



AQUIND Limited

AQUIND INTERCONNECTOR

Applicant's Response to Deadline 7 and 7a
Submissions – Appendix D AQUIND
Interconnector Enquiry

The Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 2010 – Rule 8(1)(c)

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DOCUMENT

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[REDACTED]

From: Aquind Consultation <aquindconsultation@becg.com>
Sent: 12 February 2021 16:01
To: [REDACTED]
Subject: AQUIND Interconnector Enquiry

Dear Mr Langley

Thank you for your recent enquiry, made direct to Stockton Drilling, regarding the horizontal directional drilling (HDD) process and in particular where the drilling passes underneath the allotments.

Having liaised with Stockton Drilling on this matter, we address your queries below:

The use of Drilling Fluid Onshore

It is common practice to use HDD as an installation technique to cross under "obstacles" for example rivers, railways, golf courses and SSSI. Many HDDs have been installed for this reason. As part of the drilling process the contractor would use a drilling fluid.

The use of "products" are governed in the UK by REACH regulations, they were adopted from the EU to improve the protection of human health and the environment from the risks that can be posed by chemicals, while enhancing the competitiveness of the EU chemicals industry (REACH stands for Registration, Evaluation, Authorisation and Restriction of Chemicals.)

To comply with the regulations the manufacturers produce safety data sheets (SDS), these are then used by the employer to produce the material safety data sheets (MSDS). The MSDS is a requirement under Construction Design & Management Regulations 2015 (CDM 2015) to ensure persons using the products and people who come into contact with the product do not come to harm, in this instance we are talking about bentonite (a mined naturally occurring clay). The bentonite is delivered to site in sealed one tonne bags or 25 kg bags in a dry state, The dry bentonite is then placed in mix tanks which hold water to create the wet clay which is termed drill fluid or slurry within the industry. The MSDS is for bentonite in its dry state as when wet the silica you refer too cannot escape, this is also discussed next.

The MSDS states:

- Classification Regulation (EC) No 1272/2008: not hazardous (This is the label you see on products, i.e. bleach would read 'corrosive')
- Accidental Release measures: Environmental Risk: Non-toxic, Cleaning up: Sweep or vacuum up and dispose of as non-toxic waste
- Toxicological information: Ingestion: Orally non-toxic
- Substances: Consists mainly of montmorillonite with less than 10% accessory minerals (quartz, feldspar, mica and calcite) Respirable Crystalline Silica (<7.1u micro 10⁻⁶) may be present at less than 1% and therefore not classified as hazardous

It is worth noting that 'montmorillonite' is mentioned within the MSDS, montmorillonite is the same entity as bentonite and the terms are interchangeable; except one is easier to read and say so has become the industry standard word. Montmorillonite has the chemical formula of SiO₂ as you mentioned in your question as does the clay you are standing on, as all clays have a make-up of SiO₂. This does however not relinquish AQUIND from ensuring the product is safe for use.

Additionally to the information identified on the MSDS bentonite drilling fluid is on the PLONOR (Poses Little Or No Risk) list, so discharge onshore or offshore is not a danger to the environment (NB discharge is not planned for the

project). There is not an onshore government body classification regarding the use of bentonite being non-hazardous and non-toxic, and we therefore reference PLONOR within this answer as the list is maintained by CEFAS which is an executive agency of the United Kingdom government Department for Environment, Food and Rural Affairs. This confirms the 'non-hazardous' rating of the product as demonstrated by the MSDS. The position is not different where used offshore or onshore.

Taking into account the non-toxic nature of Bentonite, there are no issues relating to contamination where used as a drilling fluid for a drill beneath allotments where produce is grown arise.

Third Parties

The Health and Safety at Work Act. 1974 places a duty on employers to take reasonably practicable steps to ensure the health and safety of people who are not in their employment, such as members of the public. The steps outlined below demonstrate a clear commitment to adhere and comply with all existing laws and regulations during construction.

The Applicant has completed risk assessments that identify project risks (Project Risk Register). At this stage of the project the HDD has been preliminarily drawn to identify which geological layers are best suited for directional drilling, and the HDD route alignment has then been further risk assessed in accordance with CDM 2015 Regulations (Construction, Design & Management) which determined the risk of bentonite break out at the allotments (HDD2) as small to negligible / minor.

At the detailed design stage, the design of the crossing shall be confirmed which will build on the preliminary design work to produce very detailed methodologies for the works. Once the sequencing and final HDD alignment has been completed, the detailed risk assessments can be conducted and finalised.

The equipment used to carry out the works will be set up outside the boundaries of the allotments, which will include the mixing plant for the drilling fluid. The mixing of the drilling fluid (bentonite and water) will be carried out in accordance with the detailed risk assessment which will be produced on completion of the final design by the Contractor.

Drilling Fluid Breakout

As you can see under the heading "Use of drilling Fluid on shore" it is classified under "Environmental Risk: Non-toxic". Bentonite is a naturally occurring mined clay and has a long history of being used as a fertilizer, for example in Holland. In the event of bentonite breakout (the risk of which is small to negligible) this would be contained and removed by personnel and small tools/pumps. Should the allotment holder wish to use it as a fertilizer this could be discussed further.

It is confirmed in the Bentonite Breakout Note (document reference [7.4.3.4](#)) that where Bentonite drilling fluid comes into contact with agricultural produce, a quick rinse with water is all that is required prior to consumption. As explained above, Bentonite is a naturally occurring substance.

Within section 10 of the MSDS it is confirmed that bentonite does not produce hazardous products during decomposition, this is due to the fact the respirable crystalline silica becomes trapped with the water molecules during mixing of the product in the mix tanks. In the unlikely case that bentonite breaks out at surface the breakout shall be cleaned and removed as far as practicable. The remaining bentonite below ground will not release silica due to the moisture content and never will as it cannot dry out to the extent silica is released through natural measures. You would need to physically cook the bentonite to get the moisture content low enough that the silica becomes respirable.

We trust we have addressed your queries. Please note that the Applicant may submit this response as part of its submissions to the Examining Authority for the Application at Deadline 7c in advance of the hearings which are to be held on w/c 15th February 2021.

We also highlight that in future all queries should be directed through to AQUIND Consultation via freephone 01962 893 869 or email aquindconsultation@becg.com. Should any queries be sent elsewhere they may be missed and may not necessarily be responded to.

Kind regards,

