



Licence Number	L5258/1991/11
Licensee	Pilbara Iron Company (Services) Pty Ltd
ACN	107 210 248
File Number:	DER2013/000902
Prescribed Premises:	Category 5: Processing of beneficiation of metallic or non-metallic ore; Category 6: Mine dewatering; Category 12: Screening, etc. of material; Category 54: Sewage facility; Category 64: Class II putrescible landfill site; Category 73: Bulk storage of chemicals, etc.
Premises	Mount Brockman, Nammuldi and Silvergrass Iron Ore Mines AML70/4, ALM70/272, G47/01242, G47/01243, L47/140, L47/388, L47/141, L47/647, LGE G848898, LG848907 and LPL N050438 within co-ordinates: E535363 N7536177; E 544071 N7257202; E553417 N7525629; E548757 N7517535; E538693 N7517627; E531400 N7517644; E527723 N7519096 and E525753 N7531802. MT SHEILA WA 6751
Date of Amendment	1 June 2017

Amendment

The Chief Executive Officer (CEO) of the Department of Environment Regulation (DER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* 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 and follows.

Date signed: 1 June 2017

Alana Kidd

MANAGER LICENSING – RESOURCE INDUSTRIES

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

Definitions and interpretation

Definitions

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

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
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@der.wa.gov.au
DER	Department of Environment Regulation
Decision Report	refers to this document
Delegated Officer	an officer under section 20 of the EP Act
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
ha	Hectares
LWCWD	<i>Landfill Waste Classification and Waste Definitions 1996</i>
Licensee	Pilbara Iron Company (Services) 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.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>

Amendment Notice

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.

This notice is limited only to an amendment for Category 64. No changes to the aspects of the original Licence relating to Categories 5, 6, 12, 54 or 73 have been requested by the Licensee.

The following DER 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)*
- *Guidance Statement: Environmental Siting (November 2016)*

Amendment description

On 13 April 2017, Pilbara Iron Company (Services) Pty Ltd (Licensee) submitted an application to DER for an amendment to the Mt Brockman, Nammuldi and Silvergrass Iron Ore Mines licence (L5258/1991/11). The licence amendment application relates to the proposed construction of a new Brockman 2 mine (B2) putrescible landfill to replace the existing putrescible landfill which is to be decommissioned. There will be no change to the volumes of waste. The Licensee has not requested a change to the design capacity for Category 64.

An additional waste type is requested to be included, which is Special Waste Type 2. The volumes of waste to be disposed at the landfill are 2000 tonnes per annual period with an expected lifespan of 10 years (RTIO, 13 April 2017).

Table 2 below outlines the proposed changes to the Licence.

Table 2: Proposed changes

Category	Current design capacity	Proposed [design] [throughput] capacity	Description of proposed amendment
64	7 634 tonnes per annual period	No change requested	Construction of a new Brockman 2 Mine (B2) putrescible landfill to replace the existing landfill which is to be decommissioned.

The proposed B2 landfill is to have a footprint of 10.5 ha and is located 700m to the west of the existing putrescible landfill. The landfill footprint requires the clearing of 5.4 ha of vegetation under MS 925 (RTIO, 13 April 2017). The approximate boundary coordinates (MGA) of B2 landfill are in Table 3 below.

Table 3: Approximate Boundary coordinates (MGA) of B2 Landfill (RTIO, 13 April 2017)

ID	Easting	Northing
1	536,309	7,520,132
2	536,713	7,520,192
3	536,714	7,519,986
4	536,342	7,519,847

The waste types proposed to be disposed include:

- Clean fill;
- Inert Waste Type 1
- Inert Waste Type 2;
- Putrescible Waste;
- Special Waste Type 1; and
- Special Waste Type 2 (RTIO, 13 April 2017).

The waste proposed to be disposed under the category of Special Waste Type 2 is empty urine specimen containers after drug and alcohol testing on the mine workforce. Special Waste Type 2 is defined as “*waste consisting of certain types of biomedical waste which are regarded as hazardous but which, with the use of specific management techniques, may be disposed of safely within specified classes of landfill*” (LWCWD 1996).

Hazardous waste is defined in the LWCWS 1996 as “*component of the waste stream which by its characteristics poses a threat or risk to public health, safety or the environment (includes substances which are toxic, infectious, mutagenic, carcinogenic, teratogenic, explosive, flammable, corrosive, oxidising and radioactive)*”. In addition, clinical waste is defined in the LWCWD 1996 as “*Waste generated by medical, nursing, dental, veterinary, pharmaceutical or other related activity which is poisonous or infectious; likely to cause injury to public health; or contains human tissue or body parts*”.

Specimens with residual urine are therefore not classed as Special Waste Type 2 unless they are collected from a person with an infectious disease or if they have visible blood.

Amendment history

Table 4 provides the amendment history for L5258/1991/11.

Table 4: Licence amendments

Instrument	Issued	Amendment
L5258/1991/11	26 May 2011	Licence re-issue
L5258/1991/11	26 May 2016	Amendment to expand the prescribed premises boundary to include new activities associated with Nammuldi; increase the design capacity for Category 5, 12, 54, 64 and 73; include the Brockman waste water treatment plant and fuel hub; include the Nammuldi landfill and remove the Pit 5 dewatering discharge point.
L5258/1991/11	17 October 2016	Amendment Notice 1 Including SGE project crusher, conveyor and fuel storage facilities.
L5258/1991/11	1 June 2017	Amendment Notice 2 Construction and operation of Brockman 2 Mine (B2) new putrescible landfill

Location and receptors

Table 5 below lists 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
Priority fauna	1 km north of the landfill footprint

Groundwater and water sources

Table 6 below lists the relevant environmental receptors relating to groundwater in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 6: Environmental receptors and distance from activity boundary

Environmental receptors	Distance from Prescribed Premises
Drainage line	300 m to the east of the landfill footprint
Groundwater – fresh with TDS between 500 to 5000 mg/L	Depth to groundwater pre-mining is 40-50m however due to dewatering is now more than 70 m.
RIWI Act Groundwater Areas	The Premises is located within a groundwater area proclaimed under the RIW Act.

Risk assessment

Tables 7 and 8 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls. The overall rating of risk is determined by comparison with the Emissions Risk Matrix in documented in the *Guidance Statement: Risk Assessments*.

Table 7: Risk assessment for proposed amendments during construction

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning	
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts					
Cat 64 Putrescible landfill	Construction of landfill trenches	Dust: associated with construction activities and vehicle movement	No residents or sensitive receptors in close proximity	Air: Particulate matter (dust)	Health and amenity impacts	Slight	Rare	Low	The closest sensitive receptor is located at Hamersley Station Homestead approximately 37 km north-east. The site is located in an area that is surrounded by mining infrastructure. Clearing of 5.4 ha of the 10.5 ha footprint will be undertaken in accordance with MS925 (RTIO, 13 April 2017). The Delegated Officer notes the distance too great for impact.
		Noise: associated with construction activities and vehicle movement	No residents or sensitive receptors in close proximity	Air: Noise generated through the operation of equipment	Health and amenity impacts	Slight	Rare	Low	The closest sensitive receptor is located at Hamersley Station Homestead approximately 37 km north-east. The Delegated Officer notes the lack of sensitive receptors and has determined that there is no risk of noise impacts.
		Waste: associated with seepage, leaks and spills of waste during construction	Surrounding soils	Direct discharge	Localised contamination of soils	N/A	N/A	N/A	No additional hydrocarbon storage is required for the construction of the landfill site.

Table 8: Risk assessment for proposed amendments during operation

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning	
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts					
Cat 64 Putrescible landfill	Operation of landfill trenches	Dust: associated with stockpiled cover material, vehicle movement and covering activities	No residents or sensitive receptors in close proximity	Air: Particulate matter (dust)	Health and amenity impacts	Slight	Rare	Low	The closest sensitive receptor is located at Hamersley Station Homestead approximately 37 km north-east. The site is located in an area that is surrounded by mining infrastructure. Clearing of 5.4 ha of the 10.5 ha footprint will be undertaken in accordance with MS925 (RTIO, 13 April 2017). The Delegated Officer notes the lack of sensitive receptors and has determined that there is no risk of dust impacts.
		Noise: associated with vehicular movement and covering activities	No residents or sensitive receptors in close proximity	Air: Noise generated through the operation of equipment	Health and amenity impacts	Slight	Rare	Low	The closest sensitive receptor is located at Hamersley Station Homestead approximately 37 km north-east. The Delegated Officer notes the lack of sensitive receptors and has determined that there is no risk of noise impacts.
		Waste: Windblown waste	No residents or sensitive receptors in close proximity. No priority fauna within 1 km of the landfill	Air: Windblown waste and deposition outside of landfill cells	Aesthetic impacts	Slight	Rare	Low	The landfill is located is surrounded by mining infrastructure such as pits and the rail line to the north. The Licensee is to construct a 2.2 metre high fence around the facility and windblown litter will be collected. The waste will be covered on a weekly basis (RTIO, 13 April 2017). The Delegated Officer notes the lack of sensitive receptors and priority fauna and has determined that there is no risk of windblown waste impacts.

		<p>Waste: Contaminated stormwater associated with contact with deposited waste</p>	Groundwater	<p>Land and waters: contaminated stormwater</p>	Contamination of stormwater potentially impacting on surface water systems and groundwater	Slight	Rare	Low	<p>The Licence Holder has proposed to construct earthen bunds surrounding the perimeter of the facility (except the entry). These earthen bunds will divert sheet flow during wet periods (RTIO, 13 April 2017).</p> <p>Noting the Licence Holder's controls, the Delegated Officer considers the consequence to be slight (minimal on-site impact) and the likelihood rare (may only occur in exceptional circumstances). The Delegated Officer therefore considers the overall risk of stormwater contamination to be low.</p>
		<p>Waste: Seepage of leachate due to putrescible waste /special waste type 2 decomposition and contact with precipitation</p>	Groundwater	<p>Waters: underlying groundwater</p>	Impacts to groundwater quality	Slight	Unlikely	Low	<p>Noting the depth to groundwater (>40m pre-mining and currently >70m due to dewatering activity) and the low potential for leachate generation due to the arid environment, the Delegated Officer considers the consequence to be slight (minimal on-site impacts) and the likelihood unlikely (will probably not occur in most circumstances). The Delegated Officer therefore considers the overall risk of seepage of leachate to be low.</p>
		<p>Waste: associated with seepage, leaks and spills of waste during construction</p>	Surrounding soils	<p>Direct discharge</p>	Localised contamination of soils	N/A	N/A	N/A	<p>No additional hydrocarbon storage is required for the construction of the landfill site.</p>

Decision

The Delegated Officer has determined the key emissions associated with construction and operation of the putrescible landfill. Based on the application supporting documentation, the Delegated Officer has determined that the construction and operation of the landfill presents a low risk of impact to the environment.

The Licensee has committed to controls during construction and operation and these controls have been conditioned in the Licence.

Specimens with residual urine are not classed as Special Waste Type 2 unless they are collected from a person with an infectious disease or if they have visible blood. The addition of Special Waste Type 2 is to be included on the Licence with specific controls as there may be an occasion in which the specimen sample falls within the Special Waste Type 2 category.

The Licensee is required to operate the landfill in accordance with the conditions of the licence upon submission of compliance documentation.

DER is currently undertaking a detailed risk review of the Licence to align the Licence with the DER's risk based Regulatory Framework. The full risk based review will incorporate these amendments into the Revised Licence.

Licensee's comments

The Licensee was provided with the draft Amendment Notice on 26 May 2017. Comments received from the Licensee have been considered by the Delegated Officer as shown in Appendix 2.

Amendment

1. Condition 15 of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the **bold** text shown in underline below:

15 The Licensee shall bury only the following types of waste within the putrescible landfills:

(i) Inert Waste Type 1;

(ii) Special Waste Type 1; ~~and~~

(iii) Putrescible waste; ~~and~~

(iv) Special Waste Type 2.

as defined in the Landfill Definitions.

2. The Licence is amended by the insertion of the condition 31

31 The Licensee is to dispose of the waste types listed in column 1 of Table 4 in accordance with the requirements set out in column 2 of Table 4.

<i>Table 4: Special Waste Type 2 Disposal Requirements</i>	
<i>Column 1</i>	<i>Column 2</i>
<i>Waste Type</i>	<i>Disposal Requirements</i>
<i>Special Waste Type 2</i>	To be disposed of in sealed bags and within a dedicated trench. The location of disposed wastes to be recorded. Immediately cover the waste with a minimum depth of one metre of inert and incombustible material.

3. The Licence is amended by the insertion of the following Condition 32:

32 The Licensee shall ensure that each item of infrastructure or equipment specified in column 1 of Table 5 is designed and constructed in accordance with the requirements specified in column 2 of Table 5.

<i>Table 5: B2 Putrescible Landfill Infrastructure Requirements</i>																	
<i>Column 1</i>	<i>Column 2</i>																
<i>Infrastructure</i>	<i>Requirements (design and construction)</i>																
<i>Landfill facility</i>	<p><i>Constructed within the approximate boundaries below:</i></p> <table border="1"> <thead> <tr> <th><i>ID</i></th> <th><i>Easting</i></th> <th><i>Northing</i></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>536,309</td> <td>7,520,132</td> </tr> <tr> <td>2</td> <td>536,713</td> <td>7,520,192</td> </tr> <tr> <td>3</td> <td>536,714</td> <td>7,519,986</td> </tr> <tr> <td>4</td> <td>536,342</td> <td>7,519,847</td> </tr> </tbody> </table>		<i>ID</i>	<i>Easting</i>	<i>Northing</i>	1	536,309	7,520,132	2	536,713	7,520,192	3	536,714	7,519,986	4	536,342	7,519,847
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<i>Earthen stormwater bund</i>	<i>Constructed to divert clean stormwater away from landfill trenches.</i>																
<i>Rollover bund</i>	<i>Constructed at the entrance to each trench to prevent stormwater entering trenches.</i>																
<i>Mesh fence with access gates</i>	<p><i>To be constructed to a minimum height of 2.2 m</i></p> <p><i>To be constructed around the perimeter of the B2 putrescible landfill facility</i></p>																

4. The Licence is amended by the insertion of the following Condition 33:

33 The Licensee must not depart from the requirements specified in Table 5 except:

- (a) Where such departures are minor in nature and do not materially change or affect the infrastructure; or*
- (b) Where such departure improves the functionality of the infrastructure and does not increase the risks to public health, public amenity or the environment.*

5. The Licence is amended by the insertion of the following Condition 34:

34 The Licensee shall submit a construction compliance document to the CEO, following construction of the B2 putrescible landfill and prior to operation.

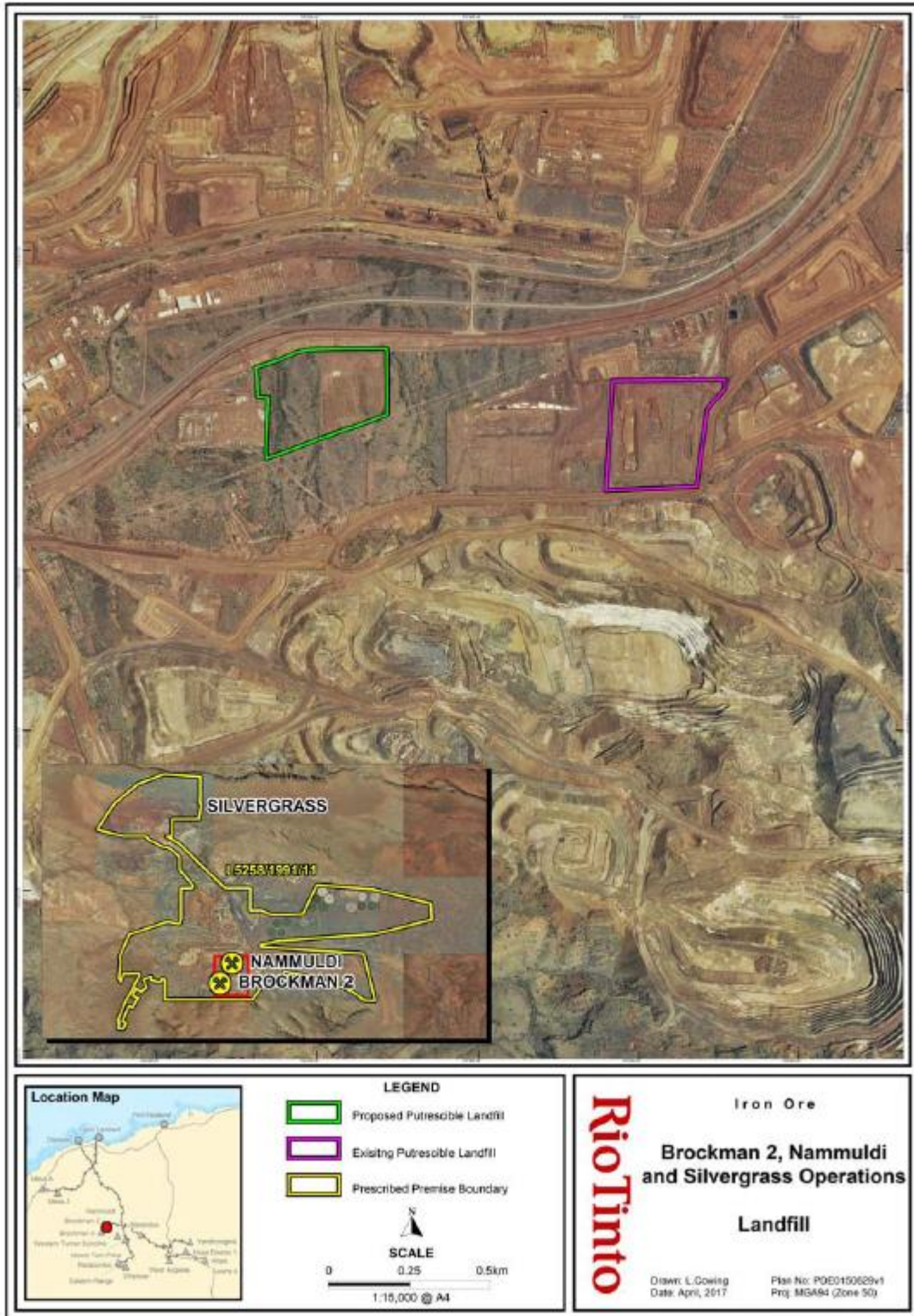
6. The Licence is amended by the insertion of the following Condition 35:

35 The Licensee must ensure the construction compliance document:

- (a) is signed by a person authorised to represent the Licensee and contain the printed name and position of that person within the company; and*
- (b) certifies that each item of infrastructure specified in Table 5 has been constructed in accordance with the conditions of the Licence with no material defects beyond those listed under condition 33.*

7. The Licence is amended by the insertion of Attachment 10:

Attachment 10 – Location of existing and proposed B2 putrescible landfill



Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L5258/1991/11 – Mt Brockman, Nammuldi and Silvergrass Iron Ore Mines	L5258/1991/11	accessed at www.der.wa.gov.au
2	Ministerial Statement 925	MS 925	accessed at www.epa.wa.gov.au/
3	Application form	Application	DER record A1412990
4	Mount Brockman, Nammuldi and Silvergrass Iron Ore Mines – L5258/1991/11 Brockman 2 Putrescible Landfill (RTIO-HSE-0307802) Rio Tinto, 13 April 2017	RTIO, 13 April 2017	DER record A1412990
5	DER, July 2015. <i>Guidance Statement: Regulatory principles.</i> Department of Environment Regulation, Perth.	DER 2015a	accessed at www.der.wa.gov.au
6	DER, October 2015. <i>Guidance Statement: Setting conditions.</i> Department of Environment Regulation, Perth.	DER 2015b	
7	DER, August 2016. <i>Guidance Statement: Licence duration.</i> Department of Environment Regulation, Perth.	DER 2016a	
8	DER, November 2016. <i>Guidance Statement: Risk Assessments.</i> Department of Environment Regulation, Perth.	DER 2016b	
9	DER, November 2016. <i>Guidance Statement: Decision Making.</i> Department of Environment Regulation, Perth.	DER 2016c	

Appendix 2: Summary of Licence Holder comments

The Licensee was provided with the draft Amendment Notice on 26 May 2017 for review and comment. The Licensee responded on 29 May 2017 waiving the remaining comment period (until 21 June 2017). The following comments were received on the draft Amendment Notice.

Condition	Summary of Licence Holder comment	DER response
32	Request to remove the requirement to construct the landfill trenches to a maximum depth of 6 metres due to the risk being determined as low. The depth to groundwater is more than 40 metres below ground level pre-mining.	DER notes this request and has removed the depth requirement from condition 32.
32	Request to remove the design and construction requirements of stormwater and rollover bunds due to duplication with current licence conditions.	DER notes that condition 19 of licence L5258/1991/11 has operational stormwater management requirements, however, condition 32 relates to the construction of stormwater infrastructure. Therefore this request is denied.
32	Notification of typographic error in condition 32.	DER notes the error and has corrected the infrastructure reference to the B2 putrescible landfill.
35	Request to remove the requirement for a suitably qualified engineer to certify the construction compliance documentation due to the low risk nature of the infrastructure, and the minimal construction requirements.	DER notes and agrees with this request. Condition 35 has been amended to remove the requirement for certification by an appropriately qualified engineer.