



Candwr Solar Farm

Pre Application Consultation

Environmental Statement

Chapter 3: Application Site

2 July 2026



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3. Application Site

3.1. Introduction

3.1.1. This chapter of the ES provides a description of the Application Site and the surrounding context.

3.1.2. This ES Chapter is supported by the following figures:

- **Figure 3.1 – Environmental Designations Plan**
- **Figure 3.2 – Land Parcel Reference Plan**

3.2. Application Site

3.2.1. The Site is located at land at Court Farm, Ponthir, Monmouthshire. The Site is illustrated at **Figure 1.1 – Site Location Plan** within the red line and has an area of approximately 131.62 hectares ("ha"), incorporating cable routes.

3.2.2. The Site is comprised of agricultural land across sixteen land parcels which are spread across three Local Authority boundaries including Monmouthshire Council, Torfaen County Borough Council and Newport City Council. The sixteen land parcels are shown on **Figure 3.2 – Land Parcel Reference Plan**.

3.2.3. The agricultural land parcels which form the Site comprise a roughly 50/50 mixture of arable and pastoral fields bordered by hedgerow vegetation and trees.

3.2.4. The Application Site is located c.5.2km north-east of the City of Newport, c.1km east of the village of Ponthir and c.2.4km north of the town of Caerleon at the closest point (Land Parcel 12).

3.2.5. The Application Site is located adjacent to the Dŵr Cymru Welsh Water Court Farm Treatment Works and would supply Dŵr Cymru Welsh Water Court Farm Treatment Works with renewable energy via a direct private wire connection. The remainder will be exported to Dŵr Cymru Welsh Water sites via the National Grid via connection to the existing 132kV overhead line at Dŵr Cymru Welsh Water Court Farm Treatment Works.

3.2.6. The Application Site is within an area of open countryside characterised by undulating ridges and valleys. The Proposed Development is proposed to be situated on relatively high ground utilising the south facing slopes of the valley landscape.

3.2.7. Sections of roads are included in the red line boundary for cable works including a section of an unnamed road between Land Parcel 10 and Land Parcel 1, and a section of Candwr Road between Land Parcel 10 and Land Parcel 3.

3.3. Land Parcel Context

3.3.1. A site description of the sixteen Land Parcels comprising the Application Site are detailed below with their corresponding parcel numbers shown in **Figure 3.2 – Land Parcel Reference Plan**. Additionally, **Figure 3.1 – Environmental Designations Plan** details illustratively the environmental opportunities and constraints within the Site and in the local context.

3.3.2. Land Parcel one:

- Located north-east of the Dŵr Cymru Welsh Water Court Farm Treatment Works in Monmouthshire Council administrative area, covering an area of c.7.68 ha.
- A road runs through the centre of the Land Parcel from west to east and a public right of way ("PRoW") Footpath 367 40/1 runs through the southern section of the Land Parcel in a south-west to north-east direction. A number of unnamed drains bisect through the Land Parcel. The Land Parcel is bounded generally by mature vegetation separating the two fields within the Land Parcel.
- The Land Parcel is bounded to the west/south-west by an access track with Dŵr Cymru Welsh Water Court Farm Treatment Works and a reservoir beyond; to the north, east and south the Land Parcel is bounded by further agricultural fields with an individual farm property located to the east.
- The topography of this Land Parcel is sloping falling from 70m AOD in the northwestern corner to 60m AOD along the eastern boundary.
- According to Flood Map for Planning for Rivers by Natural Resource Wales, the Land Parcel is located within Flood Zone 1 which is considered to be of little risk of fluvial or coastal flooding.
- The Agricultural Land Use and Soil Policy Advisor for the Welsh Government did not recommend a detailed ALC field survey is undertaken for Land Parcel one and can be considered ALC subgrade 3b (non-BMV) at best.
- No statutory designations are located at Land Parcel 1. An area of Ancient Woodland is located immediately southeast of the Land Parcel 1.

3.3.3. Land Parcel two:

- Located north of Land Parcel one within Monmouthshire Council administrative area, covering an area of c.7.69ha.
- No statutory designations are located at Land Parcel 2. The Land Parcel is bounded generally by mature vegetation separating the three fields within the Land Parcel. There is an unnamed drain located within the centre of the Land Parcel running in a east to west direction. The Land Parcel is bounded by agricultural fields to the north, east, south and west. Footpath 367 is approximately 100m at its closest point north of Land Parcel 2, running in a broadly southwest to northeast direction.

- The topography slopes from north to south from 50m AOD along the northern boundary to 30m AOD along the southern boundary.
- The Land Parcel is located within Flood Map for Planning for Rivers by Natural Resource Wales, Flood Zone 1.
- The Agricultural Land Use and Soil Policy Advisor for the Welsh Government did not recommend a detailed ALC field survey is undertaken for Land Parcel two and can be considered ALC subgrade 3b (non-BMV) at best.

3.3.4. Land Parcel three:

- This is the most northern of the Land Parcels and is within Monmouthshire Council administrative area, covering an area of c.16.61 ha.
- No statutory designations are located at Land Parcel 3. Torfaen Special Landscape Area (local, non-statutory designation) lies adjacent to the western boundary of this Land Parcel.
- It is bounded to the east/south by Candwr Road, and to the north and west the Land Parcel is bounded by agricultural fields with individual farm properties beyond. The Land Parcel is bounded generally by mature vegetation separating the four fields within the Land Parcel.
- Immediately north-west of this parcel is a Grade II Listed Building (Little Creiggydd).
- Overhead powerlines run through the western section of the Land Parcel.
- Adjacent to the northern and western boundaries of this Land Parcel are two footpaths, Footpath 366 115/1 to the north and Footpath 367 46/1 to the west.
- The topography of this Land Parcel slopes downwards from the south-eastern boundary from 80m AOD to 50m AOD along the northern boundary.
- The Land Parcel is located within Flood Map for Planning for Rivers by Natural Resource Wales, Flood Zone 1 for flooding.
- The Agricultural Land Use and Soil Policy Advisor for the Welsh Government did not recommend a detailed ALC field survey is undertaken for Land Parcel three and can be considered ALC subgrade 3b (non-BMV) at best.

3.3.5. Land Parcel four:

- Located adjacent to the southern boundary of Land Parcel 3, within Monmouthshire Council administrative area, covering an area of c. 8.86ha.

- No statutory designations are located at Land Parcel 4. The Land Parcel is bounded generally by mature vegetation.
- To the north the parcel is bounded by an access track, with individual farm properties located adjacent to both the north-western and north-eastern corners, to the east it is bordered by Candwr Road, to the south and south-east by individual farm properties with agricultural fields beyond and to the west by further agricultural fields.
- Adjacent to the southern boundary of this Land Parcel is Footpath 367 49/1. At the northern section of the Land Parcel Footpath 367 47/1 bisects the northwestern corner of the Land Parcel
- Two unnamed tributaries of Candwr Brook run through the southern section of the Land Parcel aligned with the field boundaries in a south-west to north-east direction.
- Overhead powerlines run through the northern section of the parcel from the northern to the north-eastern boundary.
- The Land Parcel is located within Flood Map for Planning for Rivers by Natural Resource Wales, Flood Zone 1 for flooding.
- The topography of this Land Parcel slopes from north to south from 80m AOD to 40m AOD.
- The Agricultural Land Use and Soil Policy Advisor for the Welsh Government did not recommend a detailed ALC field survey is undertaken for Land Parcel four and can be considered ALC subgrade 3b (non-BMV) at best.

3.3.6. Land Parcel five:

- Located adjacent to Land Parcel 4 to its west, within Monmouthshire Council administrative area, covering an area of c7.34 ha.
- This Land Parcel is bordered to the north, east, and west by agricultural fields with a small, wooded area bordering the south-western boundary, an access track in the north-eastern corner and Candwr Brook borders the southern boundary. The eastern boundary is defined by an unnamed tributary and vegetation, separating Land Parcel 4 and 5.
- No statutory designations are located at Land Parcel 5. Torfaen Special Landscape Area (local, non-statutory designation) lies adjacent to the southwestern boundary of this Land Parcel.
- Footpath 367 47/1 bisects through the parcel along the north-western boundary of Land Parcel 5.

- The topography of this parcel slopes from north to south from 80m AOD to 30m AOD.
- The majority of the parcel is within Flood Map for Planning for Rivers by Natural Resource Wales, Flood Zone 1 for flooding; the south-western boundary is located in Flood Zone 2/ 3.
- The Agricultural Land Use and Soil Policy Advisor for the Welsh Government did not recommend a detailed ALC field survey is undertaken for Land Parcel five and can be considered ALC subgrade 3b (non-BMV) at best.

3.3.7. Land Parcel six:

- Located to the west of land parcel five, to the north of Candwr Road, within Torfaen County Borough Council administrative area. The parcel covers an area of c.8.89 ha.
- No statutory designations are located at Land Parcel 6. This parcel is located within Torfaen Special Landscape Area (local, non-statutory designation).
- In the surrounding area are a number of Listed Buildings to the south and west, including Grade II Listed (Glansirhowy Farm) and Grade II* Listed (Church of All Saints).
- An unnamed road wraps around fields within the Land Parcel leading to individual farm properties beyond to the southeast. The Land Parcel to the west, north and south is bordered by further agricultural fields and to the east by small woodland designated an Ancient Woodland. Candwr Brook runs adjacent in part to the eastern boundary of the parcel. The Land Parcel is bounded generally by mature vegetation separating the four fields within the Land Parcel. A gas pipeline bisects in part the southern section of the Land Parcel.
- Footpath 424 24/1 bisects through part of the southern section of the parcel, joining an unnamed north. Footpath 424 29/1 is c. 200m west of Land Parcel 6 running in a broadly north to south direction.
- The topography is relatively flat at around 30m AOD across this parcel.
- The majority of the parcel is within Flood Map for Planning for Rivers by Natural Resource Wales, Flood Zone 2 for flooding; the south-western boundary is located in Flood Zone 2/3.
- **Agricultural Land Classification Survey (Appendix 8.1)** for the Site determined Land Parcel six to be a mixture of subgrade 2 and 3b land (i.e., a mix of BMV and non-BMV land).

3.3.8. Land Parcel seven:

- Located to the north of parcel six within Torfaen County Borough Council administrative area, covering an area of c. 7.17 ha.
- No statutory designations are located at Land Parcel 7. This parcel is located within Torfaen Special Landscape Area (local, non-statutory designation).
- Grade II Listed Glansirhowy Farm is in close proximity, south-west of this parcel.
- The Land Parcel is bounded generally by mature vegetation separating the two fields within the Land Parcel. The area surrounding the parcel is comprised of further agricultural land with individual farm properties located to the north, south and east. There is an area of Ancient Woodland located adjacent to the south-eastern corner of the parcel. The Candwr Brook runs adjacent to the south-western boundary of the parcel. Running along the western boundary of this parcel is an unnamed road running in a north to south direction.
- A PRoW (Footpath 424 34/1) runs through the parcel in a north-south direction, located adjacent to the western boundary of the parcel. Footpath 367 46/ 2 and 367 46/1 is c.300m west of this Land Parcel running in a broadly north-south direction.
- The topography is undulating ranging from 50m AOD is the north-western corner to 40m AOD in the south-eastern corner of the parcel.
- The majority of the parcel is within Flood Map for Planning for Rivers by Natural Resource Wales, Flood Zone 1 for flooding with a small section in the south-eastern corner within Zone 2.
- **Agricultural Land Classification Survey (Appendix 8.1)** for the Site determined Land Parcel seven to be a mixture of subgrade 2 and 3b land (i.e., a mix of BMV and non-BMV land).

3.3.9. Land Parcel eight:

- Located to south of the Dŵr Cymru Welsh Water Court Farm Treatment Works and lies within all administrative areas of Monmouthshire Council and Torfaen Council, covering an area of c.10.33 ha.
- The Land Parcel is bounded generally by mature vegetation separating the two fields within the Land Parcel. Ponthir Waste Water Treatment Works lies adjacent to the southern/south-western boundary, Dŵr Cymru Welsh Water Court Farm Treatment Works adjacent to the northern boundary and agricultural fields to the west and east. An area of Ancient Woodland lies close by. Land Parcel 8 is located adjacent to Land Parcel 12 (which is located adjacent to the southern boundary). A gas pipeline bisects the southern section of the Land Parcel running in a northwest – south east direction and a water mains line bisects the Land Parcel running in a north – south direction.

- A Grade II Listed Building is located in close proximity to the south-east of the parcel, Barn at Pen-Twyn Farm.
- No statutory designations are located at Land Parcel 8. The western and southern section of this parcel is located within the Torfaen Special Landscape Area (local, non-statutory designation).
- Topography is gently undulating from 50m AOD along the northern boundary to 20m AOD in the southern section of the parcel.
- The majority of the parcel is within Flood Map for Planning for Rivers by Natural Resource Wales, Flood Zone 1 for flooding; the southern boundary is Located adjacent to Flood Zone 2/3.
- **Agricultural Land Classification Survey (Appendix 8.1)** for the Site determined Land Parcel eight to be a mixture of subgrade 2, 3a and non-agricultural land (i.e., a mixture of BMV an non-BMV land).

3.3.10. Land Parcel nine:

- Located to south of Land Parcel 6 and lies within Torfaen County Borough Council, covering an area of c.7.69 ha.
- No statutory designations are located at Land Parcel 9. This parcel is located within Torfaen Special Landscape Area (local, non-statutory designation).
- The Land Parcel is bounded generally by mature vegetation separating the five fields within the Land Parcel. The area surrounding the parcel is comprised of further agricultural land with individual farm properties located to the south, east and west. Candwr Brook defines the eastern boundary. Pant-yr-eos Farm is adjacent to the south-western corner of the parcel.
- The Grade II* Listed (Church of All Saints) is within close proximity to the south-western boundary of the parcel.
- The majority of the parcel is within Flood Map for Planning for Rivers by Natural Resource Wales, Flood Zone 1 for flooding; the eastern boundary is located in Flood Zone 2/3.
- Footpath 367 50/1 is immediately south of the parcel running in a south-west to north-eastern direction parallel to the southern boundary, Footpath 424 24/1 bisects through the north-western section of the parcel in a north-south direction.
- **Agricultural Land Classification Survey (Appendix 8.1)** for the Site determined Land Parcel nine to be a mixture of subgrade 3b and 4 land (i.e., non-BMV land).

3.3.11. Land Parcel ten:

- Located to the east of Candwr Road within the administrative area of Monmouthshire Council, covering an area of c.5.12 ha. An overhead power line bisects in a north-south direction through the centre of the parcel of land.
- The Land Parcel is bounded generally by mature vegetation separating the three fields within the Land Parcel. The area surrounding the parcel is comprised of further agricultural land with individual farm properties located in all directions. Shaftesbury Farm is immediately south-east of the parcel. An unnamed tributary defines the eastern boundary of the parcel of land. Candwr Road defines the length of the western boundary. Court Farm Reservoir is c.200m east of this parcel of land.
- No statutory designations are located at Land Parcel 10.
- Immediately south-west is a Schedule Monument, Candwr Camp, separated from the parcel of land by Candwr Road.
- Footpath 367 29/1 runs the length of the northern boundary of this parcel in an east-west direction.
- The entirety of the parcel is within Flood Map for Planning for Rivers by Natural Resource Wales, Flood Zone 1 for flooding.
- Topography is relatively flat, steadily increasing from 40m to 50m AOD from the south – north of the parcel of land.
- **Agricultural Land Classification Survey (Appendix 8.1)** for the Site determined Land Parcel ten to be subgrade 3b land (i.e., non-BMV land).

3.3.12. Land Parcel eleven:

- Located to the south-east of Land Parcel 2, within the administrative area of Monmouthshire Council, covering an area of c. 2.54ha.
- This Land Parcel is bounded generally by mature vegetation The parcel is bounded by agricultural fields to the north, east, south and west. Residential property, Ty-Isaf, is c.160m east. An unnamed track bounds the eastern boundary of the parcel of land.
- No statutory designations are located at Land Parcel 11.
- The entirety of the parcel is within Flood Map for Planning for Rivers by Natural Resource Wales, Flood Zone 1 for flooding.
- The topography steadily increases from 10m to 30m AOD from the south – north across this parcel of land.
- **Agricultural Land Classification Survey (Appendix 8.1)** for the Site determined Land Parcel eleven to be subgrade 2 land (i.e., BMV land).

3.3.13. Land Parcel twelve:

- Located adjacent to parcel eight and to the south of the Dŵr Cymru Welsh Water Court Farm Treatment Works and lies within all administrative areas of Monmouthshire Council, Torfaen Council, and Newport City Council, covering an area of c. 10.99ha.
- The Land Parcel is bounded generally by mature vegetation separating the three fields within the Land Parcel. Ponthir Waste Water Treatment Works lies adjacent to the southern/south-western boundary with some dense vegetation adjacent noted as Ancient Woodland. Dŵr Cymru Welsh Water Court Farm Treatment Works is adjacent to the northern boundary and agricultural fields to the west and east. An area of Ancient Woodland is adjacent to the eastern boundary
- A Grade II Listed Building is adjacent to the south-east corner of the parcel, Barn at Pen-Twyn Farm.
- No statutory designations are located at Land Parcel 12. The southern section of this parcel is located within the Torfaen Special Landscape Area (local, non-statutory designation).
- An overhead line bisects through the southern corner in an east-west direction. A gas pipeline bisects through the Land Parcel running in a northwest – south east direction and a water mains line bisects the Land Parcel near the western boundary running in a north – south direction.
- Footpath 424 50/1 bisects through the southern section of the parcel of land in an east to west direction, and Footpath 389 24/1 runs along part of the eastern boundary of the Land Parcel.
- The majority of the parcel is within Flood Map for Planning for Rivers by Natural Resource Wales Flood Zone 1 for flooding; the southern section is located in Flood Zone 2/3.
- The topography steadily increases from 20m to 45m AOD from the south – north across the parcel of land.
- **Agricultural Land Classification Survey (Appendix 8.1)** for the Site determined Land Parcel twelve to be a mixture of subgrade 2, 3a, 3b and non-agricultural land (i.e., a mix of BMV and non-BMV land).

3.3.14. Land Parcel thirteen:

- Located to south of Land Parcel nine and lies within Torfaen County Borough Council, covering an area of c. 13.98ha.

- No statutory designations are located at Land Parcel 13. This Land Parcel is located within Torfaen Special Landscape Area (local, non-statutory designation).
- The Land Parcel is bounded generally by mature vegetation separating the seven fields within the Land Parcel. Pant-yr-eos Farm is adjacent to the north-eastern corner of the parcel. Grade II* Listed (Church of All Saints) is within close proximity, south-west of the parcel. An Ancient Woodland is located immediately outside of the eastern boundary of this parcel. The southern boundary of the Parcel is approx. 60m from the northern boundary of Ponthir.
- A number of Footpaths bisect through this Land Parcel. Footpath 367 50/1 is bisects through the centre of the parcel running in a south-west to north-eastern direction and Footpath 424 24/1 bisects through the north-western section of the parcel in a north-south direction. A short section of Footpath 424 22/1 connects Footpath 424 24/1 and 367 50/1.
- An overhead line bisects through the centre of the Land Parcel in a broadly east to west direction. A gas pipeline bisects through the eastern section of the Land Parcel running in a broadly northwest – south east direction and a water mains line bisects the Land Parcel near the southern boundary running in a broadly east-west direction.
- Candwr Brook sits within established tree belt on part of the eastern boundary of the parcel. The majority of the parcel is within Flood Map for Planning for Rivers by Natural Resource Wales Flood Zone 1 for flooding; the eastern boundary is located in Flood Zone 2/3.
- The topography steadily decreases from 60m to 35m AOD from the west –east across the parcel of land.
- **Agricultural Land Classification Survey (Appendix 8.1)** for the Site determined Land Parcel thirteen to be a mixture of subgrade 3b and 4 land (i.e., non-BMV land).

3.3.15. Land Parcel fourteen:

- Located to south of Land Parcel 13 and lies within Torfaen County Borough Council, covering an area of c. 4.27ha.
- No statutory designations are located at Land Parcel 14. This Land Parcel is located within Torfaen Special Landscape Area (local, non-statutory designation).
- The Land Parcel is bound the south by Caerleon Road. To the east rear gardens of residential properties in Ponthir abut the eastern boundary. The northern boundary is line in part with mature vegetation with Land Parcel 13 to the north and Grade II* Listed (Church of All Saints) c.200m north. The end of Footpath 424 27/1 as it meets Caerleon Road is adjacent to the northern corner of the Land Parcel.

- The Land Parcel is within Flood Map for Planning for Rivers by Natural Resource Wales Flood Zone 1 for flooding.
- The topography steadily decreases from 50m to 35m AOD from north– south across the parcel of land.

3.3.16. Land Parcel fifteen:

- Located to east of Land Parcel 8 and north of Land Parcel 12 and lies within Monmouthshire Council, covering an area of c. 7.36ha.
- No statutory designations are located at Land Parcel 15. This Land Parcel is located adjacent to Torfaen Special Landscape Area (local, non–statutory designation).
- The Land Parcel is bound the east by an unnamed road with further agricultural fields to the east. The northern, western and southern boundaries of the Site are lined with mature vegetation. To the northwest is Dŵr Cymru Welsh Water Court Farm Treatment Works. To the west is further agricultural fields. A section of Ancient Woodland is adjacent to the western boundary of the parcel, inside the Site. A Grade II Listed Building is c.160m south of the Land Parcel.
- The Land Parcel is within Flood Map for Planning for Rivers by Natural Resource Wales Flood Zone 1 for flooding.
- The topography steadily decreases from 45m to 30m AOD from northeast– southwest across the parcel of land.

3.3.17. Land Parcel with Substation:

- Located to north of Land Parcel 8 and lies within Monmouthshire Council, covering an area of c. 5.10ha.
- No statutory designations are located at this Land Parcel.
- The Land Parcel is bound to the north by an unnamed road with Court Farm Reservoir beyond. To the east is Dŵr Cymru Welsh Water Court Farm Treatment Works and a residential property. To the south and east is agricultural fields. The Land Parcel is bounded by mature vegetation and has three ponds/ scrapes associated with Dŵr Cymru Welsh Water Court Farm Treatment Works in the southeast of the parcel.
- Schedule Monument, Candwr Camp, is c.415m to the west of this Land Parcel at its closest point.
- Footpath 367 37/1 bisects through the centre of this Land Parcel, running in a broadly west– east direction.

- The Land Parcel is within Flood Map for Planning for Rivers by Natural Resource Wales Flood Zone 1 for flooding.
- The topography steadily decreases from 65m to 45m AOD from northeast-southwest across the parcel of land.

3.4. Environmental Context

- 3.4.1. **Figure 3.1 – Environmental Designations Plan** details illustratively the environmental opportunities and constraints within the Site and in the local context.

Ecology & Biodiversity

- 3.4.2. The baseline comprises a predominantly agricultural landscape of grazed pasture and arable land, with a network of hedgerows, woodland blocks, and watercourses. Two stands of Ancient Woodland are partially located within the Site boundary, while the remaining three are situated immediately adjacent to the Site. Ecological value is generally low at the field scale but increases along linear features and woodland habitats. A range of protected and notable species are present or have potential to occur.
- 3.4.3. There are no statutory or non-statutory sites designated for nature conservation located within any of the Land Parcels. Within the area surrounding the Site there are the following designations –
- River Usk Special Area of Conservation (SAC) and Special Scientific Interest (SSSI) approximately 1.4 km from the Site, and
 - Severn Estuary SAC and Special Protection Area (SPA) within 10 km of the Site (wider study area)
- 3.4.4. The Site is connected to the wider ecological network, including the Afon Lwyd and River Usk Special Area of Conservation (SAC).
- 3.4.5. Baseline conditions have been established through a combination of desk-based review and field survey. Desk study data include statutory and non-statutory designated sites, and species records obtained from South East Wales Biodiversity Records Centre. Field surveys have been undertaken to characterise habitats and assess the presence of protected and notable species, in accordance with CIEEM guidance.
- 3.4.6. Ecological surveys have been undertaken between 2023 and 2025, with the majority of fieldwork completed during 2025. These include habitat surveys (April–May 2025), breeding bird surveys (April–July 2025), wintering bird surveys (January–March and September–December 2025), bat surveys (spring to autumn 2025), and protected species surveys undertaken at appropriate times of year. Desk study data have been updated in May 2026.

Landscape

- 3.4.7. The baseline comprises a predominantly rural, undulating agricultural landscape characterised by mixed arable and pasture land, enclosed by mature hedgerows, tree belts, and small woodland blocks. There are a number of Public Rights of Way (PRoW) that run through or are adjacent to the Site.
- 3.4.8. The Site is within the following landscape character areas:
 - National Landscape Character Area 31 – Central Monmouthshire, and
 - National Landscape Character Area 35 – Cardiff, Barry, and Newport
- 3.4.9. Parts of the Site are located within locally designated Torfaen Special Landscape Area within Landscape Unit (LAU) 59, Countryside East of Cwmbran as defined by the 2021 Sensitivity Capacity Study for Renewable Energy Development¹, a non-statutory designation.
- 3.4.10. Visual baseline conditions are influenced by rolling topography and vegetation, resulting in variable intervisibility and a range of receptors including PRoW users, road users, and nearby residents.
- 3.4.11. Baseline conditions have been established through a combination of desk-based review and site survey. Desk-based sources include LANDMAP and National Landscape Character Area assessments, planning policy, and spatial datasets, supported by ZTV analysis. This data has been verified through field surveys undertaken in February 2025, October 2025 and May 2026, including viewpoint photography and on-site assessment of landscape character and visual receptors.
- 3.4.12. The LVIA assessment incorporates GIS-based visibility modelling through the generation of a Screened Zone of Theoretical Visibility (SZTV) (**Figure 5.1**), which identifies areas from which the Proposed Development may be visible based on topography, built form and screening features. A LiDAR-based ZTV (**Figure 5.2**) has also been produced to refine the representation of vegetation and built screening. The outputs of these models have been used to inform study area definition, viewpoint selection, and receptor identification, and have been verified through field survey. The assessment adopts a GLVIA-based approach, combining modelling outputs with professional judgement to evaluate landscape and visual effects.
- 3.4.13. Further details of landscape and visual baseline information, site visits, methodologies, assessment, and conclusions can be found in **draft Chapter 5 Landscape and Visual** of this ES.

Heritage

¹ Torfaen Replacement Local Development Plan (RLDP) 2018–2033. Sensitivity and Capacity Study for Renewable Energy Development Blaenau Gwent CBC and Torfaen CBC (October 2021)

- 3.4.14. The baseline comprises a predominantly agricultural landscape containing limited recorded archaeological remains within the Site, but with potential for buried features of prehistoric, Roman, and post-medieval origin. There is one known asset of the presumed alignment of a Roman road (Candwr Road) within the Site.
- 3.4.15. There are no designated heritage assets located within the Site, within the 3km study area surrounding the Site there are the following Scheduled Monuments:
- Scheduled Monument Candwr Camp immediately south of Land Parcel 10 (reference: MM135);
 - Penrhos Camp (civil war earthworks) Scheduled Monument (reference: MM011) c. 500m south-east of Land Parcel 12;
 - Lodge Wood Camp Scheduled Monument (reference: MM023) is 1.3km south-west of Land Parcel 12; and
 - Cae Camp Scheduled Monument (reference: MM079) c. 1.3km east Land Parcel 2.
- 3.4.16. Several Listed Buildings are located within the wider area, largely associated with the following settlements Ponthir, Llantarnam, LLanfrechfa, LLandegveth and Llanddewi Fach. However, the following Listed Buildings have been identified within 1km of the Application Site boundary:
- Grade II Listed Barn at Pen-Twyn Farm (reference: 26129) adjacent to the southeastern boundary of parcel 12;
 - Grade II Listed Little Creiggydd (reference: 2674) c. 35m north-east of Land Parcel 3; and
 - Grade II Listed Glansirhowy Farm (reference: 3141) c. 140m south of Land Parcel 7.
- 3.4.17. There are two Registered Historic Parks and Gardens within a 3km radius of the Site:
- Grade II Llantarnam Abbey, c.915m south-west of Land Parcel 3 at its closest point (PGW(Gt)25(TOR)); and
 - Grade II Glen Usk, c.2.1km east of Land Parcel 11 of the Site at its closest point (PGW(Gt)36(MON)).
- 3.4.18. Baseline conditions have been established through a desk-based assessment drawing on historic environment datasets (Cadw, HER and NMRW), historic mapping and archival sources, aerial imagery, and LiDAR data, supported by site walkover surveys undertaken in April and June 2025. The assessment has been undertaken in accordance with ClfA guidance and relevant Welsh planning policy and Cadw guidance.

- 3.4.19. The assessment utilises GIS-based analysis and a Screened Zone of Theoretical Visibility (SZTV) to identify potential intervisibility between the Proposed Development and heritage assets. Spatial datasets, LiDAR analysis, and site observations are used to inform a staged setting assessment in accordance with Cadw guidance. Impacts are assessed qualitatively by evaluating changes to the setting of heritage assets and the resulting effects on their significance.
- 3.4.20. Further details of the heritage and archaeological baseline information, surveys, methodologies, assessment, and conclusions can be found in **draft Chapter 10 Built Heritage** Assessment of this ES.

Air Quality

- 3.4.21. The Application Site is not located within an Air Quality Management Area ("AQMA") the closest to the Application Site is the Caerleon High Street AQMA declared for Nitrogen dioxide located c. 1.6km south of Land Parcel 12.
- 3.4.22. Baseline air quality conditions within the study area are generally good, with monitored and modelled concentrations of NO₂, PM₁₀ and PM_{2.5} well below the relevant air quality objectives. Air quality in the area is influenced primarily by road traffic emissions, with limited contribution from other sources.
- 3.4.23. Baseline conditions have been defined through a desk-based review of local air quality monitoring data, national datasets, and published reports. This includes local authority Annual Progress Reports, Defra background concentration maps, and review of potential emission sources using the Pollutant Release and Transfer Register. Traffic data from **draft Chapter 11 – Transport and Access** has also informed baseline and future air quality conditions.
- 3.4.24. No detailed air quality dispersion modelling has been undertaken. Instead, the assessment adopts a screening-based approach in accordance with EPUK/IAQM guidance, with predicted changes in traffic flows compared against established thresholds to determine the need for further assessment. As these thresholds are not exceeded, a qualitative assessment has been undertaken. Construction dust impacts have been assessed using IAQM guidance through a risk-based methodology, and future baseline conditions have been informed by Defra background projections and emission factors.
- 3.4.25. Further details of the air quality baseline information, surveys, methodologies, assessment, and conclusions can be found in **draft Chapter 12 Air Quality** Assessment of this ES.

Ground Conditions

- 3.4.26. The baseline conditions comprise an undeveloped, predominantly agricultural site with no significant on-site contamination sources identified. The geo-environmental setting is characterised by superficial deposits overlying mudstone and sandstone bedrock, with underlying secondary aquifers, surface water features, and nearby residential receptors.

Any potential contamination is considered to be localised and associated with limited areas of made ground and associated with farm gateways to improve access.

- 3.4.27. Based on published geological records, the majority of the Site is underlain predominantly of bedrock Raglan Mudstone Formation, with small areas underlain by the Downton Castle Sandstone Formation and the Upper Llanbadoc Beds and Llangibby Beds. The bedrock strata generally comprises mudstone and sandstone. The Site is not located within a Mineral Safeguarding Area. The majority of the Site does lie within Radon Affected Areas.
- 3.4.28. Baseline conditions have been informed through a desk-based assessment supported by a site walkover survey undertaken in September 2025. Sources include historical mapping, environmental database records, regulatory authority consultation, geological and hydrogeological data (including BGS mapping and borehole records), and hydrological datasets. The assessment has been undertaken in accordance with LCRM and relevant British Standards.
- 3.4.29. The assessment adopts a qualitative risk-based approach through development of a Conceptual Site Model (CSM), identifying potential contaminant sources, pathways, and receptors. Potential linkages are evaluated using a likelihood–consequence risk matrix in accordance with CIRIA guidance and LCRM. The assessment is based on desk study information and site reconnaissance, with no quantitative modelling or intrusive investigation undertaken at this stage.
- 3.4.30. Further details of the ground conditions can be found in the Phase 1 Geo Environmental Desk Study, submitted outside the EA and part of the suite of supporting DNS application documentation.

Agricultural Land

- 3.4.31. An **Agricultural Land Classification Survey (Appendix 8.1)** has been undertaken for the Application Site. Consultation was undertaken with the Welsh Governments Agricultural Land Use & Soil Policy Advisor who advised (correspondence dated 20.12.2022) that land parcels 1–5 are very likely to be ‘Gradient Limited’ to Subgrade 3b at best and are therefore not considered best and most versatile (BMV) land. It was recommended by the Welsh Governments Agricultural Land Use & Soil Policy Advisor that no detailed ALC field surveys need to be undertaken for these Land Parcels.
- 3.4.32. The baseline conditions comprise agricultural land of varying quality (Grades 2–4) characterised by clay loam and silty clay loam soils. Land quality is primarily influenced by climatic conditions, soil properties, and topography, with soil wetness representing the principal limiting factor, alongside localised effects of droughtiness, stoniness, depth, and gradient. The **Agricultural Land Classification Survey (Appendix 8.1)** confirms 23.2ha of land in the Site is determined as Best and Most Versatile (BMV) land, and 97.1ha of land in the Site is non-BMV land. It should be noted, that a much lower proportion of land use of BMV and non-BMV land from the developable area of the Site is proposed – see **draft**

Chapter 8 – Agricultural Circumstances and **Figure 8.1 – Agricultural Land Classification and Indicative Site Layout Overlay Plan** for further details.

- 3.4.33. Baseline conditions have been informed through detailed field surveys undertaken in February 2023, March and June 2025, including trial pits and auger sampling, supported by laboratory soil analysis. These data are supplemented by published datasets including predictive ALC mapping, BGS geological data, Soil Survey information, and Meteorological Office agro-climatic datasets.
- 3.4.34. The assessment has been undertaken in accordance with MAFF ALC guidance and relevant professional standards. The assessment adopts the MAFF Agricultural Land Classification methodology, whereby land quality is determined through systematic evaluation of climatic, soil and site factors. Field and laboratory data are used to assess physical parameters and interactive factors such as wetness and droughtiness, with moisture balance calculations applied where relevant. The most limiting factor at each survey point defines the ALC grade, which is then spatially interpreted to derive the overall land classification across the Site.
- 3.4.35. Further details of the agricultural circumstances baseline information, surveys, methodologies, assessment, and conclusions can be found in **draft Chapter 8 Agricultural Circumstances** Assessment of this ES.

Water Environment

- 3.4.36. Baseline conditions comprise a predominantly agricultural site characterised by gently undulating topography, freely draining soils, and underlying mudstone and sandstone geology. The Site contains a network of Ordinary Watercourses and is located within the catchment of the Afon Lwyd and Sor Brook. Flood risk mapping indicates that the majority of the Site lies within Flood Zone 1 for all sources, with localised higher-risk areas associated with watercourses. Overall, the existing flood risk baseline is low.
- 3.4.37. The majority of the Site is located within Flood Zone 1 for Rivers according to the Flood Map for Planning for Rivers by Natural Resource Wales and therefore has a low probability of flooding from rivers (less than 1 in 1,000 year). There are small localised higher-risk areas associated with watercourses located within Flood Zone 2 and 3.
- 3.4.38. The Flood Map for Planning for Seas by Natural Resource Wales does not predict the Site to be at risk. There are therefore no tidal flood risk mitigation measures recommended onsite.
- 3.4.39. The Flood Map for Planning for Surface Water and Small Watercourses by Natural Resource Wales shows that the Site is generally located in Flood Zone 1 and has a predominantly low risk of flooding from surface water and small watercourses (less than 1 in 1,000 year). Surface water flow paths are noted across the Site predicting small areas of the Site to be at risk of flooding from surface water and/or small watercourses (Flood Zone 2 and 3).

- 3.4.40. Baseline conditions have been informed by a combination of Natural Resource Wales flood mapping datasets, BGS geological and hydrogeological data, Soilsmap mapping, and Strategic Flood Consequence Assessments. This is supported by site-specific data including topographical survey, LiDAR analysis, and utility records. The assessment has also drawn on relevant national and local planning policy and guidance, including TAN15 and Planning Policy Wales.
- 3.4.41. The assessment adopts a dataset-led approach to flood risk, drawing on Natural Resource Wales Flood Map for Planning datasets to define baseline flood extents. These datasets are interpreted alongside site-specific topographic and LiDAR data to refine understanding of flow routes and flood pathways. The design has been iteratively developed to avoid higher-risk flood zones. Surface water management has been informed by quantitative drainage modelling, including FEH-derived greenfield runoff rates and storage sizing undertaken using CausewayFlow tools, with allowances for climate change. A SuDS-based drainage strategy has been developed to ensure runoff is appropriately attenuated and does not increase flood risk on or off-site.
- 3.4.42. Further details of the water environment baseline information, surveys, methodologies, assessment, and conclusions can be found in **draft Chapter 9 Water Environment Assessment** of this ES.

Noise

- 3.4.43. The baseline conditions comprise the prevailing background noise environment at surrounding noise-sensitive receptors, characterised by measured LA90 levels during the early morning, daytime, and evening periods, and influenced primarily by existing road traffic and rural activities. The noise environment is rural in character, with low levels of road traffic from intersecting minor, local roads.
- 3.4.44. Baseline noise levels have been established through unattended field surveys undertaken at eight representative receptor locations over a defined monitoring period in September 2025, with data recorded in accordance with BS 4142 requirements. Statistical analysis of measured LA90 levels has been used to derive representative background noise levels for relevant operational periods.
- 3.4.45. Operational noise levels have been predicted using SoundPlan software implementing the ISO 9613-2 propagation methodology. The model incorporates plant noise data derived from manufacturer specifications, site layout, and topographical information (including LiDAR data), and assumes worst-case operational conditions with all plant operating concurrently. Calculated noise levels at receptor locations have been compared against measured baseline background levels in accordance with BS 4142, with additional consideration of absolute noise criteria from BS 8233 and WHO guidance.
- 3.4.46. Further details of the Noise can be found in **Appendix 2.5**, appended to **draft Chapter 2 – EIA Assessment Scope and Methodology**.

Transport

- 3.4.47. The Proposed Development is situated approximately 3km to the north of Junction 25 of the M4 Motorway. Within the wider locality to the Application Site is a predominantly rural highway network including local lanes, the B4236 Caerleon Road and the A4042 trunk road, with associated PRow routes. Baseline conditions are defined by existing traffic flows and HGV proportions on key links, together with collision data, which indicates no existing highway safety issues.
- 3.4.48. Baseline conditions have been informed by a combination of traffic surveys (including Automatic Traffic Count (ATC) and Manual Classified Count (MCC) surveys), highway authority data, personal injury collision records, and topographical survey information.
- 3.4.49. No transport modelling has been undertaken. Instead, the assessment adopts a guideline-led analytical approach based on the ISEP Environmental Assessment of Traffic and Movement guidance². Changes in traffic flows associated with the Proposed Development are calculated and compared against baseline conditions, with percentage increases assessed against recognised thresholds to determine significance. Effects are evaluated on a link-by-link basis, combining magnitude of change with receptor sensitivity to derive significance.
- 3.4.50. Further details of the traffic baseline information, surveys, methodologies, assessment, and conclusions can be found in **draft Chapter 11 Transport and Access** Assessment of this ES.

Glint and Glare

- 3.4.51. Glint and glare effects occur as a result of the presence of solar panels which act as reflective surfaces. Effects will endure for the duration of the project's lifetime but cease once the panels are removed or mitigation measures such as effective visual screening are included.
- 3.4.52. The following ground based receptors have been identified within the associated 1km study area:
- A section of the B4236 totaling 3.7km;
 - A section of Usk Road totaling 1.95km; and
 - 222 dwellings

² Institute of Environmental Management and Assessment (IEMA) (2023). Guidelines: Environmental Assessment of Traffic and Movement. Institute of Environmental Management and Assessment

- 3.4.53. Aviation receptors have been identified within a 10 km study area surrounding the Proposed Development which is considered appropriate for glint and glare effects on aviation activity.
- 3.4.54. The surrounding area includes existing vegetation and intervening terrain that provide a level of mitigation for reflecting panels and therefore reduce the level of impact upon identified receptors.
- 3.4.55. The baseline conditions for the study area have been informed by reviewing information sources such as mapping and aerial photography to establish existing vegetation, buildings and intervening terrain, OSGB 36 coordinate system and DTM (Digital Terrain Model) data to establish the underlying landform and the assessment is further informed by established industry guidance and published studies relating to solar reflection characteristics and glint and glare effects.
- 3.4.56. Geometric modelling of the reflective surfaces of the solar panels has been conducted carried out using a bespoke modelling software with secondary calculations carried out for aviation receptors using the ForgeSolar software.
- 3.4.57. Further details of the glint and glare baseline information, modelling, methodologies, assessment and conclusions can be found in **draft Chapter 7 Glint and Glare** of this ES.