

Construction Method Statement



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Mynydd y Gwrhyd Solar Farm

Awel Aman Tawe

June 2025

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1. INTRODUCTION

- 1.1.1 This Construction Method Statement (CMS) has been prepared for Awel Aman Tawe (AAT) in support of an application to discharge Condition 6 of the planning permission P2020/0408. The permission is for a solar farm on land known as Mynydd Gwrhyd, a moorland area situated between the villages of Tairgwaith /Gwaun Cae-Gurwen and Cwm-twrch Uchaf. The Site is marked by presence of the two community wind turbines, owned and operated by AAT.
- 1.1.2 Permission was awarded by Neath Port Talbot County Borough Council in June 2020 for a solar farm with associated infrastructure, including site tracks, inverters, battery storage containers, transformers, CCTV, fencing and open sided education shelter.
- 1.1.3 The CMS provides details of a construction methodology that will ensure that any work conducted adheres to best practice, appropriate techniques and enhances environmental performance where possible.
- 1.1.4 As specified in the Condition 6, this CMS sets out the following:
- the parking of vehicles of site operatives and visitors;
 - loading and unloading of plant and materials;
 - scoping route for deliveries shall be required;
 - storage of plant and materials used in constructing the development;
 - the erection and maintenance of security hoarding, where appropriate;
 - security arrangements and contact details in case of an emergency;
 - timings of deliveries;
 - location and details of wheel washing facilities;
 - measures to control the emission of dust and dirt during construction;
 - scheme for recycling/disposing of waste resulting from demolition and construction works;
 - scheme for the erection of temporary/semi temporary signage.

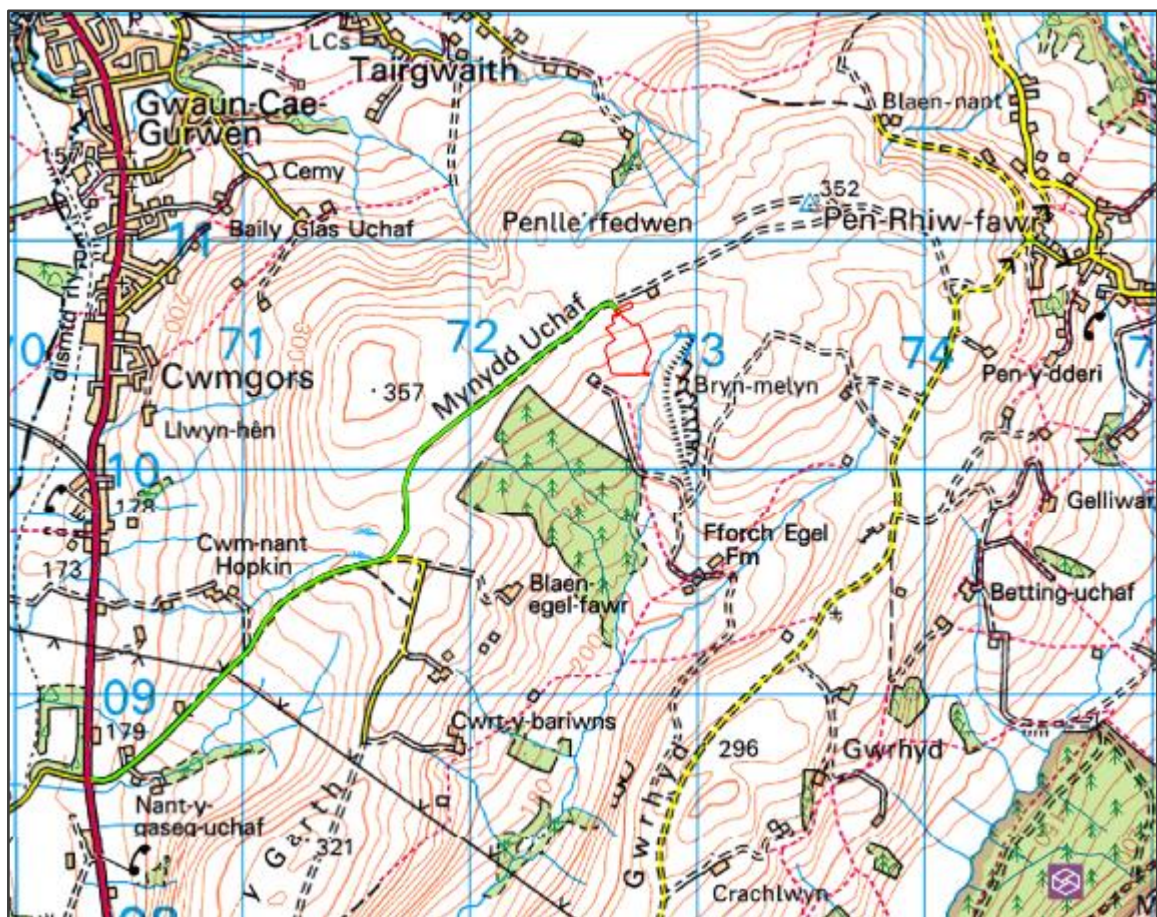
- 1.1.5 The CMS has been prepared by Dulas Ltd, a competent body in acting as client engineer for solar construction following three decades of solar ground-mount and roof-mount solar installation across the UK.
- 1.1.6 The Engineering Procurement Contractor (EPC) appointed to install the solar farm will be required to comply with the provisions of this CMS and appropriate codes of practice. The EPC will be required to accord with ‘*Considerate Contractor Scheme*’ (CCS, 1997) and the ‘*Construction (Design and Management) Regulations 2015*’ (CDM 2015) Approved Code of Practice (HSE April 2015).
- 1.1.7 All contractors and staff will be required to comply with all relevant environmental legislation and to take account of published standards, accepted industry practice, national guidelines and codes of practice appropriate to the scheme.
- 1.1.8 Prior to commencement of construction, contractors and staff will be required to operate an induction scheme, such as a tool box talk, to ensure: (i) that all employees are aware of site rules and their environmental responsibilities; (ii) to identify training needs for personnel; and (iii) to provide appropriate training. The training will include talks for site operatives to provide an appropriate level of awareness of environmental issues and to note any shortcomings so improvements can be made and issues rectified.

2. CONSTRUCTION METHODOLOGY

2.1 Access

2.1.1 Access to the proposed solar farm site is via the A474 turning east on to a small unclassified carriageway approximately 2km South of Cwmgors (at SN703086). Vehicles shall proceed along this road for 2km to the point where vehicles will turn North (at SN717095) to make use of the existing track which gives access to the existing wind farm adjacent to the proposed solar farm site.

2.1.2 Access to the Site is shown in the following plan:



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Plan 1: Access Route from the main highway to the Site

2.1.3 The route was previously used for access to enable the construction of the wind farm and is also regularly used for large agricultural plant and is therefore deemed suitable for use by HGVs.

- 2.1.4 This route will be the sole access to the Site during the construction period and for the limited access required when the Site is operational. No vehicle parking, loading or unloading will take place within the public highway. All routes will be kept free of obstacles and trip hazards during the period of installation.
- 2.1.5 On completion of the works, the access route will be made good from any damage caused by construction movement.
- 2.1.6 No works are envisaged to enable access to the site. Existing site entrance arrangements off the A474 are suitable for the access of articulated loads.
- 2.1.7 A temporary construction compound will be provided directly adjacent to the Site which will part utilise the wind turbine hardstanding. This will allow for staff parking and to enable delivery vehicles to unload away from the public carriageway.
- 2.1.8 The presence of the temporary construction compound adjacent to the Site will allow for the effective management of traffic entering and exiting the Site so that timings can be arranged dependent upon traffic movements on the main A474.

2.2 Working Hours

- 2.2.1 The core working hours will be restricted to;
- 08:00 to 17:00 Monday to Friday; and
 - 08:00 to 12:30 on Saturday.
- 2.2.2 There will be no Sunday or Bank Holiday working. Any works outside these hours will require NPTCBC's approval.

2.3 Construction Programme

- 2.3.1 The solar farm installation will be staged over a period of 16 weeks and will include periods of site preparation, installation, testing/commissioning prior to completion and project handover.
- 2.3.2 The key phases of installation will include:

Site Preparation and Ecological Protection Measures

- 2.3.3 This phase will include:

- Field survey and setting out, including demarcation of ecological protection zones;
- Site clearance;
- Laying access road and any temporary tracks;
- Swale and filter drain installation;
- Preparation of earthing system;
- Improvements to hard-standing for construction compound and laying of foundations for inverter / transformer housings;
- Installation of perimeter fence; and
- Trenching for cables and ditches.

Solar Installation

2.3.4 This phase will include:

- Piling for table supports;
- Installation of solar array frames;
- Mounting PV modules onto array frames;
- Testing of PV modules;
- Installation of electrical ducting; and
- Monitoring system installation

Electrical Infrastructure Installation

2.3.5 This phase will include:

- Connection of earthing system and Lighting Protection System;
- Interconnection of PV module cables;
- Routing and securing of DC string cables;
- Installation and connection of PV string boxes;
- Installation and connection of main DC cables;

- Delivery and installation of pre-configured inverters;
- Delivery and installation of battery energy storage system (BESS);
- Installation and connection of AC system to inverters and BESS; and
- Closure of cable trenches

Testing and Commissioning

2.3.6 This phase will include:

- DC and AC system commissioning;
- G59 witness testing;
- System accreditation;
- Commencement of environmental monitoring programme;
- Commissioning of remote monitoring system;
- Completion and Project handover to Site operator.

Site Restoration and Completion of Works

2.3.7 This phase will include:

- Removal of temporary features at site compound and welfare facilities;
- Landscaping and planting;
- Installation of outdoor education are; and
- Provision of surface water management system (swales/ ditches).

2.3.8 The construction programme will be phased as follows:

Task	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Site preparation and ecological protection measures																
Site security and setup																

Task	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Preparing access and internal tracks																
Swale and filter drain installation																
PV array installation																
Grid Connection Works																
CCTV & other security measures																
Testing and commissioning																
Landscaping and restoration																
Site closure																

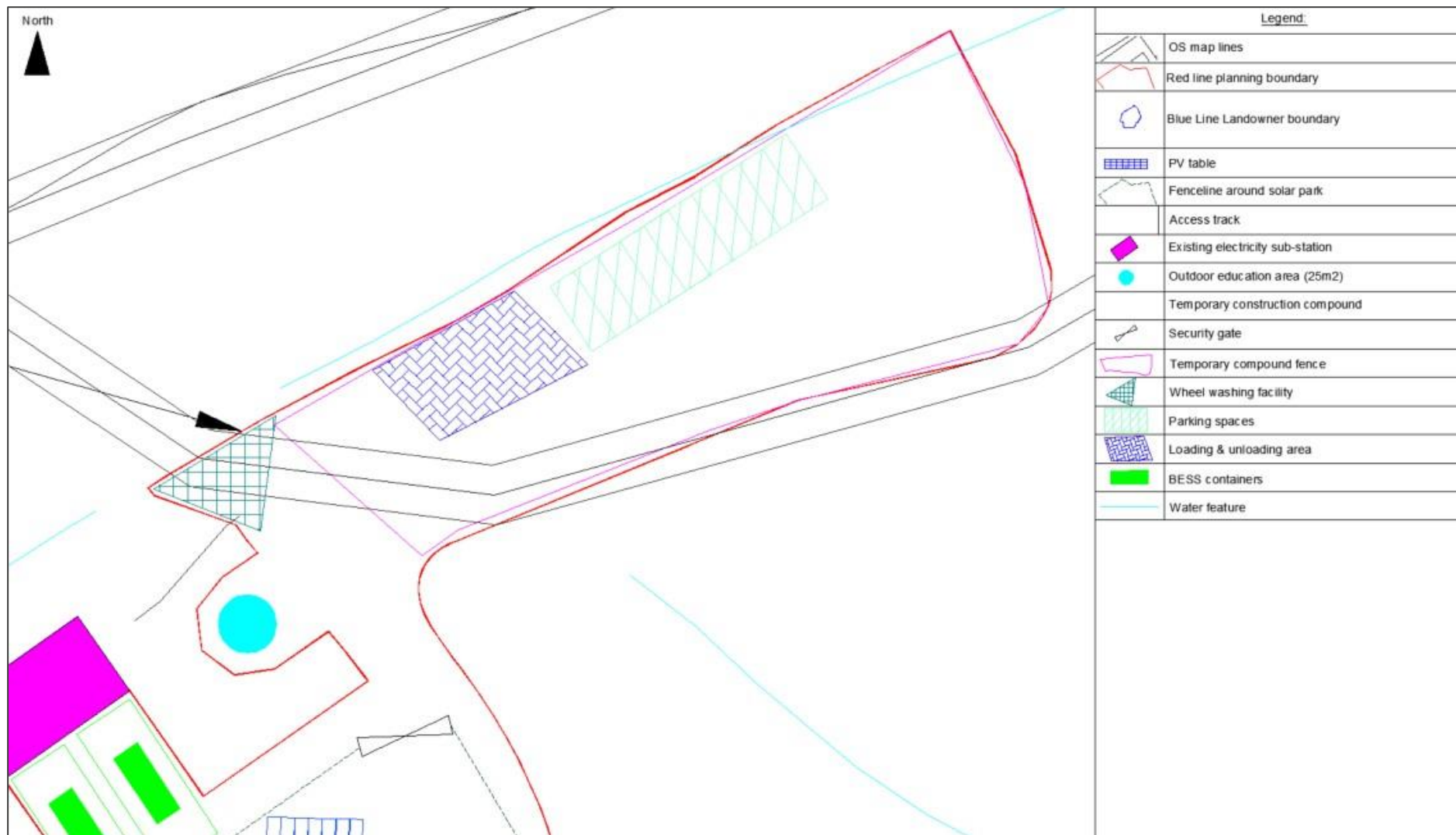
Table 1: Phases of the Construction Programme

- 2.3.9 Neighbouring residential properties and businesses will be given not less than 7-days' notice of the commencement of the works.
- 2.3.10 Once operational, site visits (for maintenance) typically occur during normal working hours, unless in an emergency.
- 2.3.11 The Site will be remotely monitored and therefore access will only be required for routine maintenance (typically every 3-4 months) and to respond to any fault alarms or emergencies.

2.4 Parking of vehicles of site operatives and visitors

- 2.4.1 Parking provisions for up to 10 private and LGV vehicles will be provided within the temporary construction compound. Details of these arrangements are marked on the updated layout plan (Figure 1-2 v2) demonstrating the location of car parking spaces, and the available areas for deliveries to manoeuvre, loading and unloading areas, and storage areas for materials and machinery as required under items a-d of Condition 6.

An extract of the layout plan demonstrating these site requirements is shown in Plan 2 overleaf.



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Plan 2: Parking, Storage, Laydown and Areas

2.5 Loading, unloading and storage of plant and materials

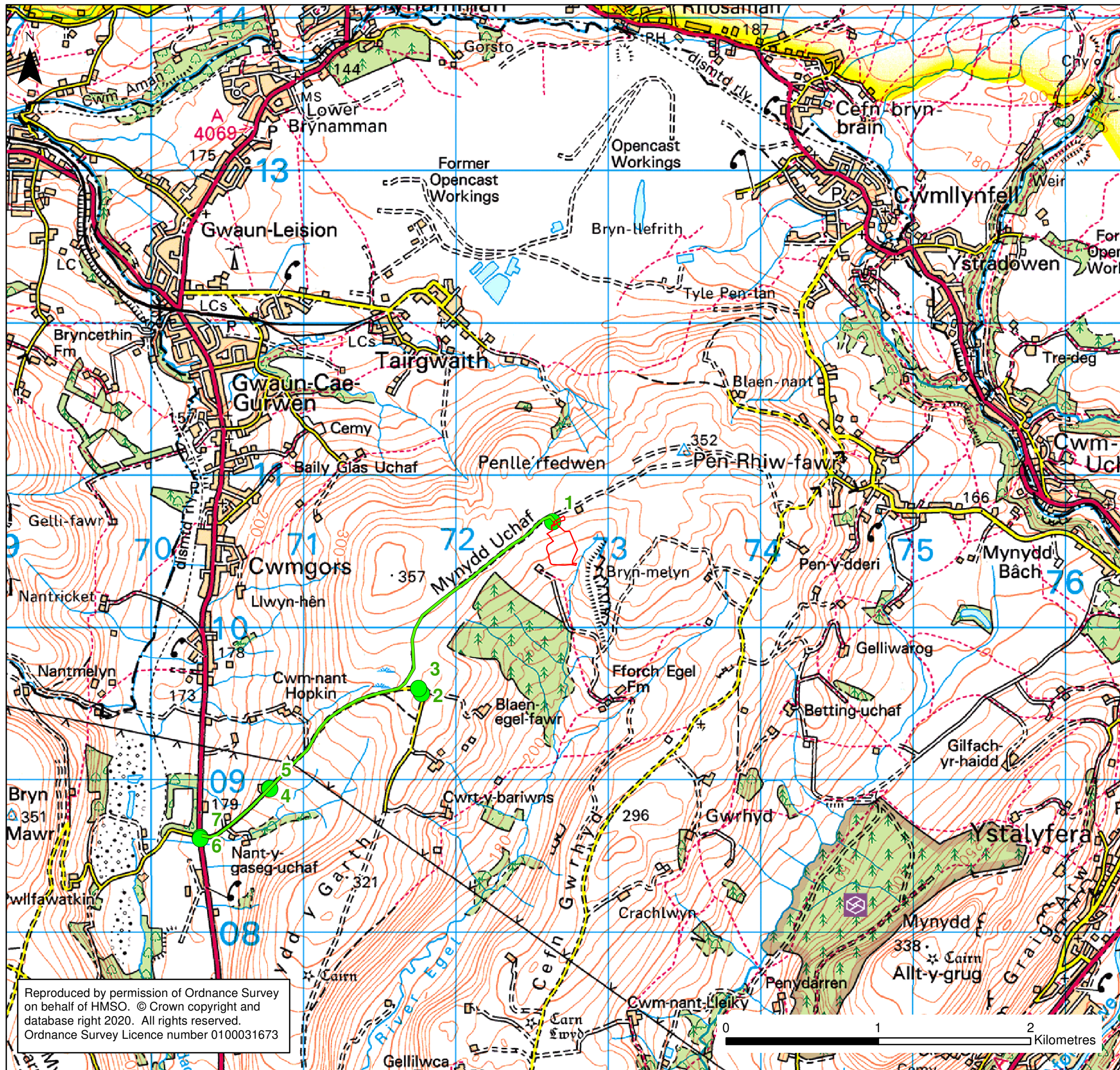
- 2.5.1 Unloading of plant and materials will take place within the temporary construction compound, and will be stored therein until utilisation for the installation. See Plan 2 above for location details.
- 2.5.2 All construction traffic entering and leaving the Site will be closely controlled by following site signage and instruction from the Site office in order to lessen effects to localised traffic / bottlenecks. A plan showing the location of the signage and the type of signage proposed is presented in the plan overleaf.
- 2.5.3 All deliveries will be scheduled during daylight hours and, where possible, to avoid peak traffic times. Vehicle and plant movement will be minimised wherever possible in order to lessen effects to the local transport network.
- 2.5.4 A banksman will be employed on site to ensure that large deliveries do not arrive and depart at the same time. This will ensure that potential vehicular conflicts with the local highway are minimised.
- 2.5.5 Long-term on-site storage during construction is not required as the HGVs and other vehicles will provide the materials at staged intervals throughout the construction period as construction progresses, rather than being delivered concurrently.
- 2.5.6 Following the completion of construction activities, no construction material will be stored on site and the temporary construction compound will revert to the current hardstanding use for the wind turbines.

2.6 Site facilities

- 2.6.1 The temporary construction compound will comprise a site office, staff welfare unit, parking spaces and areas for temporary storage of materials, fuel, tools and plant.

2.7 Erection and maintenance of security fencing and CCTV

- 2.7.1 Temporary fencing heras-type fencing will be installed around the temporary construction site compound for security purposes. This will be removed upon completion of construction.



Legend

- Site Location
- Route to Site
- Traffic Management Sign Locations

- 1.Site Entrance
- 2.Turn Left
- 3.Straight on for 2km
- 4.Northbound - Site entrance 1km on left - caution soft verges
- 5.Southbound - caution residential traffic - single track
- 6.Site location marker from Main road facing Northbound traffic- Right turn here for Gwrhyd - Awel Aman Tawe
- 7.Site location marker from Main road facing Southbound traffic- Left turn here for Gwrhyd - Awel Aman Tawe

Scale (at A3): 1:25,000

Date: May 2020

Prepared by:



Client: Awel Aman Tawe

Mynydd y Gwrhyd Solar Farm

Traffic Management

Drawn by: RK

Checked by: MP

Version: V1

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0 1 2 Kilometres

- 2.7.2 A permanent security fence will be installed around the Site in which the PV arrays and other site infrastructure are located to protect the public from exposure to the dangers of electrical equipment.
- 2.7.3 Fencing will be 2.5m in height and will comprise wooden posts and wire mesh as shown on in the following plate.

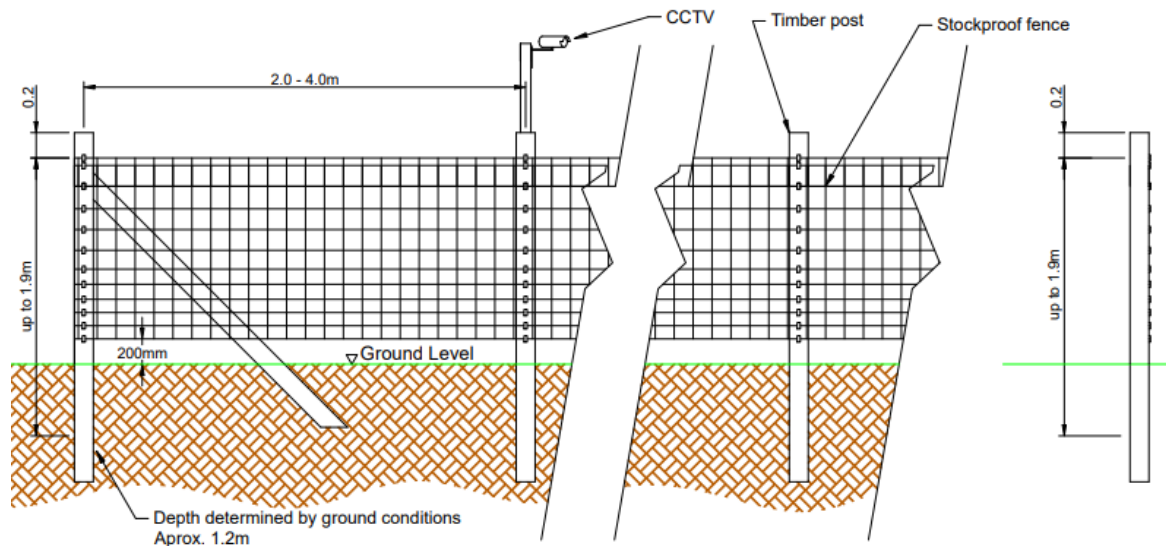


Plate 2: Security fencing and gate arrangement

- 2.7.4 There will be a number of securely locked gates in the fence, to allow access for maintenance vehicles, operatives and the landowner.
- 2.7.5 The fencing will be installed on piled ground posts, with some occasional concrete footings for anchoring of the structure.
- 2.7.6 Gaps underneath the fence will be allowed on occasions around the site perimeter fence to allow small mammals to enter/exit the site area.
- 2.7.7 Infrared CCTV cameras will also be installed around the Site. These will be mounted at a height of 2.8m on posts at locations within the security fence.
- 2.7.8 CCTV units will be located on the security fencing, and will be positioned solely to look inwards into Site. There will be no security lighting as the security cameras are motion activated infra-red cameras to ensure security and safety.
- 2.7.9 For further security and the avoidance of vandalism, the following provisions will be incorporated in the construction details:

- All offices and welfare facilities will be steel anti-vandal units;
- All construction plant will have anti-vandal shutters and keys will be kept in a locked strong box within the Site office;
- Security alarm systems will be used which are linked back to a remote monitoring station;
- Temporary doors will be kept locked out of hours to prevent illicit access; and
- No tools will be left on site unless kept in secure steel containers.

2.7.10 These security measures will ensure that materials within the site are protected, preventing potential for pollution to occur as a result of vandalism.

2.8 Security arrangements and emergency contact details

2.8.1 The security fence will be in situ for the duration of the life of the solar farm, and will be inspected on 6-month basis. Monitoring of the effectiveness of the fencing and CCTV will be pursued throughout the lifetime of the scheme to ensure its effectiveness in protecting the public, and the scheme.

2.8.2 In the case of an emergency, signage on Site (and the project website) will instruct concerned parties to contact the Applicant and construction manager. Details for relevant contacts are:

Applicant	Construction Manager
Dan McCallum, Awel Aman Tawe, 76-78 Heol Gwilym, Cwmllynfell, Swansea/Abertawe SA9 2GN Tel: 01639 830870	Chris Bailey Winfield Energy UK Ltd Baglan Bay Technology Centre Neath Port Talbot SA12 7AX

2.9 Timings of deliveries

2.9.1 Timing of all construction deliveries will be undertaken as set out in Section 2.2 above.

2.10 Location and details of wheel washing facilities

2.10.1 To avoid effects to habitats and the local highway, wheel wash facilities will be located at the exit of the construction compound. These are denoted on the revised layout Figure 1-2 V2.

2.10.2 The wheel wash facilities will be securely constructed with no overflow and the effluent will be contained for proper treatment and disposal. Where the wheel washer facilities are located, the corresponding areas shall be protected by silt fencing as appropriate.

2.10.3 The site entrances / exits will be monitored to ensure that no materials are deposited on the public carriageways. Necessary cleaning shall be provided by road sweepers or equivalent mechanical equipment.

2.11 Measures to control the emission of dust and dirt during construction

2.11.1 Dust arising during construction work is generally considered to only have a significant potential ecological impact within 20m, where heavy soiling of vegetation can occur¹.

2.11.2 Dust pollution will be minimised during construction works with water bowsers, including specialist spray equipment if required to dampen any arising debris and dust. Water from the dust suppression will then be controlled by suitable methods to prevent run-off.

2.11.3 Contractors will suppress dust emissions with water whilst loading waste materials for disposal and machinery exhaust emissions will be kept as low as is practicable by using well maintained vehicles and machinery at all times.

2.12 Scheme for recycling/disposing of waste resulting from demolition and construction works

2.12.1 A dedicated fenced area within the construction compound will be used for the temporary storage of any recycled and/or waste materials arising from construction. This area will be bunded to avoid the potential for leached materials departing the compound.

2.12.2 The following materials will be separated for recycling:

- Food
- Paper and card
- Glass

¹ See Holman et al, 2014. *Guidance on the assessment of dust from demolition and construction*.

- Metal, plastic and cartons
- Small waste electrical and electronic equipment (sWEEE)
- Wood

2.12.3 Any waste arisings not included above will be stored separately and taken to licenced waste disposal sites within the County. These sites are likely to include:

- Derwen Recycling and Waste Facility, Neath Abbey Wharf, Neath Abbey, Skewen, Neath SA10 6BL;
- Briton Ferry Recycling and Waste, Industrial Estate, Briton Ferry, Neath SA11 2HZ

2.13 Scheme for the erection of temporary/semi temporary signage.

2.13.1 The aim of the temporary signage will be to maintain the flow of traffic on the highway and prevent traffic congestion. The Site contractor will have responsibility for erecting and taking down all approved signs according to the dates of the construction period.

2.13.2 Each sign will be mounted a minimum of 2.1m above the carriageway/footway/verge, unless mounted in a trestle frame in which case it will rest on the ground. The signs will be at least 0.45m away from the edge of the carriageway. A plan showing the location of all the locations where these temporary signs will be placed is as Plan 3 above.

2.13.3 All signs will meet the required highways design specifications, as published by Welsh Government, as follows:

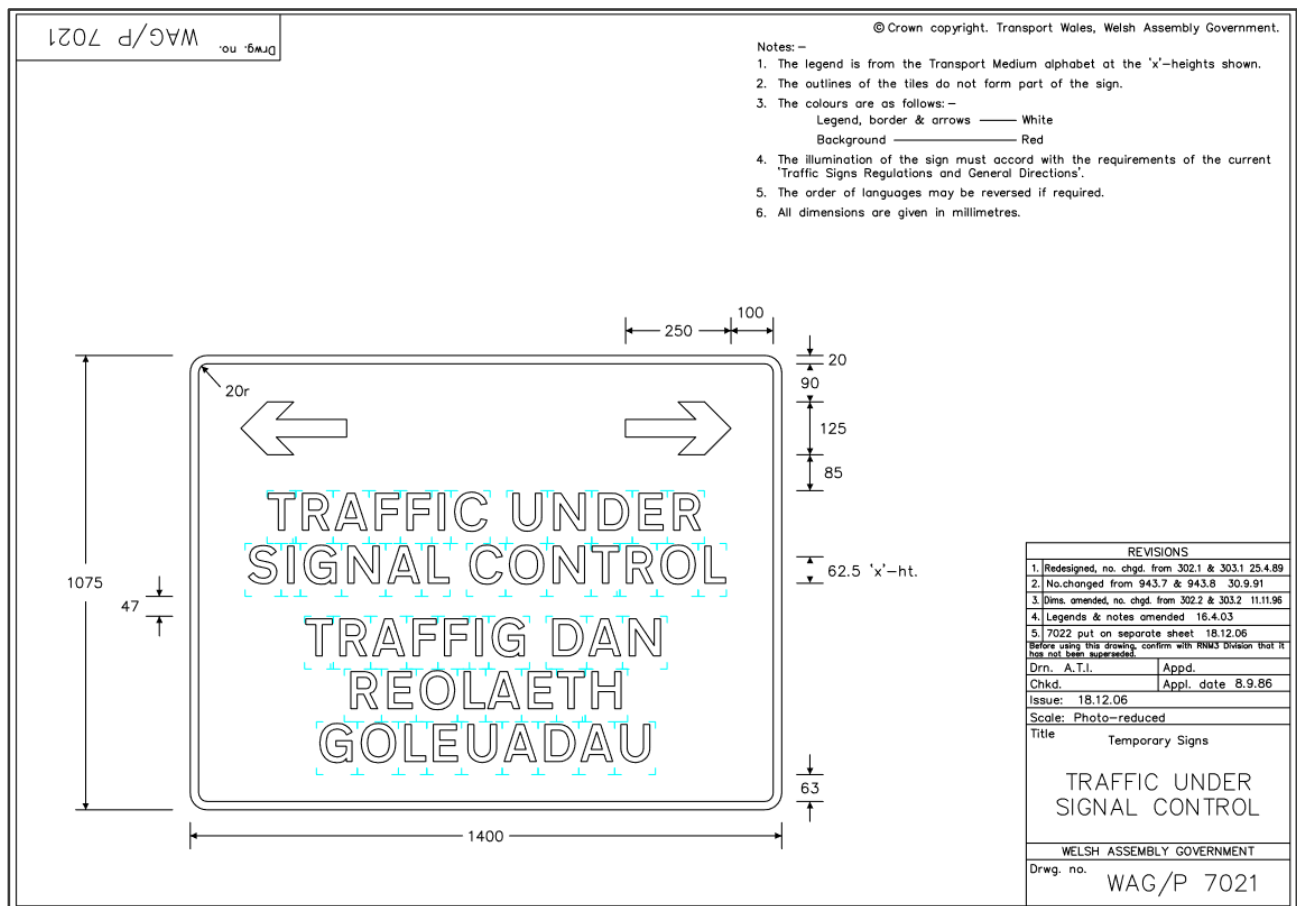


Plate 1: Typical example of temporary signage

- 2.13.4 The signs will be of an appropriate size for the approach speeds of the A4069 and will be placed such that they do not interfere with any existing highway signing. Signs will not be placed on the same poles as Stop, Give Way signs, any regulatory sign or traffic signal poles.
- 2.13.5 Signs will only be displayed for the duration of the construction phase. They will direct the public and highways users to the temporary construction period.
- 2.13.6 Any damage to existing street furniture arising from the erection of the temporary signs will be repaired and the costs recharged to the contractor.

3. AUTHORISED COMPETENT PROVIDERS

3.1.1 The Applicant has authorised the following parties as competent entities to undertake the preparation, sign-off and implementation of the provisions of this construction method statement in the delivery of the solar scheme:

Planning	Design and Construction
Mike Phillips Dulas Ltd Dyfi Eco Parc Machynlleth Powys SY20 8AX	Chris Bailey Winfield Energy UK Bay Technology Centre, Central Ave, Neath SA12 7AX
	Chris Bailey