



A specialist energy consultancy

Outline Construction Environment Management Plan

Neilston Greener Grid Park Section
36 Application

Statkraft UK Ltd

15957-005-R0
31 July 2024

COMMERCIAL IN CONFIDENCE



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TNEI Services Ltd

Company Registration Number: 03891836

VAT Registration Number: 239 0146 20

Registered Address

Bainbridge House
 86-90 London Road
 Manchester
 M1 2PW
 Tel: +44 (0)161 233 4800

7th Floor West One
 Forth Banks
 Newcastle upon Tyne
 NE1 3PA
 Tel: +44 (0)191 211 1400

7th Floor
 80 St. Vincent Street
 Glasgow
 G2 5UB
 Tel: +44 (0)141 428 3180

TNEI Ireland Ltd

Registered: 104 Lower Baggot Street, Dublin 2, DO2 Y940

Company Registration Number: 662195

VAT Registration Number: 3662952IH

Unit S12, Synergy Centre
 TU Dublin Tallaght Campus
 Tallaght
 D24 A386
 Tel: +353 (0)190 36445

TNEI Africa (Pty) Ltd

Registered: Mazars House, Rialto Rd, Grand Moorings Precinct, 7441 Century City, South Africa

Company Number: 2016/088929/07

Unit 514 Tyger Lake
 Niagara Rd & Tyger Falls Blvd
 Bellville, Cape Town
 South Africa, 7530

TNEI Inc.

Registered Address: 9319 Robert D/ Snyder Rd. PORTAL Building Mecklenburg County

Charlotte, NC 228223-0001 USA

Certification Number: C202305805696-1

Unit 216 PORTAL Building,
 9319 Robert D. Snyder Road
 Charlotte, Mecklenburg County,
 North Carolina 28223
 Tel: +1 (980) 245-4024

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1 Introduction

1.1 Purpose of this Report

TNEI Services Ltd (TNEI) has been commissioned by Statkraft UK Ltd (Statkraft) (the Applicant) to undertake the preparation and submission of a Section 36 application for the Neilston Greener Grid Park (GGP) which was granted Planning Permission on Appeal on the 28th of April 2022 (Appeal reference: PPA-350-2047. Renfrewshire Council planning application reference: 21/0034/PP). The Applicant is looking to increase the capacity of the consented Neilston GGP above 50 MW (the Proposed Development) and therefore is seeking Section 36 consent from the Scottish Ministers at the Energy Consents Unit (ECU) and associated deemed Planning Permission under the Town and Country Planning (Scotland) Act 1997, as amended. This Outline Construction Environment Management Plan (OCEMP) has been prepared in support of this application in order to outline the measures which would be put in place during construction to avoid any adverse environmental impacts arising from the construction works.

A detailed CEMP would be prepared in advance of construction works commencing, the requirement for which can be secured through a suitably worded planning condition.

1.2 Overview of the Proposed Development

The description of development is as follows:

'Formation of an up to 750MW Battery Storage Facility, comprising up to 88 battery storage container blocks and associated infrastructure, storage containers, welfare, diesel generators, CCTV and lighting columns and associated access, internal access roads, hard and soft landscaping, SuDS Basin, perimeter fence and underground grid connection cable.'

Through a careful iterative design process, the majority of the environmental impacts have been avoided, minimised, and mitigated. There are, however, potential impacts that cannot be mitigated through design alone and therefore further mitigation measures are required to be put in place during the construction of the Proposed Development. These measures have been regulated by best practice guidance and legal requirements to ensure that the Proposed Development is constructed as designed and that the additional measures identified within the planning application submission are put in place.

1.3 OCEMP Aims and Objectives

This report is intended to provide the contractor and the Applicant with a useful and essential project specific tool to manage on-site construction activities that may impact on the environment. The key aims of this report are to:

- Ensure all environmental commitments are met and that all requirements of relevant statutory legislation, standards, and guidance are fulfilled;
- Ensure that disturbance to the physical environment as a result of the Proposed Development is avoided, or where this is not possible, that disturbances are minimised and appropriately mitigated;
- Ensure that impacts on transport, tourism, historic sites, and cultural heritage are avoided, or where this is not possible, that impacts are minimised and appropriately mitigated;
- Ensure that the agreed site restoration is achieved on completion of the construction of the Proposed Development; and

- Ensure effective engagement with key stakeholders is undertaken as appropriate, in the delivery of the required mitigation.

Compliance with this report will be a contractual requirement for all personnel and contractors involved in the construction of the Proposed Development. This report includes the following:

Table 1.1 CEMP Contents and Location

| Description | Location within this OCEMP |
|---|----------------------------|
| Environmental Policies, Corporate Responsibilities and Emergency Procedures | Section 2 |
| Outline Construction Environmental Issues | Section 3 |
| Site Environmental Inspection and Auditing Procedures | Section 4 |
| Document Control and Environmental Nuisance Complaints | Section 5 |
| Reinstatement Measures | Section 6 |
| Conclusions | Section 7 |

2 Environmental Policies, Corporate Responsibilities, and Emergency Procedures

2.1 Statkraft UK Limited

The overall responsibility for implementation of this report lies with Statkraft as the developer, as well as their appointed contractor for the construction works. The successful implementation of this report will ensure that all relevant environmental commitments and responsibilities are adhered to. Statkraft is also responsible for auditing the implementation of environmental mitigation measures on site and ensuring an audit plan is developed prior to construction commencing.

These documents, together with adherence to key legislation and good practice guidance, represent the environmental requirements and standards which all personnel must comply with when working on behalf of Statkraft. This report fully accords with all legislative requirements.

2.2 Appointed Contractor

The appointed contractor for the construction of the Proposed Development (working on behalf of Statkraft) will be responsible for:

- Implementing the requirements of this report in compliance with standard and site-specific Environmental Management Systems (EMS). The EMS must comply with the ISO 14001 Environmental Management standard;
- Managing the environmental performance and compliance of all sub-contractors on site, including weekly monitoring to ensure that all sub-contractors comply with the requirements of this report and ISO 14001;
- Weekly monitoring of the environmental aspects of site works, ensuring compliance with this report and ISO 14001, including regular inspections, audits, and appropriate procedures for addressing urgent matters; and
- Training of all site staff, including sub-contractors, in general environmental awareness on specific environmental protection issues.

The appointed contractor will also be responsible for ensuring, through the incorporation of the provisions outlined in this report, that all relevant planning consent conditions, licences, and mitigation commitments that apply to site work are satisfactorily discharged. This will ensure that the environmental impact of construction activities is kept to a minimum.

The appointed construction contractor will be provided with a copy of this report.

2.3 Overall Responsibilities for Statkraft's Site Management Team

The overall day to day responsibility for ensuring that all standard and site-specific environmental actions are adhered to rests with the appointed Site Management Team.

The appointed Site Management Team will undertake regular meetings and site inspections to ensure that all site-based personnel are aware of the environmental commitments, as referenced or detailed within this report.

Under the direction of the appointed contractor, all personnel and any sub-contractors working on this project must take all reasonable precautions and undertake all reasonable measures within their control to ensure that all legal requirements are complied with and that no unnecessary damage, disturbance, or pollution results from undertaking the proposed construction works.

2.4 Emergency Procedures

All environmental incidents must be reported to the Site Management Team who will decide whether the incident is reportable to SEPA or other Regulators.

SEPA should be contacted by the Site Management Team within two hours where an incident results in direct pollution of a watercourse. This should allow for inspecting the incident and taking immediate actions to control/mitigate impacts, as well as enable SEPA to inform third parties and to take further mitigation steps, if required.

In addition to notification of any environmental incident via SEPA's 24/7 pollution hotline (0800 807060) or via SEPA's online event reporting system at 'Report Environmental Events to SEPA'¹, the local SEPA Office (Glasgow) must also be contacted and informed. SEPA's Glasgow office is located at:

Law House
Todd Campus
West of Scotland Science Park
Maryhill Road
Glasgow
G20 0XA
Tel: 0141 9456350
Fax: 01698 738155

All emergency response arrangements will be included in the construction site induction and communicated to the relevant regulatory bodies where required.

2.4.1 Spillage Control

For plant/equipment leaks:

- STOP the source of the spill or leak if possible;
- CONTAIN the spill using spill kits, sand, or soil;
- DIVERT the spill away from drains and watercourses;
- CLEAN up the spill. Put all used spill kit materials and contaminated soil in a waste bag and dispose of as hazardous waste;
- REPORT the spill to your supervisor;
- REPLENISH spill kit after use; and
- ANY pollution of a watercourse to be reported immediately to the appointed contractor's Project HSSE Manager.

Should there be any incidents then these would need to be reported to the Site Manager via the following 24-hour emergency contact details:

Graeme Hannah / 07425 571 338

2.4.2 Flood Emergency Response

If there are flood alerts in the vicinity of the construction site:

- CONTACT SEPA Flood Alert and Warning hotline on **0845 988 1188**;

¹ Report Environmental Events to SEPA. Available at: <https://www2.sepa.org.uk/EnvironmentalEvents> [Accessed 23 Jan 2024].

- OBTAIN as much information as possible from SEPA i.e., what timescales are involved and what level of flooding is expected;
- If flooding is IMMEDIATE ensure that fuel, oil, and other potential contaminants are moved out of danger or stored as securely as possible; and
- If the extent of the flooding becomes serious and an EVACUATION of the site is deemed necessary, a decision to evacuate will be made by a senior person on site – the appointed contractor’s project, Site or HSSE Manager.

2.4.3 Other Environmental Incidents

If there is any other type of environmental incident, stop what you are doing and report it to your supervisor. These may include:

- Complaints from third parties e.g., noise, dust, light pollution;
- Discovery of suspected contaminated land;
- Discovery of protected animals, birds, or reptiles;
- Damage to trees and hedgerows;
- Discovery of archaeological or historic remains; and
- Near misses – where events could have led to a minor or major incident.

The appointed contractor’s Site Management Team should be notified immediately.

3 Outline Construction Environmental Issues

3.1 Introduction

The following section of this report identifies key environmental issues, which may be required to be addressed during the construction process, together with appropriate outline environmental management actions.

3.2 Environmental Best Practice

All works are to be carried out in line with relevant environmental legislation and best practice guidance as defined within this report.

- Environmental mitigation (agreed with statutory/non statutory consultees where appropriate) to be in place prior to works commencing. This may include method statements and/or licences and permits. Mitigation to be reviewed and updated on a regular basis where required;
- Keep energy use onsite to a necessary minimum during construction;
- Minimise the total use of water onsite;
- Ensure waste is diverted from landfill wherever possible;
- Ensure HSSE Tours and Audits by the Site Management Team are undertaken in a timely manner; and
- Waste Duty Holder and Refuelling Duty Holder training to be undertaken within 4 weeks of site commencement where relevant/required.

3.3 Legal Requirements

The list below (although not exhaustive) provides an overview of some of the acts of parliament and legislation that the appointed contractor and all subcontractors must comply with.

3.3.1 Acts of Parliament (as amended)

- Nature Conservation (Scotland) Act 2004;
- The Environment Act 1995;
- Protection of Badgers Act 1992 (as amended by the Nature Conservation (Scotland) Act (2004));
- Wildlife and Natural Environment (Scotland) Act 2011;
- Environmental Protection Act 1990;
- Water Environment and Water Services (Scotland) Act 2003;
- Flood Risk Management (Scotland) Act 2009;
- Wildlife & Countryside Act 1981;
- The Control of Pollution Act 1974 Part III;
- Sewerage (Scotland) Act 1968;
- Noise and Statutory Nuisance Act 1993; and
- Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003.

3.3.2 Regulations

- Environmental Information (Scotland) Regulations 2004;

- The Environmental Liability (Scotland) Regulations 2009;
- The Construction (Design and Management) Regulations 2007;
- The Water Environment (Oil Storage) (Scotland) Regulations 2006;
- Water Environmental (Controlled Activities) (Scotland) Regulations 2011 and Amendment Regulations 2013;
- The Water Environment (Groundwater and Priority Substances) (Scotland) Regulations 2009;
- Water Supply and Water Quality (Scotland) Regulations 2010 (2001 Scotland amendment);
- Private Water Supplies (Scotland) Regulations 2006;
- Landfill (Scotland) Regulations 2003, as amended;
- Waste (Scotland) Regulations 2011;
- Waste Management Licensing (Scotland) Regulations 2011;
- Waste Information (Scotland) Regulations;
- The Conservation (Natural Habitats) Amendment (Scotland) Regulations 2007;
- The Conservation (Natural Habitats, &c.) Regulations 1994;
- Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991;
- Environmental Protection (Duty of Care) Regulations 1991;
- Control of Noise (Codes of Practice for Construction and Open Sites) (Scotland) Order 2002;
- Anti-Social Behaviours (Scotland) Act 2004;
- The Noise Emission in the Environment by Equipment for Use Outdoors Regulations 2001;
and
- Ancient Monuments and Archaeological Areas Act 1979.

All site staff will be kept informed of the above legal requirements and made aware that if these are not met that they could be breaking the law.

3.4 Sustainability

The following best practice sustainability measures will be undertaken wherever possible:

- Timber will be procured from sustainable sources;
- Energy, fuel, and water use will be monitored on site;
- Where possible, timber will be re-used for other projects;
- Water, electricity, paper consumption, use of non-renewable resources etc. will be kept to the minimum practicably required, through sustainable management practices. This will be monitored on a monthly basis by site management to identify any potential wastage and any opportunities for further reduction in consumption;
- Best practices to be implemented for vehicle and plant use (for example vehicle engines would be switched off when not in use);
- All vehicles and plant to be checked daily, with prompt reporting of any faults discovered; and
- Collections and deliveries to be planned to consolidate journeys wherever possible.

3.5 Timing of Works and Contingency Plans

The timing of the construction works will be very important. Where possible the works will be planned to avoid periods of high rainfall and also the winter months, given that the winter months are generally windier and wetter, and creates additional challenges with managing run off and storm events. Further guidance on surface and groundwater management can be found in Section 3.16 below.

Hours of working will be limited to 0700 hours to 1900 hours, Monday to Saturday, with no working taking place on Sundays or bank holidays.

There are various contingency plans in place in this report, covering emergency procedures for various aspects including, but not limited to, pollution prevention, flooding, and waste management. These various measures are all considered to amount to suitable and appropriate contingency plans for the construction of the Proposed Development.

3.6 Site Environmental Monitoring Processes and Schedule

Where required on the project, environmental monitoring will be carried out in accordance with the appointed contractor’s relevant HSE Procedures and Guidance Notes. Table 3.1 below outlines the monitoring which will be carried out throughout the duration of the construction.

Table 3.1 Mitigation Monitoring Schedule

| Frequency | Environmental Issue | Responsibility |
|-------------|--|--------------------------|
| Daily | Tracks and any areas of hardstandings cleared of mud / debris | Site Manager |
| | Delivery vehicles sheeted | Site Manager |
| | Tracks checked for dust arisings and damped down | Site Manager |
| | Site inspected for litter and kept clean | Site Manager & all staff |
| | Storage containers / bunds in compound checked for leaks / damage | Site Manager |
| Weekly | Waste disposed of from storage areas | Site Manager |
| | Warning signage correctly positioned and legible | Site Manager |
| Monthly | Position and direction of lighting | Site Manager |
| | Condition of access tracks, including verges, spoil, and drainage | Site Manager |
| | Operation and use of wheel wash and condition of associated drainage | Site Manager |
| As required | Servicing of vehicles and machinery | Site Manager |

3.7 Outline Management of Site Waste

The following good site waste management practices will be implemented by the appointed contractor for the construction works:

- Do not over order materials;
- Minimise ordering standard lengths as opposed to the 'real' lengths as this will increase potential for waste; and
- Think about delivery times.

3.7.1 Storage – Good Housekeeping

- Incorrect storage could lead to damage or contamination - replacement items are then required;
- Check shelf life and storage instructions on packaging;
- Segregate waste types – inactive, active, special, and then material types – metals, wood, concrete, plastic etc.;
- Recycle and reuse materials wherever possible e.g., timber, plastics, cardboard, tyres etc.
- Ensure that any container is secure, where necessary, so as to prevent accidental spillage, leakage etc;
- Waste must be kept in a manner that prevents it from falling from containers while in storage or in transit;
- Waste must be protected in an appropriate manner to prevent scavenging from animals; and
- Do not allow waste storage containers to overflow.

3.7.2 Delivery and Handling

- Avoid damage during unloading;
- Unload in designated areas, where possible, to minimise double handling;
- Do not accept incorrect deliveries; and
- Be aware that repetitive handling leads to damage.

3.7.3 Waste Sorting, Storage and Recycling

Skips² and other small containers will be used for all wastes on site. The following separate skips will be available on site during relevant works to allow segregation of waste materials for recycling or recovery:

- General mixed non-hazardous;
- Wood;
- Metal;
- Hazardous – depending on the types of hazardous waste generated, separate containers may be used;
- Timber Packaging – this would be included in a wooden waste skip on site;
- Paper and Cardboard;
- Plastic;
- Plasterboard; and

² The use of open skips will be avoided where reasonably practicable.



- Concrete, brick, block, rubble (i.e., inert construction waste).

All the legal documents to ensure the Duty of Care for waste will be kept at the appointed contractor's site management office during the construction of the Proposed Development.

All waste leaving the site will be accompanied with a Waste Transfer Note (WTN) (for non-hazardous material) or Hazardous Waste Consignment Note (HWCN). These will be checked by the Site Manager to ensure that the following information is detailed:

- Producer of the waste;
- Site name & location;
- Date;
- Description of the waste (i.e., contents and volume);
- European Waste Classification (EWC) number;
- Signature of the waste carrier; and
- Name of disposal site.

Once complete, the Waste Transfer Note (WTN) / Special Waste Consignment Note (SWCN) will be signed by the appointed contractor's Waste Duty Holder and a copy retained by the contractor for two years (WTN)³ or 3 years (SWCN)⁴, under Section 34 of the Environmental Protection Act 1990 (as amended). Copies of WTNs, Hazardous Waste Consignment Notes (HWCNs) and copies of Waste Licences will be held in the appointed contractor's site management office. Registered carriers would be used for the transport of any controlled waste and for the uplift of site waste.

Should any hazardous waste need to be transferred, SEPA will be notified a minimum of 72 hours prior to the transfer of any such waste.

Weekly Visual Checks will be carried out by the appointed contractor's Site Manager to check for the following:

- Containers are adequately signed;
- Containers are being filled fully prior to uplift;
- There is no cross contamination of materials (e.g., hazardous, and non-hazardous or wood and metal etc);
- Canteen and hazardous wastes are contained in covered containers;
- Containers are fit for purpose – i.e., adequately sized, and structurally sound; and
- Waste documentation is being retained, e.g., WTNs.

3.7.4 Waste Hierarchy

Further to the above, the appointed contractor will be required to undertake waste management in accordance with the waste hierarchy to help ensure that the amount of waste generated is minimised, and where possible, recycled.

Figure 3.1 overleaf sets out the waste hierarchy which will be used during the construction process.

³ Duty of care: code of practice for managing controlled waste (2012). Available at: <https://www.gov.scot/publications/duty-care-code-practice/pages/4/> [Accessed 23 Jan 2024].

⁴ Consigning Special Waste Guidance (2022). Available at: https://www.sepa.org.uk/media/519925/consigning_special_waste_guidance.pdf [Accessed 23 Jan 2024].



Figure 3.1 The Waste Hierarchy, extracted from the Scottish Government website⁵.

3.7.5 Waste Removal

Any waste removed from site would be disposed of at suitably licensed or exempt waste management facilities in accordance with the Waste Management Licensing (Scotland) Regulations⁶ 2011.

3.8 Sewage Disposal and Treatment

A septic tank (duly registered with SEPA) would be provided on site to capture sewage. This tank would then be emptied as needed in accordance with standard procedures.

3.9 Car Parking

Car parking will be provided as part of the temporary site construction compound with clear parking areas outlined so site operatives can safely park in the compound.

3.10 Material Stockpiles

There will be an area within the temporary site construction compound for the storage of materials which will be used in the construction of the Proposed Development.

3.11 Temporary Lighting

Should there be a need to provide temporary illumination of working areas in the mornings and evenings, and also if any night-work is required so as to ensure safe working, then this will be achieved through the use of mobile lighting units. Any lighting would be positioned and angled in such a manner that light 'spillage' is avoided.

3.12 Construction Noise

Good site practices would be implemented to minimise any potential effects in relation to construction noise. Section 8 of BS 5228-1:2009+A1:2014 recommends several control measures as summarised below, that would be employed on-site:

- Keep local residents informed of the proposed working schedule, where appropriate, including the times and duration of any abnormally noisy activity that could cause concern;
- Ensure that any extraordinary site work (continuing throughout 24 hours of a day) would be programmed, when appropriate, so that haulage vehicles would not arrive at or leave the site

⁵ Applying the waste hierarchy: guidance (2017). Available at: <https://www.gov.scot/publications/guidance-applying-waste-hierarchy/pages/3/> [Accessed 23 Jan 2024].

⁶ Waste Management Licensing (Scotland) Regulations (2011). Available at: <https://www.legislation.gov.uk/ssi/2011/228/contents> [Accessed 23 Jan 2024].

between 1900 and 0700 hours, with the exception of abnormal loads that would be scheduled to avoid anticipated periods of high traffic flows;

- Ensure all vehicles and mechanical plant would be fitted with effective exhaust silencers and be subject to programmed maintenance;
- Select inherently quiet plant where appropriate – all major compressors would be ‘sound reduced’ models, fitted with properly lined and sealed acoustic covers, which would be kept closed whenever the machines are in use;
- Ensure all ancillary pneumatic percussive tools would be fitted with mufflers or silencers of the type recommended by the manufacturers;
- Instruct that machines would be shut down between work periods or throttled down to a minimum;
- Regularly maintain all equipment used on site, including maintenance related to noise emissions;
- Vehicles would be loaded carefully to ensure minimal drop heights so as to minimise noise during this operation; and
- Ensure all ancillary plant such as generators and pumps would be positioned so as to cause minimum noise disturbance and if necessary, temporary acoustic screens or enclosures should be provided.

3.13 Outline Management of Dust

The main activities involved in this project which may cause dust emissions include the following:

- Construction vehicle movements;
- Earthworks; and
- Stockpiles.

The appointed contractor will be responsible for undertaking and recording the following daily checks to manage dust emissions:

- Check the local weather forecast at start of working day to identify likely daily weather conditions;
- Dry/windy weather. Apply water bowsers to excavations, access tracks and soil storage areas regularly throughout the day;
- Undertake regular visual checks throughout the day to ensure dust at the above locations is being suppressed;
- Avoid the use of open skips wherever reasonably practicable;
- In the event that dust is being blown off-site, cease dust generating activities until wind conditions improve or dust is suitably managed;
- Undertake regular visual checks throughout the day of dust management during earthworks and regular movement of HGVs on the B775;
- Actively monitor dust management and where dust pollution is likely to affect neighbours, cease all activities until suitable management procedures can be implemented;
- A record will be kept on site of all dust related complaints and remedial actions taken;
- Complaints will be reported to the Appointed Contractor’s Environmental Management Team and where required, a review of the dust management procedures will be undertaken; and

- Staff will be briefed on changes required to working practices to ensure the incident is not repeated.

In addition to the above daily checks, the following dust management procedures will be followed on site:

- All staff will be trained in the importance of dust management procedures;
- Activities on site will be planned to ensure risk of pollution from wind-blown dust is reduced to a minimum;
- The B775 will be monitored regularly, and a road sweeper will be deployed should that be deemed necessary by Renfrewshire Council or the Site Manager;
- Only appropriate plant will be used, and all equipment will be regularly maintained; and
- Burning of materials is not permitted in any working area.

3.14 Construction Traffic Management

A Construction Traffic Management Plan (CTMP) has been prepared and is appended to this report at Appendix A as part of the Section 36 application. The CTMP has been prepared to satisfy the requirements to minimise interference, maintain road safety, and ensure the free flow of traffic on the road network as a result of the traffic moving to and from the Proposed Development. The implementation of the measures in the CTMP would ensure the safe operation of the approach route to the site during construction.

3.15 Outline Pollution Prevention and Control Measures

The following general requirements for oils and fuel storage will be followed:

- Oil and fuel storage tanks will be self-bunded and will be physically protected by spill trays. All valves and tank couplings will be located within the tank bund, and a spill kit will be held beside the bulk storage tank;
- Mobile plant and vehicles will be refuelled beside relevant tanks. Filler handles will be auto-shut-off trigger-spring type, i.e., as per garage pumps. They will be stored within the bund at all times. Static plant will be refuelled at their operational location using a mobile bunded fuel bowser or jerry cans (all static plant to have spill tray/plant nappy);
- All fuel and oil containers will be locked in a secure store to prevent theft and vandalism;
- Where fuel is to be transported in small quantities, only fuel-type marked 'jerry cans' 5/10/20 litre will be used. All bunds and settlement areas will be checked daily for evidence of pollutants. Adequate oil absorbent and containment materials must be held in signposted 'spill stations' and staff briefed on how to use spill equipment effectively; and
- Oil contaminated water from bunded areas, drip trays or plant nappies will be removed using oil-absorbent pads. Contaminated water or other materials will be disposed to an appropriate disposal site with the necessary paperwork in place in accordance with Site Waste Management arrangements (Section 3.7).

Furthermore, all works shall be undertaken in accordance with SEPA's Guidance for Pollution Prevention for Works and Maintenance in or near Water: GPP5 (2018) which is appended to this report at Appendix B.

3.16 Outline Management of Surface Water

Throughout the construction phase Sustainable Drainage Systems (SuDS) will be provided. This will help to ensure that contaminated surface water runoff arising from earthworks, roads, drainage, compounds, and any other associated infrastructure does not pollute any watercourses.

3.17 Ecological Protection

The main ecological impacts that could arise from this development are:

- Habitat loss/damage at work locations;
- Disturbance/killing/injury to species;
- Changes to surface water which may impact upon ecological receptors; and
- Contamination from accidental spillages.

This OCEMP should be read in conjunction with the following reports being submitted with this application: Preliminary Ecological Appraisal (2024), the Breeding Bird Report (2024), Landscape Environmental Management Plan (2024), and the Biodiversity Enhancement and Management Plan (2024). For ease of reference, many of the recommendations have been replicated below:

- Trees on the site and within a 50m buffer of works must be protected in accordance with BS5837:2012.
- Any mature tree to be felled must be checked for red squirrel dreys and pine marten dens. This must be done in advance of works to allow for mitigation to be designed and implemented and licenses sought if necessary.
- It is recommended that a walkover by an ecological clerk of works (ECoW) to identify any features suitable for use by reptiles is undertaken at the start of works. Any features should only be removed outside of the reptile hibernation period (October – March, weather dependent) and either searched by hand immediately prior or removed under ECoW supervision.
- A lighting strategy for the site should be designed in line with the bats and artificial lighting in the UK guidelines, and should avoid illuminating adjacent habitats e.g. tree lines.
- Best practice working methods must be followed to prevent harm or disturbance to any protected species or other animal that may use the site.
- Should any rhododendron be removed during the course of the works, this must be either chipped/burned/mulched on site, or removed in closed containers for safe disposal to prevent spread. Affected soils may contain rhododendron seed and therefore the movement of soils on and off site should be attended to in a biosecurity plan.
- Any vegetation clearance should take place outside of the nesting bird season which is March-August inclusive. Should this not be possible, a nesting bird check must be undertaken by a suitably experienced ecologist no more than 24 hours prior to vegetation clearance. Should any nests be found, an appropriate buffer area as determined by the ecologist must be implemented.
- Activities which may cause loud, intense, or prolonged noise or vibrations during the bird nesting season should be reviewed by a project ecologist in relation to any known nest sites nearby.

Although evidence of badgers was not identified on the Site, the following mitigation measures should be implemented:

- A check prior to works to ensure that no setts have been created since the walkover;
- back-filling or coverage of excavations overnight, or sloping the sides to 45° or less to provide an exit to any animal entering the excavation;
- checking the site/stored materials at the beginning of each day;
- any temporarily exposed open pipe system should be capped in a way as to prevent badgers or other mammals gaining access; and
- should a badger be encountered or suspected within the site during works, a suitably qualified ecologist should be contacted.

3.17.1 Biodiversity Champion

During the construction phase, a Biodiversity Champion should be appointed to provide advice to the construction teams on all pertinent ecological issues as highlighted within the aforementioned suite of ecology reports, and to check that the ecological protection and mitigation measures, as specified in the various ecology reports, are correctly implemented. This is for general ecological oversight of the project, and where complex ecological issues arise, advice should be sought from a suitably qualified ecologist. General responsibilities of the Biodiversity Champion during the Construction Phase are:

- Contacting a suitably qualified ecologist in the event of uncertainties about ecological issues surrounding the development;
- Ensuring that all Site contractors know to report any ecological concerns/issues;
- Check and document that an overview of the Site's ecological constraints is included within the contractor inductions as appropriate;
- Ensuring that contractors, vehicles and equipment do not impact areas to be retained adjacent to the Site;
- Supervising and monitoring the implementation and habitat creation measures as set out in this document;
- If Site preparation works are scheduled during the nesting bird season (generally considered to be March-September inclusive), to organise for an Ecological Clerk of Works (ECoW) to undertake a nesting bird check in advance of works that could impact an active nest. If a nesting bird is identified, to implement suitable working methods as advised by the ECoW; and
- The Biodiversity Champion will take photographs, log the dates and times of inspections, and produce progress reports as appropriate to evidence that the above responsibilities are being upheld.

3.17.2 Contractor Responsibilities

The contractor responsibilities include the following:

- To adhere to the relevant provisions made within this document and associated ecology reports, and to comply with the advice of the project ecologist and/or Biodiversity Champion; and
- To contact the Biodiversity Champion and/or, if necessary, the project ecologist regarding any uncertainties or activities that may impact on ecological features on Site.

3.17.3 Applicant Responsibilities

The Applicant responsibilities include the following:

- Ensuring that the contractors employed are suitably qualified and experienced to undertake the habitat creation works, whilst maintaining the ecological value of the Site; and
- Providing to the contractor all information required to allow them to carry out appropriate habitat and landscape management during the construction phase. This includes any updated versions the Landscape and Environmental Management Plan document, and other related management plans, which will be circulated as soon as possible after being received.

3.18 Cultural Heritage and Archaeological Protection

The following general archaeology requirements should be followed:

- The Site Management Team and all site-based staff (including subcontractors) must take all reasonable actions to protect recognised cultural heritage assets. Staff must also be vigilant for potential archaeological discoveries;
- If suspected archaeological finds are made these will be protected by fencing off the area until an Archaeologist is contacted;
- As required by law, any coins, pottery, or bones discovered during construction works will be left in situ;
- If any human remains are found, 'The Treatment of Human Remains in Archaeology' (Historic Scotland 2006) guidance will be followed, such as, but not limited to, contacting the police and Renfrewshire Council; and
- If any treasure is found, The Treasure Act 1996 legislation will be followed, whereby treasure must be reported to the local coroner within 14 days.

The following site-specific requirements should be followed:

- The designated WWII control bunker found within the site, and associated building platform, will be fenced off during the construction phase to prevent accidental damage. Heras fencing will also be erected approximately 5 m from the features prior to construction commencement.
- The non-designated post-medieval bank found extending into the site will be removed during construction due to possessing little archaeological interest.

3.19 Public Safety and Access

Appropriate signage and fencing as necessary will be put in place on site during the construction works to ensure that public safety is maintained. Should there be any need to restrict access during the construction works then this will be kept to a minimum and will only be for areas where there are active works taking place.

An information board will be kept adjacent to the site compound which will provide information on the timing of construction works and contact details for the appointed Site Manager in the event of any queries.

4 Site Environmental Inspection and Auditing Procedures

4.1 Site Environmental Inspections

Environmental inspections of the project will be carried out on a regular basis and the results recorded on the form in Appendix C. Such inspections will vary according to the individual receptor. These inspections will consider the environmental aspects and potential construction impacts detailed above in Section 3. A suitably qualified Ecological Clerk of Works (ECOW) will be appointed to supervise and inspect works as necessary. More detailed audits will be carried out by the Site Management Team periodically in accordance with Statkraft's protocol. Such audits will be undertaken in order to ensure compliance with the approved planning conditions and all other legal requirements.

Records of all training carried out at the Proposed Development (including inductions) will be retained and made available for viewing during environmental audits if required.

If a complete failure or absence of a required CEMP element is discovered during site audits, a major non-conformance will be raised. The project will have seven (7) days from the date of issue of the audit report to recover the situation and put measures in place to prevent its re-occurrence.

If an area of weakness is identified when an element of the system is not being carried out correctly then a non-conformity will be raised, and the project will be given one month from the date of issue of the report to rectify the situation.

4.2 Environmental Audits

A planned programme of compliance audits will verify the integrity and effectiveness of the environmental management system used throughout this project and may include site visits. The purpose of any visit includes:

- Ensuring that this report and all other environmental commitments are being adhered to and that the relevant documentation is being completed;
- Ensuring that progress towards environmental objectives and targets is being monitored; and
- Ensuring that legislation and all other requirements are being complied with;
- The audit report shall make recommendations for improvement and identify the appropriate personnel and timescales for completing these actions. The contents of the report shall, if necessary, be discussed at site HSSE meetings; and
- Following the audit, if deemed necessary an investigation shall be instigated and corrective actions taken. The effectiveness of any resultant actions carried out will be assessed by the project at an appropriate time scale.

5 Document Control and Environmental Nuisance Complaints

5.1 CEMP Document Control

This report is a working document. Appendix D contains a CEMP Revision Control Register which will be maintained by the appointed contractor's Environmental Management Team. The register will show any revision numbers, revision details, and dates for the main CEMP and all Appendices.

5.2 Register for Environmental Nuisance Complaints

Should any complaints be received which are of an environmental nature, then these would be recorded on the complaint register (see Appendix E). This register will be maintained within the environmental file on site and made available during environmental audits if required. All environmental complaints will be discussed as part of regular environmental progress meetings.

6 Re-Instatement Measures

Should any post construction requirements (for example re-instatement works) be required then these would be confirmed with the appointed contractor for the construction works and agreed with Local Council/landowner/statutory bodies as appropriate. Any such requirements would be documented in the following table:

Table 6.1 Project Completion Requirements.

| Post Construction Requirements | Action | Responsibility |
|--------------------------------|--------|----------------|
| | | |
| | | |
| | | |
| | | |

Whilst, as noted above, re-instatement measures will be confirmed with the appointed contractor in due course, reinstatement will occur as soon as the construction is finished to minimise topsoil storage time and potential for erosion. In addition, and set out below are some general re-instatement measures for the appointed contractor to follow:

- Site reinstatement of all peripheral areas of the site disturbed during construction will be restored, as far as is practicable, to their condition prior to commencement of the development using stripped and stored topsoil/subsoil;
- All temporary works and fences will be removed. Where necessary, stored topsoil will be spread, rolled, and re-seeded and the area put back into agricultural use;
- The site compound will be restored at the end of the construction period. Reinstatement will involve removing the imported material and underlying geotextile if installed. Stored subsoil and topsoil will be spread, rolled, and re-seeded and the area put back into agricultural use; and
- Upon completion, all construction plant will be removed from the site.

An audit will be undertaken to ensure that any project completion requirements have been satisfactorily completed and will be documented in Table 6.2 below:

Table 6.2 Audit Record

| Audit | Date Undertaken | Summary of Findings | Responsibility |
|-------|-----------------|---------------------|----------------|
| | | | |
| | | | |
| | | | |
| | | | |

7 Conclusions

This document outlines that the development will be constructed in accordance with industry best practice and associated environmental management. It confirms the procedures that will be followed to ensure activities with potential to affect the environment are appropriately controlled and managed and it indicates the methods and working procedures necessary to implement the considered mitigation in relation to dust, noise, artificial lighting, and the protection of the water environment.

As such, the information provided within this report should be sufficient for the determination of the Section 36 application along with which this report is submitted.

Appendix A – Construction Traffic Management Plan (CTMP)

P e l l F r i s c h m a n n

Neilston Greener Grid Park – Section 36 Application

Transport Statement & Construction Traffic Management Plan

June 2024

10109339

This report is to be regarded as confidential to our Client and is intended for their use only and may not be assigned except in accordance with the contract. Consequently, and in accordance with current practice, any liability to any third party in respect of the whole or any part of its contents is hereby expressly excluded, except to the extent that the report has been assigned in accordance with the contract. Before the report or any part of it is reproduced or referred to in any document, circular or statement and before its contents or the contents of any part of it are disclosed orally to any third party, our written approval as to the form and context of such a publication or disclosure must be obtained.

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Ref. reference. Rev revision. Suit suitability.

Prepared for

Statkraft UK Limited

22 Bishopsgate
 London
 EC2N 4BQ

Prepared by

Pell Frischmann

93 George Street
 Edinburgh
 EH2 3ES



Pell Frischmann

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Appendices

- Appendix A: Core Path Plan
- Appendix B: Construction Programme

1 Introduction

Pell Frischmann has been instructed by TNEI, on behalf of Statkraft UK Limited (the Applicant) to produce a combined Transport Statement and Construction Traffic Management Plan (CTMP) in support of a Section 36 application for the creation of an expanded Green Grid Park (GGP) at a site 400 metres (m) north-west of Sergeantlaw, Gleniffer Road, Paisley.

The application is for an expanded Greener Grid Park (the Proposed Development) which includes associated access infrastructure, electrical grid connections and soft and hard landscaping features, located adjacent to a current facility that is being constructed.

This report provides an overview of the Proposed Development in relation to construction traffic and sets out the proposed mitigation measures for use at the site.

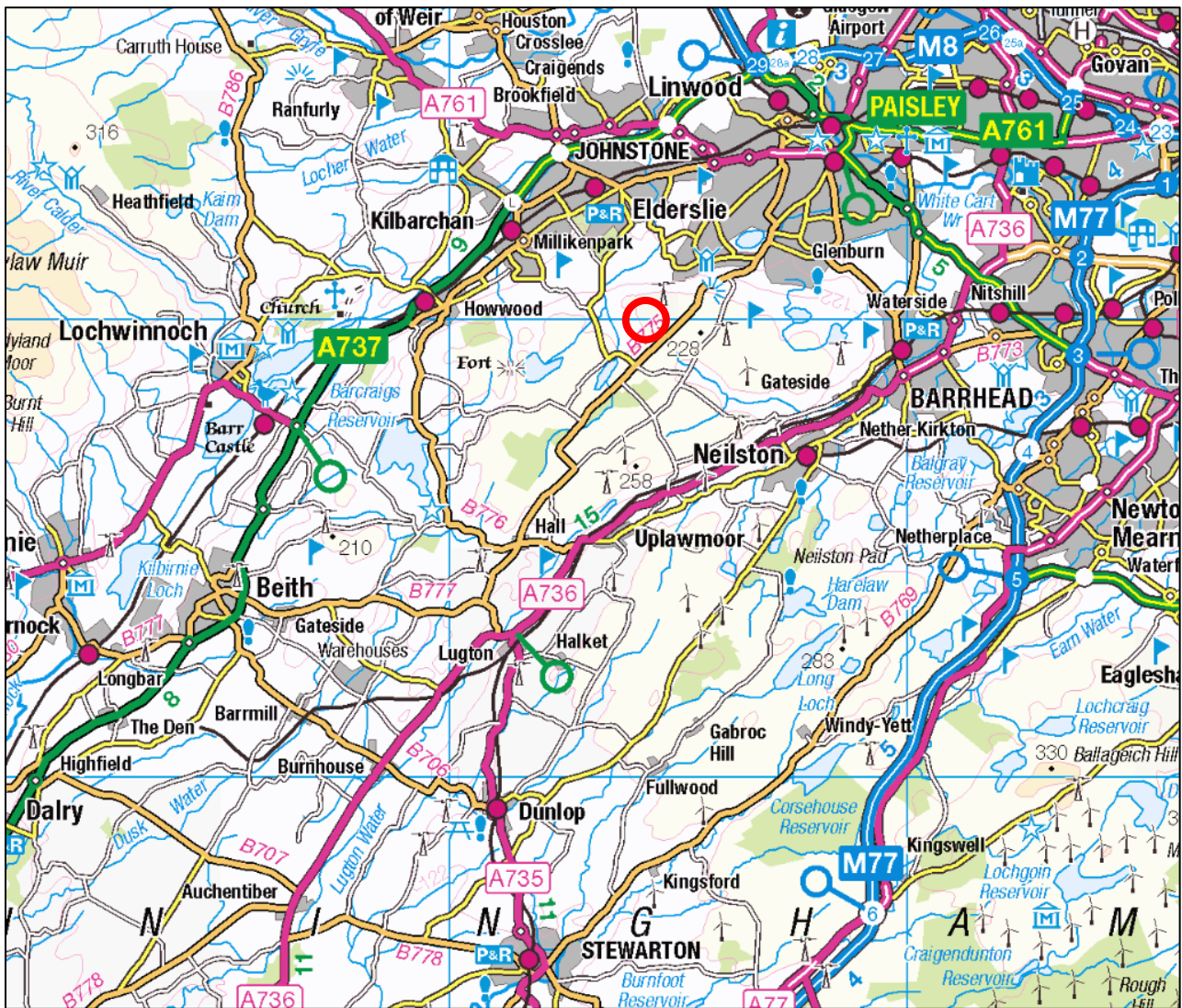
2 Development Description

2.1 Development Location and Layout

The Proposed Development comprises of a Greener Grid Park, featuring up to 750MW Battery Storage Facility, comprising up to 88 battery storage container blocks and associated infrastructure, welfare, diesel generators, CCTV and lighting columns and associated access, internal access roads, hard and soft landscaping, SuDS Basin, perimeter fence and underground grid connection cable.

The Proposed Development location is illustrated in Figure 1.

Figure 1 Development Location



Access to the Proposed Development is to be made via an access junction that will feature 215m x 4.5m visibility splays in either direction.

The layout of the Proposed Development as consented is illustrated in Figure 2.

Figure 2 Development Layout



2.2 Proposed Access Strategy

The access junction is designed to provide construction and maintenance access to the development site. The junction will feature a metalled surface for the first 15m of the access and would be built to Renfrewshire Council adoptable standards. The junction is already in place for the initial phase of the development.

The junction will have 215m by 4.5m visibility splays provided in either direction to ensure safety for all road users. Additional signage will be provided to advise other road users of turning traffic during the construction phase and these are detailed in the following sections of this report.

An emergency access is provided to the southwest of the main access. This will only provide access to fire and rescue services during an emergency situation and would not be used for general access during operation.

3 Existing Network

3.1 Active Travel Network

A review of the Renfrewshire Council Core Path maps indicates that there are two Core Paths that will potentially interact with construction traffic. These are:

- Core Path GB/24, running from Gleniffer Road to the east of the existing substation and proceed northbound; and
- GB/17, running to the south of Gleniffer Road to the northeast of the site.

Route GB/17 is an aspirational route at present. A copy of the Core Path Plan is provided in Appendix A for information.

The National Cycle Network (NCN) route map of the United Kingdom indicates that there are no NCN's located along the site frontage or in close proximity to the Proposed Development.

Renfrewshire Council's transport officers have published walking and cycling maps for the Council. Route 10, "All Around Renfrewshire" uses Gleniffer Road, along the frontage of the Proposed Development. Accommodating cyclists will be included in determining the proposed traffic management measures.

3.2 Existing Road Links

The closest trunk road forming part of the strategic road network to the Development is the M77, located to the southeast. The M77 is operated by Transport Scotland and provides strategic connections between Ayrshire and Glasgow.

The Proposed Development is accessed from B775 Gleniffer Road. The B775 is operated by Renfrewshire Council and is a 60 miles per hour (mph) local distributor road, although the speed limit reduces when travelling through urban areas. The road is of good standard and can accommodate heavy goods vehicle (HGV) traffic.

3.3 Road Safety Review

A review of the online accident database, www.crashmap.co.uk, indicates that there have been two "Serious" accidents (i.e. an injury accident) on the B775 within 1 kilometre (km) of the proposed access junction of the development site. No accidents were recorded at the existing substation location, with the accidents occurring at the junction with Caplaw Road to the southwest of the site or on the bends to the north east of the site.

In the last three years, no accidents were recorded within 1km of the proposed access junction.

A young driver was involved in one accident at the Caplaw Road junction. No "Fatal" accidents were recorded in the most recent five year period.

3.4 Baseline Traffic Flows

Baseline traffic flows have been obtained from the Department for Transport (DfT) database for roads within the assumed study network. Traffic data from 2019 was obtained to ensure that results were not impacted by Covid 19 travel restrictions and is broken down in to Car / Light Goods Vehicles (LGV) and HGVs.

The baseline traffic flows for 2019 are illustrated in Table 1.

Table 1: 2019 Baseline 24-hour Average Traffic Data

| DfT Ref | Description | Cars & LGV | HGV | Total Traffic |
|----------------|------------------------|-----------------------|------------|----------------------|
| 930173 | B775, NE of Substation | 3,213 | 67 | 3,280 |

3.5 Future Baseline Traffic Flows

Construction work is expected to commence in 2025, should the Proposed Development be consented. To provide a future year baseline, the 2019 surveys were factored using National Road Traffic Forecast (NRTF) Low Growth factors (1.038) to create 2025 flows.

The future year baseline traffic data is illustrated in Table 2.

Table 2: 2025 Baseline 24-hour Average Traffic Data

| Description | Cars & LGV | HGV | Total Traffic |
|------------------------|-----------------------|------------|----------------------|
| B775, NE of Substation | 3,335 | 70 | 3,405 |

A review of the Renfrewshire Council planning portal did not reveal any significant planning applications in the immediate vicinity of the Proposed Development site, with the exception of a Grid Stability Development located to the southwest of the substation. This development, proposed by WP Grid Services Limited does not appear to have a Transport Statement available in public view. The committee report does note that during its operation, the site would be visited eight times a month. This level of traffic generation is very low and as such would not need to be included.

No specific committed development traffic flows have been included. The use of NRTF growth factors however provides some provision for future planning decisions with respect to network growth.

4 Construction Traffic

4.1 Trip Generation

The proposed construction works are estimated to take up to 24 months.

The programme has been divided into its component sections and estimates of the likely traffic generation have been made from the material quantities, staff requirements and component deliveries required. The main areas of construction traffic can be subdivided into:

- Import of Plant and Machinery;
- Site Establishment Clearance Loads;
- Import of Bulk Materials;
- Import of Ready Mix Concrete;
- Import of General Building Supplies;
- Delivery of HV Electrical Components;
- Delivery of batteries;
- Delivery of abnormal loads;
- Delivery of general site materials and supplies;
- Grid and electrical connection works; and
- Arrival and departure of construction and commissioning staff at the site.

The traffic generation during the construction phase has used first principles to establish the volume and tonnage of construction materials. This has then been converted to two way vehicle movements to create the construction programme illustrated in Appendix B.

The peak of construction activity occurs in Month 16 of the construction programme. In this month, 25 HGV and 116 Car / LGV movements are predicted.

The initial consented phase of the GGP development will be complete prior to works commencing on the Proposed Development. It is assumed that the abnormal loads associated with that development will be of a similar scale to that for the Proposed Development and that no further assessment is required.

Should this change in the detailed design phase, the Applicant will advise the Council in writing and will provide a Route Survey Report for the Council's consideration. This report would detail any mitigation works required to access the site.

4.2 Distribution of Construction Trips

Exact material suppliers will be determined through the Balance of Plant (BoP) contract. The supplies anticipated for use in this study however are based upon the following:

- Aggregate, stone and readymix concrete: Supplied from Tarmac's Highcraig Quarry, located to the northwest of the site and accessed from the south of the B775;
- HV electrical equipment: Supplied from the north on the B775 via Paisley and Glasgow;
- General construction supplies: Supplied from the north on the B775 via Paisley;
- General site deliveries: Supplied from the north on the B775 via Paisley; and
- Construction Staff: Accessing the site from the local area, with 70% based in Paisley (access from the north) and the remainder in Johnston (accessing from the B775 from the south).

These general distributions have been applied to the peak of construction activities to estimate the likely peak traffic associated with construction activities. The peak construction traffic flows are summarised in Table 3.

Table 3: Peak Construction Traffic Flows

| Description | Cars & LGV | HGV | Total Traffic |
|-----------------------------------|-----------------------|------------|----------------------|
| B775 North of the Access Junction | 81 | 25 | 107 |
| B775 South of the Access Junction | 35 | 0 | 35 |

The impact of peak construction traffic represents an increase of 3.1% on the B775 to the north of the site and 1% to the south. The greatest increase in HGV traffic occurs to the north of the junction where a 36.2% increase is predicted.

The level of traffic impact is not considered significant, especially as the proposed construction traffic is temporary in nature and can be managed via a CTMP.

5 Construction Traffic Management Proposals

The traffic management proposals in this report will be provided to the principal contractor and they will be required to abide by these regulations as part of their commercial contracts with the Applicant. Failure to follow the traffic management measures proposed would be a contractual matter and could result in contractors being dismissed from the site.

Pages with information about the construction of the grid park will be available on the project website. These will be updated throughout the construction period. If visitors to the site are unable to find the answer to their question in the webpages, an email address will be provided on the project website to contact the Applicant. In addition, details will also be circulated via a newsletter advising about ongoing activities. A telephone number for the Principal Contractor would be published during operational hours to resolve any traffic management problems that occur and these calls would be logged and reported to the Applicant on a weekly basis to monitor the situation.

All contractors will be monitored through regular spot-checks to ensure they follow the approved access route. Access Routes identified will be clearly defined in all sub-contracts and signposted.

The site access junction will be kept clear at all times during construction and will be monitored by on-site staff to ensure vehicles do not attempt to use the area for parking.

Use of a visible vehicle identification system should be employed to ensure compliance with the agreed route and driver behaviour standards. This will allow the public to identify any rogue vehicles to the site office for easy recognition and review.

The Applicant will also create a protocol for working with local businesses to ensure the construction traffic does not interfere with deliveries or normal business traffic wherever possible.

The following measures would be provided to assist in managing traffic across the study area road network.

5.1 General Measures

Wherever reasonably possible, local suppliers such as quarries and concrete works are proposed to help minimise traffic levels of the network.

The following measures would be implemented through this CTMP during the construction phase:

- Contractual requirement in the BoP contract that contractors will only use the agreed access route;
- Construction staff parking provision will be made within the site. No parking on the public road verge will be permitted;
- A Contractor Travel Plan will be developed to encourage the use of crew buses and to reduce single occupancy car trips to the site;
- Direction signage signposting traffic on the agreed access route;
- Identification numbers of HGV and vans to allow easy recognition;
- Providing the public with details of how to report use of unapproved routes or driving issues of concern;
- Using GPS trackers to allow the monitoring of bulk delivery vehicle movements;
- Setting out site staff disciplinary measures for those who ignore the agreed access route and enforcing these throughout the construction period;
- All site vehicles will feature “white noise” reversing warning devices to reduce noise disruption when on site;
- All materials delivery lorries (dry materials) will be sheeted to reduce dust and stop spillage on public roads;
- Specific training and disciplinary measures will be established to ensure the highest standards are maintained to prevent construction vehicles from carrying mud and debris onto the carriageway;

- Wheel cleaning facilities will be established at the site entrance. A road sweeper would also be provided at site to ensure that the B775 is kept clean at the site access junction; and
- Site induction for all staff instructing them on what route to site they can use to enter and exit the site and obtaining their acknowledgement that there is only one approved access route. The induction would include:
 - A tool box talk safety briefing;
 - The need for appropriate care and speed control;
 - A briefing on driver speed reduction agreements (to slow site traffic at sensitive locations through towns and villages on the route); and
 - Identification of the required access routes and access junction operation and the controls to ensure no departure from these routes.

A temporary works compound is to be provided within the site and allows for parking in ten marked out parking spaces. Site rules will prevent staff parking on Gleniffer Road or its verges.

5.2 Road Signage

A junction signage strategy will be prepared and agreed with Renfrewshire Council prior to works commencing. The strategy will include the following:

- Site access signage to advise other road users of increased movements at the junction;
- Chapter 8 (Traffic Signs Manual) “Slow Down” and “Heavy Plant Crossing” signage along at the B775 within 500m of the site access junction; and
- “New Junction Ahead” signage at the site entrance.

Regular maintenance will be undertaken at the sign locations to keep the plates clean and to ensure that verge vegetation does not obscure them.

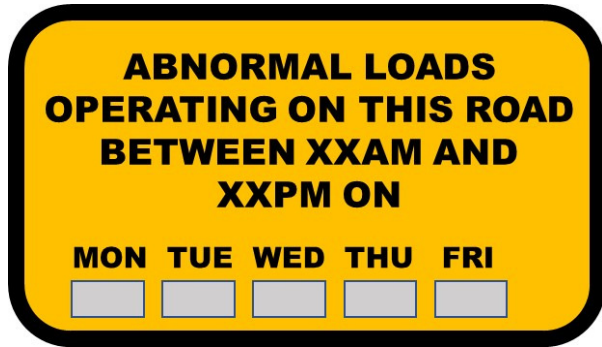
In addition to the statutory road signage noted around the site access junctions, further information signage would be provided to assist road users especially during Abnormal Indivisible Load (AIL) deliveries associated with the delivery of transformer loads. Advance warning signs would be installed on the B775 at locations agreed with the Council.

Information signage could be installed to help assist drivers and an example is illustrated in Figure 3. Flip up panels (shown in grey) would be used to mask over days where convoys would not be operating. When no convoys are moving, the sign would be bagged over by the Traffic Management contractor.

This signage will assist in helping improve driver information and allow other road users to consider alternative routes or times for their journey (where such options exist).

Regular maintenance will be undertaken at the sign locations to keep the plates clean and to ensure that verge vegetation does not obscure them.

Figure 3 Example Information Sign



5.3 Wear & Tear Agreement

An agreement is suggested to cover the cost of any abnormal wear and tear on the B775 in the vicinity of the access junction. This would be agreed with the Council subject to the granting of planning approval.

The wear & tear agreement will address concerns about possible damage to the public road, verges and structures. It will be based upon condition surveys of the road to ensure that the condition of the road does not deteriorate as a result of the construction works. It is proposed that the condition review will extend 250m in either direction from the site access junction.

Video footage of the pre-construction phase condition of the agreed area covered by the condition survey would be recorded to provide a baseline of the state of the road prior to any construction work commencing. This High Definition (HD) baseline review would inform any change in the road condition during the construction stage of the Proposed Development as it notes the existing condition of the road surface and features and details current condition.

The condition survey would feature still images for the survey and would measure specific defects to monitor their progression. Locations of points would be accurately logged using a GPS tracker.

To agree the current state of the road, the report would be agreed with the Council prior to construction works commencing.

Any immediate necessary repairs would be coordinated with the Council. Any damage caused by traffic associated with the proposed Development, during the construction period that would be hazardous to public traffic, would be repaired immediately.

During construction activities, a general road wear and tear review would be undertaken with the Council every four months during construction. Interim reviews will be undertaken by the principal contractor on a regular basis and the progress reports issued to the Applicant.

Any damage to road infrastructure caused directly by construction traffic would be made good, and street furniture that is removed on a temporary basis would be fully reinstated.

There would be a regular road edge review and any debris and mud would be removed from the public carriageway to keep the road clean and safe during the initial months of construction activity, until the construction junction and immediate access track works are complete.

Where defects occur, the principal contractor will ensure that they maintain a stockpile of road repair material on site to undertake repair works quickly and efficiently, when authorised by the Council to undertake interventions.

Upon completion of construction activities, a follow on condition review will be undertaken and a defects list prepared. Works required to reinstate the road back to its original condition would be undertaken at the Applicant's expense follow a review by the Council

There are cases where defects will need to be undertaken quickly and the contractor will have arrangements in place to respond to serious and significant defects within agreed hours.

5.4 Turning Facilities & Banksmen

For safety reasons both onsite and for other road users, the site has been designed so all vehicles can enter and exit the site in a forward gear. No vehicle shall reverse onto unmanaged public roads and shall only enter / exit the site using forward gear only.

A banksman will be provided at the site access to help guide traffic within the site and to ensure health and safety access for the site. The banksman will be in radio contact with the wider site compound to advise of movements to and from the site.

Upon completion of construction works, a gate will be provided on the access track at its junction into the proposed Development. The gate will be set back from the public road to ensure that any future HGV vehicles can stop at the gate without blocking back onto the track.

5.5 Non-Motorised Road Users

5.5.1 Pedestrians and Cyclists

The principal contractor will ensure that speed limits are always adhered to by their drivers and associated subcontractors.

Signage will be installed on the site exit that makes drivers aware of local speed limits and reminding drivers of the potential presence of pedestrians and cyclists in the area, noting the Core Path and cycle route. This will also be emphasised in the weekly tool box talks.

Warning signs advising of construction works would be placed at the start of Core Path GB/24 and asking path users to be aware of nearby construction activities.

5.5.2 Equestrians

The British Horse Society has previously made recommendations on the interactions between HGV traffic and horses. Horses are normally nervous of large vehicles, particularly when they do not often meet them. Horses are flight animals and will run away in panic if really frightened. Riders will do all they can to prevent this but, should it happen, it could cause a serious accident for other road users, as well as for the horse and rider.

The main factors causing fear in horses in this situation are:

- Something approaching them, which is unfamiliar and intimidating;
- A large moving object, especially if it is noisy;
- Lack of space between the horse and the vehicle;
- The sound of air brakes; and
- Anxiety on the part of the rider.

The British Horse Society recommends the following actions that will be included in the site training for all HGV staff. These will be added to tool box talks and the general staff induction:

- On seeing riders approaching, drivers must slow down and stop, minimising the sound of air brakes, if possible;

- If the horse still shows signs of nervousness while approaching the vehicle, the engine should be shut down (if it is safe to do so);
- The vehicle should not move off until the riders are well clear of the back of the HGV;
- If drivers are wishing to overtake riders, please approach slowly or even stop in order to give riders time to find a gateway or lay by where they can take refuge and create sufficient space between the horse and the vehicle. Because of the position of their eyes, horses are very aware of things coming up behind them; and
- All drivers delivering to the site must be patient. Riders will be doing their best to reassure their horses while often feeling a high degree of anxiety themselves.

5.6 AIL Traffic Management Measures

Any AIL movements associated with the site will be escorted by the Police. In these events, it is expected that at least one private escort and a minimum of two police escort vehicles are likely to be required (exact requirement will be confirmed with the police). The likely deployment of escorts will be as follows:

- The first police escort vehicle will be the advance escort and will be located sufficiently ahead of the convoy, to advise the convoy in good time of traffic stoppages, constraints and oncoming hazards;
- The second police escort will provide support to the first escort at junction closures and would be located at the front of the lead vehicle; and
- The civilian escort will be located behind the last vehicle to protect the rear of the convoy and ensure that following vehicles do not attempt dangerous overtaking manoeuvres. This escort will also assist with direction during constrained turning manoeuvres.

Before the convoys depart the Port of Entry (PoE), the Lead Driver should check weather and traffic conditions and ensure this information is included within the daily toolbox talks.

Within the route, there are locations where general traffic flows will need to be stopped to allow the safe manoeuvre of the loads. In these circumstances the advance escorts will ensure that the traffic is stopped before the convoys enters the affected section. The advance escorts will confirm through radio contact that the area is clear and safe for transit. Should general traffic fail to observe the request to stop, the advance escort will advise the convoy to immediately halt and will then proceed to remove the rogue traffic. The convoy must not start without approval from the advance escort.

In areas where the load is likely to, or is close to straddling the centre line, the advance escort should be positioned to give advance warning to the convoy such that evasive action can be taken. In constrained areas and other locations where verges are potentially soft the drivers must exercise care to ensure the trailer wheels do not leave the road surface as this may result in adverse load stability conditions.

Urban areas along the route pose different challenges for the abnormal loads. Whilst the vehicle speeds will be less than those in the rural sections of the route, there are more potential conflicts with other road users to be aware of. These include:

- Pedestrians and cyclists;
- Local vehicular traffic;
- Parked vehicles;
- Side junctions; and
- Street furniture.

Within urban areas, the convoy escorts will need to be aware of all road and footway users at turn sections within the route. At these locations there is potential for load over-sail and reference to the swept path assessment drawings is considered essential to identify these areas. It is important to note that only the Police have the power to request that vehicles and pedestrians move.

Within urban areas there is a higher chance of parked vehicles along the route and a possibility that parked cars will restrict available road width. Whilst these areas will not impede the loads they do create a further zone where the load drivers and escorts will need to take care of conflicts that include restricted road widths, car doors opening and pedestrians crossing the road between parked vehicles.

Information relating to AIL movements will be provided directly to residents living in the immediate vicinity of the access route. Information on the movement of the abnormal load convoys would also be provided to local media outlets by the Principal Contractor (or their appointed AIL delivery contractors) to help assist the public. Information would be provided to local newspapers and radio stations.

The project website will also be used to help advise of movements. Information would relate to expected vehicle movements on the route. It is hoped that this level of information will make residents aware of convoy movements and help reduce any conflicts.

5.7 AIL Convoy Health & Safety Measures

All staff working on the project will be inducted before entering the site. This will be undertaken prior to the commencement of AIL movements.

A daily Tool Box Talk for all convoy staff to be held at the start of each working day and carried out by the appointed Transport Co-ordinator or Appointed Lead Driver. A detailed record of the talk should be kept and filed once the convoy has arrived at the site.

The Tool Box Talks will cover a minimum of the following matters:

- The current version of the CTMP to be carried by all convoy vehicles;
- Identification of any updates since the previous version of the CTMP;
- Requirement to have a CB radio (fixed or portable), with fully charged batteries;
- Anticipated transport restrictions in each section of the route;
- Driver instructions on incident reporting;
- Driver instructions on trailer steering methodology, and availability of assistance;
- Instructions on areas requiring traffic stoppage, and methodology for convoy passing through these areas;
- The welfare arrangements for drivers;
- A summary of the predicted weather, traffic and road conditions; and
- Any questions on the contingency plans.

Each of the convoy vehicles must be suitably equipped with hazard warning devices to warn all other road users. All the tractor, trailer and escort vehicles operating on the project must have the following:

- Tractor units to have beacon bars on the roof and 3M reflective markings on both sides;
- All vehicle warning signage to be in English;
- Trailer units to have amber beacons on the rear with 3M reflective markings on both sides;
- All escort vehicles will have beacon bars on the roof, with 360 degree motion for all round visibility, and 3M reflective markings;
- Fire extinguisher and first aid kit; and
- Certified cargo lashing straps are to be used at all times. Certification must be carried and made available for inspection, kept within the cab.

All hazard warning equipment must be checked and cleaned at the start of each day. Additional cleaning of the warning equipment may be required throughout the day and must be undertaken when required.

All relevant personnel must have the appropriate Personal Protective Equipment (PPE). All PPE clothing must be 'CE' marked to show it meets current standards and should be appropriate for use in trunk road situations (i.e. must be full coats with reflective bands on the arms).

5.8 Emergency & Contingency Plan

To ensure access for emergency service vehicles, a coordination protocol will be established with the blue light emergency services. As the AIL convoys are escorted by the Police, the Police will be aware of potential access issues for ambulances and fire service vehicles and can take appropriate action on the route to pull to the side of the road or mount a verge to allow emergency vehicles past.

The civilian escort vehicles carry equipment to make running repairs to vehicles in the unlikely event of a breakdown. Further spares and equipment can also be based at the site for faster responses in case of mechanical issues.

The haulier will establish contracts with local suppliers to attend to any punctures and tyre issues, to minimise any stoppage time on the route.

6 Summary

This combined Transport Statement / Construction Traffic Management Plan has considered the likely impact of traffic generated by the Proposed Development on the local road network.

A review of the type and volume of vehicles associated with the construction programme has been provided and the peak of construction activities identified. This peak in traffic has been used to review the likely impact that construction activities would have.

Construction of the Proposed Development will generate approximately 142 movements vehicle movements per day at the peak of construction. It is expected that during the peak month of construction (Month 16), 25 two-way HGV movements per day will occur per day. A further 116 car / LGV trips would be created by construction staff travelling to and from the site.

Traffic management procedures have been proposed within this report which would ensure the safe operation of the approach route to the site during construction. Determination of the final details of these traffic management measures will occur once the Balance of Plant contractor has been appointed.

As the Proposed Development will not be manned, operational traffic is expected to be minimal and would be conducted by smaller vehicles. The impact of this on the wider road network will be negligible.

Appendix A Core Path Plan



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MAP 6 Core Paths Plan

Department of Planning & Transport

- Core Path
- Aspirational route
- ▲ Access point on National Cycle Route
- Water Access Point
- Continues as core path across council boundary
- Continues as non core path across council boundary



Appendix B Construction Programme

Construction Programme

| Element | Vehicle | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|------------------------------------|---------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|
| Site Establishment / Reinstatement | HGV | 150 | 50 | | | | | | | | | | | | | | | | | | | | | 50 | 100 |
| General Deliveries | HGV | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 |
| Site Clearance & Preparation | HGV | | 932 | 932 | 932 | 932 | | | | | | | | | | | | | | | | | | | |
| Emergency Access Junction | HGV | | | | | | | | | | | 14 | | | | | | | | | | | | | |
| Geotextile | HGV | | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| Development Platform | HGV | | | | | 911 | 911 | 911 | 911 | 911 | 911 | | | | | | | | | | | | | | |
| Foundation Steel | HGV | | | | | | | | | | 10 | 10 | | 10 | | 10 | | | | | | | | | |
| Foundation Concrete | HGV | | | | | | | | | | | 421 | 421 | 421 | 421 | 421 | 421 | | | | | | | | |
| Cabling | HGV | | | | | | | | | | | | | | 16 | | | | | | | | | | |
| Cable Sand | HGV | | | | | | | | | | | | | | | | 49 | 49 | 49 | | | | | | |
| EV Gear & Switchgear | HGV | | | | | | | | | | | | | | | | | 20 | | | | | | | |
| Cranes | HGV | | | | | | | | | | | | | | | 4 | | | 4 | 2 | | | | 2 | |
| Batteries & Invertors | HGV | | | | | | | | | | | | | | | | | | | 192 | 192 | 192 | 192 | 192 | |
| Buildings | HGV | | | | | | | | | | | | | | | | | | | 23 | 23 | 23 | 23 | | |
| Fencing | HGV | | | 13 | 13 | | | | | | | | | | | | | | | | | | | | |
| Fit Out | HGV | | | | | | | | | | | | | | | | | | | | 20 | 20 | 20 | | |
| Landscaping | HGV | | | | | | | | | | | | | | | | | | | | | 50 | 50 | | |
| Commissioning | LGV | | | | | | | | | | | | | | | | | | | | | | 44 | 44 | |
| Staff | LGV | 1279 | 1279 | 1535 | 1535 | 1535 | 1535 | 1535 | 1535 | 2046 | 2046 | 2046 | 2558 | 2558 | 2558 | 2558 | 2558 | 2558 | 2558 | 2558 | 2558 | 2046 | 1535 | 1535 | 1023 |
| Total | | 1517 | 2350 | 2569 | 2569 | 3465 | 2533 | 2533 | 2533 | 3045 | 3055 | 2579 | 3067 | 3077 | 3083 | 3081 | 3116 | 2715 | 2699 | 2862 | 2880 | 2419 | 1953 | 1717 | 1211 |
| Total HGV | | 238 | 1072 | 1035 | 1035 | 1930 | 999 | 999 | 999 | 1009 | 533 | 509 | 519 | 525 | 523 | 558 | 157 | 141 | 305 | 323 | 373 | 375 | 138 | 188 | |
| Total LGV | | 1279 | 1279 | 1535 | 1535 | 1535 | 1535 | 1535 | 1535 | 2046 | 2046 | 2046 | 2558 | 2558 | 2558 | 2558 | 2558 | 2558 | 2558 | 2558 | 2046 | 1579 | 1579 | 1023 | |
| Total HGV / Day | | 11 | 49 | 47 | 47 | 88 | 45 | 45 | 45 | 45 | 46 | 24 | 23 | 24 | 24 | 24 | 25 | 7 | 6 | 14 | 15 | 17 | 17 | 6 | 9 |
| Total LGV / Day | | 58 | 58 | 70 | 70 | 70 | 70 | 70 | 70 | 93 | 93 | 93 | 116 | 116 | 116 | 116 | 116 | 116 | 116 | 116 | 93 | 72 | 72 | 47 | |
| Total per Day | | 69 | 107 | 117 | 117 | 157 | 115 | 115 | 115 | 138 | 139 | 117 | 139 | 140 | 140 | 140 | 142 | 123 | 123 | 130 | 131 | 110 | 89 | 78 | 55 |

Appendix B – Scottish Environment Protection Agency Guidance for Pollution Prevention for Works and Maintenance in or near Water

Guidance for Pollution Prevention

Works and maintenance in or near water: GPP 5

Version 1.2 February 2018

This guidance has been produced by Natural Resources Wales (NRW), the Northern Ireland Environment Agency (NIEA) and the Scottish Environment Protection Agency (SEPA).

For Northern Ireland, Scotland and Wales, this document provides guidance on environmental legislation. These guidelines are not endorsed by the Environment Agency as regulatory guidance in England. For guidance on environmental regulations in England go to www.gov.uk

To find the relevant regulations visit www.legislation.gov.uk

Guidance for Pollution Prevention (GPP) documents are based on relevant legislation and reflect current good practice. Following this guidance will help you manage the environmental responsibilities to prevent pollution and comply with the law.

If you cause pollution or allow it to occur, you will be committing a criminal offence. Following these guidelines will help you reduce the likelihood of a pollution incident. If one does occur contact the environmental regulator immediately on the relevant incident hotline number: In Northern Ireland and Scotland call **0800 80 70 60**, in Wales call **0300 065 3000**.

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NetRegs

Health and Safety Executive (HSE)

Welsh Government

Dŵr Cymru Welsh Water

Section 1: Introduction

1.1 Who is this guidance for?

This guidance is for anyone carrying out works or activities in or near the water environment. Such activities have the potential to cause pollution, transfer non-native species and can impact on the bed and banks of a watercourse.

Potential environmental risks when working in or near water include:

- Silt – **section 2**
- Cement and concrete – **section 3**
- Chemicals and solvents – **section 4**
- Bridge cleaning debris – **section 5**
- Herbicides – **section 6**
- Invasive Non-Native Species – **section 7**
- Waste materials (including hazardous waste or special waste in Scotland) – **section 8**

1.2 Legal requirements

Formal approval may be required when carrying out such works or activities. It can take up to four months to process an application for formal approval, it is therefore important you contact the environmental regulator early on in the project.

There are laws that protect land, water, air, wildlife and people from pollution. If you cause pollution you will be committing an offence. Penalties include fines, imprisonment, Fixed Penalty Notices, stop-work notices or equivalent and having to pay clean-up costs, along with damage to your reputation.

Only clean uncontaminated water can be discharged without formal approval.

The Legal requirements are different throughout the United Kingdom (UK) (England, Northern Ireland, Scotland and Wales). If you are located in **Scotland** or **Northern Ireland** you can find information on your legal environmental obligations by visiting the NetRegs website (see website list). In **Scotland**, also read references 2 and 3. In **Wales** guidance on regulations can be found on the Natural Resources Wales (NRW) and Welsh Government website (see website list).

1.3 Which type(s) of formal approval may I need?

In this document we refer to ‘formal approval’, which covers the authorisation(s) you may need from the environmental regulator. They may be called a consent, licence or permit. You may be committing an offence if you carry out your works or activities without all the relevant formal approvals in place. See Appendix A for the main ones applicable in your area.

You are responsible for ensuring that you understand and comply with all applicable legislation wherever your site is located. If you have any concerns, or require clarification, contact the environmental regulator before taking action. Ignorance is no defence under law, so you need to understand which laws apply to you and your activities.

1.4 Scoping your project

Allowing time to plan and prepare before work starts on site can significantly reduce the risk of a pollution incident. Once you have identified potential sources of pollution, you can put in place measures to avoid or reduce the risk of causing pollution.

Planning ahead will:

- help make the job run smoothly
- improve risk management, reducing risk of pollution incidents and enforcement action
- help identify efficiencies and potential cost savings
- improve relationships with clients, local regulators and neighbours and reduce likelihood of complaints
- reduce damage and clean-up costs if an incident does happen
- help you win and maintain contracts
- protect and enhance your reputation

Plan to protect the Environment



Figure 1: Plan to protect the Environment (courtesy NetRegs 2016)

You can get information on local surface and groundwater water sensitivity from the environmental regulator before you start any work. In addition to preventing pollution of surface waters and groundwater you should take precautions to prevent blocking of channels and culverts, and erosion of the riverbank or bed. This information should form part of the environmental aspects and impact assessment and Site Environmental Management Plan (SEMP).

1.5 Pollution Prevention

It is important to understand how activities could affect the environment and cause pollution. Think about what pollution linkages there are (see Figure 2.).

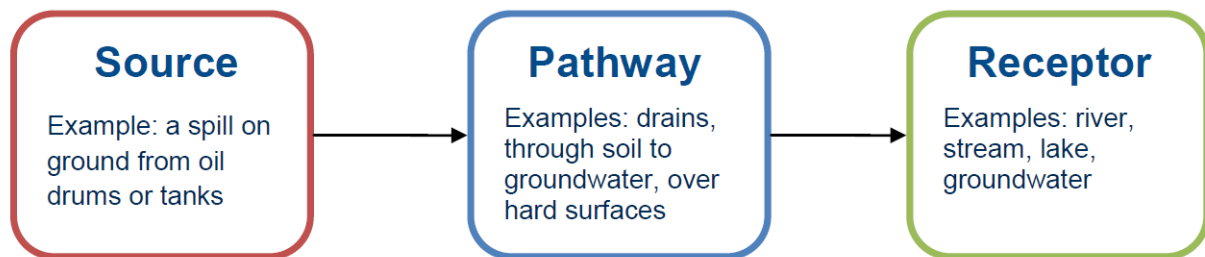


Figure 2: Example of a pollution linkage using the source > pathway > receptor model.

NOTE: Groundwater is both a pathway and a receptor.

The site and activities will only cause a risk to the environment or people if you have all three parts of the pollutant linkage present i.e. a source, a pathway and a receptor. You should put in place measures to prevent or minimise or mitigate the effects of any risks and thereby break the pollutant linkages between these three. By doing this, you can identify how to prevent or reduce the likelihood of pollution and reduce the impact of any risks that may occur. It is important that you fully understand the local drainage network as pollution is often caused by mistaking a surface water drain for a foul/combined sewer. Contact your local water company for advice on this.

Surface water drains go directly to a watercourse and therefore should only carry clean uncontaminated rainwater

If you cause pollution you will be responsible for the clean-up cost. This can be expensive and time consuming particularly if groundwater has become contaminated. There may be additional costs associated with recovering the cost for the environmental regulator's response (in line with the Polluter Pays Principle), you may receive fines through the criminal courts or civil claims and you may experience a reputational cost i.e loss of future work.

Following this Guidance for Pollution Prevention will help you reduce the likelihood of an incident. However, if one does occur contact the environmental regulator immediately on the relevant Incident Hotline number - see section 9. A rapid response to incidents will help to minimise the environmental impact and could reduce the overall costs – For more information refer to section 9.

1.6 Emergency works

Even if the works you are carrying out are required as a result of an emergency, this Guidance for Pollution Prevention should be followed as closely as possible. An emergency can be defined as an occurrence, which presents a risk of serious flooding, serious detrimental impact on drainage, or serious harm to the environment or people.

Contact should be made with the environmental regulator as soon as practicable to discuss whether further approval is required. If works are carried out without the knowledge of the environmental regulator, enforcement action may be considered whether it is an emergency or not.

Section 2: Silt

Good soil use and management is crucial to preventing silt pollution which is a major cause of environmental incidents. It can harm water quality, damage and kill aquatic life by smothering and suffocation and can cause flooding by blocking culverts and channels. See websites listed under Reference 19 for relevant soil guidance and good practice.

2.1 Activities that can cause silt pollution

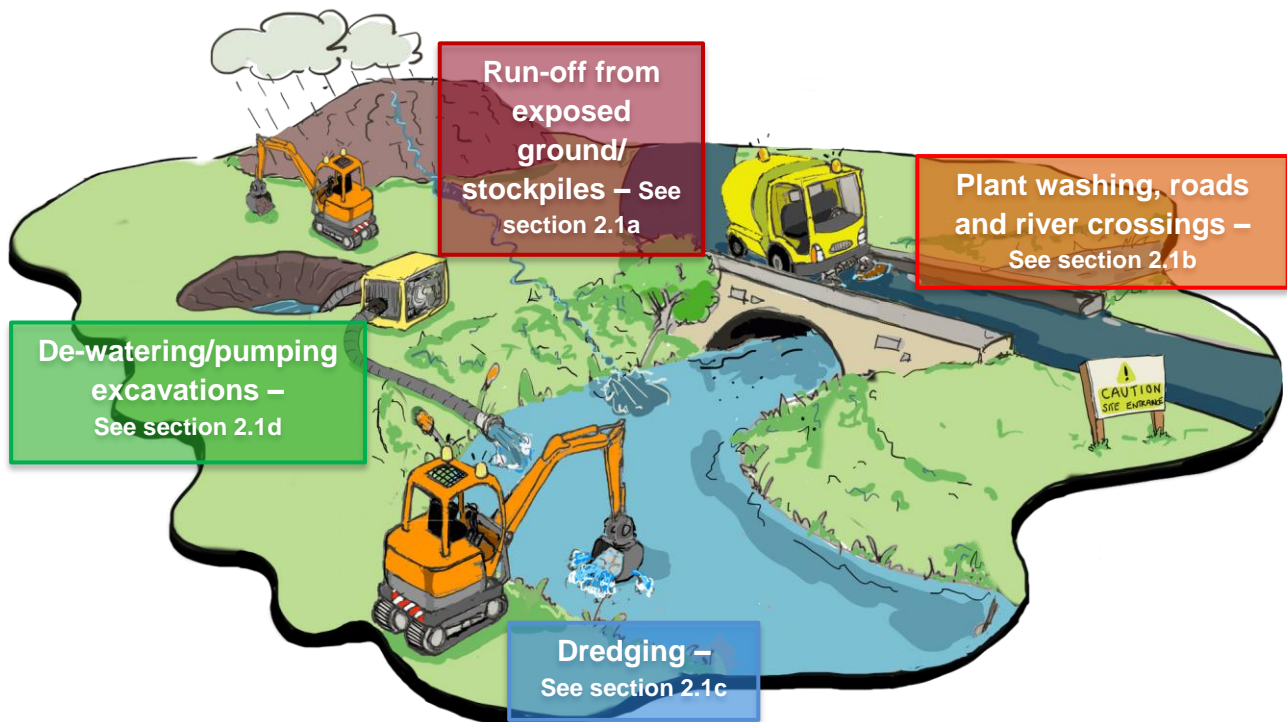


Figure 3: Activities that can cause silt pollution (courtesy NetRegs 2016)

2.1a Exposed ground and stockpiles

Soil stripping and vegetation removal at the start of a project can increase the volume of contaminated surface water run-off. It can also reduce the area of vegetated land available for disposal of silty water.

You should plan ahead for intense and also prolonged wet weather and consider all relevant pollution mitigation measures including:

- minimising the amount of time stripped ground and soil stockpiles are exposed
- only removing vegetation from the area that needs to be exposed in the near future
- seeding or covering stockpiles
- using geotextile silt fencing at the toe of the slope, to reduce the movement of silt; this should be installed before soil stripping has begun and vehicles start tracking over the site
- collect run-off in lagoons and allow suspended solids to settle before disposal – see section 2.2b
- divert clean water away from the area of construction work in order to minimise the volume of contaminated water

2.1b On-site working

The movement and maintenance of plant on site can generate silt and oil contaminated water, or introduce non-native species from other sites. Sources of silt (e.g. plant and wheel washing, site roads, river crossings) carry a high risk of causing pollution.

Plant and wheel washing

To reduce the pollution risk, make sure that you consider all relevant measures, including:

- plant and wheel washing is carried out in a designated area of hard standing at least 10 metres from any watercourse or surface water drain, rock outcrop (hard rock at surface) or karstic sinkhole
- run-off is collected in an impermeable sump - recycle and reuse water where possible
- settled solids are removed regularly and appropriately disposed of
- if permission can be granted from your local water and sewerage provider, it may be possible to discharge contaminated water to the public foul/combined sewer – see section 2.2e
- discharge of treated water to the environment with formal approval from the environmental regulator – see section 2.2
- contaminated water tankered off site for authorised disposal – see section 2.2f
- biodegradable oils should be used for vehicles and plant where possible, please be aware that they should still be prevented from entering the water environment

Site roads and river crossings

Run off from site roads and river crossings can contain high levels of silt. Road drains typically drain to the local water environment so are a pathway for pollution. To reduce the pollution risk make sure that you consider all relevant measures, including:

- brushing or scraping roads to reduce dust and mud deposits, appropriately disposing of material collected
- putting small dams or silt fencing in artificial roadside ditches to retain silt
- using existing permanent bridges or pipe crossings for crossing the river
- if necessary building temporary bridges (constructed in the dry) - do not ford rivers
- working from the bank where possible (taking steps to stabilise the bank during and after works), avoiding working in the river
- divert run-off to settlement lagoons - see section 2.2b

In **Scotland** please refer to the SEPA river crossings guidance, reference 4.

2.1c Disturbance of the river bed / working in the river channel

Always try to avoid working in the channel. When you have considered all other options and it is still necessary (e.g. dredging operations, river diversion works) contact your environmental regulator as early as possible during the scoping stages to discuss appropriate pollution control measures. Permission for this type of work may take up to four months to obtain - see section 1.

The risk of silt pollution causing an incident will depend on many factors including:

- the time of year e.g. fish spawning season
- likelihood of silt being disturbed and the method/effectiveness of silt containment
- what the river bed is made of, e.g. silt or gravel
- the conditions in which the work is carried out, e.g. working in the dry, weather

Silt pollution caused by working in the water environment can be minimised or prevented by keeping water out of the working area using appropriate isolation techniques, such as coffer dams and by-pass channels. There may be a need for fish rescue prior to in-channel works, stream diversion or coffer dam work. Fish passage **MUST** be maintained during in-channel works.

In **Northern Ireland** all river works should be conducted 'in the dry' (*i.e. isolated from waterway*) in a manner to prevent the release or escape of suspended solids or pollutants to the environment following regulator engagement to agree a method of works.

In **Wales** in-channel works during the spawning season (17 October to 15 May) are generally **NOT** permitted. You will need to contact the local NRW Fisheries Team to find out what the specific embargo periods are when working in the channel is not allowed in your area.

In **Scotland** please refer to the SEPA Silt Control Guidance: Preventing Pollution While Dredging – Reference 5

2.1d Disposal of water from excavations, dewatering and pumping

Problems with disposal of water from these activities may be minimised or avoided by:

- preventing water from entering excavations, by using cut-off ditches
- considering the impact on groundwater if you use well point dewatering or cut off walls (in Scotland, please refer to the CAR Practical Guide: GBR 15, Reference 1)
- using pump sumps in excavations
- raising inlet hoses above the bed to ensure that they do not disturb silt on the bed
- discharging clean water onto a hard surface e.g. concrete slabs/gravel, to avoid causing impact from ground/bank erosion
- using appropriate pump rates; to avoid disturbance of bed or bank the maximum rate should be set after consideration of the flow of the river, the location of the discharge and the risk of erosion
- protecting the pump inlet to avoid drawing in aquatic life and other debris
- minimising disturbance of standing water

In **Wales** please refer to the dewatering guidance – Reference 6.

2.2 Disposal of contaminated water

Where run off water is contaminated with silt or other pollutants such as oil this water must not be pumped or allowed to flow (directly or indirectly) into the water environment without treatment.

Discharges to the water environment may require formal approval from the environmental regulator – see section 1. If you require formal approval, it may limit the volume, amount of silt and the presence of any oil in the discharge, and may have conditions for additional substances.

In **Scotland** all surface water discharges from new developments require authorisation and to be treated by a Sustainable Drainage System or equivalent - see section 2.2a.

It is essential to minimise the volume of clean water that becomes contaminated, by diverting clean water away from working areas

Discharges to public foul/combined sewers will require consent from the water and sewerage provider. In **Wales** see Reference 7 for details on the water and sewerage providers in your area. If the water and sewerage provider is unable to approve, it will be necessary to tanker the contaminated water off site for authorised disposal (section 2.2f).

The choice of method for the treatment and disposal of contaminated water will depend on:

- the volume of water
- the area of land available for storage, treatment or discharge
- the amount and type of silt
- the presence of other substances in the water
- the conditions of any consent or authorisation.

Contaminated water treatment and disposal options

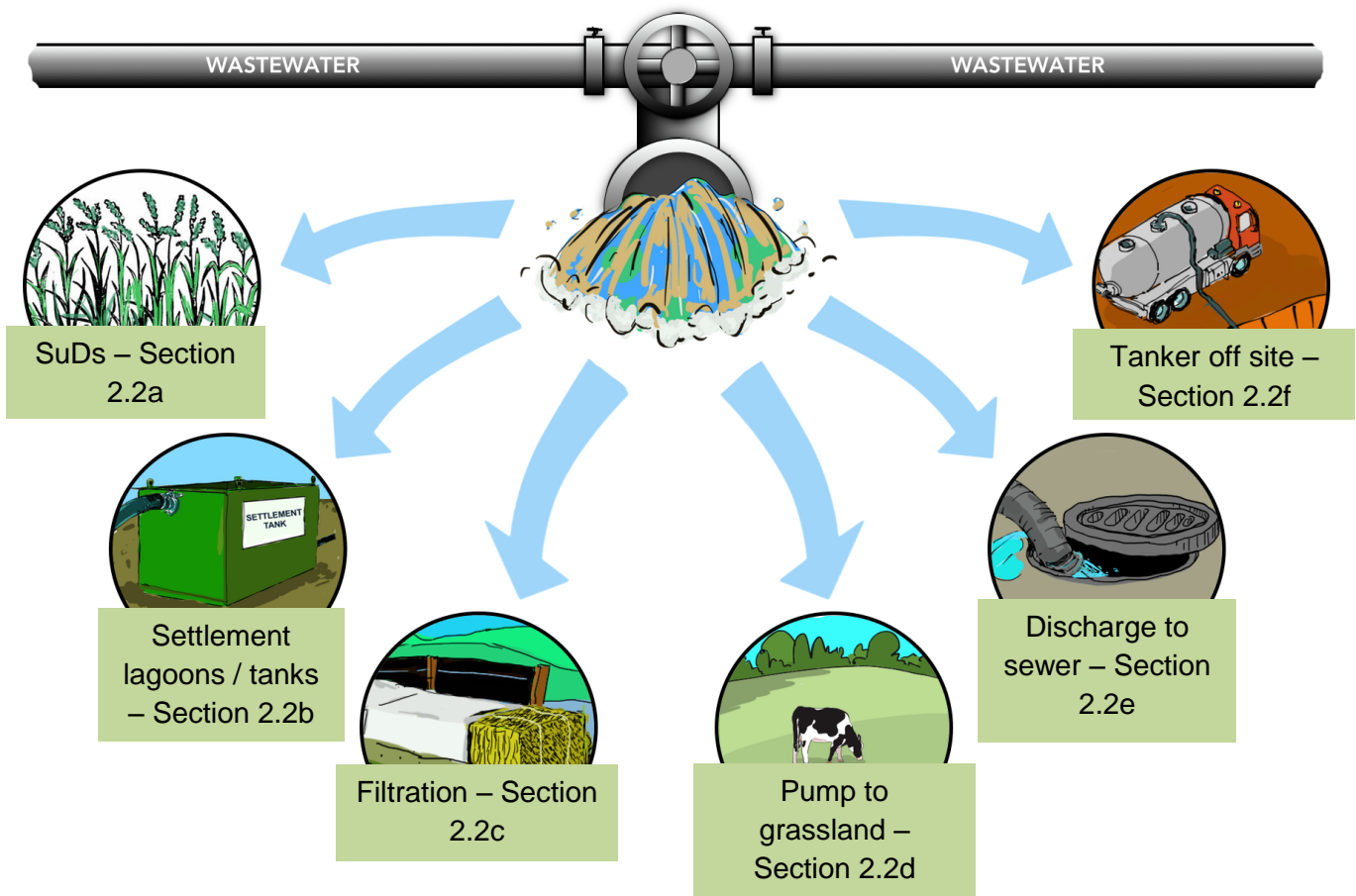


Figure 4. Contaminated water treatment and disposal options (courtesy NetRegs, 2016)

2.2a Sustainable Drainage Systems (SuDS)

Sustainable drainage is the practice of controlling and managing surface water runoff as close to its origin as practicable by slowing and reducing flows, allowing adequate settlement and biological action to take place before water is discharged to the water environment. The most effective SuDS use a series of drainage components to imitate natural drainage rather than traditional end-of-pipe drainage solutions. Well designed, easy to maintain SuDS will deliver a range of important benefits. They can:

- reduce flood risk from development within a catchment by slowing down runoff reaching the water environment
- minimise diffuse pollution arising from surface water runoff
- minimise the risk of pollution to groundwater
- minimise environmental damage, such as bank erosion and damage to habitats
- maintain or restore the natural flow regime of the receiving watercourse
- maintain recharge to groundwater
- achieve environmental enhancements, improvement to wildlife habitats, amenity and landscape quality
- help meet conditions set in license or consents.

Examples of source control SuDS:

- **Permeable/porous surface pavements** – water permeates in to the soil or sub-surface reservoir which can then be allowed to discharge slowly rather than immediately running off. This will minimise the volume of water that you might need to treat and can also recharge groundwater. Permeable/porous pavements need to be protected during installation from blocking by excessive silt-contaminated water.
- **Infiltration trenches** – a shallow excavated trench backfilled with stone to make an underground reservoir. Run off is diverted into the trench and then filters in to the subsoil. The closer to the source the more effective this method will be.
- **Infiltration basins** – a shallow surface impoundment where water is stored until it gradually infiltrates into the soil of the basin floor. The performance of the basin depends largely on the permeability of the soil and the depth of the water table
- **Filter drains or French drains** - these are similar to infiltration trenches but also allow movement of run off slowly towards a watercourse allowing time for filtration, storage and some loss of water due to evaporation / infiltration.
- **Swales** – grassed wide shallow depressions which lead water overland from a drained surface into a storage or discharge system. They provide temporary storage for run off reducing high flows. Solids are retained and oily residues and organic matter broken down in the top layer of the soil and vegetation.
- **Filter strips** – vegetated sections of land designed to accept run off as an overland sheet flow. To be effective they should be 5 – 15 metres wide and are best employed on the upstream end of a drainage system. They are most effective at removing excess solids and pollutants before discharging to downstream system.

Other SuDS can be considered including ponds, retention basins (dry ponds) and wetlands.

At the planning stage of your project consider how your drainage can be managed by using SuDS. This will ensure that SuDS infrastructure is properly maintained and functions effectively for its design life. It is advisable to begin discussions at an early stage to help ensure that sufficient land is made available to implement SuDS. Pre-application discussions between the developer, local planning authority, water and sewerage provider and other relevant bodies will help to identify the most cost effective way to integrate SuDS within the emerging scheme design.

For phased developments, the design should indicate how SuDS features will be managed, protected and commissioned, especially where their use may change through the construction programme.

Pollution removal by these methods is achieved by sedimentation, adsorption, absorption, filtration and microbial action. CIRIA have more detailed information on SuDS which can be found on the CIRIA website (see website list) or in References 8 and 9

In **Scotland**, discharges of water run-off from construction sites are required to be treated by either a Sustainable Drainage System (SuDS) or an equivalent which is equipped to avoid pollution. However, equivalent systems are not permissible for treatment of runoff water from completed developments - see CAR Practical Guide: GBR 10 in Reference 1.

Businesses in **Scotland** and **Northern Ireland** can find more information on SuDS on the guidance pages on the NetRegs website (see website list). Businesses in **Wales** can find more information at the SuDS Wales website (see website list).

2.2b Settlement lagoons or tanks

To be effective a settlement lagoon or tank should retain contaminated water long enough for silt to settle out. The length of time will depend on the type of silt, with finer clay solids taking longer to settle. If you use flocculants to aid settlement you **MUST** discuss this option with your environmental regulator before use. Flocculants can themselves be polluting and/or toxic and need careful use and monitoring to be effective. The checklist below gives guidance on lagoon/tank operation.

Table 2.1 gives guidance on the volume of lagoon or tank needed for a three-hour settlement at a defined rate of inlet discharge. NOTE: This may not be suitable for the settlement of fine clay solids.

| Typical dimension of a settlement lagoon / tank for a three hour settling time | | | |
|--|---------------------------------|--------|-------|
| Pump Diameter | Discharge rate in to the lagoon | Length | Width |
| 6 inch pump | 3000 l/ min | 60m | 20m |
| | 6000 l/ min | 80m | 27m |
| 4 inch pump | 1000 l/ min | 30m | 10m |
| | 2500 l/ min | 50m | 17m |
| Assuming a tank / lagoon depth of 1 m , where length = three times the width | | | |

Table 2.1: Settlement pond dimensions - the size of the tank/lagoon is determined by the rate of introduction of water.

Settlement lagoon/tank – good practice checklist

- maintain a constant pumped inlet rate
- minimise the inlet flow as much as possible by using energy dissipaters or rip rap
- position inlet pipe work vertically to dissipate energy
- provide lined inlet chamber to reduce velocity of flow
- line the inlet chamber and outlet weir with materials like geotextiles, brickwork, polythene or timber
- have a long outlet weir to minimise disturbance
- provide two or three lagoons in series or parallel to increase silt retention, preferably with a bypass facility to allow maintenance, when necessary
- de-silt inlet chamber regularly
- monitor discharge quality frequently.

See Reference 10 for more detail.

2.2c Filtration

If you do not have the space for lagoons and the water is contaminated with coarse silt only (not fine clay silts), you may be able to use tanks filled with filter material. Single sized aggregates 5–10 mm, geotextiles or straw bales wrapped in geotextiles can be used as a filter. You must monitor the inlet pump rate and discharge quality carefully, to ensure only clean, uncontaminated water is discharged. Discharge should then be to foul sewer (with the water and sewerage company's permission), land (with the environmental regulator's and landowner's permission), or to surface water drains (with the environmental regulator's permission).

2.2d Pump to grassland

This method of disposal is only suitable for water contaminated with silt only and you must have permission from your environmental regulator and landowner. The discharge rate must match the rate of infiltration into the soil, which will vary with the soil type (see Table 2.2), weather, amount of vegetation cover and the gradient. Discharges should be well away from excavations to avoid re-circulation through the ground and must be monitored to prevent scouring, waterlogging, overland flow and sediment mobilisation issues.

| Soil type | Infiltration co-efficient (m/h) |
|--|---------------------------------|
| Gravel | 10-1000 |
| Sand | 0.1-100 |
| Loamy sand | 0.01-1 |
| Sandy loam | 0.05-0.5 |
| Loam | 0.001-0.1 |
| Silt loam | 0.0005-0.05 |
| Chalk | 0.001-100 |
| Cut off point for most infiltration drainage systems | 0.001 |
| Sandy clay loam | 0.001-0.01 |
| Silty clay loam | 0.00005-0.0005 |
| Clay | <0.0001 |
| Till | 0.00001-0.01 |
| Rock | 0.00001-0.1 |

Table 2.2: Typical infiltration rates for different soil types (Bettess, 1996)

2.2e Discharge to sewer

Discharges to foul sewer will require the permission of the local water and sewerage provider. You must approach your local water and sewerage provider (In **Wales**, see reference 7) as early as possible in your project. You may require formal approval, which may limit the volume and content of the discharge. If the water and sewerage provider is unable to approve, it will be necessary to tanker the contaminated water off site for authorised disposal (see section 2.2f).

2.2f Tanker off site

If no other disposal routes are available then contaminated water can be collected by tanker for authorised disposal off-site. This may be a costly option and must be discussed with your environmental regulator at the scoping stage of your project. You must comply with your Duty of Care obligations and obtain Waste Transfer Notes for any waste leaving site.

Section 3: Concrete, cement and grout

Concrete, cement and grouts are very alkaline and corrosive and can cause serious pollution to water. Concrete, cement and grout mixing and washing areas should:

- be sited on an impermeable designated area
- be sited at least 10 metres from any watercourse or surface water drain, rock outcrop (hard rock at surface) or karstic sinkhole to minimise the risk of run off entering the water environment
- have settlement and re-circulation systems for water reuse, to minimise the risk of pollution and reduce water usage
- have a contained area for washing out and cleaning of concrete batching plant or ready mix lorries; see section 2.1b above
- collect wash waters that cannot be reused and, where necessary, discharge to the foul sewer (you must have permission from the local water and sewerage provider for this), or contain wash water for authorised disposal off site (see section 8. Waste Management).

Wash waters from concrete and cement works should never be discharged into the water environment as this could have serious impact on the water quality and ecology.



Cement silo inspection (courtesy of SEPA)

Section 4: Oil and chemicals

Oil storage regulations differ between countries, however in general the regulations apply to businesses in:

- **Wales**, who store more than 200 litres of any kind of oil (except uncut bitumen) in oil storage containers. The regulations also apply to oil storage at domestic properties installed since 15 March 2016;
- **Scotland**, who store any volume of any kind of oil (excluding uncut bitumen). More prescriptive requirements apply to industrial, commercial and institutional sites storing over 200 litres of oil. The regulations also apply to domestic premises storing more than 2,500 litres of oil;
- **Northern Ireland**, who store more than 200 litres of any kind of oil (excluding uncut bitumen) in oil storage containers including drums and IBCs. The regulations also apply to domestic premises storing more than 3,500 litres of oil;
- **England**, who store more than 200 litres of oil in oil storage containers.

Detailed guidelines concerning above ground oil storage can be found in our guidance GPP2, see Reference 11.

4.1 Biodegradable oils

If possible use biodegradable lubricant and biodegradable hydraulic oil in plant when working in or near watercourses. Biodegradable oils are less toxic than most of the synthetic oil but should still be stored and used to the same standards as other oils and prevented from entering the water environment.

4.2 Trade materials

Sealants, coatings, adhesives and glazings can be toxic to plants and animals if released into the environment. Select, store and use these materials carefully to save resources and protect the environment. You must not use sealant and glazing compounds containing asbestos. You should:

- use water based or low solvent products
- avoid products containing lead as a drying agent and those containing hazardous solvents (toluene or chlorinated hydrocarbons)
- provide safe and secure storage.

For guidance on general storage in **Northern Ireland** and **Scotland** visit NetRegs (see website list).

You must make sure you are familiar with the labelling on the products you use and fully understand any hazardous properties they hold.

Section 5: Bridge maintenance and structures over water

Work to maintain bridges or other structures over or next to watercourses has a high risk of causing pollution. The maintenance work itself may require formal approval from the environmental regulator and you should contact them at an early stage in your project to agree the most appropriate method of working and to agree an Environmental Management Plan.

5.1 Pollutant containment

Dust, debris and contaminated water are the most common pollutants produced by structure maintenance. You should choose a containment system designed to reduce the risk of pollution from your work. The system should take account of the sensitivity of the environment which will influence the type of containment you will need.

Methods of containment include:

- air or water impermeable walls
- rigid or flexible framing lined as necessary
- fully sealed joints
- airlocks or re-sealable entryways
- negative air pressure (achieved by forced or natural air flow)
- exhaust air filtration.

In sealed containment areas you should provide filtered ventilation to prevent the build-up of dust and minimise the possibility of contaminated air escaping. Use physical cleaning instead of liquid chemicals such as caustic and acid solutions. Contain contaminated water from surface washings and agree the disposal method with the environmental regulator as part of the Environmental Management Plan before you start work. In some circumstances you may be able to use a barge with a wastewater containment facility for working over water, or dispose to foul sewer with prior permission of the local water and sewerage provider.

The containment facility must be designed so that the structure does not obstruct the river flow beneath it to such an extent that it increases the risk of flooding.

5.2 Paint removal

Paint removal methods include:

- abrasive blast cleaning
- blasting in a closed circuit
- preparation by various types of wet abrasive blasting or water jetting
- chemical stripping
- hand or power tool cleaning.

Abrasive blasting produces the greatest level of dust and debris. The use of vacuum attachments on power tools can reduce dust generation. Water cleaning methods produce less debris, but generate run-off, which needs to be contained and treated.

Sample existing coatings for hazardous materials (e.g. lead) before starting to remove them. This can help determine the level of containment you will need. The level of containment needed depends on:

- the amount of paint to be removed
- the type and concentration of the hazardous materials
- the sensitivity of the surrounding environment.

5.3 Surface cleaning

You should avoid using grit blasting with slag-derived grit as they can contain significant levels of heavy metals such as copper. These can be toxic if they get into the water environment. Reduce the potential for contamination by using garnet, low silica abrasive or recycled glass media with vacuum attachments.

5.4 Painting

The advice for painting is similar for paint removal although the volume of waste and size of operations will be less. Remove dust and debris by sweeping or vacuum cleaning before painting. Paints can be applied on-site using brush, conventional spray or airless spray. Consider using electrostatic spray units to reduce the loss of product by over-spraying.

Carefully consider the type of paint you use. Although water based solvent-free paints have lower environmental impact they may require more frequent application. Solvent-based paints could have a higher environmental impact but will last longer and require less maintenance. The decision to use water or solvent-based paints should be based on the environmental sensitivity of the surrounding environment and ease of access to the structure. All waste paints should be disposed of at an appropriately authorised waste facility. Washings from paint brushes and containers must not enter surface water drains (e.g. roof gullies, road drains) as these may drain to the local water environment.



Bridge maintenance (courtesy of SEPA)

Section 6: Pesticide use

Pesticides are used for controlling pests (these include: insecticides; molluscicides; and acaricides), weeds (herbicides) and diseases (fungicides). They are all required to have information on the product labels to explain how and where they can be used.

You should always consider alternative ways of controlling pests and weeds in or near water. If you decide to use a pesticide in or near water, you will need approval from the environmental regulator before use. In **Scotland**, the treatment of invasive non-native species (INNS) within 1m of a surface water is now permitted, providing you follow the rules within the General Binding Rule (GBR) 23g, see Reference 1. Safe and correct application of pesticide is required to protect the environment and water supplies. Only pesticides approved for use in or near water may be used, and only by competent persons holding a Health and Safety Executive (HSE) recognised specified certificate for pesticide use (or under the direct supervision of a certificate holder). The sprayer/operator must comply with the herbicide product label and meet all of its conditions.

You should contact the environmental regulator if you are considering aerial spraying.

You must also carry out a Control of Substances Hazardous to Health (COSHH) assessment for any activities that involve pesticides.

You must make sure that your pesticide application equipment is tested at least once by 26 November 2016 unless it is less than 5 years old on that date and at regular intervals thereafter. Knapsacks and handheld sprayers are exempt from the requirement to pass inspection. All equipment must be calibrated on a regular basis.

Equipment which is less than 5 years old on 26 November 2016 must be tested before it becomes 5 years old.

After the 26 November 2016, ongoing testing intervals vary depending on the type of applicator. The following types of equipment must be inspected at intervals of no more than 5 years between 2016 and 2020 and at intervals of no more than 3 years after 2020:

- boom sprayers greater than 3m
- sprayers attached to trains or aircraft
- air assisted broadcast sprayers.

Equipment that represents a very low scale of use, including those not used for spraying pesticides, will be subject to a maximum inspection interval of 6 years. This equipment type must be inspected once by 26 November 2016 (unless it is less than 5 years old on that date) and at intervals of no more than 6 years thereafter. A complete list of these equipment types is maintained within the National Action Plan for the Sustainable Use of Pesticides, see Reference 12.

Further information is also available from the 'Using Pesticides' guidance pages and the 'Code of Practice for using Plant Protection Products' on the HSE website (see website list).

Section 7: Invasive Non-Native Species (INNS)

An invasive non-native species is any non-native animal or plant that has the ability to spread causing damage to the environment, the economy, our health and the way we live.

Common examples include:



Japanese Knotweed



Himalayan Balsam



Giant Hogweed



Asian Clam



Floating Pennywort

Common INNS (images courtesy of GBNNSS)

The regulations differ between countries, however in general:

- In **England, Wales** and **Northern Ireland** it is an offence to plant or cause to grow in the wild certain listed invasive non-native species.
- In **Scotland**, it is an offence to plant or cause **any** non-native plant species to grow in the wild.

You should take the necessary steps to eliminate the risk of transferring water and soil potentially containing plant or animal diseases, or invasive non-native species, to or from the development site. If plant material is removed from site, it can only be transported by registered waste carriers and disposed of at appropriately authorised waste sites. The environmental regulator has a public register which holds this information. In **Scotland** and **Northern Ireland** you can visit the 'Find my nearest waste site' pages on the NetRegs website (see website list) in **Wales** see Reference 13.

Any pumps and associated pipework used should be:

- emptied, thoroughly cleaned using a disinfectant approved for aquatic use, rinse thoroughly without allowing the cleaning water to enter the main drainage system (and preferably dried) before it is taken to a site and again before being removed from it.
- positioned to avoid placing the inlet pipe amongst water plants
- positioned with the inlet just below the water's surface, rather than on the bed of the water body.

To help minimise the risk of spreading INNS, any equipment or plant needs to be cleaned and dried before it is taken to a site and again before being removed from it.

In **Wales** further INNS information, including leaflets on different species is available through the Welsh Government INNS website pages (see website list).

In **Northern Ireland**, wildlife crime is reported to the Police Service Northern Ireland (see Reference 14). All sightings of INNS should be submitted through the CEDaR online submissions portal (see website list).



Use the GB Non Native Species Secretariat website (See website list) which has the latest INNS good practice information including:

- ***a short e-learning training module to provide a basic understanding of INNS, the risks and what to do***
- ***more specific biosecurity advice***
- ***and further Be Plantwise and Check, Clean, Dry information.***

You should also make yourself familiar with the GB NNSS advice on:

- ***high priority alert species***
- ***how to report any suspected INNS sightings***

Section 8: Waste management

Legal waste storage and disposal are essential for effective pollution prevention.

Under the Duty of Care legislation (see Reference 15) you have a legal duty to make sure any waste you produce does not escape from your control. Waste must be transferred to an authorised, registered or exempt waste carrier or waste manager. It must be accompanied by a full description of the waste and a Waste Transfer Note and be disposed of lawfully. You should check on the proposed destination and ensure the site is authorised to receive the waste.

In **Scotland** and **Wales** you must separate dry recyclable materials such as paper, card, glass, metals and plastics. These must be collected separately from other wastes and managed in such a manner as to allow high quality recycling. In **Wales** see Reference 16

Some types of waste, called 'hazardous wastes' or in Scotland, 'special wastes', such as oily wastes, acids, solvents and solvent-based products are very harmful to human health or to the environment. When dealing with hazardous/special wastes:

- you must store, handle and dispose of these differently to non-hazardous wastes
- you must not mix different types of hazardous or special wastes together
- if you mix hazardous or special wastes with non-hazardous wastes then you must consider everything as hazardous or special waste
- the movement of hazardous/special wastes must be accompanied by a consignment note. Everyone involved in the transfer of the waste, including your environmental regulator, must keep copies of the consignment notes for proof of legal disposal.

In **Wales** any premises that produces less than 500kg of hazardous waste in a 12 month period is exempt from registering. However hazardous waste moved from an exempt premises must still be covered by a Hazardous Waste Consignment Note. The unique consignment note code will show that the waste has come from an exempt premises. NRW have published advice that lists certain types of premises that do not need to register (see Reference 13). These exceptions only apply in certain circumstances. You should read the advice to ensure that it applies to your premises and activity. See Reference 17 for information on how to register as a hazardous waste premises.

Consider the security of your premises too - any waste dumped on your property becomes your responsibility to remove which will cost you money.

If you are located in **Scotland** or **Northern Ireland** you can find out how these waste regulations affect your site. Check the guidance by Environmental Topic section of the NetRegs website (see website list) for information on waste legislation and how you can comply.

If you are located in **Wales** you can find out how waste regulations affect you by visiting the NRW website, (see website list).

To help maximise reuse and recycling and also minimise disposal of waste, it's useful to draw up a Project Waste Management Plan or a Resource Management Plan taking into account the waste hierarchy of prevention, preparing for re-use, recycling and other recovery and disposal.

Project Waste Management Plan checklist

- Carry out a waste minimisation audit to identify where you can reduce the volume of waste you produce
- Reuse materials or use products that can be reused many times
- Substitute materials for less hazardous ones – e.g. biodegradable lubricants and water based paints
- Recycle waste where possible
- Segregate different wastes for recycling, hazardous waste and general waste and label them. Do not mix or dilute hazardous wastes - In **Scotland**, you must separate dry recyclable materials such as paper, card, glass, metals and plastics. These must be collected separately from other wastes and managed in such a manner as to allow high quality recycling
- Store waste in suitable containers of sufficient capacity to avoid loss, overflow or spillage
- Store waste in designated areas, isolated completely from surface water drains, outside the floodplain and areas which discharge directly to the water environment
- Cover or enclose skips unless they are stored undercover or within a building
- Take waste off your site frequently; do not allow large quantities to accumulate.

Section 9: Incident response

Incident Hotline Numbers:

In **Scotland, Northern Ireland and England** call:

0800 80 70 60

(24 hour service)

In **Wales** call:

0300 065 3000

(Press 1 for 24 hour service)

You should immediately report any environmental incidents by calling the Incident Hotline for your country.

Incidents can include spillages (e.g. from oils and chemicals), contaminated surface water run-off, flooding, riverbed disturbance, damage to underground services, damage to habitats and poor waste disposal and storage. If in doubt, report it.

You should produce an Incident Response Plan as part of the environmental impact management of your work. Include the following:

- site risks
- list of key external and internal contacts (include your environmental regulator, Local Authority, Fire Service)
- reporting procedures
- site plan including drainage and location of storage/refuelling areas
- list of stored materials
- details of local environmental sensitivities e.g. abstractors, high amenity areas and fish farms
- location of spill equipment
- procedures for spill containment and remediation

Train your staff and contractors in the use of spill equipment and how to manage and dispose of waste materials legally.

If you are using oils and chemicals in close proximity to the water environment, store a suitable spill kit or absorbent materials nearby. Provide appropriate temporary storage for any oils and chemicals. Contain all spillages using absorbents such as sand, soil or commercially available booms or pads and notify the environmental regulator immediately, using the Incident Hotline numbers above.

Appendix A: Types of formal approval

| | Water discharge | Working close to water | Designated sites and protected species | Other |
|-------------------------|---|--|--|---|
| Northern Ireland | If you want to discharge any of the following: trade or sewage effluent; or other poisonous, noxious or polluting substance into a waterway or water contained in any underground strata you must have approval from the Northern Ireland Environment Agency (NIEA), see website list | You must have consent from the Rivers Agency before you place structures in any waterway that could affect its drainage. Contact your local Rivers Agency office for further information, see website list | <p>Authorisation may be required for works within designated sites such as Sites of Special Scientific Interest – contact NIEA to check.</p> <p>European Protected Species of animals, their breeding sites and resting places, are protected against disturbance and harm. Check the NIEA website for more information and details on how to apply for a licence.</p> | <p>Planning permission – contact your Local Planning Authority.</p> <p>Trade Effluent Consent for discharging to public foul/combined sewer – contact your water and sewerage company to apply/discuss.</p> <p>If you plan to use herbicides to control weeds you may need authorisation from NIEA - see NIEA website.</p> <p>Other approvals may be needed depending on the site's specific environmental sensitivities – contact NIEA to check.</p> |
| Scotland | <p>Depending on the activity being carried out you may require authorisation from SEPA under the Controlled Activity Regulations (CAR).</p> <p>The level of authorisation required is dependent on the effect that the activity will have on the water environment. The levels of authorisation are as follows:</p> <ul style="list-style-type: none"> • General Binding Rules (GBRs) provide statutory controls over certain low risk activities • Registration is intended to cover low risk activities which cumulatively pose a risk to the water environment | | <p>Scottish Natural Heritage (SNH) is the conservation body for Scotland.</p> <p>Permission will be required for works on designated sites such as Sites of Scientific Interest (SSSI) or Special Area of Conservation (SAC). Contact SNH for further</p> | <p>Planning permission – contact your Local Planning Authority.</p> <p>Trade Effluent Consent for discharging to public foul/combined sewer – contact your water and sewerage company to apply/discuss.</p> |

| | | | | |
|---------------------|--|---|---|---|
| | <ul style="list-style-type: none"> A licence is needed if site-specific controls are required, particularly if constraints upon the activity are to be imposed <p>Please contact SEPA to discuss, see website list.</p> <p>Also read reference 1 for more details.</p> | <p>details, see website list.</p> <p>European Protected Species of animals, their breeding sites and resting places, are protected against disturbance and harm. Contact SNH for details on licencing.</p> | <p>If you plan to use herbicides to control weeds you may need authorisation from SEPA - see SEPA website.</p> <p>Other approvals may be needed depending on the site's specific environmental sensitivities – contact SEPA to check.</p> | |
| <p>Wales</p> | <p>An Environmental Permit for Water Discharge may be required if you carry out a water discharge.</p> <p>Discharges of clean, uncontaminated water from e.g. excavations, do not need approval providing the discharge is temporary (less than 3 consecutive months) and the advice in this GPP is followed.</p> <p>Contact NRW to apply/discuss.</p> | <p>A Flood Risk Activity Permit may be required if works are being proposed in, over, under or adjacent to a Main River. Please check NRW's website for more information.</p> <p>If the watercourse is classed as an Ordinary Watercourse you will need to contact the relevant Local Authority to discuss whether a consent is required.</p> <p>See Reference 18 to find out whether your works are near a Main River or Ordinary Watercourse.</p> | <p>Assent or Consent may be required for works within designated sites, such as Sites of Special Scientific Interest – contact NRW to check.</p> <p>European Protected Species of animals, their breeding sites and resting places, are protected against disturbance and harm. Check the NRW website for more information and details on how to apply for a licence.</p> | <p>Planning permission – contact your Local Planning Authority.</p> <p>Trade Effluent Consent for discharging to public foul/combined sewer – contact your water and sewerage company to apply/discuss.</p> <p>If you plan to use herbicides to control weeds you may need to apply for an agreement – see NRW website.</p> <p>Other approvals may be needed depending on the site's specific environmental sensitivities – contact NRW to check.</p> |

Appendix B: Examples of site specific environmental hazards and sensitivities

| Environmental Sensitivities |
|--|
| Downstream water abstractors and users e.g. fish farms. |
| NOTE: In Northern Ireland, if the waterway or downstream of the works is of a fisheries interest it will have an impact on the level and frequency of engagement with the regulator. |
| High amenity areas |
| Designated bathing waters |
| Fish, especially in fish spawning season |
| Surface water drains |
| Designated sites e.g. Sites of Special Scientific Interest (SSSIs) |
| Protected species e.g. Otters |

| Environmental Hazards |
|----------------------------------|
| Silt laden water |
| Foul sewerage pipes |
| Oil or chemical pipelines |
| Mains water supply pipelines |
| High voltage fluid filled cables |

Glossary

| | |
|-----------------------------|---|
| Aerial spraying | Involves spraying crops or plants with plant protection products from an aircraft. |
| Aquatic life | Animal or plant that lives or grows in water. |
| Biosecurity | Measures that are taken to stop the spread or introduction of harmful organisms to human, animal or plant life. |
| By-pass channels | A channel created to divert water from the main channel. |
| Catchment | The area drained by a river or body of water. |
| Clean, uncontaminated water | Water which is free from any contamination, for example uncontaminated could include rainwater directly from roofs. Even if the water looks clear it may still be contaminated with e.g. chemicals, so it is essential the sources of runoff are considered carefully when checking whether water is contaminated or not. |
| Coffer dams | A watertight enclosure pumped dry to permit construction work below the water line. |
| Combined drains/sewers | Sewers or drains that collect both foul sewage and surface water run-off and carries it safely to a sewage treatment facility. Either owned privately or by the local water and sewerage provider. |
| Containment | The action of keeping something harmful under control or within limits |
| Culverts | A covered channel or pipe designed to prevent the obstruction of a watercourse or drainage path by an artificial construction e.g. a road crossing, highway embankment etc. |
| Cut-off walls | A wall of impervious material built to reduce seepage. |
| De-silt | Removal of silt. |
| Dewatering | Removing groundwater or surface water from a construction site. |
| Discharge | Release of water into the water environment or drainage/sewer systems. |
| Dredging | The removal or redistribution of any sand, silt, ballast, clay, gravel or other materials from or off the bed of a watercourse. Generally results in channel deepening and/or widening. |
| Duty of Care | A legal obligation to take reasonable care and avoid causing damage. |

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| Environmental Management Plan | A document describing potential environmental impacts and activities of a project/site and ways to manage and mitigate these. |
| Flocculants | A substance which promotes the clumping of particles/sediments. |
| Ford rivers | Crossing a body of water at a shallow point on foot or in a vehicle |
| Formal approval | In this document refers to the authorisation(s) you may need from the environmental regulator. They may be called a consent, licence or permit. |
| Groundwater | All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil. |
| Habitat | Specific area or environment in which a particular type of plant or animal, or group of plants or animals, live |
| Hazardous material | Hazardous materials are those with toxic properties that damage the environment and / or affect human health |
| Hazardous waste | Waste that is harmful to human health or the environment. For specific legal definitions including special waste in Scotland. |
| Herbicide | Commonly known as weed killers. It is substance used to control/destroy unwanted plants. |
| Impermeable | A surface or material that liquid cannot pass through. |
| Impervious | A surface that cannot be penetrated. |
| Karstic sinkhole | A depression in the ground that has no natural external surface drainage |
| Lagoon | An artificial pool for the treatment or storage of water. |
| Organism | An individual living thing. |
| Overland flow | Also known as run-off. Water flow over the ground surface to the drainage system or direct to watercourse. This occurs if the ground is impermeable, is saturated or if rainfall is particularly intense. |
| Pesticide | A substance used to control/destroy insects or other harmful organisms to cultivated plants or to animals. |
| Polluter Pays Principle | Principle in law that ensures that the party responsible for pollution should pay for damage caused to the environment. |

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| Remediation | The act of remedying, reversing or stopping environmental damage. |
| Rock outcrop | A rock formation that appears above the surface of the surrounding land. |
| Run-off | Also known as overland flow. Water flow over the ground surface to the drainage system or direct to watercourse. This occurs if the ground is impermeable, is saturated or if rainfall is particularly intense. |
| Scour | Erosion of the channel banks and bed due to excessive velocity of the flow. |
| Secondary containment | This is another container in which a primary container is located. It is impermeable to the product being stored and water, and designed to catch spills, leaks or overflows from the container (including its pipework and equipment) in everyday use, accidents and emergencies. Secondary containment is essential to prevent pollution. Bunds and drip trays are examples of secondary containment. |
| Sediment mobilisation | The transport or movement by water of insoluble particulate matter. |
| Soil stripping | Removal of the surface layer of the soil. |
| SuDS | Sustainable drainage systems are a sequence of management practices and control structures designed to drain surface water in a more sustainable way than conventional techniques. |
| Surface waters | Water bodies including rivers, lakes, lochs, loughs, reservoirs, ponds, streams, canals, ditches (including those that are temporarily dry), estuaries and coastal waters up to three miles offshore. Northern Ireland legislation defines these as 'waterways'. |
| Suspended solids | Small solid particles which remain in suspension in water. |
| Toe (slope/bank) | The lowest point on the bank/slope of any body of inland surface water where the bank meets the bed of the body of inland surface water. |
| Trade Effluent | Trade effluent is any liquid waste (effluent) discharged from premises being used for a business, trade or industry. |

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16. Welsh Government Guidance on the Separate Collection of Waste Paper, Metal, Plastic and Glass Available at http://gov.wales/topics/environmentcountryside/epq/waste_recycling/publication/guidance-on-the-separate-collection-of-waste-paper-metal-plastic-and-glass/?lang=en
17. Register a premises as a hazardous waste producer at: <http://naturalresources.wales/permits-and-permissions/waste/register-as-a-producer-of-hazardous-waste/?lang=en>
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 - a. Construction code of practice for the sustainable use of soils on construction sites. Available at www.gov.uk/government/publications/code-of-practice-for-the-sustainable-use-of-soils-on-construction-sites
 - b. Protecting our Water, Soil and Air A Code of Good Agricultural Practice for farmers, growers and land managers (CoGAP). Available at www.gov.uk/government/uploads/system/uploads/attachment_data/file/268691/pb13558-cogap-131223.pdf
 - c. UK Forestry Standard (UKFS) Guidelines on Forests and Soil. Available at <http://www.forestry.gov.uk/ukfs/soil>
 - d. UKFS Guidelines on Forests and Water. Available at www.forestry.gov.uk/ukfs/water

Website List

NetRegs - Guidance on environmental regulations for businesses in Scotland and Northern Ireland

www.netregs.org.uk

Scottish Environment Protection Agency (SEPA) website

www.sepa.org.uk

Natural Resource Wales

www.naturalresources.wales

Welsh Government

www.gov.wales

Department of Agriculture, Environment and Rural Affairs Northern Ireland

www.daera-ni.gov.uk

Sustainable Drainage System guidance for Wales

www.sudswales.com

Health and Safety Executive (HSE) - Using Storing and Disposing of Plant Protection Products

www.hse.gov.uk/pesticides/topics/using-pesticides.htm

GB Non-Native Species Secretariat

www.nonnativespecies.org

CEDaR Online Recording for INNS.

www2.habitats.org.uk/records/ISI

Scottish Natural Heritage (SNH)

www.snh.gov.uk

Chemicals Regulation Directorate (HSE)

www.hse.gov.uk/crd

Further information

For information about environmental compliance, or to report inconsistencies or inaccuracies in this guidance, visit www.netregs.org.uk.

You can view guidance on environmental regulations online at www.netregs.org.uk (for businesses in Scotland and Northern Ireland) and at <http://naturalresources.wales> (for businesses in Wales).

This guidance is issued by the Scottish Environment Protection Agency (SEPA), Northern Ireland Environment Agency (NIEA) and Natural Resources Wales (NRW).

This document is available at www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/.

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Useful contacts

Incident/Pollution hotline: Northern Ireland, Scotland and England

0800 80 70 60 (24-hour service)

Emergency hotline - Wales

0300 065 3000 (press 1 – 24-hour service)

Floodline – Wales, Scotland and England

0845 988 1188

Flooding incident line - Northern Ireland

0300 200 0100

Natural Resources Wales

Scottish Environment Protection Agency

Northern Ireland Environment Agency

www.naturalresourceswales.gov.uk

www.sepa.org.uk

www.daera-ni.gov.uk

Head Office (Ty Cambria)
29 Newport Road
Cardiff
CF24 0TP

Corporate Office
Strathallan House
The Castle Business Park
Stirling
FK9 4TZ

Head Office
Klondyke Building
Cromac Avenue
Gasworks Business Park
Malone Lower
Belfast
BTZ 2JA

Tel: 0300 065 3000 (Mon – Fri,
9am–5pm)

Tel: 03000 99 66 99

Tel: 0300 200 7856

enquiries@naturalresourceswales.gov.uk

www.sepa.org.uk/contact

nieainfo@daera-ni.gov.uk

Appendix C – Environmental Inspection Form

| Contract Name | | Contract Number | | |
|--|-------|-----------------|----|-----|
| Date: | Time: | Area: | | |
| | | Yes | No | N/A |
| Waste | | | | |
| Are Skips/Containers in good condition? | | | | |
| Are skips overfull? | | | | |
| Are they clearly labelled with the contents? | | | | |
| Are the waste streams (general, hazardous, and recyclable waste) segregated correctly? | | | | |
| | | | | |
| Drums, Cans etc. | | | | |
| Are drums stored in safe area when not in use? | | | | |
| Are they sealed to prevent leaks? | | | | |
| Are funnels, drip trays used during filling of plant? | | | | |
| | | | | |
| Bunds / Bowsers / Containment | | | | |
| Are bunds in good condition and free from excess oil / water / debris? | | | | |
| Are Drains covered near operations? | | | | |
| Are Bowsers Securely locked while | | | | |
| | | | | |
| Plant | | | | |
| Is plant in good condition? | | | | |
| Are any spills evident | | | | |
| Are drip trays being used when refuelling? | | | | |
| Are drip trays located beneath mobile plant? | | | | |
| Are adequate spill kits available and labelled? | | | | |
| Is unused mobile plant sited in plant compound? | | | | |
| Are signs and warnings visible? | | | | |

| Contract Name | | Contract Number | | |
|--|-------|-----------------|----|-----|
| Date: | Time: | Area: | | |
| | | Yes | No | N/A |
| Is the mobile hand pump in good condition? | | | | |
| | | | | |
| Nuisance | | | | |
| Are machines switched off when not used | | | | |
| Any excessive noise | | | | |
| Is there adequate lighting | | | | |
| Is there any silt / particulates / oil / grease or colour in any of the watercourses? | | | | |
| Are stockpiles / mounds etc not located close to any sensitive receptors such as watercourses? | | | | |
| Is there any excessive dust? Are control measures being adhered to? | | | | |
| Is there any evidence of contamination on public roads (mud, etc) | | | | |
| Is there any evidence of interference with vegetation? | | | | |
| Is there any evidence of damage to wildlife? | | | | |
| | | | | |

Appendix D – CEMP Control Revision Register

| Date | Revision | Author |
|------|----------|--------|
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Appendix E – Register for Environmental Nuisance Complaints

| Complaint No. | Date | Complainant | Description of complaint | Actions taken | By whom | Accepted yes/no | Completion date |
|---------------|------|-------------|--------------------------|---------------|---------|-----------------|-----------------|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |