

CHICHESTER SOLAR FARM EXPANSION

NATIVE VEGETATION CLEARING PERMIT APPLICATION
SUPPORTING INFORMATION

28 June 2024

PREPARED FOR APA PILBARA HOLDINGS PTY LTD

PREPARED BY PRESTON CONSULTING PTY LTD

Document prepared for:

APA PILBARA HOLDINGS PTY LTD

Contact Person: Jake Cutler – Planning and Environment Manager
Email: Jake.Cutler@apa.com.au
Phone: 0439 892 752
Street and Postal Address: Level 12, 141 St Georges Terrace, Perth Western Australia, 6000

Document developed by:

PRESTON CONSULTING PTY LTD

Contact Person: Gavin Edwards - Director
Email: gedwards@prestonconsulting.com.au
Website: www.prestonconsulting.com.au
Phone: 0488 737 273
Street Address: Level 1, 226 Adelaide Terrace, Perth, Western Australia, 6000
Postal Address: PO Box 3093, East Perth, Western Australia, 6892

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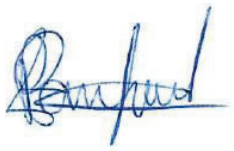
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ACKNOWLEDGEMENT OF COUNTRY

APA Pilbara Holdings Pty Ltd and Preston Consulting Pty Ltd acknowledge the Traditional Owners and Custodians of the lands on which they works; the Whadjuk people of the Noongar Nation, and on which this Proposal is situated; the Nyiyaparli people. Preston Consulting pays its respects to Elders past, present and emerging, and to all Aboriginal and Torres Strait Islander peoples, and recognises their continuing connection to land, sea, culture and community.

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Checked	Gavin Edwards Director Preston Consulting Pty Ltd		28/06/2024
Authorisation	Jake Cutler Planning and Environment Manager APA Pilbara Holdings Pty Ltd		28/06/2024

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1 INTRODUCTION

1.1 PROJECT BACKGROUND

APA Pilbara Holdings Pty Ltd (APA) owns and operates the Chichester Solar Farm (CSF), a 60 megawatt (MW) solar farm supplying power to Fortescue Metal Group's (FMG) iron ore mining operations in the Chichester Ranges located in the Pilbara region of Western Australia (WA). In addition to the CSF APA also owns and operates a 220 kilovolt (kV) overhead transmission line (OHL) running between FMG's Christmas Creek and Cloudbreak Mines and the Roy Hill Iron Ore (Roy Hill) Mine. The CSF and OHL have been fully constructed and commissioned in 2021. The CSF is integrated into APA's existing electrical infrastructure in the East Pilbara which includes the Newman Power Station and approximately 120 kilometres (km) of 220 kV OHL that supplies power to the Roy Hill mine.

APA is planning to expand the CSF (Project) by 136.6 hectares (ha) to increase its nominal operational capacity as well as installation of new Battery Energy Storage Systems (BESS) to capture and time shift curtailed excess solar generation. Up to 105.2 ha of clearing (31.4 ha is historically cleared), within Miscellaneous Licence L46/138 held by a wholly owned subsidiary of APA, is required to facilitate the Project.

1.2 PURPOSE

The purpose of this Native Vegetation Clearing Permit (NVCP) application is to seek permission to clear up to 105.2 ha of native vegetation within the Permit Area (Figure 1; Attachment 1).



Legend

Permit Area

Roads (LGATE-195)

Imagery: Google Satellite

CHP_0498_001

GDA 2020 / MGA Zone 50

0 0.5 1 km

1:30,000 (A4)

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Figure 1: Permit Area

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2 PERMIT AREA

A Purpose Permit is being sought to allow a total clearing of up to 105.2 ha within a 137 ha the Permit Area shown in Figure 1.

2.1 BOUNDARY

Clearing is to be conducted entirely within the boundaries of the Permit Area shown in Figure 1. Key environmental values were identified in the baseline studies as outlined in Section 4.

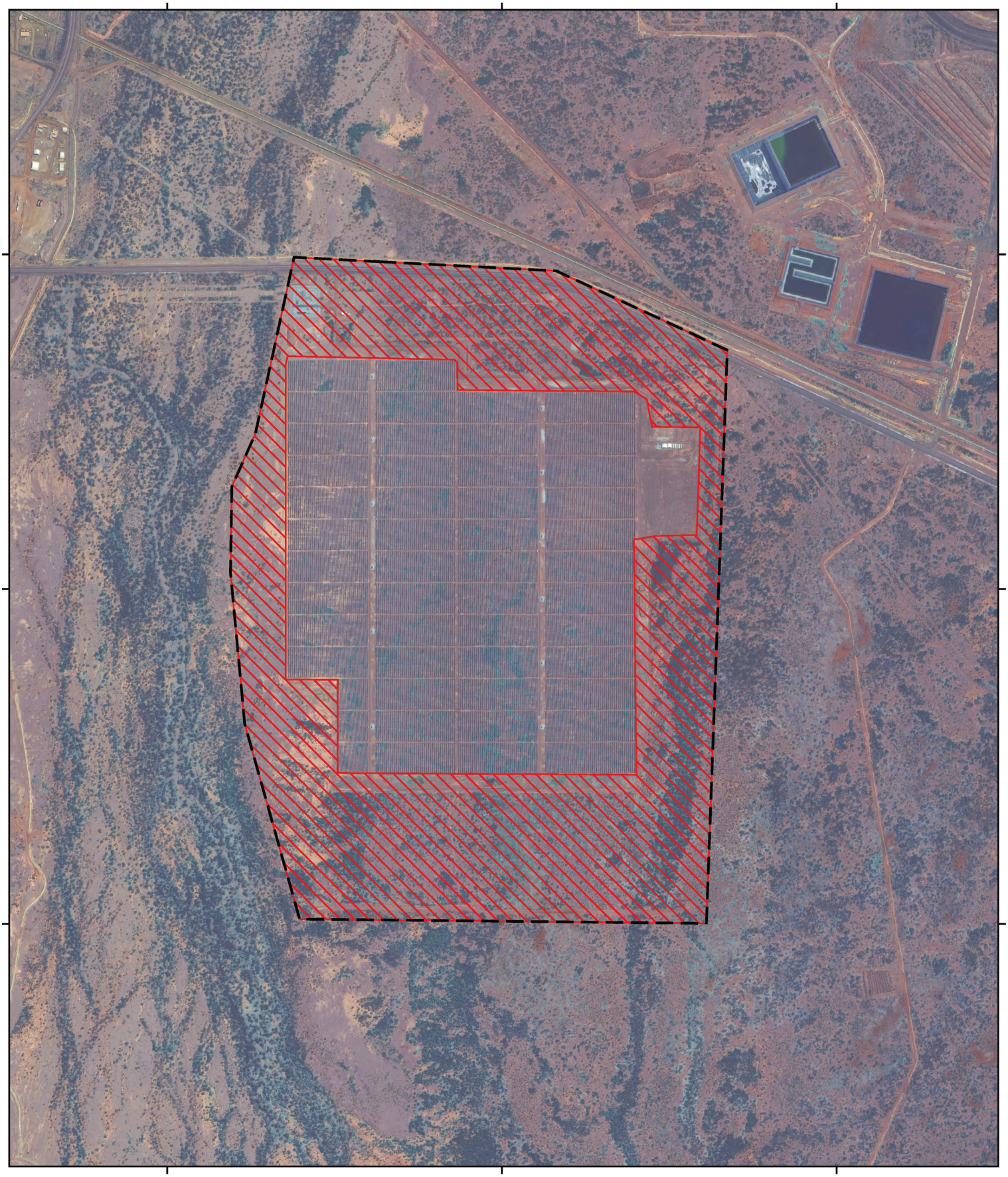
2.2 TENURE AND LAND ACCESS

The Permit Area is situated entirely within Miscellaneous Licences (L) overlies L46/138, which is held by Alinta Energy (Chichester) Pty Ltd, a wholly owned subsidiary of APA (Figure 2). Proof of ownership has been provided as Attachment 2.

2.3 NATIVE TITLE

All vegetation disturbance will occur within the Determined Claim Area WAD 6280/1998 of the Nyiyaparli People. APA holds a Native Title Agreement with the Nyiyaparli People that provides consent for this Project. APA has undertaken consultation with the Nyiyaparli People regarding the Project since 2022 and is committed to continue consultation during remaining development activities, construction, and operation.

Consultation has been ongoing and has identified a number of constraints, including Heritage sites and drainage features.



Legend

Chichester Solar Expansion Permit Area

L 46/138 (DMIRS-003)

Imagery: Google Satellite

GDA 2020 / MGA Zone 50

0 0.25 0.5 km

1:15,000 (A4)

CHP_0498_002

Figure 2: Tenure underlying the Permit Area

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3 PROPOSED ACTIVITIES

Clearing is required to commence construction and operations of the Project. This will involve clearing to for the following:

- Temporary construction areas;
- Additional site facilities;
- Additional solar array areas and new BESS installations;
- Cabling;
- Access tracks;
- Perimeter fencing;
- Firebreaks; and
- Vegetation and topsoil stockpiles;

4 ENVIRONMENTAL CHARACTERISTICS

Environmental characteristics of the Permit Area relevant to this NVCP application are detailed in the following sections.

4.1 SURVEY DETAILS

Biota Environmental Sciences Pty Ltd (Biota) conducted a desktop assessment and detailed flora and fauna survey across the Survey Area shown in Figure 3. The detailed flora and fauna Survey Area encompasses the Permit Area (Figure 1).

The survey was conducted in accordance with the guidance documents listed below:

- Technical Guidance - Flora and vegetation surveys for environmental impact assessment (Environmental Protection Authority (EPA), 2016);
- Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment (EPA, 2020); and
- A guide to the assessment of applications to clear native vegetation under Part V Division 2 of the EP Act (Department of Environment Regulation (DER), 2014).

The desktop assessment was completed prior to the field surveys that were conducted in May 2023. Desktop searches of several biological databases were undertaken to identify and prepare lists of significant flora and fauna that may occur within the Permit Area. Desktop searches were conducted within a 40 km radius of the Permit Area to provide a regional context for flora, vegetation and fauna recorded during the field surveys.

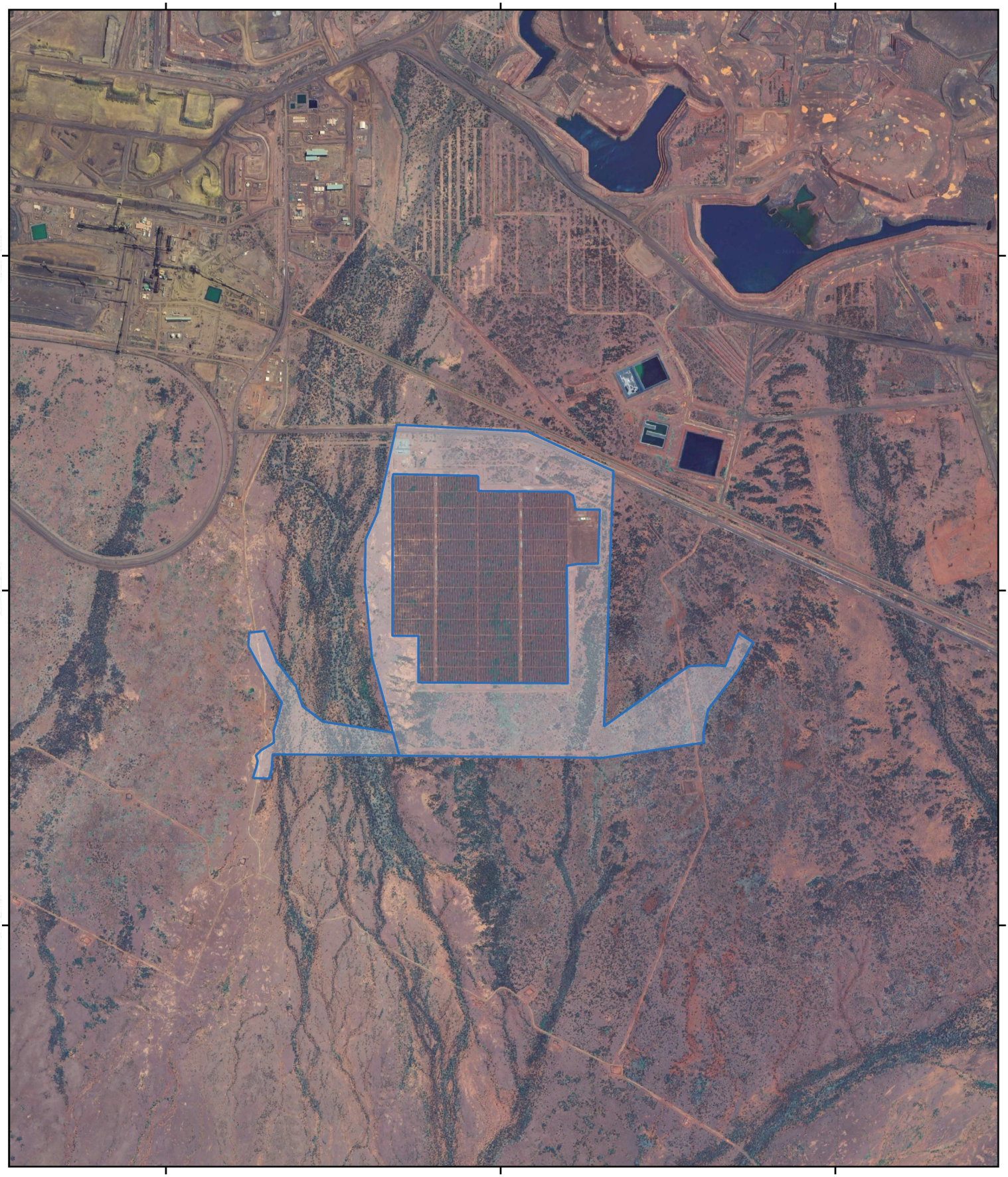
To identify communities or species of significance potentially occurring in the Survey Area, the results of the database searches and previous surveys in the locality were compiled and then assessed in consideration of the known habitat preferences for each community or species. The likelihood that significant species or communities would occur in the Survey Area was assessed using a set of rankings and criteria (Biota, 2023).

Field methods for the flora and vegetation survey included:

- Surveying of quadrats and relevés;
- Targeted flora searches;
- Vegetation type and condition mapping; and
- Threatened Ecological Community (TEC) / Priority Ecological Community (PEC) assessment.

Field methods for the fauna survey included:

- Habitat assessment and mapping via foot and vehicles traverses;
- Motion cameras;
- Ultrasonic sound recorders (to target significant bat species, particularly the Pilbara Leaf-nosed Bat and Ghost Bat); and
- Acoustic Recording Units (to target Night Parrot).



Legend

Biota Flora Survey Area

Imagery: Google Satellite

CHP_0498_009

GDA 2020 / MGA Zone 50

0 0.5 1 km

1:30,000 (A4)

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Figure 3: Survey Area

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4.2 BIOGEOGRAPHIC REGIONS

The Permit Area lies entirely within the Fortescue Plains (PIL02) Interim Biogeographic Regionalisation of Australia (IBRA) subregion of the Pilbara (PIL) bioregion (Figure 4). Subregions have been described in the *Biodiversity Audit of Western Australia's 53 Biogeographical Subregions* (Kendrick & Stanley 2001). The Fortescue Plains subregion covers approximately 11% (2,041,914 ha) of the Pilbara region and is described as:

> *"Alluvial plains and river frontage. Extensive salt marsh, mulga-bunch grass, and short grass communities on alluvial plains in the east. Deeply incised gorge systems in the western (lower) part of the drainage. River gum (Eucalyptus camaldulensis) woodlands fringe the drainage lines. Northern limit of Mulga (Acacia aneura). An extensive calcrete aquifer (originating within a palaeo-drainage valley) feeds numerous permanent springs in the central Fortescue, supporting large permanent wetlands with extensive stands of river gum and cadjeput (Melaleuca argentea) woodlands. Climatic conditions are semi desert tropical, with average rainfall of 300 mm, falling mainly in summer cyclonic events. Drainage occurs to the north-west".* (Kendrick, 2003).

4.3 LAND SYSTEMS

The Department of Primary Industries and Regional Development (DPIRD) (van Vreeswyk *et al.,* 2004) has defined the land systems of the region from landforms, soils, vegetation and aerial photography, providing the largest-scale interpretation of vegetation units for the Permit Area. The Permit Area is entirely within the Turee Land System and represents less than 1% of the 62,032.4 ha extent of this land system in the Pilbara Bioregion (Figure 5). This land system is characterised by stony alluvial plains with gilgaied and non-gilgaied surfaces supporting tussock grasslands and grassy shrublands of mulga and snakewood.

4.4 PRE-EUROPEAN VEGETATION

The Permit Area occurs in a single vegetation system association defined by Beard (1975) within the Fortescue Valley physiographic region (Figure 6), described as:

- Fortescue Valley 29 - Mulga (*Acacia Anoura*) low woodland, open woodland or sparse woodland and associated species.

From 2007 to 2018, the Department of Biodiversity, Conservation and Attractions (DBCA) and the Department of Water and Environmental Regulation (DWER) published regular updates regarding the pre-European extent and current year's extent of each of Beard's vegetation units in WA. Based on the most recent data from 2018 (Government of WA, 2019), the extent of the Fortescue Valley vegetation system association in the Permit Area remained at above 99% of its pre-European extent in the Pilbara bioregion.

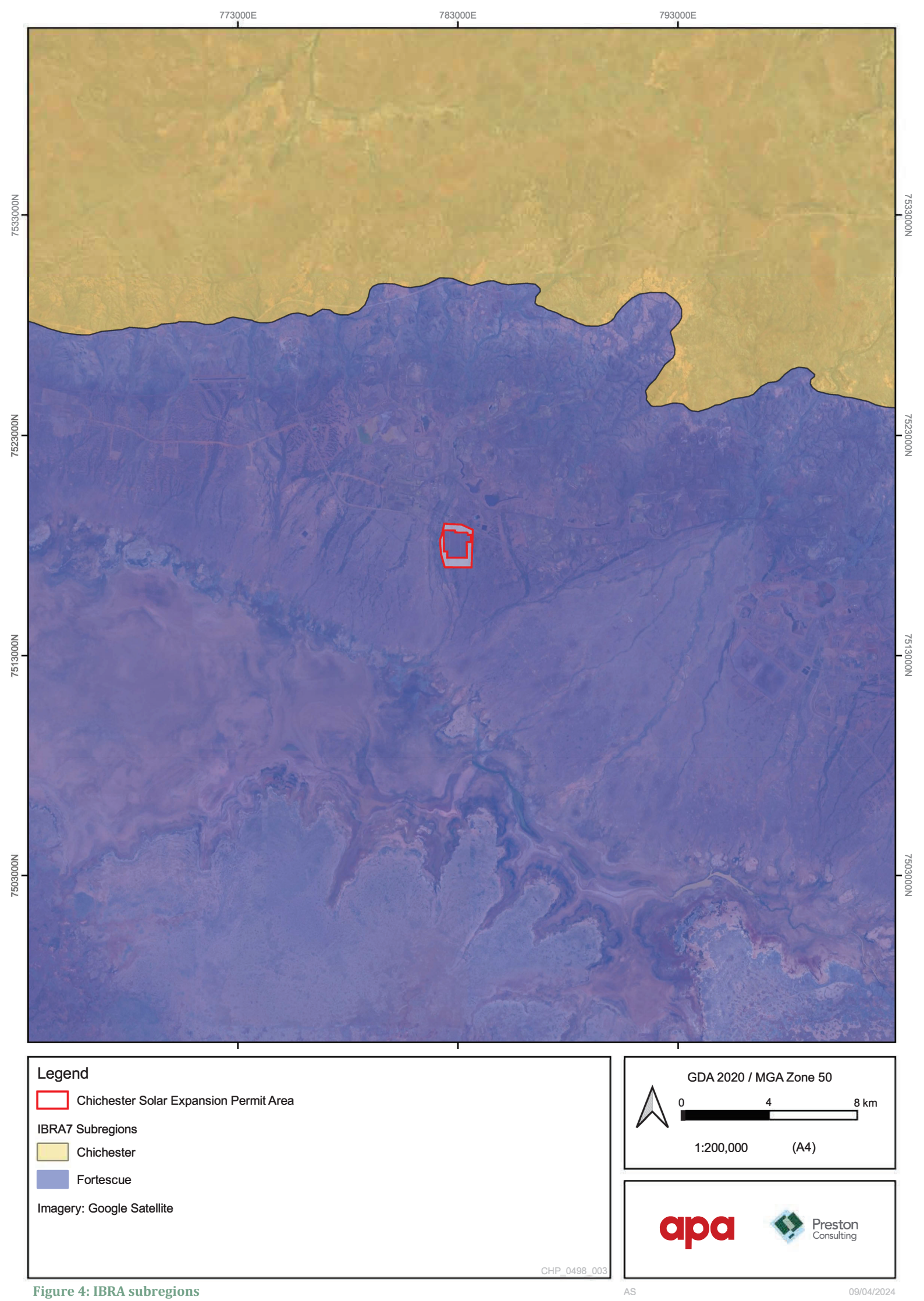


Figure 4: IBRA subregions

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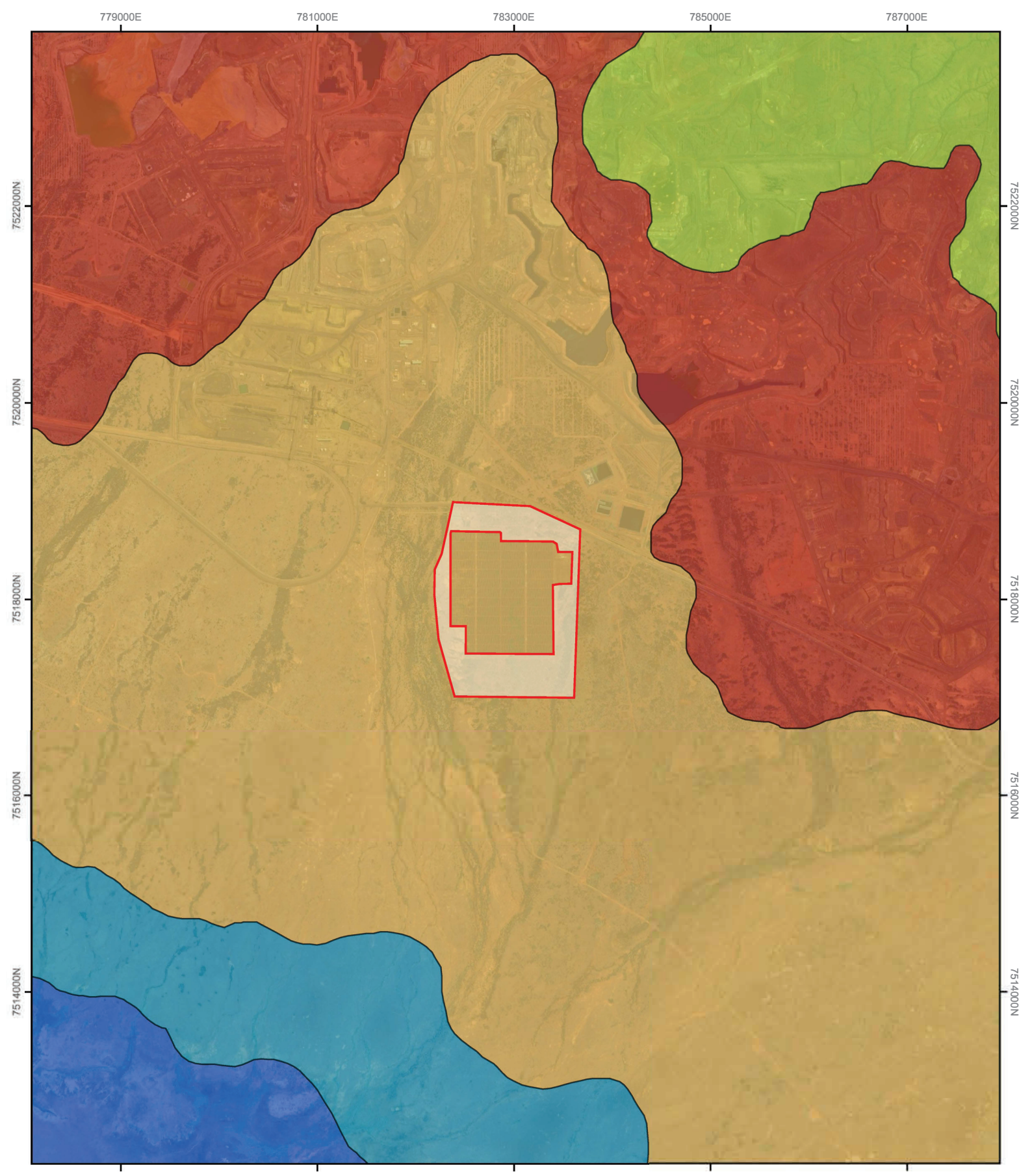


Figure 5: Land systems

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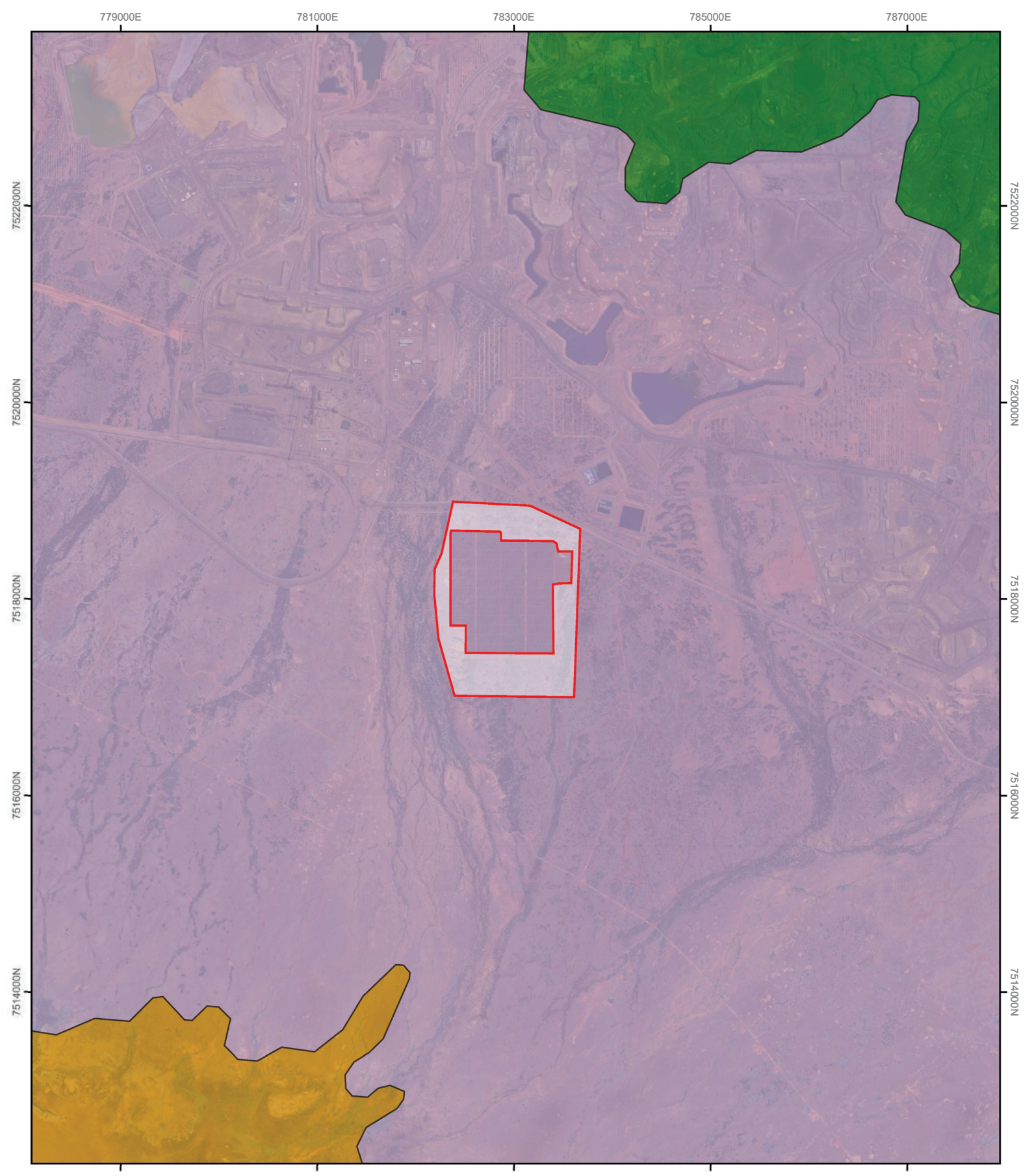


Figure 6: Pre-European vegetation

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4.5 FLORA AND VEGETATION

A total of 140 native flora species from 30 families and 76 genera were recorded during the field survey (Biota, 2023).

4.5.1 LISTED FLORA

Initial desktop studies conducted by Biota identified 30 listed flora species previously recorded within a 40 km radius of the Survey Area. No Threatened flora species listed under the EPBC Act or BC Act were identified in the desktop search. There are two Priority species which were considered likely to occur within the Survey Area, these include:

- *Rhagodia* sp. Hamersley (M. Trudgen 17794) – Priority 3; and
- *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) – Priority 3.

The desktop assessment determined that five other Priority species may occur within the Survey Area:

- *Calotis squamigera* – Priority 1;
- *Eragrostis crateriformis* – Priority 3;
- *Rostellularia adscendens* var. *latifolia* – Priority 3;
- *Swainsona thompsoniana* – Priority 3; and
- *Eremophila youngii* subsp. *lepidota* – Priority 4.

4.5.2 RECORDED SIGNIFICANT FLORA

No Threatened or Priority flora were recorded during the field surveys.

Prospective flora habitat was searched for the species identified as potentially occurring within the Survey Area (particularly *Rhagodia* sp. Hamersley (M. Trudgen 17794) and *Themeda* sp. Hamersley Station (M.E. Trudgen 11431)). Where potentially suitable habitat was present, none of the species were recorded, and in some cases suitable habitat was found to be very limited or absent from the Survey Area. The final likelihood of occurrence assessment determined that no species were considered likely or possible to occur (Biota, 2023).

4.5.3 INTRODUCED FLORA SPECIES

Nine weed species were recorded from the Survey Area, none of which are listed as Weeds of National Significance (WoNS) or are declared pests under the *Biosecurity and Agriculture Management Act 2007* (BAM Act) (DPIRD, 2023):

- **Aerva javanica* (Kapok Bush);
- **Bidens bipinnata* (Bipinnate Beggartick);
- **Cenchrus ciliaris* (Buffel Grass);
- **Cenchrus setiger* (Birdwood Grass);
- **Citrullus colocynthis* (Colocynth);
- **Echinochloa colona* (Awnless Barnyard Grass);
- **Malvastrum americanum* (Spiked Malvastrum);
- **Tribulus terrestris* (Caltrop); and
- **Vachellia farnesiana* (Mimosa Bush).

4.5.4 Vegetation Type

Four vegetation units were mapped across the Permit Area, and cleared areas were mapped separately (Figure 7). Vegetation types and their relative extents across the Permit Area are presented in Table 1.

Table 1: Vegetation types recorded within the Permit Area

Code	Mapping unit	Extent in Permit Area	
		Area (ha)	Proportion of Permit Area (%)
D1	Low open forest of *Acacia aptaneura* over mixed *Acacia* spp. and **Malvastrum americanum* shrubs over mixed tussock grassland dominated by **Cenchrus* spp. and *Aristida* spp.	19.2	14.1
F1	Low open woodland of *Acacia aptaneura* over mixed *Acacia* spp., *Senna* spp. and *Eremophila cuneifolia* shrubs over mixed tussock grasses dominated by *Aristida* spp.	60.4	44.2
F2	Scattered low trees of *Acacia aptaneura* over scattered shrubs of mixed *Acacia* spp. over scattered tussock grasses dominated by *Aristida contorta*, *Enneapogon polyphyllus* and *Eragrostis xerophila*, with scattered herbs of *Sclerolaena* spp.	21.1	15.4
F3	Low open woodland of *Acacia xiphophylla* over scattered shrubs of *Senna artemisioides* subsp. *oligophylla* and *Eremophila cuneifolia* over scattered tussock grasses of *Enteropogon ramosus* and *Aristida contorta*, with scattered herbs of *Sclerolaena cornishiana*.	4.5	3.3
C1	Cleared	31.4	23
	Total	**136.6**	**100**

4.5.5 Vegetation Condition

The condition of vegetation was mapped across the Permit Area based on the appropriate condition scale for the Eremaean Botanical Province (Keighery, 1994). 31.4 ha (23%) of the Permit Area was mapped as cleared and assigned a condition rating of 'Completely Degraded'. This included roads and vehicle access tracks. The condition of the remaining vegetation in the Permit Area ranged from 'Very Good' to 'Good to Poor', with most areas ranked as 'Very Good' (57.2%) or 'Good' (18.8%) condition (Figure 8; Table 2).

The main disturbance factors in the Permit Area comprised weed invasion, and cattle grazing and trampling. Aggressive weed species, often in high densities, occurred over the majority of the Permit Area. The most poorly rated areas ('Good to Poor' condition) were associated with drainage lines and patches of remnant vegetation isolated by previously modified areas. These areas typically supported high densities of weeds, which were often a dominant feature of the vegetation. Although some areas rated as 'Very Good' did contain weeds, these were generally in low densities and were not impacting vegetation structure. These areas were typically located further from the existing footprint of the solar farm.

Table 2: Vegetation condition

Condition Rating	Area (ha)	Proportion of Permit Area (%)
Excellent	-	-
Very Good	78.1	57.2
Good	25.6	18.8
Good to Poor	1.5	1
Completely Degraded (cleared)	31.4	23
Total	**136.6**	**100**

4.5.6 Threatened and Priority Ecological Communities

No TECs or PECs were recorded or are known to occur within the Permit Area (Biota, 2023).

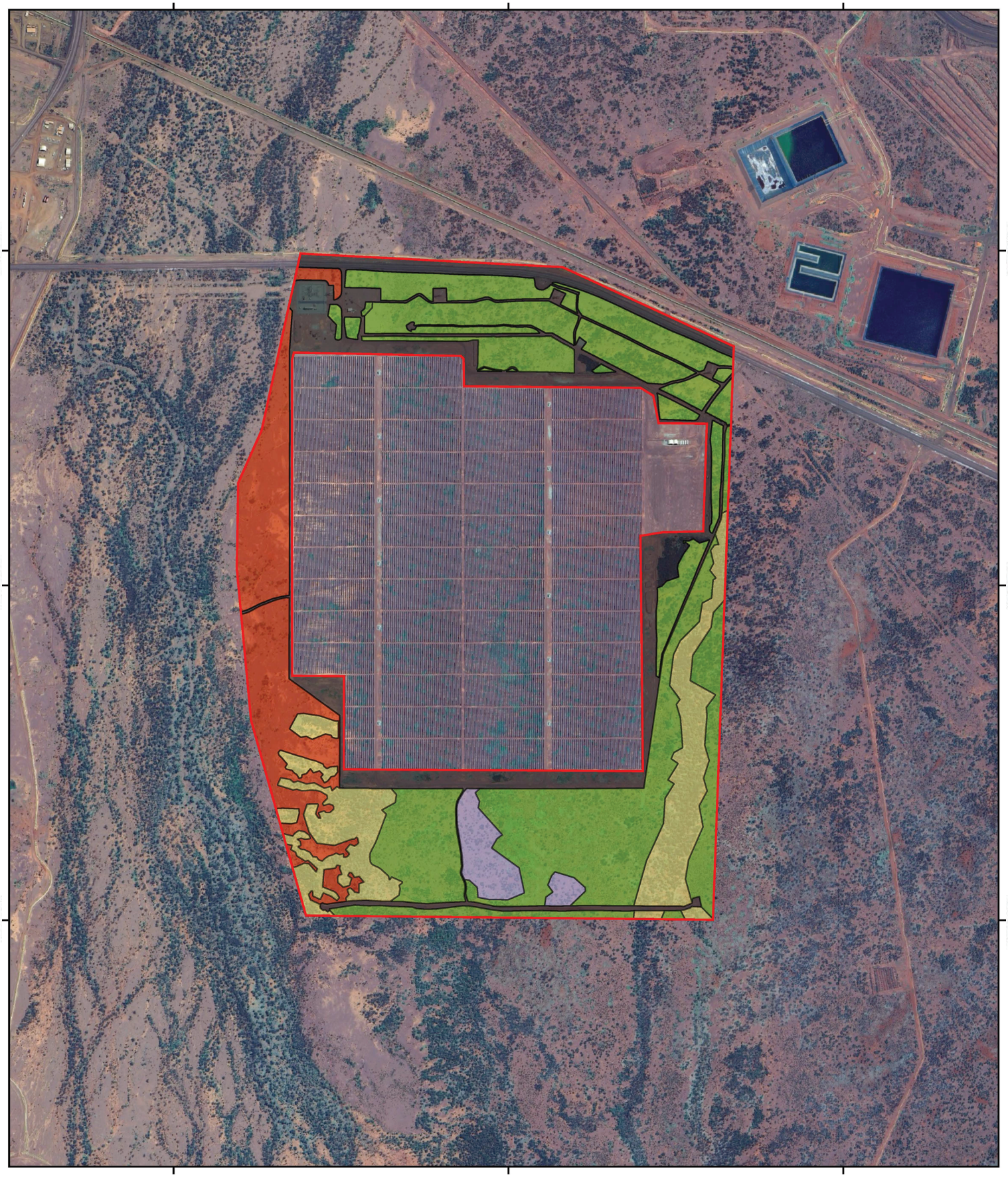


Figure 7: Vegetation types

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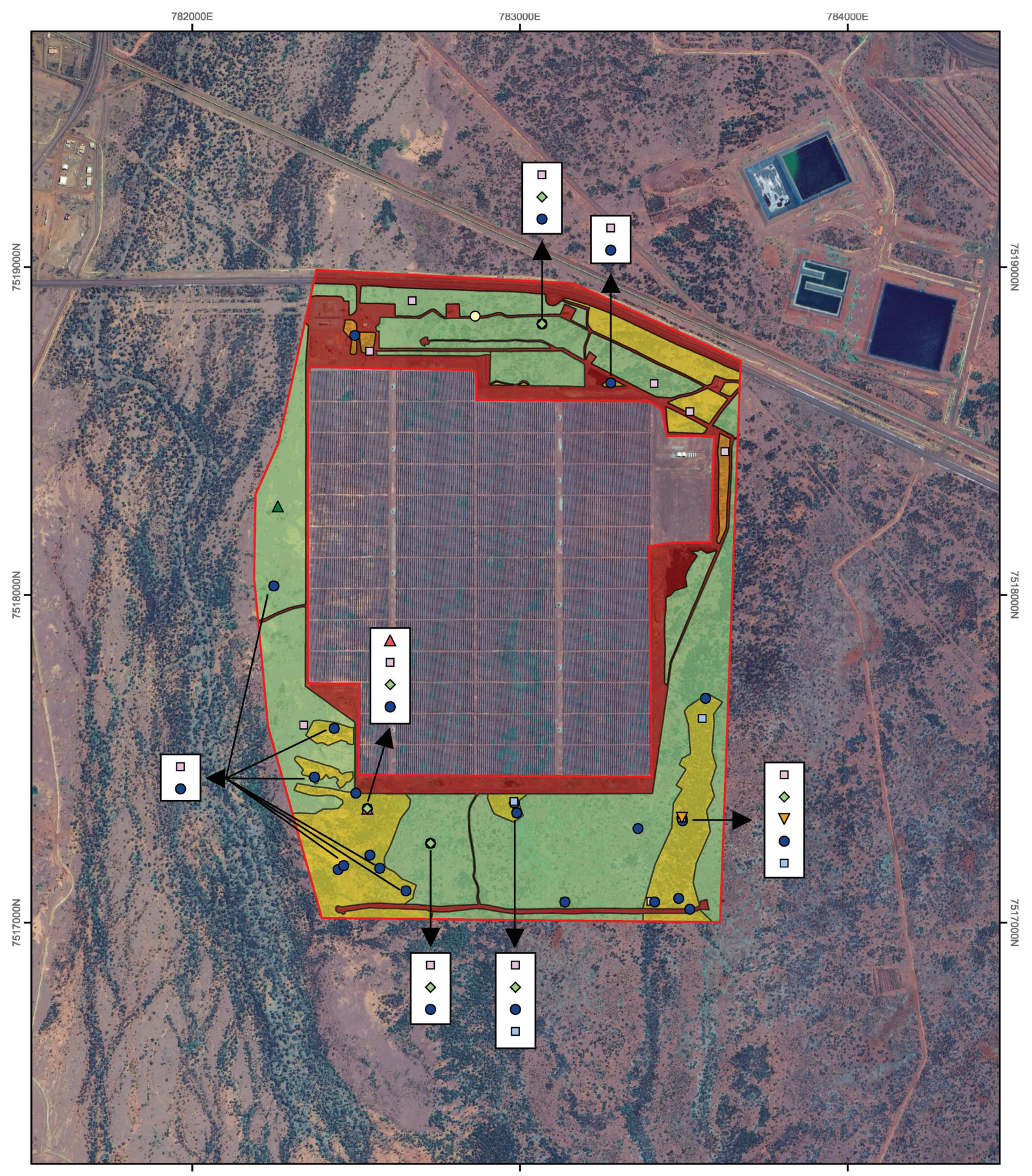


Figure 8: Vegetation condition and introduced flora records

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4.6 FAUNA

During the field survey, 67 vertebrate species were recorded, including 15 mammal species, 50 bird species and two reptile species. The 15 mammal species comprised 11 species of bat from three families, and four introduced species (rabbit, cat, dog and cattle). The recorded avifauna represented 27 families, and 52% of the species recorded were passerines (perching birds). The reptiles were represented by two families, comprising one species of varanid and one dragon species.

4.6.1 FAUNA HABITAT

Four fauna habitats were identified within the Survey Area, three of which occur within the Permit Area (Figure 9):

- *Acacia* woodland;
- Minor drainage lines and low lying floodplains; and
- Cleared areas/tracks.

The majority of the Permit Area is represented by plains supporting mixed *Acacia* woodland. The condition of this habitat type is variable, but overall good. Minor drainage lines and low-lying floodplains was considered to be in good to poor condition, attributable to tussock grasslands being dominated by weeds and the presence of cattle tracks and scats. Cleared areas (mapped as completely degraded condition) can still be utilised by some fauna. The fauna habitats recorded in the Permit Area are typical of the region and widespread in the surrounding locality (Table 3).

Table 3: Fauna habitat recorded within the Permit Area

Habitat type	Area (ha)	Proportion of Permit Area (%)
Acacia woodland	89.3	65.4
Minor drainage lines and low lying floodplains	15.9	11.6
Cleared areas/tracks	31.4	23.0
Total	**136.6**	**100**

4.6.2 LISTED FAUNA

A total of 33 vertebrate fauna species listed as significant under EPBC Act or BC Act were noted during the desktop study as having some potential to occur within the Survey Area. This total comprised eight mammals, 22 birds and three reptiles (Biota, 2023).

Of the eight mammal species, only one was assessed as likely to occur; the Short-tailed Mouse, *Leggadina lakedownensis* (DBCA Priority 4). Bioregional records suggest that primary or core habitat comprises areas of cracking clay and adjacent habitats. However, other sources provide a more diverse picture of habitat utilisation that includes areas of open tussock and hummock grassland, Acacia shrubland and savannah woodland, sandy soils, cracking clays (Aplin et al. 2016), hilltops (Dr Peter Kendrick, pers. comm.) and sandy coastal areas (Biota, pers. obs.). The *Acacia* woodland and tussock grassland habitats within the Permit Area may provide habitat for the species, particularly where patches of cracking clay soils exist. However, given the proximity to existing disturbed areas, the habitat is not considered likely to represent significant habitat for this species.

Three mammal species were assessed as having a moderate likelihood to occur within the Survey Area, but only as transient or foraging visitors:

- Northern Quoll, *Dasyurus hallucatus* (Endangered under BC Act and EPBC Act);
- Pilbara Leaf-nosed Bat, *Rhinonicteris aurantia* (Vulnerable under BC Act and EPBC Act); and
- Ghost Bat, *Macroderma gigas* (Vulnerable under BC Act and EPBC Act).

Northern Quolls would be most likely to occur within the major drainage lines habitat, which would represent suitable dispersal and foraging habitat. They may also occur in adjacent habitats while foraging. This habitat type is not available within the Permit Area. Pilbara Leaf-nosed Bats and Ghost Bats forage over a wide range of habitats and may occur over all habitats of the Permit area. The remaining four mammal species were assessed as being unlikely to occur within the Survey Area due to the absence of habitat.

Of the 22 potentially occurring significant bird species, three were assessed as likely to occur but only as foraging visitors:

- Grey Falcon, *Falco hypoleucos* (Vulnerable under BC Act and EPBC Act);
- Pacific Swift, *Apus pacificus* (Migratory under BC Act and EPBC Act); and
- Peregrine Falcon, *Falco peregrinus* (Other Specially Protected Fauna under BC Act).

Both falcon species may forage over all habitat types within the Survey Area, with the major drainage line habitat and other areas attracting aggregations of birds (e.g., temporary patches of surface water) likely to be most attractive. The major drainage line habitat does not occur within the Permit Area. Pacific Swifts are non-breeding migrants to WA and would be most likely to occur over the Survey Area between September and April, particularly in association with the passage of low pressure systems and unsettled weather (Johnstone and Storr 1998).

The other 19 bird species were assessed as being unlikely to occur in the Survey Area due to the lack of suitable habitat.

Of the three potentially occurring reptile species, none were considered as likely to occur, two may occur and one was unlikely to occur due to absence of suitable habitat. The two reptile species that may occur within the Survey Area are:

- Pilbara Olive Python, *Liasis olivaceus barroni* (Vulnerable under BC Act and EPBC Act); and
- Gane's Blind Snake, *Anilios ganei* (DBCA Priority 1).

The Pilbara Olive Python would be most likely to occur within the major drainage lines habitat, which would represent suitable dispersal and foraging habitat, but may also occasionally occur in adjacent habitats while foraging. The major drainage habitat does not occur within the Permit Area. Habitat preferences for Gane's Blind Snake are not well known, so potential habitat usage within the Survey Area is uncertain. It has been suggested that the species probably prefers "moist microhabitats which exist in many of the deeper, better shaded gorges throughout the Pilbara region" (Aplin 1998), but more recent records have been obtained from a wider range of habitats.

4.6.3 Recorded Significant Fauna

No significant fauna were recorded in the Permit Area during the field survey. The closest record of significant fauna was the Short-tailed Mouse, *Leggadina lakedownensis* (DBCA Priority 4). This species was not recorded during the field survey but has been previously recorded within 500 m of the Survey Area.

A final likelihood of occurrence assessment was completed for each of the potentially occurring significant species identified in the preliminary assessment undertaken prior to a field survey, incorporating the findings of the field survey. In summary, apart from the Short-tailed Mouse and potentially Gane's Blind Snake, all of the significant fauna species that were identified as having moderate or high likelihood of occurrence within the Survey Area would only be expected to utilise the habitats on a transitory basis while foraging or dispersing. The habitats within the Survey Area would therefore only represent secondary habitat for these species.

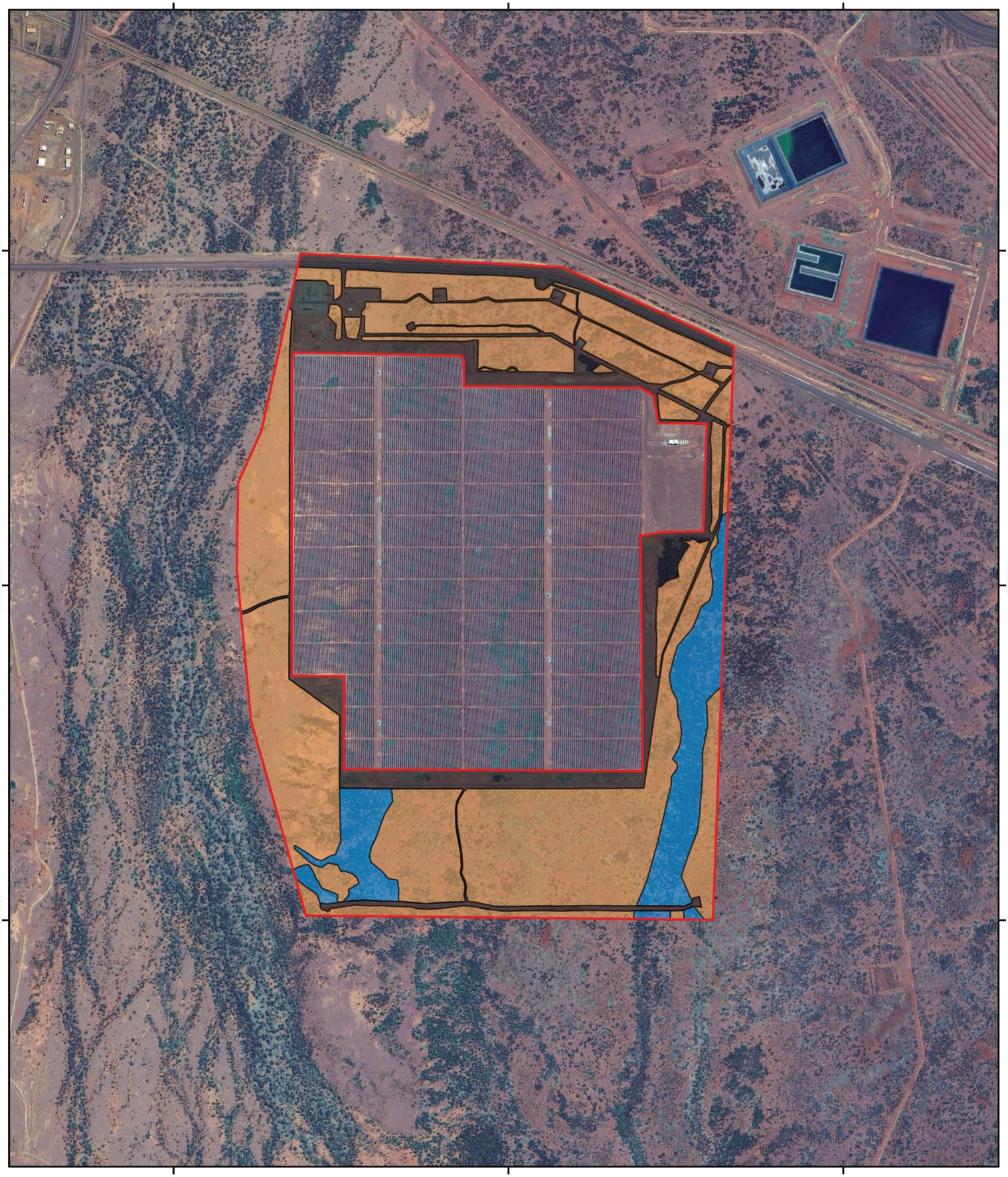


Figure 9: Fauna habitat

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4.7 WATER AND DRAINAGE

The Permit Area is within the Pilbara region which is generally dry, with occasional significant rainfall events often associated with cyclones. The Permit Area is located within the broad Upper Fortescue River Catchment. At a local level, the Permit Area is located within the Goodiadarrie Crossing Sub-catchment area of the Fortescue River.

The Permit Area does not intersect any major rivers or permanent watercourses, but one minor tributary of the Fortescue River intersects the eastern section of the Permit Area. There are no wetlands located within the Permit Area, with the nearest wetland boundary being the Fortescue Marsh, located approximately 3.5 km to the southwest. The Permit Area lies in Fortescue March management area Zone 3a - 'Kulbee Alluvial Flank' (EPA, 2013), which is an extensive area of gently sloping alluvial plains fringing the northeastern edge of the marsh.

No significant water users (groundwater or surface water) are in close proximity to the Permit Area.

Clearing will focus on vegetation removal rather than topsoil removal in most areas, leaving topsoil in-situ. Surface water flow during flood conditions will be able to easily move over the access track and through and around the structures. Any sheet flow will be able to pass under solar panels with minimal disruption to flow.

4.8 LAND USE

The Permit Area is located within the Hillside and Roy Hill operational pastoral leases. The homesteads are located outside of the Permit Area.

The Pilbara region was historically dominated by grazing and pastoral activities. Current land use in this region is more diverse, comprising pastoral grazing, mineral exploration and mining activities.

Conservation is increasingly being recognised as a land use in the Pilbara with dedication of land to Crown Reserves. The State Government acquired a portion of Hillside Pastoral Station in 2015 for the purpose of conservation and has commenced consultation with key stakeholders regarding a potential Conservation Reserve boundary. It is not clear whether the Permit Area is likely to be included in any proposed conservation estate however this is unlikely given the reduced vegetation quality and historic clearing in the Permit Area.

The Permit Area is within the Nyiyaparli People Determined area. APA has negotiated an ILUA with the Nyiyaparli People, which includes procedures under which Aboriginal heritage surveys are carried out. Consultation with the Nyiyaparli People has identified their ongoing access requirements.

5 STAKEHOLDER CONSULTATION

APA has consulted with the following key stakeholders regarding the Project:

- DWER – Part IV *Environmental Protection Act 1986* (EP Act) assessment process, works approvals and licences under Part V of the EP Act; and
- Nyiyaparli People (Prescribed Body Corporate – Karlka Nyiyaparli Aboriginal Corporation).

APA will continue to consult with key stakeholders throughout the life of the Project.

6 ASSESSMENT OF CLEARING AGAINST THE TEN CLEARING PRINCIPLES

The proposed vegetation disturbance has been assessed against the ten clearing principles described within *A Guide to the Assessment of Applications to Clear Native Vegetation* (DER, 2014; Table 4).

Table 4: Assessment of proposed vegetation disturbance against the ten clearing principles

Relevant Information	Assessment of potential impacts	Proposed control measures	Outcome – Assessment of variance with clearing principle
1. Native Vegetation should not be cleared if it comprises a high level of biological diversity			
Detailed surveys of the Permit Area were undertaken by Biota (2023). No Threatened or Priority flora, fauna or ecological communities were identified within the Permit Area during surveys. The vegetation in the Permit Area is identified as Vegetation Association 29 (Fortescue Valley). Vegetation Association 29 has over 99% of pre-European extent remaining in the Pilbara bioregion. No vegetation types were identified as having high biological diversity.	No significant flora, vegetation or fauna habitat will be disturbed by the proposed clearing. The proposed clearing will result in the removal of up to 105.2 ha of native vegetation, this clearing represents less than 0.01% of the remaining extent of Vegetation Association 29.	To minimise the impact of clearing on the environment, APA proposes the following control measures: • All clearing will be managed under a Ground Disturbance Permit process (or similar); • The total extent of vegetation clearing is limited to 105.2 ha; • Clearing areas will be checked using GPS coordinates, ground truthed by a qualified surveyor and boundaries visually identified with pegs.; • All clearing restricted to only what is required for each activity within the proposed Permit Area and undertaken only when required; and • All vegetation clearing and earth moving equipment will be inspected and cleaned prior to conducting clearing activities, vehicles will be inspected and cleaned as required, to prevent the incidental spread of weeds.	The proposed clearing is not at variance with this principle.
2. Native vegetation should not be cleared if it comprises the whole, or part of, or is necessary for the maintenance of a significant habitat for fauna indigenous to WA			
Three fauna habitats were identified within the Permit Area; *Acacia* woodland, minor drainage lines and low lying floodplains, and cleared areas/tracks (Biota, 2023). No significant fauna were recorded within the Permit Area. The Short-tailed Mouse (P4) and the Gane's Blind Snake (P1) were the only two species identified as potentially utilising the habitat within the Permit Area on a regular basis.	Apart from the Short-tailed Mouse and potentially Gane's Blind snake, all of the significant fauna species that could potentially occur within the Permit Area would only be expected to transit while foraging or dispersing. Given the small footprint of the Permit Area and the proximity to existing disturbed areas, the Permit Area is unlikely to represent significant habitat for the Short-tailed Mouse. Habitat preferences for Gane's Blind Snake are not well known, so potential usage within the Survey Area is uncertain. However, it is suggested that whilst they can be found in a	Implement control measures described above.	The proposed clearing is unlikely to be at variance with this principle.

Relevant Information	Assessment of potential impacts	Proposed control measures	Outcome – Assessment of variance with clearing principle
	wider range of habitats, they probably prefer moist microhabitats often within gorges throughout the Pilbara region.		
3. Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora			
No Threatened or Priority Flora were recorded during surveys. No significant species were considered likely or possible to occur.	No known records of Threatened or Priority Flora will be impacted by the clearing. There is a low possibility significant flora may occur within the Permit Area, however based on the likelihood of occurrence assessment, on-ground survey work completed and continuity of vegetation within the region, it is unlikely that clearing of 105.2 ha of habitat will affect the continued existence of any significant flora.	Implement control measures described above.	The proposed clearing is unlikely to be at variance with this principle.
4. Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the maintenance of, a Threatened Ecological Community			
Detailed surveys of the Permit Area were undertaken (Biota, 2023). None of the vegetation recorded within the Permit Area was considered to represent a TEC.	Not applicable	Not applicable	The proposed clearing is not at variance with this principle.
5. Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared			
The Permit Area lies entirely within the Pilbara Bioregion, specifically located on the Fortescue Plains IBRA Subregion. The Fortescue Plains subregion covers approximately 11% of the Pilbara bioregion. The vegetation in the Permit Area is identified as Fortescue Valley 29 – Mulga (*Acacia aneura*) low woodland, open woodland or sparse woodland and associated species. Fortescue Valley 29 has over 99% of pre-European extent remaining.	The Permit Area does not represent a significant remnant of native vegetation in an extensively cleared area. The proposed clearing will result in the removal of up to 105.2 ha of native vegetation, this clearing represents: • <0.1% of the remaining extent of Fortescue Valley 29.	Implement control measures described above.	The proposed clearing is not at variance with this principle.
6. Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland			
The Permit Area is located within the Pilbara Surface Water Area. The Permit Area does not intersect any major rivers or permanent watercourses. One minor	No permanent watercourses or wetlands are present within the Permit Area.	Not applicable	The proposed clearing is unlikely to be at variance with this principle

Relevant Information	Assessment of potential impacts	Proposed control measures	Outcome – Assessment of variance with clearing principle
tributary of the Fortescue River intersects the eastern section of the Permit Area.			
7. Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation			
The purpose of the clearing is to allow the expansion of the existing solar field. Disturbance in the vicinity of the Permit Area is associated with the Project and the mines which the Project services. No declared pests or Weeds of National Significance were recorded within the Permit Area (Biota, 2023).	Land degradation will be limited to the 105.2 ha of proposed land clearing required for construction of the expansion. The solar panels are unlikely to result in land degradation as they will be raised on top of existing land. This represents less than 0.1% of the remaining extent of Fortescue Valley 29.	Implement control measures described above	The proposed clearing is unlikely to be at variance with this principle.
8. Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area			
The proposed clearing area does not occur within or adjacent to any conservation areas.	Not applicable	Not applicable	The proposed clearing is not at variance with this principle.
9. Native vegetation should not be cleared if the clearing is likely to cause deterioration in the quality of surface or underground water			
The Permit Area is located within the Goodiadarrie Crossing Sub-catchment area of the Fortescue River The Permit Area does not intersect any major rivers or permanent watercourses. One minor tributary of the Fortescue River intersects the eastern section of the Permit Area.	No watercourses or wetlands are present within the Permit Area. There will be no activities associated with the Project that will intersect the water table. The proposed clearing is not expected to cause deterioration in the quality of surface or underground water.	Implement the control measures described above	The proposed clearing is unlikely to be at variance with this principle.
10. Native vegetation should not be cleared if the clearing is likely to cause, or exacerbate, the incidence or intensity of flooding			
The region is generally dry, with occasional significant rainfall events often associated with cyclones.	Clearing of 105.2 ha of native vegetation has the potential to cause both erosion of the surface and increase the sediment downstream. The expansion however does not require construction of any significant surface impediment to drainage. Surface water flow during flood conditions would be able to easily move through and around the structures. The solar field is located outside of the local watercourses. Any sheet flow will be able to pass under the panels with minimal disruption to flow.	Implement the control measures described above.	The proposed clearing is unlikely to be at variance with this principle.

7 SUMMARY AND CONCLUSIONS

The purpose of this NVCP Application is to allow the clearing of up to 105.2 ha of native vegetation.

The following key points are noted:

- The area has been extensively surveyed and the results of these surveys have been used to assess the impacts of clearing;
- Clearing of 105.2 ha within the Permit Area represents less than 0.1% of the remaining extent of Vegetation Association 29;
- No regionally or locally restricted habitat types are present;
- The proposed clearing will not result any significant impacts to the following:
    - Threatened and Priority Flora and Fauna;
    - TECs or PECs;
    - Wetlands / surface water; or
    - Conservation areas.

APA has also identified a number of control measures to minimise the impacts to native vegetation. These measures include the following:

- All clearing to be managed under a Ground Disturbance Permit process (or similar);
- The total extent of vegetation clearing is limited to up to 105.2 ha of disturbance;
- Clearing areas will be checked prior using GPS coordinates, ground truthed by a qualified surveyor and boundaries visually identified with pegs;
- All clearing restricted to only what is required for each activity within the Permit Area and undertaken only when required; and
- All vegetation clearing and earth moving equipment will be inspected and cleaned prior to conducting clearing activities, vehicles will be inspected and cleaned as required to prevent the incidental spread of weeds.

This NVCP application assessed the proposed vegetation clearing against the ten clearing principles described in *A Guide to the Assessment of Applications to Clear Native Vegetation* (DER, 2014).

8 GLOSSARY

Term	Meaning
APA	APA Pilbara Holdings Pty Ltd
BAM Act	*Biosecurity and Agriculture Management Act 2007*
BC Act	*Biodiversity Conservation Act 2016*
Biota	Biota Environmental Sciences Pty Ltd
CSF	Chichester Solar Farm
Cth	Commonwealth
DBCA	Department of Biodiversity, Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DER	Department of Environmental Regulation (now Department of Water and Environmental Regulation)
DPIRD	Department of Primary Industries and Regional Development
DWER	Department of Water and Environmental Regulation
EP Act	*Environmental Protection Act 1986* (WA)
EPA	Environmental Protection Authority
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999* (Cth)
FMG	Fortescue Metals Group
ha	Hectares
IBRA	Interim Biographical Regionalisation for Australia
km	Kilometres
kV	Kilovolt
L	Miscellaneous Licence
m	Metre
MW	Megawatt
NVCP	Native Vegetation Clearing Permit
OHL	Overhead Transmission Line
P	Priority - flora and fauna species listed as being possibly threatened under priorities of 1, 2, 3 or 4 under the *Biodiversity Conservation Act 2016*
PEC	Priority Ecological Communities – plant communities listed as being potentially threatened under the *Wildlife Conservation Act 1950*
Permit Area	Boundary for clearing proposed in this NVCP (Figure 1)
Project	Chichester Solar Farm Expansion
PV	Photovoltaic
Roy Hill	Roy Hill Iron Ore
Survey Area	Biota Environmental Sciences Pty Ltd Survey Area
TEC	Threatened Ecological Communities – plant communities listed as being threatened and legally protected under the *Biodiversity Conservation Act 2016* and / or the *Environment Protection and Biodiversity Conservation Act 1999*
WA	Western Australia
WoNS	Weed of National Significance

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