18 ENVIRONMENTAL MANAGEMENT

18.1 Introduction

This section describes the arrangements for the management of the remaining construction works by SEPIL and its contractors to ensure that the mitigation measures in the 2001 Offshore EIS and this Supplementary Update Report, legislative and contractual requirements, and environmental best practice are implemented. It provides an update to the information presented in Section 18 of the 2001 Offshore EIS.

From the outset, the project has been designed to limit its environmental impact as far as possible. SEPIL's contractors (and their subcontractors) will be expected to conduct their activities in such a way that the impact on the environment during construction is minimised.

One of the key mechanisms for environmental management during the construction stage is the production of Environmental Management Plans (EMPs) and associated documentation, to be developed by the contractors. These are described in more detail in this section.

SEPIL's approach to environmental management is to incorporate the following principles of environmental protection:

- prior assessment of environmental impact;
- minimisation of potential impact through design and other mitigation controls;
- monitoring the effectiveness of controls set; and
- auditing of performance.

This section documents how these principles will be applied by SEPIL to the remaining construction works.

18.2 HSE Policy and Commitments

SEPIL's environmental standards are set by the Shell Group's Health, Safety and Environmental (HSE) Policy (www.shell.com).

SEPIL's Managing Director personally endorses this policy and further requires each member of staff to adopt this policy and to eliminate activities believed to threaten safety, health or the environment.

The policy commits Shell to:

- pursuing the goal of no harm to people;
- protecting the environment;
- using material and energy efficiently to provide products and services;
- developing energy resources, products and services consistent with these aims;
- publicly reporting performance;
- playing a leading role in promoting best practice in industry;
- managing HSE matters in the same manner as any other critical business activity; and
- promoting a culture in which all Shell employees share this commitment.

To support these commitments, Shell will:

- have a systematic approach to HSE management designed to ensure compliance with the law and to achieve continuous performance improvement;
- set targets for improvement and measures, appraise and report performance;
- require contractors to manage HSE in line with this policy;
- require joint ventures under its operational control to apply this policy and to use its influence to promote it in other ventures; and
- include HSE performance in the appraisal of all staff and reward accordingly.

These environmental commitments encompass the environmental philosophy that will be applied by SEPIL to all aspects of the remaining construction works.

18.3 Environmental Management during Construction

18.3.1 SEPIL Key Roles and Responsibilities

The SEPIL staff on site will act primarily in an overseeing role by observing the contractors' performance and by raising issues or intervening where appropriate. A SEPIL Environmental Officer will report to the SEPIL Resident Engineer who holds ultimate responsibility for contractor monitoring and ensuring that contractors' environmental performance is compliant with SEPIL's requirements.

In general, the contractors' Environmental Officer (manager/adviser/engineer) will maintain responsibility for overseeing and implementing the works as well as any subcontractors within their remit from an environmental perspective. The contractors' Environmental Officer will report to the SEPIL Environmental Officer on the contractors' performance.

The SEPIL Environmental Officer in turn will act as the regulatory interface on environmental matters by reporting to and liaising with Mayo County Council, the North Western Regional Fisheries Board, National Parks and Wildlife Services (NPWS) and any other relevant environmental authorities. The contractors' Environmental Officer will provide the necessary support to SEPIL's Environmental Officer to ensure that he/she can adequately discharge these functions.

18.3.2 Environmental Management Plan

The project's EMP outlines how the environmental aspects and impacts associated with the remaining construction works will be managed in terms of their mitigation and control measures. This includes establishing detailed work instructions or procedures as necessary. The project's EMP also outlines how activities will be monitored in terms of environmental performance, the objectives that have been established for the work and specific targets where appropriate.

An Environmental Management Plan/Environmental Protection Plan (EMP) will be established for the works. The EMP will outline procedures to meet the environmental management requirements for the proposed works.

18.3.3 Other Documentation

In principle the environmental management documentation for the construction stage of the project can be categorised in tiers as follows:

- Level 1 - Overall HSE Plan / Environmental Management Plan
- Level 2 - Environmental Procedures
- Level 3 - Detailed construction method statements/Construction manuals

- Level 4 - Monitoring and audit records

18.3.4 Environmental Procedures

A number of Environmental Operational Control Procedures will be established on site to detail the working methods necessary for managing and mitigating environmental impacts caused by construction activity through prevention or amelioration. The environmental procedures include Emergency Procedures that will be implemented in the event of an accident. Operational control is required to ensure the management of all operations and activities associated with significant environmental aspects, policies, objectives and targets. The required level of control is achieved through the implementation of operational procedures.

18.3.5 Method Statements

Detailed and site-specific Method Statements will be produced to cover the methodologies to be employed for all main construction activities. The Method Statements will be developed having regard to advice issued by consultees, and in consultation with them, as appropriate, having regard to health and safety requirements and risks.

18.3.6 Monitoring and Audit Records

During construction, a comprehensive programme of environmental monitoring will be undertaken.

The purpose of monitoring will be to ensure that commitments and standards, as laid down in the conditions of consents, Management Plans, Operational Procedures, and Method Statements are being adhered to and any necessary remedial actions implemented.

Environmental near misses and incidents will be recorded and investigated and appropriate corrective actions put in place. SEPIL and their contractors will operate a policy of self reporting of Environmental Incidents.

SEPILs Contractors will undertake a programme of weekly environmental inspections and monthly environmental audits during the construction phase to ensure:

- that works comply with statutory, planning consent, and all contract requirements;
- to show that works are being undertaken in compliance with the project plans, procedures and method statements; and
- to demonstrate that remedial action has been taken, as necessary.

SEPIL's Environmental Advisor will also carry out appropriate environmental inspections and monitoring of their contractors environmental performance in the form of periodic inspections and audits. Where problems are identified, the corrective action will be identified and a programme of implementation will be agreed with the contractor within a defined time frame appropriate to the severity and importance of the non-compliance identified.

Inspection and auditing results will be reported to SEPIL; they will play an important part in reviewing and updating the EMP as the project progresses.

18.4 Mitigation Measures during Construction

Mitigation measures form part of the EMPs and Method Statements that will be produced to cover the construction activities. These mitigations measures include the following.

18.4.1 Noise

For marine based work in the intertidal and subtidal zones, activities will run on a 24-hour basis. For the general land-based operations at Glengad, working hours will be restricted to 07:00–19:00 Monday to Friday, 07:00–16:00 on Saturday and there will be no activity on Sundays. During the umbilical pull-in operation, it will be necessary to work on a 24-hour basis. Elements of the pre-commissioning of the offshore pipeline are planned to be carried out on a 24-hour basis, however, predicted noise levels currently are such that this work will be curtailed in the period 22:00 - -07:00.

Noise will be minimised by the screening of stationary machinery (generators) use of noise attenuation barriers and turning off such equipment when not in use. Silenced machinery will be used as much as possible to mitigate noise.

A noise survey will be carried out before and during work on the site and near local residences to measure/assess the level and impact of these activities.

18.4.2 Light

When night-time work is necessary, lighting will be directed downwards and away from residences and roads as much as is practicable. However, as the safety of the crew is paramount, some disturbance may be unavoidable.

18.4.3 Oil Spill

Re-fuelling will be restricted to allocated re-fuelling areas. In the event of an oil/diesel spill, the offshore and onshore emergency procedures will be implemented as necessary. Oil spill containers will be stationed at each site and each machine driver will be equipped with and trained to use an oil spill kit kept in the cabin of the machine.

18.4.4 Waste Management

Each contractor will be responsible for the management and disposal of their own waste in accordance with their individual Waste Management Plans. All waste disposal to onshore treatment facilities will be carried out by licensed transport and disposal contractors.

18.4.5 Traffic Management

All construction activities associated with the landfall will adhere to Traffic Management Plan prepared for the activity. The Traffic Management Plan focuses primarily on the haul route for materials to the landfall at Glengad.

18.4.6 Archaeology

Whilst the marine pipe trench was archaeologically monitored in 2002, 2005, 2008 and 2009 and nothing was found during this work, there still may be potential for archaeological remains to be uncovered during remaining works, if any deviation from the original routes occurs.

The DoEHLG will require a monitoring licence for any new marine trenches or onshore topsoil stripping in areas not stripped previously.

Contingency plans to deal with such an eventuality will be put in place for the remaining construction phases.

Given the previous monitoring which has been carried out in the area, the Underwater Archaeology Unit of the DOEHLG have confirmed that no further archaeological monitoring will be required for the umbilical installation works.

18.4.7 Ecology

Pre-entry ecological surveys have been carried out and any constraints associated with the landfall have been identified.

During construction, a working area will be fenced off at the landfall to prevent encroachment by personnel and machinery outside of the allowable work area and to protect the adjacent habitats. There will be adequate signage to further delineate this boundary.

The autumn 2008 Brent Goose survey showed that the feeding behaviour of Brent geese was not affected by onshore or intertidal works associated with the dismantling the causeway, hence, no impacts are anticipated to this population and no additional mitigation is proposed.

Marine mammal observers will be present during all marine construction operations with the Broadhaven Bay cSAC. They will conduct a visual search of the area before start-up of rock placement, surveying or umbilical installation, and any noisy operations will be delayed until 20 minutes after the last sighting of marine mammals within 1000m of construction activities.