

On behalf of the campaign “Don’t Drill The Wight” www.dontdrillthewight.co.uk I respectfully ask that the following information be taken into consideration **to refuse an environmental permit** to drill at the Arreton Site for the following reasons.

• **Pollution and Damage in the surrounding Landscape, Ecology and Human Environment.** The well site proposed by UKOG is to be situated on currently productive green field **site** of agricultural land, in close proximity to the villages of Merstone and Arreton and the local AONB. The AONB is accessed along the Bridle path and Public Footpath which run adjacent to the proposed entry slip road and site. Both intersect and cross the proposed entryway to the main well pad site. The intimate and fragmented nature of Isle of Wight AONB, the complexity of its landscapes, its myriad connecting pathways between districts and the diversity of their character, makes the area sensitive to change and reduces its ability to accommodate large scale development. “Isle of Wight AONB cannot be considered in isolation from the rest of the Isle of Wight. The very fact that the AONB consists of five distinct parcels of designated landscape spread out across the whole of the Island means that there is a strong interrelationship between the AONB and the non-designated areas.” (3.9 AONB Management plan 2019 – 2024).

The NPPF calls on local authorities to recognise that undeveloped land can perform a variety of functions and that consideration of the role it plays for wildlife, flood risk mitigation, cooling / shading, carbon storage and food production should all be taken into account in the planning process.

Whilst the Isle of Wight AONB organisation has acknowledged that there will be no high impact from the visual nature of the site and the location of the closest AONB, it will still be visible from other viewpoints. It will be a visual blight to the local and wider population, including hikers, equestrians and local nature groups due to its visibility from the highway and the proximity to the AONB and bridle path, with fencing and gateways restricting open access to footpaths.

There are currently 3406 objections to this potential activity and among these are major environmental concerns from the Arreton Parish Council, residents and many local organisations and Nature groups including those that utilise both the bridleway and footpath and surrounding natural areas. The applicant states this industrial site is for a temporary period only and that it will be abandoned after exploration if not productive after 3 years. This activity in both the short and certainly in the long term if taken to full production, will add nothing to the environmental enhancement and biodiversity of a current green and productive agricultural area. Newchurch Moors and an additional 100 acres of East Wight are being transformed and re-wilded into diverse habitats for struggling Island farmland birds such as the resident and endangered Cirl Bunting and other wildlife, by the Hampshire and IOW Wildlife Trust. The long-term ecological importance of these new improved habitats to save species is far more important within the limited scope of green expanses of our small island and will undoubtedly be threatened by the activity and placement of neighbouring oil wells. No amount of proposed mitigation is enough to guarantee the protection of this area into the future.

• **Identification of inaccurate well design, out- of- date seismic data and geophysical analysis, lack of understanding of the strata, lack of transparency in the technical detail of well bore treatments and methods of stimulating strata.** I wish to highlight an apparent lack of response by the Applicant to Emeritus Professor of Geophysics, University of Glasgow, Dr. David K Smythe’s independent report **(Comment number 2861212. Please see the pdf attached)**. I am not aware that the Environment Agency has received a copy of this report for consideration of its efficacy. This highlights that the

Competent Persons reports from Xodus, other details and facts and information provided to other organisations for Competent Person Reports for the Arreton drilling operations and the geotechnical analysis of strata, were supplied to these agencies by UKOG - and not garnered from independent sources. It also highlights that the 2D seismic data used in the creation of their well bore drilling plans are now inaccurate and outdated desk studies, that no new upgraded technical 2D seismic analysis and subsequent assessment has been undertaken, by UKOG or the original developer Angus Energy, during the lifetime and the acquisition of this PEDL licence in 2015.

His report recommends 11 points for refusal - related to the developer's Geology and Hydrogeology Document - Appendix 5, Submitted on 31st March 2020: Project number: 60555556 These points include:

- Providing conflicting information about the direction of the well tracks proposed.
- Failure to appreciate the significance of the complex faulting in the area of the proposed wells.
- Failure to provide any background information on the supposed geological structure to be explored.
- Being evasive about whether unconventional methods, including acidisation, will be required to produce commercial quantities of oil from the Portland
- Failure to consider the environmental risks of drilling at a low inclination, with concomitant likely poor cementing of production casing to the rockface.
- Failed to consider that drilling near to the old Arreton wells, which by now are rusting away underground, provides another contaminant pathway to the near-surface aquifers Which could lead to:
 - Inadvertent strata slippage during the wellbore drilling phases and subsequent damage to cement bonding of the encased wellbores
- Loss of drilling muds, additives, cement grout and well treatment fluids during drilling and work over operations.
- Spillage/leakage of recovered hydrocarbons, formation/produced water containing NOR
- Migration of natural gases, hydrocarbons and formation/produced water containing NORM from deep formations, e.g. vertically through overlying formations, along unidentified geological faults or abandoned wells Arreton-1 and Arreton-2.
- Well casing failure and leakage of well treatment fluids, natural gases, hydrocarbons and formation/produced water containing NORM water from the wellbore.
- "Temporary Nature" of Site- 3 years of activity yet permanent damage to the environment. This is not a "temporary development", with temporary impacts and consequences as claimed by the Applicant, by any stretch of the imagination and it is nonsensical to create this level of industrial impact for no sustainable purpose. Likewise to spend vast sums of money to create an industrial well pad and access road with a diverted bridle way - to drill a hole for two wells just to abandon it 3 years later - will provide no local amenity and leave a blighted landscape. It is disingenuous to suggest that, if after 3 years the site is unproductive, the site could be returned to its original state with further mitigation by additional environmental enhancement and upgrade. Removing hedging, stripping the soil away, adding concrete and compacted aggregate for the first 3 years of industrial activity will eradicate its insect life, flora, its

microbial chemistry and the microorganisms and spore-producing organisms that enrich and enhance it. Being replaced on alleged decommissioning with topsoil and stripped soil from the bunding, with young newly planted hedging to replace that which has been stripped away, will not provide an environmental “net gain” with “improved ecological biodiversity of the original site” as claimed by the Applicant.

- Updated Bat, Dormice and Badger studies required. Local knowledge indicates the importance of the site area for Bats, Dormice and Badgers and the applicant’s EIA reveals that data used for the Bat and Dormice mitigation in this application was collated at the end of 2018. The studies are recommended to be repeated and undertaken every two years since the risk data for this application would be out of date at the time of the destruction of the area for the well pad and track. **(Please see the attached comment FFIOW 03022021.pdf)** The planning officer has deemed further studies should be undertaken prior to commencement of activity in the area should the application be accepted. This site will cut off corridors and foraging areas for important local species and create disturbances for all species including humans, due to 24hour lighting impacting on the night sky and night time hunting of species, removal of foraging hedging, continuous noxious emissions to the air, increased noise and surrounding soil degradation through dust and particulate settling from site activity.

- Local Pollution and Emissions of CO_2 , NO_x , and other airborne chemicals. The Planned Activity over the 86 week period is admitted by the applicant to produce additional greenhouse gas emissions from the site of 24, 175 tons CO_2e . This equates to an extra 1,000 to 1,200 UK households’ annual emissions within this time frame - yet with no reasonable positive long-term outcome for the area in terms of improved economy or sustainability for the future to offset this climate damage. This is not acceptable given the Climate Change Committee’s directive to reduce activity and development which produces unnecessary pollution and unsustainable outcomes. The Applicant’s CP Report of the local Greenhouse gas emissions estimate, does not take into consideration emissions emanating from 86 weeks of additional idling and static traffic at the entry point of the site slip road, (which is considered part of the site plan as a whole by the Applicant). Emissions from delays and traffic queues due to the management of site access of over 6000 HGV and site vehicle journeys are inevitable but are not taken into consideration. The entryway is planned from the already busy main A3056 route across the island which already has high volumes of traffic all year round. The local primary school specifically, in Arreton, has not been listed by UKOG as being at risk of increased noise, air pollution and odour, considering its proximity and down wind location from the site. It is closer to the site than many other habitations and premises listed for consideration by the applicant’s study for mitigation. The impacts on children’s health due to vehicle and industrial emissions are well documented by the health authority as being manifestly greater than to adults.

- Pollution of Water Sources from Spillage. The Applicant quotes the significance of this area as it sits above the Lower Greensand strata in the midst of one of the islands major aquifers and its importance to local supplies of potable water. Yet, as outlined in point 2 of this comment the company has relied solely upon outdated historical desktop data for their strata analysis and hydrogeology report and there is no evidence of more efficient, updated 2D or preferably 3D seismic analysis of the site being undertaken, as required by the OGA in the terms of the original acquisition of the PEDL in 2015.

We feel that all the risk assessment undertaken by the application regarding pollution to the aquifer is incomplete and has been understated by the Applicant. The Lower Greensand Group of strata is one of our principle aquifers of the region that we rely upon for supplying potable water up to 70% of local

demand. This has been highlighted by Southern Water (**2860251.pdf attached**) These are poorly cemented sands, which is why they are capable of holding water so effectively acting like a sponge. This means that they are highly susceptible to the slightest risk of spilled or leaking contaminants from the surface and at higher risk below ground during the borehole preparation process where even the smallest amounts of toxic spillage or leaking from the cement well bore casings will cause permanent contamination of the supply.

We have concerns that the protective casings planned to pass through the aquifer may not go deep enough to ensure no risk and that even prediction of low or minimal risk of contamination is not acceptable. Water runoff from the surrounding area of the site will increase given the impermeable surface of the well pad. The applicant identifies that "Natural drainage of surface water from the Site is to a canalised tributary watercourse (sometimes called the 'Merstone Stream') of the River Medina approximately 1.2km southwest of the Site at an approximate elevation of 20m AOD. This watercourse then flows westward from the Merstone area towards Blackwater where it confluences with the Medina.

The proposed drainage system for field run off is poorly designed and would not prevent flooding occurring on the main highway - particularly during heavy rainy periods that we are seeing more and more here. This will be exacerbated by having stripped the field of over 2.5 hectares of absorbent land and replaced it with hard core surfacing. The steep incline and curve of the entry track will also receive increased rainwater deluge from the surrounding area which will easily overwhelm the drainage system.

Additional high risk has not been highlighted of discharge of contaminated fluids onto the field surface bordering the access road, from leakage of tankers or accidents, slippage of transporters or vehicle collisions on the access road. The access road is not protected by bunding or impermeable containment ditches and is only constructed with a surface of crushed aggregate. Any contaminated fluid leakage or spillage will migrate into the surrounding landscape to possibly contaminate surface stream water sources after rainfall. This has not been identified for mitigation in supporting documentation. Also the possibility of risk of spillage of contaminants – by unexpected flooding from the main well pad - due to tanker or sudden storage leakage or deluge which would instigate overflow from protection bunding is classified by UKOG as being low risk. These risks are unacceptable given the value of water resources in this location. Plans should be revised with accurate designs with high levels of mitigation of risk to ensure that low risk reduces to NO risk

There should be a financial risk analysis of the costs to be imposed on the Applicant of accidental pollution of the aquifer and/or surface water resources, as remuneration for the lifetime supply of 100% of our water to the Island by Southern Water.

- Concerns regarding monitoring and self-regulation of operators. We are aware that your Agency has recently raised serious concerns about the failure of the self- regulatory process to properly assess and manage the increasing carbon emissions from onshore and offshore development. That you also have evidence that companies have avoided or manipulated self- regulatory procedures in reporting polluting incidents in the past and that you are currently reviewing how to further ensure that regulations and practices are monitored effectively to counter past lack of compliance. At present these issues are falling between the regulators and the environment and the public are being put at risk.

Being on an Island monitoring and compliance of the management of this type of industrial site is even more complex and can be more challenging than on the mainland. For example it demands a traffic plan of considerable complexity when considering the movement and supply of heavy equipment and the delivery and removal of water, hazardous substances and waste materials by ferry, which creates additional problems for the developer. Since monitoring above and below the surface can only be confirmed and determined by site visits and by timely access to reports by the operators to yourselves, the OGA and HSE, it is imperative that the IW Council Enforcement Officers are given additional support from a neutral, suitably qualified source, if you and they are confident to confirm that the activity planned for, is activity in actuality. This would give the public and local residents confidence that the self-regulation protocols are strictly adhered to. This could be achieved by recommendation for the provision, at the expense of the operator, of equipment and devices to record their activity and the regular monitoring of documentation and communication from your authority to our Enforcement Officers. This could include

- Regular spot checks and observation including video evidence of surface activity
- The installation of several track and site virtual recording cameras to aid monitoring
- A requirement for copies of appropriate authorities records of activity and incidents on site to be copied to the IWC Enforcement Team by the operator
- Monitoring and recording the types of drilling equipment transported to the site
- Operator providing documented evidence of the percentages and types of chemical products imported by ferry to the site under Hazchem regulations
- Requiring operator's evidence through reports of the composition of waste materials under the Hazchem regulations that will be transported from the island on ferries for disposal at a suitable processing site
- Requiring independent and regular water testing results and air testing results around the perimeter of the site

Such intense monitoring by enforcement Officers of the IWCouncil is not practical or possible. This could only be achieved through better liaison between your Authority, UKOG and our Enforcement Officers to ensure compliance with regulations and remove temptation for the operator to take short cuts or make less expensive, more polluting decisions which will cause irreparable consequences for the environment.