

Intended for
Angus Fire Limited

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June 2025

Project Number
1620016373

ANGUS FIRE **APPROPRIATE MEASURE** **ASSESSMENT**

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Prepared by **Billy Glasgow**
Checked by **Lisa Jobling**
Approved by **Richard Wood**

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1. INTRODUCTION

Angus Fire Limited ("Angus Fire") proposes to operate a waste operation located at Station Road, Bentham, Nr Lancaster, LA2 7NA (the "Site").

The current activities and directly associated activities subject to regulation under Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2016 (as amended) (the 'EPR') are:

- **Activities Listed in Section 4.1 A(1)(b) of Schedule 1 of the EPR** - manufacture of chemicals which may result in the release of ammonia into the air other than an activity in which ammonia is only used as a refrigerant (Section 4.7 A(1)(b));
- **Directly Associated Activities** – Storage of raw materials, finished products and wastes and operation of two oil fired boilers.

Due to historic manufacturing activities surface water run-off from the Site has the potential to contain Per- and polyfluoroalkyl substance (PFAS). PFAS is not currently controlled by an emission limit in the EPR, and there is potential for the release of PFAS through transference from surfaces at the site into the surface water discharge (not as part of a process activity release). It is noted that manufacturing, testing and storage of fluorinated firefighting foams has ceased.

The site proposes to vary the existing permit to include a waste operation to allow for treatment of contained stormwater collected on the Site and post-treatment discharge through a new discharge point (W2).

The proposed activities are subject to regulation under the Environmental Permitting (England and Wales) Regulations 2016 (as amended) (EPR) as they relate to the treatment of non-hazardous waste under provisions of Schedule 9.

As the proposed activity is a non-hazardous waste activity and does not meet the threshold to be classified as a Schedule 1 activity under the EPR an assessment of the proposed activities against the EA guidance for appropriate measures for the treatment of non-hazardous and inert waste¹ at permitted facilities has been undertaken.

This report presents the findings of an assessment of site operations and techniques against the applicable appropriate measures

The proposed site layout and further details of the site and operations are described in more detail in the application document reference 1620016373 - Angus Fire - Permit Variation Application, June 2025.

¹ <https://www.gov.uk/guidance/non-hazardous-and-inert-waste-appropriate-measures-for-permitted-facilities>

2. ASSESSMENT OF APPROPRIATE MEASURES

Appropriate Measure	Overview	Compliant	Operator Assessment
General Management			
2.1 Management System	You must have an up-to-date written management system , and activities at your facility must follow it. Your management system must incorporate the following features.	Yes	The site operates to an environmental management system that is accredited to the ISO140001 standard. The EMS will be updated to include the management of the new treatment process. This will include: <ul style="list-style-type: none"> • Standard operating procedures • Emergency preparedness and response • Maintenance programmes • Monitoring requirements • Compliance with Permit requirements • Incidents and non-conformances
2.2 Staff Competence			
2.2.1	Your facility must be operated at all times by an adequate number of staff with appropriate training, qualifications and competence . You must keep records of training, qualifications and relevant experience.	Yes	The Site Director will have direct responsibility for the operation of the treatment process, coupled with the Site EH&S Manager. Site personnel will be trained in the operation of the treatment process and associated procedures (including emergency response). As a waste operation, the site must have an accredited professional responsible for the site. The site will have a Chartered Institute of Waste Management, WAMITAB Level 4 assigned to the site.
2.2.2	If you operate a 24-hour process, you must have: <ul style="list-style-type: none"> • remote or telemetric systems to make sure an alarm would be raised in the event of an incident during unmanned hours • appropriate personnel on call to deal with these incidents You must explain these procedures in your management system.	N/A	The water treatment process will operate as a 24-hour process in order to clear the back-log of contained stormwater. Once the back-log is cleared, it is the intention that the plant will be operated during the normal operational hours of the wider facility (0600-2200). The SAFF treatment process is a fully automated design which is monitored and controlled using a PLC system. Each batch progresses through the stages only once the control parameters are within the correct range. For example, effluent cannot be transferred to the tank for treatment until the appropriate level in the tank is detected. The system has been designed to 'fail safe', an example would be a leak would present as a pressure drop in the system, in this scenario the process would automatically shutdown and the system would alarm. The SAFF unit is monitored 24 hours per day by a team of specialist engineers via remote telemetry. This team is able to provide remote troubleshooting in the event of an issue. If necessary, the plant can be shut down remotely until a team member can access the site to investigate. The remote control system is coupled with CCTV coverage within the plant and alarms that alert Angus personnel via a mobile app. Finally, the SAFF is located within a bunded area with additional tertiary containment. Should there be any leaks within the system, they would be collected on site and pumped to the pre-treatment storage tanks.
2.2.3	The design, installation and maintenance of infrastructure, plant and equipment must be carried out by competent people, including Construction Quality Assurance where appropriate.	Yes	The design of the treatment system was undertaken by suitably qualified consultants and installation of the treatment system has been completed by the plant supplier. The competence of the personnel responsible for the operation and maintenance of the treatment system is described in response to appropriate measure 2.2.1.
2.2.4	You must have appropriately qualified managers for your waste activity who are members of a government approved technical competence scheme and who attend the facility as set out in our attendance guidance .	Yes	Please refer to the response to appropriate measure 2.2.1.
2.2.5	Staff carrying out waste acceptance checks, including sampling and analysis of waste, must be appropriately trained and competent to: <ul style="list-style-type: none"> • classify and characterise waste properly • identify whether it is suitable for your facility • manage any loads that do not conform to waste acceptance criteria • determine end of waste products 	Yes	See Section 2.2.3 regarding staff competence and Section 3.1.1 regarding Waste Acceptance

2.3 Accident Management Plan			
2.3.1	As part of your written management system you must have a plan for dealing with any incidents or accidents that could result in pollution, including near misses.	Yes	The site will review and update the existing Emergency Response Plan (AFP12.02) to include the treatment process. An Environmental Risk Assessment has been undertaken in support of the application to vary the Permit. This is provided as a separate report, and a summary is provided in Section 18.
2.3.2	The accident management plan must identify and assess the risks the facility poses to human health and the environment. Particular areas to consider may include: <ul style="list-style-type: none"> • waste types • transferring substances, for example filling (including overfilling) or emptying of vessels and containers • preventing incompatible substances coming into contact with each other • failure of plant and equipment, for example storage tanks and pipework, or blocked drains • failure of containment, for example bund failure or drainage sumps overfilling • making the wrong connections in drains or other systems • failure to contain firefighting water • failure of abatement systems • hazardous atmospheres in confined spaces • failure of main services, for example power, steam or cooling water • checking the composition of effluents before their emission • vandalism and arson • operator error • accessibility of control equipment in emergency situations • extreme weather conditions, for example flooding or very high winds 	Yes	The site will review and update the existing Emergency Response Plan (AFP12.02) to identify and assess the risk that the treatment system poses to human health and the environment.
2.3.3	You must assess the risk of accidents and their possible consequences. You can use our risk assessment guidance to help you to do this. Risk is the combination of the likelihood that a hazard will occur and the severity of the impact resulting from that hazard. Having identified the hazards, you can assess the risks by addressing six questions: <ul style="list-style-type: none"> • how likely is it that the accident will happen? • what may be emitted and how much? • where will the emission go – what are the pathways and receptors? • what are the consequences? • what is the overall significance of the risk? • what can you do to prevent or reduce the risk? 	Yes	An Environmental Risk Assessment has been undertaken in support of the application to vary the Permit. This is provided as a separate report, and a summary is provided in Section 18.
2.3.4	The depth and type of accident risk assessment you carry out will depend on the characteristics of your facility and its location. The main factors to take into account are the: <ul style="list-style-type: none"> • scale and nature of the accident hazard presented by the facility and its activities • risks to areas of population and the environment (the receptors) 	Yes	An Environmental Risk Assessment has been undertaken in support of the application to vary the Permit. This is provided as a separate report, and a summary is provided in Section 18.
2.3.5	Through your accident management plan, you must also identify the roles and responsibilities of the staff involved in managing accidents. You must provide them with clear guidance on how to manage each accident scenario, for example as a result of a spillage of a potentially polluting liquid.	Yes	The roles and responsibilities of staff responsible for managing accidents from the treatment system will be included in the updated Emergency Response Plan (AFP12.02).
2.3.6	You must have a suitably trained facility employee available at all times who will act as an emergency coordinator and will take lead responsibility for implementing the accident management plan.	Yes	The site maintains an emergency response procedure which includes a requirement for a suitable trained employee who will act as an emergency coordinator to be available at all times.
2.3.7	You must train your employees so they can perform their duties effectively and safely and know how to respond to an emergency.	Yes	The updated Emergency Response Plan (AFP12.02) will be communicated to employees, including the provision of relevant training where required.
2.3.8	You must also: <ul style="list-style-type: none"> • show how you will communicate with relevant authorities, emergency services and neighbours (as appropriate) before, during and after an accident • implement emergency procedures, including for safe plant shutdown and site evacuation • implement post-accident procedures that include carrying out an assessment of the harm an accident may have caused and the remediation actions you will take 	Yes	This information is included in the current Emergency Response Plan (AFP12.02).

	<ul style="list-style-type: none"> consider the impact of accidents on the function and integrity of plant and equipment have contingency plans to relocate or remove waste from the facility, and suspend incoming waste test the accident management plan by carrying out emergency drills and exercises 		
2.3.9	After a flooding event you must inspect and assess the integrity of affected plant and equipment, in particular infrastructure that may have been in contact with floodwater or groundwater. Tank inspections should include non-destructive testing methods to verify their integrity.	Yes	The site is not located in an area prone to flooding, notwithstanding this, the Accident Management Plan will be updated to include the inspection of the treatment system following a flooding event.
2.3.10	You must take the following measures, where appropriate, to prevent events that may lead to an accident. You must have appropriate procedures set out in your accident management plan.	Yes	Please refer to the response to appropriate measure 2.3.1.
2.3.11	<p>You must make sure that you contain the following (where appropriate) and route to the effluent system (where necessary and lawful):</p> <ul style="list-style-type: none"> process waters site drainage waters emergency firefighting water chemically contaminated waters spillages 	Yes	<p>An Environmental Risk Assessment has been undertaken in support of the application to vary the Permit. This is provided as a separate report, and a summary is provided in Section 18.</p> <p>The environmental risk assessment includes the description of the containment of the flows described in this appropriate measure.</p>
2.3.12	<p>You must have planned for how you will manage the impacts of tidal surges and storm water flows. You must consider abnormal operating scenarios and incidents, for example, by providing buffer storage capacity. You should take into account the:</p> <ul style="list-style-type: none"> nature of the pollutants potential pathways effects of downstream waste water treatment sensitivity of the receiving environment 	Yes	<p>An Environmental Risk Assessment has been undertaken in support of the application to vary the Permit. This is provided as a separate report, and a summary is provided in Section 18.</p> <p>The environmental risk assessment includes the description of the containment capacity of the site, including the assessment of 'other than normal operating conditions'.</p>
2.3.13	If buffer storage capacity is required, you can only discharge from it after you have assessed the water for contamination, in order to identify an appropriate disposal route.	Yes	<p>An Environmental Risk Assessment has been undertaken in support of the application to vary the Permit. This is provided as a separate report, and a summary is provided in Section 18.</p> <p>The environmental risk assessment includes the consideration of this appropriate measure.</p>
2.3.14	You must implement spill contingency procedures to minimise the risk of an accidental spill entering watercourses or sewers or contaminating land.	Yes	Please refer to the response to appropriate measure 2.3.1.
2.3.15	You must take account of additional firefighting water flows or firefighting foams, as set out in our fire prevention guidance . You may need infrastructure like emergency storage lagoons to prevent contaminated firefighting water from reaching a receiving water body.	Yes	<p>An Environmental Risk Assessment has been undertaken in support of the application to vary the Permit. This is provided as a separate report, and a summary is provided in Section 18.</p> <p>The environmental risk assessment includes the consideration of fire water.</p>
2.3.16	<p>You must consider and, if appropriate, plan for the possibility that you may need to contain or abate accidental emissions from:</p> <ul style="list-style-type: none"> overflows tank failures tank wall penetrations site plant or machinery leaks 	Yes	<p>An Environmental Risk Assessment has been undertaken in support of the application to vary the Permit. This is provided as a separate report, and a summary is provided in Section 18.</p> <p>The environmental risk assessment includes the consideration of this appropriate measure.</p>
2.3.17	<p>You must have security measures (including staff) to prevent unauthorised access to your facility, so preventing:</p> <ul style="list-style-type: none"> damage to equipment theft illicit dumping and fly-tipping arson <p>Depending on your risk assessment, facilities must use an appropriate combination of:</p> <ul style="list-style-type: none"> security guards total enclosure (usually with fences) controlled entry points lighting warning signs 24 hour surveillance, such as CCTV 	Yes	<p>The site has 24-hour security monitoring with security personnel and CCTV coverage.</p> <p>The site is surrounded by fencing and has controlled entry points</p>
2.3.18	If your permit allows you to store or treat combustible waste, you must have a fire prevention plan that meets the requirements of our guidance .	N/A	

2.3.19	You must maintain plant control in an emergency using one or a combination of: <ul style="list-style-type: none"> alarms trips and interlocks automatic control systems tank level readings such as ultrasonic gauges, high level warnings, process interlocks and process parameters 	Yes	An Environmental Risk Assessment has been undertaken in support of the application to vary the Permit. This is provided as a separate report, and a summary is provided in Section 18. The environmental risk assessment includes the consideration of this appropriate measure.
2.3.20	You must: <ul style="list-style-type: none"> make sure that all the measurement and control devices you would need in an emergency are easy to access and operate in an emergency situation maintain plant in a good state through a preventive maintenance programme and a control and testing programme use techniques such as suitable barriers to prevent moving vehicles damaging equipment implement procedures to avoid incidents due to poor communication between operating staff – during shift changes and following maintenance or other engineering work 	Yes	Please refer to the response to appropriate measure 2.3.1.
2.3.21	You must: <ul style="list-style-type: none"> keep an up to date record of all accidents, incidents, near misses, changes to procedures, abnormal events, and the findings of maintenance inspections carry out investigations into accidents, incidents, near misses and abnormal events and record the steps taken to prevent their reoccurrence maintain an inventory of substances which are present (or likely to be) and which could have environmental consequences if they escape 	Yes	The site has established procedures to record and investigate incidents and non-conformances which may affect the environmental performance of the facility. Angus Fire's management system requires that nonconformances are reported, investigated and rectified, and actions are implemented to prevent reoccurrence. Any accident or incident that may arise as a consequence of the treatment system will be management in accordance with established procedures.
2.3.22	You must notify the Environment Agency without delay if you detect any of the following events and they are causing, or may cause, significant pollution: <ul style="list-style-type: none"> a malfunction a breakdown or failure an accident emission of a substance not controlled by an emissions limit breach of an emissions limit 	Yes	This requirement is already as part of the site's Environmental Permit. The site will ensure that they notify the EA should any pollution events, or potential pollution events cause significant pollution.
2.4 Contingency Plan and Procedures			
2.4.1	You must implement a contingency plan so that you: <ul style="list-style-type: none"> comply with all of your permit conditions and operating procedures during maintenance or shutdown at your facility, including disruption at other facilities that would affect supplies to your facility or the removal of waste from it do not exceed limits in your permit and continue to apply appropriate measures for storing and handling waste stop accepting waste unless you have a clearly defined method of recovery or disposal and enough permitted capacity 	Yes	The process is designed to treat contained stormwater from the site. Waste will not be accepted from third parties. The process has been designed to have significant storage capacity for surface waters. Influent will be stored in five (5) storage tanks with a total capacity of 164 m ³ prior to processing which provides significant contingency should the process be shut down for maintenance or due to failure. In the unlikely event that the storage capacity is exceeded, then surface waters can be stored in IBCs within the site boundary. The design of the process requires that treated surface water is analysed prior to discharge. Should the analyses show that PFOS in the treated water exceeds the emission limits, the water will be routed back to the influent tanks for further treatment. Water exceeding the limits will not be discharged to the river. If the treatment targets cannot be achieved, then the water could be removed for offsite disposal.
2.4.2	You must have contingency procedures to make sure that, as far as possible, you know in advance about any planned shutdowns at waste management facilities to which you send waste.	Yes	Waste produced by the treatment process is minimal (approximately 25kg/day). Following the clearance of the backlog of contained stormwater on-site there will be sufficient suitable storage space on-site to store waste generated from the treatment system in the event of a shutdown, until it can be accepted at the waste management facility.
2.4.3	You must make your contracted or regular customers are aware of your contingency plan and of the circumstances in which you would stop accepting waste from them.	Yes	The site will not accept waste from third parties.
2.4.4	You must consider whether the sites or companies you rely on in your contingency plan: <ul style="list-style-type: none"> can take waste at short notice are authorised to do so in the quantities and types likely to be needed, in addition to carrying out their existing activities 	Yes	The site will not accept waste from third parties, and generation of waste from the process is minimal at approximately 25kg/day. In the event of a shutdown on the receiving site, generated waste would be held on site in a secure location until the designated facility is able to receive it.
2.4.5	If you could exceed your permitted limits, or compromise your storage or handling procedures, you must not discount alternative disposal or recovery options on the basis of extra cost or geographical distance.	Yes	Please refer to the response to appropriate measure 2.4.1.
2.4.6	You must not include unauthorised capacity in your contingency plan. If your contingency plan includes using temporary storage for additional waste at your facility, then you must	Yes	The contingency plan does not require the exceedance of any of the site's authorised conditions.

	make sure that your facility is authorised for this storage and you have the appropriate infrastructure in place.		
2.6.7	<p>Your management procedures and contingency plan must:</p> <ul style="list-style-type: none"> • identify your technology's known or predictable malfunctions and the procedures, spare parts, tools and expertise needed to deal with them – so you can minimise predictable malfunctions and fix them quickly • include a record of spare parts held, especially critical spares, or state where you can get them from and how long it would take • have a defined procedure to identify, review and prioritise items of plant which need a preventative regime • include all equipment or plant whose failure could directly or indirectly affect the environment or human health – if the equipment or plant is process critical then you may need to stop accepting waste or shut down your process • make sure you have the spare parts, tools, and competent staff needed before you start maintenance 	Yes	The site will review and update the existing Environmental Management System to include the treatment process. A summary of the integration of the treatment process into the site's EMS is provided in Section 7 of the Operations Report.
2.6.8	If you produce an end-of-waste material , your contingency planning must consider storage capacity for end-of-waste products and materials that fail the end-of-waste specification.	N/A	The process does not generate end-of-waste material.
2.6.9	Your management system must include procedures for auditing your performance against all of these contingency measures and for reporting the audit results to the site manager.	Yes	The site maintains and accredited ISO14001 Management System. The management system will be reviewed and updated to include the treatment system. A summary of the integration of the treatment process into the site's EMS is provided in Section 7 of the Operations Report.
2.5 Facility Decommissioning			
2.5.1	You must consider the decommissioning of the facility at the design stage and make suitable plans to minimise risks during decommissioning.	Yes	<p>The treatment plant is a containerised unit that could be wholly removed from site at the end of life.</p> <p>There are no underground connections from the storage tanks to the treatment plant. All new tanks are of MDPE construction. These would be relatively easy to decontaminate and remove during decommissioning.</p>
2.5.2	<p>For existing facilities where potential risks are identified, you must implement a programme of design improvements. These design improvements must make sure that you:</p> <ul style="list-style-type: none"> • avoid using subsurface tanks and pipework • drain and clean out vessels and pipework before dismantling • use insulation which you can remove easily without dust or hazard • use recyclable materials, taking into account operational or other environmental objectives 	N/A	The treatment system is a new treatment system specifically designed and optimised for the site.
2.5.3	<p>You must maintain a decommissioning plan to demonstrate that:</p> <ul style="list-style-type: none"> • plant can be decommissioned without causing pollution • the site will be returned to a satisfactory condition 	Yes	The treatment plant is a modular containerised system, allowing for ease of decommissioning. Foaming agent (as a relevant hazardous substance) is incorporated into the installation's Site Condition Report to support the return to a satisfactory condition.
2.5.4	You should identify non-productive or redundant items such as tanks, pipework, retaining walls, bunds, reusable waste containers, ducts, filters and security systems and implement a programme of decommissioning and removal.	N/A	<p>The treatment system is a new treatment system specifically designed and optimised for the site.</p> <p>However, due to the backlog of contained stormwater on-site, existing tanks that will not be part of the long-term treatment system are currently used to store contained stormwater, in addition to IBCs for temporary storage.</p> <p>As these existing tanks and IBCs are not considered part of the new treatment system, they will be decommissioned and removed from the site following the clearance of the backlog of contained stormwater.</p>
2.5.5	You should follow our guidance on how land and groundwater should be protected at permitted facilities . You should plan for producing a site condition report, if needed to surrender your permit.	Yes	A baseline site condition report was prepared as part of the original permit application for the site and remains valid for the purposes of this variation.
Waste Pre-acceptance, acceptance and tracking.			
3.1 Waste Pre-acceptance			
3.1.1	You must implement waste pre-acceptance procedures so that you know enough about a waste (including its composition) before it arrives at your facility. You need to do this to assess and confirm that the waste is technically and legally suitable for your facility. If you accept the waste, you must keep records to justify your decision. Your pre-acceptance procedures must follow a risk-based approach, considering:	Yes	The effluent treatment plant has been specifically designed to treat potentially contaminated water from the Angus installation. The site does not accept waste from third parties and therefore many of the waste pre-acceptance and acceptance criteria are not relevant to this operation.

	<ul style="list-style-type: none"> the source and nature of the waste potential risks to process safety, occupational safety and the environment (for example from odour and other emissions) knowledge about the previous waste holder(s) 		<p>The plant has been specifically designed to treat PFAS impacted surface waters from the site. Extensive research and development has gone into designing the ETP for this specific purpose. A significant number of samples have been collected since the containment of rainwater commenced in June 2024 (i.e. ~12 months of samples). This has allowed the concentration of PFOS and multiple PFAS chemicals to be established for a range of locations across the site, with concentrations of up to 8 µg/l PFOS identified (see Section 7.4 of the Operations Report).</p> <p>The SAFF unit has been demonstrated to treat from 0.005 to 50,000 µg/l of all PFAS species in a variety of industrial applications. In addition to SAFF, the treatment train at the site includes a powdered activated carbon polishing stage to ensure that the treatment target of 10 ng/l can be achieved. However, the SAFF unit alone has demonstrated treatment to <10 ng/l prior to the PAC process.</p> <p>The influent is considered to be stable, and the influent tanks provide significant storage capacity (165 m³ in total with the largest tank being 40m³) that provide buffering prior to treatment. Any peaks in concentration would be smoothed in the holding tanks. The anticipated concentrations for the influent are therefore well within the range of treatment capability for the treatment plant.</p> <p>Additionally, the discharge tanks cannot be released until the treated water has been tested at a UKAS accredited laboratory to demonstrate that the treatment target of <10 ng/l of PFOS has been achieved. Should a problem occur in the treatment train resulting in inadequately treated effluent, then it would be diverted back to the influent tanks for further treatment and the reason investigated.</p> <p>For these reasons, the site does not intend to test the influent tanks prior to treatment. Testing both the influent and discharge tanks would result in significant delays in treating and discharging the tanks as both sets of samples would require testing at the laboratory with several days turnaround time. The key analysis is considered to be the discharge tank, ensuring that nothing is discharged above the proposed 10 ng/l limit.</p>
3.2 Waste Acceptance			
3.2.1	You must implement waste acceptance procedures to check that the characteristics of the waste received matches the information provided to you during waste pre-acceptance. This is to confirm the waste is as expected and that you can accept it. If the waste does not conform to the pre-acceptance information, you may still be able to accept the waste, but you must confirm first that your permit allows it and that your facility can handle it appropriately. Otherwise, you must reject the waste.	Yes	See Section 3.1.1.
3.3 Quarantine			
3.3.1	Your facility must have a dedicated waste quarantine area or areas which you use to temporarily store waste being rejected, or non-conforming waste whilst it is being assessed. Quarantine areas must have impermeable surface with self-contained drainage if there is a risk of contaminated runoff from the quarantined waste.	Yes	<p>Contained Stormwater to be treated is stored in five (5) influent tanks. The water is then passed through the treatment process into one of nine (9) discharge tanks. A sample of the treated surface water will be taken and analysed at a UKAS accredited laboratory to confirm that the treatment has been effective prior to discharge.</p> <p>Should the analytical results show that the treatment process has not met the target value of <10ng/l PFOS, then the contents of the tank can be quarantined in the tanks prior to being diverted back to the influent tank to be reprocessed.</p> <p>In the unlikely event that there is insufficient storage in the tanks, then effluent could be stored in IBCs within a dedicated storage area.</p>
3.3.2	Where there is a risk of fugitive emissions from quarantined waste you must store it in closed or covered containers or within a building.	N/A	Quarantined water would be stored either within a tank or IBC, located within a bunded area.
3.3.3	Quarantine storage must be separate from all other storage and clearly marked as a quarantine area.	Yes	<p>Should the analytical results show that the treatment process has not met the target value, then the contents of the pre-treatment storage tanks are quarantined. These tanks will be isolated until the contained stormwater can be diverted back to the pre-treatment storage tanks.</p> <p>This process is part of the management procedures of the new treatment system to prevent the release of contained stormwater that does not meet the target value. The contained stormwater cannot be released until compliant test results are received or the valves are changed to allow for the quarantined contained stormwater to be diverted back to the pre-treatment storage tanks. The inclusion of this process as part of the</p>

			management procedures for the new process is considered to be sufficient isolate the quarantined contained stormwater.
3.3.4	You should store the waste in quarantine in closed containers or cover it to prevent emissions if appropriate. For example, you should sheet quarantined contaminated soil or store it in a covered skip to prevent rainfall or wind from mobilising pollutants.	Yes	Quarantined contained stormwater is held within enclosed MDPE tanks.
3.3.5	You must have written procedures for dealing with wastes held in quarantine, including a maximum storage volume. The maximum storage time must take account of the potential for odour generation, pest infestation and storage conditions. If the waste is infested or odorous you must remove it within 24 hours or sooner.	Yes	The quarantine process is part of the management procedures for the new treatment system.
3.4 Waste Tracking			
3.4.1	You should use an electronic or equivalent system to hold up-to-date information about the available capacity of different parts of your facility, for example reception, quarantine, treatment and storage areas. If you do not have an electronic system you still need to hold the equivalent level of information. You should use a pre-booking system to make sure that you have enough waste storage and process capacity for the incoming acceptable waste.	Yes	Waste tracking is not directly applicable as the site does not accept any waste from third parties. However, each of the tanks has level monitoring to allow monitoring of the volumes of surface water to be treated. The volumes of surface water to be treated is directly proportional to the rainfall received at the site. Calculations show that the storage available is significantly greater than the average daily rainfall and the volume generated during a storm event. Records of the volumes of surface water will be maintained. The treatment train is managed by a PLC system that requires confirmation of the analytical data prior to the discharge being allowed. The control system will retain records of the discharge volumes, the analytical data and the personnel that authorise the discharge.
3.4.2	You must create records and update them to reflect deliveries, on-site treatment and despatches. Your tracking system will also operate as a waste inventory and stock control system, including both wastes and end-of-waste materials produced at your facility. It must include this information as a minimum: <ul style="list-style-type: none"> the date the waste arrived on site the original producer's details (or unique identifier) a unique reference number waste pre-acceptance and acceptance information the package type and size the intended treatment or disposal route the nature and quantity of wastes held on site where the waste is physically located on site where the waste is in the designated recovery or disposal process identifying the staff who have taken any decisions about accepting or rejecting waste streams and who have decided on recovery or disposal options details that link waste to relevant transfer notes details of any non-conformances and rejections, including consignment notes for waste rejected because it is hazardous 	Yes	Please refer to the response to appropriate measure 3.4.1.
3.4.3	The electronic (or equivalent) system must be able to report for each of LoW code: <ul style="list-style-type: none"> the total quantity of waste present on site at any one time a breakdown of the waste quantities you are storing pending on-site treatment or awaiting onward transfer where a batch of waste is located based on a site plan the quantity of waste on site compared with the limits in your management system and permit the length of time the waste has been on site compared with the limits in your management system and permit 	Yes	Please refer to the response to appropriate measure 3.4.1.
3.4.4	The electronic (or equivalent) system must also be able to report the total quantity of end-of-waste materials on site at any one time, and where that material is located based on the site plan	N/A	The treatment plant will not generate end-of-waste materials
3.4.5	You must store back-up copies of records off site. These records must be readily accessible in an emergency.	Yes	Records of the contained stormwater treated at the site will be maintained in accordance with existing on-site procedures.
3.4.6	You must keep acceptance records for a minimum of 2 years after you have treated the waste or removed it off site. You may have to keep records for longer if they are required for other purposes, for example hazardous waste consignment notes.	Yes	The site will not accept waste from third parties. Waste acceptance records are therefore not applicable.
Waste Storage			

4.0.1	You must have waste storage and handling procedures. You must store and handle waste in a way that makes sure you prevent and minimise pollution risks by using appropriate measures.	Yes	Waste storage is restricted to the storage of surface waters to be treated. Storage is provided in dedicated influent tanks and discharge tanks. Handling of waste is not necessary as surface waters are pumped from site sumps directly into the storage tanks and hard piped to the treatment train and onwards to the discharge tanks. In the unlikely event that the volume exceeds that of the storage location, there is potential for surface water to be retained in IBCs for processing. However, this is not anticipated to be routine and will occur only in exceptional circumstance. The storage tanks are located in the tank farm which provides secondary containment. The tank farm is located within the installation boundary which is restricted to authorised personnel. The perimeter is fenced and 24 hour security is provided. CCTV is also in operation and can be monitored by security or remotely. Storage of surface waters is provided in the dedicated storage tanks. The tanks are included in the site asset register. The capacity of the storage tanks is clearly defined and managed. Level indicators on the storage tanks provide data on the influent volumes and the discharge tanks are monitored by the PLC control system. The only type of 'waste' stored is contained stormwater. There are dedicated influent and discharge storage tanks. In this scenario, IBCs will be clearly marked with their contents and stored in site locations where the drainage is routed to the treatment plant, providing containment. The intention is to treat surface waters as soon as there is sufficient volume in the influent tank. This will ensure that ullage is maintained for rain water capture. The storage tanks and bunds are subject to daily inspections in line with existing site procedures. In addition, the storage tanks and bunds are monitored by CCTV which can be accessed by authorised personnel by means of a mobile application. The Emergency Preparedness and Response procedures have been updated to include the treatment process and storage tanks. Site personnel are training in spill response. Incidents and near misses are recorded on the site database.
4.0.2	You must store waste in locations that minimise the unnecessary handling of waste.	Yes	
4.0.3	Waste handling must be carried out by competent staff using appropriate equipment. You must use mechanical unloading technologies where it is possible, safe and practicable to do so.	Yes	
4.0.4	Where possible, you should locate storage areas away from watercourses and sensitive perimeters. You must store all waste within the security protected area of your facility to prevent unauthorised access and vandalism.	Yes	
4.0.5	You must clearly document in your management system the maximum storage capacity of your facility and its designated storage areas. You must regularly monitor the quantity of stored waste against the allowed maximum capacities, and not exceed them. You must define capacity in terms of, for example: <ul style="list-style-type: none">cubic metres or tonnagenumbers of skips or other containersmaximum tank or vessel capacities	Yes	
4.0.6	You should clearly mark all waste storage areas and provide signs indicating the type of waste stored there.	Yes	
4.0.7	You must not accumulate wastes. You must treat wastes or remove them from the site as soon as possible. You must prioritise the treatment or off-site transfer of waste based on: <ul style="list-style-type: none">its typeits age on arrivalthe date of arrivalthe duration of storage on site	Yes	
4.0.8	Except for inert waste, you must follow the first-in-first-out principle, unless you need to prioritise more recently received wastes because they pose a higher risk of pollution.	N/A	
4.0.9	You must minimise refuse derived fuel (RDF) and solid recovered fuel (SRF) storage durations. You must implement an auditable bale identification system so that you can remove bales in date order.	N/A	
4.0.10	You must securely wrap bales of RDF and SRF with high-density polyethylene (HDPE) membrane or equivalent. This is to prevent water entering, access by pests and odour release. You should inspect bales regularly and rewrap any that are damaged. If they are wrapped securely, you can store them outside (unless your permit forbids this). If you store bales outside, your fire prevention plan must manage the risks from solar heating during hot weather.	N/A	
4.0.11	You must thoroughly clean storage bays and containers on a regular basis to prevent the build-up of aging waste, which will be a source of odour and attract vermin.	Yes	
4.0.12	All waste containers must be fit for purpose, that is: <ul style="list-style-type: none">in sound conditionnot corroded, if metalhave well-fitting lidssuitable for the contentswith caps, valves and bungs in place and securewithin the manufacturer's designed lifespan, particularly for plastic containers	Yes	
4.0.13	You must inspect storage areas, containers and infrastructure regularly to make sure there is no loss of containment. You must deal with any issues immediately. You must keep written records of the inspections. You must clean up and log any spillages of waste.	Yes	
4.1 Segregation			
4.1.1	You should keep different types of waste segregated if contamination would inhibit the recovery of the waste.	Yes	The process will treat contained stormwater only. There are dedicated tanks for untreated (influent) water and treated water.
4.1.2	Where paper, plastic, metal or glass have been collected separately, they must not be mixed with other waste or material. This duty applies where you are required to keep wastes separate and to help with or improve waste recovery.	N/A	
5. Waste Treatment			
5.0.1	Waste treatment must have a clear and defined benefit. You must fully understand, monitor and optimise your waste treatment process to make sure that you treat waste effectively and efficiently. The treated output material must meet your expectations and be	Yes	The treatment process is designed to treat contained stormwater with the defined benefit being the removal of low concentrations of contaminants prior to discharge to controlled waters.

	suitable for its intended disposal or recovery route. You must identify and characterise emissions from the process and take appropriate measures to control them at source.		Treated surface waters will not be discharged prior to confirmation that the process has achieved the target concentration of PFOS at <10 ng/l. This is achieved by sampling and analysis at a UKAS accredited laboratory.
	<p>You must prevent unwanted or unsuitable material from entering subsequent waste treatment processes.</p> <p>You must have accurate and up-to-date written details of your treatment activities and the abatement and control equipment you are using. You should include information about the characteristics of the waste to be treated and the waste treatment processes, including:</p> <ul style="list-style-type: none"> • simplified process flow sheets that show the origin of the emissions • diagrams of the main plant items where they have environmental relevance, for example, storage, tanks, treatment and abatement plant design • details of physical processes for example separation, compaction, shredding, heating, cooling or washing • an equipment inventory, detailing plant type and design parameters • waste types to be subjected to the process • the control system philosophy and how the control system incorporates environmental monitoring information • process flow diagrams (schematics) • the hourly processing capability of waste treatment equipment • a summary of operating and maintenance procedures <p>The extent of the information about your treatment activities will depend on the nature, scale and complexity of your facility and the range of environmental impacts it may have. It is also based on the type and amount of wastes processed.</p>	Yes	<p>All aspects identified here are presented within the Operations Report supporting this variation.</p> <p>The site maintains an accredited ISO14001 Management System. The management system will be reviewed and updated to include the treatment system.</p>
	<p>You must have up-to-date written details of the measures you will take during abnormal operating conditions to make sure you continue to comply with permit conditions.</p> <p>Abnormal operating conditions include:</p> <ul style="list-style-type: none"> • unexpected releases • start-up • momentary stoppages • shutdown 	Yes	<p>An Environmental Risk Assessment has been undertaken in support of the application to vary the Permit. This is provided as a separate report, and a summary is provided in Section 18.</p> <p>The environmental risk assessment includes the consideration of this appropriate measure.</p>
5.1 Soils and Inert Waste			
5.1.1	Soil and aggregate washing is a physico-chemical treatment (not a separation or sorting activity) and you must categorise the outputs as set out in WM3.	N/A	The treatment plant does not undertake soil and aggregate washing.
5.2 Waste treatment outputs including fines			
5.2.1	You must not make assumptions about the nature of the outputs from your waste treatment processes. You must make sure that you appropriately classify the outputs following WM3 If you do not, you may breach your Duty of Care for waste and commit an offence under the Environmental Protection Act 1990.	Yes	The treatment process is for contaminated surface waters only. The influent stream has been characterised and assessed against the criteria in WM3 (see Section 5) and was determined to be non-hazardous waste. Waste generated from the process is monitored and will be appropriately classified for recovery/disposal.
5.2.2	Any hazardous waste taken from your facility must be consigned following our guidance Dispose of hazardous waste .	Yes	Hazardous waste generated from the treatment process will be disposed of at a licenced facility authorised to accept that type of waste. Records and documentation of the waste consignment will be maintained in accordance with established on-site procedures.
5.2.3	If an output is not waste, for example because end-of-waste criteria have been met, or the material has been produced in accordance with a Quality Protocol (resource framework), then you do not need to store the output within your permitted area. However, non-waste materials are still able to cause pollution, for which you remain liable. You must implement appropriate measures to prevent and minimise risks of pollution from non-waste and waste materials.	Yes	<p>An Environmental Risk Assessment has been undertaken in support of the application to vary the Permit. This is provided as a separate report, and a summary is provided in Section 18.</p> <p>The environmental risk assessment includes the consideration of this appropriate measure.</p>
5.3 Waste Treatment for Landfill	If you are handling or treating waste before you send it to landfill follow our guidance Dispose of waste to landfill .	N/A	
6.0 Emissions Control			
6.0.1	You must identify, characterise and control emissions from your activities that may cause pollution.	Yes	Assessment of anticipated contaminants within the contained stormwater has been undertaken and appropriate emission limit values proposed. Specific details on control measures presented below.
6.1 Enclosure Within Buildings			
6.1.1	Enclosing activities within buildings can be an appropriate measure for preventing and minimising emissions of pollution, given that an appropriately designed building will reduce a range of types of pollutants, in particular, noise, dust and odour. A partially enclosed	Yes	<p>The SAFF plant is enclosed within a containerised unit, which effectively provides adequate containment similar to it being enclosed in a building.</p> <p>The PAC treatment and associated sludge filter waste are located within an adjacent building. Storage tanks are located externally and contained within a bund.</p>

	building may be an appropriate measure on its own, or together with other appropriate measures, depending on the site-specific circumstances.		The plant is quiet with no odour or dust issued anticipated.
6.1.2	If your waste treatment activities are likely to cause (or are causing) significant pollution at sensitive receptors which cannot be addressed by alternative measures, then you must carry out that waste treatment activity within an enclosed building.	Yes	The waste treatment activity is undertaken within a containerised unit or in an adjacent building. Contained stormwater and post treatment discharge are stored within tanks located within a bunded area. Therefore, the waste treatment activities are not likely to cause significant pollution at sensitive receptors.
6.1.3	You must also carry out non-treatment activities, such as storing and transferring waste (including loading and unloading) in enclosed buildings if these activities are likely to cause (or are causing) significant pollution at sensitive receptors which cannot be addressed by alternative measures. An enclosed building means a construction designed to provide sheltering cover and minimise emissions of noise, particulate matter, odour and litter. It must be enclosed on all sides. Its doorways must be as small as practicable and covered with fast-acting doors which default to the closed position. You must keep its windows closed unless you need to open them for ventilation. Dirty (process contaminated) air must pass through appropriate abatement before being emitted from the building.	Yes	Contained stormwater is not anticipated to be odorous, or likely to generate fugitive emissions, dust or litter. The storage of contained stormwater will be within enclosed tanks located within a bunded area.
6.1.4	Material transfer and storage systems and equipment (for example conveyors, hoppers, containers and tanks) can extend outside the enclosed building so long as they are also fully enclosed.	Yes	All tanks, transfer and treatment systems located outside of a building are containerised and/or within a bunded area.
6.1.5	You must regularly assess your enclosed building's integrity. You should consider using BS EN ISO 9972:2015 to demonstrate building containment. This method is based on fan pressurisation. You should carry out a smoke test at least annually and where potential faults in building integrity are likely to be causing pollution such as odour.	N/A	Fugitive emissions, odour, dust or litter from the contained stormwater are not likely to be generated.
6.1.6	Enclosed buildings must be ventilated to provide a safe working environment for employees. Your building's ventilation system must be properly designed and effective in order for the building to provide adequate containment and prevent fugitive emissions and unacceptable noise. The engineer designing the ventilation system must be appropriately qualified. To validate the size of supply points (louvers), and the volume of dirty air that needs to be extracted, the engineer must understand and consider: <ul style="list-style-type: none"> the needs of the occupants working in the building heat release the volume of moist gas emissions that will be generated 	N/A	Fugitive emissions, odour, dust or litter from the contained stormwater are not likely to be generated.
6.1.7	The air inside the enclosed building must be maintained under negative pressure, or you must install a localised extraction system that extracts dirty air from sources of pollution within the building. Sources that could potentially benefit from localised extraction include: <ul style="list-style-type: none"> shredders and trommels waste loading and unloading areas odorous stockpiles 	N/A	Fugitive emissions, odour, dust or litter from the contained stormwater are not likely to be generated.
6.1.8	You must regularly assess the integrity of your building for damage that could result in fugitive emissions, including noise breakthrough. You must prevent and minimise damage by implementing a maintenance programme.	Yes	Fugitive emissions, odour, dust or litter from the contained stormwater are not likely to be generated. Site facilities team regularly inspect the integrity of the building and services to the building as part of the site's planned preventative maintenance (PPM) schedule.
6.1.9	You must implement measures to control door opening, to make sure that the engineered ventilation system works as effectively as possible. It must direct emissions to the abatement system, rather than letting them escape as fugitive emissions through doors or windows. If you use negative pressure, it must be maintained when doors are opened, and you must monitor the pressure to demonstrate its effectiveness. Additional measures to minimise fugitive emissions may be required in some cases, for example installing an airlock entry system.	N/A	Fugitive emissions, odour, dust or litter from the contained stormwater are not likely to be generated.
6.1.10	To reduce emissions of noise and vibration, the building must have an appropriate minimum surface density. You must install acoustic seals on doors and windows, following advice from an acoustic specialist.	Yes	The treatment system is not considered to generate significant noise or vibrations. An assessment of the potential impact from noise and vibration generated from the treatment system is provided in the sections below.
6.2 Point Source Emissions to Air			
6.2.1	You must use appropriate measures to make sure that you collect, extract and direct all process emissions to an appropriate abatement system for treatment before release.	N/A	There are no point source emissions to air as a result of the treatment process.
6.3 Fugitive Emissions to Air			
6.3.1	You must use appropriate measures to prevent and minimise fugitive emissions to air, including dust , mud and litter , odour and noise and vibration .	Yes	There are no fugitive releases to air anticipated from the process. The only potential for the formation of dust is the use of powdered activated carbon. This part of the process is undertaken within a building, and PAC will be stored inside the main warehouse building.
6.3.2	You must use your waste pre-acceptance, waste acceptance and site inspection checks and procedures to identify and manage wastes that could cause, or are causing, fugitive emissions to air. When you identify any such wastes you must:	Yes	The site will not accept waste from third parties.

	<ul style="list-style-type: none"> take appropriate risk-assessed measures to prevent and control emissions prioritise their treatment or transfer <p>Where necessary to prevent fugitive emissions to air from the storage or handling of wastes, you should use a combination of the following measures:</p> <ul style="list-style-type: none"> use fully enclosed material transfer and storage systems and equipment outside buildings, for example conveyors, hoppers, containers, tanks and skips store and handle the waste within a suitably enclosed area (for example bays), a building or enclosed building keep doors closed except when access is required keep enclosed buildings and equipment under adequate negative pressure with an appropriate abated air circulation or extraction system, locating air extraction points close to potential emission sources use fast-acting or 'airlock' doors that default to closed 		There are no fugitive releases to air anticipated from the process. The only potential for the formation of dust is the use of powdered activated carbon. This part of the process is undertaken within a building, and PAC will be stored inside the main warehouse building.
6.3.3	<p>You must have an appropriate, regular maintenance programme covering all buildings, plant and equipment. It must help prevent emissions or minimise them. Your maintenance programme must include:</p> <ul style="list-style-type: none"> a leak detection and repair programme to promptly identify and mitigate any fugitive emissions of organic compounds from treatment plant and associated infrastructure (for example, pipework, conveyors or tanks) regular inspection and cleaning of all waste storage and treatment areas and equipment (including conveyor belts) to avoid large scale contamination activities preventing plant and equipment from corroding (for example, conveyors or pipes) – including selecting and using appropriate construction materials, and lining or coating equipment with corrosion inhibitors 	Yes	<p>The site operates to an environmental management system that is accredited to the ISO140001 standard. The EMS will be updated to include the management of the new treatment process. This will include:</p> <ul style="list-style-type: none"> Standard operating procedures Emergency preparedness and response Maintenance programmes Monitoring requirements Compliance with Permit requirements Incidents and non-conformances <p>The Operator has a maintenance contract with the supplier of the treatment plant to provide regular inspection and maintenance.</p>
6.3.4	<p>You should monitor and log weather conditions – temperature, wind speed and direction, and describe any precipitation (for example none, drizzle, heavy rain, snow). You can use this information to identify when dispersion conditions are poor (that is, periods of warm, calm weather with wind blowing towards sensitive receptors). You can also use it to inform decisions to implement additional short-term pollution control contingency measures. If you have a weather station you should position it carefully, for example not placing it in between buildings. There is guidance in the World Meteorological Organization's Guide to Meteorological Instruments and Methods of Observation.</p>	Yes	<p>The treatment system is quiet with no odour or dust anticipated to be generated. The treatment system and storage tanks are all enclosed, containerised or located within a building. Therefore, the treatment system is not considered likely to be affected by adverse weather. Notwithstanding this, an Environmental Risk Assessment has been undertaken in support of the application to vary the Permit. This is provided as a separate report, and a summary is provided in Section 18.</p>
6.4.4	<p>Relying on dispersion and wind direction to minimise pollution at sensitive receptors must be a last resort and you must not use it instead of measures that prevent and reduce pollution at source.</p>	Yes	<p>Fugitive emissions, odour, dust or litter from the contained stormwater are not likely to be generated.</p>
6.4.5	<p>If your activities are likely to produce dust and particulates, mud or litter that could cause pollution at sensitive receptors, or if such pollution has been substantiated, you must implement and regularly review a dust, mud and litter management plan. You must do this following our guidance. Your dust, mud and litter management plan must explain how you will prevent and minimise emissions of dust, mud and litter from your facility.</p>	N/A	<p>Fugitive emissions, odour, dust or litter from the contained stormwater are not likely to be generated. Therefore, a dust, litter and mud management plan has not been prepared.</p>
6.4.6	<p>Measures such as litter fencing and micro-netting should be located as close as possible to areas where you load and unload light-weight loose waste, if this activity is done outdoors. You should not rely on fences and screens at the perimeter of your facility to stop litter escaping.</p>	N/A	<p>The treatment system and storage tanks are all enclosed, containerised or located within a building. The treatment system has been designed to treat contained stormwater. Therefore, no litter is anticipated to be generated from the treatment system.</p>
6.4.7	<p>Measures such as mist sprays should be located as close as possible to point source emissions of dust, for example at conveyors, trommels, shredders, and at building entrances – except where this would increase odour from biodegradable waste. If measures such as using hoses and road sweepers do not prevent mud escaping onto the public highway, you must take further measures and you must consider installing a high pressure wheel wash. Regardless of the measures you use, you must make sure that you minimise water consumption, and that contaminated water does not escape from your facility, unless you can lawfully discharge it.</p>	N/A	<p>Fugitive emissions, odour, dust or litter from the contained stormwater are not likely to be generated. Further, the treatment system and storage tanks are all enclosed, containerised or located within a building. Therefore, misting of wastes to prevent dust is not considered to be necessary.</p>
6.4.8	<p>If your activities are likely to produce odour pollution at sensitive receptors, or such pollution has been substantiated, you must implement and regularly review an odour management plan following our guidance, which includes H4 Odour management. Your odour management plan must explain how you will prevent and minimise odorous emissions from your facility</p>	N/A	<p>There are no fugitive releases to air anticipated from the process.</p>
6.4.9	<p>You must reject waste that is highly odorous as part of your pre-acceptance and waste acceptance procedures. This is unless you can handle and treat these wastes within an enclosed building with appropriate odour control measures, including extraction via odour abatement. Otherwise, you should talk to the waste supplier to stop it happening again.</p>	N/A	

	You should avoid receiving aged waste, for example by refusing to accept waste from other transfer stations that do not have strict inventory controls and documented holding times.		
6.4.10	You must make sure that odorous waste arrives at and leaves your facility in covered or enclosed vehicles. Mesh covers are not adequate to control odour. You should minimise how long potentially odorous waste is kept at your facility, in particular under anaerobic conditions. Making smaller stockpiles increases natural aeration, reducing the risk of anaerobic biodegradation which can cause odour.	N/A	
6.4.11	You should wash empty vehicles before they leave your facility, to remove any residues which may be or become odorous. You must make sure the run-off from this process is contained and lawfully discharged.	N/A	
6.4.12	You should not allow contaminated liquids to pool for long periods of time, as they can be a source of odour. If you do not have a drainage system inside the building that can collect the leachate or dirty water, then you will need other appropriate measures. You should take action to avoid ponding or pooling. Industrial vacuum cleaners can be used to suck up liquids. You should clean any spillages immediately.	Yes	
6.4.13	You must cover odorous or potentially odorous waters or liquids or keep them in enclosed tanks or containers.	Yes	
6.4.14	Using masking agents (for example dry nano systems, ozone systems and ionisation systems) is a way of attempting to disguise an odour problem. If you understand and process wastes efficiently then you will not need to use masking agents. We do not consider this technology an appropriate measure.	Yes	
6.4.15	If your activities are likely to produce noise or vibration pollution at sensitive receptors, or such pollution has been substantiated, you must implement and regularly review a noise and vibration management plan . Follow our guidance H3 part 2 noise assessment and control . Your noise and vibration management plan must explain how you will prevent and minimise emissions of noise and vibration from your facility.	Yes	The treatment system is not considered to generate large volumes of noise and vibrations. An assessment of the potential impact from noise and vibration generated from the treatment system is provided in the sections below.
6.4.16	For noise, your noise and vibration management plan must be informed by a noise impact assessment carried out following the methodology of BS 4142:2014+A1:2019 'Methods for rating and assessing industrial and commercial sound'.	N/A	An Environmental Risk Assessment has been undertaken in support of the application to vary the Permit. This is provided as a separate report, and a summary is provided in Section 18.
6.4.17	For vibration, your noise and vibration management plan must be informed by a vibration impact assessment carried out following the methodology of BS 6472-1:2008 'Guide to evaluation of human exposure to vibration in buildings. Vibration sources other than blasting'.	N/A	The environmental risk assessment includes the consideration of these appropriate measure.
6.4 Point Source Emissions to Water (Including Sewer)			
6.4.1	You must identify the main chemical constituents of your facility's point source emissions to water and sewer as part of your inventory of emissions.	Yes	The contained stormwater to be treated has been characterised and the treatment train designed on this basis. The discharge of treated stormwater has been assessed using the Environment Agency H1 assessment tool. The assessment concluded that the impact to the receiving water was insignificant. The treatment process has been optimised to treat the specific contaminants involved. The combination consists of Surface Activated Foam Fractionation followed by treatment with Powered Activated Carbon. Trials have been undertaken to demonstrate that this combination achieves the treatment target of <10 ng/l of PFOS in the discharge. Infrastructure to ensure that uncontaminated water streams are segregated from potentially contaminated areas to minimise the volume of water that needs to be treated. This includes a construction of a roof above the lagoons to allow for discharge of uncontaminated water and prevent the generation of contaminated water in the lagoons. The expected catchment area for the contained stormwater is provided in Figure 02. Only contaminated surface water is to be treated. Process effluent is not generated at the site.
6.4.2	You must assess the fate and impact of the substances emitted to water and sewer following the Environment Agency risk assessment guidance.	Yes	
6.4.3	Discharges to water or sewer must comply with the conditions of an environmental permit and a trade effluent consent.	Yes	
6.4.4	Relevant sources of waste water include: <ul style="list-style-type: none"> runoff from all waste storage and handling areas, including loading and unloading areas process water condensate collected from treatment process waste compactor runoff vehicle washing washing of containers and vessels soil washing effluent vehicle oil and fuel leaks spills and leaks rainwater from bunds around containers and tanks If you need to treat waste water before discharge or disposal, you must use appropriate treatment techniques. An appropriate combination of treatment techniques, for example, could include silt or solids removal and using an oil separator to manage site drainage.	Yes	
6.4.5	You must segregate uncontaminated water streams (for example clean runoff from roofs) from those that require treatment.	Yes	
6.4.6	You must separate contaminated water streams based on pollutant content and treatment required. For example, you may need to collect and treat separately contaminated surface runoff water and process water.	Yes	

6.5 Fugitive Emissions to Land and Water			
6.5.1	You must use appropriate measures to control potential fugitive emissions and make sure that they do not cause pollution.	Yes	<p>The treatment process consists of five influent tanks, a containerised treatment train containing the SAFF unit and PAC treatment tanks, and nine discharge tanks. The tanks are contained within the tank farm bund. Whilst the bund is an existing asset, it provides containment for >25% of the overall pre-treatment tank capacity in line with the CIRIA 736 guidance.</p> <p>The nine discharge tanks are all new and are of MDPE construction. There are three new MDPE influent tanks, and two repurposed tanks. The repurposed tanks underwent integrity testing in 2023.</p> <p>The treatment train is in a containerised unit which provides containment for the tanks held within.</p> <p>The treatment train, tank farm and bund is monitored by CCTV which can be accessed by authorised personnel using a mobile application. This allows the area to be monitored remotely.</p> <p>Should there be a loss of containment outside of the tank farm bund, then the material would be captured in the site's drainage system and sumps – which would be routed to the influent tanks.</p> <p>The site undertakes daily inspections of all areas of the site and monitors the bunds for rainwater accumulation. Rainwater from the bunds will be pumped to the influent tanks for treatment</p> <p>The assets will be included on the site's planned preventative maintenance programme and will be inspected in line with current procedures or manufacturers specifications.</p>
6.5.2	<p>You must design appropriate surfacing and containment or drainage facilities for all operational areas, taking into account:</p> <ul style="list-style-type: none"> • collection capacities • surface thicknesses • strength and reinforcement • falls • materials of construction • permeability • resistance to chemical attack • inspection and maintenance procedures • relevant standards of construction • end use, for example by tracked or wheeled vehicles or vehicle weight 	Yes	
6.5.3	<p>Your drainage infrastructure must:</p> <ul style="list-style-type: none"> • prevent incompatible wastes coming into contact with each other • make sure that fire cannot spread 	Yes	
6.5.4	You must store and treat all waste on an impermeable surface with contained drainage that meets CIRIA or an equivalent approved standard. The impermeable surfaces must have sealed construction joints. These requirements do not apply in designated areas where the waste being stored or handled does not pose any significant risk of contaminating surface water or ground water. You must appropriately isolate these designated areas from other operational areas so that there cannot be any flows between them. This includes in the event of an accident, for example a fire.	Yes	
6.5.5	<p>You must provide bunds for all tanks containing liquids (whether waste or otherwise) that could be harmful to the environment if spilled. Bunds must meet https://www.ciria.org/ItemDetail?iProductCode=C736F&Category=FREEPUBS CIRIA 736 or an equivalent approved standard and:</p> <ul style="list-style-type: none"> • be impermeable, stable and resistant to the stored materials • have no outlet (that is, no drains or taps) and drain to a blind collection point • have pipework routed within bunded areas with no penetration of contained surfaces • be designed to catch leaks from tanks or fittings • have an appropriate capacity • have regular visual inspections – any contents must be pumped out or otherwise removed under manual control after checking for contamination • be fitted with a high level probe and an alarm (as appropriate) if not frequently inspected • have tanker connection points within the bund (where possible), and if not possible you must provide adequate containment for spillages or leakage • have programmed engineering inspections (extending to water testing if structural integrity is in doubt) • be emptied of rainwater regularly to maintain the containment capacity 	Yes	
6.5.6	All above-ground tanks containing liquids (whether waste or otherwise) that could be harmful to the environment if spilled must be kept on an impermeable surface with contained drainage that meets CIRIA 736 or an equivalent approved standard. You must fit the tanks with alarms and cut-out systems to detect and prevent leaks and spills.	Yes	
6.5.7	<p>You must minimise using subsurface equipment and infrastructure, and decommission it where possible. For subsurface structures, you must:</p> <ul style="list-style-type: none"> • establish and record the routing of all site drains and subsurface pipework • identify all subsurface sumps and storage vessels • engineer systems to minimise leakages from pipes and make sure they can be detected quickly if they do occur • provide secondary containment or leakage detection for subsurface pipework, sumps and storage vessels – vessels must be fitted with alarms and cut-out systems to detect and prevent spills when filling • establish an inspection and maintenance programme for all subsurface structures, for example, pressure tests, leak tests, material thickness checks or CCTV 	Yes	

6.5.8	You must provide secondary containment that meets CIRIA 736 , or an equivalent approved standard, for all drums and other mobile containers which: <ul style="list-style-type: none"> are greater than 200 litres in capacity and are kept outside contain liquids (waste or otherwise) that could be harmful to the environment if spilled 		
6.5.9	You must comply with the oil storage regulations . These apply to non-hazardous wastes such as vegetable and cooking oil, as well as to biofuels and mineral oils.	N/A	
6.5.10	You must provide appropriate buffer storage capacity at your facility to store waste waters, taking into account: <ul style="list-style-type: none"> potential abnormal operating scenarios and incidents the nature of any polluting substances and their impact on the downstream waste water treatment plant and receiving environment You must have appropriate measures to monitor, treat and reuse the water held in the buffer storage before discharging.	Yes	Please refer to the response to appropriate measure 2.3.12 and 2.3.13.
6.5.11	You must take appropriate measures to prevent emissions from washing and cleaning activities, including: <ul style="list-style-type: none"> containing and directing spray, liquid effluent and wash-waters to foul sewer or collecting them in a sealed system for offsite disposal – you must not discharge them to surface or storm drains where possible, using biodegradable and noncorrosive washing and cleaning products storing all detergents, emulsifiers and other cleaning agents in suitable bunded or containment facilities, within a locked storage area, or in a building away from any surface water drains preparing cleaning or disinfection solutions in contained areas of the site and never in areas that drain to the surface water system or groundwater 	Yes	The site operates to an environmental management system that is accredited to the ISO140001 standard. The EMS will be updated to include the management of the new treatment process. This will include: <ul style="list-style-type: none"> Standard operating procedures Emergency preparedness and response Maintenance programmes Monitoring requirements Compliance with Permit requirements Incidents and non-conformances
6.5.12	You must produce and implement a spillage response plan and train staff to follow it and test it.	Yes	Please refer to the response to appropriate measure 2.3.
6.5.13	Your procedures and associated training must make sure you deal with spillages immediately. You should follow the manufacturer's health and safety advice for any products or substances involved.	Yes	
6.5.14	You must keep spill kits at locations close to areas where a spillage could occur and make sure relevant staff know how to use them. You must make sure kits are replenished after use.	Yes	
6.5.15	You must stop spillages from entering drains, channels, gullies, watercourses and unmade ground. You must make available proprietary sorbent materials, sand, booms or drain mats for use when required.	Yes	
6.5.16	You must make sure your spillage response plan includes information about how to recover, handle and correctly dispose of waste produced from a spillage.	Yes	
6.5.17	You must have a documented inspection and maintenance programme for impermeable surfaces and containment facilities and keep records to demonstrate its implementation.	Yes	Please refer to the response to appropriate measure 6.5.12.
6.6 Pests			
6.6 Pests	You must manage waste in a way that prevents pests. For example, if you do not manage flies, rats and birds they can affect operations, be a nuisance to neighbours and pose an environmental and health hazard as a potential vector for pathogens.	N/A	Pests are not applicable to the treatment of surface waters.
7. Emissions monitoring and limits			
7.1 Emissions to Air			
7.1 Emissions to Air	Your facility's emissions inventory must include information about the relevant characteristics of point source emissions to air.	N/A	Not applicable to the proposed activity.
7.2 Medium Combustion Plant Directive			
7.2 Medium Combustion Plant Directive	If you operate medium combustion plant or specified generators you must monitor your emissions following the Environment Agency guidance on Monitoring stack emissions: low risk MCPs and specified generators and maintain a record of the type and quantity of fuel used in the plant.	N/A	Not applicable to the proposed activity. The boiler is rated as <5MWth.
7.3 Emissions to Water and Sewer			
7.3.1	Your facility's emissions inventory must include information about the relevant characteristics of point source emissions to water or sewer, such as: <ul style="list-style-type: none"> average values and variability of flow, pH and conductivity 	Yes	The composition of the surface waters to be treated has been characterised over multiple monitoring campaigns. The data suggests that the composition is stable.

	<ul style="list-style-type: none">average concentration and load values of relevant substances and their variability, for example, chemical oxygen demand (COD) and total organic carbon (TOC), metals, priority substances or micropollutantsdata on bio-eliminability, for example, biochemical oxygen demand (BOD), BOD to COD ratio, biological inhibition potential (for example, inhibition of activated sludge)		
7.3.2	For relevant emissions to water or sewer identified by the emissions inventory, you must monitor key process parameters (for example, waste water flow, pH, temperature, conductivity or BOD) at appropriate locations. For example, these could either be at the: <ul style="list-style-type: none">inlet or outlet (or both) of the pre-treatmentinlet to the final treatmentpoint where the emission leaves the facility boundary	Yes	The emissions to water have been characterised over multiple monitoring campaigns and the treatment capacity of the treatment system. The key parameters to be monitored at the site is based on the emissions inventory and composition of the contained stormwater that is to be treated in the plant. Sampling locations, monitoring frequency and parameters are described in the sections below.
8 Process Efficiency Appropriate Measures			
8.1 Energy Efficiency			
8.1.1	You must create and implement an energy efficiency plan at your facility. This must: <ul style="list-style-type: none">define and calculate the specific energy consumption of the activity (or activities) you carry out and waste stream(s) you treatset annual key performance indicators, for example specific energy consumption (expressed in kWh/tonne of waste processed)plan periodic improvement targets and related actions	Yes	The treatment process is not energy intensive. However, where possible, energy efficient equipment has been included in the design. The site is certified to the ISO14001 standard and therefore has a commitment to monitoring and targeting of the site’s potential impacts, including energy.
8.1.2	You must regularly review and update your energy efficiency plan as part of your facility’s management system.		
8.1.3	You must have and maintain an energy balance record for your facility. This must provide a breakdown of your energy consumption and generation (including any energy or heat exported) by the type of source (electricity, gas, conventional liquid fuels, conventional solid fuels, and waste). You should provide Sankey diagrams or energy balances to show how energy is used in your waste treatment processes.	Yes	
8.1.4	You must regularly review and update your energy balance record as part of your facility’s management system, alongside the energy efficiency plan.	Yes	
8.1.5	You must have operating, maintenance and housekeeping measures in relevant areas, for example: <ul style="list-style-type: none">air conditioning, process refrigeration and cooling systems (leaks, seals, temperature control, evaporator or condenser maintenance)the operation of motors and drivescompressed gas systems (leaks, procedures for use) steam distribution systems (leaks, traps, insulation)space heating and hot water systemslubrication to avoid high friction lossesboiler operation and maintenance, for example, optimising excess airother maintenance relevant to the activities within the facility	Yes	
8.1.6	You must have measures in place to avoid gross energy inefficiencies. These should include for example: <ul style="list-style-type: none">insulationcontainment methods (such as seals and self-closing doors)avoiding unnecessary discharge of heated water or air (for example, by fitting simple control systems such as timers and sensors)	Yes	
8.1.7	You should implement additional energy efficiency measures at the facility as appropriate, following our guidance .	Yes	
8.2 Raw Materials			
8.2.1	You must maintain a list of the raw materials used at your facility and their properties. This includes auxiliary materials and other substances that could have an environmental impact.	Yes	The raw materials involved in the treatment process is limited to powdered activated carbon and foaming agent that is used to optimise the SAFF process. The quantity of PAC required is calculated per batch to minimise the amount required and to minimise the volume of waste generated. The quantity of the foaming agent required per batch has been optimised. The raw materials will be stored within the main warehouse building. The foaming agent is a liquid and will be stored on portable bunds. The site condition report has been updated to include a Relative Hazardous Substance (RHS) Stage 1-3 assessment of the foaming agent required to optimise the SAFF treatment process.
8.2.2	You must regularly review the availability of alternative raw materials and use any suitable ones that are less hazardous or polluting. This should include, where possible, substituting raw materials with waste or waste-derived products.	Yes	
8.2.3	You must justify the continued use of any substance for which there is a less hazardous alternative.	Yes	
8.2.4	You must have quality assurance procedures to control the content of raw materials.	Yes	

8.3 Water Use			
8.3 Water Use	You must take measures to make sure you optimise water consumption to: <ul style="list-style-type: none">• reduce the volume of waste water generated• prevent or, where that is not practicable, reduce emissions to soil and water	N/A	Water will not be consumed as part of the treatment process.
9 Waste Minimisation, Recovery and Disposal			
9.1	You must have and implement a residues management plan that: <ul style="list-style-type: none">• minimises the generation of residues, that is solid waste arising from the treatment of waste• optimises the reuse, regeneration, recycling or energy recovery of residues, including packaging• makes sure you properly dispose of residues where recovery is technically or economically impractical	Yes	Waste generated from the treatment process is limited to a concentrate extracted from the SAFF process and a sludge that is formed following treatment with PAC. This is minimised by the quantity of PAC being calculated for each individual batch to maximise the efficiency of the process. Both the concentrate and the PAC sludge be removed from site to a licenced waste facility.
9.2	Where you must dispose of waste, you must carry out a detailed assessment identifying the best environmental options for waste disposal. You must review on a regular basis options for recovering and disposing of waste produced at the facility. You must do this as part of your management system to make sure that you are still using the best environmental options and promoting the recovery of waste where technically and economically viable.	Yes	