No	Issue raised	Response
1	Scope and Drawings, Section 3.2.1 and 4.7.2. Several of the statements made refer to aspects of the previous application (in relation to the outfall pipe and the crossings of Sruwaddacon Bay) and this document therefore needs to be updated.	The last sentence in Section 3.2.1 which reads: *'The onshore pipelines (20" pipe and water outfall pipe) shall be constructed by conventional pipe laying methodology, and through two trenchless crossings of the tidal Glenamoy River in Sruwaddacon Bay.'* should read: *'The onshore pipelines (20" pipe and water outfall pipe) shall be constructed by conventional pipe laying methodology, except through Sruwaddacon Bay where they will be installed in a tunnel.'* Section 4.7.2. reads as follows: *'The cathodic protection provided on the offshore pipeline uses conventional sacrificial anodes fitted to the external wall of the pipe. Onshore an impressed current system will be utilised throughout the entire length of the route including the estuary and river crossings. The "supplementary" coating system for the estuary crossings will be subject to detailed design'.* The last sentence should be deleted.
2	Onshore Pipeline Design Overview, Section 4.3 What are the reasons for change to the pipeline minimum design temperature 1,1100m downstream of the LVI?	The reasons for the change to the pipeline minimum design temperature 1,100m downstream of the LVI is to increase operational flexibility during system restart.
3	Onshore Pipeline Design Overview, Section 4.16. Does the minimum bend radius of 5D also apply to the LVI?	A minimum bend radius of 5D does not apply to the LVI because the LVI bypass will not be pigged.

No	Issue raised	Response
4	Onshore Pipeline EIS Table 3.2 suggests that the minimum outside diameter for a trenchless, segment lined tunnel, such as that proposed, is 3.5m. This would be more than sufficient to house the pipeline and other services, so why is a diameter of 4.2 m proposed?	The internal diameter of the proposed tunnel will be approx 3.5 m. This diameter is driven by construction safety and logistics requirements . During the main construction phase, eight operators will normally be present at the head of the tunnel operating the TBM and erecting the concrete tunnel segments, as well as carrying out the segment grouting and other operations such as rail and utility extensions. Experience from a 4 km segment lined tunnel recently built, contributed to determining that a 4.2 m external diameter tunnel would be the optimal solution.
5	Onshore Pipeline EIS, Section 3.6.1 States that 'the reliability of the offshore safeguarding system has been significantly increased by hardware changes to the control system". Please give full details of these changes.	The reliability of the system has been increased by including devices to release, at the Gas Terminal, the pressure of the hydraulic fluid within the umbilical resulting in closure of subsea valves independently of the control signals within the umbilical. Details of this change can be found in the following sections of the EIS: - Appendix Q2.1, Section 5.4 Overpressure Protection Overview (specifically the seventh paragraph) - Appendix Q4.5, Section 2.3 Current Pipeline Process Safeguarding Philosophy (specifically the first bullet point after the second paragraph) - Appendix Q4.5, Section 2.5.2 Safeguarding Layers of Protection (specifically layers 3a and 3b) Details of the reliability of the overpressure protection system which now includes this additional trip can be found in the following section of the EIS : - Appendix Q4.6, Section 1.2 Offshore Pipeline (The Wells Isolation System)

No	Issue raised	Response
6	Onshore Pipeline EIS. The schedule in Figure 5.2 indicates that tunnel grouting is on the critical path and appears to delay first gas by around 2 ½ months. Was this effect on the schedule taken into account when deciding if the tunnel is to be grouted?	As set out in Section 3.5.1.2 of the Onshore Pipeline EIS the main reasons for grouting the tunnel are as follows: • The pipeline will be completely protected within the grouted tunnel. As described in Chapter 4 and Appendix Q, the pipeline will be inspected internally on a periodic basis using an intelligent pipeline inspection gauge (PIG) and possible corrosion will be monitored by the cathodic protection system. • A fully grouted tunnel is preferable from a maintenance point of view in that there is no manned entry requirements. • The fully grouted configuration will ensure the long term integrity of the tunnel structure. These reasons were given more weight than a potential schedule gain in the order of approximately 2 months when considering this option.
7	Appendix Q4.4, Section 5.1 It is stated that the 20" Mainline Isolation Valve will be opened to allow pigging and will be locked closed when the pig has passed and "the valve leak tightness confirmed". How is the leak tightness of this valve to be tested?	The method of leak testing for the 20" Mainline Isolation valve (a double expanding gate valve (DEGV)) is to measure pressure build up in the valve cavity. Subsequent to the pig passing the 20" DEGV and with the pipeline operational, the cavity pressure in the 20" Mainline Isolation valve will be vented down to atmospheric pressure. The pipeline will remain pressurised both sides of the DEGV. Leak testing will then be carried out locally by inserting a pressure gauge on the valve cavity vent line and monitor the pressure build up over a period of time. This pressure rise will then be calculated into a volumetric leakage rate from the pipeline into the cavity.

No	Issue raised	Response
8	Appendix Q5.2 (PIMS) In table 2.1, the reference to "Rules and Procedures Manual for Petroleum Operations" should read "Rules and Procedures Manual for Petroleum Production Operations" (to distinguish it from that for exploration and appraisal operations).	As set out in Chapter 4 and in the PIMS itself, the objective of the document is to provide a management scheme for the integrity of the Corrib Gas Pipeline System. The document will remain a living document throughout the life of field. The missing word in the reference in Table 2.1 is noted and will be corrected in the update of the PIMS.
9	Appendix Q5.2(PIMS), Attachment A1 Twice in Table A5.1 there are references to "Well P1"; this no longer exists and needs to be changes to "Well P101".	This is noted and will be updated (see response to Item 8 above)
10	Appendix Q5.2 (PIMS), Attachment A2. In Section A2.2 it is stated that "velocities in the pipeline are predicted to remain above 4 m/s". At what gas production rate would the velocity fall below 4 m/s?	The velocities in the pipeline are predicted to remain predominantly above 4 m/s. Pipeline operating conditions can vary on a daily basis (anywhere within the defined operating envelope) and over time (as the pressure and production rate decline over the life of the field). As such, there is not one specific gas production rate at which the velocity will fall below 4 m/s. A number of sample points have been chosen to illustrate when conditions will occur to give velocities lower than 4m/s: - Year 1: if the rate is reduced to 280MMSCFD, this would result in the velocity reducing to below 4 m/s (80-85barg terminal arrival pressure). - Year 8: if the rate is reduced to 100MMSCFD, this would result in the velocity reducing to below 4 m/s (30barg terminal arrival pressure).