



Document: Form 114	Site Environmental Management Plan	
Issue: 2		
Related to: All Contracts		
Page No. 1 of 9		

M90 10-11 55 Friarton Bridge Scour Protection

Site Environmental Management Plan

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Document: Form 114	Site Environmental Management Plan	
Issue: 2		
Related to: All Contracts		
Page No. 2 of 9		

SITE ENVIRONMENTAL MANAGEMENT PLAN (SEMP)

The objective of this SEMP is to ensure prevention of pollution to land, air or water and compliance with current environmental legislation, and to provide a benchmark for best practice. For the avoidance of doubt, pollution prevention procedures include, but are not necessarily limited to: all aspects of traffic, plant and materials management, waste management, surface water and drainage management and asphaltic and concrete management. Consideration of Disruption due to Construction is considered within the individual mitigation topics. The SEMP must be included in the site file and used as toolbox talk during site induction for all site personnel. All site personnel must sign to confirm they have received toolbox talk.


GENERAL

- i. If any of the recommended mitigation cannot be met onsite BEAR's Environmental Team must be contacted before work starts so that the implications of this can be considered before work commences.
- ii. If a complaint is raised, an immediate review must be completed to remove the problem. If the complainant's issue / problem is deemed to not exceed defined / legal thresholds, discussions must be held with the third party to understand the problem further and evaluate whether the problem can be rectified or improved. Communication must be maintained with interested parties.
- iii. The site file must include a copy of this Site Environmental Management Plan (SEMP). The Operations Supervisor must induct all personnel and must use this SEMP as a toolbox talk to raise environmental issues.
- iv. The Operations Supervisor must undertake regular environmental monitoring and a daily site record must be maintained. Recording sheets must detail the date, location of inspection, frequency, findings, etc.
- v. All subcontractors, suppliers and visitors to the site must be notified, via a site induction, of the requirements onsite for pollution prevention measures detailed in this SEMP.

Document: Form 114	Site Environmental Management Plan	
Issue: 2		
Related to: All Contracts		
Page No. 3 of 9		

AIR QUALITY

- i. Careful consideration must be given to the siting and orientation of equipment, vehicles and non-road mobile machinery (NRMM), so that it is located, as far as is possible, away from the River Tay.
- ii. Wherever possible, equipment, vehicles and NRMM must be shut-down when stationary.
- iii. All equipment, vehicles and NRMM must have been regularly maintained, paying attention to the integrity of exhaust systems.
- iv. If powered generators are required, avoid the use of diesel or petrol and use mains electricity or battery powered equipment, where practicable.
- v. Activities which have the potential to produce dust, particulate matter and exhaust emissions (DPMEE) e.g. cutting and grinding of materials must, if possible, be undertaken away from the River Tay (if possible, > 10 m). Cutting, grinding and sawing equipment must also be fitted or used in conjunction with suitable dust suppression techniques e.g. water spray or local exhaust ventilation system that fits directly onto tools.
- vi. Materials that have a potential to produce dust must be removed from site as soon as possible, unless being re-used on site.
- vii. If any emissions of dark smoke should occur (except at start up) the machinery involved should be taken out of service immediately and any defect rectified before use.
- viii. In the unlikely event that unacceptable DPMEE are emanating from the site, the operation must, where possible, be modified and re-checked to verify that the corrective action has been effective. Actions to be considered include: (a) minimizing cutting and grinding on-site, (b) reducing the operating hours, (c) repositioning equipment, and (d) changing the method of working, etc.


Document: Form 114	Site Environmental Management Plan	
Issue: 2		
Related to: All Contracts		
Page No. 4 of 9		

ECOLOGY & NATURE CONSERVATION

- i. The Contractor must ensure that all operatives are aware of the presence of Giant Hogweed (and potential threat to human health) and that they are briefed on the control measures and their responsibilities. This must be achieved through delivery of an Invasive Non-Native Species 'Toolbox Talk' prior to works commencing onsite.
- ii. The Contractor must also setup Giant Hogweed biosecurity measures, including:
 - o all vehicles leaving the works location must be thoroughly pressure-washed in a designated wash-down area (on an impermeable surface),
 - o foot baths must be located at the entrance / exit for site operatives.
 - o designated machinery and equipment must remain within the works location for the duration of the works.
 - o indiscriminate vehicle movements across soil should be avoided.
- iii. The Contractor must ensure that all operatives are aware of the presence of Otter and Beaver and that they are briefed on their responsibilities. This must be achieved through delivery of Otter and Beaver Species 'Toolbox Talks' prior to works commencing onsite.
- iv. BEAR Scotland's Environmental Team must be contacted to allow consideration of potential environmental effects if:
 - o Unforeseen site clearance is required.
 - o There is potential for unforeseen disturbance of species.
 - o Unplanned works must be undertaken out-with the carriageway boundary.
 - o There is any deviation from the agreed plan, programme and/or method of working.
 - o There is a pollution incident.
 - o Breeding birds / nests are found onsite.


LANDSCAPE EFFECTS

- i. Where possible, construction vehicles must not be left in places where soil or vegetation will be damaged. If damage to road verge occurs this must be lightly cultivated or graded (upon completion of the works) to allow natural recolonization by local species and promote integration with existing landscape character.
- ii. The site must be left clean and tidy.

Document: Form 114	Site Environmental Management Plan	
Issue: 2		
Related to: All Contracts		
Page No. 5 of 9		

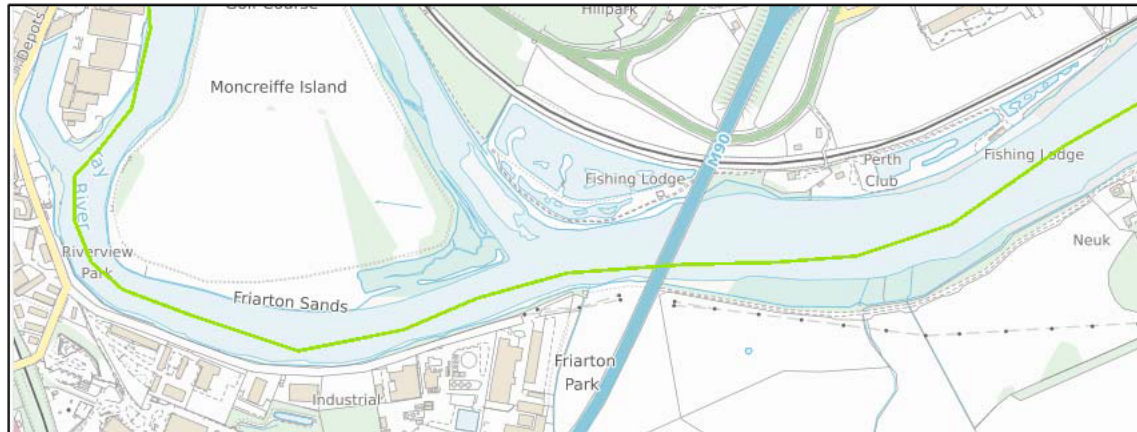
NOISE & VIBRATION

- i. Wherever possible, careful consideration must be given to the siting and orientation of particularly noisy items of vehicles and NRMM, so that it is located away from the River Tay.
- ii. Equipment, vehicles and NRMM with directional noise characteristic must (where practical) be shut-down in intervening periods between site operations.
- iii. The use of ancillary pneumatic percussive tools must be avoided (except where there is an overriding justification), and if used must be fitted with mufflers or silencers of the type recommended by the manufacturer.
- iv. Drop heights from vehicles and NRMM must be kept to a minimum to minimise noise when unloading.
- v. All equipment, vehicles and NRMM used onsite must have been regularly maintained, paying attention to the integrity of silencers and acoustic enclosures.
- vi. All compressors must be 'sound-reduced' models fitted with properly lined and sealed acoustic covers which must be kept closed when in use.
- vii. HGV and site vehicles must be switched to the minimum setting required by HSE and, where possible, must utilise 'broadband non-tonal' or 'directional sound reversing' alarms.
- viii. If unacceptable noise is emanating from the site the operation must, where possible, be modified and re-checked to verify that the corrective action has been effective. Actions to be considered include (a) minimizing cutting and grinding on-site, (b) reducing the operating hours, (c) repositioning equipment, (d) changing the method of working etc.

Document: Form 114	Site Environmental Management Plan	
Issue: 2		
Related to: All Contracts		
Page No. 6 of 9		


ROAD DRAINAGE & WATER ENVIRONMENT

- i. All site personnel must be made aware of the conservation importance of the River Tay. No work has been identified that would require entering this feature. If such a need were identified onsite BEAR Scotland's Environment Team must be contacted (before works commence) to allow consideration of potential environmental effects.



River Tay.


- ii. The Contractor must implement measures to minimise the risk of sediment and oils entering the River Tay. A sediment management system (silt curtain or similar) and oil boom, for example, must be placed in the River Tay, at the interface between the works and the river (refer to DWG 17/NE/1203/007/003) These measures must be inspected at the start of each day (and periodically during the day) to ensure that they have not been removed, damaged or interfered with. If it is identified that the sediment management system, or oil boom, are not up to standard, the works must not commence until they have been reinstated to the condition they were originally in.
- iii. The Contractor must not wash tools and equipment in the River Tay
- iv. The abstraction or transfers of water from the River Tay is not permitted.
- v. The River Tay bankside (either side of the works) will be re-instated to at least the equivalent condition of the surrounding bankside.
- vi. Consideration must be given to work patterns in relation to wet weather. Periods of heavy rainfall must be avoided and after heavy rainfall, inspection and maintenance of all controls must be undertaken.
- vii. All site personnel must be aware of site spillage response procedures and appropriate spillage reporting procedures must be in place.
- viii. Any storage of oil and refuelling areas (if required) must be in accordance with the Water Environment (Miscellaneous) (Scotland) Regulations 2017.

Document: Form 114	Site Environmental Management Plan	
Issue: 2		
Related to: All Contracts		
Page No. 7 of 9		


- ix. Spill kits must be located at oil storage and refuelling areas.
- x. All vehicles and NRMM used onsite must have been regularly maintained, paying attention to the integrity of oil tanks, coolant systems, gaskets etc.
- xi. Storage and refuelling areas (if required), the works compound area (if required) and any vehicles and NRMM not in operation must be located at least 10 m from the River Tay, with any vehicles and NRMM not in operation sited in designated areas on impermeable surfaces.
- xii. Diesel generators, and any other NRMM, where there is a risk of leakage of oil or fuel, must have internal bunding that meets 110% capacity requirements OR must have drip trays placed beneath them.
- xiii. All vehicles must be confined to a prescribed route and must be isolated from the River Tay.
- xiv. Waste water from welfare facilities must be subject to effluent treatment followed by tanker removal.

GEOLOGY & SOILS

- i. If sustained heavy rainfall (e.g. >10 mm in 24 hours) occurs during soil stripping operations (to permit placement of geotextile liner and graded rock), work must be suspended and not restarted until the ground has had at least a full dry day.
- ii. Soil stripping operations must be carried out in two sections to avoid bare earth being exposed for long periods of time. This will help to minimise the risk of runoff and silt getting into the river.
- iii. Topsoil derived from soil stripping must be retained for reuse onsite and must be stockpiled in an area of the site where it can be left undisturbed and must not interfere with site operations. The surface of the stockpile must be regraded and compacted to reduce rainwater infiltration and the ground used for stockpiling topsoil must also be cleared of vegetation.
- iv. Multiple handling of topsoil derived from soil stripping must be minimised.
- v. Topsoil retained for reuse onsite must not be placed within 10 m of the River Tay.
- vi. Topsoil reused onsite must be spread evenly in a single layer < 200 mm in height to ensure the soil profile is maintained across the works location.
- vii. Topsoil reused onsite must be grass-seeded to promote integration with existing landscape character.
- viii. Topsoil reused onsite must not be traversed by heavy machinery.

Document: Form 114	Site Environmental Management Plan	
Issue: 2		
Related to: All Contracts		
Page No. 8 of 9		

WASTE & MATERIAL USE & RE-USE

- i. If any substance used on site displays the 'Dangerous to the Environment' Control of Substances Hazardous to Health (COSHH) symbol, then the following controls must be implemented:
- Do not allow substance to enter road drainage, sewers, groundwater or surface watercourses.
 - Any spillages must be contained using bunding.
 - Any spillages must be absorbed with an absorbent material (e.g. dry sand or earth) and collected and stored in a suitable container which is properly labelled and sealed securely in preparation for disposal.
 - Spillages or uncontrolled discharges into watercourses must be immediately reported to SEPA.
 - COSHH substances to be clearly labelled and stored in bunded areas away from surface watercourses.
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- ii. Materials must be stored with the appropriate security to prevent loss, theft or vandalism.
- iii. Stockpiled materials (if required) must be stored away from road gullies stored to prevent cross-contamination with other materials or wastes.
- iv. Designated areas (if required) must be established on site to segregate and reuse waste materials, and waste must be contained and removed from site as soon as is practicable.
- v. Waste water from welfare facilities (if required) must be subject to effluent treatment followed by tanker removal.
- vi. Waste must be contained and removed from site as soon as is practicable.
- vii. Duty of care and waste management legislation applies e.g. evidence of material transfer notes and/or waste exemption certificates.

Register of Personnel Receiving Site Environmental Management Plan Toolbox Talk

NAME	COMPANY	SIGNATURE	DATE

Inducted by: _____

Date: _____