



Third
Revolution
Projects

Chapter 3: Proposed Development

Tydd Solar: Proposed Solar Farm, Land at
Treading Field, Treading Drain, Tydd St. Giles,
Cambridgeshire PE13 4PL



Applicant: Pathfinder Clean Energy UKDev Ltd

May 2026

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1.0 Introduction

1.0.1 This chapter provides a description of the Proposed Development for which consent is being sought, for the purposes of informing the identification and assessment of likely significant environmental effects. This includes the anticipated construction and operational activities connected with the Proposed Development.

1.0.1 The planning application seeks permission for the following Proposed Development:

“Temporary ground mounted solar photovoltaic (PV) farm with battery storage, substation and associated works”

1.0.3 It is made up of the following main components that work together to generate and store renewable energy:

- Solar panels that convert sunlight to electrical energy. The panels are ground mount on frames that can track the sun and produce solar power from both the top and bottom sides of the panel. This is the best available technology;
- Inverter/transformer stations spread evenly across the Site and which convert the captured solar energy into electricity capable of being fed via underground cables into a new on-site substation. From here it is then exported to the National Grid again via the 132kV transmission line on-site;
- Battery storage containers also located next to the on-site substation that store the solar produced electricity in times of lower demand so that it can then be released into the National Grid when demand is higher;
- Compacted internal access track comprised of permeable surfaces, expected to be crushed stone;
- Post-and-wire deer fence for security and gates to enclose the parameters of the site and allow sheep to graze securely;
- Internally mounted and facing security and monitoring CCTV/infra-red cameras mounted along the perimeter of site; and
- Landscaping planting, biodiversity enhancements and surface water attenuation measures.

2.0 Site layout and design

2.0.1 The final Proposed Development site layout including associated infrastructure is illustrated below in Figure 1.

2.0.2 The proposed development will comprise of a ground-mounted solar photovoltaic array and associated infrastructure with an export capacity of 49.9MW. The PV array will comprise of PV mounted modules arranged in rows with a maximum height of 3.5m.

2.0.3 The Proposed Development also includes a Battery Energy Storage System (BESS) with a capacity of 30MW. The BESS will store excess energy generated by the solar PV array and release it during periods of high demand or low generation.

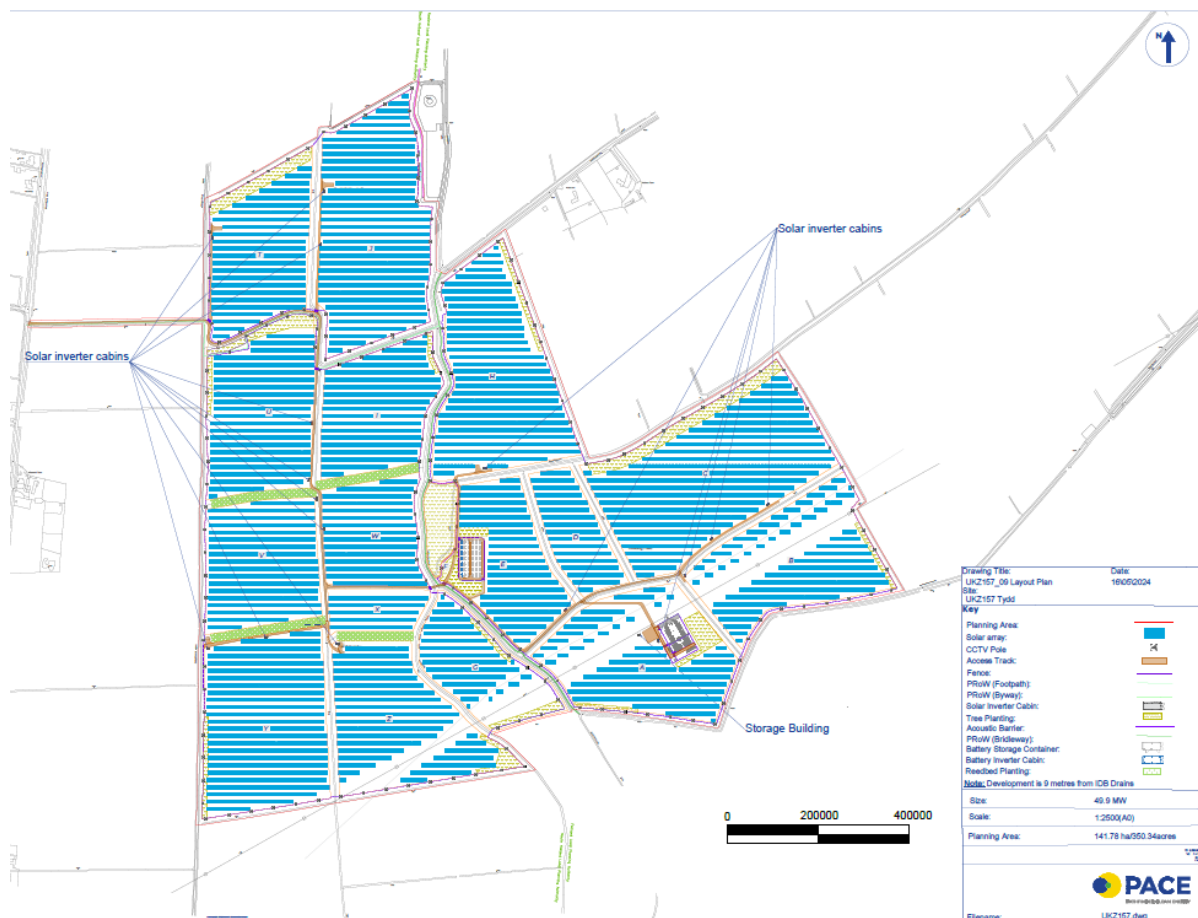


Figure 1: Proposed Site Layout

3.0 Solar photovoltaic modules and mounting frames

- 3.0.1 The Proposed Development will consist of an array of solar photovoltaic (PV) modules orientated in a southerly direction. The model of solar PV panel will be determined closer to construction and will be comprised of the latest PV technology. The modules will stand approximately 800mm above the ground at their lowest point and will be angled approximately 20 degrees to horizontal and will be arranged in south-facing rows.
- 3.0.2 Each module will be mounted upon a prefabricated metal frame. The module frames will be anchored to the ground via steel piles which will be driven approximately 1.5m-3m below ground. The framed mounting system would be pile driven, therefore no foundations would be required.

4.0 Inverters and transformers

- 4.0.1 Inverters and field transformer units will be installed on Site in order to convert the Direct Current (DC) produced by the solar modules into an Alternating Current (AC) which is compatible with the local electricity distribution network. String inverters are the preferred option for this Site layout. String inverters are placed on the rear of the mounting frame to be less visible. The field transformers will each be installed in various field locations across Site, to ensure voltage compatibility for export to the local electricity distribution network.

These transformers have been sited as far away from residential properties as possible while maintaining their core capability in order to reduce their impact on residential amenity.

5.0 Battery energy storage compound

5.0.1 There will be 30 Battery Energy Storage System (BESS) containers in the Proposed Development measuring 2.8m wide, 7m long, and 3m tall. The proposed design of these containers can be seen below at Figure 2.

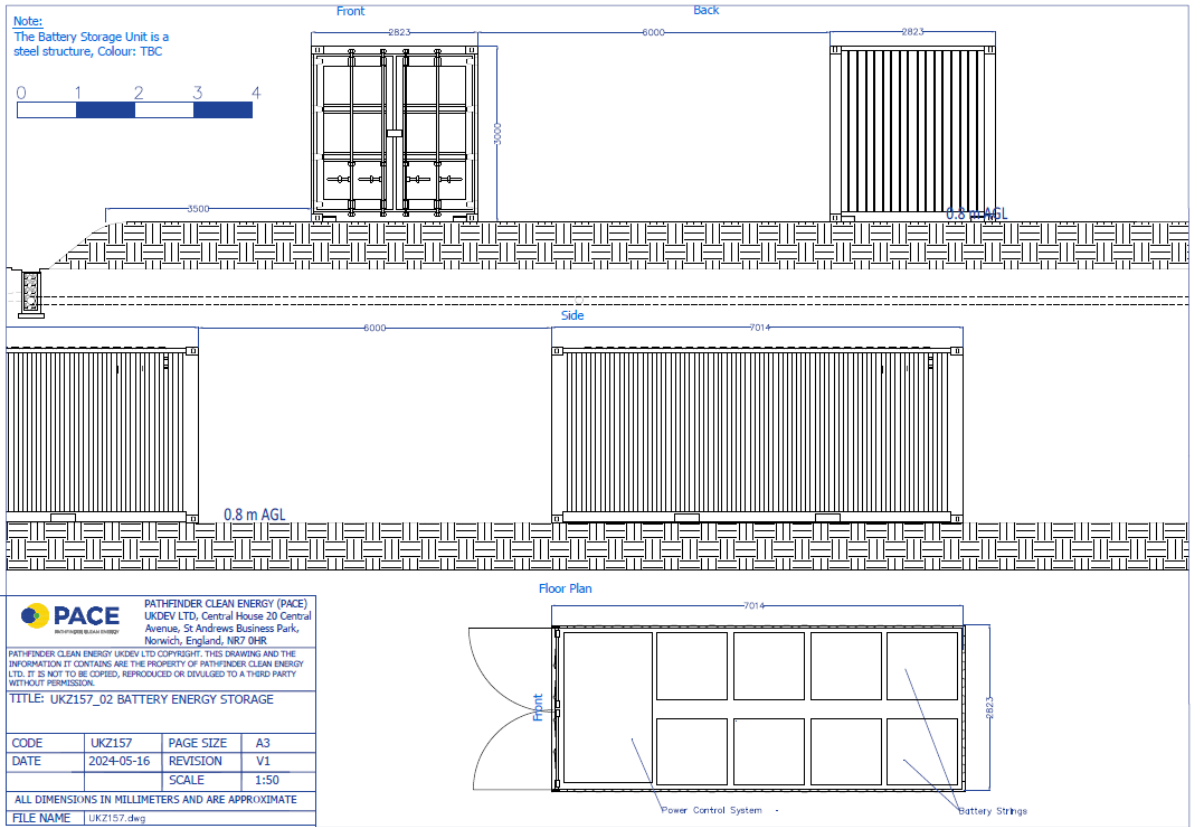


Figure 2: Proposed Battery Container Design

5.0.2 There will be a further 7 containers for inverters located adjacent to the battery containers that will allow the batteries to switch between charging and discharging mode. These containers are proposed to be approximately the same design as the battery containers.

6.0 Landscape and biodiversity proposals

6.0.1 Landscape mitigation and biodiversity enhancement proposals have been incorporated into the scheme design as part of the iterative design process and the finalised proposals are presented in full in the Landscape and Ecological Management Plan.

6.0.2 The key landscape and biodiversity proposals are listed below:

- A biodiversity net gain of 487.83 habitat units and 2.39 hedgerow units yielding approximately 173.53% net gain in habitat units and an undefined percentage of hedgerow units as there are currently no hedgerows on site.

- Positive ecological management of panel and field margins and fringe areas rather than use for intensive agriculture will significantly improve the biodiversity of the site.
- Creation of new habitats including new reedbed, new native trees and shrubs, new hedgerow, and smaller habitats including hibernacula and bird boxes.
- Deer fencing will also protect these newly established habitats while still allowing small mammals to pass through mammal gates at the base of the fencing.

7.0 Onsite substation, spares, and communications buildings

- 7.0.1 The Proposed Development will include a substation area that will include the point of connection to the existing 132kV transmission line that runs through the site. This substation will include the electrical infrastructure necessary to facilitate the connection point and will have a maximum height of 12.7m to match the existing power lines.
- 7.0.2 There will also be a storage container nearby to the proposed substation to allow the storage of tools and other maintenance materials on-site. The storage container is proposed to approximately of the same design as the battery storage containers.

8.0 Temporary construction compound

- 8.0.1 The proposed development will include a temporary construction compound incorporating a temporary laydown and parking area. This will be located near the Site entrance and is expected to be comprised of porta-cabin type buildings in addition to providing an area for vehicles to turn around. The compound does not form part of the application.
- 8.0.2 During construction, temporary materials storage will be located within the construction compound and set-down area. The temporary construction compound will comprise a small portacabin and welfare facilities. The construction compound will not require any hardstanding.

9.0 Security fencing and CCTV

- 9.0.1 Security fencing will be established around the edge of the solar array areas, also incorporating the BESS compound and associated infrastructure, to prevent unauthorised access. The fencing will stand 2m tall and is proposed to be of post-and-wire construction.
- 9.0.2 The entrance of the Site will comprise a 6m wide double-leaf access gate. This will stand 2.8m high and is shown below at Figure 3.

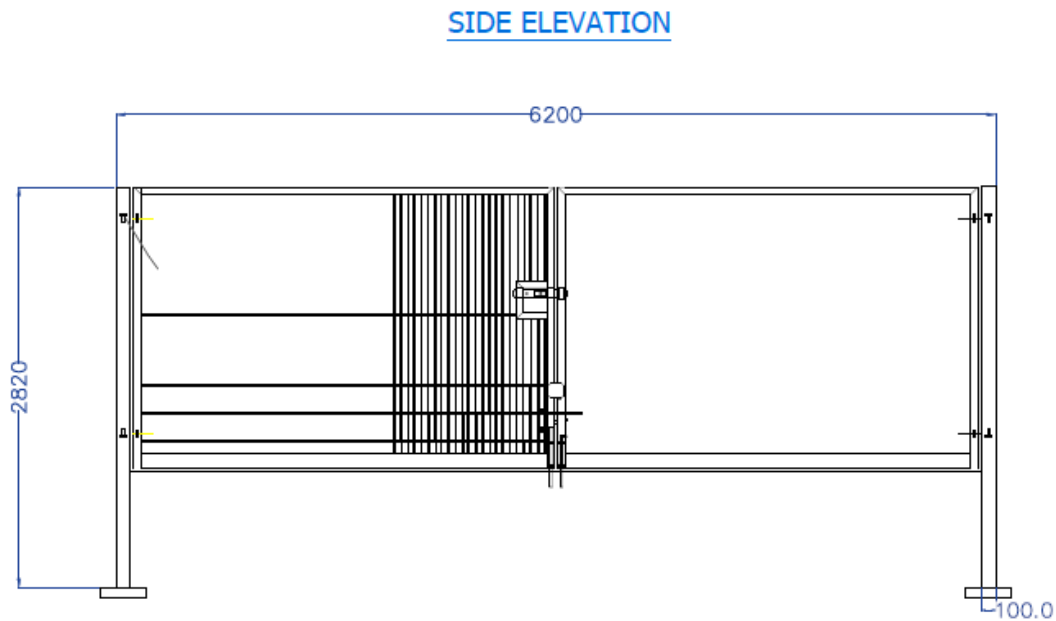


Figure 3: Proposed gate side elevation

- 9.0.3 CCTV will be deployed as a security measure. The CCTV will be mounted on galvanised steel posts, each measuring approximately 3m tall. An example of the proposed fencing and CCTV can be seen in Figure 4.



Figure 4: Indicative fence and CCTV design

- 9.0.4 The number of CCTV units to be installed will be dependent on lines of sight. These cameras will be installed inside and adjacent to the proposed security fencing with the exact locations to be confirmed prior to construction. They will be installed at discreet locations and will only face internally.

10.0 Site access and onsite tracks

- 10.0.1 Access into and out of the site will be via existing site accesses off Guanockgate Road to the west of the site. The accesses will be made suitable for HGVs using the standards specified

by both SHDC and FDC. The submitted Transport Statement and Construction Traffic Management Plan demonstrate the safe manoeuvrability of vehicles into and out of the site.

- 10.0.2 Internal access tracks will be established to allow for construction and ongoing access/maintenance of the infrastructure on the Site. These tracks will have a typical width of 4m with wider bends and at junctions.

11.0 Public access

- 11.0.1 Footpath SuSE/8/1 enters the site alongside the farm access track that is proposed to be used as the Site access. It continues along the existing farm access under the name Tydd/4/1. Public Bridleway 13 runs through the centre of the site in a north-south direction. Both of the public rights of way will be buffered by 4m as requested by the Fenland Definitive Map Team during consultation on the application. Use of these public rights of way will not be impacted by the proposed development and traffic management mitigation measures outlined in the Construction Traffic Management Plan will be implemented to ensure the safety of the users.

12.0 Construction

- 12.0.1 The construction of the Proposed Development is expected to take place over eight to twelve months. Construction would include the principal activities listed below:
- Laying of new access track;
 - Construction of site entrance;
 - Erection of security fencing;
 - Establishing a temporary Site compound (which will include the temporary laydown and vehicle parking area);
 - Trenching and installation of electric cabling;
 - Piling and erection of the module mounting frames;
 - Installation of transformers, inverters and switchgears; and
 - Construction of the substation(s), spares and control buildings.
- 12.0.2 Normal construction hours will be between 0700 and 1900 Monday to Friday and 0900 and 1300 on Saturdays. These times have been chosen to minimise disturbance to local residents. It must, however, be noted that out of necessity due to weather conditions and health and safety requirements, some generally quiet activities may occur outside the specified hours stated. Any construction outwith these hours will be in line with agreed noise limits and advance warning of any works outwith the agreed working hours will be provided to local residents.
- 12.0.4 The substation compound will be a gravelled area with component parts situated on concrete hardstanding.

13.0 Environmental management

- 13.0.1 It is considered that the construction phase of the Proposed Development will not give rise to a significant number of daily additional vehicle trips, outlined in the CTMP. As such, the impact of traffic levels on the road network surrounding the Proposed Development will be negligible.
- 13.0.2 The access route has limited sensitive receptors, reducing any potential transportation impacts experienced during the construction phase.
- 13.0.3 A Transport Statement has been undertaken and will include consultation with local road officers and estimation of construction loads/trip numbers to assess the potential impact of construction traffic upon the local road network.
- 13.0.4 It is expected that the construction works would last around 8-12 months. A Construction Environmental Management Plan (CEMP) will be prepared and agreed with the Council prior to the commencement of construction activity.
- 13.0.5 The CEMP will describe how the Applicant will ensure suitable management of, but not limited to, the following environmental issues during construction of the Proposed Development:
- Noise;
 - Dust and air pollution;
 - Water quality and pollution prevention;
 - Surface water drainage and ground water;
 - Ecology (including habitats and species protection measures, and biodiversity enhancements);
 - Pollution prevention plan;
 - Site operations (including maintenance of the construction compounds, working hours, and safety of the public).

14.0 Operation and maintenance

- 14.0.1 Once operational, the solar array will require scheduled and occasional unscheduled maintenance of the solar modules and associated infrastructure. The scheduled maintenance is expected to consist of a monthly routine site inspection.
- 14.0.2 Once the BESS is operational, it will require minimal maintenance. Maintenance is expected to consist mostly of routine site inspections by technicians, as well as unscheduled visits when required.
- 14.0.3 The land around the panels will remain as grass cover seeded with wildflower mix, and will be managed for sheep grazing. Further details on this are included in the accompanying landscape management plan. Access to the local tracks and public rights of way will be

maintained by the applicant throughout the operational phase of the Proposed Development.

15.0 Decommissioning

- 15.0.1 The Applicant is applying for consent to operate the solar and BESS development for 40 years. The Applicant is committed to decommissioning and restoring the site to its previous agricultural use. In the event that a decision was to be made that the Site could be re-powered/re-fitted, then a new consenting process, including supporting statement as to the potential environmental effects, would be required.
- 15.0.2 Decommissioning is a relatively straightforward process and similar to the construction process, with the majority of structures and equipment designed to be disassembled and removed in a straightforward manner (with inverters etc. being containerised and simply able to be detached from the piles they are placed on and the solar arrays disassembled and piles pulled up). A decommissioning plan would be secured via an appropriately worded planning condition.