Fferm Solar Larnog

Environmental Statement

Volume II, Chapter 3: Site and Surrounding Area

November 2026

Issue Sheet

Report Prepared for Trydan Gwyrdd Cymru

Document Title

Volume II, Chapter 3: Site and Surrounding Area

Disclaimer

This report has been prepared by WSP UK Ltd with all reasonable care and diligence within the terms of the contract with the Client, Trydan Gwyrdd Cymru. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. We accept no responsibility to third parties to whom this report, or any part, thereof is made available. Any such party relies upon the report at their own risk.

List of Contents

3. Site and Surrounding Area 3
3.1. Introduction 3
3.2. Current Land Use 3
3.3. Environmental Characteristics 5
3.4. Future Baseline 7

List of Figures (see Volume III)

Figure 3.1: Environmental Constraints Plan

3. Site and Surrounding Area

3.1. Introduction

3.1.1. This chapter provides an overview of both the Site and the surrounding area. 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. The Site is identified in **Figure 1.1: Site Location Plan**. The Site is located within the Council's authority area, between the settlements of Penarth and Sully.

3.1.2. The key spatial boundaries and sensitive receptors within the Site and surrounding area are illustrated on **Figure 3.1: Environmental Constraints Plan**. Further technical data is provided within the technical **Chapters 6** to **11**.

3.1.3. 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 Site Location Plan**.

3.1.4. The Site is bounded to the west by the B4267 Lavernock Road, and the Glamorgan Coast to the east and south.

3.2. Current Land Use

General

3.2.1. The Site largely consists of agricultural fields which are intersected by existing access tracks used for agricultural purposes. The northern section of the Site is crossed by existing overhead electricity lines (OHLs).

Population and Settlements

3.2.2. The Site is located predominantly on land between the settlements of Penarth, located approximately 500 m to the north-east, and Sully, located approximately 550 m to the west. The surrounding area comprises a mixture of agricultural land, residential development and recreational uses.

3.2.3. There are a number of isolated farmsteads and individual residential properties in the vicinity of the Site, including dwellings located along Fort Road and St Mary's Well Bay Road. The nearest residential properties are located adjacent to the south-western and eastern boundaries of the Site, including a dwelling on St Mary's Well Bay Road and properties at Ty-r-Orsaf and along Fort Road.

3.2.4. The Bay Caravan Park is located immediately south of the Site. Marconi Holiday Park is situated approximately 130 m to the south east of the Site, whilst the Upper Cosmeston Farm development and Ysgol Llyn Derw (Ysgol-y-Derw)[1] are located to the north of the Site. The settlements of Sully and Penarth comprise the nearest concentrations of residential receptors, with additional recreational receptors located at Cosmeston Lakes Country Park, approximately 0.3km north of the Site boundary.

Topography

3.2.5. The Site occupies a gently undulating coastal landscape between Penarth and Sully, situated on the plateau above the Severn Estuary. Ground levels within the Site are generally low-lying and vary across a series of agricultural fields enclosed by hedgerows, tree belts and small woodland blocks. The wider area is characterised by rolling lowland topography, with coastal cliffs forming the southern edge of the landscape and falling towards the Bristol Channel. Landform and intervening vegetation locally restrict views of the Site, whilst the generally open elevated nature of the surrounding countryside allows longer-distance views across parts of the wider landscape and estuary.

Access

3.2.6. 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.

3.2.7. There are Public Rights of Way (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.

3.2.8. Additional PRoWs 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).

3.2.9. 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.

[1] Ysgol Llyn Derw (Ysgol-y-Derw) is considered to be operational and therefore, is considered as part of the existing baseline environment.

3.3. Environmental Characteristics

3.3.1. Key environmental features are presented in **Figure 3.1: Environmental Designations Plan** and summarised below, with further details available in **Chapters 6** to **11**.

Statutory Ecological Designations

3.3.2. There are statutory no ecological designations located within the Site. However, 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.

3.3.3. 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 0.4km to the north, Sully Island SSSI, located approximately 1km to the south, and Cog Moors SSSI, located approximately 1.5km to the north-west.

3.3.4. 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.

Non-statutory Ecological Designations

3.3.5. 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.

Natural Resources

3.3.6. 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.

3.3.7. 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.

3.3.8. A review of the Welsh Government Predictive Agricultural Land Classification (ALC) Map[2] identifies that the Site contains Grade 3b and 4 land which is not considered to constitute Best and Most Versatile (BMV)[3]. Please refer to **Figure 3.2: Agricultural Land Classification.**

Historic Environment

3.3.9. There are no designated heritage assets within the Site. The closest Listed Buildings include 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.

3.3.10. 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.

Other Environmental Constraints

3.3.11. There are no Air Quality Management Areas (AQMAs) within the Site or its immediate surroundings. The Site is located within a predominantly rural area between the settlements of Penarth and Sully, comprising agricultural land, recreational land uses and dispersed residential development.

3.3.12. The Site is located within the National Landscape Character Area (NLCA) 35 Cardiff, Barry and Newport, which forms part of the coastal lowlands between the Severn Estuary and the South Wales Valleys. The landscape is characterised by a mixture of urban areas, agricultural land, hedgerows and woodland, with green wedges providing separation between settlements.

3.3.13. At a local level, the Site lies within the Lavernock Hinterland (VLFGLVS787) LANDMAP Visual and Sensory Aspect Area. This landscape comprises rolling and undulating lowland farmland enclosed by hedgerows and scattered trees, with occasional views towards the sea. The area contains a mixture of agricultural land, caravan parks, farms and small settlements and has an overall LANDMAP evaluation of Moderate.

[2] Welsh Government (2025) Data Map Wales: Predictive Agricultural Land Classification (ALC) Map 2. Available online at: https://datamap.gov.wales/layers/inspire-wg:wg_predictive_alc2
[3] Welsh Government (2025) Agricultural Land Classification: predictive map guidance. Available online at: https://www.gov.wales/agricultural-land-classification-predictive-map-guidance

3.4. Future Baseline

3.4.1. Schedule 4 of the EIA Regulations requires consideration of the likely evolution of the current baseline in the absence of the Proposed Development. Whilst there are considerable limitations to the predictions that can be made about baseline conditions at a future point in time, some topic areas require projections to account for future change, such as planned developments, land use change, environmental trends (i.e. climate change) and traffic growth.

3.4.2. Further detail on the future baseline conditions considered in elements of the assessment can be found in **Chapters 6** to **11**.