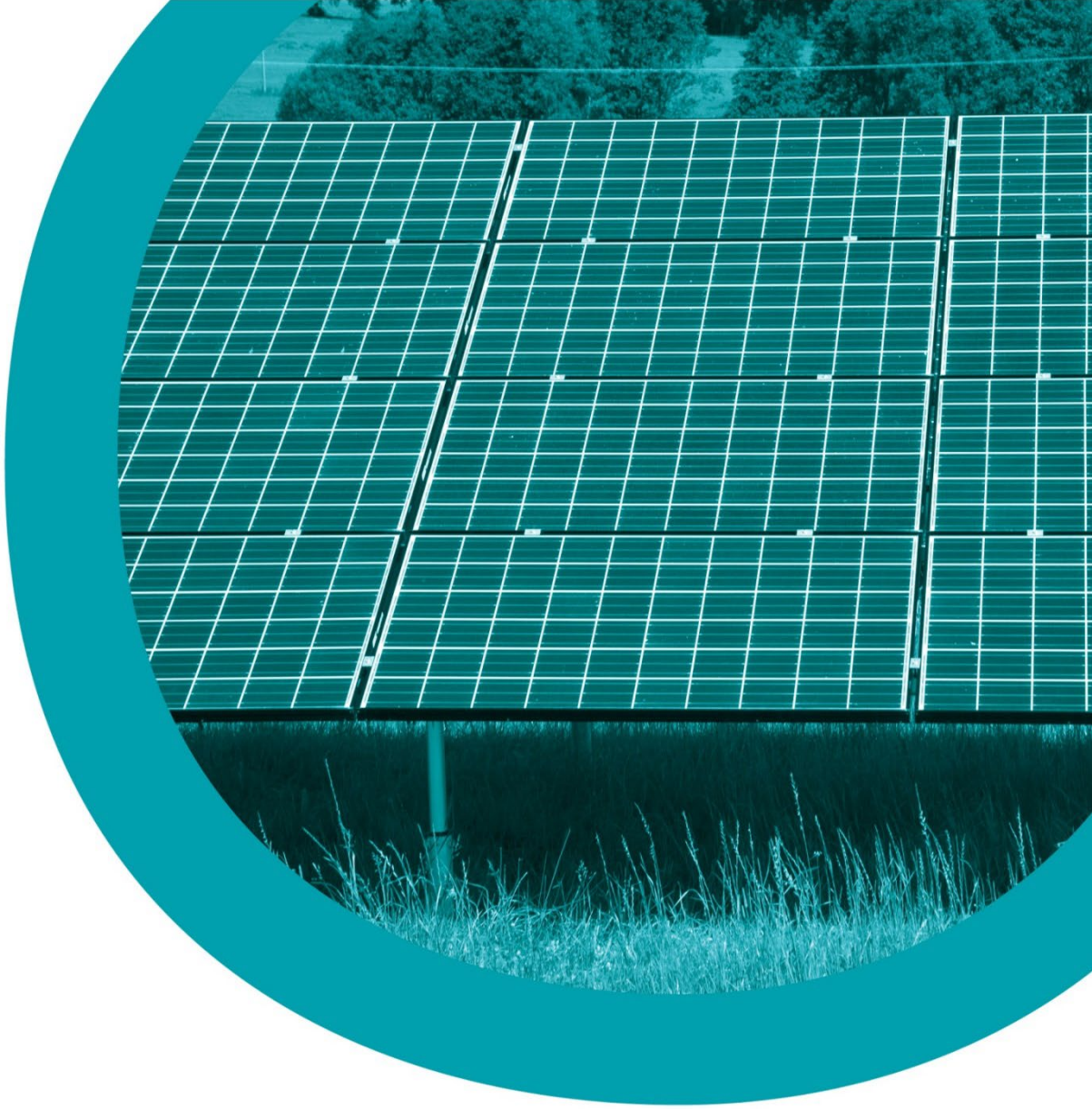


Hafod Road Solar Scheme

Construction Environmental Management Plan

Applicant: National Trust

Date: August 2025

dulas
inspiring renewable energy

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1. INTRODUCTION AND SCOPE

1.1 Introduction to Hafod Road Solar CEMP

1.1.1 This Construction Environmental Management Plan (CEMP) is prepared by Dulas Ltd on behalf of the National Trust ('the Applicant') in order to fulfil Wrexham County Borough Council's (WCBC) planning validation requirements and the scope of assessments set out in the Council's response to a request for pre-application advice (ENQ/2024/1174).

1.1.2 This CEMP sets out the methods and measures of installation sufficient to demonstrate to the determining authority that all construction and environmental aspects of the Hafod Road Solar Scheme ('the Development') have been considered and would be satisfactorily controlled should the development proceed.

1.1.3 The Applicant will build out the scheme, if approved, in accordance with the specifications in the CEMP, as may be developed over time and any other relevant conditions to this development.

1.1.4 Following written approval to proceed, construction will be managed by the Principal Contractor in accordance with the approved methods and plans, unless amendments are agreed in writing with the planning authority. In addition, the client will be required to appoint a Principal Designer for the installation phase, qualified in Health, Safety and Environment whose role will be to advise the Client on relevant issues during the detailed design, planning and installation phases of construction work and is someone who has knowledge and experience of planning, management, construction, and communications.

1.1.5 The location of the Development site is shown in Figure 1 *Site Location* and the site layout in figure 2 of the submitted application plans.

1.1.6 This is a live document and will require review by the Principal Contractor prior to commencement of works on site.

1.2 Scope

1.2.1 The specific elements that this CEMP addresses include:

- Communication, Roles and Responsibilities;

- Public Engagement;
- Construction Programme;
- Construction Management, including:
  - Health and Safety;
  - Lighting
- Environmental Management including:
  - Pollution Prevention;
  - Surface Water Drainage Works;
  - Emergency Pollution Control Plan;
  - Waste Management;
  - Noise Management;
  - Air Quality Management; and
  - Ecological Management.

1.2.2 The Principal Contractor and all site operatives will have the responsibility to ensure that the CEMP is adhered to, and any non-conformances reported to the Principal Contractor, Applicant and the local authority, where deemed necessary.

1.2.3 Note that Health and Safety matters will be managed in accordance with the Health and Safety at Work, etc Act 1974 and the Management of Health and Safety at Work Regulations 1999 and will be undertaken by the Principal Contractor/ Engineering Procurement Company appointed by the Applicant.

2. GENERAL COMMUNICATION

2.1 Roles and Responsibilities

2.1.1 The key parties involved in construction and connection of the Hafod Road Solar Scheme are set out in Table 2-1.

Table 2-1: Project Roles and Contacts

Position	Contact Name	Company	Number	Address
Project Team				
Client	John Millen	The National Trust	07767 463959	National Trust The Hollens Grasmere LA22 9QB
Principal Contractor	To be confirmed			
Principal Designer	To be confirmed			
Other contractor(s)	To be confirmed			
Third Parties				
Highways Authority (WCBC)	Roads and Transport Department		TBC	
Environmental Protection	Natural Resources Wales (NRW) https://naturalresources.wales/about-us/contact-us/report-an-incident/?lang=en Wrexham County Borough Council https://www.wrexham.gov.uk/services/environmental-services			
National Grid	https://www.nationalgrid.com/uk/electricity-transmission/network-and-infrastructure/electricity-emergencies-and-safety-advice		0800 40 40 90	
Scottish Power Energy Networks	https://www.spenergynetworks.co.uk/pages/contact_us.aspx		0800 001 5400	
Wales and West Utilities	https://www.wwutilities.co.uk/services/smell-gas/		0800 111 999	

2.1.2 The Applicant and its appointed Principal Contractor will be competent bodies in the undertaking of the works on site and will manage all activities in accordance with this CEMP and any additional, relevant planning conditions.

2.1.3 The Principal Contractor is responsible for managing activity on site safely and in accordance with the CEMP. The CEMP is a working document, and it is the responsibility of the Applicant to review it prior to commencement on site in order to tailor it to the specific site conditions and to account for any new local issues that arise.

2.1.4 The CEMP should also be reviewed throughout the construction phase to ensure that it is still fit for purpose and so that best practice is always taken into account and adhered to.

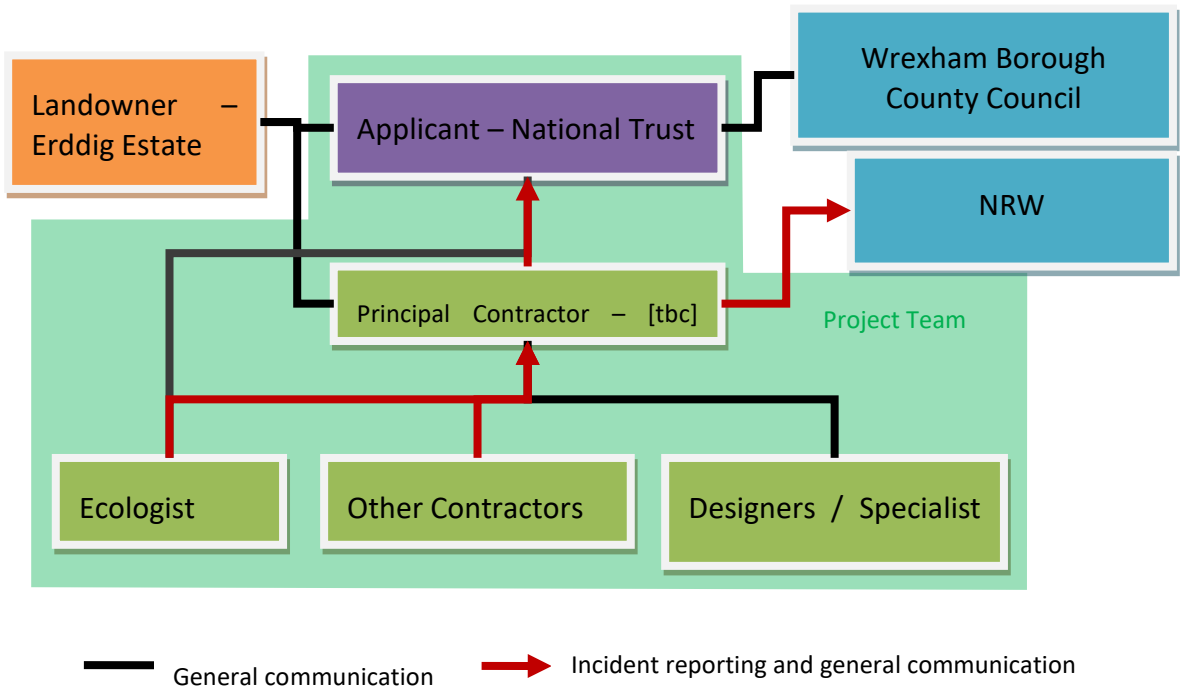
2.1.5 Each of the above parties and their personnel on site are responsible for ensuring that the CEMP is adhered to and that any non-conformances are reported.

2.2 Communication Protocols

2.2.1 Table 2-1 above lists all relevant stakeholders including Applicant, Contractor and relevant third party contact details. This table will be updated and kept current by the Principal Contractor for the duration of construction.

2.2.2 Diagram 1 illustrates the main lines of communication and incident reporting. This diagram will be updated and kept current by the Principal Contractor for the duration of construction.

Diagram 1: Main Lines of Communication



2.3 Training Provisions

2.3.1 The Principal Contractor will ensure that all personnel receive a site induction, which addresses all relevant matters within this CEMP, prior to carrying out any activity on site. The induction will address the following matters as a minimum, and may be added to as required for personnel carrying out specific roles on site:

- Health and safety;
- Welfare;
- Working on / in proximity to public rights of way;
- Access arrangements and traffic management;
- Environmental incident response and reporting; and
- Ecological sensitivities on site.

2.3.2 The Principal Contractor will ensure that all personnel receive regular toolbox talks which will provide on-going reinforcement and awareness training on the above matters.

2.3.3 The retained ecologist will provide an ecological toolbox talk at site set-up which will subsequently be included as an integral component of all site inductions.

2.3.4 The Principal Contractor is responsible for ensuring that all personnel on site are competent to carry out their roles, including having received adequate formal training where required.

3. CONSTRUCTION MANAGEMENT

3.1 Project Description Overview

3.1.1 The Hafod Road Solar site is divided into two land parcels, the main area is an arable field (area 1), with a smaller area to the north of the arable field (area 2).

3.1.2 The site is located to the east of Johnstown, bounded by B5436 Bangor Road to the south, Hafod Road to the West and the A483 to the east. Hafod House Farm and the Hafod House rest home are located to the west of the site. Aberdefyn Nature Reserve is located slightly further west, between the proposed solar scheme and the outskirts of Johnstown. The field to the north of the site is also National Trust land, and has recently been developed as Hafod y Bwych Commemorative Woodland.

3.1.3 The site has been used to grow maize for animal feed. Both parcels of land were used for feed however the Northern field was rarely harvested due to its wet soils and tree shading.

3.1.4 The capacity of the solar PV ground-mount installation is up to 1072kWp, comprising up multiple panels mounted on galvanised steel frames forming solar arrays. The solar scheme will also require an on-site access track, an electricity substation and supporting infrastructure such as inverters, cabling and storage containers. The entire scheme will be surrounded by security fencing and CCTV.

3.2 Health and Safety

3.2.1 Prior to work commencing on site, the Principal Contractor will prepare a Health & Safety Management Plan in accordance with the Health and Safety at Work, etc Act 1974 and the Management of Health and Safety at Work Regulations 1999. Such a plan will include:

- Confirmation of the detailed design of the solar farm scheme designer;
- Appointment prior to construction work of a competent and adequately resourced Principal Contractor / EPC;

- Agreed protocols for co-operation between the client and the Principal Contractor supervisor and methods of exchanging relevant necessary information;
- Maintenance of a Health & Safety file during construction for the solar PV scheme, including such information on the completed structure as required for future maintenance or renovation;
- Provision of a copy of the safety and health plan to tendering contractors for the project.

3.2.2 The Principal Contractor, following appointment, will inform the formulation of the Health & Safety Management Plan (HSMP) through the following actions:

- Identify hazards arising from the design or from the technical, organisational, planning or time related aspects of the project;
- Where possible, eliminate the hazards or reduce the risks;
- Communicate necessary control measures, design assumptions or remaining risks to the Principal Contractor so they can be dealt with in the HSMP;
- Ensure that the design work is coordinated to ensure safety;
- Prepare a written HSMP and provide to the client prior to tender for contracting services;
- Prepare a Health & Safety file for the completed structure and provide to client.

3.3 Public Engagement

3.3.1 The Applicant and Principal Contractor will notify local residents and affected Parish Councils a minimum of 5 weeks in advance of construction to inform them of the expected works and the installation programme.

3.3.2 Public notices at all entry points to the site will be erected at least 3 weeks in advance of construction.

3.3.3 The Applicant is required to maintain contact with all relevant stakeholders throughout the installation phase, inclusive of providing day-to-day phone contact, so that the construction team can be notified of incidents or issues.

3.4 Construction Programme

3.4.1 The construction programme will be subject to a decision on the proposed scheme and any seasonal implications for commencing works. This CEMP will be updated and augmented with more details of the construction programme once the Principal Contractor is appointed and detailed designs are approved through planning condition discharge.

3.4.2 Currently it is estimated that the proposed solar scheme would take 16 weeks to install and restore following cessation of works.

3.5 Site Entrance and Public Safety

3.5.1 See outline Construction Transport Management Plan for relevant details.

3.6 Lighting

3.6.1 During construction, and in accordance with the permitted hours for installation prescribed by a relevant planning condition, if deemed necessary, temporary portable light poles plus associated power moons or lighting balloons run by generators may be required, likely to be governed by the time of year the scheme is likely to be installed in. These will have a height of 7-9m and will be located at points around the site.

3.6.2 This lighting would only be used from time to time, at the beginning and end of the days, when it is dark or during twilight. It is most likely that the lights will be used between 6.30 and 8.00 am and 4–8pm Monday to Friday, and Saturday morning.

3.6.3 No lighting will be required during the operational phase of the solar PV project. Refere to 4.5.2 regarding minimum standards to be adhered to to minimise ecological impacts beyond the site area.

3.7 Security Arrangements

3.7.1 Security fencing will be installed during the first week of the construction phase around the solar array. During or following construction, the fencing arrangement will be

completed and augmented with inwards looking CCTV units. This will ensure public protection and the safety and security of the PV infrastructure.

3.8 Storage of Plant and Materials

3.8.1 Any plant or materials will be housed within the temporary construction compound. Any materials of value will be stored in appropriate containers at the construction site.

3.8.2 Any fuel, oils and chemicals required for construction purposes will be stored in bunded facilities within the construction compound. All such fluids and products will be stored in accordance with NRW guidelines, details of which are expected to be confirmed through agreement with the relevant authorities in the discharge of planning related conditions.

3.9 Service Crossings

3.9.1 A utilities search identified that the following services are located in close proximity to the site. Although none are known within the Proposed Development, the Principal Contractor will be required to be aware of these locations and to put in place suitable measures to prevent damage or associated risks to health and safety in the event that any buried or overhead services are affected by construction works.

Table 3-1 – Services in close proximity to the site

Utility Name	Utility Type	Location
SP Energy	Electric	11kv line along western field edge
National Grid	Electric	Overhead line crosses south west corner
WWU	Gas	High pressure gas line on western side of Hafod Road
Hafren Water	Water	Water main on western side of Hafod Road
Welsh Water	Sewerage	Runs across south eastern corner of southern field
BT	Telecoms	Phone cable on western side of Hafod Road

3.9.2 A coal mining risk assessment concluded that historical mining is unlikely to impact the proposed development. It recommended that a careful watch is maintained during any ground works at the site to assess for any evidence of disturbed ground.

4. ENVIRONMENTAL MANAGEMENT

4.1 Environmental Incident & Response

4.1.1 Once construction work commences on site, a spill response procedure will be implemented. Spill response posters will be distributed around the site and a spill response procedure will be communicated to all site personnel during the first site induction. These instructions will also be published and displayed at suitable locations across the site, and will also include contact telephone numbers for the emergency services and the NRW regional office.

4.1.2 Spill response equipment (spill kits) will be provided and maintained by the Principal Contractor.

4.1.3 Site personnel will be trained in the use of spill response equipment and the training will be updated as required. This training will be included in the site induction and tool box talks.

4.1.4 Any significant spills will be reported to the Principal Contractor immediately. Key information will include: what substance was spilled; approximate volume and time of spillage; accurate grid reference for the location of the spill; all measurements taken; help required i.e. manpower, machinery etc. and whether the spill has reached a watercourse.

4.1.5 Emergency contact details should be confirmed as part of the HSMP.

4.2 General Pollution Prevention Measures

4.2.1 The following points are the general pollution prevention measures that are required to be employed on site during construction:

- Precautions will be taken to ensure the protection of watercourses and groundwater against pollution, silting and erosion during watercourse crossing construction operations. At this stage no watercourse crossings are anticipated.
- Any material or substance which could cause pollution, including silty water, will be prevented from entering surface water drains or watercourses by the

propitious use of and appropriate placement of (temporary) silt fences, cut-off drains, silt traps and drainage to vegetated areas where appropriate.

- All stockpiled materials will be stored in designated areas and isolated from any surface drains and a minimum of 10 metres away from any watercourses or ditches.
- All works will be carried out in accordance with best practice and will aim to prevent deterioration in the ecological status of surface waters and to avoid compromising the restoration potential of such waters.
- In the event of a pollutant spillage on site, the material will be contained (using an absorbent material such as sand or soil or commercially available booms) and NRW notified immediately using an incident hotline number.

4.3 Waste Management

4.3.1 A number of difference waste streams are likely to arise during construction. The Principal Contractor will identify all waste streams and provide an estimate of expected waste volumes for each waste type generated within the waste stream.

4.3.2 Waste streams that typically arise during construction include:

- Waste from Welfare Facilities, e.g. food waste, paper, plastics, glass and other typically domestic refuse, and sewage.
- Concrete.
- Excess and off-cut metal frames.
- Surplus chemicals, fuel and oils.
- Packaging, e.g. cardboard, paper, plastics and wood.
- Waste Metals (i.e. offcuts from frames).
- Cleaning activities e.g. polluted water from plant, vehicle and wheel washes.

4.3.3 Licenced landfill and recycling operators proximate to the site will be identified prior to construction. All recyclable material will be removed off-site to such the recycling operator, and all non-recyclable waste will be similarly taken to the licenced landfill

operator. Any hazardous materials such as chemicals and oils will be recycled where possible, or otherwise taken to a licenced disposal company.

4.4 Air Quality Management

4.4.1 There is the potential that dust could be created from construction traffic movement and from general construction activities.

4.4.2 To reduce the potential for dust generation, any construction traffic carrying loose material will be covered. Should there be any periods of prolonged dry weather facilities will be made available at the site access point and all vehicles leaving the site will be strictly controlled to limit dust emissions and avoid depositions long the minor road.

4.4.3 Dependent upon weather conditions at construction, where dust potential becomes a concern a water bowser will be provided for dust suppression on site to “dampen down” access tracks prior to vehicles arriving at and leaving the site.

4.5 Ecological Management

4.5.1 General environmental protection measures to be implemented during the construction phase will include best environmental practice guidance outlined by the Environment Agency in Guidance for Pollution Prevention (GPPs), which have now replaced the old series of guidance document (PPGs). and those outlined by the Construction Industry Research and Information Association guidance (CIRIA, 2015). The Ecological Mitigation and Enhancement Statement (EMES) should be consulted for further information on generic mitigation measures.

4.5.2 The following minimum standards will be adhered to in order to minimise ecological impacts beyond the site area:

- Noise and vibration will be controlled through minimising intrusive works and excavations, and using of parking facilities located in the construction compound, and therefore away from public areas.
- Lighting used for construction will be switched-off when not in use and positioned so as not to spill on to adjacent land. Further information is provided in the EMES.

- Measures will be taken to prevent dust and other emissions from construction affecting land beyond the array site. Vehicle movements will be kept to a minimum and occasional spraying of the site with water will be conducted in the event of very dry conditions.
- Chemicals and fuels, if any, will be stored in secure containers located away from watercourses or water bodies. Spill kits must be available.
- Any excavations will be covered or securely fenced (with no potential access points beneath fencing) when the site is closed (e.g. overnight) to protect animals from entrapment. Further information is provided in the EMES.
- Temporary protective fencing as detailed in the EMES will be installed to protect sensitive ecological resources. There should be no access/ storage of any kind beyond this fencing. Any fencing installed should not unduly obstruct the movements of wildlife.
- Biosecurity measures as detailed in the Biosecurity Risk Assessment and Method Statement (BRAMS) will be implemented by all site personnel throughout the construction phase.
- All site personnel will maintain a watching brief for Badger (setts), Hedgehogs, Great Crested Newts, reptiles (Grass Snake), and (nesting) birds. Further information is provided in the EMES.
- An ecologist/Ecological Clerk of Works will be retained throughout the construction phase and will attend site as necessary to facilitate implementation of ecological avoidance/mitigation measures.

4.5.3 All ecological avoidance/ mitigation measures will be guided by the following three documents which must be adhered to by all site personnel:

- Ecological Mitigation and Enhancement Statement (EMES).
- Great Crested Newt Reasonable Avoidance Measures Method Statement (GCN RAMs).
- Biosecurity Risk Assessment and Method Statement (BRAMS).

4.5.4 When the ecologist is on site it will be his/ her responsibility (in collaboration with the Principal Contractor) to supervise/ implement these measures and ensure compliance as far as is reasonably possible. When the ecologist is not on site this responsibility will lie with the Principal Contractor and all individual personnel. The ecologist will be retained (mostly off-site) throughout the construction phase and will be available for consultation (when not on site). The ecologist should be contacted when/ if necessary.

4.6 Environmental Monitoring and Auditing Provisions

4.6.1 The Principal Contractor will undertake regular health & safety and environmental audits as specified under the HSMP.

4.6.2 Records will be maintained of all completed audits, corrective actions and close outs.

Appendix A: Environmental Incident and Emergency Response Plan

1. Introduction

1.1 Environmental incidents may include: spillages (oils and chemicals); contaminated run-off; flooding; riverbed disturbance; damage to underground services; damage to habitats; poor waste disposal and storage.

2. Environmental Incident Hazard Reporting

2.1 A system for reporting environmental incidents or potential hazards will be developed for the site by the appointed contractor. All reported incidents or hazards will be logged in a database to allow review, auditing and lessons learned.

3. Procedures to be followed in the event of a spillage / incident

3.1 The following procedure is intended as a guideline to dealing with incidents. Site personnel shall in accordance with these procedures, whilst applying common sense and ensuring their own health and safety, and that of others:

i. If possible, identify the source of the spillage and cut off source, e.g. by closing valve, righting container etc;

ii. Identify where spillage has gone to and/or where it may go to. If spillage is near a watercourse (drainage ditch, burn, river) divert spillage away from the watercourses by digging interception trenches or by using absorbent material (spill kit);

iii. Notify all parties in an appropriate order as stated below. Notification should be made by one person only whilst the remainder of staff present attend to the spill itself;

iv. If a spill has reached a watercourse the following measures should be applied-

- Place flexible absorbent booms ahead of the contamination within a quiet stretch of water;
- Place absorbent cushions in the water immediately upstream of these booms; and
- Repeat this process further downstream and remove and replace saturated absorbent material as required.

v. Dig up all contaminated ground as soon as possible / immediately. All contaminated materials should be placed in sealed polythene bags/containers and disposed of appropriately by the Principal Contractor; and

vi. Complete required record of incident and response into reporting system / database.

3.2 In the event of a spillage, communications between the Parties, including NRW, should include the following key Information, provided in a clear and concise manner:

- What substance was spilled;
- Approximate volume and time of spillage;
- Accurate Location of spill (GPS or grid reference if possible, or bridge ID/number referenced on map etc);
- All measures taken;
- Help required i.e. manpower, machinery, expert advice, disposal, etc; and,
- Whether the spill has reached a watercourse.

Outline Communication Plan:

