



Glöyn Byw | Butterfly Solar Farm

**Land to the North of the B5426,
Wrexham**

Construction Traffic Management Plan (CTMP)

Prepared for

RWE

RWE Renewables UK

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CONTENTS

1.0	INTRODUCTION	3
1.1	Purpose of This Report	3
2.0	SITE CONTEXT	5
2.3	PRoW Network	9
3.0	PROPOSED DEVELOPMENT	11
3.1	General	11
3.2	Construction Programme	11
3.3	Construction Traffic Generation	12
3.5	Abnormal Indivisible Loads (AILs)	15
3.6	Construction Compound	16
3.7	Sustainable Travel Considerations	17
4.0	PROPOSED ACCESS ROUTE	18
4.1	Site Access Arrangements	18
4.2	Proposed HGV Routing	18
4.3	Cable Laying	19
4.4	Vulnerable Road Users	20
5.0	SITE MANAGEMENT PLAN	22
5.1	Management of Site Accesses	22
5.2	Site Management	23
5.3	Vehicle Wheel Washing Facilities	23
5.4	Dust and Dirt Control	24
5.5	Noise	24
5.6	Waste Management	25



IMAGES

Image 2.1 – Site Location	5
Image 2.2 – PRow Network Relative to Site	10
Image 3.1 – Indicative Configuration of a Construction Compound	16
Image 4.1 – Proposed Site Access Locations.....	18
Image 4.2 – Construction Phase HGV Routing Plan.....	19

TABLES

Table 3.1 – Anticipated Traffic Generation during the Construction Period.....	12
Table 3.2 – ‘First Principles’ Assumptions and Trip Generation Forecasts for Deliveries (Based on 39-Week Construction)	13
Table 3.3 – ‘First Principles’ Assumptions and Trip Generation Forecasts for Staff ...	14
Table 3.4 – Total Average Daily Two-Way Trips (Based on a 39-Week Construction Period)	15

APPENDICES

Appendix A – Proposed Site Layout Plans



1.0 INTRODUCTION

1.1 Purpose of This Report

- 1.1.1 This Construction Traffic Management Plan (CTMP) has been prepared by Axis on behalf of RWE Renewables UK (hereafter referred to as 'the Applicant') to accompany a planning application for the Glöyn Byw / Butterfly Solar Farm project ('the Proposed Development').
- 1.1.2 The Proposed Development comprises a new solar energy generating station and an associated on-site Battery Energy Storage System (BESS) on land to the north of the B5426, Wrexham ('the Site'). The Proposed Development also includes the associated infrastructure and connection to the Legacy National Grid substation.
- 1.1.3 The design for the Proposed Development would enable the export of up to 99.9 megawatts (MW) of electricity, as well as the storage of electricity in the BESS.
- 1.1.4 As the Proposed Development would have an electrical generating capacity of more than 10 MW, it would be defined as a Development of National Significance (DNS) and therefore the Proposed Development will be determined by Planning and Environment Decisions Wales (PEDW).
- 1.1.5 The Site is located within Wrexham County Borough Council ('the Council' or 'WCBC'), approximately 3km to the south of the City of Wrexham and 1.5km to the east of Johnstown. The solar array and associated infrastructure would be located on land to the north of the B5426 and the east of the A483.
- 1.1.6 The solar array is divided into three principal areas referred to as the Western, Central and Eastern Array Areas (the WAA, CAA and EAA respectively).
- 1.1.7 The purpose of this document is to propose how construction traffic, including Site personnel movements, would be safely controlled at the Proposed Development by sub-contractors, working on behalf of the Applicant. The document should be read alongside the separate Transport Statement (TS) which sets out further details of the Site access arrangements and operational traffic impacts.



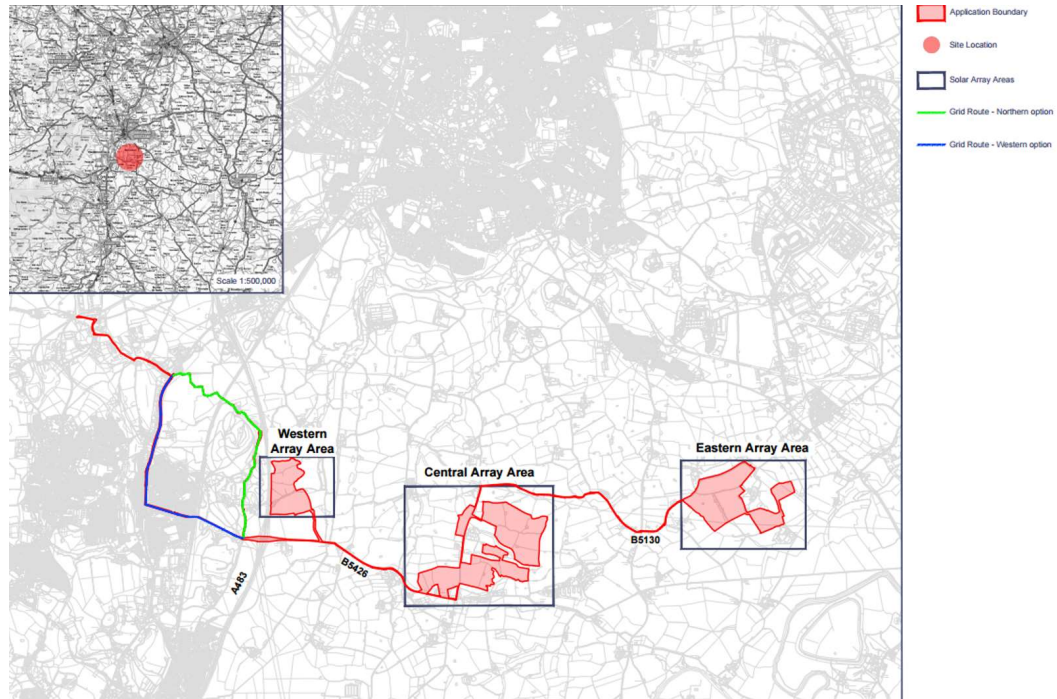
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- 1.1.8 This report is provided in Outline form, as a construction contractor is yet to be appointed prior to the grant of planning permission. The details within this report are therefore indicative only. This report nonetheless provides sufficient detail to make an informed decision of the construction related impact and necessary mitigation of the Proposed Development.



2.0 SITE CONTEXT

- 2.1.1 The location of the Site is illustrated in **Image 2.1** following, which provides a visual reference to its geographic setting in relation to the surrounding area.

Image 2.1 – Site Location



- 2.1.2 The Site is divided into three principal areas referred to as the Western, Central and Eastern Array Areas (the WAA, CAA and EAA respectively), each of which is described below. Each of the array areas are separated by approximately 1.8km and they would be connected to each other via underground cabling, which in turn would link to a main onsite substation located within the WAA. The application also includes an underground cable connection from the onsite substation to the Legacy National Grid Sub-Station, which is located approximately 1.3km to the north of Rhosllanerchrugog.

- 2.1.3 The OS grid references for each of the array areas are:

- i) WAA – 331692, 346263
- ii) CAA – 333959, 345629
- iii) EAA – 336679, 346129

- 2.1.4 The entirety of the Site covers an area of approximately 146ha. This comprises a fenced/panelled area of 102ha, a proposed 16ha wildflower meadow, and a cable run area also of 16ha.

Western Array Area

- 2.1.5 The WAA covers approximately 21ha and comprises agricultural fields bound by hedgerows, some of which contain mature trees. The WAA is located to the immediate east of the A483, approximately 1km to the east of Johnstown.
- 2.1.6 There is a private road leading through the WAA which provides access from Hafod Road in the west (west of the A483) to a private residential dwelling, Hafod y Bont, located adjacent (although outside of) the eastern boundary of the WAA. The road is also a Public Right of Way (PRoW), footpath RUA/119. This private road is not proposed as an access route into the WAA. Access would be gained into the WAA from the B5426 to the south as set out in the TS.
- 2.1.7 The Hafod House Rest Home is located approximately 220m to the west of the Site, to the west of the A483. The Hafod Industrial Estate is also located to the west of the A483, approximately 300m from the WAA boundary. The Bonc yr Hafod Country Park is located 215m to the west. Within the same area there is also the Stryt Las a'r Hafod Site of Special Scientific Interest (SSSI) and the Johnstone Newt Sites Special Area of Conservation (SAC).

Central Array Area

- 2.1.8 The CAA covers approximately 66ha and comprises agricultural fields bound by hedgerows. Marchwiell Hall Road runs up the centre of the CAA which would be used to access the CAA as detailed in the TS. The CAA is divided into four distinct parcels, two to the west of the Marchwiell Hall Road and two to the east.
- 2.1.9 There are several properties close to the southern boundary of the CAA, to the north and south of the B5426. These properties form part of the settlement of Eyton. Eyton Primary School is also located in this area, to the south of the B5426. Residential properties are located along Marchwiell Hall Road and lie close to the boundary of the CAA. A golf course and the Plassey Holiday Park is located to the east of the CAA.



- 2.1.10 Bwgan Ddu Lane runs east-west approximately 200m to the north of the CAA. The cable connection between the CAA and the EAA runs along Bwgan Ddu Lane. This cable route is described further below.
- 2.1.11 No PRoW are located within the CAA. Footpath MAR/7 connects the B5426 with Marchwiel Hall Road and runs along a section of the southern boundary of the CAA.

Eastern Array Area

- 2.1.12 The EAA covers approximately 43ha and comprises agricultural fields bound by hedgerows. An area of woodland, approximately 30m in width and 350m in length, is located centrally within the EAA. Kiln Lane, a minor road, forms the northern boundary of the EAA. This would be used to gain access into the EAA as set out in the TS.
- 2.1.13 There are a number of residential properties located along Kiln Lane, on its northern side. Gerwyn Hall is located immediately to the east of the EAA. A residential property and commercial premises are located to the south of the EAA. The nearest settlement to the EAA is the village of Cross Lanes, approximately 850m to the northeast. The village of Bangor-on-Dee is located approximately 1.5km to the southeast. The B5426 runs east-west approximately 600m to the south of the EAA.
- 2.1.14 Footpath SES/6 runs through the eastern most parcel of the EAA. Footpath SES/9 runs along the southern boundary of the EAA and connects to footpath SES/6. There are a number of other footpaths within the vicinity of the EEA, all of which are shown on **Image 2.2** later in this CTMP.

Electrical Connections

- 2.1.15 The Site includes the roads which connect the three solar array areas, within which cables will be laid to connect the solar farm to the main Site substation, located in the WAA.
- 2.1.16 The EAA would be connected to the CAA via the B5130 (Kiln Lane), Cockbank Lane, Bwgan-Ddu Lane and Marchwiel Hall Road. The CAA would be connected to the WAA via Marchwiel Hall Road and the B5426.



- 2.1.17 As described in the following section, the Site also includes the electricity connection from the solar farm substation in the WAA to the Legacy Substation. Two routes are currently under consideration, shown on **Image 2.1**.
- 2.1.18 The first, the 'Northern Option', would route west along the B5426 from the WAA, before turning north along Hafod Road and Corkscrew Lane, to the junction with the B5605 (Wrexham Road). The cable would then cross Wrexham Road and proceed along Smithy Lane before routing north along Talwrn Road and then west along the unnamed B5426 to Legacy Substation entrance road.
- 2.1.19 The second option, the 'Western Option', would route west along the B5426 from the WAA towards Johnstown where it would turn north along the B5605 (High Street/Wrexham Road). It would continue north to the junction with Smithy Lane and then follow the same route as the Northern Option from this point to Legacy Substation.

2.2 Local Highway Network

- 2.2.1 This section of the CTMP describes the sections of road network that would be used to take access to the array areas, as set out in the TS.

B5426 (Bangor Road)

- 2.2.2 The B5426 operates in a west-east alignment between Rhosllanerchrugog and Bangor-on-Dee. It also provides access to the Strategic Road Network (SRN) by way of Junction 2 of the A483 Swansea to Manchester Trunk Road, which is located to the south-west of WAA and incorporates both on-slips and off-slips to both carriageways.
- 2.2.3 Locally to the Site, the B5426 is a single carriageway, two-way, predominantly unlit, rural road that is subject to a posted speed limit of 50mph in the vicinity of WAA, reducing to 30mph / 20mph close to CAA and derestricted in the vicinity of EAA. There is no footway provision along the majority of the road.
- 2.2.4 The majority of the road is subject to centreline and edge of carriageway markings and has a generally carriageway width of some 6.0m, thereby allowing clear two-way vehicular flow in the main.



Marchwiel Hall Road

- 2.2.5 Marchwiel Hall Road operates in a general north-south alignment between Sontley Road and the B5426. The road is a single carriageway, two-way, unlit, rural road that is derestricted in the vicinity of CAA.
- 2.2.6 There is no footway provision along the road. The majority of the road is not subject to centreline or edge of carriageway markings and has a varying carriageway width such that single working vehicle movement only is afforded on some sections, although the low vehicle flows mean that this does not appear to generally create any issues in practise.

B5130 (Kiln Lane)

- 2.2.7 The B5130 operates in a southwest-northeast alignment between the A528 Overton Road / Cockbank Lane junction and the A534 Wrexham Road.
- 2.2.8 Locally to the Site, the B5130 is a single carriageway, two-way, unlit, rural road that is subject to a posted speed limit of 40mph in the vicinity of EAA. There is no footway provision along the road.
- 2.2.9 The majority of the road is subject to centreline and edge of carriageway markings and has a generally carriageway width of some 5.5m, thereby allowing clear two-way vehicular flow in the main.

2.3 P_{RoW} Network

- 2.3.1 The local P_{RoW} network in the vicinity of the Site, based on WCBC's online P_{RoW} map, is presented at **Image 2.2**.



3.0 PROPOSED DEVELOPMENT

3.1 General

- 3.1.1 The Applicant proposes to develop a new solar energy generating station and an associated on-site Battery Energy Storage System (BESS), including a 132 kV substation.
- 3.1.2 Copies of the proposed Site layout plans relating to the WAA, CAA, and EAA are included at **Appendix A**. Further details of the Proposed Development are provided in the TS.
- 3.1.3 The nature of the Proposed Development is such that photovoltaic solar arrays do not generate any material level of development-related traffic once operational. Traffic generation during the operational phase will likely be limited to a single monthly maintenance trip.
- 3.1.4 The majority of development related traffic would be generated during the construction phase.

3.2 Construction Programme

- 3.2.1 In total, the construction works are expected to last between 39 and 52 weeks. Construction activities would take place 5.5 days per week, during the following hours:
- i) Monday to Friday 07:30 – 18:00;
 - ii) Saturday 08:00 – 14:00; and,
 - iii) No works on Sundays or Bank Holidays.
- 3.2.2 The exact details of phasing would be decided by the appointed construction contractor.



3.3 Construction Traffic Generation

3.3.1 **Table 3.1** summarises the number and type of deliveries that are anticipated to be generated during the entire construction period.

Table 3.1 – Anticipated Traffic Generation during the Construction Period

Temporary/Ancillary Works & Equipment	Details of load	One-Way Trips	Two-Way Trips
Welfare Delivery	HGV	40	80
Welfare Collection	HGV	40	80
Welfare Servicing (Diesel, water, and waste)	HGV	250	500
Fencing	HGV	20	40
Aggregate for roadways	16T Lorry	1,300	2,600
Construction support total		1,650	3,300
PV Equipment/Components	Details of load	One-Way Trips	Two-Way Trips
PV panels	HGV	345	691
Metal frames	HGV	400	800
Cabling	Mixed	100	200
Inverters and transformers	Mixed	36	72
BESS Containers	Mixed	27	54
Substations	Mixed	4	8
Other	Mixed	26	52
PV Equipment/Components Total		938	1,876
Sum Total*		2,588	5,176

3.3.2 As summarised in **Table 3.1**, it is anticipated that the total number of construction related vehicles requiring access to the Site would be some 2,588 one-way trips (5,176 two-way trips) across the full construction period. These trips would be spread across the various Site accesses (A - F) as set out later in this CTMP and as detailed fully in the TS.

3.3.3 The construction phase would require a total of 80 staff members being on Site at any one time. Staff will be mini-bussed in, with a 4-person per vehicle target where required. It is therefore forecast that the total light vehicle movements during the construction period will be 20 one-way or 40 two-way trips per day.

3.3.4 The following subsections of this report set out the ‘first principles’ assumptions and trip generation forecasts of the delivery and staff movements that might be expected to occur on a daily basis.

HGV Deliveries

- 3.3.5 With regards to the above, **Table 3.2** sets out the 'first principles' assumptions and associated traffic generation forecasts for the construction-related deliveries (excluding staff).
- 3.3.6 For robustness, these figures are based on an assumed 39-week construction period in order to present the potential maximum average number of movements that may occur on a daily basis.

Table 3.2 – 'First Principles' Assumptions and Trip Generation Forecasts for Deliveries (Based on 39-Week Construction)

Breakdown of Trip Generation Proportions per Operating Day	
There would be 58.5 operating hours per week (5 x 10.5-hour weekdays and 1 x 6-hour Saturday)	
As a proportion of the weekly operating hours, weekdays would account for 90% of weekly trips (over 5 weekdays)	
This equates to 18% of weekly trips per weekday (i.e. 90% / 5)	
As a proportion of the weekly operating hours, Saturdays would account for 10% of weekly trips	
Traffic Generation (39 Weeks Construction)	
During the construction period, there will be:	5,176 two-way delivery-related movements, in total
This equates to approximately:	133 two-way delivery-related movements per week (on average)
Based on the proportional breakdown of operational hours above, this equals approximately	24 two-way HGV movement per weekday, on average*
And approximately,	14 two-way HGV movements per Saturday, on average*

*Subject to rounding

- 3.3.7 As set out in **Table 3.2**, during the construction period, there are expected to be a total of approximately 24 two-way delivery-related movements per weekday and 14 two-way delivery related movement per Saturday, on average. This level of traffic generation is considered to be insignificant.
- 3.3.8 Again, these figures are based on an assumed 39-week construction programme for robustness. Based on a 52-week construction programme, the above figures reduce to 18 two-way per weekday and 10 two-way per Saturday, on average.

Construction Staff Trips

- 3.3.9 In addition to trips associated with deliveries, and as mentioned earlier, there will also be a number of movements associated with staff trips. The ‘first principles’ assumptions and associated trip generation relating to construction staff are set out in **Table 3.3**.

Table 3.3 – ‘First Principles’ Assumptions and Trip Generation Forecasts for Staff

Staff Trips (Weeks 1 – 52)	
During the peak period there will be:	80 construction staff on site per day
Assuming an occupancy of 4 people per vehicle, this equates to:	40 two-way staff trips per day

- 3.3.10 As set out in **Table 3.3**, approximately 80 construction-related staff would require access to the Site per day. Assuming vehicle share occupancy of 4 people per vehicle, the proposed construction phase can be expected to result in 40 two-way vehicle trips per day.

3.4 Total Construction-Related Traffic Generation

- 3.4.1 In total, there will be a maximum of approximately 64 two-way movements per day during the construction period. This is inclusive of delivery-related movements and staff trips and is robustly based on a 39-week construction period.
- 3.4.2 This level of traffic generation is low in absolute terms and would not be expected to result in any material impact on highway safety or the free flow of traffic on the surrounding highway. This movement profile is expected to be of no material difference to the current farm and agricultural vehicles that travel along the access routes at the current time.
- 3.4.3 Daily HGV construction related movement would be spread throughout the day with light vehicle staff movements occurring at the start and end of the day.
- 3.4.4 It should also be reiterated here that this level of traffic generation is temporary in nature and any trips to the Site, once operational, would be limited to an occasional LGV for maintenance purposes and would be insignificant in nature.
- 3.4.5 The total average daily two-way trips, comprising both construction staff and HGV deliveries, are summarised in **Table 3.4**.

Table 3.4 – Total Average Daily Two-Way Trips (Based on a 39-Week Construction Period)

Daily Trips (2-way)	
Vehicle Type	Construction Period Weekday
HGV	24
Lights	40
Total Trips per day (2-way)	64

- 3.4.6 These trips would be split between the various Site access junctions (A - F). Spread over an average weekday (10.5 hours), the Proposed Development can be expected to result in a maximum of approximately 6 two-way trips per hour during the morning and afternoon peaks. This equates to one two-way movement every 10 minutes or so, which is not a significant level of traffic.

3.5 Abnormal Indivisible Loads (AILs)

- 3.5.1 The Proposed Development is not anticipated to result in any requirement for abnormal loads. Ultimately, any abnormal load events associated with the Proposed Development would be carried out in accordance with standard road closure / abnormal load transport procedures and would involve direct liaison and planning with relevant road authorities, police and other appropriate technical and community stakeholders and will be the subject of detailed risk assessment.
- 3.5.2 The transportation of AILs is subject to a separate consenting process outside of the Planning system, which the appointed contractor would go through with reference to the Government's portal / the electronic service delivery for abnormal loads (ESDAL)¹ prior to carrying out any such AIL movements.
- 3.5.3 The largest vehicles anticipated to require access to the Site during the construction period would be 16.5m long low-loader HGVs which will not require abnormal load permissions.

¹ <https://www.gov.uk/esdal-and-abnormal-loads/notifying-the-authorities>

3.6 Construction Compound

- 3.6.1 The Site boundary will be kept secure by means of temporary fencing to minimise the risk of unauthorised persons from gaining access to the Site during the works.
- 3.6.2 The precise size, layout and location of the main construction compound / laydown areas and workers' vehicle parking would be a matter for the main construction contractor, who would not be appointed until after planning permission has been secured. Nonetheless, given the area available it is not considered that there are any significant constraints to providing a suitable area(s) for staff welfare, parking, set-down and compound. It is likely that a number of such areas will be provided across the Site within the respective array areas (WAA, CAA, EAA).
- 3.6.3 A typical configuration of a construction compound is detailed below in **Image 3.1**.

Image 3.1 – Indicative Configuration of a Construction Compound



- 3.6.4 Vehicles delivering materials to the Site will be required to enter the Site and unload within the designated compound area.

- 3.6.5 Parking would be managed and carefully monitored by the Site Manager to ensure that parking is provided in an efficient and safe manner, with sufficient separable distance from any plant, materials or construction activity. Special precautions would be taken when catering for any disabled staff / visitors to ensure that all access / egress to parking and other facilities are safe, practical and reasonable.
- 3.6.6 The only vehicles that would be parked within the confines of the main construction areas are construction vehicles such as cranes, Site and delivery vehicles. Construction staff would park within the temporary car parking area. All construction vehicles and plant would be parked in a safe and tidy manner when not in use.

3.7 Sustainable Travel Considerations

- 3.7.1 In order to reduce the impact of construction staff vehicle movements on the local highway network, construction staff would be encouraged to consider ways of travelling to the Site by means other than single occupancy private car.
- 3.7.2 The exact nature of the measures that would be employed to encourage sustainable travel would be dependent on the composition of construction staff and the locations from which they would be travelling to the Site. Full details of the measures to encourage sustainable travel would be prepared by the main construction contractor.
- 3.7.3 Based on experience with similar construction projects, it is envisaged that staff will be mini-bussed in, with a 4-person per vehicle target. Any locally based staff would be encouraged to walk or cycle to the Site.

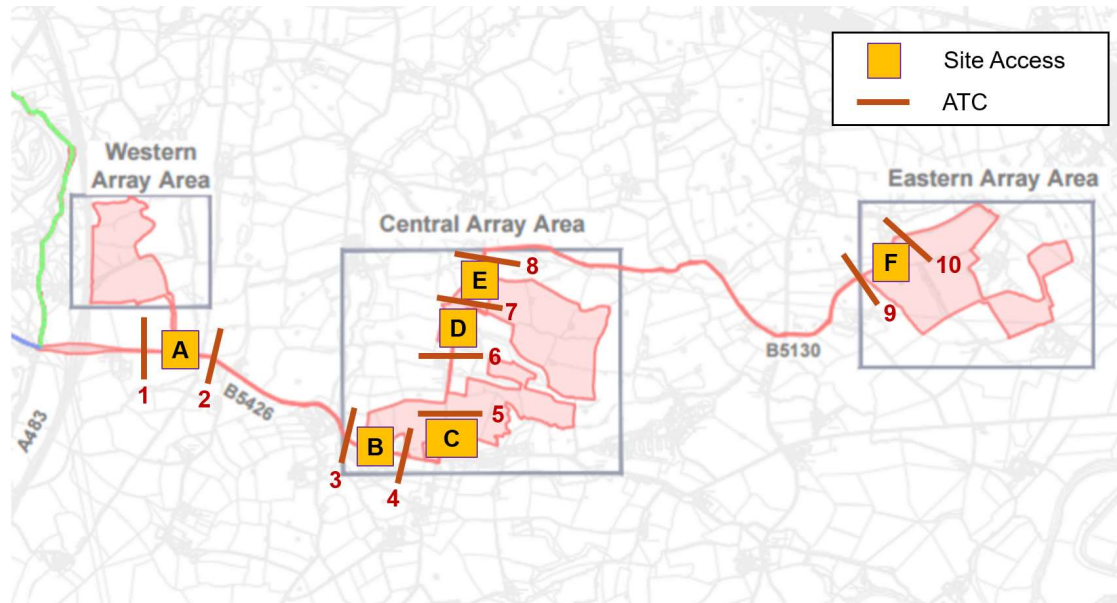


4.0 PROPOSED ACCESS ROUTE

4.1 Site Access Arrangements

- 4.1.1 The proposed Site access locations (A – F) are shown at **Image 4.1**. Each access would serve as both a construction and operational phase access to the respective array areas.

Image 4.1 – Proposed Site Access Locations



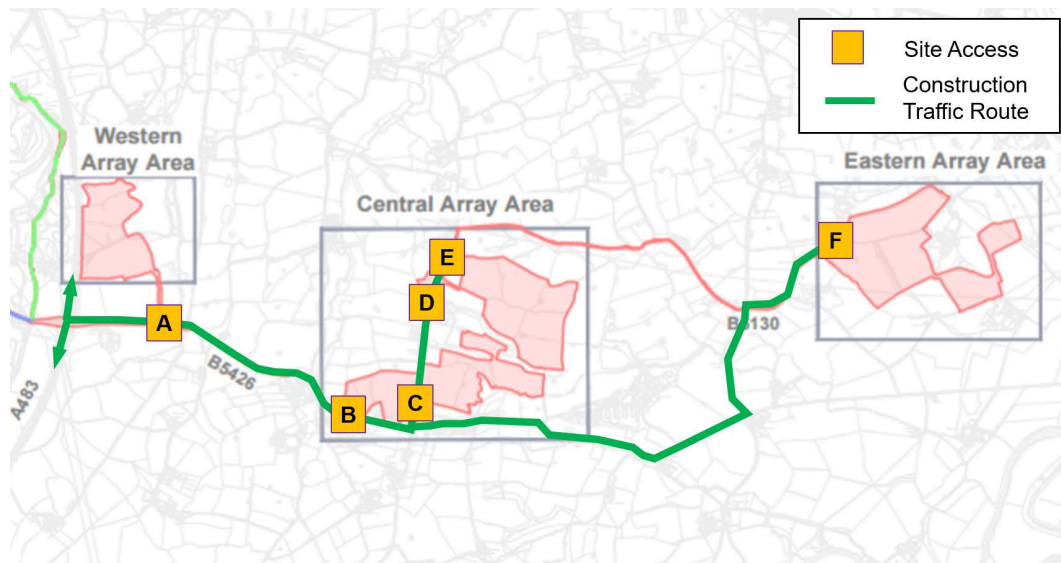
- 4.1.2 Full details relating to each Site access design, including matters relating to junction scale / form, visibility splays and swept path analysis are provided within the TS.

4.2 Proposed HGV Routing

- 4.2.1 The exact origination of development related HGV trips is uncertain at this stage and would be determined by the sourcing of materials and plant by the appointed contractor. HGVs would nonetheless be routed primarily along the SRN, avoiding residential areas where possible and statutory limits on HGV movements (such as weight restrictions).
- 4.2.2 Construction traffic will route to all parts of the Site via the A483 Junction 2 (SRN) and the B5426. Access to the WAA will then be achieved directly from the B5426 with access to the CAA and EAA being via Marchwiell Hall Road (CAA) and the B5426 / A528 Overton Road / B5130 Kiln Lane (EAA).

- 4.2.3 A plan showing the routing strategy is included at **Image 4.2**.

Image 4.2 – Construction Phase HGV Routing Plan



- 4.2.4 Given the low traffic levels generated by the Proposed Development, as discussed in the TS, it is considered that the Proposed Development would not have any material impact on the above route(s) and no off-site highway infrastructure works are therefore considered to be required.

4.3 Cable Laying

- 4.3.1 As mentioned within the TS that also accompanies this application, the Site encompasses the roads linking the three solar array areas, along which cables will be installed to connect the solar farm to the main Site substation located within the WAA.
- 4.3.2 The EAA would be connected to the CAA via the B5130 (Kiln Lane), Cockbank Lane, Bwgan-Ddu Lane and Marchwiel Hall Road. The CAA would be connected to the WAA via Marchwiel Hall Road and the B5426.
- 4.3.3 The Site also includes the electricity connection from the solar farm substation in the WAA to the Legacy National Grid Substation, which is located approximately 1.3km to the north of Rhosllannerchrugog. Two route options are being applied for under the planning application.

- 4.3.4 The first, the 'Northern Option', would route west along the B5426 from the WAA, before turning north along Hafod Road and Corkscrew Lane, to the junction with the B5605 (Wrexham Road). The cable would then cross Wrexham Road and proceed along Smithy Lane before routing north along Talwrn Road and then west along the unnamed B5426 to Legacy Substation entrance road.
- 4.3.5 The second option, the 'Western Option', would route west along the B5426 from the WAA towards Johnstown where it would turn north along the B5605 (High Street/Wrexham Road). It would continue north to the junction with Smithy Lane and then follow the same route as the Northern Option from this point to Legacy Substation.
- 4.3.6 The timing and extent of excavation works will ultimately depend on the appointed contractor, who has yet to be confirmed, and therefore falls outside the scope of the planning system. However, based on typical practice, it is expected that approximately 50 to 100 metres of cable can be laid per day. The works would be carried out in sections, with partial carriageway closures, extending across half the road width, to maintain access via the remaining half. Each section would be backfilled at the end of each working day. Alternatively, trenchless methods such as directional drilling may be employed, which allow cable installation without disturbing the road surface.

4.4 Vulnerable Road Users

- 4.4.1 The safety of vulnerable road users such as pedestrians, cyclists, and horse riders will be considered carefully due to the absence of segregated footpaths and the rural nature of some of the roads surrounding the site.
- 4.4.2 The following measures will be considered by the appointed contractor and incorporated into the detailed CTMP:
- i) Pre-construction Road Safety Assessment: Commissioning of a formal road safety audit will be considered for the affected routes to identify any specific hazards or locations where additional mitigation might be required;
 - ii) Banksman and Access Control: Consideration will be given to the positioning of trained banksman at key access points, particularly during peak delivery periods,



to assist with vehicle movements and to provide added safety oversight at potential conflict points;

- iii) Timing and Routing of HGV Movements: Construction traffic movements, particularly HGVs, may be scheduled to avoid peak times of local non-motorised road use;
- iv) Traffic Management Measures: The need for temporary signage or traffic calming, to improve safety will be assessed;
- v) Communication with Local Community: A stakeholder communication strategy could be developed to inform residents of upcoming vehicle movements and construction phases. This will include a designated contact point for traffic-related concerns during construction.

5.0 SITE MANAGEMENT PLAN

5.1 Management of Site Accesses

- 5.1.1 The Site Manager or their designated deputy would be responsible for supervising, controlling and monitoring vehicle movements to and from the Site as well as whilst the vehicle is on Site, and ensuring that there are suitable arrangements for the safe delivery and collection of the vehicle load.
- 5.1.2 HGV deliveries would be allocated a delivery slot with which they must comply. Slots would be allocated by the Site Manager, and arrangements would be made for a banksman to be available to assist HGV drivers in accessing the Site if necessary.
- 5.1.3 The proposed management, including allocation of specific delivery slots, would minimise the level of vehicular activity taking place at, and on approach to the Site at any one time and will also mitigate any potential inter-vehicular conflicts. This principally relates to vehicles routing to / from the CAA, access to which involves routing via some narrow sections of Marchwiel Hall Road. The highway approaches to the WAA and EAA accesses afford clear two-way vehicular movement such that this measure is of less importance to these array areas.
- 5.1.4 Continuous communication shall take place between delivery drivers and the Site manager to organise arrival during the delivery slot and to manage the departure of HGVs from the Site.
- 5.1.5 HGV drivers would be inducted and informed of the HGV routing strategy (see **Section 4.2**) and behaviours to be adopted whilst on-site and during deliveries. Signage would be located at key junctions on the approach to the Site to guide HGV drivers along the appropriate HGV route and information would be provided to each driver highlighting any surrounding HGV restrictions.
- 5.1.6 Arrangements would be made to ensure that HGVs avoid (wherever possible) entering and leaving the Site during busy periods of the day. These arrangements would be organised locally by the Site Manager who would be responsible for the day to day running of the construction programme.



5.1.7 Deliveries of materials would be restricted to vehicles that can access the Site and manoeuvre in such a manner that they can egress the Site in a forward gear, thus avoiding the need to reverse onto the local highway network. Swept path analysis of the largest anticipated vehicles at the Site (16.5m articulated vehicles) is included within the TS and demonstrates no issues with Site access and egress amongst these vehicle types.

5.1.8 All visitors would be required to report to the project management / reception offices and sign in. Visitors would be permitted onto Site by arrangement and escorted by a construction member of staff. Visitors to the construction Site would be required to undertake a visitor's induction prior to being allowed access to the Site. It is a requirement that all Site personnel and visitors sign in and out of the Site on all occasions.

5.2 Site Management

5.2.1 It would be a requirement of the project that all personnel working or carrying out deliveries to the Site would require as a minimum; safety helmet (hard hat), hi-vis tabard, coveralls, gloves, light eye protection and safety boots, spares will be on Site for temporary visitors, if required.

5.2.2 Temporary safety and emergency lighting would be installed and maintained to provide a safe level of illumination in and around the Site during the works.

5.2.3 All storage of plant and equipment would be on the construction Site at the compound area(s). There would be no storage on the public highway.

5.3 Vehicle Wheel Washing Facilities

5.3.1 Mud and debris would be prevented from being taken onto the adjacent highway network through the use of appropriate wheel wash facilities located within the Site, within each array area. There would be wheel wash facilities located at each of the Site accesses (within the Site) and Site operatives would direct all traffic to cross the wheel wash facility before exiting the Site. The exact nature of the wheel wash units has yet to be determined and it may be either hand-held jet washes or dry wheel wash rumble strips. This would be dependent upon seasonal conditions in the area at the discretion of the Site Manager.



- 5.3.2 These facilities would remain in place from the start of the construction phase until the works are complete. Any residual deposits of dust or dirt on public roads would be removed regularly, using road brushes and vacuum road sweepers.

5.4 Dust and Dirt Control

- 5.4.1 Dusty emissions generated by the construction may cause nuisance through, for example, surface soiling and loss of visibility due to deposition. Numerous construction activities have the potential to produce dust emissions, e.g. the movement and placing of granular materials.
- 5.4.2 Since it is difficult to suppress dust once it is airborne, where possible measures would be implemented to prevent dust from being generated in the first place.
- 5.4.3 Measures that would be implemented to control dust emissions include:
- i) Pre-assembly of equipment would be conducted to minimise on Site particulates;
 - ii) Vehicles transporting materials capable of generating dust to and from Site would be suitably sheeted on each journey to prevent release of materials and particulate matter. The sheeting material would be maintained in good order, free from excessive rips and tears; and
 - iii) Regular monitoring of the road network in close proximity to the Site accesses would be implemented to ensure appropriate additional measures are applied as required to minimise dust generation.
- 5.4.4 In dry weather, it is possible that the ground may dry out. Under these circumstances, machinery traversing the access roads may create nuisance dust which could drift out of the Site. Under these circumstances these areas would be dampened down so that any dust does not become a nuisance to the public.

5.5 Noise

- 5.5.1 This section of the report considers the mitigation measures for noise specifically relating to transport, including vehicle deliveries and staff arrivals.
- 5.5.2 Control measures to reduce the impact of noise would likely include (but not limited to):



- i) Vehicle noise would be kept as low as possible (e.g. excessive revving of vehicles would not be permitted, engines would be turned off rather than left idling);
- ii) Where possible, HGVs would be routed away from sensitive noise receptors;
- iii) Loading and unloading of vehicles around Site would be conducted in such a manner as to minimise noise generation. Where possible, these actions would be conducted away from noise sensitive receptors; and
- iv) Noise complaints, breaches of any Section 60 notices or exceedances of action levels would be reported to and investigated by the Site Manager.

5.6 Waste Management

- 5.6.1 All spoil generated on Site as a result of the construction process would, wherever possible, remain on Site and aid in the formation of the landscaping proposals. Other wastes would be disposed of using skips.
- 5.6.2 All miscellaneous waste generated during construction would be tidied into skips/bins on a minimum daily basis, and special waste; for example, Control of Substances Hazardous to Health Regulations (COSHH) waste; would be put into containers appropriate to its nature, where relevant.
- 5.6.3 All statistics associated with waste generation, and reprocessing would be collated by the project management team on a monthly basis and stored in the Site waste management file.

PRoW Network

- 5.6.4 As set out in **Image 2.2** and described earlier in this CTMP, there are a small number of PRoWs that operate through / adjacent to the Site.
- 5.6.5 The Site layout plans included in **Appendix A** show the intention to retain the PRoWs in the final operational layout, including the provision of a wildflower meadow where Footpath SES/6 passes through the EAA.
- 5.6.6 However, it is acknowledged that there may be some impact on the PRoW network during the construction phase. The affected PRoWs will therefore be subject to temporary closures / diversion orders or will remain open as existing and subject to careful management during the course of the construction works.

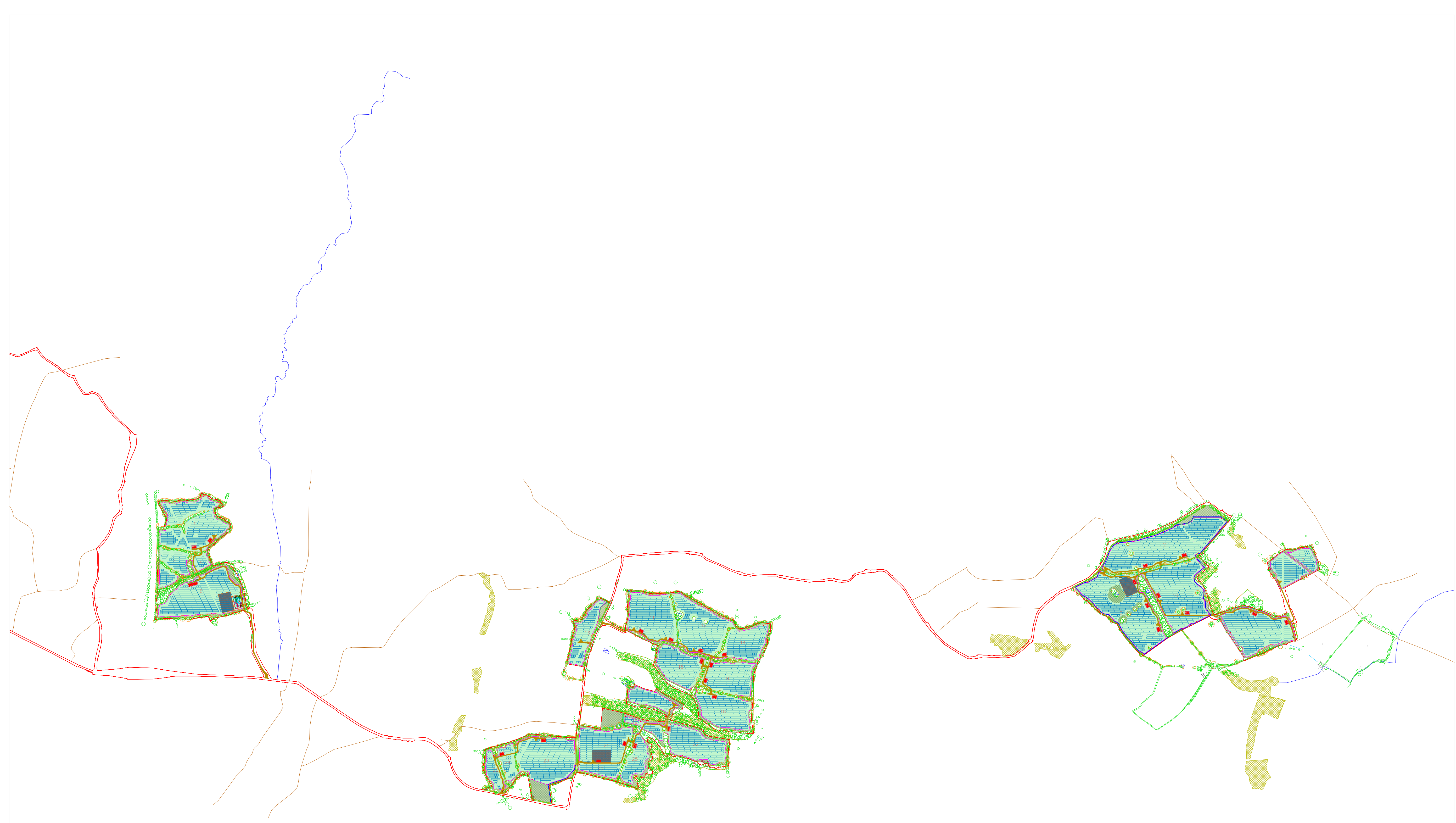


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- 5.6.7 The exact PRow mitigation measures will be set out within the detailed CTMP (following appointment of a Principal Contractor) and can be subject to further discussion and agreement with WCBC.



Appendix A – Proposed Site Layout Plans





NOTES

1. All details are indicative only.
2. Dimensions are in metres unless stated otherwise.
3. Refer to HSE document "Avoiding danger from overhead power lines – Guidance Note GS6" to ensure safe operation of machinery in proximity to overhead power lines.

LEGEND

- Planning Red Line
- Road
- No-dig Road
- Solar panels
- Fence
- Hedges
- Trees
- Ancient Woodland
- Hybrid Inverter Container
- Spares Container
- Customer Switch Gear Container
- Indicative CCTV Locations
- Access Gate
- Construction compound
- Rivers/Ponds
- Public Rights Of Way
- Permissive Path
- Acoustic Fencing
- Grassland
- Wildflower Meadow
- Tree Belt



DETAILS

TITLE	Glwyn Byw Solar Farm – General Layout – Clean
LOCATION	Near LL13 OYA
DATE	7 August 2025
CONFIGURATION	Typical fixed design
REVISION	12