Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Rathlin Energy (UK) Limited

West Newton 'A' Well Site
Fosham Road
Marton
Hull
HU11 5DA

Variation application number

EPR/BB3001FT/V006

Permit number

EPR/BB3001FT

West Newton 'A' Well Site
Permit number EPR/BB3001FT

Introductory note

This introductory note does not form a part of the permit

Under the Environmental Permitting (England & Wales) Regulations 2016 (Schedule 5, Part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made.

All the conditions of the permit have been varied and are subject to the right of appeal.

This variation is to carry out a reservoir stimulation activity on the existing well WNA-2 drilled in 2019, targeting the Permian age Kirkham Abbey Formation at approximately 1.7 km depth, to re-establish permeability within the Kirkham Abbey Formation, having been impeded by formation damage as a result of the initial drilling and completion operation. Reservoir stimulation is the injection of well stimulation fluid into a target formation designed to improve the efficiency of the flow of fluids through the reservoir rock and into the well.

The injection of well stimulation fluid is considered an indirect input because it involves the introduction of substances through the soil and into groundwater.

The activity is a groundwater activity (AR9) – Schedule 22, 8(I): Reservoir Stimulation. The injection of a substance into groundwater to increase the flow of fluids or gas to a well or borehole in connection with the extraction or use of any energy source.

This activity is finite; this means that the event (the well appraisal) occurs once, any further reservoir stimulation that maybe required will necessitate a new variation application.

The activities are as follows:

- An Industrial Emission activity as defined by the Industrial Emissions Directive and Schedule 1, Part 2, Section 1.2 of the Environmental Permitting (England and Wales) Regulations 2016, as amended, relating to production of fluids extracted from the resource formation, separation and storage of products (crude oil) and waste prior to onward transport.
- Schedule 1, Part 2, Section 5.1 of the Environmental Permitting (England and Wales) Regulations 2016, as amended, relating to the flaring of waste gas, from onshore oil and gas exploration, appraisal and production activities.
- Medium Combustion Plant - Schedule 25A for the use of produced gas in gas engines to produce electricity.
- A Mining Waste Operation, as defined by the Mining Waste Directive and Schedule 20 of the Environmental Permitting (England and Wales) Regulations 2016, as amended, relating to the management of extractive waste. In respect of stimulation wells, a non-hazardous Mining Waste Facility for the accumulation of injected well stimulation fluid which will remain in the underground target formation and has become waste. An enclosed ground flare will be used to incinerate less than 10 tonnes of waste gas per day that cannot be used.
- A groundwater activity, as defined by the Groundwater Directive and Schedule 22 of the Environmental Permitting (England and Wales) Regulations 2016, as amended, for the discharge, injection of stimulation fluid into the target formation that might lead to an indirect input of a pollutant to groundwater.

There are no other changes to the permit.

The schedules specify the changes made to the permit.

The status log of the permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	**Date**	**Comments**
Application EPR/BB3001FT/A001	Duly made 30/01/2014	Application for an environmental permit for the management of waste and flaring of waste gas
Permit determined	30/04/2014	Permit Issued to Rathlin Energy (UK) Limited
Application EPR/BB3001FT/V002	Duly Made 07/05/2015	Variation to add a surface water activity
Variation determined EPR/BB3001FT	05/08/2015	Varied permit issued.
Application EPR/BB3001FT/V003	Duly Made 16/12/2018	Variation to add an installation activity for the storage and handling of crude oil Variation of the Mining Waste Operation to conduct well testing of well WNA-2 and extended well test
Schedule 5 response	17/04/2019	Applicant response to Schedule 5 questions
Additional Information received	10/06/2019	Work Instruction 21 – Management Procedures for Scrubber Reactants (RE-04-021) Rev 4 Vapour Recovery Plan R2 Work Instruction 20 – Recording Flare Stack Temperature Work Instruction (RE-04-020) Rev 2 PW Shrouded Flare Stack Emissions Report Work Instruction 32 – Well Test Operations Using Flare (RE-04-032) Rev-1 Work Instruction 34 – Purging of Well Test Equipment Procedures (RE-04-034) Leak Detection and Repair Plan Work Instruction 35 – Capping Procedures (RE-04-035) Updated 03 Non-Technical Summary R1 Updated 05 Waste Management Plan R5 Updated 07 Environmental Risk Assessment R2 Updated 10 – Gas Management Plan R3
Additional Information received	26/06/2019	Updated Leak Detection and Repair plan revision 2
Additional information received	11/07/2019	Updated Non-Technical Summary R2 Work Instruction 20 – Recording Flare Stack Temperature Work Instruction (RE-04-020) Rev 3 Work Instruction 32 – Well Test Operations Using Flare (RE-04-032) Rev-3 Updated 05 Waste Management Plan R6 Updated 07 Environmental Risk Assessment R3 Updated 10 – Gas Management Plan R4 Updated 09 – Odour Management Plan R3

Status log of the permit		
Description	**Date**	**Comments**
Additional information received	27/07/2019	Updated Non-Technical Summary R3 Updated Work Instruction 20 – Recording Flare Stack – Incinerator Temperature Data (RE-04-020) Rev 3 Updated 012 – Leak Detection and Repair Plan Rev 2 Updated 10 – Gas Management Plan – R5 Updated 09 – Odour Management Plan – R4 Updated Work Instruction 32 – Operations of Combustion Unit during Well Testing (RE-04-032) Rev 4 Updated 07 Environmental Risk Assessment R4 Updated 05 Waste Management Plan R7 RE-05-EPRA-WN-SP-004-02 Rev 3 230719 As Built Plan 500 Scale
Variation determined EPR/BB3001FT/V003	06/08/2019	Variation granted
Application EPR/BB3001FT/V004	Duly Made 18/02/2020	
Variation determined EPR/BB3001FT/V004	23/04/2020	Variation granted
Application EPR/BB3001FT/V006 (variation and consolidation)	Duly made 18/10/2021	Application to vary the permit including: • Drilling of up to six additional wells; • Drilling of sidetrack wells; • Appraisal testing; • Long term production; • Well treatment and clean up activities; • Burning of gas in natural gas engines.
Response to Schedule 5 Notice dated 11/03/2022	27/05/2022	Updated Waste Management Plan, Site Condition Report, Safety data sheets, Chemical Inventory, Surface Water Management Plan and Hydrogeological Risk Assessment.
	13/06/2022	Updated Noise Impact Assessment.
Response to Schedule 5 Notice dated 21/07/2022	26/08/2022	Updated Environmental Risk Assessment, Chemical Inventory, Surface Water Management Plan and JAGDAG assessment.
Response to request for further information dated 01/09/2022	02/09/2022	Ecological Impact Assessment Rev 2.
	05/09/2022	Information about use of CO_2 for lifting purposes
Response to Schedule 5 Notice dated 18/11/2022	06/01/2023	Updated Chemical Inventory, Surface Water Management Plan and appendices and Waste Gas Management Plan
	25/01/2023	Updated Air Quality Assessment of a wellsite development
Response to request for further information dated 02/03/2023	06/03/2023 10/03/2023	Submission of surface water data.

Status log of the permit		
Description	**Date**	**Comments**
Response to request for further information dated 17/03/2023	27/03/2023	Submission of revised Surface Water Management Plan.
Variation determined and consolidation issued EPR/BB3001FT	23/08/2023	Varied and consolidated permit issued.
Application EPR/BB3001FT/V006	Duly made 18/09/2024	Application for reservoir stimulation activity on existing well WNA-2
EPR/BB3001FT/V006	18/09/2024	Waste Management Plan RE-EPRA-WNA-WMP-005 Revision 10 dated July 2024
Responses to Schedule 5 Notice No 1	12/12/2024	Response dated 20/12/2024 and 10/01/2025 including: • Outer Limits Seismic Hazard Assessment • Central Regional Geo-seismic Cross Section • Surface Water Management System R5 • West Newton A-2 Well, WR11 Application Supporting Statement.
Responses to Schedule 5 Notice No 2	28/02/2025	Response dated 26/03/2025
Responses to Schedule 5 Notice No 3	11/04/2025	Response dated 01/05/2025 and 06/05/2025 including: • Chemical Inventory Revision 5B
Permit determined EPR/BB3001FT	DD/MM/2025	Permit issued to Rathlin Energy (UK) Limited.

Other permits relating to this installation		
Operator	**Permit number**	**Date of issue**
Rathlin Energy (UK) Limited	EPR/PB3030DJ – Radioactive Substance Permit Standard Rules SR2014 no 4 for accumulation and disposal of radioactive (NORM) wastes from oil and gas production.	07/08/2018

End of introductory note.

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies and consolidates

Permit number

EPR/BB3001FT

Issued to

Rathlin Energy (UK) Limited ("the operator"),

whose registered office is

Suite 1, 7th Floor
50 Broadway
London
SW1H 0BL

company registration number 06478035

to operate an installation and a mining waste operation at

West Newton 'A' Well Site
Fosham Road
Marton
Hull
HU11 5DA

to the extent set out in the schedules.

The notice shall take effect from [DD/MM/YYYY]

Name	Date
Principal Permitting Team Leader	**[DD/MM/YYYY]**

Authorised on behalf of the Environment Agency.

Schedule 1

All conditions have been varied by the consolidated permit EPR/BB3001FT/V006 as a result of the application made by the operator.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/BB3001FT

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BB3001FT/V006 authorising,

Rathlin Energy (UK) Limited ("the operator"),

whose registered office is

Suite 1, 7th Floor
50 Broadway
London
SW1H 0BL

company registration number 06478035

to operate an installation and a mining waste operation/a water discharge activity/a groundwater activity] at

West Newton 'A' Well Site
Fosham Road
Marton
Hull
HU11 5DA

to the extent authorised by and subject to the conditions of this permit.

Name	Date
	[DD/MM/YYYY]

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

(a) in accordance with a written management system that identifies and minimises risks of pollution, so far as is practicable, including those risks arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and

(b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of the permit.

1.2 Energy efficiency

1.2.1 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR7) the operator shall:

(a) take appropriate measures to ensure that energy is used efficiently in the activities;

(b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and

(c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR7) the operator shall:

(a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;

(b) maintain records of raw materials and water used in the activities;

(c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and

(d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

1.4.1 The operator shall take appropriate measures to ensure that:

(a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities;

(b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

(c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the "activities").

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.2.2 The groundwater activity (AR9) referenced in schedule 1 table S1.1 shall take place at the discharge point marked on the site plan at schedule 7 to this permit.

2.2.3 The discharge (AR9) shall be made from the wellbore WNA-2 within the Kirkham Abbey Formation as listed in tables S1.1 and S3.3; and the operating techniques that are the subject of conditions prefixed by condition 2.3 shall be applied at the location, or otherwise described, in schedule 7.

2.3 Operating techniques

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

2.3.3 The operator shall:

(a) review the waste management plan at least every five years from the date of initial approval and submit any written revisions to the Environment Agency for approval.

(b) implement the approved waste management plan from the date of approval, unless otherwise agreed in writing by the Environment Agency.

2.3.4 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.5 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

(a) the nature of the process producing the waste;

(b) the composition of the waste;

(c) the handling requirements of the waste;

(d) the hazardous property associated with the waste, if applicable; and

(e) the waste code of the waste.

2.3.6 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

2.5 Pre-operational conditions

2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4A have been completed.

2.5.2 The operations specified in schedule 1 table S1.4B shall not commence until the measures specified in that table have been completed.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3.

3.1.2 The limits given in schedule 3 table S3.1 shall not be exceeded.

3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.2.4 The Operator shall take appropriate measures:

(a) to prevent the input of hazardous substances to groundwater; and

(b) where a non-hazardous pollutant is not controlled by an emission limit, to limit the input of such non-hazardous pollutants to groundwater to ensure that such inputs do not cause pollution of groundwater.

3.3 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

(b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

(b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

(a) point source emissions specified in tables S3.1 and S3.3;

(b) groundwater monitoring specified in table S3.2;

(c) Ambient air monitoring specified in table S3.6; and

(d) Process monitoring specified in table S3.7.

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 The operator shall carry out:

(a) regular calibration, at an appropriate frequency, of systems and equipment provided for carrying out any monitoring and measurements necessary to determine compliance with this permit; and

(b) regular checking, at an appropriate frequency, that such systems and equipment are serviceable and correctly used.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 and S3.3 unless otherwise agreed in writing by the Environment Agency.

3.5.5 If required by the Environment Agency, the operator shall:

(a) take such samples and conduct such measurements, tests, surveys, analyses and calculations, including environmental measurements and assessments, at such times and using such methods and equipment as the Environment Agency may specify; and

(b) keep samples, provide samples, or dispatch samples for tests at a laboratory, as the Environment Agency specifies, and ensure that the samples or residues thereof are collected from the laboratory within three months of receiving written notification that testing and repackaging in accordance with the relevant legislation are complete.

3.5.6 During the extended well test phase, on a monthly basis, or as agreed in writing with the Environment Agency; the Operator shall analyse the flare feed gas as specified in table S3.7. A report of the analysis shall be submitted to the Environment Agency within 28 days of completion of each analysis.

3.5.7 The operator shall by calculation determine the emissions of the substances identified in table S3.1, based on the most recent feed gas composition analysis, feed gas flow rate and combustion efficiency of the flare.

3.5.8 The groundwater monitoring plan specified in Table S1.2, Schedule 1 shall be implemented unless otherwise agreed in writing with the Environment Agency.

3.5.9 Any revised groundwater monitoring plan shall be implemented in place of the original in accordance with the Environment Agency's written approval unless otherwise agreed in writing

4 Information

4.1 Records

4.1.1 All records required to be made by schedules 3, 4 and 5 to this permit shall:

(a) be legible;

(b) be made as soon as reasonably practicable;

(c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

(d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:

(i) off-site environmental effects; and

(ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall maintain convenient access, in either electronic or hard copy, to the records, plans and management system required to be maintained by this permit.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR7) a report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:

(a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;

(b) the annual production /treatment data set out in schedule 4 table S4.2; and

(c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

(a) in respect of the parameters and emission points specified in schedule 4 table S4.1;

(b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and

(c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

4.3.1 In the event:

(a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—

(i) inform the Environment Agency,

(ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and

(iii) take the measures necessary to prevent further possible incidents or accidents;

(b) of a breach of any permit condition the operator must immediately—

(i) inform the Environment Agency, and

(ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;

(c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 The information provided under condition 4.3.1 shall be supported by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

(a) any change in the operator's trading name, registered name or registered office address; and

(b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

(a) any change in the operator's name or address; and

(b) any steps taken with a view to the dissolution of the operator.

In any other case:

(a) the death of any of the named operators (where the operator consists of more than one named individual);

(b) any change in the operator's name(s) or address(es); and

(c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.5 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR7) where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

(a) the Environment Agency shall be notified at least 14 days before making the change; and

(b) the notification shall contain a description of the proposed change in operation.

4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.3.7 Where the operator proposes to make an amendment to the approved waste management plan, which is not otherwise the subject of an application for approval under the Regulations or this permit:

(a) the Environment Agency shall be notified at least 14 days before implementing the amended waste management plan in place of the original; and

(b) the notification shall contain a description of the proposed amendment.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity and WFD Annex I and II operations**	**Limits of specified activity and waste types**
AR1	Schedule 1 Section 1.2 A(1)(e)(i): The loading, unloading, handling or storage of, or the physical, chemical or thermal treatment of crude oil	Production of fluids extracted from the resource formation, separation and storage of products (crude oil) and waste prior to onward transport	From receipt of production fluids at the wellhead to the despatch of products (crude oil) and waste. Oil shall be stored in vessels which are of sufficient strength and structural integrity to ensure that it is unlikely to burst or leak in its ordinary use. Provisions shall be made to minimise the emissions of non methane volatile organic compounds (NMVOC) and methane from the oil storage tank vent. Any water, contaminated with crude oil, which is drained off from the vessel and is not being recycled must be collected for treatment before disposal. Any water collected in the secondary containment (bund) must be sampled and analysed before release to controlled water. If found to be contaminated with crude oil, it must be collected for treatment before disposal. Any road tanker loading systems must be fully contained and the delivery system shall be fitted with dry break couplings. During loading of road tankers, the road tanker shall be back vented to the bulk storage tank or routed to a suitable vent treatment system.
AR2	Schedule 1 Section 5.1 A(1)(a) The incineration of hazardous waste in a waste incineration plant or waste co-incineration plant with a capacity exceeding 10 tonnes per day as listed in Schedule 1 section 5.1 A(1)(a) of the EP Regulations	Flaring of waste gas, from onshore oil and gas exploration, appraisal and production activities.	Limited to flaring of waste gas, from onshore oil and gas exploration and appraisal activities, produced from well testing activities in accordance with the approved Waste Gas Management Plan RE-EPRA-WNA-WGMP-010 Rev 7, dated 11/2022. For well clean up a PW well test shrouded ground flare may be used. For the extended well testing the high efficiency, lower emission burner CEB enclosed flare shall be used. During the production phase disposal of waste gas is not permitted by flaring other than for emergency or maintenance purposes only.

Directly Associated Activity			
AR3	New Medium Combustion Plant - Schedule 25A: Use of produced gas in gas engines to produce electricity	Combustion of produced gas in up to four spark ignition engines with a rated thermal input of 9.7 MWth each	From the receipt of produced gas to the despatch of waste combustion gases
AR4	Storage of additional raw materials.	Raw materials directly associated with the production of crude oil.	From receipt of raw materials to the despatch for use.
AR5	Oil fired bath heaters	Use of up to two oil fired bath heaters with a rated thermal input of <1MWth	Use of up to two oil fired bath heaters for oil/water separation and hot oil washing
AR6	Diesel generator for on-site electricity supply	Use of diesel generator with a rated thermal input of <1MW	From the receipt of diesel to the despatch of waste combustion gases.
AR7	Discharge of rainfall dependent surface water run off via Outlet 1		The discharge shall be made via a Class 1 SPEL oil-water separator designed, manufactured and maintained according to European Standard BS EN 858-1 to surface water. The discharge shall be managed as described in the Surface Water Management Plan RE-EPRA-WNA-SWMP-013 Revision 5 dated 27/11/2023 referenced in table S1.2.
Description of activities for waste operations			**Limits of activities**
AR8	A mining waste operation for the management of-extractive waste including gas from prospecting for mineral resources, not involving a waste facility. The management of extractive waste generated by well abandonment The management of extractive waste generated by drilling, production, well workover and maintenance, and well decommissioning, abandonment and permanent deposit in-situ of well stimulation fluids.		Permitted waste types shall conform to the description in the approved waste management plan. The activities shall be limited to those described in the approved Waste Management Plan referenced RE-EPRA-WNA-WMP-005 Rev 10, dated July 2024. Drilling additives shall be approved in writing by the Environment Agency prior to use. The activities shall be limited to the management of waste arising from the prospecting for oil and/or gas. Well stimulation, other than by hydrocarbon based stimulation of well WNA-2 authorised under activity AR9 and subject to POM 5 is not permitted.
	Description of activity for Groundwater		**Limits of specified activity**

AR9	The discharge of hydrocarbon based stimulation fluid to ground via production borehole at West Newton A Wellsite, well WNA-2 Subject to pre-operational condition POM 5 in Table S1.4	The discharge of hydrocarbon based stimulation fluid to ground via well WNA-2 production borehole for operations for the extraction of hydrocarbons to stimulate oil production in the Kirkham Abbey Formation The target formation for the hydrocarbon based well stimulation is the Kirkham Abbey Formation. The activities shall be limited to those described in the approved Waste Management Plan referenced RE-EPRA-WNA-WMP-005 Rev 10, dated July 2024. Stimulation fluids shall be approved in writing by the Environment Agency prior to use.

Table S1.2 Operating techniques

Description	Parts	Date Received
Site plans RE-05-EPRA-WN-SP-004, dated 05/2023	All	15/05/2023
Waste Gas Management Plan RE-EPRA-WNA-WGMP-010 Rev 7, dated 11/2022.	All	06/01/2023
Environmental Risk Assessment RE-05-EPRA-WN-ERA-007 Rev 7, dated 08/2022	All	26/08/2022
Air quality assessment of a wellsite development, dated 05/2021	All	15/07/2021
West Newton Well site Groundwater Management Plan Exploration Operations RE-05-EPRA-WN-GWMP-010 Rev 2	All	17/04/2014
Environmental Management System Policy Manual RE-02-002	All	30/01/2014
Air Quality Monitoring Plan: Rathlin Energy West Newton Site, Rev: 0, Date 20 June 2014	All	20/06/2014
Work Instruction 21 – Management Procedures for Scrubber Reactants (RE-04-021) Rev 4 – Addendum 1	All	18/02/2020
Vapour Recovery Plan R2 – Addendum 1	All	18/02/2020
Work Instruction 20 – Recording Flare Stack – Incinerator Temperature Data (RE-04-020) Rev 3	All	27/07/2019
Work Instruction 32 – Operations of Combustion Unit during Well Testing (RE-04-032) Rev-4 – Addendum 1	All	18/02/2020
Work Instruction 34 – Purging of Well Test Equipment Procedure (RE04-034)	All	10/06/2019
Work Instruction 35 – Capping Procedure (RE-04-035)	All	10/06/2019
Leak Detection and Repair Plan Revision 2	All	27/07/2019

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Noise Impact Assessment JAT2106REPT-03-R5-Rathlin-WNA, dated 06/2021; and Addendum JAT2106-REPT-04-R1 dated 09/2021	All	15/07/2021 and 13/06/2022
Hydrogeological and Flood Risk Assessment West Newton A Exploration, Appraisal and Production Development Ref: P19-035 Rathlin WN Field Dev\RPT HRA WNA June 2021	All	27/05/2022
Surface Water Management Plan RE-EPRA-WNA-SWMP-013 Revision 5 dated 27/11/2023	All	27/11/2023
Odour Management Plan RE-EPRA-WNA-OMP-009 Rev 7	All	25/07/2024
Hydrogeological Risk Assessment Technical Addendum ref: 3490933: West Newton A wellsite. WNA-2 reservoir stimulation HRA REV01 dated July 2024	All	25/07/2024
Site Plans RE-EPRA-WNA-SP-004 Revision 0 dated July 2024	All	25/07/2024
Waste Management Plan referenced RE-EPRA-WNA-WMP-005 Rev 10 dated July 2024	All	25/07/2024
Site Condition Report, RE-EPRA-WNA-SCR-006 Revision 5 dated July 2024	All	25/07/2024
West Newton A-2 Well WR11 Application Supporting Statement RE-05-EPRAWNA-2-WR11 Rev.0	All	20/12/2024
Chemical Inventory RE-EPRA-WNA-CI-008 Revision 5B dated May 2025	All	06/05/2025

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC 1 Leak Detection	The operator shall submit a written 'leak detection and repair plan', and associated procedures and shall obtain the Environment Agency's written approval to it. The plan will identify, measure and reduce emissions of volatile organic compounds and other substances to air, appropriate to their operations and in accordance with European standard EN15446 or an equivalent standard. The plan shall be implemented in accordance with the Environment Agency's written approval.	6 months from start of production activities
IC 2 Management System	The operator shall review and update the written management system (referred to in condition 1.1.1) to ensure the procedures are in place to meet the requirements resulting from the variation of this permit. In particular the review should ensure that the following points are included in the management system: The procedure for notifying the Environment Agency on each occasion where uncombusted natural gas is vented to atmosphere for safety purposes. Notification to include, but not limited to: reasons for, duration of and quantity of gas vented. The procedure for providing emergency flare capacity in the event that primary flare / gas management processes are unavailable / if venting likely to continue for more than 24 hours	6 months from start of production activities
IC 3 Gas Management	The operator shall carry out analysis of the gas produced during appraisal and testing to determine its mercury content. If mercury is present in the gas the operator shall assess the impact on emissions to air from flaring and venting in line with our H1 risk screening tool and submit a report for the Environment Agency approval.	3 months from start of appraisal testing phase
IC 4 Containment	The operator shall submit a written 'secondary and tertiary containment plan' and shall obtain the Environment Agency's written approval to it. The plan shall contain the results of a review conducted, by a competent person, in accordance with the methodology detailed within CIRIA C736 (2014), of the condition and extent of secondary and tertiary containment systems where all polluting liquids and solids are being stored, treated, and/or handled. This review should consider, but is not limited to, the storage vessels, separators, bath heaters, bunds, loading and unloading areas, transfer pipework/pumps, temporary storage areas, and liners underlying the site. The plan must contain dates for the implementation of individual improvement measures necessary for the secondary and tertiary containment systems to adhere to the standards detailed/referenced within CIRIA C736 (2014), or equivalent. The plan shall be implemented in accordance with the Environment Agency's written approval.	3 months prior to start of AR9 or by XX/XX/XX (input date 1 yr from variation issue), whichever is sooner

Table S1.4A Pre-operational measures	
Reference	**Operation**
POM 1 Completed	The Operator shall submit for approval by the Environment Agency details of the proposed location, depth and construction of the required monitoring boreholes for groundwater quality sampling at least four weeks prior to the commencement of the permitted activities and have obtained the written approval to the details by the Environment Agency.
POM 2 Completed	At least 2 weeks before the commencement of permitted activities the operator shall submit to the Environment Agency a report that details the as built monitoring borehole designs and describes the baseline groundwater quality sampling for the site. The chemical sampling suite presented in Table S3.2 of this permit shall be used for the baseline groundwater quality sampling programme.
POM 3 Completed	At least 2 weeks prior to operation the operator shall submit to the Environment Agency for approval the following information in relation to the operation of the flare: • The design combustion efficiency of the flare across the expected feed gas flow range. • The design temperature in the combustion chamber at which the combustion efficiency specified in (i) above will be achieved. • Details of the continuous monitoring methods to be employed for measuring the flare temperature and flare feed gas flowrate. • Control measures to ensure that the design flare temperature is maintained.
POM 4 Completed	At least 4 weeks prior to commencement of the gas flaring activity the operator shall submit to the Environment Agency for approval details of the ambient air monitoring programme that they will undertake before, during and after the period of gas flaring.
POM 5	At least 3 months prior to commencement of activities referenced AR9 in Table S1.1 the Operator shall submit to the Environment Agency for approval a written Hydraulic Fracturing Plan and obtain both the North Sea Transition Authority (NSTA) and the Environment Agency's written approval to it. The plan must include: • a map showing faults near the well and along the well path, with a summary assessment of faulting and formation stresses in the area and the risk that the operations could reactivate existing faults; • information on the historical seismicity and assessment of the risk of induced seismicity; • summary of the planned operations, including stages, pumping pressures and volumes; • the processes and procedures that will be put in place before or during hydraulic fracturing to identify the vertical and horizontal extents of the fractures within the target formation and ensure that they are not near the permitted boundary; • in the event that the fractures extend beyond the permit boundary, the steps that would be taken to assess and if necessary mitigate the effect and limit further propagation outside the target rocks; • a comparison of proposed activity to any previous operations and relationship to historical seismicity; • proposed measures to monitor local seismicity during the operations; • proposed reporting during hydraulic fracturing and your proposals for post fracturing reporting of the location, orientation and extent of the induced fractures to demonstrate that the permit has been complied with.

Table S1.4B Pre-operational measures for future development		
Reference	**Operation**	**Pre-operational measures**
PO1	Commencement of activities on extension of wellsite area for production phase under EPR/BB3001FT/V005	At least 3 months prior to construction of the well extension area for production as shown in Figure 3 in Schedule 7, the operator shall submit a written 'secondary and tertiary containment plan' and shall obtain the Environment Agency's written approval to it. The plan shall contain the results of a review conducted, by a competent person, (qualified structural engineer) in accordance with the methodology detailed within CIRIA C736 (2014), of the proposed secondary and tertiary containment systems where all polluting liquids and solids are being stored, treated, and/or handled. This review should consider, but is not limited to, the storage vessels, separators, bath heaters, bunds, loading and unloading areas, transfer pipework/pumps, temporary storage areas, and liners underlying the site. The written 'secondary and tertiary containment plan' shall propose secondary containment systems to meet Class 2 standard or higher for the storage vessels, separators, bath heaters, bunds, loading and unloading areas, and transfer pipework/pumps. The plan shall be implemented in accordance with the Environment Agency's written approval.
PO2	Installation of gas engines on site and gas utilisation	Prior to the installation of gas engines on site as part of the production phase, the operator shall submit the final configuration to the Environment Agency in writing for approval including details of: • Final number, size and specification • Updated layout plan • Confirmation that specifications for both air quality and noise are no worse that specified in the wellsite extension application, providing an updated air quality and noise impact assessment based on the proposed engine design/configuration. • Confirmation of the flare details for maintenance and emergency situations during production operations • Confirmation that the specification is in line with the Gas management plan in table S1.2 and represents BAT for gas management and utilisation at the site. • An updated odour management plan to reflect any changes.

Schedule 2 – Waste types, raw materials and fuels

The disposal or recovery of non-extractive wastes are not permitted activities and there are no restrictions on raw materials or fuels under this schedule.

Schedule 3 – Emissions and monitoring

Table S3.1 point source emissions to air – emission limits and monitoring requirements					
Emission point ref. and location	**Source**	**Parameter**	**Limit (including unit)**	**Monitoring frequency**	**Monitoring standard or method (Note1)**
Appraisal testing phase - Figure 2 in Schedule 7					
A1: Gas flare as shown in Indicative well appraisal/testing layout plan in Schedule 7 (Note 4)	Enclosed gas flare (Well testing)	Oxides of nitrogen	150mg/m3 (Note 3)	Once during the well testing programme	As specified in LFTGN05 Monitoring enclosed landfill gas flares: LFTGN 05 - GOV.UK (www.gov.uk) or as otherwise agreed in writing with the Environment Agency
		Carbon monoxide	50mg/m3 (Note 3)	Once during the well testing programme	
		Total volatile organic compounds (VOCs)	10mg/m3 (Note 3)	Once during the well testing programme	
		Flare gas feed rate	No limit set	Continuous	
		Flare temperature	>800˚C (Note 2)	Continuous	
A2: Gas flare as shown in Indicative well appraisal/testing layout plan in Schedule 7 (Note 4)	Shrouded flare or enclosed gas flare (well clean-up operations only)	Oxides of nitrogen	No limit set	Monthly	By calculation in accordance with condition 3.5.7
		Carbon monoxide	No limit set	Monthly	By calculation in accordance with condition 3.5.7
		Total volatile organic compounds (VOCs)	No limit set	Monthly	By calculation in accordance with condition 3.5.7
		Flare gas feed rate	No limit set	Continuous	Note 1

Table S3.1 point source emissions to air – emission limits and monitoring requirements					
Emission point ref. and location	**Source**	**Parameter**	**Limit (including unit)**	**Monitoring frequency**	**Monitoring standard or method (Note1)**
		Flare temperature	>800˚C (Note 2)	Continuous	
A3-A5: Crude Oil Storage –Stock Tanks as shown in Indicative well appraisal/testing layout plan in Schedule 7	Stock Tank vents	Gas vented	None set	Monthly	By calculation to determine the quantity of gas vented over the reference
Production phase – Figure 3 in Schedule 7					
A6: Gas flare as shown in Indicative production phase layout plan in Schedule 7 (Note 4)	Enclosed gas flare (emergency and maintenance only during production only)	Oxides of nitrogen	150mg/m3 (Note 3)	Annually	As specified in LFTGN05 Monitoring enclosed landfill gas flares: LFTGN 05 - GOV.UK (www.gov.uk) or as otherwise agreed in writing with the Environment Agency
		Carbon monoxide	50mg/m3 (Note 3)	Annually	
		Total volatile organic compounds (VOCs)	10mg/m3 (Note 3)	Annually	
		Flare gas feed rate	No limit set	Continuous	As approved in writing with the Environment Agency
		Flare temperature	>800˚C (Note 2)	Continuous	As approved in writing with the Environment Agency

Table S3.1 point source emissions to air – emission limits and monitoring requirements					
Emission point ref. and location	**Source**	**Parameter**	**Limit (including unit)**	**Monitoring frequency**	**Monitoring standard or method (Note1)**
A7- A12 and A13-A15: Crude Oil/ produced water Storage Stock Tanks as shown in Indicative production phase layout plan in Schedule 7	Crude Oil and produced water Stock Tank vents	Gas vented	None set	Monthly	By calculation to determine the quantity of gas vented over the reference period
A16: Diesel generator for on site electricity supply as shown in Indicative production phase layout plan in Schedule 7	<1MWth diesel generator exhaust	Combustion exhaust gases	-	-	-
A17: Oil fired bath heater as shown in Indicative production phase layout plan in Schedule 7	<1MWth Oil fired bath heater	Combustion exhaust gases	-	-	-
A18: Oil fired bath heater as shown in Indicative production phase layout plan in Schedule 7	<1MWth Oil fired bath heater	Combustion exhaust gases	-	-	-
A19 – A22: Gas engines as shown in Indicative production phase layout plan in Schedule 7	New Medium Combustion Plant spark ignition gas engines 4 X 9.7 MWth (Note 3)	Oxides of nitrogen	95 mg/Nm^3 (Note 3)	Annually	BS EN 14792
		Carbon monoxide	519 mg/Nm^3 (Note 3)		BS EN 15058
		Total volatile organic compounds (VOCs)	371 mg/Nm^3 (Note 3)		BS EN 12619

Table S3.1 point source emissions to air – emission limits and monitoring requirements					
Emission point ref. and location	**Source**	**Parameter**	**Limit (including unit)**	**Monitoring frequency**	**Monitoring standard or method (Note1)**
		Engine gas feed flow rate	-	Continuous	As approved in writing with the Environment Agency
		Sulphur Dioxide (Note 5)	15mg/Nm^3 (Note 3) (Note 5)	Annually	BS EN 14791 or CEN TS 17021

Note 1: As reported in response to condition 2.4.1 and Schedule 1, table S1.3, 'West Newton Wellsite Ground Flare Justification Exploratory Operations RE-05-EPRA-WN-GFJ-012 Rev2'

Note 2: Flare temperature to be within operating range specified for the Aereon enclosed flare in 'Recording Flare Stack / Incinerator Temperature Data Work Instruction' reference RE-04-020 Revision 3

Note 3: Monitoring requirements are defined at a temperature of 273.15 K, a pressure of 101.3 kPa and after correction for the water vapour content of the waste gases at a standardised O_2 content of 15% for engines and gas turbines and 3% for flares and all other MCPs.

Note 4: Monitoring required for flares operating >10% of calendar year i.e. 876 hours / 36.5 days.

Note 5: Monitoring not required and limit not applicable if the hydrogen sulphide and total sulphur content of the feed gas is less than or equal to 5mg/m^3 and 50mg/m^3 respectively based on feed gas analysis as required in Table S3.7.

Table S3.2 Groundwater monitoring requirements				
Location or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
GWBH1 and GWBH2 as shown in Site Layout Plan (Drawing ref: ZG-RE-WNAEXT-PROD-EPR-005, May 2023)	Mercury and its compounds expressed as mercury (Total Hg)	Prior to commencement of any operations: sample once every 4 weeks; During periods of testing: sample once every 4 weeks, with first sample collected on eve of testing Outside of testing: sample once every three months	As approved in writing by the Environment Agency	-
	Cadmium and its compounds expressed as cadmium (Total Cd)			
	pH			
	BOD			
	Inorganic determinants: Turbidity, pH, Total Suspended Solids, Alkalinity, Hardness, Sulphate, Chloride, Nitrate, Calcium, Magnesium and Potassium			
	Organic determinants: BTEX including MTBE by GC/MS, Total petroleum hydrocarbons (speciated TPH Working Group criteria (UK) aromatic and aliphatic banding) Methane			

Table S3.3 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Effluent(s) and discharge point(s)	**Parameter**	**Limit (inc. unit)**	**Ref. Period**	**Limit of effective range**	**Monitoring frequency**	**Compliance statistic**
W1: Discharge to surface water of trade effluent consisting of rainfall dependent surface water run off via Outlet 1 as shown in site plans in Schedule 7	In accordance with the Surface Water Management Plan RE-EPRA-WNA-SWMP-013 Rev.5 dated 27/11/2023 referenced in table S1.2.					
AR9 The injection of well stimulation fluid for production of hydrocarbons to ground via Well WNA-2	Maximum daily discharge volume	85m^3	Total volume for the injectivity tests and single hydraulic well stimulation operation	N/A	Continuous	Maximum
	Maximum rate of discharge	<5m^3/min pump rate	Instantaneous (spot sample	N/A	N/A	Maximum
	15-minute instantaneous or averaged flow	No limit set. Record as l/s	Spot sample	N/A	Continuous	N/A
	Surface injection pressure	9000 psi	Instantaneous (spot sample)	N/A	N/A	N/A

Table S3.4 Discharge points			
Effluent Name	**Discharge Point**	**Discharge point NGR**	**Receiving water/Environment**
Trade effluent consisting of rainfall dependent surface water run off	Discharge Point W1 - Outlet 1	TA 19221 39198	Lambwath stream
AR9 Well stimulation fluid for production of hydrocarbons	Perforations in the West Newton A WNA-2 borehole within the Kirkham Abbey Formation at 1679m - 1724m True Vertical Depth Subsea.	TA 19271 39160 at surface and TA 19428 39235 at top of Kirkham Abbey Formation	Groundwater through perforations in the existing WNA-2 borehole constructed in the Kirkham Abbey Formation

Table S3.5 Surface Water Monitoring points		
Monitoring point reference (Note 1)	**Monitoring type**	**Monitoring point NGR**
Holding Tank No. 1 Drilling area sample point	Surface water sampling	TA1924239176
Holding Tank No. 2 Drilling area sample point		TA1924239172
Drilling area perimeter containment ditch		TA1923639168
Production area perimeter containment ditch		TA1936339192
Discharge Point - Outlet 1		TA1923839196
Lambwath stream (upstream)		TA1954539729
Lambwath stream (downstream)		TA1890839670
Note 1 - Monitoring to be carried out in accordance with Surface Water Management Plan RE-EPRA-WNA-SWMP-013 Revision 5 dated 27/11/2023 referenced in table S1.2.		

Table S3.6 Ambient air monitoring requirements				
Location or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
As provided in the Air Quality Monitoring Plan: Rathlin Energy West Newton Site, Rev: 0, Dated 20 June 2014 as specified within table S1.2	Nitrogen Dioxide Sulphur Dioxide Methane Carbon Monoxide Non-methane volatile organic compounds (BTEX, Top 10 VOCs, Total VOCs)	Monthly Weekly during flare operation	As specified in the Air Quality Monitoring Plan: Rathlin Energy West Newton Site, Rev: 0, Date 20 June 2014	

Table S3.7 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Flare feed gas during extended well test	Methane Non-methane VOCs Total hydrocarbons C2 to C6 Total hydrocarbons C7+	Monthly or as approved in writing by the Environment Agency	As specified in Appendix 3 of LFTGN 546_11 LFTGN04 Guidance for monitoring trace components in landfill gas (publishing.service.gov.uk) or as otherwise agreed in writing with the Environment Agency	Units Mol%
	Benzene			Unit µg/m3 (limit of detection <30 µg/m3)
	Hydrogen sulphide			Unit µg/m3 (limit of detection <150 µg/m3)
	Total sulphur			Unit µg/m3 (limit of detection <150 µg/m3)
	Total mercaptans			Unit µg/m3 (limit of detection <150 µg/m3)
	Speciated mercaptans specifically: Ethanethiol Methanethiol 1-butanethiol 1-propanethiol 1-pentanethiol			Units µg/m3 (limit of detection <150 µg/m3)
	Total chlorinated compounds as Cl			Unit µg/m3 (limit of detection <110 µg/m3)
	Total fluorinated compounds as F			Unit µg/m3 (limit of detection <110 µg/m3)
	Total mercury (as Hg)			Unit µg/m3 (limit of detection <0.5 µg/m3)
	Carbon monoxide			Unit Mol%
	Carbon dioxide			Unit Mol%
	Nitrogen			Unit Mol%

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Point source emissions to air Parameters as required by condition 3.5.1	A1 to A22 as in table S3.1	Every month during well drilling, clean-up and testing Every 3 months during production phase	1 January
Groundwater monitoring Parameters as required by condition 3.5.1	GWBH1 and GWBH2 as in table S3.2	As set out in Table S3.2 under monitoring frequency	1 January
Point source emissions to water (other than sewer) Parameters as required by condition 3.5.1	W1: Outlet 1 as in table S3.3	Every 3 months	
Surface water monitoring parameters as listed in table S1.2 - Surface Water Management Plan RE-EPRA-WNA-SWMP-013 Revision 5 dated 27/11/2023	Monitoring points as in table S3.5	Every 3 months	1 January, 1 April, 1 July, 1 October
Ambient air monitoring Parameters as required by condition 3.5.1	According to the ambient monitoring sampling plan as specified in tables S1.2 and S3.6	Every month during well drilling, clean-up and testing Every 12 months during production phase	1 January
Process monitoring Parameters as required by condition 3.5.1	Flare feed gas	Every 3 months	1 January, 1 April, 1 July, 1 October
Total discharge volume of well stimulation fluid in Table S3.3	Flow monitoring points	2 weeks after completion of the well stimulation process	On completion of works

Table S4.2 Annual production/treatment	
Parameter	**Units**
Natural gas flared	Tonnes or m^3
Crude oil production	Tonnes
Natural gas production	Tonnes or m^3
Electricity generated	MWh
Average water cut	% production
Average gas to oil ratio	Scf / bbl

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Energy usage	Annually	MWh
Electricity exported	Annually	MWh
Flare operation	Annually	hours
Gas engine usage	Annually	hours
Natural gas vented	Annually	Tonnes or m^3

Table S4.4 Reporting forms		
Parameter	**Reporting form**	**Form version number and date**
Point source emissions to air	Emissions to Air Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 23/08/2023
Point source emissions to water (other than sewer)	Emissions to Water Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 23/08/2023
Surface water and groundwater monitoring	Surface Water and Groundwater Monitoring Form, or other form as agreed in writing by the Environment Agency	Version 1, 23/08/2023
Ambient air monitoring	Ambient Air Monitoring Form, or other form as agreed in writing by the Environment Agency	Version 1, 23/08/2023
Process monitoring	Process Monitoring Form, or other form as agreed in writing by the Environment Agency	Version 1, 23/08/2023
Water usage	Water Usage Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 23/08/2023
Energy usage	Energy Usage Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 23/08/2023
Other performance parameters	Other Performance Parameters Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 23/08/2023

Schedule 5 – Notification

These pages outline the information that the operator must provide.

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

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

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	**Notification period**

(c) Notification requirements for the breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

(d) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	

Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“approved waste management plan” means a plan of the type described in Article 5(1) of Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and amending Directive 2004/35/EC, approved as part of the grant or variation of an environmental permit and as revised from time to time.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“Competent Authority” means, in relation to –

(a) London, the London Fire and Emergency Planning Authority;

(b) an area where there is a fire and civil defence authority, that authority;

(c) the Isles of Scilly, the Council of the Isles of Scilly;

(d) an area in the rest of England, the county council for that area, or where there is no county council for that area, the district council for that area;

“disposal” means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission limit.

“extractive waste” means waste resulting from the prospecting, extraction, treatment and storage of mineral resources and the working of quarries, excluding waste which does not directly result from these operations.

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

“Hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended).

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“List of Wastes” means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“Medium Combustion Plant” or ”MCP” means a combustion plant with a rated thermal input equal to or greater than 1 MW but less than 50 MW.

“Medium Combustion Plant Directive” or “MCPD” means Directive 2015/2193/EU of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from medium combustion plants, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“mining waste facility” means a waste facility as defined in Article 3(15) of Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and amending Directive 2004/35/EC, where a mining waste operation is carried out.

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“stimulation fluid” is a mixture of water, proppants (like sand) and hydrocarbon based fluids that can be injected into a wellbore at high pressure to improve the efficiency of the flow of fluids through the reservoir rock and into the well.

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes and in relation to hazardous waste, includes the asterisk.

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“year” means calendar year ending 31 December.

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

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels other than gas engines or gas turbines, 6% dry for solid fuels; and/or

1. in relation to emissions from gas engines or gas turbines, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 15% dry for liquid and gaseous fuels; and/or
2. in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

Schedule 7 - Site plan

Figure 1: General Site location plan

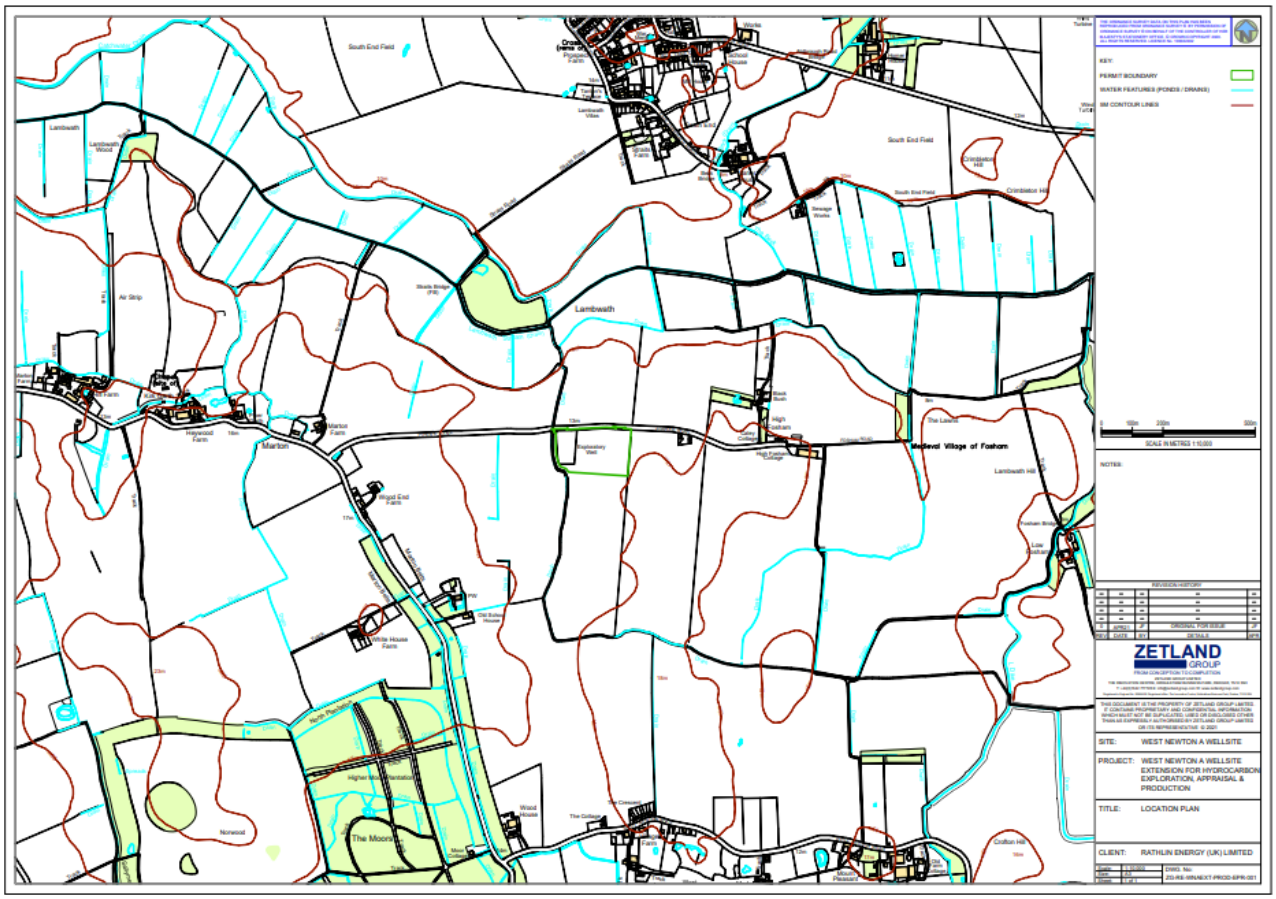


Figure 2: Indicative layout – appraisal/ testing layout with air emission points (PSE)

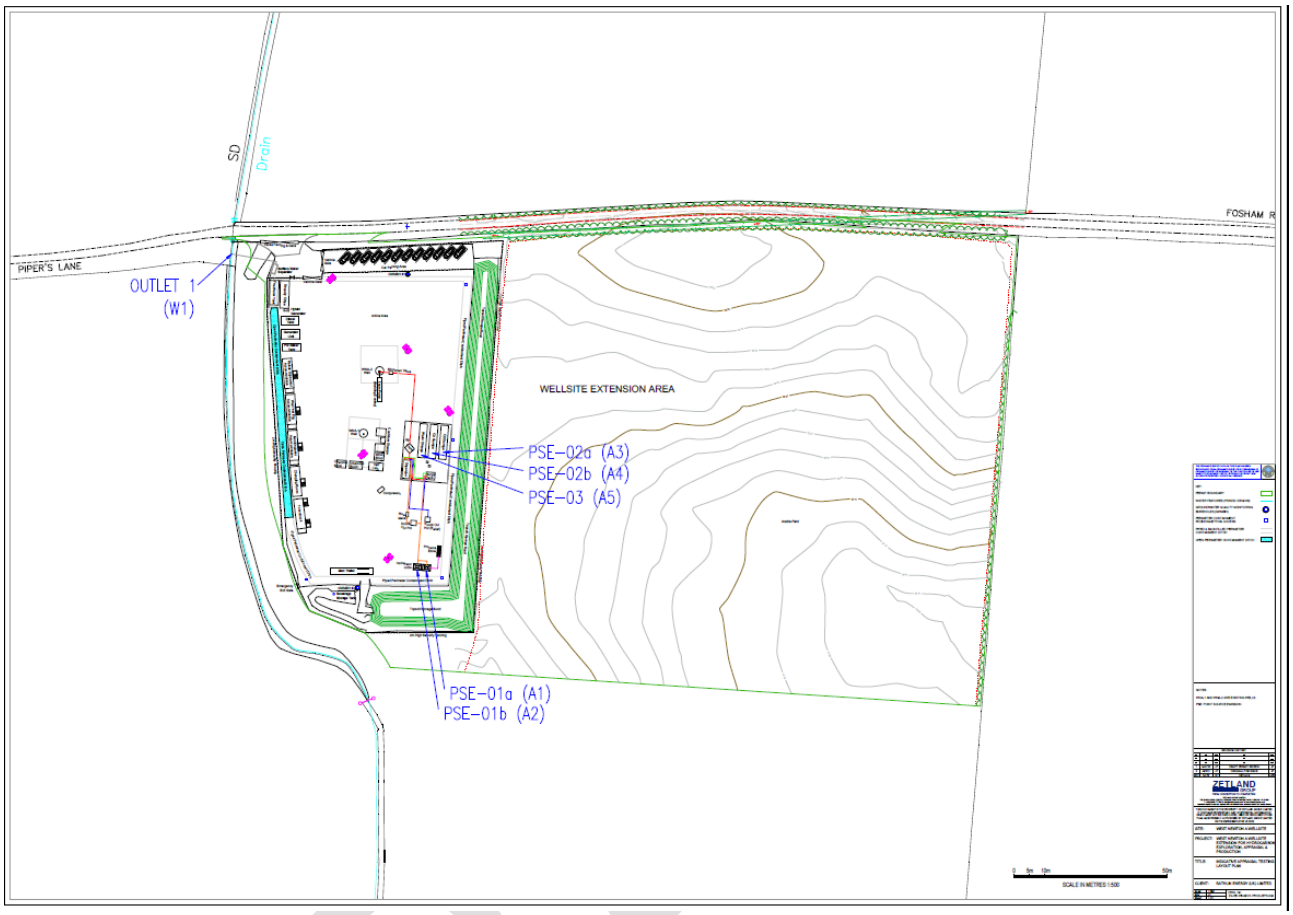


Figure 3: Indicative layout production phase with air emission points (PSE)

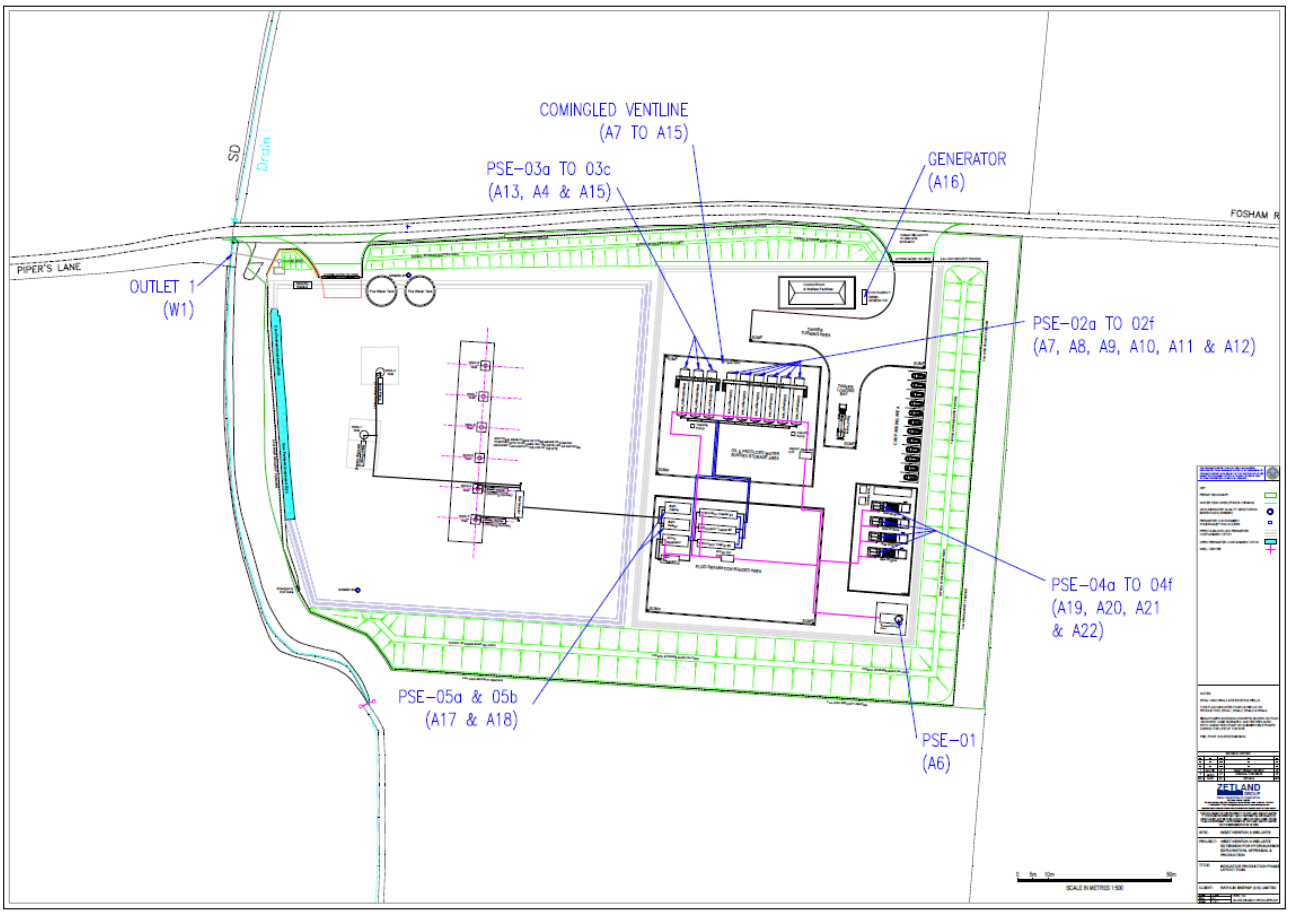


Figure 4: Extent of Mining Waste Facility Plan

DWG. No: ZG-RE-WNAEXT-PROD-EPR-011 Dated July 2024

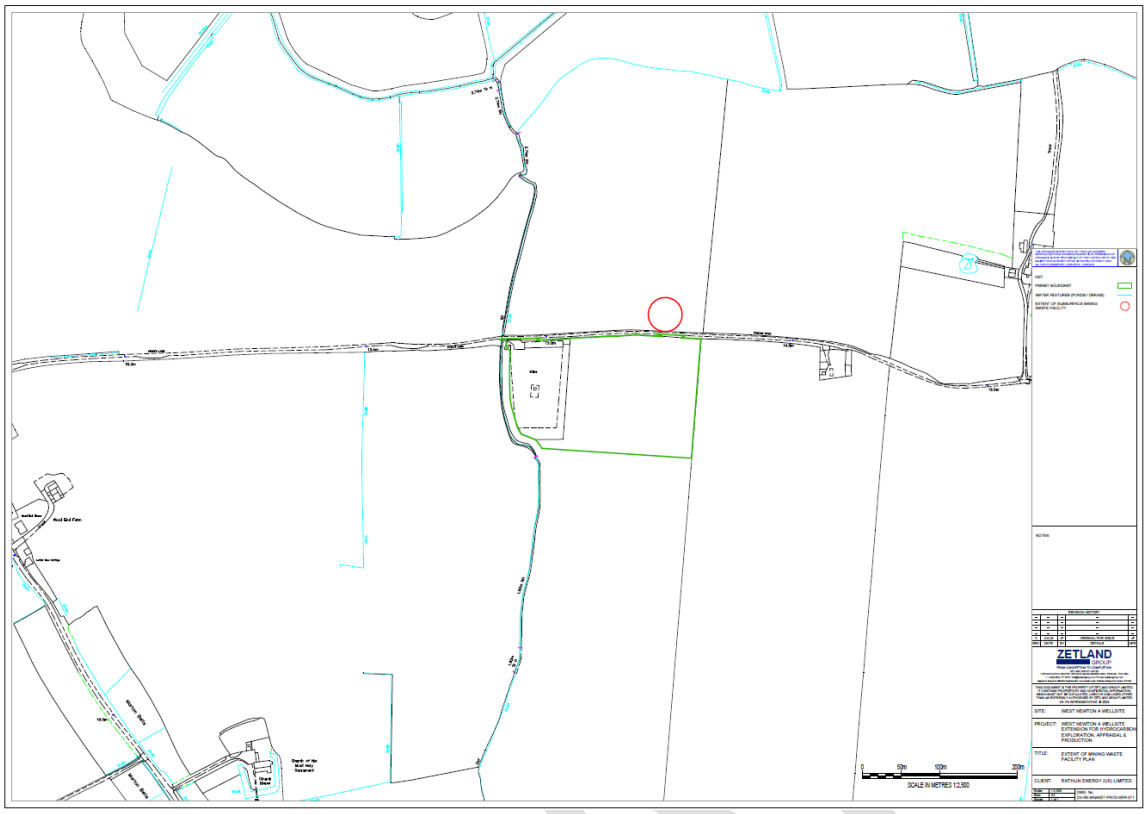
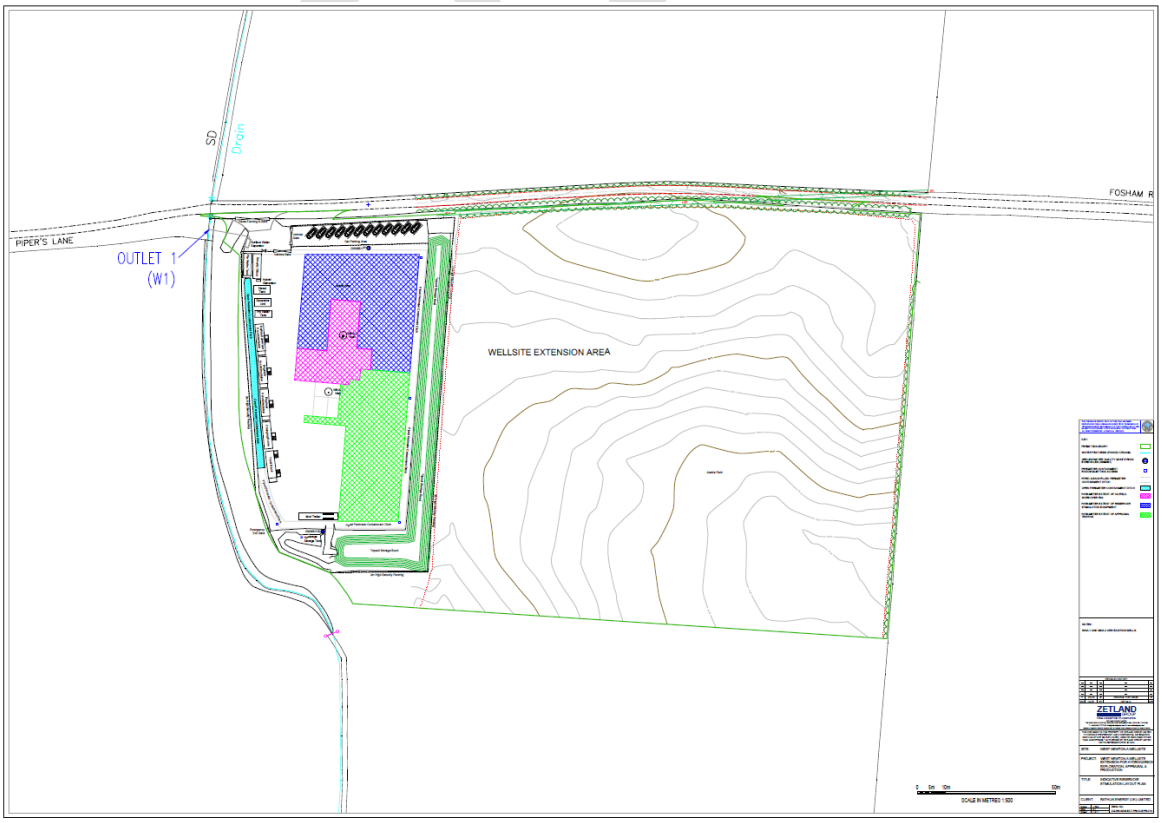


Figure 5: Indicative Reservoir Stimulation Layout Plan

DWG. No: ZG-RE-WNAEXT-PROD-EPR-010 dated July 2024



END OF PERMIT

Emissions to Air Reporting Form

Permit number: EPR/BB3001FT

Operator: Rathlin Energy (UK) Ltd

Facility name: West Newton A Well Site

Emissions to Air Reporting Form: Version 1, 23/08/2023

Reporting of emissions to air for the period from *[DD/MM/YY]* to *[DD/MM/YY]*

Emission point	Substance / parameter	Emission Limit Value	Reference period	Test method [1]	Result [2]	Sample dates and times [3]	Uncertainty [4]

Signed: *[Name]*

Date: *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your monitoring results.

Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Complete columns 1 to 5 using the information from schedule 3 of your permit. Complete columns 6 to 8 with your monitoring data. Add additional rows as necessary.

[1] Where an internationally recognised standard test method is used, give the reference number. Where another method that has been formally agreed with the Environment Agency, give the appropriate identifier. In other cases state the principal technique, for example gas chromatography.
[2] Give the result as the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, give the result as the 'minimum to maximum' of the measured values.
[3] For non-continuous measurements give the date and time of the sample that produced the result. For continuous measurements give the percentage of the process operating time covered by the result.
[4] Complete if the uncertainty associated with the result is not a 95% confidence interval. Leave blank for 95% confidence intervals.

Emissions to Water Reporting Form

Permit number: EPR/BB3001FT **Operator:** Rathlin Energy (UK) Ltd

Facility name: West Newton A Well Site **Emissions to Water Reporting Form:** Version 1, 23/08/2023

Reporting of emissions to water (other than to sewer) for the period from *[DD/MM/YY]* to *[DD/MM/YY]*

Emission point	Substance / parameter	Emission Limit Value	Reference period	Test method [1]	Result [2]	Sample dates and times [3]	Uncertainty [4]

Signed: *[Name]* **Date:** *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your monitoring results.
Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Complete columns 1 to 5 using the information from schedule 3 of your permit. Complete columns 6 to 8 with your monitoring data. Add additional rows as necessary.

[1] Where an internationally recognised standard test method is used, give the reference number. Where another method that has been formally agreed with the Environment Agency, give the appropriate identifier. In other cases state the principal technique, for example gas chromatography.
[2] Give the result as the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, give the result as the 'minimum to maximum' of the measured values.
[3] For non-continuous measurements give the date and time of the sample that produced the result. For continuous measurements give the percentage of the process operating time covered by the result.
[4] Complete if the uncertainty associated with the result is not a 95% confidence interval. Leave blank for 95% confidence intervals.

Surface Water and/or Groundwater Monitoring Form

Permit number: EPR/BB3001FT

Operator: Rathlin Energy (UK) Ltd

Facility name: West Newton A Well Site

Surface Water and/or Groundwater Monitoring Form: Version 1, 23/08/2023

Reporting of surface water and/or groundwater monitoring for the period from *[DD/MM/YY]* to *[DD/MM/YY]*

Monitoring point	Substance / parameter	Trigger level	Reference period	Test method [1]	Result [2]	Sample dates and times [3]	Uncertainty [4]

Signed: *[Name]*

Date: *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your monitoring results.
Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Complete columns 1 to 5 using the information from schedule 3 of your permit. Complete columns 6 to 8 with your monitoring data. Add additional rows as necessary.

[1] Where an internationally recognised standard test method is used, give the reference number. Where another method that has been formally agreed with the Environment Agency, give the appropriate identifier. In other cases state the principal technique, for example gas chromatography.
[2] Give the result as the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, give the result as the 'minimum to maximum' of the measured values.
[3] For non-continuous measurements give the date and time of the sample that produced the result. For continuous measurements give the percentage of the process operating time covered by the result.
[4] Complete if the uncertainty associated with the result is not a 95% confidence interval. Leave blank for 95% confidence intervals.

Ambient Air Monitoring Form

Permit number: EPR/BB3001FT **Operator:** Rathlin Energy (UK) Ltd

Facility name: West Newton A Well Site **Ambient Air Monitoring Form:** Version 1, 23/08/2023

Reporting of monitoring ambient air for the period from *[DD/MM/YY]* to *[DD/MM/YY]*

Monitoring point	Substance / parameter	Compliance limit	Reference period	Test method [1]	Result [2]	Sample dates and times [3]	Uncertainty [4]

Signed: *[Name]* **Date:** *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your monitoring results.
Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Complete columns 1 to 5 using the information from schedule 3 of your permit. Complete columns 6 to 8 with your monitoring data. Add additional rows as necessary.

[1] Where an internationally recognised standard test method is used, give the reference number. Where another method that has been formally agreed with the Environment Agency, give the appropriate identifier. In other cases state the principal technique, for example gas chromatography.
[2] Give the result as the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, give the result as the 'minimum to maximum' of the measured values.
[3] For non-continuous measurements give the date and time of the sample that produced the result. For continuous measurements give the percentage of the process operating time covered by the result.
[4] Complete if the uncertainty associated with the result is not a 95% confidence interval. Leave blank for 95% confidence intervals.

Process Monitoring Form

Permit number: EPR/BB3001FT

Operator: Rathlin Energy (UK) Ltd

Facility name: West Newton A Well Site

Process Monitoring Form: Version 1, 23/08/2023

Reporting of process monitoring for the period from *[DD/MM/YY]* to *[DD/MM/YY]*

Monitoring point description or source	Parameter	Reference period	Test method [1]	Result [2]	Sample dates and times [3]	Uncertainty [4]

Operator's comments

Signed: *[Name]* **Date:** *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your monitoring results.
Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Complete columns 1 to 5 using the information from schedule 3 of your permit. Complete columns 6 to 8 with your monitoring data. Add additional rows as necessary.

[1] Where an internationally recognised standard test method is used, give the reference number. Where another method that has been formally agreed with the Environment Agency, give the appropriate identifier. In other cases state the principal technique, for example gas chromatography.
[2] Give the result as the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, give the result as the 'minimum to maximum' of the measured values.
[3] For non-continuous measurements give the date and time of the sample that produced the result. For continuous measurements give the percentage of the process operating time covered by the result.
[4] Complete if the uncertainty associated with the result is not a 95% confidence interval. Leave blank for 95% confidence intervals.

Water Usage Reporting Form

Permit number: EPR/BB3001FT

Operator: Rathlin Energy (UK) Ltd

Facility name: West Newton A Well Site

Water Usage Reporting Form: Version 1, 23/08/2023

Reporting of water usage for the year *[YYYY]*

Water source	Water usage (m^3)	Specific water usage (m^3/unit) [2]

Operator's comments

Signed: *[Name]*

Date: *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your annual water usage.
Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Add additional rows as necessary.

Energy Usage Reporting Form

Permit number: EPR/BB3001FT

Operator: Rathlin Energy (UK) Ltd

Facility name: West Newton A Well Site

Energy Usage Reporting Form: Version 1, 23/08/2023

Reporting of energy usage for the year *[YYYY]*

Energy source	Energy consumption / production (MWh)	Specific energy consumption (MWh/unit) [2]

Operator's comments

Signed: *[Name]* **Date:** *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your annual energy usage.
Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Add additional rows as necessary.

[1] Multiply delivered electricity by 2.4 to convert to primary energy where the electricity is supplied from the national grid. If the electricity is supplied from another source, specify the conversion factor used. Add additional rows as needed if electricity is imported from multiple sources.
[2] Divide energy consumption by an appropriate unit of raw material processed or product output.

Other Performance Parameters Reporting Form

Permit number: EPR/BB3001FT **Operator:** Rathlin Energy (UK) Ltd

Facility name: West Newton A Well Site **Other Performance Parameters Reporting Form:** Version 1, 23/08/2023

Reporting of other performance parameters for the period from *[DD/MM/YY]* to *[DD/MM/YY]*

Parameter	Units

Operator's comments

Signed: *[Name]* **Date:** *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report the performance parameters (other than water and energy) required by your permit.
Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. The parameters to report and units to be used can be found in the 'Performance parameters' table in schedule 4 of your permit. Add additional rows as necessary.