



Application for Licence Amendment

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

Licence Number	L8332/2009/3
Licence Holder	Cleanaway Co Pty Ltd
ACN	127 853 561
Application Number	APP-0026833
File Number	INS-0001518
Premises	Karratha Hazardous Waste and Decontamination Facility Lot 126 on Plan 183297 COOYA POOYA WA 6714 Legal description – As defined by the Premises maps attached to the Revised Licence
Date of Report	6 March 2026
Decision	Revised licence granted

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1. Decision summary

Licence L8332/2009/3 is held by Cleanaway Co Pty Ltd (Licence Holder) for the Karratha Hazardous Waste and Decontamination Facility (the Premises), located at Lot 126 on Plan 183297, Cooya Pooya.

This Amendment Report documents the assessment of potential risks to the environment and to public health from proposed changes to the emissions and discharges during the operation of the premises. As a result of this assessment, Revised Licence L8332/2009/3 has been granted.

The Revised Licence issued as a result of this amendment consolidates and supersedes the existing Licence previously granted in relation to the premises. The Revised Licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

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 11 December 2024, the Licence Holder submitted an application to the department to amend Licence L8332/2009/3 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act).

The application requested a number of amendments to the premises licence to better reflect the activities being undertaken, or proposed to be undertaken, at the site.

During the assessment process, the Licence Holder requested additional amendments on 14 November 2025 and on 13 February 2026. All proposed amendments, including those requested later in the assessment process, are summarised in Table 1.

Table 1: Proposed amendments

	Existing licence condition	Description of proposed amendment (JBS&G)
1	Condition 1, Table 1 Waste acceptance	An amendment to include the acceptance of Class IV and V contaminated soil. This is requested to allow the wastes to be processed on site to reduce their class to provide more options for their further treatment or disposal.
2	Condition 1, Table 1 Waste Acceptance	An amendment to remove a limit on the quantity of chromium wastes permitted to be received per annual period. The applicant states that the basis of the limit is not known, and it is not linked to any specific environmental outcome.

	Existing licence condition	Description of proposed amendment (JBS&G)						
3	Condition 1, Table 1 Waste Acceptance	An amendment to increase the quantity limit for per-and polyfluoroalkyl substances (PFAS) contaminated waste from 1,000 to 40,000 tonnes per annual period, as well as specifying that only liquid waste must be accepted in sealed impervious containers.						
4	Condition 4, Table 2 Waste Processing	<p>An amendment to the waste processing requirements specified to include PFAS contaminated soil as follows:</p> <table border="1" data-bbox="475 618 1302 1279"> <thead> <tr> <th data-bbox="475 618 735 689">Waste type</th> <th data-bbox="735 618 943 689">Process</th> <th data-bbox="943 618 1302 689">Process limits</th> </tr> </thead> <tbody> <tr> <td data-bbox="475 689 735 1279"><u>PFAS contaminated soil</u></td> <td data-bbox="735 689 943 1279"><u>Treatment with Rembind™ or equivalent treatment process if required, prior to disposal off-site</u></td> <td data-bbox="943 689 1302 1279"> <u>Process must only occur within Fixation Bay 1 or 2 as indicated in Figure 2 [of the licence].</u> <u>All runoff from the fixation bays and the fixation pad must be diverted to capture and storage pits.</u> <u>Waste must be tested for final PFAS concentration to determine the suitability for landfill disposal.</u> <u>PFAS waste exceeding a Total PFAS concentration of 50 mg/kg must be disposed of to a suitably licenced facility.</u> <u>Volume of material being processed must not exceed 340 m³ at any given time.</u> </td> </tr> </tbody> </table> <p>The applicant states that the addition of PFAS contaminated soils will allow greater flexibility in the way that the premises treats PFAS contaminated wastes, providing an additional treatment option for waste in the region.</p>	Waste type	Process	Process limits	<u>PFAS contaminated soil</u>	<u>Treatment with Rembind™ or equivalent treatment process if required, prior to disposal off-site</u>	<u>Process must only occur within Fixation Bay 1 or 2 as indicated in Figure 2 [of the licence].</u> <u>All runoff from the fixation bays and the fixation pad must be diverted to capture and storage pits.</u> <u>Waste must be tested for final PFAS concentration to determine the suitability for landfill disposal.</u> <u>PFAS waste exceeding a Total PFAS concentration of 50 mg/kg must be disposed of to a suitably licenced facility.</u> <u>Volume of material being processed must not exceed 340 m³ at any given time.</u>
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<u>PFAS contaminated soil</u>	<u>Treatment with Rembind™ or equivalent treatment process if required, prior to disposal off-site</u>	<u>Process must only occur within Fixation Bay 1 or 2 as indicated in Figure 2 [of the licence].</u> <u>All runoff from the fixation bays and the fixation pad must be diverted to capture and storage pits.</u> <u>Waste must be tested for final PFAS concentration to determine the suitability for landfill disposal.</u> <u>PFAS waste exceeding a Total PFAS concentration of 50 mg/kg must be disposed of to a suitably licenced facility.</u> <u>Volume of material being processed must not exceed 340 m³ at any given time.</u>						
5	Condition 4, Table 2 Waste Processing	<p>An amendment to replace metal, paper, plastic, cardboard, drums, wood, tyres with the generic term “recyclables” and include shredding as a processing activity for these wastes.</p> <p>The applicant states that replacing the specific waste types with a generic term will allow greater flexibility in the types of recyclables that can be processed at the premises.</p> <p>The applicant has proposed the following definition for “recyclables”: <i>A material that has the potential to be collected, processed and remanufactured into a new product such as metal, paper, cardboard, wood and rubber.</i></p>						
6	Condition 4, Table 2 Waste Processing	An amendment to delete the word ‘plastic’ in front of shredder in the process for containers or drums contaminated with residues of controlled waste. This will allow other containers and drums to be processed, not just plastic ones.						

	Existing licence condition	Description of proposed amendment (JBS&G)															
10	Condition 4, Table 2 Waste Processing	Amendment to authorise the treatment of low-level PFAS-contaminated liquid waste via the existing Wastewater Treatment Plant, through the integration of a granulated activated carbon (GAC) polishing vessel as a final treatment step.															
7	Assessed production capacity for Category 61	An amendment to increase the throughput for Category 61 from 40,000 tonnes per annum to 80,000 tonnes per annum. The increase was requested due to emerging markets.															
8	Condition 5, Table 3 Containment Infrastructure	<p>The following amendments to Table 3 have been requested:</p> <table border="1" data-bbox="472 719 1337 1554"> <thead> <tr> <th data-bbox="472 719 721 792">Vessel or compound</th> <th data-bbox="721 719 951 792">Material</th> <th data-bbox="951 719 1337 792">Requirements</th> </tr> </thead> <tbody> <tr> <td data-bbox="472 792 721 958">IBC and Drums, rear lift skips and shipping containers Packaged waste for transshipment <u>in</u></td> <td data-bbox="721 792 951 958">As per Table 1</td> <td data-bbox="951 792 1337 958">Stored on bunded, impervious concrete hardstand pad</td> </tr> <tr> <td data-bbox="472 958 721 1124">Dedicated sea containers for Storage of NORM contaminated waste</td> <td data-bbox="721 958 951 1124">NORM contaminated waste</td> <td data-bbox="951 958 1337 1124">NORM to be stored on an impervious hardstand pad <u>Sealed containers stored in a manner that prevents discharge of waste to the environment</u></td> </tr> <tr> <td data-bbox="472 1124 721 1323">Half-height containers, sea containers, ISOTainers or similar containers for storage of waste</td> <td data-bbox="721 1124 951 1323"><u>Contaminated and packaged waste</u></td> <td data-bbox="951 1124 1337 1323"><u>Sealed containers stored in a manner that prevents discharge of waste to the environment</u></td> </tr> <tr> <td data-bbox="472 1323 721 1554">Fixation pad <u>pads</u></td> <td data-bbox="721 1323 951 1554">Wastes that have been processed by absorption</td> <td data-bbox="951 1323 1337 1554">Must consist of an impervious concrete floor with <u>impermeable</u> 0.2 mm PVC liner. Must be graded so as to divert all runoff to capture and storage pits. Must contain leachate or contaminated stormwater.</td> </tr> </tbody> </table> <p>The amendments have been requested to provide flexibility for the premises to store containers on natural ground instead of on a hardstand. All waste stored on natural ground will be in sealed containers to prevent the discharge of waste into the environment and inspected regularly.</p> <p>The amendment to the fixation pad is to reflect that there is more than one fixation pad and to allow alternative specification liners to be used.</p>	Vessel or compound	Material	Requirements	IBC and Drums, rear lift skips and shipping containers Packaged waste for transshipment <u>in</u>	As per Table 1	Stored on bunded, impervious concrete hardstand pad	Dedicated sea containers for Storage of NORM contaminated waste	NORM contaminated waste	NORM to be stored on an impervious hardstand pad <u>Sealed containers stored in a manner that prevents discharge of waste to the environment</u>	Half-height containers, sea containers, ISOTainers or similar containers for storage of waste	<u>Contaminated and packaged waste</u>	<u>Sealed containers stored in a manner that prevents discharge of waste to the environment</u>	Fixation pad <u>pads</u>	Wastes that have been processed by absorption	Must consist of an impervious concrete floor with <u>impermeable</u> 0.2 mm PVC liner. Must be graded so as to divert all runoff to capture and storage pits. Must contain leachate or contaminated stormwater.
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9	Conditions 29 to 31	The new fixation pad has been constructed. Therefore, the applicant requests that these conditions be deleted.															

	Existing licence condition	Description of proposed amendment (JBS&G)
10	Condition 1, Table 1 Waste acceptance Condition 2, Table 4 Waste processing	<p>The applicant requested the addition of putrescible waste from offshore industry, mining camp accommodation, and commercial and residential premises, as well as inert waste type 1, electronic waste, and asbestos waste to the licence. A 40,000-tonne per annual period limit was proposed for each waste type. However, all accepted wastes will be managed within the existing 40,000-tonne per year limit for Category 61A activities.</p> <p>These waste types have been requested to allow acceptance under current contractual arrangements. The wastes are only intended to be stored on the premises prior to removal to a suitably licensed facility, and no processing of these wastes will occur.</p>

The Licence Holder has also requested that the name of the premises be changed from Karratha Liquid Waste Treatment and Waste Transfer Station to the Karratha Hazardous Waste and Decontamination Facility.

2.3 Background and compliance matters

The premises operates as a solid and liquid waste storage and treatment facility where waste is stored and processed prior to being transported off-site, or to onsite evaporation basins. On 3 May 2017, the department granted a licence amendment to L8332/2009/3 which permitted the acceptance of PFAS contaminated wastes at the premises and the treatment of PFAS contaminated liquid waste with Rembind™ or an equivalent treatment process.

The premises was classified under the *Contaminated Sites Act 2003* as ‘Possibly contaminated - investigation required’ on 30 May 2023. The site was reported as the annual groundwater monitoring conducted to comply with L8332/2009/3, detected PFAS in the groundwater beneath the site. The PFAS was found present in concentrations exceeding guideline values for freshwater ecosystems and health-based guidance values for drinking water in the *PFAS National Environmental Management Plan* (Heads of EPAs Australia and New Zealand, January 2020). If ongoing groundwater monitoring indicates that significant concentrations of PFAS are migrating off-site via groundwater flow, a detailed investigation will be required to assess the extent of potential impacts.

This information has been considered in the context of the current licence amendment to ensure that appropriate environmental controls remain in place and that potential risks associated with PFAS contamination are managed effectively.

On 15 December 2021, the Licence Holder notified the department of 36 ISOs (24kL) containing Hotpad waste (hydrocarbon sludge impacted by mercury) which had been stored on the premises since 2019 and were not stored in a bunded area as required by L8832/2009/3. On 18 June 2024, the department issued a Prevention Notice under section 73A (1)(a) of the EP Act to the Licence Holder to take steps to remove the waste from the premises and dispose of it at an approved facility. The Licence Holder has since complied with all requirements of the Prevention Notice.

2.4 PFAS National Environmental Management Plan 3.0

PFAS are manufactured chemicals that have been used for more than 50 years. PFAS makes products non-stick, oil- and water-repellent, and fire, weather- and stain-resistant. PFAS have been used in a range of consumer products, such as carpets, clothes, food packaging and paper, and have also been used in firefighting foams, pesticides and stain repellents.

PFAS are known to be persistent, bio-accumulative, and toxic. Due to their persistence in the environment and moderate solubility, PFAS can be transported long distances in water and air, as well as transfer between different media (for example soil, sediment, surface water and groundwater). In Australia, PFAS have been used for a long time in a wide range of consumer products and industrial applications. Over time, the chemicals have worked their way across and through the soil to contaminate surface waters and groundwater, and have migrated into adjoining land areas. PFAS are also present in waste streams, including landfills and wastewater treatment facilities, as well as more broadly in the environment due to ongoing industrial discharges. As a result, low levels of PFAS are found in most environmental settings.

The PFAS National Environmental Management Plan Version 3.0 (NEMP 3.0) was released in early March 2025. This version provides updated guidance on managing PFAS contamination in Australia to minimise environmental and health risks and is applicable to premises receiving and treating PFAS contaminated wastes.

NEMP 3.0 provides specific guidelines for PFAS sampling, treatment, and the disposal of PFAS contaminated waste to landfills. For disposal to landfill, waste concentrations must meet both the total and leachable concentration limits as per the Australian Standard Leaching Procedure (ASLP) at pH 5 and un-buffered reagent water, simulating worst-case leaching conditions. Depending on specific landfill characteristics and regulatory approaches, environmental regulators may adjust these criteria for certain landfills. However, the landfill acceptance limit for the combined total of PFOS-, PFOA-, and PFHxS-related compounds has been set at 50 mg/kg.

Figure 1 below outlines the landfill acceptance criteria as depicted in table 11 of NEMP 3.0. When relating the landfill types referred to in NEMP 3.0 to the *Western Australian Landfill Waste Classification and Waste Definitions (as amended 2019)* (LWCWD), it should be noted that:

- An 'unlined' landfill is equivalent to a Class I or Class II landfill;
- A clay/single composite lined landfill is equivalent to a Class II (clay) or a Class III (single composite) landfill; and
- A double composite lined landfill is equivalent to a Class IV landfill.

Landfill type	Concentration type	Interim landfill acceptance criteria ^{a,b}		Comments
		Sum of PFOS and PFHxS ^c	PFOA	
Unlined	ASLP leachable concentration (µg/L)	0.07µg/L	0.56µg/L	Drinking water × 1 (Department of Health 2017)
	Total concentration (mg/kg)	20mg/kg	50mg/kg	Soil – Human health industrial/commercial × 1 Total concentration for PFOA (including related substances) of 50mg/kg based on a proposed Basel Convention LPCL
Clay/single composite lined	ASLP leachable concentration (µg/L)	0.7µg/L	5.6µg/L	Drinking water × 10 (Department of Health 2017)
	Total concentration (mg/kg)	50mg/kg	50mg/kg	Soil – Human health industrial/commercial × 10 Total concentration for PFOS + PFHxS and PFOA (including related substances) of 50mg/kg based on the Basel Convention's LPCLs
Double composite lined	ASLP leachable concentration (µg/L)	7µg/L	56µg/L	Drinking water × 100 (Department of Health 2017)
	Total concentration (mg/kg)	50mg/kg	50mg/kg	Soil – Human health industrial/commercial ×100 Total concentration for PFOS + PFHxS and PFOA (including related substances) of 50mg/kg based on the Basel Convention's LPCLs

- a Waste concentrations must be less than both the relevant leachable concentration and the total concentration values for the type of landfill.
- b Where significant PFAS are present beyond PFOS, PFOA, and PFHxS, these solid PFAS-contaminated materials may not be acceptable for landfill disposal. This should be discussed with the environmental regulator.
- c Where the criteria refer to the sum of PFOS and PFHxS, this means concentrations of PFOS only, PFHxS only, and the sum of the two, including their respective related compounds.

Figure 1: PFAS NEMP 3.0 Landfill acceptance criteria

For noting: For the purpose of this assessment, the Delegated Officer will relate the landfill types and their associated landfill acceptance criteria outlined in NEMP 3.0 to the equivalent landfill class and waste class as outlined in the LWCWD.

2.5 Audit report for fixation pad

On 11 July 2025, Cleanaway Co Pty Ltd submitted an audit report for the construction of the fixation pad in accordance with Condition 30 of L8332/2009/3. The fixation pad is divided into two pads, Fixation Pad 2A and Fixation Pad 2B, separated by a 2 m high concrete push-up wall.

The department reviewed the audit report and found that it satisfactorily met the requirements of Conditions 29 and 31 of the licence. A letter dated 15 July 2025 was issued to Cleanaway Co Pty Ltd advising them of this outcome.

The fixation pad is proposed to be used for the treatment or storage of PFAS-contaminated waste or contaminated soils.

2.6 Treatment of contaminated soils (Class IV and Class V)

Contaminated soils received at the facility which meet Class IV and Class V landfill disposal criteria typically contain:

- Per-and polyfluoroalkyl substances (PFAS): Commonly associated with firefighting foams (e.g. Aqueous Film Forming Foam) used at mining sites and processing sites.
- Heavy metals: Soils with low-level contamination by mercury, lead and/or nickel, generally originating from industrial activities, mining operations, smelting residues, and fuel storage areas.
- Non-chlorinated organics: High aromatic hydrocarbon content from crude oil processing, tank cleaning, and fuel spills.

2.6.1 PFAS treatment

The Licence Holder proposes to treat PFAS impacted contaminated soils using proprietary powdered sorbents such as RemBind®, which consists of activated carbons, clays, and reagents designed to immobilise PFAS. The treatment involves mixing the sorbent into the contaminated soil at a specified dosage, with water added if necessary, using earthmoving equipment within designated fixation bays.

Laboratory testing provided by the Licence Holder demonstrates that RemBind® effectively immobilises PFAS, reducing leachability and waste classification.

Up to 1,000 tonnes of PFAS impacted solid waste is proposed to be stored onsite at any one time.

For noting: The application of RemBind® for the purpose of reducing waste classification for disposal to a lower class of landfill is considered to be 'dilution' in line with Section 12 of NEMP 3.0, and as such is not an acceptable treatment methodology.

It is required that PFAS waste meet the landfill acceptance criteria for both the ASLP leachable concentration and the total concentration specifications outlined in NEMP 3.0 for the corresponding landfill type.

To ensure compliance with the specifications of NEMP 3.0, the following should be undertaken in relation to PFAS impacted contaminated soils:

- Soils should be tested against the total concentration specifications of NEMP 3.0 on arrival to the premises to determine what class of landfill the waste can be disposed of to.
- Soils should then be tested against the ASLP leachable concentrations for that landfill class. If the ASLP leachable concentrations can be achieved, the waste is suitable for disposal for at the corresponding landfill class.

- If the ASLP leachable concentration is exceeded, RemBind® can be used to reduce leachability. Soils should then be retested to demonstrate the material aligns with the leachable concentrations for the applicable landfill class.

In this regard, the treatment of PFAS impacted contaminated soils should be undertaken with the purpose of reducing the ASLP leachable concentrations of the material, not the total concentration. The class of landfill that the PFAS impacted contaminated soils can be disposed of to will be determined by the total concentration of PFAS within the material, pre-treatment of the material with RemBind®, subject to the material also meeting the ASLP leachable concentrations for that landfill class.

This methodology will be reflected through conditions in the amended Licence.

2.6.2 Heavy metals treatment

Soils contaminated with heavy metals are proposed to be treated to reduce their classification by one level, in accordance with the waste classification procedure outlined in Figure 1 of the LWCWD. Treatment involves blending the soil with activated carbon, bentonite, and mulch and/or clean soil.

The Licence Holder has proposed these treatment methods as activated carbon helps stabilise heavy metals in soil by attracting and binding them to its surface. Its porous structure and large surface area make it effective at capturing dissolved metal ions, which reduces their potential to leach into the environment. In addition to adsorption, activated carbon supports other interactions such as ion exchange and precipitation, further limiting the mobility of metals under landfill conditions.

Bentonite, a naturally occurring clay, immobilises metals through its ability to exchange ions and physically trap contaminants. Its layered structure allows it to swap sodium and calcium ions for heavy metals like lead and mercury, locking them into the clay matrix. Bentonite also swells when wet, which improves soil cohesion and lowers permeability, helping to prevent movement of contaminants through the leachate.

2.6.3 Hydrocarbon-contaminated soils

Soils contaminated with hydrocarbons exceeding Class III landfill criteria will not be treated onsite. These materials will be temporarily stored prior to disposal at an appropriately licensed landfill. Upon acceptance, soils will be sampled to confirm classification. In some cases, natural attenuation processes such as volatilisation and bioremediation may reduce contamination levels over time.

Class IV soils are currently disposed of at the Pilbara Regional Waste Management Facility and the Red Hill Landfill facility. Class V soils are directed to Tellus Holdings Ltd's Sandy Ridge facility.

2.7 Treatment of low-level PFAS contaminated liquid waste

The premises will accommodate up to 100 kL of PFAS-impacted liquid waste on site at any given time. Treatment of low-level PFAS-contaminated liquids is proposed via the onsite wastewater treatment plant (WWTP), with treated effluent directed to onsite evaporation ponds.

To enhance PFAS removal, a granulated activated carbon (GAC) polishing vessel will be incorporated following primary treatment. The system will utilise GAC type GS 900, operating at a controlled feed rate of 5 L/s with a retention time of 10 minutes. These operating conditions are designed to optimise adsorption efficiency, particularly for long-chain PFAS compounds.

The Licence Holder conducted trials to assess the effectiveness of GAC in removing PFAS from contaminated liquids:

1. Henderson Carbon Trial

This trial evaluated multiple GAC types (GS 900, GS 1300, and a combination of both) under controlled conditions with a slow feed rate with 10 minutes contact time and 10L/s retention time.

The untreated control sample recorded PFAS concentrations of:

- PFHxS + PFOS: 0.05 µg/L
- PFOA: <0.01 µg/L
- Total PFAS: 0.44 µg/L

All GAC-treated samples showed significant reductions:

- PFHxS + PFOS: <0.01 µg/L
- PFOA: <0.01 µg/L
- Total PFAS: <0.05 µg/L

2. PFAS in IBCs Trial

This trial assessed PFAS removal from client-supplied waste stored in intermediate bulk containers (IBCs), comparing different flow rates. The results are shown in Table 2.

Table 2: Results of PFAS in IBCs Trial

Sample Code	Sum of PFHxS x PFOS	PFOA	sum of PFAS
IBC / Control (Initial sample of waste supplied)	0.84	0.04	1.08
FILTER	< 0.01	< 0.01	0.18
FAST (pumped through the filter at appx. 2 L/s, 30 second contact time)	0.13	< 0.01	0.29
SLOW (Pumped through the filter slowly, 10-minute contact time)	0.01	< 0.01	0.29
Sample Code	Sum of PFHxS x PFOS	PFOA	sum of PFAS

The results confirm that longer contact times substantially improve PFAS removal for long-chain compounds.

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 *Guideline: Risk assessments* (DWER 2020).

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 operation which have been considered in this Amendment Report are detailed in Table 3 below. Table 3 also details the control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 3: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Spills or leaks of PFAS contaminated material	Acceptance and processing of Class IV to V PFAS contaminated soil Increase in quantity of PFAS contaminated waste accepted and processed on the premises from 1,000 tonnes per annum to 40,000 tonnes per annum	Discharge to land or surface water	<ul style="list-style-type: none"> Existing licence controls Contaminated soils will be stored and treated on fixation pads which have been constructed on a hardstand with a permeability of 1×10^{-9} m/s or less. Treated waste will be tested to determine its landfill disposal classification and disposed of to an appropriately licensed facility.
Seepage into soil or surface water runoff of PFAS contaminated material	Acceptance, treatment with Rembind and/or by absorption with woodchips and storage of PFAS contaminated waste	Overland runoff to surface water or seepage to soils and groundwater	<ul style="list-style-type: none"> Existing licence controls Contaminated soils will be stored and treated on fixation pads which have been constructed on a hardstand with a permeability of 1×10^{-9} m/s or less. PFAS contaminated soils will be treated with powdered sorbents such as RemBind® to reduce leachability Treated waste will be tested to determine its landfill disposal classification and disposed of to an appropriately licensed facility. The volume of PFAS-impacted soil being processed will not exceed 340 m³ at any given time. No more than 1,000 tonnes of PFAS impacted solid waste will be stored onsite at any given time.
Spills or leaks of contaminated material containing heavy metals and/or hydrocarbons	Acceptance, storage and processing of contaminated soils meeting Class IV and Class V landfill disposal criteria, containing heavy metals (mercury, lead, nickel) and hydrocarbons	Seepage through soil to groundwater	<ul style="list-style-type: none"> Contaminated soils will be stored and treated on fixation pads which have been constructed on a hardstand with a permeability of 1×10^{-9} m/s or less. Contaminated soils received at the premises will be tested to determine appropriate methods of treatment and landfill classification prior to processing. Class IV and V contaminated soils will

Emission	Sources	Potential pathways	Proposed controls
Seepage or surface water runoff of contaminated material containing heavy metals and/or hydrocarbons	Acceptance, storage and processing of contaminated soils meeting Class IV and Class V landfill disposal criteria, containing heavy metals (mercury, lead, nickel) and hydrocarbons	Overland runoff to surface water or seepage to soils and groundwater	<p>be treated to reduce their classification by one level, with activated carbon, bentonite, mulch and/or clean soil.</p> <ul style="list-style-type: none"> • Post-treatment, soils will be retested to confirm landfill classification and disposed of to an appropriately licensed landfill. • Hydrocarbon contaminated Class IV and V soils will not be treated but securely stored prior to removal to an appropriately licensed facility. • Treated soils will be analytically tested to confirm landfill classification and disposed of to an appropriately licensed facility.
Vapours - mercury, volatile organic compounds (VOCs)	Acceptance and processing of contaminated soils meeting Class IV and Class V landfill disposal criteria, containing heavy metals (mercury, lead, nickel) and hydrocarbons	Air/windborne pathway	Existing licence controls
Noise	Shredding of recyclables and containers made from materials other than plastic	Air/windborne pathway	Existing licence controls
Spills or leaks of contaminated material	Removal of requirement for waste storage containers to be stored on an impervious hardstand pad and allow more flexibility by replacing with "sealed containers stored in a manner that prevents discharge of waste to the environment"	Overland runoff to surface water or seepage to soils and groundwater	Waste will be stored in sealed containers in a manner that prevents the discharge of waste into the environment such as in half-height containers, sea containers or ISOs.

Emission	Sources	Potential pathways	Proposed controls
Dust or fumes containing chromium compounds	Increase in the quantities of hexavalent and trivalent chromium wastes accepted, stored, handled and processed at the premises due to removal of 100 tonnes per year limit on the licence.	Air/windborne pathway	Existing licence controls
Spills of hexavalent and trivalent chromium wastes		Overland runoff to surface water or seepage to soils and groundwater	Existing licence controls
Wastewater discharges containing contaminants such as PFAS	Increase in throughput for Category 61 from 40,000 tonnes per annual period to 80,000 tonnes. Treatment of PFAS-contaminated liquid waste through the WWTP Overtopping of evaporation ponds	Overland runoff to surface water or seepage to soils and groundwater	<ul style="list-style-type: none"> Existing licence controls A granulated activated carbon (GAC) polishing vessel post-water treatment will be integrated into the WWTP onsite GAC type GS 900 with a controlled feed rate of 5 L/S and a 10-minute retention time will provide conditions that optimise adsorption capacity, delivering a high removal efficiency for long-chain PFAS Liquid waste contaminated with PFAS will be limited to 100 kL on the premises at any given time.
Leachate containing contaminants such as PFAS	Increase in throughput for Category 61 from 40,000 tonnes per annual period to 80,000 tonnes. Treatment of PFAS-contaminated liquid waste through the WWTP Seepages from evaporation ponds	Seepage through soil to groundwater	
Leachate	Storage of putrescible waste and electronic waste	Seepage through soils to groundwater	Putrescible waste and electronic waste will be received and stored in enclosed half-height containers, sea containers, skip bins, ISOtainers or similar containers or waste storage.
Odour	Increase in throughput for Category 61 from 40,000 tonnes per annual period to 80,000 tonnes. Storage of putrescible waste	Air/windborne pathway	<ul style="list-style-type: none"> Existing licence controls Putrescible waste will be stored in enclosed containers to mitigate odours.

Emission	Sources	Potential pathways	Proposed controls
Asbestos fibres	Acceptance and storage of asbestos waste	Air/windborne pathway	Asbestos will be received and stored in enclosed containers to prevent the release of airborne fibres.
Dust	Acceptance and storage of Inert waste type 1 (construction and demolition waste)		

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder from its assessment. Protection of these parties often involves different exposure risks and prevention strategies and is provided for under other state legislation.

Table 4 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 (*Guideline: Environmental siting* (DWER 2020)).

Table 4: Sensitive receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Commercial/Industrial	Approximately 0.15 km west and 0.25 km north of the prescribed premises boundary
Kingfisher accommodation village	Approximately 2.2 km north of the prescribed premises boundary
Environmental receptors	Distance from prescribed activity
Seven Mile Creek	Approximately 1.2 km east of the prescribed premises boundary
Threatened Ecological Community	Approximately 1.6 km east of the prescribed premises boundary
Minor non-perennial watercourses	Approximately 0.2 km west and within south-east corner of prescribed premises boundary
Underlying groundwater (non-potable purposes) Groundwater abstraction bore (CAW201542(1))	Between 7 m and 10 m below ground level The direction of groundwater flow is inferred to be in a northerly direction towards the Indian Ocean (ER Consultants Pty Ltd, 2025). Abstraction bore is approximately 0.5 km north of the prescribed premises boundary
Cultural receptors	Distance from prescribed activity
Aboriginal heritage site	Approximately 900 m north and 1,000 m south-west of the prescribed premises boundary

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) 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 incomplete 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 5.

The Revised Licence L8332/209/3 that accompanies this Amendment Report authorises emissions 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 5: Risk assessment of potential emissions and discharges from the Premises during operation

Risk Event					Risk rating ¹	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls/Delegated Officer comments
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood			
<p>Acceptance and processing of Class II to V PFAS contaminated soil</p> <p>Increase in quantity of PFAS contaminated waste accepted and processed on the premises from 1,000 tonnes per annum to 40,000 tonnes per annum</p> <p>Acceptance, treatment with RembindTM and/or by absorption with woodchips and storage of PFAS contaminated waste</p>	Spills or leaks of PFAS contaminated material	Seepage through soil to groundwater causing degradation to the beneficial uses of groundwater and/or ecosystem disturbance	Minor water courses	Refer to Section 3.1	C = Moderate L = Possible Medium Risk	N	<p>Conditions 1, 2, 3, 5, 8, 9, 17, 18, 19, 20, 21, 22, 23, and 24</p> <p>Condition 4</p>	<p>It is recognised that a significant volume of PFAS contaminated waste exists within this region, primarily due to historical firefighting training and other activities that have resulted in widespread soil and water contamination. Therefore, the Delegated Officer acknowledges the importance of increasing the acceptance and processing capacity for this waste-type at the facility.</p> <p>There are no down-gradient sensitive environmental receptors in the immediate vicinity of the premises that are likely to be impacted by PFAS-contaminated groundwater. Furthermore, the proposed use of activated carbon-based products for waste treatment is expected to significantly reduce the potential for PFAS leaching into the surrounding groundwater. Supporting research from the State University of New York (Zhang and Liang, 2022) and CSIRO (Navarro <i>et al.</i>, 2023) indicates that RemBind[®] can reduce PFAS leaching by over 95% with long-term effectiveness.</p> <p>The Delegated Officer has assessed the Licence Holder's proposed management measures and considers them suitable. These measures have been formalised as licence conditions.</p> <p>However, Class V PFAS contaminated soil with a total concentration exceeding 50 mg/kg cannot be treated to reduce its total concentration and therefore, to reduce its class. Activated carbon-based products can only reduce the leachability concentration through immobilisation but the process does not remove or destroy the PFAS. Accordingly, a condition has been placed within the licence stating that PFAS waste exceeding a Total PFAS Concentration of 50 mg/kg cannot be treated to meet the criteria for disposal at lower class landfills and must be disposed of to a suitably licensed facility.</p> <p>Additionally, conditions have been placed on the Licence ensuring that PFAS contaminated soil is tested against the landfill acceptance criteria specifications outlined in NEMP 3.0 on arrival to the premises, or accepted to the premises with results of this testing provided with the waste load, to ensure that the total concentration of PFAS within the waste is assessed prior to treatment with RemBind[®] to reduce the contaminated soil's leachability (if required). This will ensure compliance with the requirements outlined in NEMP 3.0 regarding acceptable treatment methodologies for PFAS contaminated wastes.</p>
			Beneficial uses of groundwater		C = Moderate L = Unlikely Medium Risk			
	Seven Mile Creek	C = Moderate L = Possible Medium Risk						
	Minor water courses	C = Moderate L = Unlikely Medium Risk						
<p>Acceptance and processing of contaminated soils meeting Class IV and Class V landfill disposal criteria, containing heavy metals (mercury, lead, nickel) and hydrocarbons</p>	Spills or leaks of contaminated material containing heavy metals and/or hydrocarbons	Seepage through soil to groundwater causing degradation to the beneficial uses of groundwater and/or ecosystem disturbance	Minor water courses	Refer to Section 3.1	C = Moderate L = Possible Medium Risk	N	<p>Conditions 1, 2, 3, 5, 8, 9, 17, 18, 19, 20, 21, 22, 23, and 24</p> <p>Condition 4</p>	<p>The Delegated Officer acknowledges that under natural geological conditions, bentonite clays exhibit a strong capacity to adsorb and chemically bind a range of heavy metals over extended periods. However, this retention capacity may be compromised in landfill environments containing significant quantities of putrescible waste. Research indicates that long-term exposure to landfill leachate can alter the mineral structure of bentonite, potentially reducing its adsorption efficiency (Spooner and Giusti, 1999).</p> <p>Based on this information, the Delegated Officer considers that metal-contaminated wastes stabilised with bentonite may be suitable for disposal at Class III or Class IV landfill facilities, provided the following conditions are met:</p> <ol style="list-style-type: none"> ASLP leachate testing of the stabilised material demonstrates compliance with the criteria for disposal at Class III or IV landfills; and The stabilised wastes are not co-disposed with putrescible waste, to minimise leachate generation and preserve the integrity of the bentonite matrix. <p>The Delegated Officer considers the applicant's proposed controls (specifically, the testing of incoming contaminated soils and post-treatment materials) to be appropriate and has incorporated these requirements as regulatory controls within the licence. Additionally, a condition requiring the maintenance of analytical records has been included to support compliance and traceability.</p> <p>The Delegated Officer does not support the use of mulch in the treatment process due to its high moisture content, which may contribute to increased leachate production. Instead, woodchips have been specified as a preferred alternative, given their lower moisture content and suitability for stabilisation purposes.</p>
			Beneficial uses of groundwater		C = Moderate L = Unlikely Medium Risk			
Seven Mile Creek	C = Moderate L = Unlikely Medium Risk							
Minor water courses	C = Moderate L = Possible Medium Risk							
<p>Acceptance and processing of contaminated soils meeting Class IV and Class V landfill disposal criteria, containing heavy metals (mercury, lead, nickel) and hydrocarbons</p>	Seepage or surface water runoff of contaminated material containing heavy metals and/or hydrocarbons	Overland runoff to surface water or seepage to soils and groundwater causing degradation to the beneficial uses of groundwater and/or ecosystem disturbance	Minor water courses	Refer to Section 3.1	C = Moderate L = Possible Medium Risk	N	<p>Conditions 1, 2, 3, 5, 8, 9, 17, 18, 19, 20, 21, 22, 23, and 24</p> <p>Condition 4</p>	<p>The Delegated Officer considers the applicant's proposed controls (specifically, the testing of incoming contaminated soils and post-treatment materials) to be appropriate and has incorporated these requirements as regulatory controls within the licence. Additionally, a condition requiring the maintenance of analytical records has been included to support compliance and traceability.</p> <p>The Delegated Officer does not support the use of mulch in the treatment process due to its high moisture content, which may contribute to increased leachate production. Instead, woodchips have been specified as a preferred alternative, given their lower moisture content and suitability for stabilisation purposes.</p>
			Beneficial uses of groundwater		C = Moderate L = Unlikely Medium Risk			
Seven Mile Creek	C = Moderate L = Unlikely Medium Risk							
Minor water courses	C = Moderate L = Possible Medium Risk							

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls/Delegated Officer comments
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Acceptance and processing of contaminated soils meeting Class IV and Class V landfill disposal criteria, containing heavy metals (mercury, lead, nickel) and hydrocarbons	Vapours - mercury, volatile organic compounds (VOCs)	Air/windborne pathway impacting human health	Nearby commercial/industrial premises Kingfisher Accommodation Village	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Conditions 1, 2, 3, 4, 5, 17, 18, 19, 20, 21, 23, and 24	The applicant has a responsibility to comply with workplace exposure standards and current Occupational Health and Safety legislation to protect their workers from the risks of exposure to mercury vapour and VOCs such as benzene, toluene, xylene etc. Compliance with this legislation would also protect workers at adjacent industrial lots. Therefore, the Delegated Officer considers that no additional regulatory controls are required under the licence for this emission pathway.
Shredding of recyclables containers made from materials other than plastic	Noise	Air/windborne pathway impacting health and amenity	Nearby commercial/industrial premises	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 28	The Licence Holder is required to comply with the Environmental Protection (Noise) Regulations 1997.
Removal of requirement for waste storage containers to be stored on an impervious hardstand pad and allow more flexibility by replacing with "sealed containers stored in a manner that prevents discharge of waste to the environment"	Seepage or surface water runoff of contaminated material	Overland runoff to surface water or seepage to soils and groundwater causing degradation to the beneficial uses of groundwater and/or ecosystem disturbance	Minor water courses Beneficial uses of groundwater	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	Condition 5	The Delegated Officer considers the change to an outcome-based condition acceptable. It maintains the environmental protection objective by requiring the Licence Holder to ensure containers are stored in a manner that prevents discharge of waste to the environment, while allowing flexibility in how this outcome is achieved.
Increase in the quantities of hexavalent and trivalent chromium wastes accepted, stored, handled and processed at the premises due to removal of 100 tonnes per year limit on the licence.	Dust or fumes containing chromium compounds	Air/windborne pathway impacting public health	Nearby commercial/industrial premises Kingfisher Accommodation Village	Refer to Section 3.1	C = Major L = Rare Medium Risk	Y	Conditions 1, 2, 3, 5, 8, 9 and 11	The 100 tonnes per year limit for chromium waste was originally introduced during the licence renewal on 19 March 2015, based on quantity estimates provided by the Licence Holder at that time. The proposed removal of this limit would align the acceptance criteria for chromium waste with those applied to other hazardous waste types within the D category group for inorganic chemicals. Given this alignment and considering that existing licence conditions adequately address the risks associated with the acceptance, handling, and processing of chromium wastes, the Delegated Officer considers that no additional regulatory controls are required.
	Spills of hexavalent and trivalent chromium wastes	Overland runoff to surface water or seepage to soils and groundwater causing degradation to the beneficial uses of groundwater and/or ecosystem disturbance	Minor water courses Seven Mile Creek Beneficial uses of groundwater	Refer to Section 3.1	C = Moderate L = Rare Medium Risk	Y		
Increase in throughput for Category 61 from 40,000 tonnes per annual period to 80,000 tonnes. Treatment of PFAS-contaminated liquid waste through the WWTP Overtopping of evaporation ponds	Wastewater discharges containing contaminants such as PFAS	Overland runoff to surface water or seepage to soils and groundwater causing degradation to the beneficial uses of groundwater and/or ecosystem disturbance	Minor water courses Seven Mile Creek Beneficial uses of groundwater	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	N	Conditions 1, 2, 3, 5, 6, 7, 8, 9, 17, 18, 19, 20, 21, 23, and 24 Conditions 4 and 22	The Delegated Officer acknowledges the emerging market demands and evolving waste management needs in the region. The risk of overtopping of evaporation ponds, which could result in the discharge of contaminated wastewater via overland runoff or seepage to surface water and groundwater, has been assessed. Existing licence conditions require the maintenance of a minimum freeboard of 500 mm in evaporation ponds, which is considered sufficient to mitigate this risk. The Licence Holder has proposed that only low-level PFAS-contaminated liquid wastes will be treated through the WWTP. Limits on PFAS concentrations for incoming waste have been specified within the licence. The Licence Holder has demonstrated that the treatment process is capable of sufficiently reducing PFAS concentrations in the liquid waste. To ensure ongoing environmental protection, additional licence conditions have been included requiring timely replacement of the activated carbon media when treatment performance declines, and monitoring of PFAS concentrations in the treated water discharged to the lined evaporation ponds.

Risk Event					Risk rating ¹	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls/Delegated Officer comments
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood			
Increase in throughput for Category 61 from 40,000 tonnes per annual period to 80,000 tonnes. Treatment of PFAS-contaminated liquid waste through the WWTP Seepages from evaporation ponds	Leachate containing contaminants such as PFAS	Seepage through soil to groundwater causing degradation to the beneficial uses of groundwater and/or ecosystem disturbance	Minor water courses Seven Mile Creek Beneficial uses of groundwater	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	N	Conditions 1, 2, 3, 5, 6, 7, 8, 9, 17, 18, 19, 20, 21, 23, and 24 Condition 22	Existing licence conditions require the integrity of containment infrastructure associated with wastewater treatment and evaporation ponds to be maintained. To further support environmental protection, additional licence conditions have been included requiring monitoring of PFAS concentrations in the treated water discharged to the lined evaporation ponds.
Increase in throughput for Category 61 from 40,000 tonnes per annual period to 80,000 tonnes.	Odour	Air/windborne pathway impacting health and amenity	Nearby commercial/industrial premises Kingfisher Accommodation Village	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Conditions 1, 2, 3, 4, 5, 8 and 28	The Delegated Officer has determined existing licence conditions to be sufficient to manage odour emissions from the premises.
Acceptance and storage of Inert waste type 1 (construction and demolition waste)	Dust	Air/windborne pathway impacting health and amenity	Nearby commercial/industrial premises Kingfisher Accommodation Village	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	N	Conditions 1 and 4	The Delegated Officer considers it necessary to require that storage containers are fully enclosed to reduce the potential for dust emissions from the premises.
Acceptance and storage of electronic waste Acceptance and storage of putrescible waste	Leachate	Seepage through soil to groundwater causing degradation to the beneficial uses of groundwater and/or ecosystem disturbance	Minor water courses Seven Mile Creek Beneficial uses of groundwater	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Conditions 1 and 4	The Delegated Officer considers it necessary to specify that storage containers are fully enclosed to prevent ingress of water that may lead to leachate generation.
Acceptance and storage of putrescible waste	Odour	Air/windborne pathway impacting health and amenity	Nearby commercial/industrial premises Kingfisher Accommodation Village	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	N	Conditions 1 and 4	The Delegated Officer considers it necessary to require that storage containers are fully enclosed to minimise odour emissions from the premises.
Acceptance and storage of special waste type 1 (asbestos)	Asbestos fibres	Air/windborne pathway impacting public health	Nearby commercial/industrial premises Kingfisher Accommodation Village	Refer to Section 3.1	C = Severe L = Rare High Risk	N	Conditions 1 and 4	The Delegated Officer considers that specific acceptance and handling requirements for asbestos are necessary to ensure the material is managed in a manner that prevents the release of asbestos fibres. Asbestos and ACM must not be mixed with any other waste type and must be fully contained to prevent fibre emissions, and clearly labelled with the words 'CAUTION-ASBESTOS' in letters not less than 50 mm high. These controls are considered necessary to ensure consistency with the <i>Health (Asbestos) Regulations 1992</i> and to ensure that asbestos received onsite is appropriately packaged and handled to minimise the risk of airborne fibre emissions and associated impacts to public health.

Risk Event					Risk rating ¹	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls/Delegated Officer comments
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood			
Upset conditions (Waste fire)	Smoke	Air/windborne pathway impacting health and amenity	Nearby commercial/industrial premises Kingfisher Accommodation Village	Refer to Section 3.1	C = Major L = Unlikely High Risk	N	<u>Conditions 1, 4, 14, 15 and 16</u>	<p>Conditions have been included to ensure that electronic waste is kept protected from the weather and stored in fully enclosed containers. This helps reduce the risk of fire by limiting exposure to heat and moisture, which can contribute to failures in lithium-ion batteries commonly found in many electronic items. Enclosed storage also prevents damage such as crushing or puncturing of devices, which can cause a battery to fail and potentially lead to a fire.</p> <p>Loose and removable batteries present a higher fire risk than batteries contained inside intact devices. For this reason, additional safety measures are required. Batteries must be stored separately in enclosed, fire-resistant containers to prevent chemical reactions, short-circuiting, or other conditions that could cause ignition.</p> <p>Given the increased quantities of waste to be stored onsite and the acceptance of electronic waste which, which presents an elevated fire risk, the Delegated Officer considers it appropriate to require the development and implementation of a Fire and Emergency Management Plan.</p>
Upset conditions (Waste fire)	Firefighting wash water	Overland runoff to surface water or seepage to soils and groundwater causing degradation to the beneficial uses of groundwater and/or ecosystem disturbance	Minor water courses Seven Mile Creek Beneficial uses of groundwater	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	N	<u>Conditions 14, 15 and 16</u>	<p>The Delegated Officer considers it appropriate to require a Fire and Emergency Management Plan that includes controls for managing and containing firefighting wash water.</p>

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

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 6 provides a summary of the consultation undertaken by the department.

Table 6: Consultation

Consultation method	Comments received	Department response
Local Government Authority advised of proposal on 10 April 2025	The City of Karratha responded on 1 May and did not raise any concerns regarding the proposal.	Noted.
Department of Planning, Lands and Heritage (DPLH) advised of proposal on 10 April 2025	DPLH responded on 19 August 2025 advising the applicant maintains valid tenure over the subject land and is subject to lease terms and conditions which include obligations to rehabilitate the leased premises and remediate any contamination, pollution or environmental harm of or to the subject land arising from the use and occupation of land.	Noted.
Department of Energy, Mines Industry Regulation and Safety (Dangerous Goods Team) advised on 10 April 2025	None received.	It is the applicant's responsibility to ensure they hold a current dangerous goods licence reflecting the proposed changes to the premises and should liaise with DEMIRS where required.
Licence Holder was provided with draft amendment on 28 October 2025	Comments from the Licence Holder were received on 14 November 2025. Refer to Appendix 1	Refer to Appendix 1
The Licence Holder was provided with a second draft amendment on 8 December 2025	Comments from the Licence Holder were received on 13 February 2026. Refer to Appendix 2	Refer to Appendix 2
The Licence Holder was provided with a third draft amendment on 24 February 2026	Comments from the Licence Holder were received on 3 March 2026 and 5 March 2026. Refer to Appendix 3	Refer to Appendix 3

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

Table 7: Summary of licence amendments

Condition no.	Proposed amendments
N/A Licence front page	<p>Premises name updated.</p> <p>Premises throughput increased from 40,000 tonnes per annum to 80,000 tonnes per annum.</p>
1, Table 1	<p>Row numbering has been applied to Table 1 to facilitate clear referencing throughout the licence.</p> <p>Row 3 has been amended to allow the acceptance of Class I to V contaminated soil as N120 waste. N120 excludes PFAS contaminated soil. N120 has been removed from Row 17 "Soils and sludge" as it is already covered in Row 3.</p> <p>The Chromium wastes limit in row 7 has been removed as requested by the Licence Holder.</p> <p>Putrescible waste has been added in Row 14 to allow the acceptance of general waste from offshore industry, mining camp accommodation, and commercial and residential premises for temporary storage prior to dispatch offsite.</p> <p>Row 22 has been amended to allow an increase of PFAS contaminated wastes accepted onto the premises from 1,000 tonnes to 40,000 tonnes per annual period. The condition has also been amended to specify that liquid PFAS contaminated waste must be accepted in impervious sealed containers, and that soil PFAS contaminated waste is limited to contaminated soil and must be tested prior to treatment commencing at the premises.</p> <p>Rows 23, 24 and 25 have been added to authorise the acceptance of Inert waste type 1, electronic waste and Special waste type 1 (asbestos). These waste types will be accepted in the 40,000 tonnes per year limit for Category 61A activities.</p>
4, Table 2	<p>Row numbering has been applied to Table 2 to facilitate clear referencing throughout the licence.</p> <p>New conditions have been included in row 4 for the treatment of contaminated soils.</p> <p>Row 3 has been amended to clarify that soils and sludges exclude N220, N120 and M270 waste. Fixation pads 1 and 2, fixation pits 1 and 2 and drying pad have replaced the previous wording "<i>Fixation bays 1 and 2</i>" to align with updated Figure 2.</p> <p>Processing requirements for putrescible waste have been included in Row 4.</p> <p>Row 5 has been added to include processing specifications for contaminated soils (Class II to V, including N120, but excluding PFAS contaminated soil).</p> <p>Row 6 (previously Row 4), for all PFAS contaminated materials, including PFAS containing product and contaminated containers, has been amended to include a maximum storage volume of 1,000 tonnes of PFAS impacted solid waste at any given time.</p> <p>Row 7 has been inserted with conditions for the treatment and testing of PFAS contaminated soil.</p> <p>Row 8 (previously Row 5), for PFAS contaminated liquid waste, has been amended to update locations where treatment of PFAS contaminated liquid waste can occur. A</p>

Condition no.	Proposed amendments
	<p>new condition has been added to ensure that solidified liquid waste is spadeable and does not contain any free liquids so that it is suitable for disposal to an appropriately licensed landfill. Another new condition has been included requiring records to be kept of the treatment processes undertaken, including identification and quantities of treatment materials used, date of treatment, and results of analytical testing.</p> <p>Rows 9 and 10 have been added specifying requirements for the treatment of low-level PFAS contaminated liquid waste as well as the storage of all PFAS contaminated liquid wastes.</p> <p>In Row 16 (previously Row 11) "Metal, paper, plastic, cardboard, drums, wood, tyres has been renamed "Recyclables" and shredding has been added to the processes permitted. Recyclables has been defined in Table 11.</p> <p>Row 20 has been added for the receipt and storage of Inert waste type 1 prior to removal to a suitably licensed facility.</p> <p>Row 21 has been added for the receipt and storage of electronic waste and batteries prior to removal to a suitably licensed facility.</p> <p>Row 22 has been added for the receipt and storage of Special waste type 1 (asbestos) prior to removal to a suitably licensed facility)</p>
5	<p>Row numbering has been applied to Table 3 to facilitate clear referencing throughout the licence.</p> <p>Rows 6 and 13 have been amended as requested by the Licence Holder to better reflect what occurs on site. Row 14 has been added to include half-height containers, sea containers, enclosed skip bins, ISOtainers or similar fully enclosed containers for storage of waste. These containers are authorised for the storage of contaminated packaged waste, Inert waste type 1, Special waste type 2 (asbestos) and electronic waste.</p> <p>Amendments have been made to row 18, requirements for fixation pads to reflect what has been constructed on site.</p>
14-28	Conditions have renumbered to 17- 31 due to the inclusion of fire management conditions
14	The addition of a condition for the implementation of a Fire and Emergency Management Plan.
15	The addition of a condition requiring the Fire and Emergency Management Plan to be submitted to the CEO by 30 June 2026.
16	The addition of a condition requiring the Licence Holder to notify the CEO within 24 hours of becoming aware of any fire on the premises or any accident, malfunction, or emergency which results or could result in the discharge of fire-fighting wash water or other waste from the premises.
22 (previously 19)	The monitoring of PFOA and PFOS + PFHxS in the outflow from the WWTP and in treated water from holding tanks at the tank farm has been included as a requirement in Table 5.
29-31	Conditions have been deleted as the Fixation pads have been constructed.
Table 10	<p>Definitions have been included for the following:</p> <ul style="list-style-type: none"> • ASLP

Condition no.	Proposed amendments
	<ul style="list-style-type: none"> • ASLP leachable PFAS concentration • Chemist or suitably qualified person • Electronic waste • Fire management consultant • Fire wash water • Free liquid • Low-level PFAS contaminated waste • PFHxS • PFOA • PFOS • Putrescible waste • Recyclables • Small batch • Spadeable • Special waste type 1 • Total PFAS Concentration

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

Condition	Summary of Licence Holder's comment	Department's response
Page 1. Prescribed premises category description	Request to increase the throughput for Category 61A to 80,000 tonnes per annum.	The Delegated Officer has determined that the requested increase is not appropriate to include in this amendment. An increase to the Category 61A throughput has already been approved under the current Works Approval (W2927/2025/1) for the premises. Accordingly, any change to the licence throughput will need to be considered through a separate licence amendment, following completion of works and submission of the required compliance documentation.
Condition 1, Table 1, Item 3	Request to include waste meeting Class I landfill disposal criteria. Request to add a requirement that all PFAS impacted waste must come to site as M270. The Licence Holder queried whether "N120" would cover this waste type.	N120 covers this waste type and its waste code has been included in Row 3. N120 excludes PFAS contaminated soil. However, the Delegated Officer has included in the specification that contaminated soils in this waste type exclude PFAS contaminated soil, which is to be accepted as M270, for clarity.
Condition 1, Table 1	Request to include general waste in half heights or skips in the waste acceptance table. This provides flexibility with minimal environmental risk. This waste will not be consolidated or stored, but will be received on ground and dispatched to a waste facility. It aligns with storage requirements outlined in Condition 5, Table 3, Item 14.	The Delegated Officer has resolved to include this type of waste as putrescible waste on the understanding that the general waste is from mining accommodation camps and offices and similar to kerbside household waste. Condition 4, Table 2, has been amended to include temporary storage requirements for general waste. Condition 5, Table 3, Item 14 has also been amended to include general waste from mining accommodation camps and offices.
Condition 1, Table 1, Item 21	Request that M270 solid waste is not restricted to soil to allow for flexibility to receive other PFAS contaminated solid wastes.	The Delegated Officer has resolved to delete restriction to PFAS-contaminated soils only. Row has been renumbered to Item 22 due to inclusion of general waste as per comment above.

Condition	Summary of Licence Holder's comment	Department's response
<p>Condition 4, Table 2, Row 3, Column 3</p> <p>Condition 4, Table 2, Item 6</p> <p>Condition 4, Table 2, Item 7</p>	<p>In the column "Process Limits" include fixation pad 1 so that it reads 1 & 2. Figure 2 has been updated and attached with the correct information on Fixation pit 1 & 2 and Fixation Bay 1 & 2.</p>	<p>The updated Figure 2 attachment was missing. The Licence Holder is requested to provide this.</p>
<p>Condition 4, Table 2, Item 6</p>	<p>The Licence Holder queried whether Tellus' Sandy Ridge Facility have the ability to receive PFAS waste above 50 mg/kg?</p>	<p>There is nothing in the Tellus Holdings Ltd Sandy Ridge Facility Licence (L9240/2020/1) that prohibits the acceptance of PFAS contaminated waste with concentrations above 50 mg/kg. The Delegated Officer recommends that Cleanaway Co Pty Ltd contacts the Sandy Ridge Facility directly to confirm acceptance requirements.</p> <p>This condition has also been amended to remove reference to "intractable waste" and disposal to a suitable "Class V facility". The condition has been reverted to requiring its disposal at a "suitably licensed facility". This change reflects the availability of viable destruction and treatment options for PFAS-contaminated material within Australia. PFAS-contaminated waste can also be transported interstate for high-temperature thermal destruction (incineration) at approved hazardous waste treatment plants. Therefore, removing reference to these terms provides greater flexibility by allowing alternative pathways for safe and effective PFAS management, rather than limiting disposal to Class V facilities.</p>

Condition	Summary of Licence Holder's comment	Department's response
<p>Condition 4, Table 2, Item 8</p>	<p>Column "Process".</p> <p>Include the wording "or similar" after the wording (GS900 type).</p> <p><i>Revised wording.</i></p> <p>followed by post-treatment using a granulated activated carbon (GAC) polishing vessel (GS 900 type) or similar to further reduce PFAS concentrations prior to discharge to onsite evaporation ponds or reuse.</p> <p>Column "Process Limits"</p> <p>Include the wording "or as per the operational requirements of the vessel with similar capability".</p> <p><i>Revised wording.</i></p> <p>The GAC polishing vessel must operate at a controlled feed rate of 5 L/s with a minimum retention time of 10 minutes (or as per the operational requirements of the vessel with similar capability.</p> <p>This allows flexibility in the equipment type that CWY installs to polish the low level PFAS impacted water.</p>	<p>This has been renumbered to Item 9 due to the inclusion of Putrescible waste (general waste from mining accommodation camps and offices) to the waste processing table.</p> <p>The Delegated Officer has resolved to amend the condition wording as requested to allow for flexibility in the equipment type used as long as it delivers the same outcome.</p>
<p>Condition 4, Table 2, Item 9</p>	<p>Request to revise "100 kL" to "200 kL" based on the potential to receive offshore ISO (particularly low level PFAS) as a larger project.</p>	<p>The proposed increase from 100 kL to 200 kL represents a very large quantity of liquid waste and has not been included in the current assessment. There are concerns that the premises may not have sufficient storage capacity to safely accommodate this volume.</p> <p>This change will not be supported in this amendment. A separate licence amendment application will be required to assess this increase, providing detailed information on:</p> <ul style="list-style-type: none"> • The proposed storage location(s); • Infrastructure and containment controls; and • How the waste will be managed to prevent environmental risk. <p>Until such an application is submitted and assessed, the requested change cannot be supported.</p>
<p>Note</p>	<p>There is no Table 10. The tables now go from 9 to 11.</p>	<p>Noted and corrected.</p>

Condition	Summary of Licence Holder's comment	Department's response
<p>Table 11 low level PFAS</p>	<p>Revise definition.</p> <p>(a) 5.6ug/L PFOA</p> <p>(b) 0.7ug/L for PFOS + PFHxS</p> <p>These are not the values we requested as per the submitted flowchart attached.</p> <p>We requested these values to be consistent with the 7 Mile ponds. CWY notes that 7 Mile receive this impacted water at the stated levels and is discharged direct into ponds. CWY intends to receive the waste water at the proposed levels, treat through the GAC filters and then discharge into the evaporation ponds.</p> <p>CWY's methodology is significantly lower risk than 7 Mile as they are discharging directly into a storage vessel with no treatment.</p> <p>At 0.1ug/L there would be little point intreating the water as this is generally a value below background levels.</p> <p>Only allowing the 0.1ug/L would create a commercial disadvantage to CWY.</p>	<p>The Delegated Officer has resolved to amend the definition of low level PFAS contaminated liquid waste as requested.</p>

Appendix 2: Summary of Licence Holder's comments on risk assessment and draft conditions (second draft package)

Condition	Summary of Licence Holder's comment	Department's response																				
Condition 1, Table 1, Row 14 (Putrescible Waste)	<p>The Licence Holder requested an update to the quantity limit and specification of Putrescible Waste as follows:</p> <table border="1"> <thead> <tr> <th>#</th> <th>Waste type</th> <th>Waste code</th> <th>Quantity limit</th> <th>Specification</th> </tr> </thead> <tbody> <tr> <td>14</td> <td>Putrescible Waste</td> <td>N/A</td> <td><u>40,000 tonnes per annual period</u></td> <td><u>General waste from offshore industry, mining camp accommodation, and commercial and residential premises.</u> <u>Received in half-height containers, sea containers, skip bins, ISOtainers or similar containers for storage of waste.</u></td> </tr> </tbody> </table>	#	Waste type	Waste code	Quantity limit	Specification	14	Putrescible Waste	N/A	<u>40,000 tonnes per annual period</u>	<u>General waste from offshore industry, mining camp accommodation, and commercial and residential premises.</u> <u>Received in half-height containers, sea containers, skip bins, ISOtainers or similar containers for storage of waste.</u>	The Delegated Officer has considered the proposed increase to the putrescible waste quantity limit in the risk assessment, and the relevant condition in the licence has been updated accordingly. Refer to Section 3.2 for further detail.										
#	Waste type	Waste code	Quantity limit	Specification																		
14	Putrescible Waste	N/A	<u>40,000 tonnes per annual period</u>	<u>General waste from offshore industry, mining camp accommodation, and commercial and residential premises.</u> <u>Received in half-height containers, sea containers, skip bins, ISOtainers or similar containers for storage of waste.</u>																		
Condition 1, Table 1	<p>Request to add the following waste types as they may require to be accepted under current contracts. These waste types will be accepted in the 40,000 tonnes per year limit for Category 61A activities and will be stored in accordance with the requirements in Table 3 of the licence.</p> <table border="1"> <thead> <tr> <th>#</th> <th>Waste type</th> <th>Waste code</th> <th>Quantity limit</th> <th>Specification</th> </tr> </thead> <tbody> <tr> <td><u>23</u></td> <td><u>Inert waste type 1</u></td> <td><u>N/A</u></td> <td><u>40,000 tonnes per annual period</u></td> <td><u>Received in half-height containers, sea containers, skip bins, ISOtainers or similar containers for storage of waste.</u> <u>Waste containing visible asbestos or asbestos containing material (ACM) shall not be accepted.</u> <u>All construction and demolition (C&D) waste must have the waste source confirmed.</u></td> </tr> <tr> <td><u>24</u></td> <td><u>Electronic waste</u></td> <td><u>N/A</u></td> <td><u>40,000 tonnes per annual period</u></td> <td><u>Received in half-height containers, sea containers, skip bins, ISOtainers or similar containers for storage of waste.</u></td> </tr> <tr> <td><u>25</u></td> <td><u>Asbestos waste</u></td> <td><u>N220</u></td> <td><u>40,000 tonnes per annual period</u></td> <td><u>None specified.</u></td> </tr> </tbody> </table>	#	Waste type	Waste code	Quantity limit	Specification	<u>23</u>	<u>Inert waste type 1</u>	<u>N/A</u>	<u>40,000 tonnes per annual period</u>	<u>Received in half-height containers, sea containers, skip bins, ISOtainers or similar containers for storage of waste.</u> <u>Waste containing visible asbestos or asbestos containing material (ACM) shall not be accepted.</u> <u>All construction and demolition (C&D) waste must have the waste source confirmed.</u>	<u>24</u>	<u>Electronic waste</u>	<u>N/A</u>	<u>40,000 tonnes per annual period</u>	<u>Received in half-height containers, sea containers, skip bins, ISOtainers or similar containers for storage of waste.</u>	<u>25</u>	<u>Asbestos waste</u>	<u>N220</u>	<u>40,000 tonnes per annual period</u>	<u>None specified.</u>	The Delegated Officer has considered the proposed acceptance of Inert waste type 1, Electronic waste and asbestos waste in their risk assessment, and the Waste acceptance (Table 1) and Waste processing (Table 2) tables in the licence have been updated accordingly. Refer to Section 3.2 for further detail.
#	Waste type	Waste code	Quantity limit	Specification																		
<u>23</u>	<u>Inert waste type 1</u>	<u>N/A</u>	<u>40,000 tonnes per annual period</u>	<u>Received in half-height containers, sea containers, skip bins, ISOtainers or similar containers for storage of waste.</u> <u>Waste containing visible asbestos or asbestos containing material (ACM) shall not be accepted.</u> <u>All construction and demolition (C&D) waste must have the waste source confirmed.</u>																		
<u>24</u>	<u>Electronic waste</u>	<u>N/A</u>	<u>40,000 tonnes per annual period</u>	<u>Received in half-height containers, sea containers, skip bins, ISOtainers or similar containers for storage of waste.</u>																		
<u>25</u>	<u>Asbestos waste</u>	<u>N220</u>	<u>40,000 tonnes per annual period</u>	<u>None specified.</u>																		

Condition	Summary of Licence Holder's comment	Department's response								
<p>Condition 4, Table 2, Row 4 (Putrescible waste)</p>	<p>Request the following changes (as summarised in table below):</p> <ul style="list-style-type: none"> Amend the waste type to simplify the description as the specification regarding containers and waste sources is covered in Table 1 (Row 14) Amend process description to more accurately describe proposed activities. Amend process limits to remove the 24 hour storage limit; the waste is stored in enclosed containers that may be held on site for several days. The enclosed nature of the containers ensures the risk of odours and leachate emission is low, also noting the separation distance to sensitive receptors. Condition 5, Table 3, Row 14 ensures that half-heights etc. containing Putrescible Waste are stored in a in a manner that prevents discharge of waste into the environment. <table border="1" data-bbox="398 624 1435 820"> <thead> <tr> <th data-bbox="398 624 450 655"></th> <th data-bbox="456 624 763 655">Waste type</th> <th data-bbox="770 624 1077 655">Process</th> <th data-bbox="1084 624 1435 655">Process limits</th> </tr> </thead> <tbody> <tr> <td data-bbox="398 660 450 692">4</td> <td data-bbox="456 660 763 756">Putrescible Waste in skip bins or half-height containers (general waste from mining camp accommodation and offices)</td> <td data-bbox="770 660 1077 788">Temporary storage prior to dispatch to a suitably licensed waste facility <u>Receipt, handling, consolidation, and storage prior to removal to a suitably licensed facility</u></td> <td data-bbox="1084 660 1435 788">Must be stored onsite for a maximum of 24 hours. <u>Stored in half-height containers, sea containers, skip bins, ISOtainers or similar containers for storage of waste.</u></td> </tr> </tbody> </table>		Waste type	Process	Process limits	4	Putrescible Waste in skip bins or half-height containers (general waste from mining camp accommodation and offices)	Temporary storage prior to dispatch to a suitably licensed waste facility <u>Receipt, handling, consolidation, and storage prior to removal to a suitably licensed facility</u>	Must be stored onsite for a maximum of 24 hours. <u>Stored in half-height containers, sea containers, skip bins, ISOtainers or similar containers for storage of waste.</u>	<p>The Delegated Officer considers the proposed amendments to the waste description and processing activities to be appropriate for the operations undertaken onsite and has amended the licence accordingly.</p> <p>Given the distance to sensitive receptors and the requirement for putrescible waste to be stored in fully enclosed containers, the Delegated Officer has determined that the 24-hour storage limit is no longer necessary and has amended the condition to remove this requirement. However, the Delegated Officer does not consider the process limits proposed by the Licence Holder to clearly convey that containers must be fully enclosed. To ensure this requirement is explicit, the process limits have been amended to state: <i>"Must be stored in fully enclosed containers to prevent odour and leachate emissions."</i></p>
	Waste type	Process	Process limits							
4	Putrescible Waste in skip bins or half-height containers (general waste from mining camp accommodation and offices)	Temporary storage prior to dispatch to a suitably licensed waste facility <u>Receipt, handling, consolidation, and storage prior to removal to a suitably licensed facility</u>	Must be stored onsite for a maximum of 24 hours. <u>Stored in half-height containers, sea containers, skip bins, ISOtainers or similar containers for storage of waste.</u>							
<p>Condition 4, Table 2, Row 5 (Contaminated soils)</p>	<p>Confirmation of wording as follows: (b) Treatment of waste must only occur in Fixation Pad 1 & 2, Fixation Pit 1 & 2 and Drying Pad as shown in Figure 2. An updated version of Figure 2 is provided in Appendix A.</p>	<p>This information was requested by the Delegated Officer to ensure the treatment pad names aligned with the site map provided, and it has now been incorporated into the licence.</p>								
<p>Condition 4, Table 2, Row 5 (Contaminated soils)</p>	<p>Regarding point (c) and analytical testing of contaminated soils, some small batches of soil (typically less than 10 m³) received at the premises are not normally tested. These smaller batches are usually associated with clean up from small spills or investigative works (e.g., soil samples/trial pits) and are characterised on acceptance at the premises but are not analytically tested. The waste is blended straight into larger stockpiles of soils already held on site, which are analytically tested in accordance with the licence requirements. Given this, no specific changes to the condition is requested; however, the information is provided in case the department determines that the condition wording requires updating or additional clarifying notes are needed.</p>	<p>The Delegated Officer has considered this activity and determined that it does not change the overall risk profile. However, to ensure the licence accurately reflects current onsite practices, the condition has been amended to include this activity.</p>								

Condition	Summary of Licence Holder's comment	Department's response
Condition 4, Table 2, Row 7 (PFAS contaminated soils)	Regarding points (a) and (b) and requirement for PFAS waste exceeding a total PFAS concentration of 50 mg/kg not to be treated on the premises and to be disposed of to a suitably licensed facility, further discussion with the department is required as Cleanaway is not aware of any facilities in the State that can accept this type of waste.	<p>The Department notes Cleanaway's advice that no facilities within Western Australia are known to accept PFAS-contaminated waste with total PFAS concentrations exceeding 50 mg/kg. The Tellus Holdings Ltd Sandy Ridge Facility Licence (L9240/2020/1) does not contain provisions that prohibit the acceptance of PFAS-contaminated waste above this concentration. Cleanaway is therefore advised to liaise directly with the Sandy Ridge Facility to confirm specific acceptance requirements.</p> <p>The Department further notes that PFAS-contaminated waste may be transported to appropriately licensed facilities in other Australian jurisdictions where high-temperature cement kiln incineration is available. This treatment method represents a technically feasible disposal option for high-concentration PFAS wastes where permitted by the relevant jurisdiction.</p>
Condition 4, Table 2, Row 7 (PFAS contaminated soils)	Confirmation of wording as follows: (c) Treatment of PFAS waste must only occur in Fixation Pad 1 & 2, Fixation Pit 1 & 2 and Drying Pad as shown in Figure 2. An updated version of Figure 2 is provided in Appendix A.	This information was requested by the Delegated Officer to ensure the treatment pad names aligned with the site map provided, and it has now been incorporated into the licence.
Condition 4, Table 2, Row 8 (PFAS contaminated liquid waste)	Confirmation of wording as follows: (a) Absorption must only occur in Fixation Pad 1 & 2, Fixation Pit 1 & 2 and Drying Pad as shown in Figure 2. An updated version of Figure 2 is provided in Appendix A.	This information was requested by the Delegated Officer to ensure the treatment pad names aligned with the site map provided, and it has now been incorporated into the licence.

Condition	Summary of Licence Holder's comment	Department's response
<p>Condition 4, Table 2, Row 8 (PFAS contaminated liquid waste)</p>	<p>Request that the requirement for processed waste to meet a free liquid limit of <0.1% be amended to require the processed waste to be in a spadeable state. A material with less than 0.1% free liquid limit could potentially introduce new risks (e.g., fugitive dust and occupational health risks) and at such low levels will be impractical to measure both on-site and at an external soil testing laboratory.</p> <p>The term 'spadeable' is defined in the Landfill Waste Classification and Waste Definitions 1996 (as amended 2019) and would mean the processed waste would behave like a solid with minimal risk associated with leachate. If required, this definition could be added to Table 10 of the licence. The requested amended is as follows: (f) Material which has been processed by absorption must be in a spadeable state.</p>	<p>The Delegated Officer notes that the submission appears to interpret "free liquid" as relating to overall moisture content. However, the requirement for the material to contain less than 0.1% free liquid does not refer to moisture levels within the material. It means that the processed waste must not release liquid when handled or disturbed (i.e. it must not drip or drain).</p> <p>Under the <i>Landfill Waste Classification and Waste Definitions 1996 (as amended 2019)</i>, "spadeable" refers to material that behaves sufficiently like a solid, and solid waste should not contain free liquids. Consistent with this, the condition has been amended to require that processed material be spadeable and contain no free liquids, to make this requirement clearer and more practical for the Licence Holder to apply. Both "free liquid" and "spadeable" have been defined in the licence.</p>

Condition	Summary of Licence Holder's comment	Department's response								
<p>Condition 4, Table 2, Row 9 (Low level PFAS contaminated liquid waste)</p>	<p>Suggested wording as follows: (b) The Licence Holder must remove and replace the activated carbon media in the GAC polishing vessel as required. The frequency of the filter media replacement will depend on the throughput of the unit, which will be variable depending on the waste volumes accepted at the premises. The unit will be routinely inspected and the outcomes along with the results of analytical testing of treated water will be used to determine the need for and timing of filter media replacement. The unit will be operated and maintained in accordance with the manufacturer's specification and Cleanaway's internal management system as per Condition 8 of the licence.</p>	<p>The Delegated Officer acknowledges the suggested wording and notes the Licence Holder's explanation that the required frequency of activated carbon media replacement will vary depending on throughput and waste volumes, and that routine inspections and analytical results will be used to determine when replacement is required.</p> <p>The Delegated Officer considers that in this case a performance-based trigger is appropriate.</p> <p>Accordingly, the condition has been amended to require the activated carbon media to be replaced when routine inspections or analytical testing of treated wastewater indicate reduced treatment performance or media exhaustion.</p> <p>This approach aligns with the Licence Holder's stated operational practice and ensures the treatment system continues to function effectively to protect the environment.</p>								
<p>Condition 5, Table 3, Row 14 (Half-height containers etc.)</p>	<p>Request that the material specification is amended to:</p> <ul style="list-style-type: none"> Align with Table 1 and Table 2 for Putrescible waste, Asbestos waste and E-waste; and Change requirement of 'Sealed' to 'Enclosed' as some vessels or compounds are not fully sealed (like a sea container) and are instead lidded or covered; as follows: <table border="1" data-bbox="495 1043 1386 1289"> <thead> <tr> <th></th> <th>Vessel or compound</th> <th>Material</th> <th>Requirements</th> </tr> </thead> <tbody> <tr> <td>14</td> <td>Half-height containers, sea containers, <u>skip bins</u>, ISOtainers or similar containers for storage of waste</td> <td>Contaminated and packaged waste <u>Putrescible waste</u> <u>Asbestos waste</u> <u>E-waste</u> General waste from mining accommodation camps and offices</td> <td>Sealed <u>Enclosed</u> containers stored in a manner that prevents discharge of waste into the environment</td> </tr> </tbody> </table>		Vessel or compound	Material	Requirements	14	Half-height containers, sea containers, <u>skip bins</u> , ISOtainers or similar containers for storage of waste	Contaminated and packaged waste <u>Putrescible waste</u> <u>Asbestos waste</u> <u>E-waste</u> General waste from mining accommodation camps and offices	Sealed <u>Enclosed</u> containers stored in a manner that prevents discharge of waste into the environment	<p>The condition has been amended accordingly to maintain consistency across the licence.</p>
	Vessel or compound	Material	Requirements							
14	Half-height containers, sea containers, <u>skip bins</u> , ISOtainers or similar containers for storage of waste	Contaminated and packaged waste <u>Putrescible waste</u> <u>Asbestos waste</u> <u>E-waste</u> General waste from mining accommodation camps and offices	Sealed <u>Enclosed</u> containers stored in a manner that prevents discharge of waste into the environment							
<p>Schedule 1: Maps</p>	<p>An updated Figure 2: Premises layout and location of site infrastructure is provided in Appendix A.</p>	<p>This was requested by the Delegated Officer and the updated map has been included in the licence.</p>								

Condition	Summary of Licence Holder's comment	Department's response								
Table 10 (Definitions)	<p>Request that the following definitions are added to the table consistent with the above responses:</p> <table border="1" data-bbox="394 300 1473 485"> <thead> <tr> <th data-bbox="394 300 645 341">Term</th> <th data-bbox="651 300 1473 341">Definition</th> </tr> </thead> <tbody> <tr> <td data-bbox="394 346 645 379">Putrescible Waste</td> <td data-bbox="651 346 1473 379">has the meaning defined in the Landfill Definitions</td> </tr> <tr> <td data-bbox="394 384 645 418">Spadeable</td> <td data-bbox="651 384 1473 418">has the meaning defined in the Landfill Definitions</td> </tr> <tr> <td data-bbox="394 422 645 456">Landfill Definitions</td> <td data-bbox="651 422 1473 456">means the document titled 'Landfill Waste Classification and Waste Definitions 1996' published by the CEO of DWER and as amended from time to time</td> </tr> </tbody> </table>	Term	Definition	Putrescible Waste	has the meaning defined in the Landfill Definitions	Spadeable	has the meaning defined in the Landfill Definitions	Landfill Definitions	means the document titled 'Landfill Waste Classification and Waste Definitions 1996' published by the CEO of DWER and as amended from time to time	<p>The Delegated Officer considers the definitions for "Putrescible Waste" and "Spadeable" to be suitable and these have been included in the Definitions table within the licence.</p> <p>"Landfill Definitions" is already defined in the licence.</p>
Term	Definition									
Putrescible Waste	has the meaning defined in the Landfill Definitions									
Spadeable	has the meaning defined in the Landfill Definitions									
Landfill Definitions	means the document titled 'Landfill Waste Classification and Waste Definitions 1996' published by the CEO of DWER and as amended from time to time									

Appendix 3: Summary of Licence Holder's comments on risk assessment and draft conditions (third draft package)

Condition	Summary of Licence Holder's comment	Department's response
<p>Condition 1, Table 1, Rows 14, 23 and 24</p> <p>Condition 4, Table 2, Rows 20 and 21</p> <p>Condition 5, Table 3, Row 14</p>	<p>Request deletion of the phrase "with secure lids" and replacement with the word "enclosed". Skip bins are predominantly not lidded. It is likely they will be tarped.</p>	<p>The applicant's request to delete the phrase "with secure lids" and replace it with "enclosed" has been accepted. This change provides additional flexibility by recognising that many skip bins used for waste storage are not fitted with rigid lids while still requiring the secure containment of waste.</p> <p>However, while tarping may be used operationally, the Delegated Officer notes that a tarp may not always provide adequate containment, particularly in adverse weather or windy conditions, and operators should ensure that any method used provides effective enclosure.</p>
<p>Condition 4, Table 2, Row 21</p>	<p>Request deletion of "waste in enclosed, fire-resistant containers to prevent chemical reactions, short-circuiting or ignition".</p> <ul style="list-style-type: none"> • Insert "Mixed household and lithium batteries are packaged (sometimes on receipt) in galvanised steel containers which are compliant for storage and transportation" • Insert "Lead-acid and nickel cadmium batteries are received palletised and stored on concrete bunded areas prior to being disposed of at an authorised facility." 	<p>The applicant's requested insertions were not adopted as proposed because the wording was not enforceable in a licensing context. To ensure the conditions remain outcome-based and enforceable, the wording has been updated to specify the required storage standards instead.</p> <p>The revised conditions now require mixed household and lithium batteries to be stored in non-combustible galvanised steel containers maintained to prevent battery damage, overheating, or fire, and require lead-acid and nickel-cadmium batteries to be stored palletised, on a bunded hard-sealed surface, and plastic wrapped to prevent contact with stormwater. These updates reflect the intent of the applicant's request while ensuring the conditions are clear, enforceable, and aligned with regulatory requirements.</p>
<p>Condition 16</p>	<p>Request deletion of the word "immediately" and replacement with the words "as soon as practicable" to align with the submission of a Section 72 Notice. "Immediate" opens the Licence Holder up to compliance risk.</p>	<p>The licence holder's concern regarding the use of the word "immediately" is noted. However, the phrase "as soon as practicable" does not provide a defined or measurable timeframe and is therefore difficult to enforce in a licensing context. To ensure clarity and regulatory certainty for both the licence holder and the Department, the condition has been amended to require notification within 24 hours of becoming aware of a fire event, which provides a clear, enforceable timeframe while addressing the compliance risk raised by the licence holder.</p>