

Tornagrain

A Planned Town for the Highlands

Environmental Statement

Construction Environmental
Management Plan



Introduction

This document comprises an outline Environmental Management Plan to be adopted during construction. It is intended to provide a basis for consultation with THC and other parties as the planning process proceeds. It is assumed that final CEMPs, based on this outline plan, will be agreed and adopted as a condition of detailed planning permissions for each phase of the development.

The CEMP draws together the relevant mitigation measures that have been identified in the EIA, and provides the framework within which they will be delivered. In effect, the Management Plan represents a schedule of construction mitigation, and for that reason is presented as part of the environmental statement (ES).

Specifically, the CEMP sets out:

- the general environmental principles to be followed;
- mitigation and monitoring measures to be adopted to address specific issues; and
- management arrangements to ensure effective delivery of these measures.

The measures set out in the CEMP are based on relevant environmental legislation, local authority policies or codes, the requirements of statutory bodies and prevailing industry standards. The measures shall conform to Best Available Techniques Not Entailing Excessive Costs (BATNEEC) or Best Practicable Means (BPM), as appropriate.

Environmental Management System

General Principles

The work shall be carried out within the framework of an Environmental Management System (EMS), which shall be consistent with BS EN ISO 14001. The EMS shall comprise an Environmental Manual and a series of Procedures, which define the measures necessary to deliver the requirements of the CEMP. The EMS shall include a programme of monitoring and auditing performance against defined commitments, policies and objectives, and shall be audited periodically by independent third parties.

The principles and measures set out in the CEMP shall form the basis for the development of a "second tier" of documents, comprising management plans and method statements relating to particular aspects of the work. These documents shall contain specific technical and legal commitments to be entered into with the relevant parties. A preliminary schedule of "second tier" documents is presented in Appendix A.

Implementation

As part of the EMS, the contractors shall identify the management structure responsible for its implementation. A designated Environmental Manager shall be appointed. Their responsibilities shall include:

- the overall environmental performance of the project;
- compliance with appropriate legislation and regulations; and
- development, implementation, monitoring, audit and updating of the EMS.

The Environmental Manager shall have the authority to suspend any non-compliant construction activity. Specialist personnel may be brought in from time to time to advise on issues such as archaeology and ecology. Site inspections shall be carried out on a regular basis.

The contractors shall be responsible for identifying the training needs of staff to ensure that all personnel receive appropriate training. This training may include environmental awareness-raising relevant to construction management, the purpose and operation of the EMS, and "Toolbox" talks on issues such as noise and dust control.

Community Liaison

The contractors shall set up a Helpline service to respond to inquiries, concerns or complaints raised by the general public or other parties. A named Community Liaison Officer shall be responsible for managing the helpline service and for responding to all enquiries.

All calls, and the response given to them, shall be logged. The caller's concerns or requirements shall be dealt with in an appropriate manner. The contractors shall establish a procedure that identifies the responsibility for actions arising from such calls at each stage, from receipt of the call to sign-off of the completed action.

Site Operations

Site Boundaries

Any part of the site not already enclosed by fences or other barriers shall be made secure so as to prevent public access.

That part of the site boundary adjoining the Kildrummie Kames SSSI shall be securely fenced so as to prevent trespass by construction personnel or vehicles. Provision shall be made for wildlife access (e.g. badger gates) on the basis of appropriate specialist advice.

Where work is to take place close to residential properties, and a risk of noise impacts has been identified in the EIA, consideration shall be given to the erection of temporary hoardings. The location, specification and external finish of such hoardings shall be agreed with THC's Environmental Health department.

Lighting

The location, specification and duration of temporary lighting shall be agreed with THC. Light spill outside the site boundary shall be minimised, particularly in the vicinity of residential properties.

Security

Security measures shall be implemented to prevent unauthorised entry to the site or trespass by construction personnel into adjoining areas or properties.

Working Hours

Working hours shall be agreed with THC. Unless agreed otherwise, it is envisaged that the core hours shall be 08:00 to 18:00 hours, Mondays to Fridays and 08:00 to 13:00 hours on Saturdays. No working shall take place on Sundays or Bank Holidays without the prior agreement of THC.

In order to prevent queuing of vehicles outside the site, specific vehicle deliveries and mobilisation may take place from 07:00 to 08:00 hours and from 18:00 to 19:00 hours on Monday to Friday.

It may be necessary for some activities to take place outside the core working hours (e.g. concrete pours or delivery of over-sized loads). If so, these activities shall be agreed with THC and other interested parties (e.g. traffic police).

Occupiers of nearby properties shall be informed in advance of the scheduling of works and the duration of specific activities. In the case of any work required in response to an emergency, THC and local residents shall be advised of its starting time and duration as soon as possible.

Highways and Traffic

Good Housekeeping

The contractors shall follow a “good housekeeping” policy at all times. Measures shall include:

- considerate site behaviour by construction staff;
- prohibition of open fires;
- dust controls;
- ensuring that public roads are kept clean;
- regular inspection of hoardings, their repair and repainting, as necessary;
- provision and maintenance of toilet and other welfare facilities for staff;
- maintenance of a clean and tidy site, including vermin control and timely removal of food waste and other refuse; and
- management of site lighting so as to minimise impacts on nearby properties.

Pest Control

Appropriate pest control measures shall be adopted. These shall include:

- correct and satisfactory stopping and sealing of all disused drains and sewers;
- preventing the accumulation of refuse and putrescent materials; and
- ensuring that any on-site messing/catering facilities pay careful attention to food delivery, handling and storage, and the collection and disposal of waste food and associated materials.

Concrete Batching

If concrete batching takes place on the site, the contractor shall prepare a method statement for its location and operation, including any measures required to minimise impacts such as noise and dust, and shall agree this with THC.

General Provisions

The contractors shall carry out the works in such a way as to maintain existing public and private access as far as possible, and to minimise any disruption or inconvenience caused by construction traffic.

A Traffic Management Plan shall be agreed with the highway authority and other parties. The Plan shall show:

- the location of any roads or footpaths that require temporary or permanent closure or diversion;
- routes to be used by construction traffic, including any abnormal loads; and
- the location of lorry holding areas.

HGV routes shall be clearly signposted, and adherence to them shall be monitored.

The contractors shall give appropriate notice of highway work to the highway authority and shall obtain all necessary licenses, consents, approvals and notices before commencing this work.

Works Affecting Carriageways

Before commencing any work to a carriageway, the contractors shall consult the highway authority on the proposed commencement date and duration of these works, and on the area of the carriageway concerned. Measures shall be taken to ensure public safety on or adjacent to the highway and the protection of highway structures.

Any interference with the structure or surface of the highway and associated street furniture or equipment, including damage to kerbs, surfaces, footways or services, shall be restored by the contractor to the reasonable satisfaction of the highway authority.

The works shall not encroach onto the highway at any time, or interfere with the free movement of traffic or pedestrians, without the approval of the highway authority. This shall apply both to temporary obstructions or width reductions, and to headroom clearance.

Pedestrian Access

The contractor shall be responsible for maintaining safe pedestrian access to the satisfaction of the highway authority. Specific provisions may include temporary footways and access for cyclists and the mobility-impaired.

Where vehicles entering or leaving the site need to cross footways, they shall do so under the control of a competent gate marshal.

Noise and Vibration

Vehicle Maintenance and Driving

Vehicles shall be maintained in good condition so as to be safe and roadworthy, and so as to comply with minimum legal or practicable limits on noise and exhaust emissions. Drivers using the lorry holding area shall switch off their engines when stationary.

Mud on Roads

The contractor shall take all reasonable measures to avoid mud being deposited on public roads. Measures to be adopted shall include:

- the provision of easily cleaned and properly drained hardstanding for vehicles entering, parking on and leaving the site;
- the provision of wheel-washing facilities, with sumps and catch-pits;
- the use of approved mechanical road sweepers, to clean hard-standings and any mud or debris deposited by site vehicles on roads or footpaths in the vicinity of the site; and
- secure sheeting of lorries carrying spoil or other particulate materials.

The contractor shall take all reasonable measures to minimise sedimentation of highway drainage systems. This may include the use of sediment traps and/or barriers to prevent mud and/or contaminated materials entering the system.

General Provisions

The contractor shall control and limit noise and vibration levels, so far as is reasonably practicable, so that residential properties and other sensitive receptors are protected from excessive noise and vibration levels arising from the works.

The contractor shall ensure, where noise or vibration levels are predicted to exceed specified levels (see below), that prior liaison with THC and relevant occupiers is undertaken to inform them of the reasons for, and the timing and expected duration of, the relevant work.

Management Principles

Method statements shall be produced for each task or phase of the works as appropriate. Predictions of noise (and/or vibration) shall be carried out on the basis of these method statements (taking account of activities overlapping in time) at receptor locations relevant to the phase of the works in question.

Best Practicable Means (BPM) shall be adopted for all activities. Where predicted noise/vibration levels exceed specified limits, the method statements shall be reviewed to ensure that alternative methods are not feasible within the principle of BPM.

The contractor may be required to submit applications to THC under Section 61 of the Control of Pollution Act 1974 (COPA) in accordance with the procedure described below.

Where predicted levels of noise/vibration exceed specified levels, and mitigation at source and/or along the propagation path have been fully implemented in accordance with BPM, mitigation at the receptor shall be considered.

Prior to the commencement of each task or phase to which the method statements apply, the actual equipment, locations, work rate and other assumptions shall be reviewed to ensure that no acoustically significant changes have occurred since the noise predictions were carried out. Where such changes have occurred, revised predictions shall be produced, and the results shall be reviewed and acted on as for the initial predictions.

Noise and Vibration Monitoring Plans shall be prepared before work commences, together with a mechanism for modifying working methods if actual noise levels exceed the predicted values.

Prediction, management, monitoring and technical advice relating to noise and vibration shall be carried out by suitably qualified personnel. These tasks shall

be embedded within the EMS, and unambiguous lines of responsibility shall be set out in relation to noise and vibration issues. Specifically:

- complaints relating to noise and vibration shall be addressed through the hotline;
- working methods and BPM relating to noise and vibration shall be communicated to stakeholders as part of the community liaison process;
- provision for the suspension of work for environmental reasons shall include activities that give rise to unforeseen exceedance of agreed noise limits; and
- procedures shall be established for apportioning the responsibility for noise mitigation between different contractors as appropriate.

Definitions

Method Statements shall comprise descriptions of working methods, locations, timing, plant, activities etc to enable noise/vibration predictions to be carried out for the activity described, both on its own and in combination with other activities associated with the project.

Unless otherwise agreed with THC, predictions of noise (and/or vibration) shall be carried out on the basis of the procedures set out in BS5228. The predictions must be carried out/supervised by a competent person.

Best Practicable Means shall be as defined in Section 72, Part III, of the Control of Pollution Act (COPA) 1974.

A specified level is one that, if exceeded, triggers some action. Different levels of noise and vibration may serve as thresholds, depending on the time of the occurrence, its duration and the type of receptor.

Section 61 Consents

The contractor may be required to submit applications to THC for "Prior Consent for Work on Construction Sites" under Section 61 of the Control of Pollution Act, 1974. Such consents shall be submitted at least 35 days prior to the commencement of the relevant works, and shall include details of the following:

- the works and the method by which they are to be carried out;
- the likely noise levels that would result at nearby noise-sensitive premises in the absence of mitigation;

- the measures proposed to minimise noise emissions from the works;
- the resulting noise levels likely to be experienced at the relevant premises, and the duration of such levels; and
- the duration of any periods of exceedance of the specified level(s).

In issuing any such "prior consent", THC may attach conditions, limit or qualify the consent to allow for any change in circumstances and/or limit the duration of the consent.

Mitigation

It is normally most effective to mitigate noise/vibration at source, or as close as possible to the source along the "propagation path" by which the noise reaches receptors. Typical mitigation measures include the following:

- selection of intrinsically "quiet" plant or working methods;
- using plant and vehicles responsibly, e.g. switching them off when idle;
- provision of acoustic barriers or enclosures around noisy plant;
- avoiding noisy activities at locations close to sensitive receptors, or ensuring that such activities are kept to a minimum;
- ensuring that haul roads and points of access are not located close to sensitive receptors;
- ensuring that vehicle reversing alarms are set to the minimum required for safe working practices to be maintained; and
- ensuring that site security alarms are fitted with 20 minute cut-out devices and that THC's noise team are notified of the name and contact details of authorised key holders who can be on site within one hour to deactivate persistently sounding alarms.

If, despite the application of the mitigation described above, noise emissions at sensitive receptors exceed the specified levels/durations, mitigation at the receptors shall be considered. A procedure for identifying the need for such mitigation, and the form it should take, shall be agreed with THC. Typically, such mitigation might comprise secondary acoustic glazing similar to that specified in the Noise Insulation Regulations (NIR).

Noise Monitoring

The contractor shall employ competent persons to monitor noise at noise-sensitive receptors and other locations (e.g. at the site boundary, adjacent to particular items of plant or operation). The calculation of noise levels shall be based on BS 5228:1997.

Noise monitoring shall be of two principal kinds: long-term (automatic) and short-term (attended). Short-term monitoring typically uses a mobile system that can be operated for periods of between 15 minutes and a few hours at a time. This could be used, for example, for measuring noise from specific items of plant (to confirm that their noise output is consistent with the assumptions underlying the original predictions).

Locations and procedures for both types of monitoring shall be proposed by the contractor on the basis of the predicted noise levels and durations, shall take account of the receptors identified in the ES, and shall be agreed with THC.

Variations from Approved Methods

Variations to the approved methods shall be permissible in emergency circumstances, where the health and safety of site personnel or members of the public may be at risk, or on certain other occasions as agreed with THC.

The contractor may apply for variations from "prior consent" approvals granted by THC under section 61 of the Control of Pollution Act 1974. Examples of grounds for such variations may include:

- delivery or despatch of oversized plant or material loads on days and/or at times outside the normal working hours, due to police requirements; or
- unforeseen overrun of critical work where unacceptable risks might otherwise arise (e.g. structural failure due to interrupted concrete pours).

Applications for variations to any "prior consent" approvals shall be made in writing to THC's noise control team as soon as the contractor becomes aware of the need for such a variation. Where possible, such applications shall be made no less than 10 working days before any such work is due to commence.

The application shall include:

- the grounds for making the application, including why there is no other practicable means of carrying out the works within the constraints of the existing "prior consent";

- details of the variation requested (e.g. relaxation of noise levels to a stated level or variation of times or days that noisy works are permitted);
- the noise levels that are predicted to occur at relevant receptors as a result of the variation, together with their duration; and
- the mitigation to be adopted to ensure that noise impacts are reduced to a practicable minimum.

THC shall reserve the right to refuse or attach conditions to any variation from any agreed "prior consent". Work in relation to such variations shall not commence until THC has confirmed them in writing.

Vibration

Most of the procedures described above apply to vibration as well as (airborne) noise. However, the following provisions relating specifically to vibration shall be noted.

The contractor shall ensure that vibration monitoring is carried out in accordance with the guidance of BS 5228, BS 7385 and BS 6472.

Vibration levels, measured at the base of any building, shall be controlled so that the Peak Particle Velocity (PPV) in any orthogonal direction (in accordance with BS 7385: Part 1: 1990) does not exceed a level of 10 mm/s.

Where 10mm/s is predicted to be exceeded, the contractor shall undertake an appropriate defects survey. In addition, an assessment of the vulnerability of the building shall be carried out by a suitably qualified and experienced specialist. Works predicted to exceed 10 mm/s shall be identified, and THC shall be notified.

Where the measured vibration levels exceed the guideline levels, the activity responsible for causing this vibration shall be suspended. Where mitigation is practicable, this shall be implemented before the activity re-commences.

Non-percussive piling methods shall be used where practicable.

A plan for vibration monitoring shall be devised and shall be agreed with THC, to whom the results of such monitoring shall be reported.

Dust and Air Pollution

General Provisions

The contractors shall take all practicable measures to avoid environmental effects associated with wind-borne dust or with emissions from vehicles and plant.

Prior to the commencement of work, the contractors shall develop method statements to control dust and fume emissions. Methods shall be in accordance with “best practicable means” and with relevant guidance.

Dust

The contractors shall avoid creating a dust nuisance and shall agree dust control measures with THC prior to commencing work. In the event that any construction activities cause, or are likely to cause, the release of dust, the contractors shall apply appropriate mitigation to minimise such emissions. Typical measures are described below.

Easily cleaned and properly drained hardstanding areas and haul roads shall be constructed to accommodate the parking and movement of vehicles on site. These areas shall be kept free from mud, debris or other materials capable of being spread beyond the site.

Unsealed haul roads shall be regularly damped-down. Haul roads close to sensitive receptors shall be sealed. Speed limits shall be enforced for vehicle movements within the site.

Wheel-washing facilities shall be installed at site exits, and shall be used by all departing vehicles. These facilities shall include sumps and catch-pits designed and maintained to an acceptable standard.

A road-sweeper shall be used as necessary within the site and on nearby sections of highway, particularly on designated HGV routes, to avoid the accumulation of mud or other materials capable of creating dust. Manual sweeping and cleaning of pedestrian routes may be necessary.

Stockpiling and handling of dusty materials shall not take place close to sensitive receptors. Drop heights shall be minimised and, if necessary and practicable, materials shall be damped down and appropriate screening provided. In the event that dust emissions may arise from vehicles travelling to/from the site, consideration shall be given to ensuring that such vehicles are adequately sheeted.

Cutting and grinding shall be managed and monitored so as to avoid any off-site dispersal of dust.

Exhaust Emissions

The contractors shall take all practicable precautions to prevent the occurrence of smoke emissions or fumes from site plant, construction traffic, stored fuel oils or other substances. Stationary plant powered by diesel or internal combustion engines shall be located away from site boundaries.

All plant shall be properly maintained and emissions shall conform to the manufacturers' specification or legislative standards, as appropriate. Plant and vehicles shall not be left running/idling when they are not in use. Smoke or fume emissions shall not exceed the relevant occupational exposure limits.

Monitoring

The monitoring of dust deposition from construction activities is rarely practicable. The most effective approach comprises a combination of visual inspection, followed by rapid response to halt any emissions, and by monitoring of the various mitigation measures described previously.

Specific initiatives shall include:

- the setting up of a complaints hotline, so that members of the public can inform the construction team of any nuisance arising from dust;
- a procedure for ensuring that any dust-generating activities can be suspended until such time as appropriate control measures can be applied, alternative methods adopted or more suitable weather conditions prevail;
- providing advance warning of any activities likely to create dust; and
- a procedure for ongoing evaluation of the need for and effectiveness of dust control measures, including provisions for remedial action where necessary.

Ground Contamination

Overview

The targeted site investigation (SI) work undertaken for the EIA indicates that the risk of residual contamination being encountered on the site is very low. However, there is a possibility that localised contamination may result from previous activities or occurrences (e.g. spillages of fuel or agricultural chemicals). A precautionary approach shall therefore be adopted.

The works shall be carried out in such a way that, in the event that any contaminated or hazardous materials are encountered, risks of adverse impact on the environment or on human health are minimised.

General Principles

A watching brief shall be maintained during any works involving ground disturbance. In the event that any evidence of contamination is found (e.g. discoloration of soils, oil slicks on groundwater, odours), the activity shall be suspended until advice is obtained from a geotechnical engineer or equivalent.

Appropriate remedial action shall be agreed with THC/SEPA. This may include:

- further site investigations, in accordance with BS 10175: 2001;
- a risk assessment; and
- development of specific procedures for the remediation, handling, transport and disposal of the contaminated material.

The contractor shall comply with all statutory requirements relating to the storage, treatment and disposal of contaminated materials. Such materials shall be carried out by registered carriers and conducted under a ticketing system to ensure delivery to appropriately licensed tips.

Known hazards relating to the works, including those associated with contaminated materials, shall be recorded in a Risk Register, and shall be incorporated within a pre-tender Health and Safety Plan. Construction personnel shall be supervised and instructed on potential hazards, including the immediate reporting of any contaminated materials.

Work in the vicinity of the kerosene pipeline shall be carried out with the consent of relevant parties, under appropriate supervision and on the basis of the full available information as to its route, depth and characteristics.

Solid Waste

General Principles

The contractors shall carry out the works in such a way that minimises both the overall generation of solid waste and the proportion of that waste to be disposed of off-site.

The contractor shall develop a Solid Waste Management Plan (SWMP) as part of the "second-tier" documents within the EMS. This Plan shall comply with prevailing waste management practice. In particular, it shall adopt an hierarchical approach whereby waste minimisation shall be the first priority, followed by re-use, recycling and disposal respectively. The disposal of solid wastes shall comply with all regulatory requirements.

Control Measures

As part of the SWMP, the contractors shall classify and quantify all solid waste arisings, and for each category shall identify opportunities for recycling/re-use, disposal routes and licensing requirements. The EMS shall include a programme of audits to demonstrate compliance with Duty of Care.

If spoil arisings have been classified as suitable for fill material, they shall be used within the site where practicable. Where spoil is unsuitable for use within the site, or is excess to requirements, it shall be disposed of in accordance with the Waste Management Licensing Regulations 1994 and the contractor's Duty of Care under the Environmental Protection Act 1990.

Sites for the disposal of solid wastes shall be agreed with the waste regulation authority. The contractor shall review the environmental capabilities of waste carriers and disposal sites, and shall ensure that they are regularly audited.

The performance of the SWMP shall be monitored to ensure that the correct procedures are carried out. This monitoring shall include periodic independent audits, which shall include a review of the types of waste removed, the licence of the carriers and disposal sites used, waste transfer consignment notes and records.

Archaeology

The cultural heritage study carried out for the EIA has identified a number of sites of archaeological interest. A written scheme of investigation (WSI), detailing an appropriate scheme of archaeological mitigation work, shall be agreed with THC as a condition of any planning permission.

The archaeological investigation shall have been completed, and any need for mitigation agreed with THC, before construction starts on the areas to which the WSI applies. Where practicable, opportunities for the phasing of construction alongside the archaeological investigation work shall be explored, subject to agreement with THC.

Depending on the findings of the investigation, it may be necessary for qualified archaeological personnel to maintain a watching brief over groundworks and related activities on specific parts of the site. This need shall be agreed with THC and shall be allowed for in the construction programme.

Ecology

General Provisions

The ecological assessment carried out as part of the EIA identifies a number of habitats within the site that are considered to be of interest, together with several species that are subject to various levels of protection. The contractors shall comply with all regulatory provisions and best practice relating to the protection of these habitats and species, so as to ensure that impacts are reduced to a practicable minimum.

Where species are protected by specific legislation, the contractors shall follow approved guidance, and shall allow sufficient time for any surveys to be carried out and any licences or consents to be obtained.

An ecological clerk of works shall be appointed prior to the start of work. If suitably qualified, this role may be taken by the Environment Manager, or may be carried out by a specialist adviser.

The ecological clerk of works shall be responsible for preparing a Habitat and Species Protection Plan, and for supervising all surveys and obtaining all approvals and consents necessary for its implementation.

The contractors shall comply with the Wildlife and Countryside Act 1981.

Habitat Protection

The Habitat and Species Protection Plan shall delineate areas that are not to be disturbed, either permanently or during specific seasons or phases of work. Such areas shall be clearly demarcated on site, shall be protected by temporary fencing of an approved standard, and shall be marked up on contract drawings.

These areas are likely to include:

- the woodlands (to be partly retained/selectively felled);
- individual trees, including any potentially supporting protected species (e.g. nesting birds, red squirrel dreys);
- the former millpond at Hillhead;
- the Mid Coul Burn; and
- any other features identified on the basis of specialist advice (e.g. the buffer zone around a main badger sett).

The effectiveness of this protection shall be monitored. Unless agreed by the ecological clerk of works, no vehicles or construction personnel shall enter the protected areas. Such areas shall not be used for parking, storage of materials, spoil tipping or any other activity likely to cause ecological harm.

Soil Management

All topsoils shall be stripped and shall be retained for future use on site. Soil stripping, handling and storage shall comply with best practice.

Soils from woodland areas shall be segregated from those originating from the arable parts of the site. The former shall be re-used only in areas where woodland is to be re-established. The remaining soils will be generally available for re-use in amenity and landscaped areas.

Breeding Birds

All trees, scrub or other habitat of value to nesting birds shall be identified by the ecological clerk of works and shall be marked on the contract drawings. Where this vegetation is to be removed, clearance shall take place either outside the breeding season (March-August) or following prior inspection by the ecological clerk of works. Nesting will be discouraged on any cleared areas temporarily left vacant prior to construction.

Trees to be removed shall be inspected for any evidence of nesting goshawk. If nests are found to be present, "no-go areas" shall be demarcated around these trees, and shall be maintained until such time as the parent birds have finished rearing their young.

Slavonian grebe have been recorded as using an irrigation pond within the site, and have historically used Loch Flemington for breeding. The pond shall be monitored for at least two seasons prior to the start of construction work in its immediate vicinity, in order to confirm whether breeding Slavonian grebe are present. Should their presence be confirmed, an alternative water feature shall be created on MEDCO land outside the site, on the basis of specialist advice, prior to removal of the existing pond (which shall take place outside the breeding season).

Red Squirrel

All tree work would be completed between August and November to avoid the red squirrel breeding season. Any trees to be removed or lopped shall be surveyed by the Ecological Clerk of Works for the presence of red squirrel, squirrel dreys or signs of squirrel activity prior to the work taking place. Trees containing dreys shall be retained, and connectivity between these and adjoining woodland shall be maintained.

Bats

Any mature trees with the potential to provide bat roosts shall be identified by the ecological clerk of works and shall be shown on the contract drawings. These trees shall be retained where possible and shall be protected in accordance with best practice, e.g. delineation of fenced tree protection zones.

Where such trees cannot be retained, they will be felled in September to mid-October to minimise the risk of disturbing breeding bats. The trees shall be inspected by qualified personnel on the night prior to their removal to confirm that bats are absent. Felled sections shall be lowered carefully to the ground and shall be left for 24 hours before being moved.

A mixed-species bat roost has been identified in an outbuilding at Mid Coul. This building is to be retained and refurbished. Specialist advice shall be sought in relation to the design and timing of this work, with a view to retaining those features attractive to bats or to incorporating alternative features if necessary.

Badgers

A Badger Protection Plan has been prepared as part of the EIA, but is to remain a confidential document. This plan shall form the basis for development of a mitigation strategy, which shall be agreed with SNH and incorporated into the construction programme.

Specifically, this strategy is likely to include the establishment of a 30m radius buffer zone around a main sett, and the retention of green corridors between this sett and the surrounding area.

These protected areas shall be delineated to an appropriate standard, whilst allowing for the movement of badgers. Construction personnel and vehicles shall not trespass into these areas except with the explicit approval of the ecological clerk of works and under appropriate supervision.

Water Pollution

Sources of Impact

Construction work will take place close to the Mid Coul Burn, including remodelling and installation of road crossings. Water quality in the burn could be affected by physical disturbance, accidental spillage, dewatering of excavations or runoff from nearby construction areas.

General Provisions

The work shall be carried out in such a way as to minimise any risk of pollution to surface- or ground-waters. It shall comply with best practice as set out in SEPA pollution prevention guidelines and CIRIA best practice guidance. All necessary consents shall be obtained under the Controlled Activities Regulations (CAR).

A Water Protection Plan shall be developed as part of the EMS and shall be agreed with SEPA. The Plan shall include:

- general pollution prevention and control;
- temporary discharges;
- protection of watercourses;
- control and protection of groundwater; and
- temporary treatment and attenuation measures.

Pollution Prevention and Control

All fuel, oil and chemical storage areas shall be bunded and their surfaces sealed. Servicing and fuelling shall take place within construction compounds. Dedicated wash-down areas shall be provided for concrete mixers and other plant as necessary. The drainage from such areas shall be segregated. Contaminated water (including grey water and sewage) shall be disposed of to foul sewer.

A Pollution Incident Control Plan shall be developed, and shall be agreed with SEPA and other relevant parties.

The Plan shall set out the measures to be taken in the event of a pollution incident of sufficient magnitude to pose a risk to ground- or surface-waters, or to public health. It shall include an emergency contacts list, comprising relevant parties such as the Fire Brigade, Police, Ambulance Service, THC, statutory authorities and occupants of nearby properties.

Protection of Watercourses

The burn shall be protected with temporary fencing, and access shall be controlled. No unauthorised discharges or tipping, or water abstraction, shall be permitted.

Where temporary crossings are required (e.g. culverts), they shall be appropriately sized so as to accommodate anticipated peak flows and should be as short as possible. Bank protection measures shall be adopted where necessary. Where permanent culverts are to be constructed, these should be installed as early as possible so as to provide crossing points during construction.

Where the burn is to be remodelled, containment measures shall be adopted to control erosion and silting, and to avoid any associated downstream effects. In some cases, pumped diversion around excavated areas may be necessary.

Protection of Groundwater

No abstraction of groundwater shall take place without licensing from SEPA. Where piling or deep excavation necessitate the removal of groundwater by dewatering, this shall be confined to as short a period as possible. The control and disposal of groundwater shall be agreed with SEPA.

Runoff Attenuation and Treatment

The site shall be managed so as to control surfacewater runoff and soil erosion. Where necessary, measures such as protective matting and temporary cut-off drains may be required.

Runoff, together with discharges from dewatering, shall be controlled so as to attenuate peak flows and to mitigate its quality before discharge into the natural drainage system or soakaways. Measures are likely to include temporary storage ponds and silt traps. Such discharges may require licensing under the Controlled Activities Regulations.

Agricultural Soils

A Soil Management Plan (SMP) shall be prepared as one of the second-tier documents. Soil handling, placing, compaction and management shall be in accordance with best practice, as set out in the SMP.

Topsoils from areas in agricultural use shall be stripped prior to the start of general construction works. These soils shall be categorised on the basis of their condition and origin, and shall be stockpiled in accordance with best practice.

The soils shall be re-used in amenity and recreation areas (e.g. gardens, parks, playing fields), in broadly the same location as they originated. Any surplus soil shall be re-used elsewhere within the site, subject to the agreement of the ecological clerk-of-works. No soil shall be disposed of off-site unless it can be demonstrated that it is genuinely surplus to requirements.

Appendix A: Preliminary Schedule of Second-Tier Documents

“Second tier” documents are the means by which the objectives and principles set out in the CEMP will be translated into specific actions. These documents will form a core part of the Environmental Manual and Procedures. The following schedule is preliminary, and shall be verified as the EMS is developed.

B1	Traffic Management Plan
B2	Pollution Incident Control Plan
B3	Solid Waste Management Plan
B5	Method Statement for Piling
B6	Method Statement for Earthworks
B7	Method Statement for Concrete Batching
B8	Method Statement for Noise and Vibration Monitoring
B9	Method Statement for Dust Control
B10	Written Scheme of Archaeological Investigation
B11	Habitat and Species Protection Plan
B12	Water Protection Plan
B13	Soil Management Plan

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