MWP

# Construction Environmental Management Plan (CEMP)

## Mill Farm Solar 110kV Substation

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Client: Mill Farm Solar Project Ltd.

April 2024

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# Appendices

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Appendix 2 – Environmental Management Plans

| Project No. | Doc. No. | Rev. | Date | Prepared By | Checked By | Approved By | Status |
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| 23991 | 6001 | A | February 2024 | RP | AR | OH | Issue |
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# 1. Introduction

Mill Farm Solar Project Ltd. (the "applicant") is applying to An Bord Pleanála (ABP) for planning permission for the development of 1 No. 110kV onsite Eirgrid substation with associated electrical plant, 2 No. Over Head Line (OHL) End Mast structures, electrical equipment, security palisade fencing, an IPP building and a transformer (the "proposed development"), associated with an approved Solar PV Development (the "permitted development") at Ricetown Co. Meath (the "proposed development site").

The proposed development site comprises agricultural land on a site of approximately 3.6 Ha within the townland of Ricetown, approximately 12 km north of Navan, Co. Meath.

The proposed development will comprise:

- A 110 kilovolt (kV) Air Insulated Switchgear (AIS) loop-in substation with associated compound, including control and operational buildings, electrical plant, equipment, cabling, lighting, CCTV, lightening masts, drainage infrastructure, security palisade fencing, and all associated and ancillary works necessary to facilitate the development.
- Erection of 2 no. OHL end masts (c. 20m high) and 2 no. lattice gantries (c. 16m high) and associated overhead cabling to enable a loop-in/loop-out grid connection to National grid via the existing Meath Hill-Gorman 110kV overhead powerlines located above the site.

The works will include site drainage and permanent signage associated with the new construction. The road layout for the proposed project makes use of the existing onsite access road and tracks, associated with the adjacent permitted solar farm development, where possible. The proposed development is compatible and does not in any way impede or alter the permitted Mill Farm Solar Farm.

There will be a requirement to excavate approximately 7,000$m^3$ of clean, natural topsoil and subsoil. This material will be reused, where feasible, to create berms and used for landscaping on the adjacent permitted solar farm site. Excess clean soil material will be deposited permanently in 2 No. soil deposition areas (1,600$m^2$) located adjacent to the western boundary of the site.

Where surplus material is to be reused on the adjacent permitted solar farm site as a by-product (not as a waste), this will be done in accordance with Article 27 of the European Communities (Waste Directive) Regulations 2011 (S.I. No. 126 of 2011) (as amended) and having regard for the Circular Economy and Miscellaneous Provisions Act 2022 and any such legislative requirements that may be required later.

The Solar PV development was approved by Meath County Council (MCC) under reference number 22/1044 on 14th February 2023. The approved development consists of:

'Permission for a period of 10 years to construct and complete a Solar PV development with a total site area of circa 97.05 hectares, to include solar panels mounted on steel support structures, associated cabling and ducting, 12 No. Transformers, 1 No. Temporary Construction Compound, 1 No. Storage Container, maintenance tracks, perimeter fencing and gates, 61 No. CCTV, 4 No. Weather Stations, 3 No. Bunds associated landscaping and ancillary works, with an operational life of 40 years.'

The Solar Development will have the energy capacity to power approximately 20,000 homes. The proposed 110kV substation, which is the subject of this report, will be connected to the National Grid by looping into the Meath Hill-Gorman 110kV overhead powerlines above the site.

This Construction and Environmental Management Plan (CEMP), prepared by MWP on behalf of Mill Farm Solar Project Ltd., outlines construction practices and environmental management measures which are to be implemented during the construction phase to ensure the Project is constructed in accordance with best practice and with the minimum impact on the surrounding environment.

This CEMP has been produced to accompany the planning application. It is intended that this will be updated to include more site specific information, once the Contractor's and Construction Management Team (CMT) is appointed.

This CEMP should be read in conjunction with the Outline CEMP prepared by Neo Environmental Ltd. for the permitted development as the construction of the proposed development will take place simultaneously with the construction of the permitted solar farm.

## 1.1 CEMP Purpose and Objectives

All construction projects require the preparation of a site specific CEMP in order to ensure that the project is constructed in accordance with Best Practice, with the minimum impact on the surrounding environment.

The purpose of a CEMP is to outline how the Contractor(s) will implement a Site Construction Management System to meet the specified requirements which include contractual, regulatory and statutory requirements, environmental mitigation measures and planning conditions.

In essence this CEMP is to provide the Client and the Main Project Contractor with a practical guide to ensure compliance by all parties with Planning and Environmental requirements.

The CEMP achieves this by providing the environmental management framework to be adhered to during the pre-commencement, construction phase of the Project. It outlines the work practices, construction management procedures, management responsibilities, general control and mitigation measures, as well as monitoring proposals that are required to be adhered to in order to construct the works in an appropriate manner.

All site personnel will be required to be familiar with the plan's requirements as related to their role on-site.

There is a requirement on the Appointed Contractor(s), that details of this Preliminary CEMP are updated with progress, including the roles and responsibilities of those appointed on the site for the construction of the project, if their respective roles change during the currency of the project.

The CEMP will be reviewed by the Appointed Contractor prior to commencement of the works and submitted to Mill Farm Solar Project Ltd., ABP and/or Meath County Council for agreement. The document will be revised, if required, during the works and retained by the Appointed Contractor on file for inspection along with any associated records.

## 1.2 Scope

This CEMP defines the approach to environmental management at the site during the construction phase. Compliance with the CEMP, the procedures, work practices and controls will be mandatory and must be adhered to by all personnel and contractors employed during the construction phase of the project.

This CEMP seeks to:

- Promote best environmental on-site practices for the duration of the construction phase; and
- Comply with any planning conditions that may apply.

## 1.3 Live Document

The CEMP is considered a 'live' document, and as such, should be reviewed on a regular basis. Updates to the CEMP may be necessary due to any changes in environmental management practices and/or contractors. As explained in more detail in the later sections, the procedures agreed in this CEMP will be audited regularly throughout the construction phase to ensure compliance.

# 2. Site Context

The proposed development site is located adjacent to the permitted Mill Farm Solar Project site (see **Figure 2-2**). The neighbouring townlands include Stokesquarter, Painestown, Killary, Ricetown and the nearest small villages are Lobinstown (2km north-east) and Castletown K.P. (2.6km southwest), in Co. Meath. The nearest large towns are Navan, Co. Meath, Ardee in Co. Louth (12km north-east), Kells (14.5km southwest), and Drogheda (22.5km south-east) (**see Figure 2-1**). Access to the proposed development site is from an existing access point via the L1604, which connects to the N52, approximately 1km the northwest. The Killary Stream (EPA River Waterbody Code: IE_NB_06K010500) is located approximately 190m to the east of the proposed development site. Water runoff from the site most likely drains into the Killary watercourse as the land slopes towards the watercourse. There is a drainage ditch running along the southwest and south east boundary of the agricultural field the proposed development site is located within. This drainage ditch may convey surface water towards the Killary Stream.

The receiving environment is a rural area consisting of small villages, isolated farmsteads and houses and ribbon residential development along the main roads. The permitted solar farm also includes the site of a former quarry, now reinstated.

Various industrial features are also evident with a number of quarries located in the wider vicinity and electricity pylons running throughout the area.

The majority of habitat within the site boundary was classified as cultivated land - Arable Crops BC1 (wheat cereal) and the topography is relatively flat with surface water draining to lower lying drainage areas to the northeast and south. Refer to the **Ecological Appraisal Report** submitted with this planning application for further details on the habitats on the proposed development site.

The proposed substation is located adjacent to an existing 110 kV overhead powerline which runs along the southern boundary and will connect directly to this powerline.

There are no Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Natural Heritage Areas (NHAs) or proposed NHAs (pNHAs) within or directly adjacent to the site. There are four designated Natura 2000 sites located within the zone of influence (ZoI) of the proposed development site; two SACs and two SPAs which include the River Boyne and River Blackwater SAC, the River Boyne and River Blackwater SPA, Dundalk Bay SAC and Dundalk Bay SPA. Refer to the **Natura Impact Statement (NIS)** submitted with this application for further details.

See **Figures 2-1** and **2-2** for the proposed development site location and **Figure 2-3** for the proposed site layout.

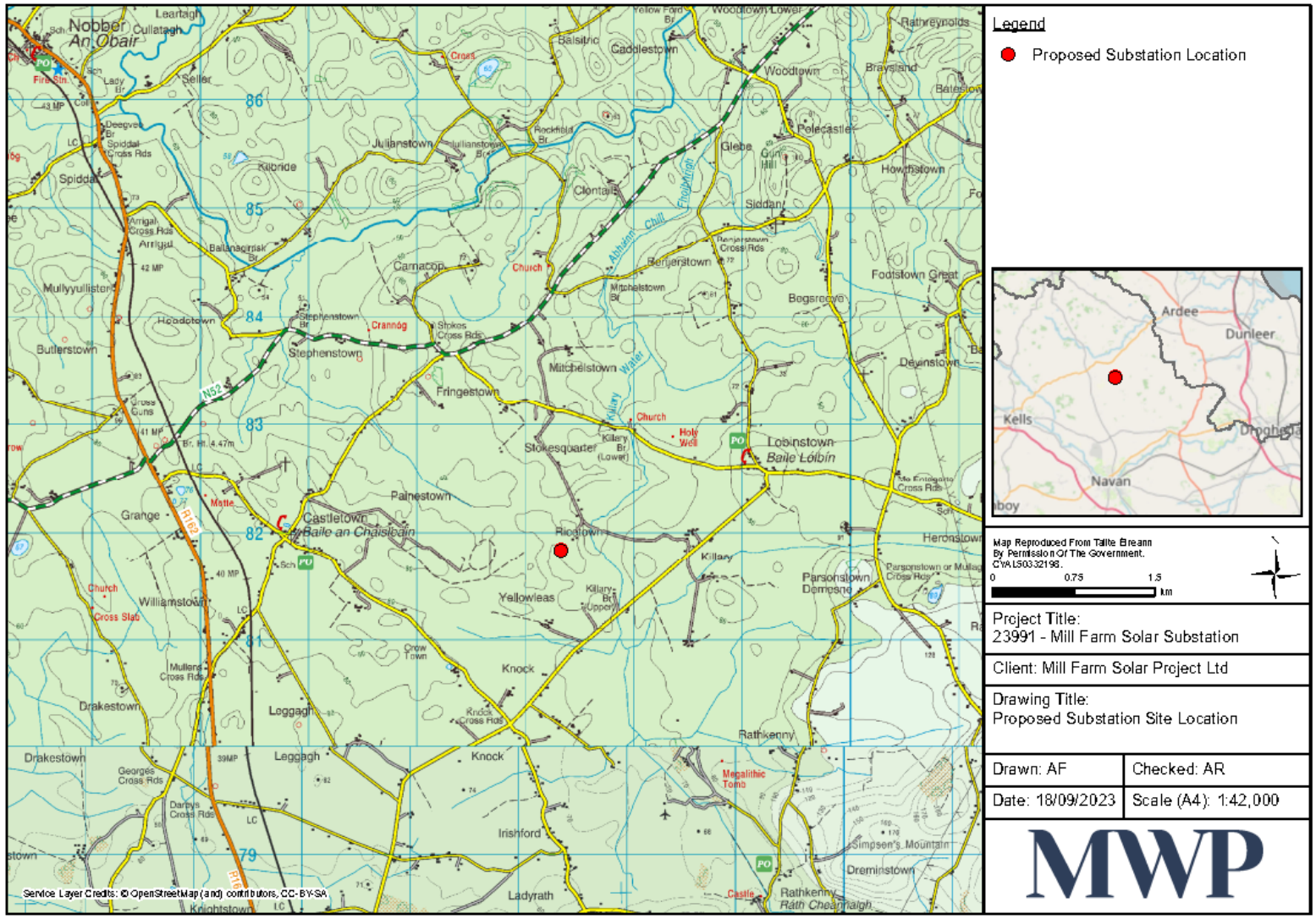



**Figure 2-1: Proposed Development Site Location in context of greater area**

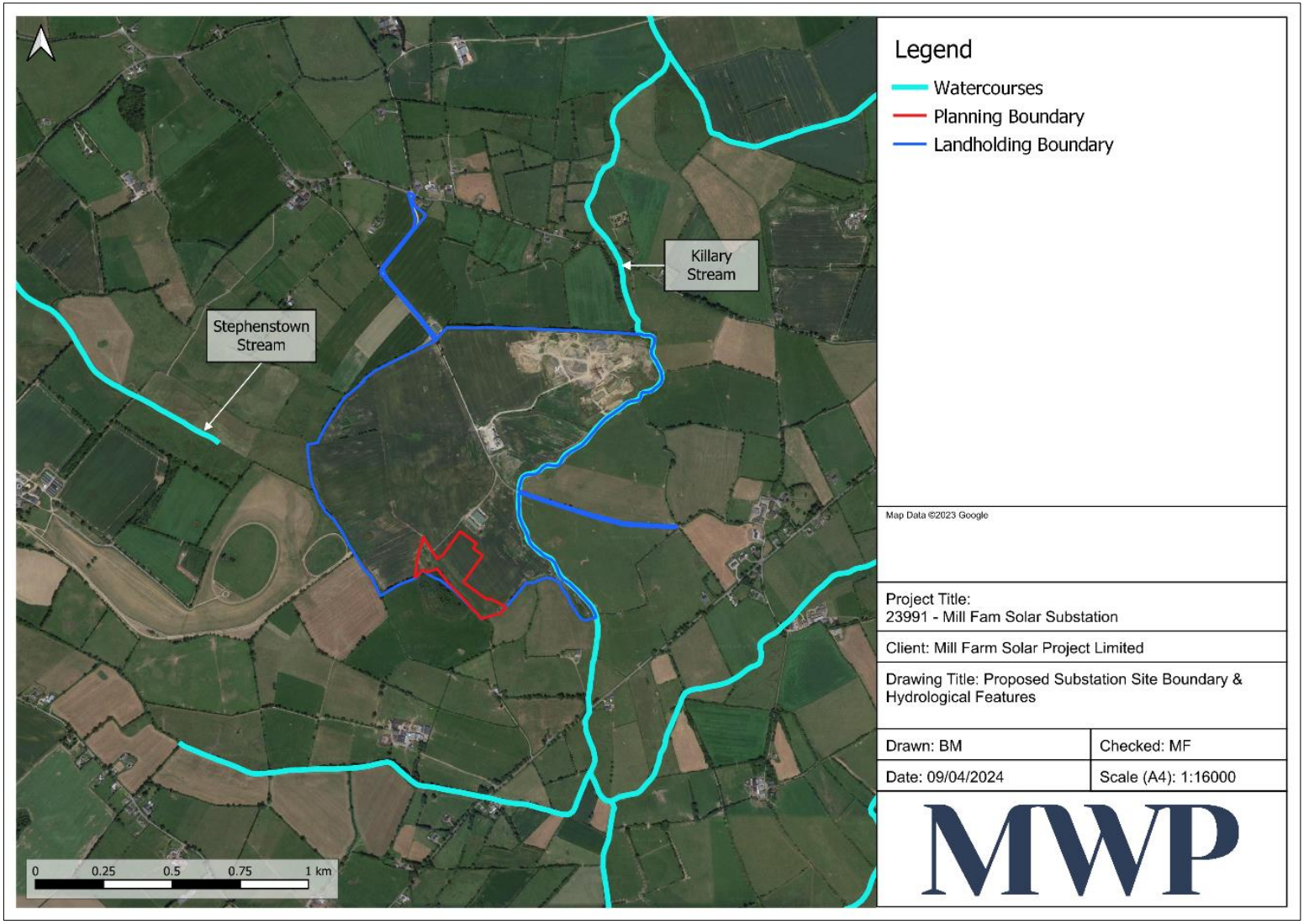



**Figure 2-2: Proposed Development Site Location with red line boundary and permitted solar farm boundary**

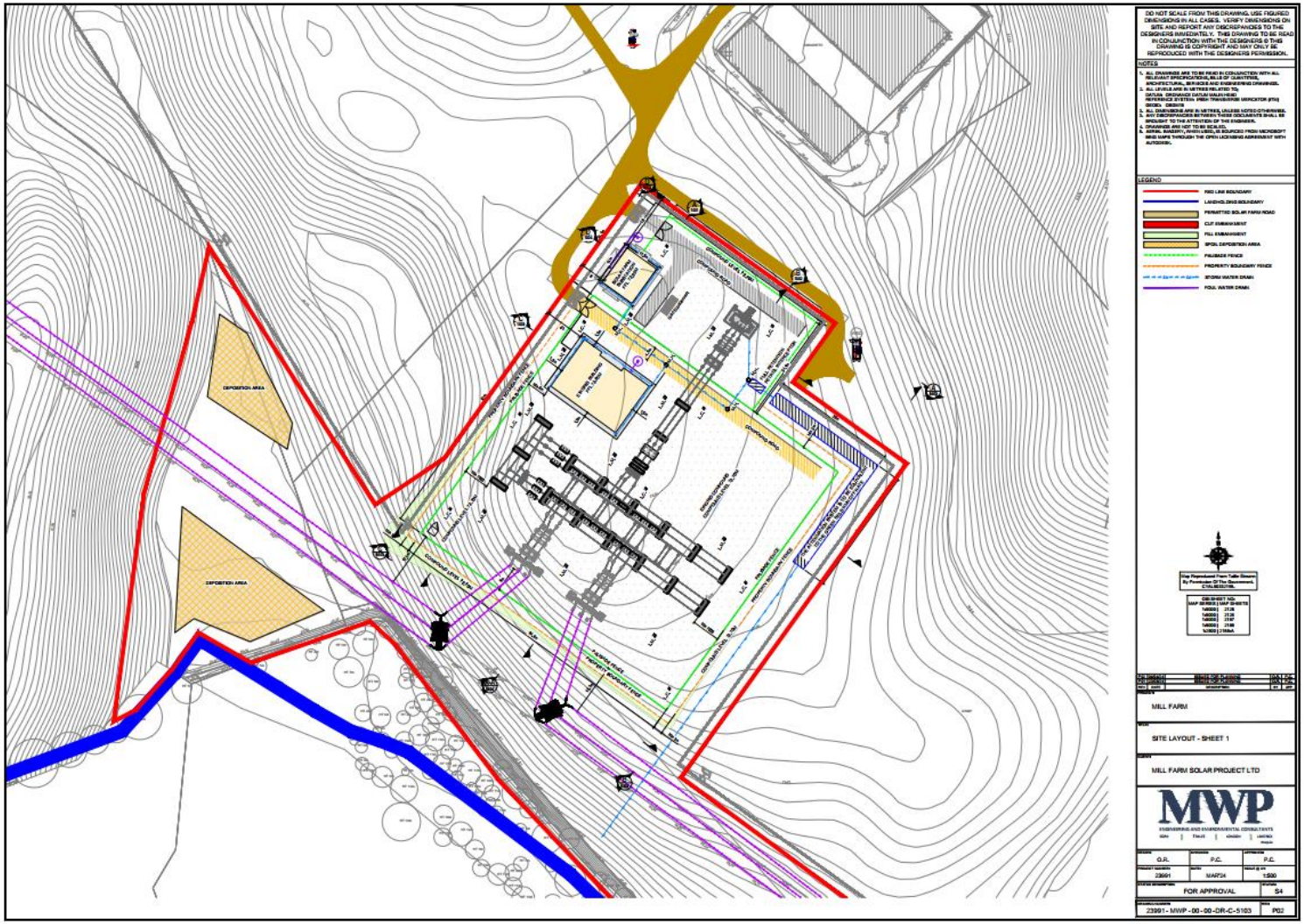



**Figure 2-3: Proposed Site Layout**

# 3. Construction Works

The Applicant is proposing to construct a 110kV loop-in substation and associated works in the townland of Ricetown, County Meath to connect the permitted Mill Farm Solar Project located at Stokesquarter, Painestown, Killary, Ricetown, Castletown K.P., Navan, Co. Meath to the National Grid.

Key elements of the civil works and activities associated with the construction phase of the development are as follows and are discussed in the following subsections:

- Pre-commencement activities including site investigation work and pre-construction surveys.
- Site preparation and installation of drainage systems.
- Bulk earthworks for formation of substation compound base.
- Substation compound base and equipment foundations.
- Cable trenching and cable laying.
- Construction of control building and installation of equipment within compound.
- Complete site works: security fencing, gates, signage, lighting.
- Demobilise offices and tidy up site.

Mechanical machinery and electrical equipment typically used for construction projects will be required to facilitate the proposed development. The following is a non-exhaustive list of plant that is typically heavy civil engineering work and may be used in this proposed development:

- 30-50T Excavators;
- 15-30T Excavator;
- Rubber Tired 15-20T Excavator;
- 3-10T Mini Diggers;
- Low Ground Pressure Excavators (Bog master);
- Mobile Crane for construction;
- Telescopic Handler;
- Tractors and trailers;
- Road grader;
- Double contained fuel bowsers;
- 12T Rollers;
- Diesel powered generators; and
- Water bowsers.

## 3.1 Working Hours

Construction working hours will be limited to 7.00am to 7.00pm Monday to Friday and from 08.00am to 2.00pm on Saturdays with no work on Sundays.

All traffic movements will be carried out between the hours of 7.00am to 7.00pm on Monday to Friday and 8.00am to 2.00pm on Saturdays. Outside of these times works are limited to:

- Commissioning and testing; and
- Works required in an emergency where there is the potential of harm or damage to personnel, plant, equipment, or the environment, Deliveries will also be scheduled to avoid peak times where relevant, e.g. avoiding rush hours and after school pick up times.

The working day may extend at times when critical elements of work need to be advanced. Longer working days can occur when there is a planned concrete pour, etc.

In the event that activities outside of normal working time are needed, the Contractor shall prepare a suitable Method Statement and the Contractor will seek the approval of the Local Authority and if required, the directly affected residents/other.

The construction phase of the proposed development is anticipated to cover a period of between 14-18 months. During this period, there will be a combination of HGVs for the component deliveries and cars/vans for construction staff. HGV movements are expected to be most intense throughout the stage of construction, tailing off towards the final weeks. Car/van movements are expected to be constant throughout.

## 3.2 Construction Personnel

The following personnel will be required during the duration of the construction phase:

- 1 no. Project Manager
- 1 no. Construction Manager
- 1 no. Environmental Manager
- Health and Safety Personnel
- Approx 15 no. Construction Personnel

It is forecast that there will be a maximum of 20 staff on site at any one time during the construction phase, although this will vary subject to the overall programme of works.

## 3.3 Substation Components

### 3.3.1 Proposed 110kV Substation Compound

The overall substation compound will have an area of c.11,572m$^2$ divided into two adjoining sections: an EirGrid section (c. 9,262m2 in area) and an IPP (Independent Power Producer) section (c.2,310 m$^2$ in area), each of which are enclosed within a 2.6m high palisade fence. An additional outer concrete post and rail fence (1.4m in height) will be installed around the perimeter of the EirGrid compound.

Each section will contain a control building and an outdoor electrical yard including electrical equipment such as electrical pylons, over and underground ducting & cables, busbars, disconnects, breakers, sealing ends, lightning

and lighting masts. The IPP section will also contain 1 No. bunded transformer with a back up emergency diesel generator and associated diesel storage tank also located within the bund. Both buildings will be a block built single storey building approximately 6.5m in height, with pitched roof and an external blockwork and plastered finish.

The overall substation compound will consist of a 50mm compound stone finish. The max height of the substation is 8.55m. 10 No. Lightning masts of 18m high will be erected within the compound.

### 3.3.2 Overhead loop-in Grid Connection

The electrical connection required from the proposed substation development will be facilitated by Overhead 110kV Loop-in Interface Masts. The erection of 2 No. Over Head Line (OHL) End Mast structures (c. 20m high) are required under the existing Meath Hill-Gorman 110kV OHL. There is also a requirement for the installation of 2 No. lattice gantries (c. 16m high).

The existing OHL will be terminated and 2 new towers will be erected to create 2 new OHL circuits. The new interface mast structure locations are to be selected based on ground surveys, ground profiles, allowable angles and ruling span checks. A foundation is excavated for each tower location and the placement of excavation material is temporarily stored in designated deposition areas. Any excess excavation material will be utilised as berms, deposited at the permanent deposition area and for landscaping purposes on the adjacent permitted solar farm. Reinforcing bars are placed into each excavation and the body of each tower assembled adjacent to the excavation. Concrete is poured directly into each excavation and allowed to cure until a preformed metal panel is set in place. The foundations are then backfilled individually. At this stage, the existing OHL is de-energized and construction of the 2 towers take place. An earth mat is laid and is a requirement for the electrical connection of the tower. A hardstand area is made available for the use of a crane to guide and position each section of the towers together. Once all sections of the towers are bolted securely the conductor can be centred and installed. All other associated equipment such as down dropper conductors and shackles are positioned before the electrical circuit can be tested in both directions to confirm OHL is re-energised.

#### Drainage

Foul sewage from the temporary facilities will be routed to covered precast concrete watertight 5m$^3$ tanks designed for receiving and storing sewage with no outlet. The tanks will be sized to suit the expected use and will be installed in a location remote from water courses. Contents and residues will be regularly emptied by a competent operator for safe disposal to an approved treatment works.

Surface water runoff from the roofs of the substation buildings, and hard-surfaced areas within the electrical yard, including areas where a risk of a contaminant leak or spill may be present (such as the transformer bund), will be collected in a series of filter drains, roof guttering and downpipes and routed to an underground gravity drainage network. All runoff collected in the stormwater sewer network will pass through an oil/petrol Interceptor prior to discharging to an attenuation unit on the north-eastern side of the compound. The attenuation unit will provide attenuation of the increased volumes of surface water runoff generated from the hard surfaces of the development when compared to the current greenfield condition. The attenuated surface water runoff is then proposed to overflow at a controlled rate equal to the greenfield runoff rate to an existing vegetated land drain on the southern side of the compound.

### 3.3.3 Construction Compound

A suitably surfaced contractor's temporary construction compound and laydown area will be provided for the duration of the site works on the permitted adjacent Solar Farm. The construction compound will consist of

temporary site offices, equipment storage and construction staff welfare facilities, as well as car parking areas for staff and visitors. A potable water supply will be provided by a water tanker.

## 3.4 Construction Traffic and Haul Route

Access to the Site is from an existing access point off the L1604. It is anticipated the haul route will likely be from the N52, which is located to the northwest of the site. Vehicles will exit the N52 onto the L1604 in a southwest direction from approximately 1km, before turning right into the site access point.

A detailed Construction Traffic Management Plan (CTMP) will be prepared for the proposed development by the appointed contractor(s) prior to construction.

Access on this existing road will be maintained. The volume of traffic generated by the transportation requirements will be minimal.

Throughout the construction phase of the project access will need to be maintained to the following areas:

- Local road network including L1604
- Site access roads

Construction traffic will include:

- HGVs importing construction materials including concrete and piping
- HGVs exporting waste/spoil materials
- HGVs delivering plant and fuel
- Traffic associated with on-site construction personal

Further details on how traffic will be managed during construction is provided in **Appendix 2, EMP 6: Construction Traffic Management**.

## 3.5 Construction Methodology

### 3.5.1 Site Preparation

Prior to the commencement of construction activities, the area for development will be fenced off.

The site boundary will be clearly marked with high visibility tape and the appointed contractor will not be permitted to use any areas outside the identified site boundary for any activity relating to construction.

#### 3.5.1.1 Temporary Site Construction Compound

A suitably surfaced contractor's temporary construction compound and laydown area will be provided for the duration of the site works on the permitted adjacent Solar Farm. The construction compound will consist of temporary site offices, equipment storage and construction staff welfare facilities, as well as car parking areas for staff and visitors.

Container storage units will be provided for holding tools and materials. The compound will be fenced with chain-link fencing on wooden posts and will have a lockable gate.

A potable water supply will be provided by a water tanker. Foul sewage from the temporary facilities will be routed to covered precast concrete watertight 5m$^3$ tanks designed for receiving and storing sewage with no outlet. The

tanks will be sized to suit the expected use and will be installed in a location remote from water courses. Contents and residues will be regularly emptied by a competent operator for safe disposal to an approved treatment works.

The temporary compound will be used as a secure storage area for construction materials, waste materials and also contain temporary site accommodation units to provide welfare facilities for site personnel. Facilities will include offices, meeting rooms, a canteen and a drying room.

The temporary compound will be constructed early in the project in order to provide site offices and accommodation for staff and for the delivery of materials. Any surface water management, bunding, waste management measures etc will also be put in place at the outset. The compound will be in place for the duration of the construction phase and will be removed once commissioning is complete.

The temporary construction compound will typically be constructed as follows:

- The area to be used as the compound will be marked out at the corners using ranging rods or timber posts;
- The compound will be established using a similar technique as the construction of the excavated site road;
- A bunded containment area will be provided within the compound for the storage of lubricants, oils and site generators etc;
- If necessary, the compound will be fenced and secured with locked gates; and
- The compound will include an enclosed wastewater management system (holding tank) capable of handling the demand during the construction phase when as many as 20 people will be working on site. These will be emptied as required by a licensed contractor.

See Figure 3-1 for an example temporary construction compound. Materials and waste handling and storage will be within the confines of the site(s). Adequate warning signs will be on display to illustrate the required PPE and risks associated when entering the construction areas.


**Figure 3-1: Typical temporary site construction compound**

# 4. Construction & Environmental Management

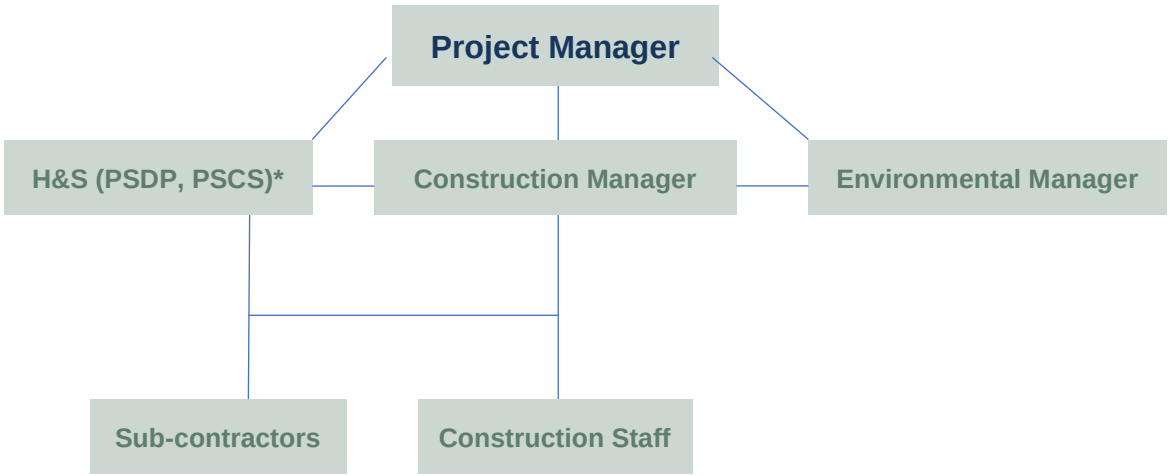
## 4.1 Overview

A number of outline environmental management plans (EMPs) have been prepared for managing the impacts of Construction Activities associated with the proposed development. See Table 5-1 below. Prior to commencement of construction these plans are to be updated and implemented by the Appointed Project Manager and/or Project Contractor as relevant.

Once appointed, it is the Contractor's responsibility to update and add (where required) project specific control measures relevant to the environmental management plans and procedures. The Contractor will ensure that plans/procedures are communicated to all site staff, including sub-contractors, through induction, training and at relevant meetings.

## 4.2 On-site Organisational Structure and Responsibility

The Organisational Structure for the Contractor's Project Team is included below. This structure is defined by the Contractor and includes the names of the assigned personnel with the appropriate responsibility and reporting structure reflected.




*H&S – Health and Safety

*PSDP – Project Supervisor Design Process

PSCS – Project Supervisor Construction Stage

The Contractor will select the Project Team for the construction of the Project. The Contractor's Project Team will include an overall Project Manager, whose duties will stretch beyond the day-to-day works to budgetary, procurement and scheduling matters. The selected Construction Manager will have overall responsibility for the construction-site personnel carrying out the works and the Construction Manager will report to the Project Manager.

A competent Environmental Manager will be appointed for the duration of the works and will report to the Project Manager. The Construction Manager will communicate regularly with the Environmental Manager to ensure mitigation measures are applied to specific works. The Environmental Manager will carry out tasks as required, including ensuring that installation and maintenance of sediment control measures are implemented and maintaining approved waste management control measures. The use of dedicated staff, under the direction of the Environmental Manager, will ensure the environmental controls are in situ ahead of the works on-site.

## 4.3 Duties and Responsibilities

The general role of key people on-site implementing the CEMP will be:

- The Project Manager - liaises with the Project Team in assigning duties and responsibilities in relation to the CEMP to individual members of the main contractor(s)'s project team.
- The Construction Manager - liaises with the Environmental Manager when preparing site works where there is a risk of environmental damage and manages the construction personnel and general works.
- The Environmental Manager - ensures that the CEMP is developed, implemented and maintained. The Environmental Manager's tasks at the construction-site are described below at Section 4.3.3. To ensure adequate cover of environmental tasks, waste management tasks and responsibilities, dedicated construction staff will be assigned to the Environmental Manager to implement and maintain the Sediment and Erosion Plan and any other measures required.

Other roles include:

- Health and Safety (PSDP and PSCS);
- Specialist environmental contractors (if required).

### 4.3.1 Project Manager

Name: TBC

A Project Manager is to be appointed on behalf of the main Contractor(s) to manage and oversee the entire project. The Project Manager is responsible for:

- Implementing of the Construction and Environmental Management Plan (CEMP);
- Implementing the Health and Safety Plan;
- Management of the construction project;
- Liaison with the client/developer;
- Liaison with the Project Team;
- Assigning duties and responsibilities in relation to the CEMP;
- Production of construction schedule;
- Materials procurement; and
- Maintaining a site project diary.

### 4.3.2 Construction Manager

Name: TBC

The Construction Manager manages all the works to construct the project, on behalf of the Contractor. The Construction Manager reports to the Project Manager. In relation to the CEMP, the Construction Manager is responsible for:

Site-Specific Method Statements

- Liaising with the Environmental Manager in preparing site-specific Method Statements for all Works activities where there is a risk of environmental damage, by incorporating relevant Environmental Control Measures and referring to relevant Environmental Control Measure Sheets;
- Liaising with the Environmental Manager in reviewing and updating site-specific Method Statements for all Works activities where Environmental, Resource & Waste Management Control Measures and Environmental Control Sheets have been altered; and
- Liaising with the Environmental Manager where third party agreement is required in relation to site-specific Method Statements, Environmental, Resource & Waste Management Control Measures and/or Environmental Control Measure Sheets.

General

- Being aware of all project Environmental Commitments and Requirements;
- Ensuring that all relevant information on project programming, timing, construction methodology, etc., is communicated from the Project Manager, to the Environmental Manager in a timely and efficient manner in order to allow pre-emptive actions relating to the environment to be taken where required;
- Programming and planning of excavation works and communicating this schedule to the Environmental Manager;
- Ensuring that adequate resources are provided to design and install any environmental interventions;
- Liaising with the Project Team in assigning duties and responsibilities in relation to the CEMP to individual members of the Contractor's project staff;
- Ensuring that the Environmental Manager performs regular and frequent environmental site inspections; and
- Reviewing and approving all waste management control measures ensuring compliance with National and International Waste legislation and best practice.

### 4.3.3 Environmental Manager

Name: TBC

The Environmental Manager is responsible for:

General

- Being familiar with the project environmental commitments and requirements;
- Being familiar with baseline data gathered for the various environmental assessments and during pre-construction surveys;
- Assisting the Construction Manager with the provision of the information on environmental management during the course of the construction phase;

- Liaising with the Project Team in assigning duties and responsibilities in relation to the CEMP to individual members of the Contractor's project staff;
- Implementing the environmental procedures of the CEMP;
- Liaising with the Construction Manager to ensure that the control measures set out in the Schedule of Environmental Mitigation are implemented;
- Liaising with the client/developer in relation to environmental issues; and
- Auditing the construction works from an environmental viewpoint.

### Site-Specific Method Statements

- Liaising with the Construction Manager in preparing site-specific Method Statements for all Works activities where there is a risk of environmental damage. These site-specific Method statements should incorporate relevant Environmental Control Measures and take account of relevant Environmental Control Measure Sheets;
- Liaising with the Construction Manager in reviewing and updating site-specific Method Statements for all Works activities where Environmental Control Measure and Environmental Control Sheets have been altered; and
- Liaising with the Construction Manager where third party agreement is required in relation to site-specific Method Statements, Environmental Control Measures and/or Environmental Control Measure Sheets.

### Third Party Consultations

- Overseeing, ensuring coordination and playing a lead role in third party consultations required statutorily, contractually and in order to fulfil best practice requirements;
- Ensuring that the minutes of meetings, action lists, formal communications, etc., are well documented and that the consultation certificates are issued as required;
- Liaising with all prescribed bodies during site visits, inspections and consultations;
- Where new Environmental Control Measures are agreed as a result of third party consultation, ensuring that the CEMP is amended accordingly;
- Where new Environmental Control Measures are agreed as a result of third party consultation, the Environmental Manager should liaise with the Construction Manager in updating relevant site-specific Method Statements; and
- Where required, liaising with the Construction Manager in agreeing site-specific Method Statements with third parties.

### Licensing

- Ensuring that all relevant works have (and are being carried out in accordance with) the required permits, licences, certificates, planning permissions, etc,;
- Liaising with the designated licence holders with respect to licences granted pursuant to the Wildlife Act, 1976, as amended (if required); and
- Bringing to the attention of the Project, Design and Construction Team any timing and legal constraints that may be imposed on the carrying out of certain tasks.

### Resource & Waste Management Documentation

- Holding copies of all permits and licences provided by waste contractors;
- Ensuring that any operations or activities that require certificates of registration, waste collection permits, waste permits, waste licences, etc., have appropriate authorisation; and
- Gathering and holding documentation with the respect to waste disposal.

### Legislation

- Keeping up to date with changes in environmental legislation that may affect environmental management during the construction phase;
- Advising the Construction Manager of these changes; and
- Reviewing and amending the CEMP in light of these changes and bringing the changes to the attention of the Contractor's senior management and subcontractors.

### Specialist Environmental Contractors

- Identifying requirements for specialist environmental contractors (including ecologists, asbestos, waste contractors and spill clean-up specialists) before commencement of the Project;
- Procuring the services of specialist environmental contractors and liaising with them with respect to site access and report production;
- Ensuring that the specialist environmental contractors are competent and have sufficient expertise to co-ordinate and manage environmental issues; and
- Co-ordinating the activities of all specialist environmental contractors on environmental matters arising out of the contract.

### Environmental Induction Training and Environmental Toolbox Talks

- Ensuring that Environmental Induction Training is carried out for all the Contractor's site personnel. The induction training may be carried out in conjunction with Safety Induction Training;
- Providing toolbox talks on Environmental Control Measures associated with Site-specific Method Statements to those who will undertake the work;

### Environmental Incidents/Spillages

- Prepare and be in readiness to implement at all times an Emergency Response Plan;
- Notifying the relevant statutory authority of environmental incidents;
- Carrying out an investigation and producing a report regarding environmental incidents. The report of the incident and details of remedial actions taken should be made available to the relevant authority, and the Construction Manager;
- The Site Environmental Manager shall notify the Client of any complaints or environmental incidents within 24 hours of occurrence. Where significant incidents occur requiring the involvement of statutory authorities or emergency services or where any pollution events occur, the Client shall be notified within 1 hour; and
- In the event of encountering a spillage or contaminated land/buried waste being encountered the Environmental Manager will contact MWP - Engineering and Environmental Consultants who have at their disposal Environmental Engineers and Scientists with experience in addressing spillage or contaminated

land/buried waste. MWP have personnel based in three offices in Ireland and will be available to dispatch suitably qualified and experienced personnel at short notice in the event of an Environmental Incident.

Site Environmental Inspections and Auditing

- Carrying out regular documented inspections of the Site to ensure that work is being carried out in accordance with the Environmental Control Measures and relevant site-specific Method Statements, etc.,
- Carrying out inspections of the site drainage system;
- Appending copies of the inspection reports to the CEMP;
- Liaising with the Construction Manager to organise any repairs or maintenance required following the daily inspection of the Site;
- Accommodate audits by the Employer and/or independent auditing consultants during the Project;
- Accommodate third party environmental auditing when required;
- During audits, the Environmental Site Manager shall make the necessary staff available during each audit and provide access to all documentation and site areas (and provide necessary induction and training to allow access where required);
- If there are any adverse findings arising from the environmental audits, the Environmental Site Manager shall be required to take prompt mitigation actions and provide written reports to the Employer detailing such mitigation; and
- The Environmental Site Manager shall notify the Employer of any complaints or environmental incidents within 24 hours of occurrence. Where significant incidents occur requiring the involvement of statutory authorities or emergency services or where any pollution events occur, the Employer shall be notified within 1 hour.

Note: Communication in respect of the project to regulatory or statutory bodies shall be undertaken by the Employer, unless otherwise agreed, except in the case of incident notification.

Environmental Records

- The Construction Environmental Manager shall provide all CEMP documentation to the Client on completion of the site works. Reports arising during the site works, such as verification reports or waste disposal records shall be provided to the Client within one month of completion of the activity and may be subject to review.

### 4.3.4 Site Personnel

All Contractors, and other site personnel, on the project will adhere to the following principal duties and responsibilities:

- To co-operate fully with the CMT and the Project Manager/Environmental Manager in the implementation and development of the CEMP at the site;
- Adhering to the relevant Environmental Control Measures and relevant site-specific Method Statements
- To conduct all their activities in a manner consistent with regulatory and best environmental practice;
- To participate fully in the environmental training programme and provide management with any necessary feedback to ensure effective environmental management at the site; and
- Adhere fully to the requirements of the site environmental rules.

- Adhering to the Health and Safety Plan;
- Reporting immediately to the Environmental Manager and Construction Manager any incidents where there has been a breach of agreed procedures including:
    - a spillage of a potentially environmentally harmful substance;
    - an unauthorised discharge to ground, water or air etc.

### 4.3.5 Other Roles

#### 4.3.5.1 Health and Safety Personnel

The Health and Safety personnel for the construction project is appointed by the Contractor in line with the Construction Regulations:

- Carrying out duty of Project Supervisor Construction Stage (PSCS);
- Responsible for safety induction of all staff and personnel on-site;
- Implementing the Health and Safety Plan;
- Auditing and updating the Health & Safety Plan; and
- All other required legal duties.

#### 4.3.5.2 Specialist environmental contractors

- Identifying requirements for specialist environmental contractors (including ecologists, asbestos/waste contractors and spill clean-up specialists) before commencement of the project;
- Procuring the services of specialist environmental contractors and liaising with them with respect to site access and report production;
- Ensuring that the specialist environmental contractors are competent and have sufficient expertise to co-ordinate and manage environmental issues, and
- Co-ordinating the activities of all specialist environmental contractors on environmental matters arising out of the contract.

## 4.4 Contacts

### 4.4.1 Main Contractor Contacts

**Table 4-1: Main Contractor Contacts**

| Position Title | Name | Phone | Email |
|---|---|---|---|
| Main Contractor | TBC | | |
| Project Manager | TBC | | |
| Construction Manager | TBC | | |
| Environmental Manager* | TBC | | |

| Position Title | Name | Phone | Email |
|---|---|---|---|
| Safety (PSCS)* | TBC | | |
| Safety Manager* | TBC | | |
| Site Emergency Number* | TBC | | |
| Resource & Waste Management Coordinator | TBC | | |
| Overall Project PSDP | TBC | | |

**24 hour contact details required*

### 4.4.2 Employer Contacts

**Table 4-2 Employer Contacts**

| Position Title | Organisation | Name | Phone | Email |
|---|---|---|---|---|
| Employer | Mill Farm Solar Project Ltd. | Jane O'Connor | (057) 936 1540 / (087) 429 6496 | enquiries@millfarmsolar.ie |
| Employer's Representative | MWP | Olivia Holmes | (021) 453 6400 | olivia.holmes@mwp.ie |

### 4.4.3 Third Party Contacts

**Table 4-3: Third Party Contacts**

| Organisation: | Position: | Name/Address | Phone: | Email Address: |
|---|---|---|---|---|
| Inland Fisheries Ireland | Dublin Office | Inland Fisheries Ireland<br>3044 Lake Drive<br>Citywest Business Campus<br>Dublin<br>D24 CK66<br>Ireland | (01) 884 2693 | dublin@fisheriesireland.ie |
| National Parks and Wildlife Service | District Conservation Manager (North Eastern Division - Kildare, North & East Offaly, Dublin, Meath & Louth) | National Parks & Wildlife Service<br>90 King Street North<br>Dublin 7<br>D07 N7CV<br>IRELAND | (01) 539 3175 / (01) 539 3230 | nature.conservation@chg.gov.ie |
| Environmental Protection Agency (EPA) | EPA Dublin - Regional inspectorate | EPA Dublin<br>McCumiskey House<br>Richview<br>Clonskeagh Road<br>Dublin 14<br>D14 YR62 | (01) 268 0100 | info@epa.ie |
| Local Authority | Meath County Council | Meath County Council,<br>Planning Department,<br>Buvinda House,<br>Dublin Road,<br>Navan,<br>County Meath,<br>C15 Y291 | (046) 9097000 | planning@meathcoco.ie |
| Health and Safety Authority | HSA Contact Centre | HSA Contact Centre<br>Health and Safety Authority<br>Metropolitan Building | 0818 289 389 | contactus@hsa.ie |

| | | | | |
|---|---|---|---|---|
| | | James Joyce Street<br>Dublin 1 | | |
| Emergency Services | An Garda Síochána<br>Navan Garda Station | Navan Garda Station<br>Abbey Road,<br>Navan,<br>Co. Meath<br>C15 FW77 | (046) 903 6100 | |
| Emergency Services | Ambulance and Fire Service | Ambulance and Fire Service | 999 or 112 | |

## 4.5 Auditing, Monitoring and Response

The Environmental Monitoring Schedule (Table 4-4) for construction will provide for the checking of equipment, materials storage and transfer areas and specific environmental controls.

The Contractor will assign an Environmental Manager who will visit the site regularly to monitor the construction activities on a day to day basis. The duties will include completing the required checklists (sample checklist included below) and coordinating with the relevant personnel as required ensuring all environmental monitoring is carried out.

**Table 4-4: Example of Environmental Monitoring Schedule**

| Aspect | Area of Inspection | Monitoring Required | Note/Checks | Frequency | Responsibility |
|---|---|---|---|---|---|
| **Surface Water Run-off Controls** | Weather Forecast | Met Éireann download | • Pre-determined rainfall trigger levels (e.g. 1 in 5 year storm event or heavy rainfall at >25mm/hr) | Regular/daily/weekly during the construction phase as well as during and after significant rainfall events | Environmental Manager |
| | Discharges from on-site sediment and erosion controls | Visual inspection | • Colour, presence of silts | Weekly | Environmental Manager |
| **Water quality monitoring** | Discharges from on-site sediment and erosion controls<br>Internal site road<br>Site Entrance | Visual inspection | • Unacceptable level of sediment/silt on the road surface<br>• Presence of waste | Weekly | Environmental Manager |
| | | Visual inspection | • Unacceptable level of sediment/silt on the road surface<br>• Presence of waste<br>• Surface Condition | Daily | Project Manager |
| **Roads** | Fuel & Oil Storage areas | Visual inspection | • Damage to containers or ancillary equipment<br>• Leakages<br>• Unlocked storage container<br>• Fuels stored within bunded area | Daily | Project Manager |
| | Construction Materials Storage Areas | Visual inspection | • Damage<br>• Untidiness | Daily | Environmental Manager |
| **Temporary Site Compound Area** | Waste Collection Areas | Visual inspection | • Damage<br>• Untidiness<br>• Full skips | Daily early/weekly | Environmental Manager |
| | Mobile wheel wash | Visual inspection | • Build-up of sediment | Daily | Environmental Manager |
| | Wastewater facilities | Visual inspection | • Holding tank requiring emptying | Weekly | Project Manager |
| **Operation Control** | Concrete pours | Visual inspection | • Run-off / spills | Weekly | Project Manager |
| | Dust generation | Visual Inspection | • Cleanliness of roads and compound area<br>• Dust at stockpiles<br>• Dust from delivery vehicles | To be scheduled with pours | Project Manager |

## 4.6 Environmental Performance Indicators

The Contractor will outline the key performance indicators (KPIs) for the Site in gauging successful site management in the prevention of pollution and the protection of the environment.

Environmental performance indicators will include:

- Number of environmental accidents/incidents logged;
- Breach of procedure and corrective actions;
- Number of environmental complaints received;
- Results of monthly water quality monitoring if required;
- Results of noise and vibration monitoring, and
- Results of site audits.

The performance indicators will be communicated to all relevant personnel and sub-contractors. The review periods for analysing site performance indicators must also be specified.

### 4.6.1 Response Procedure/ Corrective Action

In the event of an environmental incident, or breach of procedure, or where a complaint is received, or in the event of encountering buried waste or contaminated soils/groundwater, the contributing factors are to be investigated and remedial action taken as necessary. The Contractor will ensure that the following response actions will take place:

1. The Project Manager must be informed of any incident, breach of procedure and/or complaint received and details must be recorded in the incident/complaint register
2. The Project Manager is to conduct/co-ordinate an investigation to determine the potential influence that could have led to the non-compliance.
3. The Project Manager is to notify and liaise with the appropriate site personnel where required, e.g. Site Environmental Manager.
4. The Project Manager shall notify the Client of any complaints or environmental incidents within 24 hours of occurrence. Where significant incidents occur requiring the involvement of statutory authorities or emergency services or where any pollution events occur, the Client shall be notified within 1 hour.
5. If necessary, the Project Manager will inform the appropriate regulatory authority. The appropriate regulatory authority will depend on the nature of the incident.
6. The details of the incident will be recorded on an Incident / Complaints Form which is to record information such as the cause, extent, actions and remedial measures used following the incident/complaint. The form will also include any recommendations made to avoid reoccurrence of the incident.
7. The Project Manager will be responsible for any corrective actions required as a result of the incident e.g. an investigative report, formulation of alternative construction methods or environmental sampling, and will advise the Designer and Client as appropriate.
8. The Project Manager is to ensure that the relevant environmental management plans/procedures are revised and updated as necessary.

# 5. Environmental Management Plans

A number of environmental management plans (EMP) have been prepared for managing the impacts of Construction Activities associated with the Project. See Table 5-1 and refer to Appendix 2. These plans are to be implemented by the Appointed Project Manager and/or Project Contractor(s) as relevant.

Once appointed, it is the Contractor's responsibility, to update and add (where required) project specific control measures relevant to the environmental management plans and procedures. The Contractor will ensure that plans/procedures are communicated to all site staff, including sub-contractors, through induction, training and at relevant meetings.

**Table 5-1: Plans for Managing Impacts of Construction Activities**

| Ref: | Procedure: |
|---|---|
| EMP 1 | Surface Water Runoff and Excavation Management |
| EMP 2 | Fuels and Oils Management |
| EMP 3 | Management of Concrete |
| EMP 4 | Construction Noise Management |
| EMP 5 | Construction Resource & Waste Management |
| EMP 6 | Construction Traffic Management |
| EMP 7 | Construction Dust Management |
| EMP 8 | Ecological Management Plan Protection of Habitats and Fauna |
| EMP 9 | Emergency Response |
| EMP 10 | Site Environmental Training and Awareness |
| EMP 11 | Monitoring and Auditing |
| EMP 12 | Environmental Accidents, Incidents and Corrective Actions |
| EMP 13 | Environmental Complaints |

# Appendix 1

## Contractor Method Statements

## (Contractor Input Required at Construction Stage)

# Appendix 2

## Environmental Management Plans

## EMP 1: Surface Water Runoff and Excavation Management

### Purpose

There will be a requirement to excavate approximately 7,000m$^3$ of clean, natural topsoil and subsoil. This material will be reused, where feasible, to create berms and used for landscaping on the adjacent permitted solar farm site. Excess clean soil material will be deposited permanently in 2 No. soil deposition areas (1,600m$^2$) located adjacent to the western boundary of the site.

Where surplus material is to be reused on the adjacent permitted solar farm site as a by-product (not as a waste), this will be done in accordance with Article 27 of the European Communities (Waste Directive) Regulations 2011 (S.I. No. 126 of 2011) (as amended) and having regard for the Circular Economy and Miscellaneous Provisions Act 2022 and any such legislative requirements that may be required later.

Potential negative effects include (in the absence of adequate management) weathering and erosion of the surface soils, increased dust levels or pollutants from the construction processes, and accidental spills and impacted runoff resulting in adverse water quality effects.

According to the Environmental Protection Agency (EPA) Map the proposed development site and the surrounding area lies within Hydrometric Area No.06, Newry, Fane, Glyde and Dee (Water Framework Directive) Catchment Area and within the Dee sub catchment 'SC_010' and 'SC_030'.

The Killary Stream (EPA River Waterbody Code: IE_NB_06K010500) is located a short distance (190m) to the east of the proposed development site. Water runoff from the site most likely drains into the Killary watercourse as the land slopes towards the watercourse. There is a drainage ditch running along the southwest and south east boundary of the agricultural field the proposed development site is located within. This drainage ditch may convey surface water towards the Killary Stream.

The purpose of this plan is to describe measures for the management of excavations, the management of all surface water and run-off on the site, and in particular, sediment and erosion control.

### Management of Surface Water during Earthworks

It is important that surface water/ground water is controlled during the construction phase of the proposed development to prevent heavy silting/contamination to the drainage ditch on the proposed development site, the Killary Stream and other surrounding watercourses. As outlined within the Risk & Drainage Impact Assessment for the permitted solar development, SuDS will be installed prior to the construction of the permitted and proposed developments. This SuDS feature will take the form of soakaways which will treat and attenuate surface water runoff before infiltrating into the soils below, or to discharge into the existing field drainage system.

Surface water/ground water run off using the following methods:

- Erosion controls are required to be implemented to prevent runoff flowing across exposed ground and become polluted by sediments. These measures include:
    - Monitoring of the weather forecast prior to planning excavation works;
    - Minimising the area of exposed ground and ensuring excavation will not proceed faster than the rate of construction;
    - Stripped pavement/soil material will be temporarily stockpiled more than 10m away from any drain or watercourse or taken off-site.
    - Stockpiles will be in a dry zone that is not subject to ponding.

  - Providing bunds or other diversions to keep run off from entering the stockpile area where required.
  - Providing impermeable mats (plastic sheeting) as covers to mounded excavated material and open excavations during periods of heavy rainfall.
- Earth movement activities will be suspended during periods of prolonged rainfall events;
- The earthworks material will be placed and compacted in layers to prevent water ingress and degradation of the material;
- Drainage and associated pollution control measures will be implemented on site before the main body of construction activity commences;
- Runoff of surface water from construction areas will be controlled;
- During construction, surface water management controls will be in place to prevent entry of silted run-off into the existing site stormwater network. The existing site drains directly to ground (i.e. storm water is not collected).
- Silt-laden runoff should be expected from any areas of recently exposed soil or rock. There is also potential for pollution to occur from machinery used in the substation construction.
- Any introduced or artificial materials required (e.g. silt fencing, straw bales, sand bags, etc.) that might need to be deployed onsite, will be removed on completion of the works.
- Discharge from the silt control measures will be discharged into an area of vegetation for dispersion or infiltration, in accordance with SuDS techniques or discharged into the existing drainage network within the proposed development site.
- Water abstraction will not be required as part of the proposed project.
- Additional drainage measures will be implemented to help attenuate the increase in surface water flows, if surface water is observed discharging from the construction compound.
- Runoff from this area is anticipated to have high silt loading due to mobilised soils from excavated surfaces, fines from track aggregate and sludge due to traffic.
- Hardstanding runoff will be directed to a temporary swale on the lower boundary of the construction compound. This drainage scheme will be removed at the end of the construction stage and the area reinstated.
- Surface water runoff from the roofs of the substation buildings, and hard-surfaced areas within the electrical yard, including areas where a risk of a contaminant leak or spill may be present (such as the transformer bund), will be collected in a series of filter drains, roof guttering and downpipes and routed to an underground gravity drainage network. All runoff collected in the stormwater sewer network will pass through an oil/petrol Interceptor prior to discharging to an attenuation unit on the north-eastern side of the compound. The attenuation unit will provide attenuation of the increased volumes of surface water runoff generated from the hard surfaces of the development when compared to the current greenfield condition. The attenuated surface water runoff is then proposed to overflow at a controlled

rate equal to the greenfield runoff rate to an existing vegetated land drain on the southern side of the compound.

Clean Water Diversion

- Where feasible, clean water (e.g. water that has yet to come into contact with any disturbed construction or working areas), will be kept separate from the watershed or intercepted by the construction drainage.
- Up-gradient cut-off ditches and water diversion measures will be installed, if required, in order to intercept and divert clean water around the temporary construction compound area. These measures will be installed ahead of the main construction works. This will reduce or prevent the amount of potential silt-laden or polluted water that might require treatment.
- Clean runoff that has been diverted around an area of working should be discharged into an area of vegetation for dispersion or infiltration, in accordance with SuDS techniques.
- Sediment control measures, such as silt traps, gravel, sand bags, anchored straw bales or silt fencing might be required at the discharge point to prevent erosion at the outlet and aid dispersion of the diverted water.

Stockpile Control Measures:

- All construction waste within the site shall be removed from the site and disposed of/recovered at a suitably authorised waste facility.
- Excavation and stockpiling activities will be minimized during wet weather periods.
- Soil and/or subsoil will be left undisturbed in situ for as long as possible prior to excavation.
- Stockpiles of excavated soil and/or subsoil will be graded so as to shed water.
- Repeated handling of soil will be avoided and ideally all soil stockpiles will remain undisturbed until otherwise required.

Excavation and Earthworks

- All excavation and earthworks will be carried out in accordance with BS6031:2009 Code of Practice for Earthworks. Soil handling, extraction and management will be undertaken with regard to best practice guidelines such as Guidance on the Waste Management (Management of Waste from the Extractive Industries) Regulations 2012.
- The following practices will be followed in relation to the excavation of cable trenches, topsoil stripping and any other earthworks:
- Excavated material will be stored and re-used to infill excavations on site where possible. Where the soil is to be re-used, this will be side casted. All side casted soil to be kept a minimum of 20m from any watercourse.
- There will be a requirement to excavate approximately 7,000$m^3$ of clean, natural topsoil and subsoil all subject to a detailed site investigation report. This material will be reused, where feasible, to create berms and used for landscaping on the adjacent permitted solar farm site. Excess clean soil material will be deposited permanently in 2 No. soil deposition areas (1,600$m^2$) located adjacent to the western boundary of the site.

- Although unlikely, if any contaminated earth is uncovered, this will be stored separately and disposed of accordingly once the contaminant has been identified.
- Efforts will be made to ensure that water does not accumulate in excavated areas.
- All topsoil and subsoil will be stored separately, and care will be given to ensure the structure and quality of the soil is not damaged.
- The amount of exposed ground and soil stockpiles will be kept to a minimum and any stockpiles in place for an extended period of time will be allowed to re-vegetate naturally.
- Earthworks shall not occur during unsuitable weather conditions, including when soils are waterlogged or very dry.

### Silt Control

- Silt-laden runoff should be expected from any areas of recently exposed soil or rock. There is also potential for pollution to occur from machinery used in construction of the proposed development.
- Any introduced or artificial materials required (e.g. silt fencing, straw bales, sand bags, etc.) that might need to be deployed onsite, will be removed on completion of the works.
- Discharge from the silt control measures will be discharged into an area of vegetation for dispersion or infiltration, in accordance with SuDS techniques or discharged into the existing drainage network within the proposed development site.

### Monitoring

- Controls will be regularly inspected and maintained.
- The Environmental Manager will regularly inspect the site. Any damage will be repaired or cleared promptly.
- Weather forecasts will be regularly monitored during the construction phase. The 24 hour advance meteorological forecasting service from Met Éireann will be used.
- Water Inspection Programme to include visual monitoring of Sediment and Erosion Control measures.

### Responsibility

The Environmental Manager is responsible for ensuring that appropriate water pollution prevention measures are put in place and that water inspection is carried out if required. Where standards are breached and remedial action is taken, an investigation must be carried out in conjunction with the Construction Manager, and further samples must be taken to verify that the situation has returned to normal.

The Environmental Manager is responsible for ensuring spill kits are readily available in vulnerable locations.

The Construction Manager (or a designate) is responsible for ensuring the spill kits are adequately stocked and should inform the Environmental Manager when items have been used.

## EMP 2: Fuel and Oils Management

### Purpose

Construction machinery and associated equipment will be the principal sources of pollutants such as oil, lubricants, fuel and hydrocarbons. The accidental release of fuel, oil spills or harmful chemicals which could result in adverse water quality impacts.

The purpose of this plan is to describe measures for the management of all fuel and oils on-site for the protection of watercourses from any spills.

### Procedure

Construction machinery and vehicles:

- The potential for hydrocarbons getting into the existing drains and local watercourses will be mitigated by only refueling construction machinery and vehicles in designated refueling areas using a prescribed re-fueling procedure;
- Fuel tanks, drums and mobile bowsers will have a secondary containment such as a double skinned tank. All tanks, drums and mobile bowsers will be located in a sealed impervious bund with sufficient capacity to contain at least 25% of the total volume of the containers or 110% of the largest container, whichever is the greatest;
- Refueling will be carried out using 110% capacity double bunded mobile bowsers. The refueling bowser will be operated by trained personnel. The bowser will have spill containment equipment which the operators will be fully trained in using;
- Refueling of vehicles and plant will be carried out on hard standing, using drip trays to ensure that no fuel can contaminate the ground outside of the bunded areas;
- Storage areas will be covered, wherever possible, to prevent rainwater filling the bunded areas;
- Storage areas will be kept secure to prevent acts of vandalism that could result in leaks or spills;
- All containers of any size will be correctly labelled indicating their contents and any hazard warning signs.
- All oil and diesel storage facilities will be at least 30m from any watercourse including surface water drains;
- Fuel fill pipes will not extend beyond the bund wall and will have a lockable cap secured with a chain;
- Suitable precautions will be taken to prevent spillages from equipment containing small quantities of hazardous substances (i.e. chainsaws and jerry cans) including;
    - Each container or piece of equipment will be stored in its own drip tray made of a material suitable for the substance being handled; and
    - Containers and equipment will be stored in a firm level surface.
- Plant nappies or absorbent mats to be placed under refueling point during all refueling to absorb drips. Plant nappies to be provided beneath small mobile plant (e.g. small generators, pumps, etc.);
- Mobile bowsers, tanks and drums should be stored in secure, impermeable storage area, away from drains and open water;

- No tanks or pipework containing liquids such as fuel, oils or chemicals will be stored below ground;
- To reduce the potential for oil leaks, only vehicles and machinery will be allowed onto the site that are mechanically sound. An up-to-date service record will be required from the main contractor;
- For deliveries and dispensing activities, it will be ensured that:
    - Site specific procedures are in place for bulk deliveries;
    - Delivery points and vehicle routes are clearly marked; and
    - Emergency procedures are displayed and a suitably sized spill kit is available at all delivery points, and staff are trained in these procedures and the use of spill kits.
- Potential leaks from delivery vehicles will be reduced by visually inspecting all delivery vehicles for major leaks. Contractors supplying concrete and crushed stone to the site will be contractually required to supply their products using roadworthy vehicles;
- Vehicles and plant will not park near or over drains and will be washed in accordance with the commitments set out above;
- Should there be an oil leak or spill, the leak or spill will be contained immediately using oil spill kits; the nearby dirty water drain outlet will be blocked with an oil absorbent boom until the fuel/oil spill has been cleaned up and all oil and any contaminated material removed from the area. This contaminated material will be properly disposed of in a licensed facility;
- The Environmental Manager will be immediately informed of the oil leak/spill and will assess the cause and the management of the clean-up of the leak or spill. They will inspect nearby drains for the presence of oil, and initiate the clean-up if necessary;
- Immediate action will be facilitated by easy access to oil spill kits. An oil spill kit that includes absorbing pads and socks will be kept at the site compound and also in site vehicles and machinery;
- Correct action in the event of a leak or spill will be facilitated by training all vehicle/machinery operators in the use of the spill kits and the correct containment and cleaning up of oil spills or leaks. This training will be provided by the Environmental Manager at site induction; and
- In the event of a major oil spill, a company who provide a rapid response emergency service for major fuel spills will be immediately called for assistance, their contact details will be kept in the site office and in the spill kits kept in site vehicles and machinery.

### Oil storage during the construction phase

- Only the required volume of oil will be stored for the works taking place at the time.
- A secure bunded containment area will be provided within the site for the storage of lubricants, oils and site generators, etc. Emergency procedures and contingency plans, including emergency spill kit with oil boom, will be set up to deal with accidental spillages.
- Fuel containers must be stored within a secondary containment system e.g. bund for static tanks or a drip tray for mobile stores;

- Access to oil stores will be controlled by the storage of oils within a locked steel container within the site compound. The site compound will be surrounded by a palisade fence and locked when there are no site personnel present.
- Collision with oil stores will be prevented by locating oils within a steel container in a designated area of the site compound away from vehicle movements.
- Leakages of oil from oil stores will be prevented by storing these oils in bunded tanks which have a capacity of 110% of the total volume of the stored oil. Ancillary equipment such as hoses and pipes will be contained within the bunded storage container. Taps, nozzles or valves will be fitted with a lock system.
- The volume of leakages will be prevented through monitoring oil storage tanks/drums for leaks and signs of damage. This will be carried out daily by the Environmental Manager and
- Long term storage of waste oils will not be allowed on site. These waste oils will be collected in leak-proof containers and removed from the site for disposal or re-cycling by an approved service provider.

### Responsibilities

The Construction Manager and Environmental Manager are responsible for ensuring Fuel and Oils are managed in line with this procedure.

### Reference

Best Practice Guidelines BPGCS005 – Oil Storage Guidelines (Enterprise Ireland).

## EMP 3: Management of Concrete

### Purpose

There is potential for pollutants to enter storm drains negatively impacting on water quality from the use of cementitious material.

The purpose of this plan is to describe measures for the management of concrete on-site for the protection of watercourses from any spillages.

### Procedure

Supervision of concrete pours:

- To reduce the potential for cementitious material entering watercourses, concrete pours will be supervised by the Construction Manager, a suitably qualified Engineer and the Environmental Manager;
- The Construction Manager will ensure that the area of the pour is completely drained of water before a pour commences and;
- Incidental rainfall from light showers during the period of a pour is typically absorbed into the concrete matrix but heavier showers can result in some run off from the top surface of the concrete pour. If run-off is encountered the Environmental Manager will block the outflow from the drains to retain or treat the run-off until the pH is neutral before discharge to the drainage network.

### Concrete Water

- Pours will not take place during heavy rainfall;
- To reduce the volume of cementitious water, washout of concrete trucks will not take place on site. Concrete trucks will be washed out off site at the source quarry;
- To reduce the volume of cementitious water, only concrete truck chutes will be washed down on site. The concrete trucks shall wash down their chutes at a designated chute wash down area within the temporary Construction Compound (away from the works area). The wash down area shall consist of a polythene lined bunded area of about 10m$^3$ capacity. The collected washdown water will be disposed of using a registered contractor;
- No disposal of concrete remnants will be permitted on site;
- Breaking of concrete (associated with structure demolition) has the potential to emit alkaline dust into the receiving environment. Where necessary a barrier between the dust source and the sensitive receptor (the water body in this case) will be erected to limit the possibility of dust contacting the receptor.
- The use of wet concrete and cement in or close to any water body will be carefully controlled so as to minimise the risk of any material entering the water;
- Where possible, a specific fast-setting mix (by having either a higher than normal fines content, a higher cement content or the use of ecologically-appropriate chemical admixtures, will be used to minimize risk of ecological impacts.
- Concrete will not be allowed to enter watercourses under any circumstances, and drainage from excavations in which concrete is being poured will not be discharged directly into existing watercourses without

appropriate treatment and consent from the relevant authority. Delivery trucks, tools and equipment will be cleaned at the wheel wash facility located at the temporary site compound.

### Responsibilities

- All concrete pours will be supervised by suitable personnel;
- The Environmental Manager is responsible for ensuring that appropriate water pollution prevention measures are put in place and that water sampling is carried out where required. Where standards are breached he/she should carry out an investigation and in conjunction with the Construction Manager, he/she should ensure remedial action is taken and further samples taken to verify that the situation has returned to normal;
- The Environmental Manager is responsible for ensuring spill kits are readily available in vulnerable locations.

## EMP 4: Construction Noise Management

### Purpose

The construction phase of the Project has the potential to increase noise levels at noise sensitive locations surrounding the site. Potential noise impacts from the construction phase will depend on the number and type of equipment employed during the works. The primary emissions expected from the proposed development are fugitive emissions of noise from the use of machinery and equipment and the increase in human activity for the duration of the works. A Noise Impact Assessment Report (NIAR) was completed for the proposed development and is included with the application documents. The NIAR outlined mitigation measures for the construction stage.

Construction works will be carried out in accordance with best practice and in line with recommendations contained within BS 5228-1:2009+A1:2014.

The purpose of this plan is to describe measures for the management of impacts from construction noise.

### Procedure

Control of Noise at Source

- Plant will be properly and regularly maintained.
- Compressors, if needed, will be 'sound related' models fitted with properly lined and sealed acoustic covers which will be kept closed whenever machines are in use.
- All vehicles and mechanical plant will be fitted with effective exhaust silencers.
- All traffic movements will be carried out between the hours of 7:00am – 7:00pm (Monday – Friday inclusive and 8:00am – 2:00pm (Saturday) . Outside of these times works are limited to:
    - Commissioning and testing; and
    - Works required in an emergency where there is the potential of harm or damage to personnel, plant, equipment, or the environment, Deliveries will also be scheduled to avoid peak times where relevant, e.g. avoiding rush hours and after school pick up times.
- The working day may extend at times when critical elements of work need to be advanced. Longer working days can occur when there is a planned concrete pour etc.
- In the event that activities outside of normal working time are needed, the Contractor shall prepare a suitable Method Statement and the Contractor will seek the approval of the Local Authority and if required, the directly affected residents/other.

Construction Phase

Best practice in the form of BS5228 –1&2:2009 + A1 2014, *Code of Practice for the Control of Noise and Vibration on Construction and Open Sites* will be adopted during the construction phase in order to minimise the noise generated by construction activities and nuisance to neighbours.

- A pre-construction commitment to managing nuisance noise will be agreed through notification and consultation with affected parties, if deemed necessary.
- Operators of all mobile equipment will be instructed to avoid unnecessary revving of machinery (Clause 8.2.1 General).

- Use of appropriate plant and equipment where possible with low noise level generation where possible (Clause 8.2.2 Specification and substitution).
- All construction plant to be used on site should have effective well-maintained silencers (Clause 8.2.3 Modification of existing plant and equipment).
- Noise generating equipment will be located as far as possible away from local noise sensitive areas identified (Clause 8.2.5 Use and siting of equipment); and,
- Regular and effective maintenance of site machinery including a full maintenance schedule to ensure that all pieces of equipment are in good working order. With efficient use of well-maintained mobile equipment, considerably lower noise levels than those predicted can be attained (clause 8.2.6 Maintenance).
- All plant and equipment for use will comply with the Construction Plant and Equipment Permissible Noise Levels Regulations 1996 (SI 359/1996) and other relevant legislation.

In addition, the following best practice measures are proposed:

- Training of site staff in the proper use and maintenance of tools and equipment.
- Avoidance of unnecessary noise when carrying out manual operations and when operating plant and equipment.
- Machines that could be in intermittent use will be shut down between work periods or will be throttled down to a minimum.
- Plant start-up will be sequential rather than all together.
- Internal access tracks to be well maintained.
- Plant known to emit noise strongly in one direction will, when possible, be orientated so that the noise is directed away from noise-sensitive locations and;
- Drop heights for materials such as gravels will be minimised whenever practicable.

### Responsibility

- The Construction Manager will be familiar with the noise sensitive receptors and alert the Environmental Manager in good time prior to work commencing in the areas closest to any noise sensitive receptors.
- Any noise complaints shall immediately be directed to the site agent. Depending on the nature of the complaint remedial action may need to be undertaken.
- The Environmental Manager will review any relevant planning conditions in updating this plan.

### References

*BS5228 –1&2:2009, Code of Practice for the Control of Noise and Vibration on Construction and Open Sites*

IOA GPG Supplementary Guidance Note 5: *Post Completion Measurements* (July 2014).

***Details of management of noise on the site to be finalised by Appointed Contractor***

## EMP 5: Construction Resource & Waste Management

### Purpose

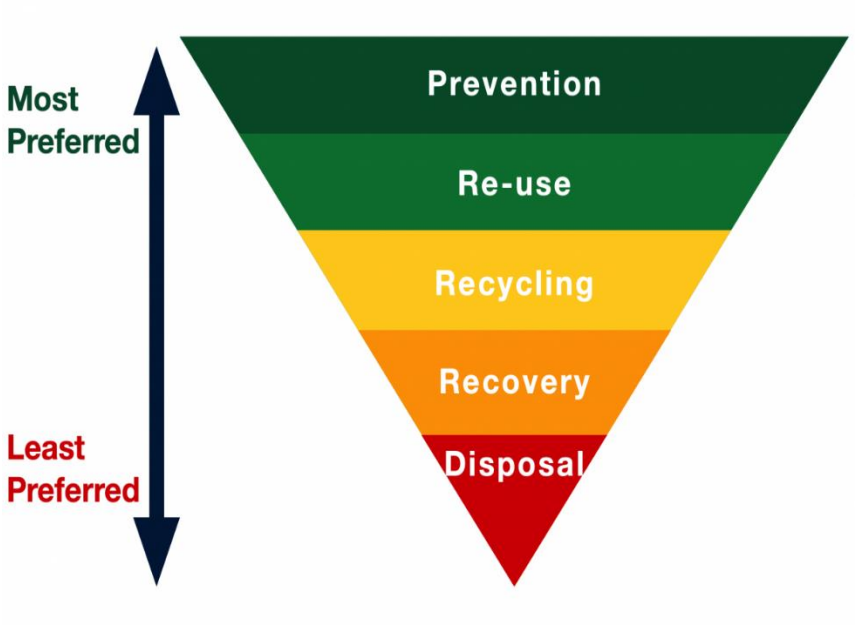
During construction excavated material comprising coarse and fine grained soil material will be removed to a suitably permitted/licensed facility by licensed waste contractors for recycling, disposal or where appropriate used as a by-product to create a berm on the adjacent and permitted solar farm site. Where the material is to be reused on another site as a by-product (not as a waste), this will be done in accordance with Article 27 of the European Communities (Waste Directive) Regulations 2011 (S.I. No. 126 of 2011) (as amended) and having regard for the Circular Economy and Miscellaneous Provisions Act 2022 and any such legislative requirements that may be required later.

The purpose of the plan is to describe measures for the management of all wastes associated with the construction works. There will be limited waste generated during the construction phase of the Proposed Development.

### Procedure

Resource & Waste Management Plan

- The Waste Management Hierarchy (illustrated below) will form the basis of the Plan and will incorporate the principles outlined in '*A Waste Action Plan for a Circular Economy*' (WAPCE) and the guidance provided in EPA '*Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects*', 2021;
- The Construction Resource & Waste Management Plan will address the following aspects of the Project:
    - Analysis of the waste arising/material surpluses;
    - Specific waste management objectives for the project;
    - Methods proposed for prevention, reuse and recycling of wastes, and
    - Material handling procedures.



### Construction

Contractors working on site during the works will be responsible for the collection, control and disposal of all waste generated by the works. Construction phase waste may consist of hardcore, stone, concrete, steel reinforcement, shuttering timber, food waste from the canteen and unused oil, diesel and building materials. This waste will be collected at the end of the construction phase and taken off site to be reused, recycled and disposed of in accordance with best practice procedures at an approved facility. Domestic wastewater from the on-site holding tank will be collected on a regular basis by approved contractors and disposed of in an authorised facility in accordance with best practice. Plastic waste will be taken for recycling by an approved contractor(s) and disposed or recycled at an approved facility.

### General Resource & Waste Management on Site

To manage waste effectively, focus on the following:

- Ordering the correct amount of materials to be delivered when needed;
- Ensuring materials are not delivered to site damaged and unusable;
- Reducing the amount of packaging used by suppliers;
- Where possible, establish a 'take back' system with suppliers;
- Ensuring wastes are handled and stored correctly; and
- Limiting the amount waste going to landfill by reusing and recycling where possible.

### Temporary Construction Compound

Construction compound / waste storage area will be created for storage of waste materials, plant, and equipment and for site offices, and welfare facilities.

### Wastes Generation

Best practice procedures in general will minimise waste generated on-site. Measures including good site management will be taken to limit the quantity of waste generated during construction phase.

Miscellaneous/incidental waste materials will be generated during construction including concrete, pallets, packaging, spare steel reinforcement, shuttering timber, food waste, unused oil, and building materials. Waste will be collected at regular intervals during the construction phase and taken off site by licenced waste contractor to be reused, recycled and disposed of in accordance with best practice procedures at an approved facility.

Plastic waste will be removed for recycling by an approved contractor and disposed or recycled at an approved facility.

Surplus materials will include materials generated by the excavation works during construction works, mainly comprising excavated soil and subsoil. There will be a requirement to excavate approximately 7,000$m^3$ of clean, natural topsoil and subsoil. This material will be reused, where feasible, to create berms and used for landscaping on the adjacent permitted solar farm site. Excess clean soil material will be deposited permanently in 2 No. soil deposition areas (1,600$m^2$) located adjacent to the western boundary of the site.

Waste streams will include wastes generated by plant, machinery and construction workers over the period of the works, for example waste oils, sewage, refuse (paper, carton, plastic etc), wooden pallets, waste batteries, fluorescent tubes etc.

### Minimisation, Reuse, Recycling, and Management of Construction Waste

The primary aim of this Resource & Waste Management Plan is to ensure that wastes generated during the course of the project are managed in a systematic manner in accordance with Waste Management Legislation and the principles of the waste Hierarchy, i.e. Prevention, Minimisation, Reuse, Recovery, and Recycling.

Wastes generated during the construction phase will be identified and segregated according to their category as described by the European Waste Catalogue (EWC). In order to affect this designated waste storage areas will be created at the site temporary construction compound, other suitable locations, for storage and segregation of wastes prior to transport for recovery/disposal at suitably licensed/permitted facilities. Suitably sized containers for each waste stream will be provided and will be supervised by the Waste Management Coordinator (WMC). The WMC will be responsible for the management of wastes during the entire project. The numbers and sizing of the containers will be agreed with the Waste Contractors/Hauliers in advance of the commencement of the construction works. Source segregation of the wastes generated will result in cost savings, in addition to providing an environmentally sound route for the management of all the Construction and Demolition Waste.

Under Waste Management Regulations 2007 a waste collection permit, for appropriate waste codes and destinations is required by the waste haulier, to transport the waste from one site to another. The contractor will ensure the movement of all wastes are carried out in compliance with relevant waste regulations.

Wastes will only be treated or disposed of at waste facilities to carry out a specific activity (i.e. chemical treatment, landfill, incineration etc.) for the specific waste types. Records of all waste movements and associated documentation will be held on site. It is planned that all waste activities at the site will comprise of;

- source,
- segregation,
- storage, and
- collection

In order to prevent/minimise the generation of wastes, the Contractor will ensure that raw materials are ordered so that the timing of the delivery/quantity delivered, and the storage is not conducive to the creation of unnecessary waste.

The Contractor will continuously seek to improve the Resource & Waste Management process on the site during all stages of the construction phase and maximise opportunities for reuse/recycling where ever they exist. For example in relation to waste packaging, the Contractor will seek to negotiate take back of as much packaging waste as possible at source, to ensure maximum recycling. The Construction Resource & Waste Management Plan will be included in the team weekly meetings. In addition the plan will be communicated to the whole construction team regularly on site, including any updates form earlier revisions of the plan.

An overview of the methods to manage the primary waste streams is presented in the following sections;

### Soils and Spoil

There will be a requirement to excavate approximately 7,000m$^3$ of clean, natural topsoil and subsoil. This material will be reused, where feasible, to create berms and used for landscaping on the adjacent permitted solar farm site. Excess clean soil material will be deposited permanently in 2 No. soil deposition areas (1,600m$^2$) located adjacent to the western boundary of the site. As a precautionary measure, it is recommended that an "Unexpected Contamination Finds Protocol" is developed prior to the commencement of works, which will enable the contractor to safely manage any potential contamination on the site should it be encountered during planned excavation works.

Should contaminated soil be encountered during excavations works the Contractor shall cease excavation works in the area where contaminated soil has been uncovered. The Contractor shall engage the services of a Consultant who specialises in Contaminated Land and arrange a site visit for the inspection of the contaminated soil. The Contaminated Land Consultant shall provide guidance on appropriate soil sampling and chemical testing and classification of the waste. Once the test results are available the Contaminated Land Consultant will issue a report.

### Concrete

Concrete waste will occur. Excess concrete will be returned to the supplier for reuse. Concrete trucks will be washed out off site at the source quarry. To reduce the volume of cementitious water, only concrete truck chutes will be washed down on site. The concrete trucks will wash down their chutes at a designated chute wash down area in the site compound. The wash down area will consist of a polythene lined bunded area with a capacity of about 10m³. No disposal of concrete remnants will be permitted on site. Concrete management procedures are detailed in **EMP 3: Management of Concrete**.

The Environmental Officer will monitor the pH of the water in the chute wash down bund(s) and can dose with $CO_2$ or acidic water from the drains until the wash out water achieves neutrality before discharge if deemed necessary.

### Waste-Water Treatment / Effluent disposal

During the construction phase, staff facilities will be provided at the site compound/other suitable locations. A cabin comprising a canteen, washroom and toilets will be provided. This cabin will contain three integrated holding tanks; one for clean water, one for waste water and the third for sewage. The waste water tank and sewage tank will be emptied as required by a vacuum tanker and removed from site to a licensed facility. These staff facilities will be removed at the end of the construction phase. Foul sewage from the temporary facilities will be routed to covered precast concrete watertight 5m$^3$ tanks designed for receiving and storing sewage with no outlet. The tanks will be sized to suit the expected use and will be installed in a location remote from water courses. Contents and residues will be regularly emptied by a competent operator for safe disposal to an approved treatment works.

### Hazardous and Other Waste

The following Table lists some of the waste types that may be generated during the construction works. Although some waste types may be generated in locations other than the temporary construction compound (for example if absorbent filters are required at foundation/track locations etc.), such waste materials will be stored within the temporary construction compound only. Waste materials outlined below, generated outside the temporary construction compound, will be taken to the temporary construction compound on a daily basis and placed in appropriate waste receptacles.

| Common Construction Wastes | | | | | |
|---|---|---|---|---|---|
| Concrete | Wood | Cables | Ducting | Metallic packaging/tins | Cardboard Packaging |
| Paper packaging | Plastic packaging | Wooden packaging | Office paper | Non-hazardous detergent | Plastic containers |
| Plastic bottles | Mixed waste | Ferrous metal | Non-hazardous waste electrical(s) | | |

| Hazardous Waste, as categorised by the European Waste Catalogue | |
|---|---|
| 13 01 10: Used mineral hydraulic oil (non-chlorinated) | 13 02 08: Other waste engine, gear or lube oil |
| 13 02 05: Waste engine, gear or lube oil (non-chlorinated) | 13 02 08: Other waste engine, gear or lube oil |
| 16 01 07: Oil filters | 20 01 23: Discarded equipment containing CFCs |
| 16 06 01: Lead batteries | 16 07 08: Oily waste from transport and storage tanks |

| | |
|---|---|
| 16 10 01: Hazardous liquid wastes to be treated off-site | 20 01 21: Fluorescent tubes and other mercury-containing waste |
| 20 01 33: Hazardous batteries and accumulators that are collected separately | 15 02 02: Absorbents, filter materials, wiping cloths, clothing contaminated by dangerous substances |

If hazardous waste / contaminated ground is encountered, then appropriate handling, storage, transportation, and disposal will be carried out. Works to the area where the hazardous waste/contaminated ground is encountered will stop. The ground will be assessed by an Environmental Engineer. Prior to being removed from the site, the waste will undergo a comprehensive waste assessment and classification by suitably trained/qualified person(s), in accordance with the EWC hazardous waste list. If non-hazardous waste becomes contaminated with hazardous waste, the entire load will be considered hazardous. At the site every effort will be made to segregate waste, and properly segregate hazardous waste from non-hazardous and inert waste arising. Hazard wastes will be identified, removed and kept separate from other wastes in order to avoid cross contamination. Specific method statement detailing the necessary mitigation measures during the excavation/handling, transportation, and disposal of hazardous materials encountered at the site will be prepared as required.

Oils, paints, adhesives and chemicals will be kept in a separate contained secured storage area. Lids will be kept on containers to avoid spillage/evaporation. Waste oils, adhesives etc will be handled, and disposed of appropriately. Every effort will be made at the site for no long term storage of hazardous materials/fuels/oils/chemicals, etc. There shall be no long term storage of waste oils etc. at the site.

### Gravel/Stone/Asphalt/ Bituminous Materials

These materials will be delivered to site if required, with excess returned to supplier.

### Metals

It is now common practice to segregate metals for reuse and recycling, however there are still sites where waste metal is thrown away in the general rubbish. One of primary sources of metal on sites is rebar. Waste of rebar will be reduced by ordering 'made to measure' from the source and detailed scheduling of all reinforced concrete structural elements.

### Packaging/Plastic

Double handling will be avoided by segregating packaging wastes immediately after un-wrapping. Waste packaging will be segregated and in separate containers, at storage area for collection by the waste contractor for disposal to licensed facility.

### Mixed Waste

- This waste stream will arise from waste packaging of piping components;
- A 40 $m^3$ open skip will be put in place to collect mixed waste within a designated waste area at the temporary site construction compound;
- This skip will accept plastic packaging, plastic piping, cardboard and other waste;
- Special care will be taken to ensure that no green waste or food waste will be disposed of in this skip. The purpose of this arrangement is to stop birds scattering food items across the site and therefore prevent vermin infestation;
- This material will be collected by contracted and licensed non-hazardous waste collectors.

### Mixed Waste/Canteen Waste

Staff canteens have the potential to generate food waste and packaging waste. Designated receptacles will be provided at the canteen(s) to allow for segregation, and storage of individual waste streams. These will include receptacles for food waste, dry recyclables, and residual bin. All offices and canteens will be equipped with black plastic refuse bags and wheelie bins for the purpose of collecting and delivering this waste stream to the compactor. This material will be collected by the contracted waste management company/transported to licensed facility.

### Dry recyclable collection from welfare facilities

- All offices and canteens will be equipped with clear plastic bags and wheelie bins for the purpose of collecting dry recyclables. This will be strictly managed to prevent any food waste entering the dry recyclable stream;
- Recycling wheelie bins will be located at all welfare facilities and offices associated with the project; and
- This material will be collected by the contracted and licensed non-hazardous waste collectors.

### Other waste

Other wastes which may be generated may include residual non-recyclable waste such as paper, cloth, some cardboards, or plastics. Others may include fibreglass and geotextiles, and polystyrene. These types of materials will be stored in a dedicated container at the site compound. All residual wastes will be dispatched to suitably licensed facility for disposal. Other construction and demolition waste will be collected and disposed of appropriately.

### Management of General Waste

- Access to materials will be controlled. A dedicated storage area will be provided in the site temporary construction compound for building materials such as cables, plastic piling for the settlement ponds, geotextile matting, blocks, tools and equipment, fence posts and wire, booms, pipes etc.
- Access to stored materials will be restricted; the site compound will be securely fenced from the outset and will be locked when there are no site personnel present.
- To contain and manage construction phase waste, multiple skips will be provided at the temporary site construction compound; one for recyclable waste and others for various construction waste. These skips will be emptied when required by a licensed waste management company. Waste oil and waste oil drums will be collected and stored in containers and on a bunded tray within the storage container.
- At the end the works, the completed works areas will be tidied of any unused material or waste; this material will be brought to the site compound for storage and reuse or placed in the appropriate skip for disposal.

### Construction Phase General Waste

- Construction waste (timber, steel, concrete etc) elements will be segregated and stored in dedicated bins on site for recycling;
- All waste steel reinforcing will be stockpiled and at the end of each work unit, it will be collected for recycling by Licensed Facility;
- Plastics and packaging will be segregated and stored in dedicated bins on site for recycling;
- Waste oil stored on site will be stored in labelled containers and will be collected by licensed facility/licensed oil-recycling contractor as necessary. Records will be maintained on the volumes of waste oil generated.

- Paper / cardboard, this material will be recycled; and
- Wastewater from office and welfare facilities. These facilities will be regularly emptied by licensed/suitable contractors.

### Training

Copies of the Resource & Waste Management Plan will be available to all site personnel. All site personnel and sub-contractors will be instructed about the objectives of the Resource & Waste Management Plan for the site, and informed of the responsibilities which fall upon them as a consequence of its provisions. This will be carried out during the site induction process for all site personnel. Where source segregation and materials reuse techniques apply, each member of the construction team will be given instructions on how to comply with the Resource & Waste Management Plan for the site. Site notices will be designed to reinforce the key messages of the Resource & Waste Management plan and will be displayed prominently for the benefit for all on site personnel.

### Waste Records

All details of wastes (arising/generated/movement, etc) will be recorded during the project. Each consignment of waste removed from the site will be documented in the form of a waste management movement record form which will ensure full traceability of the material to its final destination. All records will be retained at a designated location at the site office/temporary construction compound and made available for auditing of the Resource & Waste Management plan.

### Responsibility

The Environmental Manager will be responsible for adherence to correct waste management procedures. They will also identify a waste contractor to remove waste that can be recycled or re-used.

The Environmental Manager will keep records provided by waste contractors of all waste being removed from site. The Environmental Manager will record waste removed from site regularly. This information will be recorded in a standard format. It will be the construction manager's responsibility to organise the removal of skips from their area when they are full.

The Environmental Manager will inspect waste segregation and temporary soil/rock storage stockpiles during his regular site visits.

### References

*EPA 'Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects', 2021*

*Design Out Waste: A design team guide to waste reduction in construction and demolition projects (EPA, 2015)*

## EMP 6: Construction Traffic Management

### Purpose:

During the construction phase there will be additional traffic on the existing road network. Possible negative effects include additional traffic volumes on the local road network and impacts on residential amenity by construction traffic vehicles.

The purpose of this plan is to describe measures for the management of all traffic, including construction traffic, for the minimization of disturbance and nuisance to the local community.

A detailed CTMP will be prepared for the proposed development by the appointed contractor(s) prior to construction.

### Procedure

#### General

A CTMP will be prepared for the proposed development by the Appointed Contractor. This Plan will be finalised in agreement with Meath County Council.

The plan will include provision for:

- Communicating with the community, An Garda Síochána and Meath County Council.
- Details of site access and any site traffic rules, including security, parking, loading and unloading, required speed or other relevant details.
- Programme of maintenance and upkeep of public roads.
- Site operating hours (including delivery) to be outlined.
- Access to the Site is from an existing access point off the L1604. It is anticipated the haul route will likely be from the N52, which is located to the northwest of the site. Vehicles will exit the N52 onto the L1604 in a southwest direction from approximately 1km, before turning right into the site access point.
- Access on this existing road will be maintained. The volume of traffic generated by the transportation requirements will be minimal.

#### Public Roads

- In order to mitigate from a significant impact during peak traffic hours, the majority of staff will either arrive on-site before or after the peak morning traffic and finish work before or after the evening peak traffic hours.
- The condition of the public roads will be monitored on an on-going basis and a road sweeper provided to clean the public roads if required.

#### Site Entrance

- There will be no parking of any vehicles on the public road near the site entrance.
- Adequate parking will be provided on-site for both employees and visitors.
- The condition of the site entrance will be monitored on an on-going basis and a road sweeper provided to clean the public road if required.

### Responsibility

- Project Manager
- Construction Manager

- Construction personnel
- Sub-contractors as appropriate
- Delivery personnel

## EMP 7: Construction Dust Management

### Purpose

The main air quality impacts will be associated with dust generation during construction works. The purpose of this plan is to describe the measures for the management of nuisance impacts on air quality from construction generated dust.

### Procedure

The potential for dust to be emitted depends on the type of construction activity being carried out in conjunction with environmental factors including levels of rainfall, wind speeds and wind direction. The potential for impact from dust depends on the distance to potentially sensitive locations and whether the wind can carry the dust to these locations. The majority of any dust produced will be deposited close to the potential source and any impacts from dust deposition will typically be within several hundred metres of the construction area.

It is not envisaged that a dust monitoring nor a sampling programme is required for this site. Ongoing good practice measure for the management of dust on-site is to implemented as set out below. Ongoing visual monitoring of dust by Site Management.

In order to control, prevent and minimise dirt on the access route and emissions of dust and other airborne contaminants during the construction works, the following measures will be implemented:

- Wheel washing equipment will be available and used on-site, as required to prevent the transfer of dirt and stones onto the public highway. All drivers will be required to check that their vehicle is free of dirt, stones and dust prior to departing from the site. Wheel washing will likely be a water bowser and power spray. It will not have any cleaning additives and will drain into the temporary drainage feature at the site compound.
- During windy conditions, any dust generating activities will be avoided or minimised, where practical.
- Any soil stockpiles will be covered when left for extended periods of time.
- Driving practices which minimise dust generation will be adopted.
- Loads into and out of the site will be covered where required.
- Site road and compounds will be regularly cleaned and maintained as appropriate;
- Hard surface roads will be swept to remove mud and aggregate materials from their surface;
- Furthermore, any road that has the potential to give rise to fugitive dust will be regularly watered, as appropriate, during dry and/or windy conditions;
- Speeds will be restricted on hard surfaced roads as site management dictates;
- The relevant Site Speed Limit shall be adhered to at all times to ensure low vehicle speeds;
- Public roads in the vicinity of the site will be regularly inspected for cleanliness and cleaned as necessary;
- Loads of materials leaving the Site will be evaluated and covered if considered necessary to minimise potential dust impacts during transportation;
- The transportation contractor shall take all reasonable measures while transporting waste or any other materials likely to cause fugitive loses from a vehicle during transportation to and from site, including but not limited to:
    - Covering of all waste or material with suitably secured tarpaulin / covers to prevent loss;
    - Utilisation of enclosed units to prevent loss.

### Responsibility

- The Environmental Manager is responsible for reviewing the site Dust Minimisation Plan.
- The Construction Manager is responsible for:
    - Organising dust suppression through use of bowsers and cleaners;
    - Plan site layout so that machinery and dust causing activities are located away from receptors as far as possible;
    - Keep site fencing, barriers and scaffolding clean using wet methods;
    - Remove materials that have the potential to produce dust from sit as soon as possible;
    - Cover seed of fence stockpiles to prevent wind whipping;
    - Ensure all vehicles switch off their engines when stationary – no idling vehicles; and
    - Use enclosed chutes and covered skips.
- The Project Manager is responsible for:
    - Recording all dust and air quality complaints, identify causes and take appropriate measures to reduce emissions in a timely manner;
    - Make a compliant log available to Meath County Council when requested; and
    - Record any exceptional incidents that cause dust or air emissions.

### References

Guidelines for the Treatment of Air Quality during the Planning and Construction of National Road Schemes (Consultation Draft, National Roads Authority, October 2006).

Control of Dust from Construction and Demolition Activities (BRE, 2003).

## EMP 8: Ecological Management Plan for the Protection of Habitats and Fauna

### Purpose

To describe measures for the management and protection of habitats and fauna on the site.

### Procedure

Ensuring implementation of ecological protection measures outlined below.

### Ecological Protection Measures

The proposed development site does not lie within or directly adjacent to any statutory or non-statutory designated environmental sites. Within the Zone of Influence (ZoI) of the proposed development site boundary there are two Special Areas of Conservation (SACs) and two Special Protection Areas (SPAs). Within 5km of the proposed development site there are no Natural Heritage Areas (NHAs) or Proposed Natural Heritage areas (pNHAs). Natura 2000 sites within the ZoI of the proposed development site boundary included the River Boyne and Blackwater SAC, River Boyne and Blackwater SAC, River Boyne and Blackwater SPA and Dundalk Bay SPA.

Arable Crops (BC1), was identified as the primary habitat within the proposed development site during the site walkover completed by MWP and is considered to be of low ecological value. Drainage Ditch (FW4) and Wet Willow-Alder-Ash Woodland (WN6) are partially located within the proposed development site on the southwest, and Arable crops (BC1) borders the rest of the site boundary.

No rare or protected flora species were recorded within the proposed construction footprint during the ecological survey of the proposed development site.

Measures recommended within the Ecological Appraisal and Natura Impact Statement prepared by MWP for the proposed development and within the Ecology Assessment for the permitted Solar Farm Development prepared by Neo Environmental Ltd. Will also be implemented for the proposed development. These measures include:

- Best practice pollution prevention measures implemented prior to and throughout the construction phase to prevent contaminants entering the aquatic environment;
- Pre-commencement badger survey;
- Pre-commencement otter survey;
- Pre-construction breeding bird survey (if works are to commence between March and August inclusive);
- All excavations to be securely covered, or a suitable means of escape provided (ramp at 450) at the end of each working day to prevent accidental trapping of otter and badger;
- Security fencing to have mammal gates at base to allow free movement of mammals through the site.

### General Habitats

- Habitat degradation will be limited by controlling the movement of construction vehicles and machinery. Construction vehicles and machinery will not encroach onto habitats beyond the proposed development footprint and will be required to travel via the constructed roads when moving between works areas. To emphasise this requirement, the boundaries of the footprint of the development will be fenced off with post and wire. The Environmental Officer will also monitor vehicle movements;
- Mitigation measures set out in Ecology Assessment for the permitted Solar Farm Development prepared by Neo Environmental Ltd. For the protection of habitats, ecology and fauna during construction will be adhered to.

### Management and Treatment of Invasive Alien Plant Species (IAPS)_ On-site

All management and control measures implemented on-site during the construction phase are to be carried out strictly in accordance with best practice guidance as set out in '*The Management of Noxious Weeds and Non-native Invasive Species on National Roads*' (NRA, 2010) and best practice management guidelines for various species published by Invasive Species Ireland[1].

Prior to being brought onto the site, all plant and equipment will be cleaned and free of soil/mud/debris or any attached plant or animal material. Prior to entering the site, all plant/equipment will be visually inspected by the Environmental Officer to ensure all adherent material and debris has been removed. A pre-construction survey for IAPS is to be carried out by a suitably qualified ecologist prior to any works commencing. If IAPS occur within the works footprint, the appointed Contractor is to develop and implement an appropriate method statement regarding the management of IAPS on-site.

All footwear/waders and all equipment that will be placed within the water will be treated to prevent foreign flora/fauna entering the water and after use to prevent the spread to other catchments. Non-native species control will be practised according to '*IFI Biosecurity Protocol for Field Survey Work*' (IFI, 2010) noting that some works components are located at/near watercourses.

- Pre-construction site surveys are to take place during the growing period to identify any new stands which emerge and survey for any viable knotweed or other IAPS material.
- Where any IAPS is identified within the works footprint, the appointed contractor is to develop and implement an appropriate method statement with regard to managing IAPS on-site. Fencing and/or advisory signage is to be erected. Where stands are small, comprising individual plants, the use of signage may suffice.
- No ground maintenance, opening up or any other ground disturbance should take place within IAPS fenced areas, without prior consultation with, and the direction of the appointed invasive specialist, and then only under strict supervision.
- If access to the infested areas is necessary, and particularly if any essential work has to be carried out within the fenced locations, then this must only be done following formal approval in advance, and after the preparation and agreement of a "task specific" method statement.
- Where there will be encroachment into IAPS infested areas as part of the development, site-specific soil remediation plans are to be developed and implemented to provide for the safe and bio-secure removal and disposal of IAPS infested soil. These plans should include for the provision of vertical and horizontal root barrier membranes, as and where appropriate, and all other measures necessary to ensure bio security compliance.
- Under no circumstances is any IAPS plant or rhizome material to be cut, dug out or in any other way disturbed without the advice, direction and supervision of the appointed invasive specialist.
- Where necessary, the off-site removal of Japanese knotweed, its variants, soil infested with knotweed material, and other IAPS is to be carried out according to the relevant NPWS licence and any conditions attached. This licence is to be procured in advance of any removal of IAPS material off-site and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477).
- Large areas of disturbed/bare soil should be mulched, where appropriate, and seeded/planted at the earliest opportunity with native species to stabilise the soil and deter subsequent reinvasion. Planting

[1] Resources - Invasives.ie Accessed: 1st November 2023

should be carried out with regard to '*Horticulture Code of Good Practice: To prevent the introduction and spread of invasive non-native species* (Kelly, 2012).

- Where application of herbicides is required to treat IAPS on-site, the proximity of ecological receptors is to be taken into account. Herbicide use is to be minimised as much as possible and targeted to the specific IAPS. Where use of herbicides is required, non-residual, aquatic approved herbicides are to be used.
- Herbicides are not to be used in windy or foggy weather, during or preceding rainfall or where rainfall is forecast within 12 hours or during particularly cold weather to reduce risk of spray drift, run-off or poor plant uptake.
- All herbicides are to be pre-mixed in a designated secure area. Only the volumes of herbicide necessary for each treatment area are to be prepared.
- Herbicide will be applied to target species only and great care taken to avoid affecting surrounding vegetation by run-off or drift.
- Herbicides are to be applied strictly in accordance with the manufacturer's recommendations and by competent, experienced and licenced personnel registered as Professional Pesticides User, and fully in compliance with the European Communities (Sustainable Use of Pesticides) Regulations, 2012, (S.I. 155 of 2012) and Good Plant Protection Practice as prescribed in the European Communities (Authorization, Placing on the Market, Use and Control of Plant Protection Products) Regulations, 2003 (S.I. No. 83 of 2003). The herbicide selected must be used in compliance with the Pesticide Product Label and any conditions set out in it.
- All management and control measures implemented on-site during the construction phase are to be carried out strictly in accordance with best practice guidance as set out in '*The Management of Noxious Weeds and Non-native Invasive Species on National Roads*' NRA (2010) and '*Horticulture Code of Good Practice: To prevent the introduction and spread of invasive non-native species* (Kelly, 2012) and in accordance with the site-specific IAPS Management Plan, which will be updated accordingly as the project progresses.
- Physical remediation post-construction, if required, is to be managed and undertaken as per the IAPS Management Plan which is to be updated continually over the course of the multi-annual management approach to IAPs within the site.

### Protection of Bats

#### Buffers

During the construction phase, buffer zones have been included as part of the design of the proposed development. This will minimise disturbance to commuting and foraging routes for bat species within the area of the Proposed Development, and include the following:

- a 5m buffer from trees (dependent on tree height)
- a 2m buffer from all field drains

#### Landscape Recommendations

Only native tree, shrub and plant species will be utilised during landscaping.

#### Construction Phase Lighting

Lighting associated with the site works could cause disturbance/displacement of bats. During the site works, lighting will follow mitigation measures outlined by Bat Conservation Ireland in Bats & Lighting Guidance Notes

for: Planners, engineers, architects and developers (2010), BCT Lighting Guidelines (BCT, 2018), Bats and lighting: Overview of current evidence and mitigation guidance (Stone, 2013) and Bat Mitigation Guidelines for Ireland. Irish Wildlife Manuals, No. 25 (Kelleher & Marnell, 2006); and

The following measures will be applied in relation to site lighting:

- Lighting will be provided with the minimum luminosity sufficient for safety and security purposes.
- Where possible, construction lights will be switched off when not in use.
- Lighting will be positioned and directed so that it does not to unnecessarily intrude on adjacent ecological receptors. There will be no directional lighting focused towards the boundary habitats respectively and cowling and focusing lights downwards will minimise light spillage.
- Works will primarily take place during hours of daylight to minimise disturbance to any nocturnal mammal species.

### Protection of Badger

A pre-construction survey for badger will be undertaken prior to the commencement of any works as per NRA (2005) guidance in order to identify any changes within the site. The pre-construction survey will be undertaken no more than 10-12 months in advance of construction commencement. The survey will be supplemented by an additional survey immediately prior to site works commencing if a sufficient time period has elapsed since the pre-construction survey.

In the event of a badger sett(s) being identified within or in proximity of the development site, all construction activity and site works will be undertaken in accordance with relevant best-practice guidance set out in NRA (2005) in relation to construction works and badger and any specific mitigation, where required, will be carried out under relevant license from NPWS.

All excavations will be securely covered at the end of each working day to prevent accidental trapping of badger, otter or other small mammals and to reduce the negative impact construction could have on mammals within the area of the Proposed development site.

### Protection of Otter

The presence of otter is expected to be constrained to areas adjacent to the Killary Water as the other habitat types associated with the proposed development site are not optimal for otter and are likely to be restricted to commuting.

There is potential for any commuting otters using the site during the construction phase to become trapped in trenches excavated during works. In line with construction best practice, all excavations during the construction phase of the proposed development will be covered securely to prevent the accidental trapping of otters. In addition, it is a pre-commencement survey will be carried out for the presence of otters prior to construction.

### General Protection of other Fauna/Habitats

- The extent of construction works area within the development site boundary will be clearly marked out using temporary stakes and high-visibility tape/bunting such that the construction zone, including extent of access for all construction plant and machinery, site compound and materials storage areas, is defined and is clearly visible to all contractor staff and machine operators.
- Movement of construction plant/construction vehicles will be restricted as much as is practicably possible to within the extent of works footprint within the development site boundary.
- Disturbance of fauna will be limited by controlling the movement of construction vehicles and personnel. Construction vehicles and personnel will not encroach onto habitats beyond the proposed development footprint.

- Construction materials and wastes will be kept in designated areas to reduce risk of accidental injury/entrapment of any wildlife on-site.
- Removal of vegetation will only be undertaken outside the bird breeding and nesting season which encompasses March 1st to August 31st inclusive, in accordance with Section 40 of the Wildlife Acts.
- Vegetation removal will be minimised within the proposed development site.
- All temporary construction lighting will be turned off outside daylight hours.
- Should any resting or breeding place of any protected species be discovered within the site during construction works, works will cease immediately, the area will be cordoned off and the advice of NPWS sought.

### Decommissioning Phase Mitigation measures

At the end of the estimated 40-year lifespan of the proposed development, the Developer will decide if to decommission the substation. The specific decommissioning activities will depend on the future use of the site, as determined by the project owner at the time of closure. However, any future development plans for the site, during or after this period, will require a new planning permission application. If no planning permission is sought after the proposed development reaches the end of its lifespan, the site will be fully decommissioned.

Potential impacts during the decommissioning phase will be similar to those of the construction phase however, decommissioning will be of a significantly lesser scale, as large-scale excavations will not be required.

Mitigation measures for the decommissioning phase will be similar to those of the construction phase.

- Implement habitat restoration measures within the decommissioned area to promote the re-establishment of native vegetation and support the recovery of local wildlife populations. This may include allowing native tree, scrub and other flora species to naturally regenerate, and creating wildlife-friendly features such as nesting boxes and bat roosts in the vicinity of the site.
- If required, works will be undertaken outside the bird breeding season (March-August) to mitigate for impacts to ground nesting and breeding birds.
- Ensure proper soil stabilization measures are employed during decommissioning to prevent erosion, sediment runoff, and adverse impacts on water quality. Appropriate silt control measures such as silt fences will be installed on the existing drainage systems and other best management practices followed to protect sensitive resources and control erosion.
- Best practices will be incorporated into the safe handling and storage of materials, including containment measures, bunding, drip trays installed as part of plant and machinery used to ensure no risks to water quality.
- Spill kits will be readily available on-site where oils or liquids are handled, and all staff will be trained on their location and proper use in case of emergencies.
- Standards of good practice for noise and vibration will be followed to minimise noise and vibration impacts from activities and vehicles.
- Standards of good practice for air quality, as set out in the Institute of Air Quality Management (IAQM) 'Guidance on the Assessment of Dust from Demolition and Construction', or relevant guidance will be followed during decommissioning to minimise dust from activities and vehicles.
- A waste management plan will be developed to handle the disposal of materials and equipment associated with decommissioning. This will include proper handling, recycling, or disposal of hazardous materials, in accordance with relevant regulations and guidelines.
- Implement a monitoring program to assess the effectiveness of decommissioning mitigation measures and the recovery of the impacted environment. Regular reporting should be conducted to provide updates on the progress of habitat restoration and the overall success of decommissioning efforts.

- An invasive species management plan will be developed for the decommissioning phase of the grid route. Prior to decommissioning, a survey will be conducted to identify any invasive species present along the grid route. Locations and extent of invasive species infestations will be documented. If any future infestations of invasive non-native species are identified prior to any decommissioning works, exclusion zones will be established around them, and the Ecological Clerk of Works (EcoW) contacted for advice as required.
- Best practice measures will be followed for cleaning and decontaminating equipment and vehicles to prevent the accidental transfer of invasive species.
- Lighting, if required will be deployed in accordance with the following recommendations to prevent or reduce the impact on ecological receptors:
- The use of lighting will be minimised to that required for safe site operations;
- Lighting will utilise directional fittings to minimise outward light spill and glare (e.g. via the use of light hoods/cowls)
- Lighting will be directed towards the interior of the site limits rather than towards the boundaries.

These measures should be tailored to the specific characteristics of the proposed development, taking into account the regulatory requirements.

### Monitoring

In the unlikely event that protected faunal species are found actively using the Site for breeding/roosting during the construction phase, works will cease immediately, and the area will be cordoned off until advice is sought from a suitable qualified expert / NPWS.

### Responsibility

- Environmental Manager; and
- Construction Manager.

## EMP 9: Emergency Response

### Purpose

To describe measures for the prevention of an environmental accident or incident and the response required to minimise the impact of such an event.

### Procedure

In the event of an environmental emergency, all personnel will react quickly and adhere to this procedure.

All site personnel will be inducted in the provisions of the Emergency Response Plan.

The following outlines some of the information, on the types of emergency, which must be communicated to site staff:

- Release of hazardous substance – Fuel and oil spill;
- Concrete spill or release of concrete or silt;
- Flood event – extreme rainfall event;
- Environmental buffers and exclusion zones breach;
- Housekeeping of materials and waste storage areas breach;
- Stop works order due to environmental issue or concern (threat to archaeological or ecological feature); and
- Fire on-site.

If any of the above situations occur; the Emergency Response Plan is activated. The Environmental Manager will most likely be responsible for overseeing the Emergency Response Plan (to be confirmed by the Appointed Contractor(s)) and will be prepared and ready to implement the plan at all times. The Environmental Manager will be immediately informed and report to the scene. He / she must be aware of the:

- Nature of the situation – brief description of what has happened;
- Location of the incident;
- Whether any spill has been released; and
- Whether the situation is under control.

Oil Spillages

The following list outlines issues likely to be appropriate for inclusion the plan:

- Site staff will report the spillage immediately to the Environmental Manager or Construction Manager;
- Where relevant, the Environmental Manager will report the spillage to Inland Fisheries Ireland and Meath County Council;
- Where possible, the source of pollution will be identified;
- Switch off all sources of ignition;
- Stop the spillage spreading:
- Use absorbent materials from the spill kit to mop up the spill (sand or absorbent materials should be used rather than detergents);

- Do not wash spillage into drainage system. Washing will only make the situation worse and extend the pollution to other water bodies/drainage systems;
- If the spill has already reached drains, block the inlet of the dirty water cross pipes in the nearby drainage outflow points on the roadside drains with oil absorbent booms, which will prevent oils flowing into the existing drains;
- Shovel contaminated sand/earth/absorbent granules into sacks or skips; and
- A specialist oil removal company should remove pooled oil.

Concrete Spillages

The following list outlines issues likely to be appropriate for inclusion in such a plan:

- Site staff will report the concrete spillage immediately to the Environmental Manager or Construction Manager;
- Where relevant, the Environmental Manager will report the spillage to Inland Fisheries Ireland and Meath County Council;
- If there is a risk of concrete spreading into the drainage system, the inlet of the dirty water cross pipes in the nearby drainage outflow points on the roadside drains will be blocked using the absorbent booms, which will prevent concrete flowing into the existing drains;
- Do not wash spillage into drainage system. Washing will only make the situation worse and extend the pollution to other water bodies/drainage systems;
- If the spill has already reached drains, acid may be added to the drains by the Environmental Manager to neutralise the alkalinity of the concrete; and
- Shovel contaminated concrete granules into sacks or skips for treatment in the Roadside Concrete Wash unit.

Contacts

As an Environmental Control Measure, the Environmental Manager will append the relevant contact details to the Emergency Response Plan document. Examples of such contact details include:

- Environmental Manager;
- Specialist oil removal company ;
- Meath County Council;
- Inland Fisheries Ireland; and
- National Parks and Wildlife Service.

Location of Emergency Spill Kits

- A map indicating the location of all emergency spill kits will be attached to the Emergency Response Plan document; and
- Emergency oil spill kits will also be carried in all site vehicles and machinery and in the site office.

Responsibility

- The Environmental Manager will prepare and finalise an Emergency Response Plan to be ready to respond to any incident;

- All site personnel will report any spillages of oil or chemicals to the Environmental Manager and Construction Manager immediately; and
- As appropriate, the Environmental Manager will report the spillage to the Inland Fisheries Ireland, Meath County Council and any other relevant authority.

## EMP 10: Site Environmental Training Awareness

### Purpose

To describe measures for informing the public of restricted access to the construction-site and the training of all site personnel in the protection of the environment and the relevant controls.

### Scope

Notification to the public of restricted access to the Site. All site personnel and construction teams which may influence environmental impacts.

### Procedure

Site signage will be provided at the entrance to the site to inform the public that access to the site is restricted to those directly involved in the construction works.

An initial site environmental induction and ongoing training will be provided to communicate the main provisions of the CEMP including this EMP to all site personnel. Two-way communication will be encouraged to promote a culture of environmental protection.

The following outlines some of the information which will be communicated to site staff:

- Environmental procedures of the CEMP;
- Housekeeping of materials and waste storage areas; and
- Environmental Emergency Response Plan.

Housekeeping and Storage of Hazardous Materials

- Hazardous materials marked with the following symbols will only be stored in a secure storage container in the temporary site construction compound.

- Sub-contractors will provide a copy of the Material Safety Data Sheets for all hazardous substances brought on-site.

All finalised CEMP policies will be adhered to, in the management of fuels and oils, concrete, and installation of sediment and erosion controls and drainage features. All finalised details will be communicated with site personnel. Environmental Training including spill kit training, installation of silt fence training is to be provided by the Appointed Contractor(s). Environmental training records will be retained in the site office.

### Responsibility

- Construction Manager;
- Environmental Manager; and
- All site personnel.

## EMP 11: Monitoring and Auditing

### Purpose

To describe measures for environmental monitoring during the construction works and audit of control measures to ensure environmental protection.

### Procedure

All mitigation measures, any planning conditions and relevant construction methods will be monitored on-site. The Contractor will nominate an Environmental Manager for the works. The Environmental Manager will provide Audit Checklists to ensure regular checks of the Site's control measures for the ongoing protection of the environment.

Monitoring will be carried to ensure adherence with the following;

- EMP 1: Surface Water Runoff and Excavation Management
- EMP 2: Fuels and Oils Management
- EMP 3: Management of Concrete
- EMP 4: Construction Noise Management
- EMP 5:Construction Resource & Waste Management
- EMP 6: Construction Traffic Management
- EMP 7: Construction Dust Management
- EMP 8: Ecological Management Plan Protection of Habitats and Fauna
- EMP 9: Emergency Response
- EMP 10: Site Environmental Training and Awareness
- EMP 11: Monitoring and Auditing
- EMP 12: Environmental Accidents, Incidents and Corrective Actions
- EMP 13: Environmental Complaints

Checklists for daily, weekly or monthly site audits will be finalised by the Environmental Manager and the relevant personnel informed of their duties. Checklists will include (but are not limited to) confirmation that fuel is stored appropriately, resource & waste management rules are adhered to, all environmental buffers are maintained, Surface water and run-off control measures of the are in place and functioning, and concrete chute wash-out procedure is being followed. Checklists will be finalised with the Contractor's EOP.

All environmental records, including completed checklists, will be retained at the site office.

### Responsibility

- Project Manager;
- Environmental Manager; and
- Construction Manager.

## EMP 12: Environmental Accidents, Incidents and Corrective Actions

### Purpose

To describe measures for the recording, investigating and close-out of any environmental accidents or incidents on the Site.

### Procedure

- The Environmental Manager or Construction Manager will be contacted as soon as possible where there is any incident that carries the possibility of negative environmental consequences (e.g. minor oil leakage or blockage of drainage pipe);
- The Emergency Response Plan and standard emergency procedures will be applied to get the incident under control and prevent injury or loss of life in the first instance;
- Work in the area will be halted and the Environmental Manager will be called to the scene to assess the situation and to decide on initial responses and remedial measures;
- Once the situation is under control, the environmental accident or incident will be recorded and the cause investigated;
- Any remedial action required will be taken to mitigate any damage and prevent a reoccurrence; and
- Corrective actions will be communicated to personnel and sub-contractors where relevant – particularly where it results to a change in procedure.

Example list of environmental accidents & incidents:

- Accidents involving large spill of fuel or concrete from delivery truck (emergency response required)
- Spills of fuel and oil (minor);
- Waste or rubbish left around the Site (not in dedicated waste areas);
- Breach of any buffers (archaeological, ecological, watercourse);
- Failure of any control measures (silt fences collapsed in a storm);
- Concrete chute wash out in a non-dedicated area;
- Unplanned vehicle movement off the access tracks; and
- Unplanned vehicle movement within a buffer zone.

### Responsibility

- Site staff will contact the Environmental Manager or Construction Manager as soon as possible where there is any incident that carries the possibility of negative environmental consequences; and
- The Environmental Manager is responsible for alerting the relevant authorities.

## EMP 13: Environmental Complaints

### Purpose

To describe measures for the recording and resolving complaints by third parties, including local residents or members of the public.

### Procedure

Any environmental complaints received, whether internal or external, will be recorded and investigated. It is recommended that immediate action is taken as relevant to resolve environmental complaints to avoid any nuisance to the local community or any environmental damage.

This procedure includes:

- Recording of any complaints to a Site Log;
- Follow up by the relevant site representative – Environmental Manager;
- Remedial measures where required;
- Ongoing communication with complainant to confirm resolution; and
- Any required training or communication with site personnel and sub-contractors as a result.

The out of hours contact number for the Site is: TBC

### Responsibility

- Project Manager;
- Environmental Manager; and
- Construction Manager.