



Your ref: SSD 9346594  
Our ref: DOC24/1028316

Ms Rebecka Groth  
Senior Environmental Assessment Officer  
Department of Planning, Housing and Infrastructure  
Returned via the Major Projects Portal

Attention: Rebecka Groth

Dear Ms Groth

### **Major Projects – EPA Advice - Prestons Waste Treatment Facility (SSD-9346594)**

I refer to your email of 1 October 2024 inviting the Environment Protection Authority (EPA) to provide comments on the Amended Development Report (ADR) and accompanying documents for the Prestons Waste Treatment Facility (the Project) which is proposed to be built at 9-13 Whyalla Place, Prestons NSW (the Premises).

The facility, if approved, will require an Environment Protection Licence under the *Protection of the Environment Operations Act 1997* for Waste Processing Facility (non-thermal treatment of hazardous and other wastes).

As requested, the EPA has considered the latest version of the proposal which was detailed in the ADR in relation to the environmental issues which the EPA has primary legislative responsibility being air, noise, surface water and waste management. Please find our detailed comments and suggested approval conditions below and in Attachments 1, 2 and 3 to this letter.

In assessing the proposal, the EPA has also identified a number of issues that DHPI may wish to consider in the overall assessment of the application. These issues are briefly outlined below.

### **Staging of Construction and Operational Activities**

The EPA understands that the construction of the facility is set to take place in two stages. The EPA is concerned that delaying the construction of the wastewater treatment plant (WWTP) and the establishment of a trade waste agreement with Sydney Water until 'Stage 2' of the development—approximately two years after the initial 'Stage 1' operations—poses a significant risk of releasing untreated or inadequately treated wastewater into the environment.

The EPA recommends both Stage 1 and Stage 2 be completed before any operations are permitted at the facility.

### **Waste Acceptance and Proposed Waste Codes**

The proponent has provided the EPA with a list of waste transport codes for wastes they propose to receive at the premises. While these codes and the associated descriptions provide an indication of the waste types intended to be received; it should be noted that waste transport

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requirements and the NSW Waste Classification requirements serve different purposes. At the licensing stage, the proponent will need to demonstrate that the wastes proposed to be accepted will be assessed and classified to enable lawful and safe management.

To demonstrate this, the proponent will need to clearly define the types of waste, characteristics of the waste, treatment processes, and management plans for all outputs. The EPA will require detailed information to evaluate the plant's capability to handle specific pollutants effectively. Detailed information at this stage is crucial for the plant's operational success and regulatory compliance.

### **Recommended approval conditions**

While we have separated our recommended waste acceptance, approval and licensing conditions into Attachments 1, 2 and 3 respectively, DPHI is welcome to draw upon all information and recommended conditions by the EPA in assessing the proposal. Note, EPA recommendations for proposed conditions generally appear in ***bold italic*** in the Attachments.

Prior to finalising the consent if granted, the EPA requests the opportunity to review any draft approval conditions.

If you have any further questions about this matter, or would like to discuss the EPA's comments, please contact me or Grace Pollock on Ph: (02) 9995 6606 or [grace.pollock@epa.nsw.gov.au](mailto:grace.pollock@epa.nsw.gov.au).

Yours sincerely



**ALEKSANDRA YOUNG**

**Acting Manager Operations**

16 December 2024

## ATTACHMENT 1

### HI QUALITY – PROPOSED PRESTONS HAZAROUS WASTE TREATMENT FACILITY (SSD-9346594) EPA's RECOMMENDED CONDITIONS OF WASTE ACCEPTANCE

#### EPA Advice - Table 1: Wastes recommended for receipt at the facility subject to conditions

The EPA recommends the following waste streams (codes) and activities can be approved at the proposed facility subject to all conditions listed below being met:

- a) All wastes must be classified in accordance with the NSW EPA Waste Classification Guidelines prior to receipt.
- b) All wastes received at the premises must be managed within a bunded area capable of containing any spills. This includes but is not limited to loading, unloading, storage and treatment. For any liquids, the bund must be capable of containing 110 percent of the contents of the largest tank and meet the relevant Australian Standard.
- c) Materials classified as Dangerous Goods must not be received at the premises except for DG Class 8 PG II and III.
- d) Materials must be segregated by compatibility and concentration. Acids and alkalis cannot be stored in the same bund. These must be managed in accordance with Australian Standard AS3780/2008 "the storage and handling of corrosive substances" and meet Safe Work NSW requirements.
- e) All wastes (solid and liquid) must be classified and disposed of to a facility that can lawfully accept the waste.
- f) A plan is required for wastes that are not acceptable to be received, unexpected finds and wastes that are not in suitable containers for storage and handling.
- g) Soils contaminated with PFAS require a separate management process and plan and are not suitable to be received under the M250 or N120 classification. The NSW EPA waste classification guidelines addendum includes concentration limits for disposal, and these criteria are updated in accordance with the National Environmental Management Plan for PFAS. PFAS contaminated soils must be kept separate from other materials to prevent cross contamination.
- h) Waste oils and mixed oily water (J100 and 120) must be managed in a separate treatment area and not be mixed with other chemicals.
- i) Drilling mud must be classified as a solid or liquid waste based on the waste classification guidelines and assessed for contaminants of concern prior to receipt. Drilling mud that has come into contact with hazardous waste or special waste (asbestos) will not be considered for a resource recovery order and must be documented in the Operational Environment Management Plan, including details on storage, handling, and disposal. Drilling mud must be processed using the best available technology. Post separation, each fraction must be appropriately classified and disposed of to a facility that can lawfully accept the waste.

Waste Code	Description	Waste stream proposed to be accepted
A100	Waste resulting from surface treatment of metals and plastics	1. Packaged wastes – Non-Dangerous Goods 2. Liquid waste
A110	Waste from heat treatment and tempering operations containing cyanides	1. Packaged wastes – Non-Dangerous Goods 2. Liquid waste
A130	Cyanides (inorganic)	1. Packaged wastes – Non-Dangerous Goods 2. Liquid waste
B100	Acidic solutions or acids in solid form	1. Packaged wastes –including Dangerous Goods Class 8 PG II and III* 2. Packaged wastes – Non-Dangerous

		Goods 3.Liquid waste
C100	Basic solutions or bases in solid form	1.Packaged wastes –including Dangerous Goods Class 8 PG II and III* 2.Packaged wastes – Non-Dangerous Goods 3.Liquid waste
D110	Inorganic fluorine compounds excluding calcium fluoride	1.Packaged wastes – Non-Dangerous Goods 2. Liquid waste
D120	Mercury; mercury compounds	1.Packaged wastes –including Dangerous Goods Class 8 PG II and III* 2.Packaged wastes – Non-Dangerous Goods 3.Liquid waste
D210	Nickel compounds	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste
D130	Arsenic; arsenic compounds	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste
D140	Chromium compounds (hexavalent and trivalent)	1.Packaged wastes –including Dangerous Goods Class 8 PG II and III* 2. Liquid waste
D150	Cadmium; cadmium compounds	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste
D160	Beryllium; beryllium compounds	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste
D190	Copper compounds	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste
D220	Lead; lead compounds	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste
D230	Zinc Compounds	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste
D270	Vanadium compounds	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste
D290	Barium compounds (excluding barium sulphate)	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste
D300	Non-toxic salts	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste
D310	Boron compounds	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste
D330	Inorganic sulphides	Packaged wastes – Non-Dangerous Goods
D360	Phosphorus compounds excluding mineral phosphates	1.Packaged wastes – Non-Dangerous Goods
F100	Waste from the production, formulation and use of inks, dyes, pigments, paints, lacquers and varnish	1.Packaged wastes – Non-Dangerous Goods
F100	Waste from the production formulation and use of resins, latex, plasticisers, glues and adhesives.	1.Packaged wastes – Non-Dangerous Goods
H170	Waste from manufacture, formulation and use of wood preserving chemicals	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste

J100	Waste Oils	Waste Oils
J120	Waste oil/water, hydrocarbons/water mixtures or emulsions	Waste oils
J160	Waste Tarry Residues	1.Packaged wastes – Non-Dangerous Goods
M150	Phenols, phenol compounds including chlorophenols	1.Packaged wastes – Non-Dangerous Goods
M210	Cyanides (organic)	1.Packaged wastes – Non-Dangerous Goods
M230	Triethylamine catalysts for setting foundry sands	1.Packaged wastes – Non-Dangerous Goods
M250	Surface active agents (surfactants), containing principally organic constituents and which may contain metals and inorganic materials	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste 3. PFAS Contaminated soils
M270	Per-and poly fluoroalkyl (PFAS) contaminated materials including waste PFAS containing products and contaminated containers (soils & liquid streams)	1.Liquid waste 2.PFAS Contaminated soils
N120	Soils contaminated with a substance or waste referred to in Parts 1 or 2 of Schedule 1 of the Protection of the Environment Operations (Waste) Regulation 2021	1.Packaged wastes – Non-Dangerous Goods 2.PFAS contaminated soils 3.Bulk soils 4.Drill Muds 5.Sediments and Sludges
N140	Fire debris and Wash Waters	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste
N150	Fly Ash	1.Packaged wastes – Non-Dangerous Goods
N160	Encapsulated, chemically-fixed, solidified or polymerised wastes that are referred to in this Part	1.Packaged wastes – Non-Dangerous Goods
N190	Filter Cake	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste 3. Bulk Contaminated soils
N205	Residues from industrial waste treatment	1.Packaged wastes – Non-Dangerous Goods 2.Liquid waste
R120	Waste pharmaceuticals, drugs and medicines	1.Packaged wastes – Non-Dangerous Goods
R140	Waste from the production and preparation of pharmaceutical products	1.Packaged wastes – Non-Dangerous Goods
T100	Waste chemical substances arising from research and development or teaching activities, including those which are not identified and/or are new and whose effects on human health and/or the environment are not known	1.Packaged wastes – Non-Dangerous Goods
T120	Waste from the production, formulation and use of photographic chemicals and processing materials	1.Packaged wastes – Non-Dangerous Goods

**EPA Advice - Table 2: Wastes not recommended for receipt at the facility**

The EPA recommends against the approval of the acceptance of the following waste streams (codes) and activities at the proposed facility at this stage. Detailed reasons are included in the table below:

M260	Highly odorous organic chemicals (including mercaptans and acrylates)	1.Packaged wastes – Non-Dangerous Goods	The proposed HVAC air/odour control system is not likely to be sufficient to control highly odorous organic wastes and odour impacts to surrounding receivers are likely.
M180	Polychlorinated dibenzo-p-dioxin (any congener)	1.Packaged wastes – Non-Dangerous Goods	There is no treatment technology proposed at the site for this waste stream. Specialist equipment and knowledge is required to treat or immobilise this waste stream and it should be handled with care.
N100	Containers and drums that are contaminated with residues of waste referred to in Table 1 of the Waste that must be tracked in NSW: <a href="https://www.environment.nsw.gov.au/resources/owt/trackwaste07522.pdf">https://www.environment.nsw.gov.au/resources/owt/trackwaste07522.pdf</a>	1.Packaged wastes – Non-Dangerous Goods	The EPA will require further information for wastes proposed to be accepted under waste code N100 as there is no treatment technology proposed at the site for this waste stream. Specialist equipment and knowledge is required to treat or immobilise residues from this waste, and it should be handled with care as it may include dangerous goods residues.

## ATTACHMENT 2

### HI QUALITY – PROPOSED PRESTONS HAZAROUS WASTE TREATMENT FACILITY (SSD-9346594)

#### EPA's RECOMMENDED CONDITIONS OF APPROVAL

##### **Waste Management**

###### Waste Acceptance and Classification

There is an inconsistent approach outlined in the ADR in relation to the acceptance of waste types. To illustrate the issue in the Amendment Report "Table 5-2 Waste material storage limits and locations contains" waste tracking code N120 has been used for contaminated soils, drill muds, sediments and sludges. The waste classification guidelines require the waste material to be a solid and drill muds and sludges are often classified as liquids. Categorising waste by its nature is not consistent with requirements to classify waste in accordance with the [EPA Waste Classification Guidelines](#).

Reliance on the waste generator to be responsible for the consignment and classification of the waste should be reviewed. Whilst it is recognised that some information will be provided by the waste generator, the consignor and receiving facility all have obligations regarding waste classification when transporting and/or receiving trackable waste.

Classification of the waste using the Australian Dangerous Goods Code (**ADG Code**) or for tracking requirements using waste codes is supplementary to the requirement for the waste to be classified in accordance with the [EPA Waste Classification Guidelines](#).

Reliance on historical results or previous batches for waste classification as outlined in section 1.4.7.2 (parra 4) is not an acceptable practise. EPA's Sampling Design Guidelines [Sampling Design part 1 - application](#) and [Sampling design part 2 - interpretation](#) provides clear information about stockpile sampling sample storage and minimum frequency to draw meaningful conclusions about waste classification.

***All wastes accepted and generated at the premises must be assessed and classified in accordance with the Protection of the Environment Operations Act 1997 (POEO Act) and [NSW EPA Waste Classification Guidelines](#) as in force from time to time.***

***The proponent must develop and implement a plan to confirm and verify the classification of waste to be received and accepted at the facility with ongoing testing to demonstrate compliance with these guidelines.***

It is noted the bulk soils that are proposed to be accepted are to be included under the trackable waste code N120. This is very broad and includes soils contaminated with a wide range of contaminants. ***These soils must be classified using the waste classification guidelines, and soils classified as hazardous waste are not permitted to be accepted.***

***The proponent must develop and implement a waste acceptance plan. The plan must include:***

- a) the proponent's waste acceptance criteria for each waste type.***
- b) the typical source(s) and method(s) of generation of each waste type.***
- c) the expected chemical and physical composition for each waste, including associated contaminants and their maximum concentrations, and water content.***
- d) the expected average and maximum quantity of each waste type to be received, stored and processed at the site at any time.***

- e) ***the process used to treat each waste type, and how relevant contaminants are treated and/or removed from each waste stream.***
- f) ***the expected average and maximum operational processing capacity for each waste type.***

#### Receipt of unexpected waste

During the licencing stage, the EPA will determine in consultation with the proponent the capabilities of the plant and the upper limits of chemical contaminants that are allowed to be present in incoming waste loads.

***The proponent must have in place thorough procedures, checks and testing on wastes arriving at the facility to verify that each waste type received has been classified correctly and is permitted to be received. This includes checking for additional contaminants or concentrations beyond the treatment capabilities of the plant. Where there is uncertainty or where data is inadequate or missing for contaminants of concern the waste must be kept separate until testing has been completed and a valid waste classification is arrived at.***

***At the licencing stage the applicant will be required to demonstrate there is sufficient space and procedures so any unexpected waste can be stored, managed and disposed of at a facility that is lawfully allowed to receive it.***

#### Waste storage requirements

**All waste must be stored in designated secure areas with appropriate containment and control measures for that waste.**

#### Emergency Response Plan

A waste processing facility needs to have an emergency response plan to effectively manage and mitigate the risks associated with potential spills, leaks, or other incidents involving hazardous materials.

***The proponent must develop and implement an emergency response plan in line with the EPA's [Guideline: Pollution Incident Response Management Plans](#) to handle any incidents that may arise from site operations including the receipt and management of non-conforming waste received at the premises.***

#### Timeframe for treatment of waste

***All waste received at the facility must be processed within a timeframe agreed to by the EPA and documented in a facility Waste Management Plan.***

***The proponent must develop and implement an Operational Waste Management Plan (OWMP) detailing all aspects and procedures for operations at the facility***

#### Bioremediation Management Plan

At the licencing stage the proponent must develop and implement for all bioremediation activities a ***Bioremediation Management Plan***. The Bioremediation Management Plan should include the following information:

- a) ***volume of soil to be treated and the concentrations of all relevant chemical substances, as well as their source and characteristics***
- b) ***remediation target concentrations and predicted time for achieving these targets***
- c) ***the planned uses or destination of treated material, and options for material not successfully treated and/or containing other chemical substances***
- d) ***suitability of site for the bioremediation program***
- e) ***proposed management details—including reporting and corrective action***

- f) details of treatment process, e.g. mixing, stockpiling area, bulking agents or other additives—sources, nature and mixing processes**
- g) details of the treatment duration**
- h) details of water collection and leachate treatment systems**
- i) details of water and nutrient recycling to maintain soil moisture (as far as practicable) or, if not recycled, the details of treatment and disposal**
- j) methods of extraction and treatment of volatile compounds before release to the atmosphere**
- k) details of proposed soil sampling program and analytical procedures—sample numbers, parameters, frequency**
- l) details of the bioremediation performance monitoring program.**

The proposal puts forward to treat wastes with a wide range of contaminants of concern using many different treatment methods in a comparatively small area. Therefore, managing waste treatment time and schedules must be achieved through implementing robust tracking and monitoring systems.

These systems and the confirmed treatment schedules will need be agreed in writing with the EPA at the licensing stage. It is noted that the timeframe for bioremediation at a maximum of three months will mean that waste stream treatment throughput is low (in terms of annual throughput rates).

***Contingency measures including alternate locations for waste processing and disposal must be developed in the event that the treatment fails or is not achieved in the required time frame***

#### Cross-contamination prevention

The proponent must ensure wastes are treated, processed and stored separately and do not become cross contaminated upon receipt, during processing and when being dispatched from the plant. The proposed controls or procedures to guard against cross contamination do not give the EPA confidence that the facility will be able to be operated to prevent cross contamination of hazardous wastes.

EPA Waste Classification Guidelines highlight that:

“Two or more classes of waste must not be mixed in order to reduce the concentration of chemical contaminants. Dilution of contaminants is not an acceptable waste management option. This includes the addition of water to any waste prior to laboratory analysis for the purpose of waste classification”

***In addition to the proposed Sampling, Analysis Quality Plan (SAQP) it is recommended the applicant develop and implement robust procedures that are documented in the OWMP to ensure all waste materials are securely contained and cross-contamination cannot occur.***

#### Management of Industrial Chemicals

Section 296B of the POEO Act makes it a pollution incident if there is a failure to comply with the risk management measures specified for industrial chemicals in the IChEMS Register. Under these measures users of IChEMS scheduled chemicals (including waste containing those chemicals) must undertake all reasonable practical measures to avoid cross contamination. The definition of use of an IChEMS scheduled chemical is provided in the Section 296 of the POEO Act.

The EPA believes the applicant has not adequately taken these risks into consideration. It appears the applicant is relying upon administrative controls as the sole line of defence to prevent cross contamination of IChEMS scheduled chemicals and waste.

***The EPA recommends the applicant redesign elements of the facility so there are separate entry, unloading, loading and storage areas for IChEMS scheduled 5, 6 and 7 chemicals and wastes (e.g. PFAS) and wastes which are not subject to these requirements.***

Some PFAS are volatile at ambient temperatures and when agitated in liquid. ***At the licencing stage the EPA will require the applicant to develop an air quality management plan that demonstrates that air emissions generated during the treatment of liquid PFAS waste are adequately captured by the proposed air emissions system and that a separate closed loop system is not required to prevent contamination of air filtration equipment.***

It is noted that in table 1-2 Number and allocation of waste bays it is proposed to permit bioremediation bays to be interchangeable with other contaminated soil bays. ***Consideration should be given by the applicant to whether bioremediation bays should be interchangeable given the sensitivity microbes may have towards certain chemicals which may be commonplace at elevated concentration in contaminated soils, (e.g. Cr(VI), Pb and Ni, phenols, etc) thereby potentially compromising future bioremediation processes in that bay.***

The EPA notes that procedures and processes for bioremediation will need to be confirmed in a bioremediation management plan at the licencing stage.

#### Decontamination of washdown and trucks

It is noted that vehicles containing hazardous waste will enter and exit from the Premises. The risks of contamination from hazardous wastes are significant.

***All vehicles that deliver waste to the facility must be washed in a manner that does not pollute land or waters. Controls must be implemented that capture vehicle wash water, have it classified and direct it to a lawful facility for treatment and disposal.***

***At the licencing stage the proponent will be required to submit to the EPA the decontamination process intended to be used for the trucks and washdown bays.***

#### Capacity to manage end products

It is noted that all the waste received at the facility is proposed to be disposed either to landfill or by trade waste agreement with the local water authority. Disposal is the least preferable outcome under the EPA's Waste Hierarchy and does not align with NSW's Waste Avoidance and Resource Recovery Strategy, EPA's Circular Economy Policy, end-of-life framework or current Regulatory Strategy.

The EPA would expect the applicant to address these issues in the OWMP by outlining procedures that will ensure all waste received and processed is managed in a way that achieves the highest order outcome and that all waste received is to be managed in accordance with best environmental practice. ***Prior to disposal or recovery, the methods or guidance that are used to classify waste or permit its re-use should be explicitly stated (e.g. EPA Sampling Design Guidelines, EPA Waste Classification Guidelines, Resource Recovery Order/Exemption etc).***

#### Storage of waste products

At the licensing stage, the applicant will need to update the OWMP to provide the details outlined below for each waste product created at the facility:

- Typical ranges of chemical concentrations
- Intended waste classification
- Proposed interim storage arrangements including location, primary and secondary containment measures, timeframes for collection

- Evidence that there is a commitment to accept these wastes, and these volumes must be validated prior to a licence being issued

Product	Volume
Drilling mud non-compliant with RRO	1200tpa
Drilling mud byproduct – Separated solids	1200tpa
Drilling mud waste water	0.8ML per annum
Liquid waste water	65 ML per annum
PFAS contaminated leachate from PFAS soil	Unknown tpa
PFAS contaminated soil	7000tpa
PFAS contaminated Liquid waste water treatment plant byproduct - GAC and resins	4000 tpa
PFAS contaminated Waste Oil	1000 tpa
PFAS contaminated filter cake	4000 tpa
PFAS contaminated sludge	Unknown tpa
Liquid waste water treatment plant byproduct Waste Oil	1000 tpa
Liquid waste water treatment plant byproduct Filtercake	4000 tpa
Bioremediated and immobilised contaminated soils	58000 tpa
Contaminated scrap metal	1500 tpa
Contaminated cardboard	750 tpa
Contaminated plastic	1500 tpa
Contaminated wood waste	3750 tpa
Contaminated concrete, brick and rubble	7500 tpa
Neutralised acid sulfate soils	26000tpa
Leachate from PFAS contaminated soil	Unknown tpa

## **Bulk Soils**

### Bioremediation

58,000 tonnes of contaminated soils are proposed to be accepted with 50,000 tonnes to be immobilised and a further 8,000 tonnes to be bioremediated. It is not clear whether there is sufficient segregation proposed to deal with all these wastes. In some cases, it may be possible to combine them, but they all have their own properties and potential incompatibilities. Mixing of wastes to achieve re-use or disposal criteria is not an acceptable practice.

The use of bioremediation is for targeted contaminants and the presence of others can impact negatively upon the process. Bioremediation must be conducted in accordance with the principles outlined in [EPA's Best Practice Note on land farming](#).

***At the licensing stage the applicant will be required to submit a bioremediation plan that clearly demonstrates how the bioremediation of contaminated soils doesn't result in the main mechanism for contaminant reduction being due to mixing and volatilisation. A trial is recommended to demonstrate the efficacy of the bioremediation process.***

### Specific Immobilisation Approvals

There are a wide range of contaminants that are proposed to be immobilised through either a general or specific immobilisation approval. ***Any contaminated soils proposed to be accepted at the premises for contaminant immobilisation must have a General or Specific Immobilisation Approval in place under Part 10 of the Protection of the Environment Operations (Waste) Regulation 2014 prior to receipt.***

For wastes requiring immobilisation under a Specific Immobilisation Approval, any application must be in accordance with the EPA's published guidance on [Immobilisation Approvals](https://www.epa.nsw.gov.au/your-environment/waste/tracking-transporting-hazardous-waste/immobilisation) (<https://www.epa.nsw.gov.au/your-environment/waste/tracking-transporting-hazardous-waste/immobilisation>) and the process must be able to reliably immobilise the contaminant/s of concern.

In Figure 1-10: Waste Reveal Process bench scale testing is proposed. Bench scale testing (which has potential for error when used for large stockpiles) may be appropriate where the waste has been homogenized. However, many wastes have a high degree of variability. For SIA purposes, a bench scale test extrapolated to 1000s of tonnes may not be appropriate and pilot trials may be required to test equipment and methodology.

In Figure 1-11: Soils, sediments and sludges process flow there is no testing component or pilot trials, it goes straight into immobilisation. This should be updated to include testing and pilot trials.

It is noted that sludge might need pre-treatment with bentonite. This may result in dilution of the contaminants. Where possible sludges with intermediate moisture contents should be pressed to increase solids.

- It should be noted that metalloids such as arsenic and metals such as mercury form soluble phases in some cementitious systems, and this would need to be addressed in a specific immobilisation approval application.
- Note that for PAH reclassification, leachable concentration is not appropriate unless benzo(a)pyrene is the sole contaminant. The usual method is Unconfined Compressive Strength. See EPA's [Immobilisation Technical Note 2](#) for such contaminants and others that are immobilised using solidification techniques.

#### Acid Sulfate Soils

Acid sulfate soils (ASS) must be managed in accordance with Part 4 of the EPA Waste Classification guidelines. ***At the licensing stage, the applicant will be required to develop and implement an Acid Sulfate Soil Management Plan (ASSMP). This must be able to demonstrate to the EPA how any processes and methods it proposes to use will result in homogeneous mixing and/or neutralisation of ASS material. This should ensure that the acidic species are neutralized. Only once neutralization is achieved can a waste classification be conducted. Onsite testing and validation are required in addition to reliance on third party assessments of PAS and ASS.***

It is noted that the applicant plans to use a front-end loader bucket for neutralising ASS batches under 500T. The EPA is of the opinion that this will not sufficiently neutralise the ASS and would be a highly odorous activity. ***At the licensing stage the EPA would require additional information about the Mixing Plant for ASS batches to consider potential licence conditions for this activity.***

#### Drill Mud

It is unclear to the EPA what sources of the drilling mud will be, how the drilling muds will be treated and what any potential contaminants might be. It should be noted that drill mud can contain asbestos or hydrocarbons from the ground that was directionally drilled. The presence of any contaminants should be confirmed prior to receipt at the premises.

***The EPA notes at the licensing stage, additional information would be required to ensure that all contaminants in drilling muds are identified and can be removed. Drilling mud that has come into contact with hazardous waste will not be considered for a resource recovery order and is not deemed suitable for application to land. The processes and agreed chemical concentrations will need to be documented in the OEMP and will need to account***

**for any drill mud that requires transport to landfill and include information regarding the storage handling and quantity of stockpiled drill mud at the site.**

## **PFAS Chemicals**

### NSW Industrial Chemicals Environmental Management Standard Register

The Industrial Chemicals Environmental Management (Register) Instrument 2022 ([IChEMS Register](#)) has been established by the Commonwealth, consisting of 7 schedules. In NSW, the IChEMS Register is implemented through POEO Act. For all scheduled industrial chemicals, all users and manufacturers in NSW must comply with the risk management measures, prohibitions, and restrictions specified in the IChEMS Register.

Reviews of the IChEMS register must be conducted at a minimum of once every 6 months to ensure that all scheduled chemicals are managed to meet the relevant Risk Management Measures. The reviews of the IChEMS register should include the CAS RN list of chemicals listed in the register (available on the IChEMS website), to ensure that analysis for relevant chemicals is carried out. The review must also refer to [CAS RN list of chemicals listed in the IChEMS Register](#)

### PFAS as a Dangerous Good

In NSW any waste containing PFAS could be considered a dangerous good under the ADG Code. Many wastes containing PFAS chemicals can be designated Dangerous Goods (UN3077 for Solids and UN3082 for Liquids).

### PFAS Contaminated soil

As outlined in the section “Management of Industrial Chemicals” the proponent will be required to separate the bund systems that deals with PFAS contaminated soil. There is potential for dust generation while the PFAS contaminated soil is unloaded, stored and loaded. **At the licensing stage the applicant must provide to the EPA an updated OWMP documenting all procedures related to the management and storage of the identified PFAS contaminated soil. The OWMP must detail all practical measures to be taken to ensure there is no cross-contamination between the PFAS contaminated soil and the other waste received, processed and transported from the site. The proponent must develop and document procedures that address the potential for moisture loss while the soil is in storage and the potential for dust generation. Additionally, the OWMP must detail measures to ensure the disposal of PFAS byproducts follows best practice guidelines and adheres to all regulatory requirements**

Additional information required by the EPA at the licensing stage for the PFAS Waste Water Treatment Plant will include:

- The proposed/expected maximum and average flow rates through the pre treatment and PFAS treatment units. The likely treatment duration, or factors that may affect treatment duration and effectiveness
- Other contaminants that may be present with the PFAS including levels of hydrocarbons, heavy metals or other types of pollutants
- Treatment concentration limits of the wastewater treatment plant
- Evidence that the waste intended to be treated can be treated in such a way as to ensure that the chemical is destroyed or irreversibly transformed so that the remaining waste and environmental releases do not contain chemicals that exhibit Schedule 6 or Schedule 7 IChEMS risk characteristics

### By products from the PFAS Wastewater Treatment Plant

IChEMS outlines procedures that must be strictly adhered to when managing the byproducts of the PFAS treatment plant. The applicant must ensure that all waste that has come into contact with IChEMS scheduled chemicals is treated according to the relevant IChEMS scheduled advice.

Solid PFAS waste such as the PFAS filter cake and the PFAS sludge and other PFAS containing material must be classified in accordance with the [Addendum to the Waste Classification Guidelines \(2014\) – Part 1: classifying waste](#) as amended from time to time and legally transported to a facility that is licenced to accept it.

The EPA notes that producers and holders of PFAS waste must undertake all reasonably practical measures to avoid contamination of non PFAS wastes and must not dilute PFAS waste to lower the PFAS concentration below relevant waste handling and disposal thresholds. Best practice waste handling and disposal thresholds need to be regularly updated.

***At the licensing stage the applicant must provide to the EPA an updated OWMP documenting all procedures related to the management and storage of the identified PFAS by-products. The OWMP must detail all practical measures to be taken to ensure there is no cross contamination between the PFAS waste byproducts and the other waste received, processed and transported from the site. Additionally, the OWMP must detail measures to ensure the disposal of PFAS byproducts follows best practice guidelines and adheres to all regulatory requirements***

### **Environmental Liabilities**

#### Financial Assurance will be required

The proponent should also be made aware that the EPA will require the provision of a financial assurance for the project prior to issuing an Environment Protection Licence. The amount and form of the financial assurance is to be agreed with the EPA once the detailed design is completed. This approach would enable the amount and form of financial assurance to properly reflect the EPA's consideration of the following prescribed matters in the POEO Act:

- I. The degree of risk of environmental harm associated with the wastes and waste by products;
- II. The remediation work that may be required because of activities under the licence;
- III. The environmental record of the holder or former holder of the licence or proposed holder of the licence; and
- IV. Other matters prescribed in the regulations.

The EPL could not be surrendered, or transferred to another person, except with the consent of the EPA in accordance with the POEO Act (which would include the transferee satisfying the EPA of its financial capacity to comply with the environmental protection measures in the EPL). The conditions of the EPL (including maintaining the financial assurance) would remain binding and enforceable against the holder of the EPL.

#### Insurance may be required

The proponent should be made aware that, consistent with section 72 of the POEO Act, the EPA may require the proponent to take out and maintain a policy of insurance to cover environmental incidents at the licensing stage.

### **Recoverable Materials**

#### Resource Recovery Orders and Exemptions

The EPA doesn't permit the reuse/application of hazardous wastes on land. General Resource Recovery Orders and Exemptions (RROE) listed on the EPA website are not developed with hazardous waste streams in mind. All treated waste considered for reuse from this facility would need to be the subject of a successful application to the EPA for a specific RRO/E.

#### Onsite reuse of waste products

IChEMS requirements prohibits the reuse of waste which has come into contact with schedule 7 PFAS contaminated waste. ***The EPA will not approve the onsite reuse of treated water***

***derived from PFAS wastewater treatment. Even advanced treatments may not fully remove all PFAS compounds, posing environmental and health risks.***

#### Water

The plans which have been provided to the EPA are based on the approval of the Trade Waste connection with Sydney Water. ***If the Trade Waste connection is not approved the EPA will require the applicant to provide detailed plans and updates to all documents contained within the ADR package to demonstrate it is able to accommodate the additional trucks and transport of liquid waste to a facility lawfully able to accept it for all liquid waste that would otherwise be discharged to the sewer.***

#### Operational Management

##### Spill response plans

***At the licensing stage, the applicant will be required to include within the OWMP comprehensive spill response plans to handle accidental spills/releases of each waste and end product at the site.***

##### Storage of reagents

The applicant has provided to the EPA a large list of treatment reagents intended to be stored at the Premises. *It is concerning to the EPA that the provided plans include storage of incompatible chemicals within the same bunded area. For example, HCl and NaOH must not be stored together.*

***At the licensing stage, the applicant must submit to the EPA new plans that show how these chemicals will be stored within their own separate bunded areas. It is recommended that the combined “at any one time” total of these chemical reagents must not exceed 10 tonnes.***

#### Integrated Waste Tracking

The proposed facility will be required to use the Integrated Waste Tracking system under Part 4 of the *Protection of the Environment Operations (Waste) Regulation 2014* (Waste Regulation), the transport and disposal of hazardous waste listed in Schedule 1 must be tracked when it is transported into, within or out of NSW. The waste producer, their authorised agent if appropriate, transporter and receiving facility manager are all responsible for ensuring that the waste is properly tracked. Waste tracking involves:

- obtaining approval from the EPA for the hazardous waste to be transported
- completing required documentation
- ensuring all parties are authorised to transport and receive the waste.

Under Parts 1 and 3 of Schedule 1 of the Waste Regulation, certain liquid wastes need to be tracked.

## ATTACHMENT 3

### HI QUALITY – PRESTONS HAZAROUS WASTE TREATMENT FACILITY (SSD-9346594)

#### EPA's RECOMMENDED LICENCE CONDITIONS –

#### Protection of the Environment Operations Act 1997

#### General comments

##### Environment Protection Licence Conditions

The licence conditions below are indicative only. Detailed terms of the licence will be finalised upon the consent being granted and licence application being made to the EPA.

##### Waste Levy Liability

Whilst waste facilities used for transfer, storage and processing of wastes are generally not liable to pay contributions under s.88 of the POEO Act (Waste Levy) as noted in Cl. 20(4) of the POEO Waste Regulation. The facility operator will need to do periodic mass balance calculations and accurately weigh and track incoming and outgoing wastes to ensure no stockpiling of wastes occurs.

Such facilities must record certain information about waste entering and leaving the facility (as "transactions"). Please see the EPA Waste Levy Guidelines available at <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/wasteregulation/23p4486-waste-levy-guidelines.pdf> for further information about record keeping.

##### Environmental Management

Before issuing an Environment Protection Licence, the EPA must be satisfied that all waste and by-products will be managed according to best practice standards. Applicants must provide comprehensive information demonstrating their commitment to best practice environmental management. This includes detailed plans for waste segregation, containment, treatment, and disposal, as well as measures to prevent contamination and protect local ecosystems.

##### Authorised Amount

As part of the licensing process EPA will suggest an Authorised Amount be included in the Licence conditions. This will be the upper limit of wastes and reagents that can be stored, treated or processed at the facility at any one time and annually. The Authorised Amount will be formulated in line with the capacity and controls that are approved at the site. The licensee will be required to adhere to these limits.

Waste type	Applicable Waste Codes	Maximum anyone-time storage limit (tonnes)	Storage before treatment	Storage after treatment
Packaged wastes – including Dangerous Goods Class 8 PG II and III*	B100 C100 D120 D140		Received and stored within containers – no treatment.  Packaged waste classified as DG Class 8, PG II or PG III to be stored in a designated bay in compartment 3.	In Intermediate Bulk Containers (IBCs) or drums located adjacent to the office and amenities block, within the shed or within compartment 3 and above the PMF.
Packaged wastes – Non-	J160 N120 N190 N140 N205 D130		In intact IBCs or drums located within Compartment 3.	Skip bins up to 10 m3 in capacity, removed for disposal as required.

Dangerous Goods	D290 D160 D310 D150 D140 D190 N150 A100 D220 D120 D210 D300 M250 D360 H170 D270 D230 C100 B100 T100 N160 R120 M230 F100 T120 F110 R140 A100 A110 D110 N100 D330 M150 A130 M210 M260 M180			
PFAS contaminated soils	N120 M250 M270		N/A – no treatment	In designated bays – no treatment
Bulk soils: 1,080 m3  Inclusive of dried drill  muds	N/A	ASS:  2,000 t	Treated into specific, pre allocated material bays, as identified in Figure 1-1.	Post treatment, each batch is unloaded into specific, pre-allocated bay.
	N120 N190	Bioremediation:  2,000 t		
	N120 N190	Immobilisation  2,000 t		
Recovered recyclable materials (byproduct of physical soil screening)	N/A	50 t	N/A	Recovered Recyclable materials would only be stored up to a maximum of 35t before removal. Bays within Compartment 3 (refer to Figure 1-1)
Drill muds	N120	400 t	Drill mud to be pumped into the drill mud pit and then pumped to drill mud plant (dewatering plant)	Sediments to be stored in specific soil bays Liquid to be stored in holding tanks in bunded WWTP area
Sediments and sludges	N120	400 t	Sediments and sludges to be pumped into one of the sediment and sludges pits and then pumped to the dewatering plant.	Liquid to be stored in holding tanks in bunded WWTP area

Liquid waste	N140 N205 D130 D290 D160 D310 D150 D140 D190 A100 D220 D120 D210 D300 M250 H170 D270 D230 C100 B100 A100 A110 D110 M270	540 kL	within holding tanks in banded WWTP area Wastewater classified as DG Class 8, PG II or PG III would be placed in a designated tank and transferred for immediate treatment.	Within holding tanks in banded WWTP area
Waste oils	J100 J120	2t	N/A	1,000 L IBC located in banded WWTT area

## 1. ADMINISTRATIVE CONDITIONS

### 1.1. What the licence authorises and regulates

- This licence authorises the carrying out of the scheduled activities listed below at the premises specified in X. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation. Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Waste storage Waste processing (non-thermal treatment) Non-thermal treatment of hazardous and other waste Chemical production waste generation Contaminated soil treatment	Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste Non-thermal treatment of general waste Non-thermal treatment of hazardous and other waste Environmentally hazardous chemicals - premises based Dangerous goods production Contaminated soil treatment Recovery of general waste Recovery of waste oil	TBD

### 1.2. Premises or plant to which the licence applies

- The licence applies to the following premises:

### 1.3. Information supplied to the EPA.

- Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

- The SSD 9346594 submitted to Department of Planning, Housing and Infrastructure on XXX is not to be taken as part of the documentation in XX, other than those parts specifically referenced in this licence.
- The "Environmental Impact Statement" prepared by X is not to be taken as part of the documentation in XX, other than those parts specifically referenced in this licence.
- The additional documents supplied to the EPA in relation to the development, including the ADR "XX" is not to be taken as part of the documentation in XX, other than those parts specifically referenced in this licence.

## 2. DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND

### 2.1. Location of monitoring/discharge points and areas.

- The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.
- The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

EPA Identification no	Type of Monitoring	Type of discharge point	Location Description
	Soil volume monitoring		
	Groundwater Monitoring		
	Air Monitoring		
	Stormwater monitoring		

## 3. LIMIT CONDITIONS

### 3.1. Pollution of waters

- Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

### 3.2. Volume and mass limits

- The total quantity of waste stored on the premises must not exceed X tonnes at any one time.
- The quantity of Dangerous Goods Class 3 Packing Group II on the premises must not exceed XX
- The quantity of Dangerous Goods Class 8 of Packing Group 1 and II stored on the premises must not exceed XX
- The quantity of Dangerous Goods Class 9 on the premises must not exceed XX
- The total amount of waste received at the premises must not exceed XXX tonnes per annum.
- The total amount of liquid waste processed at the premises from offsite must not exceed XX tonnes per annum.
- The total amount of solid waste processed at the premises from offsite must not exceed XX tonnes per annum.
- The authorised amount of liquid waste and liquid waste by-products stored at the premises cannot exceed XX tonnes at any one time.
- The authorised amount of solid waste stored at the premises cannot exceed XXX tonnes at any one time.

### 3.3. Concentration limits

- For each monitoring/discharge point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.
- Air Concentration Limits

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Reference conditions
To be determined	To be determined	To be determined	To be determined	To be determined

### 3.4. Reagents

- The licensee must strictly adhere to the below at any one time reagent limit List. The licensee must ensure that materials are stored and segregated according to the relevant standard for that material.
- The licensee must not store HCl and NaOH together and the combined at any one time total of these chemical reagents must not exceed 10 tonnes.

Reagent	At any one time tonnage	
To be determined	To be determined	To be determined

### 3.5. Waste

- The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below. Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below. Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below. This condition does not limit any other conditions in this licence.

Code Waste	Waste	Description	Activity	Other Limits
To be determined	To be determined	To be determined	To be determined	To be determined

- Liquid wastes must meet the WTP Liquid Waste Acceptance Criteria prepared by XXX as updated from time to time in consultation with the EPA.
- Liquid wastes under Condition XX of the licence must not contain any characteristics of Dangerous Goods.
- Incoming waste must only be transported to the Premises from pre-qualified customers as per XXXX. Approval in writing must be sought from the EPA to receive waste from any other waste stream.
- The licensee must not produce any waste at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below. Any waste created at the premises must be stored. In accordance with. as specified by Figures XXX of the "Operations Waste Management Plan" dated XXX

Waste Code	UN Code	Description	Tonnage limits	Concentration limits	Other Limits
To be determined	To be determined	To be determined	To be determined	To be determined	To be determined

### Definition of PFAS Contaminated Liquid Waste

- PFAS contaminated liquid waste means a liquid waste that has a concentration of PFOS/PFHxS greater than or equal to 0.7 micrograms/litre or a concentration of PFOA greater than or equal to 5.6 micrograms/litre.
- Any PFAS liquid waste must be correctly classified and segregated from all other waste at the premises at all times.

### General Solid Waste

- General solid waste accepted at the premises is limited to drill mud that is not contaminated with PFAS chemicals only. The amount of general solid waste to be processed at the premises is to be no more than X tonnes per annum. The total amount of general solid waste stored at the premises is to be no more than X tonnes at any one time.

### 3.6. Noise Limits

- Noise generated at the Premises must not exceed the noise limits in the Table below.

Location	Day LAeq (15 minute)	Evening LAeq (15 minute)	Night LAeq (15 minute)	Night LA1 (1 minute)
To be determined	To be determined	To be determined	To be determined	To be determined

- For the purpose of condition X; Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sunday and Public Holidays.
  - Evening is defined as the period 6pm to 10pm.
  - Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and Public Holidays.

### 3.7. Hours of Operation

- Construction works must only be undertaken:
  - between the hours of 7:00am and 6:00pm Monday to Friday;
  - between the hours of 8:00am and 1:00pm on Saturdays; and
  - at no time on Sundays or public holidays.
- Works outside of the hours identified in condition X may be undertaken in the following circumstances:
  - works that are inaudible at the nearest receivers;
  - b) works agreed to in writing by the Secretary;
  - c) for the delivery of materials required outside these hours by the NSW Police Force or
  - other authorities for safety reasons;
  - d) Where it is required in an emergency to avoid the loss of lives, property and/or to
  - prevent environmental harm.
- Activities on the Premises are permitted between the following hours:

Activity	Day	Time
To be determined	To be determined	To be determined

### 3.8. Potentially offensive odour

- The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises.

Note: Section 129 of the Protection of the Environment Operations Act 1997 provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

- No condition of this licence identifies a potentially offensive odour for the purpose of the section 129 of the Protection of the Environment Operations Act 1997.

#### **4. OPERATING CONDITIONS**

##### **4.1. Activities must be carried out in a competent manner**

- Licensed activities must be carried out in a competent manner. This includes:
  - a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
  - b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.
- The facility must be adequately staffed with suitably qualified and experienced persons at all times when wastes are received and/or when the processing plant is operated.

##### **4.2. Maintenance of plant and equipment**

- All plant and equipment installed at the premises or used in connection with the licensed activity:
  - a) must be maintained in a proper and efficient condition; and
  - b) must be operated in a proper and efficient manner.
- The licensee must ensure that trucks, machinery, wash bays and treatment pits are appropriately decontaminated in line with the agreed procedure documented at page X of the X

##### **4.3. Dust**

- Activities occurring in or on the Premises must be carried out in a manner that prevents or minimises the generation of dust.
- The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.
- The licensee must not use recycled water for dust suppression.
- Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading.
- The licensee must ensure no visible dust leaves the Premises.
- The licensee must ensure that no material, including sediment or soil, is tracked from the Premises.

##### **4.4. Process and management**

- At all times when wastes are received and/or when the processing plant is operated, the licensee must have suitably qualified and experienced personnel on site who are trained and experienced to perform all the necessary on-site monitoring and/or testing of incoming wastes, waste treatment in progress, treated wastes and process plant residues.
- All waste must be received and treated in an enclosed building with roller doors.

##### **4.5. Waste Management**

- The licensee must undertake an initial characterisation of any waste to ascertain the classification of the waste and ensure that it is a waste which it is licensed to receive. This characterisation must be documented and retained by the licensee.
- The licensee must ensure that any waste, destined for off-site transport must be assessed characterised and/or classified in accordance with the EPA's Waste Classification Guidelines as in force from time to time, before transporting it from the premises.

- Waste stored inside the fully enclosed building on the Premises must be stockpiled in dedicated bays as specified by Figures XXX of the “Operations Waste Management Plan” dated XXX.
- Waste stockpiles stored within the enclosed building must not exceed 4m in height other than for the waste stockpile located in Unprocessed Waste Bay A which must not exceed 2m in height (as identified by Figures XXX of the Operational Environmental Management Plan dated XXX).
- The Licensee must install and maintain permanent height markers on, in or immediately adjacent to waste stored within dedicated bays on the Premises. The markers must clearly show the stockpile height limit and be positioned so that a visual check can be made of the height of each stockpile.
- The Licensee must prepare and implement a documented procedure to ensure that waste on the Premises is stored in accordance with the conditions of this Licence. The Licensee is to keep records demonstrating waste storage compliance on the Premises. Records relating to this waste storage compliance procedure are to be made available to an EPA Authorised Officer upon request.
- When waste is transported from the premises, the licensee must ensure that the waste is transported:
  - by a waste transporter authorised to transport such waste; and
  - to a place that can lawfully be used as a waste facility for that waste.

#### **Dangerous Goods**

- Waste materials that are classified as ‘dangerous goods’ under the Australian Code for the Transport of Dangerous Goods by Road and Rail as in force from time to time must only be stored under a valid ‘Acknowledgement of Notification of Dangerous Goods on Premises’ issued by SafeWork NSW. Waste materials that are classified as ‘dangerous goods’ under the Australian Code for the Transport of Dangerous Goods by Road and Rail as in force from time to time must only be stored under a valid ‘Acknowledgement of Notification of Dangerous Goods on Premises’ issued by SafeWork NSW.

#### **4.6. Acid Sulphate Soils**

- Neutralisation of Acid Sulphate Soils may only take place in the bays as specified by Figures XXX of the “Operations Waste Management Plan” dated XXX
- The licensee must only mix Acid Sulphate Soils using the methodology provided to the EPA as specified in page X of the “Operations Waste Management Plan” dated XXX

#### **4.7. Bioremediation**

- Bioremediation may only take place in the bays as specified by Figures XXX of the “Operations Waste Management Plan” dated XXX
- This table outlines the maximum allowable contaminants to be present in contaminated soil to be bioremediated

<b>Chemical name</b>	<b>Unit of Measure</b>	<b>Tonnage</b>	<b>Activity</b>	<b>Other Limits</b>
To be determined	To be determined	To be determined	To be determined	To be determined

- This table outlines the agreed testing limits and agreed methodology that the licensee must undertake for each load of waste that is to be bioremediated

<b>Chemical name</b>	<b>Unit of Measure</b>	<b>Tonnage</b>	<b>Activity</b>	<b>Other Limits</b>
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To be determined	To be determined	To be determined	To be determined	To be determined
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- The licensee may only bioremediate the following at the specified concentrations

<b>Chemical name</b>	<b>Unit of Measure</b>	<b>Tonnage</b>	<b>Activity</b>	<b>Other Limits</b>
To be determined	To be determined	To be determined	To be determined	To be determined

- The licensee must ensure the mobile soils screen is decontaminated after each use.
- The licensee must not accept new waste for bioremediation until the previous waste received for bioremediation has been transported from the facility

#### **4.8. Immobilisation**

- Immobilisation may only take place in the bays as specified by Figures XXX of the “Operations Waste Management Plan” dated XXX
- The licensee must Demonstrate that other substances present in the waste will not interfere with the micro-encapsulation.
- The licensee must only operate the High Sheer Mixer in the areas outlines in Figures XXX of the “Operations Waste Management Plan” dated XXX
- The licensee must only operate the Rotary mixer in the areas outlines in Figures XXX of the “Operations Waste Management Plan” dated XXX
- The licensee must only operate the excavator or front-end loader in the areas outlines in Figures XXX of the “Operations Waste Management Plan” dated XXX
- The licensee must not accept new loads of waste to be immobilised until the previous load has been transported from the facility.
- The licensee must have in place an approved GIA or SIA for each waste stream to be treated/immobilised before immobilisation of the waste.
- The licensee must confirm immobilisation results in accordance with the SAQP which will be agreed with the EPA and
- The licensee must ensure immobilisation bays are bunded.
- Condition around failed immobilisation and what to do with the waste

#### **4.9. Sediments and Sludges**

- Sludges must not be transported into the WWTP until the waste classification and the presence of any contaminants of concern has been verified
- All sampling of sludges must be done in accordance with the Approved Sampling Plan unless another method has been approved by the EPA in writing before any tests are conducted.
- The licensee must not process any sludges containing PFAS chemicals
- Sludges and drill muds must be processed with the best available technology such as a filter press or centrifuge. The use of subterranean pits to manage this waste is not supported.
- Sludges must only be placed in the bays as specified by Figures XXX of the “Operations Waste Management Plan” dated XXX

#### **4.10. Drill Muds**

- By-products of the drill muds separated solids (rock and aggregate, coarse sands, and finer silt pressed into a filter cake) and wastewater must be

stored so they do not become contaminated with any incoming waste streams

- All sampling of mrrill muds must be done in accordance with the Approved Sampling Plan unless another method has been approved by the EPA in writing before any tests are conducted.
- All drill mud supplied under the Drill Mud RRO must not exceed the maximum parameters of all listed contaminants.
- The licensee must ensure all treated drill mud that does not meet the RRO order is classified stored and disposed of according to its appropriate classification.

#### 4.11. PFAS Wastewater Treatment Plant

##### All PFAS

- The licensee must strictly adhere to requirements under the Industrial Chemicals Environmental Management (Register) Instrument 2022 (IChEMS Register)
- The maximum combined amount of PFAS chemicals that can be processed in the wastewater treatment plant at any one time must not exceed the treatment capacity of the plant.
- This table outlines the maximum allowable contaminates to be present in incoming PFAS wastewater batches

Chemical name	Unit of Measure	Tonnage	Activity	Other Limits
To be determined	To be determined	To be determined	To be determined	To be determined

- This table outlines the agreed testing limits and treatment methodology that must be undertaken for each load of waste that is loaded into the wastewater treatment plant

Chemical name	Unit of Measure	Tonnage	Activity	Other Limits
To be determined	To be determined	To be determined	To be determined	To be determined

- The PFAS Wastewater Treatment Plant is limited to processing only the following wastes at the specified concentrations

Chemical name	Unit of Measure	Tonnage	Activity	Other Limits
To be determined	To be determined	To be determined	To be determined	To be determined

- The licensee must handle and store by products of the PFAS Wastewater Treatment plant in line with the process outlined in XXX of the “Operations Waste Management Plan” dated XXX
- The licensee must classify all material that comes into contact with PFAS contaminated waste and process and handle it accordingly

#### 4.12. Contaminated Wastewater Treatment Plant

- This table outlines the maximum allowable contaminants to be present in incoming contaminated wastewater batches

<b>Chemical name</b>	<b>Unit of Measure</b>	<b>Tonnage</b>	<b>Activity</b>	<b>Other Limits</b>
To be determined	To be determined	To be determined	To be determined	To be determined

- This table outlines the agreed testing limits and treatment methodology that the licensee must undertake for each load of waste that is loaded into the contaminated wastewater treatment plant

<b>Chemical name</b>	<b>Unit of Measure</b>	<b>Tonnage</b>	<b>Activity</b>	<b>Other Limits</b>
To be determined	To be determined	To be determined	To be determined	To be determined

- The Contaminated Wastewater Treatment Plant is limited to processing only the following wastes at the specified concentrations

<b>Chemical name</b>	<b>Unit of Measure</b>	<b>Tonnage</b>	<b>Activity</b>	<b>Other Limits</b>
To be determined	To be determined	To be determined	To be determined	To be determined

- The licensee must handle and store by products of the Contaminated Wastewater Treatment plant in line with the process outlined in XXX of the "Operations Waste Management Plan" dated XXX

#### 4.13. Other operating conditions

- Operations at the Premises must be undertaken in accordance with the "Operational Environmental Management Plan dated XXX unless otherwise specified by a condition of this Licence.
- Appropriate measures and protocols must be developed and implemented to prevent cross contamination of waste stored and/or treated at the premises.
- The licensee must store and handle all liquid chemicals and hazardous materials used at the premises within bunded areas that are constructed and maintained in accordance with the following:
  - a) any relevant Australian Standards for the liquids being stored;
  - b) within a bunded area with a minimum bund capacity of 110% of the volume of the largest single stored vessel within the bund;
  - c) the Storing and Handling Liquids: Environmental Protection Participant's Manual (DECC, 2007); and where any conflict exists between these requirements, the most stringent requirements apply.

Note: For the purpose of this condition, any tanks or other storage vessels that are interconnected and may distribute their contents either by gravity or automated pumps must be considered a single vessel.
- The licensee must ensure that suitable measures (e.g. high/low alarms, control valves with interlock control, one way valves) are installed on all tanks, vessels or clarifiers and associated pipes and hoses to prevent the spillage of waste.
- Stormwater Management

- The licensee must ensure that stormwater from all areas of the premises including driveways which have potential to have waste, fuel, oil or any chemical spillages must be controlled. The licensee must ensure that no waste, fuel, oil or any chemical spillage enters the stormwater.
- spill kits need to be in place capable of containing and cleaning-up spills for all volumes and types of chemicals in your authorised to be held at the Premises.

## 5. MONITORING AND RECORDING CONDITIONS

### 5.1. Monitoring records

- The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- All records required to be kept by this licence must be:
  - a) in a legible form, or in a form that can readily be reduced to a legible form;
  - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
  - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
  - i. a) the date(s) on which the sample was taken;
  - b) the time(s) at which the sample was collected;
  - c) the point at which the sample was taken; and
  - d) the name of the person who collected the sample.

### 5.2. Requirement to monitor concentration of pollutants discharged

- For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:
- Air Monitoring Requirements

<b>Pollutant</b>	<b>Units of measure</b>	<b>Frequency</b>	<b>Sampling Method</b>
To be determined	To be determined	To be determined	To be determined

- Water and/ or Land Monitoring Requirements

<b>Pollutant</b>	<b>Units of measure</b>	<b>Frequency</b>	<b>Sampling Method</b>
To be determined	To be determined	To be determined	To be determined

### 5.3. Testing methods - concentration limits

- Air emissions - Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:
  - a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or

- b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or
- c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Note: The Protection of the Environment Operations (Clean Air) Regulation 2022 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".

- Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area.

#### **5.4. Testing methods - load limits**

Note: Division 4 of the Protection of the Environment Operations (General) Regulation 2022 requires that monitoring of actual loads of assessable pollutants listed in X must be carried out in accordance with the relevant load calculation protocol set out for the fee-based activity classification listed in the Administrative Conditions of this licence.

#### **5.5. Recording of pollution complaints**

- The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.
- The record of a complaint must be kept for at least 4 years after the complaint was made.
- The record must be produced to any authorised officer of the EPA who asks to see them.

#### **5.6. Telephone complaints line**

- The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

### **6. REPORTING CONDITION**

#### **6.1. Annual return documents.**

#### **6.2. Notification of environmental harm.**

- Notifications must be made by telephoning the Environment Line service on 131 555.

Note. The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

- The licensee must provide written details of the notification to the EPA within 7 days of the date on which they became aware of the incident.

**6.3. Written report.**

**6.4. Other reporting conditions.**

- **Reporting air exceedances**

- i. Within seven days of becoming aware of an exceedance of the air concentration limits provided under the Protection of the Environment Operations (Clean Air) Regulation 2022 (as amended), or the licence, the licensee must provide a written report to the EPA. The report must include, but is not limited to, the following. (a) The date that the monitoring was undertaken. (b) Details of the Point that the monitoring was undertaken where the exceedance occurred. (c) The pollutant in which the concentration limit was exceeded. (d) The monitored concentration of the pollutant that the limit was exceeded. (e) The operating conditions of the respective plant at the time that the monitoring was undertaken. (f) The cause, or likely cause, of the concentration limit exceedance. (g) Action taken, or proposed to be taken, by the licensee in response to the exceedance.

- The report must be emailed to the EPA at [info@epa.nsw.gov.au](mailto:info@epa.nsw.gov.au).

- Note: The condition above does not remove any requirement to notify pollution incidents causing or threatening environmental harm under Part 5.7 of the Act.

- **Reporting water/land exceedances**

**7. GENERAL CONDITIONS**

**7.1. Copy of licence kept at the premises or plant.**

- A copy of this licence must be kept at the premises to which the licence applies.
- The licence must be produced to any authorised officer of the EPA who asks to see it.
- The licence must be available for inspection by any employee or agent of the licensee working at the premises.

**7.2. Contact number for incidents and responsible employees.**

**7.3. Other general conditions.**

**8. Pollution Studies and Reduction Programs**

**8.1. Stormwater Review**

- The Licensee must engage an independent, suitably qualified and experienced person to complete a review of the Premises' Water Management Plan
- The Licensee must engage an independent, suitably qualified and experienced person to conduct a Stormwater Impact Assessment that is to include an assessment of pollutant concentrations and loads following stormwater discharges from the Premises for all sampling Events for the first 6 months of operation. The assessment should include a discussion of the effects of the sampled pollutant loads on the receiving environment with respect to the relevant Australian and New Zealand Environment and Conservation Council (ANZECC)(2000) water quality guidelines.
- The Licensee must engage an independent, suitably qualified and experienced person to conduct a System Performance Evaluation that is to include:
  - An outline of all currently installed stormwater quality treatment devices and pollution controls, and the corresponding pollutant/s they are designed to control. The outline must include a table showing each pollutant identified by the sampling conducted by the Licensee and the corresponding stormwater treatment device and/or pollution control measure, and identify any pollutants being discharged that

- are not treated and/or controlled prior to discharging from the Premises.
- An evaluation of the effectiveness of the currently installed stormwater quality treatment devices and pollution controls on the Premises based on the assessment required by Condition U1.2. The evaluation must also identify additional reasonable and feasible controls and/or treatment devices that may be required to address any pollutants that continue to exceed the ANZECC (2000) assessment criteria as determined in X.
- Based on the assessment in X and the evaluation in X, review and update of the Premises' Water Management Plan to include treatment performance benchmarks based on ANZECC (2000) assessment criteria.
- The Licensee must prepare an Action Plan to implement improvements and install/maintain additional controls identified by condition U1.3. The Action Plan is to include:
  - An outline of any additional controls and/or treatment devices that are required to meet treatment
  - Performance benchmarks based on ANZECC (2000) assessment criteria, and
  - A proposed timeframe for each new control to be installed at the Premises.

## **8.2. Air Pollutant review**

- The Licensee must engage an independent, suitably qualified and experienced person to complete a review of the Premises' Air Management Plan
- The Licensee must engage an independent, suitably qualified and experienced person to conduct an Air Impact Assessment that is to include an assessment of pollutant concentrations and loads following air discharges from the Premises for all sampling Events for the first 6 months of operation. The assessment should include a discussion of the effects of the sampled pollutant loads on the receiving environment with respect to the relevant Australian and New Zealand Environment and Conservation Council (ANZECC)(2000) air quality guidelines.
- The Licensee must engage an independent, suitably qualified and experienced person to conduct a System Performance Evaluation that is to include:
  - An outline of all currently installed air quality treatment devices and pollution controls, and the corresponding pollutant/s they are designed to control. The outline must include a table showing each pollutant identified by the sampling conducted by the Licensee and the corresponding air treatment device and/or pollution control measure, and identify any pollutants being discharged that are not treated and/or controlled prior to discharging from the Premises.
  - An evaluation of the effectiveness of the currently installed air quality treatment devices and pollution controls on the Premises based on the assessment required by Condition X. The evaluation must also identify additional reasonable and feasible controls and/or treatment devices that may be required to address any pollutants that continue to exceed the ANZECC (2000) assessment criteria as determined in X.
  - Based on the assessment in X and the evaluation in X, review and update of the Premises' Air Management Plan to include treatment performance benchmarks based on ANZECC (2000) assessment criteria.

- The Licensee must prepare an Action Plan to implement improvements and install/maintain additional controls identified by condition XX. The Action Plan is to include:
  - An outline of any additional controls and/or treatment devices that are required to meet treatment performance benchmarks based on ANZECC (2000) assessment criteria, and
  - A proposed timeframe for each new control to be installed at the Premises.

## **9. SPECIAL CONDITIONS**

### **9.1. Waste Acceptance and Treatment Protocol**

- A waste acceptance and treatment protocol must be developed for all wastes to be received at the premises. The protocol must demonstrate compliance with the NSW EPA Waste Classification Guidelines, NSW EPA Sampling Design Guidelines for Contaminated Land, General and Specific Immobilisation approval requirements as well as any Resource Recovery Order and Exemption requirements.

### **9.2. Bioremediation trial**

- The trial must be based on scientific principles and include treatments, controls and replication and be statistically robust to demonstrate the efficacy of the treatment process. All contaminants of concern must be identified and monitored throughout the trial with minimum, maximum, mean and standard deviations tabulated for each stage of the trial
- The progressive treatment and testing will need to: Capture the range contaminants of concern proposed to be treated at the facility at the expected operational concentrations, providing clear demonstration of the overall treatment efficacy, on multiple batches to confirm repeatability.
- Demonstrate the efficacy of bioremediation treatment of contaminated soils for the range of contaminants and concentrations proposed to be treated at the facility and quantify the contribution of direct and indirect dilution as well as volatilisation in the treatment process.
- Characterise the contaminated soils at all stages of the treatment cycle from receipt to reuse or disposal.

### **9.3. Pollution Incident Response Management Plan (PIRMP)**

- The Licensee must prepare a 'Pollution Incident Response Management Plan' (PIRMP) that complies with Part 5.7A of the POEO Act (1997) in relation to the activity to which the licence relates. The PIRMP must be in the form required by the 'Regulations' and include the following:
  - the procedures to be followed by the holder of the relevant environment protection licence, or the occupier of the relevant premises, in notifying a pollution incident to:
    - i. the owners or occupiers of premises in the vicinity of the premises to which the environment protection licence or the direction under section 153B relates, and
    - ii. the local authority for the area in which the premises to which the environment protection licence or the direction under section 153B relates are located and any area affected, or potentially affected, by the pollution, and
    - iii. any persons or authorities required to be notified by Part 5.7,
  - a detailed description of the action to be taken, immediately after a pollution incident, by the holder of the relevant environment

protection licence, or the occupier of the relevant premises, to reduce or control any pollution,

- the procedures to be followed for co-ordinating, with the authorities or persons that have been notified, any action taken in combating the pollution caused by the incident and, in particular, the persons through whom all communications are to be made

- any other matter required by the regulations, including 'Keeping of Plan', 'Testing of Plan', and 'Implementation of Plan'

- The PIRMP must be tested at least annually or following a pollution incident.

#### **9.4. Requirement to maintain Financial Assurance**

- A financial assurance in the form of an unconditional and irrevocable and on demand guarantee from a bank, building society or credit union operating in Australia as "Authorised Deposit-taking Institutions" under the banking Act 1959 of the Commonwealth of Australia and supervised by the Australian Prudential regulatory Authority (APRA) must be provided to the EPA prior to the issue of this licence. The financial assurance must be favour of the EPA in the amount of hundred thousand dollars (\$X). The financial assurance is required to secure or guarantee funding for works or programs required by or under this licence. The financial assurance must contain a term that provides that any monies claimed can be paid to the EPA or, at the written direction of the EPA, to any other person. The licensee must provide to the EPA, along with the original counterpart guarantees, confirmation in writing that the financial institution providing the guarantees is subject to supervision by APRA.
- The financial assurance must be maintained during the operation of the facility and thereafter until such time as the EPA is satisfied the premises is environmentally secure.
- The financial assurance must be replenished by the full amount claimed or realised if the EPA has claimed on or realised the financial assurance or any part of it to undertake a work or program required to be carried out by the licence which has not been undertaken by the licence holder.
- The EPA may require an increase in the amount of the financial assurance at any time as a result of reassessment of the total likely costs and expenses of rehabilitation of the premises.
- The licensee must provide to the EPA the original counterpart guarantee within five working days of the issue of:
  - the financial assurance required by condition X and
  - the adjusted financial assurance as required by condition X and X.

#### **9.5. Environmental Obligations of Licensee**

- While the licensee's premises are being used for the purpose to which the licence relates, the licensee must:
  - Clean up any spill, leak or other discharge of any waste(s) or other material(s) as soon as practicable after it becomes known to the licensee or to one of the licensee's employees or agents.
  - In the event(s) that any liquid and non-liquid waste(s) is unlawfully deposited on the premises, such waste(s) must be removed and lawfully disposed of as soon as practicable or in accordance with any direction given by the EPA.
  - Provide all monitoring data as required by the conditions of this licence or as directed by the EPA.

- In the event of an earthquake, storm, fire, flood or any other event where it is reasonable to suspect that a pollution incident has occurred, is occurring or is likely to occur, the licensee (whether or not the premises continue to be used for the purposes to which the licence relates) must:
  - Make all efforts to contain all firewater on the licensee’s premises;
  - Make all efforts to control air pollution from the licensee’s premises;
  - Make all efforts to contain any discharge, spill or run-off from the licensee’s premises;
  - Make all efforts to prevent flood water entering the licensee’s premises;
  - Remediate and rehabilitate any exposed areas of soil and/or waste;
  - Lawfully dispose of all liquid and solid waste(s) stored on the premises that is not already securely disposed of;
  - At the request of the EPA monitor groundwater beneath the licensee’s premises and its potential to migrate from the licensee’s premises;
  - At the request of the EPA monitor surface water leaving the licensee’s premises; and
  - Ensure the licensee’s premises is secure.
- After the licensee’s premises cease to be used for the purpose to which the licence relates or in the event that the licensee ceases to carry out the activity that is the subject of this licence, that licensee must:
  - remove and lawfully dispose of all liquid and non-liquid waste stored on the licensee’s premises; and
  - rehabilitate the site, including conducting an assessment of and if required remediation of any site contamination.

**9.6. Claims on Financial Assurances**

- The EPA may claim on a financial assurance under s303 of the POEO Act if a licensee fails to carry out any work or program required to comply with the conditions of this licence.