Government of Western Australia
Department of Water and Environmental Regulation

Amendment Report

Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L4459/1987/13
Licence Holder	Argyle Diamonds Limited
ACN	009 102 621
File Number	DER2013/000649-1
Premises	Argyle Diamond Mine Lissadell Road Lake Argyle WA 6743 Mining Tenements M259 SA, L80/11, L80/24, L80/53, L80/1 and M80/114 (as defined by the Premises map attached to the Revised Licence)
Date of Report	28 May 2021
Decision	Revised licence granted

Alana Kidd

Digitally signed by Alana Kidd
Date: 2021.05.28 08:51:14 +08'00'

Alana Kidd
MANAGER, RESOURCE INDUSTRIES

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

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1. Decision summary

Licence L4459/1987/13 is held by Argyle Diamonds Limited (Licence Holder) for the Argyle Diamond Mine (the Premises), located at Mining Tenements M259 SA, L80/11, L80/24, L80/53, L80/1 and M80/114.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the construction and operation of the Premises. As a result of this assessment, Revised Licence L4459/1987/13 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at https://dwer.wa.gov.au/regulatory-documents.

2.2 Application summary

On 1 December 2020, the Licence Holder submitted an application to the department to amend Licence L4459/1987/13 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Construction of a new Category 63 Class I inert landfill at the former alluvial mine plant site for the burial of inert demolition type wastes.
- Increase the throughput capacity at the existing Class II putrescible landfill for the burial of inert demolition type wastes.
- Removal of conditions that relate to Categories 5, 6 and 39 as these activities no longer occur at the Premises and are currently undergoing decommissioning as part of the Mine Closure Plan (MCP).
- Reduce the capacity for bulk storage of chemicals (Category 73).
- Removal of the Wandarrie Sewage Treatment Plant and irrigation area, and Village Fly Camp Waste Water Treatment Plant and irrigation area as these facilities are no longer in use and is being decommissioned as part of the MCP. The monitoring requirements associated with these facilities have also been removed.
- Update maps to reflect current and proposed operations at the Premises during the mine closure process.

2.3 Amendment description

Mining at the Premises ceased in November 2020 with the Premises now in a period of 'make-safe' for 6 months where hazardous materials are removed, and equipment is isolated and de-energised. Following this period, the Licence Holder will then undertake closure execution works in accordance with the objectives outlined in the Argyle Mine Closure Plan (2020) which is regulated separately under Part IV of the *Environmental Protection Act 1986* and the *Contaminated Sites Act 2003*.

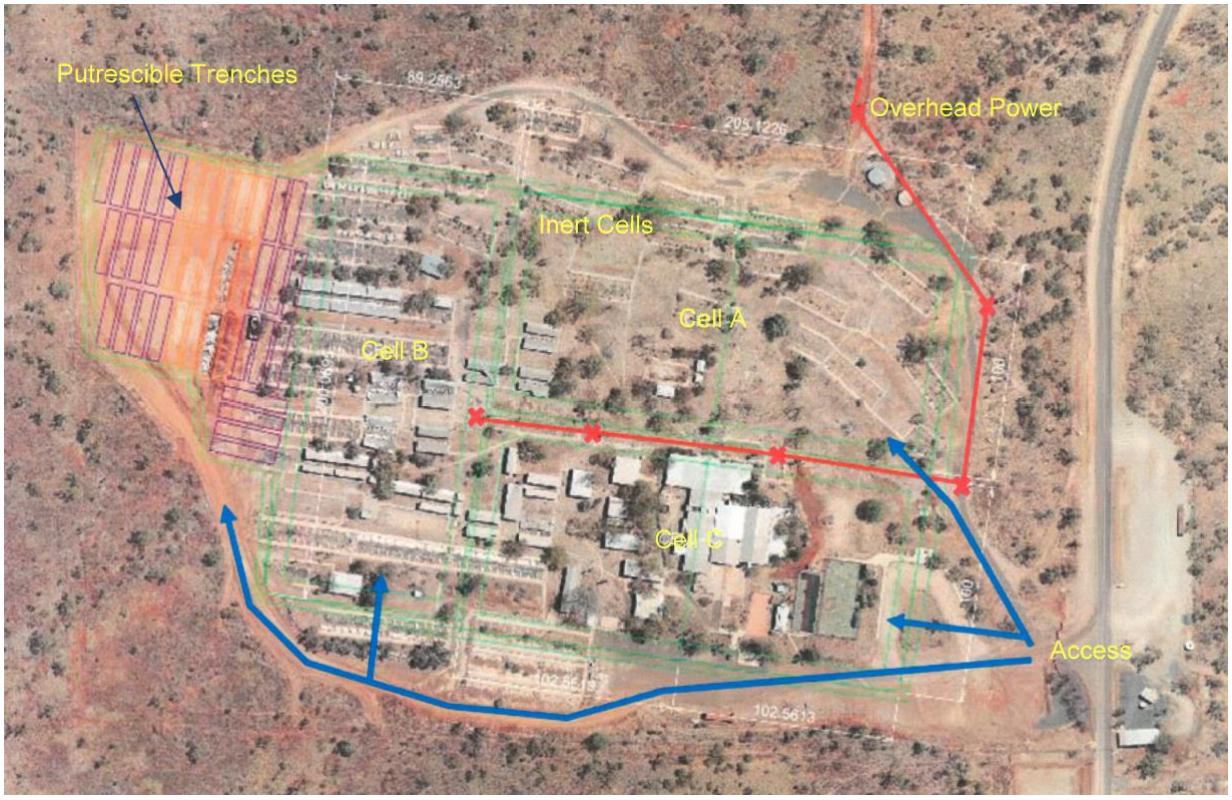
The closure execution works will result in high volumes of demolition waste being generated that will require disposal onsite. The Licence Holder proposes a total of up to 5,000 tonnes per annum of putrescible type wastes and up to 180,000 tonnes per annum of inert type wastes will

be generated during the make safe and closure works. The Licence Holder plans to dispose the putrescible waste and a majority of the inert waste at the existing putrescible landfill (Primary Landfill). The remaining inert waste will be disposed of at the new Alluvials inert landfill (Secondary Landfill).

Primary Landfill

The existing Primary Landfill which is located at the old Wandarrie accommodation camp (camp) can accept putrescible waste, inert waste and Special Type 1 and 2 wastes as described in the *Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009).* Wastes will be managed so putrescible wastes are disposed separately to inert wastes as shown in Figure 1 below.

Figure 1: Primary Landfill – General layout



During Make-Safe and closure works the Licence Holder proposes to dispose at the Primary Landfill all non-recyclable/non-salvageable inert waste generated from the camp, main processing plant infrastructure (AK1 Plant Area), the Argyle village and from other locations of the general lease. Asbestos and biomedical waste will also continue to be disposed of at the Primary Landfill.

The general layout of the Primary Landfill is shown in Figure 1 above. During Make-Safe, Cell A will be used for the disposal of inert wastes. Cell B will accept inert waste for burial during closure works and once capacity is reached, the remainder of Cell A will be used if required. The Cell C area will be used as a contingency space if required. The putrescible trenches shown in Figure 1 will continue to receive putrescible waste, asbestos and biomedical wastes for burial.

A traditional trench method will continue to be used for the burial of putrescible type wastes. The approximate dimensions for each cell (trench) are 30 m long, 6 m wide and a minimum of 4 m deep. A 2 m separation distance will be maintained between each cell. An earthen windrow with a minimum height of 300 mm will be maintained around each cell. The use of a liner is not proposed for the putrescible cells.

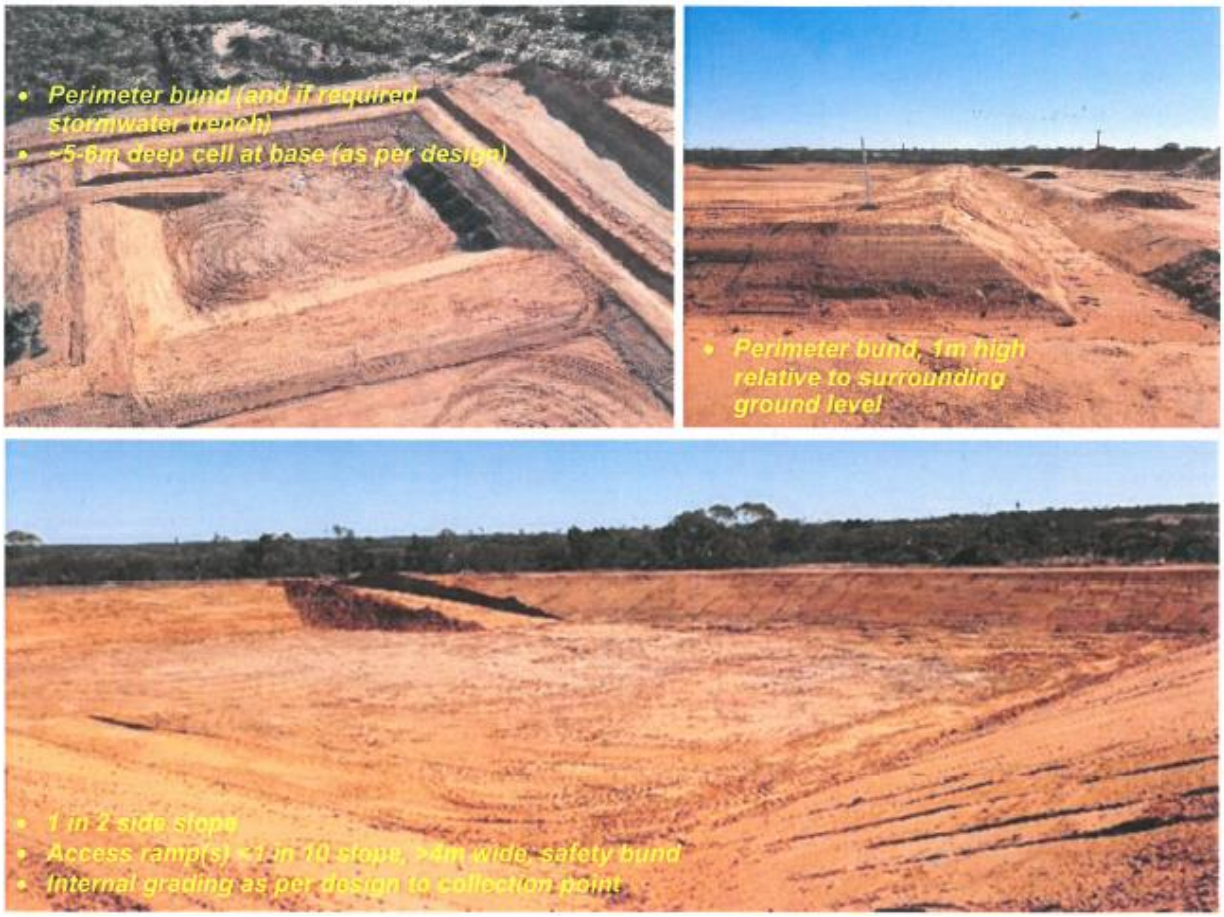
A fence will be maintained around the perimeter of the putrescible area with a gate provided for

access. Signs will be suitably located to indicate the types of wastes that can be deposited into each trench or cell. A firebreak of at least 3 m width will be provided around the Primary Landfill area.

A semi above ground mound design will be used for the construction of Cells A, B and C for the burial of inert wastes. The mound design utilises earthen walls around the perimeter of each cell with an access ramp on one side (Figure 2). Each cell will be excavated to achieve an approximate effective depth of 5-6 metres measured from the crest of the raised embankment wall. The walls provide a minimum 1 m high bund relative to the surrounding ground level which will assist in diverting stormwater away from the cells.

The base of each cell will be graded to encourage stormwater to drain to a collection point in the cell for removal if required. The use of a liner is not proposed for the inert cells.

Figure 2: Inert Cell Design – Primary Landfill



Inert wastes will be disposed into the cell and will undergo multiple passes by compaction equipment to achieve a final height that is level with the surrounding ground level (1 m below the bank crest).

Putrescible trenches will also be compacted to achieve a final waste level of 0.4 to 0.5 metres below ground level. The active tipping area at the putrescible cells will be kept to a maximum length of 30 metres.

Putrescible waste will continue to be covered weekly with a 150 – 200 mm thick excavated soil cover material. Inert wastes will be covered monthly with a 150 – 200 mm thick excavated soil cover material.

Final capping of the putrescible and inert wastes will consist of a 1.3 m thick soil cover utilising excavated or ROM material. The capping also includes a 0.1 m thick growth media in the top

layer.

Secondary Landfill

The proposed new Secondary Landfill will be located at the old Alluvials mine plant area and will only accept Class I inert materials for burial. The accepted waste for burial will consist of inert waste generated from the demolition of the Alluvials Plant area, airport and any other inert type waste from this area.

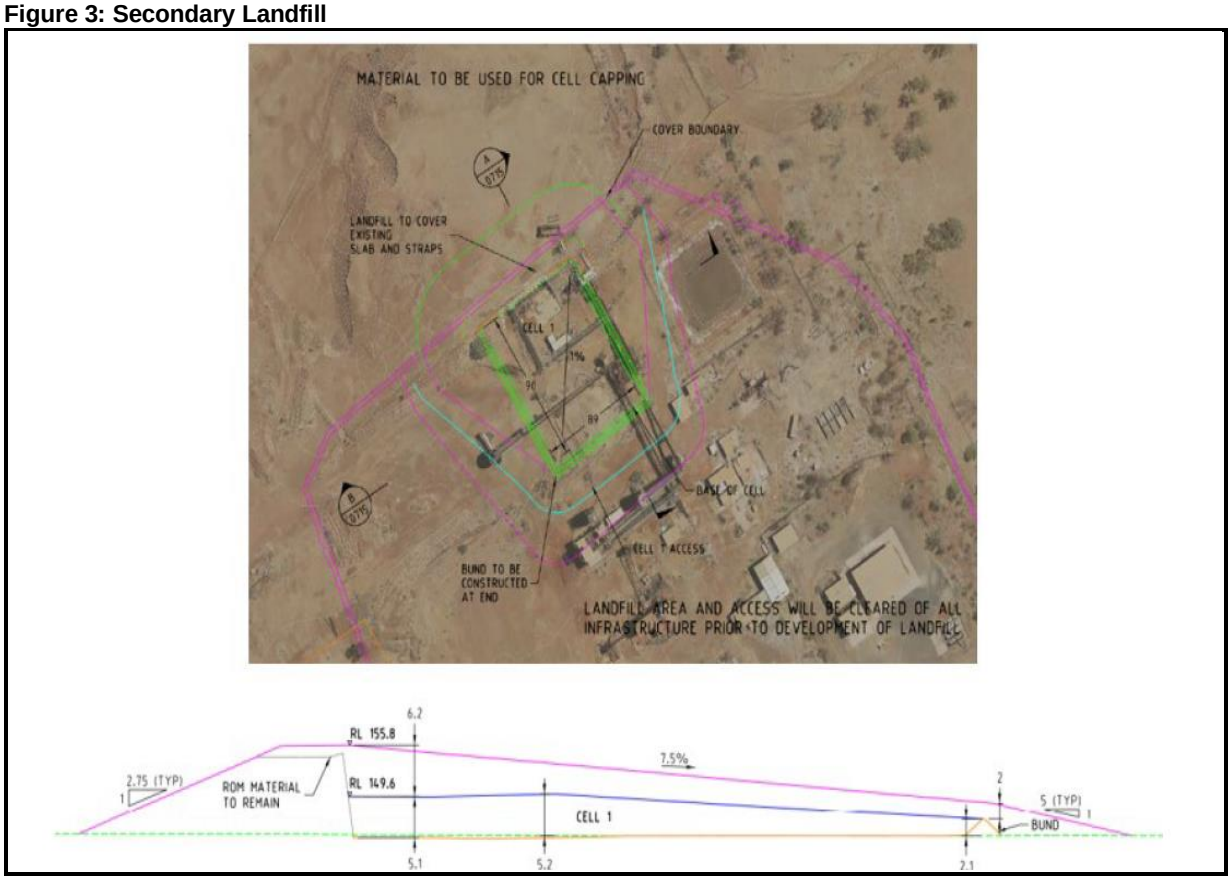
The landfill will cover an area of approximately 2.5 hectares which has been previously disturbed from mining operations. The area is flat and drainage runs east-southeast. Existing mining plant infrastructure which hasn't been used in the last couple of years remains within this area. This infrastructure will make up a majority of the inert waste to be buried at this location.

Groundwater at the selected area for the landfill is already contaminated from historical operations and is likely to be classified as Remediated for restricted use under the Contaminated Sites Act 2003 (CS Act).

The Licence Holder will use a mound method for the disposal of inert wastes as shown in Figure 3 below. Inert waste will be placed to a compacted thickness of between 2 m at the landfill perimeter and between 5 to 7 m at the Run of Mine (ROM) location. The base of the cell will be graded to encourage stormwater to drain to a collection point in the cell for removal if required. The use of a liner is not proposed.

Final capping of the inert wastes will consist of a 1.3 m thick soil cover utilising excavated or ROM material. The material will be applied in 0.25 m thick lifts with compaction occurring after each lift (95% compaction). The capping will also include a 0.1 m thick growth media in the top layer. Capping will extend at least 1 m beyond the waste footprint.

Figure 3: Secondary Landfill



Asbestos waste will be wrapped, sealed and labelled in accordance with relevant legislation and placed at the base of the Primary and Secondary Landfills. All asbestos material will be covered with at least 0.2 m of suitable fill. Clinical waste buried at the Primary Landfill will be covered with at least 1.0 m of suitable fill. A register for the locations of the buried asbestos and clinical waste will be maintained.

Table 1 below outlines the proposed changes to the existing Licence

Table 1: Proposed design or throughput capacity changes

Category	Current throughput capacity	Proposed throughput capacity	Description of proposed amendment
5	10,000,000 tpa	**0 tpa**	Processing of ore no longer occurs at the Premises with operations ceasing in November 2020.
6	9,000,000 tpa	**0 tpa**	Dewatering activities no longer occur at the Premises.
39	18,000 tpa	**0 tpa**	This activity no longer occurs onsite.
52	32 MW	**No change**	No change
54	300 m^3/day	**No change**	No change
57	Not applicable	**No change**	No change
63	4,000 tpa	**180,000 tpa of inert waste**	The Licence Holder has closed the existing inert landfill and proposes to construct a new inert landfill (Secondary Landfill) for the disposal of inert demolition waste.
64	4,810 tpa	**5,000 tpa of putrescible wastes**	The current Class II putrescible landfill will be expanded to receive large quantities of inert waste generated during make safe and closure works at the Premises.
73	3.7 million litres	**1.0 million litres**	Lower volumes of chemicals required with mining operations now ceased at the Premises.

2.4 Part IV of the EP Act

Management of the new Secondary Landfill and the existing Primary Landfill have been included in both the revised MCP and the Environmental Management Plan (EMP) for the Argyle closure. The Licence Holder has lodged these documents for approval with the EPA. An amendment to Ministerial Statement (MS) 1023 through a Section 45c process is unlikely as the development of these two new landfill sites do not represent a change in the proposal approved under MS 1023.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guidance Statement: Risk Assessments* (DER 2017).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises construction and operation which have been considered in this Amendment Report are detailed in Table 2 below. Table 2 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 2: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Dust	Construction of earthen bunds, excavation of cells and vehicle movements.	Air/windborne pathway	Onsite speed limits, water cart use for wetting down of roads and active areas when required. Rehabilitation of capped cells.
Contaminated stormwater	Stormwater becoming contaminated by interacting with inert waste (i.e. presence of hydrocarbons)	Infiltration through soil profile to underlying groundwater. Overland run-off.	All environmentally hazardous material will be removed from equipment during the make-safe phase before disposal at the landfill. Less than 20 % of mechanical equipment is expected to be disposed at the Premises. The location of the new inert landfill (Secondary Landfill) was selected due to the groundwater in that area already being contaminated from historical operations and is likely to be classified as Remediated for restricted use under the Contaminated Sites Act 2003 (CS Act). During demolition works, waste identified with visual evidence of residual hydrocarbons or sludge will be cleaned prior to demolition. Any liquid waste generated during this process will be collected and removed off-site. Waste heavily contaminated with hydrocarbons will not be disposed of at the landfills and instead will be managed under the CS Act as part of the mine closure planning stage. Waste impacted with PFAS will also be managed this way. A contaminated sites specialist has been

Emission	Sources	Potential pathways	Proposed controls
			employed by the Licence Holder to manage the acceptability of inert waste at the landfills. This position is site based. Earthen bunding around perimeter of cell to divert stormwater around the facility and retain any contaminated stormwater within the facility. The base of the cell will be compacted and graded to encourage stormwater to drain to a collection point in the cell for removal if required. Maintain a minimum separation distance of 3 m between the base of the cell/s and the highest level of the water table aquifer at the landfills. Final capping of the putrescible and inert wastes will consist of a 1.3 m thick soil cover utilising excavated or ROM material.
Windblown waste	Operation of the Primary landfill	Air/windborne pathway	Putrescible wastes including windblown wastes will be disposed into the Primary Landfill where regular fortnightly covering of waste will occur. A wire fence will be maintained around the putrescible trenches to control windblown waste.

3.1.2 Receptors

In accordance with the *Guidance Statement: Risk Assessment* (DER 2017), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 3 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises *(Guidance Statement: Environmental Siting* (DER 2016)).

Table 3: Sensitive human and environmental receptors and distance from prescribed activity

Residential and sensitive premises	**Distance from Prescribed Premises**
Lissadell Station Homestead	13.5 km **Screened out as a receptor as distance considered too great.**
Environmental receptors	**Distance from prescribed activity**
Threatened/Priority Fauna	Two mammal species found at the Premises are listed as Priority Species: the Water Rat (*Hydromys chrysogaster*); and the Lakeland Downs Mouse (*Leggadina lakedownensis*). **Screened out as a receptor** as the distribution and abundance of the mammals are highly seasonally dependant, with plague proportion during good seasons.
Threatened/Priority Flora	No Declared Rare Flora Species recorded at the Premises. Priority flora, *Eucalyptus ordiana* has been recorded onsite however not in the general location of the Primary and Secondary landfills. **Screened out as a receptor as distance considered too great.**
Groundwater at the location of the Secondary Landfill	Depth to groundwater at the new class I inert landfill (Secondary Landfill) is approximately 9 to 10 mbgl.
Groundwater at the location of the Primary Landfill	Depth to groundwater at the existing putrescible landfill (Primary Landfill) varies from 12 to 18 mbgl.
Limestone Creek	4 km to the east-southeast of the Secondary Landfill Drainage channel approximately 600 m down gradient of the Primary Landfill which eventually discharges into Limestone Creek approximately 5 km away.

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guidance Statement: Risk Assessments* (DER 2017) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 4.

The Revised Licence L4459/1987/13 that accompanies this Amendment Report authorises emission associated with the operation of the Premises.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 4. Risk assessment of potential emissions and discharges from the Premises during construction and operation

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
Construction								
Construction of a Class I inert landfill at the decommissioned Alluvial mine plant site (Secondary Landfill). Expansion of the Primary Landfill by including additional inert disposal areas.	Dust	Air/windborne pathway Smothering causing reduced photosynthetic functions of vegetation	Nearby vegetation	Refer to Section 3.1	C = Slight Minimal on-site impacts L = Possible The risk event could occur at some time **Low Risk**	Yes	Conditions 2,and 3	Construction and installation of infrastructure to be generally located as identified in the submitted application. No additional construction conditions for the management of dust required. The general provisions of the EP Act apply.
Operation								
Increased disposal of inert waste at the existing Primary Landfill.	Contaminated stormwater run-off	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality	On-site drainage channel Surrounding soils Surrounding native vegetation	Refer to Section 3.1.1	C = Minor Low level on-site impacts L =Rare The risk event will probably not occur in most circumstances. **Low Risk**	Yes	Conditions 1, 18, 23, 24, **42** 43 and 44	Applicant design and construction requirements conditioned in the licence for the new inert landfill cells at the existing Primary landfill. Existing conditions in the licence are sufficient for the management of contaminated stormwater at the new inert landfill area. Existing standard administration and reporting requirements. The general provisions of the EP Act regarding preventing pollution and environmental harm apply.
	Leachate from contaminated inert waste (i.e. remaining hydrocarbons,	Seepage through soil profile potentially contaminating	Groundwater	Refer to Section 3.1.1	C = Minor Low level on-site impacts	Yes	Conditions 1, 18, 23, 24, **42**, 43 and 44	Applicant design and construction requirements for the new inert landfill cells conditioned in the licence. During demolition works, waste

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
	chemicals)	groundwater.			L =Rare The risk event will probably not occur in most circumstances as the depth to groundwater is 12-18 mbgl at this location of the Premises. **Low Risk**			identified with visual evidence of residual hydrocarbons or sludge will be cleaned prior to demolition. Any liquid waste generated during this process will be collected and removed off-site. Waste heavily contaminated with hydrocarbons will not be disposed of at the landfill and instead will be managed under the CS Act as part of the mine closure planning stage. Waste impacted with PFAS will also be managed this way. A contaminated sites specialist has been employed by the Licence Holder to manage the acceptability of inert waste at the new inert landfill. This position is site based. Existing standard administration and reporting requirements. The general provisions of the EP Act regarding preventing pollution and environmental harm apply.
	Incidental Windblown waste	Air/windborne pathway causing amenity impacts and detrimental effects to local fauna.	Native flora and fauna	Refer to Section 3.1.1	C = Slight Minimal on-site impacts L = Possible The risk event could occur at some time **Low Risk**	Yes	Conditions 1, 18, **42**, 43 and 44	Construction condition requiring a wire fence is maintained around the perimeter of the putrescible trenches. Existing conditions in the licence sufficient for the management of windblown waste.
Disposal of inert waste at the	Contaminated stormwater	Overland runoff potentially causing	Surrounding	Refer to	C = Minor	Yes	Conditions 1, 15, **42**, 43 and	Applicant design and construction requirements conditioned in the

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
new Secondary Landfill	run-off	ecosystem disturbance	soils Surrounding native vegetation	Section 3.1.1	Low level on-site impacts L =Rare The risk event will probably not occur in most circumstances. **Low Risk**		44	licence. Existing conditions in the licence are sufficient for the management of contaminated stormwater. Existing standard administration and reporting requirements. The general provisions of the EP Act regarding preventing pollution and environmental harm apply.
	Leachate from contaminated inert waste (i.e. remaining hydrocarbons, chemicals)	Seepage through soil profile potentially contaminating groundwater.	Groundwater	Refer to Section 3.1.1	C = Minor Low level on-site impacts as a result of the groundwater at this location being contaminated. L =Rare The risk event will probably not occur in most circumstances as the depth to groundwater is 9-10 mbgl at this location of the Premises. **Low Risk**	Yes	Conditions 1, 15, 23, **42**, 43 and 44	Only inert waste which mainly consists of brick and concrete will be deposited at the secondary landfill. Groundwater at the selected area for the landfill is already contaminated from historical operations and is likely to be classified as Remediated for restricted use under the Contaminated Sites Act 2003 (CS Act). During demolition works, waste identified with visual evidence of residual hydrocarbons or sludge will be cleaned prior to demolition. Any liquid waste generated during this process will be collected and removed off-site. Waste heavily contaminated with hydrocarbons will not be disposed of at the landfill and instead will be managed under the CS Act as part of the mine closure planning stage. Waste impacted with PFAS will also be managed this way. A contaminated sites specialist has been employed by the Licence Holder to manage the acceptability of inert

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
								waste at the new inert landfill. This position is site based. Applicant design and construction requirements for the new inert landfill are conditioned in the licence. Existing conditions in the licence are sufficient for the management of leachate from the new inert landfill area. Existing standard administration and reporting requirements. The general provisions of the EP Act regarding preventing pollution and environmental harm apply.
	Incidental Windblown waste	Air/windborne pathway causing amenity impacts and detrimental effects to local fauna.	Native flora and fauna	Refer to Section 3.1.1	C = Slight Minimal on-site impacts L = Rare The risk event may only occur in exceptional circumstances **Low Risk**	Yes	Conditions 15, **42, 43 and 44**	Inert waste mainly consists of brick and concrete so no to minimal windblown type wastes expected at the Secondary landfill. Applicant design and construction requirements for the new inert landfill are conditioned in the licence.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guidance Statement: Risk Assessments* (DER 2017).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

Table 5: Consultation

Consultation method	Comments received	Department response
Licence Holder was provided with draft amendment on 22 March 2021.	30 April 2021. Refer to Appendix 1	Refer to Appendix 1
Licence Holder was provided with second draft on 17 May 2021	26 May 2021. Licence Holder had no comments on the second draft and requested the amendment proceeds to final signing and the remaining comment period is waivered.	Amendment prepared for final signing.

5. Conclusion

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

5.1 Summary of amendments

Table 6 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: Summary of licence amendments

Condition no.	Proposed amendments
N/A	Licence page category description table updated with new changes.
Definitions	Updated to reflect changes.
Previous condition 4	This condition has been removed. The requirements of this condition are no longer required because the plant is no longer operational.
Previous conditions 6, 7 and 8	These conditions are now redundant as the construction of the oil water separator has been completed and the compliance documentation submitted.
Condition 9 (previous condition 13)	Reference to the Wandarrie Sewage Plant, evaporation pond and irrigation area, and the Village Fly Camp and irrigation area in this condition has been deleted as this infrastructure is no longer in use and will be decommissioned in accordance with the MCP.
Previous condition 15	This condition has been removed as the irrigation areas are no longer in use.
Previous conditions 16 and 16(a)	These conditions have been removed as the tailings scrubber plant is no longer in use and discharge has ceased. The plant will be decommissioned in accordance with the MCP.
Previous conditions 18, 19 and 20	These conditions are considered redundant in accordance with DWER's *Operational Procedure IR-OP-02* and therefore have been removed.

Condition 15 (previous condition 24)	Condition updated to include a reference to an additional attachment to the Licence and include the burial of type 1 special wastes (asbestos) at the landfill.
Conditions 18 to 21, and 23 to 26 (previous conditions 27 to 30 and 32 to 35)	Putrescible landfill renamed as the *Primary landfill* as part of the closure works occurring at the Premises.
Condition 19 (previous condition 28)	Condition amended to also include the requirement for the placement of waste within defined trenches or areas enclosed by earthen bunds at the Secondary Landfill.
Condition 23 (previous condition 32)	Condition amended also requiring a minimum 3 metre separation distance is maintained between the base of the excavation and the highest seasonal groundwater level at the Secondary Landfill.
Previous conditions 39 & 40	These condition are now redundant as the tailings dam is no longer operational and is in a phase of closure works as part of the MCP process.
Condition 38 (previous condition 48)	Condition amended by deleting the monitoring requirements for the Wandarrie WWTP as this facility is no longer in use and will be closed in accordance with the MCP. Monitoring requirements for the Village Fly camp remain unchanged as this facility is still in use.
Condition 42 (previous condition 57)	Condition updated to include construction requirements for the new inert landfill, including groundwater monitoring bores, located at the Alluvial location at the Premises. Condition also updated by removing the construction requirements for the tailings scrubber plant. This plant has been built however is now undergoing deconstruction as part of the mine closure process.
Premises map and Attachments 1-6	Updated Premises maps to show current operations occurring at the Premises and the location of the new Secondary Landfill.
Previous attachment 6	Map of tailings scrubbing plant location and discharge location deleted as this is currently undergoing deconstruction as part of the mine closure process.
Attachment 6	Design requirements for the construction of the new inert disposal areas and new putrescible cells at the Primary Landfill Area.
Attachment 7	Design requirements for the construction of the new Secondary Landfill.

References

1. DER 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
2. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
3. DER 2016, *Operational Procedure IR-OP-02: Redundant Conditions*
4. Colleen English, *'L4459 Licence Amendment'*, email message to Paul Anderson, 20 January 2021.
5. Argyle Diamonds Limited, *Operating Licence amendment application*, 1 December 2020.
6. RioTinto, Argyle Diamond Mine*, Closure Landfill Management Plan,* 13 November 2020
7. Colleen English, Sustainability Business Partner, Rio Tinto, *ADM Draft Licence Amendment Representation,* email message to Alana Kidd and Paul Anderson, 3 April 2021.

Appendix 1: Summary of Licence Holder's comments on risk assessment and draft conditions

Condition	Summary of Licence Holder's comment	Department's response
Category description - Category 63	*Revise annual throughput to 180,000 tonnes per year.* Demolition activities will result in high amounts of waste within a relatively short timeframe. This proposed inert waste throughput value would reflect wastes disposed in both the Primary (Attachment 6) and Secondary (Attachment 7) landfills.	Supported. Licence throughputs amended.
Category description - Category 64	*Revise annual throughput to 5,000 tonnes per year* As noted in Attachment 6, putrescible waste will be segregated and managed separately from inert waste within the Primary landfill. This will reduce the putrescible landfill footprint and the associated annual throughput of Class II putrescible materials.	Supported. Licence throughputs amended.
Definitions	Remove definition for 'Irrigation Areas' as these areas no longer exist.	Supported. Licence updated.
Condition 5	*Revise text to state:* *The Licence Holder shall ensure that hydrocarbon contaminated soil is managed in the following manner:* *- placed within the AK1 TSF Bioremediation Facility (as depicted in Attachment 1), until such time as the facility is closed* *- collection and disposal within a temporary containment area prior to placement in a permanent lined containment cell located adjacent to the Primary Landfill.* The bioremediation facility is located within the TSF, with TSF decommissioning, closure and rehabilitation planned for December 2023, as per the MCP. A lined containment cell will be constructed adjacent to the Primary Landfill footprint and will be utilised to contain contaminated materials, in accordance with our auditor-endorsed Contaminated Sites Remedial Action Plan(s)*. *the containment cell will be managed under the Contaminated Sites Act (2003) rather than the EPA (1986), as agreed with DWER.	**Not supported.** The Licence amendment application dated 1/12/2020 did not request DWER to assess the construction and operation of a temporary containment area and a lined containment cell, for the purpose of temporary storage and containing contaminated materials respectively. The Licence Holder should provide to DWER further details of these facilities as well as seek clarification whether these facilities would need approval to construct and operate under Part V of the EP Act 1986.
Condition 6	Revise text to state: *In relation to the bioremediation facility, the Licence Holder shall:*	**Not supported** Conditions 5 and 6 have different requirements. Condition 5 sets out the operational requirements of the

Condition	Summary of Licence Holder's comment	Department's response
	(i) maintain soil thickness at a depth of no more than 30 centimetres; *(ii) maintain soil moisture at 15-20% and nutrient levels within the soil to sustain biological activity;* *(iii) at least monthly soil aeration;* *(iv) monitor and record the volumes and concentrations of hydrocarbon contaminated soils bioremediated at the AK1 TSF Bioremediation Facility (as depicted in Attachment 1); and,* *(v) provide the results in the Annual Environmental Report required by condition 46 of this licence.* Combine bioremediation facility operational requirements into one condition.	bioremediation facility whereas condition 6 sets out the monitoring and recording requirements.
Condition 7	*Revise text to state:* *The Licence Holder shall ensure that uncontaminated stormwater runoff is diverted away from hydrocarbon contaminated material storage areas.* Revise condition to apply more generally to the different areas where hydrocarbon contaminated soils may be placed.	**Not supported** See response to condition 5 above.
Condition 9	The Wandarrie Sewage Treatment Plant, Evaporation Pond and Irrigation Area, as well as the Village Fly Camp Wastewater Treatment Plant and Irrigation Area are no longer in use and will be closed in accordance with the MCP. *Remove sub-clause (ii) and (iii)*	Supported. Licence updated.
Condition 11	*Remove requirements for Irrigation Areas.* The Wandarrie Sewage and Village Fly Camp Wastewater Irrigation Areas are no longer in use and will be closed in accordance with the MCP.	Supported. Licence updated.
Condition 16	*Remove reference to Attachment 3 of Licence.* Attachment 3 displays only inactive, former landfills.	Supported. Licence updated.
Condition 17	*Revise statement to:* *The Licence Holder shall ~~only~~ bury used tyres from the premises at the north and south waste rock dumps in the areas depicted in Attachment 3 or within the Primary and Secondary Landfill as depicted in Attachment 4 of this licence.* Both of the inert landfill areas (Primary and Secondary) are permitted to accept Inert Waste Type 2, which includes tyres. We would therefore be requesting to revise Condition 17 to reflect this, as the WRD will not remain a viable option for tyre disposal once re-shaping	Supported. Licence updated.

Condition	Summary of Licence Holder's comment	Department's response
	activities commence in closure.	
Condition 20	*Revise wording to: The Licence Holder shall place putrescible waste at the Primary Landfill within a defined trench.* Conditions 19 to 23 fall under the sub-heading of Primary Landfill, which is the only landfill where putrescible wastes will be disposed. Suggested revisions to Conditions 20, 21 and 22 reflect the limited area in which putrescible wastes will be disposed of within the Primary Landfill (Attachment 6). Reference to enclosed earthen bunds has been removed from this draft condition, given that this only applies to the Secondary Landfill.	Supported. Licence updated.
Condition 21	*Revise wording to: The Licence Holder shall ensure that the tipping area at the putrescible trenches in the Primary Landfill is less than or equal to 30 metres in length.* Putrescible waste will be segregated from inert materials within the Primary Landfill and the tipping area length restrictions would only apply to the putrescible trenches.	Supported. Licence updated.
Condition 22	*Revise wording to: The Licence Holder shall maintain a wire fence around the perimeter of the putrescible trenches at the Primary Landfill to effectively control wind-blown waste.* Putrescible waste will be segregated from inert materials within the Primary Landfill and fencing requirements would only apply to the putrescible disposal area. This revision ensures consistency with Table 8 of the draft amendment.	Supported. Licence updated.
Condition 27	*Revise wording to:* *(i) register of clinical waste disposed of at the putrescible trenches in the Primary Landfill site; and* *(ii) record of the putrescible trenches in the Primary Landfill site indicating the position of the clinical waste disposed of at the landfill.* Putrescible waste will be segregated from inert materials within the Primary Landfill and clinical waste disposal would only occur in the putrescible disposal area.	Supported. Licence updated.
Conditions 38 through 41 and Table 6	*Remove each condition and sampling requirements outlined in Table 6* The Wandarrie and Village Fly Camp sewage treatment plants and irrigation monitoring areas have been closed and decommissioned.	Supported. Licence updated.
Condition 42 and Table 7	*Remove conditions relating to groundwater sampling at the inert Secondary Landfill* For further details to support this proposed change, please refer to Attachment A of this	Supported. Proposed condition removed from the draft Licence.

Condition	Summary of Licence Holder's comment	Department's response
	submission.	DWER agrees the requirement for the installation and monitoring of groundwater monitoring bores at the new inert landfill is not required due to the following reasons: - Only inert waste which mainly consists of brick and concrete will be deposited at the landfill. - Depth to groundwater is expected to be greater than 7.5 metres below ground level. - Groundwater at the selected area for the landfill is already contaminated from historical operations and is likely to be classified as *Remediated for restricted use* under the *Contaminated Sites Act 2003 (CS Act)*. - During demolition works, waste identified with visual evidence of residual hydrocarbons or sludge will be cleaned prior to demolition. Any liquid waste generated during this process will be collected and removed off-site. - Waste heavily contaminated with hydrocarbons will not be disposed of at the landfill and instead will be managed under the *CS Act* as part of the mine closure planning stage. Waste impacted with PFAS will also be managed this way. - A contaminated sites specialist has been employed by the Licence Holder to manage the acceptability of inert waste at the new inert landfill. This position is site based.
Condition 46	*Remove sub-conditions 46(vi) and 46(ix)* These reporting requirements would not be required if Condition 42 and Table 7 requirements are removed.	Supported. Licence updated.
Table 8 – Primary Landfill	*Revise wording in bullet 4 to read: The tipping area for the putrescible trenches is to be less than 30m in length* *Revise wording in bullet 5 to read: Putrescible waste is to be placed within defined trenches with a separation distance of at least 3m between the base of the deepest excavation and the highest seasonal level of the groundwater* As noted above, these requirements are typically associated with putrescible waste management.	Supported. Licence updated.

Condition	Summary of Licence Holder's comment	Department's response
Table 8 – Secondary Landfill	*Remove draft text from bullet 4 and associated sub-bullets* These design requirements would not be required if Condition 42 and Table 7 requirements are removed.	Supported. Licence updated.
Attachment 8	*Remove attachment from licence* This attachment would not be required if Condition 42 and Table 7 requirements are removed.	Supported. Licence updated.
Previous conditions 18 & 19	ADM noted the suggested removal of the Liquid Chemical Storage section by DWER, despite there still being up to 1 million litres of fuel stored at site, which is the Schedule 1 capacity. Can you please clarify the reason for the removal of this section.	The bulk storage of chemicals up to a maximum of 1 million litres still remains authorised under the Licence as shown on the first page of the Licence (Category 73). Previous conditions 18 & 19 which set out how chemical storage compounds should be designed and managed, were considered redundant in accordance with DWER's operational procedures because the intent of these conditions are duplicated by alternative legislation. The storage of environmental hazardous materials is regulated under the *Dangerous Goods Safety Act 2004* which is administered by the Department of Mines, Industry Regulation and Safety. DWER can still apply conditions to the Licence in relation to activities associated with category 73, however DWER has determined it is currently not necessary.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)					
Application type					
Works approval	☐				
Licence	☐	Relevant works approval number:		None	☐
		Has the works approval been complied with?		Yes ☐ No ☐	
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes ☐ No ☐ N/A ☐	
		Environmental Compliance Report submitted?		Yes ☐ No ☐	
		Date Report received:			
Renewal	☐	Current licence number:			
Amendment to works approval	☐	Current works approval number:			
Amendment to licence	☒	Current licence number:	L4459/1987/13		
		Relevant works approval number:		N/A	☐
Registration	☐	Current works approval number:		None	☐
Date application received					
Applicant and Premises details					
Applicant name/s (full legal name/s)		Argyle Diamonds Limited			
Premises name		Argyle diamond Mine			
Premises location		Mineral Lease 259SA, L80/11, L80/24, L80/31 and M80/114			
Local Government Authority		Shire of Wyndham-East Kimberley			
Application documents					
HPCM file reference number:		DER2013/000649-1			
Key application documents (additional to application form):		- Attachment 3B: Additional information for Proposed Activities - Argyle Diamond Mine, *Closure Landfill Management Plan* (13 Nov 20) - Attachment 2: Premises Maps - Attachment 9: Information and data used to calculate proposed fees – estimated total waste generation for closure execution			

Scope of application/assessment	
Summary of proposed activities or changes to existing operations.	Mining operations at the Premises ceased in November 2020 with processing operations planned to cease in February 2021. The Licence Holder will then commence closure execution works. As a result of these proposed actions, the Licence Holder has applied to amendment the Licence to incorporate these changes. A brief description of the requested changes is described below. • Remove categories 5, 6 and 39 as these categories will no longer occur at the Premises from February 2021. Note DWER may decide to retain these categories on the Licence for closure purposes(i.e. monitoring) and instead have the throughputs reduced to the lowest amount. • Construction of a new Class 1 inert landfill (Alluvial landfill) for the burial of waste generated from closure execution works. The Licence Holder has requested no throughput amount is applied to the Licence and also the throughput for the existing category 64 landfill (Wandarrie) is removed. These requests are due to large quantities of waste to be buried. Note DWER is unlikely to approve the requested unlimited throughput amounts for the category 63 and 64 landfills, and will instead apply the amounts the Licence Holder provided in the estimated total waste generation for closure execution purposes. • Reduce the throughput for category 73 as the amount of chemicals stored at the Premises will be reduced. • Update/remove specific conditions that relate to the operation of plant that is no longer in use. • Update waste disposal specific conditions. • Removal/changes to monitoring requirements. • Update maps

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Proposed production or design capacity	Proposed changes to the production or design capacity
Category 5	10,000,000 tpa	0 tpa
Category 6	9,000,000 tpa	0 tpa
Category 39	18,000 tpa	0 tpa
Category 63	4,000 tpa	180,000 tonnes per year of inert waste
Category 64	4,810 tpa	5,000 tonnes per year of putrescible waste
Category 73	3.7 million litres	1.0 million litres

Legislative context and other approvals		
Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes ☐ No ☒	Referral decision No: Managed under Part V ☐ Assessed under Part IV ☐
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes ☒ No ☐	Ministerial statement No: MS1023 EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes ☐ No ☒	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ☒ No ☐	Certificate of title ☐ General lease ☐ Expiry: Mining lease / tenement ☒ Expiry: Other evidence ☐ Expiry:
Has the applicant obtained all relevant planning approvals?	Yes ☐ No ☐ N/A ☒	Approval: Expiry date: If N/A explain why?
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes ☒ No ☐	CPS No: 4532/9
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes ☐ No ☒	Application reference No: Licence/permit No:
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes ☒ No ☐	Application reference No: Licence/permit No:GWL200798
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes ☐ No ☒	Name: N/A Type: Has Regulatory Services (Water) been consulted? Yes ☐ No ☐ N/A ☐ Regional office:

Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes ☐ No ☒	Name: N/A Priority: P1 / P2 / P3 / N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes ☐ No ☐ N/A ☐
Is the Premises subject to any other Acts or subsidiary regulations (e.g. *Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx*)	Yes ☒ No ☐	Diamond (Argyle Diamonds Joint Venture) Agreement Act 1981
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes ☐ No ☒	
Is the Premises subject to any EPP requirements?	Yes ☐ No ☒	
Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*?	Yes ☒ No ☐	Classification: possibly contaminated – investigation required Date of classification: 23 March 2009