

BHP Billiton Iron Ore

EPBC Act Strategic Environmental Assessment

Annual Environmental Report

July 2019 – June 2020



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Abbreviations

Term	Meaning
AER	Annual Environmental Report
BHP	BHP Billiton Iron Ore Pty Ltd
DAWE	Department of Agriculture, Water and the Environment
DBCA	Department of Biodiversity, Conservation and Attractions
DoEE	Department of Environment and Energy (now DAWE)
DWER	Department of Water and Environmental Regulation
EPBC	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
ELOR	Environmental Legal Obligations Register
FY	Financial Year
GIS	Geographical Information Systems
ha	Hectares
MAC	Mining Area C
MAR	Managed Aquifer Recharge
MEM	Mobile Equipment Maintenance
MS	Ministerial Statement
ng/g	Nanogram per gram
OB	Orebody
OSAs	Overburden Storage Areas
PC	Primary Crusher
PEAHR	Project Environmental and Aboriginal Heritage Review
SEA	Strategic Environmental Assessment
WA	Western Australian
WAIO	Western Australian Iron Ore

1 Introduction

The BHP Billiton Iron Ore Pty Ltd (BHP) Pilbara Strategic Assessment Program (the Program) was endorsed by the Minister for the Environment and Energy on 11 May 2017 and an Approval Decision (the Approval) for taking actions in accordance with the Program was issued on 19 June 2017.

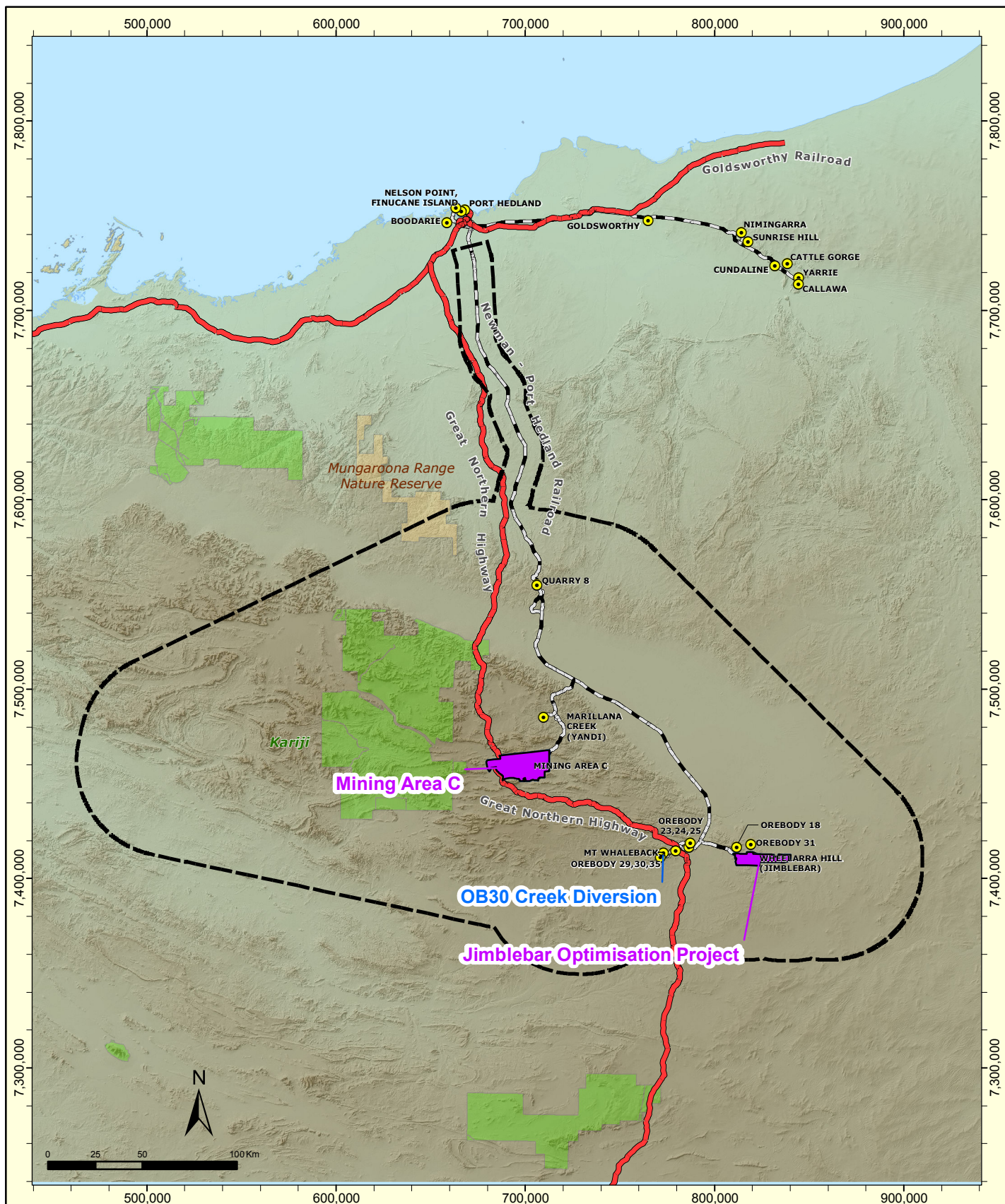
The Approval applies to the development of new iron ore mines and associated infrastructure and the expansion of existing iron ore mines and associated infrastructure within a defined Strategic Assessment Area in the Pilbara region of Western Australia (Figure 1). Key commitments of the Program and conditions of the Approval include preparation and approval of an Assurance Plan and Offsets Plan, and undertaking a validation process including preparation of a Validation Notice for each Notifiable Action (Figure 2) and BHP internal Decision Reports for non-Notifiable Actions.

In accordance with the conditions of the approval decision relating to the Program, BHP is hereby submitting an annual report for the reporting period between 1 July 2019 and 30 June 2020. An outline of the content of the report is provided below:

- Section 1: Introduction – Provides the Approval background and key terminology.
- Section 2: Approval Decision - Outlines compliance with the conditions of the Approval.
- Section 3: Program - Addresses the requirements of an annual report outlined in Part B, Chapter 5 of the endorsed Program.
- Section 4: Assurance Plan - Addresses the reporting requirements outlined in the Assurance Plan.
- Section 5: Offsets Plan - Addresses the reporting requirements outlined in the Offsets Plan.
- Section 6: Validation Notices - Outlines compliance with obligations within the Validation Notices.
- Section 7: Disturbance - Details the disturbance undertaken during the reporting period.

Key milestones that have occurred during the reporting period include:

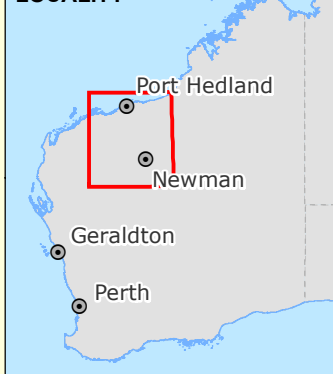
- The validation process was completed for Jimblebar Optimisation Project during the reporting period, resulting in the issuance of a Validation Notice. The Validation Notice includes the development and operation of additional Overburden Storage Areas (OSAs) and new surplus water management options including the Caramulla Managed Aquifer Recharge (MAR) and creek discharge area associated with the existing Jimblebar mining operation. Clearing commenced under this Validation Notice during the reporting period; and
- Completion of two further validation processes in respect of non-notifiable actions during the reporting period.



LEGEND

- BHP Operations
- Rail
- National Highway
- SEA Approval
- SEA Validation Notice
- Non-Notifiable Action

LOCALITY



BHP

Environment Approvals
BHP IRON ORE

SEA Disturbance Activities 2019/20

Not to scale	Prepared: P. Gant	Project No: A1003
Date: 30/09/2020	Checked: B. Kraft	Figure: 1
Datum: GDA 94	Projection: MGA Zone 50	

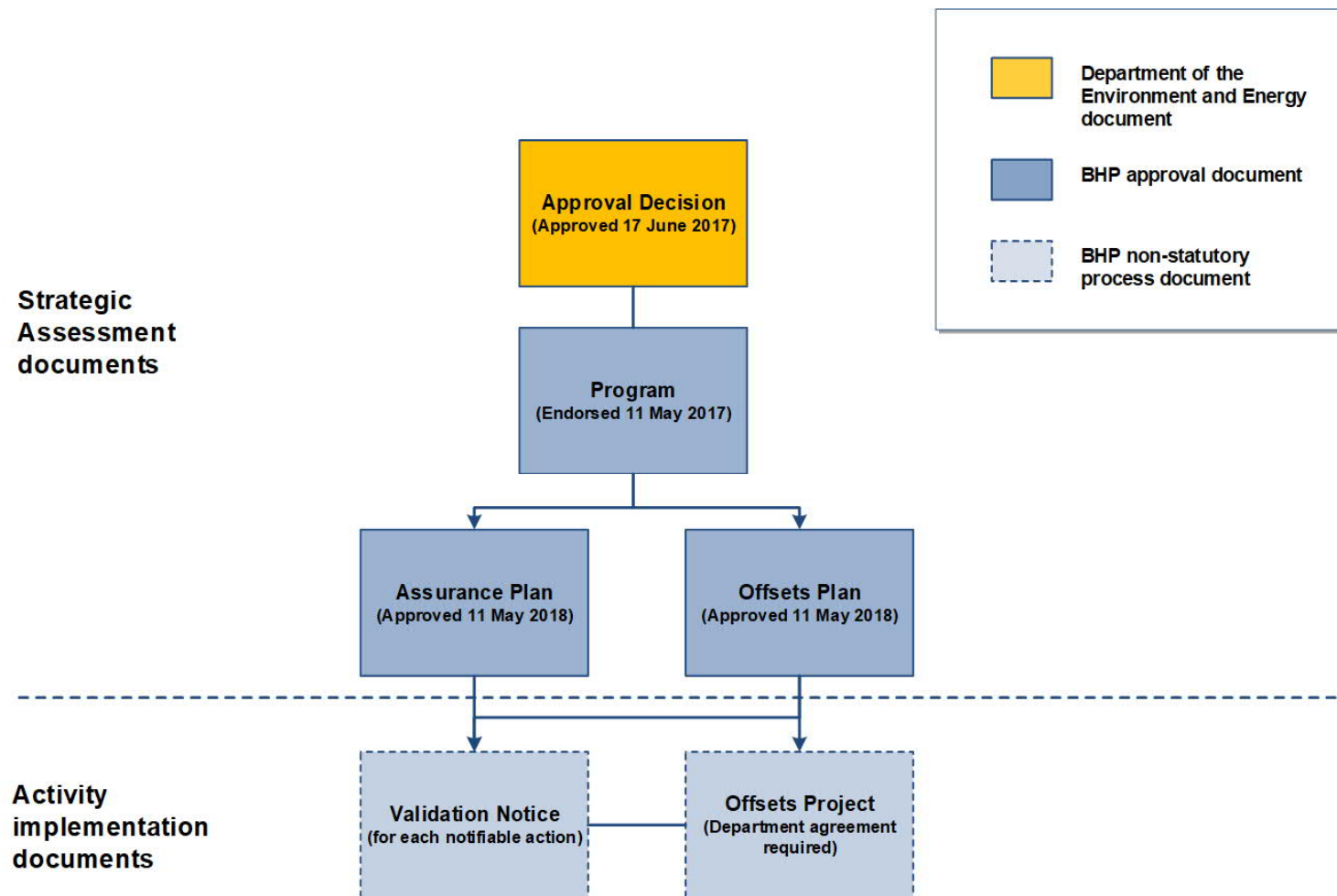


Figure 2: BHP Strategic Environmental Assessment – Approval Documents

2 EPBC SEA Approval Decision

Table 1 assesses compliance against the 10 conditions of the approval.

Table 1: Audit Table for the EPBC SEA Approval Decision (Approved: 19 June 2017)

Condition/Section	Requirement	How	Documentation	Evidence	Timeframe	Status
1	The approval holder must implement the endorsed Program.	Implement proposals in accordance with criteria in the Program.	Compliance reported annually in the BHP Iron Ore (BHP) Strategic Environmental Assessment (SEA) Annual Environmental Report (AER).	Activities have been implemented in accordance with the endorsed Program (see Conditions 3 and 7).	Life of approval.	Compliant.
2	The approval holder must not make any validation decisions as outlined in Part C of the endorsed program after 70 years from the date of the approval.	No validation decisions to be made after 19 June 2087.	Compliance reported annually in the BHP SEA AER.	The approval commenced on the 19 June 2017. Validation decisions were permitted during the reporting period.	From 19 June 2087.	Not required during this reporting period.
3	Within 12 months of the date of approval, the approval holder must prepare and submit for the Minister's written approval an Assurance Plan and an Offsets Plan in accordance with Section 3 of the endorsed Program.	Prepare and submit an Assurance Plan and Offsets Plan to the satisfaction of the Minister of the Department of Environment and Energy (DoEE) (or delegate).	Submitted Assurance Plan and Offset Plan.	An Assurance Plan and Offsets Plan were prepared and submitted to the Department on 1 March 2018. The Assurance Plan and Offsets Plan were approved by the Department on behalf of the Minister on 11 May 2018 (Reference Letter from G. Manning – Assistant Secretary Assessments (WA, SA, NT) and Post Approvals Branch Environment Standards Division dated 11 May 2018).	Prior to 19 June 2018.	Closed.
	The approval holder must implement the approved Assurance Plan and Offsets Plan.	Implement proposals in accordance with the requirements of the approved Assurance Plan and Offsets Plan.	Compliance reported annually in the BHP SEA AER.	The Assurance Plan and Offsets Plan have been implemented (see Condition 7).	Annually for the duration of the Approval.	Compliant.
	The approval holder must publish the approved Assurance Plan and Offsets Plan on its website within one (1) month of receiving written notice that the Assurance Plan and Offsets Plan are approved.	Publish the approved Assurance Plan and Offsets Plan on the BHP external website.	Submitted Assurance Plan and Offset Plan.	The Assurance Plan and Offsets Plan were published on the BHP website on 15 May 2018. Email sent to V. Cox (Senior Assessing Officer – Post Approvals) on 15 May 2018 advising the Plans were available on the website.	Within 1 month of approval.	Complete.
4	<p>Unless otherwise agreed to in writing by the Minister, every five years from the date of approval, the approval holder must review and revise the Assurance Plan and the Offsets Plan in accordance with Section 4.1 of the endorsed Program.</p> <p>The approval holder must submit the revised Plans for the Minister's approval within 6 months of the five year anniversary of the date of approval unless the Minister has agreed in writing that no revisions are necessary.</p> <p>If the approval holder does not submit the revised Plans for approval, the approval holder may not give any further validation notices under Part C of the endorsed Program until the revised Plans have been submitted and approved.</p> <p>The Minister may, within 60 days of receipt by the Department of the revised Plans, advise the approval holder in writing that (a) the revised Plans are approved; or (b) additional revisions are required to be made to the Plans.</p> <p>If the Minister does not advise the approval holder within the 60 days, the revised Plans are taken to have been approved by the Minister and the approval holder must implement the revised Assurance Plan and Offsets Plan.</p> <p>If the Minister requires additional revisions to the Plans, the approval holder has to make the required revisions and resubmit the Plans for approval.</p> <p>If the revised Plans are not submitted, no further validation notice may be given under Part C of the endorsed Program until the revised Plans have been submitted and approved.</p> <p>The Minister has 30 days to advise the approval holder in writing whether the revised Plans are approved. If the Minister does not advise the approval holder within the 30 days, the revised Plans are taken to have been approved and the approval holder must implement the revised Assurance Plan and Offsets Plan.</p>	Prepare and submit a review and revision of the Assurance Plan and Offsets Plan to the satisfaction of the Minister of the DoEE (or delegate).	5 yearly review document and revised Assurance Plan and Offsets Plan.	Not required during this reporting period.	First review due 19 December 2021.	Not required during this reporting period.

Condition/ Section	Requirement	How	Documentation	Evidence	Timeframe	Status
	<p>After receiving written notice from the Department that the revised Assurance Plan and Offsets Plan are approved, the approval holder must implement the revised Assurance Plan and Offsets Plan.</p> <p>The approval holder must publish and maintain the revised Assurance Plan and Offsets Plan on its website within one (1) month of receiving written notice from the Department that the plans have been approved.</p>					
5	<p>At any time the approval holder may choose to review and revise the Assurance Plan and/or the Offsets Plan without requiring the Minister's approval of the revised Plans if the revision does not:</p> <p>(a) include changes to Program Matters Outcomes; (b) affect the achievement or monitoring of Program Matters Outcomes; or (c) include changes to environmental offsets for any Program Matters.</p> <p>If the approval holder makes this choice, the approval holder must notify the Department in writing that the current approved Assurance Plan and/or Offsets Plan has been revised and provide the Department with a copy of the revised Assurance Plan and/or Offsets Plan.</p> <p>The approval holder must implement the revised Assurance Plan and/or Offsets Plan from the date of the written notice to the Department.</p> <p>The approval holder must publish the revised Assurance Plan and Offsets Plan on their website within one (1) month of the written notice to the Department.</p>	Prepare and submit a review and revision of the Assurance Plan and Offsets Plan to the satisfaction of the Minister of the DoEE (or delegate).	Revised Assurance Plan and Offsets Plan.	Not required during this reporting period.	Anytime during the duration of the Approval.	Not required during this reporting period
6	The approval holder must inform any person that they authorise, permit or request to undertake any activity of obligations under the endorsed Program and conditions attached to this approval that restrict or regulate the undertaking of activities within the strategic assessment area.	Obligations are maintained in the legal obligations register and documented within the Project Environmental and Aboriginal Heritage Review (PEAHR) prior to undertaking activities.	Western Australian Iron Ore (WAIO) Environmental Legal Obligations Register (ELOR) and PEAHR documentation.	Seventeen obligations from the Mining Area C (MAC) Validation Notice and thirteen obligations from the Jimblebar Optimisation Project Validation Notice have been incorporated into the WAIO ELOR. The Jimblebar Optimisation Project Validation Notice took effect on 8 June 2020. Obligations from MAC Validation Notice and Jimblebar Optimisation Project Validation Notice are also incorporated into site specific PEAHRs for all activities related to the project. All personnel carrying out works associated with activities relating to the Validation Notice are required to comply with environmental approvals, the PEAHR requirements and conditions and any other relevant legislative requirements.	Prior to undertaking activities.	Compliant.
7	An upper disturbance limit of 110,000 hectares applies to the approval holder. All activities that result in a direct disturbance will account towards the upper disturbance limit. The approval holder may undertake activities that result in a direct disturbance up to the maximum of 110,000 hectares less any direct disturbance permitted in a section 146B approval given in relation to assets divested by the approval holder and for which a validation notice has been given.	Maintain the program disturbance tracking register	Program disturbance tracking register.	Table 7 details the current disturbance undertaken during the reporting period against the upper disturbance limit. The current total disturbance (2,374.84 ha), up to 30 June 2020, has not exceeded the upper disturbance limit. No individual activities exceeded their allocated disturbance limit.	Annually for the duration of the Approval.	Compliant.
8	By the first business day in October of each year after the commencement of this approval, the approval holder must submit a report to the Department and publish the report on its website. The report must address the requirements of an annual report outlined in Part B of the endorsed Program.	Prepare and submit annual report and publish on BHP external website	BHP SEA AER.	<p>This document forms the annual report under the approval for the 1 July 2019 to 30 June 2020 period.</p> <p>The FY 2019 report was submitted on 1 Oct 2019 and is available on the BHP website (https://www.bhp.com/-/media/bhp/regulatory-information-media/iron-ore/western-australia-iron-ore/0000/httpswwwbhpcomenvironmentregulatoryinformation--western-australia-iron-ore--western-australia-iron-ore-pilbara-strategic-assessment-commonwealth/20191001-env-waio-epbc-strategic-assmt-aer-2018_2019.pdf)</p> <p>Table 2 documents the requirements of an annual report in accordance with Part B, Chapter 5 Reporting, of the Program.</p>	Annually for the duration of the Approval.	Compliant.
9	The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions attached to this approval, including measures taken to implement the endorsed Program, Assurance Plan and	Maintain the program disturbance tracking register.	Program disturbance tracking register.	Table 7 provides an extract of the Program disturbance tracking register, which details the disturbance undertaken during the reporting period against the upper disturbance limit.	Duration of the Approval.	Compliant.

Condition/ Section	Requirement	How	Documentation	Evidence	Timeframe	Status
	Offsets Plan and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions attached to this approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	Document decisions regarding notifiable and non-notifiable actions Maintain the legal obligations register.	Validation notices and decision reports. WAIO ELOR.	There were two actions determined to be not notifiable in the reporting period (Western Creek Diversion and MAC Surplus Water). Decision Reports were completed for both non notifiable actions. The draft Jimblebar Optimisation Project Validation Notice was made available for public comment from 9 March 2020 to 8 April 2020. BHP has recently replaced the CMO online database, previously used to record legal obligations, with a purpose built WAIO ELOR database to administer and report against legal obligations. This section will be reviewed during the next revision of the Assurance Plan, to document this replacement.		
10	Upon the direction of the Minister, the approval holder must ensure that an independent audit of compliance with the conditions attached to this approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	Appoint a Minister approved independent auditor to undertake an audit of compliance with conditions.	Independent auditors report.	Not required during this reporting period.	When requested by the Minister.	Not required during this reporting period.

3 EPBC SEA Program Part B

Table 2 assesses compliance against the seven requirements of the reporting section of the Program.

Table 2: Audit Table for the EPBC SEA Program Part B

Chapter	Condition/Section	Requirement	How	Documentation	Evidence	Timeframe	Status
5 Reporting	Item 1	Compliance with the Assurance Plan and Offsets Plan and Validation Notices.	Assess as part of the BHP annual reporting process.	BHP SEA AER.	No non-compliances with the Assurance Plan, Offsets Plan or Validation Notices have been identified during the reporting period.	Annually for the duration of the Approval.	Compliant.
	Item 2	Actions determined not notifiable.	Assess activities against the Program and Assurance Plan.	Decision Report.	There were two actions determined to be not notifiable in the reporting period (Western Creek Diversion and MAC Surplus Water). Decision reports were completed for both non-notifiable actions. No disturbance activities were undertaken for Western Creek Diversion and MAC Surplus Water during the reporting period.	Duration of the Approval.	Compliant.
	Item 3	Activities determined to be a notifiable action.	Assess activities against the Program and Assurance Plan.	Decision Report and Validation Notice.	One action was determined to require a Validation Notice during the reporting period (Jimblebar Optimisation Project).	Duration of the Approval.	Compliant.
	Item 4	Progress of notifiable actions, including when notifiable actions have commenced and completed.	Review progress of notifiable actions.	Program disturbance tracking register.	See Section 6: Validation Notices	Annually for the duration of the Approval.	Compliant.
	Item 5	Assets divested through the process described in Section 2.1, noting the status of environmental obligations under this Program at the time of divestment.	Review BHP divestment activities.	Asset database.	No assets, subject to the Program, were divested during the reporting period.	Annually for the duration of the Approval.	Not required during this reporting period.
	Item 6	An account of the upper disturbance limit for all activities taken within the Strategic Assessment Area. This will include any direct disturbance that has occurred in the twelve month period and as a cumulative total.	Maintain the program disturbance tracking register.	Program disturbance tracking register.	Details of disturbance undertaken during the reporting period and the cumulative disturbance is provided in Table 7.	Annually for the duration of the Approval.	Compliant.
	Item 7	Results of the five yearly review as described in Sections 4.1.1. and 4.1.2.	Prepare and submit a five yearly review to the satisfaction of the Minister.	Five yearly review document.	Not required within this reporting period.	First Review due the 19 December 2021.	Not required at this stage.

4 EPBC SEA Assurance Plan

Table 3 assesses compliance against the nine requirements of the Section 8 (Reporting) and five requirements of Section 10 (Data Management) of the Assurance Plan.

Table 3: Audit Table for the EPBC SEA Assurance Plan

Chapter	Condition/Section	Requirement	How	Documentation	Evidence	Timeframe	Status
8 Reporting	Item 1	Notifiable Actions identified under the Program during the period covered by the report.	Assess activities against the Program and Assurance Plan.	Validation Notice.	One action was determined to require a Validation Notice during the reporting period (Jimblebar Optimisation Project).	Annually for the duration of the Approval.	Compliant.
	Item 2	Details of activities within the scope of the Program which were commenced during the period covered by the report but were determined not notifiable.	Review progress of non-notifiable actions and maintain the program disturbance tracking register.	BHP SEA AER. Program disturbance tracking register.	Clearing of native vegetation for geotechnical drilling required for the Orebody 30 (OB30) Creek Diversion was conducted during the reporting period. Details of disturbance undertaken for the OB30 Creek Diversion during the reporting period is provided in Table 7 and Figure 9. No activities were undertaken for Western Creek Diversion or MAC Surplus Water during the reporting period.	Annually for the duration of the Approval.	Compliant.
	Item 3	Status of implementation (planned start date, action commenced and planned completion date; and action completed) of all Notifiable Actions.	Review progress of notifiable actions and maintain the program disturbance tracking register.	BHP SEA AER. Program disturbance tracking register.	See Section 6: Validation Notices.	Annually for the duration of the Approval.	Compliant.
	Item 4	Assets divested through the process described in Section 2.1 of the Program.	Review BHP divestment activities.	Asset database.	No assets, subject to the Program, were divested during the reporting period.	Annually for the duration of the Approval.	Not required during this reporting period.
	Item 5	Status of offsets implemented for each Notifiable Action.	Review progress of offset plans for notifiable actions.	BHP SEA AER.	No offsets were implemented during the reporting period. BHP submitted the Offsets Proposal for Mining Area C, in accordance with the Offsets Plan, on the 14 December 2018. The Offsets Proposal is currently under review. Jimblebar Optimisation Project did not require EPBC Act Offsets.	Annually for the duration of the Approval.	Not required during this reporting period.
	Item 6	Disturbance areas associated with all actions, whether material or non-material, implemented since the Approval. Both the annual disturbance and the total disturbance (since the Approval) will be included.	Maintain the program disturbance tracking register.	Program disturbance tracking register.	Details of disturbance undertaken during the reporting period and cumulative disturbance provided in Table 7 and Figures 5, 8 and 9.	Annually for the duration of the Approval.	Compliant.
	Item 7	The outcomes of compliance audits undertaken during the period covered by the report will be included.	Review outcomes of compliance audits completed during the reporting period.	Compliance audit reports.	No compliance audits were completed during the reporting period.	Annually for the duration of the Approval.	Compliant.
	Item 8	Summary of any exceedances of the Program Matter Outcomes relevant to each Notifiable Action and corrective actions taken.	Review decision reports, notifiable actions and compliance audits undertaken during the reporting period.	Monitoring reports.	No exceedances of the Program Matter Outcomes were identified during the reporting period. See Section 6: Validation Notice.	Annually for the duration of the Approval.	Compliant.
	Item 9	Deviation from the Program or from information and management commitments contained in a Validation Notice for a Notifiable Action.	Review decision reports, notifiable actions and compliance audits undertaken during the reporting period.	Compliance audit reports.	No deviations from Program or Validation Notices were identified during the reporting period.	Annually for the duration of the Approval.	Compliant.
10 Data Management	Item 1	An annual review of the site monitoring register and the guideline trigger values to ensure the program is efficient, risk based and meets compliance requirements.	Review site monitoring registers and compliance audits.	Site monitoring register and compliance audit reports.	See Section 6: Validation Notices.	Annually for the duration of the Approval.	Compliant.
	Item 2	Environmental monitoring and measurement equipment is to be maintained/calibrated/verified in accordance with manufacturers specifications.	Review site monitoring registers and compliance audits.	Site monitoring register and compliance audit reports.	Groundwater level monitoring was undertaken during the reporting period. Calibration of water level monitors was undertaken in accordance with the manufacturers specifications, as per the Western Australian (WA) Department of Water and Environmental Regulation (DWER) Operating Licences.	Annually for the duration of the Approval.	Compliant.
	Item 3	Verify source data integrity – determine if the data from a sampling point has been mapped against the correct data program, data type, test methods and units of measurement are accurate.	Review site monitoring registers and compliance audits.	Site monitoring register and compliance audit reports.	Verification of the groundwater level monitoring data was completed during the reporting period. Verification activities included confirming sampling locations, checking monitoring equipment and ensuring consistency with previous monitoring data.	Annually for the duration of the Approval.	Compliant.
	Item 4	Source monitoring data is analysed against trigger values, trends and outliers and in consideration of the target environmental outcomes.	Review site monitoring registers and compliance audits.	Site monitoring register and compliance audit reports.	Groundwater level monitoring data was compared against trigger values during the reporting period. No values from the Mining Area C - Validation Notice, exceeded triggers during the reporting period. See Section 6: Validation Notices.	Annually for the duration of the Approval.	Compliant.
	Item 5	An investigation is required for any values that are above triggers and thresholds.	Review site monitoring registers and compliance audits.	Site monitoring register and compliance audit reports.	No values from the Mining Area C - Validation Notice, exceeded triggers and thresholds during the reporting period. See Section 6: Validation Notices.	Annually for the duration of the Approval.	Compliant.

5 EPBC SEA Offsets Plan

Table 4 assesses compliance against the nine requirements of the Section 4.5 (Annual Environmental Report) and five requirements of Section 4.6 (Offsets Reconciliation) of the Offsets Plan.

Table 4: Audit Table for the EPBC SEA Offsets Plan

Chapter	Condition/Section	Requirement	How	Documentation	Evidence	Timeframe	Status
4.5 Annual Environmental Report	Item 1	Notifiable Actions identified under the Program during the period covered by the report.	Assess activities against the Program and Assurance Plan.	Validation Notice.	One action was determined to require a Validation Notice during the reporting period (Jimblebar Optimisation Project).	Annually for the duration of the Approval.	Compliant.
	Item 2	Details of activities within the scope of the Program which commenced during the period covered by the report but were determined to not be notifiable.	Review progress of non-notifiable actions and maintain the program disturbance tracking register.	BHP SEA AER. Program disturbance tracking register.	Clearing of native vegetation for geotechnical drilling required for the OB30 Creek Diversion was conducted during the reporting period at the approved and operating Whaleback Iron Ore Mine. Details of disturbance undertaken for the OB30 Creek Diversion during the reporting period is provided in Table 7 and Figure 9.	Annually for the duration of the Approval.	Compliant.
	Item 3	Status of implementation (planned start date, action commenced and planned completion date, and action completed) of all Notifiable Actions.	Review progress of notifiable actions and maintain the program disturbance tracking register.	BHP SEA AER. Program disturbance tracking register.	See Section 6: Validation Notices.	Annually for the duration of the Approval.	Compliant.
	Item 4	Status of offsets implemented for each Notifiable Action including monitoring and continuous improvement outcomes where applicable.	Review progress of offset plans for notifiable actions.	BHP SEA AER.	No offsets were implemented during the reporting period. BHP submitted the Offsets Proposal for Mining Area C, in accordance with the Offsets Plan, on the December 2018. The Offsets Proposal is currently under review. Jimblebar Optimisation Project did not require EPBC Act Offsets.	Annually for the duration of the Approval.	Not required during the reporting period.
	Item 5	Assets divested through the process described in Section 2.1 of the Program	Review BHP divestment activities.	Program asset divestment register.	No assets, subject to the Program, were divested during the reporting period.	Annually for the duration of the Approval.	Not required during this reporting period.
	Item 6	Disturbance areas associated with all actions, implemented since the Approval. Both the annual disturbance and the total disturbance (since Approval) will be included.	Maintain the program disturbance tracking register.	Program disturbance tracking register.	Details of disturbance undertaken during the reporting period and cumulative disturbance provided in Table 7 and Figures 5, 8 and 9.	Annually for the duration of the Approval.	Compliant.
	Item 7	Details and outcomes of audits undertaken during the period covered by the report.	Review outcomes of compliance audits completed during the reporting period.	Compliance audit reports.	No compliance audits were completed during the reporting period.	Annually for the duration of the Approval.	Not required during this reporting period.
	Item 8	Summary of any impacts that have prejudiced attainment of the Program Matter Outcomes relevant to each Notifiable Action and corrective actions taken.	Review decision reports, notifiable actions and compliance audits undertaken during the reporting period.	Compliance audit reports.	No exceedances of the Program Matter Outcomes were identified during the reporting period. See Section 6: Validation Notices.	Annually for the duration of the Approval.	Compliant.
	Item 9	Deviation from the Program or from key management commitments contained in a Validation Notice.	Review decision reports, notifiable actions and compliance audits undertaken during the reporting period.	Compliance audit reports.	No deviations from Program were identified during the reporting period. Key management commitment contained with Validation Notices are currently under review.	Annually for the duration of the Approval.	Compliant.
4.6 Offsets Reconciliation	Step 1	Prior to ground disturbance an assessment of native vegetation condition, occurrence of Program Matters and/or habitat of conservation value to Program Matters is undertaken.	Review vegetation condition prior to ground disturbance.	PEAHR.	For MAC, a flora condition assessment was undertaken as part of the Flora and Vegetation Surveys (Onshore Environmental, 2011/2012) to support the assessment process and approval of Ministerial Statement (MS) 1072. Habitat mapping was undertaken as part of Vertebrate Fauna Desktop Assessment (Biologic, 2017) completed for the approval of MS 1072. For the Jimblebar Optimisation Project, the following flora and vegetation surveys were completed as part of the assessment process for the approval of MS 1126: <ul style="list-style-type: none"> East Jimblebar and Caramulla Flora and Vegetation Survey (Biologic 2019) Caramulla Creek Flora and Vegetation Survey (Astron Environmental Services, 2018) Reconnaissance Flora and Vegetation Survey Caramulla (Onshore Environmental, 2018) Shears West Detailed Vegetation and Flora Survey (Onshore Environmental, 2018). Habitat mapping was undertaken as part of Jimblebar East and Caramulla Fauna Survey (GHD, 2019). There were not additional offsets proposed for the Jimblebar Optimisation Project. The PEAHR process reviews proposed activities prior to disturbance to further assess the vegetation condition and occurrence of Program Matters.	Prior to commencing ground disturbance.	Compliant.

Chapter	Condition/ Section	Requirement	How	Documentation	Evidence	Timeframe	Status
	Step 2	The vegetation and topsoil is cleared in accordance with the relevant internal ground disturbance controls.	Conduct vegetation clearing in accordance with PEHR conditions.	PEHR.	Implementation of on ground activities are managed via the PEHR process. All ground disturbance activities will meet the requirements of the PEHR. Topsoil requirements are included within the conditions of PEHR. All personnel carrying out works associated with clearing activities are required to comply with environmental approvals, the PEHR requirements and conditions and any other relevant legislative requirements.	Prior to commencing ground disturbance.	Compliant.
	Step 3	Annual recording and mapping of new disturbance is undertaken.	Maintain disturbance tracking register and annual map disturbance completed during reporting period.	Program disturbance tracking register and BHP SEA AER.	Recording of annual disturbance is undertaken using on-site surveys, with confirmation through aerial photography from the end of the reporting period. Survey and aerial photography data is processed using ArcMAP, to generate maps for specific disturbance areas. Details of disturbance undertaken during the reporting period is provided in Table 7 and Figures 5, 8 and 9.	Annually for the duration of the Approval.	Compliant.
	Step 4	The total area disturbed within the scope of the Program is calculated using a geographical information system (GIS).	Review annual disturbance.	Program disturbance tracking register and BHP SEA AER.	Disturbance is calculated using on-site surveys, with confirmation through the most recent aerial photography. Survey and aerial photography data is reviewed and the final disturbance areas are calculated using ArcMAP.	Annually for the duration of the Approval.	Compliant.
	Step 5	The total number of hectares disturbed over the reporting period and a cumulative period total against the Program, for each Validation Notice.	Maintain disturbance tracking register.	Program disturbance tracking register.	Details of disturbance undertaken during the reporting period and cumulative disturbance is provided in Table 7 and Figures 5, 8 and 9.	Annually for the duration of the Approval.	Compliant.

6 Validation Notices

6.1 Mining Area C

Mining Area C is located approximately 100 kilometres northwest of the town of Newman in the Pilbara region of Western Australia. The mine is situated within Mineral Lease 281SA (ML281SA) and Mineral Lease 249SA (ML249SA) and is operated by BHP in accordance with the *Iron Ore (Mount Goldsworthy) Agreement Act 1964*. MAC Northern Flank Operations commenced in August 2003 under Ministerial Statement 491, issued 24 December 1998.

Campaign mining through conventional open cut mining methods involves drilling, blasting, and categorisation of blasted material into iron ore or waste rock continues at Northern Flank and Packsaddle deposits. Fixed and mobile ore crushing facilities are utilised through the operation. Ore is blended into stockpiles onsite and railed to BHP's shipping facilities at Port Hedland where it is shipped to overseas customers.

Mine dewatering occurs at North Flank. MAR continues to be the main method of mine surplus water disposal. The A Deposit MAR ceased to operate in April 2019 due to mine extension to the east. The Juna Downs MAR was commissioned in February 2019 and became operational in May 2019 as a replacement option for the A Deposit MAR.

Disturbance activities for Mining Area C, specifically Southern Flank, commenced in July 2018 following the Validation Notice becoming effective on 13 July 2018. Details of disturbance undertaken for Mining Area C during the reporting period are provided in Table 7 and Figure 5.

Development of Southern Flank infrastructure continued during the reporting period. These works included the establishment of an access road from Mulla Camp to Primary Crushing Station (PC) 2, access road from Mining Area C to PC1, bulk earth works for PC1 and PC2, Mobile Equipment Maintenance (MEM) precinct, conveyors from Southern Flank to MAC, opening of mine pit areas at Southern Flank and the expansion of the existing rail loop at MAC. Based on the current mine plan, completion of mining at the site is anticipated in approximately 2068.

6.1.1 Population

Monitoring of Greater Bilby, Pilbara Olive Python, Pilbara Leaf-Nosed Bat and Northern Quoll populations was not required during the reporting period as per the Validation Notice.

In respect of the Ghost Bat, based on the results of monitoring conducted during the FY2020 reporting period, BHP consider that the Program Matter Outcome:

No loss of Ghost Bat population/s as a result of program activities

has been achieved for the FY2020 reporting period.

6.1.1.1 Ghost Bat Monitoring

The research into Ghost Bat ecology has continued to be undertaken throughout the FY2020 reporting period. The research objectives include:

- determine the temporal and spatial use of roosting habitat by Ghost Bats in the eastern Hamersley sub-region;
- investigate the foraging strategy utilised by the Ghost Bat in the Pilbara; and
- determine any key dispersal corridors for Ghost Bats in the eastern Hamersley sub-region.

Sampling

As part of the research, four field trips were undertaken in August, October, November and December 2019 to collect Ghost Bat scats from caves (including high value caves that were accessible or likely to yield scats for analysis) to assess the temporal and spatial use of roosting habitats.

During the August 2019 field survey, scats were collected from 15 of the 23 caves visited across Mining Area C, South Flank and Mudlark. The number of scats collected was more than previously collected during the May 2019 field trip, suggesting a higher level of Ghost Bat activity level in these areas over the few months leading to the visit. Two ghost bat individuals were observed.

During the October 2019 field survey, scats were collected from 10 of the 24 caves visited during the field trip, with a reduced number from the August field trip. No scats were recorded at the control site caves at Mt Truchanas. Three ghost bat individuals were observed.

The November 2019 field trip saw fewer scats than the previous two months, with scats collected from three of the 17 caves visited.

During the December 2019 field trip, 20 caves were visited and scats were collected from five of the caves. The variations in the records and scat collections suggests that Ghost Bats are not utilising specific caves consistently throughout the year; rather they are utilising different areas of the landscape within their range.

Based on the continued presence of Ghost Bat at MAC during the reporting period, BHP considers that the performance target in the Validation Notice of

Signs of ghost bat use in the 'to be retained' ghost bat caves or artificial roosts (if applicable) within the activity area

has been achieved for the FY2020 reporting period.

Analysis

Genetic and Hormone analysis from monitoring in 2017-2018 was completed during the reporting period. Table 5 shows the caves from which samples were collected at MAC. From the 1078 samples collected, 888 were able to generate useable genotypes. This resulted in the identification of 135 unique genotypes (individuals) across the roosts sampled in the central, east and south-eastern Hamersley Range study area. Ninety-eight ghost bat individuals were detected in roosts in the MAC (Figure 4). Of these 29 individuals were categorised as 'recaptures' from the Pilbara-wide WA Department of Biodiversity, Conservation and Attractions (DBCA) genotype database.

Hormone analysis was undertaken on 454 scat samples. From these samples 124 scats contained elevated progesterone levels (i.e. samples with progesterone levels exceeding 970 ng/g). Of the 124 scats containing elevated progesterone levels, 99 scats were also genotyped, and consequently associated with 43 unique individuals identified in the genetic analysis across the larger study area. The high value caves that recorded the presence of pregnant females from Mining Area C is included in Table 6.

Table 5: Presence and absence of scats recorded at high value caves at Mining Area C during monitoring

Cave Id.	Nov-15	Dec-15	Apr-16	May-16	Oct-16	Late Oct-16	Dec-16	Late Dec-16	Feb-17	May-17	Jun-17	Late Jun-17	Oct-17	Jan-18	Mar-18	Apr-18	Jul-18	Sep-18
AC01	0	0	5	1500	—	150	0	—	—	2	—	—	0	15	0	0	—	60
AC02	—	—	—	—	0	—	0	—	—	—	—	—	—	0	—	—	—	—
AC5	—	—	—	—	5	—	0	—	—	—	—	—	15	3	0	0	—	3
AC8	—	—	—	—	0	—	0	—	—	—	—	—	0	0	0	14	—	0
AC9	—	—	—	—	0	—	0	—	—	—	—	—	300	50	3	20	—	0
AC13	—	—	—	—	23	—	9	—	—	—	—	—	—	—	—	—	—	—
AC14	—	—	—	—	—	—	0	—	—	—	—	—	1	—	—	—	—	0
AC17	2	1	2	0	500	—	0	—	—	40	—	—	800	35	0	0	—	—
AC18	—	—	—	—	—	—	12	—	—	—	—	—	—	—	—	—	—	—
AC32	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—
SF4	—	—	—	—	0	—	0	—	—	—	20	—	—	—	—	—	—	—
SF5	—	—	—	—	—	—	0	—	—	—	—	—	700	0	1	0	NS	400
SF6	—	—	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—
SF8	1	0	8	120	19	—	0	—	—	—	300	—	5700	2	0	0	—	350
SF14	0	0	100	350	70	—	0	—	—	—	150	—	3	0	1	40	—	—
SF18	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—
SF26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
SF 27	0	0	0	7	0	—	0	—	—	—	—	—	35	0	—	40	—	—

N.B. '—' denotes not sampled

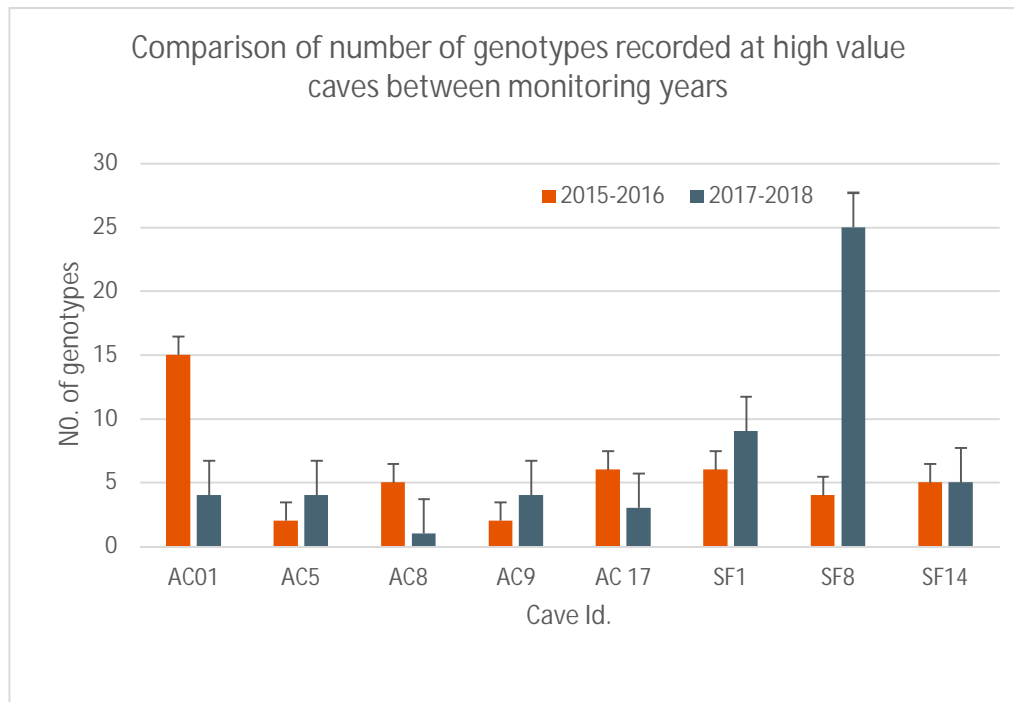


Figure 3: Individual genotypes recorded in genetic analyses from high value caves at Mining Area C sampled both in 2015-2016 and 2017-2018

Table 6: High value caves at Mining Area C with records of presumed pregnant ghost bats as indicated by hormone analyses (Progesterone > 1000 ng/g) from 2014-2018

Cave Id	2014	2015	2016	2017	2018
AC01	Yes	—	No	—	Yes
AC02	—	—	No	—	—
AC5	No	—	No	Yes	No
AC8	Yes	—	No	—	—
AC9	Yes	—	No	Yes	—
AC13	Yes	—	Yes	—	—
AC14	—	—	No	—	—
AC 17	No	No	No	Yes	—
AC18	—	—	Yes	—	—
AC32	—	—	—	—	—
SF1	No	Yes	No	No	Yes
SF4	No	No	—	—	—
SF5	Yes	—	—	No	No
SF6	—	—	Yes	—	—
SF8	No	No	—	Yes	Yes
SF14	No	No	—	Yes	Yes
SF18	—	—	No	—	—
SF26	—	—	—	—	—
SF27	—	No	—	No	—

N.B. '—' denotes either not sampled or no scats detected for analyses

6.1.2 Habitat

Disturbance undertaken during the reporting period under the Mining Area C Validation Notice is detailed in Table 7 and Figure 5.

No disturbance has been undertaken at Weeli Wolli Spring or Ben's Oasis by BHP. Based on the disturbance undertaken during the FY2020 reporting period, BHP consider that the Program Matter Outcome:

Program activities do not physically disturb, or result in adverse changes to the hydrological regimes and/or water quality of the following waterholes: Weeli Wolli Spring, Ben's Oasis;

has been achieved during the reporting period.

No land disturbance has occurred within 50m of the retained high value ghost bat caves or artificial ghost bat roosts during the reporting period (Figure 4). BHP considers that the performance target in the Validation Notice of:

No land disturbance within 50 m of 'to be retained High value ghost bat caves' or 'artificial ghost bat roosts'.

No disturbance to any of the 'to be retained High value ghost bat caves' or 'artificial ghost bat roosts'.

No disturbance to any 'to be retained ghost bat cave' that renders it unsuitable ghost bat habitat.

have been achieved for the FY2020 reporting period.

6.1.3 Offsets

The MAC Offsets Proposal was submitted 14 December 2018 and is currently under assessment.

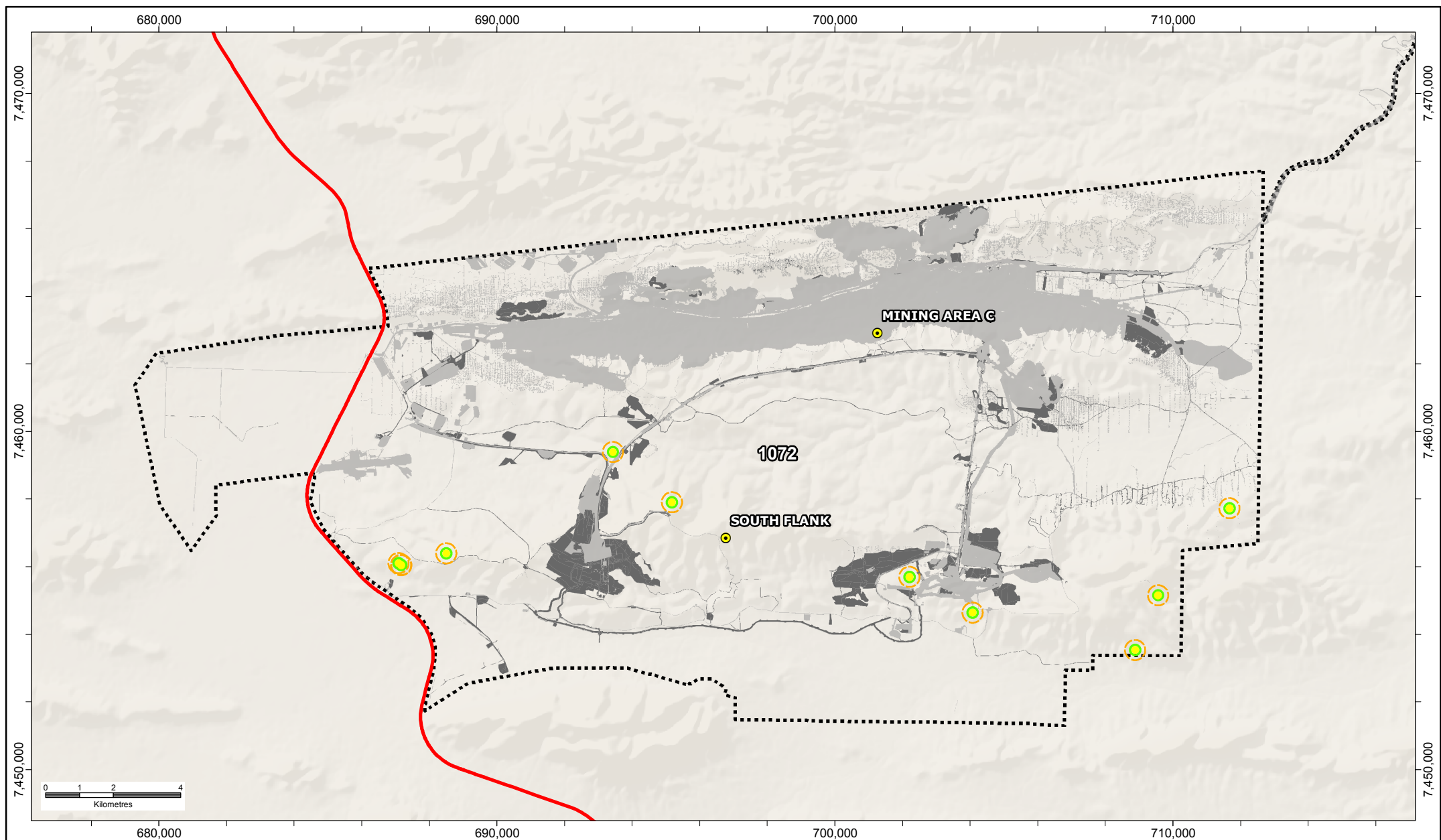
6.1.4 Hydrological Regimes

Based on the monitoring undertaken during the FY2020 reporting period, BHP consider that the Program Matter Outcome:

Program activities do not physically disturb, or result in adverse changes to the hydrological regimes and/or water quality of the following waterholes: Weeli Wolli Spring, Ben's Oasis;

has been achieved during the reporting period.

Dewatering of R Deposit is not scheduled to commence within the next two years. Baseline groundwater level monitoring continued during the reporting period at the pathway and receptor bores for Weeli Wolli Spring (Figure 6) and Ben's Oasis (Figure 7). Groundwater levels in the pathway bores (GWB0013M, HEPX0001M, HDD0003M and HDD0004M) have remained stable throughout the reporting period. Data gaps in the Weeli Wolli Spring monitoring is being investigated to determine the cause.



BHP

Mining Area C Validation Notice

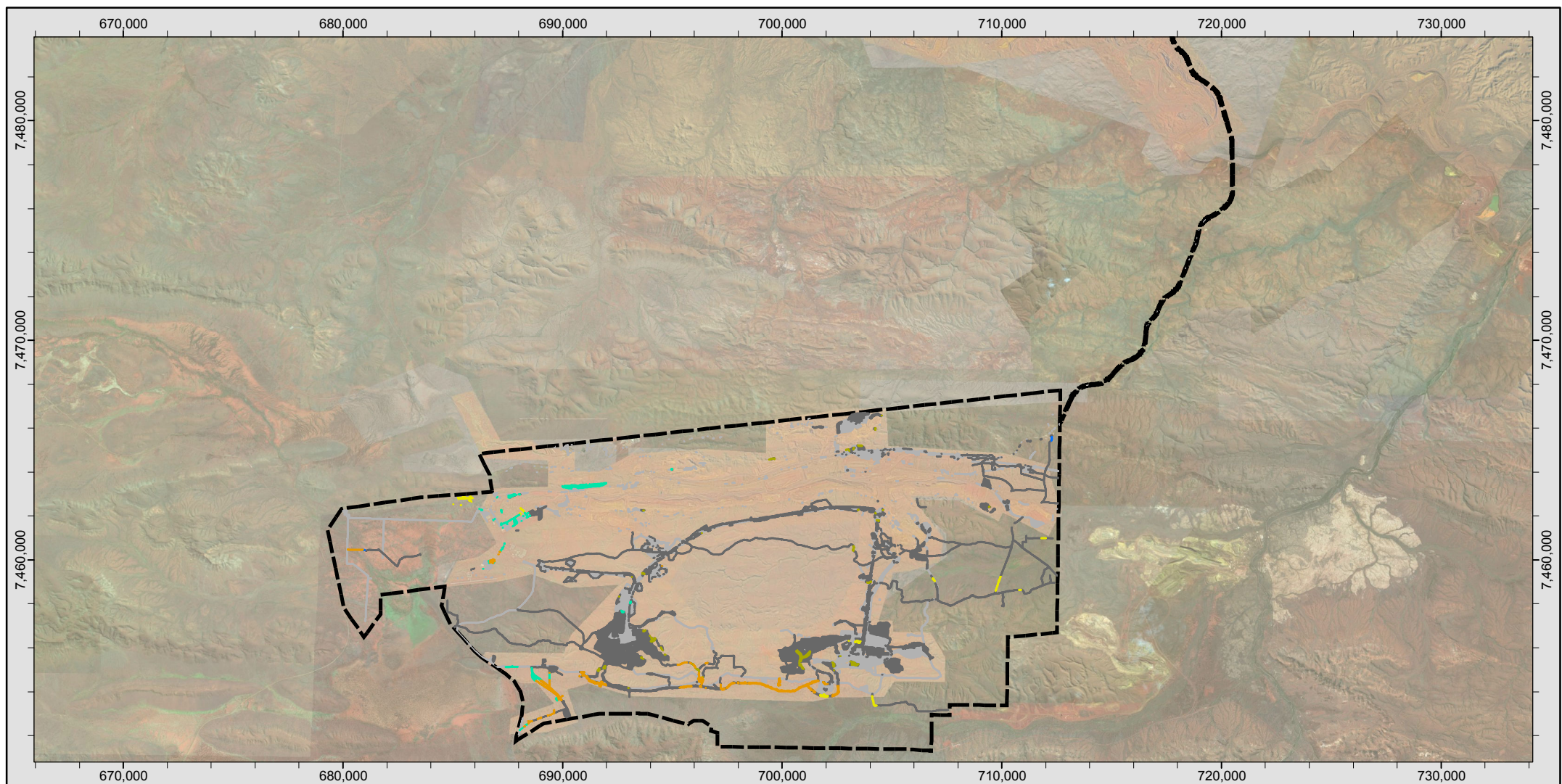
Annual Environmental Report
Ghost Bat trigger

Date:	9/09/2020	Project No:	A1003
Prepared:	M.English	Checked:	S.Carles

Figure :

4

- Ghost Bat cave threshold area
- Ghost Bat cave 150m trigger area
- Early response indicator
- VN disturbance FY20
- Previously disturbed footprint
- Mining area/ South Flank activity



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MINING AREA C - VALIDATION NOTICE Disturbance 2019/2020 Reporting Period

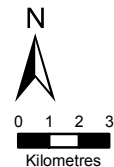
Scale @ A4: 1:250,000	Prepared: P. Gant	Project No: A1003/08 REV A
Date: 30/09/2020	Checked: B. Kraft	Figure : 5
Revision: REV A		

Legend

MAC Validation Notice Disturbance

- Gorge/ Gully (FY 20 - 16.3 ha)
- Major Drainage Line (FY 20 - 0.2 ha)
- Mulga Woodland (FY 20 - 6.2 ha)
- Sand Plain (FY 20 - 37.1 ha)
- Stony Plain (FY 20 - 43.2 ha)
- Other Habitat Type (FY 20 - 998.8 ha)
- (FY 19 - 1175.8 ha)
- Ministerial Statement 1072

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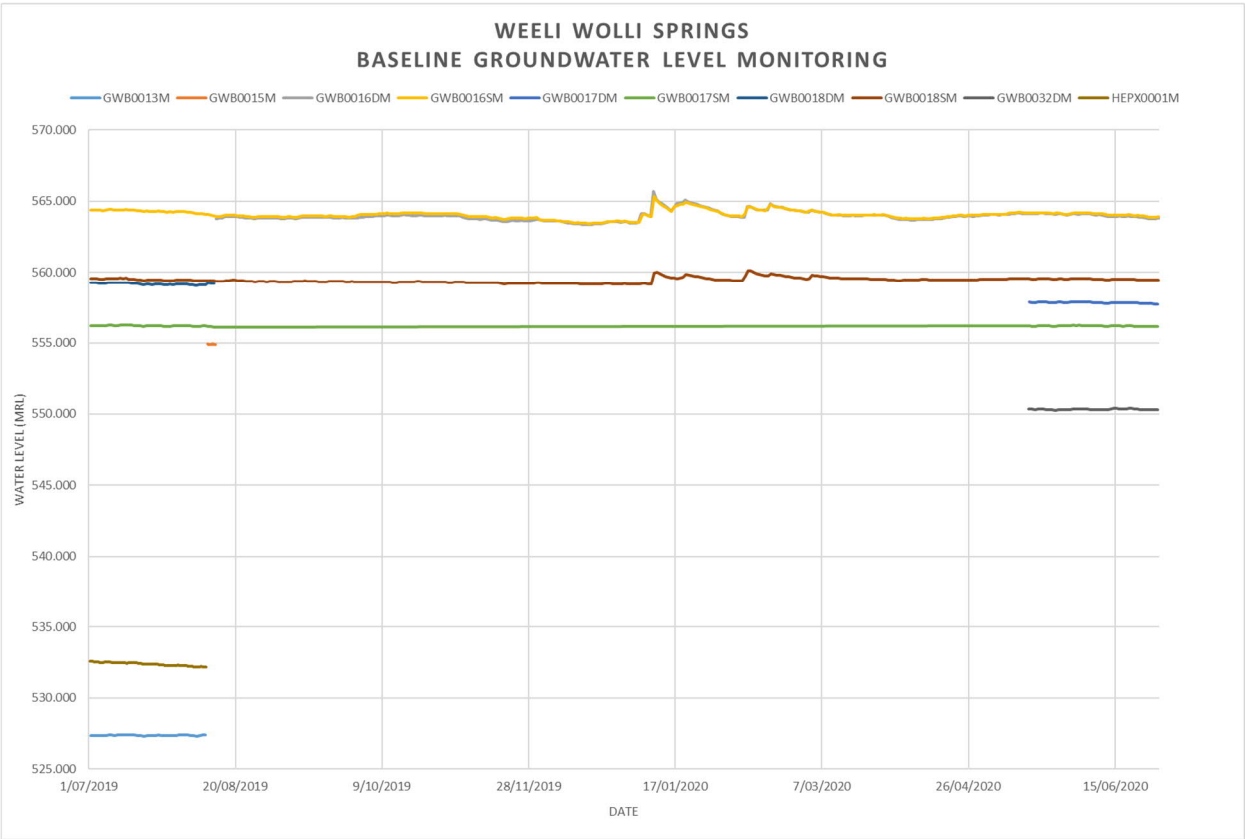


Figure 6: Weeli Wolli Spring Groundwater Level Monitoring

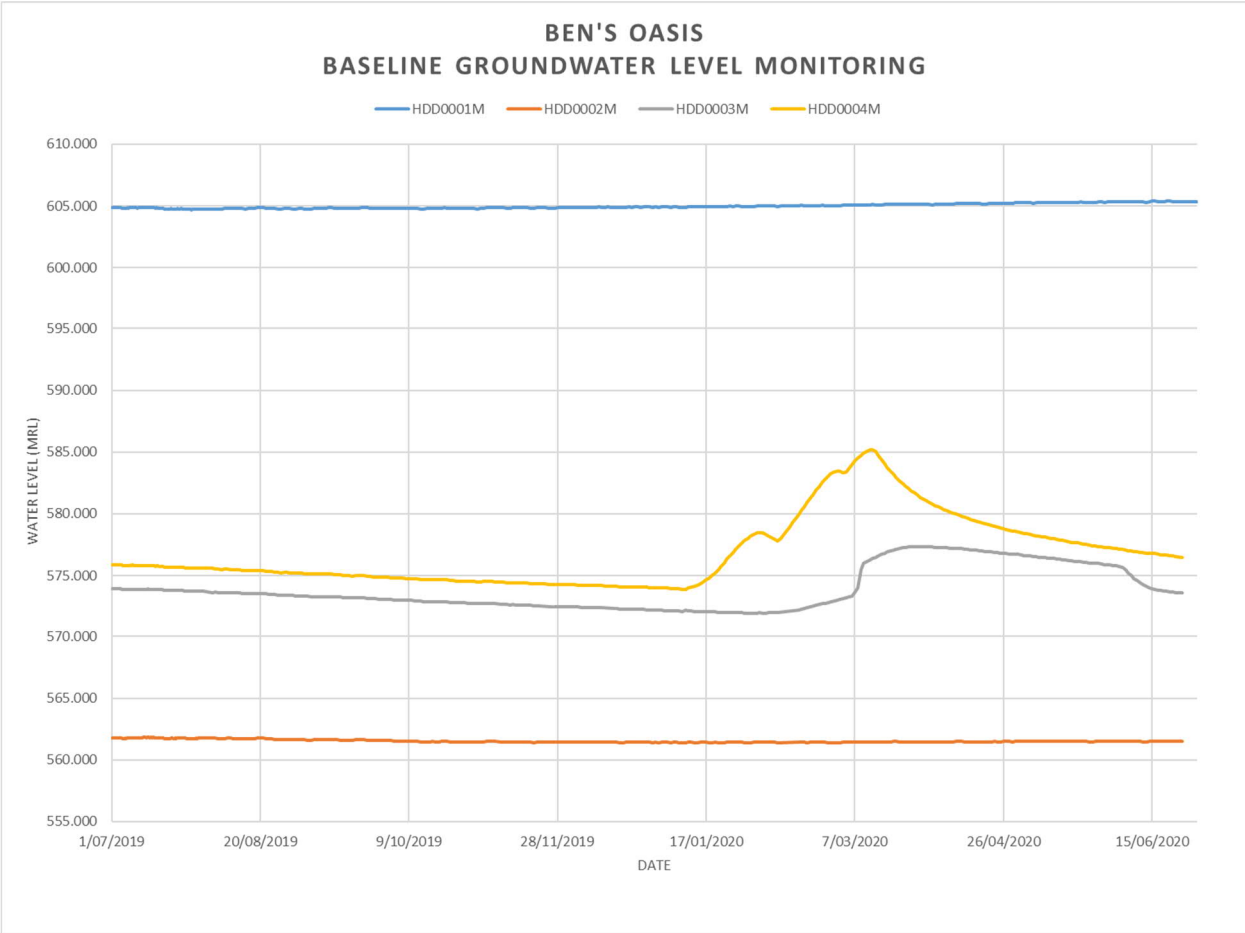


Figure 7: Ben's Oasis Groundwater Level Monitoring

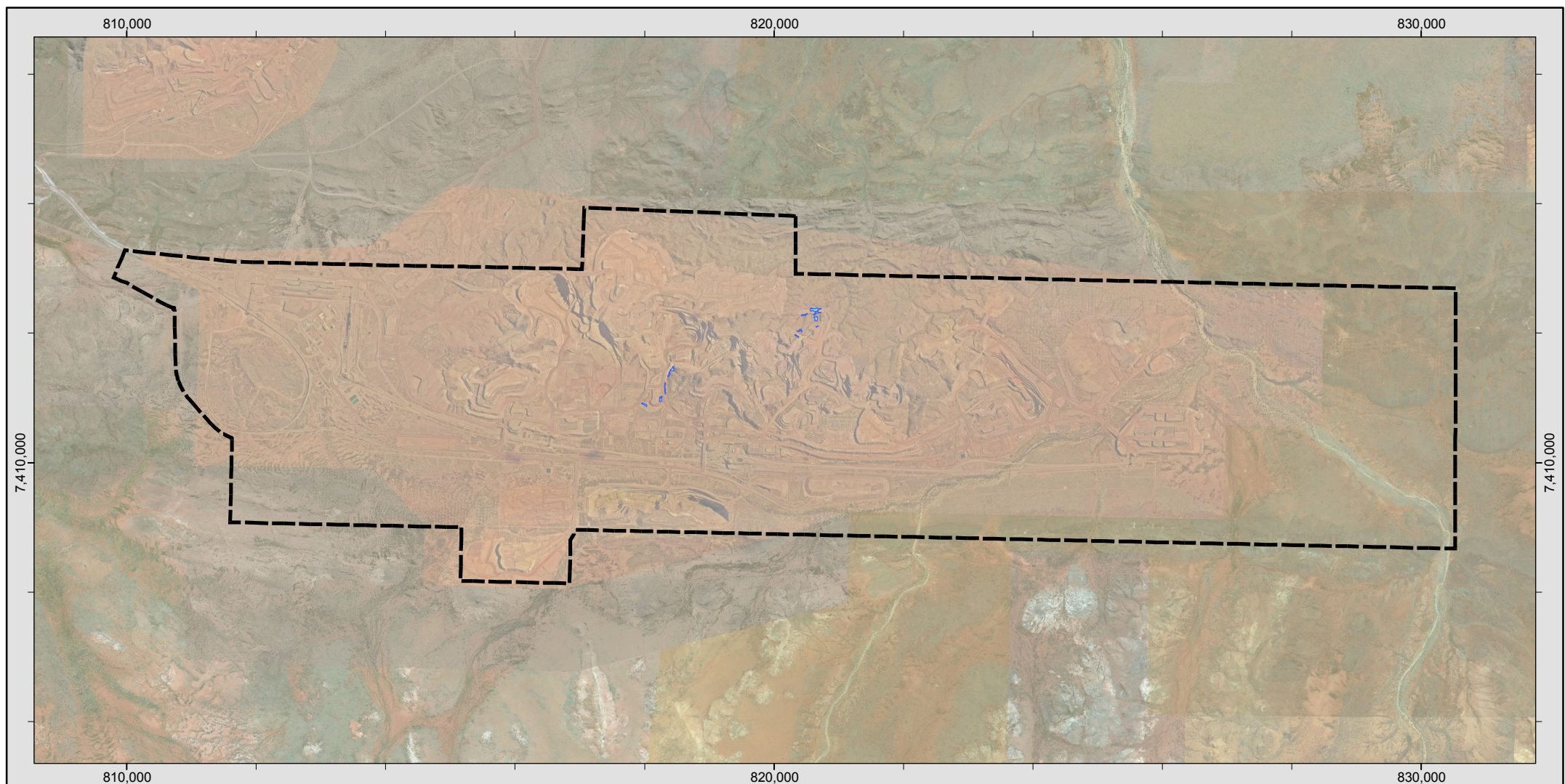
6.2 Jimblebar Optimisation Project

Mining operations at Jimblebar are located approximately 40 kilometres east of the town of Newman.

Existing mining operations include above and below water table mining of open iron ore pits, overburden storage areas and the operation of associated mine, processing and rail infrastructure. Groundwater is abstracted for water supply and to dewater the orebodies. Surplus water management includes transfer to Ophthalmia Dam, controlled creek discharge and MAR. New overburden storage areas to the south of the existing operation and additional water management options in the Caramulla area include MAR and Caramulla Creek discharge.

The draft Jimblebar Optimisation Project Validation Notice was made available for public comment from 9 March 2020 to 8 April 2020, with the Validation Notice taking effect on the 8 June 2020. Details of disturbance undertaken for the Jimblebar Optimisation Project during the reporting period is provided in Table 7 and Figure 8. Disturbance activities associated within the Jimblebar Optimisation Project commenced in 2020, with clearing of mine infrastructure and exploration drilling areas undertaken. Activities at Jimblebar Optimisation Project will continue into future reporting periods, likely up to 2075.

Given the minor disturbance activities undertaken during the reporting period, the Jimblebar Optimisation Project is not considered to be substantially implemented. Substantial implementation of the elements associated with the Jimblebar Optimisation Project will occur during the next reporting period.





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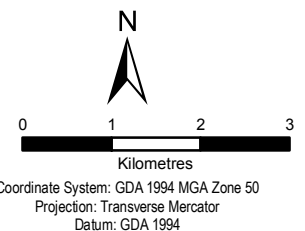
JIMBLEBAR OPTIMISATION PROJECT
Disturbance 2019/2020 Reporting Period

Scale @ A4: 1:85,000	Prepared: P. Gant	Project No: A1003/09 REV A
Date: 30/09/2020	Checked: B. Kraft	Figure : 8
Revision: REV A		

Legend

-  Jimblebar Validation Notice Disturbance (FY 20 - 1.9 ha)
-  Ministerial Statement 1126

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7 Disturbance 2019/20

Table 7: Disturbance undertaken during the 2019/20 reporting period

Project Name	Activity completed during reporting period	Validation Decision	Date Decision Documented	Proposed disturbance (ha)	Overall cumulative program disturbance remaining (ha)	Activity disturbance 2019/20 (ha)	Total activity disturbance to June 2020 (ha)	Overall cumulative activity disturbance remaining (ha)
MAC/South Flank	Establishment of an access road from Mulla Mulla Camp to PC2, access road from Mining Area C to PC1, bulk earth works for PC1 and PC2, MEM precinct, conveyors from South Flank to Mining Area C, opening of mine pit areas at Southern Flank and the rail loop expansion at Mining Area C.	Validation Notice	May 2018	16,000	94,000	1,101.75	2,277.55	107,722.45
Jimblebar OSA1 Stage 1	No activity completed during the reporting period. Disturbance allocation has been completed for this Not a Notifiable Action. This Not a Notifiable Notice has now been superseded by the Jimblebar Optimisation Project Validation Notice.	Not a Notifiable Action	Aug 2018	95	93,905	0	94.7	107,627.45
OB30 Creek Diversion	Clearing for geotechnical drilling.	Not a Notifiable Action	Apr 2019	40	93,865	0.37	0.37	107,627.08
Western Creek Diversion	No activity completed during the reporting period.	Not a Notifiable Action	Feb 2020	15	93,850	0	0	107,627.08
MAC Surplus Water*	No activity completed during the reporting period.	Not a Notifiable Action	Apr 2020	0	93,850	0	0	107,627.08
Jimblebar Optimisation Project	Clearing of mine infrastructure and exploration drilling areas.	Validation Notice	Jun 2020	2,000	91,850	1.9	1.9	107,625.18

* no clearing associated with this activity.

770,000



770,000



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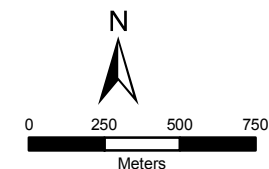
OB30 CREEK DIVERSION
Disturbance 2019/2020 Reporting Period

Scale @ A4: 1:25,000	Prepared: P. Gant	Project No: A1003/10 REV A
Date: 30/09/2020	Checked: B. Kraft	Figure : 9
Revision: REV A		

Legend

-  OB30 Non-Notifiable Action Disturbance (FY 20 - 0.4 ha)
 OB30 Creek Diversion Project

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