Shell E&P Ireland Ltd

Corrib Gas Pipeline

Operational Impacts of the Corrib Gas Pipeline

Appendix A to the Cover Letter:

Roadmap for EIS Documentation

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1 INTRODUCTION

The Corrib Gas Field Development is divided into a number of distinct but inter-related and inter-dependent elements as follows:

- Offshore seabed installation (subsea wellheads and manifold at the Gas Field);
- Offshore gas pipeline (between wellheads and landfall);
- Onshore gas pipeline (between landfall and gas terminal at Bellanaboy); and
- Bellanaboy Bridge Gas Terminal (BBGT).

The Corrib Pipeline includes both onshore and offshore, between the Corrib Gas Field and the BBGT received Ministerial Consent under Section 40 of the Gas Act in April 2002. SEPIL applied for consents for a modified route for the onshore gas pipeline in February 2009, including an application to the Minister for Department of Communications, Energy and Natural Resources (the "Minister").

Further modifications to the proposed onshore gas pipeline development, requested by An Bord Pleanála in November 2009, necessitated the preparation of a new/revised application to the Minister, including a revised Environmental Impact Statement (EIS) for the onshore gas pipeline. This revised application was submitted in June 2010. As the consents processes under the Gas Act apply to the Corrib Pipeline in its entirety (both onshore and offshore), a revised 2010 Supplementary Update Report in respect of the offshore section of the Corrib Pipeline for the 2001 Offshore EIS was also submitted, as outlined in Table 1. Additional information was also submitted to the Minister as part of the application, as listed in Table 1. A new consent was required for the Corrib Pipeline in order to implement the proposed modifications to the onshore pipeline route. This was granted on 25 February 2011 (the 2011 Section 40 Consent).

Table 1: Documentation submitted in respect of the Corrib Pipeline (2011 Section 40 Consent)

Project Element	Environmental Impact Statement / Natura Impact Statement
Offshore Seabed Installation Offshore Gas Pipeline	▪ Corrib Offshore Field to Terminal EIS October 2001 ▪ Offshore Supplementary Update Report May 2010
Onshore gas pipeline between landfall valve installation at Glengad and the Bellanaboy Bridge Gas Terminal	▪ Corrib Onshore Pipeline EIS May 2010, including Appendix P Natura Impact Statement (NIS)
Offshore and Onshore Pipeline	Additional Information ▪ (a) Non-Technical Summary; ▪ (b) Additional Information to the May 2010 Onshore Pipeline (Volume 1) (which included an Errata and Addendum to the EIS) ▪ (c) Geotechnical Data package (Sruwaddacon Bay Ground Investigation Data) 2010 (Vol. 1, 2 and 3), and ▪ (d) Engineering Integrity Material

The likely significant impacts of the construction and the operation of the Corrib Pipeline from the offshore facilities to the BBGT were fully considered and assessed in the documentation listed above. This also included an assessment of risks for non routine events.

SEPIL is applying for consent to operate an upstream pipeline, which includes both offshore and onshore elements, under Section 40 of the Gas Act (as amended) from the Minister of Communications, Energy and Natural Resources.

1.1 Purpose of this Roadmap Document

This Roadmap Document simply indicates where the information concerning the impacts associated with the operation of the Corrib Pipeline have been considered, this includes both offshore and onshore elements which have been considered and assessed in the documentation listed in Table 1.

The key information, extracted from the above documentation, includes:

- A description of the potential impacts[1] of the operation of the Corrib Pipeline on the environment.
- A summary of residual impacts[2] and a description of the mitigation measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects.

Table 2 lists all environmental aspects for which there was potential for impacts during the operation of the Corrib Pipeline. It sets out where these aspects were primarily but not exclusively considered in the EIS documentation. The operational impacts have been addressed throughout the EIS documentation and for completeness should be reviewed in its entirety. Table 3 (provided in Section 2 of this document) lists those aspects/activities for which residual operational impacts are anticipated. Where no residual impacts were predicted, these are not outlined further in this Roadmap Document. The 2001 Offshore EIS, 2010 Offshore Supplementary Update Report (SUR) and 2010 Onshore EIS all listed the key residual impacts within their respective summary chapters, (Section 16, Section 16 and Section 18 respectively). For ease of consideration and review, cross referencing these documents is provided throughout Table 3. Direct extracts are taken from the respective EIS documentation and as such in some cases refer to construction vessels. Where such impacts are identified they are clearly applicable to the use of both construction and operational vessels.

Assessments of risks for non routine events were also addressed in;

- Corrib Offshore Field to Terminal EIS October 2001 (Chapter 16).
- Offshore Supplementary Update Report May 2010 (Chapter 16).
- Corrib Onshore Pipeline EIS May 2010 (Appendix Q6.3a Corrib Risk Register, Appendix Q6.6 Emergency Response Plan and Provisions and Appendix M4 Geotechnical Risk Register).

[1] Potential impacts are those which could potentially occur if no mitigation measures were in place

[2] Residual impacts are those impacts after implementation of mitigation measures

Table 2: Operational Impacts of the Corrib Pipeline

Aspect	Offshore Pipeline	Reference	Onshore Pipeline	Reference	LVI	Reference
Human/Socio Economic	√	Chapter 6 2001/2010 Offshore EIS/SUR*	√	Chapter 6 2010 Onshore EIS	√	Chapter 6 2010 Onshore EIS
Ecology	√	Chapter 7 2001/2010 Offshore EIS/SUR	√	Chapters 12 -14 2010 Onshore EIS	√	Chapters 12 2010 Onshore EIS
Soils & Geology	√	Chapter 8 2001/2010 Offshore EIS/SUR		Chapter 15 2010 Onshore EIS		Chapter 15 2010 Onshore EIS
Water/Hydrology	√	Chapter 9 2001/2010 Offshore EIS/SUR		Chapter 15 2010 Onshore EIS	√	Chapter 15 2010 Onshore EIS
Air	√	Chapter 10 2001/2010 Offshore EIS/SUR		Chapter 8 2010 Onshore EIS		Chapter 8 2010 Onshore EIS
Noise	√	Chapter 11 2001/2010 Offshore EIS/SUR		Chapter 9 2010 Onshore EIS	√	Chapter 9 2010 Onshore EIS
Landscape		Chapter 12 2001/2010 Offshore EIS/SUR		Chapter 10 2010 Onshore EIS	√	Chapter 10 2010 Onshore EIS
Climate		Chapter 13 2001/2010 Offshore EIS/SUR		Chapter 8 2010 Onshore EIS		Chapter 8 2010 Onshore EIS
Cultural Heritage		Chapter 14 2001/2010 Offshore EIS/SUR		Chapter 16 2010 Onshore EIS		Chapter 16 2010 Onshore EIS
Waste	√	Chapter 15.2 2001/2010 Offshore EIS/SUR		Chapter 11 2010 Onshore EIS	√	Chapter 11 2010 Onshore EIS
Traffic		Chapter 15.3 2001/2010 Offshore EIS/SUR	√	Chapter 7 2010 Onshore EIS	√	Chapter 7 2010 Onshore EIS
Agriculture		N/A	√	Chapter 11 2010 Onshore EIS	√	Chapter 11 2010 Onshore EIS

Legend: √ refers to Residual Impact. Reference refers to where aspect is primarily but not exclusively considered in the EIS documentation. **Note:** The shaded grey areas relate to where aspects were considered to have no residual impact or not applicable for assessment e.g. agriculture not relevant to the offshore pipeline. * Supplementary Update Report.

2 SUMMARY OF RESIDUAL IMPACTS

Table 3 provides a summary of predicted residual impacts and a description of the mitigation measures included in the EIS documentation submitted with the Section 40 Consent to Operate application, such as the 2010 Onshore EIS, the 2001 Offshore EIS and the 2010 Offshore Supplementary Update Report and Additional Information.

Table 3: Residual Operational Impacts of the Corrib Pipeline

Aspect	Potential Impact	Mitigation Measures	Residual Impact	Extract Reference
Offshore Gas Pipeline				
Human Beings	Section 6.5.2 During normal operations, there will be no employment opportunities associated with the offshore development, except for those associated with the long-term maintenance and monitoring of the offshore pipeline and production facilities. These activities will require the employment of specialist contractors at regular intervals.	Section 6.7.2 No mitigation measures are considered necessary.	**POSITIVE** Section 6.7.2 Proposed development is likely to have an overall positive economic impact on the existing residential community through enhanced use of local services and goods.	2001 Offshore EIS, Section 6 Human Beings
Air Quality	Section 10.5.2.6 Once the pipeline and subsea equipment are in place, scheduled releases to the atmosphere are not anticipated as a result of routine operation. Occasionally, there will be small atmospheric emissions from marine vessels used for inspection surveys of the pipeline.	Section 10.7 Combustion emissions associated with transportation will be minimised through appropriate vessel selection and vehicle management plans. A programme of regular maintenance will be put in place to ensure that fuel use is as efficient as possible and emissions are within acceptable limits. Regular pipeline inspections and examinations using pipeline integrity gauges (PIGs), surface gas detectors (onshore) and inspections of the offshore route using survey vessels, will ensure that the integrity of the pipeline is maintained. These measures can	**NEGLIGIBLE** Section 10.8. In general, there are no resident sensitive receptors offshore and impacts will be negligible	2001 Offshore EIS, Section 10 Air Emissions

Aspect	Potential Impact	Mitigation Measures	Residual Impact	Extract Reference
Offshore Gas Pipeline				
		be expected to be completely effective in eliminating any potential for release of gas from the pipeline and are used routinely worldwide.		
Water Quality	Section 9.5.1 Estimates of the volume of black and grey wastewaters, discharged from vessels during the remaining offshore and nearshore works, are provided in Table 9-2. Estimates have also been provided for galley wastes from the installation vessels.	Section 9.5.1 Such discharges will be quickly dispersed by wave and tide action, and discharges during future installation operations will not be "additive".	**NEGLIGIBLE** Section 9.5.1 Given the wide area and long period over which the discharges will be made, the magnitude of the impact is classified as negligible.	2010 Offshore Supplementary Update Report, Section 9 Water
Noise impact on cetaceans	Section 11.8.1 Relatively low noise levels will be generated by the installation vessels, these are likely to result in a negligible impact to cetaceans.	Section 11.7 In terms of mitigation against the noise generated by the marine construction vessels, a code of practice for dredging works was implemented in 2008 and 2009 (in agreement with the NPWS), and will be implemented during the next construction period. The code includes requirements such as a qualified and experienced Marine Mammal Observer (MMO) to be on board near shore construction vessels. The MMO is responsible for ensuring, through visual observations, that an exclusion zone of 1000m around the vessel is free of marine mammals for 30 minutes before operations commence.	**NEGLIGIBLE** Section 16 Negligible	2001 Offshore EIS, Section 11 Noise, 16 Assessment of Environmental Effects 2010 Offshore Supplementary Update Report, Section 11 Noise

Aspect	Potential Impact	Mitigation Measures	Residual Impact	Extract Reference
Offshore Gas Pipeline				
Solid Waste	Section 15.2.8.3 Once the pipeline, umbilical and discharge pipe are operational, very little waste will be produced. It should be noted that small amounts of scale could be produced during maintenance operations. This waste will arise in the Terminal and therefore, is discussed in detail in the Terminal EIS. There will also be some solid waste generated by vessels carrying out survey or maintenance work along the pipeline route. This waste is held on board and there will no impact from this.	Section 16 .2 • inspection of pipeline integrity is routine, ensures that the pipeline functions correctly and removes scale build up; • scale is disposed of to licenced landfill site; and • subsea equipment is designed for project life. Replacement would not be a routine event. Written procedures would be followed.	**NEGLIGIBLE** Section 16	2001 Offshore EIS, Section 15 Material Assets, Section 16 Assessment of Environmental Effects
Post Construction Surveys (include Geophysical Surveys)[3]	Section 16.2 The length of the pipeline route from landfall to field will be surveyed • emissions to air from survey vessel; subsea noise; and • interference with other sea users.	Section 16.2 • survey will use low energy sonar, which has negligible effects on cetaceans; and • fishery liaison procedures will be employed.	**NEGLIGIBLE** Section 16.2 • emissions to air: refer to Chapters 10 and 13 • interaction with other sea users: refer to Chapter 15.	2001 Offshore EIS, Section 16 Assessment of Environmental Effects
Marine Ecology	Section 9.8.2 Leaching of trace metals from the sacrificial anodes is anticipated to have a negligible impact on the marine environment, as they will dissolve very slowly over the life of the pipeline. This will release small	Section 9.7.2 The sacrificial anodes used for cathodic protection will be designed to dissolve slowly, such that only low concentrations of metals are released over a long time period.	**NEGLIGIBLE** Section 9.10 There could be a slow breakdown of the sacrificial anodes if the pipe is left on the seabed, releasing metal ions into the water. This is expected to provide a negligible	2001 Offshore EIS, Section 9 Water

[3] Geophysical surveys include side scan sonars

Aspect	Potential Impact	Mitigation Measures	Residual Impact	Extract Reference
Offshore Gas Pipeline				
	amounts of metal ions into the water column which will be diluted by the natural water movements along the pipeline route. Any metals which leach from anodes which are covered by the sediment may take longer to disperse.		impact because of the slow rate of release and high dilution available	
Water Quality (Discharge pipe (outfall pipe) and Umbilical	Section 9.8.2 During operation, the discharge from the outfall location north of Erris Head will consist of treated surface water run-off from hard surfaces around the terminal, effectively treated rain water and therefore no impacts are predicted. The discharge on the seabed in the Corrib field will consist of produced water, which has been treated to reduce contaminant concentrations to those required by the existing IPPC licence. The concentrations specified in that licence were such that there would not be damage to marine organisms. No effects are therefore predicted.	Section 9.7 For all offshore aspects of the project other than the pipeline installation in Broadhaven Bay, and the discharge off Erris Head and in the Corrib Field, the mitigation measures as proposed in 2001 Offshore EIS remain valid. Section 7.5 The treated surface water run-off from hard surfaces around the terminal will be discharged through a pipeline that terminates around 12.5km from the landfall. The produced water will be subject to three stages of treatment before it is discharged via the umbilical to the Corrib Field. The contaminants likely to be present in the produced water discharge have been identified on the basis of the fluids analysed from well testing operations. These contaminants will be	**NEGLIGIBLE** Section 9.10 Based on the assessments made in the 2001 Offshore EIS and further consideration of the potential impacts carried out by the EPA in granting the IPPC licence, the reinstatement and residual impacts are still considered negligible	2010 Offshore Supplementary Update Report, Section 9 Water and 7 Flora and Fauna

Aspect	Potential Impact	Mitigation Measures	Residual Impact	Extract Reference
Offshore Gas Pipeline				
		treated to their respective Environmental Quality Standards (EQS) (Water Framework Directive (2000/60/EC)).		
Rock Placement[4] **Offshore Geology**	Section 8.5 The rock placement in Broadhaven Bay will disturb an area of seabed equivalent to the design footprint of the rock berm. Seabed geology over the berm footprint will be entirely covered. An estimate assuming worst case scenario calculates the footprint to range from 15000m2 to 30,000m2 in addition to the existing project footprint associated with the offshore pipeline/umbilical and seabed infrastructure at the offshore gas field.	Section 8.7 All of the rock material that is to be deposited to protect the pipeline in the Bay will be inert hard rock that has been washed following quarrying and grading. As such, the potential for rock dust to be introduced into the water column is considered extremely low. The majority of the seabed of the Bay is sandy in nature, and as such the rock berm will introduce hard substrate for colonisation by epibenthic species. This introduced hard geology will be consistent with the exposed bedrock that necessitates the rock placement, as well as the subtidal cliffs at the peripheries of the Bay. Hard rock substrates are characterised by increased species richness compared with the sandy seabed.	**MINOR** Section 8.10 There will be a residual impact related to the presence on the seabed of the pipeline. This impact is considered to be minor, in that the area of seabed taken by the pipeline is very small and does not exhibit any geological features that are unique and which would be lost or damaged.	2010 Offshore Supplementary Update Report, Section 8.5/8.7 Geology 2001 Offshore EIS, Section 8.10 Geology and Sediment

[4] Impacts from concrete mattressing are as for from rock placement

Aspect	Potential Impact	Mitigation Measures	Residual Impact	Extract Reference
Offshore Gas Pipeline				
Rock Placement **Water Quality**	Section 9.8.1 Placement of rock over the pipeline section in Broadhaven Bay, and the burying of the umbilical using a subsea plough/jetting tool, will have a minor, short-term, localised impact (see Table 3-1 for installation period), creating increased turbidity. Given that the installation period has been extended, the impacts will be perceived over a longer time period, though they will effectively be negligible.	Section 9.7 For all offshore aspects of the project other than the pipeline installation in Broadhaven Bay, and the discharge off Erris Head and in the Corrib Field, the mitigation measures as proposed in 2001 Offshore EIS remain valid.	**NEGLIGIBLE** Section 9.10 The reinstatement and residual impacts are still considered negligible.	2010 Offshore Supplementary Update Report, Section 9 Water

Aspect	Potential Impact	Mitigation Measures	Residual Impact	Extract Reference
Onshore Gas Pipeline				
Human Beings	Section 6.4.2.3 The proposed onshore pipeline development, as part of the overall Corrib Gas Field Development, is likely to have the following impacts during its operation: • Create new jobs and demand for local services, benefiting the working community of the area.	Section 6.5.2 No remedial or reductive measures are considered necessary.	**POSITIVE** Section 6.6.2 The overall Corrib Gas Field Development will directly employ approximately 55 no. people during its operation at the Bellanaboy Bridge Gas Terminal, in a variety of occupations, both skilled and unskilled. Based on the classification of people by principal occupation and social class profile above, much of the population in the local vicinity of the subject site are likely to be qualified to benefit from the type of new employment which will be created. This is a significant positive impact for the local and wider community.	2010 Onshore EIS, Section 6 Community and Socio-Economics
Terrestrial Ecology	Section 12.4 Potential impacts on habitats and species are summarised in sections 12.4.2 and 12.4.3 while the predicted level of post construction impacts are outlined for the short term and long term in Section 12.7. Appendix P (NIS) Section 5.2 and Table P14.	Section 12.5 The following sections provide summary details on the mitigation measures proposed to ameliorate against those potential impacts outlined in Section 12.4. A full description of the proposed mitigation measures are provided in Appendix J(1). Appendix P (NIS) Section 6.	**No long term significant impacts** Section 12.6 Residual impacts are summarised in sections 12.7.1 – 12.7.4 and in Table 9 in Appendix J (1). The terminology for impact duration is in accordance with the EPA Guidelines (2003). Long term significant impacts are not expected because of the nature of pipeline construction and the fact that, with the exception of the landfall valve installation footprint, habitats can be reinstated.	2010 Onshore EIS, Section 12 Terrestrial Ecology Appendix J1, including Table 9, Summary of expected impacts on habitats and species Appendix P (NIS), including Table P14. 2010

Aspect	Potential Impact	Mitigation Measures	Residual Impact	Extract Reference
Onshore Gas Pipeline				
				Onshore EIS, Section 12 Terrestrial Ecology
Traffic	Section 7.5.2 There will be very little traffic associated with the operation of the Corrib Onshore Pipeline. The traffic movements associated with the occasional safety checks and maintenance will be negligible and will not generate a potential traffic impact on the surrounding road network.	Section 7.6.1 The development of the pipeline will have minimal traffic associated with it during its operation apart for safety checks and maintenance purposes. This means no mitigation measures will be required for the operational stage of the pipeline.	**NEGLIGIBLE** Section 7.7 The results show that no operational difficulties are expected.	2010 Onshore EIS, Section 7 Traffic
Agriculture	Section 11.2.2 The extent of permanent exclusion from future development is defined by the area of the on-land permanent pipeline wayleave – in this case the width of the permanent wayleave is generally 14 metres (and 20m wide in peatland and forestry). Furthermore, potential development in close proximity to a gas pipeline must be controlled on the grounds of public safety, with exclusion areas normally calculated in reference to current pipeline design safety codes.	Section 11.4.1 1 Permanent landtake, permanent loss of areas for harvesting timber and temporary loss of areas for grazing or grass harvesting will be dealt with by compensation	**MINOR** Section 11.5.1 The proposed development will have a minor, long term residual impact on forestry production within the permanent wayleave. The residual impact on the remaining lands used for grazing and grass production will be short term and minor.	2010 Onshore EIS, Section 11 Material Assets

Aspect	Potential Impacts	Mitigation Measures	Residual Impact	Extract Reference
LVI				
Human Beings	Section 6.4.2.3 The proposed onshore pipeline development, as part of the overall Corrib Gas Field Development, is likely to have the following impacts during its operation: • Create new jobs and demand for local services, benefiting the working community of the area.	Section 6.5.2 No remedial or reductive measures are considered necessary.	**POSITIVE** Section 6.6.2 The overall Corrib Gas Field Development will directly employ approximately 55 no. people during its operation at the Bellanaboy Bridge Gas Terminal, in a variety of occupations, both skilled and unskilled. Based on the classification of people by principal occupation and social class profile above, much of the population in the local vicinity of the subject site are likely to be qualified to benefit from the type of new employment which will be created. This is a significant positive impact for the local and wider community.	2010 Onshore EIS, Section 6 Community and Socio-Economics
Traffic	Section 7.5.2 Once every 4-5 years the LVI will require a maintenance inspection, which will require the use of heavy machinery, but this will not involve a high number of traffic movements.	Section 7.6.1 The development of the pipeline will have minimal traffic associated with it during its operation apart for safety checks and maintenance purposes. This means no mitigation measures will be required for the operational stage of the pipeline.	**NEGLIGIBLE** Section 7.7 The results show that no operational difficulties are expected.	2010 Onshore EIS, Section 7 Traffic
Hydrogeology	Section 15.3.3.2 A perforated drainage pipe network will intercept both groundwater and surface water and divert elevated groundwater from the LVI site to a concealed outfall in the cliff face.	Section 15.3.3.2 No remedial or reductive measures are proposed.	**IMPERCEPTIBLE** Section 15.3.3.2 Only imperceptible impacts on local groundwater levels and groundwater flow in the area would be expected during the operational stage of the proposed project.	2010 Onshore EIS, Section 15 Hydrology and Hydrogeology

Aspect	Potential Impacts	Mitigation Measures	Residual Impact	Extract Reference
LVI				
Noise	Section 9.4.5 There will be no continuous operational noise generated by the proposed development.	Section 9.5.6 Residents of the nearest receptors will be notified well in advance prior to any major maintenance works at the LVI, or if the LVI pipeline restart system needs to be operated.	**NEGLIGIBLE** Section 9.6 The only noise to be generated by the development during operations will be from weekly visits to the LVI, and any maintenance works. The additional traffic generated by this activity will be negligible in comparison to the existing traffic flows.	2010 Onshore EIS, Section 9 Noise and Vibration
Landscape	Section 10.4.1.1. The LVI will become a new but non-prominent feature of this landscape.	Section 10.4.1.1. It is located approximately 50m from the landfall in (Glengad) and has been set down in a 'dished' area approximately 3m below existing ground level. The careful siting of the installation at reduced ground levels results in low levels of change in landscape resource.	**MODERATE** Section 10.6 The LVI will not be a prominent feature in the landscape at the headland at (Glengad) due it is low-lying nature and design mitigation measures. No significant visual impacts are predicted for properties with a potential view across the location of the restored LVI.	2010 Onshore EIS, Section 10 Landscape and Visual Impact Assessment
Terrestrial Ecology	Section 12.4.4.2 There will be a small permanent loss of habitat at the footprint of the landfall valve installation (approximately 20m x 22m) and along the access road. This will be located in an area of improved agricultural grassland of low ecological value. Impacts are expected to be long term, localised, direct, and moderate. Normal operation of the LVI will not have any impact upon wildlife using the area, including the occasional	Section 12.5.4.2 Following construction this topsoil will then be used on the slopes of the facility, which will then be left to revegetate naturally. It is proposed therefore that no seed or topsoil will be imported into the cSAC in order to prevent the introduction of non-native genotypes which could result in the genetic pollution of the local plant populations, also to protect against the introduction of pest species.	**SLIGHT/MODERATE** Section 12.6.4 In the short term impact level is expected to be moderate for the footprint of the LVI, but imperceptible to slight for other areas associated with the LVI. Long term impacts are expected to be slight to moderate (LVI footprint) and imperceptible to slight for reinstated areas. Although there will be slight loss of foraging habitat for birds and small mammals, it is	2010 Onshore EIS, Section 12 Terrestrial Ecology and Appendix J1, Table 9, Summary of expected impacts on habitats and species Appendix P (NIS), including

Aspect	Potential Impacts	Mitigation Measures	Residual Impact	Extract Reference
LVI				
	otter holt and the Sand Martin colony close by. The facility will not require illumination during night-time. Regular monitoring checks at the LVI will involve one or two individuals with a small vehicle or jeep and are not expected to impact on species using the site any more than current agricultural activities impact on the area. If works or servicing is required at the LVI at any stage, then this may temporarily disturb faunal species for the duration of the work, but no lasting impact is expected.	To aid topsoil stability and grass growth, a geotextile membrane will be laid on the slopes of the facility. Appendix P (NIS) Section 6.	expected that in the long term - with likely further agricultural improvement in the locality - the residual impact will be slight. In addition, the provision for naturally regenerated grassland areas on the slopes of the facility and on level areas will compensate to some extent, for the loss of the pre-existing grassland. The residual impact in vegetation and faunal terms and also in the context of the present function of this area as a buffer zone within the cSAC, is expected to be slight.	Table P14
Agriculture	11.3.2.1 Approximately 0.5 hectares of farmland will be required for the LVI (and permanent access road) at Glengad. This land is in the ownership of SEPIL.	Section 11.4.1.1 Permanent landtake, permanent loss of areas for harvesting timber and temporary loss of areas for grazing or grass harvesting will be dealt with by compensation.	**MINOR** Section 11.5.1 The proposed development will have a minor, long term residual impact at the LVI due to loss of land for production.	2010 Onshore EIS, Section 11 Material Assets

3 CONCLUSION

The tables in this document outlines where consideration has been made of the potential and residual impacts and mitigation measures associated with the operation of both the onshore and offshore elements of the Corrib Pipeline.