



Prestons Waste Treatment Facility
Amendment Report

Appendix M

Previous EPA comments

Response to EPAs' comments from June, August and 4 December 2023

EPA Query (including date of query)	Response/Comment	Reference
Air quality, odour and noise		
<p>June – August 2023 In relation to air and odour impacts– a new report has been provided which still has some matters that require addressing</p>	<p>To support the RtS, a revised Air Quality Impact Assessment (AQIA) was prepared by Zephyr, which superseded the original EIS AQIA prepared by Golder.</p> <p>As described in Section 6.2 of the Amendment Report, the inconsistencies between the findings of the Golder AQIA and the Zephyr AQIA are as a result of differences in the metals emission rates adopted between the two assessments. The revised AQIA by Zephyr adopted the maximum metal concentrations possible to (comply with internal health and safety requirements) within the pre-filtered air within the building to provide a conservative emissions estimate. The combined filter efficiencies for different particle size groups were then applied to the building air to calculate the reduced particulate matter (PM) emissions post-filtration.</p> <p>The dispersion model used in the Golder AQIA was AERMOD, incorporating the meteorological pre-processor AERMET. The dispersion modelling completed for the Revised AQIA used CALPUFF and the CALMET pre-processor. Both these models are approved for use in NSW and either would be suitable for the subject AQIA.</p> <p>It is considered valid to refer to predicted impacts from the Golder AQIA for the pollutants not modelled in the revised AQIA as the Golder AQIA emission assumptions used are highly conservative. Only where the Golder AQIA presented ground level concentration impacts in excess of their respective air quality criterion have these been re-evaluated within the Revised AQIA (where more realistic/appropriate assumptions have been assessed). For this reason, only arsenic and chromium have been assessed within the Revised AQIA.</p>	<p>Section 6.2 of the Amendment Report</p> <p>Draft OAQMP (Appendix G)</p>
<p>4/12/2023 The EPA requests the submission of the draft OAQMP as part of the ADR.</p>	<p>A draft Operational Air Quality Management Plan (OAQMP) has been prepared as part of the Draft Operational Environmental Management Plan (OEMP) and is provided in Appendix G.</p>	<p>Draft OAQMP (Appendix G)</p>
<p>June – August 2023 In relation to noise impacts – The new information satisfies all issues raised in the EPA's submission in relation to noise.</p>	<p>This comment has been noted.</p>	<p>N/A</p>

EPA Query (including date of query)	Response/Comment	Reference
Plans		
<p>4/12/2023 A consolidated set of plans for the facility is required. Several of the plans are merely scattered throughout the ADR, EIS and Appendix B as figures which are difficult to read, not to scale and not in accordance with the requirements of the Environmental Planning and Assessment Regulations 2021 for plans. The inadequacy of the plans has been a constant issue identified by the Department and the EPA.</p> <p>4/12/2023 The bay sizing is nominated in text and not reflected on a scaled floor plan with dimensions.</p>	<p>An updated and consolidated set of plans has been prepared by SMEC for the proposed Facility (Appendix E of the Amendment Report).</p> <p>These plans have been prepared to a scaled floor plan with dimensions (a scale and north arrow are provided in each figure).</p>	<p>Consolidated design drawings (Appendix E)</p>
PCBs and PFAS		
<p>June – August 2023 The following specific queries have been raised in regard to Waste management:</p> <p><i>Some of the key matters to be addressed prior to determination – Waste Management:</i></p> <p>a) Inclusion of hazardous chemicals</p> <p><i>The EPA reiterates that waste such as PFAS contaminated soil, asbestos, PCB waste etc. are not suitable for receipt at the proposed facility.</i></p> <ul style="list-style-type: none"> June – August 2023 In relation to Waste Management – a substantial portion of the information requested in the EPA’s correspondence of 14 January 2022 has not been provided. Without this information, the EPA is unable to adequately assess the potential impacts to the environment and community from the proposal. The EPA is unable to provide further comment without this information; 	<p>As noted, in the Amended Proposal Description (Appendix B) the following wastes would not be received at the Site:</p> <ul style="list-style-type: none"> Scheduled PCB contaminated material (see Section 5.3.2 of the Amendment Report) PFAS contaminated soil above the restricted solid waste criteria (see Section 5.3.1 of the Amendment Report) Asbestos containing material <p>Each of the above are listed as non-conforming waste that would be automatically rejected. Section 5.8 of the draft OWMP (Appendix H) outlines a non-conforming waste procedure, and an unexpected finds procedure is in place within these management plans to manage non-conforming wastes.</p> <p>Section 6.2.3 of the OWMP outlines the specific management measures proposed for the storage of PFAS contaminated soil. Table 6-15 of the OWMP has been updated to provide clarification regarding the specific criteria for acceptance of PFAS contaminated material. PFAS contaminated soils above the levels prescribed in Table 6-15 would not be accepted at the facility.</p> <p>Review of the market has confirmed that there is a crucial need for facilities that accept PFAS contaminated soils within NSW. The Project would not treat PFAS contaminated soils but would instead act as a temporary storage option prior to the material being transferred to a Facility that is licensed to</p>	<p>Section 5.3.1, 5.3.2 of the Amendment Report</p> <p>Amended Proposal Description (Appendix B)</p> <p>Section 5.8, Section 6.2.3 and Table 6-15 of the draft OWMP (Appendix H)</p>

EPA Query (including date of query)	Response/Comment	Reference
<ul style="list-style-type: none"> Further clarification of Hi-Quality's intentions for handling in storage of PFAS and PCB contaminated soils on Site and the limits at which these wastes would be accepted on Site <p>4/12/2023 The ADR at 3.1.1.1 does not provide the specific criteria for the PFAS which is proposed to be stored. It only makes reference to the addendum to the Waste Classification Guidelines.</p>	<p>treat the material. The Facility would enable the material to be stored within a controlled environment, rather than being left to the customer to manage.</p> <p>HiQ has reduced the proposed annual throughput for PFAS contaminated soils from to 7,500 tpa, with a limiting storage capacity of approximately 300 t onsite at any one time.</p>	
<p>4/12/2023 The figures in the ADR showing the floor plan of the facility are not adequate for the Department and EPA to understand how the area has been separated and controlled to prevent cross contamination.</p>	<p>Updated plans have been prepared by SMEC (Appendix E). The soil PFAS bays are located at the Southern end of Compartment 1.</p> <p>The PFAS storage bays are bunded and would not be interchangeable with the other treatment bays, which limits the potential for cross contamination. The Facility layout figure (Figure 1-4 of the Amended Proposal Description) shows the separation of treatment bays, bunding and leachate diversion platforms which would control cross contamination.</p> <p>The procedure for PFAS contaminated soil storage and the related environmental controls are provided in Section 6.2.3 of the OWMP (Appendix H). Once the material is removed from the Facility the used bay(s) will undergo decontamination with Decon 90 or Liquinox, as described in the PFAS storage procedure in Section 6.2.3 of the OWMP.</p> <p>A Hazard Identification Report (Appendix L) has been prepared by Sherpa Consulting (2024) which considered risks from storage of PFAS soil and associated offsite safety and environmental risks; finding the proposed controls and management measures in place to be adequate to manage risk. No High risks were identified.</p>	<p>Figure 1-4 of the Amended Proposal Description (Appendix B)</p> <p>Consolidated Design Drawings (Appendix E)</p> <p>Section 6.2.3 of the draft OWMP (Appendix H)</p> <p>Hazard Identification Report (Appendix L)</p>
Capacity and waste management (general)		

EPA Query (including date of query)	Response/Comment	Reference
<p>June – August 2023 <i>[Some of the key matters to be addressed prior to determination – Waste Management:]</i></p> <p>a) <i>The proponent’s response to the EPA’s response to the EIS dated 14 January 2022</i></p> <p><i>The proponent’s response has not included the detailed information that was requested. The applicant has proposed this be provided in a Waste Management Plan (WMP) and Specific Immobilisation Approval requests. The EPA cannot provide advice without reviewing this information.</i></p>	<p>A comprehensive draft OEMP (Appendix F) and draft OWMP (Appendix H) (to be finalised following project approval) have been prepared to provide the EPA, and other stakeholders, with additional information regarding the management of the Proposal. The OWMP provides a comprehensive description of procedures and measures that will be implemented to manage the Facility.</p> <p>Section 6.2.1.4.2 of the OWMP provides an outline of the proposed process for seeking Special Immobilisation Approvals (SIAs). A draft guidance SIA application template has been prepared as part of the OWMP (Appendix D of the OWMP). The detailed content of individual SIAs, however, cannot be prepared at this stage of the project, as each SIA will be developed during operation based on the specific characteristics and treatment options proposed for each batch of soil to be treated under an SIA.</p>	<p>Draft OEMP (Appendix F)</p> <p>Section 6.2.1.4.2 of the Draft OWMP (Appendix H)</p> <p>Draft Guidance SIA Template (Appendix D to the OWMP)</p>
<p>4/12/2023 Several of the issues, concerns or questions the EPA have regarding the waste management procedures of the development could be answered through the lodgement of a detailed draft OWMP for the site and proposed operations. The EPA and the Department have continually questioned the ability of the site to handle the quantity and types of waste streams given the large areas required for heavy vehicle movements, the amount of time required to carry out the proposed treatments and a need to ensure waste streams are separated and do not come into contact with other waste streams.</p> <p>The EPA request that the OWMP is provided with the ADR.</p> <p>June – August 2023 <i>The EPA also requested that the applicant provide supporting evidence that the proposed treatment technologies can be applied at the facility taking into consideration:</i></p> <p><i>Constraints of the facility including but not limited to the size and time for treatment/storage,</i></p>	<p>A comprehensive review of the Facility’s operational capacity, as well as market conditions, has been carried out in response to stakeholder queries. As a result of this review, HiQ is proposing to reduce the annual throughput to 210,500 tonnes per annum (tpa), as well as reduce the onsite storage limits at any one time. A detailed explanation of the proposed throughputs and the Facility’s capacity is provided in Section 5.1.2 of the Amendment Report, which has found that at the reduced throughput handling, capacity of the Facility is sufficient. As a result of the reduced throughput the draft OTMP (Appendix I) has been updated to account for the lower volume of trucks that would be required. A detailed swept path analyses have also been updated showing sufficient space to operate the Facility based on the heavy vehicles movements (as shown in the OTMP).</p> <p>The Facility has been designed such that each waste load will be allocated a designated bay or pit, there is to be no mixing of waste loads. The bays are separated by six-metre-high push walls. The soil stockpile heights would be limited to enable a buffer between the height of the stockpile and push wall, so that materials do not spill into other bays.</p> <p>The Facility will utilise an online booking system (Section 5.5 of the OWMP), which allows for control over the volume of waste to be received at any one time as waste loads would not arrive onsite unexpectedly. This also enables the Facility to ‘pause’ waste acceptance if there is any delay onsite that would affect storage capacity.</p> <p>Additionally, inclusion of a ‘Storage and transfer’ bay in the design allows for contingency in the unlikely event that further capacity is required onsite. Further contingency measures are outlined in Section 1.4.14 of the Amended Proposal Description and further description in Section 10.2 of the OWMP.</p>	<p>Section 5.1.2 of the Amendment Report</p> <p>1.4.14 of the Amended Proposal Description (Appendix B)</p> <p>Section 5.5 and Section 10.2 draft OWMP (Appendix H)</p> <p>Draft OTMP (Appendix I)</p>

EPA Query (including date of query)	Response/Comment	Reference
<p>4/12/2023 Section 1.5 lists plant and equipment which are required for the operation of the waste facility.</p> <p>Please provide a site plan showing where all the plant and equipment is located or stored if not already provided on Figure 1.8 or 1.11. Given the required area for the manoeuvring of heavy vehicles through the site, there appears to be little room for the manoeuvring or storage of other machinery.</p> <p>4/12/2023 Provide the location of the drill mud plant on a site plan and provide details of where trucks would park to unload from the vacuum tanker. Show how the trucks would manoeuvre into this area</p>	<p>Figure 1-4 in the Amended Proposal Description (Appendix B) has been updated include the static and mobile plant and equipment storage locations. When not in use, mobile plant and equipment would be stored in Compartment 3.</p> <p>Section 6.3.2 of the OWMP (Appendix H) outlines the process for drill mud plant and equipment. Trucks would park directly in front of the drill mud bays in Compartment 1. The drill mud plant (dewatering plant) will be located next to the sludge pits adjacent to the LWTP wall. This is shown on the Site Layout Plan in Figure 1-3 of the Proposal Description.</p> <p>A detailed swept path analyses have also been updated showing sufficient space to operate the Facility including with plant and equipment in operation within the (as shown in the OTMP – Appendix I).</p>	<p>Figure 1-4 in the Amended Proposal Description (Appendix B)</p> <p>Section 6.3.2 of the Draft OWMP (Appendix H)</p> <p>Draft OTMP (Appendix I)</p>
Environmental controls and procedures		
<p>June – August 2023 Include details of all the environmental controls that will be used at the site.</p>	<p>Environmental controls have been embedded into the design and management procedures for the Facility:</p> <ul style="list-style-type: none"> • Updates have been made to the Amended Proposal Description (Appendix B) to provide further detail on proposed environmental controls. Section 1.2.7 – 1.2.10 of the Amended Proposal Description provide a description of the key environmental controls proposed, including urban design features, air quality management infrastructure, water and leachate management infrastructure and fire infrastructure. • Consolidated design drawings (Appendix E) have been prepared by SMEC which show key design features. These include the leachate collection and water management systems, wheel washes, HVAC and exhaust system, bunding design, fire infrastructure features and traffic control features. • A draft OEMP (Appendix F) -, including an OWMP (Appendix H), an OAQMP (Appendix G) and OTMP (Appendix I) - has been prepared to provide detail around the operational procedures that will be utilised to manage environmental aspects. These documents also provide detail on the specific environmental controls applicable for each activity carried out on site • A Hazard Identification Report (Appendix L) has been prepared by Sherpa which identifies environmental and safety risks from the operation of the Facility and outlines the environmental controls which have included within the Facility design and operational plans. The assessment 	<p>Section 1.2.7 – 1.2.10 of the Amended Proposal Description (appendix B)</p> <p>Consolidated design drawings (Appendix E)</p> <p>Draft OEMP (Appendix F) and sub plans – draft OWMP (Appendix H), draft OAQMP (Appendix G), draft OTMP (Appendix I)</p> <p>Hazard Identification Report (Appendix L)</p>

EPA Query (including date of query)	Response/Comment	Reference
	<p>found the environmental controls to be effective in managing risk with no High environmental risk identified for the operation of the Facility</p> <ul style="list-style-type: none"> A Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K) has been prepared which provides a detailed description of the Australian Standards, design features and management controls in place to manage risks associated with liquid and hazardous waste. <p>Notably, the Hazard Identification Report (Appendix L) assessed 106 potential environmental risks that may arise as a result of the operation of the Facility. With the above environmental controls in place these would comprise no High risks and only 6 Medium environmental risks.</p>	<p>Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K)</p>
<p>4/12/2023 What processes are in place to prevent environmental harm in the event there is a chemical spill?</p> <p>4/12/23 Where will the Applicant store these [reagents] materials when not in use?</p> <p>4/12/23 More information is required on the overflow protection devices to be installed on the cement silo.</p> <p>4/12/23 What are the environmental controls used in the[reagent] storage area?</p>	<p>Reagents would be stored in the two ‘reagent storage areas’ (one in Compartment 1 and one in Compartment 2) and ‘cement silo’ as shown in the site layout plan Figure 1-4 in the Amended Proposal Description (Appendix B). Reagents used in the LWTP would be stored within the reagent storage area in Compartment 2, with the exception of Hydrochloric Acid which would be stored in Compartment 1 (to be separated from Caustic Soda). The reagent storage areas are internal to the building. Other than the cement (stored in the cement silo) reagents would be stored on shelves above the PMF level.</p> <p>Section 6.7 of the draft OWMP (Appendix H) outlines the storage limits and requirements for the reagents. The Hazard Identification Report (Appendix L) includes a comprehensive risk assessment for potential risks associated with chemical (reagent) spills and storage. The risk assessment found a total of 18 risks associated with the storage and use of reagents, including potential spills. All 18 environmental risks were found to be low with controls in place.</p> <p>A detailed description of the controls that would be in place to manage the risk of reagent spills is outlined in Sections 3.2 and Section 3.6 of the Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K). In summary these controls comprise (refer Section 3.2.2, 3.2.3, 3.6.2 and 3.6.3):</p> <ul style="list-style-type: none"> Compliance with applicable guidelines and standards including <i>AS1894 The storage and handling of non-flammable and combustible liquids</i>, <i>AS3780 The storage and handling of corrosive substance</i> and <i>AS3780 The storage and handling of corrosive substances</i> (other applicable guidelines are detailed in Section 3.2.2 of the Liquid and Hazardous Waste Risk identification and Minimisation Report (Appendix K)) Specific storage requirements for reagents that are classified dangerous goods (Hydrochloric Acid and Caustic Soda are outlined in Table 3-4. Hydrochloric acid will be stored on its own within a locked safety cabinet. 	<p>Figure 1-4 of the Amended Proposal Description (Appendix B)</p> <p>Hazard Identification Report (Appendix L)</p> <p>Section 3.2 and 3.6 of the Liquid and Hazardous Waste Risk identification and Minimisation Report (Appendix K)</p> <p>Section 6.7 of the OWMP</p> <p>Draft OEMP (Appendix F)</p> <p>Consolidated design drawings (Appendix E)</p>

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	<ul style="list-style-type: none"> • Cement would be stored in silos located in the southern warehouse building extension. The cement silo will be fitted with a high-level alarm overflow protection device. The cement silo will vacuum the cement from the truck. A high-level alarm will be installed to alert if the storage area is near maximum. The alarm type will be confirmed at the detailed design phase. This delivery process would be supervised by suitable trained HiQ staff. • Design / physical controls including - the Facility is fully enclosed with impervious surfaces and rollover bunding with suitable storage capacities (e.g. 100% of the largest tank capacity in Compartment 2), scrubber / HVAC system in place, processing lines include isolation valves and alarms, emergency wash down showers and spill kits are located throughout the facility, fire management infrastructure, signage and placards. The bunded areas and leachate diversion platforms locations are detailed on the Site Layout Plan and drainage is shown in the Hydraulics Services Detailed Design (Appendix E4 of the Amendment Report). Compartment 2 is lined with epoxy sealer. • Management features (as summarised in the OEMP and OWMP) including hot works permit, staff training, maintenance schedules, mandatory PPE requirements, use of two-way radios and working in pairs protocols • An Incident and Emergency Response Plan and Spill Response Plan are provided within the OEMP (Appendix F). 	
<p>4/12/2023 What are the environmental controls used in the storage area and in the extraction and packaging of the solids [from the sludges]?</p>	<p>Once sludges have been dewatered, the solids would comprise soils which would then be transferred to a soil treatment bay to undergo decontamination (as described in Section 6.2 of the OWMP). Environmental controls for the storage of sludges would include the following as outlined in Section 6.3.1 of the OWMP (Appendix H):</p> <ul style="list-style-type: none"> • Ventilation system to be managed in accordance with the OAQMP during loading and unloading of material and treatment of material • Application of water for dust suppression during loading and unloading of the material and during treatment, if visibly dry • Visual inspection of the storage area on completion of unloading and loading to confirm all material is within the pit or LWTP. Use of brooms or shovels to move the material within the treatment bay if observed outside of the pit or LWTP. • Spill and emergency response within the OEMP. 	<p>Section 6.2 and Section 6.3.1 of the Draft OWMP (Appendix H)</p>

EPA Query (including date of query)	Response/Comment	Reference
<p>4/12/2023 Where will the shredded material be stored and what are the environmental controls in place?</p>	<p>Shredded waste will be located within the bay allocated for packaged wastes within Compartment 3 (Figure 1-4 of the Amended Proposal Description).</p> <p>Environmental controls for the storage of shredded material involves operation of the ventilation system to be managed in accordance with the OAQMP (Appendix G) during loading, unloading and shredding of material. Additionally, the area will be visually inspected on completion of unloading and loading to confirm the material is within the allocated bay.</p>	<p>Figure 1-4 of the Amended Proposal Description (Appendix B)</p> <p>Draft OAQMP (Appendix G)</p>
<p>4/12/2023- Appendix B - Table 1.5 – Total Petroleum Hydrocarbons: Physical separation / screening is a treatment technology identified for some waste streams. Provide more details on the precise procedures for physical screening and separation including all environmental controls to be used.</p>	<p>A detailed draft OWMP (Appendix H) has been prepared to provide additional information regarding proposed treatment processes. Section 6.2.1.1 of the OWMP details the physical screening process. In summary, the physical screening procedure includes the following:</p> <ul style="list-style-type: none"> • The type of screening technology used will be dependent on the particle size distribution and the grading of the materials. It is anticipated that cohesive materials or soils containing greater than 15% fines (silt and clay) will not be suitable for physical separation and may be more suited to chemical separation (Section 6.2.1.2 of the OWMP). • Three types of physical screening technology will be deployed, as follows: <ul style="list-style-type: none"> ○ The high shear mixer chemical stabilisation / mixing plant comes fitted with a screen to remove oversize materials which will be separated prior to stabilisation commencing; ○ A mobile screen; and ○ An excavator / loader with drilling / screening bucket attachment that will enable physical separation prior to treatment for soils not passing through the high shear mixer • The contaminated material will be loaded into the respective physical screening technology via an excavator or front-end loader. • Non-soil materials that have been separated out during physical screening will be transferred to the storage and transfer bay via an excavator or front-end loader. These materials will be tested to confirm they are not contaminated prior to being transported to a suitable facility for recycling. Should testing identify that contamination is present they will be classified in accordance with the Waste Classification Guidelines and disposed of at an appropriately licensed facility. <p>As noted above, the Facility comprises many environmental controls to manage environmental risk, including management of waste. as described in:</p> <ul style="list-style-type: none"> • The Amended Proposal Description (Appendix B) and the Consolidated design drawings (Appendix E) provide a description and shows the key design features that are proposed to control environmental impacts. These include the leachate collection and water management systems, 	<p>Section 6.2.1.1 and Section 6.2.1.2 of the Draft OWMP (Appendix H)</p> <p>Hazard Identification Report (Appendix L)</p> <p>Consolidated design drawings (Appendix E)</p> <p>Amended Proposal Description (Appendix B)</p> <p>Draft OEMP (Appendix F) and sub plans – draft OWMP (Appendix H), draft OAQMP (Appendix G), draft OTMP (Appendix I)</p>

EPA Query (including date of query)	Response/Comment	Reference
	<p>wheel washes, HVAC and exhaust system, bunding design, fire infrastructure features and traffic control features.</p> <ul style="list-style-type: none"> • A draft OEMP (Appendix F), including a OWMP (Appendix H), an OAQMP (Appendix G) and OTMP (Appendix I), has been prepared to provide detail around the operational procedures that will be utilised to manage environmental aspects. • A Hazard Identification Report (Appendix L) has been carried out which identifies associated environmental and offsite safety risks from the operation of the Facility and outlines the environmental controls which have included within the Facility design and operational plans. The Hazard Identification Report found the controls to be effective and managing risk with no High environmental risk identified for the operation of the Facility. 	
<p>4/12/2023 Appendix B – Section 1.4.7.2 – “Operations during Stage 1 and Stage 2 would include treatment of soils through screening, bioremediation and immobilisation methodologies, and Stage 2 operations would extend to chemical screening treatment”.</p> <ul style="list-style-type: none"> • Where does the Applicant proposed to treat the soil? What type of plant and equipment will be used (location of the plant is not provided on the floor plan)? What environmental controls will be implemented to control dust and particulates? 	<p>Since the timing of this comment, HiQ have committed to update their construction plan to enable construction and operation of stages 1 and 2 concurrently (refer to Section 5.1.6 of the Amendment Report for further detail).</p> <p>A detailed draft OWMP (Appendix H) has been prepared to provide additional information regarding proposed treatment processes. Section 6.2.1 of the OWMP provides an overview of the treatment of bulk soils – this is further broken down into the specific treatment types that would be applied. In general, soil treatment would involve physical screening of material and potential for chemical separation to treat soils with heavier tar/ hydrocarbon fractions. After the initial screening, further. treatment would depend on the treatment process selected during the ‘identification of primary treatment technology procedure’.</p> <p>Bioremediation and immobilisation would occur within the bays designated for these activities (Figure 1-4 of the Amended Proposal Description).</p> <p>A draft OAQMP (Appendix G) has been prepared that includes the objective to manage dust. Installation of heating, ventilation and air conditioning will be undertaken. This will include a Particulate Matter (PM) filter and Activated Carbon filters to mitigate dust impacts.</p> <p>With regards to immobilisation, dust emissions during treatment are expected to be unlikely as the process would be contained within the high shear mixer. Following immobilisation treatment, the moisture content of the material would be increased within the high shear mixer plant and directly transferred via a covered feed belt to the immobilisation storage bays to cure.</p> <p>In addition to the general environmental controls described in the responses above, the OWMP outlines the environmental controls during treatment, including:</p>	<p>Section 5.1.6 of the Amendment Report</p> <p>Amended Proposal Description (Appendix B)</p> <p>Section 6.2.1 of the Draft OWMP (Appendix H)</p> <p>Hazard Identification Report (Appendix L)</p> <p>Consolidated design drawings (Appendix E)</p> <p>Draft OAQMP (Appendix G)</p>

EPA Query (including date of query)	Response/Comment	Reference
	<ul style="list-style-type: none"> • Ventilation system to be managed in accordance with the OAQMP during loading and unloading of material and treatment of material • Application of water for dust suppression during loading and unloading of the material and during treatment • Visual inspection of the storage area on completion of unloading and loading to confirm all material is within the treatment bay. Use of brooms or shovels to move the soil within the treatment bay if observed outside of the bunded area. • Fabric curtains on the bioremediation bays are designed to contain the minor contaminant generation from the handling and the turning process. <p>A Hazard Identification Report (Appendix L) has been carried out which identifies associated environmental and offsite safety risks from the operation of the Facility and outlines the environmental controls which have included within the Facility design and operational plans. The risk assessment found the controls to be effective and managing risk with no High environmental risk identified for the operation of the Facility.</p>	
<p>4/12/2023 Appendix B - Table 1.5 – ASS: Acid neutralisation is a treatment technology identified for ASS. Provide more details on the precise procedures for acid neutralisation including all environmental controls to be used.</p> <p>4/12/2023 What dust suppression methods will be used [during the treatment of ASS]?</p>	<p>A detailed draft OWMP (Appendix H) and an associated Acid Sulfate Soils Management Plan (ASSMP) have been prepared to provide additional information regarding proposed treatment processes. Section 6.2.2 of the OWMP and the Draft Acid Sulfate Soils Management Plan (Appendix F to the OWMP) detail the ASS treatment process. In summary, the ASS treatment procedure includes the following:</p> <ul style="list-style-type: none"> • The treatment of PASS/ASS onsite is the responsibility of the Environmental Manager and Chemist. ASS treatment will be neutralised using agricultural lime ('aglime'). Aglime is non-corrosive, and requires no special handling, contains at least 98% calcium carbonate by weight, and should have a particle size <1mm. Aglime will be applied using a mobile high shear mixer and will be automatically dosed, based on characterisation and verification test results. Where aglime is used as a neutralising agent, the type and quantity of lime must be calculated so that a neutralising value (NV) of 100 is achieved. • Neutralising values are the result of the purity of the lime – a NV of 100 is required to ensure the lime effectively neutralises the acid and that calculations of liming rates remain consistent. <ul style="list-style-type: none"> ○ Agricultural lime (CaCO₃) generally has a NV of 90-100%. ○ The factor of safety can be modified to account for a reduced NV. • Aglime shall be added in an appropriate ratio and/or based on results of Chromium Suite testing and/or suspension peroxide oxidation combined acidity and sulfate (SPOCAS). 	<p>Amended Proposal Description (Appendix B)</p> <p>Section 6.2.1, 6.2.2, 6.4 and 6.5 of the draft OWMP (Appendix H)</p> <p>Draft Acid Sulfate Soils Management Plan (Appendix F to the OWMP)</p> <p>Hazard Identification Report (Appendix L)</p> <p>Consolidated design drawings (Appendix E)</p>

EPA Query (including date of query)	Response/Comment	Reference
	<ul style="list-style-type: none"> • Once treated the soil will undergo validation testing as described in Section 6.5 of the OWMP. • Any contaminated ASS (i.e. elevated levels of heavy metals) will be treated using the bulk soils methodology (Section 6.2.1 of the OWMP) to reduce contaminant load via the high shear mixer. Cross-contamination will be minimised by the wash down of the mixer following each load and the area will be bunded to contain material. Run-off from the washdown will be captured by the leachate diversion platforms and treated as liquid waste. This is described in Section 6.4 of the OWMP. In addition to the general environmental controls described in the responses above, the OWMP outlines the environmental controls during treatment, including: <ul style="list-style-type: none"> • Ventilation system to be managed in accordance with the OAQMP during loading and unloading of material and treatment of material • Application of water for dust suppression during loading and unloading of the material and during treatment • Visual inspection of the storage area on completion of unloading and loading to confirm all material is within the treatment bay. Use of brooms or shovels to move the soil within the treatment bay if observed outside of the bunded area. <p>A Hazard Identification Report (Appendix L) has been carried out which identifies associated environmental and offsite safety risks from the operation of the Facility and outlines the environmental controls which have included within the Facility design and operational plans. The risk assessment found the controls to be effective and managing risk with no High environmental risk identified for the operation of the Facility.</p>	
<p>4/12/2 2023 Appendix B – Section 1.4.7.2.3 “Sludges would be delivered to the Site by tankers ranging in capacity from 2,000 L to 20,000 L. Tankers would unload sludge directly into designated containment bays or pits. Each batch of sludge would be unloaded in a pre-allocated pit, with no mixing of loads permitted.”</p> <p>How will the pits be cleaned between batches, what chemicals and methods will be used and where will these be stored when not in use? What environmental controls will be in place during the unloading of sludge.</p>	<p>The OWMP (Appendix H) includes standard bay decontamination procedures for each of the treatment methodologies. For the treatment of sludges, the following decontamination procedure would be followed</p> <p>Once the material has been removed from the sludge pits, the sludge pits must be decontaminated using Decon 90 or Liquinox. If using Decon 90, a 2% to 5% solution of Decon 90 with water is to be prepared. The LWTP must be saturated with the solution and left to soak for 2 to 24 hours. The sludge pits must then be rinsed with water and left to dry prior to being used again.</p> <p>When the Decon 90/Liquinox are not in use this would be stored within the reagents storage area in Compartment 1.</p>	<p>Section 6.3.1 of the Draft OWMP (Appendix H)</p> <p>Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K)</p>

EPA Query (including date of query)	Response/Comment	Reference
	<p>Environmental controls for sludges are described in Section 6.3.1 of the OWMP. A Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K) has been prepared which includes a description the key risk minimisation measures and controls for reagent and the Decon 90/Liquinox.</p>	
<p>4/12/2023 What environmental controls are in place during the use of the sheer mixer?</p>	<p>Section 1.2.8 of the Amended Proposal Description (Appendix B) outlines the air quality management infrastructure proposed for the Facility, including features to manage dust. Further, a draft OAQMP (Appendix G) has been prepared as part of the draft OEMP, which outlines the Facility features and procedures that will be put in place to manage air quality, including dust. Installation of heating, ventilation and air conditioning will be undertaken. This will include a Particulate Matter (PM) filter and Activated Carbon filters to mitigate dust impacts.</p> <p>Procedures for immobilisation of soils are included in Section 6.2.1.4 of the OWMP and include checks for soil and reagent moisture levels prior to transfer to and from the high shear mixer to minimise dust emissions.</p> <p>Material from the high shear mixer unit would be transferred via a covered feed belt to the immobilisation storage bays, inhibiting the possibility for dust emissions. The machine is fully enclosed, therefore there is low risk of dust or emissions during use.</p> <p>Additionally, the storage bays within Compartment 2 are connected to the HVAC system that contains a stockpile bay hood where air is collected and treated. The single stockpile bay hood will collect and send for treatment, approximately 95% of the total air flow through the space and is processed through the HVAC system.</p> <p>The OWMP outlines the environmental controls during treatment, including:</p> <ul style="list-style-type: none"> • Ventilation system to be managed in accordance with the Operational Air Quality Management Plan (OAQMP) during loading and unloading of material and treatment of material • Application of water for dust suppression during loading and unloading of the material and during treatment • Visual inspection of the storage area on completion of unloading and loading to confirm all material is within the treatment bay. Use of brooms or shovels to move the soil within the treatment bay if observed outside of the bunded area. 	<p>Section 1.2.8 of the Amended Proposal Description (Appendix B)</p> <p>Draft OAQMP (Appendix G)</p> <p>Section 6.2.1.4 of the draft OWMP (Appendix H)</p>

EPA Query (including date of query)	Response/Comment	Reference
Water and leachate management infrastructure		
<p>4/12/2023 The Department and the EPA have previously requested detailed plans for the proposed leachate and water management systems. The ADR at Figure 3.3 provides only a basic concept for the water and leachate management infrastructure which is laid over top of an aerial of the roof of the building. Although Section 3.3 of the ADR describes the proposed system, the applicant has not provided detailed plans to show that this system can work on site and what modifications to the existing hardstand areas and building are required to facilitate the system (creating necessary fall etc.). A detailed leachate and water management plan is required.</p> <p>4/12/2023 Section 1.2.8 of Appendix B suggests the leachate collection pits would be excavated into the ground and would involve ground-breaking internal to the warehouse building. What depth are the pits proposed to be provided at? What flood level would these pits be installed at?</p>	<p>An updated and consolidated set of plans have been prepared by SMEC for the proposed Facility and are provided in Appendix E of the Amendment Report.</p> <p>Drawing CC-201 shows where changes to existing hardstand would be required to install leachate management infrastructure. Cross Sections for Compartment 1 are provided in E5 Structural Design. Design Drawings E4 shows the design for the Hydraulics Services that would be installed as part of the Facility.</p> <p>Section 1.2.9 of the Amended Proposal Description (Appendix B) outlines the proposed leachate management system that would be installed at the Facility and includes a summary figure of the key leachate infrastructure features.</p> <p>Section 2.3.2 of the OEMP outlines how water and leachate will be managed.</p> <p>The Revised Environmental Management Measures (Appendix C) have been updated, such that G2 includes a commitment to prepare an Operational Stormwater and Leachate Management Plan.</p>	<p>Consolidated design drawings (Appendix E)</p> <p>Section 1.2.9 of the Amended Proposal Description (Appendix B)</p> <p>Section 2.3.2 of the draft OEMP (Appendix F)</p> <p>Revised Environmental Management Measures (Appendix C)</p>
<p>4/12/2023 Section 1.2.8 also suggests “The bunding would consist predominantly of drive-over bunding at the driveway entries and step-over bunding at doorways, with sufficient capacity to contain one tanker load of liquid (20,000 L)”, however this is not detailed on plans showing holding capacities. Also, no calculations or a water balance has been provided.</p> <p>Bunding of Wastewater Treatment Plant – Appendix B suggests the LWTP will be bunded in accordance with Australian Standards. Which standards is the Applicant referring to? What is the capacity of the bunded area and</p>	<p>Since the timing of this comment, Section 1.4.12 of the Amended Proposal Description (Appendix B) has been updated to provide clarity on the water balance for the site.</p> <p>The bunding design would be sufficient to contain the load of one 20,000L tanker truck, as described in Section 1.2.9 of the Amended Proposal description.</p> <p>Bunding for the facility has been designed to capture the firewater requirements as prescribed in AS2419.1, which is:</p> <ul style="list-style-type: none"> • Fire hydrant water supply of minimum 4 hours at 20L/s = 288 kL • Fire sprinkler water supply of minimum 2 hours at 96L/s (as per AS 2118.1-1999) = 691.2 kL <p>To capture the spent fire water the bunding would therefore require a minimum height of 178.4 mmm $(=(288\text{kL} + 691.2\text{kL}) \times 1,000 / 5,490)$. The proposed bunding is 250 mm in height, which would provide significantly more storage capacity than required to capture the spent fire water.</p>	<p>Section 1.2.9 and Section 1.4.12 of the Amended Proposal Description (Appendix B)</p> <p>Consolidated design drawings (Appendix E)</p>

EPA Query (including date of query)	Response/Comment	Reference
<p>how has this capacity been selected (failure of largest size vessel, containment of fire water etc.)</p> <p>Again, the basic plans provided do not provide the surety that the system described in the ADR and Proposal Description (Appendix B) can actually be catered for within the existing and expanded building.</p> <p>The information and plans provided is insufficient for the Department and the EPA to carry out an informed assessment of the development. The lack of detailed plans for this SSD has continually been raised as an issue with the Applicant. Examples of other the detailed plans submitted for other similar facilities have also been provided.</p>	<p>The total storage capacity provided by the bunding within the three compartments of the Facility is 1,283kL, comprising:</p> <ul style="list-style-type: none"> • Compartment 1: 1,007kL • Compartment 2: 156 kL • Compartment 3: 120kL. <p>An updated and consolidated set of plans has been prepared by SMEC for the proposed Facility and are provided in Appendix E of the Amendment Report.</p>	
Treatment technologies - general		
<p>June – August 2023 The EPA also requested that the applicant provide supporting evidence that the proposed treatment technologies can be applied at the facility taking into consideration</p> <p>- <i>The contaminants of concern,</i></p>	<p>The Waste Type and Treatment Table (Annexure A to Appendix B) provides a detailed description of:</p> <ul style="list-style-type: none"> • Each waste type to be received at the Facility • The potential contaminants that may be found within each waste type • The proposed treatment procedure to be applied for each waste type <p>Generally, the bulk soils accepted onsite are expected to fall under the N120 waste code, the remaining waste codes listed in Annexure A to Appendix B would be accepted in the form of liquid wastes or packaged goods.</p> <p>Annexure B also includes tables outlining the maximum concentrations for each contaminant that would be accepted within soil and liquid waste.</p> <p>As per the Amended Proposal Description, Chemical oxidation has been removed as a treatment technology, with the remaining treatment technology comprising:</p> <ul style="list-style-type: none"> • Physical screening • Chemical separation 	<p>Waste Type and Treatment Table (Annexure A to the Amended Proposal Description – Appendix B)</p> <p>Contaminant Concentrations tables - Annexure B of the Amended Proposal Description (Appendix B)</p> <p>Section 6 of the Draft OWMP (Appendix H)</p>

EPA Query (including date of query)	Response/Comment	Reference
	<ul style="list-style-type: none"> • Bioremediation • Immobilisation. <p>Details on the treatment technologies and procedures are included in Section 6 of the OWMP (Appendix H).</p>	
<p>- <i>Treatment stoichiometry</i></p>	<p>The dosing rates for chemicals or reagents needed to achieve the desired reaction or transformation of the contaminated soils to meet landfill disposal requirements would be confirmed prior to treatment for each batch received. The reagent dosing rates would be tailored specifically to each waste batch depending on the contaminants present. The following guidance documents / approvals would be used to guide the treatment of the waste streams:</p> <ul style="list-style-type: none"> • Where waste is subject to a general immobilisation approval (GIA), the requirements of the GIA would be met, as outlined in Section 6.2.1.4.1 of the OWMP (Appendix H) • Where a specific immobilisation approval (SIA) is required, HiQ would apply for the SIA prior to treatment of the waste and would provide the treatment stoichiometry at this time (refer Section 6.2.1.4.2 of the OWMP). The facility would treat wastes using reagents and processes commonly used in Australia and globally that have demonstrated scientific basis for immobilisation. A draft guidance SIA application template has been prepared as part of the OWMP (Appendix D of the OWMP). • Treatment and handling of ASS will be in accordance with the NSW Acid Sulfate Soils Manual (ASSMAC, 1998). A Draft Acid Sulfate Soils Management Plan has been prepared and provided as Appendix F of the OWMP. • A Draft Bioremediation Management Plan has been prepared and provided as Appendix G of the OWMP. 	<p>Section 6 and Appendix D of the Draft OWMP (Appendix H)</p> <p>Draft Acid Sulfate Soils Management Plan (Appendix F of the Draft OWMP (Appendix H))</p> <p>Draft Bioremediation Management Plan (Appendix G of the Draft OWP (Appendix H))</p>
<p>- Available treatment technology, emissions, and the disposal/reuse criteria;</p>	<p>A detailed draft OWMP (Appendix H) has been prepared to provide additional information regarding proposed treatment processes.</p> <p>As noted above, Chemical oxidation has been removed as a treatment technology, with the remaining treatment technology comprising standard treatment types:</p> <ul style="list-style-type: none"> • Physical screening • Chemical separation • Bioremediation • Immobilisation. 	<p>Section 6 of the draft OWMP (Appendix H)</p> <p>Revised AQIA (Appendix E of the RtS)</p> <p>Waste Type and Treatment Table (Annexure A of the</p>

EPA Query (including date of query)	Response/Comment	Reference
	<p>Section 6 of the OWMP provides a detailed description of how each of these treatment technologies will be applied and each of their respective environmental controls. Further a draft OAQMP (Appendix G) has been prepared. A Draft Acid Sulfate Soils Management Plan has been prepared and provided as Appendix F of the OWMP.</p> <p>A Draft Bioremediation Management Plan has been prepared and provided as Appendix G of the OWMP.</p> <p>A revised Air Quality Impact Assessment was completed as part of the RtS in response to the EPAs' comments surrounding emissions estimations and modelling. The revised AQIA used conservative assumptions in regards to both the emissions estimates and air flow parameters from the ventilation outlets. The results of the dispersion modelling indicated that the predicted concentrations for PM₁₀, PM_{2.5}, arsenic, chromium, lead and odour at the closest sensitive receptors are all predicted to comply with all NSW EPA requirements.</p> <p>With regards to disposal/reuse criteria, all waste materials would undergo validation testing after treatment to ensure the material meets the EPAs' "Waste Classification Guideline" disposal criteria prior to offtake. Disposal / offtake options for each waste stream are outlined within the Waste Type and Treatment Table appended to the Amended Proposal Description (Appendix B). The validation testing process is described in further detail in Section 6.5 of the OWMP.</p>	<p>Amended Proposal Description - Appendix B)</p> <p>Draft OAQMP (Appendix G)</p> <p>Draft Acid Sulfate Soils Management Plan (Appendix F of the Draft OWMP (Appendix H)</p> <p>Draft Bioremediation Management Plan (Appendix G of the Draft OWMP (Appendix H)</p>
<p>4/12/2023 Table 1.3 – "Preliminary dosage rate for liquids (chemical oxidation / precipitation."</p> <ul style="list-style-type: none"> Is chemical oxidation/precipitation still a method being used? More details on this is required. 	<p>Chemical oxidation has been removed as a treatment process since the EIS as it is acknowledged it is not a preferred treatment approach by the NSW EPA for several reasons, including:</p> <ul style="list-style-type: none"> The use of strong chemical agents has the potential to lead to the generation of hazardous by-products and the release of harmful substances, if not appropriately managed Chemical oxidation can take a longer time to complete than other treatment technologies such as immobilisation and was therefore determined not to be the most appropriate use of the facility areas While chemical oxidation may be effective for certain contaminants, it often requires large quantities of chemicals and energy, making it less sustainable. For these reasons chemical oxidation of soil is not proposed as a treatment technology at the facility. This is discussed in Section 5.1.1 of the Amendment Report. Reference to chemical oxidation processes has been removed from all of the documents 	<p>Section 5.1.1 of the Amendment Report</p>

EPA Query (including date of query)	Response/Comment	Reference
Immobilisation		
<p>4/12/2023 The ADR suggests SIAs will be sought for the site and would reflect “existing, approved immobilisation technologies already approved by the EPA on other sites.”</p> <ul style="list-style-type: none"> No information on the other sites has been provided or the technologies utilised at these sites to immobilise waste. The EPA has requested further information regarding the proposed SIAs to gain an understanding about how that process will be undertaken at the facility in response to the EIS and RtS previously. <p>4/12/2023 ADR Section 3.1.3 – The ADR does not describe the “proven immobilisation technologies, processes and reagents” which will be used in immobilisation. The ADR relies on the fact that the EPA has approved SIAs for other facilities and requests all the requirements for achieving an SIA are left as a post approval matter.</p> <p>4/12/2023 The EPA requires surety that the proposed immobilisation regime for each waste stream has been assessed and a robust process can be established to manage the regime within the confines of the proposed development and the site.</p> <p>4/12/23 An adequate description of the technology and process to be used for soil immobilisation has not been provided.</p>	<p>A detailed draft OWMP (Appendix H) has been prepared to provide further detail regarding the proposed waste treatment procedures. Since the timing of this comment the OWMP has gone through several iterations and additional information has been included on the SIAs (Section 6.2.1.4 .2of the OWMP) proposed for use at the Facility. A template SIA Application has been provided in Appendix D of the OWMP.</p> <p>Immobilisation would be undertaken in accordance with <i>Waste classification guidelines part 2: Immobilisation of waste</i> (NSW EPA, November 2014). This outlines the process for the two types of immobilisation approvals in accordance with Clause 10 of the <i>Protection of the Environment Operations (Waste) Regulation 2014</i>.</p> <p>Immobilisation techniques can include:</p> <ul style="list-style-type: none"> Natural immobilisation Chemical fixation Micro-encapsulation, and/or Macro-encapsulation <p>As outlined in Section 6.2.1.4.2 of the OWMP the Facility would utilise micro encapsulation only. Immobilisation at the Facility will predominately use solidification / stabilisation technology, which has been identified as effective for treatment of selected contaminants (see ITRC – Development of Performance Specifications for Solidification/Stabilization (Interstate Technology & Regulatory Council (IRTC), July 2011). Immobilisation will involve mixing soil with cement, lime or other pozzolonic reagents. Each of the waste codes proposed to be treated by immobilisation are being undertaken at HiQ’s operating Yatala Facility in Queensland.</p> <p>Where immobilisation is identified as the most appropriate treatment technology for a given waste batch, the waste batch would be assessed (as described in Section 5 of the OWMP). Where no general immobilisation approval exists, a unique SIA methodology would be prepared and submitted to the EPA for approval prior to treatment commencing in accordance with the guidelines. This follows the steps and approach outlined under ‘Application for a specific immobilisation approval’ (EPA. 2024).</p> <p>Section 6.2.1.4.2 of the OWMP provides an outline of the proposed process for seeking SIAs. Indicative contaminant levels and dosing rates have been outlined in Table 6-10 of the OWMP. The guidelines require scientific justification to the EPA to explain the basis that underpins the process by which immobilisation of contaminants in waste will be achieved which will be provided within each SIA</p>	<p>Section 6.2.1.4.2 of the Draft OWMP (Appendix H)</p> <p>Draft Guidance SIA Template (Appendix D to the Draft OWMP)</p>

EPA Query (including date of query)	Response/Comment	Reference
<p>4/12/23 Appendix B – 1.4.7.2.1 – Bulk Soils Immobilisation – what are the proposed methodologies to be used to immobilise bulk soils?</p>	<p>application. SIA methodology would be prepared and submitted to the EPA for approval prior to treatment commencing. A draft guidance SIA application template has been prepared as part of the OWMP (Appendix D of the OMWP).</p> <p>The detailed content of individual SIAs, however, cannot be prepared at this stage of the project, as each SIA will be developed during operation based on the specific characteristics and treatment options proposed for each batch of soil to be treated under an SIA.</p> <p>The Amendment Report has been updated to remove reference to ‘other sites’ as it is noted that information on immobilisation approvals issued by the EPA is not publicly available and is commercial in confidence. The intention of this commentary previously was to highlight that the EPA’s SIA process is an existing process that is understood to be being implemented by the EPA at other sites.</p>	
<p>4/12/2023 Very clear details of each ‘proven immobilisation technology’ proposed for the site is required including where the immobilisation will be conducted, how dust/spills from the process would be managed, etc. – this information has not been provided to date.</p> <p>4/12/2023 What dust suppression procedures or technologies would be used in this area?</p> <p>4/12/2023 What chemicals, machines and materials will the Applicant use in these [immobilisation] processes?</p>	<p>As noted above, a detailed draft OWMP has been prepared to provide further detail regarding the proposed waste treatment procedures. Since the timing of this comment the OWMP has gone through several iterations and additional information has been included on the SIAs proposed for use at the Facility (both in Section 6.2.1.4.2 of the OWMP and within the template SIA Application – Appendix D of the OWMP).</p> <p>As outlined in Section 6.2.1.4.2 of the OWMP the Facility would utilise micro encapsulation only. Immobilisation at the Facility will predominately use solidification / stabilisation technology, which has been identified as effective for treatment of selected contaminants (see ITRC – Development of Performance Specifications for Solidification/Stabilization (Interstate Technology & Regulatory Council (IRTC), July 2011). Immobilisation will involve mixing soil with cement, lime or other pozzolonic reagents. Each of the waste codes proposed to be treated by immobilisation are being undertaken at HiQ’s operating Yatala Facility in Queensland.</p> <p>A draft guidance SIA application template has been prepared as part of the OWMP (Appendix D of the OWMP), however as noted above a unique SIA methodology would be prepared for each waste batch to be immobilised; the procedure would be submitted to the EPA for approval prior to treatment commencing. HiQ has experience in the immobilisation of waste materials, they currently undertake this at their Yatala Facility.</p> <p>Section 1.2.8 of the Amended Proposal Description (Appendix B) outlines the air quality management infrastructure proposed for the Facility, including features to manage dust. Further, a draft OAQMP (Appendix G) has been prepared as part of the draft OEMP, which outlines the Facility features and procedures that will be put in place to manage air quality, including dust. Installation of heating,</p>	<p>Section 6.2.1.4 of the Draft OWMP (Appendix H)</p> <p>Section 6.2.1.4 of the Draft OWMP (Appendix H)</p> <p>Section 1.2.8 of the Amended Proposal Description (Appendix B)</p> <p>Draft OAQMP (Appendix G)</p> <p>Hazard Identification Report (Appendix L)</p>

EPA Query (including date of query)	Response/Comment	Reference
	<p>ventilation and air conditioning will be undertaken. This will include a Particulate Matter (PM) filter and Activated Carbon filters to mitigate dust impacts.</p> <p>Procedures for immobilisation of soils are included in Section 6.2.1.4 of the OWMP and include checks for soil and reagent moisture levels prior to transfer to and from the high shear mixer to minimise dust emissions.</p> <p>Material from the high shear mixer unit would be transferred via a covered feed belt to the immobilisation storage bays, inhibiting the possibility for dust emissions.</p> <p>Additionally, the storage bays within Compartment 2 are connected to the HVAC system that contains a stockpile bay hood where air is collected and treated. The single stockpile bay hood will collect and send for treatment, approximately 95% of the total air flow through the space and is processed through the HVAC system. The OAQMP describes the HVAC system and its function of increasing and decreasing flow rates within the Facility and discharging levels via the strobic fans. The air emissions control system will be operated in accordance with the manufacturer’s specifications by the operational staff and can be managed remotely by the operating staff to the conditions of the Facility</p> <p>The OWMP outlines the environmental controls during treatment, including:</p> <ul style="list-style-type: none"> • Ventilation system to be managed in accordance with the Operational Air Quality Management Plan (OAQMP) during loading and unloading of material and treatment of material • Application of water for dust suppression during loading and unloading of the material and during treatment • Visual inspection of the storage area on completion of unloading and loading to confirm all material is within the treatment bay. Use of brooms or shovels to move the soil within the treatment bay if observed outside of the bunded area. <p>The risk of the Facilities operation to create dust was also considered as part of the Hazard Identification Report (Appendix L). The assessment found that with the controls mentioned above dust emissions would be unlikely to cause a material issue at the Facility.</p>	
<p>4/12/2023 Where is the soil immobilisation to be carried out in the building?</p> <p>4/12/2023 Where would this immobilisation be carried out (in the bays?).</p>	<p>Soils to be treated via immobilisation would be stored in one of the immobilisation bays (Figure 1-4 in the Amended Proposal Description).</p> <p>As outlined in Section 6.2 of the OWMP (Appendix H), the material would be transferred from either the bulk receipt bay (Bay G) or from its storage bay to the high shear mixer within/adjacent to its storage bay, using an excavator and/or front-end loader. Once treated, the material would be directly transferred to its</p>	<p>Figure 1-4 in the Amended Proposal Description (Appendix B)</p>

EPA Query (including date of query)	Response/Comment	Reference
	<p>allocated storage bay via the high shear mixer covered feed belt. Moisture content is increased in the material prior to being fed onto the belt to ensure a uniform and homogenous mixture is produced that is deposited into its designated storage bay. Once a landfill facility has been identified to accept the material, the material will be redirected to the approved Facility.</p>	<p>Section 6.2 of the Draft OWMP (Appendix H)</p>
<p>4/12/2023 Appendix B – Table 1.5 – Coal Tar Contaminated Soil from Former Gasworks: Immobilisation is a treatment technology identified for this waste stream.</p> <p>Provide more details on the precise procedures for immobilising this waste stream.</p>	<p>The Immobilisation of Coal Tar Contaminated Soils EPA General Immobilisation Guideline would be followed to treat this waste type. Only soils less than 1% by weight of coal tar or coal tar pitch waste would be received at the Facility. Coal Tar would be immobilised in accordance with a General Immobilisation Approval (GIA).</p> <p>Section 6.2.1.4.1.1 of the OWMP provides a detailed description of the process for treatment for coal tar contaminated soils.</p> <p>In summary, treatment would involve the following:</p> <ul style="list-style-type: none"> • Batches of the soil will be loaded into mobile high shear mixer for treatment using a front-end loader or excavator. • If free non-aqueous phase liquid (NAPL) is visible soils would be pre-mixed using the excavator or rotary mixer to incorporate the NAPL. • A rotary mixer would be used to mix calcium or magnesium oxide based cement at a maximum ratio not exceeding 2 parts cement to 1 part waste soil. • The moisture content of the material would be tested prior to mixing. Reagent will either be delivered dry if total water to cement (w/c) ratio of the combined soil/cement exceeds 0.5 to ensure cement hydration. If the estimated w/c ratio is expected to be less than 0.5, additional water will be gently added to the waste materials until the w/c ratio is greater than 0.5. • Water may be added during mixing as well to effectively homogenize the materials to a maximum w/c ratio of 1.0. • Treated soils to be transferred to storage bays using an excavator or front-end loader and left to cure. • After curing, the batches are to be validated and classified for offsite disposal. <p>Treated waste that complies with all of the conditions of the Coal Tar GIA and that satisfies the requirements of the Waste Guidelines for classification as inert waste or solid waste may only be disposed of at solid waste landfills or industrial waste landfills which have currently operating leachate management systems and which are licensed by the EPA to accept that particular type of waste.</p>	<p>Section 6.2.1.4.1.1 of the OWMP (Appendix H)</p>

EPA Query (including date of query)	Response/Comment	Reference
<p>4/12/2023 Appendix B – Table 1.5 – Material containing heavy metals: Immobilisation is a treatment technology identified for this waste stream.</p> <p>Provide more details on the precise procedures for immobilising this waste stream.</p>	<p>As noted above, Section 6.2.1.4 of the OWMP (Appendix H) outlines the procedures for immobilisation as a treatment method.</p> <p>Immobilisation under a Specific Immobilisation Approval (SIA) will be sought for the treatment of metals and metalloids as well as PAHs (refer Section 6.2.1.4.2 of the OWMP).</p> <p>In summary, treatment would involve the following:</p> <ul style="list-style-type: none"> • Batches of the soil will be loaded into mobile high shear mixer for treatment using a front-end loader or excavator • The moisture content of the material would be tested prior to mixing. Reagent will either be delivered dry if total water to cement (w/c) ratio of the combined soil/cement exceeds 0.5 to ensure cement hydration. If the estimated w/c ratio is expected to be less than 0.5, additional water will be gently added to the waste materials until the w/c ratio is greater than 0.5. • Water may be added during mixing as well to effectively homogenize the materials to a maximum w/c ratio of 1.0 • Cementitious or pozzolanic binders (such as cement, ground granulated blast furnace slag or cement kiln dust) to be automatically dosed based on requirement for each waste batch. • Soils to be sampled after each addition of binding material to determine if suitable pH level has been achieved. For metals a range of optimum pH for solubility will be determined. • Treated soils to be transferred to storage bays and left to cure. • After curing, batches to be validated and classified for offsite disposal. <p>The following environmental controls would be in place during treatment:</p> <ul style="list-style-type: none"> • Ventilation system to be managed in accordance with the OAQMP during loading and unloading of material and treatment of material • Application of water for dust suppression during loading and unloading of the material and during treatment • Visual inspection of the storage area on completion of unloading and loading to confirm all material is within the treatment bay. Use of brooms or shovels to move the soil within the treatment bay if observed outside of the bunded area. <p>During treatment of the soils, the material will be sampled to confirm the pH of the material. Following treatment, the treated soil is to be tested by laboratory in accordance with the SAQP to confirm the TCLP concentrations meet the SIA requirements as described in Section 6.5 of the OWMP).</p>	<p>Section 6.21.4 of the Draft OWMP (Appendix H)</p>

EPA Query (including date of query)	Response/Comment	Reference
	<p>In the unlikely event the SIA requirements are not met following treatment, further bench scale testing will be undertaken to identify further treatment requirements. Treatment will then be conducted in accordance with the treatment procedure identified.</p> <p>If the material fails to meet the SIA requirements after further treatment the material will need to be disposed of at an appropriately licensed waste disposal facility. The Facility Manager will liaise with a licensed waste facility and coordinate the process.</p> <p>Further detail on the immobilisation procedure for heavy metals is provided in Section 6.2.1.4.2.1 of the OWMP.</p>	
Bioremediation		
<p>4/12/2023 EPA requires information to show that any environmental impacts from the bioremediation activity will be addressed. More information on the bioremediation process is required.</p> <p>More information on the use of biopiles as a technique to carry out bioremediation at the site is required.</p>	<p>Since the timing of this comment, a detailed draft OMWP (Appendix H) and a subsequent draft Bioremediation Management Plan (BMP) (Appendix H of the draft OWMP) have been prepared to provide further information regarding the operation of the Facility. The draft BMP outlines the specific procedures for the management and of bioremediation.</p> <p>Bioremediation will occur until the completion of treatment has been validated through laboratory testing to confirm suitable thresholds of contaminant load has been achieved. The timeframe for treatment will be dependent on the nature of the contamination, concentration of the contaminants and the type and volume of soil.</p> <p>Bioremediation volume limits will be strictly adhered to; HiQ will not accept additional wastes for treatment via bioremediation until any existing materials have been treated, validated, and removed from the Facility for disposal.</p> <p>Key environmental impacts with potential to arise during bioremediation, include leachate generation and air quality impacts. Section 8.1 and Section 8.3 of the BMP outline management for air quality and leachate within the WTF respectively.</p> <p>A Hazard Identification Report (Appendix L) has been prepared which has assessed offsite safety and environmental risks that may arise as a result of operation of the Facility. No high risks were found (either pre or post treatment). Controls were found to be adequate to manage risks.</p>	<p>Draft Bioremediation Management Plan (BMP) (Appendix H of the draft OWMP)</p> <p>Section 6.2.1.3 of the Draft OWMP (Appendix H)</p> <p>A Hazard Identification Report (Appendix L)</p>
<p>4/12/2023 The site plan does not identify the area to be used for bioremediation.</p>	<p>It is noted that the immobilisation and bioremediation bays may be interchangeable as all bays would be cleaned and decontaminated with Decon 90 or Liquinox after storage of each soil batch. Notwithstanding bays have been generally allocated within the Site Layout Plan and Figure 1-4 in the Amended Proposal</p>	<p>Figure 1-4 in the Amended Proposal Description (Appendix B)</p>

EPA Query (including date of query)	Response/Comment	Reference
	<p>Description labels the bays where bioremediation would occur, these are located along the eastern wall in Compartment 1.</p> <p>Bioremediation would occur in Bays C/D.</p>	
<p>4/12/2023 Appendix B – Section 1.4.7.2.3 – “Sludges with intermediate moisture content would undergo thickening using bentonite.”</p> <p>Where would the bentonite be mixed? In the containment bays or pits or as part of the LWTP?</p>	<p>Section 6.3.1 of the OWMP has been updated to clarify this process. The sludges would undergo thickening in the pits using bentonite. An excavator would be used to mix and incorporate the bentonite with the sludge.</p>	<p>Section 6.3.1 of the Draft OWMP (Appendix H)</p>
<p>4/12/2023 Appendix B – Section 1.4.7.2.3 – “Wet sludges would undergo filtration or flocculation to separate suspended solids. This may be done through the Dissolved Air Floatation (DAF) tank in the Liquid Waste Treatment Plant (LWTP).”</p> <ul style="list-style-type: none"> How much of <u>this</u> is proposed to be stored on site at any one time? 	<p>The sludge treatment procedure is provided in Section 6.3.1 of the OWMP. Reagents to be stored onsite are described in Section 1.5 of the Amended Proposal Description (Appendix B) and Section 6.7 of the OWMP. Reagents would be stored within the reagent storage areas. Following initial pre-treatment, the products (soil and liquid waste) would be re-assigned either a soil or liquid waste treatment train, depending on the contaminants present.</p>	<p>Section 6.3.1 and 6.7 of the Draft OWMP (Appendix H)</p> <p>Section 1.5 of the Amended Proposal Description (Appendix B)</p>
Soils, sediments and sludges		
<p>4/12/2023 Appendix B - Table 1.5 – Sludges: Contaminated soil treatment is a treatment technology identified for this waste stream.</p> <ul style="list-style-type: none"> Provide more details on the precise procedures for treating these waste streams 4/12/2023 Appendix B – Section 1.4.7.2 – “Soils, sediments and sludges of varying moisture content and contaminant classification would be received at the Site and would be subject to various processes to treat and decontaminate the material as far as practicable, prior to disposal at an appropriately licensed landfill or alternative treatment facility”. 	<p>A detailed draft OWMP (Appendix H) has been prepared to provide additional information regarding proposed treatment processes. Section 6.3.1 of the OWMP details the sludge treatment process.</p> <p>The sludges will be delivered to the facility by tankers ranging in capacity from 2,000 L to 20,000 L. Tankers will unload sludge directly into designated sludge pits in Compartment 2. Each batch of sludge will be unloaded in a pre-allocated pit (within Pit A) or directly into the LWTP, with no mixing of loads permitted.</p> <p>Verification testing will be undertaken following receipt to ensure contaminants align with the characterisation provided by the waste generator (as described in Section 5.3 of the OWMP).</p> <p>In summary, the sludge treatment process would involve the following (refer Section 6.3.1 of the OWMP):</p> <ul style="list-style-type: none"> Pre-treatment of sludges will be based on moisture content: Drier sludges will be deposited directly into the LWTP to undergo dewatering via a plate filter press to reduce the moisture content to less than 20% 	<p>Section 5.3, 6.2, 6.4, 6.7 and 6.3.1 of the Draft OWMP (Appendix H)</p>

EPA Query (including date of query)	Response/Comment	Reference
<ul style="list-style-type: none"> What are the proposed processes to treat this particular waste stream? Merely referring to a flow diagram is insufficient. 4/12/2023 Appendix B – Section 1.4.7.2 – “Soils, sediments and sludges of varying moisture content and contaminant classification would be received at the Site and would be subject to various processes to treat and decontaminate the material as far as practicable, prior to disposal at an appropriately licensed landfill or alternative treatment facility”. What chemical reagents would be used? What happens when there are multiple agents of contamination present in soil? <p>4/12/2023 Appendix B – Section 1.4.7.2.3 – “Wet sludges would undergo filtration or flocculation to separate suspended solids. This may be done through the Dissolved Air Floatation (DAF) tank in the Liquid Waste Treatment Plant (LWTP).”</p> <ul style="list-style-type: none"> Where will this actually be done and what is the process to remove the suspended solids? Where will they be stored? 	<ul style="list-style-type: none"> Sludges with intermediate moisture content will be deposited directly into the sludge pit where they will undergo thickening using bentonite. An excavator would be used to mix and incorporate the bentonite with the sludge within the pit Wet sludges will be deposited directly into the LWTP where they will undergo filtration or flocculation to separate suspended solids, prior to being transferred to the sludge pits. This may be done through the Dissolved Air Floatation (DAF) tank in the LWTP. The DAF is located within the LWTP in Compartment 2. The products of the pre-treatment processes are: <ul style="list-style-type: none"> Liquid waste – this will undergo further treatment in the LWTP, and Dewatered soils – these will be transferred to the soil treatment bays to undergo decontamination (as described in 6.2 of the OWMP). <p>The reagents used would then be as per the relevant bulk soil treatment train (Section 6.2 of the OWMP) or liquid waste treatment train (Section 6.4 of the OWMP). Reagents would be stored within the reagent storage areas (as described in Section 6.7 of the OWMP).</p> <p>The waste classification and tracking procedure and the waste screening and batch control procedures set out in Sections 5.2 of the OWMP would be used to identify the appropriate treatment train for the specific waste stream. This would include consideration of the appropriate treatment train for multiple agents of contamination present. Any wastes that do not meet the treatment criteria would not be accepted onsite.</p> <p>Following treatment, the materials will undergo validation testing. If contaminants are still present in the material the load will be bench tested again and a new treatment process will be identified.</p>	
<p>4/12/2023 Appendix B – Section 1.4.7.2.3 “Sludges would be delivered to the Site by tankers ranging in capacity from 2,000 L to 20,000 L. Tankers would unload sludge directly into designated containment bays or pits. Each batch of sludge would be unloaded in a pre-allocated pit, with no mixing of loads permitted.”</p> <ul style="list-style-type: none"> It is unclear where the ‘pits’ are located? 	<p>The location of the sludge pits are shown in the site layout figure, refer to Figure 1-4 of the Proposal Description (Appendix B). An updated and consolidated set of plans has been prepared by SMEC for the proposed Facility and are provided in Appendix E of the Amendment Report.</p> <p>The pits are located in the northern end of Compartment 1.</p>	<p>Figure 1-4 of the Amended Proposal Description (Appendix B)</p> <p>Consolidated design drawings (Appendix E)</p>

EPA Query (including date of query)	Response/Comment	Reference
Sampling and validation testing		
<p>4/12/2023 Provide more information regarding the “Validation Testing” proposed.</p> <p>June - August 2023 The EPA also requested that the applicant provide supporting evidence that the proposed treatment technologies can be applied at the facility taking into consideration</p> <p>The number of samples to be taken for post-treatment validation, the suite of analytes that will be tested for and the validation process proposed to be adopted</p> <p>June – August 2023 A waste classification table that references the relevant NSW Classification methods. For each contaminant the EPA needs to know:</p> <ul style="list-style-type: none"> • A detailed outline of the processes you would use to ensure the product meets the requirements of the Waste Classification table 	<p>Following treatment, all outputs will be tested to determine post-treatment contaminant loads and confirm success of the treatment methodology. Only wastes that meet landfill acceptance criteria will be disposed of at an appropriately licenced landfill (Table 73 of the Draft OWMP and the Waste Type and Treatment Table (Annexure A to the Amended Proposal Description)). Any waste intended for landfill that does not meet landfill acceptance criteria (as outlined in the Waste Type and Treatment Table) will undergo further treatment or be disposed of at an alternative appropriately licenced facility. Assessment and characterisation of the material for offsite disposal will be undertaken in accordance with the requirements outlined in the NSW EPA 2014 Waste Classification Guidelines. Section 1.4.2. of the Amended Proposal Description (Appendix B) outlines the pre and post treatment waste classifications for material received at the Facility.</p> <p>Samples for testing will be sent to a NATA accredited laboratory.</p> <p>If the results indicate the material has not responded to treatment it will undergo bench scale testing again to identify an appropriate treatment methodology. The material will undergo testing and validation after the alternative treatment train has been completed.</p> <p>Section 6.5 of the OWMP outlines the process for testing and validation.</p> <p>In accordance with Revised Environmental Mitigation Measure (REMM) MW10, Sampling and Analysis Quality Plans (SAQPs) will be prepared for the treatment of soils and liquid waste at the Site. Section 1.4.10.5 of the Amended Proposal Description (Appendix B) notes that a SAQP will be developed for each of the waste treatment processes and will address:</p> <ul style="list-style-type: none"> • Waste characterisation • Waste acceptance • Bench scale treatment and testing • Batch scale treatment and testing • Validation processes for each treatment batch. <p>The SAQPs will be developed for each of the waste treatment and validation processes and will be included as Appendix A to the OWMP. Validation testing would be in accordance with the EPA Waste Classification Guidelines six step process for classifying waste as outlined in Table 72 of the OWMP.</p>	<p>Table 72, Section 6.5 and Table 73 of the Draft OWMP (Appendix H)</p> <p>Revised Environmental Management Measures (Appendix C)</p> <p>Waste Type and Treatment Table (Annexure A of the Amended Proposal Description - Appendix B)</p> <p>Section 1.4.2 and Section 1.4.10.5 of the Amended Proposal Description (Appendix B)</p>

EPA Query (including date of query)	Response/Comment	Reference
<p>4/12/2023 Appendix B – 1.4.8 – “Recovered recyclable materials from physical screening such as timber, brick, plastics and metals would be suitable for further reprocessing and recycling. Following testing, these materials would be delivered to a third party resource recovery facility for recycling.”</p> <p>What is the testing process alluded to here?</p>	<p>As described in Section 1.4.11 of the Amended Proposal Description (Appendix B), the final testing of materials prior to offtake would be summarised in a report that includes:</p> <ul style="list-style-type: none"> Analytical Results A summary of NATA accredited lab reports against batch records A validation report for waste supplier and landfill Compilation of waste disposal facility documentation, including field testing (where applicable). <p>SAQPs will be developed for each of the waste treatment and validation processes and will be included as Appendix A to the OWMP. Validation testing would be in accordance with the EPA Waste Classification Guidelines six step process for classifying waste as outlined in Table 72 of the OWMP.</p> <p>Testing and validation is also discussed in Section 6.5 of the OWMP. The validation testing will be used to determine whether the waste is destined for landfill or can be reprocessed or reused by a third-party facility. The test report will also be provided to the facility that receives the material.</p>	<p>Section 1.4.11 of the Amended Proposal Description (Appendix B)</p> <p>Section 6.5 and Table 7-2 of the Draft OWMP (Appendix H)</p>
<p>Waste types and classifications</p>		
<p>June – August 2023 In relation to Waste Management – a substantial portion of the information requested in the EPA’s correspondence of 14 January 2022 has not been provided. Without this information, the EPA is unable to adequately assess the potential impacts to the environment and community from the proposal. The EPA is unable to provide further comment without this information;</p> <ul style="list-style-type: none"> Further clarification on: the waste acceptance criteria for each of the waste streams to be accepted for treatment at the Site the means of transporting each of the waste streams to the site the limits that the waste streams would need to meet through treatment. <ul style="list-style-type: none"> June – August 2023 A waste classification table that references the relevant NSW Classification 	<p>Additional information has been provided in the form of maximum contaminant concentrations tables for soil and packaged waste (Annexure B to Appendix B) which includes the potential contaminants that may be present in each waste type and its maximum concentration. The treatment processes for each waste type are described in detail in Section 6 of the OMWP as are the delivery method for each waste type.</p> <p>Transport of each of the waste streams to the site would be the responsibility of the customer. The anticipated type and number of heavy vehicles that would be expected to transport the various waste streams to the Facility are outlined in Table 1-15 of the Amended Proposal Description. The delivery method, for each waste type, has then been specified in Waste Type and Treatment Table (Annexure A to Appendix B). Further an Operational Traffic Management Plan (OTMP I - Appendix) has been prepared to provide further information regarding the management of traffic and transport for materials to and from Site. Section 2.5 of the OTMP outlines the operational procedures for delivery of waste to and from the Site.</p> <p>In accordance with Revised Environmental Mitigation Measure (REMM) MW10, a Sampling and Analysis Quality Plans (SAQPs) will be prepared for the treatment of soils and liquid waste at the Site. The SAQPs will outline the limits that the waste streams would be required to meet through treatment. The limits for the waste streams would be in accordance with the NSW EPA 2014 Waste Classification Guidelines.</p>	<p>Waste Type and Treatment Table (Annexure A to the Amended Proposal Description - Appendix B)</p> <p>Draft OTMP (Appendix I)</p> <p>Draft OWMP (Appendix H)</p> <p>Annexure B of the Amended Proposal Description (Appendix B)</p>

EPA Query (including date of query)	Response/Comment	Reference
<p>methods. For each contaminant the EPA needs to know:</p> <ul style="list-style-type: none"> Contaminant and delivery method Ranges/concentrations that will be treated Exact and detailed processes that will be used 		
<p>June – August 2023 A waste classification table that references the relevant NSW Classification methods. For each contaminant the EPA needs to know:</p> <ul style="list-style-type: none"> A detailed outline of the specific agents that would be added to treat the contaminant 	<p>The reagents proposed to be used on Site are listed in Table 1-16 of the Amended Proposal Description (Appendix B).</p> <p>Appendix B (Amended Proposal Description) has been updated to address the storage locations of reagents. Reagents would be stored internal to the building and used in treatment processes described in Section 1.5 of the Amended Proposal Description. Where required, storage solutions may be used for stacking of reagents, buffer distances would be maintained as appropriate.</p> <p>A description of reagents is also provided in Section 6.7 of the OWMP and type, nature and quantities of reagents is also provided in Appendix B of the Hazard Identification Report (Appendix L).</p>	<p>Table 1-16 and Section 1.5 of the Amended Proposal Description (Appendix B)</p> <p>Section 6.7 of the Draft OWMP (Appendix H)</p> <p>Appendix B of the Hazard Identification Report (Appendix L)</p>
<p>June – August 2023 A waste classification table that references the relevant NSW Classification methods. For each contaminant the EPA needs to know:</p> <ul style="list-style-type: none"> A detailed outline of what would be done with the waste streams that are created as a result of the treatment process <p>June – August 2023 Clarification of the management and disposal of contaminated waste generated by the wastewater treatment plants</p> <p>4/12/2023 Appendix B – 1.4.8 - Materials used in the LWTP, including Granular Activated Carob (GAC) and VZC, would be containerised and disposed of offsite at an appropriately licensed landfill.</p>	<p>Further detail regarding waste classification has been provided in Section 1.4.2 of the Amended Proposal Description (Appendix B) and Section 5.3 of the Amendment Report, including waste classification tables for pre and post treatment waste.</p> <p>A detailed draft OWMP (Appendix H) has been prepared to provide further detail regarding the operation of the Facility. The OWMP describes each of the waste treatment processes including management of the by-products of treatment and operation of the LWTP.</p> <p>The treatment of bulk soils may produce leachate as a result of the material being wet down during treatment or for dust suppression. The leachate would be collected within the Facility’s leachate collection pits which are then fed into the LWTP for treatment.</p> <p>As outlined in Section 6.4 of the OWMP, treatment of liquid waste via the LWTP would result in by-products of solids (known as filter cake) and treated wastewater:</p> <ul style="list-style-type: none"> The filter cake produced from the filter press will be variable in composition due to the variability of the wastewater to be treated. The filter cake will be classified as a regulated waste due to being a by-product from a treatment process. Each batch of filter cake will be analysed to determine if it can be accepted at a regulated waste landfill. Typically, filter cake will meet landfill acceptance 	<p>Section 1.4.2 of the Amended Proposal Description (Appendix B)</p> <p>Section 5.3 of the Amendment Report</p> <p>Section 6.4 of the Draft OWMP (Appendix H)</p> <p>Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K)</p>

EPA Query (including date of query)	Response/Comment	Reference
<p>More information is required on how these wastes are containerised and sent to landfill. What type of containers?</p>	<p>criteria as General Solid Waste or Restricted Solid Waste allowing landfill disposal. However, if the filter cake is hazardous, the filter cake will be treated and immobilised/stabilised according to the contaminants present before offsite landfill disposal.</p> <ul style="list-style-type: none"> • Liquid waste will be sampled at several points through the treatment train to confirm the effectiveness of treatment, and prior to disposal. Treated liquid waste will be tested for compliance with Sydney Water’s trade wastewater specification prior to discharge to sewer. Some treated wastewater that meets re-use criteria may be reused onsite for dust suppression. <p>Spent filtration media, activated carbon and ion exchange resins from the LWTP will be stored in labelled 1000 litre IBC drums, sampled and analysed. Disposal will be determined based on this analysis with disposal options being direct to landfill disposal, treatment prior to disposal to landfill (onsite or offsite), disposal via thermal destruction (e.g. to Victoria) – waste transport protocols will be followed as required.</p> <p>The containers to be utilised for storage of spent filtration media would be filled and stored in Compartment 2 in the LWTP. Compartment 2 contains a number of controls for the handling and storage of materials, including:</p> <ul style="list-style-type: none"> • Design / physical controls including - the Facility is fully enclosed with impervious surfaces and rollover bunding with suitable storage capacities (e.g. 100% of the largest tank capacity in Compartment 2), scrubber / HVAC system in place, processing lines include isolation valves and alarms, emergency wash down showers and spill kits are located throughout the facility, fire management infrastructure, signage and placards. The bunded areas and leachate diversion platforms locations are detailed on the Site Layout Plan and drainage is shown in the Hydraulics Services Detailed Design (Appendix E4 of the Amendment Report). • Management features (as summarised in the OEMP and OWMP) including hot works permit, staff training, maintenance schedules, mandatory PPE requirements, use of two-way radios and working in pairs protocols • An Incident and Emergency Response Plan and Spill Response Plan are provided within the OEMP (Appendix F) <p>The full procedure for liquid waste treatment is provided in Section 6.4 of the OWMP. Additionally, a Liquid and Hazardous Waste Risk Identification and Minimisation Report (Appendix K) has been prepared to assess the likelihood of any risks and to identify appropriate environmental controls.</p>	

EPA Query (including date of query)	Response/Comment	Reference
Mixing of waste and waste incompatibility		
<p>June – August 2023 How will materials be managed onsite to prevent issues arising from the mixing of incompatible waste types?</p> <p>4/12/2023 The EPA requires the Applicant to detail how incompatible materials will be identified and stored separately. Details of the how the separation will be achieved is required (bays, walled sections etc).</p>	<p>HiQ has prepared an updated list of waste codes to be received at the Facility (Annexure A to the Amended Proposal Description), which has removed a number of waste codes as being acceptable for receipt at the Facility. As outlined in the Amended Proposal Description (Appendix B) no waste received at the Facility would be mixed, with each waste batch treated individually.</p> <p>With the exception of relatively small quantities of Class 8 PG II and III liquid waste and packaged waste and Class 9 PG III PFAS waste (refer Section 4.2 of the OWMP) no Dangerous Goods would be received at the Facility.</p> <p>A Hazard Identification Report (Appendix L) has been prepared by Sherpa which includes a detailed appraisal of the safety and environmental risks associated with the operation of the Facility.</p> <p>The Hazard Identification Report considered incompatible mixing risks within various plant area, activities and process units (see Risk ID 3, 12, 20, 27, 34, 36, 45, 47, 48, 61, 87, 95 and 100). No high risks were identified in the risk assessment with each of the risks identified as low and being effectively managed by the OEMP, OWMP and other respective mitigations. Only one medium managed risk was identified being associated with reagent spills in the LWTP reagent storage area. Reagents caustic soda and hydrochloric acid would be stored in separate safety cabinets in compartment 2 and compartment 1 respectively.</p> <p>Waste handling and management procedures are detailed in Section 5 of the OWMP (Appendix H). In summary, prior to acceptance onsite, the waste generator will need to provide results from a NATA accredited laboratory to enable an appraisal of the treatability of the waste. A waste tracking number would then be assigned to the load. This would be used to track the waste through the treatment process(es) and ultimate disposal. Each load is to be assigned its own bay, there is to be no mixing of loads. An unexcepted finds protocol is provided in the OEMP for any non-conforming waste that arrives at the Facility.</p> <p>Table 41 of the OWMP summarises the storage location and limits of each waste type that would be received, stored, or generated as a by-product at the Site and Figure 1-4 in Amended Proposal Description (Appendix B) identifies the bays that would be used to store each waste type. Each of the bays are separated by push walls, and stockpiles would be maintained at a height at least one metre less than the push wall to ensure there is no spillage from the bays. In the case of packaged waste, waste that is found to have a low (acidic) pH would be stored in a separate bay (within Bay F) to waste found to have a high (alkaline) pH. Each bay will have its own mobile containment bunding.</p>	<p>Hazard Identification Report (Appendix L)</p> <p>Waste Type and Treatment Table (Annexure A to the Amended Proposal Description - Appendix B)</p> <p>Section 4 and 5 of the Draft OWMP (Appendix H)</p> <p>Draft OEMP (Appendix F)</p> <p>Figure 1-4 of the Amended Proposal Description (Appendix B)</p>

EPA Query (including date of query)	Response/Comment	Reference
<p>4/12/2023 How will the Applicant transfer material into the mixer and how will cross contamination with other stockpiles of hazardous waste be avoided.</p>	<p>As described in Section 6.2.1 of the OWMP, each soil waste batch will be assigned a separate bay, with no mixing of batches permitted. Dedicated bays are allocated for storage, conditioning and final validation of materials, as shown in the Site Layout Plan (Figure 1-4 of the Amended Proposal Description).</p> <p>The material to be treated by immobilisation would be transferred from its designated storage bay to the high shear mixer using an excavator or front-end loader. Once treated, the material would be directly transferred to the allocated storage bay via the high shear mixer covered feed belt. Moisture content is increased in the material prior to being fed onto the belt to ensure a uniform and homogenous mixture is produced that is deposited into its designated storage bay.</p> <p>Equipment and bays would be decontaminated, in accordance with the relevant procedures set out in Section 6.2.1 of the OWMP prior to handling or treatment of other waste loads. This ensures that there would be minimal opportunity for cross contamination between waste batches.</p> <p>Cross-contamination would also be minimised by allocated leachate diversion platforms and bunding around storage bays. These would direct any liquids from the soils to the back of the bays where it would be re-incorporated into the waste using an excavator.</p> <p>A Hazard Identification Report (Appendix L) assessed the potential risk of interactions between the waste materials to be accepted and treated onsite finding no high risks arising from accidental cross-contamination of waste types. The assessment also outlined relevant environmental controls which would be put in place minimise risk of cross-contamination.</p>	<p>Figure 1-4 of the Amended Proposal Description (Appendix B)</p> <p>Section 6.2 of the OWMP (Appendix H)</p> <p>Hazard Identification Report (Appendix L)</p>
<p>4/12/2023 Appendix B – Section 1.4.7.2 – “ASS would be stored separate to other bulk soils as identified in Figure 1-5. As with bulk soils, each load would be assigned a separate bay”</p> <ul style="list-style-type: none"> - What processes are in place to prevent cross contamination between loads? 	<p>The ASS Treatment procedure is provided in Section 6.2.2 of the OWMP (Appendix H). Since the timing of this comment a Draft Acid Sulfate Soils Management Plan (Appendix F to the OWMP) has also been prepared. Figure 1-4 in the Amended Proposal Description (Appendix B) shows the location of bays and their designation. ASS/PASS have a nominal allocation of 3 bays located in the south-east corner of Compartment 1.</p> <p>Each load of waste would be assigned a dedicated bay and there would be no mixing of loads. Cross-contamination of material loads within the high shear mixer would be avoided through washdown of the mixer between loads. All areas within the Facility will be bunded to contain and run-off would be captured by the leachate diversion platforms. Each of the bays would be decontaminated using Decon90 or Liquinox so that there is no residue left in the bay which would lead to cross contamination between waste loads.</p>	<p>Section 6.2.2 of the Draft OWMP (Appendix H).</p> <p>Draft Acid Sulfate Soils Management Plan (Appendix F to the OWMP)</p>

EPA Query (including date of query)	Response/Comment	Reference
Hazardous waste		
<p>4/12/2023 EPA request more information on the storage of dangerous goods</p>	<p>The storage limits for waste that is classified as ‘Dangerous Goods’ has been confirmed and included in the Amendment Report (Section Error! Reference source not found.5), OEMP and OWMP. Section 4.3 of the OWMP (Appendix H) includes dangerous goods storage locations and storage limits. No waste streams would be brought to the Site that would meet the classification of a Dangerous Good except Dangerous Goods Code Class 8, Packing Groups II and III and Class 9 PG III, and these would be present on site in quantities below the thresholds set out in Applying SEPP 33. Measures for the storage and management of reagents that are Dangerous Goods are included in the OWMP</p> <p>Some liquid waste and packaged waste may be brought to Site may meet the classification of Dangerous Goods Code Class 8, PG II and III and Class 9 PG III. Liquid waste and packaged waste that meet these classifications would be transported to the Site in accordance with the requirements of the ADG Code. The liquid waste and packaged waste would be received from contaminated sites within the Sydney region. The liquid waste would be transferred to a designated tank in the LWTP and the Dangerous Goods Class 8 that are transported as packaged waste would be stored within a designated bay within the packaged waste storage area. These would be stored and handled in accordance with AS 3780-2008: The storage and handling of corrosive substances.</p> <p>In addition, Caustic Soda and Hydrochloric Acid would be used as reagents within the LWTP; both of these reagents are classified as Dangerous Goods Class 8, PG II. Storage requirements for each of these reagents are covered in Section 6.7 of the OWMP.</p> <p>A Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K) has been prepared which outlines the detailed controls in place for the management of hazardous waste and Dangerous Goods (including reagents).</p> <p>A detailed description of the controls that would be in place to manage reagent and hazardous waste storage is outlined in the Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K). In summary these controls comprise (refer Section 3.2.2, 3.2.3, 3.6.2 and 3.6.3):</p> <ul style="list-style-type: none"> • Compliance with applicable guidelines and standards including AS1894 The storage and handling of non-flammable and combustible liquids and AS3780 The storage and handling of corrosive substance (other applicable guidelines are detailed in Section 3.2.2 of the Liquid and Hazardous Waste Risk Identification and Minimisation Report (Appendix K)) 	<p>Section 5.3.5 of the Amendment Report</p> <p>Amended Proposal Description (Appendix B)</p> <p>Section 4.3 and 6.7 of the draft OWMP (Appendix H)</p> <p>Liquid and Hazardous Waste Risk Identification and Minimisation Report (Appendix K)</p>

EPA Query (including date of query)	Response/Comment	Reference
	<ul style="list-style-type: none"> • Specific storage requirements for reagents that are classified dangerous goods (Hydrochloric Acid and Caustic Soda are outlined in Table 3-4 of Appendix K. Hydrochloric acid will be stored on its own within a locked safety cabinet. • Design / physical controls including - the Facility is fully enclosed with impervious surfaces and rollover bunding with suitable storage capacities (e.g. 100% of the largest tank capacity in Compartment 2), scrubber / HVAC system in place, processing lines include isolation valves and alarms, emergency wash down showers and spill kits are located throughout the facility, fire management infrastructure, signage and placards. The bunded areas and leachate diversion platforms locations are detailed on the Site Layout Plan and drainage is shown in the Hydraulics Services Detailed Design (Appendix E4 of the Amendment Report). • Management features (as summarised in the OEMP and OWMP) including hot works permit, staff training, maintenance schedules, mandatory PPE requirements, use of two-way radios and working in pairs protocols • An Incident and Emergency Response Plan and Spill Response Plan are provided within the OEMP (Appendix F). 	
<p>4/12/2023 Appendix B – Section 1.4.7.1 - where are the packaged hazardous chemical wastes proposed to be stored? Are they proposed to be stored on shelves above the PMF?</p>	<p>The Packaged waste storage area is identified on Figure 1-4 of the Amended Proposal Description (Appendix B). Packaged liquid waste will be stored on raised platforms / shelving above the PMF as described in Section 6.1 of the OWMP and Section 1.4.10.1.2 of the Amended Proposal Description.</p> <p>Caustic Soda and Hydrochloric Acid would be used as reagents within the LWTP, both of these reagents are classified as Dangerous Goods Class 8, PG II. These reagents would be stored separately in individual safety cabinets above the PMF. The storage requirements for each of these reagents are covered in Section 6.7 of the OWMP.</p> <p>A Hazard Risk Identification Report (Appendix L) has been carried out to identify and quantify risks associated with the Facility, including those associated with the storage of packaged waste. The assessment found this to pose a low risk that would be effectively managed by storing the packaged waste above the PMF level.</p> <p>Further, a Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K) has been prepared which specifically identifies risk and controls for managing hazardous waste.</p>	<p>Figure 1-4 and Section 1.4.10.1.2 of the Amended Proposal Description (Appendix B)</p> <p>Section 6.1 and 6.7 of the draft OWMP (Appendix H)</p> <p>Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K)</p>
<p>4/12/2023 The site is therefore proposed to be utilised as a transfer station. Where are these waste streams coming</p>	<p>Some waste streams are proposed to be stored only, with no treatment proposed; including PFAS contaminated soil and packaged waste. Waste sources are typically manufacturing and industrial</p>	<p>Amended Proposal Description</p>

EPA Query (including date of query)	Response/Comment	Reference
<p>from, why do they need to be temporarily stored and where are they going to?</p>	<p>sources, or in some cases from illegal dumping. The purpose of the Facility is to provide a safe, regulated place to store contaminated waste prior to transfer to appropriate treatment or disposal facilities.</p> <p>In the case of PFAS contaminated soil there is a need for an appropriate storage within the Sydney Region:</p> <ul style="list-style-type: none"> • PFAS contaminated material cannot be accepted within NSW landfills and typically requires transport to either QLD or VIC • Concessions/waiting periods to enter QLD and VIC range from two weeks to three months • In the interim material needs to be stored safely to minimise risk of harm to human health or the environment. 	
Soils screening and recovered material		
<p>4/12/2023 What is being screened and where are these contaminants being stored and disposed of?</p>	<p>Bulk soils will undergo physical screening to separate oversize and non-soil materials, such as plastics, metals, timber, concrete and aggregate, and cardboard and paper. This will be achieved through use of the screen within the high shear mixer, a mobile screen, or an excavator with a screening bucket attachment. Physical screening would have the benefit of breaking up clods in soils and clay, to improve the performance of further treatment technologies.</p> <p>Non-soil materials that have been separated out during physical screening will be transferred to the storage and transfer bay (Figure 1-4 of the Amended Proposal Description). These materials will be tested to confirm they are not contaminated prior to being transported to a suitable facility for recycling.</p> <p>This process is covered in further detail in Section 6.2.1.1 of the OWMP.</p>	<p>Section 6.2.1.1 of the Draft OWMP (Appendix H)</p> <p>Figure 1-4 of the Amended Proposal Description (Appendix B)</p>
<p>4/12/2023 Appendix B – Section 1.4.7.2 – Recovered material from physical separation.</p> <p>Where are these materials going to be stored before collection? How will you deal with the possibility of residual chemical contamination on recovered material?</p>	<p>Recovered material from physical separation would be stored in dedicated recovered recyclable material bays or transfer and storage bays (shown on Figure 1-4 of the Amended Proposal Description).</p> <p>These materials will be tested to confirm they are not contaminated prior to being transported to a suitable facility for recycling. Should testing identify that contamination is present they will be classified in accordance with the Waste Classification Guidelines (EPA, 2014) and disposed of at an appropriately licensed facility.</p>	<p>Figure 1-4 of the Amended Proposal Description (Appendix B)</p>

EPA Query (including date of query)	Response/Comment	Reference
Packaged waste for product destruction		
<p>4/12/2023 Appendix B – Section 1.4.7.1 – What type of shredder would be used</p> <p>What is the capacity of the shredder?</p>	<p>As outlined in Section 6.1.1 of the OWMP (Appendix H), packaged waste for product destruction and empty packaging will be put through the Brentwood AZ50HD dual shaft shredder (or similar), which has a throughput of 7-8 tonnes per hour, prior to offsite disposal at an appropriately licensed facility.</p>	<p>Section 6.1.1 of the draft OWMP (Appendix H)</p>
<p>4/12/2023 How much shredded waste is stored on sites at any given time?</p>	<p>A maximum of 50m³ of combustible shredded waste material would be stored onsite at any given time (Table 1-10 of the Amended Proposal Description).</p> <p>A total maximum of 400 tonnes of total packaged waste (including shredded waste) may be stored onsite at any one time.</p>	<p>Table 1-10 of the Amended Proposal Description (Appendix B)</p>
<p>4/12/2023 Where would the shredded waste be sent (provide details of licensed facilities to be used).</p>	<p>Shredded waste would be sent offsite to a licensed landfill, as General Solid Waste (refer Waste Type and Treatment Table (Annexure A to the Amended Proposal Description). A list of licenced facilities is provided in Table 7-3 of the draft OWMP (Appendix H).</p>	<p>Waste Type and Treatment Table (Annexure A to the Amended Proposal Description - Appendix B)</p> <p>Table 7-3 of the Draft OWMP (Appendix H)</p>
Offtake of waste		
<p>4/12/2023 What licenced landfills is the Applicant proposing to utilise?</p> <p>4/12/2023 Appendix B – Section 1.4.7.2 – “Soils, sediments and sludges of varying moisture content and contaminant classification would be received at the Site and would be subject to various processes to treat and decontaminate the material as far as practicable, prior to disposal at an appropriately licensed landfill or alternative treatment facility”.</p> <p>Where will soil be sent for disposal or what is the proposed alternative treatment facility?</p>	<p>The Waste Type and Treatment Table (Annexure A to the Amended Proposal Description) outlines the offtake Facility proposed for each waste type.</p> <p>Soil from sludges will be sent offsite to a licensed landfill for Restricted or GSW Waste as determined by the characterisation testing during validation.</p> <p>A list of licenced facilities is provided in Table 7-3 of the OWMP of the Amended Proposal Description.</p>	<p>Waste Type and Treatment Table (Annexure A to the Amended Proposal Description – Appendix B)</p> <p>Table 7-3 of the Draft OWMP (Appendix H)</p>

EPA Query (including date of query)	Response/Comment	Reference
<p>4/12/2023 Appendix B – Section 1.4.7.2 – Neutralised ASS would be transferred to a suitably licenced landfill for disposal.</p> <p>- How will the waste be loaded onto the trucks?</p>	<p>Once the ASS has been treated, the material would be loaded onto the trucks via the soil loading procedure which is detailed in Section 7.4.1 of the OWMP (Appendix H).</p> <p>In summary, the loading process would involve the following steps:</p> <ul style="list-style-type: none"> • Communication between the truck driver and spotter will be via UHF radio • The spotter checks communication with the incoming truck is active by receiving a response from the driver. This should be repeated during the critical periods of the loading process • The truck driver will remain in their cabin to eliminate risk of exposure to airborne contaminants and/or fumes present within the Facility. • The spotter will load the truck with the soil material using an excavator and/or front-end loader <p>The full soil loading procedure in Section 7.4.1 of the OWMP includes further detail including preparation, cleaning and exit and bay washdown and decontamination.</p>	<p>Section 7.4.1 of the Draft OWMP (Appendix H)</p>
<p>4/12/2023 What are the contingencies if the waste cannot be sent anywhere?</p>	<p>The Waste Type and Treatment Table (Annexure A to the Amended Proposal Description) outlines the offtake Facility proposed for each waste type. A list of licenced facilities is provided in Table 7-3 of the OWMP. As numerous facilities have been identified, it is considered unlikely that waste would not be possible to send anywhere.</p> <p>Further, each of the waste types proposed to be received at the Facility are also approved for receipt at HiQ’s Yatala Facility in Queensland (which can carry out either additional treatment or access to further disposal if required).</p>	<p>Waste Type and Treatment Table (Annexure A to the Amended Proposal Description – Appendix B)</p> <p>Table 7-3 of the Draft OWMP (Appendix H)</p>
General / other		
<p>June – August 2023 Please review the list of documents the EPA has received. It is suggested that documents and parts of documents that are no longer relevant be marked as such.</p>	<p>The Amendment Report and the Amended Proposal Description (Appendix B) have been developed to consolidate all current information into a single document. These documents are to be referred to when assessing the Project. A Document Status Table is provided in Appendix D.</p>	<p>The Amendment Report</p> <p>Amended Proposal Description (Appendix B)</p> <p>Document Status Table (Appendix D)</p>
<p>4/12/2023 Reference to repealed SEPP’s needs to be updated</p>	<p>New documentation provided to accompany the Amendment has been checked to ensure the latest State Environmental Planning Policy’s are referenced.</p>	<p>All Documents</p>

EPA Query (including date of query)	Response/Comment	Reference
	The Amendment Report makes reference to the repealed SEPPs as these were in force at the time of the EIS.	
<p>4/12/2023 State significant development guidelines – preparing an amendment report - Appendix D to the state significant development guidelines states:</p> <ul style="list-style-type: none"> the applicant should include an updated statutory compliance table for the amended project as an appendix to the amendment report. This table should identify all the relevant statutory requirements for the amended project and indicate where they have been addressed either in the amendment report or the associated EIS or modification report 	An updated statutory compliance table was provided in Appendix A of the Amendment Report.	Updated Statutory Compliance Table (Appendix A)
<p>4/12/2023 Council and the EPA have concerns that the wastes will be stored and processed below the PMF level including the leachate and water management system.</p> <p>Following the receipt of Council’s response to the RTS which again identifies this as an issue, have any meetings or correspondence occurred with Council to work through the issue? If so, what were the results of the meetings. If not, please provide a rationale for not discussing the issue with Council.</p>	<p>A further meeting was held with Council on 12 December 2023 to discuss their comments regarding flooding planning considerations. A letter was sent to Council in response to comments raised during the meeting to confirm based on the Preliminary Risk Screening Assessment (PRSA) completed by Golder (2021), that the Proposal is not required to meet a flood planning level of the PMF. However, all waste and reagents classed as Dangerous Goods Class 8 PG II and III would be stored above the PMF level on elevated racking and be stored in accordance with the relevant Australian Standards.</p> <p>Email correspondence received from Council (dated January 17 2024) confirms the Facility to not be deemed to be a sensitive or hazardous development (and therefore is not required to meet a flood planning level of the PMF), and reiterating the intention that all Dangerous Goods are to be stored above the PMF. This email correspondence has been provided to DPHI directly.</p> <p>As previously outlined to Council and the EPA the Site is considered to have a relatively high level of flood immunity, up to and including the 1 in 500 year event and above the 1% AEP event. A review of the flood hazard under the PMF (an event found to have a probability of occurrence in less than 1 in 10,000,000 years) identified that flood waters would likely have a low velocity presenting minimal risk, especially noting controls in place within the Facility (including bunding of the entire Facility).</p>	Correspondence from Liverpool City Council provided to DPHI directly

Response to the NSW EPAs' comments from 26 April 2024

EPA comment	Response	Reference
<p>Trade waste</p> <p>Sydney Water – trade wastewater licence</p>		
<p>Provide evidence the Applicant has initiated discussions with Sydney Water to obtain a trade wastewater licence for the proposal</p>	<p>A draft Section 73 feasibility application was prepared and submitted to Sydney Water in July 2024. Sydney Water has requested further information on the operation of the Facility and for discharge volumes to be provided by a hydraulic consultant. An updated feasibility assessment was relodged in October 2024 with the additional information requested by Sydney Water. Sydney Water has requested further information on the operation of the Facility following submission of the above information. This information will not be available until following project approval and completion of detailed design. As such the application is currently on hold until more project detail is available.</p>	<p>Details of correspondence provided to DPHI directly</p>
<p>Packaged hazardous waste</p> <p>Based on the information provided, the site does not appear to be suitable for the proposed development</p>		
<p>The Applicant has committed to not receiving any waste streams on site that would meet the classification of Dangerous Goods (DGs) other than DGs Code Class 8, Packing Groups II and III. However, the documents submitted do not currently reflect this commitment. The ADR includes an expansive list of waste streams that are incompatible and potentially have toxic, flammable and reactive characteristics.</p>	<p>Following discussions with the EPA, it has been advised that PFAS be classified as a Dangerous Good under Class 9 Packing Group III due to its potential to be an “environmentally hazardous substance”. Subsequently, the only waste considered to be Dangerous Goods that will be permitted to be received at the Facility are as DGs Class 8, Packing Groups II and III, and DGs Class 9, Packing Groups III (refer to Section 5.3.4 of the Amendment Report). These may be either within packaged waste (for storage only) or within liquid waste to be treated at the LWTP.</p> <p>Section 4.3 of the OWMP (Appendix H) outlines the type of waste that are Dangerous Goods that would be received at the Facility, including the maximum storage amount allowable on site at any one time.</p> <p>A revised list of waste codes has been prepared and provided in Waste Type and Treatment Table (Annexure A to the Amended Proposal Description – Appendix B). The revised list of acceptable waste codes has removed a number of waste that may have been deemed to be Dangerous Goods.</p> <p>Some waste codes identified within the list of waste codes proposed to be received at the Facility align with DG classifications under certain circumstances. However, for material to be considered a DG it must display</p>	<p>Waste Type and Treatment Table (Annexure A to the Amended Proposal Description – Appendix B)</p> <p>Section 4.3 and 5.3.1 of the Draft OWMP (Appendix H)</p>

EPA comment	Response	Reference
	<p>dangerous characteristics. The Australian Dangerous Goods Code (2022) outlines the specific parameters/characteristics of a good that need to be met for that good to be considered a DG. Several factors determine whether a substance is deemed to be dangerous (its concentration, chemical properties as well potential hazards such as toxicity). Specific testing will be carried out for any waste with potential to be considered a Dangerous Good, and the waste load will be rejected if it is found to have the concentrations/characteristics that would deem it to be dangerous.</p> <p>Mostly, the waste codes that are likely those being referred to by the EPA in this comment, relate to those that may be found within packaged waste or liquid waste, where it will be highly diluted and below the thresholds for the characteristics that would deem it to be a DG.</p> <p>The waste classification and tracking procedure, and the waste screening and batch control procedures set out in Section 5 of the OWMP which would ensure no goods arrive at the Facility that are not permitted. Section 5.3.1 of the OWMP outlines specific pre-screening measures to ensure no Dangerous Goods enters the Facility beyond those identified as acceptable.</p>	
<p>Provide detail around the potential sources of each waste code and maximum quantities for each waste type, so that site layout design can cater for maximum quantities.</p>	<p>Source material will primarily be generated from industrial processes and contaminated sites from within the Sydney region.</p> <p>Section 1.1.3 of the Amended Proposal Description (Appendix B) describes the maximum quantities of waste to be received at the Facility. Maximum storage volumes are outlined in Section 1.4.8 of the Amended Proposal Description (Appendix B). Maximum storage volumes by contaminant type are provided in Annexure B to the Amended Proposal Description.</p> <p>A comprehensive review of the Facility's operational capacity, as well as market conditions, has been carried out in response to stakeholder queries. As a result of this review, HiQ are proposing to reduce the annual throughput to 210,500 tonnes per annum (tpa), as well as reduce the onsite storage limits at any one time.</p> <p>A detailed explanation of the proposed throughputs and the Facility's capacity is provided in Section 5.1.2 of the Amendment Report which has found that at the reduced throughput handling, capacity of the Facility is sufficient. As a result of the reduced throughput the draft OTMP (Appendix I) has been updated to account for the lower volume of trucks that would be required. A detailed swept path analyses have also been updated</p>	<p>Section 5.1.2 of the Amendment Report</p> <p>Section 1.1.3 and Section 1.4.8 of the Amended Proposal Description</p> <p>Draft OTMP (Appendix I)</p>

EPA comment	Response	Reference
	showing sufficient space to operate the Facility based on the heavy vehicles movements (as shown in the OTMP).	
Provide evidence the: Applicant has consulted with SafeWork NSW.	WorkSafe has provided guidance on the Facility (refer email correspondence dated 16 September 2024 has been provided to DPHI directly). Implementation of SafeWork requirements will be undertaken as part of the detailed design and ongoing consultation will be carried out with SafeWork following Project Approval.	Email correspondence has been provided to DPHI directly
Provide evidence the: design of the proposed packaged waste storage area meets the design requirements of AS 3833-2007, including in relation to the segregation and spill containment.	<p>The Proposed packaging waste storage area (Compartment 3) will meet the design requirements of Australian/New Zealand Standard 3833-2024 Published 28 June 2024 <i>The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers</i>. These areas are shown in Figure 1-1 in the Amended Proposal Description (Appendix B) as well as the updated consolidated design prepared by SMEC (Appendix E). Compartment 3 is fully bunded with 250MM high roll over bunding provided at the entrance of Compartment 3.</p> <p>Any reagents (including hazardous reagents) would be stored in either Compartment 1 on pallet racking or Compartment 2, each of which would also be within fully bunded areas. Segregation has been identified as required for two of the proposed reagent types; hydrochloric acid and caustic soda. Hydrochloric acid would be stored in Compartment 1 whilst Caustic Soda would be stored in Compartment 2. Storage requirements for these items are described in Section 6.7 of the OWMP (Appendix H).</p> <p>HiQ is committed to complying with all applicable standard and requirements. Further design detail will be provided in the detailed design phase following Project Approval.</p> <p>A Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K) has been prepared which considers the risks and controls for the management of hazardous waste, including packaged hazardous waste, which outlines the required storage, segregation and spill containment features for the Facility.</p>	<p>Consolidated design drawings (Appendix E)</p> <p>Section 6.7 of the draft OWMP (Appendix H).</p> <p>Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K)</p>
Provide a detailed risk assessment, operating manual and Hazard and Operability Study (HAZOP) for the proposed consolidation process. A Hazardous Area Classification (HAC), as described below, should also consider the potential for flammable vapours to be	Following receipt of these comments, further consultation was carried out in a meeting with the EPA (date 17 June 2024). During this meeting, the EPA provided further clarity that they are looking to investigate the potential incompatibility of keeping waste materials next to each other – and that this should be considered in a risk assessment and that the HAZOP process should be followed to test any storage incompatibility between waste codes.	Revised Environmental Management Measures (Appendix C)

EPA comment	Response	Reference
<p>generated during the consolidation of hazardous chemicals.</p>	<p>At the time HiQ outlined that the HAZOP guidelines require detailed design to follow in full, and have committed to completing a HAZOP following project approval once conditions of consent and detailed design are finalised. This has been included within the Revised Environmental Management Measures (Appendix C – REMM #HR4). The EPA agreed that in the interim a gateway hazard risk study should be carried out and noted the commitment to doing the HAZOP in a more detailed manner at a later stage.</p> <p>As such, HiQ engaged Sherpa to complete a Hazard Identification Report which has been provided in Appendix L. In addition a Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K) has also been prepared.</p> <p>As per the Hazard Identification Report (Appendix L), a total of 106 safety and environmental risks associated with the operation of the Facility were identified as part of the Assessment. No High risks were identified (either unmanaged or managed). Prior to implementation of management measure a total of 64 safety and 36 environmental Medium risks were identified. Following implementation of management measures these were reduced to just 19 and 6 Medium risks respectively.</p> <p>AS/NZS IEC 60089.10.01.2022 specifies requirements for the classification of areas where flammable gas or vapour hazards may arise. No flammable or combustible gases would be received or stored at the Facility. The only flammable material to be stored at the Facility will comprise small quantities of shredded packaged waste. Any need for a Hazardous Area Classification (HAC) will be confirmed during detailed design.</p>	<p>Hazard Identification Report (Appendix L)</p> <p>Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K)</p>

EPA comment	Response	Reference
<p>Site size and waste limits</p> <p>Additional information is needed to enable the EPA to make an informed assessment</p>		
<p>The EPA still considers the site is too small for the proposed activities and yearly limits.</p>	<p>A comprehensive review of the Facility’s operational capacity, as well as market conditions, has been carried out in response to stakeholder queries. As a result of this review, HiQ are proposing to reduce the annual throughput to 210,500 tonnes per annum (tpa), as well as reduce the onsite storage limits at any one time (refer Section 1.1.3 of the Amended Proposal Description).</p> <p>A detailed explanation of the proposed throughputs and the Facility’s capacity is provided in Section 5.1.2 Error! Reference source not found. of the Amendment Report, which has found that at the reduced throughput handling, capacity of the Facility is sufficient. As a result of the reduced throughput the draft OTMP (Appendix I) has been updated to account for the lower volume of trucks that would be required. A detailed swept path analyses have also been updated showing sufficient space to operate the Facility based on the heavy vehicles movements (as shown in the OTMP).</p>	<p>Section 5.1.2 of the Amendment Report</p> <p>Section 1.1.3 of the Amended Proposal Description</p> <p>Draft OWMP (Appendix H)</p> <p>Draft OTMP (Appendix I)</p>
<p>Provide a waste table with yearly and at any one-time limits. This waste table must be detailed and describe the physical nature of the waste, the containers in which it would be stored and the method by which it would be transported.</p>	<p>The Waste Type and Treatment Table (Annexure A to Appendix B) provides a detailed description of:</p> <ul style="list-style-type: none"> • Each waste type to be received at the Facility • The potential contaminants that may be found within each waste type • The proposed treatment procedure to be applied for each waste type • The proposed method of transport for each waste type. • Further Annexure B to Appendix B provides a table of waste limits by contaminant type. <p>Section 1.1.3 of the Amended Proposal Description (Appendix B) prescribes the annual throughput limits for each waste type. The draft OWMP (Appendix H) provides further detail regarding the management, including storage, of each waste type.</p>	<p>Waste Type and Treatment Table (Annexure A to the Amended Proposal Description – Appendix B)</p> <p>Contaminant Concentration Tables - Annexure B to the Amended Proposal Description (Appendix B)</p>

EPA comment	Response	Reference
		<p>Section 1.1.3 of the Amended Proposal Description (Appendix B)</p> <p>Draft OWMP (Appendix H)</p>
<p>Site design</p> <p>Inadequate detail to assess site design</p>		
<p>The environmental controls provided do not provide the required level of detail to assess the site design.</p>	<p>Environmental controls have been embedded into the design and management procedures for the Facility:</p> <ul style="list-style-type: none"> • Updates have been made to the Amended Proposal Description (Appendix B) to provide further detail on proposed environmental controls. Section 1.2.7 – 1.2.10 of the Amended Proposal Description provide a description of the key environmental controls proposed, including urban design features, air quality management infrastructure, water and leachate management infrastructure and fire infrastructure. • Consolidated design drawings (Appendix E) have been prepared by SMEC which show key design features. These include the leachate collection and water management systems, wheel washes, HVAC and exhaust system, bunding design, fire infrastructure features and traffic control features. • A draft OEMP (Appendix F) -, including an OWMP (Appendix H), an OAQMP (Appendix G) and OTMP (Appendix I) - has been prepared to provide detail around the operational procedures that will be utilised to manage environmental aspects. These documents also provide detail on the specific environmental controls applicable for each activity carried out on site • A Hazard Identification Report (Appendix L) has been prepared by Sherpa which identifies environmental and safety risks from the operation of the Facility and outlines the environmental controls which have included within the Facility design and operational plans. The assessment found the environmental controls to be effective in managing risk with no High environmental risk identified for the operation of the Facility 	<p>Section 1.2.7 – 1.2.10 of the Amended Proposal Description (Appendix B)</p> <p>Consolidated design drawings (Appendix E)</p> <p>Draft OEMP (Appendix F) and sub plans –</p> <p>draft OWMP (Appendix H), draft OAQMP (Appendix G), draft OTMP (Appendix I)</p> <p>Hazard Identification Report (Appendix L)</p>

EPA comment	Response	Reference
	<ul style="list-style-type: none"> A Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K) has been prepared which provides a detailed description of the Australian Standards, design features and management controls in place to manage risks associated with liquid and hazardous waste. <p>Notably, the Hazard Identification Report (Appendix L) assessed 106 potential environmental risks that may arise as a result of the operation of the Facility. With the above environmental controls in place these would comprise no High risks and only 2 Medium environmental risks.</p>	Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K)
<p>Provide a document to the level of detail that covers each element of the site design as would be provided in a Hazard and Operability (HAZOP) Study</p>	<p>Following receipt of these comments, further consultation was carried out in a meeting with the EPA (date 17 June 2024). During this meeting, the EPA provided further clarity that they are looking to investigate the potential incompatibility of keeping waste materials next to each other – and that this should be considered in a risk assessment and that the HAZOP process should be followed to test any storage incompatibility between waste codes.</p> <p>At the time HiQ outlined that the HAZOP guidelines require detailed design to follow in full, and have committed to completing a HAZOP following project approval once conditions of consent and detailed design are finalised. This has been included within the Revised Environmental Management Measures (Appendix C – REMM #HR4). The EPA agreed that in the interim a gateway hazard risk study should be carried out and noted the commitment to doing the HAZOP in a more detailed manner at a later stage.</p> <p>As such, HiQ engaged Sherpa to complete a Hazard Identification Report which has been provided in Appendix L. In addition, a Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K) has also been prepared.</p>	<p>Revised Environmental Management Measures (Appendix C)</p> <p>Hazard Identification Report (Appendix L)</p> <p>Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K)</p>
<p>Changes to management of some chemicals.</p> <p>Reform of industrial chemicals environmental management</p>		
<p>The EPA intends to adopt national standards and new obligations around waste on 1 July 2025.</p>	<p>Clarification was sought by HiQ to understand the nature of the new standards to be released in July 2025. In an email dated 11 July 2025 the EPA provided reference to Industrial Chemicals Environmental Management Standard or 'iChEMS'.</p>	Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K)

EPA comment	Response	Reference
	<p>A Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K) has been prepared which provides a detailed description of the Australian Standards that have been applied for the development of the Proposal, including the iChEMS minimum standards.</p> <p>Additionally, Section 5.3.10 of the Amendment Report and Section 3.2 of the OWMP discuss the ICheMS guideline requirements.</p>	<p>Section 5.3.10 of the Amendment Report</p> <p>Section 3.2 of the Draft OWMP</p>
<p>Provide in detailed designs the environmental controls and management procedures that would be implemented so that Wastewater Treatment Plant would be consistent with the national standards.</p>	<p>A Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K) has been prepared to outline the specific risks, national standards and environmental controls that will be utilised within the LWTP. This has considered controls for both liquid waste as well as for the storage and use of reagents within the LWTP. Sections 3.1.3, 3.2.3, 3.3.3, 3.4.3 and 3.5.3 outline the environmental control in place at the LWTP to manage risk.</p>	<p>Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K)</p>
<p>Further information required</p> <p>Summary of information required</p>		
<p>Provide consolidated and updated versions of all documents, as the main lead documents referenced in the revised draft Amendment Report are no longer relevant or applicable.</p>	<p>The Amendment Report and the Amended Proposal Description (Appendix B) have been developed to consolidate all current information into a single document. These documents are to be referred to when assessing the Project. A Document Status Table is provided in Appendix D to the Amendment Report which outlines the version history of the documents and notes which have been superseded.</p>	<p>The Amendment Report Amended Proposal Description (Appendix B)</p> <p>Document Status Table (Appendix D)</p>
<p>To enable EPA's assessment the following is required:</p> <ul style="list-style-type: none"> • a Hazardous Area Classification as per AS 60079.10.1.2022); 	<p>AS/NZS IEC 60089.10.01.2022 specifies requirements for the classification of areas where flammable gas or vapour hazards may arise. No flammable or combustible gases would be received or stored at the Facility. The only flammable material to be stored at the Facility will comprise small quantities of shredded packaged waste. Section 5.2.4 of the Amendment Report outline the key fire management infrastructure incorporated within the Facility design. Any need for a Hazardous Area Classification (HAC) will to be confirmed during detailed design.</p>	<p>Section 5.2.4 of the Amendment Report</p>

EPA comment	Response	Reference
<p>A Fire Safety study (FSS) as per the FSS guidelines in Hazardous Industry Planning Advisory Paper No 2</p>	<p>Appendix K of the EIS provides a Fire and Incident Management Assessment. Since the preparation of the EIS further design refinements have been carried out. Appendix E3 of the Amendment Report shows the updated Fire Services Design; these are described further in Section 5.2.4 of the Amendment Report; along with key compliance considerations with the Fire Safety In Waste Facilities (Fire and Rescue, 2020) Guidelines. Key fire design features include:</p> <ul style="list-style-type: none"> • Site connection • Fire hydrant system • Fire sprinkler system • Fire hose reels • Portable fire extinguishers • Fire detection system • Spent fire water management. <p>As per the HIPAP 2: Fire Safety Guidelines (Department of Planning, 2011) a Preliminary Hazard Analysis should be prepared in the Development Application stage of a project. Appendix I of the EIS provides a (former) SEPP 33 Preliminary Risk Screening. Further a Hazard Identification Report has been prepared to support the Amendment Report (provided in Appendix L). As per the HIPAP 2 Guidelines, and in accordance with FIM13 in Appendix C Environmental Management Measures, a Fire Safety Study will be prepared during the post-approval detailed design phase.</p>	<p>Fire and Incident Management Assessment (Appendix K of the ES)</p> <p>SEPP 33 Preliminary Risk Screening (Appendix I of the EIS)</p> <p>Section 5.2.4 of the Amendment Report</p> <p>Revised Environmental Management Measures (Appendix C)</p>
<p>Hazardous waste risk identification and mitigation report</p>	<p>A Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K) has been prepared to outline the specific risks, national standards and environmental controls that will be utilised to manage hazardous waste. This has considered controls for both hazardous waste, liquid waste as well as for the storage and use of reagents.</p>	<p>Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K)</p>
<p>A stormwater/bunding integrity assessment report</p>	<p>All bunding associated with the Facility is proposed and has not yet been constructed. It is therefore not possible to assess for integrity. It was agreed with the EPA (meeting dated 17 June 2024) that this would not be required.</p>	<p>N/A</p>
<p>A Liquid waste 'Risk Identification and Minimisation Report'. The report must address:</p>	<p>A Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K) has been prepared to outline the specific risks, national standards and environmental controls that will be utilised within the LWTP.</p> <p>Table 1-1 outlines where in the report each of the requirements of the report are addressed:</p>	<p>Liquid and Hazardous Waste Risk and Minimisation Report (Appendix K)</p>

EPA comment	Response	Reference
<p>i. potential for unplanned releases of liquid chemicals and waste from all activities conducted at the premises including, but not limited to bulk storage tanks, drum and IBC storage areas, materials unloading and blending areas, and wastewater treatment systems;</p> <p>ii. assessment of the risks presented by potential unplanned releases of liquid chemicals and waste from each activity considered in direction (i).</p> <p>iii. identification of guidelines and standards relevant to the management of liquids associated with each activity considered in direction (i)</p> <p>iv. comparison of current infrastructure and practices for the management of potential unplanned releases of liquid chemicals and waste from each activity considered in Section (i) against the standards identified in (iii).</p> <p>v. strategies to reduce risk identified in Section (ii) and to address any identified issues with current infrastructure and practices identified in the comparison required by (iv).</p> <p>vi. preferred options to minimise potential risks to the environment posed by the storing and handling of liquid chemicals and wastes, based on the strategies identified in direction 5 (v).</p>	<ul style="list-style-type: none"> • The potential for unplanned releases, assessment of risk, identification of applicable guidelines and strategies to minimise risk are all provide in Section 3 of the Report • A comparison of current infrastructure and practices for management at the Site has not been provided as the Facility is not currently operational. No current practices are therefore applicable for hazardous waste management. 	

