

Environmental Impact Assessment (EIA) Screening Decision

Project Proposal

CNOOC Petroleum Europe Limited submitted an application to drill a single exploration well in the lolar prospect under Frontier Exploration Licence (FEL) 3/18 in the Porcupine Basin offshore of the south west of Ireland to the Petroleum Affairs Division of the Department of Communications, Climate Action and Environment on 14th November 2018.

The drill location is approximately 232 km south west of the Irish mainland in water depths of approximately 2,200m. The well will be drilled using a floating drill ship suitable for the deep water in the proposed location and the total duration of the drilling is expected to be for a duration of 100 to 150 days.

The purpose of the well is to gather data on the reservoir characteristics, hydrocarbon presence, pressure and temperatures. This information will inform any future development at the lolar prospect. Once the proposed drilling operations are complete the exploration well will be permanently plugged and abandoned, whether or not commercially viable quantities of hydrocarbons are found.

The following documents to support the environmental assessment were submitted with the application:-

- Environmental Risk Assessment (EIA Screening Report);
- Natura Impact Screening Statement (Appropriate Assessment Stage 1 Report);
- Pre-drilling Fisheries Report; and
- Underwater Archaeological Assessment.

Legislative Background

The EIA Directive (Directive 2011/92/EU, as amended by Directive 2014/52/EU) requires that projects that are likely to have significant effects on the environment by virtue, *inter alia*, of their nature, size or location are made subject to an environmental impact assessment.

Under Article 4 of the EIA Directive, projects listed under Annex I are automatically subject to an environmental impact assessment and for projects listed in Annex II, Member States shall determine whether the project shall be subject to an assessment and can make the determination through either one of both (a) case by case examination or (b) thresholds set by the Member State.

Deep drilling for the purposes of petroleum exploration falls within Annex II of the EIA Directive (Annex II 2(d)) and consequently an EIA screening assessment is required to determine whether the application submitted by CNOOC Petroleum Europe Limited is likely to have a significant effect on the environment and be made subject to an Environmental Impact Assessment.

Article 4(4) of the Directive requires in respect of projects listed in Annex II that the developer provide information on the characteristics of the project and its likely significant effects on the environment. The list of information to be provided is set out at Annex IIA. The developer may also provide a description of any features of the project and/or measures designed to avoid or prevent what might otherwise have been significant adverse effects on the environment.

The EIA Directive requires that when carrying out an EIA Screening Assessment, the relevant selection criteria as set out in Annex III shall be taken into account.

Article 4(6) of the EIA Directive requires that an EIA Screening Decision must be made as soon as possible and within a period not exceeding 90 days from the date on which the developer has submitted all the information required.

In Ireland, the European Union (Environmental Impact Assessment) (Petroleum Exploration) Regulations 2013 (S.I. No 134/2013), as amended by the European Union (Environmental Impact Assessment) (Petroleum Exploration) (Amendment) Regulations 2019 (S.I. 124 of 2019) give effect to the EIA Directive in respect of petroleum exploration activities (which include 'deep drillings') (the 'EIA Petroleum Exploration Regulations').

Regulation 3(1B) of the EIA Petroleum Exploration Regulations provides that where the holder of an exploration licence or petroleum prospecting licence makes an application to the Minister under Regulation 3(1) for permission to undertake activities under the licence, the Environment Advisory Unit of the Department ('EAU'): *"shall make a determination, having taken account of the matters specified in paragraph (2A), as to whether the activities the subject of the application would, or would not, be likely to have significant effects on the environment by virtue, inter alia, of their nature, size and location"*.

Regulation 3(2A) refers to: (a) the criteria specified in Annex III of the EIA Directive and (b) where relevant, the results of preliminary verifications or assessments of the effects on the environment carried out pursuant to European Union legislation (other than the Directive).

Regulation 3(2B) provides that where a determination is made that the proposed activities would be likely to have significant effects on the environment, the EAU shall specify, with reference to the relevant criteria listed in Annex III, the main reasons for the determination.

Regulation 3(2C) provides that where a determination is made that the proposed activities would not be likely to have significant effects on the environment, the EAU shall specify:-

- (a) with reference to the relevant criteria listed in Annex III, the main reasons for that determination,
- (b) any features (proposed by the applicant) of the proposed activities which would avoid or prevent what would otherwise be significant adverse effects on the environment, and
- (c) any measures proposed by the applicant to avoid or prevent what would otherwise be significant adverse effects on the environment.

Independent Expert Advisors

In assessing the application, the Department engaged Ramboll Environment and Health UK Limited (Ramboll) to provide advice with regard to the EIA Screening Assessment of the application. As set out in further detail below, Ramboll conducted an independent assessment

of the information provided by the Applicant by reference to the relevant selection criteria set out in Annex III of the Directive and their report is shown at Appendix 1.

Public Consultation and Process

Following receipt of the CNOOC Application and accompanying documents, these were posted on the Department website on 21st December 2018 and the public invited to make submissions before the 21st January 2019. The following responses were received and the points raised have been considered as part of the screening process.

- Submission received from An Taisce dated 13th December 2018.
- Consultation response received from An Taisce – dated (21st January)
- Consultation response from Friends of the Irish Environment (21st January 2019).
- Consultation response from Gluaiseacht dated 21st January 2019.

One of the above responses was received prior to the official publication on the Department's website as the application material was placed on the website due to an administrative error. The Department agreed to accept the response and the respondent (An Taisce) reserved the right to respond once the public consultation commenced.

Having reviewed the CNOOC Application and the responses received to the public consultation, Ramboll recommended that further information be obtained from the Applicant in relation to the project for the purposes of an EIA Screening Assessment. Adopting that recommendation, additional information was sought from the Applicant on 12th February 2019 on the basis that insufficient information had been provided with the application to enable an EIA Screening Assessment and Determination be made in respect of the project. The Department website was updated to reflect the position and the bodies who submitted observations following the initial consultation were notified of the decision to request further information.

The Applicant Response was received on 21st February 2019. This information was posted on the Department website for comment by 8th March 2019. A further letter was received from An Taisce dated 7th March 2019.

The consultation responses received (including the project specific observations) as part of the public consultations in respect of the Application are shown in Appendix 1 as part of the external review of the Applicant's EIA Screening Report undertaken by Ramboll.

EIA Screening Assessment and Determination

Further to Regulation 3(1A) of the EIA Petroleum Exploration Regulations, the EIA Screening Assessment of the CNOOC Application is carried out based on information provided by the Applicant on the characteristics of the activity and its likely effect on the environment as specified in Annex IIA of the EIA Directive and any description of the features of the proposed activities and the measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment.

In accordance with Regulation 3(1B) and (2A), in carrying out an EIA Screening Assessment of the Application to determine whether the activities the subject of the Application would or would not be

likely to have significant effects on the environment, it is necessary to have regard to the relevant selection criteria as outlined in Annex III of the EIA Directive.

In carrying out the EIA Screening assessment of the Application made by CNOOC Petroleum Europe Limited in accordance with these criteria, I have carefully considered the following documents:-

- Documents provided by the Applicant – Environmental Assessment Screening Report (EIA Screening Report), Underwater Archaeological assessment, Pre-drilling Fisheries Report, response to request for additional information.
- External review of the applicant's EIA Screening Report by Ramboll (Ramboll EIA Screening Determination Report is at Appendix 1)
- Submissions received during the public consultation processes and the additional submission from An Taisce in advance of the initial consultation.

The EIA screening assessment of the project carried out by Ramboll considered the different project elements by reference to the Annex III criteria. In this context the following elements were considered:

- Characteristics of the Project including size and design of the development, culmination with other existing or approved developments, use of natural resources (particularly land, soil, water and biodiversity), production of waste, pollution and nuisances, risk of major accidents and/or disaster relevant to the project including climate change, risks to human health
- Location of the project including existing and approved landuse, relative abundance, availability and regenerative capacity of natural resources in the areas and its underground, absorbance capacity of wetlands, riparian areas and river mouths, absorption capacity (of coastal zones and marine areas, nature reserves and parks, areas classified under national legislation, areas where there has been a failure to meet environmental quality standards, landscapes and sites of historical, cultural or archaeological significance
- Types and characteristics of the potential impact as set out in Annex III of the EIA Regulations

Based on careful consideration of the documentation highlighted above and having taken into account the matters specified in Regulation 3(2A) of the EIA Petroleum Exploration Regulations, I am satisfied that the Applicant has provided sufficient information to enable an EIA Screening Assessment of the proposed drilling project.

I agree with and adopt the responses to the observations received during the public consultation process as set out in the Ramboll Report (at Appendix 1 to this Determination).

I further agree with and adopt the EIA Screening Assessment carried out by Ramboll in respect of the CNOOC application by reference to the Annex III criteria and the conclusions reached in the Ramboll EIA Screening Determination Report (set out at Appendix 1 to this Determination).

Accordingly, I am satisfied and have decided that the request by CNOOC Petroleum Europe Ltd to drill a single exploration well in the Iolar prospect under Frontier Exploration Licence (FEL) 3/18 in the Porcupine Basin is not likely to have a significant effect on the environment and, consequently, an Environmental Impact Assessment is not required in respect of the application.

This decision is contingent on the mitigation measures proposed by the Applicant being included as conditions in any drilling consent that may be granted by the Minister in respect of the Application. The mitigation measures are outlined in Table 1 (below).

In conclusion, the proposal by CNOOC Petroleum Europe Limited to drill a single exploration well in the Iolar prospect under Frontier Exploration Licence (FEL) 3/18 in the Porcupine Basin will not require an EIA and the Applicant can be informed of the decision.

In accordance with Regulation 3(2E) of the EIA Petroleum Exploration Regulations, the public must be informed of this EIA Screening Decision and it will be published on the Department's website and in a national newspaper.

Jean Clarke

Senior Advisor



Environment Advisory Unit

Department of Communications, Climate Action and Environment

Table 1 : Mitigation measures required to be specified in any Consent that may be granted

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
Physical Presence	A pre-spud ROV survey of the well site will be undertaken to increase the likelihood that areas of high sensitivity species and habitats will be avoided at the well site.		✓
Interactions with Other Sea Users	Nexen will consult with relevant authorities and organisations as defined in the Rules and Procedures Manual, particularly the Sea Fisheries Protection Authority and the Sea Fisheries Policy Division, Department of Agriculture, Food and the Marine to minimise interference impacts resulting from the project.	✓	
	A Notice to Mariners will be distributed by the Department of Transport, Tourism and Sport and a version of this will be run in selected local marine related publications.	✓	
	A vessel will operate on site for the duration of the project	✓	
	The drill ship and supply vessel will display SOLAS compliant lights and shapes and noise signals to alert other seafarers in the area	✓	
	A 500 m safety zone will be maintained around the drill ship whilst on location		✓
	Nexen will consider the use of a Fishing Liaison Officer (FLO) on board the standby guard vessel which will operate on site for the duration of the project.		✓
	The drill ship will have Safe Work Procedures to prevent dropped objects which will include (but not limited to): <ul style="list-style-type: none"> • Good housekeeping practices with all wastes correctly stored; • Storage of hazardous chemicals as per material safety data sheet (MSDS); • Lift planning for over-the-side lifting (including appropriate crane rigging and load ratings, crane operator and rigger training and competency requirements) all lifting equipment will be tested and certified; • A ship to ship transfer permit will be in place; • All deck items will be securely stowed; • Transfer of objects will use specialist equipment and consider environmental conditions; • Ongoing personnel awareness and training and dropped object prevention programs (e.g. lanyards on hardhats, hand tools); • Safe working procedures to prevent dropped objects; • Procedures will be in place to ensure that the location of any lost material is recorded and that significant objects are recovered – including ROV and boat recovery where practicable; 	✓	

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
	<ul style="list-style-type: none"> Waste Management Plan. 		
Underwater Noise	A qualified and experienced marine mammal observer (MMO) shall be appointed to monitor for marine mammals and log all relevant events using standardised data forms.		✓
	Sound-producing activities shall only commence in daylight hours where effective visual monitoring, as performed and determined by the MMO, has been achieved. Where effective visual monitoring, as determined by the MMO, is not possible, the sound-producing activities shall be postponed until effective visual monitoring is possible.		✓
	As the water depth is >200 m pre-start-up monitoring shall be conducted at least 60 minutes before the activity is due to commence. Sound-producing activity shall not commence until at least 60 minutes have elapsed with no marine mammals detected within 1,000 m Monitored Zone by the MMO.		✓
	Pre-start monitoring shall subsequently be following by a Ramp-up Procedure (where possible) which should include continued monitoring by the MMO. Airguns utilised in VSP generally fire for approximately two minutes then stop for 5-10 minutes before repeating the pattern. To ensure that marine mammals are given the opportunity to move away from the airguns as they commence firing, energy would be slowly increased to the maximum level over a period of 40 minutes, in a process called "soft-start".		✓
	If there is a break in sound output for a period of 5-10 minutes (e.g. due to equipment failure, shut-down), MMO monitoring must be undertaken to check that no marine mammals are observed within the Monitored Zone prior to recommencement of the sound source at full power.		✓
	If there is a break in sound output for greater than 10 minutes (e.g. due to equipment failure, shut-down or station change) then all Pre-start Monitoring and a subsequent Ramp-up Procedure (where appropriate following the Pre-start Monitoring) will be undertaken.		✓
Atmospheric Emissions	Practical steps to limit the release of atmospheric emissions during the project will include advanced planning to enable efficient operations and fuel utilisation and well maintained and operated power generation equipment.	✓	
	The contractors will comply with the MARPOL Convention 73/78 Appendix VI on atmospheric emissions; no emissions of ozone depleting substances, content of sulphur in fuel oil will not exceed 35% m/m and no incineration of garbage containing more than traces of heavy metals.	✓	
	A vessels and the drill ship will comply with the Merchant Shipping (Prevention of Air Pollution from Ships) Regulations 2010-2017	✓	
	Nexen will verify that drill ship contractor procedures align with the relevant Nexen Engineering requirements which cover all aspects of primary and secondary well control for floating drilling operations.		✓

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
Discharges to the Sea	All Oil Based Muds will be skipped and shipped onshore for recovery and /or disposal in accordance with Waste Management legislation, and not discharged overboard.		✓
	Cementing procedures will be in place to minimise the quantities of cement prepared and used, consistent with safe practices, and to minimise the amount of unused cement discharged.		✓
	Chemicals will be selected in line with Nexen's chemical selection policy, reducing where possible the use of chemicals carrying substitution notifications and other product warnings.		✓
	The management of drilling fluids, drill cuttings, cementing fluids and subsea control fluids will be consistent with all appropriate Nexen Engineering Standards, Operating Standards and Procedures.		✓
	Environmental risk assessment as part of PUDAC approval process, and identification of measures to reduce risk, will be carried out to obtain approval for chemical use prior to drilling operations commencing as per the PAD Rules and Procedures Manual.	✓	
Archaeology	A pre-spud ROV survey will be conducted at the well site to identify any marine artefacts that could potentially be disturbed, or any other obstructions.		✓
	If potential marine artefacts are observed, a qualified marine archaeologist will be consulted prior to spud, and spudding will not commence until the marine archaeologist has confirmed that the spud location is free of marine artefacts.		✓
	If any item of potential archaeological interest is identified, that item will be avoided and the well location be moved to an alternative location, which will also be subject to a pre-spud ROV survey and the same precautions identified above. A short report will be prepared by the marine archaeologist detailing the observations made and the actions taken.		✓
	If a discovery of a ship wreck or object of historical interest is made during the above process, Nexen will immediately report the discovery and its location to the relevant Government Departments and Agencies identified by PAD (2014).		✓
	Under these circumstances Nexen would also facilitate the statutory authorities in any investigations that they may need to carry out in accordance with the terms of the National Monuments Acts		✓
General	All mitigation and management measures identified during the Environmental Risk Assessment Process will be incorporated into a commitments register. These commitments will be incorporated into the Environmental Management Plan (EMP) for the project.		

