



# **Yara Pilbara Fertilisers Pty Ltd**

## **Yara Pilbara R-NH3 Project Impact Reconciliation Procedure**

March 2021

# Table of contents

1.	Introduction.....	2
1.1	Purpose of this document.....	2
2.	The Proposal and condition requirements.....	2
2.1	The Proposal.....	2
2.2	Condition requirements.....	2
3.	Procedure.....	3
3.1	Identification of the biodiversity values requiring offsets.....	3
3.2	Methodology to determine clearing.....	3
4.	Reporting.....	6
	References.....	7

# Figure index

Figure 1 Fauna habitats.....	10
------------------------------	----

# Appendices

Appendix A - Figure

# 1. Introduction

## 1.1 Purpose of this document

Yara Pilbara Fertilisers Pty Ltd (YPF) and ENGIE are proposing to develop a Renewable Hydrogen Plant (the Proposal). The Proposal, including associated infrastructure, will be located adjacent to the existing YPF Plant within the Burrup Strategic Industrial Area (SIA), in the Pilbara region of Western Australia (WA). The Proposal will provide a feed source for the existing YPF Plant on the Murujuga (Burrup Peninsula) to produce green ammonia.

This document has been prepared to support the referral of the Proposal under s 38 of the *Environmental Protection Act 1986* (EP Act). This document describes the Impact Reconciliation Procedure.

# 2. The Proposal and condition requirements

## 2.1 The Proposal

The Proposal is an expansion of the existing Ammonia Plant, Burrup Peninsula Project, approved under Ministerial Statement 586. The Proponent is Yara Pilbara Fertilisers Pty Ltd.

## 2.2 Condition requirements

The Proposal will modify the existing approval. As an offset is being proposed it is expected that a condition may need to be included in the existing statement addressing the requirement to implement the condition.

## 3. Procedure

### 3.1 Identification of the biodiversity values requiring offsets

A single season Level 2 fauna survey of areas within and adjacent to the YPF lease boundary (the survey area) was undertaken in March 2020 (GHD 2020). The purpose of the survey was to identify and describe the dominant fauna habitat types present, assess habitats for conservation significant fauna, assess habitat connectivity, and identify and record fauna species through a trapping program and opportunistically.

The survey identified six fauna habitats (Table 3-1). Of the habitats identified, the rocky outcropping area was determined to have the greatest value to terrestrial fauna and was therefore excluded from the Proposal footprint. Specifically, the rocky outcropping habitat was identified as being core habitat for the Pilbara Olive Python. Of the remaining habitat types that will be affected by the Proposal, the minor drainage line was identified as being used seasonally by the Pilbara Olive Python for dispersal purposes.

The Proposal includes the clearing of 1.24 ha of Minor drainage line habitat which may be used by Pilbara Olive Python. The disturbance to the Minor drainage habitat has been minimised with less than 15% of the habitat in the survey will be cleared.

The clearing of 1.24 ha of minor drainage line habitat for the Pilbara Olive Python is the only residual impact requiring an offset. However, The Proponent is proposing to offset all of the 23.09 ha of terrestrial fauna habitat that will be cleared

Appendix A provides a figure of the habitat to be offset.

### 3.2 Methodology to determine clearing

#### 3.2.1 Direct impacts

Appendix A provides a figure of the habitat to be cleared. The area of the fauna habitat to be cleared is 23.09 ha (i.e. the baseline). This area has been calculated via on ground fauna survey and GIS technology.

**Table 3-1 Fauna habitat types within the survey area, Development Envelope and Proposal Footprint**

Habitat type and description	Extent within the survey area (ha)	Extent within the Development Envelope (ha)	Extent in the Proposal Footprint (ha)
<p><b>Rocky outcropping</b>  <u>Description:</u> Areas dominated by Triodia hummock grassland interspersed with hills with extensive rock outcropping or boulder piles.  <u>Value:</u> High habitat value overall and high habitat value for fauna species of conservation significance.                      The area is a core habitat for the Pilbara Olive Python, and foraging habitat for the Peregrine Falcon and North-western Free-tail Bat.</p>	3.74	3.74	-
<p><b>Foothills</b>  <u>Description:</u> Triodia hummock grassland adjacent to rocky hills or below boulder piles. Also contains low hills with rock substrates.  <u>Value:</u> Moderate to high value overall and habitat value for fauna species of conservation significance.                      Supportive habitat for species foraging and dispersal particularly the Pilbara Olive Python.</p>	23.38	23.38	20.21
<p><b>Minor drainage line</b>  <u>Description:</u> limited to the linear drainage systems which flow amongst the hills or on the foothills. Primarily consists of a thin, linear corridor of vegetation which drains into the intertidal mudflats and coastline. Contains Triodia hummock grasslands and small shrubs.  <u>Value:</u> High habitat value overall and high habitat value for fauna species of conservation significance.                      Due to existing presence of YPF the habitat does not connect to water / floodplain habitats and is not a fauna corridor</p>	9.38	1.34	1.24
<p><b>Sand plain</b>  <u>Description:</u> present between the rocky hills between Hearson Cove and YPF and YPN. Comprises mixed shrublands over Triodia and Buffel on sand plain with scattered shrubs.  <u>Value:</u> Low to moderate value overall and Habitat value for fauna species of conservation significance.                      This habitat provides potential hunting and foraging opportunities for the Peregrine Falcon.</p>	4.98	0.69	0.01
<p><b>Water/water body</b>  <u>Description:</u> lie on the southern side of the YPF and YPN and are present due to modification of the existing floodplain and drainage lines in the area. Seasonally filled with water and flanked by chenopod species.</p>	9.69	9.69	1.47

Habitat type and description	Extent within the survey area (ha)	Extent within the Development Envelope (ha)	Extent in the Proposal Footprint (ha)
<p><u>Value:</u> High habitat value overall and high habitat value for fauna species of conservation significance.</p> <p>Five conservation significant species were recorded in this habitat type and include Caspian Tern, Gull-billed Tern, Common Sandpiper, Red-necked Stint and Common Greenshank. Other migratory species may also utilise the habitat opportunistically. Due to the amount of bird activity it is also possible Pilbara Olive Pythons may forage and reside in the rock wall on the northern side of the water body. Foraging habitat for the North-western Free-tail Bat. The Peregrine Falcon (<i>Falco peregrinus</i>) may also utilise the area for foraging only</p>			
<p><b>Floodplain</b></p> <p><u>Description:</u> Linking King Bay and Hearson Cove is a series of tidal drainage lines and floodplain. When the high tide retracts to several small pools and a minor drainage line during the low period. Vegetation was generally sparse and scattered however in areas clustered to form low samphire shrublands.</p> <p><u>Value:</u> Moderate to high value overall and habitat value for fauna species of conservation significance.</p> <p>Foraging habitat for migratory birds, North-western Free-tail Bat and Peregrine Falcon.</p>	14.75	3.13	0.16
<b>Cleared</b>	29.24	29.24	1.68
<b>Total</b>	<b>95.16</b>	<b>71.20</b>	<b>24.78</b>

## **4. Reporting**

Based on the limited clearing extent it is anticipated that the clearing will be undertaken in one action (i.e. and will not be staged). The clearing is planned for 2021.

Following the construction of the Proposal, the area of this habitat type that is cleared will be assessed against the baseline area. The assessment will be based on GIS technology.

The Impact Reconciliation Report will be issued within 24 months of the issue of the Ministerial Statement.

# References

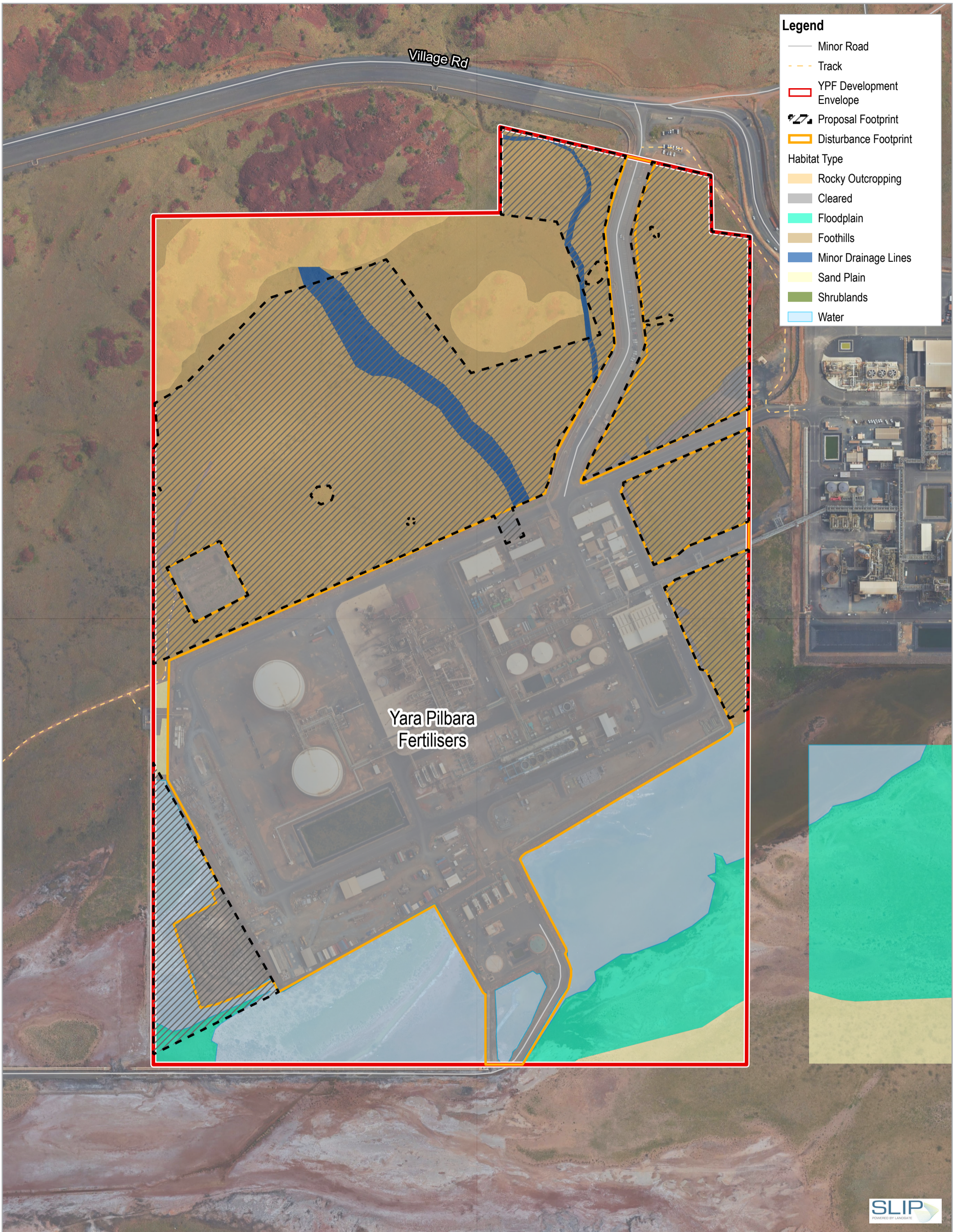
GHD PTY Ltd (2020). Renewable Hydrogen Project, Flora and Fauna Survey, unpublished report prepared for Yara Pilbara Fertilisers Pty Ltd.



# Appendices

# Appendix A - Figure

Figure 1 Fauna habitat



GHD

Level 10

999 Hay Street

T: 61 8 6222 8222 F: 61 8 9463 6012 E: permail@ghd.com

© GHD 2021

This document is and shall remain the property of GHD. The document may only be used for the purpose for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

24DJSZNHUEPC-1850682920-13/Document4

Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	M Brook	M Brook	On file	M Brook	On file	22/01/2021
1	M Brook	M Brook	On file	M Brook	On file	18/02/2021
2	M Brook	M Brook	On file	M Brook	On file	14/03/2021

[www.ghd.com](http://www.ghd.com)



Renewable Hydrogen Project									
Existing environment/ Impact	Mitigation			Significant Residual Impact	Offset Calculation Methodology				
	Avoid and minimise	Rehabilitation Type	Likely Rehab Success		Type	Risk	Likely offset success	Time Lag	Offset Quantification
<p><b>Pilbara Olive Python (<i>Liasis olivaceus barroni</i>)</b> The will result in clearing of 1.24 ha minor drainage line fauna habitat, which was identified as core habitt for the Pilbara Olive Python.</p>	<p><b>Avoid:</b></p> <ul style="list-style-type: none"> <li>Avoidance through Site selection. Clearing of high quality native fauna habitat was minimised through selection of the Proposal Footprint.</li> <li>Fauna found within the Proposal Footprint during ground disturbing activities and which require relocation, will be relocated by a trained fauna handler.</li> </ul> <p><b>Minimise:</b></p> <ul style="list-style-type: none"> <li>Clearing to be timed to minimise impacts on native fauna.</li> <li>If native fauna is disturbed during clearing it will be allowed to make its own way to adjacent vegetated areas.</li> <li>Should trenches be constructed, which native fauna are unable to escape from, they will be inspected by a "fauna spotter" on a regular basis (commencement of day shift, midday and prior to sunset). If trenches are left open overnight, ramps will be established to permit native fauna to escape.</li> <li>Any native fauna injured as a result of the Proposal construction or operation will be taken to a designated veterinary clinic or a DBCA nominated wildlife carer.</li> <li>Dust, noise and vibration management measures will be implemented during construction and operation.</li> <li>Ensure staff and contractors are provided with appropriate training to ensure conservation significant fauna and associated habitat are protected.</li> <li>Prior to conducting ground disturbance activities, ensure known locations of environmentally sensitive areas to be retained and protected from disturbance are identified on the ground by appropriate signage, fencing or flagging.</li> <li>Where possible, clearing should be undertaken on one front only, to provide an opportunity for the fauna to move out of the proposal area.</li> </ul>	N/A	N/A	1.24 ha of minor drainage line habitat to be offset via Pilbara Offset fund.					

## Preliminary offset triggers – Residual Impact Significance Model

This table is based on the Residual Impact Significance Model page 11 of the WA Environmental Offsets Guidelines (Government of WA, 2014)

Part IV Environmental Factors	Terrestrial Fauna							
	Rare flora	Threatened ecological communities	Remnant vegetation	Wetlands & waterways	Conservation areas	High biological diversity	Habitat for fauna	Other
Residual impact that is environmentally unacceptable or cannot be offset								
Significant residual impacts that will require an offset – All significant residual impacts to species and ecosystems protected by statute or where the cumulative impact is already at a critical level								
Significant residual impacts that may require an offset – Any significant residual impact to potentially threatened species and ecosystems, areas of high environmental value or where the cumulative impact may reach critical levels if not managed							Clearing of 1.24 ha of minor drainage line that provides habitat for Pilbara Olive Python	
Residual impacts that are not significant			Clearing of 23.09 ha of vegetation that is well represented in the region and local environment.				Clearing of 21.85 ha of fauna habitat, predominantly foothills habitat (20.21 ha).	