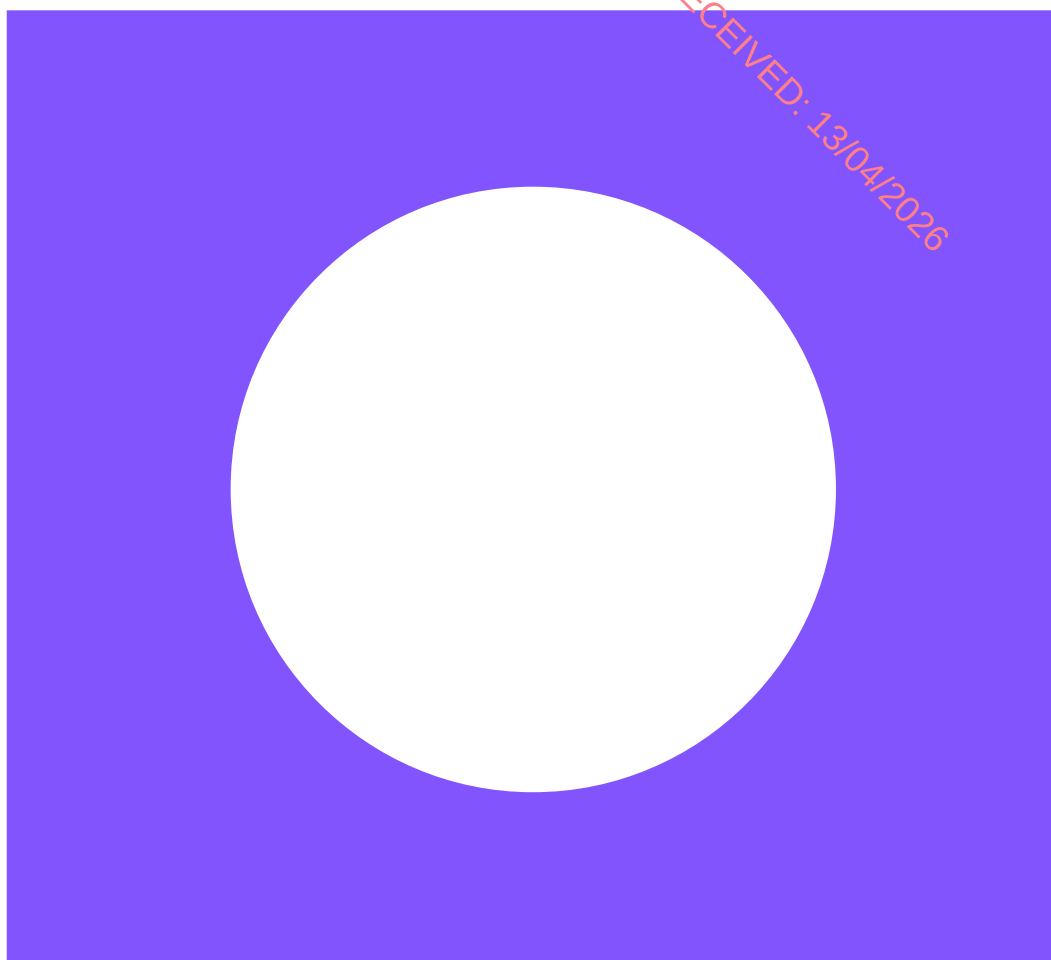




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# Shelburne Energy Farm

## Site Access Drainage Plan

April 2026

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# Shelburne Energy Farm

## Site Access Drainage Plan

April 2026

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# Issue and Revision Record

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## Document reference: 229101268 | PL2

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# 1 Introduction

## 1.1 Background

Mott MacDonald Ireland Limited was appointed by Gen7 Renewable Energy Limited (Gen7) to prepare an Environmental Impact Assessment Report (EIAR) to accompany planning applications to the relevant planning authorities for a renewable energy development referred to as Shelburne Energy Farm.

In summary, the development at Shelburne Energy Farm is a solar photovoltaic farm with an accompanying and co-located battery energy storage system. The project description is detailed fully in the EIAR which was submitted to accompany the planning application.

## 1.2 Purpose

Following submission of the planning application, Wexford County Council (WCC) reviewed the relevant documentation and made several requests for information (RFI) to clarify certain matters. The purpose of this Sediment, Erosion and Pollution Control Plan document is to address WCC's RFI no. 1c which is worded as follows:

*"1. The proposed development includes provision of 11no. site accesses and 1no. temporary site access, all of which egress onto local roads with speed limits of 60kph. It is a requirement for sightlines of 65m to the nearside road edge from a 3.0m setback to be provided. The planning documents received detail varying sightlines from a 2.0m setback and this requires revision. In this regard, the applicant shall submit the following:*

*c. Please clarify the intended use for each of the site accesses (whether permanent or temporary), and the proposed surface treatment for each site access. Surface water design details, in accordance with nature-based solutions, shall also be submitted in respect of each of the proposed vehicular accesses for the proposed development."*

The information in this Site Access Drainage Plan (SADP) document sets out the proposed surface water drainage arrangements with respect to the vehicular site access locations associated with the Proposed Project.

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## 2 Background Information

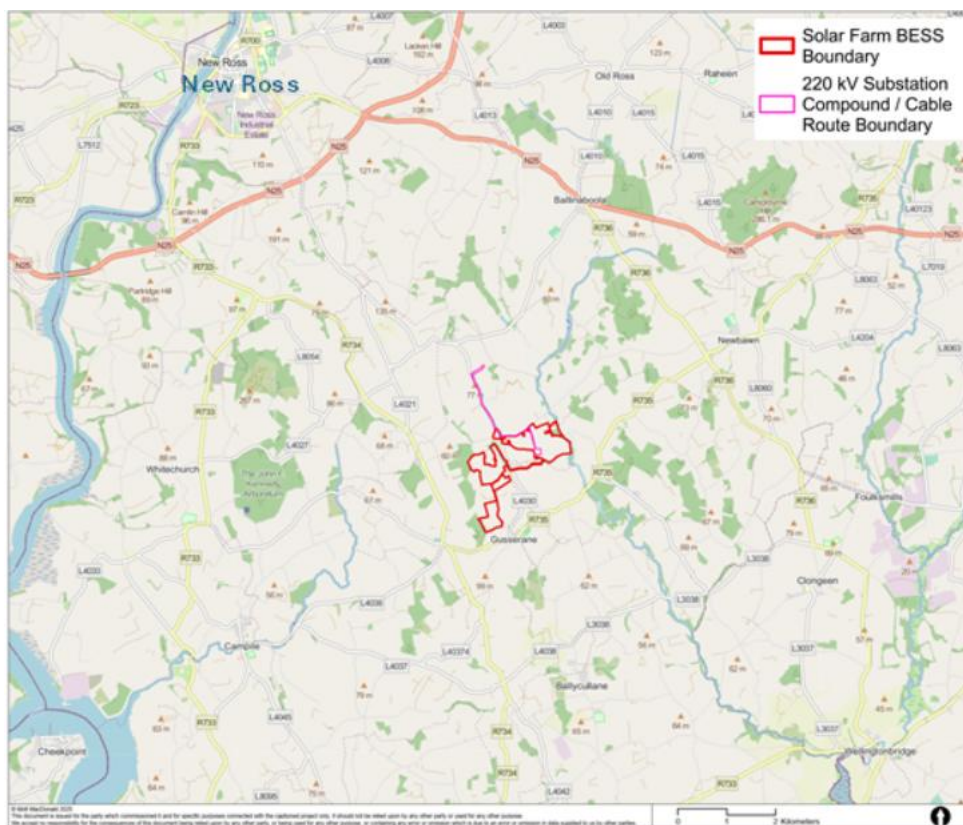
### 2.1 Project Location

Project location information is detailed fully in Chapter 5 (Development Description) of the EIAR which was submitted to accompany the planning application.

The Proposed Project is located in the townlands of Ballygarvan, Cloonagh and Nash, Gusserane, County Wexford, as illustrated in Figure 2-1.

The closest settlements include the town of New Ross located approximately 6.5km northwest, and the villages of Ballynaboola approximately 4.5km to the north, Newbawn 3.4km to the northeast and Ballycullane 3.5km to the south.

**Figure 2-1 Location of Proposed Project**



Source: Mott MacDonald Ireland Limited

Figure 2-1 indicates planning application boundaries; the red boundary represents the application boundary in relation to the planning application Wexford County Council, while the pink boundary represents the application boundary for the planning application to An Coimisiún Pleanála.

### 2.2 Proposed Development

The Proposed Project description is detailed fully in Chapter 5 (Development Description) of the EIAR which was submitted to accompany the planning application.

In summary, the Proposed Project comprises a photovoltaic (PV) solar energy farm and a co-located Battery Energy Storage System (BESS), collectively referred to as Shelburne Energy Farm, and together occupying a total area of approximately 121.5 hectares. A grid connection is required to connect Shelburne Energy Farm to the national electricity grid, with a co-located 220kV substation compound within the energy farm, measuring approximately 0.72 hectares, with an associated underground cable connection which will connect to an existing overhead transmission circuit.

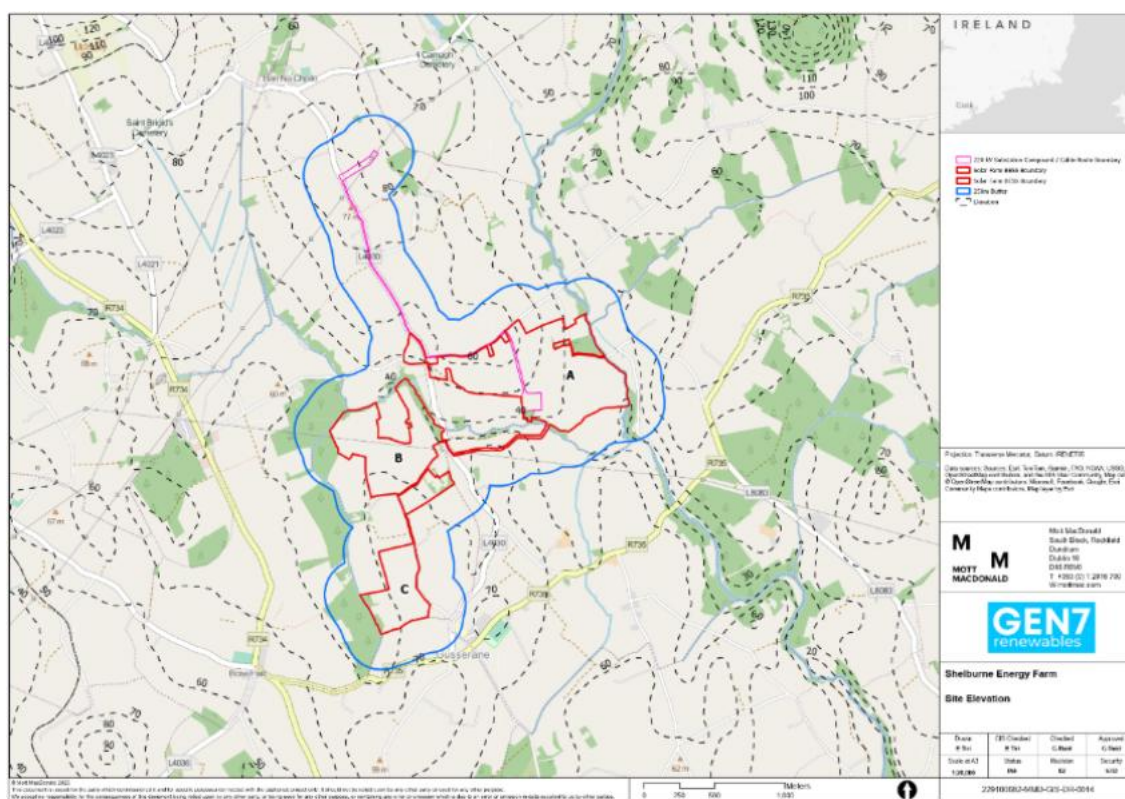
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## 3 Site Access & Drainage Arrangements

### 3.1 Site access layout arrangements

Site accesses have been designed to accommodate site-specific vehicular movements for the Proposed Project and provide effective connectivity between the local public roads and the on-site access tracks. The surface areas associated with the site access points are small in comparison with the overall extent of the scheme. The surface treatment for the site accesses is proposed to be asphalt.

**Figure 3-1 Proposed Project extent, areas and topography**



Source: Mott MacDonald Ireland Limited

Site access arrangements with respect to Areas A, B and C of the overall Proposed Project extents are summarised below; for locations of Areas A, B and C refer to Figure 3-1.

- Area A:
  - The main access track is proposed to connect the proposed substation compound and BESS compound to the local public road L40232, which defines the northern boundary of Array Area A.
  - In addition to the main access track, a network of secondary access tracks is proposed to provide operational access throughout the solar farm which have their own access points. These include:
    - Two accesses to the local public road L4030.
    - One access to the local public road L40232.
    - Two accesses to the local public road L80591.

- Area B:
  - The main access track is proposed to connect to the local public road, which joins to the L4030, located to the south of Area B.
  - In addition to the main access track, a network of secondary access tracks is proposed to provide operational access throughout the solar farm which have their own access points. These include:
    - One access to the local public road L4030.
    - Two accesses to the local public road south of the site which joins to the L4030.
- Area C:
  - The main access track is proposed to run centrally through the site, connecting to the local public road, which joins to the L4030, that runs parallel to the eastern boundary of Area C.

The proposed site access arrangements layout sheets for each access location serving the Proposed Project site are shown on Drawing Nos. 229101268-MMD-00-XX-DR-C-0201 to 0210.

## 3.2 Site access drainage arrangements

### 3.2.1 Drainage Principles & Sustainable Drainage Systems (SuDS)

Surface water drainage information is detailed in Chapter 9 (Surface Water Resources and Flooding) of the EIAR which was submitted to accompany the planning application.

To comply with established best practice, a surface water drainage system incorporating Sustainable Drainage Systems (SuDS) features will be constructed for the overall Proposed Project site to manage the quantity and quality of runoff during rainfall events. The proposed drainage strategy will comply with the recommendations as outlined in the Wexford County Development Plan 2022-2028 (Volume 2, Chapter 9) that include reference to the CIRIA SuDS Manual 2015.

SuDS are a collection of water management practices that aim to align modern drainage systems with natural water processes. SuDS facilities are designed to reduce pollution of waterbodies and to slow down runoff from sites, therefore helping to prevent downstream flooding and improve water quality. This closely mimics natural catchment behaviour where rainfall either infiltrates through the soil or runs off slowly over the ground surface to the nearest watercourse. This is known as the “treatment train” approach. SuDS devices should be placed at source, site, and regional levels. In some cases, SuDS can also provide amenity benefits to local communities and benefits for biodiversity simultaneously.

The proposed on-site surface water drainage layout for the overall Proposed Project site is shown on Drawing Nos. 229101268-MMD-00-XX-DR-C-0101 to 0110, which were submitted to accompany the planning application. Note that layout and size of drainage elements show on these drawings are subject to minor changes pending detailed design and the outcome of site investigations.

### 3.2.2 Site Access Drainage Strategy

Surface water runoff from the site accesses will be managed using over-the-edge drainage arrangements comprising French drains and filter drains which are regarded as SuDS components in CIRIA SuDS Manual (2015). These components form part of the site access drainage strategy, providing both water quantity control and pollution mitigation to improve the quality of runoff discharged from the site.

Although French drains and filter drains are effectively the same, their functions differ in the context of this scheme. French drains are proposed as infiltration features, allowing collected runoff to discharge to the ground via infiltration. In contrast, filter drains are proposed as conveyance features, allowing collected runoff to flow via pipework to a connection to the on-site surface water drainage network, which is typically served by localised soakaways that discharge runoff to the ground via infiltration.

The proposed site access drainage arrangements for the overall Proposed Project site is shown on Drawing Nos. 229101268-MMD-00-XX-DR-C-0301 to 0310, which have been submitted alongside this document. Note that layout and size of drainage elements show on these drawings are subject to minor changes pending detailed design and the outcome of site investigations.

The site accesses comprise small areas of impermeable surfacing in place of existing permeable surface which will result in an increase in surface water runoff during rainfall events. The drainage systems will be designed in accordance with local, regional and national guidance with respect to hydraulic performance to manage localised flood risk. For example, flooding should be managed within the site extents for up to the critical duration 1 in 100-year return period storm event, with a 30% allowance for climate change.

The performance of infiltration-based drainage systems is inherently dependent on the geotechnical characteristics of the underlying soils. Site-specific ground investigations will be required to establish the relevant geological and hydrogeological conditions to inform detailed design. These investigations should address a range of relevant factors, including, but not limited to soil type, bearing capacity, contamination risk, groundwater levels, and soil permeability (e.g. testing in accordance with BRE Digest 365)

The proposed SuDS features will require routine inspection and maintenance to ensure they continue to operate as intended throughout their design life. At detailed design stage, it is essential to incorporate appropriate access provision, such as rodding eyes and manhole/catchpit chambers etc., at suitable intervals to facilitate effective inspection and maintenance of drainage features, such as filter drains.

**Table 3-1 Recommended maintenance requirements for filter drains and French drains**

| Maintenance schedule   | Required action                                                                                                                                    | Typical frequency            |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Regular maintenance    | Remove litter (including leaf litter) and debris from filter drain surface, access chambers and pre-treatment devices                              | Monthly (or as required)     |
|                        | Inspect filter drain surface, inlet/outlet pipework and control systems for blockages, clogging, standing water and structural damage              | Monthly                      |
|                        | Inspect pre-treatment systems, inlets and perforated pipework for silt accumulation, and establish appropriate silt removal frequencies            | Six monthly                  |
|                        | Remove sediment from pre-treatment devices                                                                                                         | Six monthly (or as required) |
| Occasional maintenance | Remove or control tree roots where they are encroaching the sides of the filter drain, using recommended methods (e.g. NJUG, 2007 or BS 3998:2010) | As required                  |
|                        | At locations with high pollution loads, remove surface geotextile and replace, and wash or replace overlying filter medium                         | Five yearly (or as required) |
|                        | Clear perforated pipework of blockages                                                                                                             | As required                  |

Source: Table 16.1 of CIRA SuDS Manual (2015)

In terms of operation and maintenance for the design life of the Proposed Project, it is anticipated that the site access drainage arrangements will be owned and maintained by the operator themselves or a management company appointed by the developer/operator.

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## 4 Conclusion

The purpose of this Site Access Drainage Plan (SADP) document is to address WCC's RFI no. 1c which is worded as follows:

*"1. The proposed development includes provision of 11no. site accesses and 1no. temporary site access, all of which egress onto local roads with speed limits of 60kph. It is a requirement for sightlines of 65m to the nearside road edge from a 3.0m setback to be provided. The planning documents received detail varying sightlines from a 2.0m setback and this requires revision. In this regard, the applicant shall submit the following:*

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The information in this Site Access Drainage Plan (SADP) document sets out the proposed surface water drainage arrangements with respect to the vehicular site access locations associated with the Proposed Project.

Surface water runoff from the site accesses will be managed using over-the-edge drainage arrangements comprising French drains and filter drains which are regarded as SuDS components in CIRIA SuDS Manual (2015). These components form part of the site access drainage strategy, providing both water quantity control and pollution mitigation to improve the quality of runoff discharged from the site.

Although French drains and filter drains are effectively the same, their functions differ in the context of this scheme. French drains are proposed as infiltration features, allowing collected runoff to discharge to the ground via infiltration. In contrast, filter drains are proposed as conveyance features, allowing collected runoff to flow via pipework to a connection to the on-site surface water drainage network, which is typically served by localised soakaways that discharge runoff to the ground via infiltration.

The site accesses comprise small areas of impermeable surfacing in place of existing permeable surface which will result in an increase in surface water runoff during rainfall events. The drainage systems will be designed in accordance with local, regional and national guidance with respect to hydraulic performance to manage localised flood risk. For example, flooding should be managed within the site extents for up to the critical duration 1 in 100-year return period storm event, with a 30% allowance for climate change.

The proposed SuDS features will require routine inspection and maintenance to ensure they continue to operate as intended throughout their design life. Recommended maintenance requirements for filter drains (including French drains) are set out in Table 16.1 of CIRIA The SuDS Manual (2015).

In terms of operation and maintenance for the design life of the Proposed Project, it is anticipated that the site access drainage arrangements will be owned and maintained by the operator themselves or a management company appointed by the developer/operator.

With the implementation of the proposed site access drainage arrangements set out in this document, the Proposed Project will comply with the relevant local authority and national requirements.

