

Operations at Preston New Road

Keeping you informed

Update 1
23 October 2018

Hydraulic fracturing has started at Cuadrilla's Preston New Road site. The Environment Agency, Health and Safety Executive and Oil and Gas Authority will be active in regulating the site during operations. We are committed to keeping local people updated on our work over the coming months.

Our roles

Environment Agency

The Environment Agency is the principal environmental regulator in England. It will carry out inspections, audits and spot checks to monitor the site to ensure that Cuadrilla is working within the conditions set out in its environmental permit.

Health and Safety Executive

The Health and Safety Executive requires operators to manage well integrity so that there is no unplanned release of fluids and health and safety risks are kept as low as reasonably practicable.

Oil and Gas Authority

The Oil and Gas Authority ensures that operators have procedures in place to control and monitor the fracturing process, and assess the risks from induced seismicity.



If you would like to receive updates such as this direct via email during operations please contact us at PNREnquiries@environment-agency.gov.uk

We have set up a web page on Citizen Space to regularly update you on information from our audits, site inspections and reports from the operator.

Website link

<https://consult.environment-agency.gov.uk/onshore-oil-and-gas/information-on-cuadrillas-preston-new-road-site>

Seismic monitoring

The Oil & Gas Authority requires a real-time Traffic Light System to be operational throughout the entire operations, and is intended to mitigate the risk of induced seismicity (caused by human activity) from hydraulic fracturing, by ensuring the operator proceeds with caution if an “Amber” (0 to 0.5 M_L) event is detected, or by pausing pumping operations in the case of a “Red” (≥ 0.5 M_L) event.

During the first week of fracking operations the Oil and Gas Authority and the Environment Agency have been on site monitoring seismic activity during and after fracking.



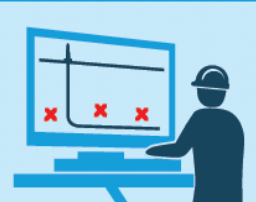
When shale rock is being fractured the seismic monitoring equipment (see image above) that is installed within the second well is able to detect micro-seismic activity.

The seismic monitoring array has detected a number of small micro seismic events (that are far below the level that can be felt) in the past week of operations, including on Friday afternoon when a 0.3 M_L (local magnitude) seismic event was detected 15 minutes after a frack test had been completed. This event was picked up by monitoring and published on the British Geological Survey website.

Operations are progressing in accordance with the agreed strict controls in the Hydraulic Fracture Plan and with the traffic light system. All of the micro-seismic activity detected to date has been within the expected range and cannot be felt at surface.

Managing onshore induced seismicity

Hydraulic Fracture Plan (HFP)




Operator sets out how it will control and monitor the fracturing process

Identifies and assesses the locations of existing faults to prevent hydraulic fracturing from taking place near them

HFP must be agreed with OGA and Environment Agency

OGA must be satisfied controls are in place to minimise disturbance

Monitoring






Before and during operations, the operator must carry out seismic monitoring as agreed in HFP

May include additional recording to measure levels of ground motion close to nearby dwellings and other structures

Where magnitude/ground motion are in line with the HFP, this confirms geological understanding and injection can resume, subject to any mitigation as part of the agreed HFP

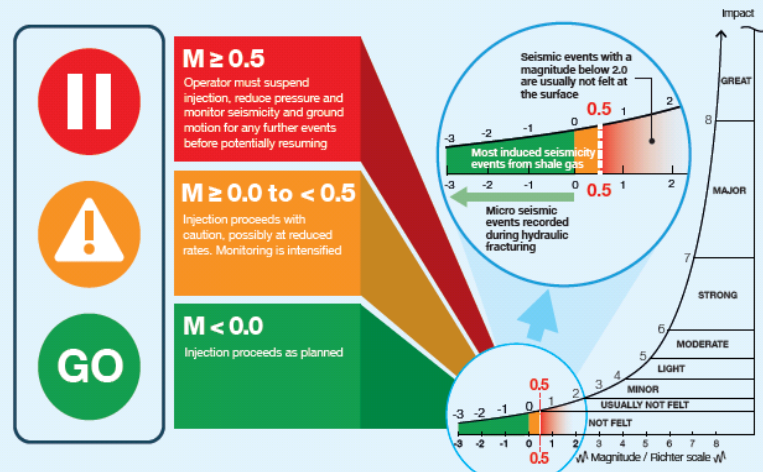
Management – “traffic light system”

M ≥ 0.5
Operator must suspend injection, reduce pressure and monitor seismicity and ground motion for any further events before potentially resuming

M ≥ 0.0 to < 0.5
Injection proceeds with caution, possibly at reduced rates. Monitoring is intensified

M < 0.0
Injection proceeds as planned



Seismic events with a magnitude below 2.0 are usually not felt at the surface

Most induced seismicity events from shale gas

Micro seismic events recorded during hydraulic fracturing

Impact scale: GREAT (8), MAJOR (7), STRONG (6), MODERATE (5), LIGHT (4), MINOR (3), USUALLY NOT FELT (2), NOT FELT (1)

Magnitude / Richter scale M_L

Site operations

- On Friday Environment Agency staff were on site checking compliance with the groundwater activities in the environmental permit; to observe mixing and storage of fracking fluid, flow measurement and carrying out groundwater borehole monitoring checks.
- Earlier in the week the Environment Agency responded to isolated reports of black smoke from the site. It is satisfied that this was due to transient emissions from the start-up of diesel engines that run the pumps. Staff assessed the air quality monitoring data as a result of the reports and reported no significant increase in air pollution levels.
- At present the tankers that have been leaving site are removing surface water and septic tank waste only. The Environment Agency plan to audit the storage and disposal of any flow-back water being produced in the coming weeks and will share details at that time
- The Environment Agency has been publishing environmental monitoring data onto the Citizen Space webpage since January 2017. It is working to increase the frequency of publishing these reports during fracking operations.



Contacting us

Environment Agency

24 hour hotline number 0800 807060 or PNREnquiries@environment-agency.gov.uk

Health and Safety Executive at: <http://www.hse.gov.uk/contact/concerns.htm>

Oil and Gas Authority at: oga.correspondence@ogauthority.co.uk