



Technical Appendix 3.1

Construction Environmental Management Plan (CEMP)





**OUTLINE CONSTRUCTION
ENVIRONMENTAL MANAGEMENT
PLAN FOR ES: RENEWABLE
ENERGY DEVELOPMENTS**

UKEN-IGE-SPR0008

Revision **004**
Page **1 of 18**
Department **Environmental**
Effective Date **1/12/2019**

REVIEW AND APPROVAL

Author:		ENVIRONMENTAL MGM AND COMPLIANCE MANAGER	Date: <u>26/11/19</u>
	Fiona Becker		
Review:		HEAD OF ONSHORE DEVELOPMENT	Date: <u>28/11/19</u>
	Richard Kojak		
Approved:		PROJECTS AND CONSTRUCTION DIRECTOR	Date: <u>28/11/19</u>
	Stuart Mason		

REVISION HISTORY (limited to 3 latest revisions)

Revision	Effective Date	Details and Reason for Change	Pages Modified
002	27/11/18	Updated entire document	all
003	14/10/19	Updated to cover a range of Renewable Energy Developments (wind turbines, solar and battery) - minor updates linked to type of development, reference to NI EA and EPA (Ireland), ref forestry residue mgn plan and updated review/approvers	1, 4, 5, 10, 12, 14, 15, 17, 18
004	1/12/19	Updated to clarify that Repowering Projects are included under the Construction Phase, Scope (pg1), Circular Economy and decommissioning of assets (pg10), Ecology- ref monitoring/mitigation programmes.(pg 12)	1, 10, 12



**OUTLINE CONSTRUCTION
ENVIRONMENTAL MANAGEMENT
PLAN FOR ES: RENEWABLE
ENERGY DEVELOPMENTS**

UKEN-IGE-SPR0008

Revision **004**Page **2 of 18**Department **Environmental**Effective Date **1/12/2019****OVERVIEW**

Purpose	<p>The purpose of this document is to supplement information within the Environmental Statement (ES), demonstrating the linkages between the ES, site activities, and likely planning conditions associated with any consent. A Construction Environmental Management Plan (CEMP) sets out the controls and processes that are to be adopted to mitigate environmental impacts throughout a project. CEMPs are generally iterative and develop throughout the construction programme.</p> <p>For SPR Renewable Energy Developments, the preparation of a CEMP is the responsibility of the appointed Principal Contractor (The Principal Contractor is generally the “Infrastructure Contractor” who is responsible for the balance of plant). SPR have certain environmental management standards that require to be considered for inclusion in CEMPs at our construction sites.</p> <p>This document outlines, at a high level, SPR’s minimum requirements for CEMPs and provides guidance on the content. The document is based on SPRs Environmental Management System (EMS) requirements, Industry Best Practice and relevant legislation (at the time of preparation). This document has been prepared as an appendix to the Environmental Statement.</p> <p>It must be noted that this document sets out SPR minimum requirements for inclusion within a CEMP and sets out guidance and best practice for adoption at SPR construction sites. The Principal Contractor is likely to have their own management system requirements and CEMP templates. Therefore the final site CEMP may vary from what is set out within this document. Site specific sensitivities and requirements of any planning consent, along with updates in legal requirements and construction best practice will also require to be considered in the development of the site CEMP.</p>
Scope	Onshore Renewable Energy Developments : Wind Turbines, Solar and Battery Storage, or a combination of the above. Including activities associated with the decommissioning of assets associated with Repowering Projects.
Responsibility	N/A
Associated Documents	Environmental Policy
Definitions	List and define all acronyms or technical terminology.
Materials & Equipment	None



OUTLINE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN FOR ES: RENEWABLE ENERGY DEVELOPMENTS

UKEN-IGE-SPR0008

Revision **004**

Page **3 of 18**

Department **Environmental**

Effective Date **1/12/2019**

TABLE OF CONTENT

REVIEW AND APPROVAL 1

REVISION HISTORY 1

OVERVIEW 2

TABLE OF CONTENT 3

INSTRUCTIONS 4

- 1. Typical Contents for a CEMP 4
- 2. Responsibilities for Environmental Management 5
- 3. Associated Documentation 5
- 4. Site Description and Associated Environmental Sensitivities 5
- 5. Environmental Management 5
- 6. Monitoring 14
- 7. Legal Compliance and other requirements 15
- 8. Reference material 16
- 9. Training 16
- 10. Reporting 17
- 11. Contractor Management 18

INSTRUCTIONS

1. Typical Contents for a CEMP

Typical Contents for a site CEMP at a SPR Renewable Energy Development construction site are set out on the template below. Outline contents for the sections are set out within this Document in Sections 2 to 11.

Purpose

Scope

Responsibilities for Environmental Management On-Site

Associated Documentation

Site Description and Environmental Sensitivities

Environmental Management

- Site Environmental Aspects, Risks and Opportunities
- Surface Water Management
- Oil and Chemical delivery and storage
- Wastewater and Water supply monitoring and control
- Waste and Resource Management
- Traffic and Transport
- Air, Land, Noise, Vibration, Flora and Fauna
- Environmental Incident Response
- Method Statements and Risk Assessments

Monitoring including Site inspections

Legal Compliance

- Planning Conditions
- Legal Register
- Consents
- Best Practice Guidance

Training including Site Induction

Reporting

- Reporting of Environmental Incidents
- Dealing with Public Complaints
- Meetings

Contractor Management

2. Responsibilities for Environmental Management

Environmental Management responsibilities for the site require to be documented. This section shall set out the environmental responsibilities on site, including identification of key site staff and their environmental management responsibilities and how this links in with “Client” responsibilities and that of the project team such as site environmental manager and environmental advisor and environmental specialists such as Ecological Clerk of Works and Archaeologist. Interactions with stakeholders such as the Local Authority, Scottish Natural Heritage, Natural England, Scottish Environment Protection Agency, Environment Agency, Northern Ireland Environment Agency, Environmental Protection Agency (Ireland) etc should also be covered in this section.

On the majority of construction sites SPR employ a Principal Contractor who is responsible for environmental management on site, including the preparation of onsite environmental documentation.

3. Associated Documentation

This section shall refer to relevant associated EMS and site specific documentation that require to be taken into consideration in developing the CEMP. Examples include Client requirements (such as SPR Environmental Policy), Contractors EMS requirements, site Environmental Statement, planning conditions, consents, risk registers, legal registers, etc.

4. Site Description and Associated Environmental Sensitivities

This section shall set out information or links to information with regard to environmental sensitivities on site such as watercourses, protected habitats, human receptors, constraints, site layout plans, and the scope of works to be undertaken, including identification of environmental aspects, impacts, risks and any opportunities.

SPR have an aspect, impacts, risks and opportunities register as part of the ISO14001 Environmental Management System; this details potential environmental impacts for construction projects and relevant control measures.

The Principal Contractor will be expected to have their own aspect and impacts register as part of their Environmental Management System.

5. Environmental Management

Sustainable Development should be integrated throughout the construction stage. This can bring benefits from not only an environmental perspective but also economic and social and can cover matters such as site planning, material selection, resource and energy use, recycling and waste minimisation. This section therefore shall set out details of the controls and processes to be adopted to mitigate the environmental impacts on site and any opportunities or initiatives should also be explored at a site level.

Typically this would cover the following items.

- Surface Water Management
- Oil and Chemical delivery and storage
- Wastewater and Water supply monitoring and control
- Waste and Resource Management including Circular Economy

- Traffic and Transport
- Air, Noise & Vibration, Land Management incl Archaeology, Flora and Fauna
- Environmental Incident Response
- Method Statements and Risk Assessments

A brief overview of some of the key issues is provided below. However it must be noted that these are not exhaustive and will be developed for the specific site.

5.1 Surface Water Management

This section of the CEMP shall detail practices related to the protection, control, and movement of surface water.

SPRs Principal Contractor will be required to prepare detailed site surface water management design/drainage plans for the site. The designs shall detail the surface water management measures to be implemented during the works. The detailed design shall be supported by calculations and methodologies for sizing of the proposed measures, including lagoons, ditches, culverts etc and drawings detailing site characteristics including topography, surface water, groundwater, catchment area, site sensitivities and guidance for implementation. Where appropriate the principles of Sustainable Urban Drainage Schemes shall be applied. Design information will require to cover both the temporary and permanent drainage measures on site.

It should be noted that for projects being constructed in Scotland, it is likely that a SEPA Construction site licence shall be required as per the Controlled Activity Regulations (CAR). This will require the production of a site Pollution Prevention Plan with associated drainage plans which will be managed by the Principal Contractor and shall detail all site specific surface water management measures.

The most significant potential source of contamination to surface waters is suspended solids, however other sources may include a chemical or hydrocarbon spill, vehicle/wheel washings, concrete washings and wastewater.

Definitions related to surface water management include:

Surface Water	Water that collects on the land surface such as lakes, rivers, streams and is related to groundwater.
Run-Off	Water flow that occurs overland from rain, snow melt or other sources which subsequently enters into a drainage system or other surface water systems.
Suspended Solids	Refers to small solid particles which remain in suspension in water as a colloid or due to the motion of the water. It is used as one indicator of water quality. Consists of silt, clay, fine particles of organic and inorganic matter, insoluble organic compounds and microscopic organisms

Protocols

As part of the approach to site surface water management the Principal Contractor should check the weather forecast (such as Met Office five day forecast) on a regular basis in order to track any potential heavy rainfall events. The Principal Contractor shall produce, communicate and implement a wet weather and snow melt protocol which shall detail the actions to be taken in programming work in advance and during wet weather and snow melt in regard to work activities. The purpose is to reduce the generation of silty run-off from construction activities on-site and potential for pollution of watercourses.

Surface Water Management Measures Onsite

The best type of system for a construction site will be dependent on a number of factors including the amount of rainfall on-site, the gradient of the site, soil type and land available on-site. The Principal Contractor will decide what surface water management measures are best suited for the site. Some of the techniques available are detailed below;

Cut-off Ditches- can be put in place upslope of excavations, roads and other infrastructure elements or other work areas to collect clean run off before it reaches the disturbed ground and divert it around or away from the work site This greenfield flow can then be discharged over a suitable dispersion area of undisturbed vegetation for example.

Drainage Ditches – can be put in place in order to capture surface water runoff from the roads or other infrastructure elements on-site and divert this to an appropriate discharge point via surface water control and mitigation measures such as those referred to below. The use of such control measures reduces the amount of silt within the runoff and therefore reduces the impact of the discharge into watercourses.

It is important that cut-off ditches and drainage ditches are implemented in advance of the main construction activities and are designed to ensure that, as far as possible, clean water is not contaminated by dirty water.

Silt Fences – are designed in order to effectively filter the water, holding back the silt and allowing the water through, they require to be installed correctly with the lower part of the fence dug into the ground. Silt fences will also require to be cleaned out on a regular basis, particularly after periods of heavy rainfall. Silt fences require to be inspected and maintained on a regular basis in order to ensure that silty water is not running under or round the silt fences

Splash Backs – can be put in place where the roads on-site cross over watercourses and ditches. Generally, silt fence is installed in order to prevent silty runoff from the roads entering directly into watercourses. These require to be inspected and maintained in order to ensure that silty runoff does not enter directly into the surface watercourses below.

Settlement Lagoons – control surface water run-off by slowing the flow of water and allowing the silt particles to drop out of suspension, before the water is discharged. Lagoons must be sized appropriately taking into consideration the anticipated volume and quality of run off they will be receiving. A number of lagoons in series and/or in parallel may be required to provide adequate settlement time. Lagoons require to be maintained e.g. cleaned out on a regular basis, in order to ensure peak performance. A series of lagoons may be required to provide adequate settlement.

It is important that settlement lagoons are constructed prior to works likely to generate silty run off to ensure that all potential run-off is captured

Flocculants - may also be used to aid settlement of fine particles. These involve a chemical solution that can be used to force very fine particles to clump together and settle out of the water column. The point of treatment shall be constructed in such a way to allow controlled dosing and a documented register shall be kept to record use of chemicals at each treatment location. A settlement area needs to be provided after the point of treatment to give the flocculants a chance to work and the particles to settle out.

The use of Flocculants will require approval from the regulator, and should be reserved for only if issues are encountered with conventional treatment methods, and if very fine sediment particles (e.g. clay) are being encountered. All surface water management measures on-site require to be maintained by the

**OUTLINE CONSTRUCTION
ENVIRONMENTAL MANAGEMENT
PLAN FOR ES: RENEWABLE
ENERGY DEVELOPMENTS**

UKEN-IGE-SPR0008

Revision **004**Page **8 of 18**Department **Environmental**Effective Date **1/12/2019**

Principal Contractor. It is important that maintenance is undertaken in order to ensure that settlement lagoons and silt fences are de-sludged when required as the retention capacity of the system will be affected by a build-up of sediment.

All mitigation measures implemented on site will require to be visually monitored on a regular basis this may be weekly as a minimum (frequency related to risk, site sensitivity, weather conditions, etc), with inspections of mitigation measures also being carried out after periods of heavy rainfall. Inspections of mitigation measures and any required maintenance will be carried out by the Principal Contractor. A record of any findings from the inspections carried out by the Principal Contractor will require to be recorded including details of any silty water runoff impacting on watercourses or any maintenance required to mitigation measures e.g. such as the cleaning out of silt fences or lagoons.

5.2 Oil and Chemical delivery and storage

Oils and chemicals should only be ordered in manageable quantities and stored responsibly i.e. in a bunded area or suitable container/storage area, in accordance with relevant legislation and containers must be labelled with details of contents.

All deliveries of oils and chemicals should be met by a competent member of staff who will direct the driver to the delivery point. Spillage kits must be available at or near the delivery point for emergencies. Depending on the site, there may be a requirement to escort the delivery vehicle (such as for fuel deliveries) onto and through the site.

Oil and chemical storage

All fuel tanks should be kept locked when not in use. All oils and chemicals should be returned to the storage area after use.

Fuel oil shall be delivered to site by road tanker and transferred to mobile bowsers and/or the static tank(s) within a designated fuel transfer area (refuelling area) in the site compound and/or designated refuelling areas on site for mobile bowsers. Any fuel bowsers or static tanks on-site will require to be bunded to 110% capacity

It is a ScottishPower Renewables requirement that storage of static generator(s) and associated fuel tank(s), which are separate with inter-connecting hoses require to be located within a covered impermeable bund – where these will be located on-site for follows best practice as set out in PPG 6. Bunds shall be constructed from concrete block work or similar (e.g.. a walled containment facility). Prevent rainwater from accumulating in bunds as this compromise the containment. If required, drainage of these areas shall be via an Oil Separator.

Where this arrangement is for a short duration such as 6 months or less e.g. at the construction of a control building, alternative containment options can be considered, subject to site sensitivities and duration e.g. such as containment of inter-connecting hoses using a plant nappy and agreement with ScottishPower Renewables

Where more than one container is stored, the storage bund should be capable of storing at least 110% of the largest container or at least 25% of the total storage capacity, whichever is the greater. Oil absorbent spill response kits should be immediately to hand and be used to mop up any spillage. The following sets out general storage requirements for oils and chemicals;

- All storage containers should be clearly labelled in accordance with Control of Substances Hazardous to Health (COSHH) requirements or appropriate replacement legislation. All containers should be stored in an upright position.

- The Site should maintain a COSHH inventory.
- Storage of oils and chemicals should be controlled (such as segregation) to prevent a reaction between the different types; for example gas cylinders should be stored separately, as should substances marked flammable.
- When determining storage locations consideration should be made to enable adequate access and egress for plant and manual handling.
- Where external storage is required, locations should be sited at appropriate distances from watercourses, possible routes to watercourses and drains and should consider site sensitivities and the scope of activities being undertaken. Storage areas should be located in areas free from vehicle movements to minimise the risk of collision damage.
- The contractor should also consider the installation of oil interceptors within compound drainage where a significant volume of fuel and oil is stored.

Refuelling

Refuelling activities on-site should be undertaken by a designated and trained member of staff. Refuelling should only be carried out in designated refuelling areas. These areas should be located away from watercourses and drains and should consider site sensitivities and the scope of activities being undertaken. Drip trays should be used and spill kits should be located at all refuelling locations, which will also require to be marked on the site plan.

Used spillage response kit material and waste oil shall be treated as hazardous/ special waste and stored appropriately on-site. All waste will require to be disposed of off-site to a licensed disposal site.

Inspection and Maintenance

Oil and chemical storage areas should be inspected, at least weekly for signs of spillage, leaks and damage. Rainwater, materials and general debris in bunds and drip trays should be removed as part of the maintenance programme.

Disposal of Oils and Chemicals

Details for the disposal of oils and chemicals should be set out in the waste management section of the CEMP.

5.3 Wastewater and Water supply monitoring and control

Wastewater presents a hazard to the environment and can cause contamination of groundwater and pollution of surface waters.

In order to manage wastewater and water supply facilities at construction sites a series of monitoring and maintenance control measures should be put in place.

Wastewater Monitoring and Control

Waste water facilities on a construction site often comprise of septic tanks, cess pits or holding tanks; all of which will require to be emptied by a licensed waste carrier. Frequency for the emptying of wastewater

**OUTLINE CONSTRUCTION
ENVIRONMENTAL MANAGEMENT
PLAN FOR ES: RENEWABLE
ENERGY DEVELOPMENTS**

UKEN-IGE-SPR0008

Revision **004**Page **10 of 18**Department **Environmental**Effective Date **1/12/2019**

facilities and associated responsibilities will be assigned by the Principal Contractor. The frequency of emptying will depend on the volume of the associated tank and number of personnel occupying the site.

In the case of a septic tank regular sampling will require to be collected from the discharge point to demonstrate compliance to any quantitative limits set in the discharge consent, authorisation or permit issued by the Scottish Environment Protection Agency (SEPA) or Environment Agency/ (EA), Natural Resource Wales, Northern Ireland Environment Agency (NIEA) or Environmental Protection Agency (Ireland).

The sample will require to be analysed for the parameters specified in the discharge consent, authorisation or permit; if no parameters are specified it is recommended that the sample should be analysed for suspended solids in order to ensure that the discharge is not causing an adverse environmental impact to the surrounding water environment.

Sampling, screening and recording of sample results to ensure compliance with relevant consent or authorisation conditions will be the responsibility of the Principal Contractor.

Quality of the discharge from septic tank facilities on construction sites should be visually checked by the Principal Contractor on a periodic basis as part of their environmental site inspections.

Concrete washout areas should be planned to ensure that they do not cause congestion with site traffic and designed to prevent the escape of run off into the natural environment of the site such as a lined containment system. When washout areas are full and the concrete has hardened it should be broken out and disposed of in an appropriate manner. Washout areas should be clearly identified at specified locations.

Water Supply

Construction sites rarely have a connection to a mains water supply with drinking water being supplied via drinking water coolers and toilet and kitchen facilities being supplied via rainwater harvesting via holding tanks on the roof of the construction compound or via tankered water.

In some cases the construction compound can also be supplied by water from an abstraction point, via a borehole water supply for example, or water may require to be abstracted for other site activities such as on site concrete batching plants.

The Principal Contractor will be responsible for monitoring and recording the location of abstraction activities on-site and associated abstraction rates during the construction phase to demonstrate compliance to any abstraction licences/permits.

5.4 Waste and Resource Management

Waste hierarchy

SPR aims to manage waste in accordance with the waste hierarchy by avoiding waste generation and promoting waste minimisation in the first instance. This applies to both our construction and operational sites. Where waste is produced, we will aim to reuse, recycle or recover where practical and economically feasible prior to considering disposal. We support the Circular Economy and encourage contractors to also adopt this approach where practicable when considering the management of materials and decommissioning of assets such as refurbishment and/or reuse of turbine components

SPR together with our Suppliers and Sub-contractors who generate or dispose of waste as a result of carrying out their agreed activities require to do so in a controlled manner and in line with current legislation.

Types of Waste

Waste produced on site will generally be regarded as 'controlled' waste, which comprises household, commercial or industrial waste. Waste produced by construction sites will usually be regarded as commercial waste since it will have been produced from premises used wholly or mainly for trade or business purposes.

Some controlled wastes are often further classified in view of their difficult nature and additional regulatory controls. In general terms and for most practical purposes it is often easiest to consider wastes as either hazardous or non-hazardous.

General waste arising at site such as waste paper, plastics, wood, metal, packaging, small quantities of waste food and food containers and septic tank waste are likely to fall in the non-hazardous category.

Hazardous wastes produced on site will include oils and fuels, oily rags, solvents, chemicals, and electrical equipment. Absorbent materials used for containing/cleaning spills of substances will be classified as hazardous waste e.g. oil absorbent matting. The materials should be bagged, sealed and labelled and placed in a hazardous waste storage container in the same way, as any other waste contaminated with a hazardous substance must be treated, and disposed of, as hazardous waste.

Storage of Waste

Waste should be deposited and contained within suitable labelled storage facilities until its removal from site by an authorised waste carrier. Waste should be segregated as appropriate for recycling such as paper, cans, plastics, wood, metal, packaging.

Labelling on containers must be durable and permanent. When determining storage locations, consideration should be made to enable adequate access and egress for plant and manual handling.

Transfer of Waste

Only authorised waste carriers should be employed to remove waste from Construction Sites. The Principal Contractor will be responsible to ensure that carriers have the required documentation such as waste carriers licence.

A Waste Transfer Note must accompany and be raised before transfer of any non-hazardous waste off site.

All wastes that are classified as special or hazardous waste are subject to the Consignment Note system for transfer.

Copies of the above documentation shall require to be retained on-site in line with applicable legal requirements.

Waste Management Plan (WMP)

SPR construction sites shall require to have a Site Waste Management Plan, which will be the responsibility of the Principal Contractor. The Plan should record the following information, as a minimum:

- The types of waste generated by the site.
- The management approach for each waste type (Reuse, Recycle, Recover, Dispose).

- The storage arrangements for each waste type;
- Details of Waste Management companies to be used to deal with waste from the project
- The site waste monitoring and reporting arrangements.

5.5 Air, Noise, Vibration, Land and Flora and Fauna

Emissions to Air

During construction in dry weather there is the potential for a certain amount of dust to be generated. Some of the measures implemented on site may include, but will not be limited to the following:

- Adherence to the speed limit on site in order to reduce the dust generated from transport on site roads;
- Water bowsers - spraying with water to dampen dust down;
- Road sweepers – remove silt from the road surface to reduce the potential for dust on the public road, if required;
- Materials with the potential to produce dust must be stored accordingly to prevent dust generation e.g. materials stored out of the wind and covered; and
- Transport of dust generating material will be covered.

Noise and Vibration

There is the potential for noise and vibrations to be generated during the construction process. Measures will require to be implemented on site to minimise any effects and a programme of monitoring may be required.

Flora and Fauna

Monitoring of flora and fauna should be undertaken as part of the daily/weekly site inspections carried out by the on-site Ecological Clerk of Works (ECoW)¹ or environmental advisor/manager. All details from the inspections should be recorded in the form of a monthly report; the report should be issued to SPR and the Principal Contractor; with findings of the report being discussed at the monthly health, safety and environmental meetings.

Depending on the location of the site Consents/Licenses may also be required in relation to Protected Species, Habitats, Designations and/or specific monitoring/mitigation programmes.

Land Management: Peat

On sites that will involve the excavations of peat, the Principal Contractor shall prepare a Peat Management Plan. The Plan will take consideration of appropriate guidance, good practice and satisfy the requirements of the regulator. In addition, where forestry clearance is required as part of the development, there will also be a requirement to produce a Forestry Residue Management Plan.

¹ Note The requirement to have an Ecological Clerk of Works will depend on the site sensitivities and planning condition requirements

5.6 Emergency Environmental Spill Response

Responsible construction and the management of health, safety and environmental risks are paramount to the prevention of environmental incidents. The CEMP will include an Emergency Environmental Response Procedure (EERP), including a response flow chart.

As part of the environmental management controls on Site it is a SPR requirement that the Principal Contractor shall have in place a dedicated “environmental team”. The purpose of this team is to carry out environmental management works on site such as surface water management and to respond to environmental incidents, such as spill response etc.

EERP Flow Chart

Typical contents for an emergency environmental spill response (EERP) flow chart are set out below.

- Assess safety
- Stop Spillage / Leakage at Source
- Contain Spill / Leak
- Notify
- Clean Up (including disposal contaminated material)
- Monitor

5.7 Spill Kits

It is an SPR requirement for spill kits to be provided in/with the following on all of SPR construction sites;

1. in all heavy plant and equipment, 4x4 and commercial vehicles;
2. with all refuelling bowsers;
3. with all static fuel tanks; and
4. during all refuelling operations, associated transportation and storage

These kits are used as a first response or for the containment and clean-up of small spills.

In addition spill kits should be strategically located at sensitivities areas on site or where activities are being conducted that have the potential for a spill placing booms across sensitive watercourses downstream of work areas should also be considered. A supply of spill kits should be held on site and stocks constantly replenished. Contents of the spill kits will be determined by the Principal Contractor in line with best practice.

As part of the EERP a specialist spill response contractor will require to be identified for the site to deal with any major environmental incidents.

5.8 Method Statements and Risk Assessments

It is the responsibility of the Principal Contractor to have in place method statements and risk assessments for works being carried out on-site. Where relevant, the method statement should cross reference applicable environmental risk assessments. The risk assessments should identify environmental hazards and outline subsequent control measures.

**OUTLINE CONSTRUCTION
ENVIRONMENTAL MANAGEMENT
PLAN FOR ES: RENEWABLE
ENERGY DEVELOPMENTS**

UKEN-IGE-SPR0008

Revision **004**Page **14 of 18**Department **Environmental**Effective Date **1/12/2019**

The following environmental risks are examples which could be identified on a construction site;

- Discharges to water (including accidental spillage);
- Releases to atmosphere (including dust);
- Discharges to land (including accidental spillage);
- Waste management (duty of care compliance); and
- Impact on ecological systems.

Control measures should be developed, implemented and monitored to ensure that any impact on the environment is minimised.

All persons involved in the work activities considered 'key' on a construction site should be given a method statement briefing, in the form of a tool box talk, delivered by the Principal Contractor. This should outline the risks involved and the control measures that personnel are expected to comply with. It is general practice that individuals require to sign a method statement briefing record sheet acknowledging receipt of the information.

5.9 Traffic and Transport

During the construction phase, there will be traffic movements within the site boundary in addition to associated traffic movements on the local road network such as heavy goods vehicles, turbine deliveries. Measures to address associated impacts should be set out in the CEMP and may include a traffic management plan.

6. Monitoring

A programme of monitoring shall require to be set up for the site, this should be documented in the CEMP and include the following items, where relevant;

Surveys: Pre-construction and ongoing ecological surveys such as surveys for European Protected Species, bird surveys, protected habitats etc as required.

Site Inspections: The Principal Contractor, or appointed delegate will require to undertake site inspections; on at least a weekly basis (dependant on site activities). These site inspections will require to include an environmental component which will cover the SPR requirements set out on UKEN-IGE-SPR0009 Guidance for Construction Sites Environmental Inspections and as a minimum cover waste management; surface water management; management of hazardous materials, water and wastewater management; emergency response, incidents and complaints, nuisance; and other site specific issues such as battery storage areas. Weekly inspections will be complimented by a combination of daily/monthly inspections, dependant on the site specific requirements.

SPR also carry out periodic site inspections to assess the performance of the various contractors on site. This is recorded on the form UKEN-FGE-SPR0027 Construction Environmental Site Inspection Form which covers the SPR requirements set out above.

The Principal Contractor is responsible for ensuring the close out of any actions identified during the inspections. Records of the inspections carried out are to be retained onsite by the Principal Contractor; any remedial actions required are also recorded.



OUTLINE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN FOR ES: RENEWABLE ENERGY DEVELOPMENTS

UKEN-IGE-SPR0008

Revision 004

Page 15 of 18

Department Environmental

Effective Date 1/12/2019

Environmental Audits: internal (Principal Contractor) and external (via Client). The SPR EMS and associated audit programme includes the requirement to audit SPR construction sites on a periodic basis. This is in addition to the site inspections. All audits are carried out by trained personnel within the SPR environmental team (or delegated specialists). All actions raised from the audit are logged; progress tracked and a closing date assigned when the action is complete.

Physical monitoring: A programme of physical monitoring may be established such as water quality, dust, noise, vibration, and energy and resource usage.

7. Legal Compliance and other requirements

7.1 Planning Conditions

SPR sites are constructed under specific consents and licenses issued by Government bodies such as the Planning Inspectorate, Local Authority, Energy Consents Unit and the Regulators such as SEPA, the Environment Agency, Natural Resource Wales, Northern Ireland Environment Agency, Environmental Protection Agency (Ireland). Specific limits for emissions to air, land and water and working practices (such as seasonal exclusions) are contained within these consents/licenses and may not be breached at any time.

The Principal Contractor will be required to ensure that all relevant planning conditions for the site are complied with.

In addition, the SPR project manager will be responsible for maintaining an up-to-date register of the planning conditions for the site that specifically relate to the construction phase of the project. Planning conditions will be reviewed by the SPR project manager on a periodic basis to ensure that all of the planning conditions are being complied with and progress against each planning condition will be logged in the register. A copy of the planning conditions will require to be held on-site.

7.2 Legal Register

The Principal Contractor will be required to ensure that all relevant environmental legislation and best practice are complied with on site.

In addition, it is SPR policy to minimise the impact of its construction activities on the environment by complying with all current environmental legislation and best practice. In order to ensure that SPR are aware of the requirements of current environmental legislation a Legal and Compliance Register is kept as part of the SPR EMS.

All contractors on-site including the Principal Contractor and the Turbine, Solar, Battery contractor (s) are required to comply with current (and future) environmental legislation, regulations, best practice, and standards applicable to the activities in which they are engaged and other environmental requirements decided upon by SPR. This includes maintaining sufficient records of environmental information and audits both to show compliance with legal requirements and to demonstrate continual improvement where appropriate.

The Principal Contractor will be responsible for applying and obtaining any related consents/licenses to their activities such as septic tank consents, water abstraction licenses, activities associated with watercrossings, environmental protected species licenses and other discharge consents or environmental permits.

SPR will assess compliance to relevant environmental legislation as part of the SPR construction site environmental audits and inspections.

8. Reference material

Key reference material in this section of the CEMP should include the following.

- Site Planning Conditions
- Legal Register
- Consents/Licences/Permits
- Best Practice Guidance/Industry Standards such as Pollution Prevention Guidelines and the updated Guidance for Pollution Prevention (GPPs).

9. Training

Various mechanisms are employed at construction sites to communicate environmental management requirements. Key mechanisms are set out below.

9.1 Site Inductions

All SPR construction sites require to have a site induction that includes an environmental component. Designated on site personnel from the Principal Contractors project team will be responsible for preparing and delivering the site induction and maintaining documented attendee records. SPR have guidance on the environmental management contents of site inductions that includes the following items:

- Permits/licences;
- Waste;
- Water and Wastewater;
- Fuel, Oil and Chemical Management;
- Spillage; and
- Environmental Incident Reporting and Environmental Emergency Response Arrangements.

9.2 Tool Box Talks (TBT)

TBT are an effective method for the dissemination of information relating to work activities. Environmental TBTs will require to be delivered by the Principal Contractor to on-site personnel on an as required basis. When a TBT has been delivered it is the responsibility of the Principal Contractor to ensure that all personnel attending the TBT have signed a TBT attendance sheet. Topics for environmental TBT may include;

- Waste Management
- Delivery and Storage of Oils and Chemicals
- Waste Water and Water Supply Monitoring
- Surface Water Management
- Emergency Response

- Ecological Sensitivities
- Spill response training

9.3 Environmental Notice board

It is an SPR requirement that all our constructions sites have an environmental notice board. The notice board will be used to display copies of relevant environmental management information, including but not limited to the following;

- SPR Environmental Policy
- SPR Environmental Behaviours
- SPR Environmental Alerts
- Site Plan showing ecologically sensitive areas or management areas
- Emergency Response Contact Details
- Emergency Response Flowchart

10. Reporting

10.1 Environmental Incidents

The Principal Contractor will be required to prepare a site specific environmental emergency incident response plan. The plan will require to include how to report and deal with an environmental incident including the measures available to contain/clean up an incident (e.g. spill kits).

It is the responsibility of the Principal Contractor to ensure that all staff including any subcontractors are trained in the environmental emergency response plan so that they are prepared to respond to an incident promptly and effectively on-site. Where appropriate, SPR encourage a test of the environmental emergency response plan to be carried out on-site by the Principal Contractor.

The Principal Contractor will be required to report environmental incidents to the SPR project team. Details of the incident report require to be logged in the SPR reporting system by the relevant SPR project team member.

10.2 Public Complaints

The Principal Contractor will require to have in place a procedure for recording and responding to public complaints. The Principal Contractor will be required to report public complaints to the SPR project team. Details of the complaint are required to be logged in the SPR reporting system by the relevant SPR project team member.

10.3 Meetings

Environmental meetings and debriefs will require to be held on-site. This includes a standard monthly health, safety and environment meeting that is required to be held on all SPR construction sites. The meeting will require to be chaired by a member of the SPR project team and attendees generally include the Principal Contractor, turbine/solar/battery supplier, key sub-contractors and environmental specialists such as Ecological Clerk of Works.



OUTLINE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN FOR ES: RENEWABLE ENERGY DEVELOPMENTS

UKEN-IGE-SPR0008

Revision **004**Page **18 of 18**Department **Environmental**Effective Date **1/12/2019**

Where deemed appropriate and on sites where an Ecological Clerk of Works is present, weekly ECoW meetings may be held between the ECoW and the Principal Contractor and any other appropriate parties. The purpose of these meetings is to discuss ongoing issues relating to the ECoWs remit, that have been raised through the ECoW reports and to produce an action list to help prioritise the close out of the actions.

10.4 Community Liaison

Depending on the site location, a public/community relations plan may be developed for the site by the Principal Contractor. The purpose of the plan is to set out the approach to community liaison for the duration of the Project. SPR would also contribute to the plan.

11. Contractor Management

The Site CEMP should set out how the Principal Contractor manages their subcontractor's onsite. This may range from the selection and assessment processes to the assessment of performance on site.

In regards to SPR, SPR appoint third parties to construct our portfolio of Renewable Energy Developments.

SPR have a preference for our construction sites to be registered by our Principal Contractors under the Considerate Contractors Scheme. Sites and companies that register with the scheme are monitored against a Code of Considerate Practice that focuses on three main areas of concern: the general public, the workforce and the environment.

ScottishPower Renewables

9th Floor
320 St Vincent Street
Glasgow
G2 5AD

T +44 (0)141 614 0451

EarraghailRenewableEnergyDevelopment@scottishpower.com

