Scottish & Southern Electricity Networks
TRANSMISSION

TG-NET-ENV-512

Environmental

General Environmental Management Plan (GEMP) – Working in or Near Water

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1 Introduction

1.1 Construction activities in or near water have the potential to cause serious pollution or impact on the bed and banks of a watercourse and on the quality and quantity of the water.

1.2 Engineering works can cause damage to the habitat within rivers, lochs and wetlands, with associated impacts on invertebrates, plants, birds and mammals. Engineering works can also block the passage of migrating fish and damage spawning habitats during sensitive times.

1.3 Major causes of environmental harm associated with working in or near watercourses include:

- Silt e.g. disturbance of river bed or bank, dewatering and pumping of excavations, run-off from exposed ground, plant washing, roads and river crossings;
- Cement and concrete – which is very alkaline and corrosive and can cause serious pollution;
- Chemicals and solvents – oil storage, refuelling, trade materials etc;
- Herbicides – aerial and non-aerial applications; and
- Waste materials (including special waste) e.g. oily wastes, spent acids and solvents.

2 References

The document detailed below in Table 2.1 - Scottish and Southern Electricity Networks Documents, should be used in conjunction with this document.

Table 2.1 - Scottish and Southern Electricity Networks Documents

Reference	Title
SM-NET-ENV-500	Consents and Environment Manual

3 Legislation

3.1 There are a number of activities which pose a risk to the water environment including:

- Discharges to the water environment;
- Abstractions; and
- Physical works within, and in proximity to, controlled waters.

3.2 The Water Environment (Controlled Activities) (Scotland) Regulations 2011 – more commonly known as the Controlled Activity Regulations (CAR) sets out authorisations that are required for different activities in or near the water environments (including rivers, lochs, estuaries and groundwater).

3.3 Levels of CAR authorisation include General Binding Rules (GBR), Registrations and Licences.

3.4 A Construction run-off licence is required for any project that:

- Exceeds 4 hectares in area;
- Contains a road or track length in excess of 5km;
- Includes any area of more than 1 hectare that has a slope more than 25 degrees; or
- Includes any road (or track) with a length greater than 500 metres that has a slope more than 25 degrees.

3.5 Large and complex construction project run-off licence may be required for project that undertake one or more controlled activities(including the discharge of water run-off from a construction site to the water environment) and are:

- A project (or part of a project) that is a National Development, as identified in the National Planning Framework; and/ or
- A linear project greater than 25km in length.

4 General Compliance Requirements

4.1 General

4.1.1 Plan all works in accordance with best practice.

4.1.2 Ensure all necessary authorisations under the Controlled Activities Regulations (CAR) are in place.

4.1.3 Identify all activities that will be undertaken in or near watercourses (including all identifiable drainage paths).

4.1.4 Avoid works within 10m of a watercourse unless no other practical options exist and leave a vegetated buffer strip.

4.1.5 Where works are undertaken within 10 m of any watercourse or drain, ensure specific pollution prevention controls are in place.

4.1.6 Communicate risks associated with working in or near watercourses to all personnel and include control measures in the site-specific construction method statements.

4.1.7 Keep site tidy and do not store materials too close to watercourses or surface water features.

4.1.8 Ensure that all watercourses are routinely monitored for changes in water quality and keep a written record of monitoring. If water quality deteriorates, stop works, identify the source of the problem and implement appropriate mitigation measures. Ensure any potential pollution incident is reported in line with procedures, including to SSEN Transmission.

4.2 Watercourse Engineering

4.2.1 Seek to avoid or minimise watercourse engineering works wherever possible.

4.2.2 Vehicles should not work within the water unless no other reasonable options exist.

4.2.3 All construction machinery operating in-stream should be mechanically sound to avoid leaks of oils, hydraulic fluid, etc.

4.2.4 Machinery should be thoroughly cleaned and checked prior to commencement of in-stream works.

4.2.5 All reasonable steps shall be taken to prevent the transport of sediments or other matter disturbed by the works.

4.2.6 Ensure all required pre-construction surveys have been completed before starting works (these will include, where appropriate, fresh water pearl mussels, otter, water vole).

4.2.7 Check if there are any timing restrictions to works because of protected species (e.g. spawning salmonids, otter, water vole etc) or landowner commitments.

4.2.8 Any temporary dams used should be designed to accommodate periods of high watercourse discharge and dried out sections of bed should be check for stranded fish. Any stranded fish or other wildlife must be immediately translocated to suitable nearby habitat.

4.2.9 Pumps should also be fitted with screens to prevent fish mortalities and ingress of debris, and the outfall to pumps be designed to prevent erosion of the receiving waters (i.e. by dissipating the flow). Back up pumps should be available.

4.2.10 Where stock has access to the works fencing may be necessary to allow the regeneration of native riparian and aquatic marginal vegetation.

4.3 Surface Water Control

4.3.1 Locate areas of high-risk activities away from watercourses and drainage paths. Areas of high risk include:

- Fuel and chemical storage;
- Refuelling areas;
- Material stockpiles;
- Vehicle and equipment washing areas;
- Site compounds / parking areas.

4.3.2 Minimise the volume of contaminated run-off being created by:

- Diverting clean surface water away from areas using cut-off drains, catch pits and bunds (where necessary these can be lined);
- Do not allow water to drain down the length of a haul road. Roads should have adequate cambers to shed water quickly and if necessary cut-off drains installed across the road;
- Minimise erosion of exposed soils and working areas;
- Reduce the exposed working area through phased construction;
- Reinstate exposed soil as soon as practical;
- Roughen exposed surfaces to reduce rate of water run off;
- Prevent water from leaving site prior to treatment;
- Ensure adequate buffer zones are identified between working areas and surface waters;
- Diversion drains should be used to catch sediment laden run-off and direct it to treatment facilities such as settlement ponds (where necessary these can be lined), silt fences (not to be installed in watercourse), settlement tanks etc (see CIRIA C6848);
- Maintain all mitigation measures regularly to ensure their effectiveness;
- Depending on the level of contamination, silty water can be pumped over land to filter through vegetation and infiltrate into the ground provided it is carried out in line with the CAR regulations. An appropriate buffer distance must be maintained to allow sufficient distance for the vegetation to filter the silty water prior to reaching a watercourse;
- Ensure construction works minimise disturbance to the current run-off regimes.

4.4 Vegetation Removal

4.4.1 Trees and shrubs should not be removed without agreement.

4.4.2 Avoid un-necessary vegetation removal.

4.4.3 Where necessary leave a vegetated buffer distance of 10m between works and a watercourse.

4.4.4 Only break the ground surface when works are required and initiate a phased approach.

4.4.5 Comply with agreed buffer zones of vegetation as this will allow further treatment of surface water.

4.4.6 Do not dispose of cleared vegetation into the watercourse and avoid debris from clearance.

4.4.7 Vegetation removal can impact on bank stability and increase erosion. Ensure that all banks are restored to a condition prior to works commencing and assess what further protection may be required.

5 Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	New Document Created	N/A	1.00	Richard Baldwin
02	Updated text, and reference doc added.	TG-NET-ENV-512 (Rev1.00)	1.01	Richard Baldwin
03	Reviewed and updated	TG-NET-ENV-512 (Rev 1.01)	1.02	Richard Baldwin