

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Island Gas Limited
South Leverton Oilfield
Off Cottam Road
Treswell
Retford
Nottinghamshire
DN22 0EP

Variation application number

EPR/UP3431CV/V002

Permit number

EPR/UP3431CV

South Leverton Oilfield

Permit number EPR/UP3431CV

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 add or change -

1. Update an existing Installations Activity; Oil storage and handling has been updated to a schedule 1.2 A(1)(e)(i) activity under the Industrial Emissions Directive and updated Environmental Permitting (England and Wales) Regulations 2016, as a result of renumbering of schedule 1 activities in the updated regulations. The existing oil storage activity at South Leverton well-site 7 has not changed from those currently permitted.
2. 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 not involving a Mining Waste Facility. The permit is being varied to include activities specified by the approved Waste Management Plan. This includes venting of gas from a storage tank, preventative well maintenance and well work-overs. Well maintenance treatment processes include hot water washing, wax dissolver treatment and acid treatment for scale removal. These are not new activities and were previously covered by the operating techniques within the operator's existing permit.

The activities on site have not changed significantly from those currently permitted. This permit variation and consolidation is part of an onshore oil and gas sector wide review. There are no other changes to the permit.

The installation at South Leverton oilfield comprises of four well sites near to the villages of Treswell and South Leverton in Nottinghamshire; well sites 6, 7, 8 and 13. Only one of the well sites is currently in production and stores produced fluids (a mixture of produced water and oil); well site 7 (via a single vertical well; SLV 7). The remaining wells (all vertical) at well site 6 (SLV 6), well site 8 (SLV 8) and well site 13 (SLV 13) are all shut in and are not operational.

Pipelines connect well sites 6, 8 and 13 to well site 7. These pipelines are no longer operational and are redundant awaiting abandonment (and will be decommissioned in the future). These were previously used to transfer produced fluids to South Leverton well site 7 for storage prior to export off site. The South Leverton oilfield sites make up a total area of 0.8 hectares (well site 6 is 0.2 hectares, well site 7 is 0.25 hectares, well site 8 is 0.18 hectares and well site 13 is 0.17 hectares).

The total produced fluids storage capacity at well site 7 (within storage tank T 522) is 217 barrels (bbls), 29 tonnes or 34.5 cubic metres (m³).

Produced water and oil are extracted from the reservoir (Crawshaw Sandstone of the Lower Coal Measures) and are pumped (via beam pump) directly to the bunded storage tank. No re-injection of produced water takes place at South Leverton oilfield.

The storage tank is periodically emptied, with the comingled production fluids (produced water and oil) transferred by road tanker for separation and re-injection at an appropriate and permitted processing facility. The storage tank at well site 7 has a single vent stack which allow gas entrained within the produced fluid to escape to atmosphere from the produced fluid storage tank. Power is supplied to each well site via a mains electricity connection.

The principal releases into the environment from site comprise:

- (a) Emissions to air of gaseous hydrocarbons from separation of volatiles in storage.
- (b) Emissions of gaseous hydrocarbons from the road tanker by displacement on loading.
- (c) Rainwater run-off from non-process well-site areas to ground
- (d) Contaminated rainwater from well cellars and containment systems/bunds is removed by tanker for off-side treatment.
- (e) Engineering waste resulting from maintenance work is removed for disposal at a licensed waste disposal facility.

There is one site of special scientific interest (SSSI) at Ashton's Meadow within 2.0 km of the well sites. There are no European designated sites within proximity of the existing South Leverton oilfield well sites.

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/HP3639MT	Duly made 05/10/06	
Additional information received	18/01/07	
Permit determined EPR/HP3639MT	25/04/07	Permit issued to Star Energy Oil and Gas Limited
Application received EPR/HP3639MT/V002	03/01/12	Notified of change of company registered address
Application determined EPR/HP3639MY	03/02/12	Varied permit issued
Application EPR/UP3431CV/T001 (full transfer of permit EPR/HP3639MT)	Duly made 29/06/12	Application to transfer the permit in full from X to Island Gas Limited
Transfer determined EPR/UP3431CV	06/08/12	Full transfer of permit complete
Application EPR/UP3431CV/V002 (variation and consolidation)	Duly made 07/12/17	Application to vary to add a mining waste operation and update the permit to modern conditions.
Schedule 5 notice response received	12/07/18	Response to schedule 5 notice
Variation determined EPR/UP3431CV/V002 [Billing references: DP3733YG / EAWML 404428]	18/12/18	Varied and consolidated permit issued in modern condition format.

Superseded or Partially Superseded Licenses/Authorisations/Consents relating to this installation			
Operator	Permit number	Date of issue	Fully or Partially Superseded
Star Energy Oil and Gas Limited	AF6413	19/06/92	Fully superseded

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/UP3431CV

Issued to

Island Gas Limited (“the operator”),

whose registered office is

7 Down Street

London

W1J 7AJ

company registration number 04962079

to operate an installation and a mining waste operation at

South Leverton Oilfield

Off Cottam Road

Treswell

Retford

Nottinghamshire

DN22 0EP

to the extent set out in the schedules.

The notice shall take effect from 18/12/2018

Name	Date
Principal Permitting Team Leader	18/12/2018

Authorised on behalf of the Environment Agency.

Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation, and 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/UP3431CV

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/UP3431CV/V002 authorising,

Island Gas Limited (“the operator”),

whose registered office is

7 Down Street

London

W1J 7AJ

company registration number 04962079

to operate an installation and a mining waste operation at

South Leverton Oilfield

Off Cottam Road

Treswell

Retford

Nottinghamshire

DN22 0EP

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

Name	Date
Principal Permitting Team Leader	18/12/2018

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 (A1 to A2) 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 (A1 to A2) 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 (A1, A2 and A3) shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

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 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.
- 2.3.5 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.

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 Subject to any other condition of this permit, 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 so as 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 table S3.1;
 - (b) transfers off-site specified in table S3.2
 - (c) process monitoring specified in table S3.3.
- 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 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 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.
- 3.5.5 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.
- 3.5.6 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.

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 (A1 to A3) 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.

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 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, 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
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 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.
- 4.3.8 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:
- (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

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
A1	S1.2 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 by beam pump, phase separation and storage of products (crude oil) and waste prior to onward transport.	<p>From receipt of production fluids at the wellhead to the despatch of products (crude oil) and waste.</p> <p>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.</p> <p>Any road tanker loading systems must be fully contained and the delivery system shall be fitted with dry break couplings.</p> <p>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.</p> <p>Provisions shall be made to minimise the emissions of non-methane volatile organic compounds (NMVOC) and methane from the oil storage tank vent.</p> <p>Any water, contaminated with crude oil, which is drained off from the storage vessel and is not being recycled must be collected for treatment before disposal.</p> <p>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.</p>
Activity reference	Directly Associated Activity		
A2	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.
A3	The management of extractive waste from production activities, not involving a waste facility. The management of extractive waste generated by well workover.	<p>Permitted waste types shall conform to the description in the approved waste management plan.</p> <p>The activities shall be limited to those described in the approved Waste Management Plan referenced in table S1.2 below</p> <p>The storage of extractive waste is limited to temporary storage in secure containment as part of the collection and transportation of waste from the site.</p> <p>Well stimulation by hydraulic fracturing is not permitted.</p>	

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to section 2.1 and 2.2 in the application	05/10/06
Response to the request for information issued on 20/12/07	Response from the applicant dated 18/01/2007 to the request for further information	18/01/07
Application and response to Schedule 5 notice (dated 07/06/2018)	Updated application documents provided in response to sections 5a, 5c and 6 of Part C2 of the application form	25/09/17 and 12/07/18
Application	Technical standards specified in Part C3 of the application	25/09/17
Application	Completed Gap Analysis Tool response (dated 20/06/17)	25/09/17
Application and response to Schedule 5 notice (dated 07/06/2018)	Appendix 4: Updated and approved Waste Management Plan as amended in response to Schedule 5 notice	25/09/17 and 12/07/18
Application and response to Schedule 5 notice (dated 07/06/2018)	Appendix 7 – Updated site condition report (SCR) and environmental risk appraisal (ERA) in response to Schedule 5 notice	25/09/17 and 12/07/18
Application and response to Schedule 5 notice (dated 07/06/2018)	Appendix 9 – Updated de-minimis justification and supplementary information in response to Schedule 5 notice (for well maintenance activities)	25/09/17 and 12/07/18
Application and response to Schedule 5 notice (dated 07/06/2018)	Appendix 10 – Updated chemical information: materials safety data sheets and supplementary information in response to Schedule 5 notice	25/09/17 and 12/07/18
Secondary and tertiary containment plan as approved under IC1 specified in table S1.3	All of document	Date of approval of IC1
Leak detection and repair plan as approved under IC2 specified in table S1.3	All of document	Date of approval of IC2
Environment Management System as approved under IC3 specified in table S1.3	All of document	Date of approval of IC3
Gas management system improvement plan as approved under IC4 specified in table S1.3	All of document	Date of approval of IC4
Site surface water management plan as approved under IC6 specified in table S1.3	All of document	Date of approval of IC6

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1 Containment	<p>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.</p> <p>The plan shall be implemented in accordance with the Environment Agency's written approval.</p>	18/09/2019
IC2 Leak detection	<p>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 consider all activities listed in table S1.1. 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.</p> <p>The plan shall be implemented in accordance with the Environment Agency's written approval.</p>	18/06/2019
IC3 Management system	<p>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 point(s) is / are included in the management system:</p> <ol style="list-style-type: none"> a) Details of the training given to staff on use of spill kits; ensure training records updated accordingly. b) The procedure to be followed for monitoring the quantity and composition of flowback water and / or produced water and keeping records of the results. c) The procedure for determining the consignments of wastes for disposal off-site to be sampled and the procedure for retaining those samples. d) The procedure for identifying vessel fill limits, e.g. fitting level detection, overflow protection system. e) The procedure for identifying bund fill levels, e.g. high level alarm on unmanned sites. f) The procedures for testing the impermeable membrane and subsequent remediation measures if required. g) The procedure for notifying the Environment Agency on each occasion where natural gas is vented uncombusted to atmosphere for safety purposes. Notification to include, but not limited to: reasons for, duration of and quantity of gas vented. 	18/03/2019

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC4 Gas Management	<p>The operator shall submit a written gas management improvement plan and shall obtain the Environment Agency's written approval for it.</p> <p>The plan must contain detailed consideration of all available options for the beneficial utilisation of all of the available gas from your activities, including gas that is not already utilised, gas vented from storage vessels and gas vented during the loading and unloading of road vehicles where relevant.</p> <p>Where such utilisation is not feasible, your plan must consider in detail all available options, both combustion and non-combustion based (including but not necessarily limited to flaring, vapour recovery, scrubbing and adsorption), for the disposal or abatement / mitigation of your waste gas so as to minimise its environmental impacts as far as available techniques allow.</p> <p>The gas management improvement plan shall also refer to the review of emissions undertaken as a result of IC5. If emission limits were not being met, the plan shall including actions that will be taken to ensure that emission limits are met.</p> <p>The plan must contain dates for the implementation of the identified improvement measures.</p> <p>The plan shall be implemented in accordance with the Environment Agency's written approval.</p>	18/06/2020
IC5 Air monitoring	<p>The operator shall monitor point source emissions to air in accordance with table S3.1. The operator shall submit a review of emissions compared to the emission limits in table S3.1 to the Environment Agency and obtain the Environment Agency's written approval of the report.</p>	18/06/2019
IC6 Surface water	<p>The operator shall submit a written 'site surface water management plan' and shall obtain the Environment Agency's written approval to it. The plan will be based on the understanding from the conceptual site model and environmental risk assessment where the risks to the water environment are clearly detailed. The plan shall include details of how rainwater is managed, collected, stored and treated where necessary prior to discharge or disposal. The plan shall contain dates for the implementation of any improvement measures necessary to ensure that there are no uncontrolled contaminated water discharges to the environment from the site.</p> <p>The plan shall be implemented in accordance with the Environment Agency's written approval.</p>	18/09/2019
IC7 Site Condition Report	<p>The operator shall undertake a review of the Site Condition Report to ensure Article 22 of the Industrial Emissions Directive is complied with. The review shall include at least the following:</p> <ul style="list-style-type: none"> i) consideration of oil storage areas including oil storage vessels, bunds, loading and unloading areas and other potential sources of contamination as shown in the site location plan ii) reference to any historical spillages, the chemicals involved and locations iii) baseline soil sample results and groundwater data 	18/12/2019

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
-	-

Non-extractive wastes are not accepted as part of the 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. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [point A1 on site plan 3 in Schedule 7]	Storage tank vent	Gas vented	-	Month	Monthly	Calculation to determine the quantity of gas vented over the reference
		Hydrogen sulphide	5.7 mg/m ³	-	Monthly	As approved in writing with the Environment Agency

Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
Transfer of contaminated surface water arising from the well cellars and hard standing process areas to Gainsborough 05 or Welton Gathering Centre	Well cellars and process areas	N/A	None	None	N/A	N/A

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Gas to oil ratio of production from the installation	Gas to oil ratio	Monthly	As agreed in writing with the Environment Agency	

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
Emissions to air Parameters as required by condition 3.5.1.	A1 (vent stack serving one storage tank at South Leverton well site 7)	Every 6 months	1 January, 1 July
Process monitoring Parameters as required by condition 3.5.1	Description as indicated in table S3.3	Every 6 months	1 January, 1 July

Table S4.2: Annual production/treatment	
Parameter	Units
Crude oil production	Tonnes
Average water cut	% of production
Average gas to oil ratio	Standard cubic feet (Scf) gas/bbls oil

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Water usage	Annually	Tonnes or m ³
Energy usage	Annually	MWh

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	18/12/2018
Annual production	Form production 1 or other form as agreed in writing by the Environment Agency	18/12/2018
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	18/12/2018
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	18/12/2018
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	18/12/2018

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 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 or background concentration 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 property” has the meaning in Annex III of the Waste Framework Directive.

“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

“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, as amended from time to time.

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

“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.

“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

“year” means calendar year ending 31 December.

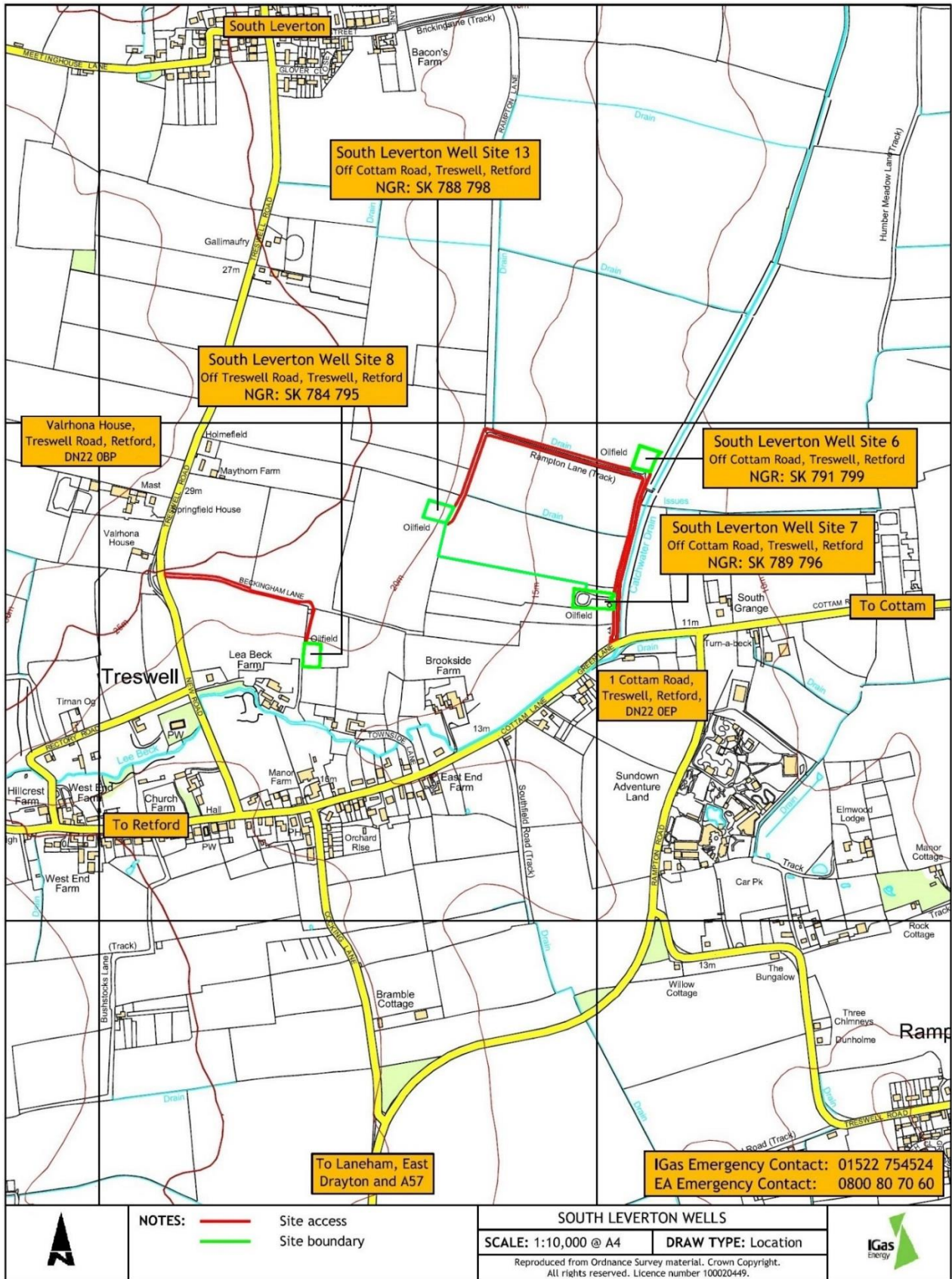
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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

- 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, 6% dry for solid fuels; and/or
- 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.

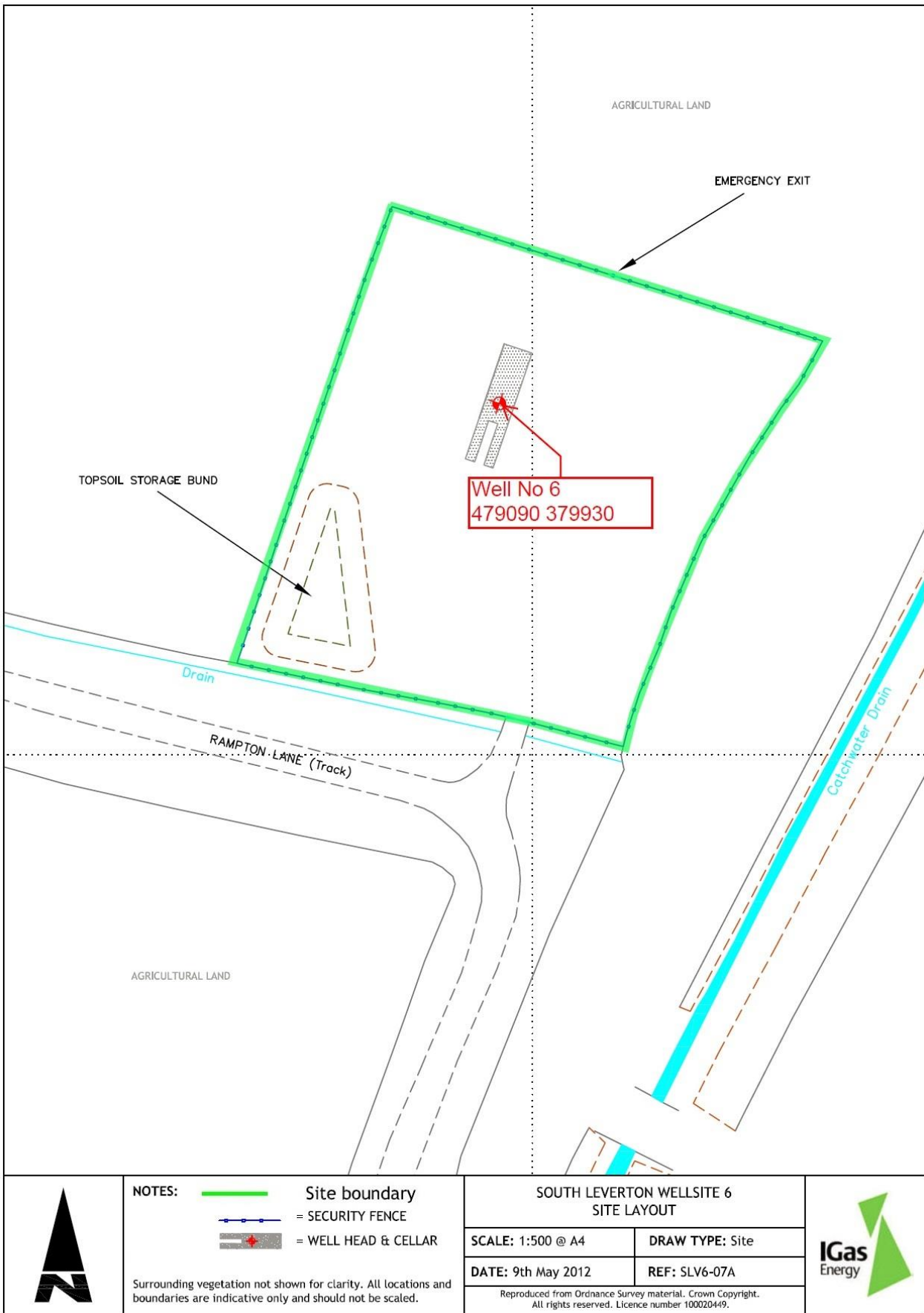
Schedule 7 – Site plans

Site plan 1: Layout of South Leverton Oilfield well sites (well site 7 is producing, well sites 6, 8 and 13 are shut in)



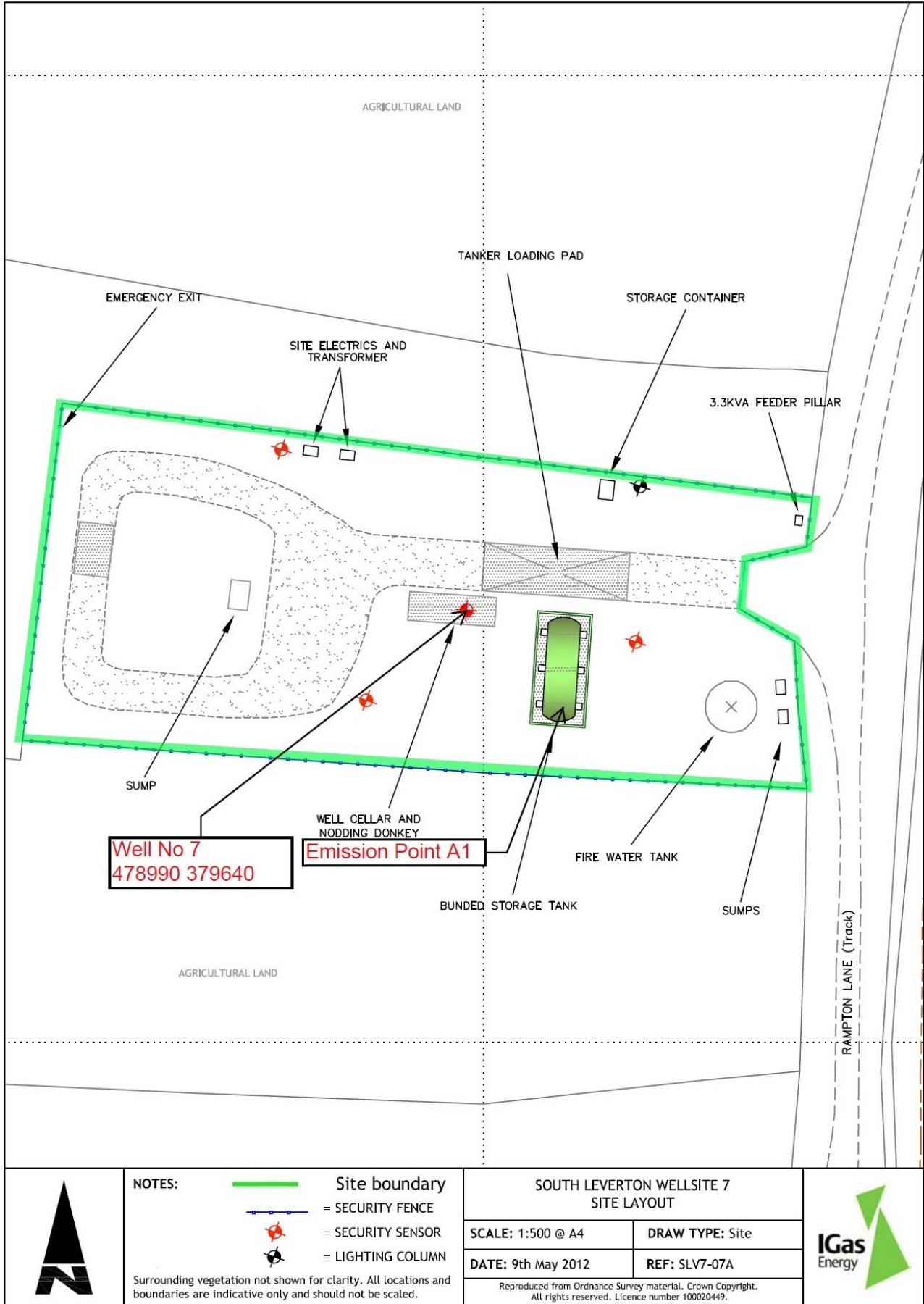
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Site plan 2: Layout of South Leverton well site 6 (shut in)



Reproduced by permission of the operator

Site plan 3: Layout of South Leverton well site 7 (producing)



NOTES:

- Site boundary
- = SECURITY FENCE
- ★ = SECURITY SENSOR
- ⊙ = LIGHTING COLUMN

Surrounding vegetation not shown for clarity. All locations and boundaries are indicative only and should not be scaled.

**SOUTH LEVERTON WELLSITE 7
SITE LAYOUT**

SCALE: 1:500 @ A4	DRAW TYPE: Site
DATE: 9th May 2012	REF: SLV7-07A

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Site plan 4: Layout of South Leverton well site 8 (shut in)



Reproduced by permission of the operator

Site plan 5: Layout of South Leverton well site 13 (shut in)



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END OF PERMIT

Permit Number: EPR/UP3431CV

Facility: South Leverton Oilfield

Operator: Island Gas Limited

Form Number: WaterUsage1 18/12/2018

Reporting of Water Usage for the year YYYY

Water Source	Usage (m ³ /year)	Specific Usage (m ³ /unit output)
Mains water		
Site borehole		
River abstraction		
Total water usage		

Operator's comments:

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/UP3431CV
Facility: South Leverton Oilfield

Operator: Island Gas Limited
Form Number: Energy1 18/12/2018

Reporting of Energy Usage for the year YYYY

Energy Source	Energy Usage		Specific Usage (MWh/unit output)
	Quantity	Primary Energy (MWh)	
Electricity *	MWh		
Natural Gas	MWh		
Gas Oil	tonnes		
Recovered Fuel Oil	tonnes		
TOTAL	-		

*Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments:

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/UP3431CV
Facility: South Leverton Oilfield

Operator: Island Gas Limited
Form Number: Performance1 18/12/2018

Reporting of other performance indicators for the period DD/MM/YYYY to DD/MM/YYYY

Parameter	Units
Total raw material used	Tonnes

Operator's comments:

Signed

Date.....

(Authorised to sign as representative of Operator)