BHP

Impact Reconciliation Procedure

Orebody 32 Below Water Table Creek Discharge

December 2025
Version 1 Draft

Authorisation

Version	Position	Date
Version 1 Draft	Manager Environment WA Iron Ore	15/12/2025

Document amendment record

Version	Section/page	Version description	Key changes	Date
Version 1 DRAFT	All	Submitted to Office of the EPA to meet Condition 16-6 of Ministerial Statement 1105 for the OB32 BWT Creek Discharge Derived Proposal	New document	15/12/2025

Abbreviations

Term	Meaning
BHP	BHP Iron Ore Pty Ltd
CEO	Chief Executive Officer
ECW	Enhanced Compressed Wavelet
EPA	Environmental Protection Authority
ESRI	Environmental Systems Research Institution
GDA2020	Geocentric Datum of Australia 2020
GeoTIFF	Geographic Tagged Image File Format
ha	Hectares
IBRA	Interim Biogeographic Regionalisation for Australia
the Instructions	*Instructions on how to prepare Environmental Protection Act 1986 Part IV Impact Reconciliation Procedures and Impact Reconciliation Reports* (EPA 2021)
IRP	Impact Reconciliation Procedure
IRR	Impact Reconciliation Report
m	metres
MRF	Mining Rehabilitation Fund
MS	Ministerial Statement
NVCP	Native Vegetation Clearing Permit
OB32 BWT	Orebody 32 Below Water Table

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1 The proposal and condition requirements

1.1 The Proposal

This Impact Reconciliation Procedure (IRP) has been prepared by BHP Iron Ore Pty Ltd (BHP) to satisfy Condition 16 of Ministerial Statement 1105 (MS 1105) for the Pilbara Expansion Strategic Proposal, to support the request that the Orebody 32 Below Water Table Creek Discharge proposal (OB32 BWT Creek Discharge Proposal) be declared a Derived Proposal. The IRP has been developed in accordance with the *Instructions on how to prepare Environmental Protection Act 1986 Part IV Impact Reconciliation Procedures and Impact Reconciliation Reports* (EPA 2024) (the Instructions).

The purpose of this IRP is to outline the methods to calculate the area of vegetation or environmental value/s impacted within the Hamersley Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the Pilbara bioregion, in relation to the OB32 BWT Creek Discharge Proposal. This IRP does not apply to clearing undertaken under the authority of other existing approvals for existing operations at the Newman Hub (i.e. other Ministerial Statements or Native Vegetation Clearing Permits (NVCPs)) that intersect the vegetation or environmental value/s requiring offset.

1.2 Ministerial Statement condition requirements

BHP is required to prepare and submit an IRP to the Chief Executive Officer (CEO) prior to ground-disturbance as per Condition 16 of MS1105, as identified in the Section 45B Notice for Orebody 32 BWT Creek Discharge Proposal (Table 1). The relevant condition requirements for Condition 16 of MS1105 are provided in Appendix 1.

Table 1: Ministerial Statement 1105 condition requirements

Ministerial Statement	Title	Condition number
1105	Orebody 32 Below Water Table Creek Discharge Proposal	16, 16-1 to 16-11

2 Procedure

2.1 Identification of the environmental values requiring offsets

The environmental values required to be offset have been identified through the environmental impact assessment for the OB32 BWT Creek Discharge Proposal and/or by MS1105 Condition 16 (Table 2).

The environmental impact assessment for the OB32 BWT Creek Discharge Proposal found that following mitigation, there will not be any significant impacts on vegetation or other environment values. However, during the assessment of the Pilbara Expansion Strategic Proposal, the Environmental Protection Authority (EPA) considered that the clearing of native vegetation in Good to Excellent condition is a significant residual impact due to the cumulative impacts of clearing in the Pilbara (EPA 2018).

The clearing of up to 39 ha of native vegetation in Good or Very Good condition has been identified for the Proposal, all of which occurs within the Hamersley subregion of the Pilbara region and will require offset (Table 2).

Table 2: OB32 BWT Creek Discharge Proposal environmental values that require offset under Condition 16-2 of MS1105

Significant residual impact	Values	Extent of impact	Offset payment rate $/ha	Proposed offset $
Clearing of native vegetation in the Pilbara Hamersley IBRA region	Native vegetation in Good to Excellent condition	Up to 39 ha	$1016	$39,440
Total extent to be offset		**39 ha**		**$39,440**

1. Based on the FY24/25 financial offset rates for the base rate for the Hamersley subregion, to be indexed annually in accordance with the Perth - All Groups Consumer Index.

2.1.1 Baseline survey information

Prior to commencement of ground disturbance for the OB32 BWT Creek Discharge Proposal, baseline biological surveys were undertaken to classify the native vegetation condition in the Development Envelope, in accordance with the EPA technical guidelines.

The baseline biological survey information that establishes the extent and condition of the environmental values, is described below and further in Appendix 2.

Vegetation condition mapping of the Development Envelope was undertaken in 2021-2022 and 2025 (Spectrum 2022; Biologic 2025) and classified according to the condition scale for the Eremaean Botanical Province in the EPA Technical Guidance for Flora and Vegetation (EPA 2016). The vegetation condition data was mapped spatially and is stored in an internal database. The internal database also contains the IBRA subregion spatial data as defined by the Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW), as required by the Instructions.

The majority (59%) of the Development Envelope was rated as being in Good condition, with approximately 8% in Very Good condition (Figure 1). There are no areas of Excellent condition vegetation mapped within the Development Envelope. The remaining area is considered to be in Poor condition (~10%) or Completely Degraded/Cleared (~23%). The latest available land disturbance data for existing clearing (February 2025) was used in the condition mapping of the Development Envelope.

Of the 40 ha of native vegetation clearing required for the OB32 BWT Creek Discharge Proposal, up to 39 ha is in Good or Very Good condition, all of which occurs within the Hamersley subregion and will require offset (Table 2).

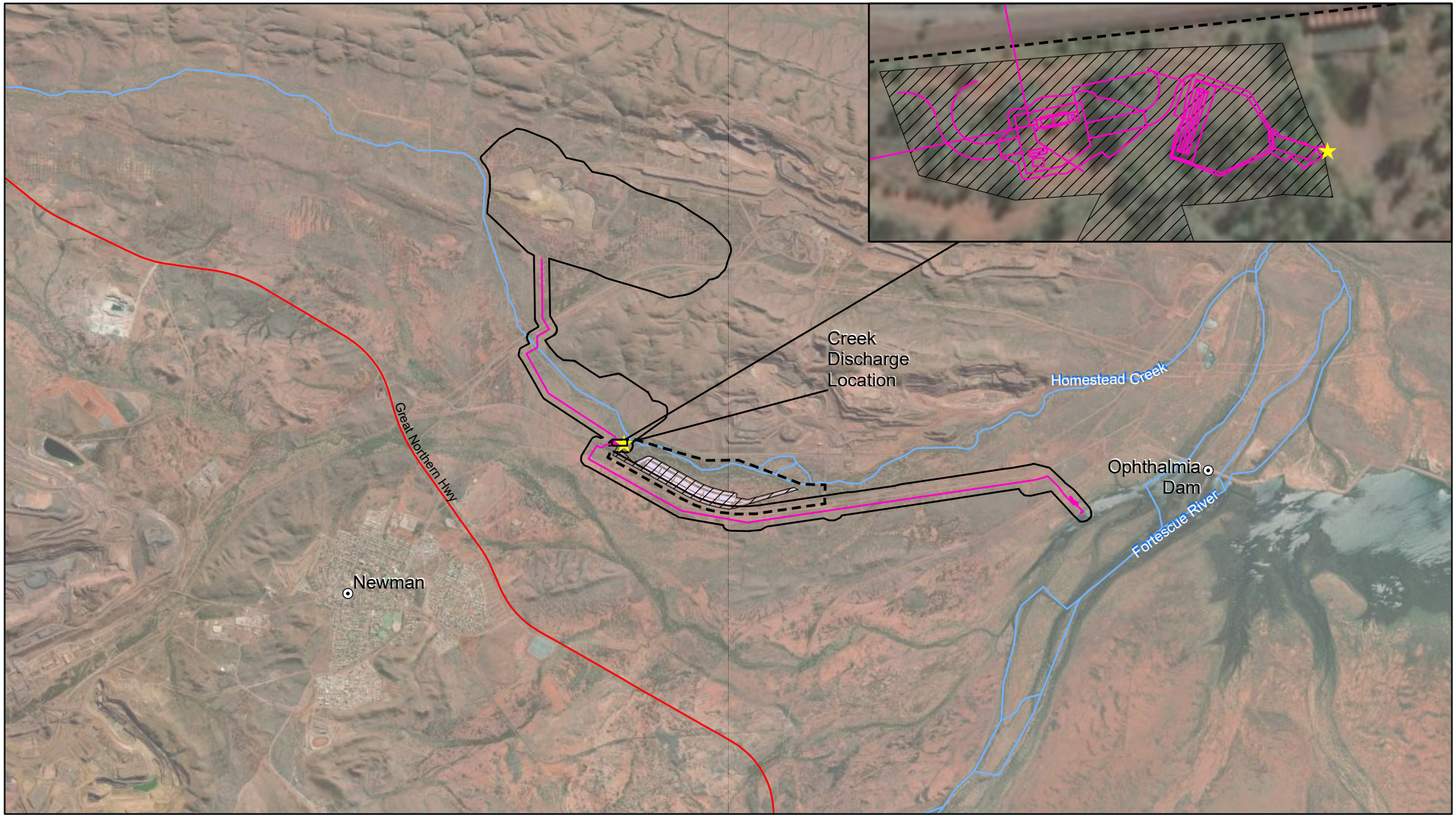
2.1.2 Offset exemptions

As discussed in Section 1.1, this IRP is for the clearing authorised under MS1105 for the OB32 BWT Creek Discharge Proposal. The entire authorised extent of clearing (40.0 ha) is subject to Condition 16-2 of MS1105. This authorised extent is limited to the Proposal Development Envelope (Figure 1), and relates to clearing for the construction, operation and decommissioning of the surplus water discharge pipeline and aeration pond (if required) for the OB32 BWT Creek Discharge Proposal.

Existing clearing undertaken under other approval mechanisms within the Development Envelope (totalling 10.00 ha) is exempt from offsets and is not covered under this IRP (Table 3).

Table 3: Clearing exempt from offsets for the OB32 BWT Proposal

Ministerial Statement	Condition number	Offset requirements	Offset exemption area (ha)
1105	16-2	Clearing of Good to Excellent condition native vegetation within the Hamersley and/or Chichester IBRA subregion	The following clearing is exempt: • existing clearing within the Development Envelope (10 ha) as it is approved under other approval mechanisms



- OB32 BWT Derived Proposal
- OB32 BWT Pipeline
- Development Envelope
- Indicative Footprint
- OB32 Creek Discharge Location
- Aeration Ponds and Swale
- Highways
- Watercourse

N

0 0.5 1 1.5 2 2.5

KILOMETRES

GDA 1994 MGA ZONE 50

BHP

PUBLIC

OB32 BWT CREEK DISCHARGE DERIVED PROPOSAL

DEVELOPMENT ENVELOPE AND INDICATIVE FOOTPRINT

WAIO PLANNING, TECHNICAL & ENVIRONMENT

SCALE @ A4:	1:75,000	REQUESTOR:	ENV. APPROVALS	FIGURE:	1.0
DATE:	1/05/2025	PREPARED:	GEOMATICS	NO:	A1079_106_RevA

Document Path: Y:\Jobs\A1001_A1500\A1079\3Project\A1079_106_OB32_DP_DE_&_IF_RevA.aprx\A1079_106_OB32_DP_DE_&_IF_RevA

2.2 Method to determine impacts

As discussed in Section 2.1.1, Spectrum and Biologic completed flora and vegetation surveying (including vegetation condition assessment and mapping) of the Development Envelope in 2021-2022 and 2025 in accordance with the EPA Technical Guidance (EPA 2016). This mapping is considered to form the baseline state of vegetation condition for this IRP for the OB32 BWT Creek Discharge Proposal (described further in Appendix 2).

If vegetation within the Development Envelope is impacted (via a different approval) in the period between the completion of the baseline survey and the Notice given by the Minister under Section 45B(2) that the Strategic Proposal Statement takes effect (i.e. the 'approval') for the OB32 BWT Creek Discharge Proposal, the condition of the vegetation in BHP's internal database system will be updated to capture the new altered condition (e.g. cleared or Completely Degraded).

2.2.1 Impacts

BHP will use the methodology detailed in Steps 1 to 3 below to calculate the amount of land disturbance (i.e. clearing of native vegetation) within the Development Envelope. This will result in a verified Land Disturbance dataset that is used to determine the amount of clearing that is required to be offset against the environmental value/s (i.e. Step 4).

The verified Land Disturbance dataset is also used to update the baseline dataset for the condition of vegetation that is to be used for the next financial year reconciliation.

This process will be repeated annually to determine the amount of clearing in each financial year, as is required to be reported in the Impact Reconciliation Report (IRR) (see Section 3.2).

Step 1 - Remotely Sensed data

BHP sources appropriate remotely sensed data (i.e. aerial photography or satellite imagery) for the area of the IRR. The remotely sensed data may come from a variety of sources and where appropriate, it will be mosaicked together. The mosaicked remotely sensed data is then re-sampled to 1 m resolution. This remotely sensed data set is used for the capture of the land clearing that is to be supplied as an end deliverable dataset.

Step 2 - Land Disturbance data

Direct land disturbance (i.e. clearing) is captured on a periodic basis throughout the financial year. The data is captured via digitising the land disturbance visible in orthophotos and/or satellite imagery, at a scale of 1:2,000 (this scale may vary in some instances depending on the resolution of the imagery captured).

All land disturbance data is then attributed with the reporting year, responsible operational entity, the underlying approval and the proposed or actual land-use (using the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) Mining Rehabilitation Fund (MRF) classifications). Where there are multiple approvals within the same area, the site responsible person is accountable for allocating the land disturbance to the appropriate approval.

Step 3 - Data review

Following the capture of the Land Disturbance data (Step 2), the dataset is reviewed at the end of each financial year to ensure:

- all land disturbance activities for the financial year period have been identified
- accurate and clean boundaries (removal of overlaps and correction of anomalies)

- data attribute completeness and correctness.

As BHP captures land disturbance/clearing at a scale of 1:2,000 (i.e. +/- 1 m on the ground), any polygon slivers or gaps in the dataset under one square metre are ignored and are considered acceptable in the context of analysing datasets at vastly different scales.

Step 4 - Processing of environmental value/s datasets

BHP have developed a methodology which automates the process of combining Land Disturbance, IBRA subregions and environmental value/s (e.g. vegetation condition) datasets to ensure the process of deriving the final offset calculation is consistent and repeatable. The process manipulates the datasets (e.g. clips inputs to the project Development Envelope, cleans any overlaps) to match the requirements of the Instructions, resulting in a final area calculation.

3 Reporting

3.1 Frequency and timing

The first biennial reporting period shall commence at the beginning of the financial year that ground disturbance activities are undertaken, as per Condition 16-5 of MS1105. For the OB32 BWT Creek Discharge Proposal, clearing is estimated to commence in Q3 2026 (i.e. FY2027). Orebody 32 operations is estimated to have a maximum project life of 50 years, with an expected end date of 2076. Table 4 documents the timing of the biennial reporting periods for OB32 BWT Creek Discharge Proposal (based on the end date of Orebody 32 operations when surplus water discharge is expected to cease).

As per the Instructions, the IRR will be submitted no later than four months after the conclusion of the biennial reporting period. As specified in Table 4, BHP propose to submit the IRR on the last business day in September following the end of the reporting period.

Table 4: Reporting period and frequency of the Impact Reconciliation Reports

Biennial period	Action	Timing
	Ministerial Statement 1105 issued	11 July 2019
	Notice given that the Strategic Proposal Statement takes effect for the OB32 BWT Creek Discharge Proposal	Signed XX Issued to BHP XX
	OB32 BWT Creek Discharge clearing commences	Estimated to commence Q3 FY 2027
Period 1	First biennial reporting period	1 July 2026 to 30 June 2028
	IRR submitted to DWER	29 September 2028
Period 2	Second biennial reporting period	1 July 2028 to 30 June 2030
	IRR submitted to DWER	30 September 2030
Period 3	Third biennial reporting period	1 July 2030 to 30 June 2032
	IRR submitted to DWER	30 September 2032
Period 4	Fourth biennial reporting period	1 July 2032 to 30 June 2034
	IRR submitted to DWER	29 September 2034
Period 5	Fifth biennial reporting period	1 July 2034 to 30 June 2036
	IRR submitted to DWER	30 September 2036
Period 6	Sixth biennial reporting period	1 July 2036 to 30 June 2038
	IRR submitted to DWER	30 September 2038
Period 7 Final biennial report period	Seventh and final biennial reporting period	1 July 2038 to 30 June 2040
	IRR submitted to DWER	28 September 2040

3.2 Impacts and reconciliation

Ground disturbance activities for the OB32 BWT Creek Discharge Proposal will wholly occur within the Development Envelope and are expected to commence in Q3 2027. As per Condition 16-8 of MS1105, ground disturbance activities will not commence, unless otherwise agreed by the CEO, until the CEO has confirmed in writing that the IRP satisfies the requirements of Condition 16-7 (Appendix 1).

As discussed in Section 2.1, clearing of vegetation in Good to Excellent condition within the Hamersley IBRA subregion of the Pilbara bioregion will be up to 39 ha. Approximately 0.8 ha of clearing is expected to occur within the first biennial reporting period, associated with the construction of the Homestead Creek discharge outlet. The remaining clearing is associated with the construction of the aeriation ponds and will only occur if monitoring indicates they are required. The clearing of vegetation will be captured spatially and reconciled against the baseline data for vegetation condition within the Development Envelope.

As per Condition 16-10 of MS1105, the IRR will provide the location and spatial extent of the clearing undertaken within each biennial reporting period. More specifically, the following information will be submitted in each IRR:

- amount of clearing (ha) of vegetation in Good to Excellent condition within the Hamersley IBRA subregion of the Pilbara bioregion that has occurred during each financial year of the reporting period, including the offset rate
- information used to validate amount of clearing (e.g. aerial imagery, remote sensing data, digitised polygons and/or ground-truthing surveys) in each financial year
- information regarding any exemptions, other clearing approvals or reductions to contributions to the fund (e.g. where impacts have occurred that are applied to a different Ministerial Statement or NVCP)
- forward estimate of impacts expected to be reported in subsequent reporting periods.
- details and spatial data for historical impacts excluded from offset requirements.

4 References

Biologic (2025) *OB32 Settlement Pond Flora and Vegetation Technical Memo*. Report prepared for BHP, Rev 3, June 2025

BHP Iron Ore Pty Ltd (BHP) (2020) Biodiversity Survey Spatial Data Requirements Procedure. Document number SPR-IEN-EMS-015. Version 11.0. Published January 2020.

BHP Iron Ore Pty Ltd (BHP) (2023) *Impact Reconciliation Procedure*. Document number 0147312. Version 2.3. Published February 2023.

Environmental Protection Authority (EPA) (2016) *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment*. Environmental Protection Authority. Western Australia. Published 13 December 2016.

Environmental Protection Authority (EPA) (2018) *Pilbara Expansion Strategic Proposal*. Report and recommendations of the Environmental Protection Authority. Report 1619. Perth, Western Australia. Published 9 July 2018.

Environmental Protection Authority (EPA) (2024) *Instructions on how to prepare Environmental Protection Act 1986 Part IV Impact Reconciliation Procedures and Impact Reconciliation Reports*. Environmental Protection Authority. Western Australia. Published March 2024.

Spectrum Ecology and Spatial (Spectrum) (2022) *OB32 Surplus Water and Homestead Creek Wetting Front Detailed Flora and Vegetation Assessment*. Report prepared for BHP, April 2022.

Appendices

Appendix 1 Ministerial Statement 1105 condition requirements

Ministerial statement	Condition number	Condition requirement
1105	**16 Offsets**	
	16-1	In view of the significant residual impacts as a result of the implementation of the proposal identified in condition 16-2, the proponent shall contribute funds to the Pilbara Environmental Offsets Fund.
	16-2	The significant residual impacts are: (1) clearing of 'Good' to 'Excellent' condition native vegetation, including habitat for threatened fauna species, within the Hamersley and/or Chichester IBRA subregion. (2) clearing of native vegetation referred to in condition 16-2(1) which has other important or specialised environmental values within the Hamersley and/or Chichester IBRA subregion. (3) clearing of 'Good' to 'Excellent' condition native vegetation, including habitat for threatened fauna species, within the Fortescue IBRA subregion. (4) clearing of native vegetation referred to in condition 16-2(3) which has other important or specialised environmental values within the Fortescue IBRA subregion.
	16-3	The proponent shall contribute funds to the Pilbara Environmental Offsets Fund calculated pursuant to conditions 16-4 and 16-5, subject to any reduction approved by the CEO under condition 16-11.
	16-4	The proponent's contribution to the Pilbara Environmental Offsets Fund shall be paid biennially, with the amount to be contributed calculated based on the clearing undertaken in each year of the biennial reporting period in accordance with the following calculation: C = R x H Where: C = the contribution to the fund for clearing done in the relevant year R = contribution rate for the year in which the clearing is undertaken as published for the Pilbara Environmental Offsets Fund by the CEO for each significant residual impact identified in condition 16-2. H = number of hectares of land cleared in the relevant year for each significant residual impact referred to in condition 16-2.
	16-5	The first biennial reporting period shall commence at the beginning of the financial year that ground-disturbing activities causing one or more of the significant residual impacts identified in condition 16-2 are undertaken.
	16-6	Prior to ground-disturbing activities, the proponent shall prepare and submit an Impact Reconciliation Procedure to the CEO.

Ministerial statement	Condition number	Condition requirement
	16-7	The Impact Reconciliation Procedure required pursuant to condition 16-6 shall: (1) state that clearing calculations for each biennial reporting period will commence on 1 July of the required reporting period, unless otherwise agreed by the CEO; (2) include a methodology to calculate the amount of clearing undertaken during each year of the biennial reporting period for each of the significant residual impacts identified in condition 16-2; and (3) indicate the timing and content of the Impact Reconciliation Reports
	16-8	The proponent shall not commence ground-disturbing activities, unless otherwise agreed by the CEO, until the CEO has confirmed in writing that the Impact Reconciliation Procedure satisfies the requirements of condition 16-7.
	16-9	The proponent shall submit Impact Reconciliation Reports in accordance with the Impact Reconciliation Procedure approved in condition 16-8.
	16-10	The Impact Reconciliation Reports required pursuant to condition 16-9 shall provide the location and spatial extent of the clearing undertaken within each biennial reporting period.
	16-11	The proponent may seek the written approval of the CEO to reduce all or part of the contribution payable under condition 16-4 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; (2) the payment counterbalances impacts of the proposal on matters of national environmental significance; and (3) the payment counterbalances the significant residual impacts to the environmental values identified in condition 16-2.

Appendix 2 Baseline spatial data associated with the environmental value requiring offset

Spectrum and Biologic completed flora and vegetation surveying of the OB32 BWT Proposal Development Envelope - (Spectrum 2022, and Biologic 2025a). The surveying was undertaken in accordance with the EPA Technical Guidance (EPA 2016) and included the assessment and mapping of vegetation condition. The condition of vegetation was mapped using the Vegetation Condition Scale for the Eremaean and Northern Botanical Provinces as per Table 2 in the EPA Technical Guidance (EPA 2016).

All baseline environmental survey data captured by Spectrum and Biologic was supplied to BHP in accordance with BHP Data Standards (document SPR-IEN-EMS-015, BHP 2020). The BHP Data Standards ensure a consistent and repeatable method of capturing environmental survey data. The survey data is stored on BHP's internal database system following review for technical and spatial accuracy.

This baseline environmental survey data and existing land disturbance data is considered to form the pre-clearing extent and baseline state of vegetation condition for this IRP for the OB32 BWT Creek Discharge Proposal.

The following spatial data is provided to support this IRP, as per the Instructions:

- **boundary**: the OB32 BWT Creek Discharge Proposal Development Envelope
- **baseline**: vegetation condition mapping (baseline survey data), clearing/land disturbance up to the date the Notice is given for the OB32 BWT Creek Discharge Proposal (the 'approval'), and IBRA subregions
- **imagery**: aerial imagery for the extent of the Development Envelope.

All spatial data is provided in a format that complies with the requirements of the Instructions, and as per the following parameters:

- **data type**: closed polygons for boundary and baseline data attributes as per Table 6 of the Instructions
- **format**: shapefile or Environmental Systems Research Institution (ESRI) geodatabase format
- **coordinate system**: Geocentric Datum of Australia 2020 (GDA2020) datum, projected into the appropriate Map Grid of Australia zone
- **imagery**: Enhanced Compressed Wavelet (ECW) format or Geographic Tagged Image File Format (GeoTIFF), at a minimum 1 m resolution.