Larnog Solar Farm

Planning, Design, and Access Statement

November 2026

Issue Sheet

Report Prepared for: Trydan Gwyrdd Cymru

Planning, Design, and Access Statement

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Appendix A – Statutory Pre-Application Advice

Acronyms

Term	Description
AC	Alternating Current
AGL	Above Ground Level
AQMA	Air Quality Management Area
BESS	Battery Energy Storage System
BMV	Best and Most Versatile
BoSS	Balance of Solar System
CCTV	Closed-Circuit Television
CEMP	Construction Environmental Management Plan
CTMP	Construction Traffic Management Plan
DAS	Design and Access Statement
DC	Direct Current
DNS	Development of National Significance
EIA	Environmental Impact Assessment
ES	Environmental Statement
FCA	Flood Consequence Assessment
GIS	Geographic Information System
ha	Hectare(s)
LDP	Local Development Plan
LEMP	Landscape and Ecology Management Plan
LPA	Local Planning Authority
LVIA	Landscape and Visual Impact Assessment
MW	Megawatt(s)
NBB	Net Benefit for Biodiversity
NGED	National Grid Electricity Distribution
oBSFMP	Outline Battery Fire Safety Management Plan
oCEMP	Outline Construction Environmental Management Plan
oCTMP	Outline Construction Traffic Management Plan
oLEMP	Outline Landscape and Ecology Management Plan
PAC	Pre-Application Consultation
PDAS	Planning, Design and Access Statement
PIR	Passive Infra-Red
PPW	Planning Policy Wales
PRA	Preliminary Risk Assessment
PRoW	Public Rights of Way

Term	Description
PV	Photovoltaic
RLDP	Replacement Local Development Plan
RVAA	Residential Visual Amenity Assessment
SAC	Special Area of Conservation
SCADA	Supervisory Control and Data Acquisition
SINC	Site of Importance for Nature Conservation
SPA	Special Protection Area
SPG	Supplementary Planning Guidance
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems
TAN	Technical Advice Note
TPO	Tree Preservation Order

1. Introduction

1.1. Overview

1.1.1. WSP ('the Agent') have been instructed by Trydan Gwyrdd Cymru ('the Applicant') to prepare and submit a full planning application for the proposed Larnog Solar Farm (hereafter, the 'Proposed Development') for:

The construction and operation of a ground-mounted solar photovoltaic (PV) farm with a gross electrical output capacity to the distribution grid network in the region of 35MW and associated infrastructure, including substation and a Battery Energy Storage System (BESS).

1.1.2. The Proposed Development would be located on land approximately 500 m south-west of Penarth and 550 m east of Sully (hereafter 'the Site'). The Site is approximately 46.54 hectares (ha) in size and largely comprises agricultural land with defined field boundaries and pockets of woodland.

1.1.3. This Planning, Design and Access Statement (PDAS) has been prepared to accompany the statutory pre-application consultation (PAC). The PDAS analyses the Proposed Development in the context of the requirements of relevant planning policy and guidance (at national through to local levels) to provide an overarching analysis of the proposals in the context of site specific and general development policies. The PDAS also explains the design evolution of the Proposed Development and the accessibility of the Site.

1.1.4. In addition to this PDAS, the following documents have been prepared in support of the statutory PAC in accordance with national guidance, the Vale of Glamorgan Council (hereafter, the 'Council') validation checklist, and pre-application advice received from the Council:

- Full suite of plans;
- Planning, Design and Access Statement;
- Environmental Statement;
- Habitats Regulations Assessment;
- Tree Survey and Arboricultural Impact Assessment;
- Green Infrastructure Statement;
- Transport Statement;
- Flood Consequences Assessment (FCA) and Outline Drainage Statement;
- Minerals Resource Assessment;
- Outline Construction Traffic Management Plan (oCTMP);
- Outline Construction Environmental Management Plan (oCEMP); and
- Outline Battery Fire Safety Management Plan (oBSFMP).

1.2. Statutory Pre-Application Advice

1.2.1. Statutory Pre-application Advice was sought from the Council in respect of the Proposed Development in November 2025. A formal pre-application response was issued on 11th March 2026. A copy of the Pre-App Response is included in **Appendix A**.

1.2.2. The Council confirmed that national and local policy provides support, in principle, for renewable energy development. However, the Proposed Development would need to be acceptable in accordance with Policy MD19 of the Vale of Glamorgan Adopted Local Development Plan 2011-2026, and other planning considerations, such as:

- The location of the site within the countryside, and the South Penarth to Sully Green Wedge;
- Landscape and visual effects; particularly in areas adjacent to roads, Public Rights of Way (PRoW), the Wales Coast Path and [1]proposed active travel route;
- The siting, layout and design of the solar arrays, substation, Battery Energy Storage System (BESS) and associated energy infrastructure should be focused in areas where the solar arrays are less visible, before planting;
- Potential effects upon residential amenity, including noise, vibration lighting and glint and glare;
- Ecology, designated sites, protected species, trees, hedgerows, and wider green infrastructure, including the need to demonstrate application of the step-wise approach and delivery of biodiversity enhancement;
- Potential effects upon the historic environment, including Listed Buildings, County Treasures, the Scheduled Monument and archaeological interests;
- Construction and operational traffic, access arrangements and potential effects upon highway network and PRoW;
- Flood risk, surface water drainage and SuDS; and
- Potential aviation safeguarding effects associated with glint and glare.

1.2.3. The Council advised that landscape and visual effects are of particular importance when determining the acceptability of the Proposed Development. A comprehensive Landscape and Visual Impact Assessment (LVIA) was requested, as well as careful consideration of the location and extent of development within individual fields. The Council highlighted concerns regarding the triangular parcel of land adjacent to the junction of St Mary's Well Bay Road and Lavernock Road due to its visibility and rural character.

[1] Vale of Glamorgan Council (2025) *Planning Application 2025/00493/RG3*. Available online at: https://vogonline.planning-register.co.uk/Planning/Display/2025/00493/RG3

1.2.4. The pre-application advice also emphasised the importance of retaining existing trees and hedgerows where possible, to provide appropriate buffers to ecological features and residential receptors and carefully considering the siting and design of the substation, BESS, and associated infrastructure to minimise their influence on the rural and coastal landscape.

1.3. Environmental Impact Assessment

1.3.1. An Environmental Impact Assessment (EIA) Screening Opinion was issued by the Council on 27 March 2026 and, having considered the selection criteria in Schedule 3 of the EIA Regulations and the advice in *Welsh Office Circular 11/99: Environmental Impact Assessment* on establishing whether EIA is required, the Council concluded that the Proposed Development constitutes 'EIA development' within the meaning of the EIA Regulations.

1.3.2. The Council noted that the Proposed Development constitutes 'EIA development' due to:

- The size of the Proposed Development and the local context;
- The potential for significant adverse landscape and visual impacts;
- The potential impacts on mineral resource of national importance;
- The potential impacts on protected sites and species; and
- The potential impacts on archaeological resources.

1.3.3. Following the Screening Opinion received from the Council in relation to the Proposed Development, a request for an EIA Scoping Direction was submitted to the Council on 23 June 2026. An EIA Scoping Report was submitted as part of the request which set out the proposed scope and methodology for the environmental assessments to be undertaken as part of the EIA. A formal Scoping Direction was subsequently issued by the Council on 7 October 2026. Further details on the Scoping Opinion and how it has informed the draft Environmental Statement (ES) are provided in **Chapter 2: Approach to the EIA**.

1.3.4. A draft ES has been prepared as part of the statutory PAC based on the EIA Scoping Direction and stakeholder consultation. It includes an assessment of the likely significant environmental effects of the Proposed Development based on the existing and future environmental baseline.

1.4. Structure of the document

1.4.1. This PDAS is structured as follows:

- Section 2 describes the Site and its surroundings and Planning History;
- Section 3 sets out a detailed description of the Proposed Development;
- Section 4 sets out the national and local planning policy context for the Development;
- Section 5 assesses the proposed development in accordance with the planning policy framework; and
- Section 6 provides a summary and conclusions.

2. The Site, Surroundings, and Design Evolution

2.1. Site Description

2.1.1. The Site comprises approximately 46.54 ha of agricultural land, with defined hedgerow boundaries and clusters of woodland. The Site sits within an area of land owned and managed by Welsh Government. The wider Land Ownership Boundary and Site are illustrated in **Figure 1.1**. The Site is located within the Council's authority area, between the settlements of Penarth and Sully.

2.1.2. The Site is the area within which all components of the Proposed Development are proposed to be located, including areas required during construction (i.e. temporary construction compounds), operation and decommissioning.

2.1.3. The Site is bounded to the west by the B4267 Lavernock Road, and the Glamorgan Coast to the east and south. To the north, the Site is bound by Ysgol Llyn Derw, which opened in September 2026, Fort Road, and agricultural fields.

2.2. Site Characteristics and Existing Land Use

2.2.1. The Site is currently in agricultural use, predominately as arable farmland, and is subdivided into a series of irregularly shaped fields bounded by established hedgerows, trees and areas of woodland. Existing farm access points and informal agricultural tracks connect the fields across the Site.

2.2.2. The Welsh Government Predictive Agricultural Land Classification Map identifies the Site as comprising Grade 3b and Grade 4 agricultural land. Neither Grade 3b nor Grade 4 land constitutes Best and Most Versatile (BMV) agricultural land, which comprises Grades 1, 2 and 3a. The Predictive ALC Map therefore indicates that there is no BMV agricultural land within the Site.

2.2.3. The Site includes pockets of woodland, particularly within the western portion of the Site around St Mary's Well Bay Road. Some of these wooded areas are subject to Tree Preservation Orders (TPOs). There is no ancient woodland within the Site boundary.

2.2.4. The Site occupies an undulating coastal landscape, with gently sloping ground running broadly east–west through the centre of the Site and higher ground towards the northern and southern extents. Land levels generally fall from the B4267 Lavernock Road southwards towards the Bristol Channel, terminating at low coastal cliffs.

2.3. Access, Public Rights of Way and Recreation

2.3.1. The Site is currently accessed from the local highway network via Fort Road and St Mary's Well Bay Road. The surrounding road network comprises a combination of local roads connecting the settlements of Penarth and Sully, with Lavernock Road (B4267) forming the principal route through the wider area. Existing agricultural access tracks are present within the Site and provide connectivity between individual field parcels.

2.3.2. There are PRoW within and surrounding the Site. The Site includes four public footpaths, recognised as L1/5/1, L1/5/2, L1/7/1, and L1/8/1 on the Council's planning portal. Footpath L1/5/2 crosses the Site, connecting Fort Road and St Mary's Well Bay Road. Footpaths L1/7/1 and L1/8/1 run along the western boundary of the Site. Footpaths L1/5/1, L1/7/1, and L1/8/1 all form part of the Wales Coast Path.

2.3.3. Additional PRoW are located within the surrounding area, including Footpath L1/1/1 within Lavernock Nature Reserve (approximately 30m southeast of the Site) and a footpath crossing agricultural land associated with Cosmeston Lakes Country Park (approximately 500m north of the Site).

2.3.4. The consented Sully to Cosmeston Active Travel Route (application reference: 2025/00493/RG3) is also located adjacent to the north of the Site, which runs adjacent to the northern boundary. This cumulative development includes works for a shared pedestrian and cycle route from Sully to Cosmeston.

2.4. Site and Surrounding Environment

Statutory and Non-Statutory Ecological Designations

2.4.1. There are statutory ecological designations located close to the Site. The Severn Estuary Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar Site and Site of Special Scientific Interest (SSSI) are located approximately 160m east of the Site.

2.4.2. There are four SSSIs within 2km of the Site, comprising Penarth Coast SSSI, located adjacent to the south-eastern Site boundary, Llynnoedd Cosmeston / Cosmeston Lakes SSSI, located approximately 400m to the north, Sully Island SSSI, located approximately 1km to the south, and Cog Moors SSSI, located approximately 1.5km to the north-west

2.4.3. In addition, Cosmeston Lakes Country Park Local Nature Reserve is located to the north of the Site, whilst Lavernock Point Nature Reserve lies adjacent to the south-eastern boundary, with part of the reserve overlapping Penarth Coast SSSI.

2.4.4. There are several non-statutory ecological designations surrounding the Site. Two Sites of Importance for Nature Conservation (SINCs), Lavernock Point East and Ty-r-Orsaf, are located within 20m of the Site boundary. The Site also falls within a B-Lines area, a strategically important ecological network established to provide habitat connectivity for pollinating insects through a series of wildflower-rich habitat corridors. In addition, Lavernock Point Nature Reserve is located adjacent to the south-eastern Site boundary. Existing habitats within and around the Site include hedgerows, semi-natural woodland, scattered trees, scrub and grassland habitats, which contribute to the ecological connectivity of the wider landscape.

Habitats on Site

2.4.5. The Site comprises predominantly arable agricultural land, bounded by hedgerows and containing parcels of semi natural broadleaved and mixed woodland, scrub, semi-improved grassland, standing water and drainage features. Hedgerows and woodland within the Site qualify as Priority Habitats under the Environment (Wales) Act 2016.

Cultural Heritage

2.4.6. There are no designated heritage assets within the Site.

2.4.7. There are eight Grade II listed buildings within 1km of the Site, including the Original House at Lower Cosmeston Farm, located approximately 415m north of the Site, Swanbridge House, located approximately 500m south-west of the Site, and the Church of St Lawrence, located approximately 55m south-east of the Site.

2.4.8. There are three Scheduled Monuments within 1km of the Site. These comprise the Anti-aircraft and Coastal Battery West of Lavernock Point, located approximately 75m east of the Site, St Mary's Well Bay Pillbox, located approximately 400m south of the Site, and Sully Island 'Danish Fort', located approximately 1km south-west of the Site.

2.4.9. There are no Registered Historic Parks and Gardens, World Heritage Sites or Registered Battlefields within 1 km of the Site. The Penarth Conservation Area is located approximately 1.7 km to the north of the Site.

Natural Resources

2.4.10. There are no statutory Main Rivers within the Site. The nearest Main River is Sully Brook, located approximately 250m north of the Site. Several drainage ditches and small areas of standing water are present within the Site, whilst Cosmeston Lakes are located approximately 300m from the Site.

2.4.11. There are limited areas of Flood Zones 2 and 3 situated within the Site, associated with areas of surface water and ordinary watercourse flood risk. These areas are generally confined to the outer edges of the Site boundary. The Site is not located within a Source Protection Zone (SPZ). The Site is underlain by bedrock aquifers classified as Principal and Secondary B Aquifers, indicating the presence of groundwater resources of varying importance and vulnerability.

Air Quality and Noise

2.4.12. There are no Air Quality Management Areas (AQMAs) within or close to the Site.

2.4.13. There are no Noise Action Planning Priority Areas within the vicinity of the Site.

2.4.14. Sensitive noise receptors include nearby residential properties, The Bay Caravan Park, the Marconi Holiday Village, and users of the PRoW network.

Land Use and Other Environmental Constraints

2.4.15. Part of the Site lies within a Limestone Mineral Safeguarding Area and partially overlaps a Dormant Quarry Area. The mineral safeguarding and ground conditions of the Site have informed the design and assessment of the Proposed Development.

2.4.16. The Site has a history of quarrying, including areas of former limestone quarrying and associated Made Ground. A former landfill is also located adjacent to the north-eastern Site boundary. The Preliminary Risk Assessment (PRA) identified potential geo-environmental risks associated with former quarrying, infilling and the adjacent landfill; however, the Proposed Development has been designed to avoid identified areas of Made Ground, and the assessment concludes that risks to human health and controlled waters from potential on-site contamination sources are low. Further details are provided in Environmental Statement Volume IV, Appendix 11C: Preliminary Risk Assessment.

2.5. Planning History and Context

2.5.1. The planning history of the Site and surrounding area has been reviewed to identify historic and current planning applications of relevance to the Proposed Development.

2.5.2. For clarity, the review distinguishes between recent development in the immediate locality of the Site and comparable solar energy development within the wider Vale of Glamorgan.

Recent Local Planning Context

2.5.3. A review of recent planning applications in the vicinity of the Site has been undertaken to establish the relevant local planning context. The review has focused on planning applications determined or submitted within the last five years which, by virtue of their location, scale or nature, are considered relevant to understanding recent development activity in the surrounding area.

2.5.4. The applications considered most relevant to the local planning context are summarised in **Table 2-1**.

Table 2-1: Planning History

LPA Ref.	Address	Description	Outcome
2020/01170/OUT	Land at Upper Cosmeston Farm, Lavernock Road, Penarth	Outline application for residential development, a primary school, community space and public open space with all matters reserved other than access	Approve subject to Legal Agreement (outstanding)
2025/00493/RG3	Sully to Cosmeston Active Travel Route	Works for a shared pedestrian and cycle route (Active Travel Route), earthworks, landscaping and associated works from Sully to Cosmeston.	Approved

Comparable Solar Development

2.5.5. In addition to the local planning context, a review has been undertaken of planning applications for comparable solar energy developments within the Vale of Glamorgan. The purpose of this review is to provide context regarding the nature and scale of solar development that has recently been considered within the local authority area and the planning issues arising from those proposals.

2.5.6. The solar developments considered most relevant to the Proposed Development are summarised in **Table 2-2**.

Table 2-2: Consented Solar Developments in the Vale of Glamorgan.

Planning Reference	Location	Description
PEDW Ref: DNS CAS-02112-T2N0G8 Vale of Glamorgan Ref: 2024/00001/DNS	Land East of Dyffryn, approximately 5 km North-West of Barry Town Centre (Parc Worlton)	**Parc Worlton Solar Farm** Proposed Solar Farm with an installed generation capacity of 42MW and associated ancillary infrastructure, including a 132 kV substation.

Planning Reference	Location	Description
PEDW Ref: DNS CAS-01391-M3G6Q9 Vale of Glamorgan Ref: 2023/00001/DNS	Land at Fonmon, west of Cardiff Airport.	**East Aberthaw Solar** Proposed ground mounted photovoltaic solar farm with an electrical generating capacity of approximately 35MW together with associated equipment, infrastructure and ancillary works.
PEDW Ref: DNS/3245503 Vale of Glamorgan Ref: 2023/00002/DNS	Land off Five Mile Lane, Bonvilston (Oaklands Solar Farm)	**Oaklands Solar Farm and BESS** Proposed ground mounted PV solar farm and BESS with associated equipment, infrastructure, grid connection and ancillary work.
PEDW Ref: DNS/3267575 Vale of Glamorgan Ref: 2022/00001/DNS	Land at Vianshill Farm, The Downs, St Nicholas	**Parc Dyffryn Solar Park** Solar farm with BESS and associated ancillary infrastructure.
PEDW Ref: DNS/3261558 Vale of Glamorgan Ref: 2021/00001/DNS	Land at Brynwell Farm, on land between the A4232 and Leckwith village	**Brynwell Farm Renewable Energy Hub** Installation of a solar farm comprising ground mounted solar PV panels with a net installed generating capacity (AC) of up to 25 MW, including mounting system, battery storage units, inverters, underground cabling, grid connection hub, stock proof fence, CCTV, internal tracks and associated infrastructure, landscaping and environmental enhancements, for a temporary period of 40 years.

3. Description of the Proposed Development

3.1. Introduction

3.1.1. This section provides a description of the Proposed Development and its key components, as well as the overall need for the scheme. The Proposed Development would provide approximately 35 MW of renewable energy generation from solar PV modules, supported by a Battery Energy Storage System (BESS). The Proposed Development would contribute towards the decarbonisation of the energy system and Wales's transition to a low-carbon future.

3.2. Overview of Proposed Development

3.2.1. The main components of the Proposed Development consist of the following:

- Ground mounted Solar PV modules with a total installed capacity of approximately 35 MW. The PV modules will be mounted on fixed-tilt support structures facing south.
- Project Substation compound, which will include substation, switching and control equipment, storage areas, vehicular parking, material laydown areas, perimeter fencing, lighting, security infrastructure and associated ancillary equipment. BESS would also be included within the Project Substation compound.
- Balance of Solar System (BoSS) which comprises inverters, transformers and switchgear.
- Ancillary infrastructure works including underground cables, boundary treatments, security equipment, weather stations, landscaping, biodiversity enhancement, access tracks, earthworks, surface water management, and any other works identified as necessary to enable the development.
- Permanent diversion of Public Footpath L1/5/2.
- Associated safety and security infrastructure required for the construction, operation and decommissioning of the Proposed Development.

3.2.2. The following sections provide further detail on each component.

Ground Mounted Solar PV Generating Station

3.2.3. The proposed solar PV panel arrays are arranged to maintain the existing field boundaries and hedgerows. Hedgerow planting / strengthening is proposed as part of the Proposed Development to provide further visual screening of the Proposed Development from nearby views. The overall site layout is presented in **Figure 5.1**, which includes the indicative arrangement of the solar arrays.

3.2.4. The Proposed Development would include bifacial solar PV modules with an anti-reflective coating. Bifacial modules use a glass backsheet, allowing solar irradiance to be absorbed from both the front and rear sides of the module, thereby increasing the opportunity for energy generation. Each module would be approximately 2.4m x 1.3m and consist of a series of photovoltaic cells beneath a layer of toughened glass. The frame is typically built from anodised aluminium or steel. The Proposed Development is anticipated to comprise approximately 50,000 – 55,000 solar PV modules.

3.2.5. The solar PV modules would be fixed to a mounting structure in groups known as 'strings'. The string length is determined by the selected module and inverter characteristics, as well as the expected site temperatures. The modules are expected to be mounted on galvanised steel support structures known as 'tables' secured to the ground using driven piles or equivalent foundations.

3.2.6. Each string of solar PV modules will be mounted on a metal rack, known as a mounting structure. The mounting structure are usually supported by galvanized steel poles, pile-driven into the ground to a depth of approximately 1.5 – 3.0m, although this would be dependent on geotechnical studies and pull-out tests.

3.2.7. The mounting structure carrying the solar PV modules will be designed to face southwards on a fixed-tilt mounting structure. The solar PV modules would be angled at a slope of 10 to 30 degrees (currently assumed to be 17 degrees) from horizontal to optimise daylight absorption.

3.2.8. Once attached to the mounting structure, the minimum height of the lowest part of the solar PV modules will be approximately 80cm above ground level (AGL) and the maximum height of the solar PV modules will be approximately 3.5m AGL. A typical solar arrangement is presented in **Figure 5.2**.

Balance of Solar Systems

3.2.9. The BoSS refers to the components and equipment that convert the Direct Current (DC) electricity collected by the solar PV modules into Alternating Current (AC) electricity for export to the grid. The principal components of the BoSS include inverters, transformers, and switchgear as follows:

- Inverters: Inverters are required to convert the DC electricity collected by the PV modules into AC, which allows the electricity generated to be exported to the grid. Inverters are sized to cope with the characteristics of the DC electricity that is generated by the solar PV modules. The Proposed Development is anticipated to include approximately 95 string inverters, distributed throughout the solar arrays.
- Transformers: Transformers are required to 'step-up' the voltage of the electricity generated before it reaches the Project Substation. The Proposed Development is anticipated to include approximately six transformer stations.

- Switchgear: Switchgear refers to a variety of electrical control equipment such as disconnect switches, fuses and circuit breakers to control, protect and isolate electrical equipment. Switchgear is used both to de-energise equipment to safely allow maintenance to be carried out and to clear faults downstream.

3.2.10. The BoSS transformers and switchgear will be housed within a Transformer Station. The transformer stations will be arranged at intervals across the Site and would be mounted on concrete pads or concrete columns surrounded by permeable hardstanding. The transformer stations are typically the size of a shipping container, approximately 6m x 3m in plan, and up to approximately 3m in height. The Transformer Station would be painted in a colour in keeping with the surrounding environment, often with a green painted finish.

Project Substation Compound

3.2.11. The final design and configuration of the Project Substation will be determined through detailed design. The Project Substation compound dimensions have been specified to accommodate a 33kV substation. The compound will house transformers, switchgear, metering equipment, protection control and relay equipment, supervisory control and data acquisition (SCADA) and telecommunications systems, auxiliary power systems, and associated operational infrastructure.

3.2.12. A control building would also be provided, which may comprise either a painted block building or of prefabricated construction with external colours and finishes sensitive to the context to be confirmed prior to construction.

3.2.13. The substation building is anticipated to have a maximum height of approximately 3.5m AGL.

3.2.14. The BESS and substation infrastructure will be located within a shared fenced compound comprising areas of hardstanding, internal access roads, equipment maintenance areas and associated fire-water storage and containment infrastructure. The overall size of the compound is anticipated to be approximately 60 x 54m. Foundations for buildings and electrical infrastructure are anticipated to extend to a depth of up to approximately 1.7m below ground level.

3.2.15. Permanent palisade steel fencing (up to 2.75m high) will be installed around the perimeter of the Project Substation compound. The Project Substation compound would include lighting in accordance with relevant standards but will not be permanently lit. Refer to **Figure 5.4** for details regarding typical fencing.

Battery Energy Storage Systems

3.2.16. The BESS will be located within a dedicated area within the Project Substation compound. The BESS units would be housed within purpose-built containers with a maximum height of up to 3m. The BESS is designed to provide energy storage and grid support services, including energy shifting, frequency response, reserve capacity support, system balancing and energy arbitrage. It will primarily allow electricity generated by the Proposed Development to be stored and exported when required, while also supporting the stability and operation of the electricity network.

3.2.17. The BESS will comprise battery storage units, power conversion systems, medium-voltage power station transformers, switchgear, protection and control systems, SCADA equipment, heating, ventilation and air conditioning systems, fire detection and safety systems, underground cabling, access roads, fire-water storage and containment infrastructure, and associated ancillary equipment.

3.2.18. The requirement for lightning protection associated with the Project Substation and associated electrical infrastructure will be assessed during the detailed design stage. Where required, lightning protection measures will be incorporated into the final design in accordance with the relevant engineering standards and operational safety requirements.

Ancillary Development

On Site Cabling

3.2.19. On-site electrical cabling is required to connect the proposed infrastructure. Where possible, on-site cabling will be laid underground. The dimensions of the trenches will vary depending on the number of ducts they contain and are assumed to be up to approximately 1m wide, with a depth of approximately 1.2m.

3.2.20. Cabling between solar PV modules and the inverters will typically be required to be AGL (along a row of racks), fixed to the mounting structure, and then underground (between racks and the inverter input).

3.2.21. Cable routing would utilise existing gaps in hedgerows and be routed alongside internal access tracks to minimise ground disturbance, where reasonably practicable. Open-cut trenching methods would be used for much of the cable routing. However, there may be a requirement for specialist trenchless techniques (technique to be confirmed at detailed design stage) for a cable crossing beneath St Mary's Well Bay Road.

Fencing and Security

3.2.22. Security fencing will enclose the operational areas of the Proposed Development. The fields encompassing the solar PV modules and supporting infrastructure will likely be fenced using a typical 'deer fence' with wooden post supports which are expected to have a maximum height of 2.5m. Appropriate signage will be installed at access points and along the Site perimeter where required for operational, health and safety, security and wayfinding purposes. To maintain ecological connectivity and facilitate the movement of small mammals, the fencing will incorporate suitably sized mammal gates at appropriate intervals and locations.

3.2.23. Pole-mounted, inward-facing closed-circuit television (CCTV) systems incorporating passive infra-red (PIR) detectors will be deployed at regular intervals around the operational areas of the Proposed Development to provide sufficient surveillance coverage within the boundaries of each field, whilst avoiding the need for night-time lighting. The CCTV cameras will be mounted on timber support poles, with camera heights typically approximately 1.5m above the solar PV modules and up to 5m above ground level within the Project Substation Compound.

Drainage

3.2.24. A detailed operational drainage design will be carried out pre-construction, with the objective of ensuring that drainage of the land to the present level is maintained.

3.2.25. The design of new drainage systems will be agreed with the Council and other relevant stakeholder. This will include an attenuation pond incorporated within the site layout to provide temporary surface water storage and attenuate runoff rates. Field drainage or ditches are assumed to be required in some areas of the solar PV generating station, depending on the topography and hydrology.

Access

3.2.26. The Proposed Development would be permanently accessed via St Mary's Well Bay Road, which provides suitable entry points into the parcels which adjoin the public highway. The ecological mitigation area located in the east of the Site would be accessed via the existing field access points.

3.2.27. Internal access tracks will be provided throughout the Site to facilitate access for construction, operational and maintenance vehicles. Where practicable, the Proposed Development will utilise existing farm tracks, field gateways and gaps in field boundaries to minimise the need for new access infrastructure and avoid the loss of existing vegetation and habitats. Early survey work has identified that all fields designated for solar PV generating stations have suitable access points and are connected by an existing network of tracks currently used by agricultural machinery.

3.2.28. Approximately 2.4km of new access tracks would be required within the Site. The access tracks will typically comprise permeable stone surfacing formed from compacted crushed stone to a typical depth of approximately 300 to 500mm, subject to detailed ground investigations and engineering design. The tracks will have a typical width of approximately 4m, with a maximum width of up to 6m required for two-way vehicle movements and bends. The design of the internal access tracks has accounted for maintenance and emergency access requirements, including access for emergency services vehicles to the Project Substation Compound and BESS.

Landscaping, Habitat Management, Biodiversity Enhancement, and Amenity Improvements

3.2.29. The Proposed Development will include landscaping, habitat management, biodiversity enhancement, and amenity improvements. These measures will be sensitively designed to retain and enhance ecological networks, landscape character, and recreational connectivity including consideration of the setting, accessibility, and user experience of PRoW within and adjacent to the Site.

3.2.30. The key proposals as part of the Outline Landscape and Ecology Management Plan (oLEMP) include:

- The retention and long-term management of existing hedgerows, mature trees, established vegetation corridors, grassland areas and PRoW, which would be incorporated into the long-term landscape framework.
- Landscape enhancement measures, such as native species planting and hedgerow reinforcement, native tree planting, creation of a traditional orchard and establishment of species-rich wildflower grasslands.
- Existing PRoW, including the Wales Coast Path and local footpath network, will be retained, incorporated into the proposed layout, and maintained to ensure access for the lifetime of the Proposed Development.
- The diversion of Footpath VG/L/1/5/2 has been designed to maintain PRoW connectivity, whilst enhancing the recreational experience of users. It would be routed through the proposed orchard and species-rich wildflower habitat, providing a more attractive and biodiverse setting than the existing agricultural field edge and reducing the direct association between the route and operational solar infrastructure.
- Ongoing monitoring and adaptive habitat management to ensure the successful establishment and long-term delivery of landscape and biodiversity benefits.

3.2.31. Details of the proposed landscape and ecology strategy are set out within the oLEMP (see **Appendix 6G – Volume IV of the ES**).

Permanent Diversion of Public Footpath L1/5/2

3.2.32. Public Footpath L1/5/2 currently passes through the eastern parcel of the Site (see **Figure 3.1 – Volume III of the ES**).

3.2.33. As part of the Proposed Development, the Applicant is proposing the permanent diversion and enhancement of Public Footpath L1/5/2. The existing alignment of the footpath is difficult to access at the eastern boundary of the Site due to overgrown vegetation. The proposed diversion has been developed through discussions with the Council and is intended to improve the functionality, accessibility and user experience of the route. The diverted alignment would provide a clearly defined footpath with enhanced surface conditions and improved connectivity within the local PRoW network, representing an overall enhancement to recreational access.

3.2.34. The proposed diversion would provide a more accessible and clearly defined route through the Site, improving usability and connectivity for users. The diverted route has been designed to integrate with the Proposed Development and the landscape strategy, which is detailed within the oLEMP (see **Appendix 6G – Volume IV of the ES**). The proposed diversion of Public Footpath L1/5/2 is shown in Annex A of the oLEMP.

Grid Connection

3.2.35. The Proposed Development would need to be connected to the grid network. The Applicant is in discussion with National Grid Electricity Distribution (NGED) with regard to the likely grid connection location for the Proposed Development.

3.2.36. It is currently understood that the Proposed Development would connect to either Penarth Primary Substation or Sully Grid Bulk Supply Point. The final point of connection will be determined through the ongoing grid connection application process and contractual agreement with NGED.

3.2.37. The Project Substation would be connected to the NGED substation via underground electrical cabling. The grid connection cable route is anticipated to be predominantly located within the public highway corridor. The indicative grid connection options are shown on **Figure 5.6: Indicative Grid Connection – Volume III of the ES**.

3.2.38. The grid connection would be brought forward by NGED and therefore, the grid connection infrastructure does not form part of the Proposed Development application and is therefore considered as a cumulative development within the EIA.

3.3. Need for the project

3.3.1. There is a clear and established need to increase renewable electricity generation in Wales in response to climate change, the need to decarbonise the energy system and the importance of energy security. The Welsh Government has established a statutory target for Wales to achieve net zero greenhouse gas emissions by 2050, supported by interim targets including a 63% reduction in emissions by 2030 and an 89% reduction by 2040. The delivery of additional renewable energy generation forms an important part of achieving these objectives.

3.3.2. This need is reflected in the Welsh Government's renewable energy ambitions. Wales has adopted a target to meet the equivalent of 100% of its annual electricity consumption from renewable sources by 2035, alongside an ambition for 1.5 GW of renewable energy capacity to be locally owned within the same timescale. These targets represent a substantial increase in renewable generation and require the continued deployment of renewable energy projects across Wales.

3.3.3. The importance of delivering renewable energy is also recognised through national planning policy. Future Wales identifies renewable energy generation as key to the delivery of Wales's carbon budgets, with Policy 17 confirming strong support in principle for renewable and low-carbon energy development from all technologies and at all scales. Planning Policy Wales similarly identifies the benefits of renewable and low-carbon energy, both in responding to the climate emergency and increasing energy security, as being of paramount importance.

3.3.4. Against this background, there is a growing need to increase renewable generation and energy storage capacity to help meet future electricity demand and national carbon and greenhouse gas reduction targets. The Proposed Development responds directly to this identified need through the generation of renewable electricity, supporting the transition towards a low-carbon energy system and contributing towards Welsh Government renewable energy, decarbonisation and energy security objectives.

3.3.5. In the absence of the Proposed Development, the renewable electricity that it would generate would not be delivered and the contribution that the Proposed Development would make towards increasing renewable electricity supply would be lost. The Proposed Development therefore represents a tangible opportunity to deliver additional renewable energy generation as part of the wider transition of Wales's energy system.

3.3.6. This national need is reinforced at the local level. The Vale of Glamorgan Council declared a Climate Emergency in 2019 and has subsequently progressed Project Zero and its Climate Change Challenge Plan 2021-2030 as part of its response to climate change. The Proposed Development would contribute to these wider local decarbonisation objectives through the delivery of additional renewable electricity generation.

4. Design and Access Statement

4.1. Introduction

4.1.1. The Site of the Proposed Development is greater than 1 ha and, as such, represents a 'major development'. This means that a Design and Access Statement (DAS) is required to accompany the planning application.

4.2. Design Principles

4.2.1. The Proposed Development has been shaped through an iterative and multidisciplinary design process, informed by environmental assessment, technical and engineering requirements, stakeholder engagement and public consultation. A series of design principles were established to guide the selection of suitable development areas and subsequent refinement of the layout.

4.2.2. The principal design considerations included:

- working with the existing agricultural field pattern, topography and landscape structure;
- retaining existing hedgerows, trees and woodland wherever practicable and maintaining appropriate stand-off distances from these features;
- avoiding or reducing effects on sensitive ecological and heritage features;
- responding to landscape and visual sensitivities, including views from residential properties, roads, PRoW and the Wales Coast Path;
- maintaining appropriate separation from residential properties and recreational routes;
- directing development towards fields with sufficient size, accessibility and capacity to accommodate solar infrastructure;
- locating the Project Substation, BESS and other infrastructure to balance environmental, highway, engineering and operational requirements; and
- integrating landscape, ecological, drainage and access measures into the design to avoid or reduce environmental effects and provide opportunities for enhancement.

4.3. Site Selection and Assessment of Context

4.3.1. The Site forms part of a wider Welsh Government landholding between Penarth and Sully. The wider landholding was identified as having potential to accommodate solar photovoltaic development due to a combination of its scale, availability and location, together with suitable solar irradiance and generally favourable topography for solar energy generation. Importantly, the landholding also provides sufficient land to enable the Proposed Development to respond to environmental and amenity constraints, rather than seeking to maximise development across all available land. The Site has therefore emerged from a process of identifying those parts of the wider landholding most capable of accommodating development in an environmentally responsive manner.

4.3.2. The existing environmental and landscape context has been a key consideration in identifying the Site and informing the design response. The land predominantly comprises an established agricultural field pattern defined by hedgerows, trees and woodland, which provides an existing landscape framework within which the Proposed Development can be accommodated. The Site does not contain any international or nationally designated environmental sites and, as identified by the Welsh Government Predictive Agricultural Land Classification Map, comprises Grade 3b and Grade 4 agricultural land rather than BMV agricultural land. The design process has nevertheless recognised the environmental sensitivities within and surrounding the Site, including ecological features, heritage assets, the local landscape and views from publicly accessible locations, and has sought to avoid or reduce effects upon these receptors through the selection of land taken forward for development.

4.3.3. The relationship of the Site with surrounding settlements, individual residential properties and the network of PRoW has also been an important contextual consideration. The Site lies within a settled and publicly accessible landscape, including the Wales Coast Path and other local routes, and its potential visibility and relationship with nearby receptors has informed the extent of land considered suitable for development. Development has consequently been directed away from areas identified as more sensitive, with sufficient land available to maintain appropriate separation from residential properties and to respond to landscape and visual considerations.

4.3.4. The Site also benefits from characteristics that support the practical and efficient delivery of renewable energy infrastructure. It is located in proximity to the existing electricity network, including Penarth Primary Substation approximately 2.2 km to the north and Sully Grid Bulk Supply Point approximately 2.35 km to the north-west, providing an opportunity to connect to available grid capacity. The Site is accessible from the existing local highway network, while its scale provides sufficient flexibility to accommodate the generating infrastructure, associated substation and battery storage infrastructure, access and environmental mitigation within a coherent development.

4.3.5. Taken together, these characteristics identified the wider landholding as suitable for further consideration for solar development. Environmental appraisal, technical assessment and site surveys were subsequently used to identify the areas within the landholding with the greatest capacity to accommodate development and establish the Site taken forward for assessment. Following this site selection process, the design of the Proposed Development was progressively refined in response to the detailed environmental, technical and consultation evidence, as described below.

4.4. Design Development

4.4.1. Good design has been embedded within the Proposed Development from the outset. The design has evolved through an iterative and multidisciplinary process in which environmental assessment, technical and engineering requirements, stakeholder engagement and the characteristics of the Site have collectively informed the location, extent and arrangement of development. The process has not therefore involved the refinement of a predetermined layout. Instead, successive stages of assessment have been used to identify areas with greater capacity to accommodate development, avoid or reduce potential environmental effects and progressively refine the Proposed Development.

4.4.2. The design evolution has taken place through six principal stages which identifies the key Design Points at which assessment, consultation or technical development resulted in substantive changes to the design. The following sections explain the principal considerations and design responses at each stage.

Stage 1: Understanding the Site

4.4.3. The first stage established an understanding of the opportunities and constraints across the wider landholding, applying the design principles identified above. Site visits and GIS-based desktop analysis considered environmental, landscape, technical and engineering factors, including ecological and heritage designations and assets; the pattern of settlement, topography and land use; proximity to residential properties and publicly accessible areas and routes; existing woodland, trees and hedgerows; and existing infrastructure and utilities. These considerations were used to identify areas with initial potential to accommodate solar development, with areas affected by overriding or significant constraints avoided from an early stage and the remaining areas progressed for more detailed assessment.

Stage 2: Identifying the Proposed Development

4.4.4. The initial development areas were then subject to more detailed environmental and technical appraisal. This drew upon emerging evidence including the Preliminary Ecological Appraisal, draft Historic Environment Desk-Based Assessment and initial Landscape and Visual Appraisal, alongside preliminary engineering design and an indicative solar PV layout. The findings were brought together through an interdisciplinary design workshop, enabling the suitability of individual fields to be considered holistically rather than against individual environmental or technical constraints in isolation.

4.4.5. Each field was assigned a Good, Moderate or Poor rating reflecting its capacity to accommodate development. Poor ratings were associated with factors including steeper topography and proximity to recognisable landscape features such as Hopkins Mount; proximity to residential properties and St Lawrence's Church; potential views from residential properties and public roads; and practical considerations associated with smaller fields and accessibility. Only fields assessed as having Good or Moderate capacity were progressed, directing development towards those parts of the landholding considered more capable of accommodating solar infrastructure while limiting potential environmental effects.

Stage 3: Refinement following surveys

4.4.6. Detailed survey and assessment of the remaining areas provided the next level of design refinement. This included the PRA, geophysical survey and bat surveys, with the emerging findings again considered through interdisciplinary review. The process resulted in further areas being removed or modified where assessment identified greater environmental sensitivity or reduced capacity to accommodate development.

4.4.7. A notable outcome of this stage was the removal of the fields east of Fort Road. The geophysical survey identified anomalies indicating the potential presence of buried archaeological features within these fields, while landscape and visual assessment also identified sensitivities associated with views from the Wales Coast Path. The removal of these fields therefore avoided potential archaeological effects and reduced development within a visually sensitive part of the Site. The resulting design represented a reduced development area compared with the earlier option, increasingly concentrating development within areas identified as having greater capacity to accommodate change.

Stage 4: Siting the principal infrastructure

4.4.8. As the overall development area became more established, the design process focused increasingly on the location of key infrastructure, including the Project Substation and BESS. Potential locations were assessed against a combination of environmental, engineering and operational considerations, including separation from residential properties and PRoW, highway accessibility, opportunities for landscape screening and relevant land-use constraints.

4.4.9. This assessment identified two potential locations within the large field west of St Mary's Well Bay Road for more detailed consideration. The location and arrangement of the compound were subsequently informed by the relationship with residential properties and PRoW, highway accessibility, opportunities for landscape screening and the operational requirements of the infrastructure.

Stage 5: Responding to consultation and EIA screening

4.4.10. Receipt of the EIA Screening Opinion and pre-application advice from the Vale of Glamorgan Council provided a further opportunity to test the emerging design against the issues identified through consultation and assessment. Rather than treating the emerging layout as fixed, the feedback was used to inform further substantive changes to the extent and arrangement of development.

4.4.11. These changes included removing infrastructure from the triangular field adjacent to the B4267 Lavernock Road and St Mary's Well Bay Road, increasing separation between solar infrastructure and sections of the Wales Coast Path east of The Bay Caravan Park, and further refining the location of the Project Substation Compound. Following screening and discussions with the Vale of Glamorgan Council, the Project Substation Compound was also relocated outside the Mineral Safeguarding Area. Collectively, these changes reduced development within more sensitive areas and responded directly to issues identified through environmental assessment and consultation.

Stage 6: Developing the Proposed Development

4.4.12. The later stages of design development focused on integrating the individual components into a coherent scheme, informed by the developing findings of the EIA, technical design work and consultation. The site access, internal access tracks, drainage strategy, solar PV layout and landscape and ecological proposals were progressively refined to respond to identified environmental and technical constraints and opportunities. This included optimising the solar PV layout to maintain appropriate stand-off distances from hedgerows, trees and watercourses and incorporating an attenuation basin to manage surface water runoff associated with the Project Substation compound.

4.4.13. Landscape and ecological mitigation and enhancement were developed as integral components of this iterative design process. Areas for habitat creation and enhancement were identified and incorporated into the landscape design, including reinforcement of existing hedgerows, new native planting and the creation of species-rich grassland. These measures are intended to strengthen ecological connectivity, assist the integration of the Proposed Development into the landscape and contribute towards the delivery of Net Benefit for Biodiversity (NBB). An additional area of land to the east of the main solar array was also incorporated within the Site Boundary to facilitate ecological mitigation for skylark. These proposals are brought together through the Landscape and Ecological Masterplan and Appendix 6G: Outline Landscape and Ecology Management Plan (oLEMP), with the approach to NBB described further in Appendix 7G: Net Benefit for Biodiversity Report.

4.4.14. The landscape and ecological design also informed the proposed permanent diversion of Public Footpath L1/5/2. Working with the existing landscape structure and following discussions with the Local Planning Authority, the diverted alignment has been designed to provide a more accessible, clearly defined and attractive route through the Site while maintaining connectivity with the wider PRoW network. The route is integrated with the associated landscape and ecological enhancement measures, including the proposed traditional orchard and habitat proposals. Further details are provided in the oLEMP.

4.4.15. These later refinements demonstrate how environmental assessment and consultation have informed both the avoidance and reduction of potential effects and the identification of opportunities for landscape, ecological and recreational enhancement. The resulting landscape and ecological proposals therefore form part of the design of the Proposed Development itself and are described further in Section 4.5: Environmental and Landscape Design and the oLEMP.

4.5. Proposed Development

Use

4.5.1. The Site is currently in agricultural use, comprising a series of fields intersected by existing agricultural access tracks.

4.5.2. The Proposed Development would operate as a solar farm for a period of 40 years. Following the end of its operational life, a further application may be submitted to repower the site; alternatively, the development would be decommissioned. Decommissioning would comprise the dismantling and removal of above-ground infrastructure, together with the removal of foundations to a depth of approximately 1 m below ground level, with components recycled where practicable or otherwise appropriately disposed of. The potential for grassland establishment and continued agricultural use through animal grazing beneath the solar panels is also being explored.

Character

4.5.3. The Proposed Development comprises a temporary and reversible form of development, where solar panel arrays are generally limited in height and designed to follow the existing landform and field boundaries. The design aims to minimise visual effects and maintain the open character of the Site. The Proposed Development does not introduce urbanising features or built form that undermines the openness or function.

Amount

4.5.4. The Proposed Development comprises approximately 35 MW of solar generating capacity, together with the associated Project Substation, BESS, transformers, access, electrical and ancillary infrastructure described in the Project Description. Approximately 50,000–55,000 solar PV modules are anticipated, although the final number will be subject to detailed design and equipment selection. Chapter 5 of the ES provides the detailed parameters for each component of the Proposed Development.

4.5.5. The amount of development accommodated within the Site reflects the iterative design process described above. Rather than maximising infrastructure across the available landholding, the developable area has been progressively refined to respond to environmental and technical constraints and to provide appropriate separation from existing landscape features, residential and recreational receptors, together with areas for landscape, ecological and habitat enhancement.

Layout

4.5.6. The layout of the Proposed Development has been designed to balance efficient renewable energy generation with the environmental and landscape characteristics of the Site. The south-facing, fixed-tilt solar arrays have been arranged within the existing field pattern, retaining existing field boundaries and providing a minimum 10 m buffer between solar panels and existing hedgerows, trees and woodland blocks. A wider 15 m buffer is provided between solar panels and boundary vegetation along parts of the Wales Coast Path to maintain separation and a greater sense of openness for recreational users.

4.5.7. The layout also incorporates areas for landscape and habitat enhancement, including hedgerow reinforcement, native planting, species-rich grassland and a traditional orchard. In particular, the southern part of Field 6 has been kept free of solar panels, providing an open buffer to the neighbouring residential property and accommodating the orchard and enhanced route of Footpath L1/5/2. Existing hedgerow gaps will also be used for access tracks and cable routes where practicable to minimise vegetation removal. The layout of the Proposed Development is detailed in **Figure 5.6**.

Scale

4.5.8. The Site will cover an area of 46.54 hectares, which includes all the land required to construct, operate, and decommission the Proposed Development.

Appearance

4.5.9. The appearance of the Proposed Development reflects its function as renewable energy generating infrastructure, while seeking to integrate its components within the established agricultural landscape. The solar PV arrays will form the most extensive element but will comprise relatively low-profile structures arranged within the existing field pattern. The south-facing, fixed-tilt modules will have a maximum height of approximately 3.5 m above ground level, with their arrangement responding to field size, topography and environmental constraints. Existing field boundaries and hedgerows will be retained as far as practicable, helping to break up views of the arrays and maintain the established landscape structure.

4.5.10. Associated electrical infrastructure has been designed and arranged to limit its prominence within the Site. String inverters will generally be located beneath or adjacent to the solar arrays, while approximately six transformer stations, typically up to 3 m high, will be distributed across the Site and finished in a colour appropriate to the surrounding environment. Larger-scale infrastructure will be concentrated within the Project Substation compound, which will accommodate the substation and BESS. The substation infrastructure is anticipated to have a maximum height of approximately 3.5 m and the BESS will comprise purpose-built containers up to approximately 3 m high. The detailed specification, external materials and finishes of the BESS containers will be determined as part of the detailed design, with external colours and finishes selected to respond sensitively to the surrounding landscape context.

4.5.11. The appearance of these components will be considered alongside the wider landscape framework. Existing hedgerows, mature trees and vegetation corridors will be retained and supplemented by native planting, hedgerow reinforcement, tree planting and other landscape and habitat enhancements. Alongside the sensitive siting of infrastructure, these measures will help integrate the Proposed Development within its landscape setting and reduce its visual prominence as planting establishes.

Access and Movement

Permanent Access

4.5.12. The Proposed Development would be accessed from St Mary's Well Bay Road. The location of the permanent access was developed through consideration of three potential access points along the road, supported by swept path analysis and assessment of environmental, technical and highway constraints. The assessment considered the ability to safely accommodate construction and operational traffic, visibility and highway safety, the potential loss of vegetation, and relationships with existing road users, PRoW and other nearby receptors.

4.5.13. The assessment identified constraints associated with the initially proposed access to the western parcel due to its proximity to The Bay Caravan Park and the Wales Coast Path. The preferred access was consequently identified further north along St Mary's Well Bay Road, where an existing field access can be utilised, limiting vegetation removal principally to that required to achieve appropriate visibility splays. The location also provides greater separation from The Bay Caravan Park, avoids conflict with the Wales Coast Path and can safely accommodate construction and operational traffic. The preferred access arrangement was discussed with the Vale of Glamorgan Council Highways Officer, who confirmed that the proposed approach was acceptable.

4.5.14. Within the Site, existing farm tracks, field gateways and gaps in field boundaries will be utilised where practicable, minimising the requirement for new infrastructure and vegetation removal. Approximately 2.4 km of new access tracks are proposed, typically approximately 4 m wide and increasing up to 6 m where required for two-way movements and bends. The internal access arrangement also accommodates maintenance and emergency access, including to the Project Substation Compound and BESS.

Construction Arrangements

4.5.15. Construction traffic will access the Site from the B4267 Lavernock Road and St Mary's Well Bay Road, with the construction access points making use of existing field accesses. Three temporary construction compounds will be established across the Site and will be served by the existing and proposed internal access network. Details of construction traffic routing, delivery requirements and measures to manage effects on the local highway network are provided within the Transport Statement and outline Construction Traffic Management Plan.

4.5.16. The construction access arrangements have therefore been considered as part of the wider iterative design process, rather than solely as a construction-stage matter. In particular, the selection of the preferred access from St Mary's Well Bay Road has sought to balance highway safety and the requirements of construction vehicles with the avoidance of unnecessary vegetation removal and potential effects on nearby recreational and amenity receptors. Appropriate construction management measures, including the use of banksmen where required, will be implemented to manage construction vehicle movements.

Community Safety

4.5.17. Community safety has been considered through the design of the Site boundaries, access arrangements and security infrastructure, with a clear distinction maintained between publicly accessible areas and the operational areas of the Proposed Development. Solar PV generating areas and associated infrastructure will be enclosed by security fencing, typically comprising deer fencing supported by timber posts up to 2.5 m in height. Appropriate signage will be provided at access points and along the Site perimeter where required for health and safety, security and wayfinding purposes. The detailed fencing design will also maintain ecological connectivity through appropriately located mammal gates.

4.5.18. Security and surveillance will be provided by inward-facing CCTV incorporating passive infra-red (PIR) detection, positioned to provide surveillance coverage within the operational areas of the Site. This approach provides for effective monitoring while avoiding reliance on permanent night-time lighting, thereby limiting unnecessary lighting within the rural setting. CCTV associated with the solar arrays will be positioned approximately 1.5 m above the modules, with equipment within the Project Substation Compound extending up to 5 m above ground level.

Environmental and Landscape design

4.5.19. Landscape and ecological considerations have formed an integral part of the design of the Proposed Development and are brought together through the Landscape and Ecological Masterplan. The approach has been to integrate the Proposed Development within the existing landscape rather than relying solely on screening. The layout therefore responds to the established agricultural field pattern, with existing hedgerows, mature trees and vegetation corridors retained and managed where practicable and used to help structure and contain the Proposed Development. New planting has been designed to reinforce this existing landscape framework using locally appropriate native species, while avoiding extensive or uncharacteristic screening that would itself alter the character of the landscape.

4.5.20. The Landscape and Ecological Masterplan incorporates a range of measures which respond to particular parts of the Site and identified landscape, visual and ecological sensitivities. These include native hedgerow reinforcement and planting, strategic tree and scrub planting, species-rich wildflower and tussocky grasslands and the creation of a traditional orchard. Specific measures include planting around the Project Substation to provide additional containment from St Mary's Well Bay Road, new scrub planting adjoining the Wales Coast Path, and the creation of a traditional orchard and species-rich grassland through which the proposed diverted route of Footpath L1/5/2 will pass. These measures have been designed to provide landscape and visual mitigation while also strengthening habitat connectivity and biodiversity across the Site.

4.5.21. The landscape proposals also provide opportunities to improve the recreational experience associated with the PRoW network. The diversion of Footpath L1/5/2 has been designed to maintain connectivity while routing users through the proposed orchard and species-rich habitat, providing separation from operational solar infrastructure and a more diverse landscape setting. The establishment, management and monitoring of the landscape and ecological measures throughout the operational lifetime of the Proposed Development will be governed by the Landscape and Ecology Management Plan (LEMP), providing for the long-term management of landscape features and habitats.

4.6. Consultation

4.6.1. A non-statutory consultation was undertaken between December 2025 and January 2026. A total of 79 people attended the consultation events, with 73% of respondents living locally. Consultation responses indicated support for the Proposed Development being well-designed, efficient and environmentally sensitive, while contributing to the generation of clean and secure electricity. Concerns were raised regarding the amount of development in the area and potential disruption during construction. Respondents also raised concerns regarding the continued use of the area for walking, potential landscape and visual impacts, and the role of enhanced screening in protecting views. Responses also welcomed proposals to enhance conditions for nature and deliver biodiversity benefits.

4.6.2. The consultation responses have influenced the design of the Proposed Development, including through proposed hedgerow planting to provide additional visual screening from nearby viewpoints. In addition, the Proposed Development includes the diversion of Public Footpath L1/5/2 and enhancement of the local PRoW network, with the proposed diversion providing a more accessible and clearly defined route through the Site and improving usability and connectivity for users.

5. Planning Policy Context

5.1. Introduction

5.1.1. This section sets out the planning policy context for the Proposed Development. In accordance with Section 38 (6) of the Planning and Compulsory Purchase Act 2004, planning applications must be determined in accordance with the statutory development plan unless 'material considerations' indicate otherwise. The following section introduces the relevant legislative and policy framework in relation to planning matters. This covers international, national, regional and local planning policy.

5.2. National Planning Policy

Future Wales – the National Plan 2040 (February 2021)

5.2.1. Future Wales is the National Development Framework for Wales, setting the direction for development in Wales to 2040. Future Wales is a spatial plan with a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of communities.

5.2.2. Regarding climate change, Future Wales recognises that changes to our climate and weather patterns will have a significant impact on well-being on both current and future generations. Increasing temperatures and extreme weather events are putting pressure on ecosystems, infrastructure, the built environment and our unique landscape and cultural heritage, which all contribute to social, economic and ecological resilience.

5.2.3. Future Wales identifies that Wales can become a world leader in renewable energy technologies, in part because of the potential for solar generation, and also because of the commitment to ensuring the planning system provides a strong lead for renewable energy development.

5.2.4. Policy 17 states that the Welsh Government strongly supports renewable energy development in principle, and decision makers must give significant weight to the need to meet Wales's international commitments and targets set for the consumption of renewable energy. All development proposals however must demonstrate that they will not have an unacceptable adverse impact on the environment.

5.2.5. Policy 18 states:

"Proposals for renewable and low carbon energy projects (including repowering) qualifying as Developments of National Significance will be permitted subject to Policy 17 and the following criteria:

1. *outside of the Pre-Assessed Areas for wind developments and everywhere for all other technologies, the proposal does not have an unacceptable adverse impact on the surrounding landscape (particularly on the setting of National Parks and Areas of Outstanding Natural Beauty);*
2. *there are no unacceptable adverse visual impacts on nearby communities and individual dwellings;*
3. *there are no adverse effects on the integrity of Internationally designated sites (including National Site Network sites and Ramsar sites) and the features for which they have been designated (unless there are no alternative solutions, Imperative Reasons of Overriding Public Interest (IROPI) and appropriate compensatory measures have been secured);*
4. *there are no unacceptable adverse impacts on national statutory designated sites for nature conservation (and the features for which they have been designated), protected habitats and species;*
5. *the proposal includes biodiversity enhancement measures to provide a net benefit for biodiversity;*
6. *there are no unacceptable adverse impacts on statutorily protected built heritage assets;*
7. *there are no unacceptable adverse impacts by way of shadow flicker, noise, reflected light, air quality or electromagnetic disturbance;*
8. *there are no unacceptable impacts on the operations of defence facilities and operations (including aviation and radar) or the Mid Wales Low Flying Tactical Training Area (TTA-7T);*
9. *there are no unacceptable adverse impacts on the transport network through the transportation of components or source fuels during its construction and/or ongoing operation;*
10. *the proposal includes consideration of the materials needed or generated by the development to ensure the sustainable use and management of resources;*
11. *there are acceptable provisions relating to the decommissioning of the development at the end of its lifetime, including the removal of infrastructure and effective restoration. The cumulative impacts of existing and consented renewable energy schemes should also be considered".*

5.2.6. The points highlighted in the above Policy will be explored in further detail in Section 6.

5.3. Planning Policy Wales, Edition 12

5.3.1. Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015, and other key legislation. Table 5-1 sets out the policies which are relevant to the Site and Proposed Development.

Table 5-1: Planning Policy Wales (Edition 12, February 2024)

Para. No.	Policy Text
1.18	Legislation secures a presumption in favour of sustainable development in accordance with the development plan unless material considerations indicate otherwise to ensure that social, economic, cultural and environmental issues are balanced and integrated.
2.8	Planning policies, proposals and decisions must seek to promote sustainable development and support the well-being of people and communities across Wales.
2.15 and Figure 5	The national sustainable placemaking outcomes should be used to inform the assessment of development proposals: • Creating and Sustaining Communities • Growing Our Economy in a Sustainable Manner • Making Best Use of Resources • Maximising Environmental Protection and Limiting Environmental Impact: • Facilitating Accessible and Healthy Environments
3.43	Planning authorities must prioritise the use of suitable and sustainable previously developed land and/or underutilised sites for all types of development.
5.7.1	The Welsh Government's highest priority is to reduce demand wherever possible and affordable. Low carbon electricity must become the main source of energy in Wales. Renewable electricity will be used to provide both heating and transport in addition to power. The future energy supply mix will depend on a range of established and emerging low carbon technologies, including biomethane and green hydrogen.

Para. No.	Policy Text
5.7.2	Overall power demand is expected to increase as a result of growing electrification of transport and heat. In order to ensure future demand can be met, significant investment will be needed in energy generation, transmission and distribution infrastructure. The system will need to integrate renewable generation with storage and other flexibility services, in order to minimise the need for new generation and grid system reinforcement. Collectively we will need to concentrate on reducing emissions from fossil fuel sources, whilst driving further renewable generation which delivers value to Wales.
5.7.5	Planning applications for onshore generating projects in Wales which have an installed generation capacity of between 10MW and 350MW (there is no upper limit for onshore wind generating stations) are made directly to the Welsh Ministers under the Developments of National Significance (DNS) process and considered under policies in Future Wales.
5.7.6	The planning system should secure an appropriate mix of energy provision, which maximises benefits to our economy and communities whilst minimising potential environmental and social impacts.
5.7.9	The Welsh Government's preferred position on new power lines is that, where possible, they should be laid underground. However, it is recognised that a balanced view must be taken against costs which could render otherwise acceptable projects unviable. Where undergrounding of lines is not possible or applicable, proactive engagement with energy companies and the public to mitigate the visual impact of any potential new transmission lines should take place.
5.7.14	The Welsh Government has set targets for the generation of renewable energy: • for Wales to generate 70% of its electricity consumption from renewable energy by 2030; • for one Gigawatt of renewable energy capacity in Wales to be locally owned by 2030; and • for new energy projects to have at least an element of local ownership.
5.7.15	The planning system has an active role to help ensure the delivery of these targets, in terms of new renewable energy generating capacity and the promotion of energy efficiency measures in buildings.
5.9.1	…planning authorities should seek to ensure their area's full potential for renewable and low carbon energy generation is maximised and renewable energy targets are achieved…
5.9.10	Planning authorities should ensure development plan policies are supportive of renewable and low carbon energy development in all parts of Wales, direct developments to the right locations and set out clearly the local criteria against which proposals will be evaluated.

Para. No.	Policy Text
6.4.3	Development plan strategies, policies and development proposals must consider the need to: • support the maintenance and enhancement of biodiversity and the resilience of ecosystems; • ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats, including the most recent targets set out in the 2022 UN Global Biodiversity Framework; • ensure statutorily and non-statutorily designated sites and habitats are properly protected and managed and their role at the heart of resilient ecological networks is safeguarded; • safeguard protected species and species of principal importance and existing biodiversity assets from direct, indirect or cumulative adverse impacts that affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water, air and soil, including peat; and • secure the maintenance and enhancement of ecosystem resilience and resilient ecological networks by improving diversity, extent, condition, and connectivity.

Relevant Technical Advice Notes

5.3.2. Each Technical Advice Note (TAN) provides detailed planning advice on a different subject. They should be read alongside PPW which sets out the land use planning policies. The relevant TANs to this application have been set out below:

- TAN 5: Nature Conservation and Planning (September 2009);
- TAN 6: Planning for Sustainable Rural Communities (July 2010)
- TAN 24: The Historic Environment (March 2026)

5.4. Local Planning Policy

Vale of Glamorgan Adopted Local Development Plan 2011- 2026

5.4.1. The Council's Local Development Plan (LDP) provides the overarching strategic planning framework for the county area to 2026. The LDP was formally adopted on the 28 June 2017, and sets out the vision, objectives, strategy and policy for development in the county to 2026.

5.4.2. A Replacement Local Development Plan (RLDP) is currently being prepared for the period 2021 to 2036. Consultation on the RLDP took place in January – March 2026 and it is anticipated that the RLDP will be adopted in September 2027.

5.4.3. The policies from the LDP considered relevant to the Proposed Development include:

Table 5-2: Local Plan Policies

Policy	Relevance to the Proposed Development
Policy SP1 – Delivering the Strategy. This policy seeks to improve the living and working environment, promote enjoyment of the countryside and coast and manage important environmental assets.	The Proposed Development has been designed to preserve and, where appropriate, enhance the natural environment of the Vale of Glamorgan, in line with the objectives of Policy SP1. The Site is not located within a Conservation Area, Registered Historic Landscape, Special Landscape Area, or the Glamorgan Heritage Coast. However, it lies in proximity to several statutory and non-statutory ecological designations, including the Severn Estuary SAC/SPA/Ramsar and the Penarth Coast SSSI. The design of the Proposed Development has been informed by environmental constraints, incorporating appropriate stand-offs and buffers to avoid direct impacts on these designated sites. The layout retains existing hedgerows and woodland features and has been developed through an iterative design process informed by ecological, landscape and heritage assessments. The Proposed Development is temporary in nature, with an operational lifespan of approximately 40 years, after which the Site can be decommissioned and restored to its current agricultural use. Accordingly, the Proposed Development is considered to preserve the environmental and heritage value of the Site and its surroundings and accords with Policy SP1.
Policy SP9 – Minerals. This policy seeks to ensure the provision of a continuous supply of minerals to meet local and regional needs.	The Proposed Development is located within a Limestone Mineral Safeguarding Area and partially overlaps a Dormant Quarry Area. The Proposed Development comprises a temporary form of development, with an anticipated operational lifespan of up to approximately 40 years. The solar arrays and associated infrastructure are designed to minimise ground disturbance and do not involve permanent development that would sterilise underlying mineral resources. Following decommissioning, the Site can be restored to a condition that would allow for the future extraction of minerals, if required. The siting of the Project Substation Compound to minimise any potential conflict with safeguarded mineral resources. The Proposed Development does not prejudice the long-term availability of minerals and is therefore consistent with the safeguarding objectives of Policy SP9.

Policy	Relevance to the Proposed Development
SP10 – Built and Natural Environment. This policy states that development proposals must preserve and where appropriate enhance the rich and diverse built and natural environment and heritage of the Vale of Glamorgan,	The Proposed Development has been designed to preserve the built and natural environment and heritage assets within and surrounding the Site. The Site is not located within any designated heritage assets; however, it lies within the setting of a number of ecological and landscape designations, including the Severn Estuary SAC/SPA/Ramsar, Penarth Coast SSSI and local SINCs. The design has incorporated appropriate buffers and mitigation measures to ensure that there are no direct impacts on these assets. The Proposed Development retains and enhances existing landscape features, including hedgerows and woodland, and includes opportunities for biodiversity enhancement across the Site. Environmental assessments, including ecological, landscape and heritage studies, have informed the design and demonstrate that the Proposed Development will not result in unacceptable harm to designated or non-designated assets. The temporary and reversible nature of the Proposed Development further ensures that the Site can be restored at the end of its operational life. The Proposed Development is therefore considered to accord with Policy SP10.
Policy MG18 – Green Wedges. This policy identifies the location of Green Wedges to prevent the coalescence of settlements and to retain the openness of land.	The Proposed Development is located within a designated Green Wedge between Dinas Powys, Penarth and Llandough. The Proposed Development comprises a temporary and reversible form of development, with solar panel arrays typically limited in height and designed to follow the existing landform and field boundaries. The layout has been developed through an iterative design process to minimise visual effects and maintain the open character of the Site. Existing hedgerows, field boundaries and areas of woodland are retained and enhanced, and additional planting is proposed to provide further screening and integration within the landscape. The Proposed Development does not introduce urbanising features or built form that would undermine the openness or function of the Green Wedge in preventing coalescence between settlements. Following decommissioning, the Site can be restored to its current agricultural use. Accordingly, the Proposed Development is considered to preserve the openness of the Green Wedge and accords with Policy MG18.

Policy	Relevance to the Proposed Development
Policy MG22 – Development in Minerals Safeguarding Areas. This policy sets out the requirements that must be met to allow new development in an area of known mineral resource.	The Proposed Development is located within a Limestone Mineral Safeguarding Area and partially overlaps a Dormant Quarry Area. The development comprises a temporary use with an anticipated operational lifespan of approximately 40 years. The design minimises ground disturbance, with solar arrays mounted on driven posts and limited excavation required. No permanent structures are proposed that would prevent future access to underlying mineral resources. Following decommissioning, all infrastructure can be removed, and the Site restored to a condition that would allow for future mineral extraction if required. The Proposed Development therefore would have no significant impact on the possible working of the safeguarded resource. The proposal does not result in the unnecessary sterilisation of minerals and is considered to comply with Policy MG22.
Policy MG30 – Local Search Areas for Solar Energy. This policy states that proposals for solar energy generation schemes up to 50 mw will be permitted in Local Search Areas for solar energy provided there are no unacceptable effects on amenity, heritage assets or the environment.	The Site does not fall within a designated Local Search Area for solar energy, however during the site selection process a review of environmental, technical and planning considerations was undertaken, this included consideration of ecology, landscape and visual effects, cultural heritage, flood risk, agricultural land classification, access arrangements, proximity to residential receptors and the capacity of the local electricity network. The Proposed Development comprises a solar PV generating station of circa 35MW, which falls within the scale supported by the policy. Environmental constraints, including ecological designations and heritage assets, have been considered through the design process, with appropriate buffers and mitigation measures incorporated to avoid or minimise potential impacts. Technical assessments submitted in support of the application demonstrate that there would be no unacceptable effects on amenity, heritage assets or the environment. The Proposed Development is therefore considered to align with the objectives of Policy MG30 and national policy support for renewable energy generation.

Policy	Relevance to the Proposed Development
Policy MD1 – Location of New Development . This policy sets out the requirements for new development on unallocated sites.	The Site comprises Grade 3b and Grade 4 agricultural land and does not contain BMV agricultural land. The Proposed Development would therefore avoid the development of higher-quality agricultural land, while allowing continued agricultural use, including potential grazing, during its operational lifetime. The Proposed Development represents has been designed to ensure that there are no unacceptable impacts on the character of the surrounding area. The Site does not comprise BMV agricultural land, and allows for continued agricultural use (such as grazing) throughout its operational lifespan. The Proposed Development benefits from access to the existing highway network and will utilise existing infrastructure where possible. Construction and operational impacts are limited and can be appropriately managed through mitigation measures. The Proposed Development does not give rise to unacceptable impacts in respect of flood risk, water environment, or wider environmental considerations. The Proposed Development promotes renewable energy generation, contributing to sustainable development objectives, while ensuring that environmental effects are appropriately managed. Accordingly, the Proposed Development is considered to comply with the requirements of Policy MD1.

Policy	Relevance to the Proposed Development
Policy MD2 – Design of New Development. This policy sets out the key principles that developers should consider in respect of design, amenity and access in order to create high quality, healthy, sustainable and locally distinct places.	The Proposed Development has been designed to a high standard, responding appropriately to the character of the surrounding rural landscape. The layout of the solar PV arrays follows the existing field pattern and landform, with heights kept low and consistent to ensure a recessive appearance within the landscape. Existing hedgerows, woodland and field boundaries are retained and form a key part of the design, supplemented by additional landscaping to enhance integration with the surrounding environment. The scale, form and layout of the Proposed Development have been informed by an iterative design process which has taken into account environmental, landscape and technical constraints. The Site does not introduce built form that is incongruous with the rural context, with development limited to solar arrays and small-scale ancillary infrastructure. The Proposed Development will provide a safe and functional access arrangement utilising the existing highway network and tracks, ensuring no unacceptable impact on highway safety. Traffic generation will be limited to the construction phase, with negligible operational traffic. Residential amenity has been considered through appropriate siting and separation distances from nearby receptors, and the lack of operational noise, lighting or human activity ensures no significant disturbance during operation. The Proposed Development incorporates sensitive landscaping and biodiversity enhancements, including retention and management of existing habitats and the creation of new ecological features. In addition, the Proposed Development contributes to climate change mitigation through the generation of renewable energy. Accordingly, the Proposed Development is considered to comply with the requirements of Policy MD2.

Policy	Relevance to the Proposed Development
Policy MD7 – Environmental Protection. This policy states that development proposals will be required to demonstrate they will not result in an unacceptable impact on people, residential amenity, property and / or the natural environment. Where impacts are identified developers must demonstrate that appropriate measures can be taken to minimise the impact identified to an acceptable level.	The design and supporting assessments demonstrate that the Proposed Development will not result in unacceptable impacts in respect of pollution, land contamination, noise, vibration, air quality or light. The Proposed Development will operate without external lighting and with minimal on-site activity, thereby limiting disturbance. Flood risk and the water environment have been considered in the design, with appropriate drainage measures to ensure that runoff is managed and that the Proposed Development does not increase flood risk on or off site. The Site is not located within an area of high flood risk, and the development will be designed in accordance with national policy requirements. Any potential impacts identified can be appropriately mitigated through standard construction and environmental management measures, including a CEMP. The Proposed Development is therefore considered to comply with Policy MD7.

Policy	Relevance to the Proposed Development
Policy MD9 – Promoting Biodiversity. This policy requires development proposals to conserve and where appropriate enhance biodiversity interests unless the need for the development clearly outweighs the biodiversity value of the site or impacts of the development can be satisfactorily mitigated and acceptably managed.	The Proposed Development has been designed to conserve and enhance biodiversity interests at the Site. Existing ecological features, including hedgerows, woodland and field margins, will be retained and protected. The Site lies in proximity to designated ecological sites, including the Severn Estuary SAC/SPA/Ramsar and Penarth Coast SSSI. The design has incorporated appropriate buffers and layout amendments to avoid direct impacts on these designations. A Preliminary Ecological Appraisal and supporting assessments have informed the development, identifying opportunities for habitat creation and enhancement, including species-rich grassland and improved habitat connectivity. The implementation of mitigation and enhancement measures, alongside a long-term Habitat Management Plan, will ensure that impacts are appropriately managed and that a net benefit for biodiversity is achieved. The Proposed Development is therefore considered to comply with Policy MD9.
Policy MD17 – Rural Enterprise. This policy sets out the requirements for the development of small scale employment uses that promote rural enterprise	The Proposed Development represents an appropriate form of rural diversification, providing renewable energy generation within an agricultural setting. The Site will remain in agricultural use for grazing throughout the operational lifespan of the development, ensuring that it continues to function as rural land. The Proposed Development involves minimal permanent built form, limited to small-scale ancillary infrastructure required for operation. The scale and nature of the Proposed Development are compatible with its rural location and do not prejudice existing land uses. Accordingly, the Proposed Development supports rural enterprise and diversification in accordance with Policy MD17.

Policy	Relevance to the Proposed Development
Policy MD19 – Low Carbon and Renewable Energy Generation. This policy sets out the requirements for proposals for the generation of low carbon and renewable energy. It requires cumulative impacts to be considered and proposals to be informed by a landscape and visual impact assessment.	The Proposed Development directly accords with Policy MD19 through the provision of a solar photovoltaic generating station with an output of approximately 35MW, contributing to the generation of low carbon and renewable energy. The Site has been selected through a robust site selection process, considering environmental, technical and operational constraints. The land is not classified as BMV agricultural land, and the Proposed Development allows for continued agricultural use. Potential impacts on landscape, heritage, ecology and residential amenity have been assessed through supporting technical studies. The design incorporates mitigation measures, including sensitive siting, landscape planting and buffers, to ensure that there are no unacceptable effects on these interests. The Proposed Development will operate without significant noise, lighting or emissions, and therefore will not adversely affect residential amenity or environmental receptors. The temporary and reversible nature of the development ensures that the Site can be restored following decommissioning. The Proposed Development will contribute to local and national renewable energy targets and provides a source of clean energy, supporting climate change objectives. The proposal is therefore considered to comply with Policy MD19.

5.5. Supplementary Planning Guidance

5.5.1. In addition to the adopted LDP, the Council has approved Supplementary Planning Guidance (SPG). SPG's are material considerations produced to guide the public, applicants and developers when preparing planning applications.

Renewable Energy SPG (2019)[2]

5.5.2. The Renewable Energy SPG demonstrates the Council's positive and proactive approach to supporting renewable energy development within the Vale of Glamorgan. It recognises the importance of renewable energy in addressing climate change and meeting national targets, and promotes development where environmental, landscape and amenity impacts can be appropriately considered and mitigated.

[2] Vale of Glamorgan Council (2019) *Renewable Energy Supplementary Planning Guidance*. March 2019. Available online at: https://www.valeofglamorgan.gov.uk/Documents/Living/Planning/Policy/SPG/Renewable-Energy-SPG-March-2019.pdf

5.5.3. The SPG also draws on the Council's Renewable Energy Assessment to identify areas with potential for solar and other technologies (Sections 6.1.2-6.1.4), while confirming that proposals outside identified areas can still be supported where justified on their merits. Accordingly, the SPG provides clear evidence that the Council supports appropriately located and well-designed renewable energy schemes, such as the Proposed Development, subject to compliance with relevant planning and environmental considerations

Other Relevant SPGs

5.5.4. The following SPGs are also of relevance:

- Biodiversity and Development SPG (2018). This SPG provides guidance to assist developers in ensuring development takes a proactive approach towards achieving a high quality natural environment and meets statutory duties and social responsibilities as required by statutory legislation and national policy.
- Design in the Landscape SPG. This SPG provides advice and guidance on how design issues affecting the landscape are best addressed in new development proposals.
- Mineral Safeguarding SPG (2018). This SPG provides guidance on how planning applications within Minerals Safeguarding Areas are considered and requirements for such applications.
- Trees, Woodland, Hedgerows and Development SPG (2018). This SPG provides guidance to developers on how to consider trees and hedgerows within new development.

5.5.5. The guidance provided in these SPGs has been considered within section 6 of this report.

5.6. Other Material Considerations

5.6.1. The following documents have been identified as material considerations which are key drivers for the need for renewable energy developments and support the Proposed Development.

Energy Generation in Wales (2023)[3]

5.6.2. The Energy Generation in Wales 2023 report sets the energy generation capacity in Wales at the end of 2023 and analyses how it has changed over time. The report identifies that renewable electricity generation has increased over time, with 176 MW of new renewable electricity capacity installed in 2023. The report estimates that Welsh renewable electricity generation is equivalent to 53% of Wales' current electricity consumption. The Welsh Government has set a target for renewable electricity generation to be equivalent to 100% of annual electricity consumption by 2035.

5.6.3. Solar PV development forms a key component of this transition, with more than 15,300 new solar PV projects commissioned in 2023, contributing to installed renewable capacity and providing an opportunity to expand generation further in appropriate locations.

Energy Wales: A Low Carbon Transition (2012)[4]

5.6.4. This document sets out the Welsh Government's strategy for moving towards a low-carbon economy by transforming the energy system, reducing emissions and increasing the use of renewable energy across Wales. It identifies renewable energy, as central to this transition, supporting their continued expansion at both large and small scales to reduce reliance on fossil fuels and help meet future energy demand.

Energy Wales: A Low Carbon Transition Delivery Plan (2014)[5]

5.6.5. This document sets out the Welsh Government's delivery framework for implementing the strategy established in Energy Wales: A Low Carbon Transition (2012). It outlines how Welsh Government intends to achieve a low-carbon energy system by coordinating policy, investment and programme delivery across key sectors, including renewable energy, energy efficiency and infrastructure development.

5.6.6. This document emphasises maximising economic and community benefits from renewable energy developments, alongside supporting investment, supply chains and skills across Wales to enable delivery.

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[3] Welsh Government (2025) *Energy Generation in Wales 2023*. Available online at: https://www.gov.wales/sites/default/files/publications/2025-02/energy-generation-in-wales-2023.pdf

[4] Welsh Government (2012) *Energy Wales: A Low Carbon Transition*. Available online at: https://www.gov.wales/sites/default/files/publications/2019-07/energy-wales-a-low-carbon-transition.pdf

[5] Welsh Government (2014) *Energy Wales: A Low Carbon Transition Delivery Plan*. Available online at: https://www.gov.wales/sites/default/files/publications/2019-07/energy-wales-a-low-carbon-delivery-plan.pdf

Practice Guidance – Planning Implications of Renewable and Low Carbon Energy (2011)[6]

5.6.7. This guidance provides a framework for assessing the planning implications of renewable and low carbon energy development, identifying the potential positive and negative environmental, social and economic effects associated with different technologies. It confirms that planning decisions should balance the need to increase renewable energy generation with consideration of site-specific impacts, including landscape, ecology, heritage and local amenity, supported by appropriate mitigation where necessary.

Green Wedge Background Paper (2013)[7]

5.6.8. This Background Paper considers the need for additional green wedge designations resulting from the Vale of Glamorgan LDP 2011 – 2026. The Background Paper confirms that Green Wedges are designated to prevent settlement coalescence, protect the openness of the countryside, safeguard undeveloped land from speculative development and maintain the setting of settlements, particularly in areas subject to development pressure such as the South-East Vale.

5.6.9. The Site lies within a designated Green Wedge between Penarth, Sully and surrounding settlements, this is considered further in section 6.

[6] Welsh Assembly Government (2011) *Practice Guidance: Planning Implications of Renewable and Low Carbon Energy*. February 2011. Available online at: https://www.gov.wales/sites/default/files/publications/2018-09/planning-implications-renewable-low-carbon-energy-development.pdf

[7] Vale of Glamorgan Council (2011) *Green Wedges Background Paper*. Available online at: https://www.valeofglamorgan.gov.uk/Documents/Living/Planning/Policy/LDP/Background%20Papers/Green_Wedge_Background_Paper_2011.pdf

6. Planning and Environmental Considerations

6.1. Introduction

6.1.1. This section identifies the main planning considerations arising from the LDP including the relevant SPGs applicable to this planning application as well as the material considerations warranting the grant of planning permission for the Proposed Development.

6.2. Planning Considerations

6.2.1. The following sections assess the Proposed Development against the principal planning considerations identified through national and local planning policy and the environmental assessment process. The assessment should be read alongside the detailed policy review in Section 5 and draws upon the findings of the ES and other supporting application documents. Rather than repeating the policy framework or technical assessments, this section considers how the Proposed Development responds to the relevant policy requirements and whether any identified effects weigh against the grant of planning permission.

Principle of Development and need for the scheme

6.2.2. The Proposed Development is supported by national planning policy through Future Wales and PPW, alongside relevant policies within the Council's LDP.

6.2.3. There is growing need for renewable energy generation and storage capacity, to meet increasing electricity demand in the future and national carbon and greenhouse reduction targets. The Proposed Development will aid in achieving the national target of 100% electricity coming from renewable sources by 2035.

6.2.4. The Proposed Development is located within the South Penarth to Sully Green Wedge and has therefore been designed and assessed with particular regard to the preservation of openness and the purposes of the Green Wedge. The implications of the Proposed Development for the Green Wedge, including its temporary and reversible nature, are considered further below.

6.2.5. Accordingly, the principle of development would be generally acceptable provided that there are no adverse impacts in other regards, including visual and residential amenity, biodiversity and landscape, or highway safety. These factors are addressed in detail below.

Green Wedge

6.2.6. The Site is located within the South Penarth to Sully Green Wedge, as designated under Policy MG18(6) of the Vale of Glamorgan LDP. Policy MG18 seeks to protect the open nature of designated Green Wedges from inappropriate development. The Green Wedge is therefore an important consideration in the siting and design of the Proposed Development and its assessment within this PDAS.

6.2.7. The purpose and extent of the South Penarth to Sully Green Wedge are considered within the Council's Green Wedge Background Paper (2013), as outlined in Section 5.6 above. The Background Paper identifies the role of Green Wedges in preventing settlement coalescence, protecting the openness of the countryside, safeguarding undeveloped land and maintaining the setting and separation of settlements. These purposes provide an important basis for considering the effects of the Proposed Development on the function and openness of the Green Wedge. The South Penarth to Sully Green Wedge remains extensive, although its extent has previously been reduced following the grant of planning permission at Upper Cosmeston Farm (planning reference 2020/01170/OUT).

6.2.8. At the national level, PPW establishes a presumption against inappropriate development within Green Wedges. However, PPW paragraph 3.77 recognises that certain other forms of development may be appropriate within a Green Wedge where they preserve its openness and do not conflict with the purposes of including land within it. Renewable and low-carbon energy generation is expressly identified as one such form of development. Accordingly, the location of the Proposed Development within the Green Wedge does not, of itself, establish that the development is inappropriate; consideration must be given to its effects on openness and on the purposes of the Green Wedge.

6.2.9. The Proposed Development comprises predominantly low-lying solar infrastructure within an existing agricultural landscape structured by hedgerows and areas of woodland. The layout and design of the Proposed Development have been developed in response to the landscape context of the Site, with consideration given to the siting of solar arrays and associated infrastructure, the retention of existing landscape features and the incorporation of additional landscape mitigation.

6.2.10. The introduction of solar panels and associated infrastructure will alter the existing character of parts of the Site and the effects of the Proposed Development on landscape character, visual amenity and the openness of the Green Wedge have therefore been important considerations in the design process. Particular consideration has also been given to the siting and design of ancillary infrastructure, where built elements have greater potential to influence the perception of openness.

6.2.11. The Proposed Development is also temporary and reversible, with the solar generation and associated infrastructure to be removed following cessation of operations and the land restored. While temporariness does not remove the need to consider effects on openness during the operational period, it is relevant to the duration and permanence of those effects.

Public Benefits

6.2.12. The Proposed Development would deliver a range of public benefits, principally through the generation of renewable electricity and its contribution towards national decarbonisation, energy security and renewable energy targets. As a project promoted by Trydan Gwyrdd Cymru, a company wholly owned by the Welsh Government, it would also support the development of renewable energy capacity on the Welsh public estate, with profits returning to the public purse. The Proposed Development incorporates biodiversity and landscape enhancements, including habitat creation, strengthened ecological connectivity and NBB, together with improvements to the accessibility and recreational experience of Footpath L1/5/2. Separate from the planning merits of the Proposed Development, the Applicant is also proposing a Community Benefit Fund for its operational lifetime, currently based on £400 per MW of installed capacity.

Landscape Character

6.2.13. The Site is located within a predominantly agricultural landscape characterised by an established pattern of fields, hedgerows and vegetation, with a limited number of residential properties in the surrounding area and a number of recreational receptors, including the Welsh Coast Path, Lavernock Point Nature Reserve and Cosmeston Lakes Country Park. The Proposed Development has been designed to retain, enhance and manage existing hedgerows, trees, grassland and other semi-natural habitats, alongside the creation of new landscape planting and habitats. These measures would help to integrate the Proposed Development into its surrounding landscape setting while enhancing existing landscape features and habitats. While the LVIA identifies significant adverse effects on the landscape character of the Lavernock Hinterland during operation, these effects are geographically localised, with the influence of the Proposed Development generally contained within the Site and its immediate vicinity by the existing vegetation and surrounding landform.

Landscape and Visual Impact

6.2.14. The LVIA has assessed the effects of the Proposed Development on landscape character and visual amenity during construction, operation and decommissioning. Construction activities would introduce noticeable and locally prominent features within the landscape; however, landscape effects would be concentrated within the Site and its immediate setting and would be temporary in duration. Construction effects on landscape character are therefore assessed as not significant.

6.2.15. During operation, the LVIA identifies significant adverse effects on the Lavernock Hinterland LANDMAP Visual and Sensory Aspect Area (VLFGLVS787) and Cultural Landscape Services Aspect Area (VLFGLCLS050). These effects arise principally from the introduction of solar and associated infrastructure into the existing pastoral landscape, resulting in a change in landscape character within the Site and its immediate setting. The effects are, however, geographically localised, with the existing field boundary vegetation and surrounding undulating landform helping to contain the influence of the Proposed Development beyond the immediate vicinity of the Site.

6.2.16. Significant visual effects are also identified for recreational users of Footpath L1/5/2 during construction and operation, reflecting both the proximity of the Proposed Development and the proposed diversion of the route. The landscape strategy responds through the retention of an area free from panels within Field 6, together with hedgerow, orchard and wildflower planting associated with the diverted route. While these measures will soften and filter views as planting establishes, the LVIA identifies a residual significant effect due to the change in the experience and character of views along the route.

6.2.17. A significant visual effect is also identified for pedestrians and cyclists using St Mary's Well Bay Road during the early operational phase. As the proposed landscape planting establishes and matures, the LVIA concludes that this effect can be mitigated such that it would no longer be significant in the longer term. Overall, the LVIA concludes that significant landscape and visual effects would be localised and affect a limited number of receptors, rather than extending across the wider study area.

Residential Amenity

6.2.18. The potential effects of the Proposed Development on residential amenity have been considered throughout the design and environmental assessment process, including in relation to landscape and visual effects, glint and glare, noise and vibration, and surface water management. The Site is located within a predominantly agricultural landscape with a limited number of residential properties in its immediate surroundings, and the design has sought to maintain appropriate separation from residential receptors and respond to the particular sensitivities identified through the EIA.

6.2.19. Landscape and visual considerations associated with nearby residential properties have informed the siting and design of the Proposed Development, including the separation of infrastructure from residential properties and the embedded mitigation shown on the Landscape and Ecological Masterplan. Proposed hedgerow reinforcement, tree planting and the traditional orchard will strengthen the existing landscape framework and provide further filtering and screening of views as planting establishes. Potential effects on residential visual amenity will be considered through a Residential Visual Amenity Assessment (RVAA) as part of the final ES.

6.2.20. Potential glint and glare effects on residential receptors have also been assessed. The assessment identifies no glare or low impacts for most dwelling receptors. Where greater potential effects were identified under the conservative modelling scenario, including at properties adjoining Fort Road, south-west of the Site and at The Bay Caravan Park, existing vegetation together with the embedded planting and hedgerow strengthening proposed through the landscape strategy is expected to reduce the effects to a low level. No significant glint and glare effects on residents are therefore predicted taking account of embedded mitigation.

6.2.21. Construction activities have the potential to temporarily affect residential amenity through noise and vibration; however, these activities would generally progress across the Site rather than remain close to individual properties for prolonged periods and would be subject to construction management and mitigation measures. During operation, noise would principally arise from electrical infrastructure and is not predicted to result in significant effects on nearby residential receptors. Surface water management has also been incorporated into the design, including attenuation and measures intended to maintain existing land drainage and control runoff, with the detailed drainage design informed by the FCA and Outline Drainage Statement.

6.2.22. Overall, residential amenity has been an important consideration in the evolution and assessment of the Proposed Development. The siting of infrastructure, separation from nearby properties and embedded landscape and environmental measures have been used collectively to avoid or reduce effects, with the detailed conclusions for individual environmental topics set out within the ES.

Nature and Conservation and Green Infrastructure

6.2.23. Nature conservation and biodiversity have been integral considerations in the design of the Proposed Development, with the layout developed to retain and protect existing ecological features, including hedgerows, trees and watercourses, through appropriate stand-off distances and avoidance measures. These existing features provide the foundation for a wider network of habitat creation and enhancement proposed across the Site.

6.2.24. The Landscape and Ecological Masterplan provides for the enhancement and creation of habitats across the Site, including hedgerow reinforcement, new native planting and species-rich grassland, with measures designed to strengthen ecological connectivity and contribute towards the delivery of NBB. An additional area of land to the east of the main solar array has also been incorporated specifically to provide ecological mitigation for skylark. The establishment and long-term management of these measures will be secured through the Landscape and Ecology Management Plan, with the NBB achieved by the Proposed Development considered in detail within the NBB Report.

6.2.25. A Green Infrastructure Statement has been submitted alongside the planning application, setting out how green infrastructure has been considered and incorporated within the Proposed Development and demonstrating the relationship between the proposed landscape, biodiversity and green infrastructure measures.

Cultural Heritage and Archaeology

6.2.26. There are no designated built heritage assets or designated below-ground archaeological remains within the Site. Archaeological investigation, including geophysical survey and trial trench evaluation, has identified and investigated a number of features within the Site, while designated and non-designated historic assets are present within the surrounding area. The findings of this work have informed the design of the Proposed Development, including the removal of eastern land parcels identified through geophysical survey as being archaeologically sensitive, thereby avoiding potential effects on archaeological features within those areas.

6.2.27. Construction groundworks could result in the partial or complete disturbance of archaeological features within the remaining development area. Archaeological features that could be affected by the Proposed Development are considered to be of negligible to low sensitivity. Taking account of their sensitivity and the embedded design measures, including measures to reduce the depth of ground disturbance where appropriate, the resulting effects are assessed as negligible to minor adverse and not significant in EIA terms. Any further archaeological mitigation required will be determined through consultation with Heneb following review of the archaeological investigation results.

6.2.28. During operation, potential effects on heritage assets relate principally to changes to their setting through the introduction of the solar arrays and associated infrastructure within the surrounding landscape. The assessment considers the Anti-aircraft and Coastal Battery west of Lavernock Point and St Mary's Well Bay Pillbox, together with listed and locally designated assets around Cog and Swanbridge. While there is potential for intervisibility with elements of the Proposed Development, existing vegetation, topography and built development limit views, and the Site generally makes little or no contribution to the aspects of setting from which these assets derive their heritage significance. Operational effects are therefore assessed as reversible and negligible to minor adverse, and not significant in EIA terms.

Flood, Risk and Surface Water Management

6.2.29. The Site is generally at low risk of flooding. No statutory main rivers are present within the Site, although a number of ordinary watercourses, drainage ditches and field drainage features are present within and adjacent to it. Localised areas of surface water and ordinary watercourse flood risk occur primarily around existing drainage corridors, field boundaries and overland flow routes. The Proposed Development has been designed in response to these constraints, with key infrastructure positioned in areas of low flood risk and existing drainage features and flow routes retained where practicable.

6.2.30. The Site is underlain by Principal, Secondary A and Secondary B aquifers and is identified as having high groundwater vulnerability. The design and construction of the Proposed Development therefore incorporate measures to protect both surface water and groundwater quality. During construction, potential effects associated with soil disturbance, sediment mobilisation and accidental pollution will be managed through the oCEMP, including sediment and erosion controls, appropriate management of stockpiles and surface water runoff, and pollution prevention measures.

6.2.31. The Site has a history of agricultural use and localised historic quarrying, with potential contaminative sources associated with former land uses identified through the PRA. The design avoids identified areas of Made Ground and known contamination, and the assessment concludes that the risk to controlled waters and human health is low. Further site-specific ground investigation, groundwater monitoring and infiltration testing will be undertaken at the detailed design stage to confirm ground conditions and inform the detailed drainage design and construction measures.

6.2.32. During operation, surface water will be managed in accordance with the principles established through the FCA and Outline Drainage Statement. The Project Substation Compound represents the principal impermeable area within the Proposed Development and its drainage strategy incorporates a filter drain network and infiltration basin to collect, temporarily store and manage runoff. Appropriate treatment and pollution-control measures will be incorporated to protect surface water and underlying groundwater resources. The detailed drainage design will be subject to approval by the Sustainable Drainage Approving Body prior to construction.

6.2.33. The solar panels would have a minimum lower edge of approximately 0.8 m above ground level and would not obstruct existing surface water flow pathways or materially affect the capacity of the Site to accommodate flood water. Taking account of the embedded drainage, pollution prevention and groundwater protection measures, Chapter 11 of the ES concludes that the Proposed Development would not materially increase flood risk within the Site or elsewhere and that no significant effects on water quality, hydrogeology or ground conditions are anticipated.

Transport and Access

6.2.34. The principal transport effects associated with the Proposed Development would occur during construction, when additional vehicle movements would be required for the delivery of materials, plant and personnel. The Transport Statement (ES Appendix 11F) concludes that the local highway network has sufficient capacity to accommodate the anticipated construction traffic and that the Proposed Development would not result in significant effects on highway operation or road safety. The proposed access arrangements are suitable for the anticipated construction traffic, and the assessment identifies no existing highway safety issue that would be exacerbated by the Proposed Development. An Outline Construction Traffic Management Plan (oCTMP) has been prepared to set out measures to control and manage construction traffic, with a detailed CTMP to be prepared prior to commencement of the main construction works and secured by planning condition.

6.2.35. A network of PRoW crosses and adjoins the Site, including routes forming part of the Wales Coast Path and Footpath L1/5/2, which connects the Wales Coast Path with Fort Road. The accessibility, setting and experience of these routes have been important considerations in the design of the Proposed Development. Existing PRoW will generally be retained and maintained throughout the operational lifetime of the Proposed Development, with the layout and landscape proposals designed to respond to their recreational use.

6.2.36. The design has responded to the relationship between the Proposed Development and existing recreational routes, including the Wales Coast Path, through the separation of solar infrastructure and landscape planting to reduce effects on views and the experience of users. Footpath L1/5/2, which currently connects Fort Road with the Wales Coast Path through the eastern parcel of the Site, is proposed to be permanently diverted and enhanced following discussions with the Council. The existing route is difficult to access at its eastern boundary due to overgrown vegetation, and the proposed alignment will provide a more clearly defined and accessible route with improved surface conditions and connectivity. As part of the Landscape and Ecological Masterplan, the diverted route will pass through the proposed traditional orchard and species-rich wildflower habitat, improving its recreational setting while providing greater separation from operational solar infrastructure. The proposed diversion and associated landscape proposals are detailed within the oLEMP.

6.2.37. The design has also taken account of the proposed Sully to Cosmeston Active Travel Route along the former railway alignment. This route has planning approval and is intended to provide a pedestrian and cycle connection between Sully and Cosmeston, linking at Cosmeston with the wider active travel network, including National Cycle Network Route 88. The Proposed Development has been designed in the context of this future recreational and active travel connection, alongside the existing PRoW network.

Minerals and Ground Conditions

6.2.38. The Site lies within a Limestone Mineral Safeguarding Area and partially overlaps a Dormant Quarry Area. Accordingly, the Proposed Development has been considered against the mineral safeguarding objectives of Policies SP9 and MG22 of the LDP, including whether it would unnecessarily sterilise safeguarded mineral resources or prejudice their potential future working.

6.2.39. The Proposed Development represents a temporary and reversible use of the land for an operational period of approximately 40 years, rather than permanent development over the safeguarded resource. The design has also sought to minimise potential conflict with mineral safeguarding constraints, including through limited ground disturbance and the siting of the Project Substation Compound. Following decommissioning, the solar and associated infrastructure would be removed and the land restored, enabling future access to the underlying mineral resource if required. The Proposed Development would therefore not permanently sterilise the safeguarded resource or prejudice its long-term availability and is considered to accord with the safeguarding objectives of Policies SP9 and MG22.

6.3. Planning Balance

6.3.1. There is strong national policy support for the delivery of renewable energy development in Wales. Future Wales and Planning Policy Wales (PPW) support the transition to a low-carbon economy and recognise the important contribution that renewable energy generation can make towards decarbonisation, energy security and the delivery of sustainable development. The Proposed Development would make a positive contribution towards these objectives through the generation of renewable electricity and should therefore be afforded significant positive weight in the planning balance.

6.3.2. The assessment set out above demonstrates that the Proposed Development has been designed in response to the environmental and planning constraints and opportunities of the Site. The iterative design process has avoided or reduced potential effects where practicable and incorporates mitigation and enhancement measures relating to landscape and visual amenity, residential amenity, biodiversity and green infrastructure, cultural heritage, flood risk, accessibility and mineral safeguarding. The Proposed Development would also deliver wider benefits through habitat creation and enhancement, NBB and improvements to the accessibility and recreational experience of Footpath L1/5/2.

6.3.3. The Proposed Development would nevertheless result in a range of adverse effects, the majority of which are not significant. In particular, however, the LVIA identifies significant adverse effects on the Lavernock Hinterland LANDMAP Visual and Sensory and Cultural Landscape Services Aspect Areas, together with localised significant visual effects for users of Footpath L1/5/2 and, during the early operational period, pedestrians and cyclists using St Mary's Well Bay Road. These effects must be weighed in the planning balance. However, they are geographically localised and have been reduced through the siting and design of the Proposed Development and embedded landscape mitigation. With the exception of those identified landscape and visual effects, the assessments summarised above do not identify significant residual effects that would indicate that the Proposed Development is unacceptable in planning terms.

6.3.4. The temporary and reversible nature of the Proposed Development is also relevant to the planning balance. Following the approximately 40-year operational period, the solar and associated infrastructure would be removed and the land restored. This limits the permanence of the identified landscape and visual change and would also retain the longer-term availability of the safeguarded mineral resource.

6.3.5. Overall, when the identified adverse effects are weighed against the strong national policy support for renewable energy, the contribution of the Proposed Development to renewable electricity generation and decarbonisation, and the landscape, biodiversity and recreational enhancements incorporated within the scheme, the planning balance is considered to weigh in favour of the Proposed Development. Having regard to the assessment of the South Penarth to Sully Green Wedge, including the nature, siting, temporary duration and reversibility of the Proposed Development, together with the other planning considerations assessed above, the Proposed Development is considered acceptable in planning terms, subject to the mitigation, management measures and controls identified within the application and Environmental Statement.

7. Conclusion

7.1.1. Planning permission is sought for the construction, operation, and decommissioning of the Proposed Development. The Proposed Development would provide a significant source of renewable electricity and contribute towards the transition to a low-carbon energy system in Wales.

7.1.2. There is strong support in national planning policy for the delivery of renewable and low-carbon energy infrastructure. Future Wales identifies the potential for Wales to become a world leader in renewable energy technologies and, through Policy 17, confirms strong support in principle for renewable energy development and requires significant weight to be given to the need to meet Wales's renewable energy commitments and targets. Planning Policy Wales similarly recognises the important role of the planning system in facilitating additional renewable energy generation and the infrastructure necessary to support the transition to a low-carbon energy system.

7.1.3. At the local level, the Council's adopted and emerging LDP and supporting Renewable Energy Supplementary Planning Guidance provide a positive policy framework for appropriately located and designed renewable energy development, subject to the consideration of environmental, landscape and amenity effects. In particular, the Proposed Development would make a direct contribution towards the objectives of Policy MD19 The Proposed Development would also contribute towards the climate change objectives identified by the Council through Project Zero and its wider response to the climate and nature emergency.

7.1.4. The Site is located within the South Penarth to Sully Green Wedge and the effect of the Proposed Development on its openness and function has therefore been an important consideration in the design and assessment of the Proposed Development. The Proposed Development predominantly comprises low-lying solar infrastructure within an existing agricultural landscape structured by established field boundaries, hedgerows and woodland.

7.1.5. The design of the Proposed Development has evolved to respond to the landscape context, including through the removal of infrastructure from the triangular field adjacent to Lavernock Road and St Mary's Well Bay Road and refinement of the layout and location of ancillary infrastructure. The Proposed Development would also be temporary and reversible, with infrastructure removed following decommissioning and the land capable of being returned to agricultural use.

7.1.6. The design of the Proposed Development has been informed by an iterative process of environmental and technical assessment, consultation and design refinement. Existing hedgerows, trees, woodland and field patterns have informed the layout; appropriate buffers have been incorporated in response to sensitive environmental and recreational receptors; and landscape planting and habitat enhancement form part of the proposals.

7.1.7. The Site comprises Grade 3b and Grade 4 agricultural land, the Proposed Development therefore avoids the development of BMV agricultural land. The design also minimises ground disturbance within the Mineral Safeguarding Area and would not prevent future access to the underlying mineral resource following decommissioning.

7.1.8. The environmental assessments supporting the planning application have considered the potential effects of the Proposed Development on landscape and visual amenity, biodiversity and green infrastructure, the historic environment, residential amenity, flood risk and drainage, transport and access, agricultural land, minerals and other relevant environmental considerations. The assessments have informed the design of the Proposed Development and the identification of appropriate mitigation and management measures. In a number of these respects, including cultural heritage, flood risk and surface water, noise and vibration, the assessment does not identify significant residual environmental effects. Where significant adverse effects are identified, these principally relate to localised landscape and visual effects. These effects would occur during the operational lifetime of the Proposed Development but would not be permanent, as the development is temporary and reversible and the solar and associated infrastructure would be removed following decommissioning. The duration and reversibility of these effects are therefore relevant considerations in the overall planning balance.

7.1.9. The Proposed Development would deliver substantial environmental and economic benefits. Most significantly, Larnog Solar Farm would provide approximately 35 MW of new renewable electricity generating capacity, equivalent to the electricity needs of approximately 13,800 average Welsh homes, directly supporting the decarbonisation of electricity generation and contributing towards national and local renewable energy and climate change objectives. The proposals would also retain and strengthen existing landscape and ecological features, deliver NBB through habitat creation and enhancement, and improve recreational access through the proposed enhancement and diversion of Footpath L1/5/2 via a new community orchard and wildflower habitat. As a project being developed on Welsh Government-owned land, the Proposed Development would also provide a wider public benefit through profits returning to the public purse.

7.1.10. This PDAS has demonstrated how the Proposed Development has responded to the relevant national and local planning policy framework and how planning, design and access considerations have informed the evolution of the proposals. The assessment demonstrates that the Proposed Development is supported in principle by national policy for renewable energy and responds appropriately to the relevant requirements of the Vale of Glamorgan LDP, including those relating to renewable energy, Green Wedge, landscape and visual effects, biodiversity, amenity and mineral safeguarding. The iterative design process has responded to the opportunities and constraints of the Site, avoiding and reducing environmental effects where practicable and incorporating mitigation and enhancement measures as integral components of the Proposed Development.

7.1.11. Overall, having regard to the development plan as a whole, national planning policy and other material considerations, the Proposed Development is considered to represent an appropriate and sustainable form of renewable energy development.

7.1.12. It is therefore considered that the proposals are acceptable in planning and design terms and that planning permission should be granted.

Appendix A Statutory Pre-Application Advice

Date/Dyddiad: 11 March 2026
Ask for/Gofynwch am: Laura Fower
Telephone/Rhif ffon: (01446) 704653
Your Ref/Eich Cyf:
My Ref/Cyf: P/DC/2025/00095/EPA
e-mail/e-bost: Planning@valeofglamorgan.gov.uk

The Vale of Glamorgan Council
Civic Offices, Holton Road, Barry CF63 4RU
Telephone: (01446) 700111

Cyngor Bro Morgannwg
Swyddfeydd Dinesig, Heol Holton, Y Barri CF63 4RU
Ffôn: (01446) 700111

www.valeofglamorgan.gov.uk

Ms Ruth Jones
1 Capital Quarter
Cardiff
CF10 4BZ

Dear Ms Jones

Town and Country Planning Act, 1990 (as amended)
Application No. 2025/00095/EPA
Proposal: Ground-Mounted Solar Farm with a gross electrical output capacity to the distribution grid network in the region of 35MW, and associated infrastructure, including substation and a Battery Energy Storage System (BESS)
Location: Larnog Solar Farm, Sully

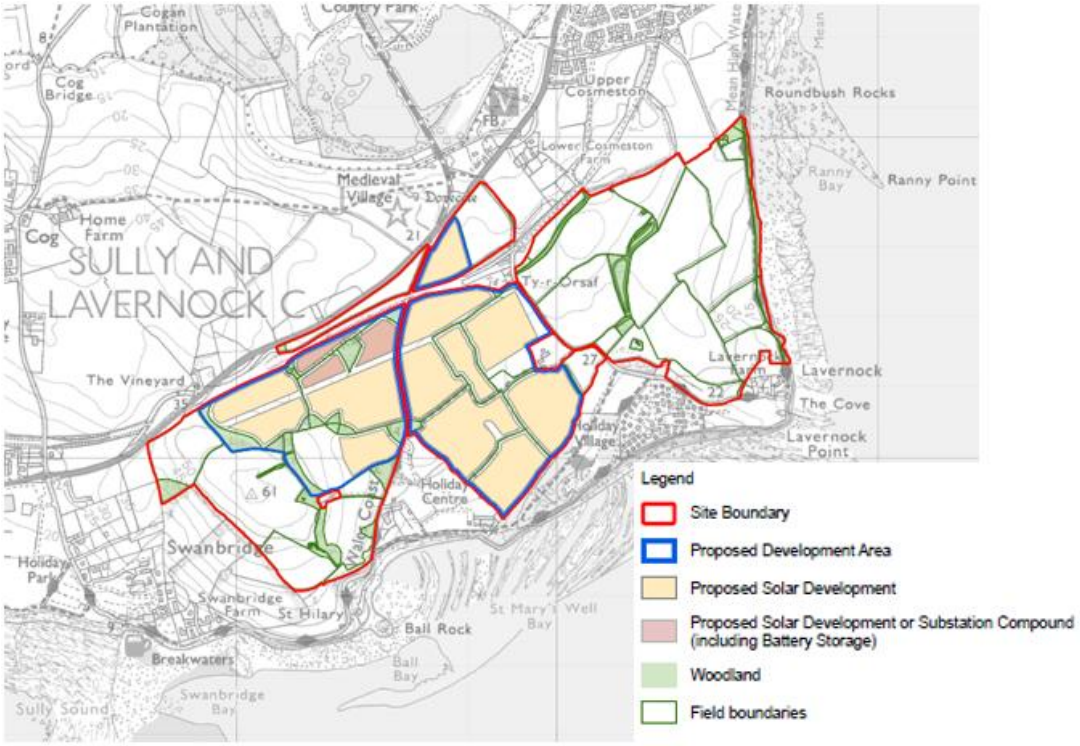
I refer to your correspondence received on 21 November 2025, concerning the above and your request for statutory pre-application advice, submitted on behalf of Trydan Gwyrdd Cymru.

Proposal

The proposal is for the construction, operation and subsequent decommissioning of a ground mounted solar farm on land between Sully and Cosmeston. The application has been supported by a plan showing the parcels of land proposed for the solar development and substation compound. This is shown overleaf.

The area proposed for the solar arrays is approximately 40ha with a further 3.5ha of battery storage and compound facilities. The submission details that the gross electrical output capacity to the distribution network would be in the region of 35MW. The proposed development includes a project substation compound, Battery Energy Storage (BESS) and Balance of Solar Systems (BoSS), as well as ancillary infrastructure works.

An EIA screening request has been submitted in parallel (application ref. 2025/01286/SC1).



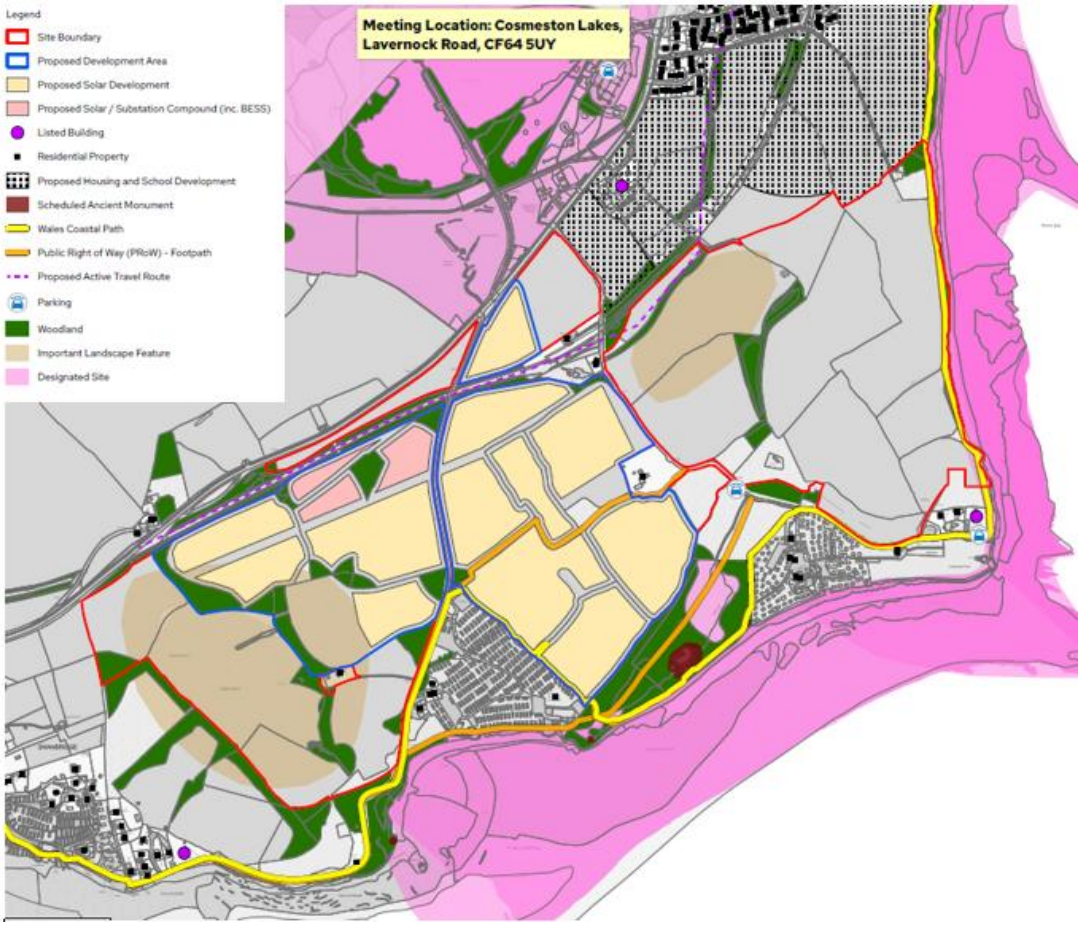
Local Context and Constraints

The extent of the proposed development is shown on the plan above outlined in blue (hereon referred to as 'the site'), whilst the wider site ownership is shown outlined in red. The site comprises undeveloped fields located to the south of the B4267 Lavernock Road. In policy terms, the site is located within the Countryside and a designated Green Wedge. A Public Right of Way and section of the Wales Coastal Path run adjacent to and through to the site.

The parcels of land are predominately bounded by trees and hedgerow. There are pockets of woodland around the proposed parcels, particularly to the west of St Mary's Well Bary Road, which are covered by TPOs. Penarth Coast SSSI (Site of Special Scientific Interest) and Lavernock Point East SINC (Site of Importance for Nature Conservation) are adjacent to the site, while there is a Habitat Site identified along the disused railway. In addition, the coastal area further to the east is a designated Ramsar and SAC (Special Area of Conservation) site.

Much of the site is within a mineral safeguarding area for Limestone (Category 1 and/or 2) and the southeastern parcel is within a Dormant Mineral Site. Small parts of the site are within Flood Zone 2 and 3 for Surface Water and Small Watercourses on Natural Resources Wales flood maps. There are several listed buildings, County Treasures (locally listed buildings), and a Scheduled Monument in the vicinity of the site. There are also some archaeological records which appear to be within the confines of the site itself.

The plan provided for the site walkover, as shown below, identifies some of the noted constraints.



Relevant Planning History

From an examination of our records, there are a number of planning applications on and adjacent to the site area, however none are identified at this stage as being of direct relevance to the proposed scheme.

To the northeast of the site, there is an outline planning application (ref. 2020/01170/OUT) for residential development, a primary school, community space and public open space with all matters reserved other than access. This has been approved subject to legal agreement.

Construction works are also ongoing in relation to the specialised school and associated works under application 2022/01113/RG3 on land to the north of Fort Road.

To the north of the main site area, planning permission (ref. 2025/00493/RG3) has been granted for an Active Travel Route between Sully and Cosmeston, which runs along the dismantled railway.

Local Development Plan:

Section 38 of The Planning and Compulsory Purchase Act 2004 requires that in determining a planning application the determination must be in accordance with the Development Plan unless material considerations indicate otherwise. The Vale of Glamorgan Adopted Local Development Plan 2011-2026 forms the local authority level tier of the development plan framework. The LDP was formally adopted by the Council on 28 June 2017, and within which the following policies are of relevance:

Strategic Policies:
POLICY SP1 – Delivering the Strategy
POLICY SP9 – Minerals
POLICY SP10 – Built and Natural Environment

Managing Growth Policies:
POLICY MG18 – Green Wedges
POLICY MG19 – Sites and Species of European Importance
POLICY MG20 – Nationally Protected Sites and Species
POLICY MG21 – Sites of Importance for Nature Conservation, Regionally Important Geological and Geomorphological Sites and Priority Habitats and Species
POLICY MG22 – Development in Minerals Safeguarding Areas
POLICY MG24 – Dormant Mineral Sites

Managing Development Policies:
POLICY MD1 - Location of New Development
POLICY MD2 - Design of New Development
POLICY MD4 - Community Infrastructure and Planning Obligations
POLICY MD7 - Environmental Protection
POLICY MD8 - Historic Environment
POLICY MD9 - Promoting Biodiversity
POLICY MD19 - Low Carbon and Renewable Energy Generation

In addition to the Adopted LDP the following policy, guidance and documentation supports the relevant LDP policies.

Future Wales: The National Plan 2040:

Future Wales – the National Plan 2040 is the national development plan and is of relevance to the determination of this planning application. Future Wales provides a strategic direction for all scales of planning and sets out policies and key issues to be considered in the planning decision making process. The following chapters and policies are of relevance in the assessment of this planning application:

Chapter 3: Setting and achieving our ambitions

- 11 Future Wales' outcomes are overarching ambitions based on the national planning principles and national sustainable placemaking outcomes set out in Planning Policy Wales.

Chapter 4: Strategic and Spatial Choices: Future Wales' Spatial Strategy

- Guiding framework for where large-scale change and nationally important developments will be focussed over the next 20 years.

- Strategy builds on existing strengths and advantages and encourages sustainable and efficient patterns of development.

Chapter 5 – The Regions

- The Vale of Glamorgan falls within the South East region.
- Regional policies provide a framework for national growth, for regional growth, for managing growth and supporting growth.
- In the absence of SDPs, development management process needs to demonstrate how Future Wales' regional policies have been taken into account.

Policy 8 – Flooding

- Focus on nature-based schemes and enhancing existing defences to improve protection to developed areas.
- Maximise opportunities for social, economic and environmental benefits when investing in flood risk management infrastructure.

Policy 9 – Resilient Ecological Networks and Green Infrastructure

- Action towards securing the maintenance and enhancement of biodiversity (to provide a net benefit), the resilience of ecosystems and green infrastructure assets must be demonstrated as part of development proposals through innovative, nature-based approaches to site planning and the design of the built environment.

Policy 17 – Renewable Energy

- Support for developing renewable and low carbon energy from all technologies and at all scales.
- Significant weight to the need to meet Wales' international commitments and the target to generate 70% of consumed electricity by renewable means by 2030 to combat the climate emergency.
- All proposals for large scale wind and solar developments should demonstrate that they will not have an unacceptable adverse impact on the environment and describe the net benefits it will bring.

Policy 18 – Renewable and Low Carbon Energy Developments of National Significance

- Sets out the criteria for assessing such proposals and refers to the need to consider the cumulative impact of existing and consented renewable energy schemes.

Planning Policy Wales:

National planning policy in the form of Planning Policy Wales (Edition 12, February 2024) (PPW) is of relevance to the determination of this application.

The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales,

The following chapters and sections are of particular relevance in the assessment of this planning application:

National planning policy in the form of Planning Policy Wales (Edition 12, February 2024) (PPW) is of relevance to the determination of this application.

The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales,
The following chapters and sections are of particular relevance in the assessment of this planning application:

Chapter 2 - People and Places: Achieving Well-being Through Placemaking,

- Maximising well-being and sustainable places through placemaking (key Planning Principles, national sustainable placemaking outcomes, Planning Policy Wales and placemaking

Chapter 3 - Strategic and Spatial Choices

- Good Design Making Better Places
- Sustainable Management of Natural Resources
- Previously Developed Land
- The Best and Most Versatile Agricultural Land
- Development in the Countryside (including new housing)
- Supporting Infrastructure

Chapter 5 - Productive and Enterprising Places

- Energy (reduce energy demand and use of energy efficiency, renewable and low carbon energy, energy minerals)
- Making Best Use of Material Resources and Promoting the Circular Economy (design choices to prevent waste, sustainable Waste Management Facilities and Minerals)

Chapter 6 - Distinctive and Natural Places

- Recognising the Special Characteristics of Places (The Historic Environment, Green Infrastructure, Landscape, Biodiversity and Ecological Networks, Coastal Areas)
- Recognising the Environmental Qualities of Places (water and flood risk, air quality and soundscape, lighting, unlocking potential by taking a de-risking approach)

Technical Advice Notes:

The Welsh Government has provided additional guidance in the form of Technical Advice Notes. The following are of relevance:

- Technical Advice Note 5 – Nature Conservation and Planning (2009)
- Technical Advice Note 10 – Tree Preservation Orders (1997)

- Technical Advice Note 11 – Noise (1997)
- Technical Advice Note 12 – Design (2016)
- Technical Advice Note 15 – Development, Flooding and Coastal Erosion (2025)
- Technical Advice Note 18 – Transport (2007)
- Technical Advice Note 24 – The Historic Environment (2017)

Welsh National Marine Plan:

National marine planning policy in the form of the Welsh National Marine Plan (2019) (WNMP) is of relevance to the determination of this application. The primary objective of WNMP is to ensure that the planning system contributes towards the delivery of sustainable development and contributes to the Wales well-being goals within the Marine Plan Area for Wales.

Supplementary Planning Guidance:

In addition to the adopted Local Development Plan, the Council has approved Supplementary Planning Guidance (SPG). The following SPG are of relevance:

- Biodiversity and Development (2018)
- County Treasures
- Design in the Landscape
- Minerals Safeguarding (2018)
- Parking Standards (2019)
- Planning Obligations (2018)
- Renewable Energy (2019)
- Sustainable Development - A Developer's Guide
- Travel Plan (2018)
- Trees, Woodlands, Hedgerows and Development (2025)

Other relevant evidence or policy guidance:

- Manual for Streets (Welsh Assembly Government, DCLG and DfT - March 2007)
- Welsh Government Circular 016/2014: The Use of Planning Conditions for Development Management
- Welsh Office Circular 11/99 – Environmental Impact Assessment
- Welsh Office Circular 13/97 - Planning Obligations
- Section 160 (1) of the Historic Environment (Wales) Act 2023, imposes a duty on the Council with respect to any buildings or other land in a conservation area, where *special attention shall be paid to the desirability of preserving or enhancing the character or appearance of that area*.

Equality Act 2010

The Equality Act 2010 identifies a number of 'protected characteristics', namely age; disability; gender reassignment; pregnancy and maternity; race; religion or belief; sex; sexual orientation; marriage and civil partnership. The Council's duty under the above Act has been given due consideration in the preparation of this report.

Well-being of Future Generations (Wales) Act 2015

The Well-being of Future Generations Act (Wales) 2015 places a duty on the Council to take reasonable steps in exercising its functions to meet its sustainable development (or wellbeing) objectives. This report has been prepared in consideration of the Council's duty and the "sustainable development principle", as set out in the 2015 Act. In reaching the recommendation set out below, the Council has sought to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.

Analysis of Proposal

Procedural Matters:

As you will be aware, if the proposed development is over a certain scale it would be a deemed a Significant Infrastructure Project (SIP) and therefore an application would need to be submitted to PEDW rather than the LPA. The SIP system has replaced the previous Development National Significance (DNS) system from the 15 December 2025.

The Infrastructure (Wales) Act 2024 outlines that if the scheme would have an installed generating capacity of between 50 and 350 megawatts it would be defined as a SIP. The LPA's role in this process would be to produce a Local Impact Report.

It is understood that the proposed development, as submitted, would not exceed the 50 megawatt threshold and therefore would not be considered a SIP development.

Planning Policy Overview:

The aforementioned policy is considered to be of relevance in considering the likely impact of the proposed development on the Vale of Glamorgan. Policies specifically related to renewable energy proposals are set out in more detail in this section.

At a national level, Future Wales: The National Plan (2021) and Planning Policy Wales Edition 12 (2024) (PPW) identity an emphasis in favour of development that promotes renewable energy generation, in order to decarbonise energy production in Wales. Despite the policy emphasis, both documents identity that harm can be caused by large scale renewable energy schemes and that they would not be suitable in all locations.

Policies 17 (Renewable and Local Carbon Energy and Associated Infrastructure) and 18 (Renewable and Low Carbon Energy Developments of National Significance) of Future Wales contain strategic and detailed criteria-based policies respectively. These policies are to be considered in the determination of applications for renewable energy schemes, albeit noting that the latter is intended to apply to DNS (now SIP) applications.

Paragraphs 5.9.19 and 5.9.20 of PPW suggest that contributions to meeting targets; cutting greenhouse gas emissions; and the wider environmental, social and economic benefits and opportunities should be considered in determining renewable energy proposals, but the need to minimise impacts on local communities; the impact on the natural and historic environment; cumulative impact; the transportation network; grid connection issues and the impacts of climate change in the location, design, build of proposals should be considered.

At a local level, LDP Policy MD19 (Low Carbon and Renewable Energy Generation), which is also a criteria-based policy, details that:

"*Proposals for the generation of low carbon and renewable energy will be permitted where it can be demonstrated that there is no unacceptable impact on the interests of:*

- *Best and most versatile agricultural land;*
- *Aviation safeguarding;*
- *Electrical, radio or other communication systems;*
- *Landscape importance;*
- *Natural and cultural heritage;*
- *Nature conservation;*
- *Residential amenity; and*
- *Soil conservation.*

In assessing such proposals, the cumulative impacts of renewable energy schemes will be an important consideration. Where necessary, proposals should be informed by a landscape and visual impact assessment…"

The Council's Renewable Energy SPG (2019) further outlines planning considerations for renewable developments.

LDP Policy MG30 (Local Search Areas for Solar Energy) has identified 6 areas appropriate for solar development of up to 50 MW, subject to it not having unacceptable effects on amenity, heritage assets or the environment. The site does not fall within any of these areas, but this does not strictly preclude development of the site for solar, subject to consideration of the relevant planning policies. Additionally, it is noted that PPW states, at paragraph 5.9.15, that proposals that fall outside of identified areas for low carbon and renewable energy should be determined based on the merits of the individual proposal.

Principle of Development:

As detailed above, national and local planning policy provides support in principle for renewable energy schemes. Nevertheless, the proposal would

need to be acceptable in terms of the specific issues identified in the criteria laid out under Policy MD19 of the LDP, as well as other relevant planning policy considerations.

The site is located in the Countryside where LDP Policy MD1 (Location of New Development) applies. This policy sets out the framework for future development to take place on unallocated sites in the Vale of Glamorgan and identifies a number of criteria which must be met. Of particular relevance is criterion 1, which states that new development on unallocated sites should "*Have no unacceptable impact on the countryside*". Further to this, the amplification text to the policy notes the need to ensure that the distinctive character of the Vale of Glamorgan is protected. The landscape and visual impact will therefore be a key consideration in respect of the proposed development. This issue is discussed in more detail below.

Furthermore, the site is located within the Green Wedge between South Penarth to Sully. The purpose of the green wedge designation is to prevent the coalescence of the settlements and to retain the openness of land which has a coastal character in this location. LDP Policy MG18 (Green Wedges) details that within the green wedges "*development which prejudices the open nature of the land will not be permitted*." The amplification text details that the areas defined by the green wedges are more vulnerable and susceptible to change and require additional protection. PPW12, at paragraph 3.77, clarifies that certain forms of development, including renewable energy generation, may be appropriate in the green wedge provided they preserve its openness and do not conflict with the purposes of including land within it.

The Council's Planning Policy team have been consulted and provided comments (refer to copy attached separately). The issue of the green wedge designation is discussed within the consultation response in greater detail. It is commented that the adverse impacts of such a large scale solar farm on the landscape area are undeniable and should be more fully explored through a detailed Landscape and Visual Impact Assessment (LVIA). The responding Officer has, however, suggested that it could be feasible for the development (with appropriate supplementary landscaping, design and layout) to be integrated into the existing landscape without significant adverse impact on the openness of the green wedge, noting the weight to be afforded to policy support for renewable energy.

An LVIA, along with details of design and layout, will therefore be critical for the LPA to understand the impact on the openness of the green wedge. The LPA would need to weigh up the benefits of the scheme in relation to renewable energy generation and supply against any harm identified to the green wedge, albeit such harm should be avoided where possible through siting and design. Further discussions regarding visual and landscape impacts is provided below.

Visual and Landscape Impact:

The visual and landscape impact of solar development is a key material consideration, as emphasised by the relevant policy provisions identified above. LDP Policy MD19 details that proposals should demonstrate that there would be no unacceptable impact in the interests of landscape importance

(inter alia). The policy further details that: "*In assessing such proposals, the cumulative impacts of renewable energy schemes will be an important consideration. Where necessary, proposals should be informed by a landscape and visual impact assessment*." This is reinforced in the Council's Renewable Energy SPG which identifies specific concern in relation to cumulative impacts on sensitive landscape areas and the potential for solar farms to add to the urbanisation of the countryside.

It will therefore be necessary for a comprehensive LVIA to be undertaken to inform and support a formal proposal. I am not aware at this time of any other existing ground mounted scale solar developments or permissions for such schemes in this part of the Vale, although several large scale schemes have been consented in other parts of the borough. Nevertheless, the impact on the landscape arising from the proposed scheme should be more fully considered through a detailed LVIA, which it is suggested could take account off any off-shore visual impacts. A Glint and Glare Assessment should also be produced to assist with consideration of any associated visual impact on the open countryside (in addition to other visual receptors such as neighbouring property or aircraft).

Generally, the areas which are likely to be most visually sensitive are those adjacent to highways and those visible from the public right of way / Wales Coastal Path and proposed active travel route. In addition, there might be other public vantage points where long distance views of this coastal area can be achieved, but this does depend on the topography of the land and presence of any existing vegetation. In this regard it was observed on our site walkover that the land is fairly undulating and there are established trees and mature hedgerows present, mostly to the field boundaries, which could offer a degree of screening to certain aspects of the scheme.

Solar development undoubtedly alters the character of the land and therefore should, in the first instance, be directed to those areas where the solar arrays would be less prominent or visible before mitigation such as planting is considered. The removal of any existing vegetation to facilitate the development would also have a bearing on the degree of impact. As discussed on site, we would advise that the LVIA considers the presence of any Ash dieback and the impact this could have on views in the event that the trees are or become diseased and consequently die / require removal.

In terms of the fields which are crossed by public paths, it was suggested by the applicant on site that the solar arrays could be set back and a planting buffer provided to mitigate views. Further details including sections would be required to illustrate this proposed arrangement. The potential extent of the site, has potential to be highly visible from a number of potential locations and any LVIA would need to consider whether development needs to be rationalised in certain fields or part thereof, to minimise the potential detriment to the character of surrounding land. For instance, it is considered that thetriangular parcel of land to the north, adjacent to where St Mary's Well Bay Road joins Lavernock Road, is highly visible and has pleasant rural character on approach to Cosmeston. As a result, there is significant concern that the introduction of a solar array here would have detrimental visual impact, due to its prominent nature, and it is therefore advised that consideration is given to the omission of this parcel.

The proposed substation compound and battery storage elements was discussed on site, as this has potential to have significant adverse impact on the landscape through introduction of built development, that would be less likely to be readily reversible as is often considered the case for solar panels themselves. Careful consideration should be given to the layout and design of this area to ensure any views, in particular where they can be achieved from the adjacent road and proposed active travel route, are adequately mitigated. In addition, further details of all ancillary works including boundary treatments, security equipment, lighting, earthworks etc. should be provided as these can significantly contribute towards altering the rural character.

Unfortunately, I have not received any comments from the Council's Landscape Architect at the time of writing but shall forward if/when received and have provided their details separately. Nevertheless, as detailed an LVIA will be essential to make a full assessment of the impact of the development on this rural coastal landscape. A further site visit would need to be undertaken by officers as part of a planning application with benefit of the LVIA and formal proposals.

Impact on Residential Amenity:

Policies MD2 and MD19 of the LDP both make reference to the requirement of development to safeguard residential amenity. This is supported by the criteria based Policy MD7 which states that development proposals will be required to demonstrate they will not result in an unacceptable impact on people and residential amenity from "*Noise, vibration, odour nuisance and light pollution*" (criterion 4). In addition, Policy 18 in Future Wales states that there should be "*no unacceptable adverse visual impacts on nearby communities and individual dwellings*" (criterion 2).

There are existing residential dwellings adjacent to and in proximity to the proposed parcels. It is unlikely that the solar panels would be overbearing or result in overshadowing of dwellings, however consideration should be given to the need for appropriate buffers where they would be located close to residential development in order to mitigate the impact. A Glint and Glare Assessment should include an assessment in respect of residential amenity.

Solar arrays themselves generally do not generate large amounts of noise or require significant lighting and so scope exists to mitigate potential nuisance through design and conditions. That said, supporting equipment such as transformers and battery storage facilities may result in noise pollution and vibration which in turn, can result in adverse impact upon residential amenity.

Details of any ancillary equipment will be required in any subsequent application, along with a Noise Survey and Noise Impact Assessment (I understand that contact has been made with environmental health officers at Shared Regulatory Services regarding survey requirements). A Construction Environmental Management Plan would also be required to address potential sources of nuisance during construction.

Ecology and Green Infrastructure:

Criteria 3, 4 and 5 of Policy 18, Future Wales, state that there should be no adverse effects on the integrity of internationally designated sites; no unacceptable adverse impacts on national statutory designated sites for nature conservation, protected habitats and species; and that the proposal should include biodiversity enhancement measures to provide a net benefit for biodiversity.

Moreover, PPW12 Chapter 6 places emphasis on the need to preserve and enhance the natural environment. One of the requirements is for a green infrastructure statement to be submitted with all planning applications, in order to demonstrate how the 'step-wise' approach has been applied (paragraph 6.4.12 refers). The step-wise approach is a hierarchy which first seeks to avoid any impacts on habitats and species, followed by minimise, mitigate/restore, compensate on site, and finally compensate off site, in order of priority. A net benefit to biodiversity should be achieved at all stages, over and above any mitigation and/or compensation that may be required.

At a local level, Policies MG19, MG20 and MG21 serve to protect designated sites and species. More generally, Policy MD9 (Promoting Biodiversity) states that *'New development proposals will be required to conserve and where appropriate enhance biodiversity interest unless it can be demonstrated that:*

1. *The need for the development clearly outweighs the biodiversity value of the site; and*
2. *The impacts of the development can be satisfactorily mitigated and acceptably managed through appropriate future management regimes.'*

The site includes areas of undeveloped land with trees/hedgerows to the field boundaries, and areas of TPO woodland between some of the field parcels. Moreover, as detailed earlier in this response, there are statutory and non-statutory nature conservation designations adjacent and in proximity to the site. The proposed development therefore has potential to have detrimental ecological impact. A Preliminary Ecological Assessment has been carried out and in this it is recommend that further surveys for bats (I understand these may have already been carried out), badgers, dormouse and breeding birds are undertaken.

The Council's Ecologist has been consulted and provided advice on the various species and issues that it is considered would need to be assessed:

1. *Ground nesting birds.*
2. *Hedgerow nesting birds.*
3. *Landscape scale birds of prey such as Hobby, Barn Owl, Peregrine Falcon and Kestrel, all recorded locally. The cumulative loss of prey habitat of this and Lower Cosmeston Farm will need addressing.*
4. *Winter feeding grounds for birds.*
5. *Mammals - Hazel Dormouse, Otter and Hedgehog.*
6. *Bats – including an evaluation not only of species and PRF's but also the use made of the site – commuting, feeding routes.*
7. *A full botanical survey.*
8. *Moths – notable species already recorded locally and noted for action the Vale Nature Recovery Action Plan include Chalk Carpet, Figure of Eight, Greenweed Flat-body (Agonopterix atomella) and Narrow-bordered Bee Moth. Their larval food plants should be looked for in the botanical survey.*
9. *Recent surveys have also indicated Carrot-mining Bee at Cosmeston Country Park and this needs to be looked out for in invertebrate surveys.*
10. *Reptiles and Amphibians – Common Frog, Common Toad and Slow Worm.*
11. *A walkover survey of the grasslands in the autumn to assess their importance for grassland fungi with an option to undertake DNA analysis of soil samples.*
12. *Hedgerow condition and future management*
13. *How the proposal will retain or improve habitat and landscape connectivity, especially east – west, outside of the former Taff Vale railway line corridor.*

It is also advised that a Habitat Regulations Assessment would be expected due to being within an area of influence of the Severn Estuary SAC/SPA. The proposal will need to be considered in the context of the development of the land at Lower Cosmeston Farm in terms of cumulative effects on biodiversity.

A tree survey and impact assessment will be required to establish any impacts to trees and hedgerows. As per the step-wise approach, detrimental impacts on these features should be avoided in the first instance. Where possible trees should be retained, noting that PPW12 paragraph 6.4.42 states that "*Permanent removal of trees, woodland and hedgerows will only be permitted where it would achieve significant and clearly defined public benefits*." It also requires any replacement tree planting to be provided at a minimum ratio of at least 3 trees of a similar type and compensatory size for every 1 lost.

Consideration should be given in the layout to appropriate buffers for the designated ecological sites and green infrastructure features. The proposed development must fundamentally demonstrate how the step-wise approach has been applied, in addition to provision of biodiversity net gain appropriate and proportionate to the development.

Historic Environment:

Policy 18 of Future Wales details that proposals for renewable and low carbon energy projects should not result in any unacceptable adverse impacts on statutorily protected built heritage assets.

LDP Policies SP10 (Built and Natural Environment) and Policy MD8 (Historic Environment) are of particular relevance and seek to ensure development proposals protect the qualities of the built and historic environment in the Vale of Glamorgan. The criteria under Policy MD8 state that:

1. *Within conservation areas, development proposals must preserve or enhance the character or appearance of the area;*

2. *For listed and locally listed buildings, development proposals must preserve or enhance the building, its setting and any features of significance it possesses;*

3. *Within designated landscapes, historic parks and gardens, and battlefields, development proposals must respect the special historic character and quality of these areas, their settings or historic views or vistas;*

4. *For sites of archaeological interest, development proposals must preserve or enhance archaeological remains and where appropriate their settings*

There are a number of heritage assets in proximity to the site, including a Scheduled Monument, Listed Buildings and County Treasures, and the proposed development has potential to impact on the setting of these features. There are also several recorded archaeological sites/events identified within the general area, and therefore excavation works could disturb archaeological features.

The Council's Conservation Officer has been consulted and recommended that views from the listed buildings in the south would need to be shown in a heritage report to ensure that the proposal is not intervisible from the Church of St Lawrence and Swanbridge House. It is commented that the key anticipated impact to heritage is to the wider landscape setting of designations and sites including Lower Cosmeston Farm, the medieval village (which includes two County Tresure designations) and the historic settlements of Cog, Sully, and Penarth. The Officer has advised that the part of the site located to the east of St Mary's Well Bay Road provides a positive rural setting to this historic landscape and it is questioned whether this section could be relocated or avoided to maintain the rural setting and character. The LVIA and heritage assessment would assist with understanding the potential for adverse impacts here further.

Heneb and Cadw, who provide the LPA with advice in relation to archaeology and scheduled monuments respectively, would be consulted on a formal planning application. I would advise consulting with them directly prior to submission and understand that Heneb offer a pre-application service.

Traffic and Transport:

Criterion 6 of Policy MD2 of the LDP requires that development proposals should '*have no unacceptable impact on highway safety nor cause or exacerbate existing traffic congestion to an unacceptable degree*.' I would envisage that the greatest highway impacts would be during the construction

period. Nevertheless, further details of anticipated vehicle movements during construction, operational, and decommissioning periods should be provided, as well as details of proposed means of access.

The Local Highway Authority have been consulted and commented the following:

"*A robust and detailed construction traffic management plan is required to be provided for approval. It is not yet known the primary means of access however Fort Road and St Marys Well Bay Road serve holiday/caravan parks including a small number of residential dwellings. The new Ysgol Y Deri school campus is also due to be completed along Fort Road in the next few months.*

It would be useful to provide a transport statement to get an understanding of the impact of the development on the surrounding highway network. Notwithstanding this the following information is also required:-

1. *Proposed access arrangements for the construction phase and then post construction/ future maintenance and DNO access.*
    - *Primary means of access and which road it lies from.*
    - *Visibility shown on a plan for all junctions.*
    - *Routes of transfer of materials to each parcel.*
    - *From the adopted highway first 10m of access road/track should be completed in tarmac to prevent mud/debris entering the highway.*
    - *Proposals for any temporary access post construction, i.e. works to close off or stop up.*

2. *A detailed and robust CTMP to be provided. Please include the following:*
    - *Haulage routes shown on a plan, site opening and closing times and any restrictions to times of deliveries HGV traffic.*
    - *Length of construction period.*
    - *Envisaged trip rates for HGV's and other construction traffic during the construction phase. Also, possibly vehicle types.*
    - *How construction traffic will impact on tourist locations and transport and how this will be managed.*
    - *Ensure deliveries are kept outside of school AM and PM peak times depending on route.*
    - *Wheel washing facilities to prevent mud and debris entering the highway.*

3. *Any impact on the adopted highway should be fully indicated. Any new cabling route needs to be fully highlighted and whether any cable route or connection to the grid will impact on the adopted highway. The proposed active travel route construction along the railway line will need to be fully considered.*

4. *A glint and glare assessment will need to be carried out to ensure there is no impact on users of the highway such as dazzling or distracting light reflection from the proposed panels.*

5. *As part of any planning consent a pre-construction condition survey should be carried out of the haulage route and provided to the Local Highway Authority. The survey should be paid by the applicant and carried out by an independent highway maintenance consultant and extents agreed with Local Highway Authority.*

6. *As part of any planning consent a post construction condition survey of the haulage route should be carried out as per point 5 above. The Highway Authority will require at the developers expense to carry out any remedial works identified with the second condition survey that the Highway Authority Considers necessary as direct result of the works*"

Further consideration would also need to be given to associated implications of works to provide access or passing bays, including for example any localised widening or loss of hedgerow. These elements in themselves may have other implications, for instance in terms of ecology.

Public Rights of Way:

There are several public rights of way (PRoW) which cross or run close to the proposed site, including a section of the Wales Coast Path. The indicative layout suggests that the public rights of way would not be directly impacted, however in the event the scheme obstructs any footpaths, a diversion or stopping-up order must be obtained, confirmed, and implemented before any development affecting the footpaths can proceed.

It was discussed at the site walkover if there are opportunities to upgrade the PRoWs as part of the development. I note that you have contacted the Council's Public Rights of Way Officer directly to discuss this further.

It has also been noted within their consultation response that no adverse impact should result to the footpaths and that any damage to the surface would have to be repaired by the developer. Care would also need to by the construction team and if a temporary closure of a footpath is required to facilitate works, this should be sought under the Road Traffic Regulation Act 1984.

Agricultural Land Classification:

According to predictive agricultural land classification maps, the site is predominately made up of predictive grades 3b and 4. As such, the site does not comprise any of the Best and Most Versatile (BMV) agricultural land, defined in PPW12 as Grades 1, 2 and 3a which planning policy seeks to preserve.

Nevertheless, it was discussed on site whether there are opportunities for the land to be put towards other agricultural use, such as sheep grazing, whilst the development is in existence.

Land Contamination:

LDP Policy MD7 makes reference to ensuring that development proposals do not result in an unacceptable impact from land contamination (criterion 2). A

Geo-environmental Preliminary Risk Assessment has been carried out. This concludes that the risks to human health receptors and controlled waters from the potential sources of contamination identified on site is considered to be low, based on the proposed development and the layout situated outside the areas of identified made ground. Shared Regulatory Services would be consulted in respect of this at the time of formal application.

Mineral Resource:

Much of the site is within a mineral safeguarding area for Limestone (Category 1 and/or 2). The mineral safeguarding areas are based upon the British Geological Survey (BGS) Aggregate Safeguarding Map for South East Wales. Policy MG22 of the LDP outlines that '*New development will only be permitted in an area of known mineral resource where it has first been demonstrated that:*

1. *Any reserves of minerals can be economically extracted prior to the commencement of the development;*
2. *Or extraction would have an unacceptable impact on environmental or amenity considerations; or*
3. *The development would have no significant impact on the possible working of the resource by reason of its nature or size; or*
4. *The resource in question is of poor quality / quantity*'

The Council would need to be satisfied that the development avoids the unnecessary sterilisation of the mineral resource across the site. The proposal would result in minerals beneath the site being unavailable for use during the lifespan of the development, however it is acknowledged that a development of this nature would have a limited lifespan and would be largely reversible.

Nevertheless, any future application should demonstrate that this would be the case and that the proposal would not sterilise or have any significant long term impacts on the mineral resource. Details of anticipated timescales for decommissioning should be submitted with the planning application to assist with consideration of this policy.

Dormant Mineral Site:

The southeastern parcel is within Lavernock Quarry Dormant Mineral Site. LDP Policy MG24 (Dormant Mineral Site) details that the Council will seek to prevent further mineral extraction at the identified sites. The amplification text further details that the identified sites are inactive and long dormant sites where no mineral working has occurred for a period in excess of 10 years. It notes that:

"*The Council will seek to prevent further extraction of resources at the sites listed in Policy MG24 in order to provide certainty about their future working and will seek to ensure that restoration is undertaken where appropriate. Restoration and after-use will primarily rely on natural regeneration for nature conservation/ecological purposes*"

I will need to discuss this further with Policy colleagues in terms of any implications for the proposed development. Given that the policy seeks to prevent further mineral extraction in the identified sites, I do not foresee there being a conflict in principle with the aims of the policy, albeit consideration may need to be given to restoration objectives as noted.

Aviation Safeguarding:

The site is not located within an Aviation Safeguarding Zone. Nevertheless, it is recommended that the Glint and Glare Assessment should consider potential implications for aviation safety.

Flood Risk:

Parts of the site, including some of the area proposed for the substation, are within Flood Zones 2 and 3 for Surface Water and Small Watercourses. Technical Advice Note 15 (TAN15) states that planning applications in zone 3 require the strongest justification. At paragraphs 10.23-10.24 it states that:

"*Other proposals will only be appropriate if they are essential to the Development Plan Strategy to regenerate an existing settlement or achieve key economic or environmental objectives. Any redevelopment proposal must be consistent with the acceptability considerations in section 11… Proposals that address national security or energy security needs, mitigate the impacts of climate change, that are necessary to protect and promote public health may also, by exception, be appropriate provided that their locational need is clear and the potential consequences from flooding have been considered and found to be acceptable*.

In zones 2, 3 and TAN 15 defended zone developers must undertake a flood consequences assessment proportionate to the nature and scale of the proposal. Before granting planning permission, decision makers should be satisfied the scheme is justifiable in accordance with the principles set out in section 8, where they are not satisfied, planning permission should be refused. In these zones, Planning Authorities should seek all opportunities to provide enhanced flood protection for existing communities at risk."

The proposal could therefore be appropriate within the flood zone, if demonstrated that it would address national security or energy security needs and/or mitigate the impacts of climate change. A Flood Consequences Assessment would need to be undertaken to demonstrate that the potential consequences from flooding are acceptable and that the scheme is justified in accordance with TAN15. Natural Resources Wales would be consulted in respect of a future planning application.

Surface Water Drainage:

With effect from 7 January 2019 and with the exception of single dwellings and/or developments with a "construction area" of less than 100 square metres, all construction work requiring planning permission which has

drainage implications will need Sustainable Drainage Approving Body (SAB) approval.

SuDS are intended to maximise the opportunities and benefits that can be provided by the effective management of surface water. This can only be achieved when the principles of SuDS are considered at the outset of the development process. The SuDS approach to surface water management will direct the development process and shape the layout of new developments around site drainage.

A Sustainable Drainage Approving Body (SAB) application must demonstrate compliance with the statutory standards, following a set of principles in the design of the system and satisfy the standards in relation to runoff destination, hydraulic control, water quality, amenity, biodiversity, construction, operation and maintenance.

The SAB approval process is separate from the planning application process. An application for approval for a surface water drainage scheme may be made to the SAB separately from, or combined with a planning application. The planning and SAB approvals are independent systems and there may be circumstances where separate applications are appropriate.

Prior to the submission of a planning application, if the development would trigger a SAB application, applicants are strongly advised to make a separate Pre-Application submission to the SAB. Please note that pre-application fees may apply. Further advice can be found at http://www.valeofglamorgan.gov.uk/en/living/Flooding/Flood-and-Coastal-Erosion/Sustainable-Drainage-Systems.aspx

I have not received any comments from the Council's Drainage Section, however would advise contacting the team directly regarding a pre-SAB. If planning permission is sought in advance of SAB approval, then as per the updated TAN15, a Drainage Statement should be submitted with a planning application to demonstrate how SuDS would be incorporated into the scheme.

Required Supporting Documentation

Based on the details available at this stage and responses received from internal consultees, the LPA would advise that a planning application should be supported by the following documentation:

- Full suite of plans
- Planning Statement
- Design and Access Statement
- Pre-Application Consultation Report
- Landscape and Visual Impact Assessment
- Glint and Glare Assessment
- Noise and Vibration Impact Assessment
- Ecological Impact Assessment including specific surveys
- Habitat Regulations Assessment
- Tree Survey and Arboricultural Impact Assessment

- Green Infrastructure Statement
- Historic Environment Assessment
- Archaeology Report
- Transport Statement / Assessment
- Flood Consequences Assessment / Drainage Statement
- Ground Investigation / Contamination / Minerals Assessment
- Construction Traffic Management Plan
- Construction Environmental Management Plan
- Battery Safety Management Plan

Requests for Further Advice

In accordance with the Council's Guidance Note on 'charging for pre-application advice', any further requests for pre-application advice will attract payment of a further fee and should be made in writing with appropriate supporting documentation.

Should you have any further questions regarding the above, please contact Laura Fower on the above number.

Yours faithfully

Laura Fower

for Operational Manager Development Management

Please Note:

The advice offered in this response represents an informal opinion, provided in accordance with the Council's Pre Application Guidance Note. In particular, it is emphasised that while this pre application advice will be carefully considered in reaching a decision or recommendation on an application, the final decision on any application that you may make can only be taken after we have consulted local people, statutory consultees and any other interested parties. It does not, therefore prejudice any decision which the Local Planning Authority may make should the matter come before them in a formal context.