

Closing Statement by Environ on behalf of the Minister for Communications, Energy and Natural Resources to An Bord Pleanála oral hearing in respect of the Corrib Gas Pipeline

1. ENVIRON is assisting the DCENR to undertake its statutory assessment of the Environmental Impact Statement (EIS) for the Application to construct the Corrib gas pipeline as submitted in accordance with Section 40 of the Gas Act, 1976, as amended. The scope of ENVIRON's role is to:

- Examine the submitted EIS and assess whether or not it meets the scope and quality requirements set out or implied by specific European and Irish Environmental Impact Assessment (EIA) legislation and guidelines;
- Appraise the EIS, highlighting any deficiencies in respect of the statutory requirements of the EIS and detailing the outcome and resolution of any such deficiencies;
- Undertake a high level examination of the pipeline design documentation elements of the EIS;
- Review third party submissions made to DCENR in regard of the Application, and
- Propose any relevant conditions arising from the assessment of the EIS that should be considered for inclusion in any Ministerial consent which may issue on foot of the Section 40 application.

2. In undertaking these tasks, ENVIRON has reviewed the Corrib Onshore Pipeline Environmental Impact Statement 2010 and other associated documentation on behalf of the DCENR. As noted in our Opening Statement, our review and appraisal of the 2010 Onshore Pipeline EIS documentation identified a number of issues with the information and assessments provided in the EIS. To enable us to fully assess the adequacy of the EIS and to assess whether all Project impacts can be adequately managed and maintained to acceptable levels, we sought further information from the Applicant, in the form of additional data, assessment or proposed mitigation controls, on a number of matters.

3. The Applicant has subsequently provided further information in the form of Addenda and Errata to the EIS, and other Additional Information as requested. We are currently in the process of completing our review of this information. At this stage our preliminary findings indicate that the greater majority of the previously raised issues appear to be adequately addressed by the additional information. We provide further commentary in relation to the primary issues for which we requested further information below.

4. **Traffic Impacts.** The EIS Addenda provide a range of additional information and clarifications related to traffic assessment and management, in particular with regard to the following aspects:

- **Traffic safety.** The Addenda outline the traffic management structures and measures that have previously been employed and will be used for the future construction activities. The Addenda address the impact of the additional construction-related vehicles on key junctions and further clarification on the analysis of road traffic accident data on the road network to be used by construction traffic. Appropriate mitigation measures to improve safety features taking into account these accident statistics are also proposed.
- **Impacts on public transport.** The Addenda provide further information that outlines the aspects of the Driver Code of Conduct that will increase driver awareness of bus passenger safety. The Addenda also emphasize that most local buses only share 2.4km of their route (along the R313) with the HCV construction vehicles, hence reducing the potential for impact on bus services. Nonetheless, we recommend that the potential impact on bus journey times be included in the monitoring process.
- **Impacts on pedestrians and cyclists.** The Addenda provide further information on pedestrian count data that quantifies the level of pedestrian and cyclist activity in the area, and also outlines appropriate proposed mitigation measures to minimise the safety risk to pedestrians and cyclists.
- **Presentation and Assessment of Traffic Data.** The Addenda provide further information on the calculation and estimation of traffic volumes. The revised data is adequately legible and consistent. Additional information is included on access arrangements to construction sites. The Addenda include further information on the analysis of junction capacity. All junctions are shown to operate well below capacity.
- **Specific Mitigation Measures.** The Addenda provide further information on the operation of the convoy system and the Drivers Code of Conduct for the management of construction vehicles. The Addenda also includes information on the location of breakdown services and further mitigation measures to minimise disruption to traffic. The Addenda set out the rationale for speed limit proposals and emphasizes that the designation of speed limits is subject to approval by Mayo County Council. Three separate traffic monitoring regimes that will continue during the construction process are also described within the Addenda.

5. Overall we conclude that the EIS Addenda provide significant additional clarification with respect to traffic impacts and that this information adequately resolves the issues raised during our review of the EIS.

6. **Flood Risk.** The Additional Information provides an assessment of tidal, fluvial and groundwater flood risks and demonstrates that flood risks to the LVI and the compounds at Glengad and Aghoos are adequately assessed and that the requirements of the County Mayo Development Plan have been appropriately considered in respect of flood risks. These additional assessments include:

- Clarification on the ground levels of the LVI and the tunnelling compounds used in the flood risk assessment, including confirmation that these levels are based on topographic surveys. We recommend that the minimum as-built ground elevations with respect to the tunnelling compounds (including stringing and peat storage areas) should form part of any consent conditions.
- Improved assessment of risk from tidal flooding using computer modelling (that incorporated the effects of storm surge) to predict the height of tidal events with a 1:200 and 1:1,000 year return period. The maximum tidal levels (for a 1:1,000 year event) were predicted to be approximately 3m below ground level at the LVI and Glengad compounds, and 2m below ground level at the Aghoos compound. The assessments of risk from tidal flooding in the EIS and Addendum do not consider any effects of climate change upon tidal levels, which may be pertinent to the operational life of the LVI. However, draft guidance issued by the Office of Public Works recommends a tidal allowance of +1,000mm for a 'high range' scenario (for a 100 year time horizon), and allowance for this would equate to an extreme 1:1,000 year tide being 2m below ground level at the LVI. Therefore, we conclude that it is unlikely that the effect of climate change on tidal levels would be significant with respect to flood risk at the LVI.
- Additional flood mitigation measures consisting of the construction of a bund on the western edge of the proposed Glengad compound to alleviate fluvial flood risks. We recommend that the provision of such mitigation should be included in any consent conditions.

7. **Noise and Vibration.** Noise and vibration sources have been clarified in the EIS Addenda and other additional materials submitted to this Oral Hearing (specifically the "Response to Entec, dated 20th August 2010"). The EIS Addenda demonstrates that night-time noise levels at certain sensitive residential locations (e.g. N2) will be lower than previously assessed in the EIS. The Additional Information materials also provide more detail on the assessment of vibration impacts. This includes assessment of vibration impacts from road vehicles, vibropiling, the TBM and rock-breaking equipment. The predicted vibration levels at the nearest residences are below the identified threshold levels for nuisance or property damage.

8. An outline approach to vibration monitoring has also been proposed by the Applicant, which includes an array of monitoring locations on roads along the north and south side of Sruwaddacon Bay. In outline, we consider this general approach to the location of vibration monitoring stations to be appropriate. The Applicant has also proposed a vibration threshold limit as part of its monitoring programme. This is set at 12.5 mm/s ppv, which is broadly appropriate for protection against superficial damage to properties under NRA guidelines (although the suitability of the threshold is dependent to some extent on the frequency).

However, we consider that a lower threshold limit to protect against nuisance complaints should also be applied, together with an action trigger level, above which mitigation measures are implemented in order to ensure that the threshold limits are not exceeded.

9. **Air Quality.** We raised concerns with the assessment of air quality impacts in the EIS in terms of a lack of consideration of impacts during hydrotesting of the pipeline and uncertainty in assumptions made in the assessment of air quality impacts on both humans and vegetation during construction at the Aghoos tunnelling compound. The EIS Addenda and Additional Information materials have resolved these issues through:

- The inclusion of an assessment of air quality impacts during hydrotesting, which is based on associated nitrogen generators etc. being located at Bellanaboy Terminal. This assessment predicts that the applicable ambient air quality standards will not be breached beyond the boundary of the terminal.
- Further clarification and assessment of the air quality impacts at the Aghoos compound. These studies demonstrate that under the most likely equipment layout plans for the Aghoos compound, predicted air quality impacts will meet the applicable NO₂ air concentration standard for the protection of vegetation within all areas of the Glenamoy Bog Complex cSAC and that in the worst case (where all the primary emissions sources are assumed to be located at the northern most perimeter of the compound) exceedance of the ecological NO₂ standard in the cSAC would be spatially very small. The Addenda also demonstrate that applicable air quality standards for the protection of human health will be met at the nearest residence to the Aghoos compound under both the ‘worst case’ and ‘most likely’ equipment location plans.

10. **Stone road construction.** Measures to adequately mitigate the risk of groundwater leaking vertically through the base of the Stone Road have been clarified in the Additional Information materials. This Additional Information broadly confirms that a layer of low permeability re-worked peat will be constructed at the base of the stone road, where appropriate, along the length of the pipeline route that traverses peatland. It has also been confirmed that a 0.5m thick layer of in-situ peat will be left at the base of the excavations within peatland at the proposed Aghoos compound, except in instances where deeper excavation is required for foundations etc. In these instances, a 1m layer of re-worked peat will be placed as part of reinstatement to reduce vertical groundwater leakage. If consent were to be granted, we recommend that these measures should be enforced using consent conditions. The Applicant does not propose to adopt these measures at the Aghoos stringing area, which is currently covered by ‘grassland’. However, although a thin layer of peat is present under the stringing area, the ‘grassland’ is of comparatively low ecological value and following reinstatement it will be much less sensitive than ‘peatlands’ to the effects of any vertical groundwater drainage. Therefore, in this instance we accept the proposal that no measures are required to inhibit vertical water movements in the area of grassland proposed for the stringing area.

11. **Impacts on the cSAC/pSPA designated areas.** In relation to the Glenamoy Bog Complex cSAC and the Blacksod Bay/Broadhaven Bay pSPA sites within Sruwaddacon Bay, we consider that the EIS and associated Addenda fulfil the requirements of an Appropriate Assessment for the normal performance of the proposed *planned* construction activities and demonstrate that such activities, as planned, will not significantly impact on the conservation objectives of these sites.

12. Unplanned construction events that have the potential to affect the cSAC and pSPA also need to be considered. In particular, consideration is required of bentonite breakout during tunnelling operations and the construction of an emergency intervention pit within Sruwaddacon Bay in the unlikely event that obstructions are encountered during the tunnelling process that cannot be removed via access from within the tunnel. These potential issues have been further assessed by the Applicant in the Addenda and other Additional Information, and our preliminary findings on these aspects are described below.

13. **Bentonite Breakout.** In relation to bentonite breakout, it is estimated in the Additional Information that in the unlikely event of a break-out occurring, the maximum credible release of bentonite is 7m³. This is based on the size of the working chamber and an automatic by-pass of this chamber if the chamber pressure drops. We concur that a maximum release of 7m³ of bentonite is likely to lead to only localised and short-term impacts on the bay. However, we are further assessing the design details of the TBM to confirm whether or not we consider that larger releases of bentonite are credible.

14. **Emergency Intervention Pit.** The Applicant has stated that the requirement for an emergency intervention pit is highly unlikely. Notwithstanding this, assessment of the potential impacts of an intervention pit is necessary as part of the EIS. . The EIS Addenda and other Additional Information provide further details on the design of an intervention pit and an assessment of its likely impacts on hydrology and ecology within Sruwaddacon Bay. At the present time we have not concluded our review of the Additional Information and are therefore not yet in a position to comment on its adequacy.

15. On the basis of our current understanding we have a reasonable expectation that the remaining issues identified above can be adequately resolved, although this cannot be finally confirmed until our review process is complete. It is nonetheless likely that we would recommend a number of consent conditions be applied in the event that a consent be granted for the application under Section 40 of the gas Act 1976, as amended.

16. To conclude, as a separate general point, it should be noted that any requirements or mitigations resulting from the review of security or safety which result in any design changes will need to be assessed in relation to their environmental and social impacts. Specifically in relation to this point, we have queried whether possible changes in the trench design to place protective concrete slabs over the pipeline could affect the hydrology and/or stability of the proposed Stone Road where it would pass through peatland.

The Applicant has provided Additional Information in response to these queries, and has stated that the stability and hydrology of the Stone Road would not be impacted by laying protective concrete slabs. Environ are further assessing this issue.

30 September 2010