Caulmert Limited

Engineering, Environmental & Planning
Consultancy Services

Deeside Power Station

Deeside Power (UK) Limited

Deeside Power Station Variation Application

Operating Techniques and Best Available Techniques

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Operating Techniques and Best Available Techniques

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1.0 INTRODUCTION

1.1 Overview

1.1.1 Caulmert Limited was appointed by Deeside Power (UK) Limited (hereafter referred to as "the Operator") to prepare a bespoke variation application for submission to Natural Resources Wales (NRW) for the existing environmental permit (reference EPR/XP3131VK/V003). The variation is required to permit the installation and operation of a second 49.9 MW peaking plant at Deeside Power Station (hereafter referred to as "the Site"), comprising 11 natural gas-fuelled reciprocating engines.

1.1.2 The Site is located at Weighbridge Road, Deeside Industrial Park, Deeside, Flintshire, CH5 2UL, and is centred at National Grid Reference SJ 29703 71233.

1.1.3 The proposed variation comprises the installation of a second limited-hours peaking plant at the Site, similar in design and operation to the existing peaking plant and will operate alongside the first peaker plant. The new plant will comprise 11 natural gas-fuelled reciprocating engines with an aggregate electrical output of 49.9 MW. Each will have a net rated thermal input of 9.896 MW_{th}, giving a combined net rated thermal input of approximately 217.712 MW_{th} for the 22 engines.

1.1.4 The engines will generate electricity only and will operate when required to support electricity supply, system balancing and stability of the National Grid. Operations will be limited to up to 1,500 hours per annum (on 5 year average), subject to the limits specified in this permit variation application.

1.1.5 The Site is an existing permitted installation for electricity generation using natural gas. It was originally permitted for operation of a Combined Cycle Gas Turbine (CCGT) plant with a net rated thermal input of 927 MW. Parts of the former CCGT plant are no longer operational. The existing gas turbines have been converted to synchronous compensators, which do not burn fuel and provide inertia and reactive power support to the National Grid. These activities, together with the existing diesel-fuelled back-up generator and other existing directly associated activities, will continue to be regulated under the varied permit.

1.1.6 This supporting document sets out the operating techniques, Best Available Techniques (BAT) assessment and monitoring arrangements relevant to the proposed variation. It has been prepared to support NRW's determination of the application and addresses the parts of the permitted installation affected by the proposed changes.

1.1.7 The assessment takes account of the existing permit, the recent NRW decision document associated with substantial variation EPR/XP3131VK/V003, applicable combustion-sector requirements, relevant NRW guidance and the BAT conclusions applicable to the installation.

1.1.8 The main environmental matters relevant to the proposed variation include point source emissions to air from the additional engines, surface water management, storage and handling of fuel and raw materials, waste management, noise and vibration, odour, fugitive emissions and accident prevention. These impacts will be controlled via the Operator's

environmental management system, operating procedures, planned preventative maintenance, monitoring programme, staff training and compliance with the conditions of the environmental permit.

1.1.9 The Site is located within Deeside Industrial Park, an established industrial area characterised by manufacturing, warehousing, logistics and energy-related activities. The nearest residential areas are approximately 1.3 km south-south-west of the Site, and the River Dee is approximately 0.8 km to the south.

1.1.10 Clean, uncontaminated surface water from the Site discharges via emission point W1, as shown on the site layout and emissions point plans, in accordance with the existing environmental permit and associated site drainage arrangements.

1.1.11 Overall, the proposed variation will allow the Operator to install and operate a second limited-hours peaking plant within the existing permitted installation. The facility will provide flexible electricity generation and support grid stability while operating under permit conditions and control measures designed to prevent, or where that is not practicable, minimise emissions and environmental impacts.

1.2 Relevant Legislation and Guidance

1.2.1 The permit variation application has been prepared with reference to the following legislation, guidance and technical documents, insofar as they are relevant to the proposed changes:

- Environmental Permitting (England and Wales) Regulations 2016, as amended;
- NRW guidance for applying to vary a bespoke installation permit;
- NRW guidance on complying with an environmental permit for installations;
- Medium Combustion Plant and specified generators environmental permitting guidance;
- Best Available Techniques (BAT) Conclusions for Large Combustion Plants;
- Environment Agency guidance on developing a management system for environmental permits, where relevant to management-system arrangements; and
- Industrial Emissions Directive requirements.
- Schedule 25A of the Environmental Permitting (England and Wales) Regulations 2016, as amended.

1.3 Permitted activities

1.3.1 The following Schedule 1 activity undertaken at the Site and affected by this variation is:

- Section 1.1 Combustion activities, Part A(1)(a): burning any fuel in an appliance with a rated thermal input of 50 MW or more.

1.3.2 The following directly associated activities are undertaken at the installation and will continue to be regulated under the varied permit:

- Surface water drainage;

- Electricity transformers and the 400kV banking compound;
- Storage and handling of raw materials and fuel;
- Waste management; and
- Diesel-fuelled back-up generator.

1.3.3 See **Table 1** below for the limits of specified permitted activities.

Table 1: Permitted Activities following Variation

NRW Reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR1	Schedule 1 Part 2 Section 1.1 Part A(1) (a) : Burning any fuel in an appliance with a rated thermal input of 50 or more megawatts. Consisting of individual Schedule 25A: Medium Combustion Plant. Combustion of natural gas in 11 spark ignition engines for the purpose of electricity generation with a total thermal input of 109 MW.	22 engines - A9 – A19 (existing) and A20 – A30 (additional) comprising: • 22 x 9.9 MW_{th}	From receipt of raw materials to combustion of fuel and release of exhaust gases to atmosphere. No more than 1500 operating hours per engine per year, as a five-year rolling average, with a maximum of 2250 hours per year in any one of those five years.
Directly Associated Activity			
AR2	Stand-by emergency diesel generator	1.05 MWth diesel-fired generator	From receipt of raw materials to combustion of fuel and release of exhaust gases to atmosphere. To be used only in the case of a power outage on site, or for the purpose of testing.
AR3	Surface water drainage		Handling and storage of site drainage until discharge to the site surface water system.
AR4	Waste management	Storage of waste oil in 2x 10,000l tank	Waste generation and handling - from generation of waste to despatch from the installation.
AR5	Storage and handling of raw materials and fuel	Storage of clean oil in 2x 10,000l tanks. Storage of antifreeze in 2x 2,000l IBCs	From receipt of raw materials to handling, storage and use to despatch from the installation.

		Storage of diesel in 1x 1,000l tank and 1x 4,000l tank.	
AR6	Electricity transformers and 400kV banking compound		From generator to the connection to the National Grid.

1.4 Proposed Activities

1.4.1 The Operator proposes to install a second 49.9 MW peaker plant at Deeside Power Station which will operate under limited-hours for up to 1,500 hours per annum, and will be identical in design and operation to the existing plant. The second peaker plant will operate alongside the existing units, follow the same operating profile, and share supporting infrastructure where practicable.

1.4.2 The activity will form part of the Operator's existing arrangements to supply electricity to the National Grid and provide grid stability services through 22 natural gas-fuelled reciprocating engines, each operating for up to 1,500 hours per annum (on 5 year average). Both plants will generate electricity only.

1.4.3 The specified activities listed in the recently issued permit (reference EPR/XP3131VK/V003) and directly associated activity remains unchanged in this permit variation application, apart from the addition of 11 natural gas-fired reciprocating engines and the introduction of eleven more point source emissions to air (See **Section 4.2** of this document for more details).

1.4.4 The storage provisions associated with directly associated activities AR4 (waste oil management) and AR5 (storage and handling of raw materials and fuel) will be doubled, as shown in Table 2, to serve 22 engines. The diesel storage provision will remain unchanged.

1.5 Site Setting and Location

1.5.1 Deeside Power Station is located on Weighbridge Road within Deeside Industrial Park, Deeside, Flintshire, approximately centred at NGR SJ 29703 71233. The facility occupies a developed industrial site within one of the largest industrial estates in North Wales. The surrounding area is characterised by heavy industrial, manufacturing, warehousing, logistics and energy-related operations, with neighbouring land predominantly comprising commercial and industrial premises.

1.5.2 The Site is accessed directly from Weighbridge Road, which connects to the wider highway network (i.e., M56) via the A548 and A494, providing suitable access for operational traffic and maintenance vehicles.

1.5.3 Deeside Power Station lies within the lower Dee Estuary catchment on generally flat terrain. The River Dee is located approximately 0.8 km south of the Site, beyond which lies the Dee Estuary, an environmentally sensitive area designated for its ecological importance. The nearest human receptors comprise employees working within neighbouring industrial and commercial premises throughout Deeside Industrial Park.

1.5.4 The nearest residential areas are located along Dee View Road, approximately 1.3 km SSW of the Site. Owing to the predominantly industrial nature of the surrounding area, the Site benefits from a degree of separation from sensitive residential receptors.

1.5.5 The Site is surrounded by established industrial infrastructure and hardstanding, with site drainage system designed to manage surface water runoff. Clean, uncontaminated surface water from the site discharges through W1 as indicated in the existing environmental permit for the site.

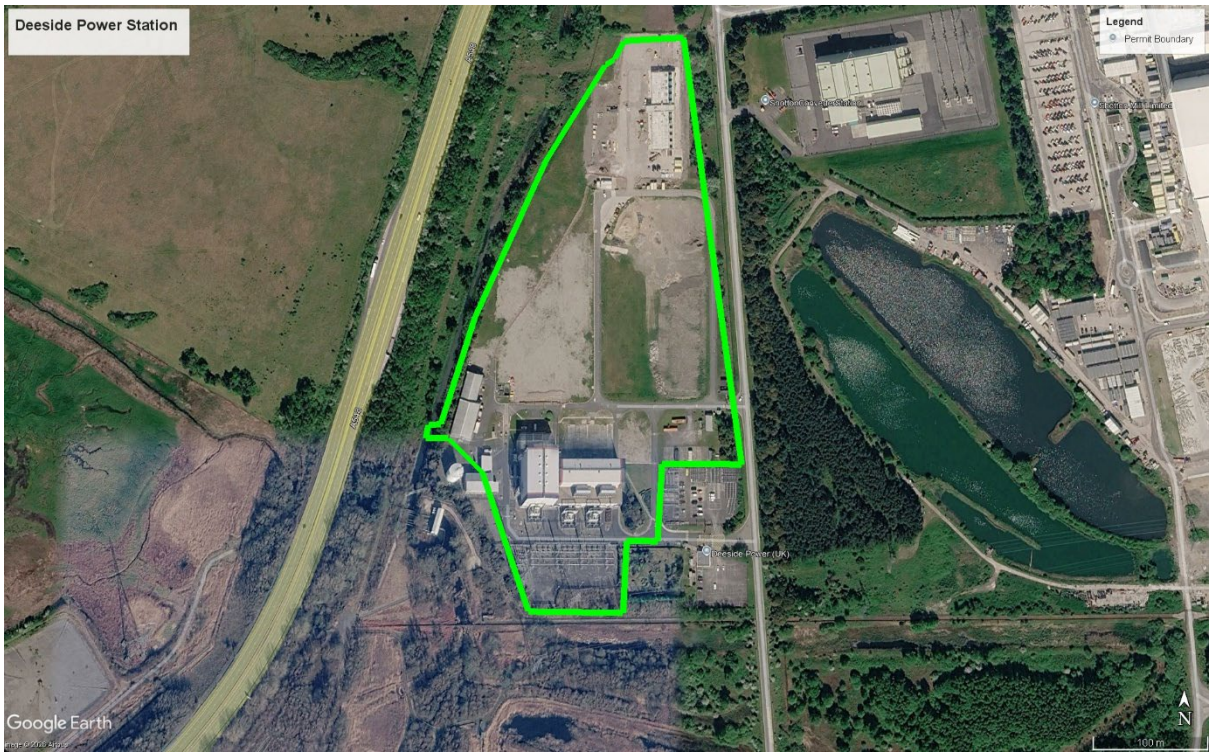


Figure 1: Site Location Plan (approximate Permit boundary in green).

2.0 OPERATING TECHNIQUES

2.1 Background

2.1.1 As mentioned in **Section 1.1**, the second peaking plant, together with the existing peaker plant, will provide flexible, limited-hours electricity generation and will operate only when required by National Grid to support electricity supply, system balancing and wider grid stability.

2.1.2 The plants are designed to make electrical output available at short notice in response to market instructions or system operator requirements (i.e. National Grid). Operation may be required during periods of increased demand, reduced generation availability, transmission constraints or other short-term balancing requirements within Great Britain.

2.1.3 The operating regime will be limited by the existing annual operating-hours restriction and controlled through the Site's operating procedures, dispatch instructions, process controls and environmental management system.

2.1.4 The existing Short-Term Operating Reserve (STOR) arrangements for the Site demonstrate the type of flexible generation service that may be required. Under these arrangements, the provider must be capable of:

- providing a minimum of 3 MW of electrical generation or steady demand reduction, which may be delivered from more than one site;
- delivering the contracted MW output following instruction, ideally within 20 minutes and in any event within the maximum response period specified by National Grid requirements;
- maintaining the contracted output for at least two hours when instructed; and
- operating at a minimum of 90% of available contracted capacity.

2.2 Operating Hours

2.2.1 The two peaker plants will be operated as a limited-hours generating activity. Operation of the 22 natural gas-fuelled reciprocating engines will be restricted to the current permitted operating-hours limit for the existing engines expressed as no more than 1,500 operating hours per engine per annum on 5 year average.

2.2.2 Both plants may be available for dispatch 24 hours a day, seven days a week, subject to commercial dispatch requirements, plant availability, maintenance requirements and the annual operating-hours restriction. The plants will only run when instructed or required and will not operate continuously as baseload generation. Operating hours will be recorded and retained through the Site's control and management systems to demonstrate compliance with the permit limit.

2.3 Operation of the Engines

2.3.1 The second peaker plant comprises a set of 11 natural gas-fired reciprocating engines which, together with the 11 existing engines authorised under environmental permit reference EPR/XP3131VK/V003, will bring the total number of engines at the Site to 22. The engines will generate electricity for export to the National Grid.

2.3.2 The selected engine technology is the Jenbacher J624, a two-stage turbocharged, V24-cylinder, spark-ignition gas engine. Natural gas will be supplied to the engines on demand from the mains gas network, with no bulk storage of natural gas at the Site.

2.3.3 Each engine will have a net rated thermal input of 9.896 MW_{th}, giving a combined net rated thermal input of 217.712 MW_{th} for the 22 engines. Both plants will generate electricity only and will operate within the limited-hours regime described in **Section 2.2** above.

2.3.4 Each engine will be located within an individual fully enclosed concrete-sided enclosure on impermeable concrete hardstanding. Each enclosure will include the associated waste heat radiator, ventilation air inlet, ventilation air outlet and exhaust stack fitted with a silencer. The layout and containment arrangements are designed to support safe operation, effective maintenance access and control of potential environmental emissions.

2.3.5 The plant will be operated and monitored through the Site's distributed control system (DCS). The DCS will monitor key operating parameters and generate alarms in the 24-hour manned main control room in the event of abnormal operation, enabling appropriate operator response in accordance with Site procedures.

2.3.6 Generated electricity will be routed through the site's existing electrical infrastructure, including the pre-existing transformers, before export to the National Grid. Engine operation, maintenance and monitoring will be managed through the Operator's environmental management system, manufacturer requirements and relevant permit conditions.

2.4 Site Operative Training

2.4.1 All personnel whose work may affect the operation or environmental performance of the proposed peaking plant will receive appropriate training before undertaking relevant duties. Training will be provided in accordance with the Operator's environmental management system, site procedures and agreed training plan, and will be proportionate to each person's role and responsibilities.

2.4.2 Training will include, where relevant, plant start-up and shutdown, normal and abnormal operation, use of the Distributed Control System (DCS), alarm response, environmental permit requirements, emissions and monitoring controls, spill prevention and response, waste handling, raw materials storage, emergency procedures and reporting requirements.

2.4.3 Maintenance and specialist activities will be undertaken by suitably trained and competent site personnel or by competent contractors, including equipment suppliers where

appropriate. Contractors will be subject to site induction and relevant permit-to-work, supervision and control arrangements before carrying out work on the installation.

2.4.4 Competence will be maintained through refresher training, toolbox talks, updates following procedural changes, learning from incidents or near misses, and review of training needs. Training records, competence assessments and relevant authorisations will be retained and made available for inspection where required.

2.5 Maintenance

2.5.1 The Operator will maintain all plant and equipment that could affect the operation or environmental performance of the proposed peaking plant. Maintenance will be managed through the Site's environmental management system, planned preventative maintenance programme, manufacturer recommendations and relevant permit conditions.

2.5.2 Maintenance activities will include routine inspection, servicing, calibration, testing and repair of the engines, associated control systems, emissions control equipment, storage tanks, bunds, pipework, drainage infrastructure and alarm systems. Activities will be undertaken as planned preventative maintenance or, where required, as reactive maintenance in response to equipment failure, alarm activation or performance deterioration.

2.5.3 A maintenance management system will be used to schedule inspections, track completion of maintenance tasks, record defects and assign corrective actions. Maintenance records will be retained to demonstrate effective plant management, ongoing equipment integrity and compliance with the environmental permit.

2.5.4 Routine maintenance will be completed at intervals specified by the equipment manufacturer, as informed by operational experience, inspection findings and industry good practice. Critical spares and consumables will be maintained on Site, where appropriate, to reduce the risk of extended downtime or impaired environmental controls.

2.5.5 Where maintenance tasks cannot be carried out by site personnel, suitably competent contractors or equipment suppliers will be appointed. Contractor activities will be controlled through site induction, permit-to-work arrangements, supervision and completion checks. Preventative maintenance will be used to minimise unscheduled downtime, maintain efficient operation and ensure that environmental protection measures remain effective.

2.6 Raw Material Requirement

2.6.1 The proposed peaking plant will require a range of raw materials to support operation and maintenance. The main input will be natural gas, which will be used as fuel for all of the reciprocating engines and supplied from the National Transmission System. Natural gas will not be stored in bulk at the Site.

2.6.2 Antifreeze/coolant will be used within the engine cooling systems. Following initial filling, only small top-up quantities are expected to be required to compensate for routine losses. Any

additional antifreeze/coolant stored at the Site will be held in suitable containers or IBCs with appropriate secondary containment on impermeable hardstanding.

2.6.3 Engine oil will be used for routine lubrication of each engine and will be stored in the 2x 10,000 litre (one existing and one additional per the permit variation) bunded steel tanks: one tank will contain clean engine oil and the second used/spent engine oil pending removal from the Site by an appropriately authorised contractor. Engine oil replacement and top-up will be carried out from the main oil storage system in accordance with site procedures and manufacturer requirements.

2.6.4 The raw materials required for the proposed activity, together with indicative annual throughput, maximum storage quantities, storage arrangements, and secondary containment, are summarised in Table 2 which is identical to those listed in Table S2.1 of the permit ref. EPR/XP3131VK/V003. These will be managed by putting the following into consideration:

- use raw materials and water efficiently, and take appropriate measures to minimise consumption and waste where practicable;
- maintain records of raw material and water use, including deliveries, storage checks, usage and removal of used oil or other relevant wastes;
- review, at least every four years, whether suitable alternative materials are available that could reduce environmental impact, and whether opportunities exist to improve raw material or water efficiency;
- record the outcome of each review and implement any further appropriate measures identified through that review.

Table 2: Raw Material Usage for the existing and proposed additional Engines.

Raw material	Indicative annual throughput	Maximum storage quantity	Storage arrangements	Secondary containment
Antifreeze/ coolant	2 Litres	2x 2,000 Litre IBCs.	To be stored in integrated bunds within the engines. IBC located on concrete hardstanding on bunded pallet.	Engines will be located within fully enclosed concrete sided structures and will be bunded. IBC will be placed located on concrete hardstanding on bunded pallet.
Engine oil	22,000 Litre	2x 10,000 Litre tanks (for clean oil). 2x 10,000 Litre tanks (for dirty oil).	To be stored in integrated bunds within the engines. Dirty and clean oil tanks are bunded steel tanks to BS 799 part 5 type J 2010 and	Engines will be located within concrete enclosures and are bunded. BS 799 complaint oil tanks located on concrete hardstanding for clean and dirty oil.

			located on concrete hardstanding.	
Natural gas		N/A. This is to be fed directly from the National Grid.	No storage. Supplied directly by the National Transmission System.	N/A
Potable water	N/A	N/A	No storage required as the water will come from metered mains supply.	N/A

3.0 REVIEW AGAINST BAT CONCLUSIONS

3.1 Overview

3.1.1 This section provides an assessment of the proposed installation of an additional 49.9 MW peaking unit, which is identical in design and operation to the existing peaking plant at Deeside Power Station. The assessment has been undertaken with reference to Natural Resources Wales (NRW) Best Available Techniques (BAT) assessment supporting the recently determined substantial variation to Permit Reference EPR/XP3131VK/V003.

3.1.2 Given the proposed peaking unit is identical in design and operation to the existing peaking plant, the Operator considers that the BAT assessment and associated conclusions established under the substantial variation are also directly applicable to the proposed installation.

3.1.3 For the per-engine regulatory basis, each 9.896 MWth reciprocating engine is an individual medium combustion plant and is subject to the applicable Medium Combustion Plant requirements in Schedule 25A of the Environmental Permitting (England and Wales) Regulations 2016, as amended. Those requirements, including applicable emission limits, monitoring and operating-hour provisions, therefore apply to each engine separately. This per-engine basis is distinct from the aggregation used to classify the overall installation as a Part A(1) combustion activity.

3.1.4 According to the Decision Document issued 9th July 2026, NRW reiterates Article 14(3) of IED requires the regulator to use BAT conclusions (BATc) as the reference for setting permit conditions. However BATc published are not directly relevant to the proposed installation and since the individual reciprocating engines are each less than 15 MWth and exhaust gases from them will be discharged via separate stacks that could not reasonably be combined, therefore aggregation through a common stack is not applicable.

3.1.5 Therefore, Article 14(6) of IED applies, which delegates authority to the regulator to determine BAT in consultation with the Operator and take account of the criteria in Annex III of IED (so far it applies to this installation).

3.1.6 Based on the above, BAT is defined as follows:

- Each individual plant 1MWth and over is subject to the MCPD, the requirements of the Directive (Schedule 25A of EPR) for each individual engine may be considered minimum standard BAT for the collective combustion plant;
- The installation will be operated for fewer than 1500 hours per year, as a five-year rolling average with no more than 2250 hours in any one of those years, this represents BAT for operating hours;
- The most relevant BAT conclusions, we may refer to the LCP BATc “for information” only, if applicable;

- The above is supplemented but not replaced by BAT definitions in our adopted regulatory guidance7; and
- As engines on an IED Chapter II Installation, the plant is excluded from the Specified Generator regulations, but these may provide indicative BAT.

3.1.7 **Table 3** provides details of how the Operator will meet applicable BAT Conclusions.

Table 3: Review Against applicable BAT.

BAT Number	Description	Applicable	Brief comments on how compliance with BAT will be achieved.
	Environmental Management Systems		
1	In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS) that incorporates all of the following features: I) Commitment of the management, including senior management; II) Definition, by the management, of an environmental policy that includes the continuous improvement of the environmental performance of the installation; III) Planning and establishing the necessary procedures, objectives and targets, in conjunction with financial planning and investment; IV) The implementation of procedures paying particular attention to: ○ structure and responsibility ○ recruitment, training, awareness and competence. ○ communication ○ employee involvement ○ documentation ○ effective process control ○ planned regular maintenance programmes ○ emergency preparedness and response ○ safeguarding compliance with environmental legislation. V) Checking performative and taking corrective action, paying particular attention to: a. monitoring and measurement see also the JRC Reference Report on Monitoring of emissions to air and water from IED-installations – ROM).	YES	The Site operates under an ISO 14001:2015-accredited Environmental Management System (EMS). Audits of key plant performance and maintenance activities will be undertaken in accordance with the requirements of the standard and reviewed at the required frequency by senior management. This will demonstrate top management engagement with the EMS and support continual improvement in the Site's overall environmental performance. 1. Deeside Power (UK) Limited is responsible for the overall effectiveness of the EMS. Through clear leadership and commitment, the company will promote continual improvement across all aspects of the EMS. Top Management will define the environmental policy and strategy and ensure that it remains appropriate to the nature and scale of the organisation's activities, products and services. 2. The Environmental Policy outlines management commitments and provides the framework for setting environmental objectives. The policy is reviewed at least annually to ensure it remains relevant. 3. Environmental objectives and performance indicators are incorporated into the EMS as core components of the ISO 14001:2015 standard. The Operator is upgrading to the 2026 Standard. 4. The elements listed under item IV are incorporated into the EMS as core components of the ISO 14001:2015 standard. A Planned Preventative Maintenance (PPM) system is in place, supported by a maintenance contract with the Original Equipment Manufacturer (OEM). An Accident Management

	b. corrective and preventive action c. maintenance of records d. independent (where practicable) internal and external auditing in order to determine whether or not the EMS conforms to planned arrangements and has been properly implemented and maintained. VI) Review, by senior management, of the EMS and its continuing suitability, adequacy and effectiveness; VII) Following the development of cleaner technologies; VIII) Consideration for the environmental impacts from the eventual decommission of the plant at the stage of designing a new plant, and throughout its operating life including: a. avoiding underground structures b. incorporating features that facilitate dismantling c. choosing surface finishes that are easily decontaminated d. using an equipment configuration that minimises trapped chemicals and facilitates drainage or cleaning e. designing flexible, self-contained equipment that enables phased closure f. using biodegradable and recyclable materials where possible. IX) Application of sectoral benchmarking on a regular basis; X) quality assurance/quality control programmes to ensure that the characteristics of all fuels are fully determined and controlled (see BAT 9); XI) a management plan in order to reduce emissions to air and/or to water during other than normal operating conditions, including start-up and shutdown periods (see BAT 10 and BAT 11);		Plan (AMP) is also in place, including emergency protocols for identified accident scenarios. The Operator has established environmental operating controls that are suitable and sufficient to minimise environmental impacts from plant activities. The Operator has also established and implemented processes to prepare for, and respond to, potential emergencies, with the objective of preventing or mitigating environmental impacts should such events occur. 5. The elements listed under item V are incorporated into the EMS as core components of the ISO 14001:2015 standard. The Operator has suitable arrangements in place to identify and address deviations from normal operation that could compromise the effectiveness of the EMS or result in environmental impact. All incidents will be recorded. The Operator will undertake annual audits to monitor and evaluate all key activities within the scope of the EMS, and records of these audits will be retained within the EMS as controlled documents. 6. The EMS is reviewed at least annually to ensure it remains relevant and continues to provide an effective framework for environmental objectives. 7. The EMS includes a commitment to continual improvement, including through sectoral benchmarking. 8. The elements listed under item VIII are incorporated into the EMS as core components of the ISO 14001:2015 standard. A Closure Plan is in place and will be updated to include the new raw materials associated with this variation. 9. The EMS includes a commitment to continual improvement, including the review of new and emerging technologies. 10. See the response to BAT 9 regarding the quality assurance/quality control programme. 11. See the response to BAT 10 and BAT 11 regarding the management plan to reduce emissions to air and/or water.

	XII) a waste management plan to ensure that waste is avoided, prepared for reuse, recycled or otherwise recovered, including the use of techniques given in BAT 16; XIII) a systematic method to identify and deal with potential uncontrolled and/or unplanned emissions to the environment, in particular:: a. emissions to soil and groundwater from the handling and storage of fuels, additives, by-products and wastes b. emissions associated with self-heating and/or self-ignition of fuel in the storage and handling activities. XIV) a dust management plan to prevent or, where that is not practicable, to reduce diffuse emissions from loading, unloading, storage and/or handling of fuels, residues and additives; XV) a noise management plan where a noise nuisance at sensitive receptors is expected or sustained, including: a. a protocol for conducting noise monitoring at the plant boundary b. a noise reduction programme c. a protocol for response to noise incidents containing appropriate actions and timelines d. a review of historic noise incidents, corrective actions and dissemination of noise incident knowledge to the affected parties. XVI) for the combustion, gasification or co-incineration of malodourous substances, an odour management plan including a. a protocol for conducting odour monitoring		12. See the response to BAT 16 regarding the waste management plan. 13. The Operator has established and implemented processes to prepare for, and respond to, potential emergencies and incidents. An Accident Management Plan is in place, including emergency protocols for identified accident scenarios. 14. A dust management plan is not required for this variation application. See the Air Quality Assessment (ref. AIR32901399) for more details on emissions. 15. A noise management plan is not required for this variation application as findings from the Noise Impact Assessment undertaken for the proposed development indicates it will have a low noise impact on both residential and ecological receptors. See Noise Impact Assessment (ref. 33001048/01) for more details. 16. This requirement is not applicable, as natural gas will be used in the process and there will be no bulk storage of natural gas at the Site.

	b. where necessary, an odour elimination programme to identify and eliminate or reduce the odour emissions c. a protocol to record odour incidents and the appropriate actions and timelines b. 4. a review of historic odour incidents, corrective actions and the dissemination of odour incident knowledge to the affected parties.		
	Monitoring		
2	BAT is to determine the net electrical efficiency and/or the net total fuel utilisation and/or the net mechanical energy efficiency of the gasification, IGCC and/or combustion units by carrying out a performance test at full load(1), according to EN standards, after the commissioning of the unit and after each modification that could significantly affect the net electrical efficiency and/or the net total fuel utilisation and/or the net mechanical energy efficiency of the unit. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.	YES	• The net electrical efficiency, net total fuel utilisation and/or net mechanical energy efficiency of the combustion units will be determined by undertaking a full-load performance test following commissioning. Testing will be carried out in accordance with relevant EN standards or, where EN standards are not available, applicable ISO, national or other recognised standards that provide data of equivalent scientific quality. • Net electrical efficiency, net total fuel utilisation and/or net mechanical energy efficiency will be retested following any modification that could significantly affect the performance of the unit. • If testing identifies a reduction in net electrical efficiency, net total fuel utilisation and/or net mechanical energy efficiency following any works, the Original Equipment Manufacturer (OEM) will undertake appropriate maintenance and checks under the contract in place with the Operator. • Net electrical efficiency testing will be undertaken during commissioning of the engines to demonstrate compliance with applicable LCP BAT requirements.
3	BAT is to monitor key process parameters relevant for emissions to air and water including those given in the BAT document.	YES	• A range of key process parameters relevant to emissions to air will be monitored through routine periodic air emissions monitoring undertaken at the Site. Parameters monitored will include, but not be limited to, those listed under BAT 3:

			a. Flue gas flow; b. Flue gas oxygen content; c. Flue gas temperature; d. Flue gas pressure; and e. Flue gas water vapour content. • Eleven new emission points to air are proposed as part of this variation application, associated with the second peaking plant. These comprise the individual exhaust stacks from each engine, designated A20 to A30. • There is currently no set emission limit for the existing generator exhaust emission point A3. • Although the combined thermal input of the proposed combustion plant is greater than 50 MWth, each individual engine has a thermal input of less than 15 MWth. As the individual thermal input of each engine is greater than or equal to 1 MWth and less than or equal to 20 MWth, the monitoring requirements of the Medium Combustion Plant Directive (MCPD) apply to emissions from the Site. • All monitoring will be undertaken using appropriate sampling methods and standards in accordance with MCERTS requirements. Monitoring will include flow, oxygen content, temperature, pressure and water vapour content. • No flue gas treatment wastewater will be produced by the proposed engines; therefore, monitoring of parameters associated with flue gas treatment wastewater will not be required.

4	BAT is to monitor emissions to air with at least the frequency given in the NAT document and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality. See BAT document for details.	YES	• For the proposed 11 natural gas-fuelled reciprocating engines, the following parameters will be monitored:
			  ○ Nitrogen Oxides (NO_x)
			  ○ Carbon Monoxide (CO)
			  ○ Non-methane volatile organic compounds (NMVOC) and methane (CH_4)
			• Emissions of NOx and CO from the proposed plant will be monitored using MCERTS-approved laboratory(ies) who will obtain and analyse stack emissions monitoring samples
			• If the Operator contemplates alternative methods, this will be agreed in writing with NRW in advance.

5	BAT is to monitor emissions to water from flue-gas treatment with at least the frequency given below and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality. See BAT document for details.	N/A	This is not applicable as there are no emissions to water from flue-gas treatment resulting from the proposed installation of an additional peaking plant.
	General environmental and combustion performance		

6	In order to improve the general environmental performance of combustion plants and to reduce the emissions to air of CO and unburnt substances, BAT is to ensure optimised combustion and to use an appropriate combination of the techniques given in the BAT document.	YES	To reduce the emissions to air of CO and unburnt substances, the Operator will utilise a combination of the following techniques: **Fuel blending and mixing** The facility will use natural gas supplied by the national grid network. Any mixing of fuels (e.g. addition of biomethane) is handled by the national grid and delivered to site ready to use. **Maintenance of the combustion system** A Planned Preventative Maintenance programme is in place at the site and maintenance is carried out following the manufacturer's recommendations. **Advanced control system** A DCS control system is in place at the site that controls combustion efficiency and monitors efficiency parameters in accordance with **Table 10.8.1** of the BREF. **Good design of the combustion equipment** The selected engines technology for the peaker plant are the Jenbacher J624: a two-stage turbocharged, V24-cylinder, spark-ignition gas engine. **Fuel choice** Natural gas contains low levels of sulphur and mercury. No viable alternative fuel is currently available for the installation; therefore, switching fuels is not considered practicable at present. However, the engines are designed to be hydrogen-ready, providing the potential to transition to hydrogen if a suitable grid supply becomes available in the future.

7	In order to reduce emissions of ammonia to air from the use of selective catalytic reduction (SCR) and/or selective non-catalytic reduction (SNCR) for the abatement of NOx emissions, BAT is to optimise the design and/or operation of SCR and/or SNCR (e.g. optimised reagent to NOx ratio, homogeneous reagent distribution and optimum size of the reagent drops).	N/A	No abatement system is being proposed to be fitted to any of the proposed engines at the site, as such BAT 7 and BAT 8 are not applicable.
8	In order to prevent or reduce emissions to air during normal operating conditions, BAT is to ensure, by appropriate design, operation and maintenance, that the emission abatement systems are used at optimal capacity and availability.	N/A	Same a above.
9	In order to improve the general environmental performance of combustion and/or gasification plants and to reduce emissions to air, BAT is to include the elements listed in the BAT document in the quality assurance/quality control programmes for all the fuels used, as part of the EMS.	YES	The proposed reciprocating engines will be fuelled by natural gas supplied by the national grid. The national grid has a strict criteria that gas must meet before being injected into the grid; this includes analysis for all of the parameters listed within BAT 9 document.
10	In order to reduce emissions to air and/or to water during other than normal operating conditions (OTNOC), BAT is to set up and implement a management plan as part of the EMS, commensurate with the relevance of potential pollutant release, that includes the elements listed in the BAT document.	YES	**Appropriate design of the systems is considered relevant in causing OTNOC that may have an impact on emissions to air, water and/or soil.** The proposed engines are new, and the plant configuration has been specifically designed for this engine type. The engines have also been selected to minimise start-up times, consistent with their intended use within the existing STOR scheme or a similar operating arrangement. **Set-up and implementation of a specific preventive maintenance plan for these relevant systems.** A planned preventative maintenance programme is implemented at the Site in accordance with the manufacturer's recommendations. A service and maintenance contract is also in place with the technology provider.

			Review and recording of emissions caused by OTNOC and associated circumstances and implementation of corrective actions if necessary. The plant's Distributed Control System (DCS) will monitor and record abnormal operation. Any abnormal operating condition will generate an alarm in the manned control room, enabling appropriate operator response. **Periodic assessment of the overall emissions during OTNOC and implementation of corrective actions if necessary.** The DCS will record all periods of OTNOC. Any OTNOC events, excluding routine start-up and shutdown, will be investigated to identify the root cause. Where required, remedial actions will be implemented following the investigation.
11	BAT is to appropriately monitor emissions to air and/or to water during OTNOC.	YES	All emissions from the proposed peaking plant will be monitored during commissioning and periodically thereafter, as set out in the response to BAT 3, to confirm that operation of the proposed plant does not give rise to pollution of the receiving environment. Given the nature of the proposed equipment, and adherence to the manufacturer's recommended maintenance programme, OTNOC events are considered unlikely. Should such events occur, additional spot sampling of emissions may be commissioned, where required. Any additional sampling would be targeted at the engine or engines experiencing the OTNOC event.
12	In order to increase the energy efficiency of combustion, gasification and/or IGCC units operated greater 1500 h/yr, BAT is to use an appropriate combination of the techniques given below.	YES	The Site will meet the listed requirements as follows: **Combustion optimisation:** The proposed engines are new, and their configuration has been designed for the proposed engines. **Optimisation of working medium conditions:** Each engine will operate at 100% load when required.

			Optimisation of the steam cycle: Not applicable, as gas engines will be used at the Site. **Minimisation of energy consumption:** The engines are new and have been configured for the intended limited-hours operation within the existing STOR scheme or a similar operating arrangement. **Preheating of combustion air:** Not applicable to gas engines. **Fuel preheating:** Not applicable, as gas engines will be used at the Site. **Advanced control system:** A Distributed Control System (DCS) is in place at the Site to control combustion efficiently and monitor efficiency parameters in accordance with Table 10.8.1 of the BREF. **Feed-water preheating using recovered heat:** Not applicable, as gas engines will be used at the Site. **Heat recovery by cogeneration (CHP):** The Operator will continue to explore commercial options for heat recovery. However, given the unpredictable and limited operating periods of the engines, it is unlikely that recovered heat would be viable for nearby use. **CHP readiness:** The Operator will continue to explore commercial options for heat recovery. However, given the unpredictable and limited operating periods of the engines, it is unlikely that recovered heat would be viable for nearby use. **Flue-gas condenser: Not applicable.** The Operator will continue to explore commercial options for heat recovery; however, given the unpredictable and limited operating periods of the engines, it is unlikely that recovered heat would be viable for nearby use.

			Heat accumulation: Not applicable. The Operator will continue to explore commercial options for heat recovery; however, given the unpredictable and limited operating periods of the engines, it is unlikely that recovered heat would be viable for nearby use. **Wet stack:** Not applicable, as the proposed engines will be natural gas-fuelled and no wet flue-gas desulphurisation system will be required. **Cooling tower discharge:** Not applicable, as the proposed engines will be natural gas-fuelled and no cooling tower will be required. **Fuel pre-drying:** Not applicable, as the proposed engines will be natural gas-fuelled. **Minimisation of heat losses:** The engines will be maintained in accordance with the manufacturer's recommendations to minimise avoidable heat losses and maintain efficient operation. **Advanced materials:** The proposed engines are new and designed for the intended mode of operation. **Steam turbine upgrades:** Not applicable, as the proposed installation will comprise gas engines rather than a steam turbine system. **Supercritical and ultra-supercritical steam conditions:** Not applicable, as the proposed installation will comprise natural gas-fuelled engines operating for up to 1,500 hours per year.
	Water usage and emissions to water		
13	In order to reduce water usage and the volume of contaminated waste water discharged, BAT is to use one or both of the techniques given in the BAT document.	N/A	There will be no emissions to water from flue gas treatment resulting from the proposed activities at the site and water will not

14	In order to prevent the contamination of uncontaminated waste water and to reduce emissions to water, BAT is to segregate waste water streams and to treat them separately, depending on the pollutant content.	N/A	be utilised within the proposed reciprocating engines. Therefore, BAT 13, 14 and 15 are not applicable. The release of water from the site is clean, uncontaminated surface water which will be discharged via W1 under the existing permit for the site.
15	In order to reduce emissions to water from flue-gas treatment, BAT is to use an appropriate combination of the techniques given in the BAT document, and to use secondary techniques as close as possible to the source in or der to avoid dilution.	N/A	
	Waste management		
16	In order to reduce the quantity of waste sent for disposal from the combustion and/or gasification process and abatement techniques, BAT is to organise operations so as to maximise, in order of priority and taking into account life-cycle thinking.	YES	Wastes produced at the site will consist of waste oil and occasional wastes from maintenance activities of which waste oil generated during these activities will be transferred off site for disposal or recovery at a suitably permitted facility; oil usage will be minimised via regular servicing and maintenance of the engines. General waste from the existing offices and welfare facilities will be collected under contract with a local waste disposal contractor for recycling, where possible.
	Noise emissions		
17	In order to reduce noise emissions, BAT is to use one or a combination of the techniques given in the BAT document.	YES	**Operational measures** A planned preventative maintenance programme will be implemented for the engines at the Site. The engines will be housed within fully enclosed, concrete-sided structures with no windows. Doors will be kept closed except during access and egress. **Low-noise equipment** The selected engines have noise ratings comparable with similar engines of this type and are considered appropriate for the proposed application. **Nosie attenuation** The engines will be housed within fully enclosed, concrete-sided structures with no windows. These structures will provide

			attenuation to reduce noise propagation towards sensitive receptors. Doors will be kept closed except during access and egress. **Noise-control equipment** The engines will be housed within fully enclosed, concrete-sided structures with no windows, and doors will be kept closed except during access and egress. Exhaust stacks will also be fitted with silencers to further reduce noise emissions. **Appropriate location of equipment and buildings** The engines will be located such that the nearest human receptors are employees at Shotton Converter Station, approximately 97 m east of the Site boundary.
	Energy Efficiency		
40	In order to increase the energy efficiency of natural gas combustion, BAT is to use an appropriate combination of the techniques given in BAT 12 and the table in BAT document.	No	Not applicable to gas engines. BAT 40 also states that gas engines should meet the BAT-Associated Energy Efficiency Levels (BAT-AEELs) listed below: **Parameter**: NET electrical efficiency **BAT-AEEL**: 39.5 – 44% **Electrical Efficiency of the proposed engines:** 45.5%
	NOx, CO, NMVOC and CH4 emissions to air		
41	In order to prevent or reduce NOx emissions to air from the combustion of natural gas in boilers, BAT is to use one or a combination of the techniques given in the BAT document.	No	Not applicable as this only applies to boilers.
42	In order to prevent or reduce NOx emissions to air from the combustion of natural gas in gas turbines, BAT is to use one or a combination of the techniques given in the BAT document.	No	Not applicable as this only applies to gas turbines.
43	In order to prevent or reduce NOx emissions to air from the combustion of natural gas in engines, BAT is to use one or a combination of the techniques given in the BAT document.	YES, in part	The NOx reduction techniques will be employed for the proposed engines and to reduce NOx emissions to air, the use of one or a combination of the following techniques will be implemented at the site:

			Advanced control system: A Distributed Control System (DCS) is in place at the Site to control combustion efficiently and monitor emission parameters in accordance with Table 10.8.1 of the BREF. **Advanced lean-burn concept**: this will be in place for the engines at the site. **Lean-burn concept**: same as above. **Selective catalytic reduction (SCR)**: This is not considered suitable for the proposed engines due to the intermittent nature of the proposed operations that is heavily reliant on demand from National Gird.
44	In order to prevent or reduce CO emissions to air from the combustion of natural gas, BAT is to ensue optimised combustion and/or to use oxidation catalysts.	YES, in part	**The Operator will use one or a combination of the following techniques to meet BAT 44 and 45:** **Optimised combustion**: The proposed engines are new, and the plant configuration has been specifically designed for this engine type. A planned preventative maintenance programme will be implemented for the engines. **Oxidised catalysts**: Oxidised catalysts will not be used at the site.
45	In order to reduce non-methane volatile organic compounds (NMVOC) and methane (CH4) emissions to air from the combustion of natural gas in spark ignited lean-burn gas engines, BAT is to ensure optimised combustion and/or to use oxidation catalysts.		

4.0 MONITORING

4.1 Overview

4.1.1 The proposed monitoring arrangements as part of this permit variation application is detailed in this section.

4.2 Point Source Emissions to Air

4.2.1 There are 11 existing point source emissions to air (i.e., A9 to A19) at the site from eleven 9.896MWth gas engines under the current operating conditions, including an emergency diesel generator emission point (A3) which is used as backup in the event of a mains power supply failure to the site.

4.2.2 Eleven additional point source emissions to air (i.e., A20 to A30) will be introduced following addition of the 11 Jenbacher J624 natural gas-fired reciprocating engines. See table below for details:

Table 4: Proposed Point Emissions to Air

Emission Point Reference	Parameter	Emission Limit Value (ELV)
A20 – A30	NOx as NO2	95mg/Nm^3
	Carbon Monoxide	No limit set
	Oxygen	No limit set
	Water Vapour	No limit set
	Sulphur Dioxide	No limit set
Clean oil tank vent	No parameters set	N/A
Dirty oil tank vent	No parameters set	N/A

4.2.3 The drawing ref (7139-CAU-XX-XX-DR-V-1802) for undated emission points and grid reference.

4.2.4 Also, an Air Quality Assessment (AQA) been undertaken and the document is included with this application.

4.3 Point Source Emissions to Surface Water

4.3.1 No new point source emissions to surface water is proposed as part of this permit variation application. The existing point source emissions to surface water (i.e., W1), previously used for the discharge of cooling water has been repurposed for use in discharging clean, uncontaminated site surface water, including rainwater via the existing River Dee outfall into the environment.

4.4 Point Source Emissions to Sewer

4.4.1 There will be no point source emissions to sewer from the Site, other than from the on-site welfare facilities.

4.5 Point Source Emissions to Land

4.5.1 There will be no point source emissions to land as part of the proposed variation application. Process Monitoring Requirements

4.5.2 All tanks associated with the proposed plant will be subject to regular inspection to verify their structural integrity and condition. When inspection or maintenance is required, individual tanks will be capable of being isolated and emptied to facilitate safe inspection and maintenance.

4.5.3 A computer-based control and monitoring system will be installed to monitor key operational parameters and optimise the efficiency and reliability of the proposed generating plant. The system will operate continuously, collecting and analysing real-time identify system failures.

4.5.4 Operational data will be continuously recorded and retained, enabling the Operator to generate monitoring reports for key operational parameters of the generating plant.

4.5.5 The principal parameters recorded by the engine control systems will include:

- Natural gas flowrate from the gas reception kiosk to each engine;
- Natural gas delivery system pressures;
- Cylinder temperatures and pressures;
- Oil temperature and pressures; and;
- Coolant temperature.

4.6 Fugitive Emissions

4.6.1 Although fugitive emissions are not subject to specific limits, the Operator has a duty to operate the installation in a manner that prevents or minimises pollution. Appropriate preventative and control measures will therefore be implemented to minimise the potential for fugitive emissions to air, land and water.

Fugitive Emissions to Air

4.6.2 Operations of the proposed plant will be managed in accordance with the Operator's Environmental Management System (EMS). This will include routine inspections, preventative maintenance and servicing of the engines in accordance with the manufacturer's recommendations.

4.6.3 The maintenance regime will include inspection of gas distribution pipework and engine containment structures, functionality checks of leak detection systems within the engine containment areas, and measures to prevent over-pressurisation. The Operator has a

maintenance contract with the Original Equipment Manufacturer (OEM), which will also cover the proposed additional peaking plant.

4.6.4 The proposed gas engines will be subject to periodic emissions monitoring using MCERTS-certified methods, as required by the environmental permit, to demonstrate compliance with applicable emission limits.

4.6.5 The plant will be equipped with a Distributed Control System (DCS) to monitor plant operation and identify abnormal operating conditions. Abnormal conditions will generate an alarm within the continuously manned main control room, allowing appropriate corrective action to be taken.

4.6.6 The plant will also incorporate automatic isolation of gas supply in the event of a fire. Fire detection and alarm systems will provide both local and control-room alarms and will be designed and operated in accordance with the applicable requirements of NFPA 85.

4.6.7 Vehicle movements associated with the operation and maintenance of the plant will be restricted to areas of asphalt or concrete hardstanding. A site-wide speed limit of 10 mph will be maintained to minimise the potential for dust generation and other emissions associated with vehicle movements.

Fugitive Emissions to Land and Water

4.6.8 Clean engine oil and waste oil will be stored separately in dedicated, bunded 10,000 litre tanks. Waste oil will be removed from site before the storage tank reaches capacity. Engine oil deliveries and waste-oil collections will take place using the site's asphalt haul roads.

4.6.9 Engine oil replenishment will be undertaken automatically from the main oil storage tank via below-ground pipework, thereby minimising the potential for spills associated with manual handling and transfer operations.

4.6.10 The engine oil storage tanks will be located on appropriately designed and bunded hardstanding, in accordance with the requirements of the Water Resources (Control of Pollution) (Oil Storage) (Wales) Regulations 2016 and BS799-5:2010, as applicable.

4.6.11 Drainage from the existing transformer bunds, which pre-date the requirements of the Water Resources (Control of Pollution) (Oil Storage) (Wales) Regulations 2016, will pass through a dedicated pollution-control system comprising diverter chamber, oil-retaining tank, Skimovex oil-water separator and wastewater sump.

4.6.12 The system is designed to retain oil and other potentially polluting substances and allow only appropriately treated or uncontaminated water to pass downstream. The diverter chamber is equipped with an alarm that alerts the Operator when the system is activated. The alarm will be routinely tested to verify its functionality.

4.6.13 The wastewater sump will be routinely inspected and emptied as necessary. Only water confirmed to be uncontaminated will be pumped to the site's outfall pit (W1), as identified on site layout plan (ref. 7139-CAU-XX-XX-DR-V-1802), prior to discharge via the River Dee outfall.

4.6.14 No other potentially polluting liquids will be routinely stored at the Site.

4.6.15 Surface water features in the vicinity of the Site could act as receptors for accidental releases and as pathways through which pollutants could be transported to the River Dee. The potential for pollution will therefore be managed through the site drainage infrastructure, containment measures, routine inspection and appropriate maintenance.

4.6.16 The Site is located on an unproductive aquifer within both the bedrock and superficial geological formations. According to Natural Resources Wales 'Flood and Coastal Erosion Risk Maps'[1], the southern, western and northern parts of the site are identified as being at low risk of flooding from the sea and from surface water and small watercourses.

4.6.17 The majority of the site comprises soft landscaping and aggregate surface, with limited areas of concrete hardstanding associated with its former use. Vehicle haul routes around the site comprise asphalt surfaces and are served by a sealed drainage system. These surfaces and the site drainage infrastructure provide additional measures to minimise the potential for pollutants to infiltrate the ground or be mobilised by surface water runoff.

4.6.18 See the Environmental Riks Assessment (Report Reference 7139-CAU-XX-XX-RP-V-0302) prepared as part of this application documents for more details.

[1] Flood and Coastal Erosion Risk Maps (Accessed at: 21/07/2026)

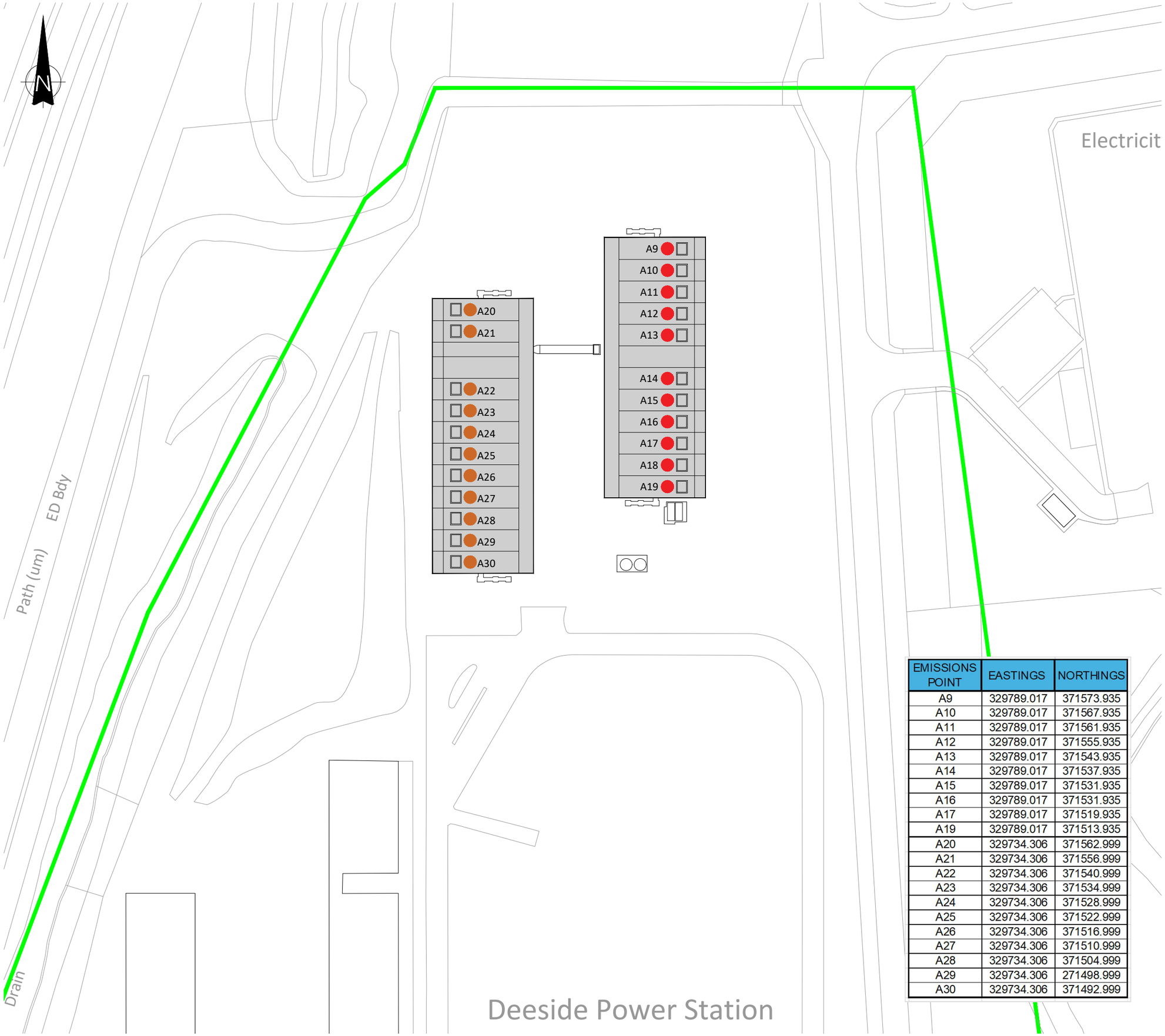
5.0 REFERENCES

5.1.1 Best Available Techniques (BAT) Conclusions for Large Combustion Plants, established under Directive 2010/75/EU and updated in November 2021.

5.1.2 Schedule 25A of the Environmental Permitting (England and Wales) Regulations 2016, as amended.

DRAWINGS

7139-CAU-XX-XX-DR-V-1802 Site Layout Plan



NOTES

1. DO NOT SCALE FROM THIS DRAWING, WORK FROM FIGURED DIMENSIONS ONLY. ALL DIMENSIONS ARE IN METRES AND ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM UNLESS NOTED OTHERWISE.

2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALIST DRAWINGS AND SPECIFICATIONS.

LEGEND

- PERMIT BOUNDARY
- PROPOSED EMISSIONS POINTS
- EXISTING EMISSIONS POINTS

EMISSIONS POINT	EASTINGS	NORTHINGS
A9	329789.017	371573.935
A10	329789.017	371567.935
A11	329789.017	371561.935
A12	329789.017	371555.935
A13	329789.017	371543.935
A14	329789.017	371537.935
A15	329789.017	371531.935
A16	329789.017	371531.935
A17	329789.017	371519.935
A19	329789.017	371513.935
A20	329734.306	371562.999
A21	329734.306	371556.999
A22	329734.306	371540.999
A23	329734.306	371534.999
A24	329734.306	371528.999
A25	329734.306	371522.999
A26	329734.306	371516.999
A27	329734.306	371510.999
A28	329734.306	371504.999
A29	329734.306	271498.999
A30	329734.306	371492.999

REV					
P01	FOR CLOPUD APPLICATION	EJD	JC	AS	09.11.26
REV	MODIFICATIONS	BY	RE	AP	DATE

PURPOSE OF ISSUE: FOR CLOPUD APPLICATION
STATUS: S2

CLIENT:
DEESIDE POWER (UK) LTD
WEIGHBRIDGE ROAD, SEALAND.
DEESIDE, CH5 2UL

PROJECT:
DEESIDE POWER STATION
INSTALLATION OF
GAS POWERED PEAKING PLANT

TITLE:
SITE LAYOUT PLAN

DESIGNED BY	DRAWN BY	REVIEWED BY	AUTHORISED BY
EJD	EJD	JC	JC

DATE	SCALE @ A3	JOB REF:	REVISION
12.10.2026	1:1000	7139	P01

DRAWING NUMBER
7139-CAU-XX-XX-DR-V-1802

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engineering environmental planning

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Registered Office: InTec, Parc Menai, Bangor, Gwynedd, LL57 4FG Company Registered No: 06716319

APPENDIX 1

EMS Summary

Registered Office: InTec, Parc Menai, Bangor, Gwynedd, LL57 4FG
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1 Deeside Power Station Environmental Management System (EMS) Summary

1.1 The Environmental Management System (EMS) is an integral part of the Integrated Management System (IMS). The following extract from the IMS manual's contents illustrates its coverage:

1 Context
1.1 Company Profile
1.2 Purpose of Manual
1.3 Integrated Management System Scope
2 Organisation
2.1 Organisation and Structure
2.2 Key Responsibilities
2.2.1 Station Manager
2.2.2 Integrated Management System Representative(s)
2.2.3 Management Review Committee
2.2.4 Site Engineer
2.2.5 Shift Engineers
2.2.6 Technical Officers
2.2.7 All Employees

2 Complementary Documentation

2.1 The following summary, adapted from Section 1.3 of the IMS manual, describes the scope of the IMS and how its management systems are integrated.

2.2 The IMS covers all business activities associated with the Synchronous Compensation plant and the Peaker plants, including the proposed second peaker plant.

2.3 The IMS demonstrates the Operator's ability to meet international standards for quality management (ISO 9001), environmental management (ISO 14001), and occupational health and safety management (OHSAS 18001, with transition to ISO 45001). It also addresses corporate, customer, and applicable statutory and regulatory requirements.

2.4 The IMS manual defines the management processes, their application, the expected level of conformity, and the approach to continual improvement.

2.5 The IMS manual is supported by three compliance matrices that set out the requirements of the respective standards and explain how those requirements are integrated:

- ISO 9001 Quality Compliance Matrix
- ISO 14001 EMS Compliance Matrix
- ISO 45001 H&SMS Compliance Matrix

2.6 Together, the IMS manual and the three compliance matrices form the IMS descriptive documentation. Each matrix covers the requirements of its respective standard.

2.7 Certification to ISO 9001, ISO 14001, and ISO 45001 is subject to annual audits within a three-year cycle comprising two surveillance audits and one recertification audit.

2.8 The IMS and its supporting documents will be reviewed and updated as necessary to reflect changes to site operations, including the introduction of new plant or equipment.

Certificate

Certificat

CERTIFICATE OF REGISTRATION

This is to certify that the Management System of

DEESIDE POWER STATION

for the following activity/activities:

OPERATION OF SYNCHRONOUS COMPENSATION PLANT

carried out in the following location

WEIGHBRIDGE ROAD, DEESIDE INDUSTRIAL PARK FLINTSHIRE, GB CH5 2UL

Has been assessed by AFNOR UK, part of AFNOR Group,
certifying under AFAQ trademark,
and complies with the Management System requirements of

ISO 9001:2015 - ISO 14001:2015 - ISO 45001:2018

CERTIFICATE N°	CLIENT SINCE	DATE OF ISSUE	DATE OF EXPIRY
EA / Q 50107	**03/08/2021**	**03/08/2024**	**02/08/2027**

UKAS MANAGEMENT SYSTEMS
0022

APPROVED BY
Managing Director of AFNOR UK LIMITED

F. BONIN-BREE

Scan this QR code to check the validity of the certificate

The use of Accreditation Symbol indicates accreditation in respect of those activities covered by the Certificate Number 022

F 0956-1 / UK 11/23

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AFNOR UK Ltd registered in England and Wales No. 02698859
www.international.afnor.com

CONDITIONS OF ISSUE

This Certificate is issued under the authority of the AFNOR UK and is subject to the following conditions:

1. The Certificate holder shall maintain compliance with the criteria defined on the Certificate covering the requirements of the management system standard and the product/service or site usage.

2. The Certificate remains the property of AFNOR UK and shall be returned on demand or if the Certificate Holder discontinues the scope of work or type of product for which the Certificate is issued.

3. The Certificate Holder shall notify AFNOR UK of any changes in name, address, ownership, organiza¬tion, site boundary, site usage or any other significant aspects, and any significant incident or event.

4. The Certificate Holder shall allow access at all reasonable times to the place of work to enable AFNOR UK to monitor the effectiveness of the assessed management system and related certified activities.

5. Legally Binding Document ® AFAQ is a registered trademark.

6. AFNOR UK complies with the international standards in force (ISO 17021).

7. AFNOR UK Ltd reserves the right to modify, at any time and without any notice, the presentation of this certification document. This document and most specifically the logo featuring on this document can only be used by its holder in the frame of relevant legal requirements and a clear and sincere communication.

Enquiries relating to the Certificate shall be submitted, in writing, to the Technical Department at the address overleaf.

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