

Woodside Solar Facility Impact Reconciliation Procedure

Woodside Energy Ltd

9 April 2024 - Revision 5

Contents

1.	Introduction	5
1.1	Purpose of this report	5
2.	The Proposal and Condition Requirements	6
2.2		
2.2	2 Offset Condition Requirements	9
3.	Impact Reconciliation Procedure	15
3.1	I Identification of the Biodiversity Values Requiring Offsets	
3.2	2 Pilbara Environmental Offsets Fund (PEOF)	
3.3	3 Contributions to the PEOF	
3.4	Method to Determine Impacts	
4.	Reporting	
4.1		
4.2	2 Frequency and Timing	
4.3	3 Impact Reconciliation Reports	
5.	References	
6.	Appendices	

LIST OF TABLES

Table 3-1. Consistency with Principles of the WA Environmental Offsets Policy	. 23
Table 3-2. Consistency with Principles of the EPBC Act Environmental Offsets Policy	. 24
Table 3-3. State environmental values that will be offset under the WA EP Act	. 27
Table 3-4. Pilbara Environmental Offset Fund contribution rate (supporting habitat) for offsets required under the EPBC Act	. 28
Table 3-5. Commonwealth Protected Matters that will be offset under the EPBC Act	. 29
Table 4-1. Reporting period and frequency of the IRRs	. 32

LIST OF FIGURES

Figure 2-1. Proposal location, Development Envelope and indicative construction staging	8
Figure 3-1. Mapped vegetation types within the Development Envelope	. 16
Figure 3-2. Vegetation Condition	. 17
Figure 3-3. Fauna Habitats	. 18
Figure 3-4. Critical and Dispersal Habitats for Northern Quoll (Biota, 2023)	. 20

LIST OF ACRONYMS

Acronym	Meaning
ABS	Australian Bureau of Statistics
Biota	Biota Environmental Services
CPI	Consumer Price Index
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Cwlth)
DE	Development Envelope
DRP	Decommissioning and Rehabilitation Plan
DWER	Department of Water and Environmental Regulation
EP Act	Environmental Protection Act 1986 (WA)
EPA	Environmental Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)
GIS	Geographic Information System
На	Hectare
IBRA	Interim Biogeographic Regionalisation for Australia
IRP	Impact Reconciliation Procedure
IRR	Impact Reconciliation Report
Km	Kilometre
MNES	Matters of National Environmental Significance
MOU	Memorandum of Understanding
MW	Mega watt
MWh	Mega watt hour
MS	Ministerial Statement
PEC	Priority Ecological Community
PEOF	Pilbara Environmental Offset Fund
ТВС	To be confirmed
WA	Western Australia
Woodside	Woodside Energy Ltd

Document Version	Reason for change	Date
1	Updates in response to EPA comments	June 2023
2	Updates in response to DCCEEW comments and to address EPA Conditions	October 2023
3	Updated based on DCCEEW feedback on offset requirements	November 2023
4	Updates in response to DWER comments	March 2024
5	Update in response to DWER comments	April 2024

VERSION CONTROL

1. Introduction

1.1 Purpose of this report

This Impact Reconciliation Procedure (IRP) has been prepared to document the environmental offsets that will be implemented for the Woodside Energy Ltd (Woodside) Solar Facility (the Proposal). The purpose of the IRP is to outline the method which Woodside intends to use for calculating:

- the extent of impacts to environmental values that are required to be offset under the Western Australian (WA) *Environmental Protection Act 1986* (EP Act).
- The extent of impacts to Commonwealth Matters of National Environmental Significance (MNES), specifically threatened species, that are required to be offset, under Section 68 of the *Environment and Biodiversity Conservation Act 1999* (EPBC Act).

This IRP has been prepared in accordance with the Environmental Protection Authority (EPA) *Instructions for preparing Impact Reconciliation Procedures and Impact Reconciliation Reports* (EPA 2021) and the Commonwealth EPBC Act *Environmental Offsets Policy* (DSEWPC 2012).

2. The Proposal and Condition Requirements

2.1 The Proposal

The Proposal will be developed by Woodside (subject to securing a positive financial investment decision and all necessary regulatory approvals and commercial arrangements), approximately 15 kilometres (km) southwest of Karratha, Western Australia (WA). The Proposal will generate electricity from a large scale solar photovoltaic farm (Solar PV Farm), complemented by energy storage (Battery Storage) infrastructure, and plans to supply renewable energy for use by the Pluto LNG Facility and potentially other industrial customers on the Burrup Peninsula. The Proposal will lie within a 1101.26 ha¹ Development Envelope (DE), within which up to 878 ha of native vegetation will be cleared if all phases of the Proposal are ultimately developed.

Supporting infrastructure may include:

- a battery energy storage system
- electrical substation
- an access road connecting to Northwest Coastal Highway
- maintenance facility / workshop
- laydown areas
- offices, ablutions, and crib facilities.

The Proposal will be implemented in a phased approach, with generation capacity expanding as customer demand increases. Initially, it is expected development will consist of up to 100 MW_{AC} (instantaneous) solar farm and associated infrastructure including battery storage.

The maximum generation capacity of the Proposal if all phases are ultimately developed is expected to be up to 500 MW of electricity from following key infrastructure elements:

- Solar PV Farm: Capable of generating up to 500 MW_{AC} (instantaneous)
- Battery Storage: Battery storage capacity is estimated to be a maximum of 200 MWh for each $50MW_{AC}$ of solar generation capacity.

The Proposal will have an operational life of up to 70 years (subject to ongoing customer demand and all necessary regulatory approvals and commercial arrangements being maintained or secured (as applicable)).

The indicative infrastructure layout of the Proposal is provided within **Figure 2-1**. It should be noted that the layout and stages of construction shown in this map are indicative in nature. Detailed design will be completed as each stage is developed, with the final infrastructure layout to be dependent on known environmental and heritage constraints.

Rehabilitation activities within the DE will commence at the completion of each construction stage to ensure temporarily cleared areas do not remain in a disturbed state. The decommissioning and rehabilitation of developed areas within the DE will be undertaken at the end of the Proposal's operational life.

¹ Woodside submitted an application requesting approval to amend MS 1212 under section 45C(1) of the *Environmental Protection Act 1986*. This application was approved on 29 February 2024 and resulted in an increase to the Proposal's Development Envelope from 1,100.3 ha to 1,101.26 ha. No other changes to the Proposal were made (ie no change of the physical elements (including maximum clearing extents), operational elements or timing elements).

Rehabilitation activities will seek to re-establish vegetation values that are similar to vegetation adjacent to the Proposal. Rehabilitation will be undertaken in accordance with the *Waste Minimisation, Decommissioning and Rehabilitation Environmental Management Plan* (WMDRP) (PA1000RH0000010).



Figure 2-1. Proposal location, Development Envelope and indicative construction staging

2.2 Offset Condition Requirements

2.2.1 State Requirements Relating to Offsets

The following conditions of approval apply to the Proposal with regard to environmental offsets and this Impact Reconciliation Procedure (Ministerial Statement 1212):

B7 Pilbara Environmental Offsets Fund

- B7-1 The proponent must contribute funds to the Pilbara Environmental Offsets Fund (PEOF) calculated pursuant to condition B7-2, to achieve the objective of counterbalancing the significant residual impacts by the proposal to:
 - (1) 'Good' to 'Excellent' condition native vegetation;
 - (2) 'Roebourne Plains coastal grasslands with gilgai microrelief on deep cracking clays' priority ecological community';
 - (3) 'Horseflat land system of the Roebourne Plains' priority ecological community'; and
 - (4) Northern Quoll (*Dasyurus hallucatus*) supporting habitat, Pilbara Leaf-nosed Bat (*Rhinonicteris aurantia*) supporting habitat, Ghost Bat (*Macroderma gigas*) supporting habitat, Pilbara Olive Python (*Liasis olivaceus barroni*) supporting habitat and Grey Falcon (*Falco hypoleucos*) supporting habitat, subject to any reduction approved by the CEO under condition B7-8.
- B7-2 The proponent's contribution to the PEOF must be paid biennially, with the amount to be contributed calculated based on the clearing of native vegetation undertaken in each year of the biennial reporting period in accordance with the rates in condition B7-3. The first biennial reporting period must commence from ground disturbing activities of the environmental value(s) identified in condition B7-3.
- B7-3 Calculated on the 2021-2022 financial year, the contribution rates are:
 - (1) \$890 AUD (excluding GST) per ha of 'Good' to 'Excellent' condition native vegetation and Northern Quoll (*Dasyurus hallucatus*) supporting habitat, Pilbara Leaf-nosed Bat (*Rhinonicteris aurantia*) supporting habitat, Ghost Bat (*Macroderma gigas*) supporting habitat, Pilbara Olive Python (*Liasis olivaceus barroni*) supporting habitat and Grey Falcon (*Falco hypoleucos*) supporting habitat cleared as a result of the proposal within the Roebourne IBRA subregion.
 - (2) \$1,780 AUD (excluding GST) per ha of 'Roebourne Plains coastal grasslands with gilgai microrelief on deep cracking clays' priority ecological community' and 'Horseflat land system of the Roebourne Plains' priority ecological community' cleared as a result of the proposal within the Roebourne IBRA subregion.
- B7-4 The rates in condition B7-3 change annually each subsequent financial year in accordance with the percentage change in the CPI applicable to that financial year.
- B7-5 To achieve the objective in condition B7-1 the proponent must prepare an Impact Reconciliation Procedure, and submit to the CEO. This procedure must:
 - (1) spatially define the environmental value(s) identified in condition B7-1;

- (2) spatially define the areas where offsets required by condition B7-1 are to be exempt;
- (3) include a methodology to calculate the amount of clearing undertaken during each year of the biennial reporting period for each of the environmental values identified in condition B7-3;
- (4) state that clearing calculation for the first biennial reporting period will commence from ground disturbing activities in accordance with condition B7-2 and end on the second 30 June following commencement of ground disturbing activities;
- (5) state that clearing calculations for each subsequent biennial reporting period will commence on 1 July of the required reporting period, unless otherwise agreed by the CEO;
- (6) be prepared in accordance with Instructions on how to prepare *Environmental Protection Act 1986* Part IV *Impact Reconciliation Procedures and Impact Reconciliation Reports* (or any subsequent revisions).
- B7-6 The proponent must submit an Impact Reconciliation Report in accordance with the confirmed Impact Reconciliation Procedure in condition B7-5.
- B7-7 The Impact Reconciliation Report required pursuant to condition B7-6 must provide the location and spatial extent of the ground disturbing activities undertaken as a result of the proposal during each year of each biennial reporting period.
- B7-8 The proponent may apply in writing and seek the written approval of the CEO to reduce all or part of the contribution payable under condition B7-2 where:
 - (1) a payment has been made to satisfy a condition of an approval under the *Environment Protection and Biodiversity Conservation Act* 1999 in relation to the proposal; and
 - (2) the payment is made for the purpose of counterbalancing impacts of the proposal on matters of national environmental significance.
- B7-9 The CEO may grant approval to discount the amount payable under condition B7-1(4) if the CEO is satisfied that the payment will offset the significant residual impacts of the proposal.
- B7-10 Condition C2 applies to the confirmed Impact Reconciliation Procedure required by condition B7-5 as if it were an environmental management plan.

C2 Environmental Management Plans: Conditions Relating to Approval, Implementation, Review and Publication

- C2-1 Upon being required to implement an environmental management plan under Part B, or after receiving notice in writing from the CEO under condition C1-1 that the environmental management plan(s) required in Part B satisfies the relevant requirements, the proponent must:
 - (1) implement the most recent version of the confirmed environmental management plan; and
 - (2) continue to implement the confirmed environmental management plan referred to in condition C2-1(1), other than for any period which the CEO confirms by notice in writing that it has been demonstrated that the relevant requirements for the environmental management plan have been met, or are able to be met under another statutory decision-

making process, in which case the implementation of the environmental management plan is no longer required for that period.

C2-2 The proponent:

- (1) may review and revise a confirmed environmental management plan provided it meets the relevant requirements of that environmental management plan, including any consultation that may be required when preparing the environmental management plan;
- (2) must review and revise a confirmed environmental management plan and ensure it meets the relevant requirements of that environmental management plan, including any consultation that may be required when preparing the environmental management plan, as and when directed by the CEO;
- (3) must revise and submit to the CEO the confirmed environmental management plan if there is a material risk that the outcomes or objectives it is required to achieve will not be compiled with, including but not limited to as a result of a change to the proposal.
- C2-3 Despite condition C2-1, but subject to conditions C2-4 and C2-5, the proponent may implement minor revisions to an environmental management plan if the revisions will not result in new or increased adverse impacts to the environment or result in a risk to the achievement of the limits, outcomes or objectives which the environmental management plan is required to achieve.
- C2-4 If the proponent is to implement minor revisions to an environmental management plan under condition C2-3, the proponent must provide the CEO with the following at least twenty (20) business days before it implements the revisions:
 - (1) the revised environmental management plan clearly showing the minor revisions;
 - (2) an explanation of and justification for the minor revisions; and
 - (3) an explanation of why the minor revisions will not result in new or increased adverse impacts to the environment or result in a risk to the achievement of the limits, outcomes or objectives which the environmental management plan is required to achieve.
- C2-5 The proponent must cease to implement any revisions which the CEO notifies the proponent (at any time) in writing may not be implemented.
- C2-6 Confirmed environmental management plans, and any revised environmental management plans under condition C2-4(1), must be published on the proponent's website and provided to the CEO in electronic form suitable for online publication by the DWER within twenty (20) business days of being implemented, or being required to be implemented (whichever is earlier).

2.2.2 Commonwealth Requirements Relating to Offsets

Commonwealth Offsets are required to compensate for the potential residual significant impact on Matters of National Environmental Significance.

Details of the extent of disturbance are provided below²;

² DCCEEW advised 3 November 2023 that offsets are calculated per hectare of habitat cleared, regardless of the number of EPBC Act listed species that habitat supports.

- Disturbance to up to 878 ha of suitable habitat for the Northern Quoll, including up to 733.4 ha of tussock grassland on cracking clays, up to 104.2 ha of hummock grassland on rocky plain (Triodia on stony soils), and up to 40.4 ha of drainage line habitat.
- Disturbance to up to 878 ha of foraging habitat for the Pilbara Olive Python, including up to 733.4 ha of tussock grassland on cracking clays, up to 104.2 ha of hummock grassland on rocky plain (Triodia on stony soils), and up to 40.4 ha of drainage line habitat.
- Disturbance to up to 837.6 ha of foraging habitat for the Ghost Bat, including up to 733.4 ha of tussock grassland on cracking clays and up to 104.2 ha of hummock grassland on rocky plain (Triodia on stony soils).
- Disturbance to up to 104.2 ha of foraging habitat for the Pilbara Leaf-nosed Bat, being hummock grassland on rocky plain (Triodia on stony soils).
- Disturbance to up to 773.8 ha of foraging habitat for the Grey Falcon, including up to 733.4 ha of tussock grassland on cracking clays and up to 40.4 ha of drainage line habitat.

The following conditions of approval apply to the Proposal with regard to environmental offsets and this Impact Reconciliation Procedure (EPBC Approval 2022/09328):

OFFSETS

The purpose of the following conditions is to compensate for the residual significant impact of the Action on EPBC Act listed species.

6) The approval holder must make payments to the PEOF. The approval holder must:

- a) prior to the commencement of the Action, make a payment of at least 10 percent of the total amount that, prior to the commencement of the Action, is estimated to be the full contribution to the PEOF required under these conditions over the life of the Action.
- b) by 30 September, each second year following the commencement of the Action, determine and retain evidence of the total clearing that has occurred as part of the Action in the period from the commencement of the Action to 30 June of each second year following the commencement of the Action.
- c) by 30 October each second year following the commencement of the Action make a payment to the PEOF greater than or equivalent to, by adjustment in accordance with the CPI from the date of this approval decision until the end of the financial year which ends in the calendar year in which the payment is made, the value of \$1,653 AUD (excluding GST) on the date of this decision for each hectare or part thereof of supporting habitat cleared in the most recent two-year period ending on 30 June.
- d) within 10 business days of the date of making each payment, submit to the department evidence of that payment having been made to the PEOF and evidence of the area of clearing in respect of which the payment is made.
- e) include in each compliance report submitted to the department details of progress towards, or achievement of, the outcomes required under condition 7) of this approval for EPBC Act listed species.
- 7) In making payments to the PEOF the approval holder must contribute to one or more offset activity that:
 - a) reduces the rate of decline of the EPBC Act listed species.
 - b) ensures populations of all the EPBC Act listed species remain viable in the Pilbara region.
 - c) specifies outcomes that demonstrate offset activity achievements and performance indicators, timeframes and milestones for their achievement.

- d) includes sufficient monitoring to detect achievement of performance indicators, milestones, and the outcomes; and
- e) provides regular reporting of the specified outcomes of the offset activity or activities the payments contributed to.
- 8) The approval holder must implement the approved Impact Reconciliation Procedure. The approval holder must commence implementing the approved Impact Reconciliation Procedure by the commencement of the Action and continue to implement the approved Impact Reconciliation Procedure at least until the expiry of this approval.
- 9) The approval holder must notify the Minister in writing, within 10 business days of becoming aware that the outcomes for EPBC Act listed species specified for the PEOF activity or activities may not be achieved.
- 10) Should the Minister determine that one or more outcomes for the EPBC Act listed species required to be achieved by the PEOF payments is not likely to be achieved and or that failure has occurred the Minister may write to the approval holder asking it to provide evidence that the outcomes for EPBC Act listed species specified for the PEOF activity or activities are likely to be achieved and or that failure has not occurred or is unlikely to occur and nominate a deadline by which this must be provided.
- 11) If, after considering any information provided by the approval holder in response to a request issued in accordance with condition 10) the Minister determines that the outcome for the EPBC Act listed species required to be achieved by the PEOF is not likely to be achieved and or failure has occurred, the approval holder must, within 4 months of being so notified by the Minister, submit an Offset Strategy to the department for the Minister's approval. The objective of implementing the Offset Strategy must be to compensate for the residual significant impacts of the Action on the EPBC Act listed threatened species. The Offsets Strategy must meet the requirements of the Environmental Offsets Policy to the satisfaction of the Minister. The approval holder must implement the Offset Strategy as approved by the Minister in writing.

12) The Offset Strategy must:

- a) include summary information on the original quality of the areas impacted by the Action that will be compensated for;
- b) identify one or more suitable environmental offset(s) for the impacts of the Action on EPBC Act listed threatened species, including detailed baseline information, location, specified achievable ecological benefits and commitments to timeframes for their achievement;
- c) specify how the Offset Strategy will achieve the outcomes required under condition 7) of this approval;
- d) describe how the Offset Strategy accounts for relevant approved conservation advices, recovery plans and threat abatement plans;
- e) specify the party or parties to be responsible for implementing the proposed offset(s).
- f) describe the monitoring program(s) to be implemented that will determine progress towards, attainment of and maintenance of the ecological benefits for the EPBC Act listed threatened species at the proposed offset(s);
- g) specify how and at what frequency offset(s) management results, monitoring program findings and assessments of ecological benefits will be reported to the department and the public;
- h) detail how the offset(s) will be protected, and ecological benefits maintained, in perpetuity;
- i) an analysis of the potential risks to the successful implementation of each proposed offset (including but not limited to environmental, administrative, financial, and governance risks);

- a description of the measures that will be implemented to mitigate risk associated with each proposed offset and a description of the contingency actions that will be implemented if performance or completion criteria are not met; and
- k) how the approval holder will ensure that the measures to be implemented as part of the Offsets Strategy have no detrimental impact on any EPBC Act listed species.
- 13) If the Offset Strategy has not been approved by the Minister in writing within 6 months of the notification by the Minister under condition 11) of this approval, and the Minister notifies the approval holder that the submitted Offset Strategy is not suitable for approval, the Minister may, at least 2 months after so notifying the approval holder, approve a version of the Offset Strategy revised by the department. The approval holder must commence implementation of the approved Offset Strategy within 2 months of the approval of the Offset Strategy by the Minister in writing, or another time as specified in writing by the Minister. The approval holder must implement the approved Offset Strategy for the remainder of the life of the approval.

3. Impact Reconciliation Procedure

3.1 Identification of the Biodiversity Values Requiring Offsets

3.1.1 State Biodiversity Values

The Interim Biogeographic Regionalisation for Australia (IBRA) divides the continent into 89 bioregions and 419 sub regions. IBRA regions represent a landscape-based approach to classifying the land surface, including attributes of climate, geomorphology, landform, lithology and characteristic flora and fauna. The IBRA is a key tool in identifying land for conservation.

The WA EPA identified in 2012, an increase in project applications and the clearing of native vegetation within the Pilbara IBRA Region. The Department of Water and Regulation (DWER) invests contributions to the Pilbara Environmental Offsets Fund (the Fund) to assist strategic biodiversity conservation projects across the Pilbara.

The potential direct impacts to vegetation by type, Priority Ecological Community (PEC) and condition class, due to clearing for construction of the Proposal components are summarised below. The indicative impact areas for each vegetation type and condition class are estimated based on the proportion of the vegetation type and condition within the Proposal DE. The specific impact footprints for each Proposal component will be determined following a review of site constraints including ecological, hydrological, heritage, geotechnical and topographic aspects.

The Proposal has potential to result in clearing of up to 878ha of native vegetation in 'Good' to 'Excellent' condition if all phases of the Proposal are ultimately developed.

Mapped vegetation types and their condition within the DE, are shown within **Figure 3-1** and **Figure 3-2**. Fauna habitat types are shown in **Figure 3-3**.

The following impacts to environmental values are required to be offset:

- Disturbance to up to 311.4 ha of vegetation in 'Good' to 'Excellent condition', (in addition to vegetation that is part of a PEC).
- Disturbance to up to 40 ha of Roebourne Plains coastal grasslands with gilgai microrelief on deep cracking clays (Roebourne Plains gilgai grasslands) PEC (Priority 1) in any condition.
- Disturbance to up to 526.6 ha of Horseflat land system of the Roebourne plains PEC (Priority 3) in any condition.
- Disturbance to up to 878 ha of Northern Quoll supporting habitat including 104.2 ha of hummock grassland on rocky plain (Triodia on stony soils), 40.4 ha of minor drainage line and 733.4 ha of tussock grassland on cracking clays habitat types.
- Disturbance to up to 104.2 ha of Pilbara Leaf-nosed Bat supporting habitat being hummock grassland on rocky plain (Triodia on stony soils).
- Disturbance to up to 837.6 ha of Ghost Bat supporting habitat including 104.2 ha of hummock grassland on rocky plain (Triodia on stony soils) and 733.4 ha of tussock grassland on cracking clays habitat types.
- Disturbance to up to 878 ha of Pilbara Olive Python supporting habitat including 104.2 ha of hummock grassland on rocky plain (Triodia on stony soils), 40.4 ha of minor drainage line and 733.4 ha of tussock grassland on cracking clays habitat types.
- Disturbance to up to 773.8 ha of Grey Falcon supporting habitat including 40.4 ha of minor drainage lines and 733.4 ha of tussock grassland on cracking clays habitat types.



Figure 3-1. Mapped vegetation types within the Development Envelope



Figure 3-2. Mapped vegetation condition within the Development Envelope



Figure 3-3. Mapped fauna habitat types within the Development Envelope

3.1.2 Commonwealth Biodiversity Values

Following submission of the Commonwealth environmental referral, the Department of Climate Change, Energy, the Environment and Water (DCCEEW) determined the Proposal to be a Controlled Action. DCCEEW identified the following threatened species, under the EPBC Act, as likely be significantly impacted by the Proposal:

- Northern Quoll (Dasyurus hallucatus)
- Pilbara Olive Python (Pilbara subspecies) (Liasis olivaceus barroni)
- Ghost Bat (Macroderma gigas)
- Pilbara Leaf-nosed Bat (*Rhinonicteris aurantia* (Pilbara Form))
- Grey Falcon (Falco hypoleucos).

Woodside commissioned Biota Environmental Services (Biota) to provide an assessment of both the likelihood of these species' occurrence with the DE and habitat value of the species listed above within the DE. Key findings of this assessment were as follows:

Northern Quoll

Northern Quoll were recorded at three locations within the DE and its immediate surrounds, based on motion camera and scat recordings. All occurrences were associated with minor drainage lines, that run through the eastern portion of the DE. A small area of tree-lined creek was recorded within the south-eastern corner of the DE which was considered to contain trees of sufficient size to form hollows that could potentially be used as Northern Quoll den sites. An occurrence of the Northern Quoll was subsequently recorded within this location via the motion cameras. Whilst this area of creek line was noted as small (0.81 ha), it was assessed as containing critical habitat³ for the Northern Quoll (**Figure 3-4**). This habitat will not be disturbed.

It was determined that the vegetated eastern drainage lines (50.71 ha) may be used as dispersal habitat by Northern Quoll, when moving from potential denning habitat (rocky areas to the south of the DE), or for transient use when the drainage line ephemeral pools contain water (**Figure 3-4**). Up to 1.0 ha of the is habitat may be cleared for the establishment of access tracks.

Whilst considered as potential periodic foraging habitat, the remaining habitat within the DE was largely considered unsuitable for Northern Quoll denning or dispersal. This was due to an absence of suitable den or shelter locations and reduced vegetative cover, thereby increasing the vulnerability of Northern Quolls to predation by foxes, feral cats, and dingos.

³ Based on Commonwealth referral guidelines (DoE, 2016), critical habitat for Northern Quoll is regarded as:

Rocky habitats such as ranges, escarpments, mesas, gorges, breakaways, boulder fields, major drainage lines or tree-lined creeklines.

[•] Structurally diverse woodland or forest areas containing large diameter trees, termite mounds or hollow logs.

[•] Dispersal and foraging habitat associated with or connecting populations important for the long-term survival of the Northern Quoll.



Figure 3-4. Critical and Dispersal Habitats for Northern Quoll (Biota, 2023)

Pilbara Olive Python

No occurrences of Pilbara Olive Python were recorded during the survey, with suitable habitat limited to small ephemeral granite pools within the north-eastern corner of the DE, and minor drainage lines in the eastern portion of the DE. Water samples were collected from the pools and underwent eDNA analysis to detect the presence of Pilbara Olive Python DNA. This analysis did not detect any evidence of Pilbara Olive Python's in the proposal DE.

The Pilbara Olive Python has been recorded in 17 localities in the Pilbara region, including Ophthalmia Dam (Helix Molecular Solutions, unpublished), Pannawonica, Millstream, Tom Price and the Burrup Peninsula. The Burrup Peninsula records are the records nearest the DE).

Although widespread on the Burrup Peninsula 11 km to the north of the DE, the approximately 8 km wide expanse of salt flat areas between the Burrup Peninsula and the DE acts as a geographic barrier to the movement of Pilbara Olive Pythons.

Given the above, Pilbara Olive Pythons are unlikely to occur within the DE. Critical habitats that provide refuge for the species (ie. gorges, gullies, caves and major drainage lines) are not present within the DE. Whilst the small ephemeral granite pools could provide foraging habitat, these were heavily impacted by grazing cattle and did not contain any suitable nearby shelter sites. As such Biota concluded that the DE does not contain critical or supporting habitat for the Pilbara Olive Python.

Ghost Bat

No Ghost Bats were recorded, with an absence of suitable roosting locations (ie. caves, rock crevices, disused mine adits) within the DE. Due to the absence of suitable roosting or breeding locations, the DE is not considered to represent habitat critical to the survival of the species.

Previous studies from tracked individuals have demonstrated foraging ranges of up to 12 km from their diurnal roosting location (Augusteyn et al. 2017, Biologic 2019), and even occasionally up to 20 to 30 km at night (Biologic 2019). Previous tracking of individuals in the Pilbara have indicated a preferred foraging habitat of thin mature woodland over patchy or clumped tussock or hummock grass on sand or stony ground.

Given these habitat preferences and their ability to range over long distances, the Ghost Bat is considered to have the potential to utilise the DE as foraging habitat.

Pilbara Leaf-nosed Bat

No Pilbara Leaf-nosed Bats were detected during the survey, with an absence of suitable roosting or breeding habitat within both the DE and the rocky hills immediately to the south. The DE contains marginally suitable foraging habitat for Pilbara Leaf-nosed bat, however the absence of any nearby roost sites and absence of any recent records in the region suggests they are unlikely to occur within the DE. Given this, no Pilbara Leaf-nosed Bat critical or supporting habitat is considered to be present in the DE.

Grey Falcon

The DE is considered to contain suitable foraging habitat for the Grey Falcon, due to the sparsely timbered tussock grasslands and minor drainage lines with periodic ephemeral waterholes. Due to the absence of suitable tall trees or man-made structures, no roosting or breeding areas are considered to occur within the DE.

With no roosting or nesting sites present, the DE does not contain any habitat critical to survival of the Grey Falcon. The suitable foraging habitat that is present throughout the DE is considered to be supporting habitat for the species.

3.1.2.1 Offsets requirements

The potential direct impacts to fauna habitat by species due to clearing for construction of the Proposal components are summarised below. The indicative impact areas for each habitat type estimated based on the proportion of the vegetation type and condition within the Proposal DE. The specific impact footprints for each Proposal component will be determined following a review of site constraints including ecological, hydrological, heritage, geotechnical and topographic aspects.

Fauna habitat types are shown in **Figure 3-3**.

The following impacts to environmental values are required to be offset by DCCEEW based on their interpretation of the habitat value for threatened species, which is based on information provided by the Threatened Species Scientific Committee and in reference to the relevant threatened species abatement plan.

- Disturbance to up to 878 ha of suitable habitat for the Northern Quoll, including up to 733.4 ha of tussock grassland on cracking clays, up to 104.2 ha of hummock grassland on rocky plain (Triodia on stony soils), and up to 40.4 ha of drainage line habitat.
- Disturbance to up to 878 ha of foraging habitat for the Pilbara Olive Python, including up to 733.4 ha of tussock grassland on cracking clays, up to 104.2 ha of hummock grassland on rocky plain (Triodia on stony soils), and up to 40.4 ha of drainage line habitat.
- Disturbance to up to 837.6 ha of foraging habitat for the Ghost Bat, including up to 733.4 ha of tussock grassland on cracking clays and up to 104.2 ha of hummock grassland on rocky plain (Triodia on stony soils).
- Disturbance to up to 104.2 ha of foraging habitat for the Pilbara Leaf-nosed Bat, being hummock grassland on rocky plain (Triodia on stony soils).
- Disturbance to up to 773.8 ha of foraging habitat for the Grey Falcon, including up to 733.4 ha of tussock grassland on cracking clays and up to 40.4 ha of drainage line habitat.

3.2 Pilbara Environmental Offsets Fund (PEOF)

Woodside will offset residual significant impacts resulting from the clearing of vegetation (including PECs), and removal of supporting habitat for threatened species via monetary contributions to the PEOF. All offset contributions associated with the Proposal (State and Commonwealth) will be paid into the Pilbara Environmental Offsets Fund (PEOF), regardless of the approval mechanism.

The WA Government's Pilbara Conservation Strategy outlines a landscape-scale approach to biodiversity conservation across the Pilbara region and provides strategic direction for conservation actions that may be funded from a variety of sources including through offsets to counterbalance the residual impacts of infrastructure projects, leading to better biodiversity conservation outcomes (DWER, 2019). In 2016, the WA Government established the PEOF with the aim of maximising the value of environmental offsets from projects in the Pilbara. The fund facilitates the coordinated delivery of environmental offset projects within the Pilbara bioregion of WA. The fund enables larger and more strategic landscape-scale projects than would occur if individual offset projects were delivered independently, leading to better biodiversity conservation outcomes (DWER, 2019). The fund combines money from individual offset payments required under the WA EP Act and the EPBC Act into a special purpose account. Projects funded by the fund address the priorities of the Pilbara Conservation Strategy described above (DPAW, 2017).

The top four outcomes that will be delivered through the Pilbara Conservation Strategy are (DPAW, 2017):

- landscape-scale conservation through improved management of key threats
- improved condition of threatened and other important species and communities

- evidence-based conservation management
- conservation through partnerships.

On 19 November 2020, a Memorandum of Understanding (MOU) was established between the WA and Australian Governments to enable the fund to receive money required as a condition under Part 9 or 10 of the EPBC Act. Under the MOU, the Commonwealth Minister for the Environment, or their delegate, will consider the use of the fund to achieve and offset on a case-by-case basis. In each case, they will consider whether the fund has the appropriate mechanisms in place to ensure the successful delivery of the offset in accordance with the conditions of approval, the EPBC Environmental Offsets Policy and commitments in the MOU (DAWE, 2020).

Table 3-1 outlines how the use of fund is consistent with the Principles of the WA Environmental Offsets Policy.

Table 3-1. Consistency	with Principle	s of the WA	Environmental	Offsets Policy

Principle	How Principle is Addressed
Environmental offsets will only be considered after avoidance and mitigation options have been pursued.	As detailed in Environmental Referral Supporting Document for the Proposal, impacts to vegetation, flora and fauna habitat have been avoided and mitigated as far as practicable.
Environmental offsets are not appropriate for all projects.	Woodside considers the use of offsets appropriate for this Proposal. Impacts to flora, vegetation and fauna habitat have been avoided and mitigated as far as practicable. The use of the PEOF is considered appropriate given the land tenure in the Pilbara which is a mix between crown land, mining and pastoral interests and native title. This tenure makes land acquisition and access for direct offsets difficult. Woodside notes that the PEOF was established specifically to overcome these barriers.
Environmental offsets will be cost-effective, as well as relevant and proportionate to the significance of the environmental value being impacted.	The offset rates paid to the PEOF are established by DWER and are 'based on the level of biodiversity protection in the region, and cumulative impacts to environmental values, including high quality vegetation and the conservation of significant-species habitat' (DWER, 2019). Under this structure, a higher rate will be paid for environmental values that are deemed more significant (such as PECs).
	The PEOFs approach of combining money from offsets from multiple proposals to deliver larger and more strategic landscape-scale projects than would occur if individual offset projects were delivered independently, effectively ensures cost effective offsets are applied that are relevant and proportionate to the environmental values that are being impacted.
Environmental offsets will be based on sound environmental information and knowledge.	The PEOF has an Implementation Plan which outlines the criteria that are used to select projects that are supported through the fund. These criteria ensure that funds contributed as offsets are utilised to implement offset projects based on sound environmental information and knowledge.

Principle	How Principle is Addressed
Environmental offsets will be applied within a framework of adaptive management.	The PEOF Implementation Plan states that "The fund will be adaptively managed to plan, implement, monitor, evaluate and adjust its delivery over time" (DWER, 2019). Further, the Governance Framework for the fund states that "Evaluation of the strategic objectives, outcomes and priorities of the Implementation Plan will be completed every three years to inform adaptive management of the Fund, consistent with Principle 5 of the WA Offset Policy which is that 'environmental offsets will be applied within a framework of adaptive management'" (DWER, 2019).
Environmental offsets will be focused on longer term strategic outcomes.	The PEOF Implementation Plan states that the strategic focus items of the fund relevant to long term strategic outcomes include that projects will maintain a strategic, landscape-scale focus, and projects will balance significant impacts identified in State and Commonwealth approvals, reducing duplication, and allowing strategic project delivery.
	It is also noted the PEOF's approach of combining money from offsets from different proposal allows the delivery of larger and more strategic landscape-scale projects than would occur if individual offset projects were delivered independently.

Table 3-2 outlines how the use of fund is consistent with the Principles of the EPBC Act Environmental Offsets Policy.

Table 3-2. Consistency with Principles of the EPBC Ac	ct Environmental Offsets Policy
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Principle	How Principle is Addressed
Suitable offsets must deliver an overall conservation outcome that improves or maintains the viability of the protected matter.	Provision of funding to the fund as part of the proposed offset strategy will be used in priority areas in the Pilbara and enhance biodiversity and ecosystem resilience which will result in an outcome that improves the viability of the populations of the impacted species.
	The MOU between WA and the Commonwealth in relation to the fund means that all monies paid into the fund as a result of an EPBC Act condition of approval will be spent for the benefit of the relevant protected matter.
Suitable offsets must be built around direct offsets but may include other compensatory measures.	The fund provides funding that is pooled with other offsets and used to implement direct offsets that address the priorities of the Pilbara Conservation Strategy.
Suitable offsets must be in proportion to the level of statutory protection that applies to the protected matter.	The offset rates paid to the fund are established by DWER and are 'based on the level of biodiversity protection in the region, and cumulative impacts to environmental values, including high quality vegetation and the conservation of significant-species habitat (DWER 2019)'. These rates include base rates for good to excellent quality vegetation and 'higher rates' for specialised environmental values such as specialised fauna habitat.
	It is anticipated that the lower rate will apply, given the intention to offset clearing of supporting habitat. It is

Principle	How Principle is Addressed	
	considered that the proposed offsets are proportionate to the level of statutory protection that applies to the protected matter.	
Suitable offsets must be of a size and scale proportionate to the residual impacts on the protected matter.	As discussed in Section 3.1 , the residual impacts of the Proposed Action are expected to be limited to the loss of supporting habitat for threatened species. Given that the offsets rates paid to the fund are calculated on a per hectare basis, it is considered that this mechanism provides an offset that is proportionate in size and scale to the residual impacts on the protected matter.	
Suitable offsets must effectively account for and manage the risk of the offset not succeeding.	The funds approach of combining money from offsets under the EP Act and EPBC Act to deliver larger and more strategic landscape-scale projects than would occur if individual offset projects were delivered independently, effectively manages the risk of offsets not succeeding when compared to smaller individual offset projects implemented by Proponents. The benefit of contributing to strategic landscape-scale projects also includes the opportunity to achieve net ecological gain due to a coordinated approach and the ability to achieve positive biodiversity outcomes on a large scale outside of the project's disturbance footprint.	
Suitable offsets must be additional to what is already required, determined by law or planning regulations, or agreed to under other schemes or programs.	The proposed offsets are additional to what is already required, determined by law or planning regulations, or agreed to under other schemes or programs.	
Suitable offsets must be efficient, effective, timely, transparent, scientifically robust and reasonable.	The fund has an Implementation Plan which outlines the criteria that are used to select projects that are supported through the fund. These criteria include (DWER, 2019):	
	"Be designed to align with the offset principles of the WA and Australian governments and the implementation principles in Chapter 2 (of the Implementation Plan) so that the outcomes of projects:	
	 tangibly and measurably improve environmental matters 	
	 are value for money and have a high chance of success 	
	 are strategic and have landscape-scale outcomes where achievable 	
	 are long term and enduring (ideally outcomes will endure for at least 20 years) 	
	 are additional to activities that are already required as a condition of approval or lease or a legislative requirement. 	
Suitable offsets must have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced.	The fund has a Governance Framework which establishes transparent decision-making processes, clarity of roles and responsibilities, and guidance for project delivery. The funds Implementation Plan which sets the funds strategic focus for a five-year period. The Implementation Plan defines the process to plan, implement, monitor, evaluate	

Principle	How Principle is Addressed
	and improve delivery of projects and the fund over time (DWER, 2019).

3.3 Contributions to the PEOF

3.3.1 Fund Contribution Required by WA EP Act

To offset impacts to State environmental values, Woodside will make financial contributions to the PEOF. A summary of the WA environmental values requiring offset and the applicable PEOF contribution rates are provided in **Table 3-3**.

The offset contribution was determined in accordance with the Financial Year 2021 – 2022/23 rates within Table 1 of the Fund contribution section of the Pilbara Environmental Offsets Fund webpage (Gov WA 2024). Table 1 outlines the rate per hectare based on the financial year and the Roebourne IBRA sub-region. The rate per hectare of clearing will be annually adjusted in accordance with the Perth Consumer Price Index (CPI) fluctuations from 1 July 2023. The Australian Bureau of Statistics (ABS) publish the annual CPI for Australian cities in September of each year and will be referenced when calculating the annual adjustments.

For areas that are offset applicable under both the State and Commonwealth approvals, the offset will be paid once only, at the highest applicable rate (i.e. no overlap between EP Act MS and EPBC Act approval offset payable layers). Refer to **Table 3-3** and **Table 3-5** for a breakdown of offset contributions under both State and Commonwealth Approvals.

Environmental value to be offset	Indicative area to be offset (ha)	Environmenta I value rating, category	Environmental value justification	IBRA subregion	Offset Rate/ha 4	Offset Total⁵
Vegetation in Good or Excellent condition	878 ha	Base rate	Direct impacts to native vegetation in Good to Excellent condition.	Roebourne	\$890	\$0
Priority 1 PECs in any condition	40 ha	Higher rate	Direct impacts to Roebourne Plains coastal grasslands with gilgai microrelief on deep cracking clays PEC (Priority 1).	Roebourne	\$1,780	\$71,200
Priority 3 PECs in any condition	526.6 ha	Higher rate	Direct Impacts to Horseflat land system of the Roebourne plains PEC (Priority 3).	Roebourne	\$1,780	\$937,348
Northern Quoll supporting habitat	878 ha	Base rate	Direct impacts to minor drainage lines, hummock grassland on rocky plain (Triodia onstony soils) and tussock grassland on cracking clays habitat types.	Roebourne	\$890	\$0
Pilbara Leaf-nosed Bat supporting habitat	104.2 ha	Base rate	Direct impacts to hummock grassland on rocky plain (Triodia onstony soils) habitat type.	Roebourne	\$890	\$0
Ghost Bat supporting habitat	837.6 ha	Base rate	Direct impacts to hummock grassland on rocky plain (Triodia on stony soils) and tussock grassland on cracking clays habitat types.	Roebourne	\$890	\$0
Pilbara Olive Python supporting habitat	878 ha	Base rate	Direct impacts to minor drainage lines, hummock grassland on rocky plain (Triodia onstony soils) and tussock grassland on cracking clays habitat types.	Roebourne	\$890	\$0
Grey Falcon	773.8 ha	Base rate	Direct impacts to minor drainage lines and tussock grassland on cracking clays habitat types.	Roebourne	\$890	\$0
Total Amount (State requirement)						\$1,008,548

Table 3-3. State environmental values that will be offset under the WA EP Act

⁴ Overlapping offsets to be paid at higher rate. For example - for 'Vegetation in Good or Excellent Condition'; 566.6 ha has been offset at higher rate (PEC's - \$1,780) and 311.4 ha has been offset as MNES habitat at higher rate under Commonwealth requirements (\$1,653).

⁵ An total offset of zero dollars assumes payment at the higher rate through Commonwealth and/or State process.

3.3.2 Fund Contribution Required by Commonwealth EPBC Act

To offset impacts to EPBC Act listed threatened species, Woodside will make the financial contributions to the PEOF presented within **Table 3-4** A summary of the environmental values requiring offset under the EPBC Act and offset totals are provided in **Table 3-5**.

Table 3-4. Pilbara Environmental Offset Fund contribution rate (supporting habitat) for offsets required under the EPBC Act

Category	Description	Offset Rate/ha
Supporting habitat	Supporting habitat means habitat that facilitates the survival of protected matters protected under the EPBC Act, which is not necessarily linked to or supporting of breeding habitat (e.g., denning, roosting, nesting) and/or within the home range that supports these breeding activities but is habitat that is considered to support the survival of the species for foraging, dispersal, or water sources.	\$1,653

EPBC Act Protected Matter to be Offset	Amount of area to be offset (ha)	Protected Matter Rating Category	Environmental value justification	Offset Rate/h a ⁶	Offset Total	Explanatory note
Terrestrial Fauna	104.2 ha	Supporting habitat	Clearing of Hummock grassland on rocky plain (Triodia on stony soils) habitat which is supporting habitat for Northern Quoll, Pilbara Leaf- nosed Bat, Ghost Bat and Pilbara Olive Python.	\$1,653	\$172,243	The total amount of this habitat type within the DE, outside the PEC areas (PEC areas offset at a higher rate under the State approval), is greater than the maximum clearing extent allowed under the approvals. As the specific location of the detailed design elements within the DE are not yet known, a worst case amount of clearing of this habitat type has been reported in line with the maximum extent permitted.
	40.4 ha	Supporting habitat	Clearing of minor drainage line habitat which is supporting habitat for Northern Quoll, Pilbara Olive Python and Grey Falcon.	\$1,653	\$66,781	The total amount of this habitat type within the DE, outside the PEC areas (PEC areas offset at a higher rate under the State approval), is greater than the maximum clearing extent allowed under the approvals. As the specific location of the detailed design elements within the DE are not yet known, a worst case amount of clearing of this habitat type has been reported in line with the maximum extent permitted.
	166.8 ha	Supporting habitat	Clearing of tussock grassland on cracking clays habitat which is supporting habitat for Northern Quoll, Ghost Bat, Pilbara Olive Python and Grey Falcon.	\$1,653	\$275,720	The specific location of the detailed design elements within the DE are not yet known, therefore a worst case offset amount has been reported based on the remaining clearing allowed up to the maximum clearing extent permitted (total of 878 ha across the PEC and non-PEC habitat areas).
	Total Amount (Commonwealth requirement)			\$\$514,744		
	Initial Contribution ⁷			\$51,474		

 Table 3-5. Commonwealth Protected Matters that will be offset under the EPBC Act

⁶ DCCEEW advised 3 November 2023 that offsets are calculated per hectare of habitat cleared, regardless of the number of EPBC Act listed species that habitat supports.

⁷ A payment of 10% of the total offsets across all phases of the Proposal (Commonwealth requirement) that may be paid into the PEOF, must be paid prior to commencement of the action.

3.4 Method to Determine Impacts

3.4.1 Vegetation and Fauna Habitat Baseline Data

Baseline vegetation and fauna habitat types and associated condition within the DE was previously mapped as part of field surveys completed in July 2019 (VLA 2019) (see **Figure 3-1** and **Figure 3-**2). A follow up wet season survey (VLA 2021) was subsequently undertaken in April and June 2020 to address the limitations of the reconnaissance survey over the Roebourne Plains, thereby enabling a comprehensive identification of any PECs. A targeted fauna survey was then undertaken by Biota (2023) to provide an assessment of both on the on the likelihood of threatened species' occurrence with the DE and habitat value, including the identification of any critical and supporting habitat. The information provided in these surveys form the baseline for the determination of impacts for this IRP.

3.4.2 Determining the Extent of Clearing

On an annual basis (when ground disturbing activities have occurred), the Proponent will utilise onground surveys and satellite imagery in combination with baseline mapping shapefiles and Geographic Information System (GIS) technology to determine the extent of each vegetation type present within the DE. The methods used will be not inconsistent with those used during the baseline surveys undertaken by VLA (2019). This includes adopting methods in accordance with the EPA Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016). The following information will be collected at each data collection site (50 m x 50 m quadrat):

- Site number
- GPS co-ordinates
- Vegetation description
- Condition
- All species present
- Percent Foliar Cover (PFC) of all species present
- Photo.

The previous baseline footprint will be overlaid on the report period data to identify new clearing and rehabilitation activities. The assessment will be used to compare the extent of each vegetation type at the end of each financial year with the 'baseline' state described above to enable calculation of the required offset payments.

Vegetation and Flora surveys undertaken within the DE (VLA 2021; VLA 2023) confirm there are areas within the DE that have been historically disturbed (cleared), these areas have therefore been excluded from the clearance and offset calculations. Further, a previous clearing permit (CPS 8782/1) was obtained by Woodside Power Pty Ltd which overlaps the DE. Clearing was undertaken under this clearing permit (CPS 8782/1) for geotechnical works between October 2020 and March 2021. The investigation comprised a total of 44 test pits and 34 boreholes. This activity resulted in a total of 5.06 ha of native vegetation being cleared (approved limit was 11.93 ha). A subsequent site survey indicated that the clearing impact areas are regenerating, and that no revegetation is considered to be required as the sites are small and are expected to continue to naturally regenerate successfully. Therefore, these areas have not been excluded from the extent of clearing and are not exempt from the offsets associated with the Proposal. No other approval mechanisms (Ministerial Statements, Native Vegetation Clearing Permits nor Programme of Works) have been identified within the DE. Therefore, the offset requirements of MS 1212 will not be affected by the other approval mechanisms.

Given the phased nature of the Proposal, with potentially long periods between new ground disturbing works, the Proponent will notify DWER and DCCEEW of commencement and completion timeframes prior to any ground disturbance activities.

However, reporting will be prepared every 2 years (regardless of whether clearing has been undertaken) as required by MS 1212, with each environmental value reported separately. This includes impacts to each IBRA subregion reported separately.

3.4.3 Offset contribution determination

Once the cleared footprint has been finalised for the relevant reporting period, the Proposals offset contribution can be determined. This contribution is based on where the clearing footprint and offset applicable areas intersect.

For areas that are offset applicable under both the State and Commonwealth approvals, the offset will be paid once only, at the highest applicable rate (i.e. no overlap between MS and EPBC Act approval offset payable layers) (Refer to **Table 3-3** and **Table 3-5**).

Offset contributions for Priority 1 and 3 Priority Ecological Communities (PEC) in any condition are offset at the highest rate of \$1,780⁸ first. Followed by Commonwealth contributions at a rate of \$1,653⁸. It is also noted that all offset contributions associated with the Proposal (State and Commonwealth) will be paid into the Pilbara Environmental Offsets Fund (PEOF) regardless of approval mechanism.

Data and supporting spatial files will be submitted biennially in the IRRs.

Following the determination of offset liability, Woodside will source the appropriate funds, aligning with internal accounting processes. Following submission and approval of IRRs (biennial), DWER will issue an invoice, which Woodside will pay by transferring the required funds into the prescribed accounts. The Company will submit evidence of each payment made to the prescribed fund to DCCEEW within 10 business days of the date of making the payment.

3.4.3.1 Initial Offset Contribution

To meet the requirements of the EPBC Act Offsets Policy, an initial contribution of 10% of the total calculated offset contribution for MNES values is required to be paid into the PEOF prior to the commencement of the Action (as defined by EPBC Act approval decision notice 2022/09328).

Payment will be made within one (1) month of receipt of the DWER invoice (see Table 3-3 and Table 3-5 for estimated contribution calculations). Since the initial payment is made prior to the commencement of the action, this amount will be subtracted from the subsequent offsets payable prior to CPI adjustments being applied, with CPI then applied only to any remaining amount owing for that period.

⁸ The rate per hectare of clearing will be annually adjusted in accordance with the Perth Consumer Price Index (CPI) fluctuations from 1 July 2023. The Australian Bureau of Statistics (ABS) publish the annual CPI for Australian cities in September of each year and will be referenced when calculating the annual adjustments.

4. Reporting

4.1 Overview

Woodside will prepare IRRs to document the clearing undertaken. The IRR will provide the location and spatial extent of the clearing undertaken during each financial year of a biennial reporting period. The IRRs will be provided to DWER and DCCEEW to enable determination of the PEOF contributions payable.

Each IRR will be structured in the manner prescribed in the EPAs *Instructions on How to Prepare EP Act Part IV* Impact Reconciliation Procedure *s and* Impact Reconciliation Report *s, March* 2021.

Each IRR will include the following information:

- identification of the relevant Ministerial Statement and the relevant EPBC Act approval decision notice, applicable conditions, and the reporting period
- quantification of clearing undertaken during the reporting period, broken down into the environmental values identified in **Table 3-3** and Protected Matters identified in **Table 3-5** of this IRP
- information from surveys supporting the quantification of clearing undertaken, including spatial data, representing areas of ground disturbance (if deemed relevant) and supporting reports
- a quantitative estimate of clearing expected in the future.

4.2 Frequency and Timing

Clearing is anticipated to be completed in several stages. The first phase of the Proposal is expected to commence ground disturbing activities within twelve (12) months upon receipt of State and Commonwealth environmental approval, however exact timing will be subject to all commercial and regulatory authorisations being in place.

The reporting schedule is provided in **Table 4-1**.

Table 4-1. Reporting period and frequency of the IRRs

Biennial Period	Action	Timing
Post approval	Ministerial Statement issued	3 November 2023
	EPBC Act Approval issued	27 November 2023

Biennial Period	Action	Timing
	Commencement of Proposal ⁹	For MS 1212; Commencement of the proposal is defined as the start of ground disturbance activities (Geotechnical surveys) which are anticipated to commence end of April 2024.
		For EPBC Act approval decision notice 2022/09328; Commencement of the proposal is defined as activities associated with the action (not including minor physical disturbance), which is anticipated to be May 2024 (ie first construction works onsite).
		Proponent will advise DWER and DCCEEW 5 business days prior to commencement of the action.
Upfront payment	Initial payment (as part of the Commonwealth requirement for 10% of the overall clearing allowable)	Prior to Proposal commencement (as defined within EPBC 2022/09328).
	Woodside to submit evidence of payment into PEOF account to DCCEEW.	Within 10 business days of payment.
Period 1 ¹⁰	First biennial reporting period ¹¹	The first IRR biennial reporting period will start the day ground disturbance activities commence (anticipated to be 30 April 2024) and end on the second 30 June after that (i.e. 30 June 2025).
	Ground Survey and review of satellite imagery to verify cleared areas	Timing proposed to take place in June 2025 (pending FID), subject to seasonal restrictions.
		Surveys to be undertaken annually during the same month each year ¹² .
	IRR submitted to DWER and DCCEEW	Prior to 30 October 2025.
	Offset invoice provided by DWER	Prior to 30 November 2025.
	Offset payment due	Within one month of receipt of invoice (ie 30
		December 2025 or earlier).
	Woodside to submit evidence of payment into PEOF account to DCCEEW.	December 2025 or earlier). Within 10 business days of making payment.

⁹ Dates are subject to a Final Investment Decision on the proposal.

¹⁰ Note that the first reporting period may be less than 24 months to align with a financial year reporting period.

¹¹ The reporting period includes both State and EPBC approvals (ie encompasses all clearing from first disturbance, regardless of approval mechanism).

¹² Surveys will be undertaken on an annual basis when ground disturbing activities have occurred.

Biennial Period	Action	Timing	
	Ground Survey to verify cleared areas (if clearing occurred)	Timing proposed to take place in June 2027 (pending FID), subject to seasonal restrictions.	
		Surveys to be undertaken annually during the same month each year ¹³ .	
	IRR submitted to DWER and DCCEEW	Prior to 30 October 2027.	
	Offset invoice provided by DWER Prior to 30 November 2027.		
	Offset payment due	Within one month of receipt of invoice (ie 30 December 2027 or earlier).	
	Woodside to submit evidence of payment into PEOF account to DCCEEW.	Within 10 business days of making payment.	
Subsequent biannual periods	Subsequent reporting will follow the sequence outlined above, with an additional two-year frequency. Clearing is expected to only occur in discrete period associated with the Proposal phases. It is likely that no clearing will occur within the majority of reporting periods. An IRR will be prepared and submitted by 30 October of the year of the end of each reporting period. In accordance with MS 1212, reporting will continue until the proposal reaches the end of the authorised proposal lifespan ¹⁴ .		
Post clearing stage	No clearing will occur after the end of the last reporting period.	Within six (6) months of final clearing completion.	
	Woodside will notify DWER and DCCEEW in writing of the actual clearing footprint and the total contributions made into the PEOF.		

4.3 Impact Reconciliation Reports

Each IRR shall be structured in the manner prescribed in the DWER *Instructions on How to Prepare Environmental Protection Act 1986 Part IV* Impact Reconciliation Procedure *s and* Impact Reconciliation Report *s, March 2021*, and use the temple provided in the below link:

https://www.epa.wa.gov.au/sites/default/files/Forms_and_Templates/Impact%20Reconciliation%20instructions_0.pdf

Each IRR will include a:

- metadata and licensing statement
- IRR report
- Data packaging¹⁵ comprising a spatial dataset and imagery or remote sensing files that capture the impacts that have occurred during the reporting period.

¹⁵ As per the IRR data package instructions (see

¹³ Surveys will be undertaken on an annual basis when ground disturbing activities have occurred.

¹⁴ If the Proposal reaches the maximum clearing extents (ie clearing is completed) prior to the end of proposal life, as per MS 1212 Condition C2-1(2), Woodside will require approval from the CEO to discontinue IRR submissions.

https://www.epa.wa.gov.au/sites/default/files/Forms_and_Templates/Impact%20Reconciliation%20instructions_0.pdf)

The IRR will detail:

- Proposal details
- Details of the IRP including document references and approval dates
- Ministerial condition requirements pertaining to the IRP and IRR
- The total cleared area that has occurred during each financial year of the period, attributed by environmental value including¹⁶:
 - the relevant environmental values and associated impacts to environmental values
 - the corresponding spatial data (extent of remaining vegetation and extent cleared), rate and IBRA v7 subregion
- Forward estimates of likely impacts in future biennial reporting periods
- Information used to validate impact areas, including figures, maps, aerial imagery; digitised polygons showing cleared areas and any on-site visual inspection notes or photographs used to determine impacts for each financial year
- Information regarding any exemptions, other clearing approvals or reductions to contributions to the fund, where relevant
- Details and spatial data for historical impacts which are excluded from offset contributions, where relevant.

¹⁶ Note that each environmental value and impacts to each IBRA v7 sub-region will be reported separately within the IRR.

5. References

Augusteyn, J., Hughes, J, Armstrong, G, Real, K and Pacioni, C (2017). Tracking and tracing central Queensland's Macroderma–determining the size of the Mount Etna ghost bat population and potential threats. Australian Mammalogy 40:243–253.

Biologic (2019). Warrawoona Gold Project: 2019 VHF Bat Foraging Studies. Unpublished report prepared for Calidus Resources Ltd, Biologic Environmental Survey, Western Australia.

Biota Environmental Sciences (2023). Woodside Solar Farm Targeted Fauna Survey. Report prepared for Woodside Energy Ltd.

Department of Agriculture, Water, and the Environment (DAWE) (2020). Memorandum of Understanding in relation to the Pilbara Environmental Offsets Fund. Commonwealth of Australia.

Department of Environment (DoE) (2016). EPBC Act Referral Guideline for the Endangered Northern Quoll *Dasyurus hallucatus*: EPBC Act Policy Statement. Commonwealth of Australia.

Department of Parks and Wildlife (DPAW) (2017). Pilbara Conservation Strategy. Government of Western Australia.

Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) (2012). *Environment Protection and Biodiversity Conservation Act 1999* Environmental Offsets Policy. Commonwealth of Australia.

Department of Water and Environmental Regulation (DWER) (2019). Pilbara Environmental Offsets Fund Implementation Plan.

Environmental Protection Authority (EPA) (2016). Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment, Environmental Protection Authority, Perth.

Environmental Protection Authority (EPA) (2021). Instructions: Impact Reconciliation Procedures and Impact Reconciliation Reports.

Government of Western Australia (Gov WA) (2024). Pilbara Environmental Offsets Fund. Accessed 1/03/2023. Available at: <u>https://www.wa.gov.au/service/environment/business-and-community-assistance/program-pilbara-environmental-offsets-fund</u>.

Vicki Long and Associates (VLA) (2019). Woodside Hybrid Renewable Energy Project – Flora and Vegetation Survey and Desktop Assessment Report. Report prepared for Woodside.

Vicki Long and Associates (VLA) (2020). Woodside Hybrid Renewable Energy Project Detailed Wet Season Vegetation and Targeted Flora Surveys. Report prepared for Woodside.

6. Appendices

This IRP submission includes:

- A. Metadata and Licensing Agreement
- B. Data package comprising the following electronic data files
 - one **boundaries** spatial dataset identifying the proposed or approved development envelope, in shapefile (.shp, etc) or ESRI geodatabase format
 - one **baseline** spatial dataset identifying the state of the land and values within the authorised extent of the proposal, in shapefile (.shp, etc) or ESRI geodatabase format
 - one or more **imagery** or remote sensing data files used to support the delineation of the environmental values (where applicable to the IRP method).