



Amendment Notice 1

Licence Number L5611/1993/11

Licence Holder BHP Billiton Iron Ore Pty Ltd

ACN 008 700 981

File Number: DER2014/001167

Premises Yarrie Project
Tenements M45/1019, ML249SA, M263SA,
M45/1018-I, M45/127, M45/140, M45/573, M45/592,
M45/558 and FNA0006363
PARDOO WA 6753
As depicted in Schedule 1

Date of Amendment 26 September 2018

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B (9) of the EP Act.

Rebecca Kelly

**MANAGER WASTE INDUSTRIES
REGULATORY SERVICES (ENVIRONMENT)**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

1. Definitions

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

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Amendment Notice	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 33 Cloisters Square PERTH WA 6850 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
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act 1986</i> (WA)
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA)
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
MS	Ministerial Statement
Occupier	has the same meaning given to that term under the EP Act.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>

2. Amendment description

BHP Billiton Iron Ore Pty Ltd (Licence Holder) was granted Licence L5611/1993/11 on 17 September 2015 for the following prescribed premises categories:

- Category 5: processing or beneficiation of metallic or non-metallic ore;
- Category 6: mine dewatering;
- Category 64: class II or III putrescible landfill site; and
- Category 85: sewage facility.

On 22 May 2018, the Licence Holder submitted an application to amend the Licence with the following changes:

- Increasing category 64 annual throughput from 250 to 500 tonnes to provide capacity to dispose of portions of untreated timber power poles;
- Inclusion of prescribed premises category 63 (class I inert landfill site) onto the licence with an annual throughput of 45,000 tonnes;
- Operation of two category 63 inert landfill cells using existing void areas;
- Expand authorisation to allow rubber to be disposed of to any landfill on the Premises or within any Overburden Storage Area (OSA).

No construction is required as the Licence Holder has proposed to use existing voids within the Premises as the inert landfill cells. The inert landfills will be used to dispose of construction and demolition material from decommissioning of site infrastructure. The waste is likely to predominantly consist of concrete, steel, rubber (tyres and conveyor belts) and may contain asbestos.

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B (9) of the EP Act.

The following guidance statements have informed the decision made on this amendment

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*

3. Other approvals

The Licence Holder has provided the following information relating to other approvals as outlined in Table 2.

Table 2: Relevant approvals

Legislation	Number	Approval
<i>Environmental Protection Act 1986</i> Part IV	Ministerial Statement 303	Approval to undertake the Goldsworthy Extension Project Phase 2 – Yarrie Project Area, East Pilbara Granted 4 February 1998

Environmental Protection Act 1986 Part V, Division 2	CPS 6450/1	Permit to clear native vegetation Granted 26 March 2015
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4. Amendment history

Table 3 provides the amendment history for L5611/1993/11

Table 3: Licence amendments

Instrument	Issued	Amendment
L5611/1993/11	22/10/2018	Administrative amendment to correct licence expiry date
L5611/1993/11	29/04/2016	Administrative amendment to extend licence expiry date
L5611/1993/11	26/09/2018	Amendment Notice 1 Inclusion of prescribed premises category 63 to allow inert waste infilling and expansion to disposal areas for tyres and waste rubber.

5. Location and receptors

The Yarrie Mine hub is located within the Shire of East Pilbara and is located approximately 185km east of Port Hedland. This area consists of Callawa, Cundaline, Cattle Gorge and Yarrie. The amendment proposes to include two new project areas for the inert landfill sites as depicted in Figures 1 and 2 below.

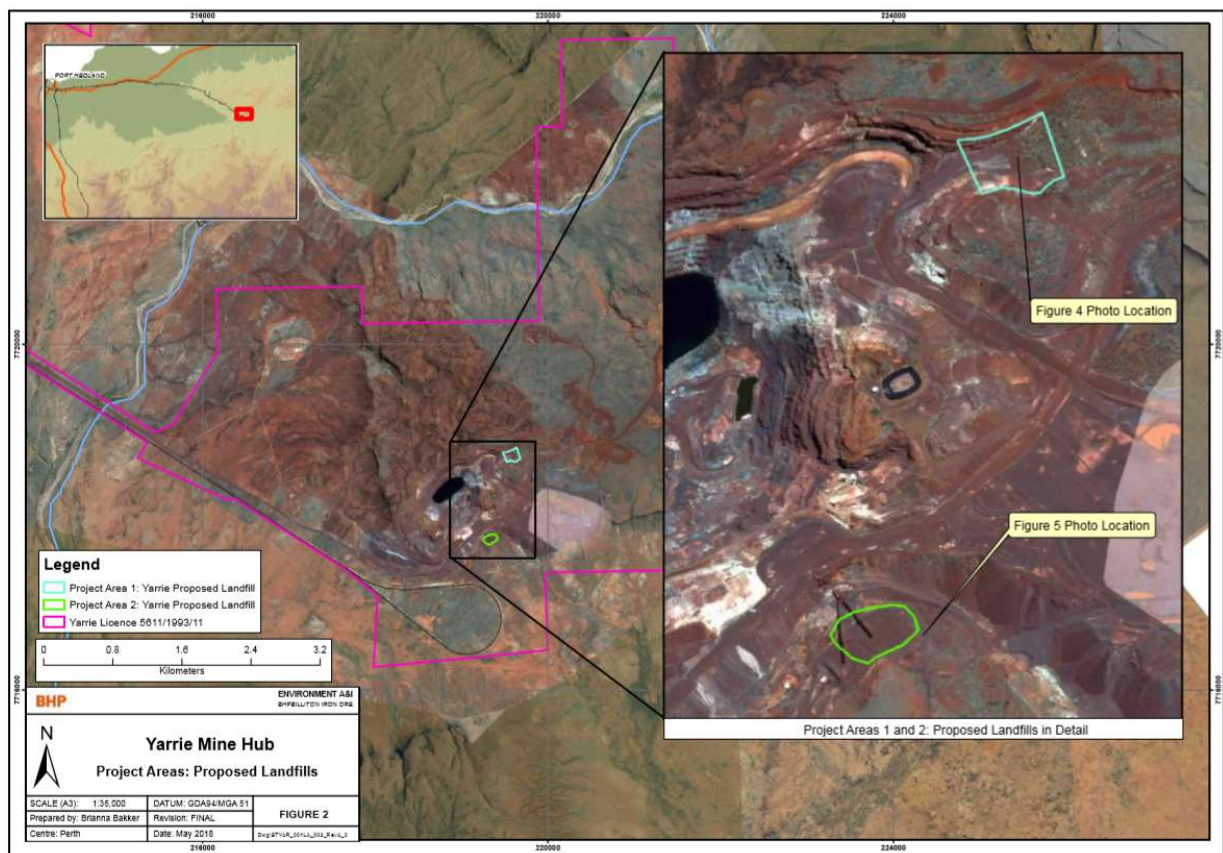


Figure 1: Depiction of proposed project areas (inert landfills)

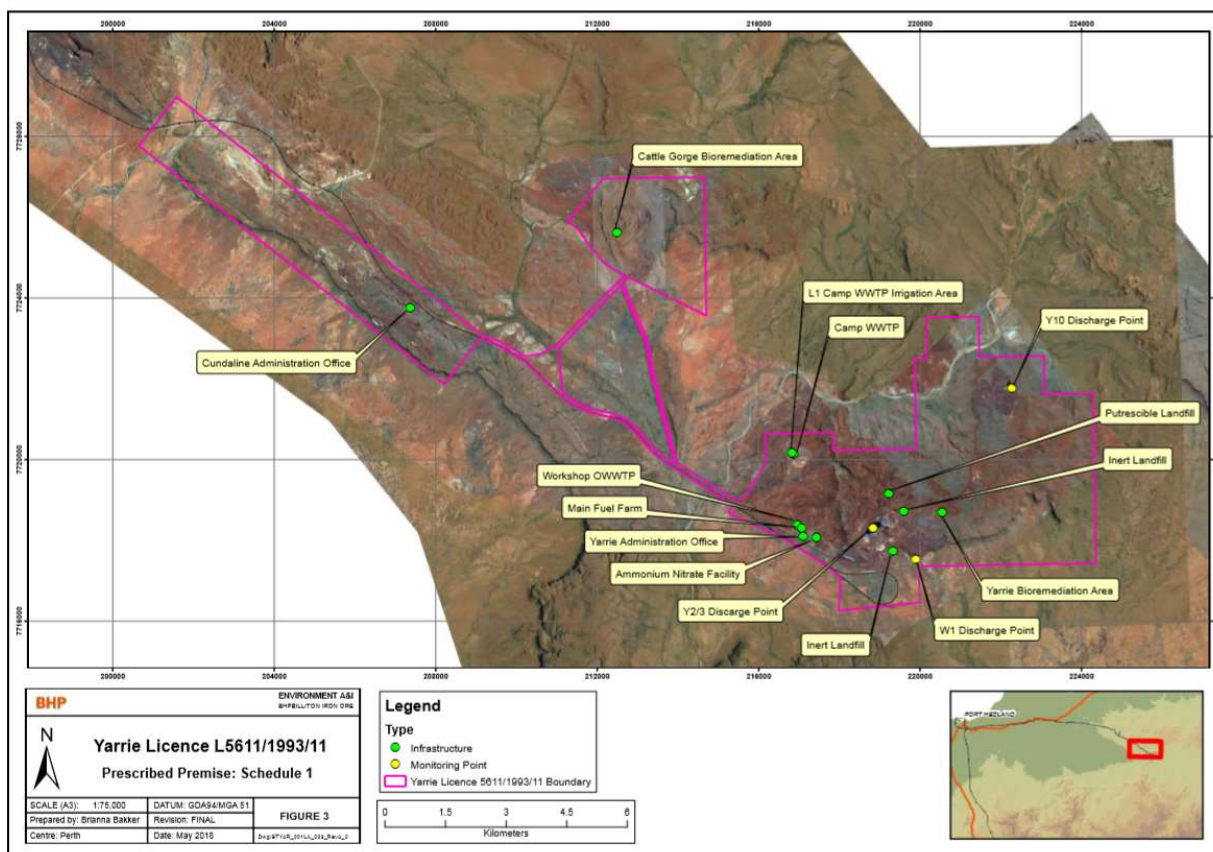


Figure 2: Overview of site layout

Table 4 below lists the relevant sensitive land uses 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
Yarrie Station homestead	Located approximately 10km southwest of the Project Area.

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
Surface water Pilbara Surface Water Area - proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act)	Eel Creek, located 4.5km west of the project area, is the closest surface water receptor.
Groundwater Pilbara Groundwater Area – proclaimed under the RIWI Act	As stated in the amendment application: <i>There is one main aquifer within the Project Area: The Pilbara - Fractured Rock which consists of "Precambrian granite-greenstone terrain overlain by surficial sediments in the river valleys. The water table is generally within 5 to 10 metres of the surface in the granitic areas, but may be quite deep below the greenstone hills. The major aquifers within these rocks are quartz veins, and chert layers. Groundwater is</i>

	<i>mainly fresh, ranging up to brackish towards the coast.</i>
Fauna and Flora	<p>Although no conservation significant fauna species have been recorded within the project areas, based on the results of a fauna survey undertaken on behalf of the Licence Holder in 2014, eight fauna species of conservation significant could potentially occur within and in the vicinity of the project areas.</p> <p>The closest identified conservation significant flora community is located more than 2km from the project areas.</p>

6. Consequence and likelihood of risk events

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 6 below.

Table 6: Risk rating matrix

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

DWER will undertake an assessment of the consequence and likelihood of the Risk Event in accordance with Table 7 below.

Table 7: Risk criteria table

Likelihood		Consequence		
The following criteria has been used to determine the likelihood of the Risk Event occurring.		The following criteria has been used to determine the consequences of a Risk Event occurring:		
		Environment	Public health* and amenity (such as air and water quality, noise, and odour)	
Almost Certain	The risk event is expected to occur in most circumstances	Severe	<ul style="list-style-type: none"> onsite impacts: catastrophic offsite impacts local scale: high level or above offsite impacts wider scale: mid-level or above Mid to long-term or permanent impact to an area of high conservation value or special significance[^] Specific Consequence Criteria (for environment) are significantly exceeded 	<ul style="list-style-type: none"> Loss of life Adverse health effects: high level or ongoing medical treatment Specific Consequence Criteria (for public health) are significantly exceeded Local scale impacts: permanent loss of amenity
Likely	The risk event will probably occur in most circumstances	Major	<ul style="list-style-type: none"> onsite impacts: high level offsite impacts local scale: mid-level offsite impacts wider scale: low level Short-term impact to an area of high conservation value or special significance[^] Specific Consequence Criteria (for environment) are exceeded 	<ul style="list-style-type: none"> Adverse health effects: mid-level or frequent medical treatment Specific Consequence Criteria (for public health) are exceeded Local scale impacts: high level impact to amenity

Likelihood		Consequence		
The following criteria has been used to determine the likelihood of the Risk Event occurring.		The following criteria has been used to determine the consequences of a Risk Event occurring:		
		Environment	Public health* and amenity (such as air and water quality, noise, and odour)	
Almost Certain	The risk event is expected to occur in most circumstances	Severe	<ul style="list-style-type: none"> • onsite impacts: catastrophic • offsite impacts local scale: high level or above • offsite impacts wider scale: mid-level or above • Mid to long-term or permanent impact to an area of high conservation value or special significance[^] • Specific Consequence Criteria (for environment) are significantly exceeded 	<ul style="list-style-type: none"> • Loss of life • Adverse health effects: high level or ongoing medical treatment • Specific Consequence Criteria (for public health) are significantly exceeded • Local scale impacts: permanent loss of amenity
Possible	The risk event could occur at some time	Moderate	<ul style="list-style-type: none"> • onsite impacts: mid-level • offsite impacts local scale: low level • offsite impacts wider scale: minimal • Specific Consequence Criteria (for environment) are at risk of not being met 	<ul style="list-style-type: none"> • Adverse health effects: low level or occasional medical treatment • Specific Consequence Criteria (for public health) are at risk of not being met • Local scale impacts: mid-level impact to amenity
Unlikely	The risk event will probably not occur in most circumstances	Minor	<ul style="list-style-type: none"> • onsite impacts: low level • offsite impacts local scale: minimal • offsite impacts wider scale: not detectable • Specific Consequence Criteria (for environment) likely to be met 	<ul style="list-style-type: none"> • Specific Consequence Criteria (for public health) are likely to be met • Local scale impacts: low level impact to amenity
Rare	The risk event may only occur in exceptional circumstances	Slight	<ul style="list-style-type: none"> • onsite impact: minimal • Specific Consequence Criteria (for environment) met 	<ul style="list-style-type: none"> • Local scale: minimal to amenity • Specific Consequence Criteria (for public health) met

[^] Determination of areas of high conservation value or special significance should be informed by the *Guidance Statement: Environmental Siting*.

* In applying public health criteria, DWER may have regard to the Department of Health's *Health Risk Assessment (Scoping) Guidelines*.

"onsite" means within the Prescribed Premises boundary.

7. Acceptability and treatment of Risk Event

DWER will determine the acceptability and treatment of Risk Events in accordance with the Risk treatment table 8 below:

Table 8: Risk treatment table

Rating of Risk Event	Acceptability	Treatment
Extreme	Unacceptable.	Risk Event will not be tolerated. DWER may refuse application.
High	May be acceptable. Subject to multiple regulatory controls.	Risk Event may be tolerated and may be subject to multiple regulatory controls. This may include both outcome-based and management conditions.
Medium	Acceptable, generally subject to regulatory controls.	Risk Event is tolerable and is likely to be subject to some regulatory controls. A preference for outcome-based conditions where practical and appropriate will be applied.
Low	Acceptable, generally not controlled.	Risk Event is acceptable and will generally not be subject to regulatory controls.

8. Risk assessment

Table 9 below describes the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. The table identifies whether the emissions present a material risk to public health or the environment, requiring regulatory control.

Table 9: Risk assessment for proposed amendments during operation

Risk Event								
Source/ Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts	Consequence rating	Likelihood rating	Risk	Reasoning
Waste handling and storage Landfilling (putrescible) Landfilling (inert) Leachate	Dust emissions generated from waste handling, stockpile liftoff, infilling activities and vehicle movements	Yarrie homestead located approximately 10km south- west of the project area	Air/wind	Health and amenity impacts	Slight	Rare	Low	Receptors are located a significant distance from the project area and are not expected to be impacted by the proposed amendments
	Noise emissions generated from waste handling, infilling activities and vehicle movements							In consideration of the predominantly inert nature of the waste proposed under this amendment and given that receptors are located a significant distance from the project area, receptors are not expected to be impacted by the proposed amendments
	Odour emissions generated from waste handling and infilling activities							
	Groundwater	Seepage through soil	Degradation of groundwater quality	Slight	Rare	Low	In consideration of the predominantly inert nature of the waste proposed under this amendment and the distance to receptors, it is unlikely that groundwater or surface water quality will be impacted by the proposed amendments.	
Surface water	Overland runoff	Degradation of surface water quality	Slight	Rare	Low			

Waste handling and storage Landfilling (putrescible) Landfilling (inert)	Asbestos	Yarrie homestead located approximately 10km south-west of the project area	Air/wind	Health impacts	Severe	Rare	High	<p>The release of asbestos fibres can cause adverse health impacts including loss of life however it is very unlikely that receptors will be impacted by this emission.</p> <p>If asbestos is identified in the decommissioned onsite infrastructure, the Licence Holder proposes to manage asbestos in accordance with the <i>Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018 (2005)]</i>, <i>Code of Practice for The Safe Removal of Asbestos [NOHSC: 2002 (2005)]</i>, <i>Australian Standard 2601 – The Demolition of Structures</i>, and the <i>Environmental Protection (Controlled Waste) Regulations 2004</i>.</p> <p>Asbestos will be disposed of to a separate area within the landfill.</p> <p>Due to the high risk rating for asbestos, regulatory controls will be included on the Licence to further assist in managing this risk.</p>
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9. Decision

The Delegated Officer has determined to amend the Licence to authorise the inclusion of prescribed premises category 63 operations, increase the throughput for category 64 operations and authorise waste rubber (tyres and conveyor belts) to be filled in any landfill and OSA. These amendments are specified in Section 11 below.

10. Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 4 September 2018. Minor comments were received from the Licence Holder in regards to the wording of the 'specification' column for Special Waste Type 1. The Licence Holder's proposed change to wording does not have any impacts to the level of risk and is consistent with the wording for other licensed premises occupied by the Licence Holder.

11. Amendment

1. The 'Prescribed premise category' table on page 1 of the Licence is amended by the deletion of the text shown in strikethrough and the insertion of the red text shown in underline below:

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
5	Processing or beneficiation of metallic or non-metallic ore	50,000 tonnes or more per year	5,000,000 tonnes per annual period
6	Mine dewatering	50,000 tonnes or more per year	200,000 tonnes per annual period
<u>63</u>	<u>Class I inert landfill site</u>	<u>500 tonnes or more per year</u>	<u>45,000 tonnes per annual period</u>
64	Class II or III putrescible landfill site	20 tonnes or more per year	250 500 tonnes per annual period
85	Sewage facility	More than 20 but less than 100 cubic metres per day	Less than 100 cubic metres per day

2. The 'Definitions' section of the Licence has been amended by the deletion of the text shown in strikethrough and the insertion of the red text shown in underline below:

'ACM' means Asbestos Containing Material;

'Asbestos' means the asbestiform variety of mineral silicates belonging to the serpentine or amphibole groups of rock-forming minerals and includes actinolite, amosite, anthophyllite, chrysotile, crocidolite, tremolite and any mixture containing 2 or more of those.

'Asbestos containing material' has the meaning defined in the Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia, (DOH, 2009);

'Special Waste Type 1' has the meaning defined in Landfill Definitions.

3. Table 1.3.1 of Licence Condition 1.3.1 has been amended by the deletion of the text shown in strikethrough and the insertion of the red text shown in underline below:

Table 1.3.1: Waste acceptance		
Waste type	Quantity limit	Specification ¹
Inert Waste Type 1	<u>Combined annual limit of 45,000 tonnes per annual period</u>	None specified
Inert Waste Type 2 (<u>tyres and conveyor rubber</u>)		None specified
Clean Fill		None specified
<u>Special Waste Type 1</u>	<u>Limited to quantities generated in the decommissioning of onsite infrastructure.</u>	<u>Waste which includes asbestos and asbestos cement products.</u>
Putrescible Waste	<u>250 500 tonnes per annual period</u>	None specified
Sewage	Less than 100 m ³ /day	Accepted through sewer inflow(s) only

Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

4. Table 1.3.2 of Licence Condition 1.3.3 has been replaced by the Table shown below:

Table 1.3.2: Waste processing		
Waste type	Process(es)	Process limits¹
Inert Waste Type 1	Receipt, handling and disposal of waste by landfilling	<u>All waste types</u> Disposal of waste by landfilling shall only take place within the landfill areas shown on the Premises Map in Schedule 1.
Clean Fill		No waste shall be temporarily stored or landfilled within 35 metres from the boundary of the premises. The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2 m.
Putrescible Waste		Disposal of waste by landfilling shall only take place within the <u>putrescible</u> landfill areas shown on the Premises Map in Schedule 1. No waste shall be temporarily stored or landfilled within 35 metres from the boundary of the premises. The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2 m.
Inert Waste Type 2 – Rubber (Tyres ² and conveyor belts)		Tyres shall only be landfilled: i) in the Tyre Dump <u>Overburden Storage Areas or landfill areas</u> located within the prescribed premises boundary shown in Schedule 1; ii) in batches separated from each other by at least 100 mm of soil and each consisting of not more than 40 m ³ of tyres reduced to pieces; or iii) in batches separated from each other by at least 100 mm of soil and each consisting of not more than 1 000 whole tyres
<u>Special Waste Type 1</u>	<u>Receipt, handling and disposal of waste by landfilling</u>	<u>Only to be disposed of into a designated asbestos disposal area within the landfill areas shown on the Premises Map in Schedule 1.</u> <u>Must not be deposited within 2m of the final tipping surface of the landfill.</u> <u>No works shall be carried out on the landfill that could lead to a release of asbestos fibres.</u>
Sewage	Biological, physical and chemical treatment	Less than 100m ³ /day
Hydrocarbon contaminated soil	Bioremediation	Contaminated soil is only to be remediated within the bioremediation facilities shown in Schedule 1

Note 1: Additional requirements for the acceptance and landfilling of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

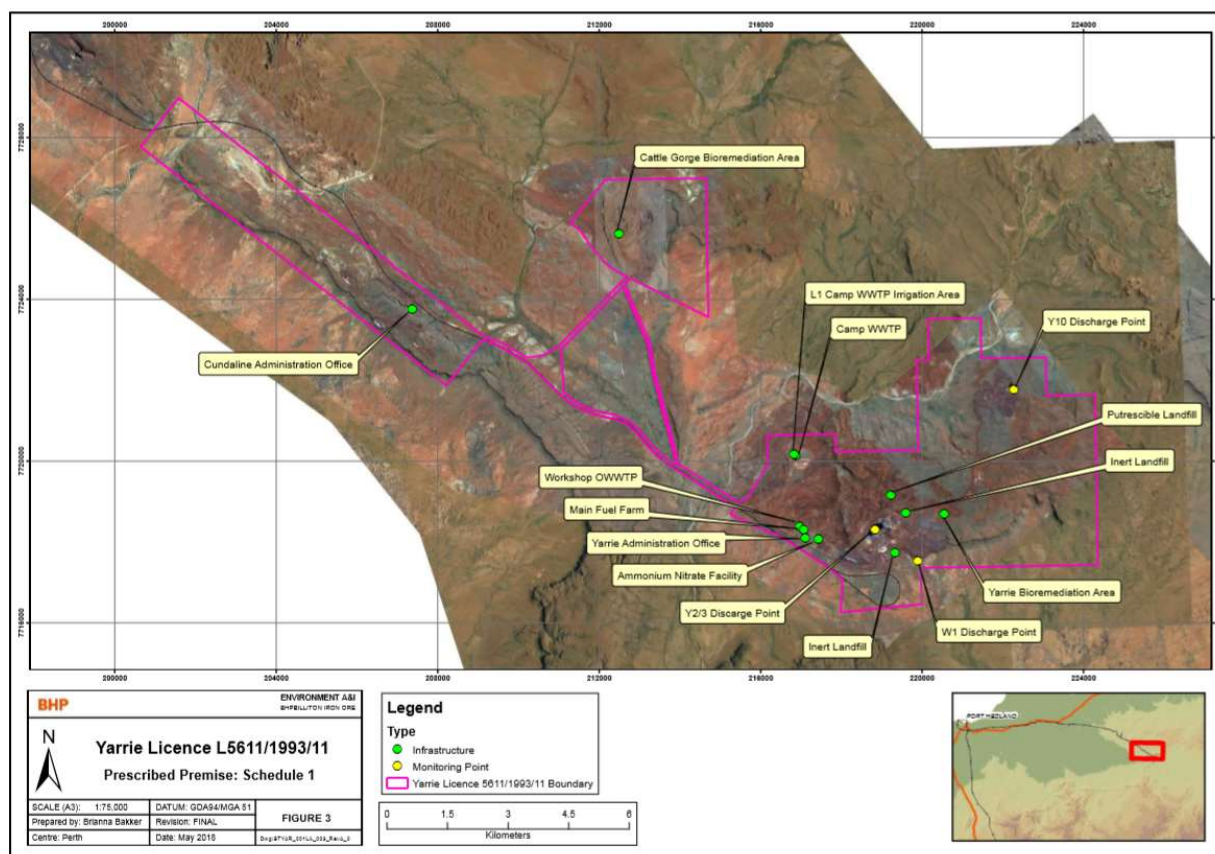
Note 2: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.

5. Table 1.3.3 of Licence Condition 1.3.5 has been amended by the deletion of the text shown in strikethrough and the insertion of the red text shown in underline below:

Table 1.3.3: Cover requirements ¹			
Waste Type	Material	Depth	Timescales
Inert Waste Type 1	Inert and incombustible material	Sufficient to ensure the waste is completely covered and that no waste is exposed	Monthly or as soon as practicable after deposit and prior to compaction
Putrescible Waste			
Inert Waste Type 2 (Tyres <u>and rubber conveyor waste</u> only)	<u>Clean Fill, Inert waste Type 1 or Soil</u>	500 mm	As soon as practical following the achievement of final waste levels in the area(s) in which tyres are deposited.
<u>Asbestos or ACM</u>		<u>300 mm</u>	<u>As soon as practicable and no later than the end of the working day after deposit.</u>
		<u>10000 mm</u>	<u>As soon as practicable after deposit</u>

Note 1: Additional requirements for the covering of tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.

6. The Premises map in Schedule 1 of the Licence has been replaced with the following image:



Appendix 1: Key documents

	Document title	Availability
1	Licence 5611/1993/11 – Yarrie Project	accessed at www.dwer.wa.gov.au
2	Licence amendment application form and supporting information (May 2018)	DWER records (A1678759)
3	Ministerial Statement 303	accessed at www.epa.wa.gov.au/
4	Permit to clear native vegetation CPS 6450/1	accessed at www.dwer.wa.gov.au
5	DER, October 2015. <i>Guidance Statement: Setting conditions.</i> Department of Environment Regulation, Perth.	
6	DER, February 2017. <i>Guidance Statement: Risk Assessments.</i> Department of Environment Regulation, Perth.	
7	DER, February 2017. <i>Guidance Statement: Decision Making.</i> Department of Environment Regulation, Perth.	