

11 January 2019

Attention: Clearing Permit Section
Department of Water and Environmental Regulation
Locked Bag 33
CLOISTERS SQUARE WA 6850

Delivered by email to: info@dwer.wa.gov.au

Dear Sir/Madam,

CLEARING PERMIT (AREA PERMIT) APPLICATION FOR PORT HEDLAND HIGHWAY PRECINCT DEVELOPMENT

Emerge Associates (Emerge) has been engaged by the Port Hedland International Airport (PHIA) Asset Trust ('the applicant') to provide environmental consultancy services to support the proposed Port Hedland Highway Precinct Development (herein referred to as 'the site').

Due to the presence of native vegetation within the site, Emerge has prepared this letter to support an application for a clearing permit (area permit) pursuant to Part V of the *Environmental Protection Act 1986* (EP Act).

Introduction and background

The applicant is developing the Highway Precinct, a leasehold industrial development located to the south-east of the PHIA Terminal, in accordance with its airport master plan. The Town of Port Hedland is the registered proprietor of the Port Hedland International Airport land and own the site in freehold.

The subject site is located within the airport master plan's Precinct 2, and is currently zoned 'Airport' under the Town of Port Hedland's Local Planning scheme No. 5. It is bound by the Great Northern Highway to the east, BHP Billiton Iron Ore (BHPBIO) railway line to the south, and the main runway to the west. The proposed site currently comprises of Air Services Australia infrastructure and mining related transient workers accommodation encampments. The light industrial land uses proposed for the site will be aviation related.

The site is 37.99 hectares (ha) in size, and supports approximately 31.52 ha of native vegetation. The remaining 6.47 ha of the site is either cleared or completely degraded non-native vegetation.

Emerge is engaged by PHIA Asset Trust to provide further information regarding the flora, vegetation and fauna values present within the site. For clearing of native vegetation purposes, PHIA Asset Trust is the named applicant on the C1: Clearing Permit (Area Permit) application form.

In accordance with the Environmental Protection Authority's (EPA's) *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016b), a flora and vegetation assessment

to the standard required of a 'reconnaissance survey' was undertaken in November 2018. A fauna assessment to the standard required of a part level 1 survey (desktop assessment) in accordance with the Environmental Protection Authority's (EPA's) *Technical Guidance – Terrestrial fauna Surveys* (EPA 2016a) A summary of the findings obtained from the PHIA airport master plan and field survey is used in this report to support the application of an area clearing permit.

Environmental context

Vegetation across the site has historically been cleared for the construction of various buildings; however, it shows evidence of having recolonised over most of the site and has been largely undisturbed since 2012. The majority of the site is vegetated with low open shrubland to low shrubland with the north eastern portion of the site cleared, with scattered native species. The key environmental attributes of the site include:

- No flora listed as threatened under the *Commonwealth's Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or *Wildlife Conservation Act 1950* (WC Act) were recorded.
- One Protected Ecological Community (PEC) occurs within 50 km of the site, however there was no evidence of it occurring within the site.
- No other Threatened Ecological Communities (TEC's) or PEC's occur within the site.

Clearing Permit Application

Attachment 1 contains the signed clearing permit application form for processing by the Department of Water and Environmental Regulation (DWER).

Attachment 2 contains the targeted flora and vegetation survey report (Emerge Associates 2018).

Index contains supporting documentation to assist the DWER in assessing the clearing permit application, including the Certificate of Title and the Written Authority to act on Behalf of the Landowner.

Clearing permit area

The clearing permit area refers to the 31.52 ha of native vegetation identified within the site boundary, and is shown in **Figure 1**. There are scattered occurrences of individual native shrubs and trees within the completely degraded areas of the site, see **Figure 2**, however these do not constitute any specific plant communities.

Flora and vegetation values

A spring flora and vegetation assessment of the clearing permit area was undertaken by Emerge on 16th November, 2018 (**Attachment 2**). The following provides a summary of the flora and vegetation values pertaining to the clearing permit area.

A total of 38 native and 5 non-native (weed) species were recorded within the site during the field survey, representing 16 families and 31 genera. The dominant family recorded was Poaceae (seven native taxa and two non-native taxa) and Fabaceae (six native taxa and one non-native taxon). Other dominant families were Amaranthaceae (four native taxa and one non-native taxon) and Asteraceae (four native taxa).

One species listed as a declared pest pursuant to the *Biosecurity and Agriculture Management Act 2007* (BAM Act) was recorded in the site, **Calotropis procera*. This species were found in and around the ponding facility in the western portion of the site. Declared pests 'must satisfy any applicable import requirements when imported, and may be subject to an import permit if they are potential carriers of high-

risk organisms. They may also be subject to control and keeping requirements once within Western Australia'. The keeping category for **C. procera* is 'exempt' thus no permit or conditions are required for keeping.

Two native plant communities, in addition to heavily disturbed and/or cleared areas were recorded within the clearing permit area. These are described below and their locations shown in **Figure 3**.

- **AtTtE** - Shrubland of *Acacia trachycarpa* over low open shrubland *Acacia stellaticeps*, *Tecticornia* sp. and *Trianthema turgidifolia* over grassland of *Eragrostis* spp., *Triodia* spp. and **Cenchrus setiger* (**Plate 1**)
- **AsTtCc** - Low open shrubland to low shrubland *Acacia stellaticeps*, *Tecticornia* sp. and *Trianthema turgidifolia* with open vineland of *Cassytha capillaris* over open forbland of *Pluchea longiseta* and grassland to closed grassland of *Eragrostis* spp., *Triodia* spp. and **Cenchrus setiger* (**Plate 2, Plate 3, Plate 4**)
- **Cleared Areas** - Cleared areas with scattered native species (**Plate 5**)



Plate 1: Plant Community AtTtE in 'good' condition



Plate 2: Plant community AsTtCc in 'very good' condition



Plate 3: Plant community AsTtCc in 'good-degraded' condition



Plate 4: Plant community AsTtCc in degraded condition



Plate 5: Cleared areas in 'completely degraded' condition.

Vegetation condition within the site ranges from ‘completely degraded’ to ‘very good’ using the Keighery (1994) scale. Vegetation was mapped as being in ‘degraded’ and ‘good’ condition due to signs of vegetation structure alteration and the level of weed cover. Vegetation in good and degraded condition comprised native low shrub, forb and grass species with higher densities of non-native species (particularly the grass species, **Cenchrus setigera* (ranging from 10 to 70% cover throughout the site). Scattered woody weed species were also present, largely situated in or around the ponding facility to the west of the site.

The south eastern portion of the vegetation in the site was mapped as largely being in ‘very good’ condition, due to higher cover by native species and reduced weed cover.

The extent of vegetation by condition category is detailed in **Table 1** and shown in **Figure 4**.

Fauna values

The fauna survey included desktop investigations and field surveys, conducted with regard to the EPA’s Guidance Statement No. 56, where possible. The fauna survey involved visual and aural surveys for any fauna species utilising the study area. The site was traversed on foot and the vegetation was searched for potentially suitable habitat for threatened and priority fauna species.

A search was conducted for threatened and priority fauna within a 50 km radius of the site using the *Protected Matters Search Tool* (DoEE 2018), *NatureMap* (DBCA 2018) and *Department of Biodiversity, Conservation and Attractions* (DBCA)’s threatened and priority fauna database.

The habitats present for fauna species within the site are mixed tussock and hummock grasslands and low shrublands. Based on the habitat descriptions for conservation significant fauna, the site contains some habitat for night parrot, crest-tailed mulgara and bilby. As established by the outcomes of the field survey assessment, the fauna habitat values within the site were considered to be substantially reduced due to historical disturbance, the small area of the site and the location (i.e. adjacent to a major transport infrastructure). Fauna diversity is likely to be well below levels present in undisturbed areas, such as remnant vegetation to the immediate north, south and south-west of the site, and it is considered highly unlikely that any of the fauna species identified by the desktop search would be present on the site

Proposed clearing of native vegetation

Native vegetation clearing is proposed to allow for the development of the PHIA Highway Precinct. A breakdown of the native vegetation to be cleared, grouped by plant community and vegetation condition, is shown in **Table 1**. Whilst this clearing permit refers to the clearing of the entire extent of native vegetation within the site, all reasonable efforts will be undertaken to reduce the extent of clearing and retain existing vegetation.

Table 1: Area of native vegetation to be cleared according to plant communities and vegetation condition

Plant community	Vegetation condition	Area (ha)
AsTtCc	Very good	15.80
	Good	10.16
	Good – degraded	3.56
	Degraded	1.75
AtTtE	Good	0.25
Cleared, including scattered occurrences of individual native shrubs	Completely degraded	6.47
Total		37.99

Response to EP Act Clearing Principles

Under Section 51C of the EP Act, clearing of native vegetation is an offence unless a clearing permit has been obtained or an exemption applies. When assessing clearing applications, DWER has regard to the ten clearing principles contained in Schedule 5 of the EP Act so far as they are relevant to the matter under consideration.

In support of this area permit clearing application, we have considered and responded to the ten clearing principles, below.

Principle (a) - Native vegetation should not be cleared if it comprises a high level of biological diversity.

The plant communities largely described over the site align with 'Sandplain A' vegetation type (ENV Australia 2011). This is described as comprising 'low *Acacia stellaticeps* shrublands over *Triodia epactia* and *Triodia secunda* grasslands/ *Triodia epactia* and *Triodia secunda* hummock grasslands mosaic'. This vegetation type is mapped as comprising the land to the north of the site within ENV (2011). This habitat, with its thick vegetation dominated by *Triodia* species, is considered of low habitat value, as it lacks diversity of microhabitats for fauna to exploit.

The clearing permit area predominantly includes vegetation that is in 'completely degraded' or 'degraded' condition, with small patches of 'good to degraded', 'good' and 'very good' condition vegetation. The area is intersected with 'samphire B' vegetation type, which comprises 'scattered *Avicennia marina* shrubs over a low open *Tecticornia halocnemoides* subsp. *tenuis*, *Tecticornia halocnemoides* and *Trianthema turgidifolia* shrubland'. *T. turgidifolia* and *Tecticornia* spp. are common within the site, particularly in the western portion adjacent to the ponding facility.

The study area is not considered to be of higher biodiversity than the surrounding areas, and the proposed clearing is unlikely to have any significant impact on the biodiversity of the region.

Principle (b) – Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Due to historical disturbance, the small size of the clearing area, and the proximity to a major road and airport terminal, the fauna habitat values within the clearing permit area are considered reduced, and the fauna diversity is considered below levels likely to be present prior to historical disturbances.

Based on the results from the fauna assessment, the vegetation within the clearing permit area provides limited potential fauna habitat. In addition, there are also large areas of better-quality vegetation surrounding the clearing permit area, which would be preferred by native fauna within the area. As a result, clearing is not considered to be at variance with this Principle.

Principle (c) – Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

During the flora and vegetation assessment carried out by Emerge Associates in 2018, no threatened flora species were identified within the clearing permit area. As a result of the absence of threatened flora species within the clearing permit area, the proposed clearing is not considered to be at variance with this Principle.

Principle (d) – Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community.

No occurrences of TEC's were identified within the clearing permit area. As a result, clearing is not considered to be at variance with this Principle.

Principle (e) – 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 extent of remnant native vegetation has been assessed by Shepherd (2001), based on vegetation association mapping undertaken by Beard (1979) of the Pilbara region. The site forms part of the Roebourne plains within the Fortescue Botanical District in the Eremaean Botanical Province of Western Australia (Shepherd 2001). The site falls within vegetation type 647 'hummock grasslands, dwarf-shrub steppe; *Acacia translucens* over soft spinifex'. Based on the *Statewide Vegetation Statistics 2017*, vegetation type 647 has 97.88% of its pre-European extent remaining. The extent of the vegetation in the survey areas is considered of *Least Concern*, i.e. intact, with close to 100% of the pre-European extents of the vegetation type considered to be remaining. As a result of this vegetation type being considered *Low Concern* and widespread throughout the Pilbara region, it would not be considered significant remnant native vegetation.

The vegetation in the clearing permit area is unlikely to represent significant remnant native vegetation due to the small size and disturbed nature of the vegetation. There were no vegetation types or landscape units identified during the flora and vegetation survey that were considered as being rare, restricted or unique. Therefore, the proposed clearing is not considered to be at variance to this Principle.

Principle (f) – Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Excluding the wastewater evaporation ponds associated with the Mia Mia facility, there are no surface water features on the site.

The WA Wetlands Database, WetlandBase was used to identify wetlands of state, national and international significance located at or nearby the site. The closest wetland of national significance is the Leslie (Port Hedland) Saltfields System, 15 km north east of the site. No wetlands of state/subregional significance are located within 10 km of the site. The proposed site is not in close proximity to any watercourse or wetland, therefore the proposed clearing is not considered to be at variance to this Principle.

Principle (g) – Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

The majority of the study area is situated on a flat, sparsely vegetated sandy plain and unlikely to be subject to land degradation caused by wind or water erosion. The removal of vegetation is also unlikely to increase any erosion within the clearing permit area given that most of the areas that will be cleared will be paved to allow for aviation related development. The proposed clearing of vegetation is not considered to be at variance with the Principle.

Principle (h) – 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.

There are no conservation areas within or in close proximity to the study areas. The proposal is unlikely to be at variance with the Principle.

Principle (i) – Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

The site is generally a flat sandy plain and there are no permanent water courses associated with the site. The clearing of native vegetation is unlikely to have any impact on surface water due to the permeability of the soil. No Public Drinking Water Source Areas (PDWSA) are within the site, and the closest PDWSA is located approximately 40 km to the south west of the site.

The Acid Sulfate Soil (ASS) Risk Map, Pilbara Coastline (DWER-053) indicates that the airport site is located adjacent to an area having a high to moderate risk of ASS occurring within 3 metres of the natural soil surface, but that the site unlikely to be affected by ASS.

Development of the site will require the preparation of appropriate water management strategies. The purpose of the water management strategies is to address the stormwater and groundwater management within the site. The proposed clearing will not be likely to cause deterioration on the quality of surface or underground water after implementing appropriate management strategies.

Principle (j) – Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.

The site is not situated in a flood zone. The site is within a 100 Year ARI Floodplain Development Control Area (DWER-003); although the airport's current masterplan reports that the airport site is not susceptible to flooding in a 100 year ARI storm. Clearing of native vegetation is unlikely to cause or exacerbate the intensity of flooding in the area, and as a result the proposal is unlikely to be at variance with the Principle.

Summary and closing

Native vegetation within the clearing permit area covers 31.52 ha and includes 6.47 ha of cleared area in 'completely degraded' condition, 3.56 ha in 'good – degraded' condition, 10.42 ha in 'good' condition, and 15.80 ha in 'very good' condition.

The content of this letter demonstrates that the proposed clearing is consistent with the clearing principles.

In summary:

- The vegetation within the clearing permit area is largely in a 'degraded' condition, and does not represent a high level of biological diversity.
- The vegetation within the clearing permit area does not represent habitat for any conservation significant species. In addition, there are large areas of intact habitat in the broader area that provide fauna habitat.
- No threatened flora species are located within the clearing permit area.
- The proposed clearing will not cause appreciable land degradation.
- The proposed clearing of vegetation will not impact upon the environmental values of nearby conservation areas due to the lack thereof.
- The proposed clearing is not considered to cause deterioration of surface or ground water.
- The proposed clearing is not likely to cause or exacerbate the incidence of flooding.

Should you have any questions regarding the content of this letter report please do not hesitate to contact the undersigned.

Yours sincerely
Emerge Associates



Encl: Figure 1: Site Location
 Figure 2: Clearing Permit Area
 Figure 3: Plant Communities
 Figure 4: Vegetation Condition
 Attachment 1: Clearing Permit Application Form and C1 Form
 Attachment 2: Flora and Vegetation Assessment (Emerge Associates 2018)

General references

- Department of Biodiversity Conservation and Attractions (DBCA) 2016, *List of Threatened Ecological Communities (TECs) endorsed by the Western Australian Minister for Environment*, Perth.
- Department of Biodiversity Conservation and Attractions (DBCA) 2017b, *Priority Ecological Communities for Western Australia Version 27*, Species and Communities Branch, Department of Biodiversity, Conservation and Attractions.
- ENV Australia 2011, *Port Hedland Regional Flora and Vegetation Assessment*, report number 11/125, revision C.
- Environmental Protection Authority (EPA) 2016a, *Technical Guidance - Terrestrial Fauna Surveys*, Perth.
- Environmental Protection Authority (EPA) 2016b, *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment*, Perth.
- Environmental Protection Authority (EPA) 2008, *Guidance Statement No. 33. Environmental Guidance for Planning and Development*, Perth.
- Gibson, N., Keighery, B., Keighery, G., Burbidge, A. and Lyons, M. 1994, *A Floristic survey of the southern Swan Coastal Plain*, Department of Conservation and Land Management and the Conservation Council of Western Australia, Perth.
- Government of Western Australia 2018, *Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017*, WA Department of Biodiversity, Conservation and Attractions, Perth.
- Harewood, G. 2017, *Fauna Assessment, Port Kennedy Drive*.
- Keighery, B. 1994, *Bushland Plant Survey: A guide to plant community survey for the community*, Wildflower Society of WA (Inc), Nedlands.
- Shepherd, D. P., Beeston, G. R. and Hopkins, A. J. M. 2001, *Native Vegetation in Western Australia: Extent, Type and Status*, Department of Agriculture, Perth.
- Water and Rivers Commission (WRC) 2001, *Wetlands: Water and Rivers Commission Position Statement*, East Perth.

Online references

- Department of the Environment and Energy (DoEE) 2018 *Protected Matters Search Tool*, <<http://www.environment.gov.au/webgis-framework/apps/pmst/pmst.jsf>>.
- Western Australian Herbarium (2018). *FloraBase—the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions. <<https://florabase.dpaw.wa.gov.au>>.

This page has been left blank intentionally.

Figures



Figure 1: Site Location

Figure 2: Clearing Permit Area

Figure 3: Plant Communities

Figure 4: Vegetation Condition

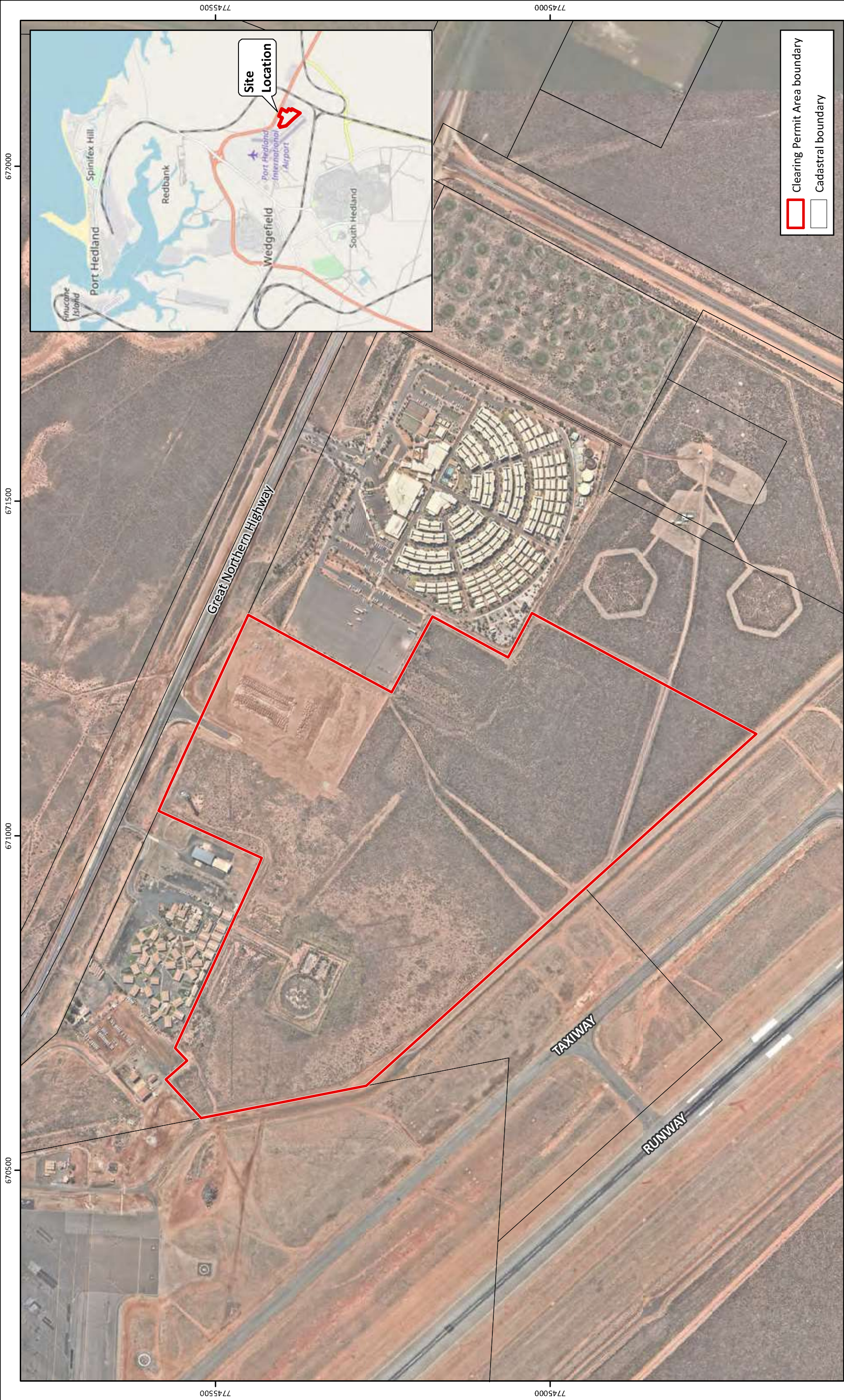


Figure 1: Site Location

Plan Number:
EP18-117(03)-F09



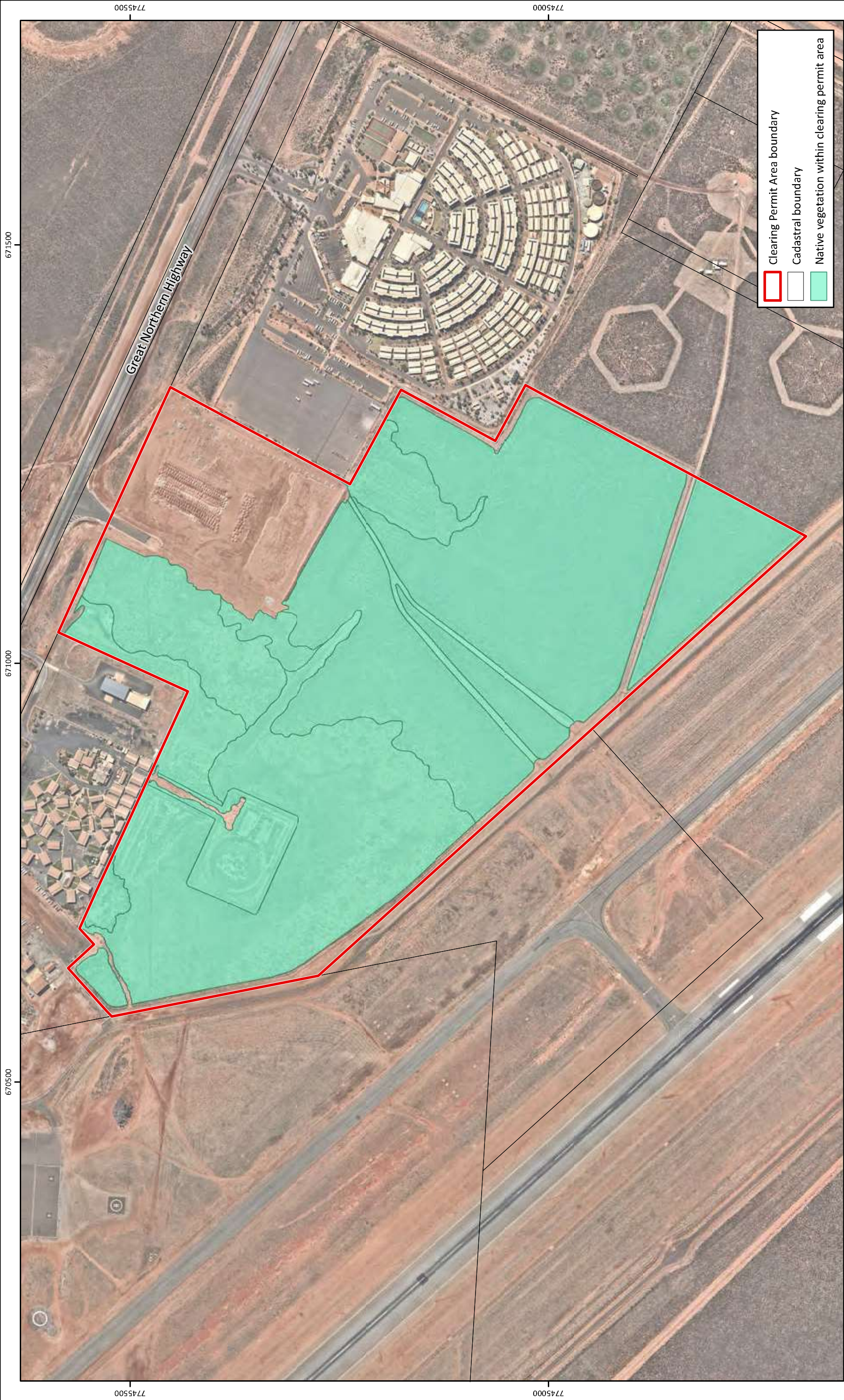
Scale: 1:7,500@A4
GDA 1994 MGA Zone 50



Project: Clearing Permit Application Report
Port Headland International Airport – Highway Precinct 2

Client: PHIA Asset Trust

While Emerge Associates makes every attempt to ensure the accuracy and completeness of data, Emerge accepts no responsibility for externally sourced data used



emerge
ASSOCIATES

0 100 200
Metres

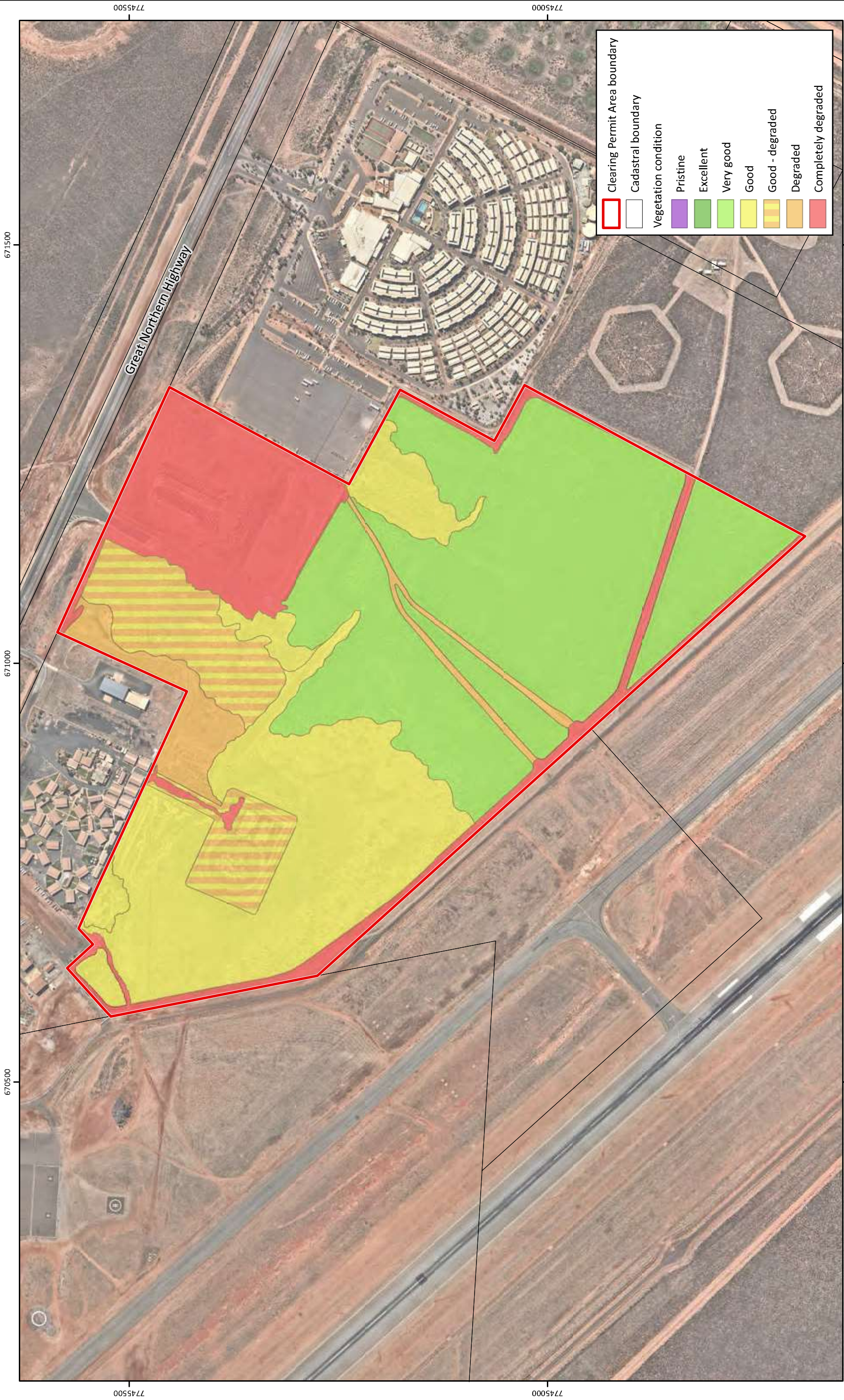
Scale: 1:6,000@A4
GDA 1994 MGA Zone 50

N

Figure 2: Clearing Permit Area

Project: Clearing Permit Application Report
Port Headland International Airport – Highway Precinct 2

Client: PHIA Asset Trust



emerge

ASSOCIATES

0100200

Metres

Scale: 1:6,000@A4

GDA 1994 MGA Zone 50

Plan Number:

EP18-117(03)--F12

Figure 4: Vegetation Condition

Project:

Clearing Permit Application Report
Port Headland International Airport – Highway Precinct 2

Client:

PHIA Asset Trust

While Emerge Associates makes every attempt to ensure the accuracy and completeness of data, Emerge accepts no responsibility for externally sourced data used