048)

The Bush Forever layer (DOP-071) is the original Bush Forever Areas in 2000 sourced from Department of Planning.The Forest Disease Risk Areas (DBCA-024) is from the official statutory plans from the DEC GIS Branch. The Department of Biodiversity, Conservation and Attractions (DBCA) maintains this dataset. The Native Vegetation Extent (DPIRD-005) data set contains the vegetation extent from the mapping of remnant vegetation in Western Australia and is maintained by Department of Primary Industries and Regional Development. Tuart Woodlands (DBCA-048) shows the areas of conservation, management due to the serious decline in the condition of tuart woodlands in the past few years.



SIGNIFICANT FAUNA

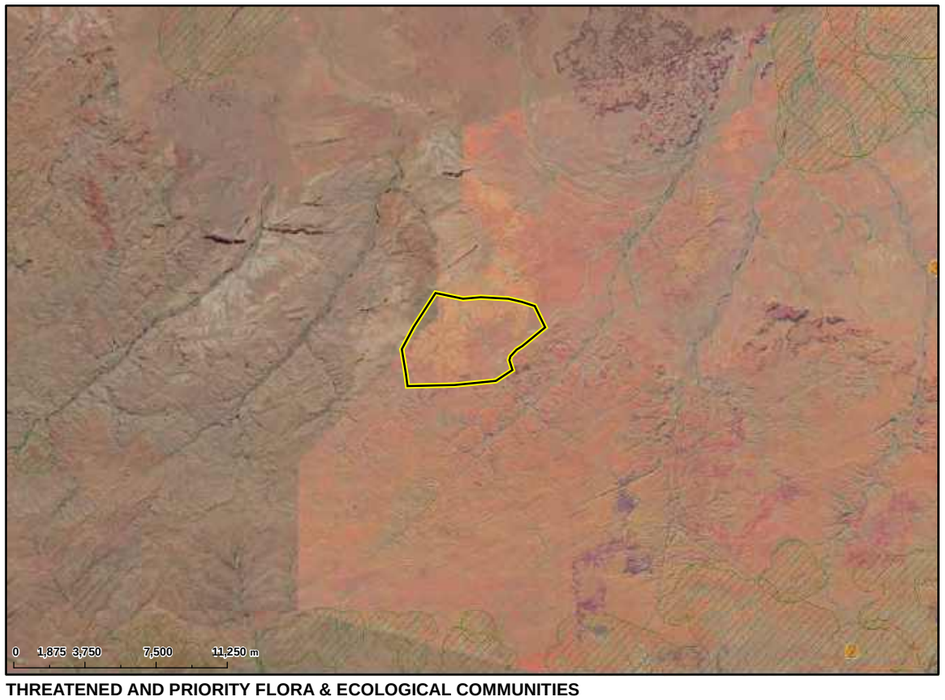
Western Ringtail Possum Habitat Suitability
Very High
High
Medium
Low
Very Low
Unsuitable

Carnabys Cockatoo
Breeding Area -
Confirmed Roost Sites
Unconfirmed Roost Sites
Confirmed Roost Sites Buffered 6km

Black Cockatoo
Roosting Sites Buffered
Breeding Sites Buffered

Western Swamp Tortoise
EPP2003 Western Swamp TortoisePolicy Boundary
Western Swamp Tortoise Habitat

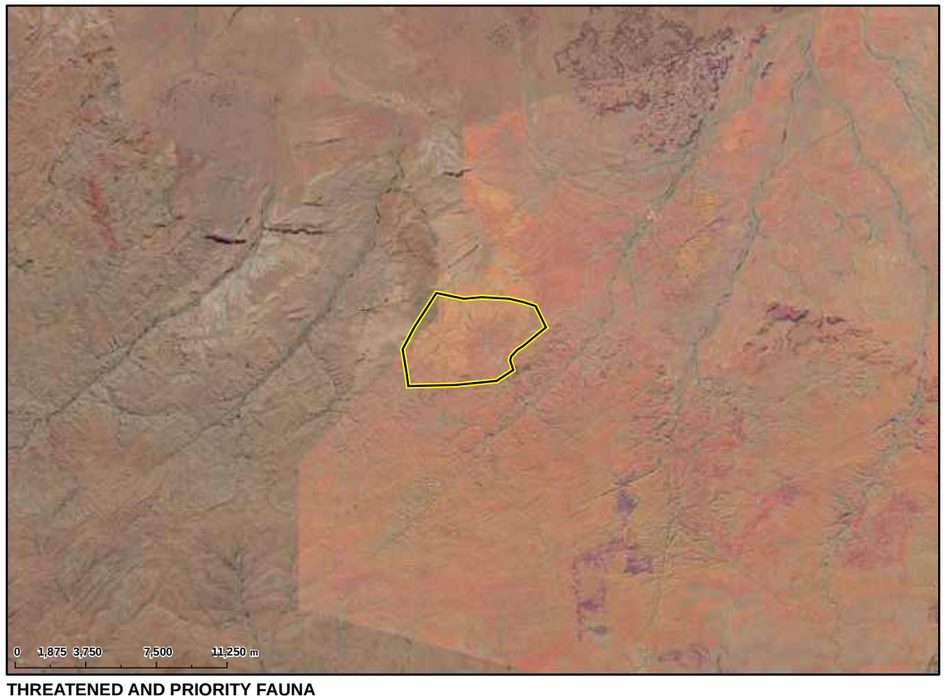
(DBCA-050) describes the currently known and confirmed night roost areas for Carnaby's Black Cockatoo in the South - West of Western Australia. A confirmed site is a site where CBC were recorded roosting as part of a formal roost survey (using the Great Cocky Count method in which birds are recorded as they settle, 30 minutes either side of sunset), as described by Berry (2008). (DBCA-052) is a 6km buffer around a confirmed site.Buffering was done to cover roost movement and recording accuracy. Roosts were buffered to 6km to indicate the likely feeding area of the roost. (DBCA-054) Shows the confirmed breeding areas of the Carnaby's Black Cockatoo (CBC) within the Swan Coastal Plain and the Jarrah Forest IBRA regions. Confirmed sites are identified where chicks or eggs of CBC have been observed.



THREATENED AND PRIORITY FLORA & ECOLOGICAL COMMUNITIES

1 Priority 1
2 Priority 2
3 Priority 3
4 Priority 4
T Threatened
X Extinct
Priority
Threatened

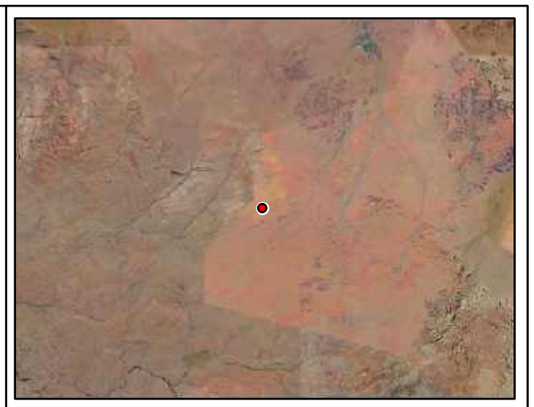
Threatened and Priority Flora (DBCA-036) describes threatened (declared rare) and priority flora populations for all land tenures, within the State of Western Australia. Threatened Ecological Communities (DBCA-038) describes Threatened Ecological Community (TEC) and Priority Ecological Community (PEC) Sites (Buffered) in WA. Threatened Ecological Communities (TEC) have been endorsed by the minister as threatened while Priority Ecological Communities (PEC) are those which have not yet been endorsed. Threatened Ecological Communities are described as either: "Presumed Totally Destroyed", "Critically Endangered", "Endangered" and "Vulnerable" while Priority Ecological Communities are described as being "Priority 1-5". Other Ecological Communities can be described as being: "Lower Risk" or "Not evaluated". Communities are based on various life-forms including plants, invertebrates and micro-organisms.



THREATENED AND PRIORITY FAUNA

Threatened - Critically Endangered
Threatened - Endangered
Threatened - Vulnerable
Presumed Extinct
Specially Protected - Migratory Birds
Specially Protected - Conservation Dependent
Specially Protected - Other Specially Protected
Priority Fauna

Threatened and Priority Fauna (DBCA-037) data set has been derived from the following two databases: 1. The WA Threatened and Priority Fauna Database which contains records of observations of any fauna listed as threatened under the Wildlife Conservation Act 1950 or listed on the Dept. of Biodiversity, Conservation and Attractions (DBCA) Priority Fauna List. This data is maintained by DBCA. 2. The DBCA Fauna Survey Database which contains records of Western Australian fauna from sources including historical reports, DBCA staff, survey data from major projects, consultants, and the general public that are licence holders. This data is managed by DBCA. The information is used to assist the Department with the management of fauna populations especially in relation to proposed land developments or activities likely to impact on fauna and fauna habitat. Data and/or information from the database can be accessed by written request to the Principle Zoologist, Species and Communities Branch. Detailed location information for individual species is generally kept confidential unless direct conservation benefits to the species can be demonstrated.



Legend

Site Boundary

N

0 810 1620 2430 3240 4050
Meters

NOTES

Aerial Imagery sourced from Landgate / SLIP

SCALE	1:50,000	(A3)
DRAWN	CED	
DATE DRAWN	3/12/2024	
CHECKED	–	
DATE CHECKED	–	
PROJECTION	GDA 1994 MGA Zone 50	

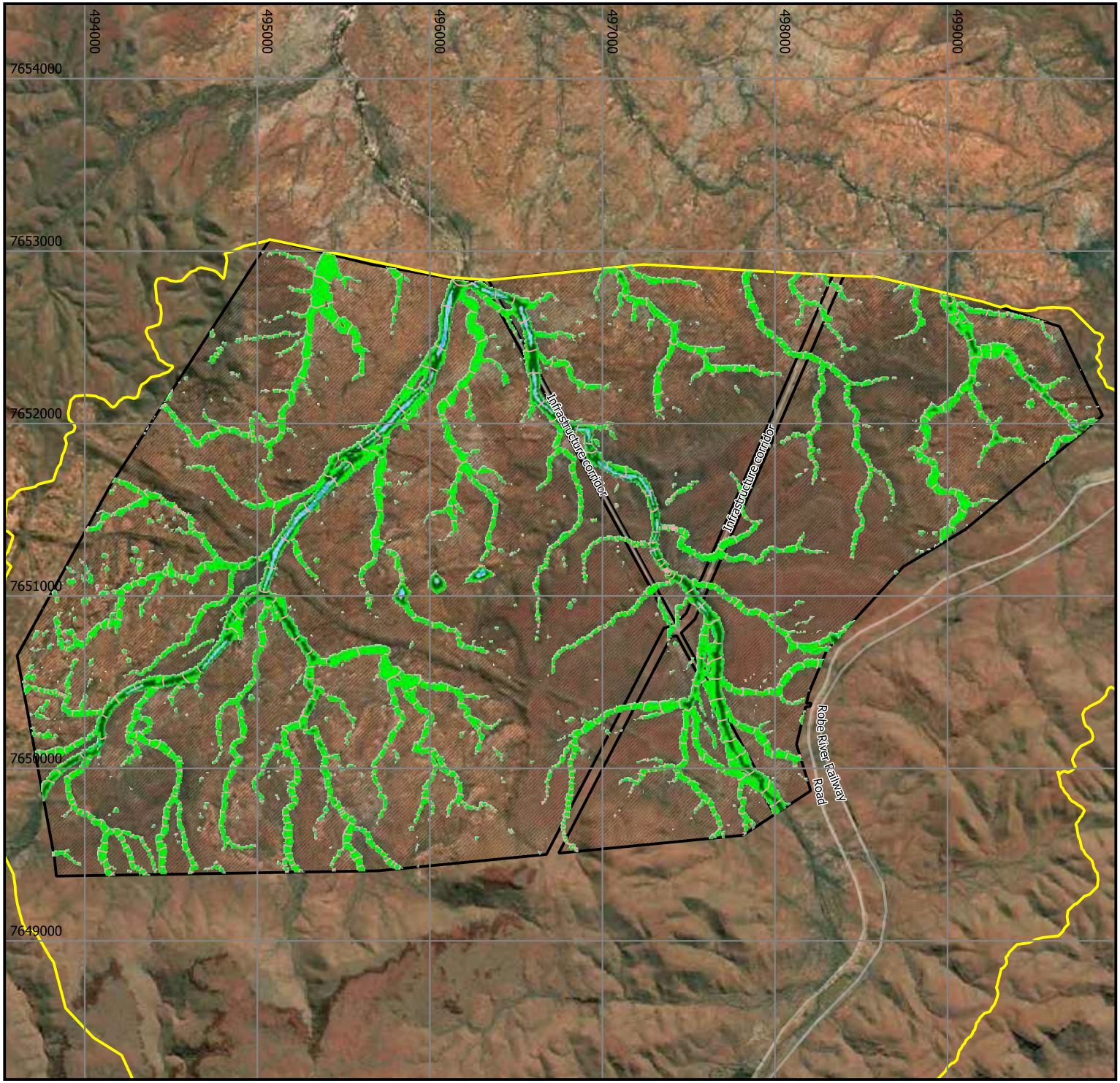
Galt Geotechnics Pty Ltd
ACN : 138 490 865
Tel : +61 (0)8 6272-0200
Address : 50 Edward Street
Osborne Park WA 6017

SITE	YINDJIBARNDI CHICHESTER
LOCATION	CROWN LAND (UCL) PIN 3115653 & 3115647 SHIRE OF ASHBURTON
TITLE	INDICATIVE ENVIRONMENTAL ASPECTS (4 OF 4)

Job No	Fig No	Rev
WAG240620	FIGURE 3D	A

Appendices

Appendix A: Hydrologia Flood Modelling Outputs



Legend

- 0.5 m water level contours (m AHD)
- Model domain
- Area of interest

Depth (m)

- <= 0.025
- 0.1 - 0.5
- 0.5 - 1
- 1 - 1.5
- 1.5 - 2
- 2 - 2.5
- 2.5 - 3
- 3 - 3.5
- > 3.5

Data source:
Imagery - ESRII
Infrastructure - Yindjibarndi Energy Corporation
Model domain, results - Hydrologia

Location

Map sheet location

N

0 0.6 1.2 1.8 km

Yindjibarndi Energy

Hydrologia

Project: Yindjibarndi Energy Project - Jinbi flood extents
Job: J0100183

Figure 5 a) Predicted flooding- 10% AEP depth

COMPILED: Hydrologia	DATE: 23/05/2024	LOCON: PERTH	A4	SCALE: 1:32000
GDA 2020 MGA 50	PLAN No: J0100183 Fig 05.pdf			
DOCUMENT NAME: J0100183_Map 04.qgz				

Appendix B: Water Balance Calculations

WA Site & Soil Evaluation
Irrigation area sizing

Please read the attached notes before using this spreadsheet

Water Balance for Zero Storage

Site Address:	**Crown Land ID 3115653 & 3115647, Chichester (South Location, Temporary Camp, Drip/Spray Irrigation)**		
Date:	Tuesday, 11 February 2025	**Assessor:**	[redacted]

INPUT DATA

Design Wastewater Flow	Q	1,620	L/day	Based on maximum potential occupancy and derived from the Supplement to Regulation 29 and Schedule 9 - Wastewater system loading rates
Design Irrigation Rate	DIR	3.5	mm/day	Based on soil texture class/permeability and derived from Table M1 of AS/NZS 1547:2012
Nominated Land Application Area	L	892	m^2	[1]
Crop Factor	C	0.8-1.0	unitless	Estimates evapotranspiration as a fraction of pan evaporation; varies with season and crop type[2]
Rainfall Runoff Factor	RF	1.0	untiless	Proportion of rainfall that remains onsite and infiltrates, allowing for any runoff
Mean Monthly Rainfall Data		Millstream		BoM Station and number
Mean Monthly Pan Evaporation Data		Tom Price		BoM Station and number or data from the Evaporation Data for Western Australia Report (https://researchlibrary.agric.wa.gov.au/cgi/viewcontent.cgi?article=1058&context=rmtr

Parameter	Symbol	Formula	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days in month	D		days	31	28	31	30	31	30	31	31	30	31	30	31	**365**
Rainfall	R		mm/month	77.1	88.2	66.6	24.3	28.7	29.5	11.9	7.4	2.3	2.8	7.1	29.1	**375**
Evaporation	E		mm/month	275	208	207	171	123	110	115	123	178	241	265	299	**2315**
Crop Factor	C		unitless	1.00	1.00	0.90	0.90	0.80	0.80	0.80	0.80	0.90	1.00	1.00	1.00	
OUTPUTS																
Evapotranspiration	ET	ExC	mm/month	275	208	186	154	98	88	92	98	160	241	265	299	**2165.2**
Percolation	B	DIRxD	mm/month	108.5	98	108.5	105.0	108.5	105.0	108.5	108.5	105.0	108.5	105.0	108.5	**1277.5**
Outputs		ET+B	mm/month	383.5	306	294.8	258.9	206.9	193.0	200.5	206.9	265.2	349.5	370.0	407.5	**3442.7**
INPUTS																
Retained Rainfall	RR	RxRF	mm/month	77.1	88.2	66.6	24.3	28.7	29.5	11.9	7.4	2.3	2.8	7.1	29.1	**375**
Applied Effluent	W	(QxD)/L	mm/month	56.3	50.9	56.3	54.5	56.3	54.5	56.3	56.3	54.5	56.3	54.5	56.3	**662.9**
Inputs		RR+W	mm/month	133.4	139.1	122.9	78.8	85.0	84.0	68.2	63.7	56.8	59.1	61.6	85.4	**1037.9**
STORAGE CALCULATION																
Storage remaining from previous month			mm/month	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Storage for the month	S	(RR+W)-(ET+B)	mm/month	-250.1	-166.9	-171.9	-180.1	-121.9	-109.0	-132.3	-143.2	-208.4	-290.4	-308.4	-322.1	
Cumulative Storage	M		mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum Storage for Nominated Area	N		mm	0.00												
	V	NxL	L	0												
LAND AREA REQUIRED FOR ZERO STORAGE			m^2	164	208	220	207	282	297	266	252	185	145	134	133	

MINIMUM AREA REQUIRED FOR ZERO STORAGE: 298 m^2

CELLS

	Please enter data in blue cells
XX	Enter available Land Application Area
XX	Data in yellow cells is calculated by the spreadsheet, DO NOT ALTER THESE CELLS

NOTES

[1] This value should be the largest of the following: land application area required based on the most limiting nutrient balance or minimum area required for zero storage

[2] Values selected are suitable for grass in WA

WA Site & Soil Evaluation
Irrigation area sizing

Please read the attached notes before using this spreadsheet

Water Balance for Zero Storage

Site Address:	**Crown Land ID 3115653 & 3115647, Chichester (South Location, Long-term Camp, Drip/Spray Irrigation)**		
Date:	Tuesday, 11 February 2025	**Assessor:**	[redacted]

INPUT DATA

Design Wastewater Flow	Q	31,500	L/day	Based on maximum potential occupancy and derived from the Supplement to Regulation 29 and Schedule 9 - Wastewater system loading rates
Design Irrigation Rate	DIR	3.5	mm/day	Based on soil texture class/permeability and derived from Table M1 of AS/NZS 1547:2012
Nominated Land Application Area	L	892	m^2	[1]
Crop Factor	C	0.8-1.0	unitless	Estimates evapotranspiration as a fraction of pan evaporation; varies with season and crop type[2]
Rainfall Runoff Factor	RF	1.0	untiless	Proportion of rainfall that remains onsite and infiltrates, allowing for any runoff
Mean Monthly Rainfall Data		Millstream		BoM Station and number
Mean Monthly Pan Evaporation Data		Tom Price		BoM Station and number or data from the Evaporation Data for Western Australia Report (https://researchlibrary.agric.wa.gov.au/cgi/viewcontent.cgi?article=1058&context=rmtr

Parameter	Symbol	Formula	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days in month	D		days	31	28	31	30	31	30	31	31	30	31	30	31	**365**
Rainfall	R		mm/month	77.1	88.2	66.6	24.3	28.7	29.5	11.9	7.4	2.3	2.8	7.1	29.1	**375**
Evaporation	E		mm/month	275	208	207	171	123	110	115	123	178	241	265	299	**2315**
Crop Factor	C		unitless	1.00	1.00	0.90	0.90	0.80	0.80	0.80	0.80	0.90	1.00	1.00	1.00	
OUTPUTS																
Evapotranspiration	ET	ExC	mm/month	275	208	186	154	98	88	92	98	160	241	265	299	**2165.2**
Percolation	B	DIRxD	mm/month	108.5	98	108.5	105.0	108.5	105.0	108.5	108.5	105.0	108.5	105.0	108.5	**1277.5**
Outputs		ET+B	mm/month	383.5	306	294.8	258.9	206.9	193.0	200.5	206.9	265.2	349.5	370.0	407.5	**3442.7**
INPUTS																
Retained Rainfall	RR	RxRF	mm/month	77.1	88.2	66.6	24.3	28.7	29.5	11.9	7.4	2.3	2.8	7.1	29.1	**375**
Applied Effluent	W	(QxD)/L	mm/month	1094.7	988.8	1094.7	1059.4	1094.7	1059.4	1094.7	1094.7	1059.4	1094.7	1059.4	1094.7	**12889.6**
Inputs		RR+W	mm/month	1171.8	1077.0	1161.3	1083.7	1123.4	1088.9	1106.6	1102.1	1061.7	1097.5	1066.5	1123.8	**13264.6**
STORAGE CALCULATION																
Storage remaining from previous month			mm/month	0.0	788.3	1559.3	2425.9	3250.7	4167.2	5063.1	5969.2	6864.5	7661.0	8409.0	9105.5	
Storage for the month	S	(RR+W)-(ET+B)	mm/month	788.3	771.0	866.5	824.8	916.5	895.9	906.1	895.2	796.5	748.0	696.5	716.3	
Cumulative Storage	M		mm	788.3	1559.3	2425.9	3250.7	4167.2	5063.1	5969.2	6864.5	7661.0	8409.0	9105.5	9821.9	
Maximum Storage for Nominated Area	N		mm	**9821.87**												
	V	NxL	L	**8761112**												
LAND AREA REQUIRED FOR ZERO STORAGE			m^2	3187	4050	4279	4028	5480	5780	5178	4895	3595	2817	2604	2581	

MINIMUM AREA REQUIRED FOR ZERO STORAGE: **5780** m^2

CELLS

	Please enter data in blue cells
XX	Enter available Land Application Area
XX	Data in yellow cells is calculated by the spreadsheet, DO NOT ALTER THESE CELLS

NOTES

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[2] Values selected are suitable for grass in WA

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Irrigation area sizing

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Water Balance for Zero Storage

Site Address:	**Crown Land ID 3115653 & 3115647, Chichester (North Location, Temporary Camp, Drip/Spray Irrigation)**		
Date:	Tuesday, 11 February 2025	**Assessor:**	[redacted]

INPUT DATA

Design Wastewater Flow	Q	1,620	L/day	Based on maximum potential occupancy and derived from the Supplement to Regulation 29 and Schedule 9 - Wastewater system loading rates
Design Irrigation Rate	DIR	4.0	mm/day	Based on soil texture class/permeability and derived from Table M1 of AS/NZS 1547:2012
Nominated Land Application Area	L	892	m^2	[1]
Crop Factor	C	0.8-1.0	unitless	Estimates evapotranspiration as a fraction of pan evaporation; varies with season and crop type[2]
Rainfall Runoff Factor	RF	1.0	untiless	Proportion of rainfall that remains onsite and infiltrates, allowing for any runoff
Mean Monthly Rainfall Data		Millstream		BoM Station and number
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Parameter	Symbol	Formula	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days in month	D		days	31	28	31	30	31	30	31	31	30	31	30	31	**365**
Rainfall	R		mm/month	77.1	88.2	66.6	24.3	28.7	29.5	11.9	7.4	2.3	2.8	7.1	29.1	**375**
Evaporation	E		mm/month	275	208	207	171	123	110	115	123	178	241	265	299	**2315**
Crop Factor	C		unitless	1.00	1.00	0.90	0.90	0.80	0.80	0.80	0.80	0.90	1.00	1.00	1.00	
OUTPUTS																
Evapotranspiration	ET	ExC	mm/month	275	208	186	154	98	88	92	98	160	241	265	299	**2165.2**
Percolation	B	DIRxD	mm/month	124.0	112	124.0	120.0	124.0	120.0	124.0	124.0	120.0	124.0	120.0	124.0	**1460.0**
Outputs		ET+B	mm/month	399.0	320	310.3	273.9	222.4	208.0	216.0	222.4	280.2	365.0	385.0	423.0	**3625.2**
INPUTS																
Retained Rainfall	RR	RxRF	mm/month	77.1	88.2	66.6	24.3	28.7	29.5	11.9	7.4	2.3	2.8	7.1	29.1	**375**
Applied Effluent	W	(QxD)/L	mm/month	56.3	50.9	56.3	54.5	56.3	54.5	56.3	56.3	54.5	56.3	54.5	56.3	**662.9**
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STORAGE CALCULATION																
Storage remaining from previous month			mm/month	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Storage for the month	S	(RR+W)-(ET+B)	mm/month	-265.6	-180.9	-187.4	-195.1	-137.4	-124.0	-147.8	-158.7	-223.4	-305.9	-323.4	-337.6	
Cumulative Storage	M		mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum Storage for Nominated Area	N		mm	0.00												
	V	NxL	L	0												
LAND AREA REQUIRED FOR ZERO STORAGE			m^2	156	196	206	195	259	272	246	234	175	139	129	127	

MINIMUM AREA REQUIRED FOR ZERO STORAGE: 273 m^2

CELLS

	Please enter data in blue cells
XX	Enter available Land Application Area
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NOTES

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Mean Monthly Pan Evaporation Data		Tom Price		BoM Station and number or data from the Evaporation Data for Western Australia Report (https://researchlibrary.agric.wa.gov.au/cgi/viewcontent.cgi?article=1058&context=rmtr

Parameter	Symbol	Formula	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days in month	D		days	31	28	31	30	31	30	31	31	30	31	30	31	**365**
Rainfall	R		mm/month	77.1	88.2	66.6	24.3	28.7	29.5	11.9	7.4	2.3	2.8	7.1	29.1	**375**
Evaporation	E		mm/month	275	208	207	171	123	110	115	123	178	241	265	299	**2315**
Crop Factor	C		unitless	1.00	1.00	0.90	0.90	0.80	0.80	0.80	0.80	0.90	1.00	1.00	1.00	
OUTPUTS																
Evapotranspiration	ET	ExC	mm/month	275	208	186	154	98	88	92	98	160	241	265	299	**2165.2**
Percolation	B	DIRxD	mm/month	124.0	112	124.0	120.0	124.0	120.0	124.0	124.0	120.0	124.0	120.0	124.0	**1460.0**
Outputs		ET+B	mm/month	399.0	320	310.3	273.9	222.4	208.0	216.0	222.4	280.2	365.0	385.0	423.0	**3625.2**
INPUTS																
Retained Rainfall	RR	RxRF	mm/month	77.1	88.2	66.6	24.3	28.7	29.5	11.9	7.4	2.3	2.8	7.1	29.1	**375**
Applied Effluent	W	(QxD)/L	mm/month	1094.7	988.8	1094.7	1059.4	1094.7	1059.4	1094.7	1094.7	1059.4	1094.7	1059.4	1094.7	**12889.6**
Inputs		RR+W	mm/month	1171.8	1077.0	1161.3	1083.7	1123.4	1088.9	1106.6	1102.1	1061.7	1097.5	1066.5	1123.8	**13264.6**
STORAGE CALCULATION																
Storage remaining from previous month			mm/month	0.0	772.8	1529.8	2380.9	3190.7	4091.7	4972.6	5863.2	6743.0	7524.5	8257.0	8938.5	
Storage for the month	S	(RR+W)-(ET+B)	mm/month	772.8	757.0	851.0	809.8	901.0	880.9	890.6	879.7	781.5	732.5	681.5	700.8	
Cumulative Storage	M		mm	772.8	1529.8	2380.9	3190.7	4091.7	4972.6	5863.2	6743.0	7524.5	8257.0	8938.5	9639.4	
Maximum Storage for Nominated Area	N		mm	9639.37												
	V	NxL	L	8598322												
LAND AREA REQUIRED FOR ZERO STORAGE			m^2	3034	3805	4007	3786	5041	5294	4784	4542	3401	2696	2501	2479	

MINIMUM AREA REQUIRED FOR ZERO STORAGE: 5295 m^2

CELLS

	Please enter data in blue cells
XX	Enter available Land Application Area
XX	Data in yellow cells is calculated by the spreadsheet, DO NOT ALTER THESE CELLS

NOTES

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[2] Values selected are suitable for grass in WA

Understanding your Report

1. EXPECTATIONS OF THE REPORT

The following sections have been prepared to clarify what is and is not provided in your report. It is intended to inform you of what your realistic expectations of this report should be and how to manage your risks associated with the conditions on site.

Geotechnical engineering and environmental science are less exact than other engineering and scientific disciplines. We include this information to help you understand where our responsibilities begin and end. You should read and understand this information. Please contact us if you do not understand the report or this explanation. We have extensive experience in a wide variety of projects and we can help you to manage your risk.

2. THIS REPORT RELATES TO PROJECT-SPECIFIC CONDITIONS

This report was developed for a unique set of project-specific conditions to meet the needs of the nominated client. It took into account the following:

- the project objectives as we understood them and as described in this report;
- the specific site mentioned in this report; and
- the current and proposed development at the site.

It should not be used for any purpose other than that indicated in the report. You should not rely on this report if any of the following conditions apply:

- the report was not written for you;
- the report was not written for the site specific to your development;
- the report was not written for your project (including a development at the correct site but other than that listed in the report); or
- the report was written before significant changes occurred at the site (such as a development or a change in ground conditions).

You should always inform us of changes in the proposed project (including minor changes) and request an assessment of their impact.

Where we are not informed of developments relevant to your report, we cannot be held responsible or liable for problems that may arise as a consequence.

Where design is to be carried out by others using information provided by us, we recommend that we be involved in the design process by being engaged for consultation with other members of the project team. Furthermore, we recommend that we be able to review work produced by other members of the project team that relies on information provided in our report.

3. DATA PROVIDED BY THIRD PARTIES

Where data is provided by third parties, it will be identified as such in our reports. We necessarily rely on the completeness and accuracy of data provided by third parties in order to draw conclusions presented in our reports. We are not responsible for omissions, incomplete or inaccurate data associated with third party data, including where we have been requested to provide advice in relation to field investigation data provided by third parties.

4. SOIL LOGS

Our reports often include logs of intrusive and non-intrusive investigation techniques prepared by Galt. These logs are based on our interpretation of field data and laboratory results. The logs should only be read in conjunction with the report they were issued with and should not be re-drawn for inclusion in other documents not prepared by us.

5. THIRD PARTY RELIANCE

We have prepared this report for use by the client. This report must be regarded as confidential to the client and the client's professional advisors. We do not accept any responsibility for contents of this document from any party other than the nominated client. We take no responsibility for any damages suffered by a third party because of any decisions or actions they may make based on this report. Any reliance or decisions made by a third party based on this report are the responsibility of the third party and not of us.

6. CHANGE IN SUBSURFACE CONDITIONS

The recommendations in this report are based on the ground conditions that existed at the time when the study was undertaken. Changes in ground conditions can occur in numerous ways including anthropogenic events (such as construction or contaminating activities on or adjacent to the site) or natural events (such as floods, groundwater fluctuations or earthquakes). We should be consulted prior to use of this report so that we can comment on its reliability. It is important to note that where ground conditions have changed, additional sampling, testing or analysis may be required to fully assess the changed conditions.

7. SUBSURFACE CONDITIONS DURING CONSTRUCTION

Practical constraints mean that we cannot know every minute detail about the subsurface conditions at a particular site. We use professional judgement to form an opinion about the subsurface conditions at the site. Some variation to our evaluated conditions is likely and significant variation is possible. Accordingly, our report should not be considered as final as it is developed from professional judgement and opinion.

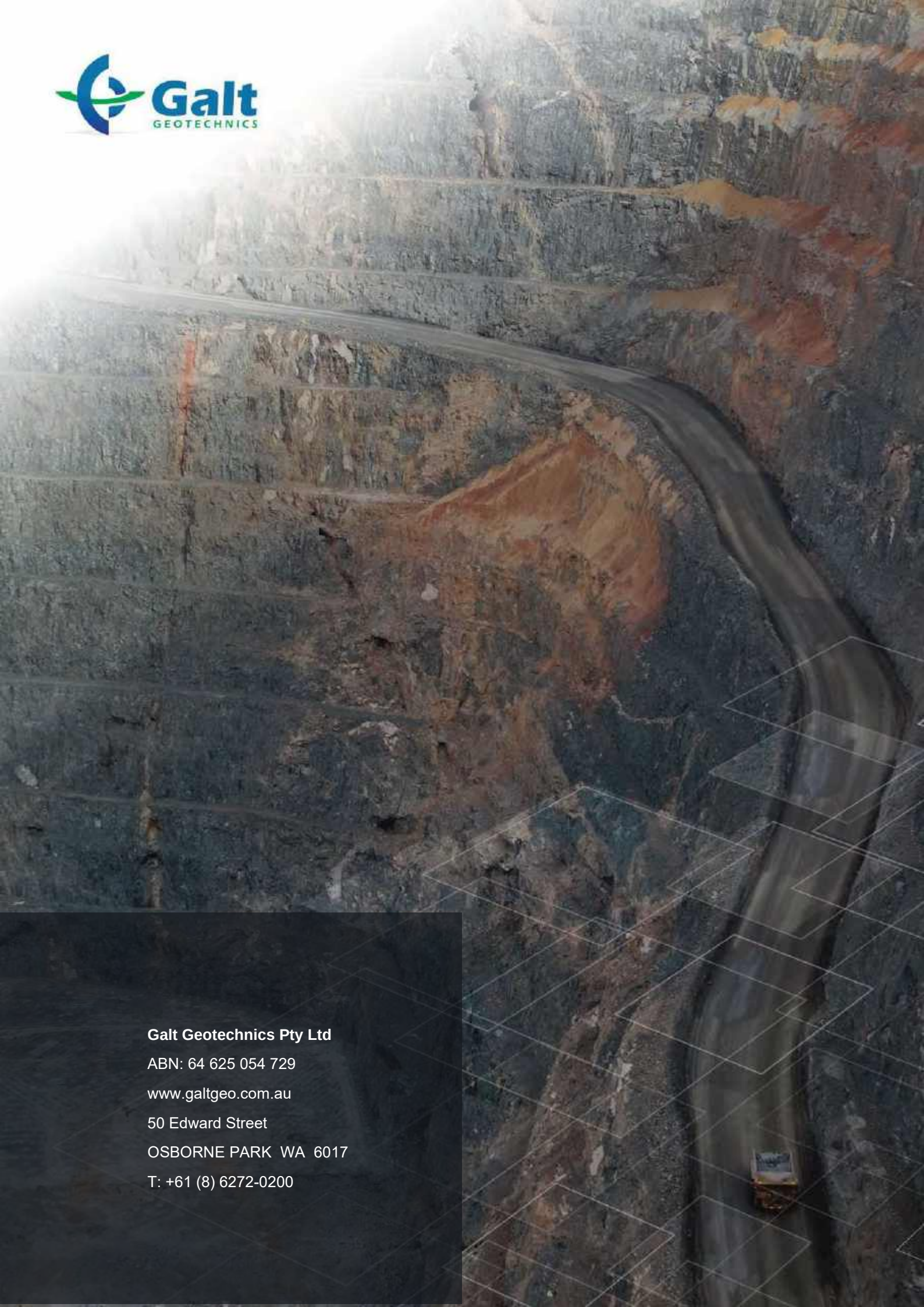
The most effective means of dealing with unanticipated ground conditions is to engage us for construction support. We can only finalise our recommendations by observing actual subsurface conditions encountered during construction. We cannot accept liability for a report's recommendations if we cannot observe construction.

8. ENVIRONMENTAL AND GEOTECHNICAL ISSUES

Unless specifically mentioned otherwise in our report, environmental considerations are not addressed in geotechnical reports. Similarly, geotechnical issues are not addressed in environmental reports. The investigation techniques used for geotechnical investigations can differ from those used for environmental investigations. It is the client's responsibility to satisfy themselves that geotechnical and environmental considerations have been taken into account for the site.

Geotechnical advice presented in a Galt Environmental report has been provided by Galt Geotechnics under a sub-contract agreement. Similarly, environmental advice presented in a Galt Geotechnics report has been provided by Galt Environmental under a sub-contract agreement.

Unless specifically noted otherwise, no parties shall draw any inferences about the applicability of the Western Australian state government landfill levy from the contents of this document.



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Appendix 6 Authority from Yiyangu Pty Ltd to apply for a Works Approval or License

Date 07 May 2025

Department of Water and Environmental Regulation
Locked Bag 10
Joondalup DC WA 6919
Via email: info@dwer.wa.gov.au

To whom it may concern

Authority to Apply for Works Approval – Jinbi Solar Facility

This letter is being provided in support of an application for a Works Approval under s.54(1)(a) of the Environmental Protection Act 1986 (WA) (EP Act), being submitted by Yindjibarndi Energy Corporation Pty Ltd (Yindjibarndi Energy) to install a Wastewater Treatment Plant on a portion of Unallocated Crown Land comprising PIN 1017635. The area subject to the application is within the approved clearing footprint for the Jinbi Solar Facility.

The Jinbi Solar facility comprises a series of solar arrays up to 150 Megawatts (MW), internal access roads, transmission lines and associated hardware and infrastructure. As a component of the Jinbi Project's construction phase, and to treat wastewater generated by the proposed construction camp, Yindjibarndi Energy propose to install a temporary Wastewater Treatment Plant with an anticipated design capacity of 81.6 m^3 per day.

The proposed location for the Jinbi Solar Facility lies within an area subject to a License to Occupy Crown Land issued to Yiyangu Pty Ltd under Section 91 of the *Land Administration Act 1997*. Development and Environmental Approvals are listed as a licensed work in Annexure B of this License.

As a duly authorised representative of Yiyangu Pty Ltd, I hereby authorise Yindjibarndi Energy Corporation Pty Ltd (Yindjibarndi Energy) to access portions of Unallocated Crown Land comprising PINs 1017635 for the purpose herein described.

Yours sincerely

Signed by:
[redacted]
[redacted]
Director