2 PROJECT DESCRIPTION, DESIGN AND ALTERNATIVES

2.1 This chapter of the Environmental Statement (ES) provides a summary of the main alternatives considered by the Applicant during the EIA process. It includes a summary of the reasons for the selection of the site, together with a description of the alternative design and layout options that have been considered. Further information is provided in the Planning Statement and Design and Access Statement that accompany the planning application.

2.2 This description of the project forms the basis for the environmental assessment provided in this Environmental Statement (ES). Further information can be found in the appendices to this chapter provided in Volume 2 of this ES.

2.3 The effects of the project have been assessed throughout the ES based on what is likely. For example, construction information is presented as the 'likely case'. Several measures which would reduce, avoid or compensate for adverse environmental effects arising have been included as part of the project design. Details of these measures are provided in detail within this chapter. This chapter, together with the subsequent topic chapters, provide the data required to identify and assess the main and likely significant effects of the project in accordance with Schedule 4 of the EIA Regulations.

PROJECT DESCRIPTION

The Site and Surrounds

Site Location

2.4 The site, comprising several agricultural fields, is located on the Gwent levels in south Wales and lies within the Redwick Parish and the Newport City Council local authority area. The site's eastern boundary is adjacent to Cold Harbour Reen, which marks the border with Monmouthshire County Council.

2.5 The Gwent Levels are a distinctive topographic zone comprising of a low-lying, flat and expansive coastal plain extending up to the Severn Estuary. Its elevation is typically between 5 - 6m AOD and generally below 10m AOD.

Land Use

2.6 Within the above area, the site is located on farmland less than a kilometre north of the centre of Redwick village and over one kilometre from the banks of the Severn Estuary. It is relatively flat

and made up of irregular shaped fields of variable sizes over a total area of over 100 hectares (Figure 2-1 Field Numbering Plan).

2.7 The fields on site are bordered by drainage channels (called reens) or agricultural ditches, situated adjacent to or in between hedgerows (Figures 2-2 and 2-3). The farmland is drained by the reen system, within which water flows slowly towards the Severn Estuary. The level of the reens is controlled by means of a series of sluices; separate boards in which may be raised or lowered to keep water levels high enough for livestock to drink.

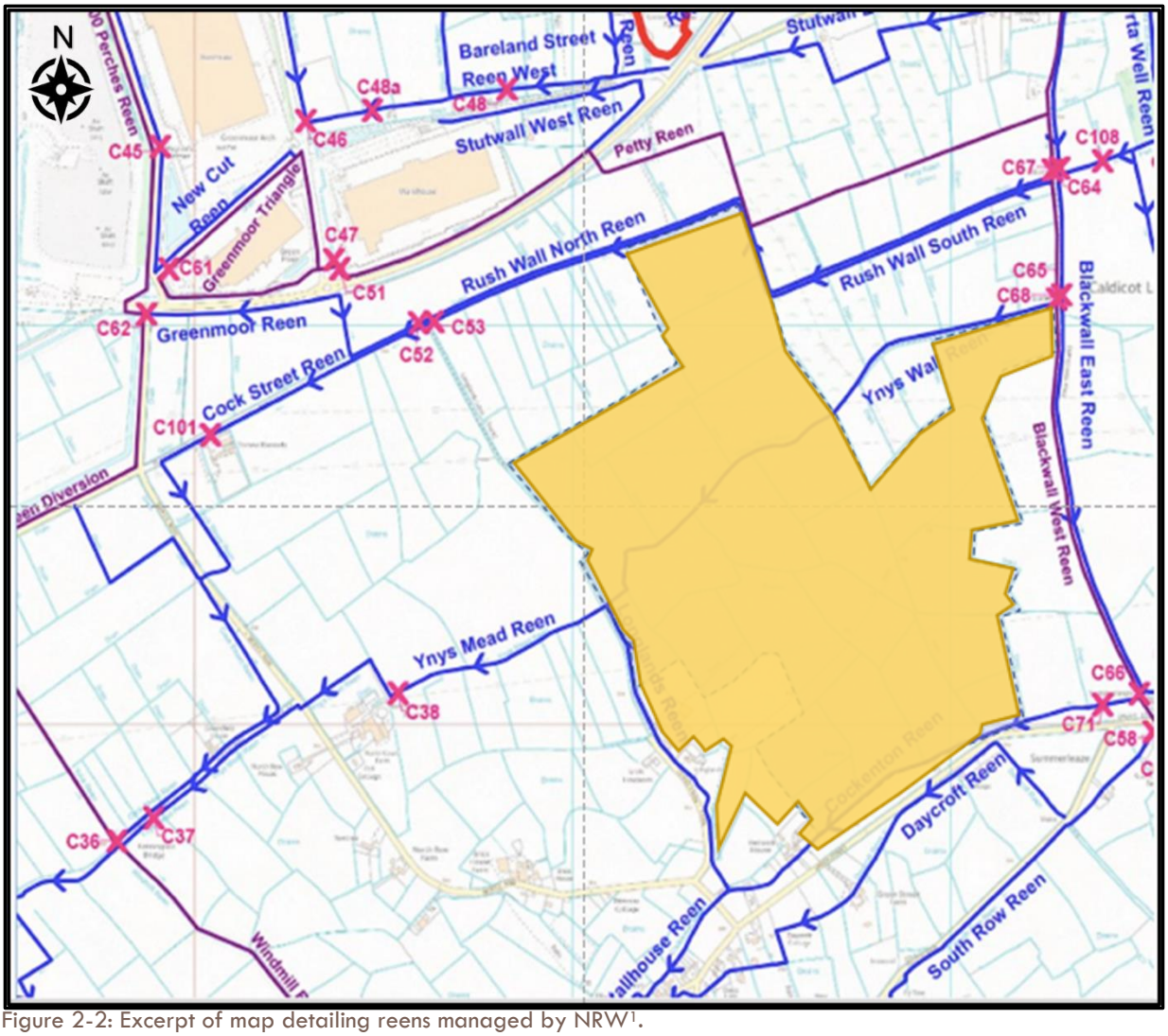

Figure 2-2: Excerpt of map detailing reens managed by NRW[1].

[1] Natural Resources Wales: Map 4 – Whitson and Greenmoor (11/02/2015)

2.8 The main reens on or adjacent to the site are the Ynys Mead Reen, Cockenton Reen, Longlands Reen, Blackwall West Reen and Rush Wall South Reen (Figure 2-2). These are cleared annually by Natural Resources Wales (NRW). As such, NRW require access to these reens at all times in order to carry out this maintenance. The farm maintains the other reens/ditches on the site, mainly to remove vegetation (such as hedge trimmings).


Figure 2-3: Example of reen on site (left) and Backwall Track, eastern site boundary (right)

2.9 The site is traversed east-west by three sets of overhead lines and their associated pylons. These overhead lines connect to a substation approximately 5 kilometres to the east

2.10 The farmland on which the site is located belongs to Longlands Farm, comprising a dairy herd which is housed indoors year-round (Figure 2-4). Grass and maize are grown on a two to three-year field rotation and used as feed for the herd of 500 cows. Maize is cropped annually, and the grass is harvested six times per year on average. The young cattle also graze some of the fields.



Figure 2-4: Maize crop stubble (Left), housed cattle at Longlands Farm (Middle), Longlands Farm Farmyard (Right)

2.11 Adjacent to the western site boundary there are three dwellings and the farmyard. Two of the three dwellings are owned and occupied by the farm owners. The dwelling adjacent and to the west of the farmyard, is not owned by the farm. The farmyard includes buildings to house livestock, machinery and feed, areas of hardstanding, silage storage and a slurry silo (Figure 2-

4). Caravans are stored just to the north of the farm buildings on an area of compacted gravel. These areas are accessed by a short single-track tarmac road with two passing places (Longlands Lane), off North Row. Where Longlands Lane meets North Row there is a small recreation ground with children's play equipment.

2.12 The landowner had confirmed that, within the site, a network of pipes has been installed to aid drainage, as is common for land in this area. Approximately 45cm under the surface of each field is a network of drainage pipes, over which is a layer of stone. Typically, the pipes are 5 to 15cm diameter and made of clay or plastic. The pipes drain toward the drainage ditches (reens) at field margins. There is little or no above-ground evidence for the locations of these features.

2.13 There are two operational wind turbine on land adjacent to the site to the north and northwest (Figure 2-5).

Figure 2-5: Site photographs of Longlands Lane Wind Turbine (Right), Permissive Path from Longlands Farm (Bottom left) to Rush Wall (Top left)

Ecological Designations

2.14 The site is subject to several ecological designations, both statutory and non-statutory, as detailed below.

Statutory Designations

2.15 The site is within the Gwent Levels SSSI - Redwick And Llandevenny unit (940 hectares). This site was selected for the following reasons:

- Aquatic invertebrates and plants associated with the reen network.
- Terrestrial invertebrates along reen banks and associated with hedgerows.

2.16 The site is immediately adjacent to Gwent Levels SSSI – Magor and Undy Unit. This site was selected for the following reasons:

- Aquatic invertebrates and plants associated with the reen network.
- Terrestrial invertebrates along reen banks and associated with hedgerows.
- Brackish water fauna and flora towards its seaward edges.

2.17 Magor Marsh SSSI is located 430 meters to the north east of this site. This site was selected for the following:

- Aquatic plants associated with the reen network.
- Breeding water and marsh birds.

2.18 The following SSSIs are also within the site's zone of influence:

- Gwent Levels – Whitson
- Gwent Levels – Nash and Goldcliff
- Penhow Woodlands
- Langstone-Llanmartin Meadows
- Rectory Meadow - Rogiet

2.19 The Severn estuary 1.3km to the south has several nationally and internationally important designated sites:

- Severn Estuary SPA - This site was designated due to its importance during the spring and autumn migration periods for waders moving up the west coast of Britain, as well as in winter for large numbers of waterbirds, especially swans, ducks and waders.
- Severn Estuary Ramsar - The site is particularly important for the run of migratory fish between the sea and rivers via the estuary, and migratory birds during spring and autumn migrations.
- Severn Estuary SSSI - Estuarine fauna including water fowl, migratory fish, invertebrates. Important for wintering and passage birds.

Non-Statutory Designations

2.20 Magor Marsh Gwent Wildlife Trust Reserve – Land adjacent to the east of the site is part of this reserve.

Landscape

2.21 The proposed development site, including the majority of the wider levels landscape, is within the Gwent Levels Landscape of Historic Interest. The Caldicot Levels Special Landscape Area also covers the proposed development site, including the wider levels landscape, within Newport Unitary Authority only.

2.22 In addition, the proposed development site and the majority of the wider levels landscape are recognized as largely 'outstanding' and 'high' value in all five LANDMAP aspect areas. LANDMAP is a unique national information system, devised by the former Countryside Council for Wales (CCW), allowing information relating to various landscapes across Wales to be collected and organised into a nationally consistent dataset, enabling landscape quality to be taken into account in decision making.

Access

2.23 The site can be accessed via five possible access points; Rush Wall East, Rush Wall West, Longlands Lane and/or two possible access points off Green Street. Generally, traffic relating to the development will access the site via Longlands Farm, though the site will be access from Green Lane during constructions as set out within paragraph 2.45.

Public Rights of Way

2.24 There are no public rights of way across the site, though there are two adopted green lanes adjacent to site. The first leads north from the northern end of Longlands Lane for 1.25km before joining Rush Wall. There are barriers to prevent vehicular access in two locations and the path is currently too overgrown to use along the middle section. The second green lane runs along Backwall Track, whilst an unclassified track continues along the Rush Wall route to the north (Figure 2-6).

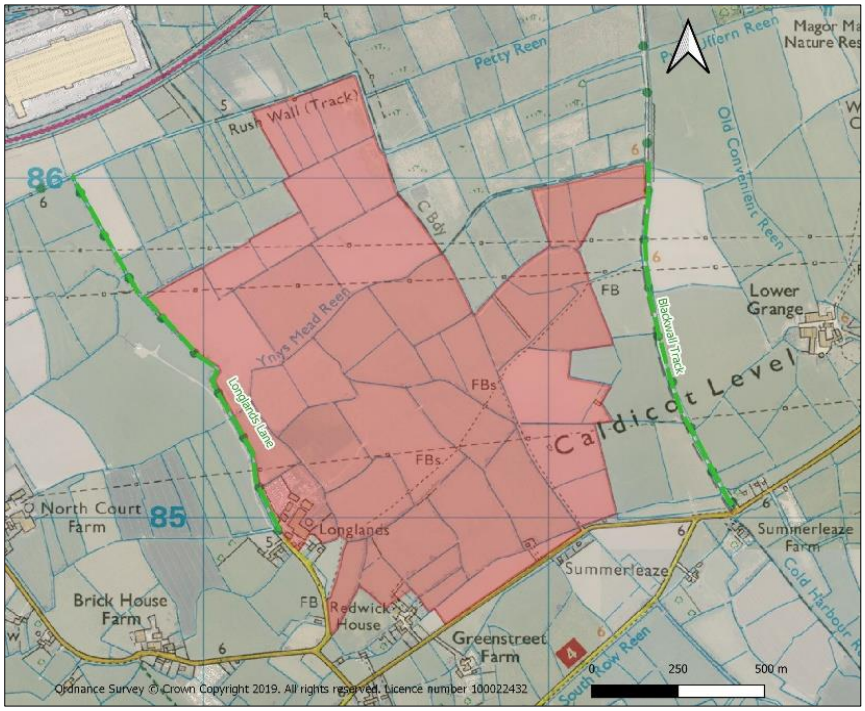

Figure 2-6 Public rights of way

Flood Risk

2.25 The area of the site is shown by the Natural Resources Wales Development Advice Map to be within Flood Zone C1. The Welsh Government Technical Advice Note for Planning 15 (TAN15) describes Zone C as being "*based on Environment Agency extreme flood outline, equal to or greater than 0.1%*" risk of flooding in any single year (i.e. 1 in 100) and Zone C1 as "*areas of the floodplain which are developed and served by significant infrastructure, including flood defences*".

Gwent Levels Reens

2.26 With respect to water resources, the key features afforded protection by the notification of the Gwent Levels SSSI - Redwick And Llandevenny unit are found within the many reens that criss-cross the site and surrounding area.

2.27 Farming practices can impact water resources due to, for example, suspended sediment, fertilizer use or herbicide leaching.

2.28 Whilst there is connectivity across the network of reens through the wider Caldicot Levels, water within the reens on the site is classed ecologically as eutrophic standing water, given the near-static nature of water flow within them.

The Proposed Development - Rush Wall Solar Park

2.29 The proposal is for the installation of a solar park with an approximate design capacity of 75MW. The development includes ancillary electrical equipment and infrastructure, access tracks, security fencing and CCTV.

2.30 The location and area the solar panels would occupy is shown on Figure 2.7: Planning Layout (Drawing no. 1578-0201-00). The total areas within the 'red line' planning application boundary and the total area of land within the fenced area containing the solar panels is also shown on Figure 2.7.

2.31 Solar panels convert sunlight to electrical energy. They generate direct current (DC) that is converted by the inverter hardware to alternating current (AC) that can be used by the electricity grid. PV systems are rated for capacity in watts (or kW or MW) with the designation 'peak' (e.g. kWp, MWp). The peak capacity of individual panels is established by measuring their performance under internationally recognised standard conditions that include temperature and wavelength of sunlight. The actual output of a system will be determined by latitude, local weather and site conditions.

2.32 Subject to final detailed design, the proposed solar park would likely comprise:

- Solar photovoltaic (PV) panels, mounted to a railing sub structure;
- 442 string inverters;
- 43 associated transformers

- Compacted gravel tracks (constructed on a sub layer geogrid membrane) to allow vehicular access between fields;
- A substation access track with a cement based top layer (a statutory requirement of the electricity distribution network operator, Western Power Distribution (WPD));
- Fencing and gates to enclose the panels within each field as illustrated in Figure 2-14 (Drawing no. 1578-0205-01);
- Security and monitoring CCTV mounted on posts within each field, as in Figure 2-15 (Drawing no. 1578-0204-00);
- Welfare and spare parts containers;
- Underground cabling to connect the panels to the substation; and
- A substation within a security-fenced, concrete-based compound measuring approximately 50m x 40m, located at the centre of the site, adjacent to an existing pylon. A T-off connection (i.e. an overhead wire) would provide the point of connection from the substation to the existing 132kV pylon on site. A 10m high single pole communications antenna may be required at the substation.

Construction of the Development

2.33 The construction phase of the Development will comprise on-site preparation and construction activities, supported by deliveries of materials, components and staff.

2.34 Construction is expected to take approximately 18-20 weeks, depending on weather and ground

Figure 2-8: String inverters on reverse of PV panel frame (left) and solar PV panels (right)

conditions, as well as other technical and environmental factors, and is likely to consist of the following principal operations:

- Installation of a temporary construction compound and site office facilities;

- Construction of site tracks;
- Excavation of cable trenches and cable laying adjacent to the site tracks
- Construction of substation and inverter hardstanding areas;
- Construction of the substation buildings/compounds;
- Installation of panels and inverters;
- Reinstatement of land, where required.

Construction Environmental Management Plan

2.35 Construction will be undertaken in accordance with a Construction Environmental Management Plan (CEMP). An outline CEMP can be found at Appendix 2.2. The CEMP includes strategies and control measures identified during the EIA process for managing the potential environmental impacts of construction and limiting disturbance from construction activities, as far as reasonably practicable. These measures would form the basis of more detailed plans and method statements likely to be required as pre-commencement planning conditions, for example a detailed reinstatement plan for field drainage.

Cable Trenching

2.36 The main groundworks entail trenching for the installation of underground cables to connect groups of solar panels to the substation. Topsoil is first stripped and set aside to create a 'working lane' approximately 10m wide. The topsoil is set outside of this 'working lane' and forms a small bund. The trench is then dug through the subsoil, and the excavated material set apart from the topsoil within the working strip.

Figure 2-9: Temporary access tracks, similar to those to be used (left), digging trenches (middle) and HC, DV and communications cables in an excavated trench (right)

2.37 The cable trenching is shown in Figure 2-9. The deepest trenching would be approximately 1.2m deep for the high voltage cables, for which a medium sized mechanical excavator would be used. Approximately 4km of this trench type would be required. Approximately 7km of low voltage

0.6m deep cable trenching is expected to be required and possibly a further 1km of 0.6m deep communications cable trenching. The cable is normally laid or winched into the open trench, and the trench then backfilled with the excavated subsoil. Generally, cable is installed in 500m lengths with a joint pit or bay at each end to allow a mechanical joint to be applied to each length of cable. A joint bay is excavated 3m long x 2m wide x 1.5m deep to allow an engineer to install the joints. The joint pit is then backfilled as per the trench.

2.38 Where required, temporary ground matts may also be used in localised areas during the construction phase to reduce ground disturbance.

2.39 Where it is necessary for cables to traverse reens and/or ditches, horizontal directional drilling will be utilised to bore cables beneath ditches and reens to minimize disturbance to the landscape, as detailed in Figure 2-16 (Drawing no. 1578-0201-50).

Panel Installation

2.40 A railing sub-structure will be piled into the ground, frames attached and then the solar panels mounted to the frames (Figure 2-10 below). The ground disturbance from piling for the panel supports is expected to be up to 2.5m below ground level. The standard height of panels and mounting systems is 2.6m above ground level (to the top of the panel/rail system), as detailed in Figure 2-17 (Drawing no.1578-0201-28) with the exception of panels located on lower ground in the north and west of the site where the panels will be between 2.8m and 3.0m above ground level, as detailed in Figure 2-18 (Drawing no. 1578-0201-01) to account for potential flood risk related to climate change over the lifetime of the development.

Figure 2-10: Panel supports (Left) and frames ready for solar panels to be fitted (Right)

Supporting Infrastructure

2.41 As illustrated in Figure 2-8 above, string inverters are fixed to the panel frames on the reverse of the PV panels and spread evenly across the site. In conjunction with this, 46 transformers will be situated across the site. These will be raised off the ground on hard-standing plinths and backfilled with excavated material at a height determined by the Flood Consequence Assessment carried out for the site, as shown in Figures 2-19 (Drawing no. 1578-0207-00) and 2-20 (Drawing no. 1578-0201-27).

2.42 The location of the substation compound is detailed in Figure 2.7. An area for the base of the substation will be excavated prior to the hard-standing plinth concrete pour, after which the associated substation infrastructure will be installed (as illustrated in Figure 2-11). The ground disturbance associated with the substation is expected to be up to 2m below ground level. The WPD (electricity distribution network operator) chair structure at the point of connect to the grid is inherently flood compatible along with the rest of the WPD compound components. The remaining substation elements/infrastructure are not flood compatible and, as such, will be installed at an adequate level, as advised by the Flood Consequence Assessment carried out for the site.

Figure 2-11: Substation compound under construction (left) and completed substation compound (right)

Access Tracks

2.43 Compacted gravel tracks constructed on a sub-layer geogrid membrane will be constructed to facilitate vehicular access between fields. In addition to this, a substation access track with a cement based top layer (a statutory requirement of the electricity distribution network operator, Western Power Distribution) will be constructed, allowing operational access via Longlands Farmyard as detailed in Figure 2-21 (Drawing no. 1578-0208-10). All access tracks will remain in use throughout the operational phase of the project.

2.44 Whilst all infrastructure is to be located a minimum of 12.5m from main reens, as detailed in Figure 2-22 (Drawing no. 1578-0201-50) and in section 2.4 above, it is proposed that access between the farmyard and project area makes use of an existing trackway directly adjacent to Longlands Reen.

Access to Site

2.45 Components will be delivered to site using the existing road network. Traffic will follow a designated route between Junction 23A of the M4 and the site access point on Green Street via the A4810 and North Row, as shown in Figure 2-12.

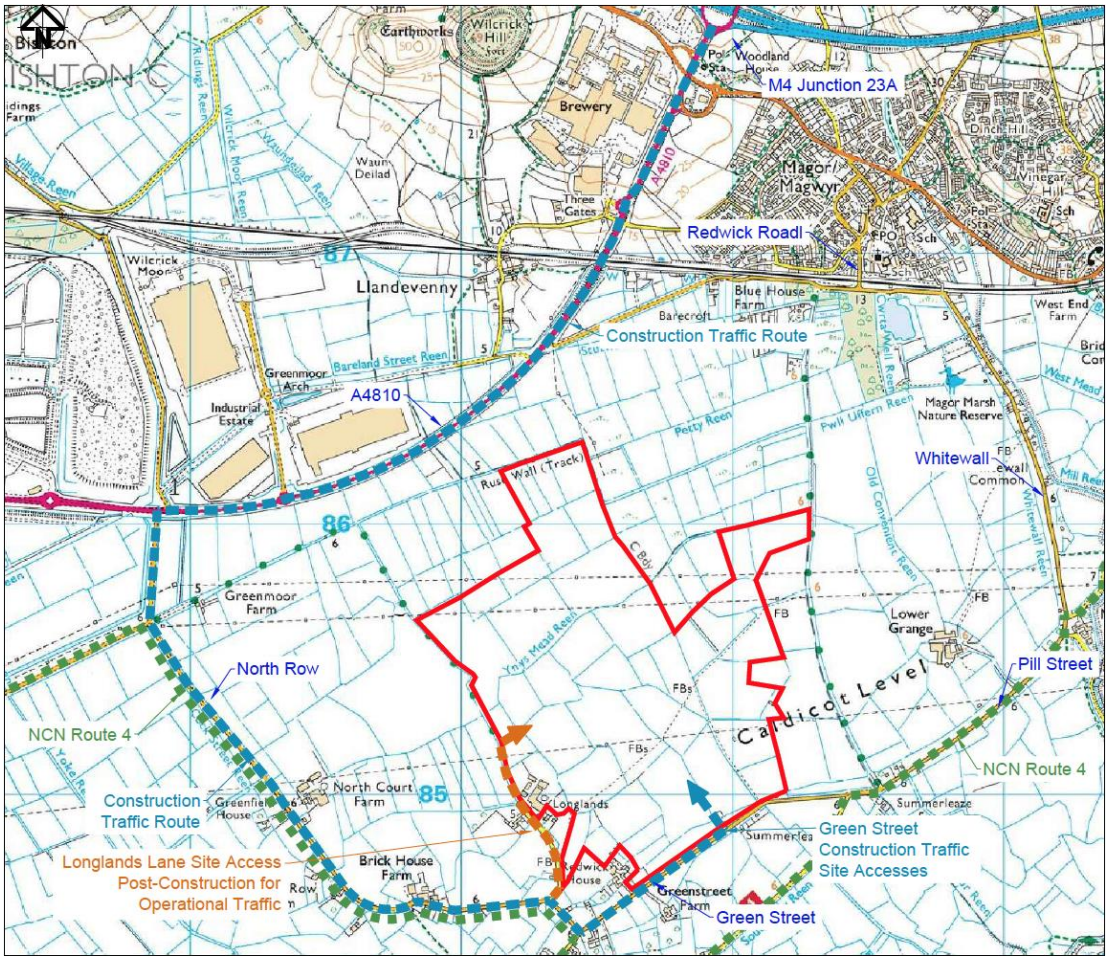

Figure 2-12: Proposed construction phase access to site

2.46 The construction phase is likely to span 18-20 weeks. Estimated movements for Heavy Goods Vehicles (HGVs) is detailed below.

Table 2-1: Estimated HGV movements for Construction Phase

	Week																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Per week																	
Earthworks	15	15	15	15	15											5	5	5
Mounting Systems		40	40	40	5													
Modules						45	45	45	45									
Inverters and Substation					14													
Cable		30	16															
Fencing, Others	20	10	10	10	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Total Deliveries Per week*	**35**	**95**	**81**	**65**	**39**	**50**	**50**	**50**	**50**	**5**	**5**	**5**	**5**	**5**	**5**	**10**	**10**	**10**
Total Deliveries Per Day	**7**	**19**	**16**	**13**	**8**	**10**	**10**	**10**	**10**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**2**
Total Movements Per Day	**14**	**38**	**32**	**26**	**16**	**20**	**20**	**20**	**20**	**2**	**2**	**2**	**2**	**2**	**2**	**4**	**4**	**4**

Construction Traffic Management Plan

2.47 A draft Construction Traffic Management Plan (CTMP) has been prepared and can be found it Appendix 2.1. The CTMP sets out the control measures for managing potential adverse effects associated with construction phase traffic. The CTMP will form the basis of more detailed plans likely to be required as pre-commencement planning conditions.

Operation and Maintenance of the Solar Park

2.48 Once operational, there is likely to be minimal activity on site, particularly when compared to the construction phase. Much of the monitoring of the site is carried out remotely, though it is expected that the site will be visited at least once a month for inspection and may be regularly attended by a farmer should livestock be situated on site. Whilst other site visits will fluctuate based on planned and reactive maintenance, activity on site will remain relatively low, typically in the range of 4-5 days per month. Typical tasks carried out throughout the operational phase and their respective frequencies are detailed in the table below:

Table 2-2: Typical operational maintenance program

Frequency	Maintenance/Operational Task
Daily	Maintenance of livestock by farmer, if required. Remote plant performance checks
Monthly	Visual inspection of: Substation housing, panel array, ground conditions, drainage/swales, security perimeter; and CCTV cameras.
Bi-Annually	Grass-cutting and planting maintenance (if required)
Annually	Inspection and routine maintenance of inverters, modules, mounting systems and substation equipment. Grounds maintenance including hedge-cutting, ecological monitoring and spot weed control.

Landscape and Ecological Management Plan

2.49 In order to avoid or reduce the potential for adverse environmental effects during operation, several measures have been designed into the project as embedded mitigation. Where management is required to maintain ecological, hydrological or landscape features these are set out in the Landscape and Ecological Management Plan (LEMP), which can be found at Appendix 2.3.

Decommissioning of the Solar Park

2.50 The solar park will have a minimum lifetime of 35 years. During decommissioning the above ground infrastructure (solar panels and supports, substation, inverters, switchgear, CCTV & fencing) and the underground cabling will be removed from site. Tracks will be removed, unless the landowner wishes for them to be retained.

2.51 The site is to be reinstated to its former state and condition, as at the date of the lease. As such, the land will be returned to its original state - available and suitable for its current agricultural use.

PROJECT DESIGN

Responding to the Environmental Sensitivity of the Site

2.52 From the outset, the project design process has evolved to take into account the sensitivities of the site and surroundings. This has allowed for the embedded mitigation of potential adverse effects according to a mitigation hierarchy – avoid, prevent, reduce and offset.

2.53 The first stage of this commitment - 'Avoid' - involves mitigation-lead design to form an inherent part of the project design, defined as 'Primary Mitigation'.

Mitigation within the Planning Boundary

The following primary mitigation measures have informed the location and design of the development within the planning boundary:

- Existing road networks will be used to access the site during construction, operation and decommissioning.
- Solar panels have been located away from the southern areas of the development which are closer to residential dwellings and Redwick village. A 300m minimum buffer is in place to the nearest residence (besides the landowner), as shown on Figure 2-7 (Drawing no. 1578-0201-00).
- Existing field boundaries will be retained and protected.
- During construction, operation and decommissioning, infrastructure (solar panels, access tracks, fencing, etc.) will be offset from reens, ditches and hedgerows to ensure that

vegetation is not damaged or disturbed and that reen water quality and drainage effectiveness is maintained. Such buffer or exclusion zones will be established 7m from ditches and 12.5m from reens. This is detailed within Figure 2-22 (Drawing no. 1578-0201-50).

- Solar panel array and related infrastructure designed to place all vulnerable equipment above predicted flood depth level.
- Adequate root protection area, as defined within the Arboricultural Report included within the application documentation, will be implemented from the hedgerows and scattered trees where activity, construction or development is likely to occur.
- On-site access tracks will utilise existing hedgerow gaps, gates and reen crossings to reduce damage and disturbance and retain the landscape character, pattern and landscape elements.
- Horizontal directional drilling will be utilised to bore cables beneath reens to minimize disturbance to the landscape.
- With the exception of the foundations for the substation and the substation access track, use of concrete will be minimal to reduce impacts on drainage. Gravel-filled soakaways to be created around concreate bases to provide compensatory capacity.
- All field access tracks will be constructed such that they are permeable to water.
- Specific fields will be kept free of panels and infrastructure to make allowance for appropriately managed Lapwing overwintering and migratory mitigation areas.

Off-site Mitigation

2.54 It has been necessary to provide mitigation outside of the planning application boundary and outside of the land ownership boundary. This pertains to land that has been secured by the Applicant to provide lapwing-breeding habitat. Should consent be granted, this would secured through a planning obligation under section 106 of the Town and Country Planning Act 1990, or its equivalent provision elsewhere.

Secondary Mitigation Measures

2.55 Whilst the primary mitigation measures discussed within this chapter denote measures embedded within the design of the development, secondary mitigation details a more flexible form of mitigation that requires further action to obtain the required outcome, often more focused on the middle of the mitigation hierarchy – 'Prevent' and 'Reduce'.

2.56 Secondary mitigation measures for the project are detailed within individual topic chapters.

ALTERNATIVES CONSIDERED

2.57 The EIA Regulations require that an ES should include: 'An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for his choice, taking into account the environmental effects' (Schedule 4, Part II(4)).

2.58 This section therefore sets out the key reasons for the selection of the project site and current layout, taking into account environmental effects.

2.59 The proposed site is a preferred option for solar energy for several reasons, including the fact that it offers ease of connection to the national grid on site, ideal topography for ease of construction, proximity to the major road network, and good irradiance due to the southerly location near the coast. A full assessment of alternative sites is included with the Sequential Site Selection Report accompanying the application.

Proximity to a Grid Connection Point

2.60 Connectivity to the grid is an essential requirement of a development of this nature. As a result, identifying a suitable area in which a grid connection can be achieved is the principal technical consideration with regards to location.

2.61 The development site, located within a network area with sufficient capacity for the energy generated from the development, offers the ability to connect to the national grid via the pre-existing electricity transmission assets located across the site (Figure 2-13) which were initially installed to serve the requirements of heavy industries which once existed along this coastline but are now no longer in operation.

Figure 2-13 Direct connection to national grid via pre-existing electricity transmission assets on site

Suitability

2.62 As stated within the Sequential Site Selection Report that accompanies this application, in order to accommodate an energy generation project of this scale, a large area of suitable land is required. A project of this scale and the area of land it necessitates is required to achieve a critical mass of energy generation to ensure its viability without Government subsidies.

2.63 The site selected is relatively flat, largely unobstructed, surrounded by natural screening and can be developed in a manner which retains the historic field boundaries and sensitive reen habitats. Very few alternative areas exist that would provide a site of sufficient scale to accommodate the proposed development. Where such areas have been identified, these have not been deliverable for other reasons, including the lack of a suitable grid connection or planning and amenity constraints.

Deliverability

2.64 The landowner selected solar energy development as a means of farm diversification which allows the dairy farm to continue operating. The landowner has already taken up other forms of diversification for the farm, including a single wind turbine development proposed in the most northern field of the site, planning approval for which was granted in January 2019. The development is currently under construction (NCC Planning application reference 18/0408). Following discussions with the landowner, an in-principle agreement was reached to allow the development to take place subject to achieving all necessary consents. This therefore establishes the deliverability of the proposed development on this site.

Agricultural Land Classification

2.65 National level guidance on the deployment of ground-mounted solar expresses a preference to avoid the 'Best and Most Versatile' cropland where possible[2]. Grades 1, 2 and 3A of the Agricultural Land Classification are considered to be best and most versatile land, whilst 3B, 4 and 5 are not.

2.66 The land on site is not of the best agricultural quality. An assessment of the agricultural land classification has shown that the land is a mosaic of grade 3b and 4 and is not considered to be 'best and most versatile'.

2.67 The site therefore avoids the best and most versatile (BMV) land and accordingly the proposed development complies with national planning policy which prefers the use of poorer quality agricultural land over the use of BMV agricultural land.

[2] Solar Trade Association "10 Commitments" of good practice in solar farm development

Solar Irradiation

2.68 The site's open, coastal location and the fact that it is not shaded by any nearby features in the landscape, make it highly suitable for this type of development. The Met Office sunshine duration data for Wales (1971-2000) confirms that the coastal area along the Gwent levels where the site is accommodated receives very high levels of sunshine when compared to the country as a whole. This provides a clear benefit to a scheme of this nature as it results in significantly more electricity generation than at other locations.