

Decision Document (Technical):

Industrial Activities - Permit level

New Applications and Variations

	Document Version Data
Document Number:	IA-DD-EASR-03
Version:	V1.0
Issue Date:	07/11/2025
Document Owner:	Waste & Industry Permitting Senior Manager
Information Asset Owner:	Head of Permitting

General Information relating to Application	
Application Reference Number:	APP2026-00000447
Authorisation Number (if applicable):	EAS/P/6101812
Application Type:	New Application
Applicant/Authorised Person:	MIALGAE LTD
Authorised Address:	Earls Road, Grangemouth, FK3 8XG
Authorised Activity(s):	Schedule 20, Part 4, Chapter 4, Paragraph 16. Production of organic chemicals

Purpose of the document

This document is intended to demonstrate transparency of the determination process to all interested parties. It should record all significant issues, decisions made, actions taken, and rationale for the decision made. It should be sufficiently detailed to demonstrate that all legal requirements were adhered to and provide the basis for defending any appeal.

Language used

You should use non-technical language as far as practicable, avoiding unexplained acronyms and technical terms. While aiming to be comprehensive, it must also be as brief as possible, consistent with the overriding need for clarity and accuracy. Officers should bear in mind that much of the document may be available publicly under the Freedom of Information Act etc.

Timely recording of information

Completion of the various forms should be done on a progressive basis rather than at the end of the process.

Level of detail

Officers should use their professional judgement as to the level of detail required which will depend on the complexity of the process. Officers must consider why the information is required and ensure appropriate detail is included. Each table is designed to be expanded as text is added and will obviously allow the insertion of additional rows where necessary

Applicability of any Section

Do not delete whole sections of the form unless directed to do so. If something is not applicable to your determination, please record this on the form and give a justification if appropriate indicating you have considered the issue and not just missed.

1. Non-Technical Summary of SEPAs Determination

This section provides a non-technical summary of the proposed application and of SEPAs determination with particular focus on areas of our determination which may be regarded as contentious either by SEPA, the applicant or the public.

Provide a non-technical summary of the process and SEPA's determination:

MIALGAE LTD use patented biotechnology to turn co-products produced from the whisky distillation process into an omega-3 oil rich product.

Co-product from a whisky distillery is delivered to the site in large volume tankers and transferred into holding vessels on the plant. The raw 'pot-ale' media undergoes processes and additions, bespoke to each distillery co-product, allowing each to be used to grow omega-3 rich algae.

Once the pot ale media is prepared it is transferred into a clean 30,000L bioreactor.

The bioreactor is seeded with a controlled algal culture. which begins. Once the algal culture is inoculated into the vessels the fermentation process begins and the algae consume the nutrients within both the raw pot ale and the added compounds, to produce an omega-3 oil rich wet product over a set number of days.

Following the fermentation process, a proportion of the water within the resulting fermentation broth (containing the algae rich in omega-3 oils) is removed, which results in a wet paste final product. The liquid portion is removed, stored, and transferred off site for treatment.

The resulting algae product is assessed for quality before being shipped directly to customers or dried further to result in a powder. The drying systems required for the dry product will also be on location within the plant boundaries and equipped with odour abatement systems.

The plant, once fully commissioned, will have a capacity to produce 220 tonnes of wet product per week, or 46 tonnes of dried product (generally a mix of both options).

Resultant effluents from the process are collected, recycled for re-use, or collected within an effluent storage tank. This resulting effluent is taken off site for disposal.

Glossary of Terms

BAT	Best Available Techniques
BREF	Best Available Techniques Reference Document
BAT-C	Best Available Technique Conclusions

CO	Coordinating Office
DAA	Directly associated activity
ELV	Emission Limit Value
The Regulations	The Environmental Authorisations (Scotland) Regulations 2018
STU	Stationary technical unit
BAT-OFC	Reference document on Best Available Techniques for Manufacture of Organic Fine Chemicals.
BAT-CWG	Best Available Techniques (BAT) Reference Document for Common Waste Gas Management and Treatment Systems in the Chemical Sector
BAT-CWWWG	Reference document on Best Available Techniques for Common Waste Water and Waste Gas Treatment/Management Systems in the Chemical Sector
BAT-EE	Reference Document on Best Available Techniques for Energy Efficiency

2. Background to the Application

This section provides relevant context regarding the background to the application, an outline of the authorisation being applied for, and identification of important, sensitive receptors.

Background to the application:

This application is for a new permit to authorise an activity described in The Regulations at Schedule 20, Chapter 4, paragraph 16. Production of organic chemicals.

Outline details of the authorisation applied for:

The authorisation will permit the production of omega-3 using cutting edge, patented, biotechnology to turn co-products produced from the whisky distillation process into an omega-3 oil rich product. The site is a unique design specific for this process and whilst drawing on the BAT documentation for technical information some of the processes are novel and as such are commercially confidential. Where commercially confidential information has been provided to SEPA for the determination process Regulation 41 of The Environmental Authorisations (Scotland) Regulations 2018 allows that information be excluded from the public register.

Identification of important and sensitive receptors – the use of Ordnance Survey map extracts can help:

The site comprises approximately 0.53 ha of hard standing previously used as a car park within the Grange Works Industrial Estate, Grangemouth.

The site sits within Earls Gate Park industrial area and is bounded by other industrial plots except Earls Road to the northwest.

The nearest housing is located approx. 500m to the southeast of the site at Wood Street, Grangemouth.

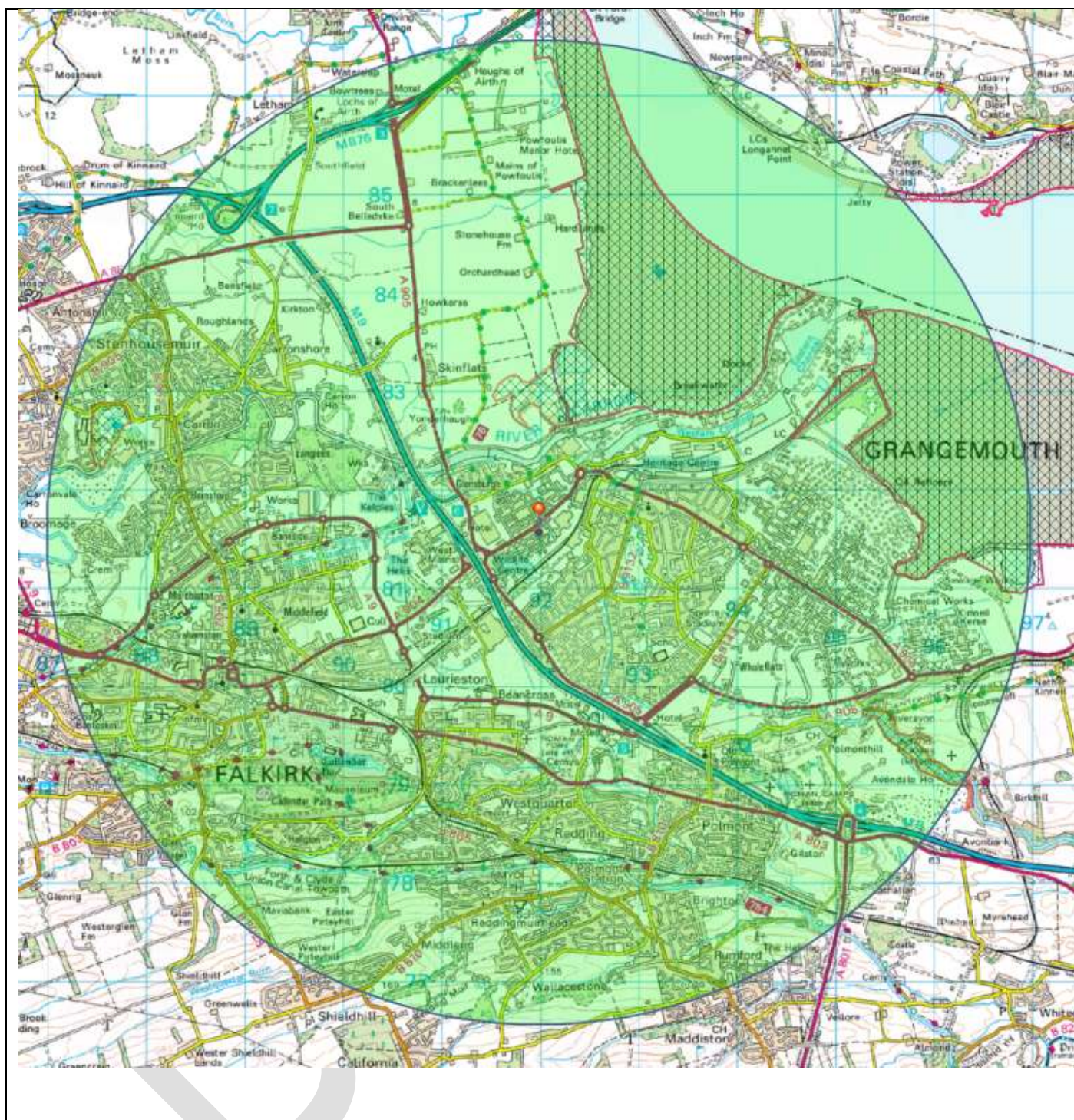
The following SSSI and SPA are located within 5k of the site, as illustrated below.

SSSi

Name	Distance km	PA_CODE	Status	European Code	Type
Firth of Forth	1.03 N	8163	Current	169840	Mixed
Avon Gorge	3,75 SE	108	Current	169661	Biological
Carron Dams	4,29 NW	331	Current	139849	Biological

SPA

Name	Distance km	PA_CODE	Status	European Code	Type
Firth of Forth	1.03 N	8499	Current	UK9004411	Biological



3. Confirmation of Activities and Place

Are we satisfied that the applicant has specified the correct activities?
Yes, the applicant has described the activities correctly as Schedule 20, Chapter4, paragraph 16. Production of organic chemicals.
Where a Schedule 20 activity is being undertaken are we satisfied that the applicant has correctly specified the Stationary Technical Unit and directly associated activities?
For permit level activities which are not Schedule 20, has the applicant identified all processes which are part of the regulated activity?
Yes, as described in the application and on the supplementary document titled '10. MIALGAE STU + DAA (public)' as supplied in support of the application
Are we satisfied that the applicant has correctly defined the boundary of the Authorised Place/Installation?
Yes, the applicant has provided an accurate definition of the site boundary in document titled '8. MIALGAE Grangemouth Desk Study - 61120-001' with the boundary clearly illustrated in Figures 1, 2, and 3.

4. Public Consultation on the Application and SEPA's response

In determining whether to consult the public on the application, reference will have been made to SEPAs '[Public Participation Statement](#)' as required by regulation 67(1), the specific activity pages on SEPAs website and relevant internal guidance.

Was Public Consultation on the application undertaken?	Yes
Date placed on Consultation Hub?	14 April 2026
Were representations received?	No
Summary of responses and how they were considered during the determination: Two responses were received in response to public participation on the application. Both comments were supportive of the proposals and are included below for reference: <i>'This is a great company that wants and needs to grow. We should be doing everything we can to support enterprise like this - and it's green - they've even won an earthshot prize! I cannot see why anyone would hold up this application.'</i>	

'I support MIALGAE LTD 's application as they are taking distillery waste material and converting it into Omega3 rich products in demand from the pet industry, which would otherwise source this from wild fish caught at sea at a time when fish stocks need to be replaced. Any discharges from the site will be treated further but are anyway an improvement on those from any distillery.'

Was the applicant required to undertake additional steps to publicise the application?

No

If yes, have they provided evidence that the additional steps required were undertaken?

No

Comment:

N/A

5. Consultation on the Application with Public Bodies and SEPA's response

In determining whether to consult the public on the application, reference will have been made to SEPAs '[Public Participation Statement](#)' as required by regulation 67(1), the specific activity pages on SEPAs website and relevant internal guidance.

Was Public Consultation on the application undertaken?		Yes
If yes, which Public Bodies did we consult with, what was their response and how did we take it into consideration? (alter rows below as required)		
Food Standards Agency	Date Consulted:	14/04/2026
	Date for response:	12/05/2026
	Date response rec'd:	29/04/2026
	Comments and SEPA Response: Based on the application and provided that the applicant complies with the relevant SEPA Guidance and all other relevant PPC Guidance Notes and Regulations including all relevant food and veterinary medicines usage regulations, Food Standards Scotland considers it unlikely that there will be any unacceptable effects on the human food chain from the emissions from this installation.	
Falkirk Council	Date Consulted:	14/04/2026
	Date for response:	12/05/2026
	Date response rec'd:	Click or tap to enter a date.
	Comments and SEPA Response: No response received	
Forth Valley NHS	Date Consulted:	14/04/2026
	Date for response:	12/05/2026
	Date response rec'd:	26/05/2026
	Comments and SEPA Response: In summary: Given the proximity of sensitive receptors, the applicants should be required to monitor odour and particulate emissions at the site boundary to provide assurance regarding ongoing safety and compliance. SEPA has included monitoring of VOCs within the permit to assess odour from the site as described within this document.	
Grangemouth Community Council	Date Consulted:	14/04/2026
	Date for response:	12/05/2026

	Date response rec'd:	Click or tap to enter a date.
	Comments and SEPA Response:	
	No response received	

6. Other Consultations

In determining whether to consult the public on the application, reference will have been made to SEPAs '[Public Participation Statement](#)' as required by regulation 67(1), the specific activity pages on SEPAs website and relevant internal guidance.

Was "Off-site" consultation required?	No
Was Transboundary Consultation required?	No

7. Assessment of Impact on Protected Areas

All activities authorised by SEPA must be assessed in relation to their potential impact on designated sites under the Nature Conservation (Scotland) Act 2004 & Conservation (Natural Habitats &c.) Regulations 1994. The outcome of the nature conservation screening assessment is recorded below.

Outcome:	Activity is unlikely to have a significant effect on the qualifying interest of any SAC, SPA or RAMSAR site, and/or damage a notified feature of a SSSI
Where an activity is likely to have a significant effect on the qualifying interest of any SAC, SPA or RAMSAR site, and or is likely to damage a notified feature of a SSSI please provide information on the implications for determination of the application below including details of consultation with Nature Scot:	
Based on the information provided consultation with Nature Scot is not required as the proposal outlined in the current permit application is deemed unlikely to have a significant effect	

8. Consideration of other legislation in the determination

Is there any other legislation that was considered during determination of the permit (for example installations that may be impacted by the requirements of legislation involving Animal By-Products, Food Standards, TFS, etc). If yes, provide information on the legislation, action and justification below:	No
N/A	

9. Outcome of In Control and Fit and Proper Person Assessment

In determining an application SEPA must satisfy itself that the applicant will both be in control of the proposed activity and that they are considered a fit and proper person to be in control of the activity. The criteria which we use to assess whether an applicant/authorised person is in control and a fit and proper person is outline in our [‘Who can hold an authorisation’](#) guidance. The outcome of our assessment is recorded below.

We must not grant an application if we think the applicant will not have control over the activity, or we do not think they are a fit and proper person to be in control of the activity.

Outcome:	The applicant will be in control of the activity and is considered a fit and proper person to be in control of the activity
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10. Further Information

In determining an application, it may be necessary to request further information. Where further information has been requested, it will be recorded in the table below.

Has a further information notice been issued?	No
Was the notice peer reviewed/approved:	Choose an item.
Information requested and justification:	Response received:
Was a compliant response provided?	Choose an item.
Comments:	

11. SEPAs Assessment of the Applicants Environmental Management Systems and Risk Assessments

The Determining Officer should assess if the applicant has:

- Demonstrated that the General Aims specified in Regulation 9 of The Regulations will be met.
- Demonstrated that Best Available Techniques will be used (where applicable).
- For Schedule 20 and Schedule 10 activities demonstrated that the waste hierarchy will be appropriately implemented.
- Demonstrate that no significant pollution will be caused.

Reference should be made below to the sections in the application where the demonstration is made. Where non-standard conditions are required to be added to the Authorisation to provide additional environmental controls or provide additional assurance to SEPA or the public these should be referenced below and detailed in section 14.

Where relevant each BAT conclusion should be referred to and confirmation provided that it has been met.

The basis for ELVs and/or equivalent technical parameters/measures should be referenced below and detailed in section **Error! Reference source not found..**

Relevant Guidance used for determination

Reference document on Best Available Techniques for Manufacture of Organic Fine Chemicals.
Reference document on Best Available Techniques for Common Waste Water and Waste Gas Treatment/Management Systems in the Chemical Sector
Reference Document on Best Available Techniques for Energy Efficiency
IND-G-019: A practical guide for Schedules 20 & 26 EASR Permit-level Industrial Activities
IND-G-012: SEPA Guidance on content and scope of site reports and baseline reports
IND-G-013: Soil and Groundwater Monitoring Technical Guidance for Schedule 20 Installations (except landfills) and relevant permit-level Schedule 26 activities
Noise and vibration management: environmental permits
IND-G-010: Noise emissions from vehicle reversing alarms
IND-G-011: SEPA Odour guidance
IND-T-001: Systematic assessment of resource use and efficiency template
IND-G-014: Systematic Assessment of resource use and efficiency in EASR permits

IND-G-017: Capacity & Threshold Guidance for EASR Industrial emissions and Other Emission Activities

The Environmental Authorisations (Scotland) Regulations 2018 (EASR)

ERG. (2025). Wet Chemical Scrubbers. Retrieved from ERG Air Pollution Control:

<https://www.ergapc.co.uk/wet-scrubbers/>

Management of the site

Environmental Management System:

MIALGAE LTD are certified to ISO 14001:2015. The scope of the Management System applies to the provision of biotechnological services to the food and drinks industry.

Original approval: 14/01/2020

Current certificate: 14/01/2024

Certificate expiry: 13/01/2027

Certificate number: 326482020

The management system includes a comprehensive set of plans to cover the operations on site including: Raw Materials, Waste, Accidents, Noise, Odour, and Emissions and Dust.

The overall management plan also references maintenance programmes and standard operating procedures. As the site is currently under construction, the Documents supplied describe that a generic EMS will be in place to cover the site until its final configuration and operating procedures are finalised. Once this is completed, SEPA will require the operator to update the EMS to reflect the operating conditions on site once it is operational

The management plans will continue to be reviewed as part of routine regulatory effort once the site has been completed.

The environmental management system utilised by MIALGAE LTD is representative of Section 5.3 of the BAT-OFC, and BAT 1 of BAT-CWWWG, and BAT-EE.

Accidents and their Consequences:

An Accident Management Plan has been provided in support of the application sets out the measures used to identify, prevent, respond to, and recover from accidents that could cause pollution or environmental harm at the installation.

This plan supports compliance with the environmental permitting regulations and guidance on accident prevention, and the companies Environmental Management System (EMS).

It includes a risk assessment matrix which describes potential accident/high risk scenarios for the installation and identifies: potential causes, environmental impact, risk level, and the controls in place as mitigation.

Details are also included on accident prevention measures, emergency response procedures, and accident investigation and reporting, and it includes cross reference to the site layout, site drainage plan, and an inventory of hazardous substances which were supplied in support of the application.

As with the environmental management system the Grangemouth Development Accident Management Plan supplied in support of the application is still currently in draft with generic information used whilst the plant and its final configuration are under construction. This will be updated with site specific guidance as the site information becomes available including information on: Spill kit locations, Emergency contact list, and Emergency stop and isolation areas.

The final accident management plan will be submitted to SEPA once completed and will continue to be reviewed as part of routine regulatory effort once the site has been completed.

The accident management plan provided by MIALGAE LTD is representative of Section 5.3 of the BAT-OFC, and BAT 1 of BAT-CWWWG, and BAT-EE.

Closure:

A Decommissioning Plan has been provided in support of the application.

This plan demonstrates that MIALGAE LTD 's manufacturing facility can be decommissioned in a manner that prevents pollution, protects the environment, and ensures the site is left in a satisfactory condition as required by the EASR regulations.

It provides an overview of the following areas of the decommissioning process: cessation of operations, the removal of materials and chemicals, cleaning and decontamination, removal of plant and equipment, inspection and cleaning of drainage and infrastructure, waste management during decommissioning, soil and groundwater protection and environmental monitoring and verification.

The plan also identifies that a final decommissioning report will be submitted to SEPA to support any permit surrender.

Start-up/Shutdown plan (where relevant):

As the site is still under construction the startup and shutdown plans will be developed once the final configuration of the site is known.

These will be reviewed as required as part of routine regulatory effort at the site.

Emissions to Air and Monitoring**Point Source emission to air:**

Emissions from the plant systems will come solely from the drying stages of the process.

The drying system will be used 24 hours a day which will operate an odour abatement system.

An emissions inventory has been supplied in support of the application detailing all potential sources of emissions and including a risk assessment for each potential source.

A standard set of conditions is included within the permit to regulate point source emissions to air as described below:

Visible emissions: other than condensed water vapour, all releases to the air during normal operation must be free from visible emissions.

Dust: which has a significant impact on the environment, people or property, must not be emitted beyond the site boundary

Aerosols: from the activities, which have a significant impact on the environment, people or property, must not be emitted beyond the site boundary.

In addition to the standard conditions one point source emission has been identified for inclusion in the permit is as follows:

The exhaust gases from drying process. This is a single emission point from the odour abatement system included within the drying process which will reduce emissions to within acceptable thresholds before release. This is discussed further in the section of this document dedicated to odour.

Fugitive emissions to air:

Potential fugitive sources of emissions to air have been identified in the emissions inventory and include emergency pressure relief valves, small steam generators, and passive ventilation from buildings.

Emissions from these points will be covered by a standard set of conditions included within the permit and as described previously.

Odour:

The operational characteristic of the site involves two stages, each with different potential odour sources.

The first, processing activities, involves the handling and treatment of nutrient-rich feedstocks to cultivate microalgae. The controlled nature of the process, including storage in sealed tanks and the use of tankers equipped with vapour recovery systems for filling operations, is expected to minimise odour emissions.

The second, drying operations, has a higher potential for odour emissions due to the evaporation of organic compounds during drying.

The odour produced by the drying process is not expected to be highly offensive. In accordance with Scottish Environment Protection Agency (SEPA) guidance (SEPA, 2025), a “yeasty” odour has a hedonic tone score, an indication of its offensiveness, of -0.07 on a scale of -4 (most offensive) to +4 (least offensive).

While it may be recognisable near the tanks, it will not be perceived as offensive at source or beyond the site boundary.

The closest human receptor is a house located approx. 130 m to the northwest of the site. At this distance, prevailing wind speed and strength would mean any odour would be significantly diluted over this distance and it should not be of concern at this location.

Using SEPAs FIDOL assessment criteria it is not expected that the site will have any major impact on the nearby receptor, Potential odour effects are anticipated to be limited to operational activities and unlikely to cause significant impact on amenity. Further mitigation measures will be investigated during commissioning of the site infrastructure to ensure any potential odour impacts can be reduced to an acceptable level and remain ‘not significant’ at receptor locations.

The site has developed an odour management plan in line with the requirements of BAT 20 of the BAT-CWWWG guidance. Once operational the odour emissions from the drying process will be monitored in accordance with EN standards and in line with the principals of BAT 6 of the BAT-CWWWG. If the potential for odorous emissions is identified further mitigation measures will be introduced and implemented in line with the Institute of Air Quality Management IAQM guidance on the assessment of odour for planning (IAQM, 2018).

The potential for odour from the site was raised by the local health board as an area of concern during consultation on the application ‘*Given the proximity of sensitive receptors, the applicants should be required to monitor odour and particulate emissions at the site boundary to provide assurance regarding ongoing safety and compliance.*’

At permit issue SEPA will include a requirement to monitor VOCs at the emission point from the odour abatement equipment to assess the potential for odour from the site. SEPA will also include standard conditions requiring 'offensive odours from the authorised activities must not be emitted beyond the boundary'. These will be reviewed on a regular basis and as part of ongoing regulatory effort at the site.

Emissions to Water and Monitoring (where relevant)

Point Source Emissions to Surface Water and Sewer:

There are no point source emissions to surface water from the installation.

All process equipment drains are networked into a central drainage collection point within the site location. This central point then drains into the main site weak stream drainage system,

Rainwater, surface water, and facilities wastewater, also connect to the site weak stream drainage network with the combined effluent directed offsite for treatment and disposal by a third-party provider a copy of this agreement was supplied in support of the application.

Effluents generated by the on-site processes is segregated, collected, and transferred by tanker directly to an off-site effluent treatment plant for controlled treatment prior to disposal. An agreement is in place with a third-party provider to ensure that they can accept this waste stream, a copy of this agreement was supplied in support of the application.

The drainage system design incorporates hard separation of weak and strong streams, ensuring no cross-contamination and maintaining treatment efficiency.

All hazardous liquid storage areas have bunded containment capable of holding at least 110% of the largest container. The bunds have been constructed of chemical-resistant materials and will be routinely inspected for integrity/drainage.

Spill kits and absorbents will be strategically located within each zone, marked with appropriate signage.

The principles used in the development of the site, including the segregation of different strength aqueous waste streams are representative of BAT 7, BAT 8, and BAT 9 of BAT-CWWWG.

Continued compliance with BAT will be monitored through routine regulatory effort at the site.

Point Source Emissions to Groundwater:

There are no point source emissions to groundwater from the proposed activities.

Fugitive Emissions to Water:

The documentation supplied in support of the application indicate that as a “New Build” facility containment measures have been incorporated into the design and construction of the installation to minimise the potential for fugitive emission releases to the water environment. Such that: all tanks have appropriate containment, site roads and external working surfaces are kerbed to direct water to the site drainage network.

Noise Emissions and Monitoring

A noise assessment was undertaken to support both the planning and permit application procedures. The assessment comprised consultation with Falkirk Council, prediction of operational noise levels, and evaluation against derived criteria.

The consultant used assumed background noise levels for the BS4142 assessment based on a desktop study and previous survey work conducted in the area. The assumed levels were expected to be suitably robust for the assessment.

Evaluation against Criteria – External Levels (BS4142)

During the daytime period, the predicted rating level meets the adopted criterion by a margin of between 11 dB and 15 dB. Noise impacts associated with operation of the development during the daytime at all noise sensitive receptors are therefore low.

During the night-time period, the predicted rating level meets the adopted criterion by a margin of between 6 dB and 10 dB. Noise impacts associated with operation of the development during the night-time at all noise sensitive receptors are therefore low.

Evaluation against Criteria – Internal Levels (BS8233)

Referring to the BS8233 criteria, the consultant evaluated noise from the development at the closest noise sensitive receptor against BS8233. Compliance at the closest noise sensitive receptor denotes compliance at all other receptors where predicted levels are lower. In accordance with BS8233, this assessment assumes a 15 dB broad-band reduction across an open window. In this case the predicted rating level meets the adopted criterion by a margin of between 16 dB and 21 dB.

In summary, the assessment determined that noise impacts during the daytime period and night-time period would have a low impact at all noise sensitive receptors. Compliance with BS8233 internal criteria at all noise sensitive receptors is also achieved by a comfortable margin.

In this case the standard noise condition contained within the permit will be sufficient for regulation in the first instance, *'Noise from the authorised activities, which has a significant impact on the environment, people or property, must not be emitted beyond the boundary'*

This position can be reviewed as part of regulatory effort should substantiated noise complaints be received in respect of the site.

The methodology used in assessing noise and the principles involved in developing the site and its processes are representative of those used to prevent or, where that is not practicable, to reduce noise emissions as illustrated in BAT 22 of BAT-CWWWG.

Resource Utilisation and Monitoring

Water use:

The production methodology on site utilises a large volume of water which is proportional to the volume of product generated.

Water use on site will be monitored and regulated through regular recording and reporting as part of resource utilisation conditions within the permit and as part of regulatory effort at the site.

Energy use and generation:

Electricity is the principal energy used on site with major energy-consuming activities identified as the manufacturing and processing equipment and the associated utilities e.g. air blower systems, chiller units.

An energy baseline has been established using projected data, where available, to allow performance tracking and identify the potential for future improvement.

Identification of the aspects of an installation that influence energy efficiency and by carrying out an audit is representative of BAT 3 of BAT-EE. Energy use on site will be monitored and regulated through regular recording and reporting as part of resource utilisation conditions within the permit and as part of regulatory effort at the site to ensure compliance with BAT.

Raw Materials Selection and Use:

MIALGAE LTD 's production process is bespoke and utilises patented biotechnology to turn co-products produced from the whisky distillation process into an omega-3 oil rich product. As such there is a clearly defined set of raw materials and specifications which can be used within the process.

Raw Material use on site will be monitored through regular recording and reporting as part of resource utilisation conditions within the permit and as part of regulatory effort at the site.

Waste Management, Handling and Monitoring**Waste Minimisation:**

As a new site MIALGAE LTD has indicated that a site-specific waste inventory will be developed and maintained as the site becomes operational. The potential for waste minimisation opportunities will be reviewed by the operator at regular intervals. Where necessary site records will be reviewed as part of routine regulatory effort at the site.

Waste Handling:

As a new site MIALGAE LTD has indicated that a site-specific waste inventory will be developed and maintained as the site becomes operational. Typical waste streams arising from the site may include process wastes, packaging waste, scrap materials (e.g. metals, plastics), general non-hazardous waste, and hazardous waste (e.g. contaminated materials, oils, chemicals, spill kits).

Waste will be managed on site as using the following protocols:

Waste streams will be sorted and segregated to maximise the potential for reuse and recycling.

Designated storage areas and containers will be clearly labelled to ensure segregation potential is optimised.

Hazardous waste will be stored separately in suitable secure containers.

Where liquids are to be stored secondary containment bunding will be utilised to minimise potential for spillage.

As part of management practices all waste storage areas will be routinely inspected to prevent degradation or the potential for leaks.

Waste storage and segregation will be monitored on site as part of routine regulatory activities.

The above proposals are in line with the principals of waste hierarchy and the principles of BAT and will be monitored and through regular recording and reporting as part of resource utilisation conditions within the permit and as part of regulatory effort at the site to ensure compliance.

Waste Recovery or Disposal:

MIALGAE LTD has provided a waste management plan in support of the application which demonstrates intent to operate within the best practice and is illustrative of the principals of waste hierarchy which ranks waste management options in order of environmental preference, from the most sustainable (prevention) to the least (disposal).

Measures to minimise waste generation include:

- Process management to reduce off-specification material.
- Process optimisation to reduce waste chemical generation.
- Process optimisation to reduce consumable requirements.
- Reuse of materials and containers where practicable.
- Procurement practices that minimise packaging.
- Engagement with suppliers to reduce waste at source.
- Review of waste data to identify reduction opportunities.
- Review and integration of MIALGAE Net Zero plan into plant systems.

The above proposals are in line with the principals of waste hierarchy and the principles of BAT

Site Condition Report, Baseline Report and Soil and Groundwater Monitoring (where relevant)

The permit contains conditions requiring the operator to prepare a soil and groundwater monitoring plan. The plan must consider locations of all activities that use, store, produce, or release, relevant hazardous substances including waste streams. And where appropriate monitor these at intervals of every 5 years for Groundwater and every 10 years for soil.

Consideration of Appropriate Measures and BAT

SEPA acknowledges that, as a novel and technologically advanced biotechnology operation, the standard BAT techniques may not be fully applicable to the MIALGAE facility and that alternative BAT measures may therefore need to be employed.

In such circumstances, SEPA has a duty under Schedule 19, Part 3, Paragraph 11 of the Regulations to, where appropriate, promote and facilitate the development and implementation of emerging techniques, particularly those identified within relevant BAT Reference Documents (BREFs) and BAT Conclusions, in accordance with the provisions and criteria set out within the Regulations.

Should additional or alternative BAT measures be required following the commencement of operations, these will be assessed and implemented through the appropriate regulatory mechanisms to ensure continued compliance with environmental objectives and permit requirements.

In this instance the applicant has demonstrated that appropriate measures will be taken to satisfy the general aims and ensure compliance with the relevant published performance standards.

Where appropriate references to compliance with BAT have been included in the relevant sections above.

Ongoing compliance with best practice will be reviewed as part of routine regulatory effort at the site.

12. Consideration of Environmental Impact Assessment

For Schedule 20 - 24 activities, if an applicant has confirmed to us in the application that the proposal is subject to an environmental impact assessment under the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017, then we must record how we have considered any relevant information obtained or conclusions arrived at from the EIA.

Was the activity to which this application relates to, subject to an EIA?	No
Please record what “ <i>relevant information or conclusions</i> ” associated with the EIA were submitted with the application by the applicant.	
N/A no EIA.	
Please record how you considered this information in the determination of the application.	
N/A no EIA.	

13. Extension to the permit determination time

Has an extension to the permit determination period been requested?	Choose an item.
Did the applicant provide written agreement to extend the determination period?	Choose an item.
Where agreed has the permissioning platform been updated?	Choose an item.
Where the applicant has not given written agreement to extend the determination period, have they notified SEPA that they wish the application to be deemed refused?	Choose an item.
Comments:	

14. Details of the draft permit

Do you propose placing any non-standard conditions in the permit?		No
Do you propose making changes to existing text, tables or diagrams within the permit?		No
Outline the changes required and provide justification below:		
Condition Number:	Justification:	
Schedules 1, 2 and 3	The permit utilises the conditions contained within the standard Schedule 20 activity permit. Where appropriate Emission Limit Values have been included for parameters based on the relevant BAT document.	

15. Informal Consultation with Applicant/Authorised Person

Has informal consultation with the applicant/authorised person on the draft determination been carried out?		Choose an item.
Draft sent to the applicant:	Click or tap to enter a date.	
Date given to return comments:	Click or tap to enter a date.	
Date Comments returned:	Click or tap to enter a date.	
Summary of contents and SEPA's response giving justification		

16. Public Consultation on SEPA's Draft Decision

Was Public Consultation on the draft decision undertaken?		Yes
Date draft determination placed on SEPA's Website:	Click or tap to enter a date.	
Date public consultation on draft consultation closed:	Click or tap to enter a date.	
Details of any other 'appropriate means' used to advertise the draft. Seek advice from the communication department		
Have all individuals who responded to the consultation on the application been informed of our draft decision?	Choose an item.	
Were representations received?	Choose an item.	

Summary of responses and how they were considered:

17. Final Decision

Outcome:	Grant
If “Refuse” or “Grant in Part” summarise the grounds for refusal:	
N/A	