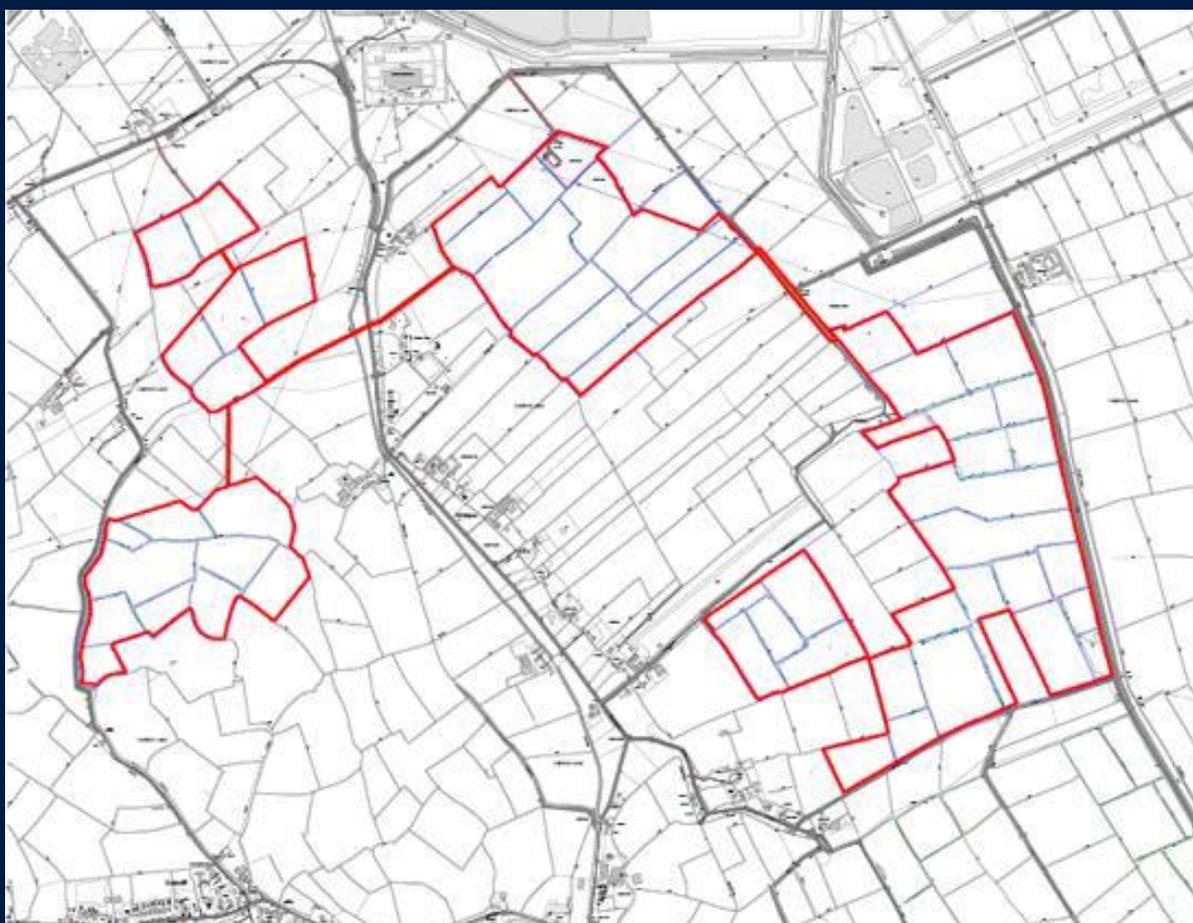


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# Outline Construction and Environmental Management Plan

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Gwent Farmers' Community Solar Scheme



**Project:** Gwent Levels Community Solar Scheme  
**Client:** Gwent Farmers' Community Solar Partnership Ltd  
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## 1.0 Introduction

### 1.1 General

1.1.1 This Outline Construction and Environmental Management Plan (OCEMP) describes how a detailed, site specific CEMP will be developed to avoid, minimise or mitigate any construction effects on the environment and the surrounding community. The plan relates to proposals for solar energy hub for which planning permission is being sought through submitted DNS application 3150137.

1.1.2 An Environmental Statement (ES) has been produced, describing and assessing the effects of the construction and operation of the proposed development on the environment and this OCEMP explains how some of those effects will be managed during the construction and decommissioning stages.

1.1.3 The document provides a framework for the planning and implementation of construction activities in accordance with environmental commitments identified in the ES and in legislative requirements. It aims highlight those site activities which require operational controls in relation to potential environmental impacts and detail mitigation measures for minimising risks to the environment.

1.1.4 The adopted construction stage CEMP will include greater detail on the specific measures which will be implemented and will be agreed with the relevant consenting body before any commencement of any construction works on site.

## 2.0 Scope of Work

### 2.1 Location

2.1.1 The site is comprised of four main areas across an area of located on agricultural land on the Gwent levels in south Wales and lies within the local plan area for Newport City Council. At a local level, the site lies within the Llanwern ward and the Goldcliff Community Council Boundary.

2.1.2 The site is predominantly set back from the existing road network and the development would sit within the existing field boundaries.

### 2.2 Description of the works

2.2.1 The proposed development is for the erection of a solar farm comprising up to 245,000 panels with associated infrastructure including inverter and transformer units, stock-proof fencing, CCTV, stone access tracks, temporary bridge structures, cable runs and an electric grid yard.

2.2.2 The proposals also include 200 container units intended to house batteries for the storage of generated electricity. However, although consent for this aspect of development is being sought through the associated DNS application it is not intended that this aspect of the proposals would be implemented until such point that consent is granted for the actual energy storage function of the development. Despite this staggered approach to the overall implementation of the proposals, the framework set out in this OCEMP is still of relevance to the battery storage element of the scheme, with final construction details to be agreed as part of the subsequent consenting process which would precede their installation.

2.2.3 Minimal demolition will be required to implement the proposal involving the removal of a short section of hedgerow at 10 locations where new, temporary bridge crossings are required. It would be possible to relocate this hedgerow on site with the specific details of such relocation to be agreed as part of the final CEMP.

2.2.4 The main construction activities are as follows:

- Piling of steel frame mounting systems in rows across the site
- Mounting of solar panels onto steel frame system
- Laying of stone aggregate to form access track through the site
- Mounting of invert units and transformer cabins
- Digging of trench and laying of electrical cables
- Erection of Gridyard area and electrical transmission components
- Laying temporary bridge structures across rheens and ditches
- Installing stock-proof fencing and ancillary equipment including CCTV cameras
- Eventual decommissioning of the site including the removal of all equipment and the reinstatement of the land as per its current use and profile

### 2.3 Construction programme

2.3.1 The likely development construction programme is set out in the Construction Traffic Management Plan (CTMP) and assumes completion of the development in 5MW segments as per the following table:

Likely Construction Programme (per 5MW)												
	Week											
	1	2	3	4	5	6	7	8	9	10	11	12
Ground Works	1 Delivery Per Week (9 deliveries)											
Mounting System					2 Deliveries Per Week (14 Deliveries)							
Panel Fitting							9 Deliveries Per Week (36 Deliveries)					
Test Commissioning												

2.3.2 A more detailed plan would be prepared by the Engineering, Procurement and Construction (EPC) contractor and this would form part of the finalised CEMP to be agreed with the LPA or PINS as appropriate.

### 2.4 General Principles

#### Site monitoring

2.4.1 In accordance with best-practice construction principles, the relevant Contractor's Site Manager will be responsible for the monitoring of the site and construction practice for the following purposes:

- To ensure that site practices are being carried out in adherence to this CEMP;
- To check site equipment for damage or wear;
- Identify any environmental hazards that may be addressed prior to a potential incident; and

2.4.2 Work areas should be kept clean and free of obstacles wherever possible. All site materials and equipment would be stored appropriately within the identified site yards shown below.

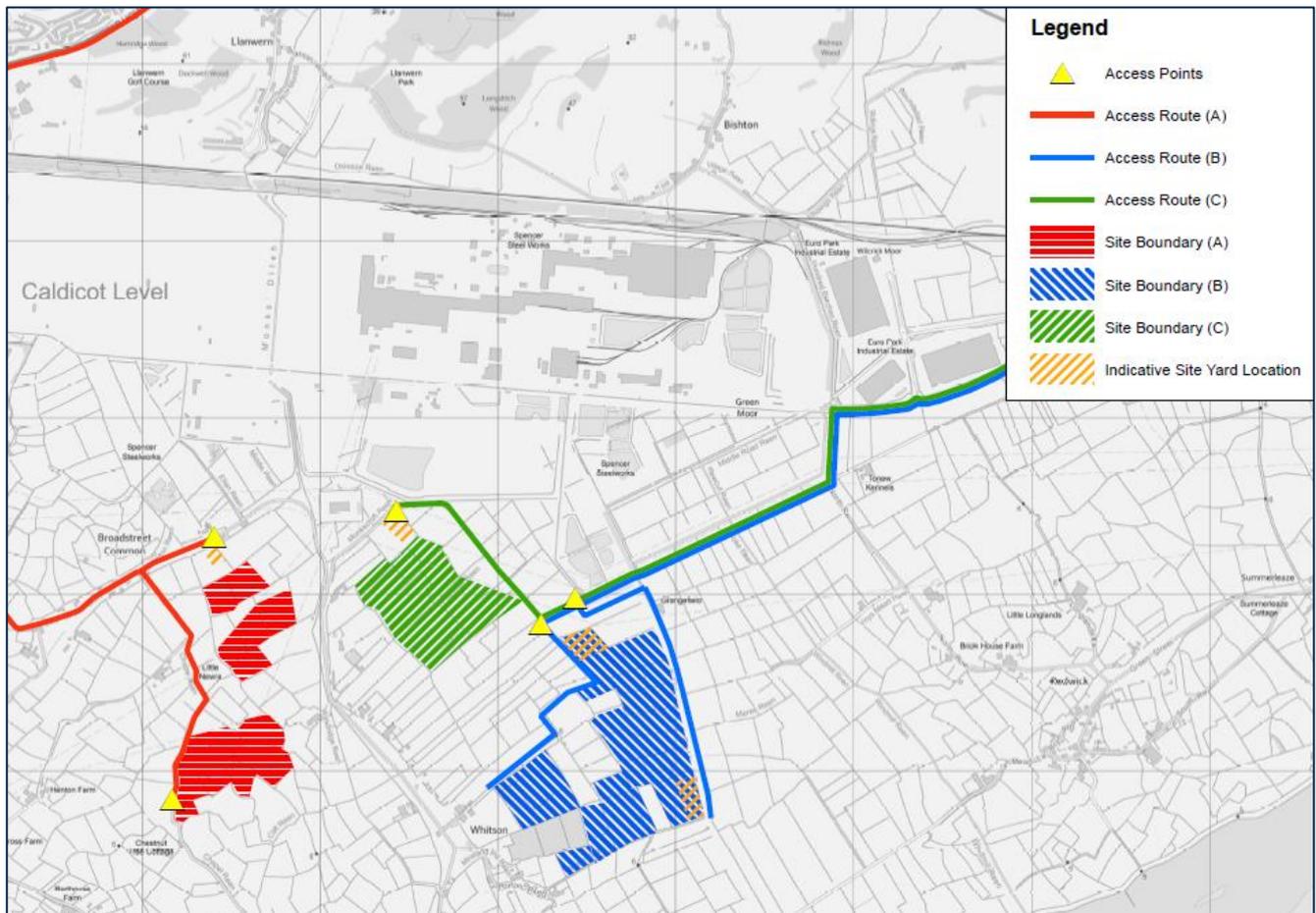


Figure 1 Indicative location of site yards during construction period

2.4.3 From these site yards, all materials would be decanted and distributed throughout the site. This approach restricts heavy goods vehicles from accessing the site and would therefore prevent any damage being caused by such vehicles.

2.4.4 The site compounds themselves would be temporary and would utilize a lightweight permeable flooring solution allowing vehicles to make deliveries to the site without churning up the ground.

### 2.5 Construction site audits

2.5.1 An audit shall be undertaken on a monthly basis by the during the construction period. This will consist of, but not be limited to, the following:

- An inspection of records held at site, such as waste transfer/consignment notes etc;
- Site walkover to assess compliance with the requirements of the detailed CEMP and with

relevant environmental legislation;

Following completion of the audit, the findings will be summarised and reported to the Owner.

### 2.6 Identification of potential impacts

2.6.1 The detailed CEMP will all of the potential impacts resulting from the required construction activities. Prior to the preparation of this document Table 1 sets out all of the potential impacts which have been identified at this stage of the projects.

Activity	Potential Impact
Transit to and from site	Pollution/nuisance from dust and emissions Noise Pollution from runoff to watercourses
Use of site machinery and vehicles	Noise Pollution from fuel leakages to water or land Damage to soil and vegetation
Production of waste	Pollution to watercourses caused by unsecured waste Litter nuisance to local community Potential health and safety risk posed by unsecured waste
Installation of framing system and solar panels	Disturbance of the integrity of the existing soil structures Damage to pasture and grassland Damage to geology resulting from piling process
Work near watercourses	Pollution to watercourses caused by fuel emissions, dust or soil runoff Disturbance of the surrounding habitat for which SSSI is designated
Vegetation coppicing and removal	Disturbance to existing flora (including trees or hedgerows not selected for removal) Disturbance to local wildlife populations

Table 1 Identification of potential impacts

## 3.0 Site working practices

### 3.1 Working hours

3.1.1 The detailed CEMP will set out the parameters for working hours and construction activities in order to ensure that any potential impacts or disturbances are properly managed.

3.1.2 Typical working hours are set out as follows:

- Monday to Friday – 07:00 – 19:00 hrs;

- Saturday – 07:00 – 19:00 hrs; and
- Sunday/Public Holidays – No construction activity to be permitted.

### 3.2 Waste Management

3.2.1 The relevant Contractor(s) will be produce a Site Waste Management Plan (SWMP) prior to commencing work on site. This plan will set the way in which resources will be managed during the site preparation and construction phases and should include the following information:

- Actions to meet the waste hierarchy such as waste elimination, minimisation, re-use, energy recovery and recycling measures;
- Assignment of the person within the Contractor's organisation with responsibility for the SWMP;
- Details of the types and quantities of waste that will be produced by the Contractor (and its subcontractors where appropriate); and
- Details of all consignments made (note that this may be a separate document, such as a WRAP waste recording and reporting spreadsheet).

3.2.2 The SWMP will be treated as a live document which can be updated and reviewed to ensure its accuracy. It will be prepared in conjunction with the detailed CEMP and will be agreed with the appropriate environmental advisor prior to any commencement on site.

3.2.3 No judgement is made within this OCEMP in relation to the quantities of waste, as the relevant Contractor will generate this information within the SWMP. However, wherever possible, waste will be eliminated, re-used or recycled as per the requirements of the waste hierarchy.

3.2.4 The following list serves to identify the possible types of waste which may be generated through the construction process:

- Cardboard and plastics from packaging of materials
- Organic waste from hedgerow coppicing
- Sewage and operational waste at site office/canteen areas

- Any unused materials – cabling, fencing etc.
- Removal of temporary construction materials used at site yards

3.2.5 In the operational phase of development there is not anticipated to be any significant quantities of waste produced as the development will only require a periodic inspection whilst its efficiency and output will be monitored remotely.

### 3.3 Dust emissions and odour

3.3.1 There are a number of mitigation measures that will be taken in order to prevent release of dust from the development site. These are set out within the accompanying CTMP as follows:

- Dust suppression facilities, including the provision of water bowsers with sufficient range to dampen all appropriate site areas;
- The wheels and chassis of vehicles shall be cleansed by hand at the point of loading in order to avoid the spread of mud, debris and dust onto the public highway;
- Sheeting of vehicles transporting stored aggregates in addition to a speed limit being enforced on site;
- Appropriate siting of any stored aggregates for laying of stone track, i.e. with preference being given to sheltered locations

3.3.2 It is considered inappropriate to apply a wet wheel wash for use during the construction period. Wet wheel washes often cause vehicles to deposit water on to the highway for a considerable distance after they have left the site. This could cause additional hazards for road users, particularly in cold weather when there is an increased risk of freezing. For this reason it is proposed to use dry cleaning methods.

### 3.4 Pollution Prevention

3.4.1 The relevant Contractor shall put in place appropriate emergency response procedures in relation to the environmental hazards on site. All site personnel will be made aware of these procedures in line with the training requirements of the detailed CEMP

3.4.2 The site compound will be fenced off. All site machinery and vehicles to be stored on site will be

stored in the site compound or will be immobilised to prevent unauthorised use or damage caused by vandalism, and to minimise the risk of pollution caused by leakages occurring out of hours. Drip trays will be used in cases where this is deemed appropriate.

3.4.3 Measures will be implemented to protect surface waters from silt contamination and/or run-off from:

- Mud, soil and stockpiled materials;
- Roads and tracks; and
- Excavations

3.4.4 The access track and hardstanding will be made of crushed stone/aggregate, allowing natural attenuation of precipitation into the underlying and surrounding ground.

3.4.5 There are rheens and ditches on site. There is a requirement to install cabling across a water crossing but no construction of the array itself will occur in close proximity to a water course.

3.4.6 In order to safeguard the water courses on site, the following measures must be observed during site preparation and construction activities:

- No substances or materials would be discharged into ditches or streams on site. All waste products should be disposed of using the prescribed methods and agreed with the LPA.
- Any storage of fuel or other fluids will be located at least 20 m away from water courses;
- Bridge crossings will be of a lightweight, temporary construction and incorporate a large span which extends beyond the banks of the rheens, thus minimising physical impacts to these ecosystems
- When performing cabling activities crossing water, spill kits will be available in order to prevent any potential spills from entering watercourses; and
- A drainage scheme will be put in place which will ensure that surface waters do not enter existing water courses.

### 3.5 Noise and disturbance

- 3.5.1 The following measures are required in order to minimise noise during construction of the solar farm:
- Vehicle engines and site machinery shall be switched off when not in use;
  - All vehicles will be properly maintained
  - The relevant Contractor should ensure that, where construction operations which cause excessive noise are to be completed, mitigation methods should be employed where possible to dampen the noise originating from these activities;
  - When loading and unloading material, this will not be dropped from a height;

## 4.0 Document Control

### 4.1 Scope of documents

- 4.1.1 The key documentation which should be held on site is (but is not limited to) as listed below:
- Waste Transfer Notes;
  - Waste Consignment Notes;
  - Weekly inspection checklists;
  - Copies of environmental incident reports;
  - Vehicle/maintenance check or repair details;
  - Training logs;
  - Material Safety Data Sheets; and
  - COSHH Assessments.

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