



Licence Number	L6942/1997/13
Licence Holder	BHP Billiton Iron Ore Pty Ltd
ACN	008 700 981
File Number:	DER2013/000329-1
Premises	Eastern Ridge Iron Ore Mine Mining tenements M244SA within coordinates MGA Zone 50 As defined by the coordinates in Schedule 1 of the Revised Licence
Date of Report	30 June 2020

1. Definitions and interpretation

Definitions

In this Amendment Report, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Amendment Report	refers to this document
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 JOONDALUP DC WA 6027 info@dwer.wa.gov.au
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	BHP Billiton Iron Ore Pty Ltd
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Amendment Report applies, as specified at the front of this Amendment Report.
Revised Licence	the amended Licence issued under Part V, Division 3 of the EP Act, with changes that correspond to the assessment outlined in this Amendment Report.

Term	Definition
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>

2. Amendment Description

The following guidance statements have informed the assessment and decision outlined in this Amendment Report.

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Land Use Planning (February 2017)*
- *Guidance Statement: Licence Duration (August 2016)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

Additional documents used to inform the decision are listed in Appendix 1.

2.1. Purpose and scope of assessment

BHP Billiton Iron Ore Pty Ltd (Licence Holder) submitted an application to for licence amendment on 3 April 2020. The Licence Holder is seeking approval to:

- construct and operate three new inert landfills south and southeast of the existing landfill (category 63);
- dispose inert concrete waste in any landfills, pit void or overburden storage area (OSA) within the prescribed premises;
- remove the reference to clean fill as a waste since it is used as a cover material only;
- remove the reference to the locations of the bioremediation (bio) facilities and allowing the bio pads to be installed anywhere within the prescribed premises, provided the licence holder complies with condition 1.3.7 (table 1.3.4) which sets out the requirements for the construction of the bio pads,
- remove emission point D02 as it has been decommissioned;
- remove the orebody 24 landfarm as a licensed discharge point; and
- Include emission point D07 to the licence

The application details that the three landfills will be located within the footprint of the existing landfill. The licence holder will construct each landfill in stages. The landfills will continue to only receive inert waste type 1 and inert waste type 2 from the mine.

The application document details that the Licence holder intends to dispose of inert concrete waste within any landfill, pit void or OSA within the boundary of the prescribed premises as inert concrete waste poses little risk to the environment and provides safe and stable backfill material. Currently, inert concrete waste is only disposed of within licenced inert landfill. By allowing inert concrete waste to be disposed of within pit voids and OSAs, this will extend the life of the landfills and allow greater flexibility in waste management at site. While there is currently no precedence in other BHP Environmental Licences, this request is in line with the existing licence Condition 1.3.3 which allows for the disposal of used tyres and conveyer belts in overburden storage areas located within the prescribed premises boundary.

Table 2 lists the documents and information provided with the amendment application and submitted as part of the assessment process.

Table 2: Licence amendments

Document/information description	Date received
Amendment application form signed by general manager of Newman operations (Eastern Ridge Iron and Ore Mine) and attached supporting documentation.	3 April 2020

2.2. CEO Initiated amendment

As part of this amendment package the Department has consolidated the licence by incorporating changes made under the following Amendment Notices:

- *Amendment Notice 1, granted 9 May 2018; and*
- *Amendment Notice 2, granted 22 March 2019.*

The obligations of the Licence Holder have not changed in consolidating the licence. The Department has not undertaken any additional risk assessment of the Premises related to previous Amendment Notices

In applying the above requested amendment the CEO has also:

- updated the expiry date to align with the 2016 amended expiry date;
- updated the definitions in the Licence;
- updated the style and appearance of the Licence;
- updated the Licence conditions to reflect wording in current licence template. The word "Licensee" was removed from the licence and the word "Licence Holder" was added to the licence instead;
- deleted the redundant licence conditions and AACR form set out in attachment 2 of the previous Licence and advise the Licence Holder to obtain the form from the Department's website;

3. Amendment history

Table 3 provides the amendment history for L6942/1997/13.

Table 3: Licence amendments

Instrument	Issued	Amendment
L6942/1997/11	08/11/2007	Licence amendment to allow processing of iron ore mined from OB23 and OB25 at the OB25 processing facilities.
L6942/1997/12	11/11/2010	Licence reissue.
W4982/2011/1	15/09/2011	Works approval issued for Orebody 24/25 Upgrade Project. Ore Processing Facility (category 5) and Sewage Treatment Facilities (category 85).
W5282/2012/1	6/12/2012	Works approval issued for Orebody 24/25. Addition of Sewage Treatment Facility (category 85) designed to treat 30 m ³ /day of effluent.
L6942/1997/12	14/11/2013	Licence amendment following completion of works approved through works approval W4982/2011/1.
L6942/1997/13	12/11/2015	Licence reissue and amendment, updated to licence template version 2.9.
L6942/1997/13	9/05/2018	Amendment Notice 1 Licence amendment to:

		<ul style="list-style-type: none"> • Increase the boundary of L6942/1997/13 (west and north) to include Orebody 24 and amendment of the northeastern section of the premises boundary; • Allow for the construction and operation of dewatering infrastructure from Orebody 24 to the existing Eastern Ridge water network; • Increase the surplus water disposal limit of category 6 by 5.1 gigalitres per annum (GLpa) to a total of 19 GLpa; • Include monitoring point D05 (OB25DMDEW005) which receives overflow from the nearby licenced recharge basins; • Increase the limit of category 5 from 31 mtpa to 32 mtpa; and • Remove Discharge Point D03 (OB25DMDEW003) as it is no longer required for operational purposes.
L6942/1997/13	22/03/2019	<p>Amendment Notice 2 Licence amendment to:</p> <ul style="list-style-type: none"> • Increase the limit of category 5 from 32 mtpa to 41 mtpa; • Include installation of a 5 mtpa relocatable crusher; • Amend the monitoring frequency for surface water emission point D06 to quarterly while discharging; and • Remove the Orebody 24 pipeline works from Table 1.3.6 Works specification.
L6942/1997/13	26/06/2020	<p>Licence amended to:</p> <ul style="list-style-type: none"> • Allow for the addition of three new inert landfills south of the existing landfill; • Allow for the disposal of inert concrete waste within any landfills; pit void or overburden storage area (OSA) within the prescribed premises; • Remove the reference to clean fill as a waste; • Remove the reference to the locations of the bioremediation (bio) facilities and allowing the bio pads to be installed anywhere within the prescribed premises; • Remove emission point D02 as it has been decommissioned; • Remove the orebody 24 landfarm as a licensed discharge point; and • Include emission point D07 to the licence.

4. Location and receptors

Table 4 below lists the relevant sensitive land uses currently in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 4: Receptors and distance from activity boundary

Residential and sensitive premises	Distance from Prescribed Premises
Newman Gymkhana and Polocrosse Club – Agistment area	1.06 km south-southwest of the premises boundary
Parnpajinya Aboriginal Community	1.90 km southwest of the premises boundary
Newman township	2.3 km south-southwest of the premises boundary

Table 5 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 5: Environmental receptors and distance from activity boundary

Environmental receptors	Distance from Prescribed Premises
Homestead Creek (as well as adjacent floodplains and major tributaries)	<p>Within the Premises boundary, the creek runs east – west along the south section of the premises boundary.</p> <p>Surface water (when flowing) travels west to east towards Ethel Gorge.</p> <p>Homestead Creek recharges the superficial aquifer below, from which water is drawn to supply the township of Newman.</p>
Ophthalmia Dam	A portion of this is within the southeast corner of the Premises boundary, the northern section of the Dam receives dewatering discharge
Section of the Fortescue River (supporting the Ethel Gorge Aquifer Stygobiont TEC)	A portion of this is within the Premises boundary, however does not permanently flow and remains dry for the majority of the year. Only flows during flood events.
<p>Ethel Gorge Aquifer Stygobiont TEC</p> <p>Listed as “EN B) ii)” Category of Threat criteria. This means the TEC is (DEC, 2013):</p> <p><i>EN) An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or was originally of limited distribution and is in danger of significant modification throughout its range or severe modification or destruction over most of its range in the near future.</i></p> <p><i>B) Current distribution is limited, and</i></p> <p><i>ii) there are few occurrences, each of which is small and/or isolated and all or most occurrences are very vulnerable to known threatening processes.</i></p>	<p>This TEC is located in the groundwater aquifer below the eastern section of the Premises and below licenced discharge points (recharge basins) D04-4 and D04-3.</p> <p>Recharge to the alluvial aquifer system supporting the TEC occurs mostly from incidental rainfall and infiltration from surface water flows in Homestead Creek</p>
Newman Water Reserve (Proclaimed)	This reserve has Priority 1 status and overlies most of the Premises, with the exception of some areas in eth north of the premises boundary. The current Licence Holder dewatering discharge points are located within a 1km radius of the following well head protection zones (bores) (DoW, 2014) H10, H8, E11, E12, E15, K29, K30, K31. A 500 m radius WHPZs for the production bores within the P1 area is applicable in the Newman Water Reserve.

5. Risk assessment

Tables 6 and 7 below describes the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. This table identifies whether the emissions present a material risk to public health or the environment and outlines relevant regulatory controls.

Table 5: Risk assessment for proposed amendment during construction

Risk Event				Consequence rating ¹	Likelihood rating ¹	Risk ¹	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities	Potential emissions	Potential receptors, pathway and impact	Applicant controls					
Category 63 - construction of inert waste type 1 and 2 landfills, vehicle movements	Dust	Air/windborne pathway causing impacts to health and amenity of closes human receptors (1 km away)	Water carts to be used if required to manage dust emissions	Slight	Unlikely	Low	Minimal dust emissions are expected to be generated during construction activities. With dust management controls in place, the Delegated Officer considers dust emissions are not likely to leave the Premises and combined with a separation distance of over 1km will not significantly impact upon the amenity of residents. The Delegated Officer considers the minor amount of dust potentially generated will not cause vegetation impacts. No further risk assessment is required.	The general provisions (section 49) of the <i>Environmental Protection Act 1986</i> are applicable
	Noise		None				Minor construction activities are considered to pose a noise risk below that of general mining general activities occurring onsite. It is considered that a sufficient separation to sensitive receptors from minor construction activities exists to mitigate potential noise impacts.	

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the Department's *Guidance Statement: Risk Assessments (February 2017)*

Table 7: Risk assessment for proposed amendments during operation

Risk Event				Consequence rating ¹	Likelihood rating ¹	Risk ¹	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities*	Potential emissions	Potential receptors, pathway and impact	Applicant controls					
<p>Cat 63: Landfilling operations- landfills, pit void or overburden storage area (OSA) within the prescribed premises;</p> <p>Vehicle movements on unsealed access roads, movement of waste materials during landfilling operations</p>	Noise	Air/windborne pathway causing impacts to health and amenity of closes human receptors (1 km away)	Vehicles will comply with designated speed limits	Slight	Unlikely	Low	Landfilling activities are considered to pose a noise risk below that of general mining general activities occurring onsite. It is considered that a sufficient separation to sensitive receptors from landfilling activities exists to mitigate potential noise impacts. The Delegated Officer considers that if any noise impacts arise, management under the <i>Environmental Protection (Noise) Regulations 1997</i> will be adequate.	The provisions of the Environmental Protection (Noise) Regulations 1997 are applicable.
	Dust		<p>Cover will be applied in accordance with the proposed license condition</p> <p>Only one active tipping face will be exposed during operations.</p> <p>Water carts for dust suppression</p>	Slight	Unlikely	Low	The Delegated Officer considers the minor amount of dust potentially generated from landfilling activities are unlikely to impact residents located over 1km away	Current licence condition 5.1.4 requires the Licence Holder to implement a complaints management system.

Risk Event				Consequence rating ¹	Likelihood rating ¹	Risk ¹	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities*	Potential emissions	Potential receptors, pathway and impact	Applicant controls					
Category 6: Emission point D07	Mine dewater discharge: Overfilling or during maintenance	Soil and vegetation. Direct discharge to land, causing localized flooding leading to decline in vegetation health	Overflow valve- will direct excessive water to the existing dewatering network which runs back into the mine pit.	Slight	Unlikely	Low	<p>The overflow from tank TK1337 will be directed into pre-constructed v-drains such that localized flooding is not expected during operations-related overflow events.</p> <p>If the engineered drains were to overtop, this would only be anticipated during significant rainfall events whereby it is likely that the nearby area will also be naturally inundated.</p> <p>As such, the risk to the land and nearby vegetation by directing the overflow to the engineered drain is not considered to be a risk to the environment and no further assessment required.</p>	<p>Following conditions added to the licence:</p> <p>2.2.1: requires the licence holder to ensure that all water discharged from tank TK1337 will be directed to D07;</p> <p>3.2.1: requires the licence holder to monitor quality of water at emission; point D07; and</p> <p>5.2.1: requires the licence holder to submit the following information to the CEO relating to D07annually:</p> <ul style="list-style-type: none"> (i) Emission parameter monitoring results; (ii) Date and duration of the discharge; and (iii) Reason for discharge

6. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a licence amendment will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

6.1. Summary of amendments

Table 7 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 6 Licence amendments

Condition No.	Proposed amendments
NA	Updated the format and appearance of the Licence.
NA	Incorporated amendment notice 1 and 2 issued in 2018 and 2019;
Definitions	Definitions updated to reflect department name changes and add some new definitions.
1.2.2 – 1.2.3, 1.3.1–1.3.5 2.1.1, 2.2.1– 2.3.1 3.1.1- 3.1.5, 3.2.1, 3.3.1, 3.4.1, 3.5.1, 3.6.1, 5.1.2 – 5.1.4, 5.2.1- 5.2.3 & 5.3.1	Licence conditions updated to reflect wording in current licence template. The word “Licensee” has been removed and the word “licence holder” was added instead to the licence.
Tables 1.3.1 & 1.3.2	Removed the wording “clean fill” from Tables 1.3.1 and 1.3.2 since it is not a waste but used as a cover material.
Table 1.3.2	Table updated to allow for the disposal of inert concrete waste within any landfills; pit void or overburden storage area (OSA) within the prescribed premises and deleting reference to the location of the bioremediation facility.
Table 1.3.4	Updated table 1.3.4 relating to the construction of three inert landfills.
4.1.4	Compliance achieved. Removed condition 4.1.1 (Table 4.1.1).
Table 5.3.1	Table updated requiring the owner to notify CEO following the construction of landfills.
Schedule 1	Premises boundary coordinates updated Amended Maps. Amendments to the map comprise: <u>Map 1</u> New location of the inert landfills <u>Map 2</u> Ore body 24 Landfarm removed as a licensed emission point <u>Map 3</u> Emission point D02 removed. Emission point D07 included to the licence.
Schedule 2	Deleted the redundant AACR form.

6.2. Licence Holder comments

The Licence Holder was provided with the draft Instrument and Amendment Report on 9 June 2020 for review and comment. Comments received from the Licence Holder on 23 June 2020 have been considered by the Delegated Officer as shown in Appendix 2.

MANAGER WASTE INDUSTRIES REGULATORY SERVICES

An officer delegated under section 20 of the Environmental Protection Act 1986

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	Licence L9462/1997/13	L9462/1997/13	Accessed at www.dwer.wa.gov.au
2.	Amendment application form signed by general manager of Newman operations (Eastern Ridge Iron and Ore Mine) and attached supporting documentation.	Licence amendment application	DWER record (DWERDT269774)
3.	DER, July 2015. <i>Guidance Statement: Regulatory principles.</i> Department of Environment Regulation, Perth.	DER 2015a	Accessed at www.dwer.wa.gov.au
4.	DER, October 2015. <i>Guidance Statement: Setting conditions.</i> Department of Environment Regulation, Perth.	DER 2015b	
5.	DER, May 2016. <i>Guidance Statement: Publication of Annual Audit Compliance Reports.</i> Department of Environment Regulation, Perth.	DER 2016a	
6.	DER, August 2016. <i>Guidance Statement: Licence duration.</i> Department of Environment Regulation, Perth.	DER 2016b	
7.	DER, September 2016. <i>Guidance Statement: Environmental Standards.</i> Department of Environment Regulation, Perth.	DER 2016c	
8.	DER, November 2016. <i>Guidance Statement: Environmental Siting.</i> Department of Environment Regulation, Perth.	DER 2016d	
9.	DER, February 2017. <i>Guidance Statement: Land Use Planning.</i> Department of Environment Regulation, Perth.	DER 2017a	
10.	DER, February 2017. <i>Guidance Statement: Risk Assessments.</i> Department of Environment Regulation, Perth.	DER 2017b	
11.	DWER, June 2019. <i>Guideline: Decision Making.</i> Department of Water and Environmental Regulation, Perth.	DWER 2019a	
12.	DWER, June 2019. <i>Guideline: Industry Regulation Guide to Licensing.</i> Department of Water and Environmental Regulation, Perth.	DWER 2019b	
13.	DWER, June 2019. <i>Guideline: Odour emissions.</i> Department of Water and Environmental Regulation, Perth.	DWER 2019c	

Appendix 2: Summary of applicant's comments on risk assessment and draft conditions

Condition	Summary of Licence Holder comment	DWER response
<p><u>Licence</u></p> <p>Page 3, Subheading Premises description and licence summary, paragraph 2, sentence 1.</p>	<p>Typographical changes requested :</p> <p>Change 36 mtpa to 41 mtpa to align with the rate approved on the current licence</p>	Changes adopted
Page 4, paragraph 2, sentence 2.	Inert concrete waste should be listed as this was one of the requests for the licence amendment	The paragraph has been updated as requested.
Page 4, Subheading Granting of Licence (L6942/1997/13) amendment 2020, paragraph 1, dot point 1	<p>Typographical changes requested:</p> <p>Remove the word cell. The inclusion of the word cell is confusing as landfills (particularly putrescible landfills) tend to have multiple cells built within the one footprint.</p>	Delegated Officer is aware that no putrescible waste will be disposed at the landfill. Request adopted.
Page 4, Subheading <i>Granting of Licence (L6942/1997/13) amendment 2020</i> , paragraph 1, dot point 2, paragraph 3, dot point 6,7 and 11	Typographical changes requested	Request adopted
Page 4, Subheading <i>Granting of Licence (L6942/1997/13) amendment 2020</i> , paragraph 1, and' <i>Instrument Log Table</i>	Typographical changes requested	Request adopted
Page 5, Subheading <i>Granting of Licence (L6942/1997/13) amendment 2020</i> , paragraph 3, dot point 11	Typographical changes requested	Request adopted
Page 6, Instrument Log table, last row, dot point 1	Typographical changes requested	Request adopted
Condition 1.3.3., Table 1.3.2, Row 3,	Typographical changes requested	Request adopted
Condition 1.3.7., Table 1.3.4, Row 8,	Typographical changes requested	Request adopted

Condition	Summary of Licence Holder comment	DWER response
Condition 1.3.12., Table 1.3.6, Row 6,	Typographical changes requested	Request adopted
Condition 1.3.12., Table 1.3.6, Row 6,	Request to remove condition which requires that earthworks must be undertaken in compliance with AS 3798-2007 as it relates to suitable soil types, compaction etc, given the landfills are for the storage of inert materials	The Delegated Officer is aware that inert waste types 1 and 2 will be disposed at the landfills. The risk relating to fire and leachate generation as a result are quite low and therefore will remove the requirement to comply with AS 3798-2007.
Condition 3.3.1, Table 3.3.1, Licence Point L1	Typographical error noted	Corrected
Condition 5.3.1, Table 5.3.1, Row 5	Remove notification requirement as it is set out in condition 1.3.11	The Delegated Officer agrees that the request in table 5.3.1 would be a duplication and therefore has been removed. Table 5.3.1 amended to reflect this.
Page 31 The Premises boundary	Word copy of the Premises boundary coordinates provided	Accepted.
<u>Decision Report</u>	Typographical changes	The Decision report has been updated to reflect the changes requested by the Licence Holder.