



APPROPRIATE ASSESSMENT DETERMINATION AND CONCLUSION STATEMENT

Project Proposal

CNOOC Petroleum Europe Limited submitted an application to drill a single exploration well in the Iolar 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 (DCCA) 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 Iolar 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.

Assessment Process

The Environment Advisory Unit (EAU), a functionally and independent separate unit of DCCA is responsible for carrying out environmental screening and any environmental assessments determined as being required following screening, in accordance with the requirements set out in Directive 2011/92/EU, as amended by Directive 2014/52/EU (**EIA Directive**) and Directive 92/43/EEC (**Habitats Directive**) in respect of applications made to the Minister for permission to undertake “activities” under an exploration licence or petroleum prospecting licence.

EIA – In Ireland, the *European Union (Environmental Impact Assessment) (Petroleum Exploration) Regulations 2013* (S.I. 134 of 2013), as amended by the *European Union (Environmental Impact Assessment) (Petroleum Exploration) (Amendment) Regulations 2019* (S.I. 124 of 2019) provide (at Regulation 3(1B)) that the EAU shall carry out an EIA Screening Assessment and make a Determination 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.

Habitats – The European Communities (Birds and Natural Habitats) Regulations 2011 – 15, as amended (**Birds and Natural Habitats Regulations**) give effect to the Habitats Directive as a matter of Irish law and require, inter alia, that a public authority carry out screening for Appropriate Assessment (AA) of a plan or project for which an application for consent is received. The EAU is responsible, for carrying out AA screening assessments and any required Stage 2 Appropriate Assessment in accordance with the Regulations, in respect of applications to the Minister for permission to undertake “activities” under an exploration licence or petroleum prospecting licence.

On receipt of an application – The Petroleum Affairs Division (PAD) in DCCAE receives applications and places the application on the DCCAE website for public consultation. The PAD, following the public consultation, refers the application, and any associated responses to the consultation, to the EAU for the purposes of carrying out its assessments.

On the completion of all environmental assessments by the EAU and after incorporating any suggested conditions which may be recommended by the EAU, the application will then be evaluated by the Petroleum Affairs Division in the Department who will make a recommendation to the Minister regarding whether consent should be given for the ‘activities’ the subject of the application.

Independent Expert Advisors

DCCAE has engaged Ramboll Environment and Health UK Limited (**Ramboll**) to provide assistance with regard to the statutory assessment of applications for permission to carry out “activities” under an exploration licence or petroleum prospecting licence.

Ramboll, on the instructions of DCCAE, has conducted an independent assessment of the information provided by the Applicant, having regard to the Habitats Directive, the Birds and Natural Habitats Regulations and relevant jurisprudence of the EU and Irish courts. The Ramboll Report is shown at Appendix 1.

Legislative Background

The Appropriate Assessment process (AA) is an assessment of the potential for adverse or negative effects of a plan or project, in combination with other plans or projects, on the conservation objectives of a European Site. The focus of AA is targeted specifically on Natura 2000 sites¹ and their conservation objectives.

AA screening or stage 1 is a process which determines whether a plan or project can be excluded from AA requirements. If not, then the AA process commences and the project progresses to stage 2 assessment.

AA Screening – Article 6(3) and 6(4) of Directive (92/43/EEC) (as amended) (**Habitats Directive**) place strict legal obligations on Member States regulating the conditions under which development that has the potential to impact on European Sites can be implemented and requiring that an Appropriate Assessment be carried out of plans or projects, not directly connected with or necessary to the management of a site as a European Site, but which are likely to have a significant effect thereon, either individually or in combination with other plans or projects. An AA Screening assessment is carried out to determine whether a plan or project is likely to have a significant effect on a European Site.

Article 6.3 states that “ any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”

¹ <https://www.npws.ie/protected-sites>

Article 6.4 states “ *if, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.*

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”

In giving effect to the above as a matter of Irish law, the European Communities (Birds and Natural Habitats) Regulations 2011-15 as amended (**Birds and Habitats Regulations**) provide as follows:-

Regulation 42(1) of the Birds and Habitats Regulations states that “*A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site”.*

Regulation 42(2) provides that: “*A public authority shall carry out screening for Appropriate Assessment under paragraph (1) before consenting for a plan or project is given, or a decision to undertake or adopt a plan or project is taken”.*

Furthermore the regulations provide under Regulation 42 (6) and 42 (7) that:-

(6) The public authority shall determine that an Appropriate Assessment of a plan or project is required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site.

(7) The public authority shall determine that an Appropriate Assessment of a plan or project is not required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it can be excluded on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site.’

AA – If a project is subject to Appropriate Assessment then Regulation 42(11) and (12) of the Birds and Natural Habitats Regulations provide as follows:-

(11) An Appropriate Assessment carried out under this Regulation shall include a determination by the public authority under this Regulation pursuant to Article 6(3) of the Habitats Directive as to whether or not a plan or project would adversely affect the integrity of a European site and the assessment shall be carried out by the public authority before a decision is taken to approve, undertake or adopt a plan or project, as the case may be.

(12) In carrying out an Appropriate Assessment under paragraph (11) the public authority shall take into account each of the following matters—

- (a) the Natura Impact Statement,*
- (b) any other plans or projects that may, in combination with the plan or project under consideration, adversely affect the integrity of a European Site,*
- (c) any supplemental information furnished in relation to any such report or statement,*
- (d) if appropriate, any additional information sought by the authority and furnished by the applicant in relation to a Natura Impact Statement,*
- (e) any information or advice obtained by the public authority,*
- (f) if appropriate, any written submissions or observations made to the public authority in relation to the application for consent for proposed plan or project,*
- (g) any other relevant information.*

Annex IV Species Assessment

Article 12 of the Habitats Directive provides that:

“Member States shall take the requisite measures to establish a system of strict protection for the animal species listed in Annex IV (a) in their natural range, prohibiting:

- (a) all forms of deliberate capture or killing of specimens of these species in the wild;*
- (b) deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation and migration;*
- (c) deliberate destruction or taking of eggs from the wild;*
- (d) deterioration or destruction of breeding sites or resting places.”*

Regulation 29 of the Birds and Habitats Regulations transposes Article 12 of the Habitats Directive into Irish law and provides:

- “29. (1) Where the Minister has reason to believe that any activity, either individually or in combination with other activities, plans or projects, is of a type that may—*
- (a) have a significant effect on a European Site,*
 - (b) have an adverse effect on the integrity of a European Site,*
 - (c) cause the deterioration of natural habitats or the habitats of species or the disturbance of the species for which the European Site may be or has been designated pursuant to the Habitats Directive or has been classified pursuant to the Birds Directive, insofar as such disturbance could be significant in relation to the objectives of the Habitats Directive,*
 - (d) cause pollution or deterioration of habitats within the meaning of the second sentence of Article 4(4) of the Birds Directive, or*
 - (e) have an adverse effect on the conservation status of—*
 - (i) animal species listed in Annex IV(a) to the Habitats Directive in their natural range pursuant to Article 12 of the Habitats Directive,*
 - (ii) plant species listed in Annex IV(b) to the Habitats Directive pursuant to Article 13 of the Habitats Directive,*
 - (iii) species of wild fauna and flora listed in Annex V to the Habitats Directive pursuant to Article 14 of the Habitats Directive,*
 - (iv) naturally occurring birds in the wild state, the Minister shall, by notice, subject to paragraph (2), where he or she considers appropriate, direct that the activity shall*

not be carried out, caused or permitted to be carried out or continue to be carried out by any person in the European Site or part thereof or at any other specified land or may restrict or regulate the activity in the European Site or part thereof or at any other specified land, and each such notice shall be accompanied by a statement of the Minister's reasons for making the decision."

Public Consultation

Following receipt of the CNOOC Application and accompanying documents, these were posted on DCCAE 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 2019)
- Consultation response from Friends of the Irish Environment (21st January 2019).
- Consultation response from Gluaiseacht dated 21st January 2019.

* The response received above from An Taisce dated 13 December 2018 was received prior to the official publication on DCCAE's website. This was due to the application material and accompanying documents being placed on DCCAE's website at an earlier stage due to an administrative error. DCCAE agreed to accept the response of An Taisce as if received during the public consultation timeline, and the respondent (An Taisce) reserved the right to respond once the public consultation commenced, which they did on the 21st January 2019.

I reviewed the CNOOC Application and accompanying documents and the responses received to the public consultation. In addition I considered recommendations from Ramboll that further information be obtained from the Applicant in relation to the project for the purposes of an EIA Screening Assessment. I adopted that recommendation, and concluded that insufficient information was provided to enable an EIA Screening Assessment. I sought additional information 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. DCCAE's website was updated to reflect the fact that additional information was being sought and to inform the public and the bodies who submitted observations following the initial consultation were additionally notified of the decision to request further information.

The Applicant's Response to the request for further information was received on 21st February 2019. This information was posted on DCCAE's website for public consultation from that date until 8th March 2019. A further submission was received from An Taisce dated 7th March 2019.

AA Screening

The appropriate assessment process was conducted in accordance with Articles 6.3 and 6.4 of the Habitats Directive (92/43/EEC), the Birds and Habitats Regulations and the principles established in case law interpreting the Directive and Regulations, which provide the decision making framework and tests for carrying out screening for appropriate assessment.

In accordance with Regulation 42(6) of the Bird and Habitats Regulations, an Appropriate Assessment was conducted of the application made by CNOOC Petroleum Europe Limited ('the applicant') and it was determined on the 27th March, 2019 that in the absence of the mitigation

measures proposed by the applicant, the possibility of a likely significant effect on the site concerned could not be excluded on the basis of objective scientific information. The application proceeded to Stage 2 Appropriate Assessment and a Natura Impact Statement was requested from the applicant.

Stage 2 – Following the AA Screening Determination and the request to provide a Natura Impact Statement additional information was received by DCCAE from CNOOC and posted on the DCCAE website on the 9th April for public consultation and submissions were invited from that date to the 29th April, 2019. The following submissions were received:-

- Submission received from An Taisce dated 29th April, 2019
- Submission response from a private individual dated 26th April, 2019.

The consultation responses received (including the project specific observations) as part of the public consultations in respect of the Application are included in the Ramboll Report as part of the external review of the Applicant's AA Screening Report and is attached at Appendix 1 to this Determination.

Assessment of Natura Impact Statement

A Natura Impact Statement (NIS) is a scientifically robust examination of a proposed plan or project which is used to characterise any possible implications of the project individually or in combination with other plans or projects on the conservation objectives of any relevant European site(s).

The assessment of the NIS submitted considered the following aspects in the context of European sites:-

- Conservation status of relevant habitats and species listed under Annex II of the Habitats Directive and Annex I of the Birds Directive;
- Baseline conditions and conservation objectives and qualifying features of any relevant European site(s);
- Any management plans associated with relevant European site(s);
- Details on each species and habitat type for which relevant European site(s) are designated and spatial mapping of the distribution and temporal mapping, including lifestyle stages;
- Information on population profile of the species and their conservation status (e.g. size, population structure etc.);
- Ecosystem structure and functioning of the site and its overall conservation state;
- The role of the site within the ecosystem region and the Natura 2000 network;
- Any other aspects of the site or its wildlife that is likely to have an influence on its conservation status and objectives (e.g. current management activities, other developments etc.)

Furthermore the NIS was also assessed in the context of the following:-

- A description of size, scale and objectives of the proposed plan or project;
- A description of the pressures of the proposed plan or project, and its likely impacts on the conservation objectives and local site characteristics;
- Identification of all European sites located within the zone of influence of the proposed plan or project, together with qualifying interests and conservation objectives;
- Methodologies, analysis and data sources utilised to demonstrate use of best scientific knowledge;
- A scientific assessment, analysis and statement of the significant effects including direct, indirect, cumulative and in combination effects of the relevant European site(s) and/or species which are expected to occur as a result of the development;
- Details of any appropriate mitigation measures undertaken, or proposed to be undertaken by the applicant (included in Table 1 to this Determination) to mitigate any significant effects on the environment or on the European site(s) and/or species, and the period within which any such measures shall be carried out by the developer;
- An assessment of the scope and scale of residual effects after mitigation (including direct, indirect, cumulative and in combination effects);
- A conclusion in relation to whether or not the project would adversely affect the integrity of any European site (either individually or in combination with other existing or consented developments).

Annex IV Species Assessment

The applicant provided a separate Article 12 screening report to address the conservation of Annex IV species. An assessment has been conducted by Ramboll of the Article 12 screening report provided by the applicant and I agree with the conclusions in the Ramboll report. I am satisfied that the assessment for Annex IV Species is of an acceptable standard and am satisfied that there would be no significant adverse effects on Annex IV species, should approval be granted for the CNOOC application.

Appropriate Assessment Determination

I have carefully considered the following documents in carrying out the appropriate assessment determination:-

- Documents provided by the applicant – Natura Impact Statement and Article Assessment 12 Screening Report;
- External review of the applicant’s Natura Impact Statement and Article Assessment 12 Screening Report by Ramboll (Appendix 1);
- Submissions received during the public consultation process;
- Ramboll’s consideration and response to each submission received during the public consultation phases (included in Appendix 1).

I note the applicant's own conclusion that the project will have no adverse effects, individually or in combination with other plans for projects, on the integrity of the any relevant European sites, in view of their conservation objectives. Ramboll in their report concludes that the risk of significant effects occurring remain but having regard to the judgement by Barniville J in (Kelly v An Bord Pleanala and Aldi [2019] IEHC 84 at 66) consider that it is the possibility of a *likely* significant effect that is the relevant test. Ramboll consider that the risks identified by the applicant are inherent in all projects of this nature and that all practicable and best practice mitigation measures have been identified and proposed to prevent or minimise these risks. Therefore Ramboll concluded that significant adverse effects are unlikely to occur.

Based on careful consideration of the information summarised above, I am satisfied that the applicant has provided sufficient information to enable an Appropriate Assessment Determination of the application to drill a single exploration well in the Iolar prospect under Frontier Exploration Licence (FEL) 3/18 in the Porcupine Basin offshore of the south west of Ireland.

I further 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 am satisfied that all appropriate process steps were followed, including as regards public consultation.

I agree with and adopt the Appropriate Assessment Report carried out by Ramboll in respect of the CNOOC Europe Petroleum Limited application and the conclusions reached in the Ramboll Appropriate Assessment Screening and NIS Review Report (at Appendix 1 to this Determination).

I note the mitigation and management measures committed to by CNOOC Europe Petroleum Limited and the additional observations and recommendations in the Ramboll Report on (pages 39 and 40 Appendix 1 and included in Table 1 of this Determination) in particular with regard to sound producing activities, pre-start up monitoring and the use of airguns, and I adopt the recommendations therein as part of this Determination.

Accordingly, I am satisfied and have decided that the application 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 offshore of the south west of Ireland would not adversely affect the integrity of a European site whether individually or in combination with other plans or projects subject to the mitigation measures proposed by the applicant (Table 1).

Appropriate Assessment Conclusion

Having considered the application by CNOOC Petroleum Europe Limited, the conclusions of the NIS, the submissions from the public consultations and based on the foregoing, it can be concluded, and I conclude, under the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011), as amended and for the purposes of Article 6(3) of the Habitats Directive that the application 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 offshore of the south west of Ireland would not adversely affect the integrity of a European site (whether individually or in combination with other plans or projects).

Jean Clarke, 17th May, 2019



Environment Advisory Unit, Department of Communications, Climate Action and Environment

Table 1: Mitigation and Management Measures Committed to by the Applicant.

Discipline	Commitment Proposed	Additional Notes
Underwater Noise	A qualified and experienced marine mammal observer (MMO) shall be appointed to monitor for marine mammals and to log all relevant events using standardised data forms.	None
	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.	If a break occurs in the hours of darkness, then sound-producing activities will not commence until hours of daylight and when effective visual monitoring is possible.
	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 the Monitored Zone by the MMO.	It is recommended that pre-start-up monitoring is undertaken irrespective of water depths to mitigate effects on marine mammals. In addition, it is recommended that the Monitored Zone is clarified to be 1,000 m.
	Pre-start-up monitoring shall be subsequently followed 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 and 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'.	None
	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.	The airguns proposed generally fire for approximately two minutes then stop for 5-10 minutes before repeating this pattern. It is recommended that the break between firing is reduced as much as possible and that monitoring is undertaken by the MMO throughout the break during the use of the airgun and

		shall not recommence within the hours of darkness when visual monitoring is ineffective.
	If there is a break in sound output for a period 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 pre-start-monitoring) will be undertaken.	If a break of greater than 10 minutes occurs in the hours of darkness, then sound-producing activities will not commence until hours of daylight and when effective visual monitoring is possible.
Unplanned accidental releases	Crew of the drill ship will undergo environmental awareness and safety training. Incident response training will form part of the induction for any crew joining the drill ship or Project vessels. The drill ship has an approved safety case and will be class certified by a recognised certifying authority	None
	A full risk assessment will be performed as part of well planning	None
	CNOOC Engineering Standards will be implemented	None
	The well will be designed to CNOOC Well Control Standards ECN-DR-STD-00067	None
	While drilling a two-barrier well control policy will be implemented at all times. The primary well control will be the mud hydrostatic and secondary well control will be the blow-out preventers or BOPs, which will be maintained throughout the drilling of the well. A full risk assessment was performed during well design	None
	While drilling, the primary well control barrier in the main conduit will be the hydrostatic pressure imparted by correctly weighted drilling fluid and secondary well control measures will include the BOP and cut-off valves on all machinery, pipelines and hoses	None

	<p>Outside the main conduit, previous casings in the next annulus also have barriers, i.e. seal assemblies in casing hangers, and cement isolation between reservoir and surface – there may be one or more cement seals set in each annulus</p>	<p>None</p>
	<p>Well design, materials and drilling procedures will combine to ensure that the surface environment can be isolated from the wellbore by at least two independent barriers during all stages of well construction and abandonment</p>	<p>None</p>
	<p>The BOP rated design pressure will comfortably exceed the anticipated reservoir pressure and the BOP will undergo maintenance and inspection prior to use</p>	<p>None</p>
	<p>Barriers will be tested prior to use, during installation and post-installation</p>	<p>None</p>
	<p>In the event of a blowout during drilling activities, when the primary Blowout Prevention Equipment has failed, a capping device will be deployed. The full description of the containment and recovery process is described in the Iolar Oil Spill Contingency Plan (OSCP), ECI-HS-PRP-00014. The OSCP was approved by the Irish Coast Guard on 12 February 2019 and was prepared in accordance with the Sea Pollution (Amendment) Act 1999. Details of the OSCP are provided in Section 4.3.4.2 of the applicant's NIS. This capping and containment system is a one of two-source control strategy, the other being a relief well drilling</p>	<p>None</p>
	<p>Shallow hazards (from shallow gas or over-pressured shallow formation water) have been assessed by seismic survey prior to drilling, and the results have been incorporated into the well design</p>	<p>None</p>

	The plug and abandonment plan will be reviewed and approved by CNOOC, in accordance with Oil and Gas UK Well Decommissioning Guidelines	None
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