Permit with introductory note

Environment Protection Act (CAP. 549)
Industrial Emissions (Framework) Regulations (S.L. 549.76).
Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (S.L. 549.77).

Aquaculture Resources Ltd.
HF36B,
Hal Far Industrial Estate
Hal Far
BBG 3000

Permit number
IP 00103/22

Contents

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Introductory note

The following Permit is issued under Regulation 7 of the Industrial Emissions (Framework) Regulations, S.L.549.76 to operate an installation carrying out activities covered by the description in Section 6.5 in Schedule 1 of the Industrial Emissions (Integrated Pollution Prevention and Control) Regulations S.L.549.77 ("the Industrial Emissions (IPPC) Regulations"), to the extent authorised by the Permit, i.e.

> **"Installations carrying out disposal or recycling of animal carcases or animal waste with a treatment capacity exceeding 10 tonnes per day".**

Aspects of the operation of the installation which are not specifically regulated by conditions in the Permit may also be subject to the condition implied by Regulation 8 of the Industrial Emissions (IPPC) Regulations, which require the Permit Holder to use the best available techniques for preventing or, where that is not practicable, reducing emissions from the installation.

Conditions marked with a **"∞"** shall be construed as conditions which are to be enforced by the Authority responsible for such an issue.

Techniques include both the technology used and the way in which the installation is designed, built, maintained, managed, operated and decommissioned.

In some sections, the Permit conditions require the Permit Holder to use Best Available Techniques (BAT), in each of the aspects of the management of the installation, to prevent and where that is not practicable to reduce emissions. These conditions do not explain what BAT is.

A non-technical description of the installation is given but the main activity of the installation is as follows:

- **Processing of tuna by-product (offal) generated during the harvesting of blue fin tuna by the tuna rearing industry for the purpose of production of fish meal and fish oil.**

Note that the Permit requires the submission of certain information to the Competent Authority. In addition, the Competent Authority has the power to seek further information at any time under regulation 11 of the Industrial Emissions (Framework) Regulations, provided that it acts reasonably.

Other IPPC Permits relating to this installation		
Permit holder	**Permit Number**	**Date of Issue**
Not applicable		

Superseded Licences/Authorisations/Consents relating to this installation		
Holder	**Reference Number**	**Date of Issue**
Not applicable		

Public Registers

This IPPC Permit and application is available to the public through the Competent Authority in accordance with the requirements of the Industrial Emissions (IPPC) Regulations. Certain information may be withheld from the public where it is commercially confidential or contrary to national security. This clause has not been applied to this application and the relevant documentation and permit.

Variations to the Permit

This Permit may be varied by the Authority at any time in the future. If the Permit Holder wants any of the Conditions of the Permit to be changed, a formal application must be submitted to the Competent Authority.

The **Status Log** within the Introductory Note to any such Variation Notice will include summary details of this Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been granted.

Any change in operations shall only be implemented following the granting of a variation of the permit by the Authority.

Surrender of the Permit

Before this Permit can be wholly or partially surrendered, an Application to surrender the Permit has to be made to the Competent Authority by the Permit Holder. For the application to be successful, the Permit Holder must be able to demonstrate to the Competent Authority that there is no pollution risk and that no further steps are required to return the site to a satisfactory state.

Transfer of the Permit or part of the Permit

Upon the joint application of a Permit Holder and a proposed transferee, the Permit Holder may request to transfer an environmental permit. The permit shall not be transferred from the Permit Holder without prior approval from the Authority. Upon the Authority's decision to transfer the permit to the transferee, all rights, obligations, liabilities shall subsist onto the transferee.

Status Log

Detail	Date	Comment
Application IP 0103/22	Received 13th April 2022	
Response to request for information	Request dated 18th April 2022	Response dated 19th and 22nd April 2022 Vetting Complete
Response to request for information	Request dated 5th May 2022	Response received 16th May 2022
Validation complete	19th May 2022	
Response to request for information	Request for non-confidential information dated 20th May 2022 Request for consolidated version for commencement of public consultation dated 27th May 2022.	Response received 1st June 2022
Public and Statutory consultation	Commenced on 4th June 2022	Concluded on 3rd July 2022
Response to Public and Statutory Consultation	Comments provided 11th July 2022	Response provided 14th July 2022
Response to request for information	Review issued between 20th August and 07th September 2002	Response received 26th August, and 07th September 2022,
Permit determined	23rd September 2022	
Permit granted	As per permit front page	

End of Introductory Note

Permit

Industrial Emissions (Framework) Regulations, S.L. 549.76;
Industrial Emissions (Integrated Pollution Prevention and Control) Regulations, S.L. 549.77.

Permit number
IP 00103/22

Approved Documents:
IP 00103/22/DOC1
IP 00103/22/DOC2
IP 00103/22/DOC3
IP 00103/22/DOC4
IP 00103/22/DOC5
IP 00103/22/DOC6
IP 00103/22/DOC7
IP 00103/22/DOC8
IP 00103/22/DOC9

The Environment and Resources Authority (hereinafter the Authority; the Competent Authority or ERA) in exercise of its powers under Regulation 7 of the Industrial Emissions (Framework) Regulations, (S.L. 549.76) ("the Industrial Emissions (Framework) Regulations"), hereby authorises:

Dr. Charlon Gouder on behalf of Aquaculture Resources Ltd. (hereinafter "the Permit Holder") (Company registration number: **C90691**)

Of / Whose Registered Office (or principal place of business) is at:

Aquaculture Resources Ltd.,
157, Archbishop Street
Valletta
VLT 1440

to operate an installation at:

Aquaculture Resources Ltd.
HF36B,
Hal Far Industrial Estate
Hal Far
BBG 3000

This permit is valid for **ten (10) years** from the date below.

Environment and Resources Authority **APPROVAL** Board No. Held on Chairman_____ Secretary_____	Date Granted: 30 / 09 /2022

Authorised to sign on behalf of the Competent Authority

Conditions

1. General

The Permitted Installation shall, subject to the conditions of this Permit, be managed controlled and operated as described in the IPPC Application, or as otherwise previously agreed in writing by the Authority. This Permit shall be interpreted in accordance with Section 6 or as otherwise defined in S.L.549.76 and S.L.549.77.

1.1 Permitted Activities

1.1.1 The Permit Holder is authorised to carry out the activities and the associated activities specified in Table 1.1.1.

Table 1.1.1

Activity listed in Schedule 1 of the Industrial Emissions (IPPC) Regulations / Associated Activity	Description of specified activity	Limits of specified activity
Section 6.5: Disposal or recycling of animal carcases or animal waste with a treatment capacity exceeding 10 tonnes per day	Production of fish meal and fish oil	From receipt of tuna by-product in refrigerated containers to grinding, pre-heating, separation, drying, cooling and handling for production of fish meal and fish oil for local use and export. Does not include the receipt of fish oil collected from outside the facility or the thawing of any feed fish.
Associated activity of utilities	Reverse osmosis plant with associated abstraction of saline water from groundwater body	From abstraction of groundwater from borehole AP1 located at 35° 48' 30.25976" N, 014° 31' 7.50511" E, use of product water within boiler, to discharge of brine effluent through the discharge borehole marked as ED2 on **IP 00103/22/DOC3.**
	One boiler using light fuel oil with a rated thermal input of 2.6 MW to produce steam and hot water.	From receipt of fuel to delivery of utility.
	One twinset generator using diesel with a rated thermal input of 1.05MW (487kW) for provision of electricity in case of power failure.	From receipt of fuel to delivery of utility.

	Operation of chemical scrubber	From collection of air from process equipment to transfer to air treatment unit.
	Operation of two air treatment units	From filtering of ambient facility air and treated scrubber air to emission of clean treated air and transfer of condensate to waste water treatment plant
	Operation of wastewater treatment plant	From collection of process effluents, treatment and disposal into the sewer. Generation of organically enriched sludge for disposal or potential reuse.
	Operation of an oil/water interceptor	From collection of hydrocarbon contaminated effluent to treated water which overflows to land.
Associated activity of storage, treatment and disposal/recycling of waste materials	Handling, storage, treatment and disposal/recovery of wastes from installation.	From generation of waste to temporary storage (under refrigerated conditions in the case of reject offal) to disposal, recycling onsite or offsite.
Associated activity of maintenance	Maintenance and repairs which may be carried out in the installation	From maintenance/repair activity to appropriate recovery/disposal of any wastes created.

1.2 Site

1.2.1 The activities authorised under condition 1.1.1 shall not extend beyond the Site, as shown on the Site Plan in Schedule 4 and the layout in Approved Documents **IP00103/22/DOC1** to this Permit.

1.2.2 Site security systems shall be implemented at all times during the subsistence of this Permit, the objective of which shall be to prevent access, which is not authorised either by the Permit Holder or under legal powers of entry. These shall be installed, operated and maintained, and shall be fully documented and recorded.

1.2.3 Measures shall be implemented and maintained throughout the operational life of the Site to control and monitor the presence of pests on the Site.∞

1.3 Overarching Management Condition

1.3.1 The Permit Holder shall endeavour to implement and maintain the EMS and allocate resources that are sufficient to achieve compliance with the limits and conditions of this Permit.

1.3.2 The Permit Holder shall submit (including as part of the EMS) the following reports annually as part of the Annual Environmental Report of the site, according to the timeframe specified in Condition 4.2:

a. Environmental Policy containing the installation's environmental objectives and targets;
b. Environmental Management Programme report (for the reporting year);
c. Environmental Management Programme proposal (for the following year);

1.3.3 The Permitted Installation shall, subject to the conditions of this Permit, be managed, controlled and operated as described in the application and subsequent responses to requests for information submitted as per the Status Log above, or as otherwise previously agreed in writing by the Authority.

1.4 Improvement Programme

1.4.1 The Permit Holder shall complete the improvements specified in Table 1.4.1 by the date specified in that table, and shall send written notification of the date of completion of each requirement to the Authority's Compliance and Enforcement Directorate within 10 working days of the completion of each such requirement.

Table 1.4.1: Improvement programme

Reference*	Requirement	Date
1.	Submission of a Contingency plan for temporary in-operation due to: 1. Routine maintenance 2. Non-routine maintenance 3. Operational malfunction of the plant exceeding 60 hours.	Within one (1) month form the granting of the permit.
2.	(a) Submission of a monitoring statement for ERA's approval for carrying out the baseline study in conformity with Articles 16(2) and 22 of the Industrial Emissions Directive, 2010/75/EU, including timeframes for implementation. (b) Commencement of monitoring in accordance with the approved monitoring statement. (c) Submission of monitoring report	(a) Within two (2) months from the granting of the permit. (b) Within a timeframe as agreed upon with the Authority (c) Within a timeframe as agreed upon with the Authority.
3.	(a) Submission of a method statement for approval by the Authority showing how the air monitoring for the medium combustion plants specified in table 2.2.3. (b) First measurement for the emissions to air monitoring as per approved method statement in (a)	(a) Within two (2) months from the granting of the permit. (b) Within four (4) months of the granting of the permit.
4.	(a) Submission of a method statement (including timeframes for implementation) for approval by the Authority for monitoring of effluent emissions arising from ED2 as specified in table 2.6.4 prior to discharge to the groundwater borehole.	(a) Within two (2) months from the granting of the permit.

	(b) Submission of monitoring results in line with approved Method Statement.	(b) Within a timeframe as agreed upon with the Authority.
5.	(a) Submission of a method statement (including timeframes for implementation) for approval by the Authority for monitoring of effluent emissions arising from ED3 as specified in table 2.4.2 prior to discharge to land at the specified frequency. (b) Submission of monitoring results in line with approved Method Statement.	(a) Within two (2) months from the granting of the permit. (b) Within a timeframe as agreed upon with the Authority.
6.	(a) Submission of a method statement (including timeframes for implementation) for approval by the Authority for monitoring of effluent emissions arising from ED1 as specified in table 2.5.3 prior to discharge to sewer. (b) Submission of monitoring results in line with approved Method Statement.	(a) Within two (2) months from the granting of the permit. (b) Within a timeframe as agreed upon with the Authority.
7.	Notification of implementation of a cleaning in-place system for equipment to minimise use of water and detergents.	Within two (2) months from the granting of the permit.
8.	For any direct connection to the sewer system, which does not include domestic sewage, a shut-off valve to allow for diversion of the effluent into a holding tank shall be fitted to address exceedances of discharge limits for sample collection and analysis. Permit holder shall inform the Authority of the installation of the shut-off valve.	Within one (1) month from the granting of the permit.
9.	Submission of certification for weighbridge calibration	Within two (2) months from the granting of the permit.
10.	Submission of certification by an independent warranted engineer showing that the chemical bund is impermeable and has a capacity in accordance with condition 2.14.1.	Within four (4) months from the granting of the permit.
11.	Submission of impermeability certification by an independent warranted engineer for the underground tank utilised for storage of light fuel oil.	Within four (4) months from the granting of the permit.
12.	Submission of impermeability by an independent warranted engineer for the buffer tank utilised for storage of filtered industrial effluent.	Within four (4) months from the granting of the permit.
13.	Submission of impermeability by an independent warranted engineer for the sump utilised for storage of unfiltered industrial effluent.	Within four (4) months from the granting of the permit.
14.	Submission of noise monitoring results in line with the approved method statement in **IP 00103/22/DOC7**	Within four (4) months from the granting of the permit.

15.	Submission of a revised bund certificate for the fish oil tanks by an independent warranted engineer to confirm that the bund capacity is in line the requirements stipulated in condition 2.14.1.	Within four (4) months from the granting of the permit.
16.	To obtain a sewer discharge permit in line with the requirements of the Water Services Corporation∞	As per agreement with the Water Services Corporation.

1.5 Operational Changes

1.5.1 The Permit Holder shall seek the Authority's written agreement prior to any operational changes as defined by S.L 549.77 by sending to the Authority:

a. written notice of the details of the proposed change, including an assessment of its possible effects (including changes in emissions and waste production) on risks to the environment and public health from the Permitted Installation;

b. Any relevant supporting information (e.g. chemical/fuel consumption, technical details, changes in the type/use of substances/mixtures, etc.);

c. any relevant supporting assessments and drawings;

d. and the proposed implementation date.

1.5.2 Further to the condition 1.5.1 such changes shall also include the necessary updates to the operation and management agreement with the Veterinary and Phytosanitary Regulation Division. ∞

1.5.3 Any such change shall not be implemented until agreed to in writing by the Authority and the Veterinary and Phytosanitary Regulation Division. As from the agreed implementation date, the Permit Holder shall operate the permitted Installation in accordance with that change, and relevant provisions in the Application shall be deemed to be amended. ∞

1.5.4 The Director of Environment and Resources and any officials to whom this role is delegated are hereby authorised to make decisions on variations to this permit that do not constitute a substantial change in the operations, permit or approved documents. No variations may be undertaken under this clause should these require any statutory consultation or further studies.

1.6 Off-site Conditions

1.6.1 Animal by-products being transported to the facility and waste generated from the treatment processes shall be transported as dry as possible. The Permit holder shall ensure that no effluents or waste escape to the environment especially when transporting such materials offsite or onsite.

1.6.2 Animal by-products and processed products must be collected and transported in sealed new packaging or covered leak-proof containers or vehicles. ∞

1.6.3 Vehicles and re-usable containers, and all re-usable items of equipment or appliances that come into contact with animal by-products or processed products, must be:∞

a. cleaned, washed and disinfected after each use;
b. maintained in a clean condition; and

c. kept clean and dry before use.
d. Re-usable containers must be dedicated to the carriage of a particular product to the extent necessary to avoid cross-contamination.

1.6.4 During transfers of offal from the supply vessel to the refrigerated vehicles, the Permit Holder shall ensure that no materials are spilled on to the quay or the sea. Any accidental spillages shall be collected immediately.

1.6.5 The Permit Holder shall endeavour to coordinate with the tuna penning operators to reduce feeding of fish prior to harvesting.

1.7 General Considerations

1.7.1 Whenever there is a conflict between the conditions of this Permit and approved documents, the conditions of the Permit shall prevail.

1.7.2 This permit is granted saving third party rights and without prejudice to any other legislation or regulations or authorisations required from any other competent authorities or site owners.

1.7.3 The validity of this permit is until 10 years from the date of the Permit Granted. The Permit Holder is able to renew the permit upon application with the Authority expressing his/her intention at least nine (9) months prior to the expiry of this permit. The permit will be considered renewed once the official renewed permit is issued by the Authority.

1.7.4 The permit is issued against a Bank Guarantee of €90,875 which shall be renewed annually. This guarantee will have to be maintained throughout the validity of the permit. Following renewal and/or variations to this permit, the Authority may require amendments to the Bank Guarantee.

1.7.5 The Authority may forfeit the full amount of the bank guarantee if any of the permit conditions are not complied with or the Permit Holder fails to comply with any instruction given or any other legal obligation under the Act or its subsidiary legislation. Forfeiture of the bank guarantee does not preclude the Authority from taking any other action to ensure that the conditions of this permit are complied with. Should the Authority forfeit the Bank Guarantee either in part or in full during the validity of the permit, the Permit Holder shall ensure that this is replenished without undue delay, in any case not exceeding 2 months from the date of forfeiture. The Bank Guarantee shall only be released upon confirmation of compliance with the permit conditions by the Authority.

1.7.6 In cases where the bank guarantee does not cover the expenses incurred by the Authority to take any remedial action on the Permit Holder's behalf, the Permit Holder is to financially reimburse the Authority of all expenses incurred within.

1.7.7 The Permit Holder shall submit a fixed annual fee of €1,500 and a variable addition reflecting ERA's cost for inspections. The latter variable component depends on the actual number of site inspections, which is determined by the performance of the Permit Holder. The total annual contribution has to be upon the Authority's request.

1.7.8 A copy of this permit shall be available at all times at the site office, including any variation notices of amendments to it.

1.7.9 The Permitted Installation shall be managed, controlled, supervised and operated by staff that are aware of the importance of environmental protection and suitably trained on the requirements of this Permit, in particular on those permit conditions relevant to their duties. All staff shall be provided with adequate training and written operating instructions to enable them to effectively carry out their duties. Training records shall be maintained in line with Condition 3.3.

1.7.10 The company shall maintain a register of third party complaints. The register shall record the name and address of the complainant(s), the date, location, source and nature of the complaint and the corrective action undertaken, where such action proves necessary.

1.7.11 All plant, equipment and technical means used in operating the Permitted Installation shall be maintained in a good operating condition and maintenance records of the above shall be kept by the Permit Holder in line with Section 2.10 of this Permit.

1.7.12 In case of any monitoring requirements specified in this permit, there shall be provided safe means of access to enable sampling/monitoring to be carried out by the Authority or by a third party if necessary.

1.7.13 All persons have a duty of care to protect the environment. The Permit Holder shall become familiar with his legal obligations and good environmental practice.

1.7.14 The Authority may request additional monitoring and/or review of operational practices and/or commission audits/reports as deemed necessary to address any circumstances that may affect the quality of the surrounding environment, at the expense of the permit holder.

1.7.15 Without prejudice to condition 1.7.14, the Authority may take any action deemed necessary including but not limited to the suspension of any activity/operation until investigations are concluded.

1.7.16 The site shall be maintained in a tidy condition, free from litter and waste (whether arising from own activities or external sources.

1.7.17 The site must be well secured at all times.

1.7.18 The Permit Holder is to be fully liable and responsible for managing the site in all its various aspects and to supervise the full adherence with all the conditions of this permit.

1.7.19 The Authority may carry out regular pre-set or unannounced compliance or monitoring checks that vary in frequency according to the site's compliance with the permit conditions and safeguarding of natural assets. Any such checks carried out by the Authority shall be made at the Permit Holder's financial expense at rate and arrangement communicated by ERA's Compliance and Enforcement Directorate.

1.7.20 The Authority's representatives may inspect and photograph any part of the site and ask for any closed or locked areas to be opened and may demand to be provided with any proof, documentation, plans, receipts or any other records.

1.7.21 The Authority may add, amend, delete or substitute any of the conditions of this permit after notifying the Permit Holder of its intention and after describing the changes to the Permit Holder. This is without prejudice to any prevailing circumstances that would preclude the Authority from following such a procedure.

1.7.22 The Authority may suspend or revoke this environmental permit in line with the provisions of CAP549.

1.7.23 Any incident including accidental release of liquid, solid or gaseous materials from the site shall be reported not later than within 24 hours to ERA, without prejudice to the emergency plan of the installation and Health and Safety.

1.7.24 The Permit Holder shall undertake all necessary measures and precautions to prevent spillage of raw materials, intermediates, products, waste and any other materials.

1.7.25 The Permit Holder has the sole responsibility to ascertain compliance with legal obligations, permit conditions and to undertake activities on and off site in line with good environmental practices at all times.

1.7.26 Further to condition 1.7.25, the Authority may request information allowing it to assess whether changes to the permit are necessary due to changes in legislation, emission limit values or any other operational aspect which may be affected by changes in legislation throughout the validity of the permit.

2. Operating Conditions

2.1 General Operating conditions

2.1.1 Offal shall be stored under refrigerated conditions at all times when not being processed and shall not exceed 100 tonnes. No unrefrigerated offal shall be kept outdoors.

2.1.2 Further to Condition 2.1.1, offal cannot be stored for more than 60 hours without treatment or disposal.

2.1.3 The raw material acceptance procedure laid out in **Approved Document IP 00103/22/DOC8** shall be followed for the receipt of each consignment of material. Any offal which exceeds a Total Volatile Nitrogen concentration of 120mgN/100g shall be classified as reject material and handled as waste. Should the 120mgN/100g need to be revised, the Permit Holder shall seek the Authority`s approval of any change. Nonetheless, offal not deemed acceptable to be processed shall still be handled as waste.

2.1.4 During inactive periods which do not fall under the circumstances of Improvement Programme Item 1 and as notified through condition 5.1, prior to annual scheduled closure of facility, all animal by-products and wastes are to be removed from the facility. Chemicals shall be adequately stored in-line with condition 2.14.1.

2.1.5 Due to the proximity of the site to designated areas of protection, there shall be no external lighting and/or lighting of ancillary access roads, tracks and paths or other lighting beyond the site boundary.

2.1.6 The Permit Holder is to implement the necessary mitigation measures so as to cause least nuisance and mitigate adverse air (from dust dispersal and emissions from vehicles and machinery), noise and vibration impacts on sensitive receptors in the Area of Influence and to the general public. ∞

2.1.7 The site is to be covered with an impermeable layer of concrete to minimise the risk of contamination through leakages into the ground below. ∞

2.1.8 Any processing water used within the facility that will have a direct contact with the personnel is to be treated with a biocide to prevent of *Legionella* infections. ∞

2.1.9 Rain and second-class water are not to be used for human consumption or for personal use. Any second-class water used for flushing and washing is to be treated with a biocide. ∞

2.1.10 Domestic cesspits are to be registered with the Superintendent of Public Health. ∞

2.1.11 The water generated from the reverse osmosis plant shall be strictly used as part of the processing of animal by-products. No reverse osmosis generated water can be used for human consumption. ∞

2.1.12 All water for human consumption and personal use in the said facilities is to be adequate, potable and from an approved source (preferably from the Water Utility Supply i.e. Water Services Corporation). ∞

2.1.13 All wastewater pipes, gullies and drainage system are to be according to local legislations. ∞

Emissions

2.2 Emissions to Air from Specified Points

2.2.1 All processes which generate significant levels of airborne contaminants (such as dusts, toxic gases, odorous chemicals) shall have effective local collection and shall discharge (after treatment where necessary) through a stack or vent located and/or designed in such a way as to avoid local environmentally detrimental effects.

2.2.2 Emissions to air shall only arise from the emission point specified in Table 2.2.2, as per **Approved Document IP 00103/22/DOC3**.

Table 2.2.2 : Emission points to air.

Emission point reference	Source
PS1	Stand-by Generator
PS2	Stand-by-Generator
PS3	Boiler
PS4	Boiler steam blow-off
PS5	Oil-water interceptor vent
PS6	Liquid Fuel Oil (LFO) tank vent
PS7	Steamline safety valve
PS8	Air treatment plant vent
PS9	Air treatment plant vent

2.2.3 The limits for emissions to air for the parameters and emission points set out in Table 2.2.3 shall not be exceeded.

Table 2.2.3 : Emission limits to air and monitoring from combustion plants

Emission point reference	Parameter	Limit in mg/Nm^3
PS1, PS2	Oxides of Nitrogen	200
	Carbon Monoxide	-
PS3	Sulphur Dioxide	350
	Oxides of Nitrogen	300
	Dust	50
	Carbon Monoxide	-

2.2.4 The limits for emissions to air for the parameters and emission points set out in Table 2.2.3 shall not be exceeded. The limits are defined at a temperature of 273.15 K, a pressure of 101.3 kPa, after correction for the water vapour content of the waste gases and at a standardised O_2 content of 3% for the boiler and 15% for the generator.

2.2.5 The first measurement shall taken within four months of the granting of the permit and shall be subsequently repeated every 3 years.

2.2.6 Monitoring shall be carried out according with the frequency stated Condition 2.2.5. During each measurement, the plant shall be operating under stable conditions at a representative even load. In this context, start-up and shutdown periods shall be excluded. The Authority reserves the right to require an increase in the frequency of such measurements.

2.2.7 Sampling and analysis of polluting substances and measurements of process parameters shall be based on methods enabling reliable, representative and comparable results. Methods complying with harmonised EN standards shall be presumed to satisfy this requirement. All analysis shall be conducted by a laboratory accredited to at least EN ISO 17025:2017. In the case of in-situ monitoring, analysis shall be conducted via appropriately calibrated instrumentation. A copy of the laboratory's accreditation certificate and a valid calibration certificate for all instrumentation are to be provided to the Authority as part of the AER.

2.2.8 The monitoring results shall be submitted as part of the Annual Environmental Report (AER) of year in which the monitoring has been carried out.

2.2.9 The Permit Holder shall maintain a record of the operating hours for each combustion plant.

2.2.10 Following submission of the AER for the previous reporting year, should the amount of operating hours of the combustion plant be less than 500 hours, as a rolling average over three years, the Permit Holder may apply with the Authority for an exemption from the emission limit values set out in Table 2.2.3, by submitting the information in Schedule 3.

2.2.11 The granting of such exemption described in condition 2.2.10 shall be at the discretion of the Authority and shall be valid until such time that the rolling average of the operating hours over three years exceeds 500 hours, or until such time as prescribed by the Authority. The Authority shall communicate the expiry of the exemption in writing.

2.2.12 The exemption described in Condition 2.2.10 shall only exempt the Permit Holder from compliance with the emission limit values set out in Table 2.2.3. Monitoring is still to be carried out with the frequency indicated in the same table.

2.2.13 Should the emission limit values in Table 2.2.3 be exceeded, as part of the AER, the Permit Holder is to propose measures that will be taken to ensure compliance with the emission limit values.

Combustion Plants

2.2.14 Industrial combustion plants shall comply with the provisions of S.L. 549.122 (Limitation of emissions of certain pollutants into the air from Medium Combustion Plants Regulations) and any other applicable subsidiary legislation.

2.2.15 Only diesel, classified as gasoil in S.L. 549.122, shall be utilised as a source of fuel for the generator whilst only light fuel oil, classified as fuel other than gasoil in S.L. 549.122. shall be utilised as a source of fuel for the boiler. The combustion plants and their respective fill points shall be located as per **Approved Document IP 00103/22/DOC5** shall be utilised as a source of fuel for the boiler. The co-incineration of any material or additional fuel including engine or other waste oil is strictly prohibited. Any change in fuel type shall require a variation of this permit as per Condition 1.5.1 prior to commencement of its utilisation.

2.2.16 Emissions to air shall discharge (after treatment where necessary) through a stack or vent located and/or designed in such a way as to avoid local effect with a minimum height of 3 metres above roof level.

2.2.17 ERA recommends that diesel (gas oil) used for the generator and shall have sulphur content not greater than 0.1 %.

2.2.18 The Permit Holder shall keep the periods of start-up and shut-down of the medium combustion plants as short as possible.

2.2.19 The Permit Holder shall ensure that the boiler and the generator (PS1, PS2 and PS3) referred to in Table 2.2.2 are certified every three years by an independent warranted engineer or an accredited laboratory. The certification shall include measurement of the parameters listed in Table 2.2.3. Monitoring from combustion plants shall be carried out whilst in operation. The certification and the monitoring results shall be submitted as part of the Annual Environmental Report. The data shall at the least be kept for a period of six years.

2.2.20 Should the Permit Holder intend to install equipment which could lead to additional emissions to air (e.g. boiler, etc.), a variation of this Permit must be secured prior to installation and operation of this equipment.

2.2.21 Should secondary abatement equipment be installed in order to meet the emission limit values indicated in Table 2.2.3, the Permit Holder is to keep a record proving the effective continuous operation of that equipment.

Monitoring Provisions and Emergency considerations

2.2.22 Sampling and analysis of polluting substances and measurements of process parameters shall be based on methods enabling reliable, representative and comparable results. Methods complying with harmonised EN standards shall be presumed to satisfy this requirement.

2.2.23 The Permit Holder shall keep a record of and process all monitoring results in such a way as to enable the verification of compliance with the emission limit values set out in Table 2.2.3.

2.2.24 In the event of malfunction leading to abnormal emissions, the Permit Holder must:

a. Investigate immediately and undertake corrective action; and

b. Adjust the process or activity to minimise those emissions; and

c. Record the cause of malfunction and actions taken.

d. In the event of non-compliance causing immediate danger to the environment, operation of the activity must be suspended and the Competent Authority informed within 24 hours

2.2.25 Further to condition 2.2.24, the Permit Holder shall provide ERA with details of the specific cause of the malfunction and the remedial steps taken or to be taken to address the malfunction.

2.2.26 All abatement equipment and ducting shall be cleaned and maintained on a regular basis (as per manufacturer specifications and approved SOPs) in line with Section 2.10 of the Permit.

2.3 Discharges to surface water

2.3.1 There shall be no discharges to surface water (other than to sewer).

2.4 Emissions to Land

2.4.1 Emissions to land shall only take place from the oil-water interceptor treating potentially contaminated rainwater from the yard indicated as ED3 in **Approved Document IP 00103/22/DOC3.**

2.4.2 Following approval of the method statement referred to as Item 5 in Table 1.4.1, the Permit Holder shall carry out effluent analysis at the frequency indicated in Table 2.4.2, for the discharge point referred to in condition 2.4.1.

Table 2.4.2 : Emission limits to land and monitoring

Emission point reference	Parameter	Limit (mg/L)	Frequency
ED3	Total Petroleum Hydrocarbons (C10-C40)	5	Every 6 months if the facility exceeds this duration of operations per annum. If the facility operates less than 6 months per annum, once during peak operations.
	Chemical Oxygen Demand	25	
	Biological Oxygen Demand$_5$ [1]	10	
	Suspended Solids	5	
	Nitrogen (total)	15	
	Phosphorus (total)	2	
	Fats , oils and greases	2.6	

[1] Where '5' refers to the measure of biological oxygen demand after 5 days.

2.4.3 The effluent discharge-monitoring result shall include the following information:

a. Identification of sampling points whereby each sample includes at least 2 replicates;

b. Methodology, limits of quantification and detection limits for each parameter to adequately assess compliance to the Emission limits values specified in Table 2.4.2;

c. Availability of accreditation to MSA EN ISO/IEC-17025:2005 standard or other equivalent standards accepted at international level for the parameter in Table 2.4.2. The operator shall include a copy of the laboratory's accreditation certification.

The results will be submitted together with the AER as specified in condition 4.2.

2.4.4 In the event of contamination of land, the Permit Holder shall notify the Authority within 24 hours. In such cases, a decontamination plan shall be forwarded to the Authority for approval and shall be executed within a time frame agreed with the Authority.

2.5 Discharges to the sewer

2.5.1 The Permit Holder shall obtain a Sewer Discharge Permit from the Water Services Corporation (WSC) which shall be updated every year and shall supply all information requested by the WSC and take all necessary actions as instructed by the WSC and/or the Authority. The Permit Holder shall forward to the Authority a copy of any Sewer Discharge Permit issued by the Water Services Corporation within 10 days of its issue. ∞

2.5.2 The Permit Holder shall follow the conditions of the Sewer Discharge Permit, as may be updated from time to time by the Water Services Corporation and the provisions of the Sewer Discharge Control Regulations (S.L.545.08). ∞

2.5.3 Emissions of trade effluent to sewer shall only arise from the emission point specified in Table 2.5.3, and **Approved Document IP 0103/22/DOC3**:

Table 2.5.3 : Emission point to sewer

Emission point reference	Source	Location of emission point

ED1	Process effluent treated via a wastewater treatment plant	Sewer discharge point

2.5.4 In implementing condition 2.5.2, the Permit Holder shall ensure that monitoring exercises are carried out at locations stipulated by the WSC. ∞

2.5.5 Further to Condition 2.5.4, following approval of the method statement referred to as Item 6 in Table 1.4.1, the Permit Holder shall carry out effluent analysis at the frequency indicated in Table 2.5.5, for the discharge point referred to in condition 2.5.3.

Table 2.5.5 : Emission limits to sewer and monitoring

Emission point reference	Parameter	Limit (mg/L)	Frequency
ED1	Total Petroleum Hydrocarbons (C10-C40)	5	Every 6 months if the facility exceeds this duration of operations per annum. If the facility operates less than 6 months per annum, once during peak operations.
	Chemical Oxygen Demand	25	
	Biological Oxygen Demand$_5$	10	
	Suspended Solids	5	
	Nitrogen (total)	15	
	Phosphorus (total)	2	
	Fats , oils and greases	2.6	

2.5.6 The effluent discharge-monitoring result shall include the following information:

a. Identification of sampling points whereby each sample includes at least 2 replicates;

b. Methodology, limits of quantification and detection limits for each parameter to adequately assess compliance to the Emission limits values specified in Table 2.5.5;

c. Availability of accreditation to MSA EN ISO/IEC-17025:2005 standard or other equivalent standards accepted at international level for the parameter in Table 2.5.5. The operator shall include a copy of the laboratory's accreditation certification.

The results will be submitted together with the AER as specified in condition 4.2.

2.5.7 In the event of contamination of land, the Permit Holder shall notify the Authority within 24 hours. In such cases, a decontamination plan shall be forwarded to the Authority for approval and shall be executed within a time frame agreed with the Authority.

2.5.8 Where any parameters stipulated by the WSC are exceeded, the Permit Holder shall ensure that any follow up actions requested by the WSC are implemented. ∞

2.5.9 Until such time that a Public Sewer Discharge Permit is obtained from the Water Services Corporation, any effluent generated from the wastewater treatment plant shall be collected and disposed of as per the requirements of the Waste Management Regulations (SL 549.63).

2.5.10 Process effluents shall not be diluted prior to discharge to sewer. ∞

2.5.11 All process and storage areas must be appropriately contained. Any accidental release of substances shall be duly contained and treated to prevent discharge into the sewers.

Any such effluent shall be disposed/recovered to the satisfaction of the Authority if treatment does not enable compliance with emission limit values in the Sewer Discharge Permit. ∞

2.5.12 Rainwater shall be segregated from all process areas that are potentially contaminated with raw materials, intermediates and/or products. As far as possible, rainwater shall be reused.

2.2.3 Rainwater shall not be discharged into the sewer. Foul sewer drains must be strictly segregated from storm water drains.

2.6 Discharges to groundwater

2.6.1 The Permit Holder shall not allow the introduction into groundwater of any substance included in the Regulations for the Protection of Groundwater against Pollution and deterioration (SL 549.53). ∞

2.6.2 The operations of the installation shall not hinder the achievement of good chemical and quantitative status of groundwater as prescribed under the Water Policy Framework Regulations, S.L.549.100.

2.6.3 Emissions to land shall only take place from the oil-water interceptor treating potentially contaminated rainwater from the yard indicated as ED2 in **Approved Document IP 00103/22/DOC3.**

2.6.4 Following approval of the method statement referred to as Item 4 in Table 1.4.1, the Permit Holder shall carry out effluent analysis at the frequency indicated in Table 2.6.4, for the discharge point referred to in condition 2.6.3.

Table 2.6.4 : Emission limits to groundwater and monitoring

Emission point reference	Parameter	Limit	Frequency
ED2	pH	6-10	Every 6 months if the facility exceeds this duration of operations per annum. If the facility operates less than 6 months per annum, once during peak operations.
	Total Dissolved Solids (TDS)	N/A (mg/l)	
	Salinity	N/A (psu)	

2.6.5 The effluent discharge-monitoring result shall include the following information:

a. Identification of sampling points whereby each sample includes at least 2 replicates;

b. Methodology, limits of quantification and detection limits for each parameter to adequately assess compliance to the Emission limits values specified in Table 2.6.4;

c. Availability of accreditation to MSA EN ISO/IEC-17025:2005 standard or other equivalent standards accepted at international level for the parameter in Table 2.6.4. The operator shall include a copy of the laboratory's accreditation certification.

The results will be submitted together with the AER as specified in condition 4.2.

2.6.6 In the event of contamination of land, the Permit Holder shall notify the Authority within 24 hours. In such cases, a decontamination plan shall be forwarded to the Authority for approval and shall be executed within a time frame agreed with the Authority.

2.7 Fugitive emissions of substances to water and sewer

2.7.1 The operations of the installation shall not hinder the achievement of good ecological status for surface waters as prescribed under the Water Policy Framework Regulations, S.L.549.100

2.7.2 The Permit Holder shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions of substances to water (including to groundwater) and sewer from the Permitted Installation, in particular from:

- All structures under or over ground
- Surfacing
- Storage areas
- Bunded areas

2.7.3 Catchment pits and bunds on site must be tested and certified to be leak-proof by an independent, warranted civil engineer or engineer every 5 years and before any renewal of this IPPC permit. Such certification shall be also submitted as part of the AER by end of March after the end of each year when testing has occurred.

2.7.4 Any accidental release of substances shall be duly treated prior to discharge into the sewers (subject to clearance from the WSC), or disposed as waste. Records shall be kept of such discharges, including the volume discharged and other parameters, as agreed with the Water Services Corporation, as per the Sewer Discharge Permit.

2.8 Odour

2.8.1 The Permit Holder shall use BAT so as to prevent or where that is not practicable to reduce odorous emissions from the Permitted Installation, in particular by:

a. limiting the use of odorous materials;
b. restricting odorous activities;
c. controlling the storage conditions of odorous materials including refrigeration of processed unprocessed material;
d. controlling processing parameters to minimise the generation of odour;
e. optimising the performance of abatement systems;
f. timely monitoring, inspection and maintenance;
g. employing, where appropriate, an approved odour management plan;

provided always that the techniques used by the Permit Holder shall be no less effective than those described in the Application, where relevant and approved by the Authority prior to their implementation.

2.8.2 There shall be no significant offensive odour, as perceived by an Authorised Officer of the Competent Authority, outside the boundary of the permitted installation.

2.8.3 Odours shall be audited on a daily basis. Should any odour be detected, the reception, handling, storage and preparation and the processing of raw material is to be examined and revised.

2.8.4 In case of complaints regarding odours which upon investigations are verified, the Authority may require the Permit Holder to submit an odour management plan, which would include recommendations for abatement of the odour and timeframes for implementation.

2.8.5 Inflatable dock shelters are to be used at all times when containers, reefers or vehicles are present at the loading and unloading bays.

2.8.6 Further to Conditions 2.1.4 and 2.8.5, during inactive periods which do not fall under the circumstances of Improvement Programme Item 1 or when containers, reefers or vehicles are not present at unloading bays, rolling shutters are to be kept closed.

2.8.7 The reception, off-loading and storage of animal by-products shall be undertaken within enclosed areas, operated under negative pressure, with extractive ventilation connected to a suitable odour abatement plant.

2.8.8 The transfer of materials throughout the entire processing line, including the conveyance of process gases and liquid effluents, shall be undertaken within totally enclosed and sealed handling systems designed, constructed and maintained to prevent leakages from occurring.

2.8.9 Prior to rendering, size reduction of animal carcases and parts of animal carcases is to be carried out as per Animal By-Product Regulations and as directed by the Veterinary and Phytosanitary Regulation Division. ∞

Cleaning

2.8.10 To minimize odours, good hygiene, quick removal of reject materials, short term storage of tuna materials & waste, frequently scheduled cleaning and its record-keeping shall be applied.

2.8.11 All spillages of process effluent are to implement dry cleaning prior to wet cleaning in order to minimize the entrainment of organic matter into the waste water treatment system.

2.8.12 Cleaning is to be done using pressurized water using hoses fitted with hand-operated triggers and where necessary hot water supplied from thermostatically controlled stream and water valves.

2.8.13 Any supply of water is to be made through nozzles designated and positioned for each individual unit operation and cleaning operation.

2.8.14 Areas where by-products, raw materials and waste are stored shall be cleaned frequently. The cleaning programme shall cover all structures, equipment and internal surfaces, material storage containers, drainage, yards and roadways.

2.8.15 Minimal quantities of water and detergents, which have been identified to have minimal impact on the environment, are to be consumed. Furthermore where possible, detergents having active chlorine are to be avoided.

Operation of waste water treatment plant

2.8.16 Process effluent shall be collected in the sump as identified in **Approved Document IP 00103/22/DOC4** prior to treatment. Waste water shall be treated once the minimal threshold has been reached.

2.8.17 Drains collecting process effluent are to be fitted with screens and/or taps to prevent solid material from entering the waste water catchment system. Furthermore, effluent lines and gutters are to be designed in such a way to prevent water stagnation prior to collection in the designated sump.

2.8.18 Untreated process effluent shall first pass through a drum filter to remove large particles from the effluent prior to treatment in the waste water treatment plant. Any organic material removed from the drum filter shall be considered as part of waste sludge W2 as identified in **Approved Document IP 00103/22/DOC6**.

2.8.19 As part of the abatement measures, the waste water treatment plant shall remove fats and solids from the effluent water.

2.8.20 Any and all waste water treatment tanks are to have sealed sides and bases and are to be aerated or agitated in order to prevent anaerobic conditions.

2.8.21 Any tanks which house industrial effluent are to have underlying drains to collect any seepage of effluent that may occur. The collected seepage is to be collected and redirected for treatment through the waste water treatment plant.

2.8.22 Until such time that the facility processes less than 50,000 tonnes of animal by-product annually, single effect evaporators are to be used to remove water from liquid effluent mixtures.

2.8.23 The waste heat from the drying of press cakes and evaporated process water shall be used in a falling film evaporator, for the concentration of process water, to form evaporated process water.

2.9 Noise

2.9.1 The Permit Holder shall use BAT so as to prevent or where that is not practicable to reduce emissions of noise and vibration from the Permitted Installation, in particular by:

a. Equipment maintenance, e.g. circulating pumps, extraction fans, compressors.
b. Use and maintenance of appropriate attenuation, ex. silencers, barriers, enclosures
c. Appropriate timing and location of noisy activities and vehicle movements
d. Periodic checking of noise emissions, either qualitatively or quantitatively;
e. Maintenance of building fabric

Provided always that the techniques used by the Permit Holder shall be no less effective than those described in the Application, where relevant and approved by the Authority prior to their implementation.

2.9.2 The level of noise emitted from the installation at all operational times shall not exceed the background noise level by 5dB.

Noise Monitoring

2.9.3 Further to the submission of the results of the noise monitoring proposal referred to as Item 14 in Table 1.4.1, noise monitoring is to be carried out as agreed with the Authority. Noise monitoring shall also be carried out upon commissioning of any new equipment which in the opinion of the Authority has the potential to significantly increase noise emissions from the installation. The locations shall be chosen and the measurements and assessment made according to BS 4142:2014.

2.9.4 As part of the AER, records of noise monitoring of the previous operating period shall be submitted to the Competent Authority by not later than end of March at the frequency as indicated in Condition 2.9.3, in the format specified in Schedule 2 of this permit. A detailed report shall also accompany such results.

2.10 Maintenance

2.10.1 All plant, equipment and technical means used in operating the Permitted Installation shall be maintained in good operating condition and without causing polluting emissions, leaks and spillages.

2.10.2 The Permit Holder shall keep a record of plant and equipment covered by condition 2.10.1, and for such plant and equipment:

a. A written or electronic maintenance programme; and
b. Records of its maintenance (including filter changes).

2.10.3 During periods of plant maintenance, it shall be ensured that raw materials or animal by products awaiting processing shall either be stored in refrigerated conditions or disposed of at facilities permitted to accept such waste.

2.10.4 All filters and any other related equipment is to be maintained and cleaned as per manufacture instructions to prevent nuisance.

2.11 Waste

Waste storage and handling

2.11.1 The Permit Holder shall use BAT in the design, maintenance and operation of all facilities for the storage and handling of waste on site such that there are no releases to water or land during normal operation and that emissions to air and risk of accidental release to water or land are minimised.

2.11.2 All operations concerning the management of waste are subject to the Waste Management Regulations (S.L.549.63) and the Waste Management (Activity Registration) Regulations (S.L. 549.45).

2.11.3 The Permit Holder shall be committed to reduce waste generation where possible.

2.11.4 Waste produced at the Permitted Installation shall be recycled, reused or recovered unless technically and/or economically impossible.

2.11.5 All wastes shall be stored within a designated and controlled storage area(s) prior to ultimate disposal. Wastes to be recycled shall be stored in a designated container or area and shall not be mixed with other wastes.

2.11.6 The Permit Holder is to prevent litter, unpermitted run-off or other wastes escaping from the site boundaries, particularly during loading/unloading. Any such escape of waste shall be collected immediately upon detection.

2.11.7 Unless approved in writing by the Authority, the Permit Holder is prohibited from mixing a hazardous waste of one category with a hazardous waste of another category or with any other waste, substances or materials.

2.11.8 End-of-waste criteria must be met for any waste to be classified as a product. In such cases, the Permit Holder shall comply with relevant criteria set by legislation. In the absence of any relevant legislation, the Permit Holder shall follow the procedure laid down in Regulation 6 of S.L. 549.63.

2.11.9 Liquid and hazardous wastes shall be stored in a labelled, closed container(s) within a designated and controlled storage area(s) prior to ultimate disposal which shall be appropriately contained to ensure no contamination of the environment in case of spillage. Wastes of different natures and having different European Waste Catalogue codes as established by Commission Decision 2000/532/EC and any subsequent amendments should not be mixed in the same container.

2.11.10 Packaging and containers which came into contact with hazardous substances shall be regarded as hazardous waste and shall be disposed of in an appropriate manner.

2.11.11 The Permit Holder shall register and in turn renew their registration with ERA as a producer of packaging and provide the required information as set out in S.L. 549.43,

the Packaging and Packaging Waste Regulations unless placing less than 100kgs of packaging on the market annually. In case the Permit Holder opts to be self-compliant for transport packaging, the targets as set out in S.L5.49.43, shall also be achieved. Documentation in relation to the Permit Holder's obligations pertaining to S.L 549.43 shall be maintained for a period of 5 years and be made available, upon request by ERA.

2.11.12 On-site disposal of wastes by any means including burning, disposal to drain or surface water, burying or deposition on land is prohibited. This excludes treated waste water discharged into sewer in line with the Sewer Discharge Permit.

2.11.13 No storage of waste, equipment or materials is permitted on property outside the site premises.

2.11.14 All storage of materials or waste shall take place only in locations where thorough clean-up and site reinstatement can be readily undertaken.

2.11.15 All wastes leaving the site after storage and/or processing must only be sent to facilities licensed to accept the individual waste stream, either locally or abroad.

2.11.16 No storage of waste destined for recovery is permitted for a period exceeding 3 years.

2.11.17 No storage of waste destined for disposal is permitted for a period exceeding 12 months.

2.11.18 The Permit Holder shall ensure that waste transferred to another person is packaged and labelled in accordance with national, European and any other standards which are in force in relation to such labelling. While awaiting collection, recovery or disposal all waste shall be stored in designated areas protected, as may be appropriate, against spillage, leachate run-off and accidental damage. The waste is to be clearly labelled and appropriately segregated.

2.11.19 No wastes other than those which are categorized in **Approved Document IP00103/22/DOC6** in accordance to the European Waste Catalogue codes as published in Council Directive 2000/532/EC and as may be amended from time to time shall be stored on site.

2.11.20 Packaging material which may have been in contact with animal by products shall be disposed of as directed by the Veterinary and Phytosanitary Regulation Division and the Authority and should it be temporarily stored on site pending removal it shall be stored in a way so as not to give rise to odours or pose a risk to the environment. ∞

2.11.21 Further to Condition 2.1.3, upon identification of any incoming material not meeting acceptance criteria, this is to be immediately labelled, separated from viable raw material and kept segregated until such time of its removal from site.

2.11.22 Reject offal, which has come into contact with such waste or by-product, is to be maintained in closed, leak-proof bins under refrigerated conditions within the facility at all times and is to be removed from the site for disposal within 24hrs by carriers as approved by the Veterinary and Phytosanitary Regulation Division. ∞

2.11.23 Animal by product or material which is rejected from the production process shall not be disposed of at sea but disposed of in permitted facilities as agreed upon with the Veterinary and Phytosanitary Regulation Division and the Authority. ∞

2.11.24 Further to Item 1 (a-c) of Table 1.4.1, in instances where dead fish (whole or in part), offal or any tissues or any other by-products, cannot be processed onsite, disposal of such material shall be carried out as directed by the Veterinary and Phytosanitary Regulation Division.∞

2.11.25 Waste sludge generated from the waste water treatment plant is to be handled and disposed of as directed by the Veterinary and Phytosanitary Regulation Division.∞

2.11.26 Further to condition 2.11.25, should the Permit Holder which to repurpose the waste sludge generated by the waste water treatment plant, the End-of-Waste procedure is to be followed as per Condition 2.11.8.

Transport

2.11.27 In the case of waste that is sent for treatment or recovery to another facility locally or abroad, the audit trail shall cover all waste from the point of generation or collection to the end recovery or disposal facility.

2.11.28 Transboundary movement of waste shall be carried out in accordance with the following regulations, as amended from time to time:

a. Regulation (EC) N° 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste;

b. Commission Regulation (EC) N° 1418/2007 of 29 November 2007 concerning the export for recovery of certain waste listed in Annex III or IIIA to Regulation (EC) N° 1013/2006 of the European Parliament and of the Council to certain countries to which the OECD Decision on the control of transboundary movements of waste does not apply; and

c. Any other applicable legislation

2.11.29 Waste sent off-site for recovery or disposal shall be conveyed only by an authorised waste carrier as per Activity 38 of Schedule 1 of S.L.549.45. The waste shall be transported only from the site of the activity to the site of recovery/disposal in a manner which shall not adversely affect the environment and in accordance with all relevant National and European legislation.

2.11.30 Transport of hazardous waste within the Maltese Islands shall be accompanied by the necessary waste transfer permits issued by the Authority. Applications for such permits are made through the hazardous waste consignment permit procedure available from the Authority's Offices.

2.11.31 Permit Holder shall ensure to keep records for every consignment of wastes removed from the Site indicating the EWC Code, description, quantities, date of removal, contractor name (including for transport), consignment note number (where applicable) and manner and place of final disposal/recovery. Waste receipts should be made available upon request.

2.11.32 Should the Permit Holder require the services of a waste broker, it shall be ensured that any such broker is a duly registered waste broker in accordance with S.L.549.45.

2.11.33 Conditions related to the transport of chemicals and hazardous wastes on land are included in Section 2.15.

Waste Records

2.11.34 Disposal and/or recovery certificates and any documentation related to transfer of waste to and from the site and/or related to its end disposal and/or recovery shall be kept on record and made available for inspection for a period of at least 5 years from date of their issue. Copies of such certificates shall be submitted on an annual basis as part of the AER.

2.11.35 As part of the AER, the Permit Holder shall submit the name of each carrier used in the transport of the substances specified in conditions 2.11.29 and 2.11.30, in the format specified in Schedule 2, by end of March after the end of each reporting period.

2.11.36 As part of the Annual Environmental Report for the installation, the Permit Holder shall produce a report on the off-site transfers of waste and wastes recycled/ recovered at the Permitted Installation over the previous operating period, providing the information listed in Schedule 2.

2.11.37 Without prejudice to condition 2.11.4, disposal of wastes including rejects, expired products, and other wastes are to be managed in accordance with the legal obligations of the Waste Regulations (S.L. 549.63). Off-site disposal or recovery of wastes may only take place at a facility licensed for that purpose.

2.12 Energy Efficiency

2.12.1 As part of the Annual Environmental Report, the Permit Holder shall produce a report on the energy consumed at the Permitted Installation over the previous operating period, by the end of March of each year, providing the information listed in Schedule 2. The energy consumption of the waste recovery unit is also to be included in this report.

2.12.2 The Permit Holder shall maintain and operate the Permitted Installation so as to secure energy efficiency, in particular by:

a. ensuring that the appropriate operating and maintenance systems are in place;
b. ensuring that all the plant is adequately insulated to minimise energy loss or gain;
c. ensuring that the type of lighting used is energy-efficient;
d. ensuring that all appropriate containment methods (e.g. seals) are employed and maintained to minimise energy loss;
e. maintaining and implementing an energy efficiency plan which identifies energy-saving techniques that are applicable to the activities and their associated environmental benefit, and prioritises them.

2.13 Monitoring

2.13.1 The Permit Holder shall maintain and implement an emissions monitoring programme which ensures that emissions are monitored as specified in this Permit, and the results of such monitoring shall be assessed. The programme shall ensure that monitoring is carried out under an appropriate range of operating conditions, and that measurements for the determination of concentrations of substances specified in this Permit shall be carried out representatively.

2.13.2 Sampling and analysis of all pollutants, as well as reference measurement methods to calibrate automated, continuous measurement systems shall be carried out as specified by the appropriate CEN standards. If CEN standards are not available, ISO standards, national or international standards, which will ensure the provision of data of an equivalent scientific quality, as agreed in writing with the Authority, shall apply.

2.13.3 Monitoring equipment, techniques, personnel and organisations employed for the monitoring requirements in condition 2.13.1 of this Permit shall be from a certified or accredited laboratory or laboratory in the process of accreditation, as confirmed by the National Accreditation Body (NAB-Malta). As part of the Annual Environmental Report, the Permit Holder shall provide evidence of certification or accreditation of laboratories used.

2.13.4 The Permit Holder shall maintain records of all monitoring taken or carried out (this includes records of the taking and analysis of samples, instrument measurements

(periodic and continual), calibrations, examinations, tests and surveys) and any assessment or evaluation made on the basis of such data, for at least a period of 5 years. Such records may be requested at any time by the Authority.

2.13.5 The Permit Holder shall provide ERA with monitoring reports as indicated in Section 4 of this permit.

2.14 Storage

2.14.1 All bulk liquids, shall be provided with an adequately designed bund system with an impermeable base and walls as per relevant REWS standards, where applicable. The capacity of the bund shall be a minimum of 110% of the largest tank within the bund or 25% of the total capacity of all the tanks within the bund, whichever is greater. All filling and off-take points shall be located within the bund. The Permit Holder shall also ensure and take all precautions to avoid leakages or spills from liquid or solid material.

2.14.2 Containers for bulk storage of chemicals shall be properly designed, located, labelled, bunded and maintained so as to prevent accidental spillage. Incompatible chemicals shall not be stored within the same bund.

2.14.3 The construction of fuel tanks shall comply with relevant REWS standards.∞

2.14.4 Drums and containers of oils or any other chemicals shall be stored in designated and secure storage areas. Storage areas shall be bunded or otherwise designed so that surface and ground waters cannot be contaminated by spillages.

2.14.5 Further to conditions 2.14.4, in the case of spillage which could have led to contamination of liquid in the sump indicated in **Approved document IP 00103/22/DOC4**, such water shall be treated prior to being diverted to the waste water treatment plant. If treatment is not possible, all effluent in the sump shall be collected and disposed of as hazardous waste.

2.14.6 Further to condition 2.14.5, in case of fuel spillage in the boiler room, the connection between the gutter and the pipework leading to the sump shall be immediately closed-off until thorough clean-up of the boiler room is undertaken.

2.14.7 Chemicals of different properties shall be stored and handled as specified in respective SDS sheets. Such sheets shall be made available and accessible to personnel responsible for the management of the storage areas and for inspection by the Competent Authority.

2.14.8 Bulk storage tanks are to be applied with overfill protection. This shall apply to all fuel tanks and industrial effluent storages which may be present on-site.

2.15 Transport ∞

2.15.1 Independent of any Environment Management System, the Permit Holder shall be responsible for making use of the services of an ADR (The European Agreement concerning the International Carriage of Dangerous Goods by Road) certified carrier for transport of chemicals and hazardous wastes on land.

2.16 Ozone Depleting Substances and Fluorinated Greenhouse Gases ∞

2.16.1 All installation, maintenance and servicing of equipment containing Fluorinated Greenhouse Gases shall abide by the requirements of EC Regulation No. 517/2014 on Fluorinated Greenhouse Gases, and L.N. 143 of 2018 on Fluorinated Greenhouse Gases (Implementing) Regulations.

2.16.2 The use of HCFCs in the maintenance and servicing, in particular refilling, or products and equipment whose function relies on such substances shall be prohibited.

2.16.3 Maintenance and servicing of equipment containing ozone depleting substances and fluorinated greenhouse gases shall be carried out in accordance with the legal provisions of Regulation (EU) No 517/2014 on fluorinated greenhouse gases and L.N. 143 of 2018 on Fluorinated Greenhouse Gases (Implementing) Regulations and Regulation (EC) No. 1005/2009 on substances that deplete the Ozone Layer. All maintenance and servicing shall be reported in the AER as per template in Schedule 2.

2.16.4 No new equipment or components containing substances falling within the scope of EC Regulation No. 1005/2009 on substances that deplete the Ozone Layer on substances that deplete the ozone layer, shall be installed within the site.

2.16.5 Where required, leak detection systems as per the legal provisions of Regulation (EU) No 517/2014 on fluorinated greenhouse gases shall be installed and well maintained.

2.17 Management and Technically Competent Person

Training

2.17.1 The Permitted Installation shall be supervised and controlled by staff who are suitably trained and fully conversant with the requirements of this Permit.

2.17.2 All staff shall be fully conversant with those aspects of the Permit conditions which are relevant to their duties and shall be provided with adequate professional technical development and training and written operating instructions to enable them to effectively carry out their duties.

Attendance of Technically Competent Person(s)

2.17.3 The Technically Competent Person (TCP) is responsible for the implementation of all the obligations stipulated in this permit, must supervise the rest of the staff on site and shall be the Permit Holder's technical focal point for the implementation of the conditions of this permit.

2.17.4 Attendance of the technically competent person(s) at the Site shall be recorded on arrival and departure.

2.17.5 The TCP or their delegate is to be present on site within one hour following a request by the Authority. Contact details of such delegates shall be made available to the Authority upon request. In the event that a TCP and/or appointed delegate terminates their employment, another person shall be appointed immediately and the Authority shall be informed of this change.

2.17.6 Where the Site has been notified to the Authority as being either non-operational or closed, the Technically Competent Person shall be capable of attending the Site within one hour.

Changes in Technically Competent Persons

2.17.7 Any changes in technically competent management (Person/s) and the name of any incoming person together with evidence that such person has the required technical competence shall be submitted to the Authority in writing within 5 working days of the change in management.

2.17.8 In the event of any leave of absence taken by the TCP for a period exceeding 10 days, the Permit Holder is obliged to find a replacement for that member of staff without delay.

Incidents and Complaints

2.17.9 The Permit Holder shall maintain and implement written procedures for:

a. Taking prompt remedial action, investigating and reporting to the Competent Authority actual or potential non-compliance with operating procedures or emission limits and if such events occur.
b. Investigating incidents, (including any malfunction, breakdown or failure of plant, equipment or techniques, down time, any short-term and long-term remedial measures and near-misses) and prompt implementation of appropriate actions; and

c. Ensuring that detailed records are made of all such actions and investigations.

2.17.10 The Permit Holder shall record and investigate complaints concerning the Permitted Installation's effects or alleged effects on the environment and public health. The record shall give the date and nature of complaint, time of complaint, name of complainant (if given), a summary of any investigation and the results of such investigation and any actions taken.

2.17.11 As part of the Annual Environmental Report of the Permitted Installation, the Permit Holder shall provide the information specified in Sections S2.7.1 and S2.7.2 of Schedule 2 by not later than end of March after the end of each operating period.

2.18 Accident prevention and control

2.18.1 In the case of an accident, the Permit Holder shall follow the Emergency Plan submitted as part of the IPPC application, as may be updated from time to time

2.18.2 The plan shall be updated whenever necessary and the updated version sent by the Permit Holder to the Civil Protection Department for their perusal/clearance.∞

2.18.3 The plan shall be reviewed at least every 2 years or as soon as practicable after an accident, whichever is the earlier, and the Authority notified of the results of the review within 2 months of its completion.

2.18.4 The Permit Holder shall maintain and implement all health and safety measures in compliance with Act XXVII of 2000; Occupational Health and Safety Authority Chapter 424 and all relevant subsidiary legislation.∞

2.18.5 The Permit Holder shall have sufficient employees trained to deal with any emergency that may arise, e.g. fire-fighting, spills and first aid.

2.18.6 The Permit Holder is to keep the Authority updated on any major changes in operations that may impact on the health and safety of the employees.

2.18.7 The Permit Holder is to make available Health and Safety documentation freely available.

2.18.8 Spillages of chemicals or other hazardous material shall receive immediate attention to prevent escape to drain, surface water or land. Spilled material shall be disposed of in an appropriate manner. Kits for the collection of liquid and powder spills shall be available on site at strategic locations.

2.18.9 In the case of an accident (including fire, chemical spills, etc.), the Permit Holder shall follow the Emergency Response Plan or the standard operating procedures related to spill response (whichever may be applicable) and, in the case that such accident could cause environmental damage, the Permit Holder shall notify the Authority within 24 hours.

2.18.10 Small leaks or spills shall be cleared up immediately by the application of absorbent materials. All sand and other material shall be disposed of as approved by the responsible authority.

2.18.11 The Permit Holder shall have in storage an adequate supply of suitable absorbent material to absorb any spillage.

2.18.12 Unpredicted impacts and nuisances which may arise from this operation and that may have a significant adverse effect on public health are to be immediately addressed by the applicant. Moreover, any other necessary mitigation measures should also be adopted. ∞

2.19 Closure and Decommissioning

2.19.1 The Permit Holder shall maintain and operate the Permitted Installation so as to prevent or minimise any pollution and public health risk, including the generation of waste, on closure and decommissioning in particular by:

a. Attention to the design of new plant or equipment;

b. The maintenance of a record of any events which have, or might have, impacted on the condition of the site along with any further investigation or remediation work carried out;

c. The maintenance of a decommissioning plan to decommissioning plan to demonstrate that the installation can be decommissioned avoiding any pollution and public health risk and returning the site of operation to a satisfactory state.

2.19.2 The Permit Holder shall maintain **Approved Document IP 00103/22/DOC9** as the Outline Decommissioning Plan for the installation. This Outline Decommissioning Plan shall at least include the following information:

a. A draft waste management strategy which shall include:

i. The identification and characterisation of sources, types of wastes (including equipment, tanks, fuels and by-products);

ii. Criteria for segregation of wastes;

iii. Proposed treatment, conditioning, transport, storage and disposal/recovery methods;

iv. Potential reuse/recycling of such wastes

b. A qualitative assessment of the potential for contamination of land and groundwater pollution which might arise from the historical and current processes carried out at the installation.

c. The Identification of potential sources of emissions to the atmosphere, land and water (both seawater and groundwater) pollution which might arise from the decontamination process and corresponding mitigation measures to minimise the likelihood of such emissions.

2.19.3 The Permit Holder shall carry out a full review of the outline Decommissioning Plan at least every 4 years.

2.19.4 If requested by the Authority, the land and groundwater monitoring strategy referred to in improvement programme item 2 in Table 1.4.1 shall fulfil these requirements:

a. The list of the pollutants to be monitored.

b. The location of the points for the sampling, the sampling methods, the handling of the samples, the pre-treatment/extraction of the analytes (where applicable) and the methods used in order to analyse the samples are clearly detailed.

c. Samples will be analysed to the relevant EN or EN ISO standards or equivalent.

d. Samples shall be managed by a lab accredited (or in the process of accreditation, as confirmed by the National Accreditation Body ((NAB-Malta) or equivalent) to at least EN 17025:2017 and preferably accredited for each and every analysis.

2.19.5 The Permit Holder shall notify the Authority immediately upon a decision being taken to decommission all or part of the site, or planned cessation for a period greater than 6 months, of all or part of the permitted activities. The Authority may impose further requirements in the case of planned cessation for a period greater than 6 months.

2.19.6 The Permit Holder shall notify the Authority prior to ceasing operations permanently in part or in full, whereby an application for cessation of operations shall be made to the Authority and shall include a decommissioning plan.

2.19.7 In the event where operations cease temporarily (2 weeks or more), the TCP or Permit Holder are obliged to notify the Authority within two (2) days and are also to inform the Authority with regards to when the works are intended to resume.

2.19.8 Following termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the installation in the permitted activity, the Permit Holder shall to the satisfaction of the Authority, decommission, render safe or remove for disposal/recovery, any land, subsoils, buildings, plant or equipment, or any waste, materials or substances or other matter contained herein or thereon, that may result in environmental pollution and that may pose a health risk.

2.19.9 One year before the planned decommissioning of all or part of the site, the Permit Holder shall submit for approval to the Authority a full Decommissioning Plan which shall at least include:

a. If requested by the Authority, a proposal for land and groundwater monitoring to investigate the state of land and groundwater upon cessation of activities.

b. Where the contamination of land and groundwater at the site poses a significant risk to human health or the environment as a result of the activities carried out by the Permit Holder, the Permit Holder shall submit a report indicating the actions to be taken for removal, control, containment or reduction of relevant hazardous substances so that the site, taking into account its current or approved future use, ceases to pose such a risk.

c. The methods which will be used in order to decontaminate the land. Such methods may also include isolation.

d. A detailed waste management strategy which shall include:

i. The identification and characterisation of sources, types and quantities of waste (including equipment, fuels, by-products such as ash, etc.);

ii. Criteria for segregation of wastes;

iii. Proposed treatment, conditioning, transport, storage and disposal/recovery methods;

iv. Potential reuse/recycling of such wastes.

e. The identification of potential sources of emissions to the atmosphere, land and water (both seawater and groundwater) pollution which might arise from the decontamination process and corresponding mitigation measures to minimise the likelihood of such emissions.

f. Following termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the installation in the permitted activity, the Permit Holder shall to the satisfaction of the Authority, decommission, render safe or remove for disposal/recovery, any land, subsoils, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution and that may pose a public health risk.

2.19.10 The approved Decommissioning Plan shall be implemented within 12 months of final cessation or decommissioning of the Permitted activities or part thereof or according to a timeframe as may be agreed with the Authority.

3. Records

3.1 The Permit Holder shall ensure that all records required to be made by this Permit and any other records made by it in relation to the operation of the Permitted Installation shall:-

a. be made available for inspection by the Authority upon request;

b. be supplied to the Authority on demand and without charge and in the format requested;

c. be legible

d. indicate any amendments which have been made and shall include the original record wherever possible; and

e. be retained at the Permitted Installation, or other location agreed by the Authority in writing, for a minimum period of 5 years from the date when the records were made, unless otherwise agreed in writing.

3.2 A daily operations log should be kept on site in which the following information shall be recorded on a daily basis:

a. Any incidents that took place on site such as mechanical faults in the machinery or equipment used on site, any spills, fires, etc and the remedial action taken.

b. Any maintenance and inspections carried out on machinery and equipment.

c. Any defects or damage to the Site Security System.

d. Any other incidents that the permit holder deems important to record.

Each record shall be compiled within 24 hours of the relevant event. The records kept in the daily operations log shall be available for inspection at any time when the Authority representatives request to inspect them.

3.3 The Permit Holder shall maintain a record of the skills and training requirements for all staff whose tasks in relation to the Permitted Installation may have an impact on the environment and shall keep records of all relevant training.

4. Reporting

4.1 All reports and written and/or verbal notifications required by this Permit and notifications required by Regulation 7 of the Industrial Emissions (IPPC) Regulations shall be made and sent to the Authority using the contact details notified in writing to the Permit Holder by the Authority.

4.2 The Permit Holder shall submit to the Authority an Annual Environmental Report (AER) of the previous operating period to the Competent Authority by the end of March of each year. The AER shall contain all the information listed in Schedule 2 of this Permit and in the format specified therein. The AER shall be forwarded to the Authority in electronic format.

4.3 The European Pollutant Release and Transfer Register (E-PRTR) report (or any report requested by any subsequent regulations replacing the E-PRTR report) for the installation shall be submitted as part of the Annual Environment Report, by end of March of each year, or as required by Legislation. All quantities shall be reported even when these do not exceed the thresholds mentioned in EC Regulation 166/2006. The format used for reporting shall be that established by Legislation, notably S.L. 549.47, as may be amended from time to time

4.4 The Permit Holder shall, within 6 months of receipt of written notice from the Authority, submit to the Authority a report assessing whether all appropriate preventive measures continue to be taken against pollution, in particular through the application of the best available techniques, at the installation. The report shall consider any relevant published technical guidance current at the time of the notice which is either supplied with or referred to in the notice, and shall assess the costs and benefits of applying techniques described in that guidance, or otherwise identified by the Permit Holder, that may provide environmental improvement.

5. Notifications

5.1 Thirty days prior to the commencement of the harvesting season, the Permit Holder shall provide the following information:

a. Initiation of processing of tuna by-product
b. Date of planned cessation of receipt and processing of tuna by-product (offal) following the completion of the harvesting operations at sea

5.2 The Permit Holder shall notify the Authority without delay of:-

a. The detection of an emission of any substance which exceeds any limit or criterion in this Permit specified in relation to the substance;

b. The detection of any fugitive emission which has caused, is causing or may cause exceedances of the emission limit values stipulated in the permit;

c. The detection of any malfunction, breakdown or failure of plant or techniques which has caused, is causing or has the potential to cause exceedances of the emission limit values stipulated in the permit; and

d. Any accident which has caused, is causing or has the potential to cause significant pollution and/or public health risk.

5.3 When submitting notifications under condition 5.2, the Permit Holder shall send the following to the Authority:-

a. The information listed in Schedule 1 to this Permit within 24 hours of such notification;

b. The information listed in Table S2.5.1 of Schedule 2 and such information shall be in accordance with that Schedule as part of the AER.

5.4 The Permit Holder shall give written notification as soon as practicable prior to any of the following:-

a. Permanent cessation of the operation of part or all of the Permitted Installation;

b. Cessation of operation of part or all of the Permitted Installation for a period likely to exceed 6 months; and

c. Resumption of the operation of part or all of the Permitted Installation after a cessation notified under condition 5.4.a

5.5 The Permit Holder shall notify the Authority, as soon as practicable, of any information concerning the state of the site which affects or updates that provided to the Authority as part of the Site Report submitted with the application for this Permit

5.6 The Permit Holder shall notify the following matters to the Authority in writing within 10 working days of their occurrence:-

a. Any change in the Permit Holder's trading name, registered name or registered office address;
b. Any change to the particulars of the Permit Holder's corporate identity.
c. Any steps taken with a view to the Permit Holder going into administration, entering into a company voluntary arrangement or being wound up.

6. Interpretation

6.1 In this Permit, the following expressions shall have the following meanings:-

Malta" means the Island of Malta, the Island of Gozo and the other islands of the Maltese Archipelago, including the territorial waters thereof.

"mg . Nm-3" or "mg/Nm3" means milligramme per normal metre cubed.

"Land" means the upper layer of the earth's crust and shall include all the various components of the lithosphere to the rock-water and rock-air boundary, where the topmost 200 cm which is made up of inorganic and organic components and which serves as a habitat for micro- and macro-organisms is defined as soil.

"AER" means the Annual Environmental Report.

“Application” means the application for this Permit, together with any response to a notice served under Regulation 5 to the Industrial Emissions (IPPC) Regulations and any operational change agreed under the conditions of this Permit.

“Authorised Officer” means any officer of the Authority authorised in writing pursuant to the Environment Protection Act 2016 to exercise any of the powers specified therein.

‘’Background concentration” means such concentration of that substance as is present in:

a. where the Permitted Installation uses no significant amount of supplied or abstracted water, the precipitation onto the site
b. water supplied to the site; or
c. where more than 50% of the water used at the site is directly abstracted from ground or surface water on site, the abstracted water; or

“BAT” means best available techniques, which means the most effective and advanced stage of development of activities and their methods of operation which indicates the practical suitability of particular techniques to prevent and where that is not practicable to reduce emissions and the impact on the environment as a whole. For these purposes: “available techniques” means “those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced in Malta, as long as they are reasonably accessible to the Permit Holder”; “best” means “in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole” and “techniques” “includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.”

"Year" or “reporting year” means calendar year ending 31 December.

The Regulations” means the Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (S.L. 549.77) and any regulations amending or replacing them.

“The Operator” means a person who is in occupation of the Site and has responsibility for carrying out day to day activities at the Site.

‘’BREF” means the latest version of the BAT reference document published by the European Commission.

“Fugitive emission” means an emission to air or water (including sewer) from the Permitted Installation which is not controlled by an emission or background concentration limit under Section 2 of this Permit.

Groundwater” means all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

Industrial Emissions (IPPC) Regulations” means the Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (S.L.549.77) and words and expressions defined in the Industrial Emissions (IPPC) Regulations shall have the same meanings when used in this Permit save to the extent they are specifically defined in this Permit. It shall include any future amendments or superseding legislation.

“Monitoring” includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

“Permitted Installation” means the activities and the limits to those activities described in Table 1.1.1 of this Permit.

"Sewer" means "Public sewerage system" means the sewerage system owned by the Water Services Corporation.

"Staff" includes employees, directors or other officers of the Operator, and any other person under the Operator's direct or indirect control, including contractors.

‘'Technically Competent Person" means a person possessing the qualifications, experience and technical competence to abide by the conditions of the Permit.

Technically Competent Management" means the Technically Competent Person or Persons in control of the day-to-day activities authorised by the Permit and carried on at the Site.

The Authority" or "the Competent Authority" or "ERA" means the Malta Environment and Resources Authority or such other body or person as the Minister responsible for the environment may by order in the Gazette prescribe.

The Permit Holder" means the Permit Holder specified in the Permit or other person to whom the Permit has been transferred in accordance with the Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (S.L.549.77) and any statutory provisions or regulations amending or replacing them.

"The Site" means the land, structures, plant and equipment to which this Permit relates;

6.2 Where a minimum limit is set for pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

6.3 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means:-

a. in relation to gases from combustion processes, all emission limit values are defined at a temperature of 273.15K, a pressure of 101.3 kPa after correction for the water vapour content of the waste gases and at a standardised O_2 for 6% medium combustion plants using solid fuels, 3% for medium combustion plants, other than engines and gas turbines, using liquid and gaseous fuels and 15% for gas turbines.

b. in relation to gases from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

6.4 Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the document(s) with the most recent date shall prevail to the extent of such.

Schedule 1
Notification of abnormal emissions and significant adverse environmental effects

This page outlines the information that the Permit Holder must provide to satisfy conditions 5.2 and 5.3 of this Permit.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the Industrial Emissions (IPPC) Regulations.

Part A

Permit Number	
Name of Permit Holder	
Location of Installation	
Location of the emission	
Time and date of the emission	

Substance(s) emitted	**Media** *(e.g. air, groundwater)*	**Best estimate of the quantity or the rate of emission** *(include units)*	**Time between which the emission took place**

Measures taken, or intended to be taken, to stop the emission	

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment or harm to human health which has been or may be caused by the emission.	
The dates of any unauthorised emissions from the installation in the preceding 24 months.	

Name[i]	
Post	
Signature	
Date	

[i] Authorised to sign on behalf of the Permit Holder

Schedule 2
Annual Environmental Report

Important note
By this submission, you confirm that you give your explicit consent for the entire contents of this Annual Environment Report to be made available on the Authority's public website.

S2.1 Introduction

IPPC Permit Number	
Reporting Year: *[Applicant to specify]*	
Name and location of Site	
Brief description of activities at the site	

S2.2 Environment Management System & Reporting

Please attach a supporting document with the following:

	Tick (✓)
1. Environmental Policy containing the installation's environmental objectives and targets;	
2. Environmental Management Programme report (for the reporting year);	
3. Environmental Management Programme proposal (for the following year);	
4. European Pollutant Release and Transfer Register Report (as per Condition 4.3)[i].	

S2.3 Process Data

S2.3.1 Annual Summary

	Units	Previous reporting year	Current reporting year
Quantity of animal by-product received	tonnes		
Quantity of fishmeal product	tonnes		
Quantity of fish oil product	tonnes		
Total Annual Energy Consumption (from electricity and other sources)	MWh		
Electricity from renewable energy sources	MWh		
Energy consumption per unit product	MWh/tonne of product		
Annual water consumption	m^3		
Water consumption per unit product	m^3/tonne of product		
Annual quantity of waste produced	tonnes		
Waste produced per unit product	tonne waste/ tonne product		

S2.3.2 Fuel consumption

	Units	Sulphur Content [ii]	Consumption	
			Previous Year	Current Year
Light Fuel Oil	m^3			
Diesel	m^3			

[i] The format used for reporting shall be that published in the Government Gazette (http://www.doi.gov.mt/EN/gazetteonline/2007/07/gazts/GG%2013.7.pdf)
[ii] Specify units (e.g. as percentage, or mg/kg)

S2.3.3 List of Raw Materials

Raw Material	Risk phrase	Annual Quantity Used (kg)

S2.3.4 Data on ozone depleting substances and fluorinated greenhouse gases

Table 1: Registration of equipment

Equipment code	Type of equipment	Use	Charge (kg) /CO_2 (eq)	Type of substance
EQ 1				
EQ 2				
EQ 3				
EQ 4				

Table 2: Maintenance Schedule[i]

Data Submitted for each scheduled inspection[ii]	Equipment Code					
	EQ 1	EQ 2	EQ 3	EQ 4	EQ 5	Continue as required
Date of inspection						
All amounts of leakages detected (in Kg/CO_2 equiv[iii])						
Actions taken to eliminate such leakages						
Quantity and nature of the substances involved						
Serial number of the personnel involved						
Quantities added [iv] and/or recovered (in Kg/ CO_2 equiv).						

[i] This table is required to be filled in for the first reporting year. In subsequent years, the table should only include information on any equipment commissioned or decommissioned during the reporting years, where relevant

(a) For equipment that contains fluorinated greenhouse gases in quantities of 5 tonnes of CO_2 equivalent or more, but of less than 50 tonnes of CO_2 equivalent: at least every 12 months; or where a leakage detection system is installed, at least every 24 months;

(b) For equipment that contains fluorinated greenhouse gases in quantities of 50 tonnes of CO_2 equivalent or more, but of less than 500 tonnes of CO_2 equivalent: at least every six months or, where a leakage detection system is installed, at least every 12 months;

(c) For equipment that contains fluorinated greenhouse gases in quantities of 500 tonnes of CO_2 equivalent or more: at least every three months or, where a leakage detection system is installed, at least every six months.

[ii] Table to be repeated for every scheduled inspection as per 'footnote 1' above
[iii] Carbon Dioxide equivalent - For calculation kindly use Annex I and IV of Regulation (EU) No 517/2014
[iv] The quantities of added fluorinated greenhouse gases are from recycled or reclaimed stocks, please include the name and address of the recycling or reclamation facility and, where applicable, the certificate number.

S2.4 Monitoring Data

2.4.1 Emissions to Air

Emission Point Reference	Parameter	Limit Value (mg/Nm^3)	Standard methodology used	Type of monitoring (in-situ / at an accredited lab)	Measurement Error	Concentration (Annual Average)			Total Annual Load $Total\ Annual\ Load = Volumetric\ flow\ rate\ \left(\frac{Nm^3}{hr}\right) \times Concentration\ \left(\frac{mg}{Nm^3}\right) \times \frac{8760}{1{,}000{,}000}$		
						Unit	Previous reporting period	Present reporting period	Unit	Previous reporting period	Present reporting period
PS1	NO_X	200							kg		
	CO	-							kg		
PS2	NO_X	200							kg		
	CO	-							kg		
PS3	SO_2	350							kg		
	NO_X	300							kg		
	Dust	50							kg		
	CO	-							kg		

Name of laboratory(ies) where tests in this section have been carried out (as applicable)	
Accreditation certificate of laboratory that carried out the emission monitoring AND/OR a valid instrument calibration certificate	

2.4.2 Emission to sewer

Emission Point Reference	Parameter	Limit Value (mg/l)	Standard methodology used	Type of monitoring (in-situ / at an accredited lab)	Measurement Error	Concentration		
						Unit	Previous reporting period	Present reporting period
ED1	Total Petroleum Hydrocarbons (C12-C40)	5						
	Chemical Oxygen Demand	25						
	Biological Oxygen Demand	10						
	Suspended solids	5						
	Nitrogen Total	15						
	Phosphorus	2						
	Fats, Oils and Greases	2.6						

Name of laboratory(ies) where tests in this section have been carried out (as applicable)	
Accreditation certificate of laboratory that carried out the emission monitoring AND/OR a valid instrument calibration certificate	

2.4.3 Emission to groundwater

Emission Point Reference	Parameter	Limit Value	Standard methodology used	Type of monitoring (in-situ / at an accredited lab)	Measurement Error	Concentration (Annual Average)		
						Unit	Previous reporting period	Present reporting period
ED2	pH	6 - 10						
	Total Dissolved Solids	- (mg/l)						
	Salinity	- (psu)						

Name of laboratory(ies) where tests in this section have been carried out (as applicable)	
Accreditation certificate of laboratory that carried out the emission monitoring AND/OR a valid instrument calibration certificate	

2.4.4 Emission to land

Emission Point Reference	Parameter	Limit Value (mg/l)	Standard methodology used	Type of monitoring (in-situ / at an accredited lab)	Measurement Error	Concentration		
						Unit	Previous reporting period	Present reporting period
ED3	Total Petroleum Hydrocarbons (C12-C40)	5						
	Chemical Oxygen Demand	25						
	Biological Oxygen Demand	10						

Emission Point Reference	Parameter	Limit Value (mg/l)	Standard methodology used	Type of monitoring (in-situ / at an accredited lab)	Measurement Error	Concentration		
						Unit	Previous reporting period	Present reporting period
	Suspended solids	5						
	Nitrogen Total	15						
	Phosphorus	2						
	Fats, Oils and Greases	2.6						

Name of laboratory(ies) where tests in this section have been carried out (as applicable)	
Accreditation certificate of laboratory that carried out the emission monitoring AND/OR a valid instrument calibration certificate	

2.4.5 Corrective Action (to be compiled if any of the emission limit values for any emission point to air, land, sewer or groudnwater are exceeded)

Emission Point Reference	Proposed Action (may include reference to additional documentation)
PS1	
PS2	
PS3	
ED1	
ED2	
ED3	

S2.4.6 Noise monitoring[i]

Year when noise monitoring was last carried out:	
Year when next noise monitoring is due as agreed with the Authoirty.	

Additional documentation to be submitted if test was carried out during previous reporting year:

	Tick (✓)
Noise monitoring report according to BS 4142:2014	

S2.5 Transport of Waste

Name(s) of registered waste carrier used during reporting year	Waste type(s) transported

S2.5.1 Off-site transfers (including exports) of hazardous waste

Date of transfer	EWC Code[ii]	Quantity of waste (in kg)	TFS/CP number	Ultimate destination

S2.5.2 On-site recycling/ wastes

EWC Code	Description of Waste	Amount Recycled or recovered (in kg)	Recycling or Recovery

[i] Noise monitoring shall be carried out according to BS 4142:2014, all the series of ISO1996 and any other standard methodology stipulated by the Authority.

[ii] European Waste Catalogue Code (Reference: Commission Decision 2000/532/EC: http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1521709045135&uri=CELEX:02000D0532-20150601)

S2.6 Testing of catchment pits and bunds

Number of tanks	
Number of sumps on site	
Number of bunds on site	
Date of last test	
Testing due on (date)	

Additional documentation to be submitted if test was carried out during previous reporting year:

	Tick (✓)
Certification by warranted engineer	

S2.7 Incidents and Complaints

S2.7.1 Non-Compliance Incidents during Reporting Year

Date of incident	Brief description of Incident	Cause	Corrective action

Total number of non-compliance incidents for previous year:[i]
Total number of non-compliance incidents for current reporting year:

S2.7.2 Complaints made by the public

Date of Complaint	Description of complaint	Actions taken

Total number of complaints for previous year:
Total number of complaints for current reporting year:

S2.8 Submission of Certifications and Documentation

Please attach a supporting document with the following:

Documentation	Submission Dates	Tick
Accreditation certificate(s) of laboratory or calibration certificates etc.	Every year	☐
Good working condition certification of generator every three years	2025	☐
Certification of bunds.	Every year	☐

Applicant's declaration

I declare that, to the best of my knowledge, all the above information is correct and substantiated.

…… ……..
……
Name **ID Card Number** **on behalf of / in my own name**
(in block letters) *(in block letters)*

……
……
Signature **Date**

Schedule 3

Template for Exemption from Emission Limit Values

In view of the operating hours of combustion plant [*INSERT COMBUSTION PLANT NUMBER E.G. CP1*] as described in IP 00103/22, I [*INSERT NAME AND SURNAME*], as the Permit Holder responsible for the combustion plant at [*ADDRESS*], submit my request to Authority to be exempt from the Emission Limit Values set out in Table 2.1.1 of the above-mentioned permit for the year [*INSERT YEAR*].

Operating Hours in 20XX	
Operating Hours in 20XX	
Operating Hours in 20XX	
Operating Hours in 20XX	
Operating Hours in 20XX	
Rolling Average over 3 Years	

I declare that, to the best of my knowledge, all the above information is correct and substantiated.

_____	_____	_____
Name *(in block letters)*	**ID Card Number**	**On behalf of / in my own name** *(in block letters)*

Schedule 4

Site Plan

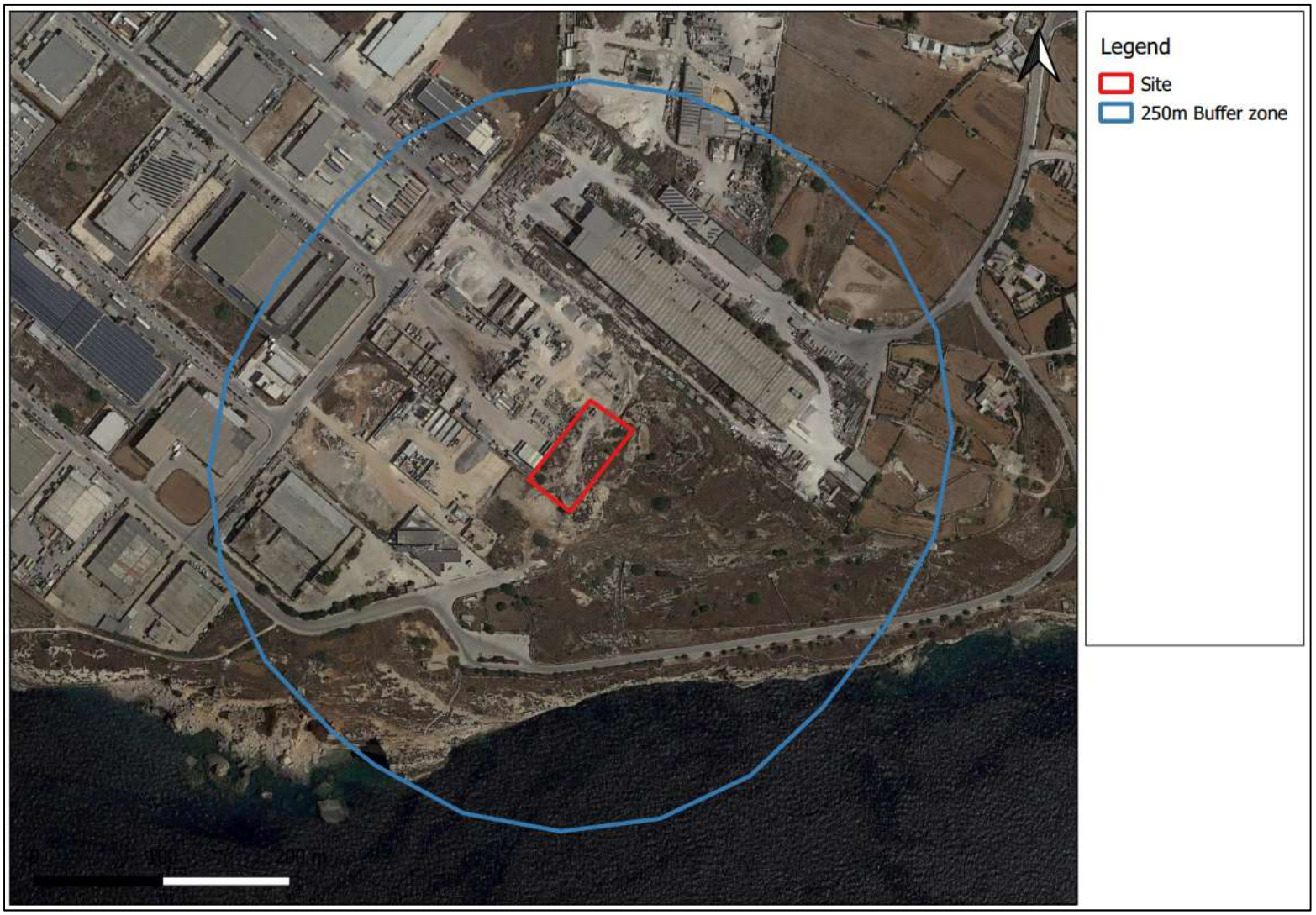
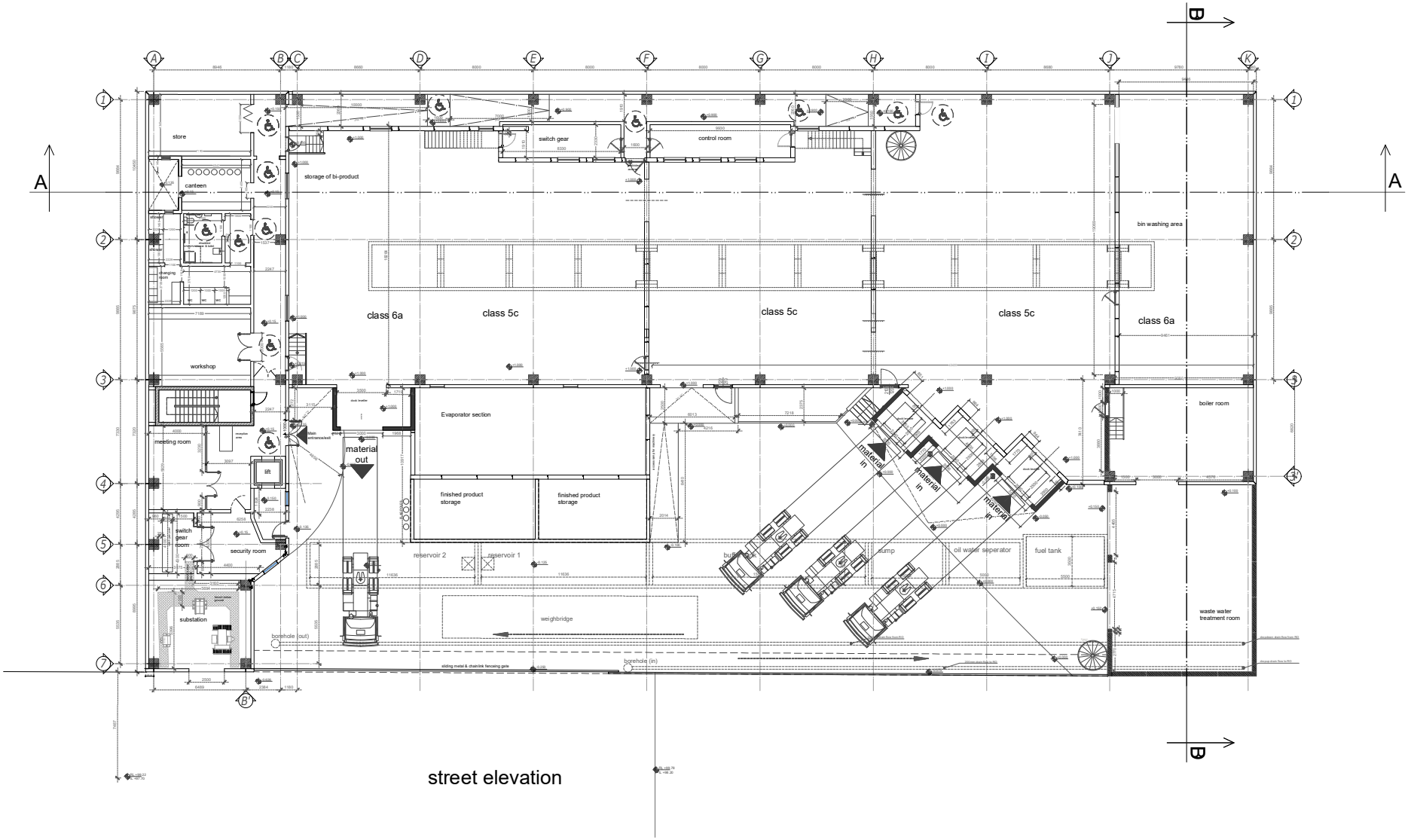


Figure S3.1: Site of installation, showing extent of area authorised for activity (outlined in Section 1.1)

End of Permit



street elevation

GROUND FLOOR (level 0) - Architectural layouts

PA-PL-001

Aquaculture Resources

Hal-Far - Plot 036B

Perit Sandro Cini

architectural layout
GROUND FLOOR (Level 0)

Level 0

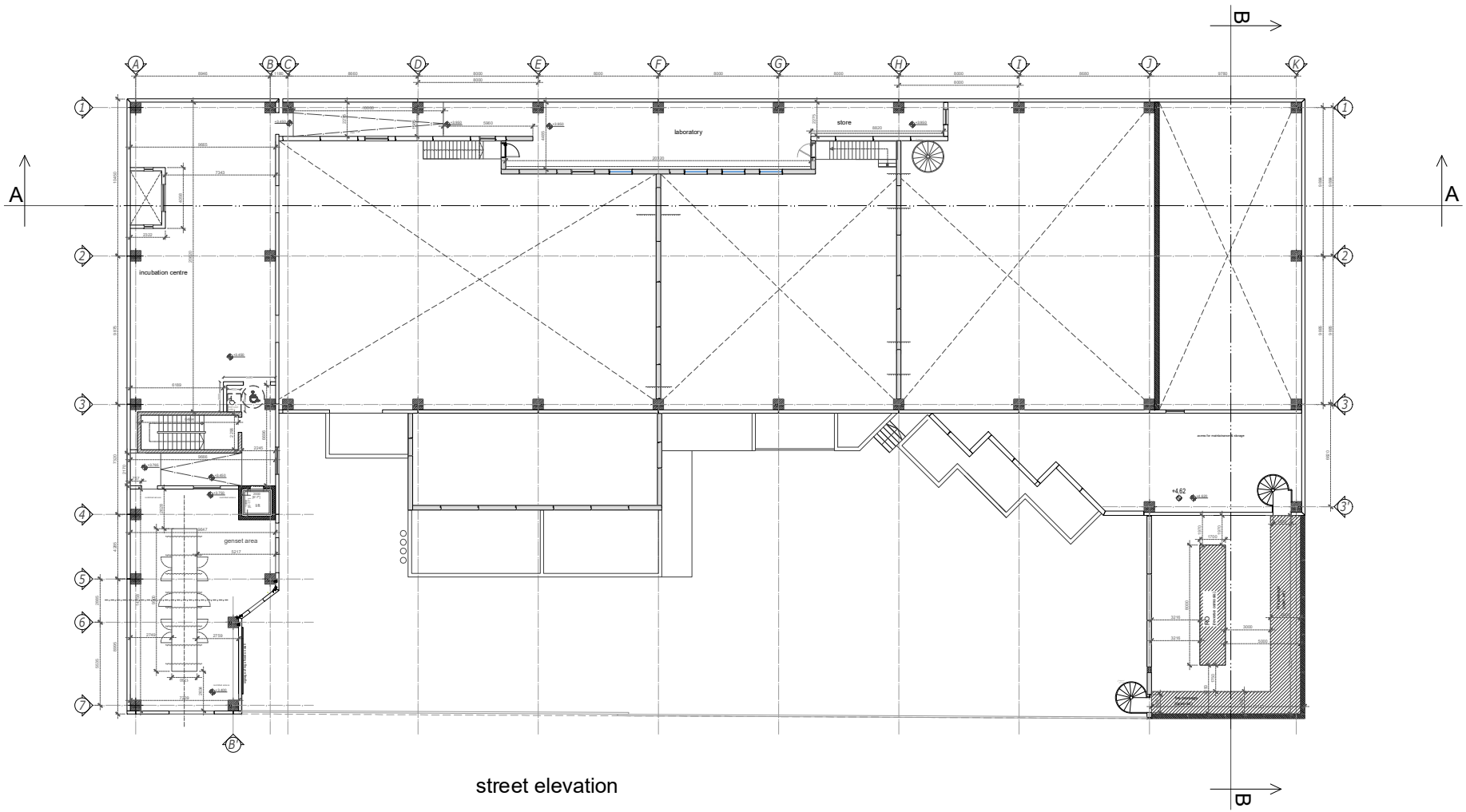
20013

March 22

1:200 on A2

SC

SC



street elevation

FIRST FLOOR (level 1) - Architectural layouts

PA-PL-002

Aquaculture Resources

Hal-Far - Plot 036B

Perit Sandro Cini

architectural layout
FIRST FLOOR (Level 1)

Level 1

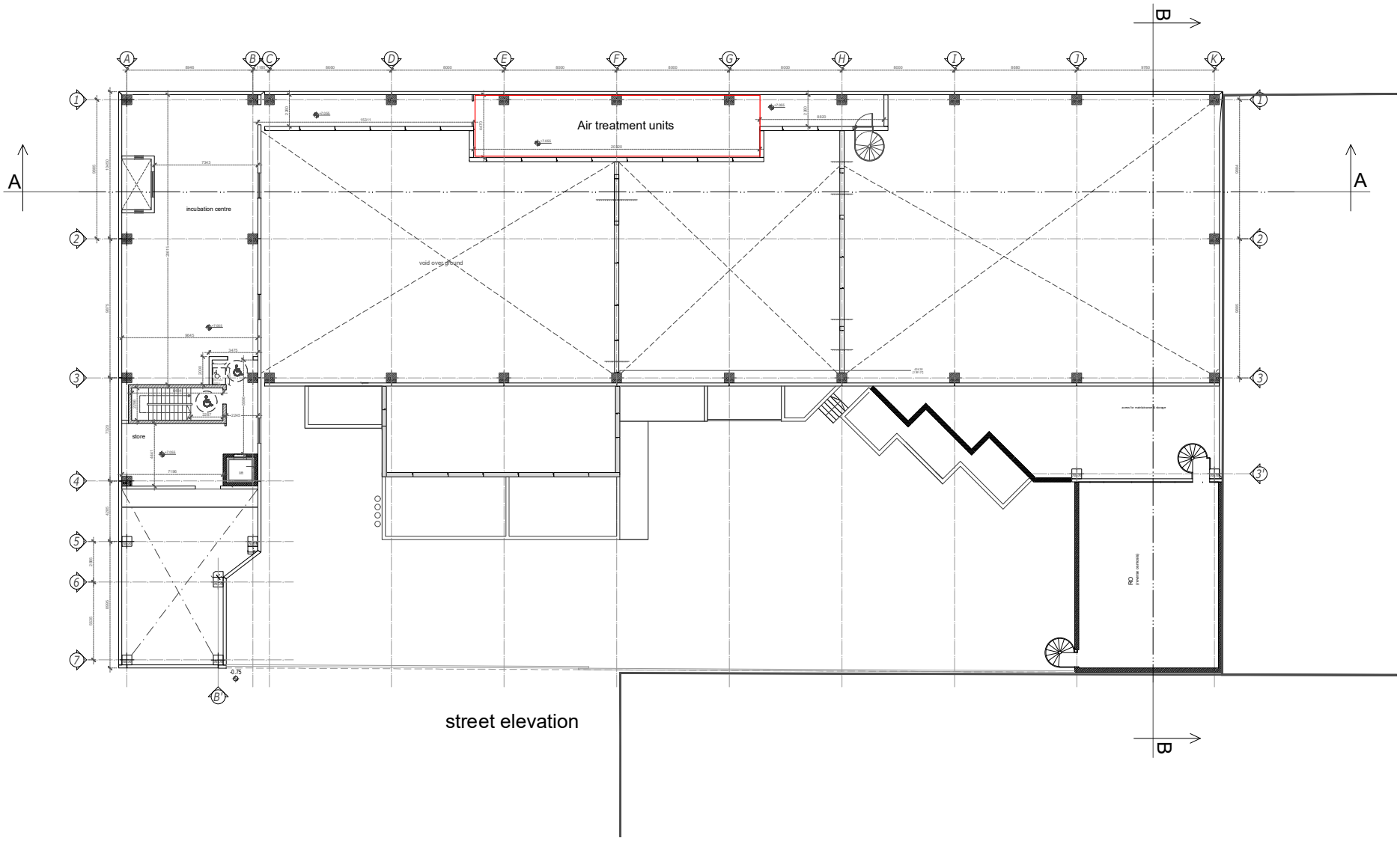
20013

March 22

1:200 on A2

SC

SC



street elevation

Aquaculture Resources

Hal-Far - Plot 036B

Perit Sandro Cini

architectural layout
SECOND FLOOR (Level 2)

Level 2

20013

March 22

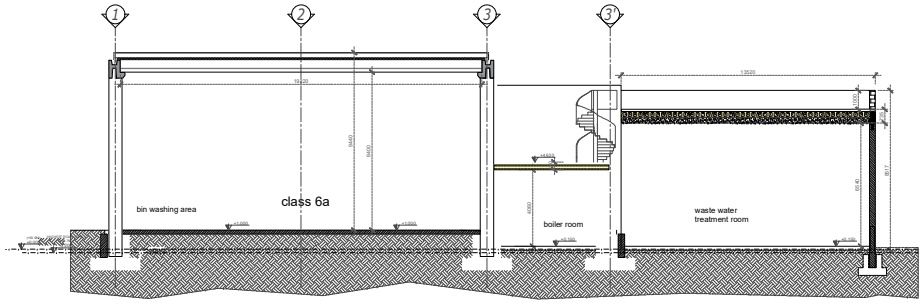
1:200 on A2

SC

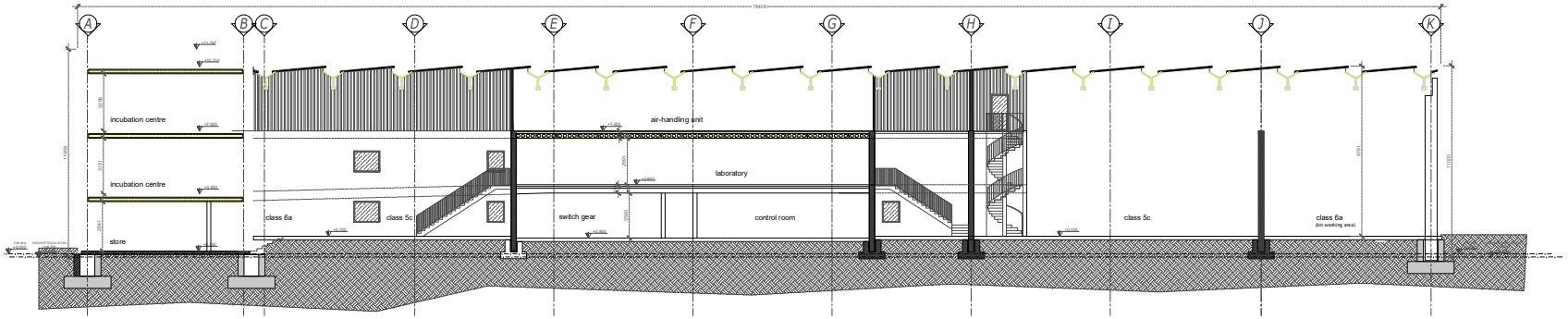
SC

SECOND FLOOR (level 2) - Architectural layout

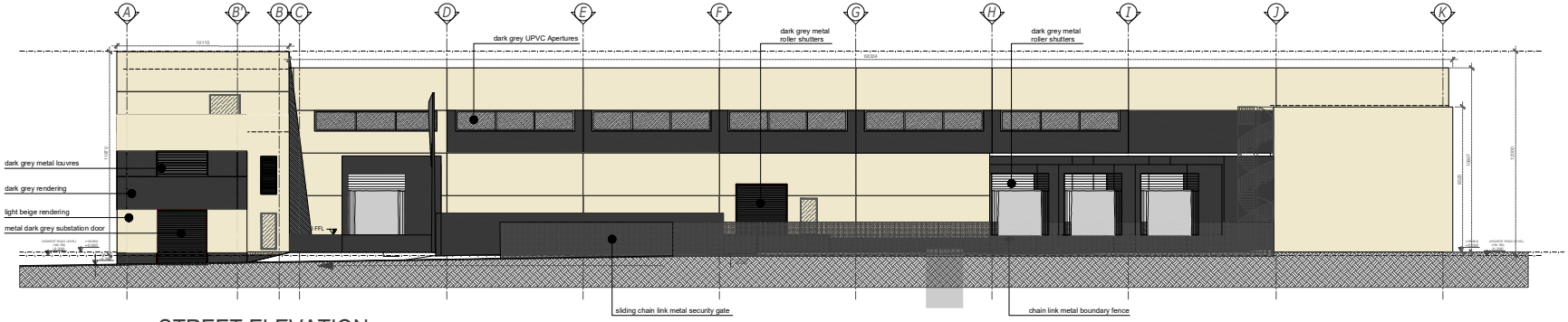
PA-PL-003



SECTION BB



SECTION AA



STREET ELEVATION

Aquaculture Resources

Hal-Far - Plot 036B

Perit Sandro Cini

architectural layout
SECOND FLOOR (Level 2)

Level 2

20013

March 22

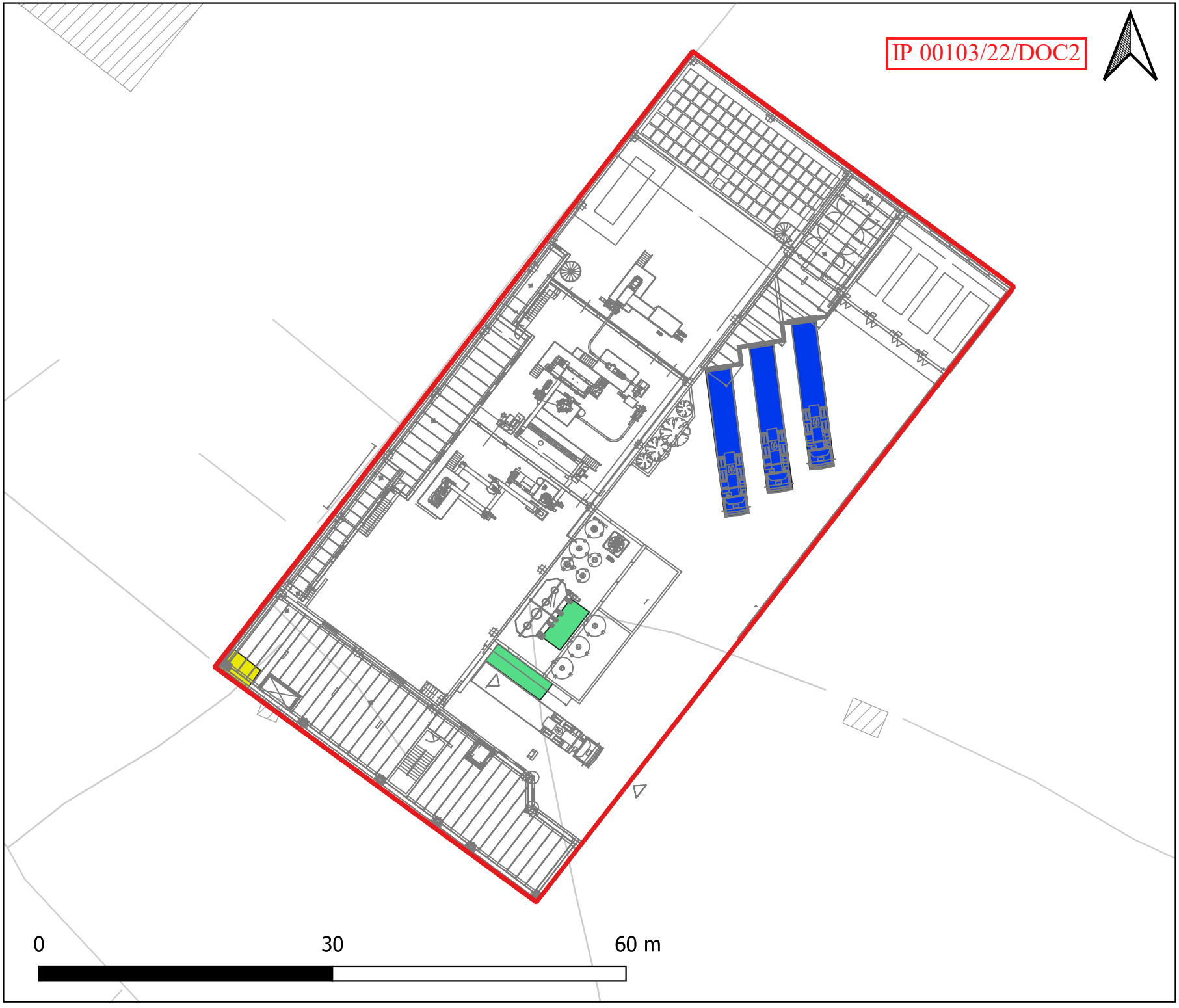
1:200 on A2

SC

SC

PA-PL-004

IP 00103/22/DOC2

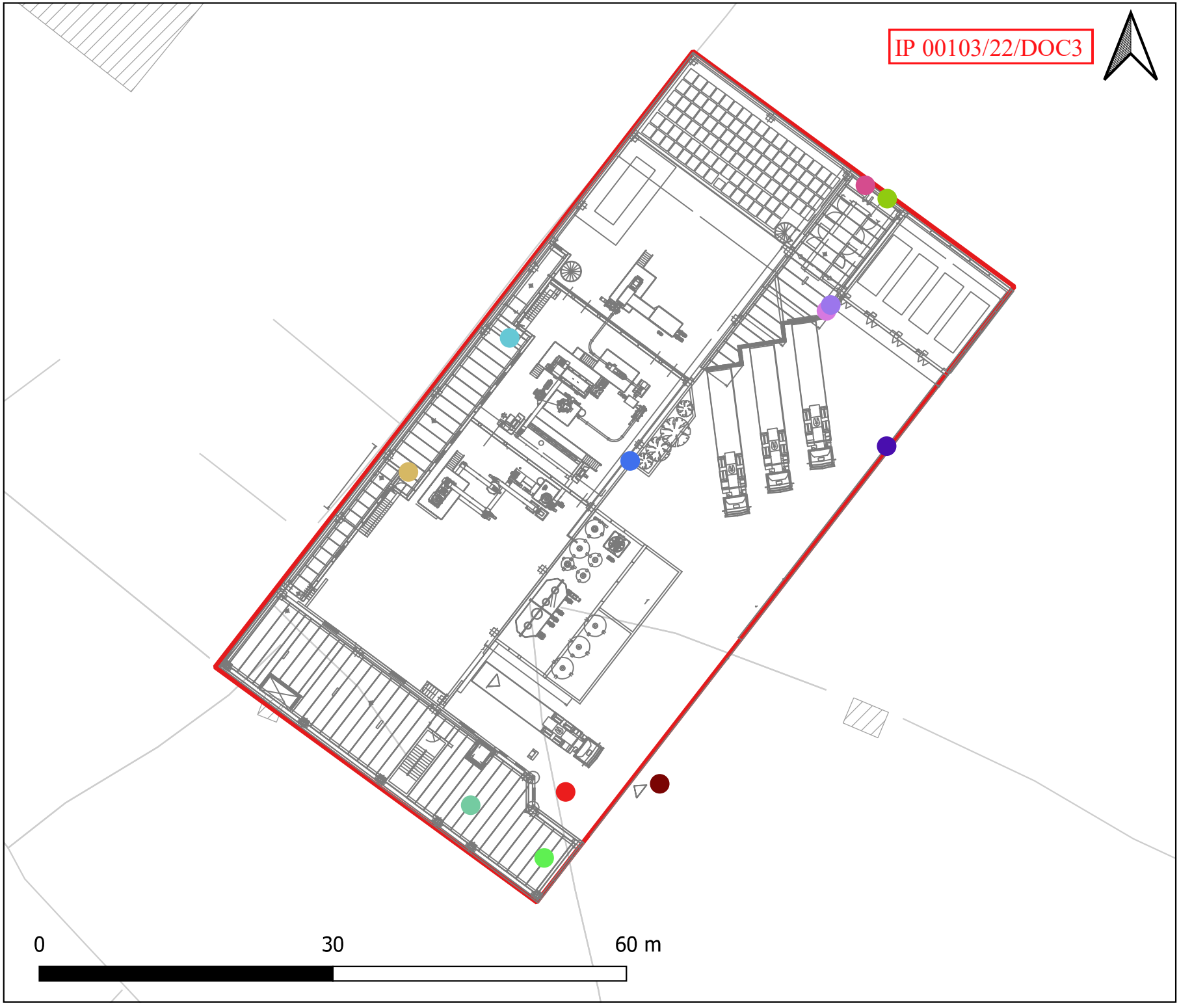


Legend

- Site
- M1: Tuna offals
- M2: Sulphuric acid & M3: Caustic soda
- M4: Ecolab Asepto, M5: Cortrol IS3020 & M6: Vita-PET BT Liquid

Title: Storage	
Drawing No: **DRG1362d**	
Design by: **YS**	Scale: **1:500**
Drawn by: **YS**	Date Created: **29/09/2021**
Approved by: **SD** Date: **Aug 2022**	Revision Date: **31/08/2022**
Quote or job No. **ENV-PRJ476**	AIS ENVIRONMENT

IP 00103/22/DOC3



Legend

- Site
- PS1: Generator engine 1
- PS2: Generator engine 2
- PS3: Boiler chimney
- PS4: Boiler steam blow off
- PS5: Vent line for oil-water interceptor
- PS6: Vent line for LFO tank
- PS7: Steamline safety valves
- PS8: Air treatment stack 1
- PS9: Air treatment stack 2
- ED1: Treated wastewater to sewer
- ED2: Brine from RO plant
- ED3: Freshwater from oil-water interceptor

Title:
Effluents & emissions

Drawing No: **DRG1359d**

Design by: **YS**	Scale: **1:500**
Drawn by: **YS**	Date Created: **29/09/2021**

Approved by: **SD** Date: **Aug 2022**	Revision Date: **31/08/2022**

Quote
or job No.

ENV-PRJ476

AIS ENVIRONMENT

yard flow to gutters

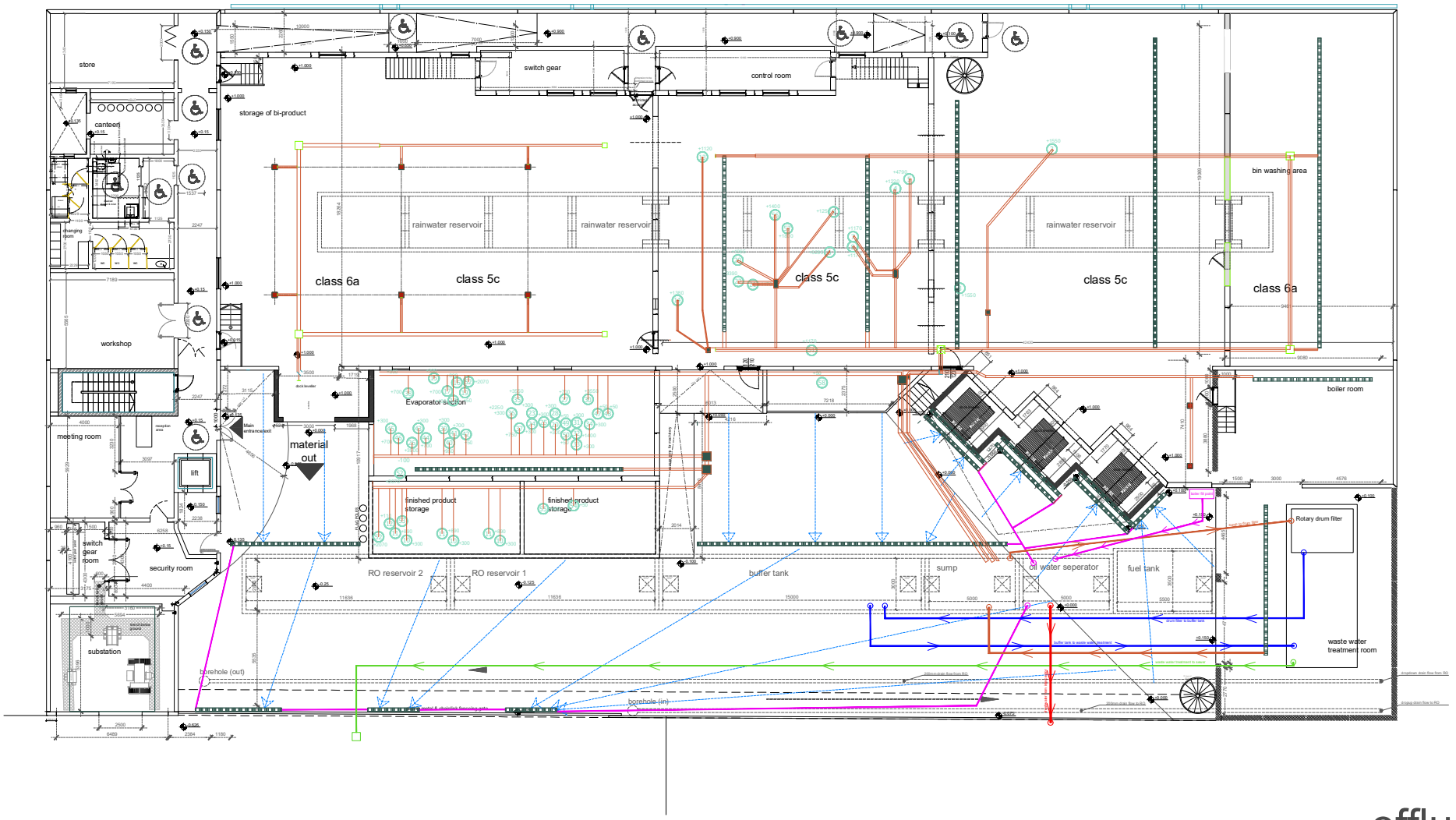
petroleum hydrocarbon effluent

pipes to & from sump

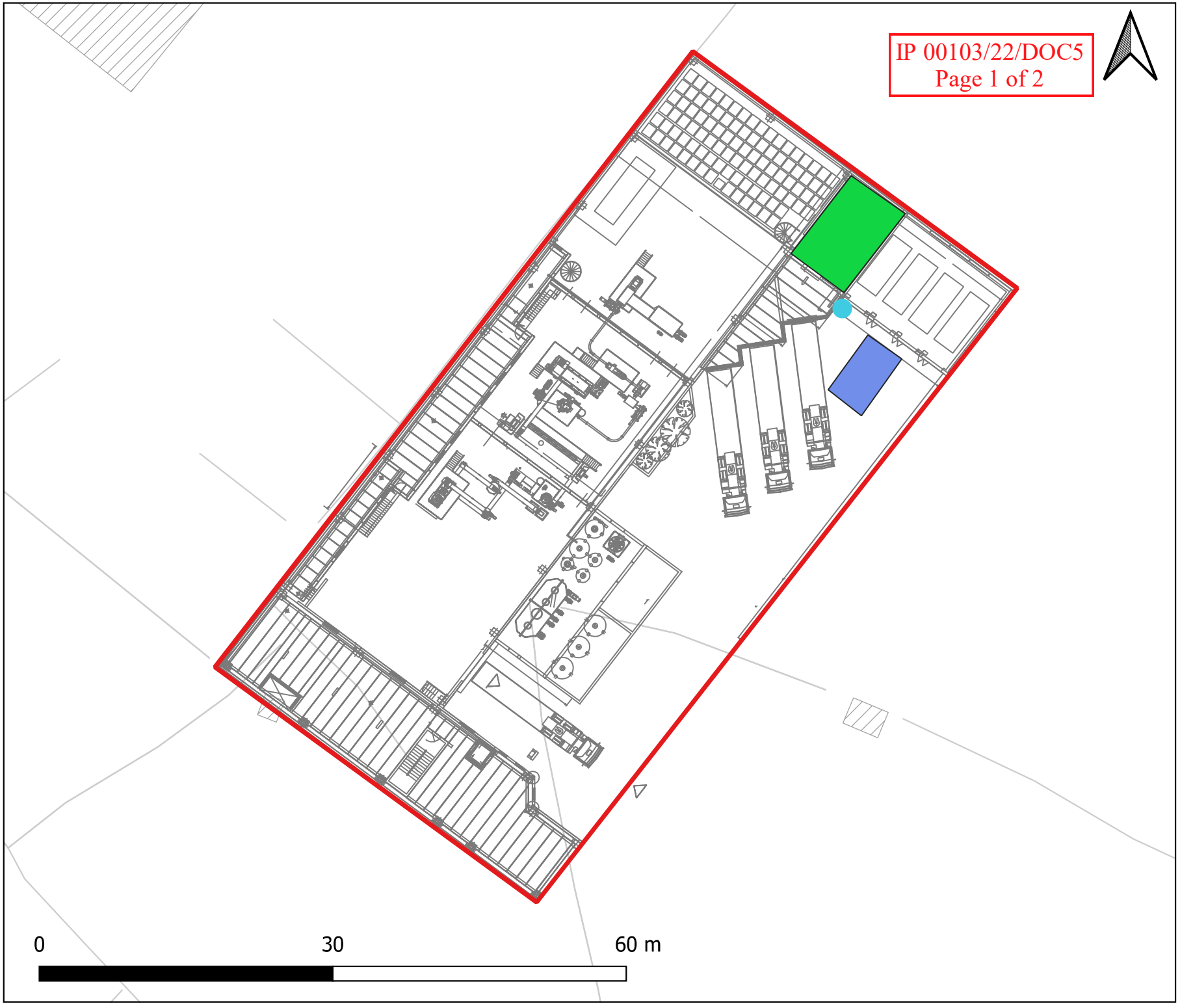
pipes to & from buffer tank

pipes from waste water treatment to sewer

freshwater from interceptor



effluents flow



Legend

- Site
- FB2: LFO fill point
- B1: Boiler
- F2: LFO

Title:
Combustion plants & fuel storage (ground floor)

Drawing No: **DRG1360c**

Design by: **YS**	Scale: **1:500**
Drawn by: **YS**	Date Created: **29/09/2021**
Approved by: **SD**	Revision Date:
Date: **Aug 2022**	**24/08/2022**

Quote or job No.

ENV-PRJ476

AIS ENVIRONMENT

IP 00103/22/DOC5
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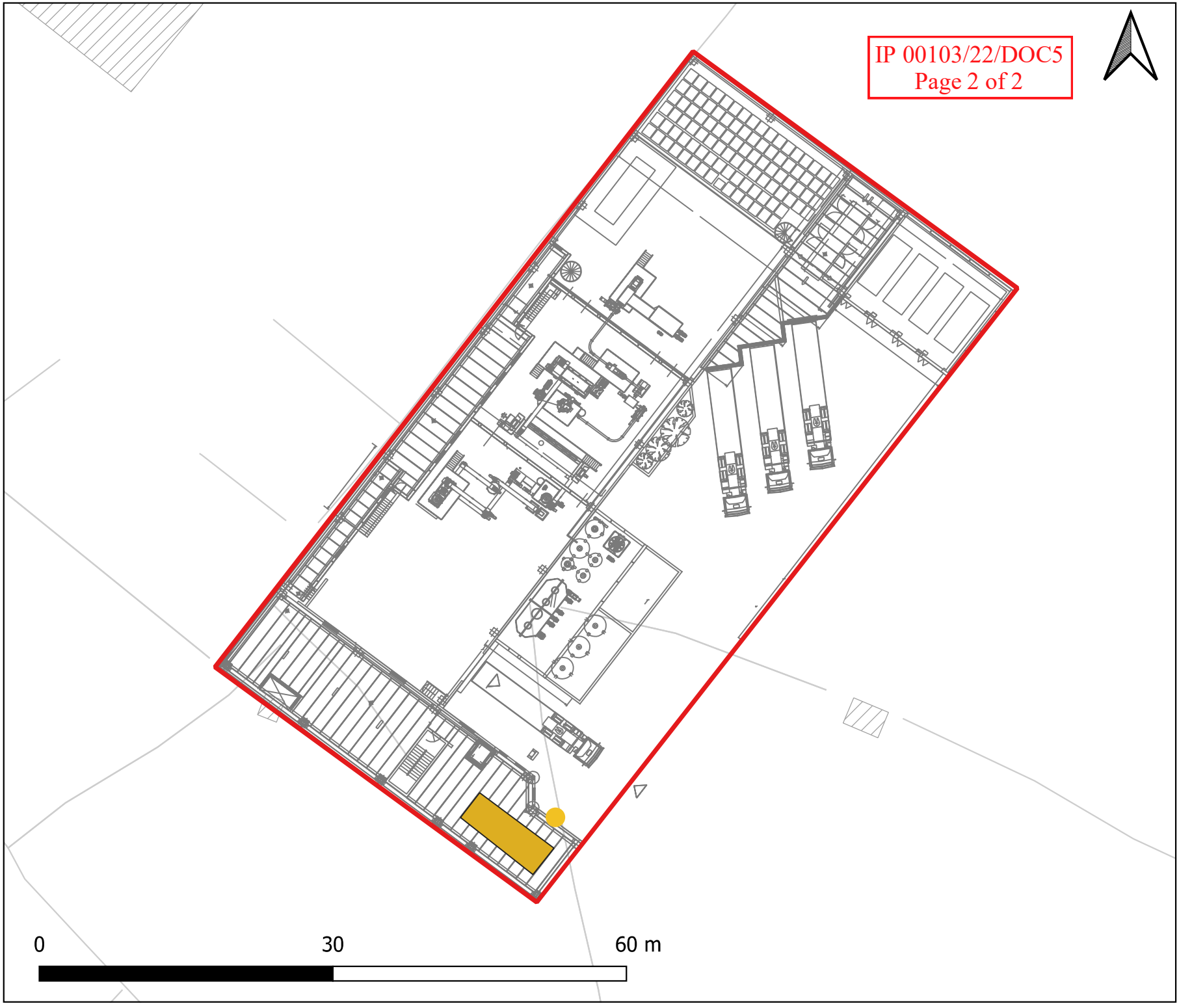


Legend

- Site
- FB1: Diesel fill point
- G1: Generator & F1: Diesel

Title:
Combustion plants & fuel storage (first floor)

Drawing No: **DRG1361c**

Design by: **YS**	Scale: **1:500**
Drawn by: **YS**	Date Created: **29/09/2021**

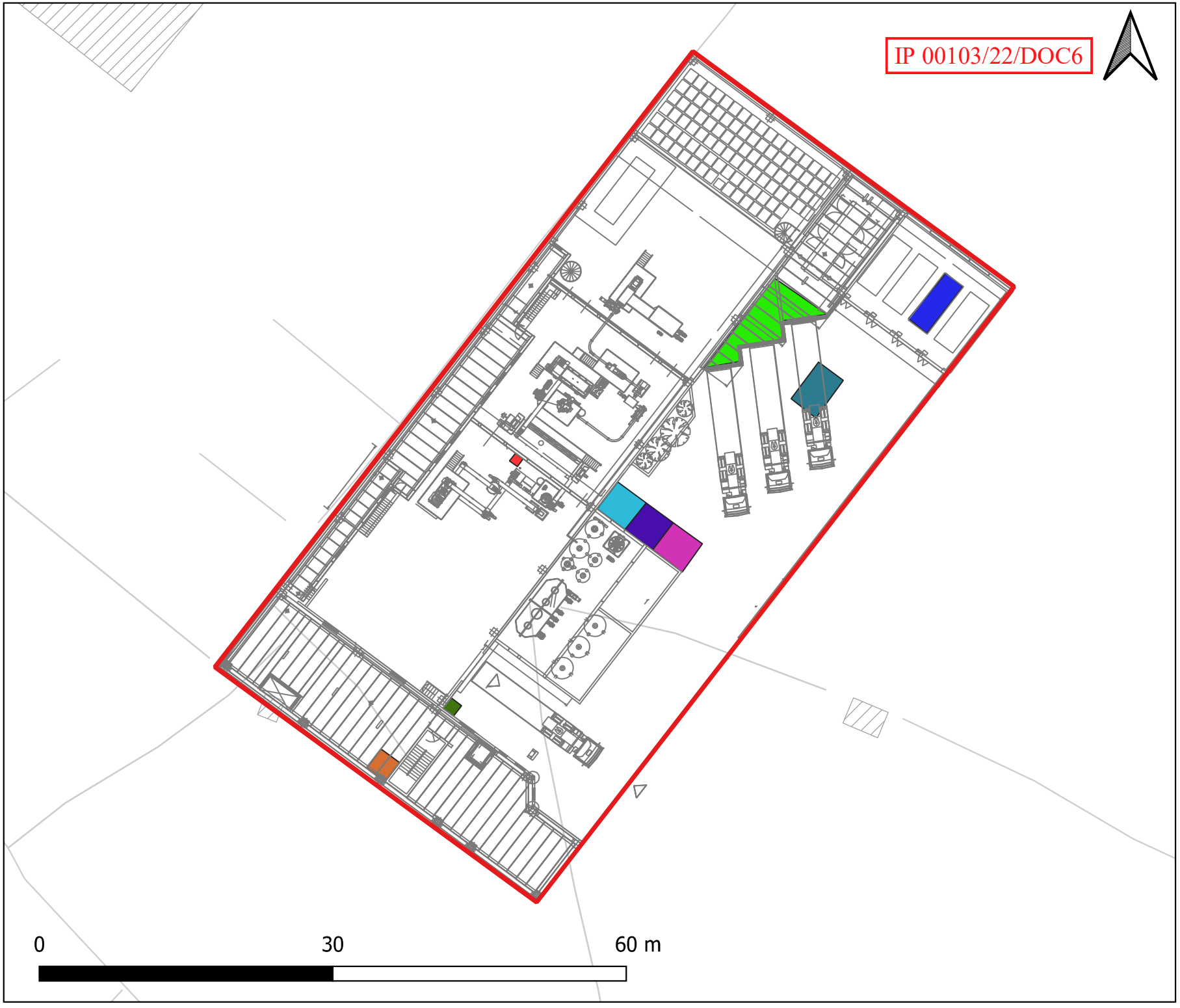
Approved by: **SD**	Revision Date:
Date: **Aug 2022**	**24/08/2022**

Quote or job No.

ENV-PRJ476

AIS ENVIRONMENT

IP 00103/22/DOC6



Legend

- Site
- W1: Cardboard
- W2: Sludge from WWTP
- W3: Contaminated IBCs
- W4: Used PPEs
- W5: Plastic packaging
- W6: Wooden pallets
- W7: Reject tuna material
- W8: Metal contaminants
- W9: Sludge from oil-water interceptor

Title:
Waste

Drawing No: **DRG1358d**

Design by: **YS**	Scale: **1:500**
Drawn by: **YS**	Date Created: **29/09/2021**

Approved by: **SD** Date: **Aug 2022**	Revision Date: **26/08/2022**

Quote or job No.

ENV-PRJ476

AIS ENVIRONMENT

IP 00103/22/DOC7

AIS ENVIRONMENT

Noise Monitoring Plan for Aquaculture Resources Ltd

As per ERA requirements for the IPPC application

Report

Noise Monitoring Plan

AIS Ref. No: **PRJ-ENV605**

Client Ref. No: **ENV333247/C/21**

Second Version

Publication Date

11 March 2022

AIS Environment Ltd,
AIS House, 18, St. John Street,
Fgura, FGR 1447

+356 21803374
www.aisenvironment.com
info@ais.com.mt

VAT No: MT 1457-1625
Reg No: C18445

DOCUMENT REVISION HISTORY

DATE	VERSION	COMMENTS	AUTHORS / CONTRIBUTORS
29/10/2021	1.0	First Version	Yasmin Schembri
11/03/2022	2.0	Second Version	Rebecca Scerri

APPROVAL LEVEL	NAME	SIGNATURE
Internal Check	Sacha Dunlop	
Internal Approval	Mario Schembri	

DISCLAIMER

This report has been prepared by AIS Environment with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of Aquaculture Resources Ltd; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from AIS Environment. AIS Environment disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

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1 INTRODUCTION

Aquaculture Resources Ltd will be operating a facility that will process fish offals generated from the tuna processing industry. The offal by-products will serve as the primary raw material in the process to generate fish meal. The operations of the facility will be supplemented by the provision of freshwater from a proposed Reverse Osmosis treatment Plant. AIS Environment Ltd (AIS) has been commissioned by Aquaculture Resources Ltd (henceforth referred to as the 'Operator') to prepare a Noise Monitoring Plan to outline the procedure that should be followed in case the site is to be decommissioned.

The operations and activities of the facility will be covered by an Industrial Pollution Prevention and Control (IPPC) Permit, the application of which is currently in progress. AIS Environment is completing the IPPC Permit application on behalf of the Operator. The Noise Monitoring Plan is required to fulfil IPPC permit application 11.3 of the facility's IPPC permit application:

11.3. Noise Monitoring

Provide a document with a method statement as to how environmental noise measurement surveys will be undertaken. This is to be accompanied by a site layout plan showing the location from where the monitoring will be done. These are to be attached with the application.

The requirements relating to noise include:

1. Information on the main sources of noise and vibration associated with the TRF;
2. Details of noise abatement services;
3. Details of relevant environmental surveys; and
4. Details of noise emission monitoring once the IPPC permit has been issued.

This document details the methodology to be utilised for the baseline sound survey, and includes:

- The identified Noise Sensitive Receptors (NSR's) to the Site and the associated monitoring locations,
- The equipment to be utilised for the survey,
- The survey time periods and indices to be measured; and
- The additional information to be recorded during the survey.

1.1 A DESCRIPTION OF THE SITE AND ITS SURROUNDINGS

Aquaculture Resources Ltd will be operating a facility that will process fish offals generated from the tuna processing industry. The offal by-products will serve as the primary raw material in the process to generate fish meal. The facility will be located in the outskirts of the Ħal-Far Industrial Estate, Birżebbuġa.

The facility comprises of a total of seven main sections which will serve to render the tuna offals into fishmeal, as listed hereunder:

- Raw material – Material is mechanically broken up into small pieces and metal contaminants are removed
- Preheating – Material is preheated using steam
- Separation – Preheated material is separated to remove the fat
- Drying – Removal of water from the material
- Meal handling – Cooling and shaping of dried material
- Evaporation – Generation of steam for other sections
- Reverse Osmosis plant – freshwater produced from the RO to be used to feed all tuna offal facility equipment

Directly associated activities include the generation of steam by the boiler, which will be distributed to the various equipment and feeding of all facility equipment with RO-produced freshwater. Ancillary activities which are carried out on site include collection and treatment of effluents from the site. Effluents are generated from the on-site drains and from the air odour treatment system. Odorous air is collected from the process area and condensed. The condensate is combined with the effluents from the drains and treated by a wastewater treatment plant. The cleaned wastewater is then drained into the public sewage system, while the sludge generated from the process is either exported to be used to produce animal fodder or collected and transported offsite for destruction.

2 TERMS OF REFERENCE

No Terms of Reference have been provided. The standard conditions which govern noise monitoring plans have been implemented.

3 METHODOLOGY

3.1 AREA OF INFLUENCE

To obtain baseline noise levels for comparison with predicted noise levels, it is being proposed that measurements are taken at a total of two noise sensitive receptors (NSRs). The author recommends that measurements are obtained at the following approximate locations:

- Location 1: Industrial area to the northwest of the Site; and
- Location 2: Agricultural area to the northeast of the Site (representative of the nearby residential property)

The approximate GPS coordinates of the proposed locations are provided in Table 1. Figure 1 displays a map of the proposed NSR sampling locations.

TABLE 1: APPROXIMATE GPS COORDINATES FOR THE MONITORING POINTS

Monitoring Point	GPS Coordinates	
Location 1	35°48'33.14"N	14°30'59.62"E
Location 2	35°48'35.30"N	14°31'18.79"E

FIGURE 1: PROPOSED LOCATION OF NOISE MONITORING STATIONS

3.2 BASELINE NOISE STUDY

3.2.1 Monitoring Equipment

In line with standard conditions for IPPC permits, the noise levels will be measured using a calibrated type 1 sound level meter conforming to BS 6698/IEC 61672-1:2013 *Electro-acoustics, Sound Level Meters, Specifications*.

The sound level meter shall be field-calibrated before and after monitoring using an acoustic calibrator conforming to the latest version of British Standard EN 60942:2003 *Electro-acoustics – Sound Calibrations*. Results must be within ±1.0dB, otherwise discarded and read again (as outlined in Condition 7 of Schedule 4 IP 0002/13/B).

All sound level meters shall be calibrated to a traceable standard by a UKAS-accredited laboratory, or equivalent, within a 12-month period before the survey and all acoustic calibrators shall be calibrated to a traceable standard by a UKAS-accredited laboratory, or equivalent, within a 12-month period before the survey.

The specifications of the noise equipment is enclosed as Appendix I.

3.2.2 Equipment Placement

The microphone will be placed 1.5m above the ground in free-field conditions, i.e. at least 3.5m from the nearest vertical, reflecting surface, and will be placed vertically.

3.2.3 Baseline Monitoring Periods

If it is proposed that the Site will be operational on a 24/7 basis; consequently it is recommended that the baseline sound survey is undertaken during a Sunday daytime and night-time as these are considered the most sensitive time periods of the week.

The survey should follow the protocol outlined below,

- Four x 15-minute non-consecutive periods at each monitoring location between 09:00 and 17:00 during a Sunday daytime: and
- Two x 15-minute non-consecutive periods at each monitoring location between 01:00 and 3:00 during a Sunday night-time (early hours of Monday morning).

3.2.4 Noise Indices to be Measured

At each monitoring position during each time period the following noise indices should be recorded:

- $L_{Aeq,T}$: the A-weighted equivalent continuous noise level over the measurement period T;
- L_{A90}: the A-weighted noise level exceeded for 90% of the measurement period. This parameter is often used to describe background noise;
- L_{A10}: the A-weighted noise level exceeded for 10% of the measurement period. This parameter is often used to describe road traffic noise;
- L_{Amin}: is the minimum noise level measured by the sound level meter over a given period; and
- L_{Amax}: the maximum A-weighted noise level during the measurement period.

3.2.5 Weather Conditions

The weather conditions at the time of measurements will be recorded. The recorded meteorological conditions will include:

- Wind speed and direction
- Temperature
- Relative humidity
- Cloud cover

Measurements should ideally be carried out under dry conditions, when the road surface is dry, and the wind velocity is no more than $2ms^{-1}$.

Monitoring should not be performed if wind speed exceeds $5ms^{-1}$, wind gusts exceed $10ms^{-1}$ and/or it is raining.

3.2.5.1 Critical Listening

During each survey period at each monitoring location the following information should be recorded/noted by the surveyor,

- The prevailing soundscape,
- Any industrial noise sources audible,
- Any events (i.e., cars passing, aircraft, local activity) which may have the potential to impact on the baseline sound levels.

3.3 OPERATIONAL NOISE ASSESSMENT

AIS have been provided with a list of operational plant with associated operational noise levels; however, it is understood these levels are for the plant idling and not whilst operating normally processing material.

However, at the initial stage the noise levels provided whilst the plant is idling would be utilised within a Cadna/A noise model for the TRF, the model would predict the specific noise levels from the TRF at the nearest NSR's during all operational periods.

It must be noted that once the TRF is operating normally, an operational noise survey would be undertaken at the Site. The survey would determine the noise levels generated by the plant whilst it is in full operation; based on the results of this survey the noise model could be updated accordingly.

3.4 NOISE ASSESSMENT AND ABATEMENT TECHNIQUES

The calculated specific noise levels at the nearest noise-sensitive receptors would then be assessed against the measured baseline background (L_{A90}) sound levels and site setting/context in accordance with the guidance contained in British Standard 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound.*

The assessment would include a subjective opinion of any acoustic features associated with the operation of the Site which would be based on the observations made by the surveyor during the operational survey; this may include penalties for tonal, impulsive, and/or intermittent aspects of the sound being generated by the Site at the nearest noise-sensitive receptors.

The results of the assessment would be used to determine whether noise levels generated by the operation of the Facility would lead to adverse impacts at the nearest NSR's.

The assessment would indicate whether any noise abatement techniques are required to reduce any identified impacts; the scope of this study includes consideration of generic mitigation measures but does not include detailed design of such measures.

It should be noted that the assessment and abatement techniques may have to be revised once the operational noise survey has been undertaken.

3.5 REPORTING

The results of the noise assessment including any required mitigation measures would be included in a standalone report written in a format suitable for submission to the Environment and Resources Authority (ERA).

Once the IPPC permit has been issued AIS would draft a detailed noise monitoring plan (NMP). As a minimum the NMP would include.

- Details of all the measurement points (which would be based on the baseline sound survey locations.),
- The measurement time periods and recommended frequency,
- Details of the noise indices to be measured during the operational survey; and
- Details of all the information which should be recorded during the operational surveys.

It is envisaged that the NMP would be produced as a separate standalone document in a format suitable for submission to the ERA.

APPENDIX I

MONITORING EQUIPMENT SPECIFICATIONS

Cirrus Research plc

dedicated to noise measurement

CR:800C

Sound Level Meters

dedicated to noise measurement.

CR:800C

Key Features

> Ideal for both Occupational and Environmental noise measurements

> Complies with the latest IEC 61672 standard as well as IEC 60651 & IEC 60804 for compliance with virtually all noise measurement regulations

> Available with Class 1 or Class 2 accuracy

> Options of 1:1 and 1:3 Octave Band Filters

> 1:1 Octave Band Filters to help in the selection of hearing protection (PPE) using the Deaf Defier3 software

> 1:3 Octave Band Filters for environmental noise measurements and tonal analysis

> Data Logging of up to 1,300 measurements, allowing for example over 12 days of 15 minute measurements, ideal for environmental noise measurements

> USB data download to the Deaf Defier3 software

> Deaf Defier3 software supplied as standard to provide measurement reports, analysis and presentation with licence-free installation and free updates available from the Cirrus website.

> AC Output for use with external analysis and recording equipment

> Outdoor measurement kits available for unattended environmental noise monitoring with optional remote access via GSM Modem

> 2 Year standard warranty with 10 year optional warranty giving you up to 12 years of cover

The CR:800C Series is a range of high performance Sound Level Meters that provide the functions and features demanded by modern measurement standards and guidelines, while being designed specifically for ease of use.

From Noise at Work Risk Assessments to Vehicle Noise Testing to Environmental Noise Measurements, the CR:800C Series provides a solution.

Data logging of the measured parameters is standard, and up to 12 days of data can be stored. The Deaf Defier3 software, which is supplied as standard, allows this measurement data to be downloaded, analysed and measurement reports created.

Available with Class 1 or Class 2 accuracy along with the options of 1:1 & 1:3 Octave Band Filters, there is an instrument to meet your noise measurement needs.

A range of accessories are available to complement the CR:800C series including outdoor measurement kits, power supplies, microphone extension cables and software.

The instruments have been designed to be simple to use whilst meeting all of the latest Standards for Sound Level Meters.

Reliable, accurate and affordable, the CR:800C Series includes the ideal instruments for your noise measurement applications.

dedicated to noise measurement.

Occupational Noise Measurement



- >Simultaneous measurement of L_{AF}, L_{Aeq}, L_{AFmax} and L_{Cpeak}
- >Time history of noise levels
- >Risk Assessment of Workplace Noise Levels
- >Ideal for noise measurements in accordance with the Noise at Work Regulations and EU Directive 2003/10/EC
- >Measurements for the selection of hearing protection with CR:822C & CR:821C using 1:1 Octave Band Filters as well as with the CR:832C & CR:831C instruments
- >Calculate Noise Exposures and create measurement reports with the Deaf Defier3 Software

All Noise at Work regulations require the assessment of the potential risk of hearing damage to employees, and the CR:800C series provides the essential parameters needed to comply with these measurement standards and guidelines, such as L_{eq}, $L_{EP,d}$ ($L_{EX,8h}$) and L_{CPeak}.

Where the noise levels are above the limits set by occuptional noise regulations such as the Control of Noise at Work Regulations in the UK, the provision of effective noise control measures and hearing protection are often required.

All of the CR:800C series, with the exception of the basic CR:811C and CR:812C units, can provide 1:1 Octave Band measurements, allowing the instrument to be used to determine the frequency content of the noise, and therefore to assist in the provision of a cost-effective solution.

The Deaf Defier3 software includes a database of hearing defender products (PPE) which is used to provide a quick and reliable solution to the selection of appropriate protection.

Occupational Noise Instrument Selection

	Class 1	Class 2	LAeq	Peak(C)	LEP,d (LEX,8h)	1:1 Octave Band Filters	Software
CR:812C		✓	✓	✓	✓		✓
CR:811C	✓		✓	✓	✓		✓
CR:822C		✓	✓	✓	✓	✓	✓
CR:821C	✓		✓	✓	✓	✓	✓
CR:832C		✓	✓	✓	✓	✓	✓
CR:831C	✓		✓	✓	✓	✓	✓
CR:813C	✓		✓				✓

Environmental Noise Measurement



- >Boundary noise measurements
- >External noise impact assessments
- >Machinery noise testing
- >Motorsport noise measurements
- >Entertainment noise

For Environmental Noise measurements, the measurements required differ from those for Occupational Noise, and all of the CR:800C instruments provide these parameters as standard.

The measurement of L_{max}, L_{min}, and five L_n values (such as L_{10}, L_{90} and L_{95}) in addition to the Leq provide the measurement functions needed to comply with measurement standards, regulations and guidelines.

The Time History data stored by the instrument is often vital in the assessment of environmental noise, allowing the CR:800C series to be used where a standard Sound Level Meter would not provide sufficient detail of the noise climate. The environmental impact of an operation or location can be assessed using this additional data. Up to 12 days of 1 second Time History data can be stored.

The CR:831C and CR:832C instruments can also provide 1:1 and 1:3 Octave Band filters, allowing the instruments to be used to identify and control noise sources that include distinct tones, which often cause complaints, even when the overall noise levels are low.

If noise measurements are to be made outdoors, there is a risk that the sound level meter may be affected by rain and wind. The Outdoor noise measurement kits protect the sound level meter and microphone and provide power to the sound level meter thus allowing noise measurements to be made in all weather conditions.

Noise measurement data can also be downloaded remotely if the GSM Cellular Modem option is fitted to the outdoor measurement kit.

Environmental Noise Instrument Selection

	Class 1	Class 2	LAeq	Lmax	Ln values	Data Logging	Software	Outdoor Kit
CR:812C		✓	✓	✓	✓	✓	✓	
CR:811C	✓		✓	✓	✓	✓	✓	✓
CR:822C		✓	✓	✓	✓	✓	✓	
CR:821C	✓		✓	✓	✓	✓	✓	✓
CR:832C		✓	✓	✓	✓	✓	✓	
CR:831C	✓		✓	✓	✓	✓	✓	✓
CR:813C	✓		✓	✓	✓	✓	✓	✓

General noise measurements



>R&D noise measurements

>Production line noise testing

>Quality control

>Sound power measurements

>Fire alarm testing

The CR:800C series can be used in a wide range of general noise measurement applications.

The provision of L_{max} allows the instruments to be used for the measurement of vehicle noise levels.

Optional microphone extension cables enable the microphone and preamplifier to be located away from the Sound Level Meter allowing measurements to be taken in confined areas and in situations where interference from the operator would affect the validity of the data. Product development and testing is an application where this feature is often essential.

All of the CR:800C instruments can provide an un-weighted AC output which can be used in conjunction with other noise measurement equipment and recording systems. This allows the units to be used for both general purpose noise measurements as well as more specialised applications.

General Noise Measurement Instrument Selection

	Class 1	Class 2	LAeq	Lmax	Data Logging	Software Support	Microphone Cables
CR:812C		✓	✓	✓	✓	✓	
CR:811C	✓		✓	✓	✓	✓	✓
CR:822C		✓	✓	✓	✓	✓	
CR:821C	✓		✓	✓	✓	✓	✓
CR:832C		✓	✓	✓	✓	✓	
CR:831C	✓		✓	✓	✓	✓	✓
CR:813C	✓		✓	✓	✓	✓	✓

Measurements

The CR:800C series measure two different types of data, Broadband and Frequency.

The Frequency data can be 1:1 Octave or 1:3 Octave depending upon the configuration of the instrument. In addition to the measured data, the instrument stores calibration records for later download.

Broadband Measurements

The standard parameters stored by all of the CR:800C series include L_{eq}, L_{max}, L_{min}, L_{CPeak}, L_E and 5 L_n values. In addition to these standard measurements, the instrument can be configured to store L_{leq} or L_{FTeq} in place of L_E.

The duration of the measurement can be either open-ended, selected from a preset list or defined by the user as required, and the measurements can also be set to automatically repeat a specified number of times.

This function is essential for environmental noise applications where the required measurement duration may be 15 minutes repeating over a 24 hour period.

Time History

When making a Broadband measurement, the instrument automatically stores a noise profile, or Time History, with the measurement. This information is stored as a 1 second Short Leq.

Over 12 days of Time History data can be stored, allowing the CR:800C series to be used for logging long periods of data.

This information can be used, for example, to analyse noise events and to identify individual noise sources, such as aircraft. When this data is downloaded into the Deaf Defier3 software, measurement reports can be created to display both the overall data and the Time History information.

Frequency Analysis

When fitted with the 1:1 or 1:3 Octave Band filters, the CR:800C series can provide a sequential sweep through the filter bands, with a minimum duration of 1 minute for the 1:1 Octave Band filters and 3 minutes for the 1:3 Octave Band filters. The sweep can be automatic or manual as required.

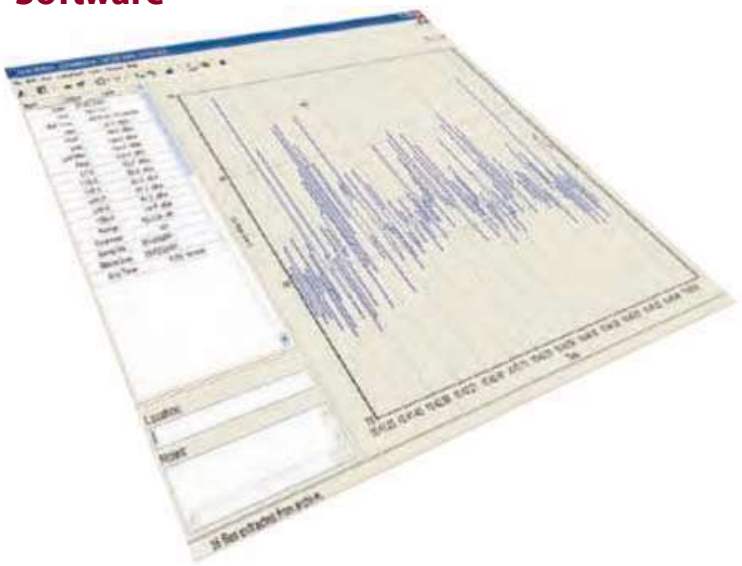
The 1:1 Octave Band filters cover the range of 31Hz to 16kHz, and the 1:3 Octave Band filters cover 25Hz to 16kHz.

The MO:800/6 option can be fitted to the 1:3 Octave Band filter to add a 20Hz and 20kHz filter band to the existing 1:3 Filter Bands.



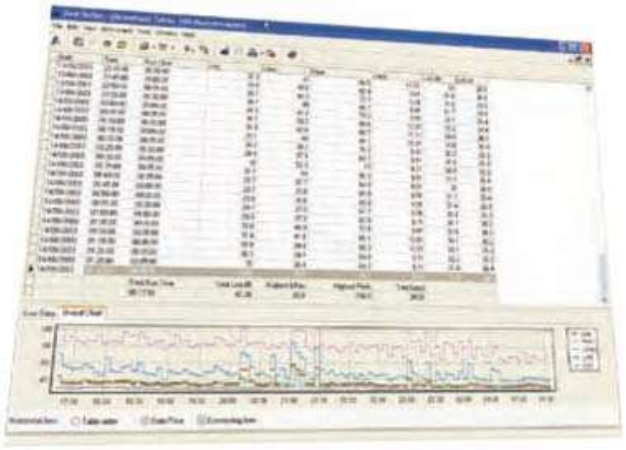



Software



All versions of the CR:800C are supplied with the Deaf Defier3 software program which provides the following functions:

- Download Data from a CR:800C series Sound Level Meter
- Store measurements in folders to organise data
- Produce measurement reports and present data
- Enter comments, locations and notes for each measurement
- Display measurements individually or grouped in a tabular format
- Select Hearing Protection (where 1:1 Octave Band measurements are available)
- Calculate NR & NC figures (where 1:1 Octave Band data is available)
- Print and export measurements
- Export measurement data for use in other programs



Broadband Measurements

Broadband measurements are displayed in both a tabular and graphical format. The numerical values for the measurement are clearly listed and include the time, date, duration and measurement range along with the Time and Frequency weightings used for each parameter.

Where the data has been downloaded, the Time History graph is also shown. A zoom function is provided to allow sections of the graph to be viewed in more detail. Cursors can be placed on the graph and the software will calculate the Leq between and outside of these markers.

Measurements can be printed or copied to other programs for additional reporting. All data from a Broadband measurement can be exported in a wide range of formats for use in other applications.

Frequency Measurements

For Frequency measurements made using either the 1:1 or 1:3 Octave Band filters, the information is displayed as a bar graph, with the numerical data also shown for reference along with the measurement time, date and duration. Comments and notes can also be entered for future reference.

Individual Frequency bands can be highlighted using the cursor. The measurements are always made by the CR:800C series using the Z Frequency Weighting, but if required, the A and C Frequency Weightings can be displayed.

The software can also calculate and display NR and NC values and curves from 1:1 Octave Band data.

Hearing Protector Selector

Where 1:1 Octave Band measurements are available, the Deaf Defier3 software can calculate the assumed protection from a range of Hearing Protector products such as Ear Plugs and Hearing Defenders.

The calculations are made using the frequency data from the measurement, and the resulting information can be printed or exported for later reference. The results can also be filtered to remove, for example, products that do not reduce the noise level at the ear to below 85dB(A).

The calculation can also include a +4dB "Real World" factor to take account of the loss of protection when PPE is not worn correctly.

Updates for the Deaf Defier3 program and the Hearing Protector database can be freely downloaded from the Cirrus Research website.

Measurement Reports

The Deaf Defier3 software contains a number of simple, preformatted measurement reports that can be used to present measurement data.

Information about the measurement, such as the location, time, date and comments, can be entered along with details of the calibration of the sound level meter.

When the report is complete, the information can be printed or exported in a range of formats including PDF, Microsoft Excel or Microsoft Word.

Sound Level Meter Measurement Kits

The CR:800C series can be supplied in a measurement kits which include all of the accessories required to operate the instrument.

A measurement kit is the recommended way to purchase a Sound Level Meter as it also contains a suitable Acoustic Calibrator. All noise measurement equipment should be calibrated regularly to ensure that it is operating and measuring correctly.

The standard measurement kit includes the following components:

- CR:515 or CR:514 Acoustic Calibrator
- UA:237 Windshield (90mm)
- CK:250 Carrying Case
- Deaf Defier3 Software
- USB Data Cable
- Operating Manuals & Certificates of Calibration
- Batteries & Accessories

The measurement kits for the the Class 1 Sound Level Meters (CR:811C, CR:813C, CR:821C & CR:831C) are supplied with the Class 1 CR:515 Acoustic Calibrator, and the Class 2 Sound Level Meters (CR:812C, CR:822C and CR:832C) are supplied with the CR:514 Class 2 Acoustic Calibrator.

The CK:250 Carrying Case can also hold a microphone extension cable and protects the Sound Level Meter and Acoustic Calibrator from damage during transit and storage.

Weatherproof Outdoor Measurement Kits

Where measurements are to be made outdoors, the Sound Level Meter should be protected from rain and wind.

If the measurements are to be made over a short period, and the weather conditions are fine, the Sound Level Meter can be mounted on a tripod, and the UA:237 Windshield used to reduce wind induced noise.

If the measurements are to be made over a longer period, or if the weather conditions cannot be guaranteed, an Outdoor Measurement Kit should be used. The CR:800C series can be used with two different Outdoor Measurement Kits, the CK:408C and CK:508C.

CK:408C Heavy Duty Outdoor Measurement Kit

Both of these kits provide a secure, weatherproof enclosure for the Sound Level Meter and the microphone as well as a rechargable battery pack to power the sound level meter.

The CK:508C Lightweight Outdoor Kit has been designed to be used for short term measurements, such as overnight, whilst the CK:408C Outdoor Kit has been designed for longer term use.

The Weatherproof case used for both of the outdoor measurement kits contains the same accessories included in the standard measurement kit. Space is provided to hold a sound level meter, acoustic calibrator, a standard 90mm windshield, software CD, batteries and operating manuals.

Please note that Class 2 versions of the CR:800C require the MO:800/5 Remote Preamplifier option before they can be used with the Outdoor Measurement Kits.

CK:508C Lightweight Outdoor Measurement Kit shown with the optional CT:3 Tripod

GSM Cellular Modem Option

In situations where an outdoor measurement kit is used, it is often useful to be able to access the measurement data stored by the instrument from a remote location.

To allow for this, the outdoor measurement kits can be fitted with a GSM Cellular Modem. When this option is fitted, the Deaf Defier3 software can connect to the sound level meter and download measurement data over a GSM network. External power can be connected to the outdoor kit to allow the instrument to run for longer periods.

Safety Officer's Noise Measurement Kits

The CR:800C Sound Level Meters are also available as part of a Safety Officer's Noise Measurement Kit.

These kits provide a complete noise measurement solution and include a sound level meter along with a number of the Cirrus doseBadge Personal Noise Dosemeters.

The sound level meter can be selected from any of the CR:800C range to meet the needs of the user. The doseBadge units can be either the standard CR:110A instruments or the Intrinsically Safe CR:110AIS units.

The unique combination of a CR:800C Series sound level meter and the doseBadge personal noise dosemeter allows almost any noise measurement situation to be covered.

More details can be found in the Safety Officers' Noise Measurement Kits datasheet or on the Cirrus Research plc website.

Specifications

Applicable Standards
IEC 61672-1:2002 Class 1 or 2 Group X
IEC 60651:2001 Type 1 I or Type 2 I
IEC 60804:2000 Type 1 or Type 2
ANSI S1.4 with NK:70 Random Incidence Adaptor
1:1 & 1:3 Octave Filters to IEC 61260 Class 1 (where fitted)

Microphone
Class 1 Instruments MK:224 pre-polarized Free-field 1/2" Condenser
Class 2 Instruments MK:216 pre-polarized Free-field1/2" Condenser
Random Incidence to ANSI S1.4 with NK:70 Adaptor

Microphone Preamplifier
Class 1 Instruments MV:200D Removable Preamplifier
Class 2 Instruments MV:200D Integral Preamplifier

Time Weightings
'F' (Fast), 'S' (Slow) & 'I' (Impulse) to IEC 61672-1:2002 Class 1 or 2

Frequency Weighting
Channel 1 'A', 'C' or 'Z'
Channel 2 'C' for Peak
Z weighting is a flat frequency response of 8Hz - 20kHz ±1.5dB excluding microphone response. When either 1:1 or 1:3 Octave Band filters are selected the 'Z' weighting is used.

Measurement Range (Typical)

Broadband	21dB(A) to 140dB(A) Class 1
	25dB(A) to 140dB(A) Class 2
	143dB(C) Peak (70 to 140dB Range)
1:1 Octave Band Filters	19dB(Z) to 140dB(Z)
1:3 Octave Band Filters	14dB(Z) to 140dB(Z)

Noise Floor (Typical)

Broadband	18dB(A) Type 1, 20dB(A) Type 2
1:1 Octave Band Filters	12dB(Z) @ 1kHz 1:1 Octave Band
1:3 Octave Band Filters	7dB(Z) @ 1kHz 1:3 Octave Band

Available Measurements
The following metrics can be displayed for a recorded session and stored:

Broadband Mode
L_{Aeq}, L_{Ceq}, or L_{Zeq}
L_{CPeak}
L_{AF}, L_{AS}, L_{AI}, L_{CF}, L_{CS}, L_{CI}, L_{ZF}, L_{ZS} or L_{ZI} (not stored)
L_{AFmax}, L_{ASmax}, L_{AImax}, L_{CFmax}, L_{CSmax}, L_{CImax}, L_{ZFmax}, L_{ZSmax} or L_{ZImax}
L_{AFmin}, L_{ASmin}, L_{AImin}, L_{CFmin}, L_{CSmin}, L_{CImin}, L_{ZFmin}, L_{ZSmin}, L_{ZImin}
L_{AE}, L_{CE},or L_{ZE}, L_{Aleq}, L_{Cleq}, or L_{Zleq}, L_{AFTeq}
$L_{0.1}$ to $L_{99.9}$ (five simultaneous user-selected values available)
Date and time, 1 second Short Leq Noise Profile (L_{Aeq}, L_{Ceq} or L_{Zeq})

Filter Mode
1:1 or 1:3 filter selected
Filtered L_{ZS},L_{ZF} or L_{ZI} (not stored)
Filtered L_{Zeq} (stored), L_{Aeq}, L_{Ceq}, or L_{Zeq} (stored)
Date and time

Frequency Bands (Nominal Frequencies)
1:1 Octave Band 31Hz to 16kHz
1:3 Octave Band 25Hz to 16kHz.
20Hz & 20kHz 1:3 Octave Band with MO:800/6 Factory Option

Memory
16Mbit memory allowing up to:
1300 broadband measurements
770 1:1 octave measurements
330 1:3 octave measurements

For example, broadband mode allows 12 days of 15 minute measurements to be stored.
Calibration records are automatically stored in the instrument memory.

Noise Profile (L_{Aeq}, L_{Ceq} or L_{Zeq}).
Short Leq (L_{Aeq},L_{Ceq}, or L_{Zeq}).
Up to 12 days at 1 second acquisition with 2 second factory set option

Automatic Measurements
The unit can be set to record and store data over fixed times of:

1 minute	5 minutes
10 minutes	15 minutes
30 minutes	1 hour
8 hours	12 hours

or a user defined period
Automatic Repeat From 2 to 999 measurements(broadband mode only)
Auto-synchronise to the clock.

Display
Graphical LCD with Quasi-Analogue Display
Selected measurement parameter with level
Warnings for Overload, Under Range
Battery Level & External Power Indicators
Time & Frequency Weighting
Elapsed measurement time
Real time short Leq (broadband mode)
Graphical 1:1 and 1:3 Octave Band (recall mode only)
Recalled stored measurements
Measurement Range & Instrument settings

Dimensions
340 mm × 75 mm × 25 mm

Weight
450 g

Batteries
2 × 1.5 v Alkaline LR6/AA

Battery Life
Broadband Mode Typically >24 hours

Environmental

Temperature	Operating -10°C to +50°C
	Storage -20°C to +60°C
Humidity	Up to 95% RH Non Condensing

External Connections
USB Type B Data Out
Multipin I/O for optional connections

Outputs
Unweighted AC Output via Multipin I/O Connector

External Power
12v-15v DC @ 100mA via Multi I/O Connector
CU:800C recommended (Specify UK, EU or US plug type)

The CR:800C is also powered directly from the USB connection to the PC.

Electromagnetic Performance
IEC 61672-1:2003
IEC 61672-1:2003
Except where modified by EN 61000-6-1:2007 & EN 61000-6-1:2007

Output Cables

Standard:	ZL:100 USB to USB
Optional:	ZL:812 AC Output Cable to Phono Connector
	ZL:813 RS232 Output Cable

Software Support
Deaf Defier3 for Windows. (Version v3.3.0 or later)

The Deaf Defier3 for Windows requires Microsoft Windows 98SE or later
The Deaf Defier3 Software is supplied with no licensing restrictions. Updates can be downloaded from the Cirrus Research plc website.

The CR:800C Series is provided with an standard 24 month warranty and an optional 10 year extended warranty. For details of this warranty please contact Cirrus Research plc or your local distributor.

Ordering Information

The CR:800C series can be ordered with a variety of features. The table below shows the Sound Level Meter and Measurement Kit reference numbers:

Instrument	Measurement Kit	Type
CR:811C	CK:811C	CR:811C Class 1 Sound Level Meter
CR:812C	CK:812C	CR:812C Class 2 Sound Level Meter
CR:821C	CK:821C	CR:821C Class 1 Sound Level Meter with 1:1 Octave Band Filters
CR:822C	CK:822C	CR:822C Class 2 Sound Level Meter with 1:1 Octave Band Filters
CR:831C	CK:831C	CR:831C Class 1 Sound Level Meter with 1:1 & 1:3 Octave Band Filters
CR:832C	CK:832C	CR:832C Class 2 Sound Level Meter with 1:1 & 1:3 Octave Band Filters
CR:813C	CK:813C	CR:813C Class 1 Sound Level Meter

Outdoor Measurement Kits

CK:408C	Heavy duty Outdoor Measurement Kit for CR:811C, CR:813C, CR:821C & CR:831C
CK:508C	Lightweight Outdoor Measurement Kit suitable for CR:811C, CR:813C, CR:821C & CR:831C
EK:411C	Complete Heavy duty Outdoor Noise Measurement Kit including CR:811C & CR:515 Acoustic Calibrator
EK:511C	Complete Lightweight Outdoor Noise Measurement Kit including CR:811C & CR:515 Acoustic Calibrator

Options for the Outdoor Measurement Kits

MM:801C	Factory fitted GSM Modem Option for Outdoor Measurement Kits with ZL:810 external 12v power cable
ZL:810	External 12v Battery Power Connector for Outdoor Kits

A range of options are available to enhance the performance of the CR:800C series. These options can also be fitted when an instrument is returned for service and recalibration. These options include:

Factory fitted upgrades

MO:800/1	Factory upgrade from Class 2 to Class 1
MO:800/2	Factory upgrade from Broadband to include additional 1:1 Octave Band Filters
MO:800/3	Factory upgrade from Broadband to include additional 1:1 & 1:3 Octave Band Filters
MO:800/4	Factory upgrade from 1:1 to 1:1 & 1:3 Octave Band Filters
MO:800/5	Factory upgrade - Remote Preamplifier for Class 2 Instruments
MO:800/6	Factory upgrade - Addition of 20Hz & 20kHz 1:3 Octave Band Filters to CR:832C or CR:831C

A range of optional accessories are available for the CR:800C Series. Please contact Cirrus Research plc or your local representative for details

Microphone Extension Cables

ZL:202	2m microphone extension cable
ZL:205	5m microphone extension cable
ZL:210	10m microphone extension cable
ZL:215	15m microphone extension cable
ZL:220	20m microphone extension cable

Output Cables

Standard:	ZL:100 USB to USB
Optional:	ZL:812 AC Output Cable to Phono Connector
	ZL:813 RS232 Output Cable
	ZL:814 Multi I/O Interface

Mains Power Supply

CU:800C Mains Power Supply. Specify UK, EU or USA type plug.

Cirrus Research plc

dedicated to noise measurement

Acoustic House, Bridlington Road
Hunmanby, North Yorkshire, YO14 0PH
United Kingdom
Tel: 0845 23 0 2434 (Local Rate UK Only)
+44 (0) 1723 891655
Fax: +44 (0) 1723 891742
Email: sales@cirrusresearch.co.uk
Web: www.cirrusresearch.co.uk

Your Cirrus Distributor

CR:800C/11/07/01r1

CERTIFICATE OF CALIBRATION

ISSUED BY **Cirrus Research plc**

DATE OF ISSUE **11 November 2020** CERTIFICATE NUMBER **148711**

Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Approved signatory
T.Goodrich
Electronically signed:

T. A. Goodrich.

Sound Level Meter : IEC 61672-3:2006

Instrument information

Manufacturer:	Cirrus Research plc	Notes:
Model:	CR:831C	
Serial number:	D22331FF	
Class:	1	
Firmware version:	04.00.24	

Test summary

Date of calibration: 11 November 2020

The calibration was performed respecting the requirements of ISO/IEC 17025:2017.
Periodic tests were performed in accordance with procedures from IEC 61672-3:2006.

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2006, for the environmental conditions under which the tests were performed. However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2002 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2002 and because the periodic tests of IEC 61672-3:2006 cover only a limited subset of the specifications in IEC 61672-1:2002..

Notes

CERTIFICATE OF CALIBRATION

Environmental conditions

The following conditions were recorded at the time of the test:

Before	Pressure:	101.01 kPa	Temperature:	22.4 °C	Humidity:	50.6 %
After	Pressure:	101.01 kPa	Temperature:	22.6 °C	Humidity:	50.7 %

Test equipment

Equipment	Manufacturer	Model	Serial number
Signal Generator	KEYSIGHT	33511B	MY59000875
Attenuator	Cirrus Research	ZE:952	78700
Multi-frequency Calibrator	Bruel and Kjaer	4226	2532068

Additional instrument information

Instruction manual: Technical Data Sheet
Reference level range: 40-110 dB
Pattern approval: No
Source of pattern approval: -

Preamplifier

Manufacturer: Cirrus Research plc
Model: MV:200D
Serial number: 1915D

Microphone

Manufacturer: Cirrus Research plc
Model: MK:224
Serial number: 212287D

Test results summary

Test	Result
Self-generated noise	Complies
Acoustic frequency weightings	Complies
Electrical frequency weightings	Complies
Weightings at 1 kHz	Complies
Linearity	Complies
Linearity (all ranges)	Complies
Toneburst response	Complies
C-weighted peak	Complies
Overload	Complies

Acoustic Calibrator

Manufacturer: Cirrus Research plc
Model: CR:515
Serial number: 80026

Calibration

Calibration check frequency: 1000 Hz
Calibrator's certificate ref: 148675
Level before adjustment: 93.60 dB(A)
Level after adjustment: 93.70 dB(A)

CERTIFICATE OF CALIBRATION

ISSUED BY **Cirrus Research plc**

DATE OF ISSUE **10/11/20** CERTIFICATE NUMBER **148676**

Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Test engineer:
D.Swalwell
Electronically signed:

Microphone

Microphone capsule

Manufacturer: Cirrus Research plc

Model: MK:224

Serial Number: 212287D

Calibration procedure

Date of calibration: 04 November 2020

Open circuit: 51.3 mV/Pa

Sensitivity at 1 kHz: -25.8 dB rel 1 V/Pa

The microphone capsule detailed above has been calibrated to the published data as described in the operating manual of the associated sound level meter (where applicable).

The frequency response was measured using an electrostatic actuator in accordance with BS EN 61094-6:2005 with the free-field response derived via standard correction data traceable to a National Measurement Institute.

The absolute sensitivity at 1 kHz was measured using an acoustic calibrator conforming to IEC 60942:2003 Class 1.

Environmental conditions

Pressure: 102.20 kPa

Temperature: 21.0 °C

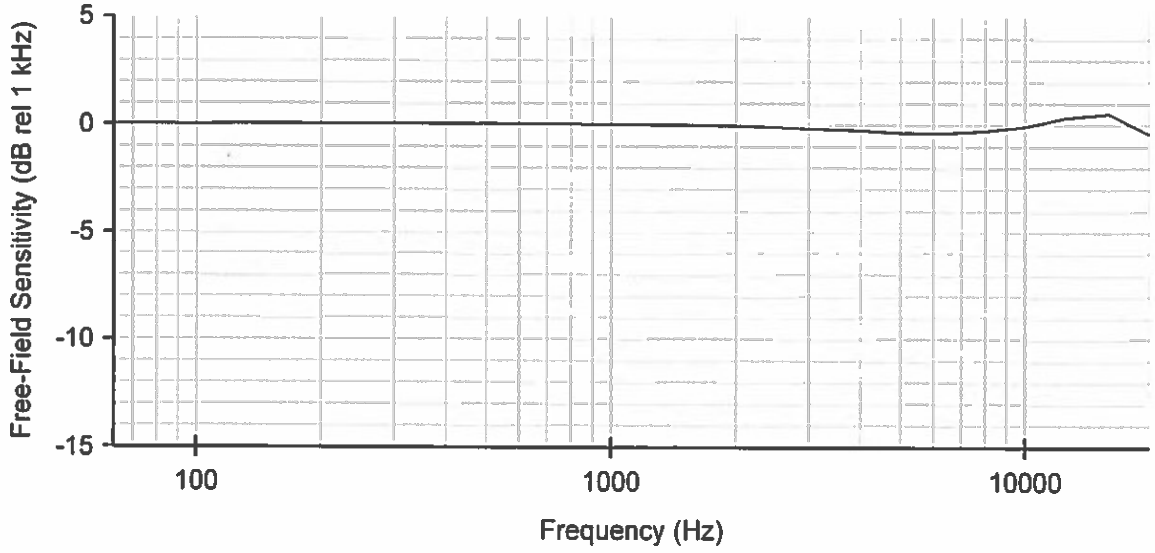
Humidity: 34.0 %

CERTIFICATE OF CALIBRATION

Free-Field Frequency Response : Tabular

Frequency (Hz)	Free-Field Sensitivity (dB rel 1 kHz)	Actuator Response (dB)
63	0.02	-0.14
80	0.02	-0.04
100	0.00	0.03
125	0.03	0.06
160	0.03	0.09
200	0.03	0.10
250	0.02	0.10
315	0.05	0.10
400	0.03	0.10
500	0.04	0.10
630	0.04	0.09
800	0.02	0.06
1 000	0.00	0.03
1 250	-0.02	-0.03
1 600	-0.03	-0.12
2 000	-0.06	-0.25
2 500	-0.13	-0.44
3 150	-0.20	-0.74
4 000	-0.28	-1.17
5 000	-0.38	-1.74
6 300	-0.40	-2.49
8 000	-0.29	-3.47
10 000	-0.09	-4.75
12 500	0.33	-6.10
16 000	0.51	-7.29
20 000	-0.45	-9.45

Free-Field Frequency Response : Graphical



CERTIFICATE OF CALIBRATION

ISSUED BY **Cirrus Research plc**

DATE OF ISSUE **10 November 2020** CERTIFICATE NUMBER **148675**

Cirrus Research plc
Acoustic House
Bridlington Road
Hunmanby
North Yorkshire
YO14 0PH
United Kingdom

Approved signatory
T.Goodrich
Electronically signed:

T. A. Goodrich.

Sound Calibrator : IEC 60942:2003

Instrument information

Manufacturer: Cirrus Research plc

Model: CR:515

Serial number: 80026

Class: 1

Notes:

Test summary

Date of calibration: 10 November 2020

The sound calibrator detailed above has been calibrated to the published data as described in the operating manual and in the half-inch configuration. The procedures and techniques used are as described in IEC 60942:2003 Annex B – Periodic Tests and three determinations of the sound pressure level, frequency and total distortion were made.

The sound pressure level was measured using a WS2F condenser microphone type MK:224 manufactured by Cirrus Research plc.

The results have been corrected to the reference pressure of 101.33 kPa using the manufacturer's data.

The manufacturer's product information indicates that this model of sound calibrator has been formally pattern approved to IEC 60942:2003 Annex A to Class 1. This has been confirmed with the PhysikalischTechnische Bundesanstalt (PTB).

As public evidence was available, from a testing organisation responsible for approving the results of pattern evaluation tests, to demonstrate that the model of sound calibrator fully conformed to the requirements for pattern evaluation described in Annex A of IEC 60942:2003, the sound calibrator tested is considered to conform to all the Class 1 requirements of IEC 60942:2003.

Notes:

CERTIFICATE OF CALIBRATION

Environmental conditions

The following conditions were recorded at the time of the test:

Pressure: 101.25 kPa
Temperature: 25.2 °C
Humidity: 48.5 %

Test equipment

Equipment	Manufacturer	Model	Serial number
Acoustic Calibrator	Bruel and Kjaer	4231	2610257
Distortion Meter	Keithley	2015	1113728
Multimeter	Fluke	8845A	1498004

Results

	Expected	Sample 1	Sample 2	Sample 3	Average	Deviation	Limits	Uncertainty
Level (dB)	94.00	93.98	93.97	93.98	**93.98**	-0.02	±0.40	0.11 dB
Distortion (%)	< 3.00	0.36	0.38	0.33	**0.36**	0.36	+3.00	0.13 %
Frequency (Hz)	1000.0	1000.3	1000.3	1000.3	**1000.3**	0.3	±10.0	0.1 Hz

The measured quantities or deviations (as applicable), extended by the expanded combined uncertainty of measurement, must not exceed the corresponding tolerance.

End of results

ARL-I-01 - Incoming material inspection

Scope: Procedure to be used for the acceptance of raw material

Responsibility:

Cost Controller – weighing

Operations – Inspection

Process:

The material that is considered acceptable for processing is category 3 Animal By-products derived from the harvesting of Bluefin tuna (*Thunnus thynnus*). The fish would need to have been harvested within 24 hours from processing.

The material is composed of heads, viscera, spines, and fins.

These shall be received exclusively in BI-1400 bins provided by Aquaculture Resources Ltd and marked with the same company.

Trailers carrying material to be processed shall first be weighed on the weighbridge, together with a check of the accompanying health certificate. The weight and origin shall be recorded on form ARL-F-01, prior to unloading at the unloading docks. Form ARL-F-01 shall be filled in for all the unloaded material. All incoming material shall be visually inspected for any obvious signs of deterioration (including foul odor).

A 100g sample from each bin shall be taken for analysis, to determine the protein, fat, moisture, ash content and total volatile basic nitrogen content.

The maximum acceptable Total Volatile Basic Nitrogen concentration is 120 mg N/100g.

Non-conforming material shall be set aside and have the ‘Non-Conforming’ sticker affixed to the bin. Details pertaining to the consignment shall be recorded in form ARL-F-01-B

IP 00103/22/DOC9

Technical description 3.7 for Aquaculture Resources Ltd

As per ERA requirements for the IPPC application

Report

AIS ENVIRONMENT

TECHNICAL DESCRIPTION 3.7
AIS REF. NO: **PRJ-ENV605**
CLIENT REF. NO: **ENV333247/C/21**
THIRD VERSION

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PART OF AIS GROUP

AIS Environment Ltd,
AIS House, 18, St. John Street,
Fgura, FGR 1447

+356 21803374
www.aisenvironment.mt
info@ais.com.mt

VAT No: MT 1457-1625
Reg No: C18445

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DISCLAIMER

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1 SCOPE

Aquaculture Resources Ltd will be operating a facility that will process fish offals generated from the tuna processing industry. The offal by-products will serve as the primary raw material in the process to generate fish meal. The operations of the facility will be supplemented by the provision of freshwater from a proposed Reverse Osmosis treatment Plant. AIS Environment Ltd (AIS) has been commissioned by Aquaculture Resources Ltd (henceforth referred to as the 'Operator') to prepare an Outline Decommissioning Plan to outline the procedure that should be followed in case the site is to be decommissioned.

The operations and activities of the facility will be covered by an Industrial Pollution Prevention and Control (IPPC) Permit, the application of which is currently in progress. AIS Environment is completing the IPPC Permit application on behalf of the Operator. The Outline Decommissioning Plan is required to fulfil IPPC permit application 14.11 of the facility's IPPC permit application:

14.11. Cessation of Operations

Provide a decommissioning plan describing the draft proposed measures to be done upon definitive cessation of activities, to avoid any pollution risk and return the site of the installation to a satisfactory state (including relevant measures for the design and construction of the installation).

2 INTRODUCTION

2.1 SITE LOCATION

The facility will be located in the outskirts of the Ħal-Far Industrial Estate, Birżebbuġa, as shown in Figure 1.

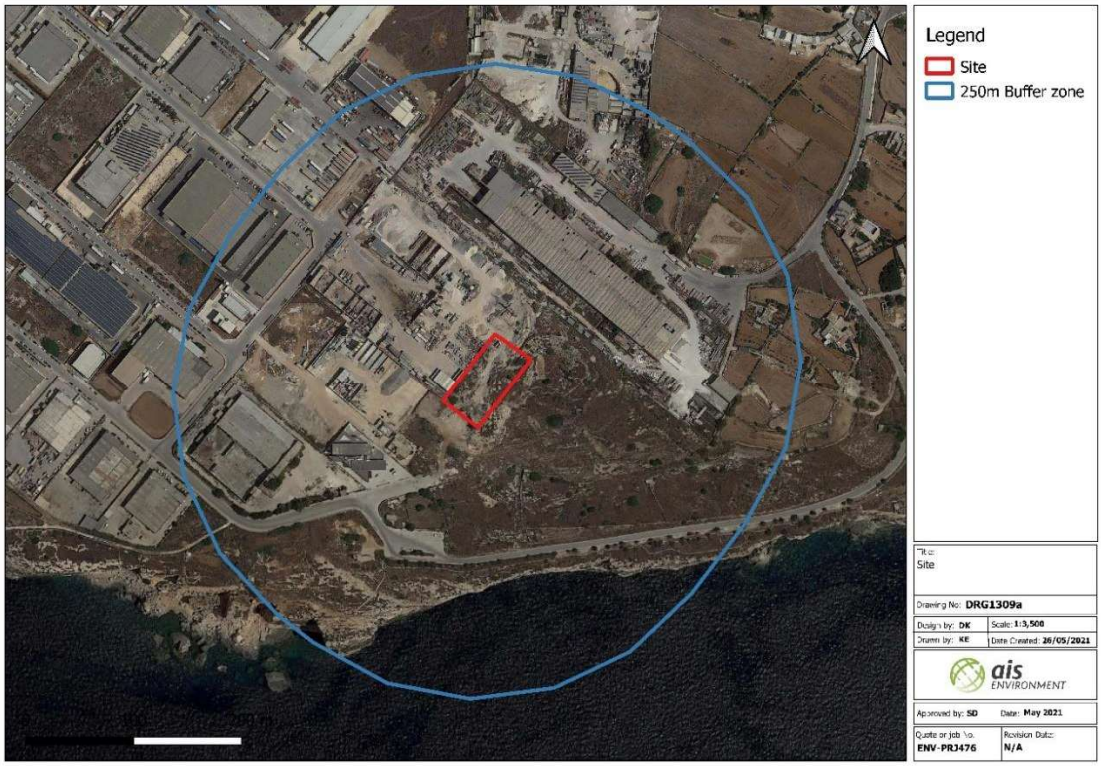

FIGURE 1: SITE PLAN SHOWING THE SITE EARMARKED FOR THE FACILITY

2.2 SITE ACTIVITIES

The facility comprises of a total of seven main sections which will serve to render the tuna offals into fishmeal, as listed hereunder:

- Raw material – Material is mechanically broken up into small pieces and metal contaminants are removed
- Preheating – Material is preheated using steam
- Separation – Preheated material is separated to extract the fat (i.e. fish oil)
- Drying – Removal of water from the material
- Meal handling – Cooling and shaping of dried material
- Evaporation – Generation of steam for other sections
- Reverse Osmosis (RO) plant – freshwater produced from RO to be used to feed all tuna offal facility equipment

Directly associated activities include the generation of steam by the boiler, which will be distributed to the various equipment and feeding of all facility equipment with RO-produced freshwater. Ancillary activities which are carried out on site include collection and treatment of effluents from the site. Effluents are generated from the on-site drains and from the air odour treatment system. Odorous air is collected from the process area and condensed. The condensate is combined with the effluents from the drains and treated by a wastewater treatment plant. The cleaned wastewater is then drained into the public sewage system, while the sludge generated from the process is either exported to be used to produce animal fodder or collected and transported offsite for destruction.

All proposed activities are included in this Outline Decommissioning Plan.

3 OUTLINE DECOMMISSIONING PLAN

3.1 REMOVAL OF RAW MATERIALS FROM SITE

The material present on site at the time of decommissioning is likely to comprise of unused chemicals and unused fuels. A list of the potential raw materials that are likely to be present on site at the time of decommissioning are presented in Table 1.

TABLE 1: RAW MATERIALS LIKELY TO BE PRESENT AT DECOMMISSIONING

Waste stream	H/N[1]
Sulphuric acid	H
Caustic soda	H
Ethoxyquin	H
Ecolab Asepto FL-D	H
Cortrol IS3020	N
Diesel	H
Light fuel oil	H
Scale inhibitor	N

3.1.1 Segregation and Storage

All raw materials present on site will be separated according to the material type and stored in the corresponding designated raw material storage areas. If this is not the case at the time of decommissioning, the material will be separated and stored as required during normal operating procedures.

3.1.2 Treatment, Conditioning and Transport

The raw material will be processed according to the standard practice. If this is not possible, the material will be treated as waste. The transport of all waste shall follow the guidelines stipulated in the local legislation: WASTE REGULATIONS OF 2011 (S.L.549.63) and WASTE MANAGEMENT (ACTIVITY REGISTRATION) REGULATIONS OF 2007 (S.L.549.45). This will include the submission of Consignment Notes and Consignment Application Permits before any hazardous wastes are removed from the site to be decommissioned.

[1] H: Hazardous; N: Non-hazardous

3.1.3 Disposal/Recovery Methods

When operations are ceased, all of the unprocessed/unused material on site will be stored and transported offsite in line with normal operating conditions. It is not possible to state at this time where the waste will be disposed or recovered as the action taken will depend on the permitted activities of the chosen waste management facility.

3.2 REMOVAL OF WASTES FROM SITE

Due to the nature of the activities carried out at the facility, the waste which will be present on site at the decommissioning phase is likely to comprise of packaging material, reject tuna offals, waste PPE and sludge from the wastewater treatment facility.

A list of the potential waste streams that are likely to be present on site at the time of decommissioning are presented in Table 2.

TABLE 2: WASTE STREAMS LIKELY TO BE PRESENT AT DECOMMISSIONING

EWC Code	Waste stream	H/N[1]
15 01 01	Cardboard packaging	N
02 02 04	Sludge from wastewater treatment	N
15 01 10*	Contaminated plastic containers	H
15 02 02*	Used PPE	H
15 01 02	Plastic packaging	N
15 01 03	Wooden pallets	N
02 02 02	Reject tuna offals	N
02 02 03	Metal contaminants	N
13 05 02	Sludge from oil-water interceptor	N

3.2.1 Segregation and Storage

All waste streams generated on site will be separated according to waste stream and stored in the corresponding designated waste storage areas. If this is not the case at the time of decommissioning, the waste will be separated and stored as required during normal operating procedures.

3.2.2 Treatment, Conditioning and Transport

No treatment of waste is carried out on site.

The transport of all waste shall follow the guidelines stipulated in the local legislation: WASTE REGULATIONS OF 2011 (S.L.549.63) and WASTE MANAGEMENT (ACTIVITY REGISTRATION) REGULATIONS OF 2007 (S.L.549.45). This will include the submission of Consignment Notes and Consignment Application Permits before any hazardous wastes are removed from the site to be decommissioned.

3.2.3 Disposal/Recovery Methods

When operations are ceased, all of the waste on site will be stored and transported offsite in line with normal operating conditions. It is not possible to state at this time where the waste will be disposed or recovered as the action taken will depend on the permitted waste management activities of the chosen waste management facility. Whenever possible, the operator will seek options to reuse/recover such waste at third party waste management facilities.

3.3 REMOVAL OF MACHINERY

The machinery at the facility is presented in Table 3. Wherever possible, all of the machinery will be transferred to an alternative site or sold locally at decommissioning stage. If not possible, the machinery will be disposed of in accordance with local waste management regulations.

TABLE 3: MACHINERY USED AT THE FACILITY

MACHINERY	QTY	MACHINERY	QTY
Twin screw conveyor	1	Meal cooler	1
Breaker	1	Screw conveyor	5
Lamella pump	2	Milling plant	1
Metal detector	1	Collecting screw conveyor	1
Grinder	1	Double bagging unit	1
Render vessel	1	Stickwater dosing pump	1
Flottweg tricanter Z5E	1	Stickwater return pump	1
Fat pump w/buffer tank	1	Vapour scrubber	1
Stick water pump w/buffer tank	1	Pump for vapour scrubber	1
Decanter Grax screw	1	Waste gas condenser	1
Fat unloading pump	1	Concentrate pump	1
Disc dryer	1	Cooling tower and pump	1
Discharge screw conveyor	1	Waste heat evaporator	1
		Condensate tank	1

MACHINERY	QTY	MACHINERY	QTY
Caustic tank	1	Scrubber for ammonia	1
Acid tank	1	Hot water tank	1

3.4 CLEANING OF THE SITE

Once all materials and equipment are removed from the facility, the buildings encompassing the entire facility and offices would remain in place. The building will have an impermeable concrete floor which will be cleaned according to standard operational procedures.

4 QUALITATIVE ASSESSMENT OF POLLUTION RISKS & IDENTIFICATION OF POTENTIAL SOURCES OF EMISSIONS

The site is currently undeveloped, and is being used as an unofficial extension of the adjacent Northwind Investments Ltd concrete and tarmac plant. The site appears to have been used as a storage area. The facility will make use of moderate quantities of liquid chemicals, and is expected to produce moderate quantities of effluents which will be treated on site. Most raw materials and waste present on site are solid and can be effectively contained. Furthermore, the ground floor of the entire facility will be covered with an impermeable layer to prevent any contamination of the underlying rock strata and groundwater. Hence, the facility is considered to have a low potential risk of spillages or major pollution incidences to land and/or groundwater.

However, the operation of the machinery on site leads to the release of emissions into the air. Such emissions are limited to the products of the complete and incomplete combustion of diesel and LFO, the production of particulate emissions and odours. All machinery used on site will be contained within the building and be regularly maintained to ensure the emissions are kept to a minimum. The doors of the facility will be kept closed as much as possible to limit dispersion of emissions. Heavy polluted air and light polluted air will be collected and treated on site to reduce the spread of odours.

At the decommissioning phase, any unsorted materials and waste will be sorted and processed in accordance with normal operating procedures and subsequently removed from site. All machinery present on site will also be removed. Neither of the activities are likely to result in the release of any pollutants into the surrounding environment.

The risk of contamination has been assessed for each of the individual materials and wastes which are likely to be present on site; including the severity of the event, probability of occurrence and overall risk level (refer to Table 7). The criteria for the assessment are outlined in Table 4 to Table 6.

In the event of the demolition of the buildings on site, it is also unlikely that any contaminants would be realised into the surrounding environment. This is due to the fact that the ground of the entire site comprises impermeable materials. Environmentally sound construction practices in line with the ENVIRONMENTAL MANAGEMENT CONSTRUCTION SITE REGULATIONS OF 2007 (S.L. 552.09) will be followed throughout the demolition works to limit the adverse effects on the surrounding environment.

TABLE 4: SEVERITY OF CONTAMINATION SCENARIO

Descriptor	Numeric Rating	Definition
Catastrophic	5	Very serious environmental effects with impairment of ecosystem function. Long term, widespread effects on significant environment.
Major	4	Serious environmental effects with some impairment of ecosystem function. Relatively widespread medium-long term impacts.
Moderate	3	Moderate effects on biological or physical environment (e.g. air, water) but not affecting ecosystem function. Moderate short/medium-term widespread impacts (e.g. significant spills).
Minor	2	Minor effects on biological or physical environment. Minor short/medium-term damage to small area of limited significance.
Insignificant	1	No land and ground water environmental contamination by release. Limited damage to minimal area of low significance.

TABLE 5: PROBABILITY OF CONTAMINATION SCENARIO

Descriptor	Rating	Definition	Guideline Frequency
Almost Certain	A	Consequence is expected to occur in most circumstances	Occurs more than once per month
Likely	B	Consequence will probably occur in most circumstances	Occurs once every 1 month to 1 year

Descriptor	Rating	Definition	Guideline Frequency
Occasionally	C	Consequence should occur at some time	Occurs once every 1 year to 10 years
Unlikely	D	Consequence could occur at some time	Occurs once every 10 years to 100 years
Rare	E	Consequence may only occur in exceptional circumstances	Occurs less than once every 100 years

TABLE 6: RISK MATRIX

		Consequence				
		Insignificant	**Minor**	**Moderate**	**Major**	**Catastrophic**
Likelihood	**Almost Certain**	Low	Moderate	Extreme	Extreme	Extreme
	Likely	Low	Moderate	High	Extreme	Extreme
	Occasionally	Very Low	Moderate	High	High	Extreme
	Unlikely	Very Low	Low	Moderate	High	High
	Rare	Very Low	Very Low	Moderate	Moderate	High

TABLE 7: QUALITATIVE ASSESSMENT OF DECOMMISSIONING CONTAMINATION SCENARIOS

Potential Source of Contamination	EWC Code	Activity	Contamination Scenario	Receptor			Severity	Probability of Contamination Occurring	Risk Level WITHOUT Mitigation Measures	Mitigation Measures	Risk Level WITH Mitigation Measures
				Land	Air	Groundwater					
Reject tuna offals	02 02 02	Temporary storage	Material exposed to the elements	Yes	No	Yes	3	D	Moderate	Storage of waste in bunds in designated areas with impermeable floors	Low
		Sorting and packaging	Material exposed to the elements	Yes	No	Yes	3	D	Moderate	Sorting and packaging takes place indoors in premises with impermeable flooring	Low
		Removal from site	Material exposed to the elements and dropping material	Yes	Yes	Yes	3	D	Moderate	Waste packaged in appropriate packaging Transported by appropriately licensed waste carrier in suitable vehicle	Low
Cardboard	15 01 01	Temporary storage	Material exposed to the elements	Yes	No	No	2	E	Very low	Storage of waste in designated areas	Very low
		Sorting and packaging	Material exposed to the elements	Yes	No	No	2	D	Very low	Sorting and packaging takes place indoors	Very low
		Removal from site	Material exposed to the elements and dropping material	Yes	No	No	2	E	Very low	Waste packaged in appropriate packaging Transported by appropriately licensed waste carrier in suitable vehicle	Very low
Plastic packaging	15 01 02	Temporary storage	Material exposed to the elements	Yes	No	No	2	D	Very low	Storage of waste in designated areas	Very low
		Sorting and packaging	Material exposed to the elements	Yes	No	No	2	C	Very low	Sorting and packaging takes place indoors	Very low
		Removal from site	Material exposed to the elements and dropping material	Yes	No	No	2	C	Very low	Waste packaged in appropriate packaging Transported by appropriately licensed	Very low

Potential Source of Contamination	EWC Code	Activity	Contamination Scenario	Receptor			Severity	Probability of Contamination Occurring	Risk Level WITHOUT Mitigation Measures	Mitigation Measures	Risk Level WITH Mitigation Measures
				Land	Air	Groundwater					
										waste carrier in suitable vehicle	
Wooden pallets	15 01 03	Temporary storage	Material exposed to the elements	Yes	No	No	2	D	Very low	Storage of waste in designated areas	Very low
		Sorting and packaging	Material exposed to the elements	Yes	No	No	2	D	Very low	Sorting and packaging takes place indoors	Very low
		Removal from site	Material exposed to the elements and dropping material	Yes	No	No	2	D	Very low	Waste packaged in appropriate packaging Transported by appropriately licensed waste carrier in suitable vehicle	Very low
Metal contaminants	02 02 03	Temporary storage	Material exposed to the elements	Yes	No	No	2	D	Very low	Storage of waste in designated areas	Very low
		Sorting and packaging	Material exposed to the elements	Yes	No	No	2	D	Very low	Sorting and packaging takes place indoors	Very low
		Removal from site	Material exposed to the elements and dropping material	Yes	No	No	2	D	Very low	Waste packaged in appropriate packaging Transported by appropriately licensed waste carrier in suitable vehicle	Very low
Sludge from wastewater treatment	02 02 04	Temporary storage	Material exposed to the elements	Yes	No	Yes	4	C	High	Storage of waste in bunds in designated areas with impermeable floors	Low
		Sorting and packaging	Material exposed to the elements	Yes	No	Yes	4	C	High	Sorting and packaging takes place indoors in premises with impermeable flooring	Low

Potential Source of Contamination	EWC Code	Activity	Contamination Scenario	Receptor			Severity	Probability of Contamination Occurring	Risk Level WITHOUT Mitigation Measures	Mitigation Measures	Risk Level WITH Mitigation Measures
				Land	Air	Groun dwater					
		Removal from site	Material exposed to the elements and dropping material	Yes	No	Yes	4	C	High	Waste packaged in appropriate packaging Transported by appropriately licensed waste carrier in suitable vehicle	Low
Contaminated IBCs and used PPE	15 01 10* 15 02 02*	Temporary storage	Material exposed to the elements	Yes	No	Yes	4	C	High	Storage of waste in bunds in designated areas with impermeable floors	Low
		Sorting and packaging	Material exposed to the elements	Yes	No	Yes	4	C	High	Sorting and packaging takes place indoors in premises with impermeable flooring	Low
		Removal from site	Material exposed to the elements and dropping material	Yes	No	Yes	4	C	High	Waste packaged in appropriate packaging Transported by appropriately licensed waste carrier in suitable vehicle	Low
Fuels	13 07 01*	Temporary storage	Material exposed to the elements	Yes	No	Yes	4	C	High	Storage of waste in bunds in designated areas with impermeable floors	Low
		Sorting and packaging	Material exposed to the elements	Yes	No	Yes	4	C	High	Sorting and packaging takes place indoors in premises with impermeable flooring	Low
		Removal from site	Material exposed to the elements and dropping material	Yes	No	Yes	4	C	High	Waste packaged in appropriate packaging Transported by appropriately licensed waste carrier in suitable vehicle	Low

Potential Source of Contamination	EWC Code	Activity	Contamination Scenario	Receptor			Severity	Probability of Contamination Occurring	Risk Level WITHOUT Mitigation Measures	Mitigation Measures	Risk Level WITH Mitigation Measures
				Land	Air	Groundwater					
Chemicals	06 01 01* 06 02 04*	Temporary storage	Material exposed to the elements	Yes	No	Yes	4	C	High	Storage of waste in bunds in designated areas with impermeable floors	Low
		Sorting and packaging	Material exposed to the elements	Yes	No	Yes	4	C	High	Sorting and packaging takes place indoors in premises with impermeable flooring	Low
		Removal from site	Material exposed to the elements and dropping material	Yes	No	Yes	4	C	High	Waste packaged in appropriate packaging Transported by appropriately licensed waste carrier in suitable vehicle	Low
Sludge from oil-water interceptor	13 05 02	Temporary storage	Material exposed to the elements	Yes	No	Yes	4	D	High	Stored within an oil-water receptor Transported by appropriately licensed waste carrier in suitable vehicle	Low
		Sorting and packaging	Material exposed to the elements								
		Removal from site	Material exposed to the elements and dropping material								

5 REVIEW OF THE OUTLINE DECOMMISSIONING PLAN

A complete review of the Outline Decommissioning Plan will be carried out every few years in line with the conditions imposed in the IPPC Permit and any revisions.