

Applicant response to consultee observations

Marine Institute

Further to recent correspondence received from the Foreshore Unit (attached herewith for your reference) regarding the foreshore licence application by Bord Gáis Éireann for a trenchless gas pipeline crossing of the River Barrow Estuary, in response to the observation raised by the Marine Institute with regard to the need for a foreshore licence for any borehole site investigation works, we confirm that BGÉ is considering carrying out borehole site investigations in the estuary and is aware of the need for a foreshore licence for such works. BGÉ is currently preparing a scope of works for the site investigation works and hopes to commence pre-application consultations on a licence application in the near future. We propose to contact you again in due course in this regard.

Kind regards,

Michael

Bernard,

From Engineering perspective I don't see any issue with processing the application for the trenchless crossing. It's the 'minimum depth' that we are interested in and this is confirmed to be 10m which is acceptable.

Regards,

Edwin.

From: Bernard Nolan

Sent: 06 July 2011 11:48

To: Edwin Mooney

Cc: Matthew McLoughlin

Subject: FW: MS51/6/333 Foreshore Licence Application Great Island Gas pipeline & 6/333a site investigation licence.

Hi Ed,

The applicants have requested that the foreshore licence application for the trenchless crossing (6/333) be considered without further reference to the over-water site investigation application (6/333a).

Could you please advise on whether this is possible/advisable.

regards

Bernard

Bernard Nolan

Foreshore Unit

Planning Policy and Legislation

Department of the Environment, Community and Local Government

Newtown Road

Wexford

053 9117367

From: Daniel Garvey [mailto:daniel.garvey@arup.com]

Sent: 21 June 2011 14:40

To: Bernard Nolan

Subject: RE: MS51/6/333 Foreshore Licence Application Great Island Gas pipeline & 6/333a site investigation licence.

Thanks for that Bernard.

There are no foreseeable circumstances in which the planned crossing depth for the pipeline will be less than 10 metres below the Estuary bed.

The application for a foreshore licence for the proposed over-water site investigations is to facilitate the provision of additional technical information for the construction contractor. The outcome of these investigations will not provide any further certainty on the depth of the crossing, above that which is known already (>10m depth). The construction contractor will continue to have flexibility to select the trench profile that best suits their methods of working.

On that basis, Bord Gáis Networks request that the foreshore licence application for the trenchless crossing be considered without further reference to the over-water site investigation application.

The conditions proposed by your engineering section are acceptable to Bord Gáis Networks.

Best regards

Dan

From: Bernard Nolan [mailto:Bernard.Nolan@environ.ie]
Sent: 08 June 2011 14:13
To: Daniel Garvey
Cc: Matthew McLoughlin
Subject: RE: RE: MS51/6/333 Foreshore Licence Application Great Island Gas pipeline & 6/333a site investigation licence.

Hello Dan,

The 333 application is dependent upon the results of the site investigation to be conducted under the 333A licence application. Of particular interest will be the depth of the crossing. Depending on the results of the site investigation it may, unfortunately, be necessary for the 333 application to go back out to public notice as the depth of the crossing would definitely be of public interest. We can discuss once the site investigation has been completed.

The Sea Fisheries protection Authority have advised that they are satisfied with your responses in relation to the bentonite and no further conditions will be attached by them.

Please see below the conditions proposed by our engineering section. These conditions are based on a crossing depth of at least 10m. Please advise on their acceptability.

1. Applicant to provide certified statement by a chartered Engineer stating that the works as detailed in this application have been designed in accordance with the relevant Irish, British or EU standard specification or Codes of Practice for strength, stability and durability, taking into account current building regulations and safety legislation.
2. Within two months of completion of the works, the applicant shall provide a certified statement by a chartered Engineer that the works have been completed in accordance with the information provided and that the foreshore is returned to its original condition.
3. During the course of the works all necessary precaution shall be taken to protect the public in accordance with relevant Health and Safety Legislation and as set

- out in Section 4 of the Environmental Appraisal Report, submitted as part of the foreshore application.
4. During the course of the works no mechanical vehicles and/or plant shall enter onto the Foreshore.
 5. All works shall be carried out in strict accordance with Section 2 'River Barrow Crossing Description and Method Statement' of the Environmental Appraisal Report, submitted as part of the foreshore application.
 6. All weighted anchors (whether concrete or sand) used to sink the HDD Drilling Fluid Return Line shall be removed from the foreshore on completion and the foreshore shall be returned to its original condition.
 7. Appropriate methods of operation shall be adopted in order to ensure that no spillages of hydrocarbons, cement, excavation run-off, Bentonite or other hazardous substance occur to the Foreshore during the works. Contractor's arrangements for the control of pollutants should be notified to both DoEHLG and Inland Fisheries Ireland for agreement prior to works on the foreshore commencing. All mitigation measures to protect both the water quality and the ecology outlined in Section 4 of Environmental Appraisal Report, submitted as part of the foreshore application, shall be strictly adhered to.
 8. Any water abstraction from the River Barrow required for the HDD process shall be subject to the LOCAL GOVERNMENT (WATER POLLUTION) ACT, 1977.

The status of the 333A application is that public notice papers were issued on 01st April 2011. We have not yet received notification of the notice in the paper or received copies of the displayed materials. I have attached copies of the public notice papers for reference.

We are still awaiting a small number of consultee observations, the conditions to attach will be forwarded to you once received.

Please give me a call if you wish to discuss.

regards

Bernard Nolan
Foreshore Unit
Planning Policy and Legislation
Department of the Environment, Community and Local Government
Newtown Road
Wexford

053 9117367

From: Daniel Garvey [mailto:daniel.garvey@arup.com]
Sent: 03 June 2011 12:11
To: Bernard Nolan
Subject: RE: RE: MS51/6/333 Foreshore Licence Application Great Island Gas pipeline

Hello Bernard.

What is the current status of the MS51/6/333 application?

Thanks

Dan

From: Bernard Nolan [mailto:Bernard.Nolan@environ.ie]
Sent: 29 April 2011 15:40
To: Daniel Garvey
Subject: RE: RE: MS51/6/333 Foreshore Licence Application Great Island Gas pipeline & 333(a) geotechnical survey

Thanks Dan,

I have forwarded onto SPFA for comment, hopefully this will suffice!

regards

Bernard Nolan
Foreshore Unit
Planning Policy and Legislation
Department of the Environment Heritage and Local Government
Newtown Road
Wexford

053 9117367

From: Daniel Garvey [mailto:daniel.garvey@arup.com]
Sent: 06 April 2011 14:43
To: Bernard Nolan
Cc: Matthew McLoughlin
Subject: RE: RE: MS51/6/333 Foreshore Licence Application Great Island Gas pipeline & 333(a) geotechnical survey

Hello Bernard and Matthew

In relation to the concerns expressed by the Sea Fisheries Protection Authority, we can confirm the following:

- 1 Bentonite is an inert, naturally-occurring material.
- 2 The Designated Shellfish Area downstream of the proposed site is two kilometres distant at the closest point (Designated Shellfish Area No. 35, Waterford Harbour). The location map for the Designated Shellfish Area is included below.
- 3 Although no release of bentonite to the Estuary is envisaged, the maximum possible volume of accidental discharge is 20 to 30 cubic metres.
- 4 A risk assessment of the potential for accidental release of bentonite has been completed – this is summarised in the table below. The risk is considered to be low.
- 5 At this location in the Estuary, there is a very large volume of dilution available.
- 6 Estuarine environments tend to have natural levels of suspended solids arising from re-suspension of mud particles, and mixing of fresh and salt water.

7 Shellfish are relatively well adapted to these typical estuarine environments.

8 In the unlikely event of a bentonite release, allowing for natural mixing, dispersion, dilution and settlement over the two kilometres between the pipeline crossing location and the closest point of the Designated Shellfish Area, no significant effects on the commercial mussel farming activities are predicted – either direct effects on the mussels as an animal, or in the form of accumulations in the mussels which could render the animal unsafe to eat.

We confirm that the pipeline crossing depth will be a minimum of 10 metres.

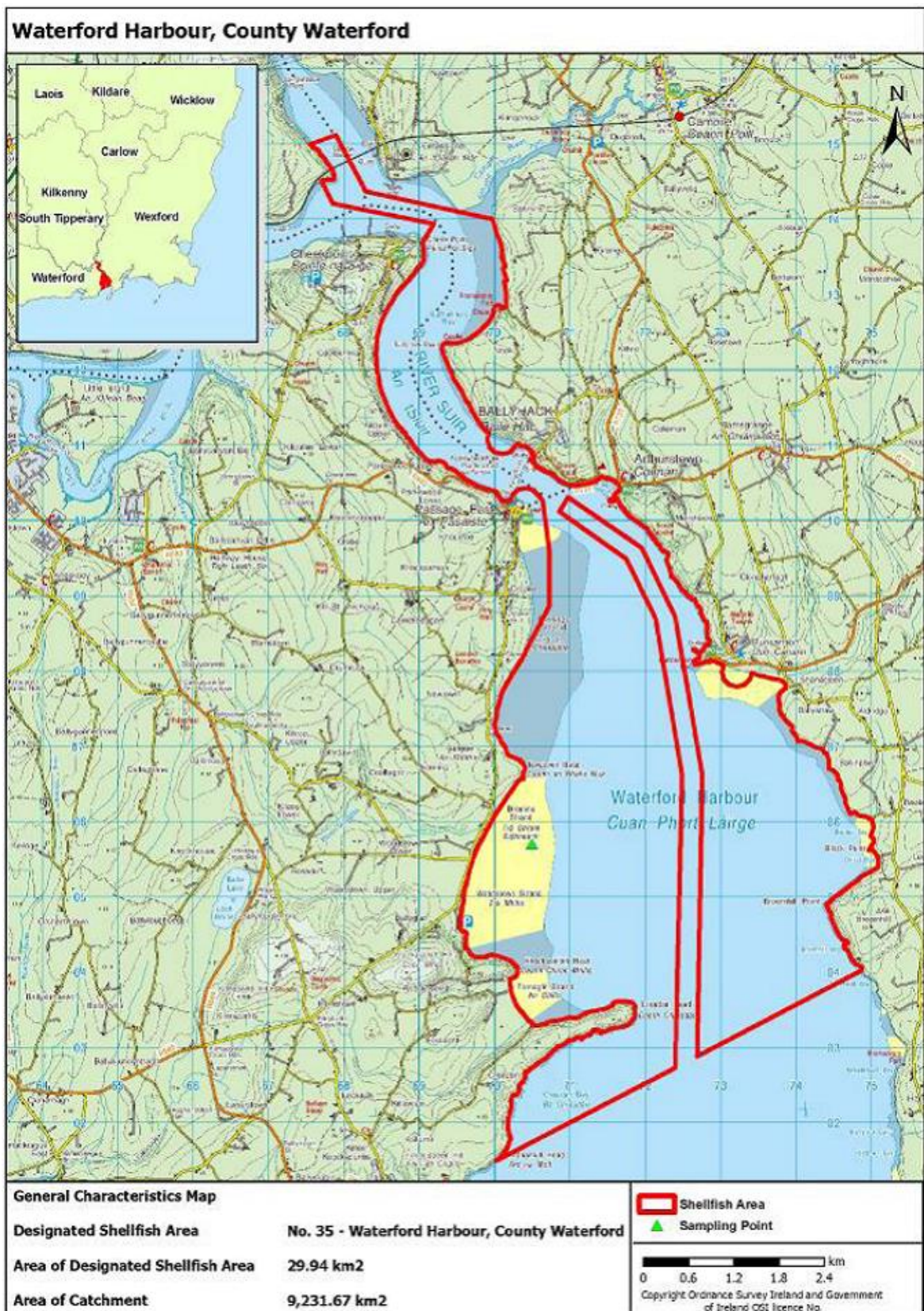
If you have any further queries, or require any further clarification, please do not hesitate to contact me.

Thank you.

Dan

| Hazard | | Risk | Risk Level | DECISIONS / CONTROL MEASURES TO ELIMINATE / REDUCE RISK | Residual Risk |
|--------|---|---------------------------|------------|--|---------------|
| | | | H/M/L | | H/M/L |
| | | | | | |
| 1 | Mud return pipeline mechanical failure | Line leaks during service | L | <ul style="list-style-type: none">Pipeline will be fabricated from high grade materialsPipeline sections will be fusion butt-weldedPipeline will be tested prior to entry into servicePipeline will operate at atmospheric pressure + slight elevation head | L |
| 2 | Mud return line impacted by passing overhead marine traffic | Line is damaged and leaks | M | <ul style="list-style-type: none">Pipeline will be weighted and settled into the soft silt accumulation on the river bedPipeline operation will always be under the supervision of experienced personnelAny deterioration in pipeline operation after a ship passes and the pipeline will be shut downMarine traffic is extremely infrequentClose liaison with the New Ross Port Authority will provide advance warning of approaching traffic and the operation of the pipeline will be closely monitored | L |
| 3 | Mud return line impacted by river marine currents | Line is damaged and leaks | M | <ul style="list-style-type: none">River currents velocities are low in the vicinity of the crossing location therefore careful design of the pipeline weighting elements and positioning on the river bed should ensure adequate anchorage to the river bed | L |

| | | | | | |
|---|---|---------------------------------|---|---|---|
| | | | | <ul style="list-style-type: none"> Any deviation of the horizontal entry angle of the pipeline entrance alignment into the river will be monitored for indication of underwater movement Close liaison with the New Ross Port Authority will provide advance warning of approaching traffic and the operation of the pipeline will be closely monitored in the event kick-back from the ship propulsion would impact the pipeline | |
| 4 | Third party damage | Pipeline leak | L | <ul style="list-style-type: none"> The HDD works site will be secured if left unattended during night time down time The HDD crossing location is in a rural sparsely populated area | L |
| 5 | Lack of operational experience involving this technique | Operational mishap causing leak | L | <ul style="list-style-type: none"> The HDD works including the design, construction, installation and operation of the mud return line will be executed to the highest of standards by qualified, experienced personnel specialising in this operation | L |



From: Bernard Nolan [mailto:Bernard.Nolan@environ.ie]

Sent: 30 March 2011 13:25

To: Daniel Garvey

Cc: Matthew McLoughlin

Subject: RE: RE: MS51/6/333 Foreshore Licence Application Great Island Gas pipeline & 333(a) geotechnical survey

Dan,

The Sea Fisheries Protection Authority is concerned about a possible release of bentonite affecting the cultivated mussels downstream of the proposed site. Could you please confirm that any such release will not directly affect the mussels as an animal and will not accumulate in the mussel and render the animal unsafe to eat?

Am I correct in my understanding that you won't be able to provide information on the depth of the crossing pending the results of a geotechnical survey currently undergoing the foreshore consent process 6/333(a)?

If this is the case we will do what we can to expedite the other process. I will need to consult with my colleague on the case, however I believe we may be able to proceed with the public notice element of 333(a) shortly.

The proposed site investigation licence would be subject to a standard charge of €950.

regards

Bernard Nolan
Foreshore Unit
Planning Policy and Legislation
Department of the Environment Heritage and Local Government
Newtown Road
Wexford

053 9117367

Thanks for that Bernard.

We note your advice that the proposed ancillary ducting should be regarded as part of the proposed trenchless crossing pipeline development, for the purposes of foreshore licensing.

In the light of this, we would like to provide the additional information as requested.

Revised construction drawings detailing the additional ducting

The ducting will consist of a sleeve pipe of up to 250mm (10") diameter and will be composed of either steel, PE or a combination of these materials. A typical cross-section is attached to this email (Typical Cross Section.png).

A Horizontal Directional Drilling (HDD) technique has been proposed for the construction of the pipeline crossing. The process essentially involves the drilling of one or more small diameter pilot hole(s) followed by reaming sessions to achieve the required hole bore diameter. The welded pipe string or bundle is subsequently pulled through the reamed hole. The only practical difference that the addition of the

ducting will have on the construction activity is that a larger diameter ream will be required to accommodate the combined pipeline and ducting bundle. The construction drawings included in the main foreshore licence application are unchanged.

Details of the capacity of the cable

The purpose of the ducting is ancillary to the gas pipeline and is being installed in the event Bord Gáis wish to monitor the security and operation of the gas infrastructure at a future date. The ducting already forms part of the planning submission to An Bord Pleanála ancillary to the pipeline.

Clarification whether the spare capacity of the cable will be utilised for commercial purposes

As the ducting is only an option, it is in the capacity of monitoring the security and operation of the gas infrastructure, if utilised.

If you have any further queries on this, please do not hesitate to contact me.

Best regards

Dan

From: Bernard Nolan - (DECLG) [mailto:Bernard.Nolan@environ.ie]

Sent: 23 December 2011 11:16

To: Daniel Garvey

Cc: dburke@bge.ie; George Burke - (DECLG); Padraic Dempsey - (DECLG)

Subject: RE: Proposed Foreshore Licence Application for ancillary ducting to Gas Pipeline to Great Island

Dan,

please see attached previous correspondence with Declan Burke in respect of proposed additional ducting. Declan previously advised that the BGE were not including a ducting option in their application. I understand from our phone conversation that the ducting will be used for a tele-communications cable, the function being, inter alia, to facilitate the operation of the cable. As it is proposed that the ducting and cable will be constructed with the pipeline it must be regarded as being part of the proposed development. This being the case it must necessarily be included in the Department's assessment of the current proposal and cannot be the subject of a separate foreshore consent application.

The following additional information on the amendment to the proposed development is required:

- revised construction drawings detailing the additional ducting
- details of the capacity of the cable
- Clarification whether the spare capacity of the cable will be utilised for commercial purposes.

regards,

Bernard Nolan
Foreshore Unit
Marine Planning/Foreshore
Department of the Environment, Community and Local Government
Newtown Road
Wexford

053 9117367

From: Daniel Garvey [mailto:daniel.garvey@arup.com]
Sent: 21 December 2011 15:01
To: Bernard Nolan - (DECLG)
Subject: Proposed Foreshore Licence Application for ancillary ducting to Gas Pipeline to Great Island

Hello Bernard

Further to our telephone conversation, the proposed foreshore licence application is in relation to ducting, associated with, and ancillary to the proposed trenchless pipeline crossing of the Barrow Estuary. The ducting will be 250mm in diameter, and constructed with the pipeline. No additional environmental or navigational impacts are predicted arising from the incorporation of the ducting with the construction of the pipeline.

If you have any other queries on this, please do not hesitate to contact me.

Thanks

Dan

Daniel Garvey
Senior Engineer

Arup
15 Oliver Plunkett Street, Cork, Ireland
t +353 (0)21 422 3200 | f +353 (0)21 427 2345
www.arup.ie

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