

Environmental Statement: Chapter 14 – Summary and Residual Effects

ES 14

Development of National Significance

Alaw Môn Solar Farm

Land west of the B5112, 415m south of Llyn Alaw, 500m east of Llantrisant and 1.5km west of Llannerch-y-Medd, Anglesey

February 2024



14.0 SUMMARY AND RESIDUAL EFFECTS

Introduction

- 14.1 This chapter summarises the mitigation measures and residual effects identified in each of the technical assessments included in the ES, which has been prepared to accompany an application for a Development of National Significance (DNS) for a ground-mounted solar photovoltaic farm, with a generating capacity of approximately 160 megawatts (MW) and a battery energy storage system facility, together with associated infrastructure on land to the west of the B5112 and to the south of Llyn Alaw at Llantrisant, Anglesey.

Summary/Conclusions

- 14.2 The Development will result in the following significant beneficial residual effects:
- Moderate beneficial effects on landscape features during the operation phase.
- 14.3 The Development will result in the following significant adverse residual effects:
- Moderate adverse effects on landscape features, landscape character and visual amenity during the construction phase; and
 - Moderate adverse effects on landscape features during the operation phase.

Table 14.1: Significance Table

Phase	Effect/ Receptor	Mitigation	Residual Significance
Cultural Heritage (Chapter 6)			
Construction	Truncation/loss of buried archaeological remains of a possibly-prehistoric ring ditch in Field 28	One or more of the following: strip, map and record excavation, above-ground design solutions, exclusion of development. The mitigation will be secured through appropriately worded planning conditions.	Not Significant
	Truncation/loss of rectilinear enclosures of possibly prehistoric or medieval date in Fields 30 - 33	One or more of the following: strip, map and record excavation, above-ground design solutions, exclusion of development. The mitigation will be secured through appropriately worded planning conditions.	Not Significant
	Truncation/loss of buried archaeological remains of possibly-prehistoric pits and postholes in Fields 15, 17, 21, 22, 23, 27, 38 and 63	Strip, map and record excavation for 20m x 20m areas centred on each known pit and posthole. The mitigation will be secured through appropriately worded planning conditions.	Not Significant
	Truncation/loss of buried historic parallel and perpendicular linear ditches within Fields 30-33	Archaeological monitoring of the excavation of all cable trenches and drainage swales coinciding with these features. The mitigation will be secured through appropriately worded planning conditions.	Not Significant
	Potential buried archaeological remains in the proposed 'cut' areas of the battery energy storage system and substation within the Site	Strip, map and record excavation for these development areas, prior to construction groundworks. The mitigation will be secured through appropriately worded planning conditions.	Not Significant
	Potential buried archaeological remains within the proposed off-Site grid connection	Archaeological monitoring of the excavation of the cable trench within the highway and/or highway verge from the Site to the Wylfa National Grid Substation. The mitigation will be secured through appropriately worded planning conditions.	Not Significant
Operational	Change to part of the setting of Cors-y-Bol Bronze Age burial mound Scheduled Monument	None required	Not Significant
	Change to part of the setting of Y Werthyr hillfort Scheduled Monument	None required	Not Significant
Landscape and Visual Effects (Chapter 7)			
Construction	Effects on Landscape Features	Implementation of measures set out in the outline Construction Environmental Management Plan (CEMP). A detailed CEMP will be secured through planning condition.	Moderate Adverse - Neutral
	Effects on Landscape Character		
	Effects on Visual Amenity		
Operational	Effects on Landscape Features	Planting and management / maintenance of vegetation and features as appropriate. The mitigation will be secured through planning condition.	Moderate Adverse – Moderate Beneficial
	Effects on Landscape Character		Minor Adverse – Minor Beneficial
	Effects on Visual Amenity		Minor Adverse - Neutral

Table 14.1: Significance Table

Phase	Effect/ Receptor	Mitigation	Residual Significance
Biodiversity (Chapter 8)			
Construction	Wintering birds (Pond 11)	Design mitigation and timing of work to avoid disturbance secured through planning condition.	Neutral
Operational	Wintering birds (Pond 11)	Design mitigation and timing of work to avoid disturbance secured through planning condition.	Neutral
Water Environment (Chapter 9)			
Construction	Effects on external flood risk during construction	None required	Negligible
	Effects resulting from increase in surface water runoff rates during construction	Compliance with BS6031:198 'The British Standard Code of Practice for Earthworks'	
	Effects resulting from potential remobilisation of existing contamination on surface water (Alaw Reservoir) and groundwater	None required	
	Effects resulting from potential contamination arising from general construction activities on surface water and groundwater	Implementation of measures set out in the outline CEMP and detailed CEMP secured through planning condition.	
Operational	Effects resulting from potential contamination from accidental or process discharges on surface water and groundwater	Implementation of the surface water drainage strategy and the double-skinned containers secured through planning condition.	Negligible to Minor Beneficial
	Effects resulting from incorporation of appropriate maintenance buffers to watercourses	Planting in the buffers will ensure they do not prohibit access to the watercourses.	Negligible
	Effects on risk of external flood risk to the Development once operational	None required	Negligible
	Effects on risk of the increase in surface water runoff rates from the Development	Implementation of surface water drainage strategy and outline Landscape and Environmental Management Plan (LEMP) and the absence of typical farming activities. A detailed LEMP will be secured through planning condition.	Negligible to Minor Beneficial
Transport and Access (Chapter 10)			
Construction	Effects on Road User Safety	Implementation of measures set out in the Construction Traffic Management Plan (CTMP).	Minor Adverse
	Effects on Severance of Communities		Negligible
	Effects on Driver and Passenger Delay		Negligible
	Effects on Non-Motorised User Delay		Negligible
	Effects on Non-Motorised User Amenity		Minor/Moderate Adverse
	Effects on Hazardous Loads		Negligible
Operational	Effects on Road User Safety	None required	Negligible
	Effects on Severance of Communities		
	Effects on Driver and Passenger Delay		
	Effects on Non-Motorised User Delay		

Table 14.1: Significance Table

Phase	Effect/ Receptor	Mitigation	Residual Significance
	Effects on Non-Motorised User Amenity		
	Effects on Hazardous Loads		
Air Quality (Chapter 11)			
Construction	Construction traffic emissions upon designated ecological sites	None	Negligible
Noise and Vibration (Chapter 12)			
Construction	Effects from Construction Noise	None required, but measures set out in the outline CEMP to minimise effect. A detailed CEMP will be secured through planning condition.	Negligible
	Effects from Construction Vibration – Residential Receptors		
	Effects from Construction Vibration – Nantanog Geological SSSI		
Operation	Effects from Operational Plant Noise	Noise Limiting Planning Condition.	Negligible
Agricultural Land (Chapter 13)			
Construction	Temporary loss by sealing or downgrading of BMV Land	Implementation of the framework Soil Management Plan to ensure successful restoration s	Minor Adverse (temporary)
	Temporary loss by sealing or downgrading of poorer quality land	Implementation of the framework Soil Management Plan to ensure successful restoration	Negligible
	Permanent loss of poorer quality agricultural land	None required	Minor Adverse
	Structural damage to high clay soils	Implementation of the framework Soil Management Plan	Minor Adverse
Operation	Effects on farm business	None required	Minor Adverse
	Effects on soils during operation	Implementation of the framework Soil Management Plan	Negligible

Interactive Effects

- 14.4 Regulation 4 (2) states that an ES must include a description of the aspects of the environment likely to be significantly affected by the Development and the interrelationship between these effects. There is no published methodology for determining the significance of interactive or synergistic effects. Combining effects with respect to one environmental discipline with another has to be qualitative and is necessarily based on judgment. Therefore, a matrix system has been used to indicate where such effects would likely occur for the construction and operational phases, highlighting where effects occur to a common receptor. This has been informed by the residual effects of the Development (as identified above in Table 14.1) and professional judgment. The findings of this exercise are set out in Table 14.2 below.

Table 14.2: Interactive Effects

Effect	Local Population and Site Users	Landscape and Views	Users of the Local Road Network	Biodiversity
Construction				
Views of vehicles and machinery being used during the construction period.	*		*	*
Disruption to users of the local road network.	*	*		*
Construction dust.	*			*
Construction noise (plant and machinery).	*			
Creation of construction employment.	*			*
Operation				
Enhanced planting and habitat provision	*	*		*
Views of the Development	*	*		
Effects to the highway network (fear and intimidation)	*		*	*
Air quality from traffic associated with the operation of the Development.	*			*

*indicates where a significant effect may occur.

- 14.5 Appropriate mitigation during the construction phase has been identified in the ES as necessary, such as best practice measures to reduce or eliminate potential adverse environmental effects of construction as far as possible. Furthermore, Chapter 5 Construction Methodology and Phasing and Appendix 5.1 Outline Construction Environmental Management Plan propose a programme and approach to works which will ensure that the Development would be implemented in the most efficient and least intrusive manner. This includes measures set out and secured through the implementation of a detailed CEMP for the Development (see Chapter 5 for further details). Relevant legislative requirements would also be adhered to.
- 14.6 During the construction and operational phases of the Development, it is considered that interactions could potentially occur as set out in Table 14.2. It is considered that interactive effects during construction on the surrounding area will be minor and not significant. Any significant adverse effects would be temporary in duration and are likely to be associated only with the peak periods of construction activity. It is considered that the interactive effects during operation of the Development on the surrounding area will be minor and not significant.