

SCOTTISH ENVIRONMENT PROTECTION AGENCY

PREVENTION OF POLLUTION FROM CIVIL ENGINEERING CONTRACTS: SPECIAL REQUIREMENTS

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Purpose

The purpose of this document is to enable those planning engineering or construction work to reduce the risk of pollution of the Water Environment. Engineering or construction work carried out in or in the vicinity of inland waters now requires authorisation from SEPA under the Water Environment (Controlled Activities) (Scotland) Regulations 2005. Your local SEPA office to discuss any requirements under these regulations.

This document contains a definitive list of clauses for incorporation into civil engineering contractual documents. Further guidance to assist those in the civil engineering industry on how to minimise the environmental impact of their activities can be found in SEPA's "Guidance for Water Pollution Prevention from Civil Engineering Contracts" and the Pollution Prevention Guideline Notes (produced by SEPA, the Environment Agency and the Environment and Heritage Services Northern Ireland). Please note that a Glossary of Terms is also attached at the end of this document.

General

The Contractor shall identify all parts of the water environment as defined in the Water Environment and Water Services (Scotland) Act 2003 which may be affected by the works and the permanent or temporary discharge points to these watercourses. The water environment includes wetlands, rivers, lochs, transitional waters, (estuaries), coastal waters and groundwater. However the engineering regime of the Water Environment Controlled Activities (Scotland) Regulations 2005 applies to engineering activities in inland waters and wetlands only. Inland waters include rivers, lochs and canals.

1. When the Contractor is planning the works, agreement should be sought from SEPA on pollution prevention measures, overall approach and emergency procedures for all construction stages. This should cover:
 - i) the protection of the water environment and sensitive locations by planning site drainage, including the run-off from borrow pits, soil heaps, haul roads and water crossing places, and
 - ii) the design and application of measures (including land acquisition to provide adequate mitigation of any pollution from the project. Contamination of the water environment can lead to serious water quality problems and adversely affect flora and fauna. Therefore, for this and other reasons, the Contractor could be prosecuted under the Water Environment (Controlled Activities) (Scotland) Regulations 2005. SEPA's formal authorisation for discharge may be required and, in extreme cases, the Engineer or the Engineer's Representative may have to suspend work until pollution

prevention measures have been carried out to SEPA's satisfaction.

2. In the event of spillage of any polluting substances and/or pollution of the water environment, the Contractor must notify SEPA and the engineer immediately by telephone. Contact telephone numbers can be found at the end of this document.
3. Where required, the Contractor shall submit to the Engineer his proposals for maintaining the free passage of fish at all times in any part of the water environment likely to be affected by the works, and these shall be submitted to the local District Salmon Fishery Board for their approval (where applicable).
4. Materials which may cause pollution shall not be stored near the water environment, nor shall they be stored in such a manner that they may fall or be carried into the water environment. All refuse and debris arising from the site in the vicinity of the water environment shall be collected and removed as required, in accordance with the Duty of Care, so that none may fall or be carried into the water environment.
5. In the event that temporary sanitation cannot be connected to the public foul sewerage system, the Contractor shall apply to SEPA for authorisation for any discharge in compliance with the Water Environment (Controlled Activities) (Scotland) Regulations 2005.
6. The use of construction plant in water represents a clear pollution risk and must only be considered as a last resort. In the event of there being no feasible alternatives (i.e. land-based construction plant), the plant must be cleaned thoroughly beforehand (principally to remove oil) and must be checked thoroughly for the presence of any potential oil leaks. SEPA should be consulted for advice on other appropriate pollution prevention measures.
7. Where a waterbody transects the construction site, the contractor shall agree the location with SEPA. Options to allow works to continue may include the following but any works impacting the watercourse will require an authorisation from SEPA under the Water Environment (Controlled Activities) (Scotland) Regulations 2005:
 - i) diverting the waterbody around the working area
 - ii) temporarily culverting the waterbody through the working area;
 - iii) blocking, diverting or overpumping the waterbody, which shall be limited to a period to be agreed with SEPA and where appropriate, with the District Salmon Fishery Board.
8. Where construction plant has to cross a waterbody, SEPA would expect that temporary bridges or culverts would be installed, together with suitable mud splash guards. General Binding Rule 6 in the Water Environment (Controlled Activities) (Scotland) Regulations 2005 should be followed if applicable.
9. Cut-off drains must be installed to intercept uncontaminated surface water and thereby prevent it from entering the working area. Agreement shall be reached with SEPA regarding its satisfactory discharge.

10. Construction plant washing facilities (including wheel washes) shall be designed to operate on total recirculation wherever possible. Where this cannot be achieved, it is advisable to collect the effluent produced for discharge to the foul sewer (this is likely to require the formal approval and consent of the Water Authority) or for off-site disposal via a licensed waste contractor. In the event of these options not being available, discharges to the water environment can only take place with adequate settlement and oil removal prior to discharge. The Contractor will require SEPA's authorisation for such discharges.
11. Borehole drilling or other ground investigations can produce a polluting effluent which may require treatment before being discharged to the water environment. An authorisation may be required for such a discharge, SEPA must be advised by the Contractor of the measures to be taken to prevent pollution before the commencement of any such operations that are liable to give rise to an effluent.

Earthworks

12. Temporary storage of topsoil and subsoil in heaps and stockpiles created after land stripping should be located as far away as possible from any drains or waterbodies to prevent any collected materials from either falling or being integrated with run-off caused by rain into the water environment. They shall be seeded or bound as soon as is practicable after deposition to ensure quick stabilisation and cut-off drains shall be provided to intercept run-off from the stockpiles.
13. Drainage from borrow pits, quarries or spoil areas must be treated to the satisfaction of SEPA (eg, by use of settlement lagoons) before discharge to any drain or waterbody. The contractor may require SEPA's authorisation for such discharges.
14. Only inert and non-toxic material shall be used to:
 - i) backfill drainage trenches;
 - ii) backfill burn crossings;
 - iii) infill area of standing water;
 - iv) infill areas where contact with groundwater is possible.
15. Where in-river bunding is required and the geology of the river bed is appropriate, sheet piling shall be used for the in-river bund. However, where native material is subject to excess scouring, imported impervious material such as puddle clay or sand bags shall be used for the formation of in-river bunds after consultation by the contractor with SEPA. Any material placed within the channel or flood plain during the construction of temporary works shall be removed by the contractor as soon as its function has been fulfilled in a manner which minimises pollution.
16. The contractor shall stockpile and replace on completion of the works any bed material necessarily excavated from a waterbody during construction of the

works. The contractor shall not remove any bed material from the water environment for use in construction.

17. Surface water or groundwater from excavations or other parts of the working area must not be pumped nor be allowed to issue directly into the water environment or drains but should receive treatment to ensure removal of pollutants in accordance with SEPA requirements before discharge to the water environment. For water pumped out of mines and quarries, or for civil engineering works and, which are discharged into the same aquifer, advice should be sought from SEPA on the possible implications of the groundwater regime of the Water Environment (Controlled Activities (Scotland) Regulations 2005.

Oil Pollution

18. The contractor must ensure that oil is stored well away from any drain or waterbody (normally not less than 10 metres). Oil storage tanks must be located on an impermeable base and be surrounded by an impervious bund with no surface water outlet. The bund must be capable of retaining at least 110% of the volume of the tanks.
19. Valves and couplings connected to oil storage tanks must be located within the bund and delivery hoses should be fitted with trigger type handles suspended back within the bund after use. Valves and trigger fill handles must be kept padlocked when not in use.
20. The transportation of fuel and oil across the site in drums or other containers must be avoided as far as practicable. Where this is unavoidable, extreme caution must be taken to avoid spillages or leaks. The contractor shall hold adequate stocks of oil absorbent and containment materials (eg, sand or earth) and/or commercially available booms on site. The contractor must ensure that relevant staff are familiar with the use of these materials.
21. Surface water, together with any material which accumulates within the storage tank bund, must be removed by means of a manually controlled positive lift pump. Oil contaminated water must be disposed of at an appropriate oil recovery plant licensed tip or incineration plant.
22. The contractor shall ensure that personnel are nominated as being responsible for the supervision of the filling of oil storage tanks, vehicles, etc, and that a "nominated person" is available at all appropriate times.
23. Mobile fuel and lubricant servicing units must be provided with appropriate quality delivery hoses with trigger-type nozzles. These vehicles, when not in use, must be parked in a secure area within an impermeable bund. Vehicles and plant must not be refuelled near drains or waterbodies.
24. Ideally, oil powered pumps, generators and similar equipment should be positioned at least 10 metres from any waterbody or drain. The disposal of waste oil/oily waters from the drip trays must be by the methods outlines in clause 22. The use of this type of equipment in water should only be used as a last resort – see clause 7.
25. The contractor shall take all reasonable measures to ensure the security of their oil storage facilities from acts of wilful damage or vandalism.

Concrete Works

26. Cement, grout and unset concrete (unless specialist products as approved by SEPA are used) must not be allowed to enter the water environment. Prevention may be achieved by diverting the water environment away from the working area with fixed shuttering or sandbags or by damming the flow upstream and pumping it beyond the working area. The inlet to the pump should ideally be screened. Residual cement or concrete must be removed from the original channel before the waterbody is returned to it.
27. The contractor must ensure that drainage from excavations where concrete is being, or has been, newly poured shall not be pumped or allowed to issue directly into the water environment without appropriate treatment and the prior approval of the Agency.
28. Tools and equipment must not be washed in the water environment. If it is necessary to wash equipment on site, this must be done well away from the water environment and washwater must not be discharged directly into the water environment or road drains without appropriate treatment.
29. The contractor must ensure that if concrete has to be sprayed in the vicinity of the water environment (eg, bridges, retaining walls, etc) suitable protective sheeting is provided to prevent rebounded or windblown concrete from entering the water environment. Rebounded material must be cleared away before the sheeting is removed.
30. The direct discharge from any concrete batching plant to the water environment will not be permitted. Subject to the approval of SEPA, such discharges may be directed to a soakaway.

Miscellaneous

31. The contractor shall take suitable precautionary measures, as agreed with SEPA, to prevent any material from falling into the water environment when concreting, bitumen spraying, blast cleaning or painting operations are being carried out above the water environment.
32. The contractor should note that any approval by SEPA of the contractor's proposals will not relieve the contractor of his responsibilities with respect to any pollution which may occur. SEPA will not be held liable for any damage or pollution resulting from operations on the site.
33. The contractor shall provide to SEPA in advance of the commencement of the works, the names of the responsible personnel on site, together with 24 hour contact telephone numbers.

The telephone number of the 3 Regional Headquarters of SEPA are:-

North Region (Dingwall)	01349-862021
East Region (Edinburgh)	0131-449-7296
West Region (East Kilbride)	01355-574200

SEPA can be contacted 24 hours-a-day on an **Emergency Hotline** number 0800-80-70-60.