 <b>Environment Agency</b>	<b>EPR Compliance Assessment Report</b>		Report ID: UP3431VF/0284856	
	<b>This form will report compliance with your permit as determined by an Environment Agency officer</b>			
Site	Preston New Road Exploration Site		Permit Ref	UP3431VF
Operator/ Permit holder	Cuadrilla Bowland Limited			
Date	10/11/2017	Time in	10:30	Out 13:30
What parts of the permit were assessed	Operating techniques - site development, Construction Quality Assurance & Validation of well pad membrane			
Assessment	Report/data review	EPR Activity:	Installation: X	Waste Op: Water Discharge:
Recipient's name/position	██████████ Health, Safety, Environment Manager			
Officer's name	EA Officers		Date issued	22/12/2017

**Section 1 - Compliance Assessment Summary**

This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation and any action you may need to take are given in the "Detailed Assessment of Compliance" (section 3). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our [Compliance Classification Scheme](#) (CCS). CCS scores can be consolidated or suspended, where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your [local office](#).

Permit Conditions and Compliance Summary		Condition(s) breached	
<b>a) Permitted activities</b>	1. Specified by permit	N	
<b>b) Infrastructure</b>	1. Engineering for prevention & control of pollution	A	
	2. Closure & decommissioning	N	
	3. Site drainage engineering (clean & foul)	N	
	4. Containment of stored materials	N	
	5. Plant and equipment	N	
<b>c) General management</b>	1. Staff competency/ training	N	
	2. Management system & operating procedures	A	
	3. Materials acceptance	N	
	4. Storage handling, labelling, segregation	N	
<b>d) Incident management</b>	1. Site security	N	
	2. Accident, emergency & incident planning	N	
<b>e) Emissions</b>	1. Air	N	
	2. Land & Groundwater	N	
	3. Surface water	N	
	4. Sewer	N	
	5. Waste	N	
<b>f) Amenity</b>	1. Odour	N	
	2. Noise	N	
	3. Dust/fibres/particulates & litter	N	
	4. Pests, birds & scavengers	N	
	5. Deposits on road	N	
<b>g) Monitoring and records, maintenance and reporting</b>	1. Monitoring of emissions & environment	N	
	2. Records of activity, site diary, journal & events	N	
	3. Maintenance records	N	
	4. Reporting & notification	N	
<b>h) Resource efficiency</b>	1. Efficient use of raw materials	N	

	2. Energy	N	
<b>KEY: C1, C2, C3, C4 = CCS breach category ( * suspended scores are marked with an asterisk),</b> <b>A = Assessed (no evidence of non-compliance), N = Not assessed, NA = Not Applicable, O = Ongoing non-compliance – not scored</b>			

<b>Number of breaches recorded</b>	0	<b>Total compliance score</b> (see section 5 for scoring scheme)	0
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If the Total No Breaches is greater than zero, then please see Section 3 for details of our proposed enforcement response

## Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- the part(s) of the permit that were assessed (e.g. maintenance, training, combustion plant, etc)
- information on the compliance score accrued inc. details of suspended or consolidated scores.
- where the type of assessment was 'Data Review' details of the assessment
- details of advice given of the report/results triggering the assessment
- any other areas of concern
- any non-compliances identified
- all actions requested
- any non-compliances with directly applicable legislation
- any examples of good practice.
- details of any multiple non-compliances
- a reference to photos taken

This report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

These comments have been produced as a review of the Construction Quality Assurance & Validation document submitted by the operator for the construction of the well pad membrane (containment system) between the site surface and the ground. This document is referred to in the Waste Management Plan reference, HSE-Permit-INS-PNR-006 Version 6, the Waste Management Plan is referred to in the Operating Techniques table of the permit, Table S1.2.

The purpose of the membrane is to prevent ground contamination from substances used for the exploration of shale gas.

Each comment is referenced to a specific section of the report. These comments have previously been provided to the operator and discussed at a face to face meeting on site and should be considered as recommendations.

A Construction Quality Assurance document was provided to the Environment Agency at the time the well pad membrane was installed. A CQA validation report was submitted subsequent to the installation of the membrane to demonstrate the correct installation and integrity.

Section 2.6 The Construction Quality Assurance (CQA) document hadn't originally referred to check surveys, though these surveys were discussed with the operator at a face to face meeting and details have now been provided in a validation report which demonstrates that the correct methods of construction have been used.

3.2.1 Details of the soil stabilisation process were required to be included in the validation report including the potential impacts on the geosynthetics and the steel pins from the chemicals used. The validation report now provides these details.

3.4 Confirmation was required in the validation report if hand shear vane testing has been carried out on the subgrade. This confirmation has been provided in the validation report.

3.5 Subgrade surface – There had been no specification for the surface or maximum allowable protrusions in the original CQA document. This detail has been provided with the validation report.

5.10.11 Confirmation was required in the validation report that the subgrade had been inspected and signed off before the sub grade had been laid. This confirmation has been provided with the validation report.

5.10.8 Confirmation was required in the validation report that any wrinkles in the geomembrance that had folded over had been remediated. This confirmation has now been provided that remedial work has been conducted.

5.11 Our original comments on the CQA document enquired as to whether bentonite had been used around protrusions in the liner. The validation report confirms the use of bentonite slurry around protrusions through the liner.

5.19.8 See point 5.16.3. Our original comments on the CQA document recommended that all seams

on the liner be tested. The validation report confirms that these tests have been conducted.

5.20.1 Destructive testing should take place on site on every fusion weld. The validation report details where non destructive tests have been completed.

5.20.10 The lab testing values for seam strength were not included in Table 1 as stated in the CQA report as referred to in our original comments. Confirmation has now been provided of these values.

6.6.2 downslope/roll direction overlaps are 500mm.

Our original comments included the production of sign off sheets for each area to be covered during construction of the membrane from subgrade up to the finished surface to ensure the surfaces are laid to the specification and that no material is present that may cause damage. These sheets need to be retained on site for inspection.

10.3.1 Please retain copies on site of all certification for the welding contractors and the CV's of the CQA personnel in the validation report as requested in our original comments.

Please note that all welding records must be retained for inspection if necessary.

**The original report did not provide information or details of the pins or anchoring system for the liner, or assessment as to whether this is adequate to secure it against movement from the proposed plant using the site in the original document. Confirmation has now been provided that the bunds have been constructed to ensure they are stable to take the fencing, ditches and anchor the liner.**

Our original comments referred to the values listed for the Smooth 2mm geomembrane which differ considerably from those in Table 1b of gm13. These include tensile properties, puncture and tear resistance. The values for the textured membrane is as gm13.

ES/16/1620-001 Our original comments referred to the liner detail not shown on the drawing, giving little information on the anchor detail or where this is representative on the site. Further information has been provided in the validation report.

ES/16/1620 – 002 Our original comments enquired as to what the pin referred to in this section has been placed into, also had any calculations on the stability and stresses to the liner been carried out. This information has been provided in the validation report.

PNR/AEY/CH/020 (and 8.1.1) Our original comments referred to the exposed geotextile on the crest of the perimeter bund and protection from damage and UV degradation. Details have been provided in the validation report.

We commented originally that the plans in the CQA document did not detail the liner sufficiently to be able to see how it is sealed around protrusions or at the edges including anchoring and protection. On site inspections have identified the anchoring and protection method.

Section A-A There is a low area between the toe of the soil bund and the perimeter bund forming another collection point for water with potential ponding. How will the liner be protected from water ingress? This was discussed at the face to face meeting.

PNR/AEY/CH/021


Section C-C and B-B – The blinding layer of concrete may come into contact with the liner. Some settlement of the Type 1 subgrade below the blinding layer may occur under load giving the potential for the concrete to damage the liner.

In addition, a procedure for inspection and maintenance of the pad, ditches and edges should be

put in place. These procedures will be subject to audit.

The CQA Validation Report is missing the following items.

There is no welding certification provided in accordance with TWI/CSWIP requirements for any of the geomembrane welders on site, or the CQA Engineers CV's included. Both of these are required for all personnel involved to complete and validate the report. These documents are to be retained on site for inspection.

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Operator/ Permit	Cuadrilla Bowland Limited	Date	10/11/2017

<b>Section 3- Enforcement Response</b>		<b>Only one of the boxes below should be ticked</b>	
You must take immediate action to rectify any non-compliance and prevent repetition. Non-compliance with your permit conditions constitutes an offence and can result in criminal prosecutions and/or suspension or revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.			
Other than the provision of advice and guidance, at present we do not intend to take further enforcement action in respect of the non-compliance identified above. This does not preclude us from taking enforcement action if further relevant information comes to light or advice isn't followed.			
In respect of the above non-compliance you have been issued with a warning. At present we do not intend to take further enforcement action. This does not preclude us from taking additional enforcement action if further relevant information comes to light or offences continue.			
We will now consider what enforcement action is appropriate and notify you, referencing this form.			

<b>Section 4- Action(s)</b>			
Where non-compliance has been detected and an enforcement response has been selected above, this section summarises the steps you need to take to return to compliance and also provides timescales for this to be done.			
Criteria Ref.	CCS Category	Action Required / Advised	Due Date
See Section 1 above			

**Section 5 - Compliance notes for the Operator**

**Section 6 – General Information**

To ensure you correct actual or potential non-compliance we may

- advise on corrective actions verbally or in writing
- require you to take specific actions in writing
- issue a notice
- require you to review your procedures or management system
- change some of the conditions of your permit
- decide to undertake a full review of your permit

Any breach of a permit condition is an offence and we may take legal action against you.

● We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.

● Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and or suspension or revocation of the permit.

● A civil sanction Enforcement Undertaking (EU) offer may also be available to you as an alternative enforcement response for this/these offence(s).

**See our Enforcement and Civil Sanctions guidance for further information**

This report does not relieve the site operator of the responsibility to

- ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- ensure you comply with other legislative provisions which may apply.

**Non-compliance scores and categories**

CCS category	Description	Score
C1	A non-compliance which could have a <b>major</b> environmental effect	60
C2	A non-compliance which could have a <b>significant</b> environmental effect	31
C3	A non-compliance which could have a <b>minor</b> environmental effect	4
C4	A non-compliance which has <b>no</b> potential environmental effect	0.1

**Operational Risk Appraisal (Opra)** - Compliance assessment findings may affect your Opra score and/or your charges. This score influences the resource we use to assess permit compliance.

**Data protection notice**

The information on this form will be processed by the Environment Agency to fulfill its regulatory and monitoring functions and to maintain the relevant public register(s). The Environment Agency may also use and/or disclose it in connection with:

- offering/providing you with its literature/services relating to environmental matters
- consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, local authorities) on environmental issues
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law and taking any resulting action
- preventing breaches of environmental law
- assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Information Regulations request.

The Environment Agency may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

**Disclosure of information**

The Environment Agency will provide a copy of this report to the public register(s). However, if you consider that any information contained in this report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within 28 days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

**Customer charter**

**What can I do if I disagree with this compliance assessment report?**

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with the officer's line managers. If you wish to raise your dispute further through our official Complaints and Commendations procedure, phone our general enquiry number 03708 506 506 (Mon to Fri 08.00–18.00) and ask for the Customer Contact team or send an email to [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk). If you are still dissatisfied, you can make a complaint to the Ombudsman. For advice on how to complain to the [Parliamentary and Health Service Ombudsman](#) phone their helpline on 0345 015 4033.