GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 3836/4
Permit Holder:	Pilbara Ports Authority
Duration of Permit:	26 September 2010 – 26 September 2025

ADVICE NOTE:
This Permit does not confer upon the Permit Holder authorisation to access the land to which the Permit relates.

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I –CLEARING AUTHORISED

1. Purpose for which clearing may be done
Clearing for the purposes of port maintenance activities and building construction.

2. Land on which clearing is to be done
Lot 471 on Deposited Plan 220595, Burrup
Lot 472 on Deposited Plan 220595, Burrup
Lot 314 on Deposited Plan 218195, Burrup
Lot 3001 on Deposited Plan 77070, Burrup
Lot 500 on Deposited Plan 401915, Burrup
Lot 501 on Deposited Plan 401915, Burrup
Lot 598 on Deposited Plan 77665, Burrup
Unallocated Crown Land (PIN 12078916).

3. Area of Clearing
The Permit Holder must not clear more than 15.25 hectares of native vegetation within the area hatched yellow on attached Plan 3836/4.

4. Application
This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

PART II – MANAGEMENT CONDITIONS

5. Avoid, minimise and reduce the impacts and extent of clearing
In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:
(a) avoid the clearing of native vegetation;
(b) minimise the amount of native vegetation to be cleared; and
(c) reduce the impact of clearing on any environmental value.

6. Weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
(b) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

PART III - RECORD KEEPING AND REPORTING

7. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit in relation to the clearing of native vegetation authorised under this Permit:

(a) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
(b) the date that the area was cleared;
(c) the size of the area cleared (in hectares);
(d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with Condition 5 of this Permit; and
(e) actions taken to minimise the risk of the introduction and spread of weeds in accordance with Condition 6 of this Permit.

8. Reporting

(a) The Permit Holder must provide to the *CEO*, on or before 30 June of each year, a written report:
  (i) of records required under condition 7 of this Permit; and
  (ii) concerning activities done by the Permit Holder under Permit between 1 January and 31 December of the preceding year.

(b) If no clearing authorised under this Permit was undertaken between 1 January and 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the *CEO* on or before 30 June of each year

(c) Prior to 26 June 2025, the Permit Holder must provide to the *CEO* a written report of records required under condition 7 of this Permit where these records have not already been provided under condition 8(a) of this Permit

DEFINITIONS
The following meanings are given to terms used in this Permit:

CEO means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

fill means material used to increase the ground level, or fill a hollow;

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;

weed/s 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 Parks and Wildlife Regional Weed Summary, regardless of ranking; or
(c) not indigenous to the area concerned.

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Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

12 August 2020

Plan 3836/4

Map Layers

- CPS areas approved to clear
- Land TenureLGATE - 226
- Local Government Authorities

N

0 100 200 300 400 m

1:10329

MGA Zone 50
Geocentric Datum of Australia 1994

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Officer delegated under section 20 of the Environmental Protection Act 1986

GOVERNMENT OF WESTERN AUSTRALIA

Clearing Permit Decision Report

1. Application details and outcome

1.1. Permit application details

Permit number:	CPS 3836/4
Permit type:	Purpose permit
Applicant name:	Pilbara Ports Authority
Application received:	26 May 2020
Application area:	15.25 hectares of native vegetation
Purpose of clearing:	Infrastructure maintenance
Method of clearing:	Mechanical Removal
Property:	Lot 471 on Deposited Plan 220595; Lot 472 on Deposited Plan 220595; Lot 314 on Deposited Plan 218195; Lot 3001 on Deposited Plan 77070; Lot 500 on Deposited Plan 401915; Lot 501 on Deposited Plan 401915; Lot 598 on Deposited Plan 77665; Unallocated Crown Land (PIN 12078916).
Location (LGA area/s):	Shire of Karratha
Localities (suburb/s):	Burrup

1.2. Description of clearing activities

The vegetation applied to be cleared is distributed across six separate areas (see Figure 1, Section 1.5).

The previous clearing permit (CPS 3836/3) provided authorisation to clear native vegetation for building construction and maintenance of infrastructure facilities within the port on the Burrup Peninsula. The amended clearing permit (CPS 3836/4) will allow for the clearing of up to 15.25 hectares of native vegetation within an 84 hectare footprint for ongoing maintenance activities for a further five years.

1.3. Decision on application and key considerations

Decision:	Granted
Decision date:	12 August 2020
Decision area:	15.25 hectares (ha) of native vegetation as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Water and Environmental Regulation (DWER) on 26 May 2020 DWER advertised the application for public comment and no submissions were received.

In undertaking their assessment, and in accordance with section 51O of the EP Act, the Delegated Officer has given consideration to the Clearing Principles in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments, and any other pertinent matters they deemed relevant to the assessment (see Sections 3 and 4).

In particular, the Delegated Officer has determined that:

- the clearing is not likely to have a significant impact on any local populations or conservation status of *Terminalia supranitifolia (P3)* and *Rhynchosia bungarensis (P4)* (see Section 3.2.1), or any other Priority flora species with records in the local area (50 km radius);
- the clearing is not likely to contain significant habitat for any known conservation significant fauna species due to the condition of the vegetation and location within road verges, buffer zones and stormwater drainage lines.

The Delegated Officer also took into consideration the purpose of the clearing is for the purpose of port maintenance activities and the Pilbara Ports Authority (PPA) notes that no further clearing has been conducted on Port lands since 2014 (PPA, 2020).

In determining to grant a clearing permit, the Delegated Officer found that the proposed clearing is not likely to lead to an unacceptable risk to the environment.

1.5. Site map

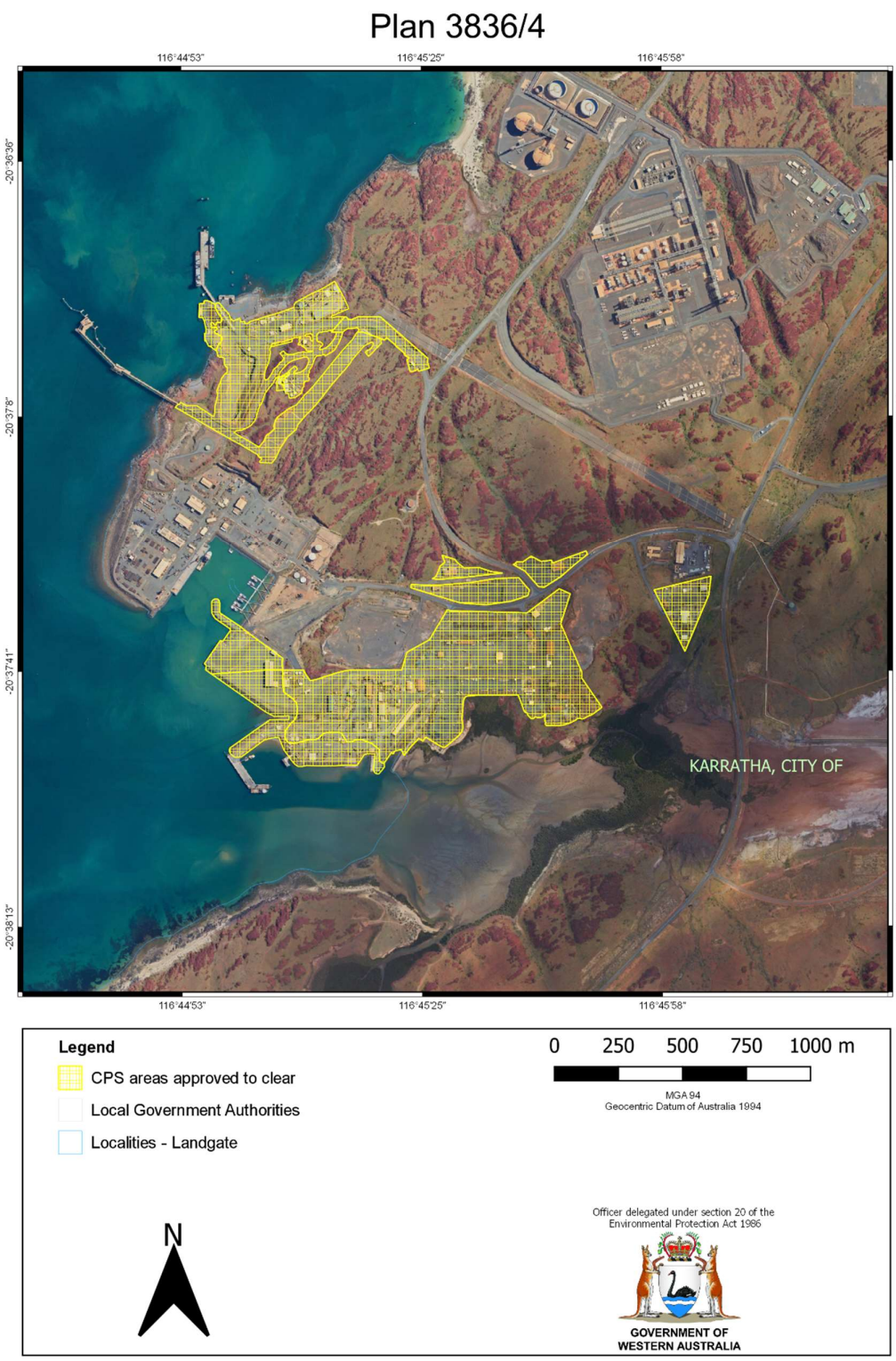


Figure 1. Map of the application area.

The areas cross-hatched yellow indicate those within which clearing is authorised

2. Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.3), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

1. the precautionary principle;
2. the principle of intergenerational equity;
3. the principle of the conservation of biological diversity and ecological integrity; and
4. the polluter pays principle

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- *Environmental Offsets Guidelines* (August 2014)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant, demonstrating that the area of native vegetation proposed to clear has not changed from the previous permit and all of the vegetation is contained within pre-disturbed areas. As part of the original permit and decision report, it was demonstrated by the applicant that the area proposed to clear is to the extent necessary to continue the ongoing maintenance of the port and control the vegetation within. This adequately demonstrated that all reasonable efforts had been taken to avoid and minimise potential impacts of the clearing on environmental values.

3.2. Assessment of environmental impacts

In assessing the application in accordance with section 51O of the EP Act, the Delegated Officer has examined the application and site characteristics (Appendix C) and considered whether the clearing poses a risk to environmental values. The assessment against the Clearing Principles is contained in Appendix D.

This assessment identified that the clearing may pose a risk to the environmental and biological values of the vegetation proposed to clear, and that these required further consideration. The detailed consideration and assessment of the clearing impacts against the specific environmental values is provided below. Where the assessment found that the clearing presents an unacceptable risk to environmental values, conditions aimed at controlling and/or ameliorating the impacts have been imposed under sections 51H and 51I of the EP Act. These are also identified below.

3.2.1. Environmental value: biological values (fauna) – Clearing Principle (b)

Assessment: A review of the available databases indicates a total of sixty-seven conservation significant fauna species with records in the local area (50 km radius), as listed under the state *Biodiversity Conservation Act 2016* (BC Act) and/or Commonwealth *Environmental Protection Act 1999* (EPBC Act). Seven of the species are known to be marine fauna and were therefore not considered for the purposes of the assessment.

Of the above, three are listed as Critically Endangered, four Endangered, five Vulnerable, thirty nine under International Agreement (IA), two Priority 1, one Priority 3, five Priority 4 and one Other Specially Protected Species (OS). Of these, *Lerista quadrivincula, Notoscincus butleri*, *Liasis olivaceus barroni*, *Dasyurus hallucatus* and *Pseudomys chapmani* all have records in close proximity and have the potential to be found within the applied clearing area based on habitat preferences.

Lerista quadrivincula or Four-lined slider (Karratha) (P1) is known from a single specimen at the Maitland River on the arid coastal plain near Karratha (Wilson and Swan, 2017). This species has not been recorded again since its first sighting and as such its status and distribution remain uncertain. The vegetation types within the application area

are well represented throughout the Burrup Peninsula region and the local area retains > 94 % of its remnant vegetation. Therefore, DWER considers the vegetation within the applied clearing area as being unlikely to represent significant habitat for this species.

Notoscincus butleri or Lined soil-crevice skink (Dampier) (P4) occurs in arid, rocky near-coastal areas of the Pilbara and is associated with spinifex-dominated areas near creeks and river margins (Wilson and Swan, 2017). This species has abundant records throughout the Pilbara and the local area contains 52 previous recordings, the closest located ~13 km away. Given the abundant previous recordings and extensive remnant vegetation of the local area and Pilbara region, the application area is unlikely to represent significant habitat for this species.

Liasis olivaceus barroni or Pilbara olive python (VU) prefers deep gorges and water holes in the ranges of the Pilbara region (Pearson, 1993). Given the preferred habitat, although potentially suitable, the application area is unlikely to represent significant habitat for this species.

Dasyurus hallucatus or the northern quoll's (EN) distribution extends north of Shark Bay, mainly within the Pilbara region and isolated population in the Kimberley region (DSEWPaC, 2012). This species is known to generally inhabit rocky areas such as ranges, escarpments, mesas, gorges, breakaways, boulder fields, major drainage lines or treed creek lines. This taxon also inhabits structurally diverse woodland or forest areas containing large diameter trees, termite mounds and hollow logs (DSEWPaC, 2011). The northern quoll is an opportunistic omnivore, consuming beetles, grasshoppers, spiders, scorpions and centipedes. They also eat fruit and nectar and also have been known to feed on human refuse (DSEWPaC, 2012). Given the majority of the applied clearing area is within road verges, buffer zones and storm water drains, the habitat is not considered significant for this species.

Pseudomys chapmani or western pebble-mound mouse (P4) found in areas of rocky, hummock grassland with little or no soil and an over storey of *Acacia*. Animals live in small family groups in burrows below mounds of pebbles (Van Dyck, Gynther & Baker, 2013). Given the majority of the applied clearing area is within road verges, buffer zones and storm water drains, the habitat is not considered significant for this species.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered **acceptable** in relation to this environmental value.

Conditions: No fauna management conditions required.

3.2.2. Environmental value: biological values (flora) – Clearing Principles (a) to (d)

Assessment: A review of the available databases indicates twenty priority species with previous records in the local area (50 km). Of these, three are listed as Priority 1, one Priority 2, fifteen Priority 3 and one Priority 4 (DBCA, 2007-).

The original application for a clearing permit (CPS 3836/1) included a flora survey conducted by Astron Environmental Services (Astron) in June 2010. This survey identified forty four taxa from 19 Families and 37 Genus, however, no priority flora species were recorded (Astron, 2010). The survey identified that the majority of the vegetation applied to clear occurs within the road verges, buffer zones and storm water drains. These areas had been previously disturbed, and regrowth consists of both weed species and colonising natives (Astron, 2010).

A further flora survey was conducted in September 2013 in support of the amendment application (CPS 3836/3) to increase the clearing area by 0.2 hectares for the construction of an administration building. This survey identified two Priority species; *Terminalia supranitifolia* (P3) and *Rhynchosia bungarensis* (P4), within the survey area (Astron, 2013). *T. supranitifolia* is a low spreading tree found on rockpiles where it is protected from the impacts of fire. Four individuals were recorded on the rockpile which was positioned under the proposed development site (Astron, 2013). This species is recorded on the Burrup Peninsula associated with rocky outcrops or rock piles, and further inland in the Pilbara IBRA Bioregion. Given the majority of the Burrup Peninsula is un-developed and retains significant suitable habitat for the species, the clearing within road verges, buffer zones and storm water drains is unlikely to have a significant impact on the conservation status, or impact on significant habitat for this species.

R. bungarensis is typically associated with rockpiles or rock outcrops. This species is widespread on the Burrup Peninsula and has also been recorded various times through the Pilbara at inland locations (Astron, 2013). Given the previous recordings at known locations inland, the clearing authorised under this permit is unlikely to have a significant impact on the conservation status, or impact on significant habitat for this species.

Two Priority Ecological Communities (PEC) are known to occur on the Burrup Peninsula, the Burrup Peninsula rock pile communities (Priority 1) and the Burrup Peninsula rock pool communities (Priority 1). The survey conducted by Astron in 2010 did not identify any occurrences of either of these PEC's (Astron 2010), however, the survey conducted by Astron in 2013 recorded a very small wooded rockpile beneath an existing office building which was considered to meet the classification criteria for the Burrup Peninsula rock pile communities PEC. Based on the small size, it was not considered to represent a significant portion of the PEC (Astron, 2013).

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered **acceptable** in relation to this environmental value.

Conditions: No flora management conditions required.

3.3. Relevant planning instruments and other matters

The City of Karratha were sent a Direct Interest letter on 16 June 2020. No response was received in regards to the proposed clearing. In 2013, DWER sent a Direct Interest letter to the then Shire of Roebourne, requesting comment on whether the Shire had any objections to the proposed clearing or whether it fits within their local town planning scheme. The Shire indicated it had no objections to the proposed clearing under CPS 3836/1.

It has been noted that this permit is in close proximity to areas in which there exists registered Aboriginal Heritage Sites. It is the responsibility of the proponent to ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

The Contaminated Sites branch at DWER was contacted in relation to the proposed clearing area intersecting three contaminated sites reports. The contaminated sites branch responded, indicating the contamination status of the sites is generally related to the current and historical port-related activities in the area. The areas of known/suspected contamination are well recorded and managed by the Pilbara Ports Authority, and the contaminated sites branch is not currently aware of any reason why the contamination status of the site will impact upon the proposed clearing activities (DWER, 2020).

Appendix A – Additional information provided by applicant

No additional information was provided by the applicant.

Appendix B – Details of public submissions

No submissions were received in relation to the clearing permit application CPS 3836/4.

Appendix C – Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix D.

1. Site characteristics

Site characteristic	Details
Local context	The proposed clearing area comprises a mix of patches of vegetation on the Burrup Peninsula surrounding roads and infrastructure. It is surrounded by varying commercial and industrial businesses and the Pilbara Ports Authority. The majority of the proposed clearing area is contained within the roads verges, buffers and stormwater drainage lines. Spatial data indicates the local area (50 km radius of the proposed clearing area) retains approximately 94% of the original native vegetation cover.
Vegetation description	Vegetation survey (Astron, 2010) indicate the vegetation within the proposed clearing area consists of "scanty remnant vegetation" across areas surveyed within Lot 471, with the majority occurring as 'very open regrowth on previously or currently semi-disturbed areas. The vegetation is Lots 472 and 628 is generally less disturbed and the native *Trioda epacta. R*epresentative photos and the full survey descriptions and mapping are available in Appendix F. This is consistent with the *Beard* mapped vegetation type: • BVA 117, described as hummock grasslands, grass steppe; soft spinifex (Shepherd et al, 2001).
Vegetation condition	Vegetation survey (Astron, 2010) described the vegetation within the proposed clearing area is generally degraded, which according to the description corresponded with a very poor to poor (Trudgen, 1991) condition, described as: • **Poor -** Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds. • **Very Poor -** Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species. The full Trudgen condition rating scale is provided in Appendix E, below. Representative photos and the full survey descriptions and mapping are available in Appendix F.
Soil description	The soil is mapped as Granitic System (286Gr) described as rugged granitic hills supporting shrubby hard and soft spinifex grasslands (DPIRD, 2017).
Land degradation risk	The mapped soil types mentioned above indicate a low risk of salinity, water logging, and acidification, and a medium to high risk of water and wind erosion.
Waterbodies	The desktop assessment and aerial imagery indicated that two minor non-perennial watercourses intersect the applied clearing area. The aerial imagery indicates these watercourses was natural drainage lines and do no flow, except during times of high seasonal rainfall.

Site characteristic	Details
Conservation areas	The application area is within 700 metres of the Murujuga National Park, which is made up of several areas throughout the Burrup Peninsula.
Climate and landform	The application area is located on the Burrup which is mapped as the Granitic System (286Gr) described as rugged granitic hills supporting shrubby hard and soft spinifex grasslands. The landforms in this area are noted as erosional surfaces; hill tracts and domes on granitic rocks with rough crests, associated rocky hill slopes, restricted lower stony plains; narrow, widely spaced tributary drainage floors and channels (DPIRD, 2017) The area records annual mean maximum and minimum temperatures of 32.5°C and 25.6°C (1993-2020) respectively and mean annual rainfall of 292.4 mm (1972-2020) (BOM, 2020).

2. Flora, fauna and ecosystem analysis

With consideration for the site characteristics set out above, relevant datasets (see Appendix G), and biological survey information the following conservation significant flora and fauna species, and ecological communities may be impacted by the clearing.

Species / Ecological Community	Distance of closest record to application area (kilometres)	Suitable soil type? (flora, ecological community)	Suitable vegetation type? (flora, ecological community)	Suitable habitat features (fauna)	Are surveys adequate to identify? (Y, N, N/A)
Notoscincus butleri – Lined soil-crevice skin (Dampier) (P4)	13 556.2	N/A	N/A	Y	N/A
Dasyurus hallucatus – northen quoll (VU)	0.330	N/A	N/A	Y	N/A
Pseudomys chapmani – western pebble-mound moise, ngadji (P4)	1726.22	N/A	N/A	Y	N/A
Liasis olivaceus barroni – Pilbara olive python (VU)	0.100	N/A	N/A	Y	N/A
Lerista quadrivincula – four-lined slider (P1)	42 727.3	N/A	N/A	Y	N/A
Flora					
Rhynchosia bungarensis (P4)	181.76	Y	Y	N/A	N/A
Vigna triodiophila (P3)	914.82	Y	Y	N/A	N/A
Terminalia supranitifolia (P3)	1557.63	Y	Y	N/A	N/A
Stackhousia clementii (P3)	1773.95	Y	Y	N/A	N/A
Eragrostis surreyana (P3)	8617.65	Y	Y	N/A	N/A
Schoenus punctatus (P3)	8718.88	Y	Y	N/A	N/A
Themeda sp. Hamersley Station (M.E. Trudgen 11431) (P3)	10818.83	Y	Y	N/A	N/A

Species / Ecological Community	Distance of closest record to application area (kilometres)	Suitable soil type? (flora, ecological community)	Suitable vegetation type? (flora, ecological community)	Suitable habitat features (fauna)	Are surveys adequate to identify? (Y, N, N/A)
Oldenlandia sp. Hamersley Station (A.A. Mitchell PRP 1479 (P3)	12510.88	Y	Y	N/A	N/A
Gymnanthera cunninghamii (P3)	14455.28	Y	Y	N/A	N/A
Gomphrena sp. Martins Well (K.F. Kenneally 6116) (P1)	14657.31	Y	Y	N/A	N/A
Gomphrena cucullata (P3)	30906.3	Y	Y	N/A	N/A
Gomphrena leptophylla (P3)	30906.3	Y	Y	N/A	N/A
Atriplex lindleyi subsp. Conduplicata (P3)	31863.86	Y	Y	N/A	N/A
Tephrosia rosea var. Port Hedland (A.S. George 1114) (P1)	34062.75	Y	Y	N/A	N/A
Goodenia pallida (P1)	34328.08	Y	Y	N/A	N/A
Trianthema sp. Python Pool (G.R. Guerin & M.E. Trudgen GG 1023) (P2)	35919.58	Y	Y	N/A	N/A
Abutilon sp. Pritzelianum (S. van Leeuwen 5095) (P3)	40080.36	Y	Y	N/A	N/A
Glycine falcata (P3)	42863	Y	Y	N/A	N/A
Solanum albostellatum (P3)	42863	Y	Y	N/A	N/A
Eragrostis lanicaulis (P3)	43956.79	Y	Y	N/A	N/A

3. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	% remaining	Current extent in all DBCA managed land (ha)	% current extent in all DBCA managed land (proportion of pre-European extent)
IBRA bioregion					
Pilbara	17,808,657.04	17,731,764.88	99.57	1,801,714.98	10.12
Vegetation complex					
BVA 117	897,107.77	883,704.60	98.51	129,205.67	14.4

Appendix D – Assessment against the Clearing Principles

Assessment against the Clearing Principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The proposed clearing area contain suitable habitat for conservation significant flora, fauna and two Priority Ecological Communities (DBCA, 2007-; Western Australian Herbarium, 1998-).	Not likely to be at variance	Yes Refer to Section 3.2.1 above.
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."* Assessment: The proposed clearing area contains suitable habitat for conservation significant fauna with mapped recordings in the local area (DBCA, 2007-), however, this is not likely to be significant habitat for any of these species.	Not likely to be at variance	Yes Refer to Section 3.2.2 above.
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The proposed clearing area is unlikely to contain habitat for threatened flora species listed under the BC Act (DBCA, 2007-; Western Australian Herbarium, 1998-).	Not likely to be at variance	No
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."* Assessment: The proposed clearing area does not contain vegetation representative of any known threatened ecological community, as is listed as under the BC Act 2016.	Not likely to be at variance	No
Environmental values: significant remnant vegetation and conservation areas		
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."* Assessment: The extent of the mapped vegetation type and the native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia (EPA, 2008; Government of Western Australia, 2019; Commonwealth of Australia, 2001). Vegetation in the proposed clearing area is not considered to be part of a significant ecological linkage in the local area.	Not likely to be at variance	No
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."* Assessment:	Not likely to be at variance	No

Assessment against the Clearing Principles	Variance level	Is further consideration required?
Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.		
Environmental values: land and water resources		
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."* Assessment: The application area contains two minor non-perennial watercourses and some of the clearing is within drainage lines. However, given the watercourses only flow during seasonally high rainfall, the condition of the vegetation and location within road verges, buffers and drainage lines, the applied clearing is unlikely to cause significant environmental impact.	Is at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are not susceptible to salinity or waterlogging, and moderately susceptible to wind and water erosion. Nothing the location of the majority of the vegetation within road verges, buffers and drainage lines, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance	No
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."* Assessment: Given the watercourses intersecting the applied clearing area are minor and non-perennial, the removal of vegetation within the watercourse for the purpose of maintenance is unlikely to cause deterioration in the quality of surface or underground water.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soils and topographic contours in the surrounding area are not susceptible to waterlogging and therefore do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.	Not likely to be at variance	No

Appendix E – Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Measuring Vegetation Condition for the Eremaean and Northern Botanical Provinces (Trudgen, 1991)

Condition	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very Good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Very Poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely Degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

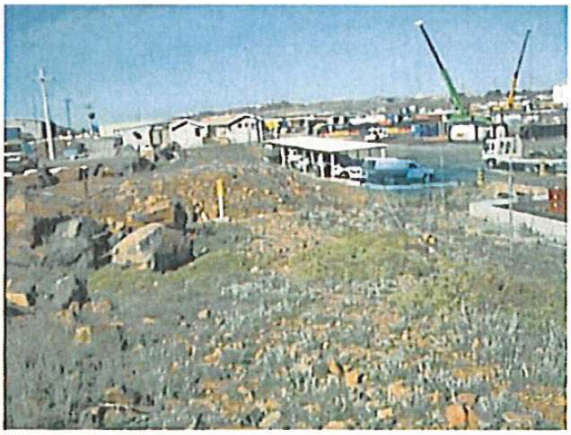
Appendix F – Biological survey information excerpts / photographs of the vegetation

Lot No	Site	Vegetation Description	Comment
471	A	**Cenchrus ciliaris* open grassland with scattered *Acacia colei, *Aerva javanica, Trianthema turgidifolia.*	Along boundary of Lot at toe of hill slope. Kapok dormant.
471	B	*Acacia bivenosa* scattered to open shrubs over *Trianthema turgidifolia* and **Aerva javanica* open low shrubs over **Cenchrus ciliaris* open grassland.	Along northern boundary of lot and along road side buffer area. Kapok dormant.
471	C	**Cenchrus ciliaris* grassland with scattered **Aerva javanica, Trianthema turgidifolia* low shrubs over vines of *Cynanchum floribundum, Ipomoea muelleri* Scattered *Acacia bivenosa, Acacia coriacea*.	Western edge of road going into Mermaid Marine. Quarantine risk area.
471	D	*Acacia pyrifolia* and *Acacia bivenosa* tall shrubs over *Cyperus vaginatus, Typha sp* with patchy *Tecticornia halocnemoides* subsp *?* and *Trianthema turgidifolia.* Scattered *Avicennia marina.*	Stormwater drain dissecting lot.
471	E	Scattered shrubs of *Ipomoea costata, Acacia bivenosa, Rhagodia eremaea, Trianthema turgidifolia* and scattered *Cymbopogon ambiguus* tussocks.	On manmade rock batter around build up industrial site south-eastern corner of 471.
471	F	*Acacia bivenosa, A. colei* open shrubs with scattered *Brachychiton acuminatus, Pittosporum phylliraeooides, Rhagodia eremaea, Ipomoea costata.*	Mixed manmade and natural rock batter around build up industrial site, south-eastern corner of 471.

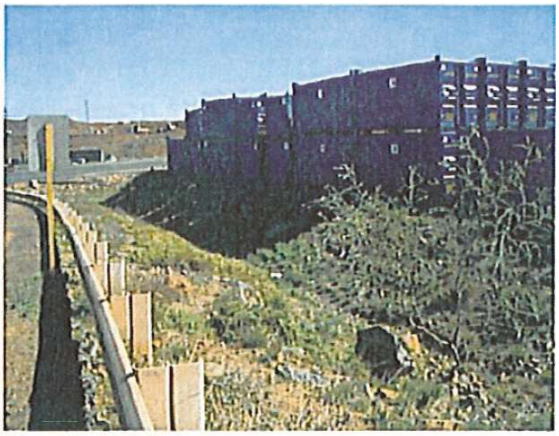
Table 1. Vegetation identified on undeveloped areas of Pilbara Ports Authority (PPA) Lot 471 (Astron, 2010).

Lot No	Site	Vegetation Description	Comment
628	H	*Triodia epactia* remnant open hummock grass with *Cymbopogon ambiguus* tussocks. Scattered herbs. Scattered low *Acacia coriacea.*	Along very edge of road verge leading into port security area.
628	I	**Aerva javanica* open shrubland (dormant) over scattered *Triodia epactia* hummocks. Scattered *Acacia coriacea, Acacia ancistrocarpa*	Very small disturbed pocket beside road at pipeline corridor intersection.
472	J	*Grevillea pyramidalis, Acacia colei* open tall shrubs over *Triodia epactia* hummock grassland. Scattered *Brachychiton acuminatus*	Corridor of rocky semi disturbed land on eastern side of entrance road to DPA offices.
472	K	**Aerva javanica* open shrubs with scattered *Acacia bivenosa* over *Cymbopogon ambiguus* tussocks.	Northern side of port road, narrow strip beside road.
472	L	*Acacia colei* open shrubs over **Aerva javanica* open shrubland with *Triodia epactia/Cymbopogon ambiguus* mixed open grassland.	Narrow corridor and drain beside road and previously disturbed land east side of DPA office.
472	N	Scattered low shrubs of *Indigofera monophylla, Pluchea tetranthera* with scattered *Triodia epactia* and *Cymbopogon ambiguus* grasses. Scattered *Brachychiton acuminatus* and *Grevillea pyramidalis* trees.	Man made rock batter beside road.
472	O	*Tephrosia rosea* var *clementii, Indigofera monophylla, Corchorus walcottii* (Burrup form) mixed open shrubs over *Triodia epactia* hummock grassland.	Small undisturbed area of land beside drain and road mid 472 lease.

Table 2. Vegetation identified on undeveloped areas of Pilbara Ports Authority (PPA) Lot 472 & 628 (Astron, 2010).

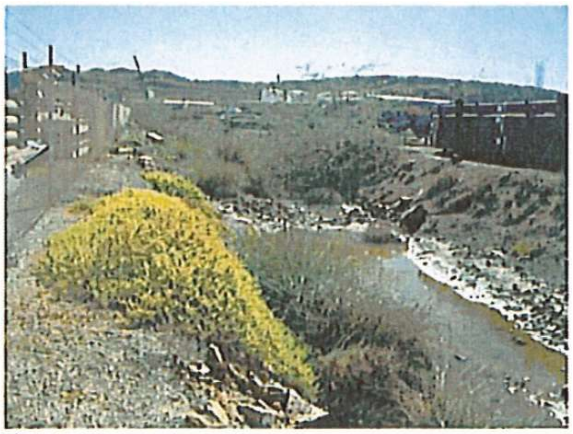


Site A – Lot 471

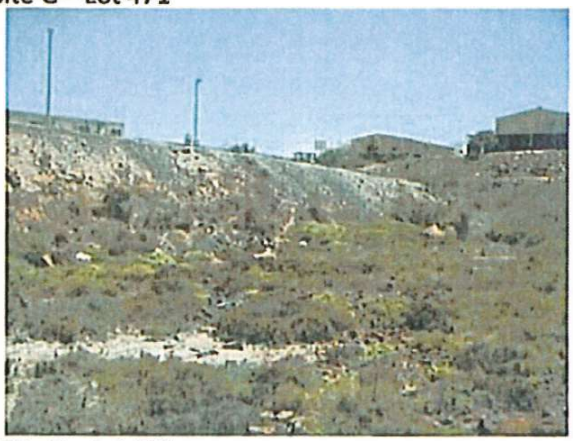


Sites B – Lot 471

Site C – Lot 471

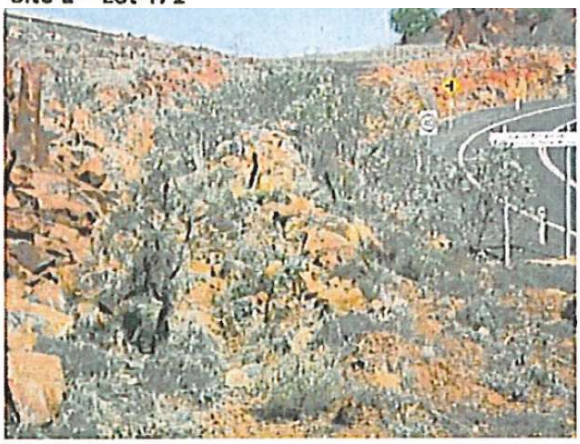


Site D – Lot 471

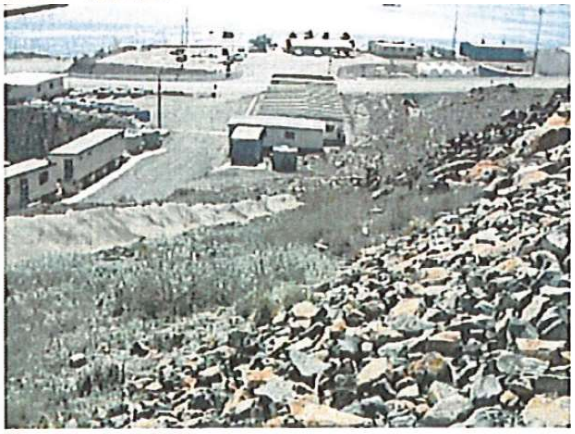


Site E – Lot 471

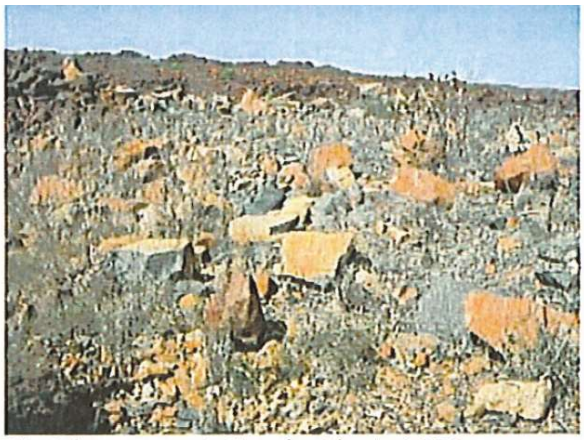
Site F – Lot 471



Site J – Lot 472



Site N – Lot 472



Site L (same vegetation for K) – Lot 472

Site O – Lot 472

Site A-O photos taken from original Astron survey from 2010.

Appendix G – References and databases

1. GIS datasets

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- Aboriginal Heritage Places (DPLH-001)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Regional Parks (DBCA-026)
- Soil and Landscape Mapping – Best Available

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

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