Permitting decisions

Variation to permit

We have decided to issue the variation for Horndean B, C and X Well Sites operated by Island Gas Limited.

The variation number is EPR/GP3231CJ/V002

We have also carried out an Environment Agency initiated variation to the permit.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

This variation is required as the Environment Agency has a duty, under the Environmental Permitting (England and Wales) Regulations 2016, regulation 34(1), to periodically review permits. As a result of that review we have identified a number of necessary changes we must make to reflect current legislation and best practice. These changes principally relate to:

- Implementation of the Mining Waste Directive namely the addition of extractive waste management activities,
- Oil storage activities.
- Groundwater activities.

The variation also aims to:

- Consolidate all previous variations to the original permit so as to bring them together into one permit so the requirements will be clearer.
- Formalise changes to monitoring requirements and compliance limits where we have agreed them in writing, for example as the result of a hydrogeological risk assessment review.
- Address site specific issues which result in a change to the current permit, for example incorporating completed improvement conditions into the permit and removing inconsistencies.

Although this permit covers 3 sites, the site address for the purposes of the permit is that of Horndean B Well Site at Sheepwash Road, Horndean, Hampshire, PO8 0DS. The Application was Duly Made on 18th January 2017.

We gave the Application the reference number EPR/GP3231CJ/V002. We refer to the Application as “the Application” in this document I order to be consistent.

The number we have given to the permit is EPR/GP3231CJ. We refer to the permit as “the Permit” in this document.

Purpose of this document

This decision document provides a record of the decision making process. It summarises the decision making process in the decision checklist to show how all relevant factors have been taken in to account.

This decision document provides a record of the decision making process. It:

- highlights key issues in the determination
- summarises the decision making process in the decision checklist to show how all relevant factors have been taken into account
- explains why we have also made an Environment Agency initiated variation
- shows how we have considered the consultation responses.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit. The introductory note summarises what the permit covers.

Radioactive Substances

Preliminary information

The Applicant also submitted a standard rules permit application for a radioactive substances activity, which we have given the application number EPR/SB3691DY/A001. This is for the export of produced water offsite which contains naturally occurring radioactive material (NORM). This activity is permitted separately and the decision with regards to that application is not dealt with in this document.

Brief outline of the process

The installation comprises of 3 associated oil production sites at Horndean B, Horndean C and Horndean X Well Sites, near Horndean in Hampshire. Crude oil together with admixed reservoir water is pumped to storage tanks on each site by pipeline. The total oil storage capacity is 351 tonnes. Produced water naturally separates out at each site in the storage crude oil storage tanks and is sent by tanker to Stockbridge Oilfield for re-injection into the Oolite producing reservoir to aid production support.

The oil storage tanks are emptied as required and exported offsite by road tanker. Associated gas, released when the oil is depressurised, is routed through an activated carbon absorption unit to remove hydrogen sulphide before being vented to atmosphere through the vent stack.

Surface water collected in the storage tank bunds at Horndean B, Horndean C and Hordean X Well Sites is transferred to the onsite produced water tanks and removed from site for reinjection into the reservoir at Stockbridge Oilfield. Electrical power for the sites is sourced from the national grid. Each well site is capable of operating independently. The principal releases into the environment comprise of:

(a) Emissions to air of hydrocarbon gases from storage tanks following separation of volatiles in storage.

(b) Emissions to air of hydrocarbon gases from the road tanker by displacement on Loading, captured via a vapour recovery system.

(c) Releases of engineering waste resulting from maintenance work is removed for disposal at a licensed waste disposal facility.

The installation operates an Environmental Management System which is externally audited.

There are no SSSIs within 2km of the installation. The installation has six European designated sites (SAC, Ramsar and SPA) within 10km, situated around the south-east Hampshire area, including the Solent and associated harbours of Chichester and Portsmouth. The closest European designated sites are Buster Hill (SAC), Chichester and Langstone Harbours (Ramsar, SPA) and the Solent Maritime (SAC), all of which are situated 7.2 km from the installation.

Description of the changes introduced by the variation

The original permit was issued for an Industrial Emission activity as defined by the Industrial Emissions Directive and Part 2 Schedule 1.2 of the Environmental Permitting (England and Wales) Regulations 2016, as amended, relating to the loading, unloading, handling and storage of crude oil.

This is a variation to add or change the following activities:

1) Installation Activity, Oil storage and handling has been changed 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. This activity was previously permitted as 1.2A(1)(h)(i) in the existing permit. The existing oil storage activities on site have 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 storage tanks and well maintenance. Well maintenance includes hot oil washing, wax dissolver treatment and acid treatment for scale removal. These are not new activities, and were previously covered by the operators operating techniques in their existing permit.

3) Groundwater activity (emission point W1) has been removed for re-injection of produced water to ground, due to the vulnerability of the local groundwater environment (source protection zone 1). Produced water is now being taken by tanker to Stockbridge Oilfield for re-injection to support production support.

4) The removal of interceptors and soakaways at Well Sites C and X, previously known as emission points W2 and W3. There are no surface water discharges from Horndean B, Horndean C and Horndean X. All surface water is collected and exported with produced water to Stockbridge for reinjection. Improvement condition 7 is included in this variation to review surface water management on site.

The production activities on site have not changed significantly from those currently permitted, however reinjection has ceased as a result of this variation with all produced water and surface water being sent to Stockbridge for reinjection for production support. This permit variation and consolidation is part of an onshore oil and gas sector wide review. There are no other changes to the permit.

Key issues of the decision

Background

This variation is part of a sector wide permit review of onshore oil and gas sites. The variation to the permit is for continued operation of an existing conventional oil and gas production site. This variation does not permit any hydraulic fracturing as specified in Schedule 1 of the permit under Table S1.1, activity A3.

The operator previously held an installation permit as an onshore oil and gas production facility, unloading, handling or storage of crude oil, or treatment under the Pollution Prevention and Control (England and Wales) Regulations 2000. During 2008, these permits automatically became environmental permits under

the environmental permitting regime. This regime was expanded in 2010 and is now covered by the Environmental Permitting (England and Wales) Regulations 2016 (the 2016 Regulations).

Since 1 October 2013 we have taken the view that operators of new onshore oil and/or gas exploration or appraisal facilities require environmental permits where activities include:

• the management of extractive waste, whether or not this involves a waste facility (as a mining waste operation)

• flaring of waste gas using a flare which has the capacity to incinerate over 10 tonnes a day (as an installation)

• a water discharge activity

• a groundwater activity, such as reinjection of produced water for production support

•naturally occurring radioactive materials (NORM) waste being managed that meets the thresholds for radioactivity set out in the 2016 Regulations (as a radioactive substances activity)

We now consider that the same environmental permits are required for existing onshore oil and/or gas facilities, in addition to the permit required for crude oil unloading, handling or storage, or treatment. This permit variation and consolidation brings these permits in line with the new regulations and approach for permits issued since 2013.

Installation Activity – Oil storage, treatment and handling

The Installation activity (oil storage, treatment and handling) have not changed at the site. The activity reference has been amended to align with the legislative change as a result of the updated Environmental Permitting (England and Wales) Regulations 2016. Limits on activities have been specified in this permit to align with our current permit wording under the standard rules permit (SR2015 No.2) for oil storage.

Mining Waste Activities

A permit subject to the Mining Waste Directive covers the management of extractive waste generated during oil and gas production. This will include any wastes from well maintenance activities such as hot oiling and acid washing as described in the groundwater de-minimis activities below and any waste gas described in the gas management section below. This variation does not permit any hydraulic fracturing. We have specified this limit in Schedule 1 of the permit under Table S1.1, activity A3.

Well abandonment and decommissioning activities are not included under the mining waste activities permitted under the operators request. We have also not included any drilling or workover activities due to the sensitivity of the local groundwater environment (source protection zone 1). Any produced water or surface water collected from the Hordean Wellsites is sent to Stockbridge to assist with production support in the Oolite reservoir. As such none of this water is disposed of and therefore does not become extractive waste as a result.

Groundwater - Removal of all Groundwater Activities

Although a groundwater activity for the re-injection of produced water and clean surface water was included in this variation application, on 8th March 2018 the Operator later withdrew this part of the application. Additional information relating to the management of produced and surface water once re-injection ceased on site was also received at that time. Produced water and site surface water is to be taken by tanker to Stockbridge Oilfield to be re-injected there for production support. The operator currently proposes to decommission this well but not to abandon it at this time. It will be kept for monitoring purposes.

The Operator previously discharged site surface water, treated in an interceptor, to ground via soakaways as a point source emission to water under the existing Permit. These soakaways have since been decommissioned and all discharges of surface water to soakaway have now been removed from the permit.

Whilst the Operator will no longer be carrying out any groundwater activities at the three sites as a result of this variation, due to the vulnerability of the underlying groundwater. The Operator does not currently undertake any groundwater monitoring, therefore additional improvement conditions have been added to help protect the groundwater environment. We are requiring groundwater monitoring to be started at each of the sites though bespoke improvement condition IC3, and production well integrity monitoring through bespoke improvement condition IC9, as well as improvement conditions IC1 and IC2 to manage containment and leak detection. (Please see the 'Improvement Programme' section in Decision Checklist below for further information on each improvement condition).

Groundwater – De minimis activities

We have accepted the Operator's justification and further information to show that the use of hot oil wash, wax dissolver and acid wash is de minimis and does not need a groundwater activity permit. These are used as near wellbore treatments during the lifetime of hydrocarbon production from the well, as part of routine maintenance activities. The purpose of hot oil washing is to remove the build-up of paraffin precipitates. The process involves circulating hot oil down the well, to the production tubing above the perforations and is circulated back to the surface. Paraffin precipitates dissolved in the hot oil and at the surface are passed through a three phase separator and directed to on-site storage tanks. The hot oil wash does not have any contact with the reservoir formation and does not pose a risk to groundwater.

The purpose of the acid wash is to remove produced water scales from production tubing which have been blocked during the production of hydrocarbons. 15% Hydrochloric acid with water is circulated down the well and across the perforated sections of the well. Acid may then be selectively pushed into the near wellbore area. This will allow the acid to dissolve the debris that is reducing the permeability and restore the natural flow paths. The water and acid wash solution is circulated below fracturing pressure. No high pressure circulation will be used which could create fractures in the reservoir rock. Any penetration of acid wash in to the formation is minimal and limited to the immediate vicinity of the wellbore. The volumes of acid to be used are low and the acid will come into contact with a relatively small area of the reservoir formation. The acid reacts with the minerals in the formation to produce an inert salty solution and carbon dioxide. Spent acid is recovered to the surface, as much as is feasibly possible.

We have considered the chemicals used (biocides and corrosion inhibitors), hot oil wash, wax dissolver and acid wash treatment as described in the application and conclude that they are either intrinsic to the operations or are considered de-minimis and can be excluded under Schedule 22 Paragraph 3.3(b) of the Environmental Permitting Regulations 2016.

Gas Management

The production of oil at the Horndean sites produces in association a relatively small amount of natural gas.

The operator's waste management plan, the amount of natural gas produced at the sites is approximately 2,200, 12,000 and 16,000 standard cubic feet per day. This is equivalent to approximately 2.6, 14 and 19 m3 per hour. Section 5.2 of the operator's waste management plan details that this gas is currently vented to atmosphere.

The operator has provided additional information in support of their conclusion that cold venting remains BAT. However, this is not an insignificant amount of gas being produced and 2 of the sites appear to produce sufficient volumes of gas to enable alternative options of gas management to be identified.

The varied permit includes improvement condition IC5 requiring a new holistic review of all available options for the utilisation, or disposal of the gases produced in association with crude oil at Horndean B, C and X Well Sites, in line with our BAT position. This shall take account of changes in production and

technology. If the Operator concludes that no alternative is viable, they will need to provide the results of a detailed consideration of all available (combustion & non-combustion based) mitigation and abatement techniques along with a robust explanation as to why the options considered are not suitable at Horndean B, C and X Well Sites.

We have also required an improvement programme for gas management at the site in line with the sector guidance under Improvement Conditions IC2 and IC6. We are satisfied that these measures to minimise the risk of air emissions, together with condition 3.1.1, will provide acceptable controls.

Gap Analysis

The operator was required to complete a Gap Analysis assessing how they meet the requirements of the Onshore Oil and Gas Sector Guidance, August 2016. This information was used to generate Improvement Conditions to address any shortfalls.

Improvement Conditions IC1, IC2, IC4, IC5, and IC7 have been added accordingly. Further information is included on each of these improvement conditions in the sections above and in the decision checklist below.

Schedule 5 Requests

A Schedule 5 Notice was served on 02 June 2017 requiring further information. The operator responded and supplied additional information on 23/08/17, 30/11/17, 06/02/18, 08/03/18 and 11/04/18. This information has been taken into account in our decision.

Decision checklist

Aspect considered	Decision
Receipt of application	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.
Consultation	
Consultation	The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement. The application was publicised on the GOV.UK website because of the high levels of public interest in the Onshore Oil and Gas Sector. We consulted the following organisations: Local Authority, Environmental Health, Horsham District Council Food Standards Agency Health and Safety Executive Mineral Planning Authority, West Sussex County Council Director of Public Health Public Health England The comments and our responses are summarised in the consultation section.
Operator	
Control of the facility	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits.
The facility	
The regulated facility	We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility' and Appendix 2 of RGN 2 'Defining the scope of the installation'. The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.
The site	

Aspect considered	Decision
Extent of the site of the facility	The operator has provided plans which we consider are satisfactory, showing the extent of the site of the facility including emission points. The plans are included in the permit.
Site condition report	The operator has provided a description of the condition of the site, which we consider is not satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive. We have advised the operator what measures they need to take to improve the site condition report in Improvement Condition IC8.
Waste management plan	The operator has provided a waste management plan which we consider is satisfactory. We have excluded some sections of the plan which refer to current reinjection practices, as outlined in permit Table S1.2 - Operational Techniques, as they will be out of date and not authorised after the variation is issued.
Biodiversity, heritage, landscape and nature conservation	The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat. We have assessed the application and its potential to affect all known sites of nature conservation, landscape and heritage and/or protected species or habitats identified in the nature conservation screening report as part of the permitting process. We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.
Environmental risk assessment	
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility. The operator’s risk assessment is satisfactory. There will be no increase in emissions as a result of this variation, and consequently no increase in environmental risk.
Operating techniques	
Operating techniques Water Quality	We have reviewed the techniques proposed by the operator and compared these with the relevant technical guidance and we consider them to represent appropriate techniques for the facility. The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.
General operating techniques	We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility. The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit. A revised waste management plan was submitted as part of the application determination process and has been assessed in accordance with these

Aspect considered	Decision
	requirements and is approved subject to conditions and exclusions. Condition 2.3.1 ensures that the operations are limited to those described in the authorised sections of the WMP and in table S1.2. It also ensures that the Operator follows the techniques set out and that any deviation will require our written approval. Any significant changes will require a formal variation of the permit. Where a condition imposes a specific requirement that will take precedence over anything in the plan. In addition we have specified additional improvement conditions as part of the permit review to ensure these operations continue to meet the requirements of our Onshore Oil and Gas Sector Guidance, August 2016.
Operating techniques for emissions that screen out as insignificant	We consider that the emission limits included in the installation permit reflect the BAT for the sector.
Odour management	We have considered potential odour emissions from the activity during our determination. Condition 3.3.1 in the permit requires that emissions from the activities shall be free from odour at levels likely to cause pollution outside the site. We are satisfied that appropriate measures will be in place to manage odour. However, we have included condition 3.3.2 in the permit. This condition enables us to require the Operator to submit a specific odour management plan, should odour become a problem. If a plan be required in the future, once we have assessed this plan as suitable, it will form part of the permit and the Operator must carry out the activity in accordance with the approved techniques.
Noise management	We have considered emissions from noise and vibration during our determination. Condition 3.4.1 in the permit requires that emissions from the activities shall be free of noise and vibration at levels likely to cause pollution outside the site. We have included condition 3.4.2 in the permit. This condition enables us to require the Operator to submit a specific noise and vibration management plan, should noise and vibration become a problem. If a plan be required in the future, once we have assessed this plan as suitable, it will form part of the permit and the Operator must carry out the activity in accordance with the approved techniques.
Permit conditions	
Use of conditions other than those from the template	Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template.
Updating permit conditions during consolidation	Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template.
Changes to the permit conditions due to an Environment Agency	We have updated permit conditions to those in the current generic permit template as part of permit consolidation. The conditions will provide the same level of protection as those in the previous permits.

Aspect considered	Decision
initiated variation	
Pre-operational conditions	Based on the information in the application, we consider that we do not need to impose pre-operational conditions.
Improvement programme	Based on the information in the application, we consider that we need to impose a new improvement programme. We have imposed an improvement programme to ensure that the standards of operation for the sector are consistent and reflect those currently required by newly permitted sites (since 2013) and meet the requirements of our Onshore Oil and Gas Sector Guidance, August 2016. All previous improvement conditions in the existing permit have been removed from the new permit. The following Improvement Conditions have been added to this permit to address the gap analysis response we received from the operator to demonstrate compliance with our Onshore Oil and Gas Sector Guidance, August 2016. This is explained in our key issues above. **IC1 - Secondary and Tertiary Containment Review** This Improvement Condition has been added to the permit to ensure that secondary and tertiary containment systems meet the standards required of a new oil and gas site. This will reduce the likelihood of any uncontrolled polluting discharges to the environment. **IC2 - Leak Detection and Repair Plan** This Improvement Condition has been added to the permit to require the Operator to produce a leak detection and repair plan that will manage fugitive VOC emissions from potential leak points such as seals, flanges, pumps and valves. This standard technique is a method for identifying and prioritising potential sources of leaks, developing a leak detection and repair programme using the monitoring standard EN 15446 including assessing reductions in emissions resulting from the programme and estimation/calculation of any residual emissions. The EN 15446 method is described in the Refineries BREF (2015) as an available method for carrying out monitoring of fugitive emissions. Alternative but equivalent methods can be proposed. **IC3 – Groundwater monitoring** This is a bespoke improvement condition, based on the OOG Re-Permitting template condition for Groundwater Monitoring but the wording has been altered to fit the conditions at the site. Improvement Condition IC3 is necessary because the operator has specified that there are no suitable groundwater monitoring boreholes at the site(s) and there is no groundwater monitoring plan in place. Groundwater monitoring is required because the Horndean sites are within the groundwater Source Protection Zone 1 for the Bedhampton and Havant Springs public water supply. The Hydrogeological Risk Assessment has concluded that the risks to groundwater are high. The information requested through this condition is needed to ensure that appropriate measures are in place to ensure that groundwater is protected from pollution and that continued operation of the site will not lead to a groundwater activity. It is an offence under the Environmental Permitting Regulations 2016 to cause or

Aspect considered	Decision
	knowingly permit a groundwater activity without having a groundwater activity permit, unless the groundwater activity is not an exempt facility. The submission of a groundwater monitoring plan will ensure that groundwater monitoring is based on the conceptual site model and hydrogeological risk assessment. Improvement Condition IC3 requires the operator to submit a groundwater plan for written approval, covering the operational phase as well as decommissioning of the Horndean Well Sites. The groundwater monitoring plan once approved, shall be incorporated into the permit as an operating technique. **IC4 – Environmental Management System Review** This improvement condition has been added as a number of procedures did not appear to be in place from the information submitted with the application. This improvement condition requires the relevant procedures to be written into the Operator's management system, and to be adhered to. The management system will be subject to usual compliance audit in future. The specific management requirements include: bund filling procedures and testing of the membrane. This shall cover any remedial measures in the event of a failure. **IC5 – Gas Management** This improvement condition has been added as the operator does not currently appear to be applying appropriate measures for the management of waste gas arising from their production of hydrocarbons. It requires the operator to submit a plan detailing their identified method for reducing the impact of gas emissions to atmosphere, for written approval. Gas management is required as the impact of releasing large quantities of un-combusted hydrocarbons leads to a significant environmental impact which can be readily mitigated using available techniques. Gas management is necessary to reduce the environmental and human health impacts of emitting natural gas directly to atmosphere. **IC6 – Air** This improvement condition has been added to require the operator to undertake appropriate emissions monitoring from each of the emission points on the site to understand the current performance of the process/equipment which gives rise to the emission, and the potential to cause pollution. We will use the results of this monitoring to determine whether the operator's processes and equipment minimises the emission to air to as low as reasonably achievable in line with best available techniques. Where appropriate, we will use these monitoring results to set appropriate assessment levels or compliance limits for the operator to comply with in future. By requiring ongoing emissions monitoring, this condition will ensure that the operator achieves, and then continues to operate their processes and equipment to an acceptable standard, and commensurately reduces their environmental impact to as low a level as is reasonably practical. **IC7 - Surface Water Management Plan**

Aspect considered	Decision
	Improvement condition IC7 has been added because the operator has indicated that rainwater is not always being dealt with in accordance with requirements necessary to protect the environment from uncontrolled contaminated discharges of site surface water. The development of a plan to show how rainfall is managed to ensure the environment is not compromised, will clarify how the requirements are being met and how the environment is being protected. **IC8 – Site Condition Report** This improvement condition is necessary because the operator is required to produce a Site Condition Report where there is a possibility of soil and groundwater contamination from activities that involve the use, production or release of a relevant hazardous substance, as defined in the Industrial Emissions Directive. The Operator has provided an incomplete Site Condition Report with baseline data for groundwater but not for soil and asked to provide the remainder by adding this improvement condition. This improvement condition requires the Operator to confirm the current state of any soil contamination, or confirm that existing soil data for the site enables a baseline to be defined for the site. **IC9 – Well Integrity Monitoring Plan** This is a bespoke Improvement Condition. Improvement Condition IC9 is necessary because the Horndean site(s) are within the groundwater Source Protection Zone 1 for the Bedhampton and Havant Springs public water supply. The information requested through this condition is needed to ensure that appropriate measures are in place to ensure that groundwater is protected from pollution and that continued operation of the site will not lead to a groundwater activity. It is an offence under the Environmental Permitting Regulations 2016 to knowingly permit or cause a groundwater activity without having a groundwater activity permit, unless the groundwater activity is not an exempt facility. It is essential that the operator demonstrates to us that they will continue to verify that industry standards are complied with for the lifetime of the well. The plan shall be incorporated into the permit as an operating technique.
Emission limits	**Emissions to air** We have considered emissions to air during the determination of the application. Fugitive emissions associated with the proposed activities will be at insignificant levels which are unlikely to cause negative impact on nearby receptors. The Operator has provided environmental risk assessments and consideration in the WMP for the management of waste gas and we have found these to be satisfactory. ELVs equivalent parameters have been set for the following substances in Schedule 3 of the permit. For emissions to air: • Gas vented (calculation method) • Hydrogen Sulphide

Aspect considered	Decision
Monitoring	We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified. Condition 3.5 of the permit requires the Operator to monitor emissions to air from the storage tank vents. We require monitoring of the concentrations and volumes of chemicals added to the production wells. This will include chemicals intrinsic to operations and those which have been accepted as de minimis. In addition following approval of the groundwater monitoring plan under IC3, we will also require additional monitoring under Table S3.2 of the permit. The Operator will keep records of the data collected, which must be submitted to the Environment Agency on a regular basis. We made these decisions in accordance with the requirements of our Onshore Oil and Gas Sector Guidance, August 2016 and the Groundwater Directive and the baseline report required under the Industrial Emissions Directive. Based on the information in the application we are satisfied that the operator's techniques, personnel and equipment have either MCERTS certification or MCERTS accreditation as appropriate as required under 3.5.3 of the permit.
Reporting	We have specified reporting in the permit. The reports will enable information on trends to be assessed and interventions to be carried out when required. We made these decisions in accordance with the requirements of our Onshore Oil and Gas Sector Guidance, August 2016 and the Groundwater Directive and to baseline report required under the Industrial Emissions Directive.
Operator competence	
Management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions. The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.
Financial competence	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.
Financial provision	We are satisfied that the waste from the site has been properly characterised and that there is no mining waste facility for extractive waste. By virtue of paragraph 9(3) of Schedule 20 to the Environmental Permitting (England and Wales) Regulations 2016 the requirements mentioned in Article 2(3) of the MWD are waived.
Growth Duty	

Aspect considered	Decision
Section 108 Deregulation Act 2015 – Growth duty	We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit. Paragraph 1.3 of the guidance says: "The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation." We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections. We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.
Further Legislation	
Schedule 22 to the EPR 2016 – Water Framework and Groundwater Daughter Directives	To the extent that it might lead to a discharge of pollutants to groundwater (a "groundwater activity" under the EPR 2016), the Permit is subject to the requirements of Schedule 22, which delivers the requirements of EU Directives relating to pollution of groundwater. The Permit will require the taking of all necessary measures to prevent the input of any hazardous substances to groundwater, and to limit the input of non- hazardous pollutants into groundwater so as to ensure such pollutants do not cause pollution, and satisfy the requirements of paragraph 6 of Schedule 22 and Article 6(1) Groundwater Daughter Directive.
Water Environment (Water Framework Directive) (England and Wales) Regulations 2003	Consideration has been given to whether any additional requirements should be imposed in terms of the Environment Agency's duty under regulation 3 to secure compliance with the requirements of the Water Framework Directive through (inter alia) environmental permits, but we consider that existing conditions are sufficient in this regard, and no other appropriate requirements have been identified.

Consultation

The following summarises the responses to consultation with other organisations, our notice on GOV.UK for the public, and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section

Response received from
East Hampshire District Council – Environmental Health
Brief summary of issues raised
East Hampshire District Council – Environmental Health Team reviewed the application with regards to noise and amenity issues. No objections raised.
Summary of actions taken or show how this has been covered
None required

Response received from
Hampshire County Council – Planning
Brief summary of issues raised
No objection.
Summary of actions taken or show how this has been covered
None required.

Response received from
Public Health England
Brief summary of issues raised
Public Health England are satisfied that the emissions to air, land and water can be adequately controlled by the permit conditions and there should be no adverse effect on the health of the population in the immediate area. Public Health England have assumed that the Environment Agency is satisfied that there is no risk to potable groundwater or local surface water features. The Environment Agency has considered this as part of the permit determination and is satisfied that the permit will prevent detrimental impacts on the receiving groundwater and local surface water features.
Summary of actions taken or show how this has been covered
None required

No representations were received from the local MP, councillors and parish/town community councils, from community and other organisations, or from individual members of the public.