

**Regener8 Power**

# **Construction Traffic Management Plan Rhigos Road Solar Farm**

**Final report**

Prepared by LUC

June 2023



## Regener8 Power

### Construction Traffic Management Plan Rhigos Road Solar Farm

**Project Number**  
12057

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# Contents

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|                        |          |
|------------------------|----------|
| <b>Chapter 1</b>       |          |
| <b>Introduction</b>    | <b>1</b> |
| Purpose of this Report | 1        |
| Report Structure       | 1        |

---

|                              |          |
|------------------------------|----------|
| <b>Chapter 2</b>             |          |
| <b>Proposed Development</b>  | <b>2</b> |
| Introduction                 | 2        |
| Storage of Materials on Site | 4        |
| Proposed Site Access         | 4        |

---

|                                            |          |
|--------------------------------------------|----------|
| <b>Chapter 3</b>                           |          |
| <b>Construction Traffic Route Overview</b> | <b>5</b> |
| Construction Traffic                       | 5        |
| Construction Vehicles                      | 6        |
| Construction Traffic Routing               | 6        |
| Route Overview                             | 7        |

---

|                                                      |          |
|------------------------------------------------------|----------|
| <b>Chapter 4</b>                                     |          |
| <b>Construction Traffic Management Plan Measures</b> | <b>8</b> |
| Introduction                                         | 8        |
| Site Access Arrangements                             | 8        |
| Construction Site Signage                            | 8        |
| Construction Site Operating Hours                    | 8        |
| Public Information                                   | 8        |
| Wheel Cleaning Facilities                            | 9        |
| Dust Management                                      | 9        |
| Road Condition Survey                                | 9        |

---

|                                         |           |
|-----------------------------------------|-----------|
| <b>Chapter 5</b>                        |           |
| <b>Personal Injury Accidents Review</b> | <b>10</b> |
| Summary                                 | 10        |

---

|                   |           |
|-------------------|-----------|
| <b>Chapter 6</b>  |           |
| <b>Conclusion</b> | <b>11</b> |
| Conclusion        | 11        |

# Chapter 1

## Introduction

### Purpose of this Report

**1.1** LUC has been appointed by Regener8 Power to prepare a Construction Traffic Management Plan (CTMP) to accompany a planning application for a proposed solar farm on land located approximately 800m to the east of Rhigos village, at Rhigos Road, Glamorgan, Wales.

**1.2** A CTMP should be considered a live document and will be updated as required throughout the development lifecycle.

### Report Structure

**1.3** Following this short introductory chapter, the report is set out as follows:

- **Chapter 2** describes the proposed development and gives details of the construction traffic;
- **Chapter 3** presents the construction traffic route overview;
- **Chapter 4** sets out the CTMP measures; and
- **Chapter 5** provides a summary of Personal Injury Accidents in the area.

**1.4** The CTMP is concluded and summarised in Chapter Six.

## Chapter 2

### Proposed Development

#### Introduction

**2.1** It is proposed that a solar farm and associated infrastructure will be constructed on the existing 16Ha of grazing land. The proposals will consist of ground mounted photovoltaic panels and associated infrastructure, with the farm expected to be operational for up to 40 years. The proposal will have a total generating capacity of up to 9MW when fully operational. Once the photovoltaic panels are removed the site will be virtually unchanged from its existing state.

Figure 2.1: Proposed Solar Farm Layout



## Storage of Materials on Site

**2.2** The appointed principal contractor will not store materials on site. Deliveries of material will be coordinated to be 'just in time' and used as they are delivered.

## Proposed Site Access

**2.3** It is proposed that the site is accessed from the south via the existing farm track accessed off the A4061 Rhigos Road. At this location the A4061 is straight, flat, and subject to a 60mph speed limit, therefore no visibility or safety issues are anticipated.

**2.4** Existing visibility is in excess of the 215m for 60mph roads required by TAN 18. Figure 2.2 shows that the minimum visibility requirement is feasible.

**Figure 2.2: Proposed Site Access Visibility Splay**



**2.5** This access location was chosen to avoid a busy bus route on Rhigos Road to the north of the site and a weak bridge within the site itself.

## Chapter 3

### Construction Traffic Route Overview

#### Construction Traffic

**3.1** The construction period for the solar farm is expected to last for 16 weeks. During this time, there will be in the order of 314 HGV movements (i.e. to and from each site). There is expected to be a maximum of 3 daily average HGV movements to and from the site. In addition, there will be a number of light goods vehicle (including cars and vans) movements during this period.

**3.2** To provide a comparison, existing traffic levels in the area were obtained from DfT count points to the west and east of the Rhigos Road junction for 2021. These locations show 2-way AADFs of between 16,594 and 18,981 vehicles.

**Table 3.1: DfT Traffic Counts, 2021**

| Count Location           | Annual Average Daily Flow | HGVs |
|--------------------------|---------------------------|------|
| A465 west of Rhigos Road | 16594                     | 847  |
| A465 east of Rhigos Road | 18981                     | 1320 |

**3.3** During the construction phase, there is anticipated to be maximum average of 3 HGV movements per day which represents only a negligible increase in the current AADF on the A465.

**3.4** The site will comprise of 16,448 modules, 36 inverters, 2 transformer stations, customer and DNO sub stations and DNO cable route to Point of Connection. The principal contractor confirms that each PV module weighs approximately 0.032 tonnes and that a total of 620 panels can be accommodated per HGV loaded with a 40ft container.

**Table 3.2: Construction Delivery Programme (Proposed), two way movements**

| Activity                     | Total Number of HGV Movements |
|------------------------------|-------------------------------|
| Modules                      | 56                            |
| Contractors Compound         | 20                            |
| Matting                      | 10                            |
| Stone                        | 6                             |
| DNO Area                     | 20                            |
| Frames                       | 28                            |
| LV/HV Cable                  | 18                            |
| Inverters                    | 2                             |
| Transformers and Substations | 8                             |
| Concrete                     | 20                            |

| Activity      | Total Number of HGV Movements |
|---------------|-------------------------------|
| Miscellaneous | 94                            |
| Plant         | 24                            |
| Fencing       | 8                             |
| Total         | 314                           |

**3.5** It is expected that the operational phase of the site will generate 10-15 trips by LGV for servicing and maintenance of the solar farm equipment per year.

### Construction Vehicles

**3.6** Deliveries will be on 40t HGVs and will be coordinated to be “Just in Time” to control traffic flow. They will be required to call ahead to ensure that the way is clear and that no other vehicles are present that may create a traffic issue.

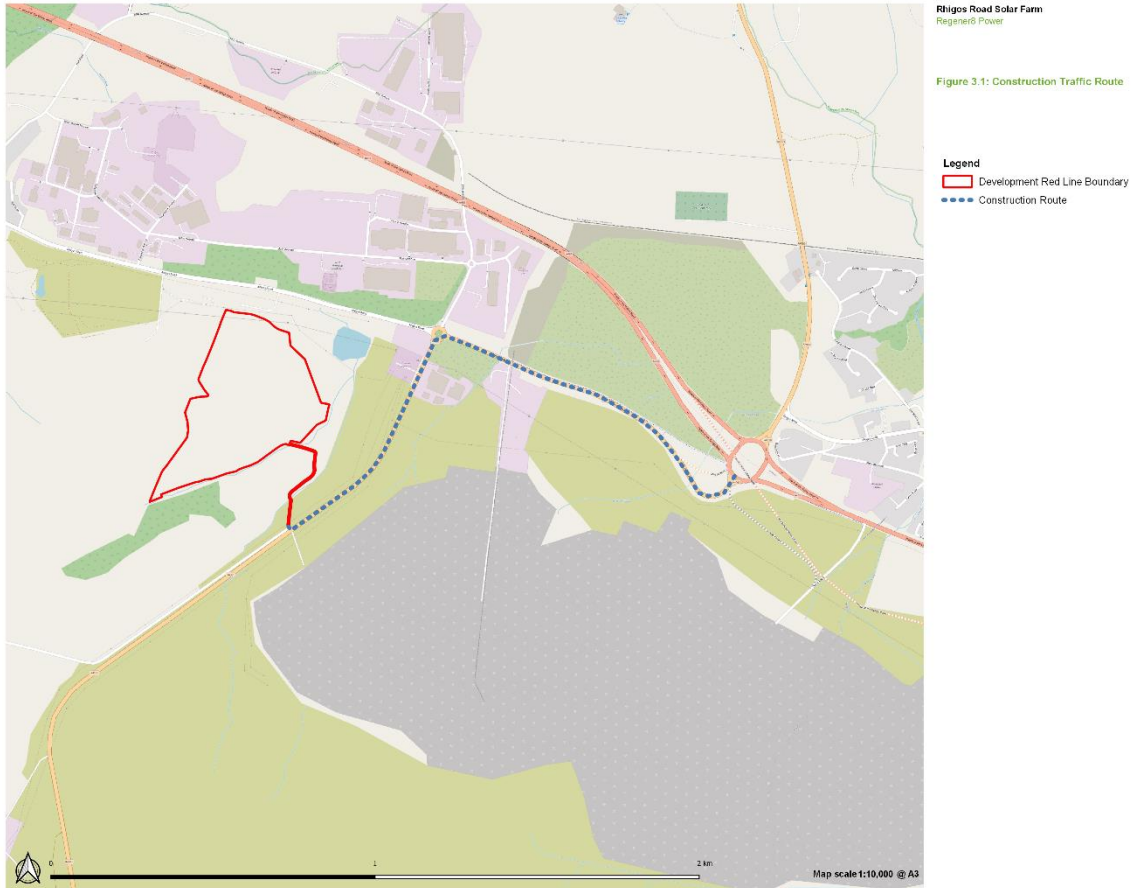
**3.7** The PV panels and frames will be shipped in 40ft containers which are typically carried to the site on a 15.4m long articulated vehicle. HGVs will typically weigh approximately 11.2 tonnes unladen (15 tonnes with shipping container).

**3.8** With regards to the routing of general construction traffic and HGVs to and from the Rhigos Road Solar Farm site, it is considered that the majority of trips will be routed to the site from the A465 to the site access via the A4061 Rhigos Road.

### Construction Traffic Routing

**3.9** Should the Local Authority require construction trips associated with the proposed development to avoid any specific areas or settlements, it is considered that this can be implemented by way of updates to the Construction Traffic Management Plan undertaken by the Principal Contractor and secured by way of a planning condition.

Figure 3.1: Construction Traffic Route



## Route Overview

**3.10** Loads accessing the site will be required to travel from the A465, before travelling westbound and then southbound on the A4062 to reach the proposed construction access.

**3.11** The A4061 connects to the A465 via a large roundabout approximately 1km to the east of the proposed development. Loads will travel westbound along the A4061 for approximately 1.1km until they reach a roundabout where they will be required to turn left to take the southbound continuation of the A4061. Loads will then follow the A4061 for approximately 750m until they reach the site construction access.

**3.12** The site construction access is reached via an unnamed private road which runs parallel to the A4061.

**3.13** From a desktop review there are no impediments to vehicles accessing the proposed development during the construction phase, especially as abnormal loads are not anticipated.

## Chapter 4

# Construction Traffic Management Plan Measures

### Introduction

**4.1** There are a number of traffic management measures proposed to help reduce the impact of the construction traffic on the surrounding road network. These measures are currently presented as indicative measures to be discussed and agreed with the Local Authority and various highways agencies closer to the construction date, which can be incorporated into the Traffic Management Plan by the Principal Contractor, and can be agreed by way of a planning condition.

### Site Access Arrangements

**4.2** At the proposed site access / unnamed road junction it is proposed to provide temporary signage, warning local residents of the increase in construction traffic trips associated with the construction phase of the proposed development.

**4.3** All vehicles associated with the proposed development will access the site from the south. The proposed site access will be taken from the existing farm track linking directly to the proposed site.

**4.4** A temporary storage area / compound will be located within the site to its southern boundary adjacent to the proposed site access, which will be used to store materials and components for the development.

**4.5** Any new access track created at the site access junction will be, as far as possible, void of loose surface material to help prevent said material being tracked out onto the road by construction traffic. All measures would be agreed in advance with the Council's Roads Department.

### Construction Site Signage

**4.6** A specific Traffic Management Plan will be produced by the Principal Contractor which will cover the construction of the site access junction and associated infrastructure. Temporary signage to advise drivers of the increase in HGV traffic during the construction period will be posted in the vicinity of the site access junction. The location and exact requirement of the signage will be agreed by the Principal Contractor with the Local Authority's Roads Department.

### Construction Site Operating Hours

**4.7** Based on similar sites, construction will likely take place from Monday to Friday between 07:00 and 19:00 and Saturday between 09:00 and 13:00. Outside these hours, works at the site shall be limited to emergency works and dust suppression, unless otherwise approved in writing by the Local Authority.

**4.8** The Local Authority shall be informed in writing of emergency works within three working days following the occurrence. No general construction traffic movements will take place on Sundays or Public Holidays without prior written approval from the Local Authority, who must be given at least two working days' notice of the proposed movements.

**4.9** Where possible, the Principal Contractor will seek to restrict the number of staff vehicles on the local road network by encouraging car sharing amongst construction staff members, as part of the considerate contractor scheme.

### Public Information

**4.10** Information on the movements of construction traffic and the project program can be provided to local residents and relevant local media to help inform the public on the progress of the project and the potential for any disruption associated with the construction vehicle movements.

**4.11** Information would relate to expected vehicle movements through the local area. It is hoped that this level of information will help residents to be aware of construction movements and help reduce the likelihood of any potential conflicts.

**4.12** If required by the Local Authority, Regener8 Power can produce a local newsletter for distribution to properties along the most affected sections of the route advising them of construction traffic movements and the measures put in place to ensure the safe and efficient operation of the road network. The requirement for this measure will be agreed with the Council's Roads Department.

### Wheel Cleaning Facilities

**4.13** 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 road 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. Construction vehicles which are required to enter the road, particularly wagons, shall be cleansed by hand at the point of loading to remove any material or debris spilled during loading. Vehicles shall travel along the site tracks, which are constructed of granular material, to avoid picking up additional debris prior to accessing the road network.

**4.14** No additional cleansing measures are proposed between the point of loading and the road network. However, a road brush shall be available should cleansing of any roads be necessary as a consequence of construction operations. Should any mud or debris be carried out with the site, a professional road sweeping company will be appointed to keep the carriageway clear.

### Dust Management

**4.15** Any dust arising from site activities must be minimised. Construction Site Managers need to be aware of the potential human health and ecological effects of dust particulates and ensure that basic remedial action is taken to limit particle pollution. Any dust arising from activities on the site must be minimised by a suitable method e.g. damping or enclosure.

**4.16** It is anticipated that the construction activities will generate dust during extended periods of dry weather. This dust will be suppressed by water bowsers damping down site entrances, access tracks and working areas, either on a continuous or as required basis.

**4.17** Other techniques adopted to control dust during the construction phase:

- 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 road;
- Ensuring that lorries leaving the site carrying debris or waste are properly covered and not overloaded;
- Cleaning the public carriageway near the site entrances as required;
- Where disk cutters are being used they should have a dust bag, have water suppression, or the working area should be wet prior to the use of the machinery; and
- In exceptional circumstances areas of the access track may be scraped to remove excess silt.

### Road Condition Survey

**4.18** A Road Condition Survey (RCS) on the proposed construction route has been requested by the LPA. The RCS will identify points where the carriageway is in poor condition and include measures to protect these areas from further damage resulting from construction traffic. It will be proposed to undertake a RCS before and after construction, to ensure that any damage caused by construction vehicles associated with the development was recorded, thus allowing the Developer to fulfil their responsibilities by rectifying any damage.

**4.19** The extent of the survey and the survey methodology will be undertaken in liaison with the Council's Roads Department and the reports would be prepared as a source of evidence should any damage claims arise.

## Chapter 5

### Personal Injury Accidents Review

#### Summary

**5.1** A review of PIA data has been undertaken to identify any existing road safety issues on the proposed construction traffic route.

**5.2** PIA data was obtained from the CrashMap database covering the anticipated construction traffic route from the A465 for the years 2017-2021.

Figure 5.1: Anticipated Construction Route PIAs



CrashMap

**5.3** There are no PIAs recorded in the last five years of available data (2017-2021) on the anticipated construction traffic route and, as the traffic generated by the solar farm during most of its lifetime will be limited to occasional maintenance and servicing, there is no anticipated risk of an increase in traffic collisions as a result of the proposed development.

## Chapter 6

### Conclusion

#### Conclusion

**6.1** It is considered that the impact of the traffic associated with the construction of the Rhigos Road Solar Farm development can be appropriately mitigated, with no significant adverse impact on road safety for the existing users of the surrounding road network.