Comments from Frack Free Coastal Communities on Environment Agency consultation EPR/YP3623LC (Europa Oil and Gas Ltd)

0 Overview and context

This response to the Environment Agency (EA) Consultation on the environmental permit application by Europa Oil and Gas Ltd (EOG) to drill and hydraulically fracture a gas well at Burniston on Yorkshire's Heritage Coast[1] is submitted on behalf of Frack Free Coastal Communities (FFCC). FFCC was set up in late 2024 to give voice to local residents concerned about Europa's plans. The response has been compiled by the Steering Group of FFCC.

We note the list of topics on which the EA is able to accept comments. However we feel it important to preface our comments on these topics with some words on the context in which this EPR application has been made.

It seems to us perverse that an agency which "strive[s] to make the right decisions today, for the people, wildlife and environment of tomorrow" and which "put[s] the climate emergency at the heart of everything we do"[2] is tasked with facilitating a development that, on the applicant's own admission in its EPR application, will cause air pollution, greenhouse gas emissions and environmental risk for the local population.

The scientific evidence is overwhelmingly clear that fossil fuels are driving global heating leading to potentially catastrophic environmental impacts both here in the UK and globally. Successive UK governments and international governments for some years have recognised the dangers. Policy direction is clearly towards net zero and sustainable energy. Climate change is a clear and present danger, evidenced starkly in this area by the huge moorland fire on the North York Moors which is still burning in the peat below the charred vegetation between Scarborough and Whitby. The International Energy Agency concluded five years ago that "No new natural gas fields are needed" in a net zero by 2050 scenario[3] and many scientific studies since then have reinforced that conclusion with ever increasing urgency. Europa's current plans for an appraisal well at Burniston is a precursor to their aspiration to develop the UK's largest onshore gasfield, totally out of keeping with a net zero scenario.

1 Regulatory requirements and technical safeguards

We have serious concerns about the ability of the Environment Agency to regulate the oil and gas sector effectively given their much-publicized failure to fulfil their regulatory functions in respect of the water sector[4]. Their over-reliance on industry operators to do their monitoring and reporting work for them and the reduction in funding available for environmental protection over the past 15 years do not fill us with confidence.

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[1] https://consult.environment-agency.gov.uk/psc/yo13-0db-europa-oil-gas-limited/

[2] EA 2025 Creating a Better Place. https://www.gov.uk/government/publications/environment-agency-ea2025-creating-a-better-place Accessed 17/9/2025

[3] Net Zero by 2050: A Roadmap for the Global Energy Sector. International Energy Agency 2020. https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroby2050-ARoadmapfortheGlobalEnergySector_CORR.pdf Accessed 17/9/2025

[4] Independent Water Commission Final Report 21 July 2025. https://assets.publishing.service.gov.uk/media/687dfcc4312ee8a5f0806be6/Independent_Water_Commission_-_Final_Report_-_21_July.pdf Accessed 17/9/2025

Our confidence in the EA is further eroded by their apparent inability to run a consultation effectively. When the consultation was first launched in July 2025, several key documents were missing: these were later added and the consultation period extended. An EA press release announcing the consultation dated 7 August 2025 incorrectly stated that Europa Oil and Gas "has an environmental permit for drilling wells and long-term oil and gas production at its site in Burniston, North Yorkshire": this was only corrected after FFCC reported the error to journalists.[5] When it was pointed out to the EA by FFCC and others that their consultation did not follow government Best Practice they added a drop-in session. However, the letter they mailed to residents inviting them to the session was not sent to all local households; a second letter, apologizing for this oversight, was received by residents two weeks after the drop-in session. When further missing documentation was identified, they extended the consultation yet again.

We are concerned that the proposed monitoring of environmental parameters is inadequate to the task of alerting the local population to potentially harmful impacts and of protecting the environment more generally. The Air Quality Monitoring Plan[6] for example envisages no monitoring beyond the perimeter of the project site. The groundwater monitoring proposals[7] look robust provided they are implemented rigorously; however the locations of the three monitoring boreholes are not shown (the cross-referenced map is missing from the document) and there seems to be no monitoring proposed of the existing boreholes used for domestic and agricultural purposes. The 21 day gap between data being taken and the analysis reported to the EA is clearly not fit for the purpose of alerting local residents to unexpected changes in parameters.

More generally, the Environmental Risk Assessment is inadequate, being far too reliant on written procedures being in place with no means of detecting whether or not they are being complied with. Even risks judged to be of high probability of occurring (e.g. AE1 Emissions to air from vehicle exhausts; OE2 Odour emissions from engine exhausts) are reduced to 'not significant' simply by having written procedures, training and maintenance schedules in place[8]. No mechanism is proposed by which the EA will check whether those procedures and schedules are adhered to. From discussions with EA staff at the 3/9/2025 drop-in, it seems that it is up to the local population to monitor and report emissions including odours. References in the Environmental Risk Assessment to mitigation or risk management actions being done only 'where possible' are unsettling.

Later, in section 3.1 below, we comment on the inappropriateness of some of the techniques proposed for this development including the inadequate assessment of BAT (Best Available Techniques).

2 Local population and sensitive sites

2.1 Local Population

[5] https://www.gov.uk/government/news/public-consultation-opens-on-yorkshire-oil-and-gas-site#full-publication-update-history

[6] Application Bespoke A001-15 Air Quality Monitoring Plan 250424.pdf

[7] Application Bespoke A001-08 Hydrogeological Impact Assessment 250116 Version F3.pdf pp. 28f.

[8] Application Bespoke A001-07a Environmental Risk Assessment 250425.pdf

EOG do not provide detailed and comprehensive information concerning receptors i.e. local population numbers/residents/businesses and sensitive sites in close proximity to the proposed drill site. These data are readily accessible from public datasets.
Based on data from the UK 2021 census[9] there are:
Within **1km, 920** residents
Within **2km, 2785** residents
Within **3km, 9784** residents.
The nearest home, Wayside Farm, is in fact immediately adjacent to the site entrance, and yet EOG do not even consider the site entrance as part of their application. (However, some of their documents do include the access road from the entrance on the Coastal Road within 'the site' – see section 6.2 below.) Residents of Coastal Road, Bridge Close, Hawthorne Close and Burniston Gardens are extremely close, in many cases as near to the well site as 400 metres, and the majority, less than 500 metres (based on OS map measurements).

Inevitably, many will be adversely affected by drilling and site activity noise, 24/7 light pollution from site floodlights, noxious odours and increased traffic fumes from extra HGVs and site machinery. This will, undoubtedly, significantly and adversely affect their current experience of day-to-day peaceful living in their own homes and gardens. Already, residents report that they are fearful of deteriorating existing physical health conditions and the likelihood of increased impacts on their anxiety levels and mental health should the EOG plans to drill and hydraulically fracture (frack) go ahead.

The most common age of the residents in the closest named streets is 72 years old, much higher than the national average, putting them in a vulnerable group. The EOG proposal is far too near to the quiet rural village of Burniston with *1523* residents. Elderly residents are particularly vulnerable to the health impacts of air, noise and other pollution. The proportion of the population aged 70 years or more in Burniston is 70% higher than in England as a whole.[10]

2.2 Sensitive Sites
There are numerous sensitive sites within **one kilometre** of the proposed drill site.

- **Burniston Garden Centre** – a thriving and popular local family business immediately opposite the site entrance. They purposefully employ young adults with special needs who are regarded as vulnerable adults with protected characteristics as defined in the Equality Act 2010 and are particularly sensitive to the detrimental impact of industrial drilling and gas exploration.
- **Green Farming Ltd Grain Store** (see section 4.4 below) – pollutants from the site risk jeopardising the strict food safety standards to which the grain drying and storage operation is required to adhere, a risk which has been ignored in the applicant's Environmental Risk Assessment.
- **Coastguard Station** – which uses the same access as the proposed site entrance from the A165 Coastal Road and requires 24/7 access.
- **Pockmoor Feed Mill** – adjacent to the access road for the drill site; likely to be adversely affected by air pollution from the site and associated HGV traffic.

[9] https://www.datadaptive.com/pop/ Accessed 17/9/2025
[10] https://www.ons.gov.uk/visualisations/customprofiles/build/#E04007662 Accessed 17/9/2025

- **Caravan Sites** – Burnside leisure park and Scarborough camping and caravan club. The majority of their visitors are elderly and seeking a peaceful countryside experience on holiday. A nearby industrial drilling site will destroy this experience.
- **Wedding Venue (The Barn at Flatts Farm)** – on Coastal Road is hardly an attractive option with a 38 metre drilling rig and gas flare in the background of their wedding photos.
- **Two Pubs** – The Oak Wheel and the Three Jolly Sailors are currently open seven days a week and are very busy all year round especially in the summer months with both local and tourist trade. Both have outdoor dining areas which will be impacted by the noise and odour from the drilling adversely affecting their business.
- **Wandales Court –** this popular **Independent Living Scheme,** just off Burniston High Street, provides retirement housing and regular community activities for many elderly and vulnerable residents.
- **Post Office and General Store –** located on Burniston High Street, providing essential services to locals and tourists. Parking and bottle necks of traffic there are already problematic and often hold up the smooth flow of traffic through the village. This endangers pedestrians and families walking to school, often with young children and pushchairs on the narrow pavements there. Extra HGVs from the EOG site will exacerbate the already busy and narrow highway through the village.
- **Sewage Work Treatment Plant –** sited off the Coastal Road and a sensitive site that processes waste products.
- **Burniston Household Waste Recycling centre –** is situated on Coastal Road. Next to this is a now disused former tip underneath which the proposed deviated well would be drilled. Any disturbance to this through drilling and fracking underneath it could disturb harmful toxic chemicals including the release of methane.
- **A small business park** – is situated nearly opposite the proposed site entrance. These businesses, as with some of the other sensitive sites, will also be affected by noise, dust and noxious odours from the site.
- **Cleveland Way (part of the Heritage Coast) –** this national footpath is adjacent to the proposed drilling site and what will be a 38 metre high rig. The path attracts huge numbers of tourists and local walkers and will be in full view of the drilling rig and industrial site. This was evident from a drone video filmed at the height of the proposed rig which clearly showed the location of the Cleveland Way.[11] Contrary to public statements by EOG, the site is visible at ground level from this footpath.
- **Cinder Track –** Again, less than 1km from the proposed drilling site, this forms part of National Cycle Route 1 and is widely used by walkers, cyclists, horse riders and families. This is also a vital wildlife corridor. Enjoyment of this resource will inevitably be diminished by nearby drilling and associated industrial activities.
- **Ecological habitat –** adjacent to the proposed drilling site is abundant wildlife including: Great Crested Newts, badgers, hares, deer, bats and diverse and thriving bird populations, insect and pond life.

Within 2 kilometres of the proposed drill site:

[11] https://vimeo.com/1091435674/1bf4d38fae?link_id=0&can_id=35319b04d7c7428991bc9a5feaeed70b

- **Lindhead Primary school** - with 215 pupils on roll including 11% with special educational needs and disabilities (SEND) and 4% with an Education, Health and Care Plan (EHCP). The youngest pupils (Early Years Foundation Stage) access outdoor learning for a lot of the school day along with all pupils playing outside at general breaktimes; they will be exposed to increased levels of air borne pollution.
- **Burniston and Cloughton Village Hall, children's playground, tennis courts and bowls club.**
- **Scarborough Rugby Club** – a sports facility which is used throughout the day by people of all ages, with its outdoor pitches, all age rugby training sessions, outdoor tennis and other courts plus Baron's Gym. The deviated drill route goes directly beneath the rugby club premises.
- **several livery stables** – horses and riders from which are regular users of the Cinder Track and the A169 Coastal Road.

Environment Agency officers at the 3rd September 2025 consultation drop-in at Burniston and Cloughton Village Hall, when questioned by residents, appeared relatively unaware of receptors in the vicinity of site as outlined above.

The recent, and still ongoing, huge North York Moors fire (Langdale Moor) is an indication of how a simple change of wind direction and speed can have devastating consequences distributing smoke across many kilometres. The same could occur with toxic gas release from a drilling rig, shrouded flare or possible equipment malfunction.

In summary, we are not convinced that sufficient EA processes and mitigation are in place to prevent significant physical and mental harm to the local population and extensive wildlife.

3 Inappropriate technology and processes

3.1 Proppant Squeeze

The proposed process – the deviated well and hydraulic fracture ('proppant squeeze') - is inappropriate. Alternative techniques for well stimulation have not been considered. The data presented are inconsistent and inadequate; it is therefore not possible to reach an informed conclusion about the environmental safety of the proposals.

Hydraulic fracturing can cause seismicity. Research commissioned by the Oil and Gas Authority after the suspension of hydraulic fracturing at Preston New Road (PNR) found that *"it is not yet possible to accurately predict the seismic response to hydraulic fracturing, if any, in relation to variables such as site characteristics, fluid volume, rate or pressure. Where induced seismicity has occurred, mitigation measures have shown only limited success, and there can be only low confidence in their effectiveness currently."*[12] We are not aware of any peer reviewed scientific study that changes this assessment. The same report concludes that *"there remain significant uncertainties and challenges related to the prediction and management of induced seismicity from hydraulic fracturing. Further work could usefully focus on addressing broader challenges, such as establishing the seismogenic nature of sites like Preston New Road, and whether certain geological settings or conditions are contributing*

[12] Summary report of the scientific analysis of the data gathered from Cuadrilla's PNR2 hydraulic fracturing operations at Preston New Road. https://www.nstauthority.co.uk/media/6970/oga-summary-of-pnr2-studies-final.pdf Accessed 12/9/2025. Accessed 14/9/2025

factors to hydraulic-fracturing induced seismicity." It is not credible simply to say that, because the geology in the area around the proposed drill and hydraulic fracturing sites are different from that at Preston New Road and other places in England which have experienced seismicity induced by hydraulic fracturing, seismicity will not happen at Burniston / Cloughton / Scalby.

Particularly concerning is the fact that seismicity associated with hydraulic fracturing at PNR was caused by volumes of fracking fluids lower than those that Europa propose to use in their test / appraisal well at Burniston.[13]

We urge the EA to insist that a proper mapping of the faults in the vicinity of the drilling and hydraulic fracturing locations is carried out before a decision on the EPR is reached. The practice of drilling near and through faults risks earthquakes and even more importantly the faults can act as pathways for contaminants to other, water bearing, geological layers.

3.2 Flaring of gas near residential properties

It is clear from recent studies that flaring poses significant health risks to nearby populations. Macaw Energies note that "*In addition to environmental impacts, the burning of gases also poses risks to human health. The pollutants released are associated with respiratory problems, cardiovascular problems, and even cancer. Communities near gas burning sites are particularly vulnerable, being exposed to high levels of air pollutants".*[14]

Nowhere in the Waste Gas Management Plan is there an analysis of the likely pollutants produced by burning of hydrocarbons, together with unknown trace elements. Neither is there an assessment of the losses to atmosphere of methane gas (CH4) – from incomplete burning and from the drilling process itself - which is a known major contributor to global warming. Typically these fugitive gas emissions are ignored by oil and gas companies because they are difficult to measure despite academic research showing them to be significant in quantity.[15] A 2021 study by the Clean Air Task Force showed un-monitored methane emissions coming from the vast majority of oil and gas facilities – at all stages in the process of exploration, extraction transport and processing – in Europe including the UK.[16]

Potential emissions from flaring include: Carbon dioxide (a major GHG and contributor to global warming); Hydrogen sulphide (rotten eggs smell, in vulnerable cases causing respiratory inflammation at low doses, respiratory paralysis, collapse and death at high doses); Nitrogen (used for cooling); Volatile Organic Compounds (VOCs - organic chemicals with a high vapour pressure at room temperature; they are often components of the fuel being flared, and some may also be created during the combustion process, especially if combustion is inefficient); methane (CH4 – from incomplete combustion and inefficient equipment); Nitrogen

[13] https://drillordrop.com/2019/09/12/cuadrilla-fracked-seven-times-before-record-breaking-tremor-official-logs/ Accessed 15/9/2025

[14] https://www.macawenergies.com/news/why-are-flared-gases-harmful-to-the-planet Accessed 15/9/2025

[15] https://www.ipcc-nggip.iges.or.jp/public/gp/bgp/2_6_Fugitive_Emissions_from_Oil_and_Natural_Gas.pdf Accessed 15/9/2025

[16] Clean Air Task Force (2021) *It Happens Here Too: Methane Pollution in Europe's oil and gas network* Clean Air Task Force, December 2021 https://cdn.catf.us/wp-content/uploads/2021/12/13024754/CATF_EUMethane_Report_Proof_12.10.21.pdf Accessed 20/9/2025

oxides (NOx) (which react with VOCs in the atmosphere to form smog); Sulphur Dioxide (SO2 which contributes to acid rain); Black Carbon (soot); Carbon Monoxide (CO).[17]

Residents are concerned about the potential noise of flaring. Noise from gas flares in the UK originates from the turbulent mixing of gases, air, and steam during the burning process, often described as a roaring sound like thunder, and can also be accompanied by vibration. The noise can be heard for miles from the source. While flaring may be seen as a convenient method for removing surplus gases, it can cause significant disruption to local communities. Communities have raised concerns about health impacts of noise, light, and vibration from flaring, including sleep disturbance and anxiety – concerns which are justified in light of extensive peer-reviewed research.[18]

Impact of pollutants (including noise, odour and vibration) from flaring will vary with wind direction and speed. Average hourly wind speed in Burniston varies significantly over the course of the year (windiest in October – March: more than 22.7 km/hour; January: 28.0 km/hour; July: 17.4 km/hour).[19] Being only a few hundred metres from the coast, wind direction in the area varies with the daily warming and cooling of the sea and land while prevailing winds at certain times of the year will blow any pollutants directly from the site towards receptors in Burniston and Cloughton. These variables have not been sufficiently taken into account by the applicant.

We ask that the EA require the applicants to use "green completions" technology instead of flaring[20]. This would reduce pollution and its detrimental effects on local residents and also reduce the impact on global warming.

3.3 Shrouded Flare

Europa plan to burn waste gas – more than 10 tonnes per day – in a flare on site opting for the cheaper shrouded rather than an enclosed flare. Europa have not demonstrated that a shrouded flare is a 'Best Available Technology'. 'Best', as they remind us, means "most effective in achieving a high general level of protection of the environment as a whole" [Waste Gas Management Plan p. 19]. They acknowledge that an enclosed flare would be more effective and their selected option of a shrouded flare "is not the most environmentally beneficial" (ibid. p. 27). They do not go on to assess the difference between the two types of flare in terms of impact on sensitive receptors, air pollution or level of GHG emissions: they did not undertake a cost-benefit comparison of the two because they had already ruled out the enclosed flare.

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[17] Fawole, O.G., et al., (2016). *Gas flaring and resultant air pollution: a review focusing on black carbon.* Environmental Pollution **216:** 182-197

[18] Bamber, A.M., et al. (2019) A Systematic Review of the Epidemiological Literature Assessing Health Outcomes in Populations Living near Oil and Natural Gas Operations *International Journal of Environmental Research and Public Health* **16** (12): 2123 doi: 10.3390/ijerph16122123 Hays, J., et al. (2017) *Public Health implications of environmental noise associated with unconventional oil and gas development* Science of the Total Environment **580** 448-456

[19] wind speed and direction data from www.weatherspark.com Accessed 14/9/2025

[20] Reduced Emissions Completions for Hydraulically Fractured Natural Gas Wells. Lessons learned from Natural Gas STAR Partners. United States Environmental Protection Agency 2011 http://large.stanford.edu/courses/2022/ph240/terrones1/docs/epa-2011.pdf Accessed 20/9/2025

Recent peer-reviewed research concludes that "While flares are designed to be efficient, real-world conditions and equipment malfunctions can cause actual flare efficiency to be well below the design specification."[21] Coburn et al. (ibid.) cite studies suggesting that on-shore flares have an "actual operational efficiency of 95.2%", concluding that "This reduction from an industry-accepted assumed efficiency of 98% can have dramatic impacts on the overall emissions from the oil and gas sector".

We want (a) to know what methods will be used by Europa and/or the EA to monitor the actual efficiency of any flare deployed at the site and what remedial action will be taken if this is found to fall below the expected level of 98%; and (b) to see a thorough analysis of the differential impact of a shrouded vs. enclosed flare, and a flare operating at real-world efficiency of 95.2% vs. one working at the assumed 98% level.

3.4 Leaving fracking waste underground in the 'mining waste facility'

The key consideration here is the drilling waste including that left underground following the fracking process. Europa acknowledges that naturally occurring radio activity (NORM) may be present in the fluids and muds that are returned to the surface[22] and they have a plan to deal with their disposal at an Environment Agency approved facility. Our concern is that there could be leakages both in the immediate environment (including to groundwater) and during their journey to eventual disposal.

The applicant claims that leaving the bulk of the fracking fluid underground in the proposed 'mining waste facility' is a Best Available Technique. Our concern is that this contaminated wastewater could have unknown destinations within the regionally important aquifer system. The applicant claims this waste cannot travel upwards into the aquifers because of the nature of the rock formations above the waste facility but they cannot be certain of this in the absence of data on geological faults in the vicinity of the facility.

In their response to EA's Section 5 request for further information, EOG now say they propose to carry out hydraulic fracturing at four depths within the well, at between 2,000 and 3,000 metres below ground level[23]. This implies that fracking waste will be located at various points within a 1km section below Barmoor Lane rather than the single location indicated in the original EPR application. This needs clarifying before a determination can be made.

4 Shape and use of the land around the site

We believe the proposed development presents significant potential risks to the surrounding land, ecosystems and water systems. We detail specific impacts that should be considered in the sections below.

4.1 Impact on agricultural land use

The proposed site is in close proximity to both good quality **arable land** and **permanent pasture** currently used for **beef cattle grazing**. Fracking operations risk disrupting these established land uses through:

[21] Coburn, SC, et al. 2024. Measuring methane destruction efficiency in gas flares with dual comb spectroscopy. *Proceedings of the Combustion Institute* **40**, 1-4.

[22] Application Bespoke A001-05 Waste Management Plan p. 50 Table 14 Formation Water / Produced Water

[23] Application Bespoke A001 s5n response 04 europa oil gas cloughton 2 schedule 5 no1 q4 response 250912.pdf

- **Soil contamination** from accidental chemical spills or leaks from surface storage ponds and fracking fluid handling.

Chemicals seeping into soils can impact the health of the soil, altering pH, fertility and microbiological composition.
Toxins from spills can accumulate in the soil making it unsuitable for grazing and reducing productivity of pasture.
Drilling operations may lead to the loss of essential soil nutrients or alter the soil's pH making it less productive for grazing livestock.

- **Airborne emissions** such as methane and volatile organic compounds (VOCs), which could affect plant health and animal welfare.

The emissions can fall on grassland and crops, stressing them, impairing growth, reducing yields and affecting the quality of the crops.
Soot or flare residue may settle onto the soil affecting soil structure and fertility. This can then impact the crops' ability to take up water and nutrients effectively.
Increased levels of pollutants can also impair photosynthesis thereby reducing the overall productivity of crops.
Airborne pollutants can negatively impact the health of grazing animals causing respiratory issues or other health problems.

- **Noise and light pollution**, which can distress livestock.
- The potential **loss of productive farmland** through land degradation.
- The **industrialisation** of what is currently a peaceful, productive rural landscape, potentially disrupting farming operations and reducing land value.

4.2 Environmental Stewardship and Conservation Areas
The area surrounding the proposed site includes land enrolled in **Environmental Stewardship schemes**, aimed at enhancing biodiversity, conserving soil quality and maintaining traditional hedgerows and margins. Disruption from drilling, flaring or traffic movements would jeopardise the ability to comply with these schemes and risk damaging habitats intentionally preserved under these protections.
The surrounding area includes **ponds, wetlands**, **woodland and hedgerows** managed for wildlife conservation, with a range of birds, reptiles (including Great Crested Newts) mammal species and insects relying on this habitat. We are concerned that **disturbance** from drilling operations (noise, light pollution, and increased human activity) will:

- negatively affect local wildlife and breeding birds
- undermine existing **agri-environment agreements** and public investment in conservation
- upset pollinators like bees and butterflies who are encouraged to the area thanks to fields nearby sown each year with pollen and nectar seed mixes. 15 Bee hives are located in a field less than 1 km away. Bees can be affected by pollution and they are kept on this farm to improve the quality of oilseed rape
- degrade the character of the rural landscape, with **long-term implications** for habitat integrity and conservation goals.

4.3 Hydrological Concerns: Borehole, Land Drains and Groundwater
The presence of a **borehole** 1.3km away is noted in the planning documents but not in the environmental assessment, which we think is an important omission. It supplies the main farm in the area (Green Farming Ltd) with water for both agricultural and domestic use. This,

and an established **land drainage system** that helps manage water flow across low-lying fields, makes the area especially vulnerable to water contamination. Specific concerns include:

- **Migration of fracking fluids** or methane into groundwater supplies via geological faults or improper well casing.
- **Pollution of surface water** through run-off during heavy rainfall events.
- **Disruption of land drainage**, which may lead to waterlogging, soil degradation, and reduced agricultural productivity.
- How local landowners will be informed of **contamination incidents** and what recourse will be available.

Given the reliance on groundwater for both **agriculture and human consumption**, the potential for contamination poses a serious risk to **public health and food safety**.

4.4 Grain Drying and Storage

We wish to raise serious concerns regarding the **close proximity of the drill site to the neighbouring Grain Drying and Storage facility** (run by Green Farming Ltd) and which is not included in the list of sensitive receptors in the Risk assessment. In several of the EPR application documents this facility is listed as an animal feed mill which is incorrect. The feed mill (Pockmor Ltd) is within the 'industrial site' and will use the same access as the drill site. The building we refer to is 300m to the west of the proposed well site and its agricultural operations could be impacted by the drilling and related activity, specifically the drying and storage of over 2000 tonnes of grain per year intended for human consumption.

- **Airborne Contamination and Dust** are not good for a grain drying process which requires clean, filtered air. The introduction of industrial drilling, flaring and vehicle movements presents a significant risk of airborne pollutants, dust and particulate matter entering the air intake and drying systems. This contamination could render the grain unsuitable for the human food chain, resulting in substantial financial losses and reputational damage.
- Fracking and gas extraction activities are known to release **VOCs and other odorous compounds** into the surrounding atmosphere. These compounds pose a risk of tainting stored grain, especially given the close proximity of the storage facilities to the proposed site. Any trace of off-odours or contamination may lead to the rejection of crops by buyers and processors.
- Green Farming Ltd's operations adhere to strict **food safety standards**, including Red Tractor assurance and other regulatory bodies. Environmental pollution from the drilling site could jeopardise their compliance with these standards, affecting not only current produce but also future business viability.
- The distance of only 300 metres between the proposed site and a food storage facility is wholly inadequate to mitigate these risks and we suggests it requires an **Adequate Buffer Zone**.

4.5. Geological Instability and Seismic Risk

We are particularly concerned about the presence of **The Peak Fault**, which runs through this area. This known geological feature introduces a significant risk of induced seismic activity due to the nature of hydraulic fracturing. In our view, the Environmental Assessment insufficiently addresses:

- The potential for increased seismicity.
- Risks to the **unstable coastal cliffs** in the area, eroding areas of farmland that abuts these cliffs and the **Cleveland Way**, a nationally important footpath and tourism asset.

- The long-term stability of the land, including effects on buildings, field structures and drainage systems.

4.6. Pollution Control and Mitigation Measures Required
Should the project proceed, the following **abatement and control measures** must be strictly enforced:

- **Baseline and continuous water monitoring** (borehole, ground and surface) before, during, and after operations.
- **Air quality monitoring** for methane, VOCs, and other pollutants.
- **Buffer zones** between the fracking site and any sensitive receptors (farmland, boreholes, habitats).
- **Emergency response plans** for spillages, well failure and groundwater contamination.
- **Restrictions on timing** of certain activities to avoid disturbing wildlife breeding seasons.
- **Long-term site remediation** obligations.

4.7 Conclusion
In summary, we believe that the proposed development presents a **high risk of unacceptable environmental impact** on a sensitive agricultural and ecological landscape. The Environmental Assessment does not adequately address the potential consequences for farming, groundwater, biodiversity and geological safety.

5 Impact of noise and odour from traffic on site
Noise and odour which may emanate from the site at the various stages of the proposed development are major concerns for local residents. Prolonged noise and light at night are linked to sleep disturbance, stress and cardiovascular impacts.

Heavy duty vehicles, drilling rigs and onsite generators emit nitrogen oxides, particulate matter ($PM_{2.5}$/PM_{10}), carbon monoxide and diesel exhaust particulates, which are linked to respiratory illness. Noise from braking, reversing alarms and engine idling can be significant in rural villages and nearby homes.

Residents close to the site have pointed out the inadequacy of the measurement of baseline noise levels, in terms both of the period of monitoring and the siting of the measurement equipment. Only four noise sensitive receptors were identified and only two locations used for continuous noise monitoring, both of which were to the south of the site and close to the A165 Coastal Road.[24] These locations and therefore the data they yield are not representative of the baseline levels of noise experienced in the vicinity of the site. We ask that the Environment Agency insist on a more robust set of data for baseline noise levels before determining the EPR application.

We believe that the noise, odour and pollution estimates from traffic on site (including vehicles approaching and leaving via the access road from the entrance on Coastal Road) are incorrect (too low) given that the applicant is anticipating using up to four times as much fracking fluid as stated in the planning application to North Yorkshire Council (see section 6.2

[24] Noise and Vibration Impact Assessment 250425 Appendix B

below), a fact that was not known to the consultants carrying out the noise and vibration impact assessment.

6 Missing, inconsistent and incorrect information in the application

We are alarmed by the careless presentation of information in the applicant's documentation as presented on the EA consultation website[25] - not simply because the EA should have accurate, complete and consistent data in order to make decisions about the EPR application but because of what it says about the reliability and precision of a company that proposes to undertake a complex industrial development in a sensitive environment – an operation which will require precision, attention to detail and the capacity rigorously to implement protocols. How can we trust a company that cannot get its basic information and calculations right at this stage?

6.1 Inadequate data

The **geological data** provided by the applicant is very broad brush. In particular, the application lacks any information on known and potential faults in the region of (1) the drill site at Burniston and (2) the site of the proposed hydraulic fracture under the Barmoor Road area of Scalby. This is significant because the OGA research cited above points to the key role of previously unknown, as well as known, faults in induced seismicity; and shows that particular fault characteristics and orientations can lead to significant seismic events even when relatively low volumes of frack fluid are being used. It is therefore critical that Europa presents the EA with data on faults in the vicinity of the proposed operations and assesses their likely impact at both the drill site and the mining waste facility.

6.2 Inconsistent data

The depth of the 'target formation' within which the proposed hydraulic fracturing will take place is variously described in the documentation as 2,900 m[26], 2,400 m[27] and 'around 2,000mbgl'[28]. The use of different measures within and between documents (TVDSS, MD, mbgl) make it difficult to compare and interpret the numbers precisely.

Contradictory figures for the ***number of hydraulic fracture treatments and the volume of fluid and proppant to be used*** are given in the documentation. The non-technical summary states there will be a single treatment, using between 300 and 500 cubic metres of fluid (page 16). This statement is repeated in the Waste Management Plan at page 18. However, page 36 of the Waste Management Plan (in section 10.7) clearly states: "*The proppant squeeze will be carried out as a multi-stage treatment … with up to four treatments being undertaken. Carrier fluid volumes for a single stage treatment are 300m^3 – 500m^3 with 12.5 tonnes of proppant entrained.*" Even on the lower figures, the estimate of carrier fluid flowing back (75m^3) and retained in the formation (105m^3)[29] are underestimated by between 33% and 60%; on the higher figure (4 treatments with total fluid of up to 2,000m^3), the waste figures are out by a factor of 10 – i.e. 1,000 per cent. This has implications for the volume of waste to be stored on

[25] https://consult.environment-agency.gov.uk/psc/yo13-0db-europa-oil-gas-limited/ Accessed 15/9/2025
[26] Hydrogeological Impact Assessment, Hafren Water for Europa Oil and Gas, December 2024, page 15
[27] ibid. Drawing 3729/HIA/08 Well Path
[28] ibid. page 17
[29] Waste Management Plan Table 12 Proppant Carrier Fluid (Flowback) Waste Table and Table 13 Proppant Carrier Fluid (Retained in the Formation) Waste Table (pp. 48f.)

site and the number of tankers required to bring water and remove waste fluid (flowback), casting doubt on Europa's estimates of emissions and impact of vehicle movements.

The description of the **dimensions of the 'mining waste facility'** beneath Barmoor Road makes no sense. Europa say "It will extend c.80 m in height, c.200 m in length and 1-2mm in width ".[30] When we asked EA staff about this at the 3/9/2025 drop-in, they agreed it did not make sense but they were not concerned about it, passing it off as 'sloppy writing'. We do not think a company that is 'sloppy' in its documentation should be conducting highly technical and risky operations: the residents near the proposed site deserve precision, consistency and competence, not sloppiness.

As noted above (section 3.4), EOG's response to EA's Section 5 request for further information about the proposed proppant squeeze confirms they intend to carry out **four hydraulic fracturing operations at different depths**, described in their response as Stages 1, 2, 3 and 4. These will be over a 1,000 metre range (from c.2km to c.3km below ground level) implying that fracking waste will be widely dispersed within the rock strata. This makes the previous description of a single 80m high 'mining waste facility' simply not credible. A full risk assessment of this dispersed 'mining waste facility' should be provided.

Although **cold venting** is ruled out as a BAT in the Waste Gas Management Plan in favour of flaring (see above section 3.3), Europa say in other documentation that cold venting will in fact be used for the gases that first emerge from the well bore.[31]

Delineation of 'the site' is not consistent. The Hydrogeological Impact Assessment plans and drawings show the site to include the access road from the A169 Coastal Road up to the well site as well as the well site itself. Other documentation, including the non-technical summary at page 11, excludes the access road from the delineation of 'the site'. This inconsistency has implications for calculation of, inter alia, emissions, air pollution, noise pollution, water run-off from 'the site' and distances from 'the site' to local receptors.

6.3 Missing information

There are still ***gaps in the documentation***. Since the consultation was first launched in July 2025, there have been two extensions to the deadline, in large part because Europa had failed to provide full documentation. Even now, there are gaps. For example, an important element of the monitoring of impacts on surface water and groundwater is the installation of monitoring boreholes. These are supposed to be shown on a map in the Hydrogeological Impact Assessment; however Appendix 3729/HIA/A1 'Monitoring Boreholes Location' shows instead the Site Layout Plan.

We trust that the EA will carefully consider all the above comments and observations and take them fully into account before deciding whether, and with what conditions, to grant the environmental permits for which Europa Oil and Gas Ltd has applied.

Steering Group of Frack Free Coastal Communities
23rd September 2025

[30] Application Bespoke A001-05 Waste Management Plan 250425.pdf p. 18
[31] Application Bespoke A001-14 Odour Management Plan 250424.pdf p. 19 (section 8.2)