



Craig Y Perthi Solar Farm Resubmission

Environmental Statement Non-Technical Summary

Prepared for

RWE

RWE Renewables UK

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Figure 1 – Location Plan

Figure 2 – Illustrative Landscape Masterplan



1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

- 1.1.1 The Environmental Statement (ES) has been prepared in support for the resubmission of a planning application made by RWE Renewables UK ('the Applicant'), to Planning and Environment Decisions Wales for the construction and operation of a solar farm, battery storage facilities and associated infrastructure ('the Proposed Development'). The Proposed Development is located on land to the east of Newport in South Wales (hereafter referred to as 'the Application Site' or 'the Site') as shown in Figure 1.
- 1.1.2 This document is the Non-Technical Summary (NTS) of the ES and provides a review of the development proposals and the possible environmental implications, in concise non-technical language.
- 1.1.3 The ES has been prepared in accordance with guidance and legislation that requires the likely significant environmental effects of developments to be assessed during construction, operation and decommissioning.

1.2 Background

- 1.2.1 In April 2024, planning permission DNS 3279787 was sought for the installation and operation of a renewable energy generating station comprising ground-mounted photovoltaic solar arrays and battery-based electricity storage containers, on the same Site as that which is the subject of this planning application. This previous proposal had a capacity of approximately 99.9 megawatt (MW) export capacity, with associated battery storage, and is hereafter referred to as the '2024 Scheme'.
- 1.3 On 21st October 2025, Planning and Environment Decisions Wales (PEDW) elected to refuse the planning application for the 2024 Scheme. However, in doing so, the Officer Report for the 2024 Scheme acknowledged that there is significant weight on the economic benefits of the scheme and its contribution to renewable energy production supporting the transition to a low carbon future in a changing climate. The Applicant**
- 1.3.1 The Applicant is a market leading UK-based solar developer, having secured over 1 GW of solar and battery storage projects throughout the UK. The Applicant places a



special focus on improving local biodiversity of sites, with an average biodiversity net gain of over 100% on its sites and has a strong record of engaging with and winning the support of local communities, who in turn help to shape their developments. As a result, they have a 98% success rate in planning.

- 1.3.2 RWE Renewables UK is the largest power producer in Wales, and the country's number one renewable energy generator. RWE are currently involved in over 3 GW of power generation in Wales across 12 sites, of which around 1 GW is renewable. The company's existing renewable energy portfolio already generates one third of Wales' renewable energy production – enough to power 550,000 homes. RWE plays a critical role in driving Wales' decarbonisation, working in partnership with Welsh Government and wider partner organisations. Through its past and future investments RWE is helping to create a clean, affordable and secure power system, which will act as the springboard to the decarbonisation of wider economic sectors across Wales, such as industry and transport.

1.4 Brief Overview of the Need for a Solar Farm

- 1.4.1 In May 2019, the Chief Minister recognised the climate emergency and made a commitment for the UK to reach net zero carbon emissions by 2050, in line with scientific advice from the International Panel on Climate Change (IPCC).
- 1.4.2 The Climate Change Act 2021 ('the Act') received Royal Assent in December 2021. The Act legally commits the UK to achieving Net Zero greenhouse gas (GHG) emissions by 2050. A legally binding interim target was also brought into force in April 2022 and sets a target to reduce GHG emissions by 45% by 2035.
- 1.4.3 To achieve this, NCC declared an Ecological and Climate Emergency in November 2021, and made a commitment to reach net zero in their own operations by 2030. This followed the Welsh Government's climate emergency declaration earlier in 2019.
- 1.4.4 Newport has been demonstrating a downwards trend in GHG emissions since 2005, with nearly a quarter of Newport's total renewable energy generation attributed to solar. Solar farms, such as the Proposed Development, would make a meaningful contribution to both local, and national climate commitments, and help tackle both the climate and cost of living crises we face. The Proposed Development would be



able to meet the equivalent energy needs of over 45,374 Welsh homes and save over 3,180,368 tonnes of CO₂, which is the equivalent of planting over 52 million trees.¹

- 1.4.5 The need for the Proposed Development as a contributor towards the UK's and Newport's target to reach Net Zero by 2030 is clear. If the legal commitments set out within the Act and the subsequent Climate Change Regulations have any chance of being achieved, through a sustainable solution, there is a need for significant deployment of grid scale renewable energy such as the Proposed Development.

1.5 The Site

- 1.5.1 The Site covers approximately 196 ha and is currently used for agriculture as part of several pastoral and arable agricultural holdings, with the focus being at Castle Farm. The Site lies wholly within the administrative area of Newport City Council (NCC). Of this 196 ha, approx. 111 ha would be fenced, and contain panelling and its ancillary infrastructure.
- 1.5.2 The site is adjacent to the South Wales Main Line railway, approximately 4 km to the east of the city of Newport. The railway forms the southern boundary to the site, whilst to the north and northwest, the Site is bounded by agricultural fields and areas of woodland within Llanwern Park. To the east, the Site is again largely bounded by agricultural fields.
- 1.5.3 Whilst being used for agriculture and being of a rural nature, the Site is located within a heavily industrialised area of South Wales. To the south of the Site, operations are ongoing at the Tata Steel Llanwern Steelworks site. The western portion of the Site is now redundant and being developed as part of the Newport Eastern Expansion Area, which would provide an additional urban environment. The eastern portion of the Site is still used for the rolling of steel.
- 1.5.4 To the east of the Site is Magor Brewery, currently operated by AB InBev, which produces over one billion pints of beer a year. There are plans to extend the Site further, including the installation of hydrogen technology to power the Site. The

¹ Reference <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>



Magor Brewery also includes a single Vensys V136 wind turbine. To the southeast of the Site is the Gwent Europark, a logistics hub that includes storage and distribution facilities for national retailers including Tesco and Wickes. The village of Bishton is located south of the central area of the Proposed Development, with a buffer of existing field units to the west and to a lesser extent to the east.

- 1.5.5 The boundaries of the Site are generally formed by hedgerows and trees as part of recognised field boundaries within agricultural holdings. The southern boundary of the Site is made up of a combination of the South Wales Main Line, Bishton Road, and an unnamed road between Bishton and Wilcrick.



2.0 ALTERNATIVES

2.1 Introduction

2.1.1 Several alternatives have been considered during the design process for the Proposed Development. The principal alternatives of relevance to the consideration of environmental effects were:

- i) Location.
- ii) Layout.
- iii) Technology.

2.2 Location

2.2.1 The starting point for the project was that the Applicant is seeking to deliver a renewable energy project, which would contribute to Newport meeting its climate change obligations by utilising a sustainable energy source.

2.2.2 Developing renewable energy solar schemes has two principal criteria which must both be satisfied:

- i) Firstly, and most importantly, any solar scheme must be located near to an existing substation which has the available capacity to import the required amount of power into the electricity grid, either directly into the substation or via a point of connection into the nearby transmission network.
- ii) Secondly, solar schemes must be located close enough to the identified substation to remain viable both in terms of cable deployment for the grid connection, and to ensure that minimum transmission losses occur.

2.2.3 A series of initial feasibility exercises were undertaken to identify if any environmental constraints at or near to the Site limited the ability for it to be developed, this included preliminary ecological assessment, desk-based heritage assessment, preliminary visual impact analysis.

2.2.4 The preliminary assessments concluded that there were no clear environmental constraints that would preclude development at the Site.



- 2.2.5 An Alternative Site Assessment (ASA) was also conducted to determine if there were any preferable sites from a policy perspective which could potentially accommodate this type of development. The ASA did not identify any preferable sites.

2.3 Layout

2024 Scheme

- 2.3.1 At the outset of the design phase, a desk-based review was undertaken to identify the extent to which the environmental conditions on the Site or in the local area, could influence the design. A range of factors were identified which guided the design of the development so that the environmental effects of the scheme were reduced. This included avoiding areas of identified flood risk, maximising distances of noise generating plant from residential properties, retaining hedgerows and trees, minimising impact on areas of higher value agricultural soils and using existing access points into fields.
- 2.3.2 The design also integrated components that would reduce the visual impact of the development and help enhance local biodiversity such as the creation of new habitats, including wildflower meadows, grassland areas, bird nesting boxes and beehives. New green infrastructure will also be incorporated, such as enhanced rights of way, new permissive paths, outdoor picnic areas, outdoor classroom, a community orchard and information boards.
- 2.3.3 Further changes to the design were made upon receipt of the Scoping Direction from Planning and Environmental Decisions Wales. The Scoping Direction confirms how the Environmental Impact Assessment must be undertaken and is informed by a number of key stakeholders.
- 2.3.4 Additional changes to the Proposed Development were made in Spring 2023 after informal consultation, which led to the identification of suitable field units for lapwing enhancement areas, increased residential offsets to retain amenity, and the relocation of the Substation Compound to avoid areas of significant flood risk.
- 2.3.5 Given the level of consultation and design iteration undertaken prior to the statutory Pre-Application Consultation process, only minor changes were made on the receipt of formal consultation responses. Tree planting was enhanced to strengthen ecological enhancements and further protect views from residential properties and



Public Rights of Way, and 'no-dig' areas were agreed with Cadw and the Glamorgan Archaeological Trust to protect buried archaeology.

Proposed Development

2.4 The Proposed Development has remained largely unchanged; however, the site area has been reduced from 240 ha to 196 ha. The reduction in the site area excludes the SSSI and consequently minimises habitat loss. This is particularly significant given the concerns raised in the 2024 reasons for refusal regarding potential impacts on lapwing populations and their associated habitats. Technology

2.4.1 The Applicant considered alternative technology options for the inverter arrangement and solar panel mounting system.

2.4.2 Inverters convert the direct current generated by the solar panels into alternating current for export to the electricity network. The principal alternatives considered were centralised inverters and string inverters. String inverters were selected because they can be distributed close to the panel rows, provide greater flexibility in the layout and avoid the need for larger central inverter stations.

2.4.3 The Applicant also considered fixed and tracking solar panel systems. Fixed systems are mounted at a set angle, whereas tracking systems move throughout the day to follow the position of the sun.

2.4.4 A fixed-panel system was selected because it is reliable, requires less maintenance and generates less operational noise than a tracking system. It also requires fewer maintenance visits and has a lower potential to give rise to glint and glare effects.



3.0 SCHEME DESCRIPTION AND CONSTRUCTION METHODS

3.1 The Proposed Development

- 3.1.1 The Applicant is seeking planning consent for “*The installation and operation of a solar farm, associated infrastructure, substation, access, biodiversity enhancements, landscaping, and grid connection.*” This solar photovoltaic electricity generating station (or ‘solar farm’) would have a maximum export capacity of approximately 99.9 MW.. The electricity generated would be enough to provide electricity for approximately 45,374 typical Welsh homes and result in an approximate saving of over 3,180,368 tonnes of CO₂ over the life of the development, compared with generation from fossil fuels. The inclusion of batteries ensures the maximum efficiency of the Site, working with the electricity distribution system to enable surplus energy to be stored and released as needed, and provide vital balancing services to the grid network.

Key components of the Proposed Development

- 3.1.2 The main components of the Proposed Development are:

- iii) rows of ground-mounted solar panels, together with the supporting frames and equipment needed to convert the electricity they generate;
- iv) an electrical compound containing the main substation, two smaller electrical buildings and associated control equipment;
- v) underground electricity cables within the Site and an underground connection of approximately 10 km to Uskmouth Power Station, mainly beneath existing roads;
- vi) approximately 7.8 km of access tracks, using existing farm entrances, tracks and field openings wherever practicable;
- vii) fencing around the solar panels, including gaps to allow small mammals to pass through, together with inward-facing security cameras;
- viii) improvements to approximately 5 km of existing Public Rights of Way and green lanes, and approximately 3.3 km of new permissive walking routes;
- ix) more than 11 km of new native hedgerow and tree planting, improvements to existing hedgerows, areas of new woodland and a community orchard;
- x) approximately 43.3 ha of wildflower meadow, including areas managed to support the shrill carder bee;



- xi) approximately 16.5 ha of land managed as nesting habitat for lapwing, including measures to reduce the risk from predators; and
- xii) other wildlife features, including bird and bat boxes, insect shelters, reptile hibernation areas and log piles.

Landscaping

3.1.3 The existing landscape framework would be retained and reinforced through:

- i) more than 11 km of new native hedgerow and tree planting;
- ii) infilling and strengthening of existing hedgerows;
- iii) native woodland planting;
- iv) specimen and hedgerow-tree planting at selected locations;
- v) establishment of a community orchard; and
- vi) long-term management of retained and proposed vegetation.

3.1.4 Further details of the components and landscaping associated with the Proposed Development is included on Figure 2.

3.2 Construction

3.2.1 The general construction activities are summarised as follows:

- i) Erection of Heras fencing around tree root protection areas.
- ii) Establishment of site compound.
- iii) Construction of site access tracks.
- iv) Erection of deer / stock fencing and gates to site perimeter.
- v) Installation of solar panels and frames.
- vi) Installation of CCTV poles and cameras.
- vii) Installation of transformer stations.
- viii) Installation of cable trenches.
- ix) Installation of control building, switchroom building and substation building.
- x) Installation of filter drains.
- xi) Grid connection.
- xii) Cultivation and seeding.
- xiii) Hedgerow and woodland planting.



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- 3.2.2 The construction period is expected to take in the order of 8-12 months. Construction activities would take place six days per week, during the following hours:
- i) 08:00 to 18:00 Monday to Friday;
 - ii) 08:00 to 13:00 on Saturdays; and
 - iii) no construction work on Sundays or Public Holiday.
- 3.2.3 Any piling operations would be limited to between 08:00 and 17:00, Monday to Friday only, and not on Saturday, Sunday or Public Holidays.
- 3.2.4 Construction traffic would access the Site from the north via the B4245 Magor Road, Waltwood Road and Bishton Road. This is the same access route that was used for construction of the Egg Production Unit and Castle Farm, Bishton. This route has therefore recently been used by construction vehicles. Furthermore, this route is also currently used by farm and agricultural vehicles, thus there are already large vehicles routeing along it.
- 3.2.5 Construction plant to be used is likely to comprise of:
- i) A number of small-scale mechanical pile driving rigs for frame supports.
 - ii) 360° excavators.
 - iii) Dumper trucks and rollers for access tracks.
 - iv) Trenching machines.
 - v) Telehandlers.
 - vi) Cranes for transformers and battery containers.
- 3.2.6 A draft Outline Construction Environmental Management Plan (OCEMP) has been developed for the Proposed Development, the purpose of which would be to manage and report environmental effects of the project during construction.



4.0 SUMMARY OF EFFECTS

4.1 Scope of Assessment

4.1.1 The Applicant has undertaken environmental assessment and Environmental Impact Assessments (EIAs) for a number of PV Solar Array and battery energy storage facilities. The potential for significant environmental effects from such developments is limited and it was determined that the Proposed Development was unlikely to result in significant environmental effects in relation to:

- i) Air Quality.
- ii) Noise and Vibration.
- iii) Population and Human Health.
- iv) Geology and Soils.
- v) Material Assets and Waste.
- vi) Climate Change.
- vii) Traffic and Transport.
- viii) Major Accidents and Disasters.
- ix) Lighting / Glare.

4.1.2 On this basis the Environmental Statement assessed the following topics in detail, the findings of which are summarised below:

- i) Landscape and Visual.
- ii) Ecology.
- iii) Ornithology.
- iv) Cultural Heritage.
- v) Hydrology and Flood Risk.

4.2 Landscape and Visual

4.2.1 Chapter 5.0 of the ES, together with the supporting figures and appendices, sets out an assessment of the likely significant landscape and visual effects of the Proposed Development.

4.2.2 The Landscape and Visual Impact Assessment (LVIA) includes a detailed assessment of visual effects from 17 viewpoints across a 5 km study area and



- considers the effect of the Proposed Development on the surrounding landscape character.
- 4.2.3 The landscape of and surrounding the Proposed Development consist of medium to large regular and irregular fields. The fields are currently in agricultural use and are divided by a diverse mix of hedgerows, linear tree belts and small woodlands. Straight ditches also border and divide the flat fields, focussed broadly to the south and east, and are often lined by mature vegetation. Sloping fields are focussed to the west and north, rising up from the fringes of the linear settlement of Bishton on the lower slopes. The linear settlement of Bishton largely runs along Bishton Road from the south to the north through the centre of the Site.
- 4.2.4 Numerous PRow and minor roads also cross and border the Site and the main railway line runs broadly from east to west along the southern fringes of the Site. The M4 motorway corridor also occurs to the north.
- 4.2.5 The large-scale buildings and structures of the Llanwern Steelworks to the south of the Site dominate the landscape and views. Further afield, the large-buildings and structures associated with the Gwent Europark to the south-east and the Magor Brewery to the east are also present. The levels landscape to the south is also scattered with lines of pylons, wind energy schemes and a large-scale solar scheme.
- 4.2.6 The Site is not recognised for its importance through any landscape relevant designations. However, within the wider study area, focussed broadly to the south within the expansive levels landscape, the Caldicot Levels Special Landscape Area (SLA) and the Gwent Levels Landscape of Historic Interest occur. The SLA and Landscape of Historic Interest are however already influenced by development including numerous lines of pylons, a solar scheme and scattered wind energy schemes.
- 4.2.7 There are also a number of Registered Historic Parks and Gardens present, within the wider study area and the centre of some of the villages and towns are recognised as Conservation Areas. These include Magor, approximately 2km to the east and Redwick, approximately 3km to the south. There are also scattered Ancient Woodlands present, mainly focussed within the higher landscape broadly to the north, adding to the well-vegetated character and wider enclosure of the Site.



- 4.2.8 The Proposed Development is situated within a high and moderate sensitivity visual and sensory aspect area, within an outstanding and high sensitivity historic landscape aspect area, within a high and moderate sensitivity cultural landscape aspect area, within a high and moderate sensitivity geological landscape aspect area and within a high and moderate sensitivity landscape habitat aspect area. The sensitivity reflecting the importance of the landscape, as defined by the LANDMAP assessment.
- 4.2.9 During the operational period, the Proposed Development would largely only be perceived in close proximity, from the settlement fringes of Bishton and from the PRoW, minor roads and railway line that cross and border the Site. Elevated but distant views of the Proposed Development would also be possible from selected exposed and open locations as the landform rises broadly to the north.
- 4.2.10 Although perceived in close proximity, the Proposed Development would be viewed as a contained built element, within a regular and well-vegetated landscape which has already been influenced by infrastructure and development. The majority of effects on landscape character, landscape relevant designations and visual amenity receptors and their views would therefore be neutral largely because of the enclosure provided by the surrounding numerous lines of dense hedgerows and trees within the landscape and the screening vegetation focussed around residential properties, settlements and transport corridors in the wider landscape.
- 4.2.11 Mitigation measures during the site selection and design stages have ensured that the Proposed Development would have minimal direct effects on landscape elements. The Proposed Development's location set in medium to large and relatively contained regular fields within a sloping to flat, well-vegetated landscape are also appropriate for solar development. The sensitive siting and location of the Proposed Development also minimises the wider impacts on landscape character, landscape relevant designations and nearby visual amenity receptors.
- 4.2.12 In addition, selected existing field boundary vegetation would be protected and enhanced and the characteristic reens focussed within the flat landscape would be sensitivity managed and enhanced, to retain and improve the landscape pattern, as well as for nature conservation and biodiversity benefits. Selected hedgerow and tree infill planting to existing boundaries would also improve screening and promote the field pattern and landscape structure. In addition, extensive proposed hedgerows,



scattered tree, woodland and orchard planting, appropriate to the landscape character and pattern, would also provide additional screening and enclosure to the Proposed Development as well as nature conservation and biodiversity enhancements.

- 4.2.13 The growth of the proposed landscape mitigation measures, as shown in the Illustrative Landscape Masterplan, including selected infill planting of the existing retained boundaries, would help to restrict even further potential views of the Proposed Development, particularly for those receptors in close proximity, over time.

4.3 Ecology

- 4.3.1 Chapter 6.0 of the ES, together with the supporting figures and appendices, sets out an assessment of the likely significant effects of the Proposed Development upon ecology and nature conservation assets at the Site and within the surrounding area. Effects of the Proposed Development on birds is discussed in Section 4.5 Ornithology of this document.
- 4.3.2 The assessment site comprises arable and managed grassland habitats enclosed by species poor hedgerows, some with trees..
- 4.3.3 Species specific surveys have been completed for great crested newt (eDNA), common dormouse, water vole, aquatic invertebrates, shrill carder bee and aquatic plants.
- 4.3.4 Adverse effects are predicted for a number of valued receptors from unmitigated construction and operational phase impacts including statutory sites, non-statutory sites, priority habitats, protected and notable species.
- 4.3.5 By adopting the following secondary mitigation, significant adverse effect can be avoided with predicted positive outcomes for interest features of Gwent Levels - Redwick and Llandeenny SSSI, amphibians, bats, otter, fish, reptiles, invertebrates and aquatic plants:
- i) Exclusion zones to boundary features protected by a suitable fence. Damping down during dry periods.
 - ii) No night works.
 - iii) Restoration of construction areas following completion of development.

- iv) HDD employed for passage under boundary features.
- v) Adoption of a ditch management plan.
- vi) Hedgerow management in winter months.
- vii) Creation of Shrill Carder bee habitat.

4.3.6 Residual effects are not significant.

4.4 Ornithology

4.4.1 Chapter 6.0 of the ES, together with the supporting figures and appendices, sets out an assessment of the likely significant effects of the Proposed Development upon receptors:

- i) Nature conservation sites designated for ornithological interest features;
- ii) Wintering and passage birds; and
- iii) Breeding birds

4.4.2 The ornithological assessment has shown that a suite of bird species utilize the site throughout the year, both for breeding and winter foraging, shelter and roosting. This includes some species associated with statutory nature conservation sites and species of conservation concern.

4.4.3 The assessment concludes that the application area does not form a core area for any SPA/Ramsar species, with no significant numbers of any individual species identified.

4.4.4 The construction of the arrays would not impact on the integrity of the nearby SSSIs. Although snipe have been recorded occasionally using single field compartments, the residual effect upon the Seven Estuary SSSI is not considered to be significant.

4.4.5 The majority of ornithological interest on the application site is of site or local value and the Proposed Development would not result in significant effects.

4.4.6 A number of land management proposals associated with the development can result in positive impacts for both wintering and breeding species.

4.4.7 Assuming all mitigation (embedded and secondary) is implemented as detailed in the LEMP, adverse residual impacts on the ornithological interest of the application



area would be limited to the displacement of breeding and wintering lapwing and wintering snipe.

- 4.4.8 Overall, the positive, long-term impacts of proactive habitat creation and management for wildlife including reed management are considered to be significant beneficial for birds at the local level and would benefit a number of Section 7 species including Amber and Red-listed birds of conservation concern. The Proposed Development may result in an enhancement of grassland botanical diversity that could result in a significant beneficial effect to birds at a Local level.

4.5 Cultural Heritage

- 4.5.1 Chapter 8.0 of the ES, together with the supporting figures and appendices, sets out an assessment of the likely significant effects of the Proposed Development upon archaeological and cultural historic assets at the Site and within the surrounding landscape. This includes direct effects resulting from the construction of the Proposed Development and effects resulting from changes within the settings of historic assets which may arise during its operation.
- 4.5.2 There are no designated historic assets within the Site. A Scheduled Monument known as Bishton Castle is located between the eastern and central parts of the Site and this comprises the location of a former medieval castle or fortified house of medieval date. Approximately 600 m to the east of the Site is a Scheduled Monument known as Wilcrick Hill Camp which is a substantial hillfort of probable Iron Age date. Just to the north-west of Wilcrick Hill Camp is a further Scheduled Monument, comprising earthworks representing a deserted village of probable medieval date.
- 4.5.3 The Grade II* listed Church of St Mary, Llanwern is located just to the west of the Site and a stone cross in the churchyard here is a Scheduled Monument. Close to the south-eastern edge of the central part of the Site is the Grade II listed Church of St Cadwaladr, Bishton.
- 4.5.4 The Site is located on the northern edge of the reclaimed former wetlands known as the Gwent Levels, a large proportion of which has been placed on the Register of Landscapes of Outstanding Historic Interest in Wales. The boundary of the registered historic landscape is to the south of the Site and the Proposed Development is located outside of this designation. However, land within the eastern



- part of the Site is within one of the defined Historic Landscape Character Areas that are a constituent of the registered historic landscape.
- 4.5.5 An archaeological geophysical survey has been undertaken across most the Site. Geophysical anomalies representing features of potential archaeological interest were identified in several parts of the Site, most notably within the south-western part of the central area where the anomalies indicate the presence of the remains of several small irregular enclosures which appear comparable in form to enclosures of later Iron Age and Roman date which have been identified in a similar topographic location further to the east.
- 4.5.6 A programme of further archaeological investigation by way of trial trenches has been agreed with the relevant stakeholder organisation and will be undertaken prior to determination of the DNS application.
- 4.5.7 The assessment has found that the Proposed Development would not result in significant effects in respect of any designated historic asset. There would be Minor Adverse effects as a result of changes within the settings of three Scheduled Monuments (Bishton Castle, Wilcrick Hill Camp and Pen-Toppen-Ash Camp), one Grade II* listed building (the Church of St Mary, Llanwern), and a Minor Adverse or Negligible Adverse effect as a result of changes within the setting of one Grade II listed building (the Church of St Cadwaladr, Bishton). There would also be a Minor Adverse effect on the Gwent Levels Landscape of Outstanding Historic Interest.
- 4.5.8 There would be a Moderate Adverse effect resulting from the impacts on the defined Historic Landscape Character Area outside the registered Gwent Levels Landscape of Outstanding Historic Interest, and a Minor Adverse or Negligible Adverse effect resulting from changes to the character of the historic landscape within the rest of the Site.
- 4.5.9 There is potential for effects of up to Moderate Adverse level to occur as a result of direct impacts to buried archaeological remains, also for effects of up to Minor Adverse level to occur as a result of direct impacts to deposits of palaeoenvironmental interest.
- 4.5.10 There is the potential for cumulative effects on the Gwent Levels Landscape of Outstanding Historic Interest when the Proposed Development is considered



alongside two other proposed solar farms. The contribution of the Proposed Development to any cumulative effects on this designated historic asset would be much lower than for the two other schemes as the Site is located wholly outside the registered historic landscape whereas the two other proposed solar farms are located wholly within it.

- 4.5.11 A targeted programme of further archaeological investigation in the form of trial trenches has been agreed with GGAT and this would enable the development of an appropriate strategy to avoid, reduce or offset any impacts on buried archaeological remains that that could occur during the construction phase. The strategy could include design amendments or changes to construction methodologies. Offsetting of impacts would be achieved through the undertaking of additional archaeological investigations ahead of construction.
- 4.5.12 Subsequent additional investigations could include appropriate examination of the deposit sequence in those parts of the Site that are within the former wetlands of the Gwent Levels. This would be in the form of the drilling of boreholes producing cores for off-site inspection leading to the development of an appropriate strategy for aimed at avoiding, reducing or offsetting any impacts on deposits of palaeoenvironmental interest during construction.
- 4.5.13 The implementation of the programme of further archaeological investigation would reduce the level of effect in respect of impacts on buried archaeological remains to Negligible Adverse or Minor Adverse which is not significant in EIA terms.
- 4.5.14 The implementation of the programme of examination of the deposit sequence within the former wetlands of the Gwent Levels would reduce the level of effect in respect of impacts on deposits of palaeoenvironmental interest to Negligible Adverse or Minor Adverse, which is not significant in EIA terms.

4.6 Hydrology and Flood Risk

- 4.6.1 Chapter 9.0 of the ES, together with the supporting figures and appendices, sets out an assessment of the likely significant effects of the Proposed Development on hydrology and flood risk.
- 4.6.2 The assessment was informed by a site specific Flood Consequences Assessment (FCA), which included specific hydraulic modelling of the local watercourses.



- 4.6.3 The Site is currently agricultural land, which is understood to be a mix of pasture and arable uses. Current land practices are to leave fields bare after harvest which can negatively impact the local waterbodies. The proposed cable route will follow existing roads, predominantly adopted highways.
- 4.6.4 The topography of the site varies, which in turn determines its hydrological landscape. The northern and western parts slope steeply down to the lower lying and flatter southern and eastern areas.
- 4.6.5 There are three principal watercourses local to the site. The Monks Ditch flows to the west of the site. The Waltwood Brook flows through part of the western portion of the site. The Wilcrick Brook flows through the eastern portion of the site. In addition, the lower lying parts of the site fall within the Caldicot and Wentlooge Levels Internal Drainage District (IDD), which is characterised by a network of watercourses and reens. It also houses the Gwent Levels – Redwick and Llandeenny SSSI.
- 4.6.6 To the south (downstream) of the site are two rail lines, which are elevated above local ground levels. The principal watercourses flow through culverts beneath these features, which influences their flow regime.
- 4.6.7 The Water Framework Directive classifies the Monk's Ditch as having an overall Moderate status. The other watercourses, particularly the reen network, do not have similar monitoring data available. However, their conditions are likely to be impacted by the local land management and agricultural practices.
- 4.6.8 NRW Reen and Ditch Habitat Surveys undertaken on Main Rivers and IDD viewed reens within the SSSI have been referred to, to inform the assessment. The surveys identify if reens are favourable or unfavourable based on the presence of submerged vascular plants. The survey results show that the IDD reens were favourable in 2011, with two failing in 2017. One Main River survey failed in 2011 but had improved in 2017.
- 4.6.9 The Development Advice Map (DAM) Zones classify low-lying parts of the site to be in within Zone C1 - Areas of the floodplain which are developed and served by significant infrastructure, including flood defences (s). This classification includes the risk of tidal flooding and flooding from watercourses.



- 4.6.10 The geology beneath the site is varied but likely to be impermeable across the site. Groundwater levels are likely to be close to the surface in the lower lying parts of the site.
- 4.6.11 The embedded mitigation includes measures to manage rainwater at source, allowing it to percolate into the ground as per the existing site. Measures include using permeable access tracks and directing runoff from containerised infrastructure to gravel beds.
- 4.6.12 Good construction and operational precautions will manage the risk of soil compaction, spills and pollution incidents (which are likely to be very low frequency given the site use and activities).
- 4.6.13 The significance of the effect construction on pollution is therefore considered to be Minor to Moderate Adverse.
- 4.6.14 The Site performs a flood risk function by storing water upstream of the railway line. The significance of the effect of construction on local flood risk is therefore considered to be Minor to Moderate Adverse.
- 4.6.15 During operation, the cessation of intensive agricultural activities will have beneficial effects in terms of runoff rates and water quality. The establishment of a healthy soil ecosystem is therefore assessed as having a moderate to minor beneficial impact to both water quality and flood risk.
- 4.6.16 The panels themselves will be raised above the predicted flood level inclusive of climate change, where relevant. No vulnerable infrastructure or construction compound would be located in areas of flood risk. The significance of change in relation to flood risk is therefore assessed as negligible.
- 4.6.17 During construction, secondary mitigation would include preparing soil for seeding through tilling where soil has become compacted.
- 4.6.18 Given the overall benefits of the Proposed Development during operation, no further mitigation is required.

4.7 Cumulative Effects



- 4.7.1 With respect to cumulative landscape and visual effects, the addition of the Proposed Development, in combination with other renewable energy schemes in the study area would not create a solar landscape or dramatically change the views from surrounding visual amenity receptors into a view dominated by solar schemes.
- 4.7.2 In terms of effects on landscape and views, the addition of the Proposed Development, in combination with other renewable energy schemes in the study area would not create a solar landscape or dramatically change the views from surrounding visual amenity receptors into a view dominated by numerous solar schemes. Even when perceived with other consented and under determination industrial and housing developments, largely focussed on and associated with the surrounding settlement fringes, will not create a landscape or views dominated by development.
- 4.7.3 It is unlikely that any of the cumulative development identified would lead to any adverse cumulative effects on ecology, given that either no significant effects were identified for those schemes where ecological assessment was undertaken, or no objections were raised for the schemes where specific ecology assessment was omitted. Whilst it is recognised that a number of developments with non-significant effects could cumulatively give rise to significant effects, this is considered unlikely given the physical separation between these schemes and the enhancement measures that many of these schemes included.
- 4.7.4 In terms of local bird populations and their supporting habitats, it is unlikely that any of the cumulative developments would lead to an adverse cumulative effect in relation to ornithology as there is no overall loss in breeding bird habitat as a result of these developments. The majority of the cumulative developments do not impact upon ornithologically sensitive areas, there is a displacement of breeding bird habitat associated with the Rush Wall Solar Farm development in a similar way to the Proposed Development. However, the combined total (Rush Wall Solar Farm and the Proposed Development) would result in 16.5 ha of land managed specifically for breeding lapwing, which would likely provide a large positive benefit for local lapwing populations.
- 4.7.5 With respect to cultural heritage, there are two cumulative developments, both solar farm developments, within the vicinity of the Proposed Development. These are the Rush Wall Solar Farm and the solar farm element of the Magor Net Zero project. The

greatest contribution to any cumulative effects on the Gwent Levels Landscape of Outstanding Historic Interest would come from the Rush Wall Solar Farm and the solar farm element of the Magor Net Zero project as they are located wholly within the registered historic landscape whereas the Proposed Development is wholly outside the registered area.

- 4.7.6 Regarding hydrology and flood risk, the fundamental aims of PPW and TAN15 is to ensure that development sites manage flood risks within their area and mitigate impacts to third parties. As a result, there is limited opportunity for cumulative impacts.
- 4.7.7 The impacts from the Proposed Development will be negligible, or minor to moderate beneficial. It is therefore likely that the two identified schemes would also deliver similar benefits. Therefore, the impacts on third parties would likewise be negligible or minor beneficial.
- 4.7.8 Given the assessment of cumulative effects, reported in the technical chapters of this ES and summarised above, it is unlikely that the Proposed Development would lead to significant cumulative effects when considered with other cumulative developments.

5.0 CONCLUSION

- 5.1.1 The ES provides a detailed description of the construction, operation and decommissioning of the Proposed Development and provides an assessment of likely significant effects which could arise in relation to the following topics:
- i) Landscape and Visual.
 - ii) Ecology.
 - iii) Ornithology.
 - iv) Cultural Heritage.
 - v) Surface Water and Flood Risk.
- 5.1.2 The ES has assessed and evaluated the potential significant, direct, indirect, cumulative and in-combination environmental effects of the Proposed Development. Where adverse effects have been identified, measures envisaged to prevent, reduce, and if appropriate offset these effects have been described.

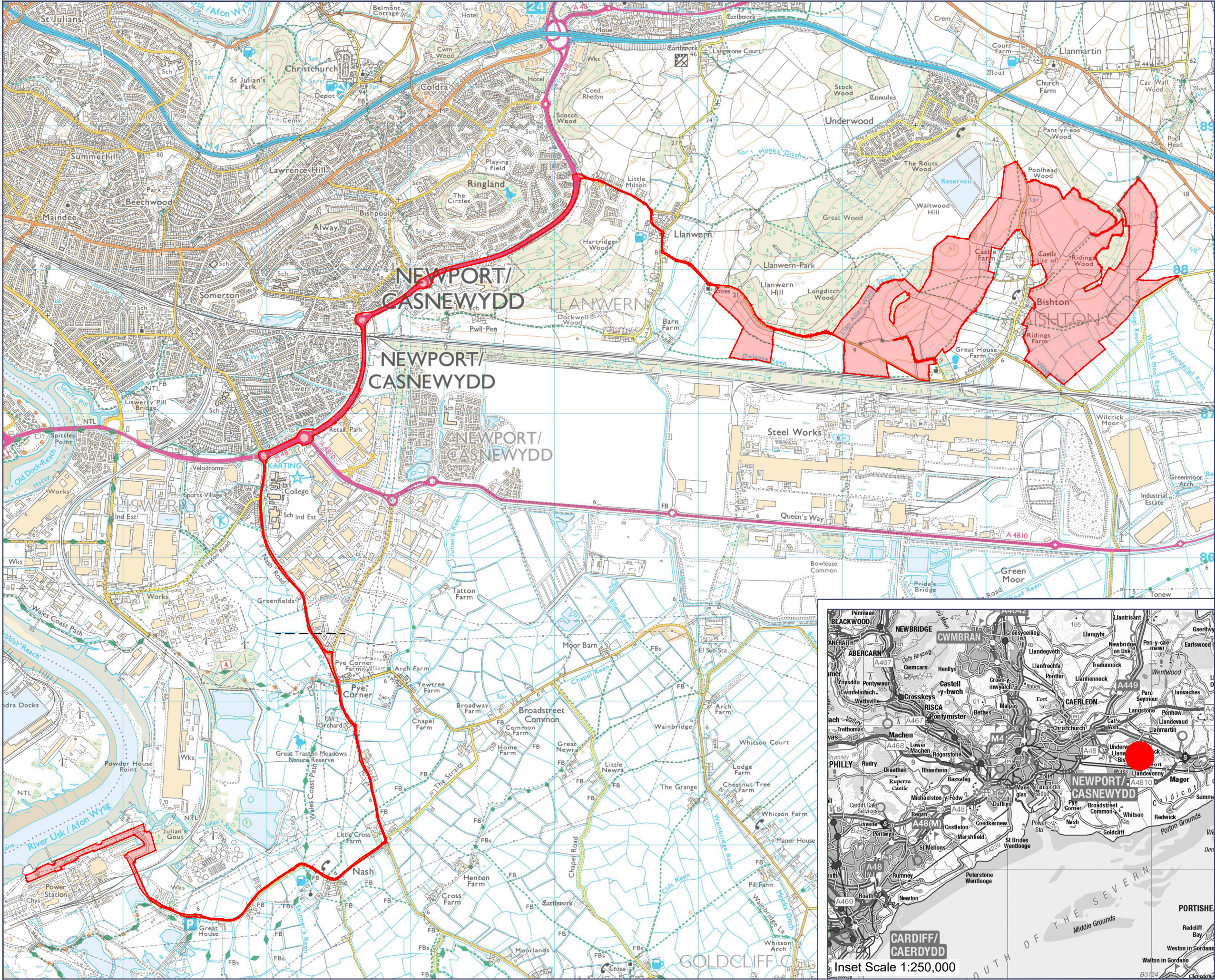


- 5.1.3 A range of mitigation and enhancement measures are proposed which would ensure any adverse environmental effects from the Proposed Development are minimised. Several of the measures proposed would result in positive environmental effects including a substantial gain in the biodiversity value of the Site.



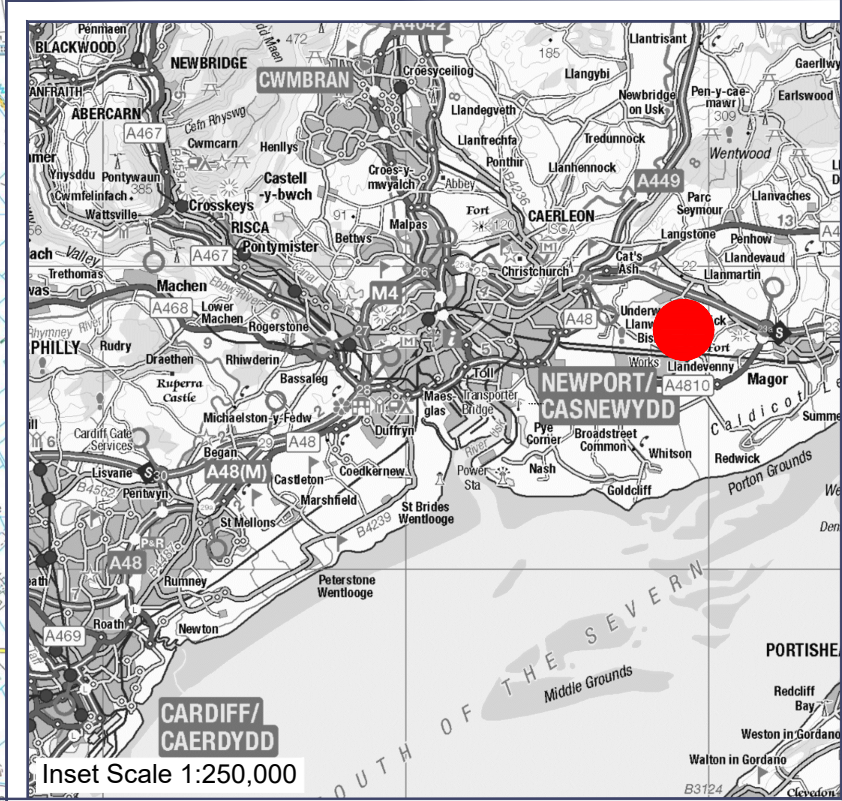
Figures





Application Boundary

Site Location



0344 8700 007

axis.co.uk

Project

Craig Y Perthi Solar Farm

Figure Number

Figure 1

Figure Title

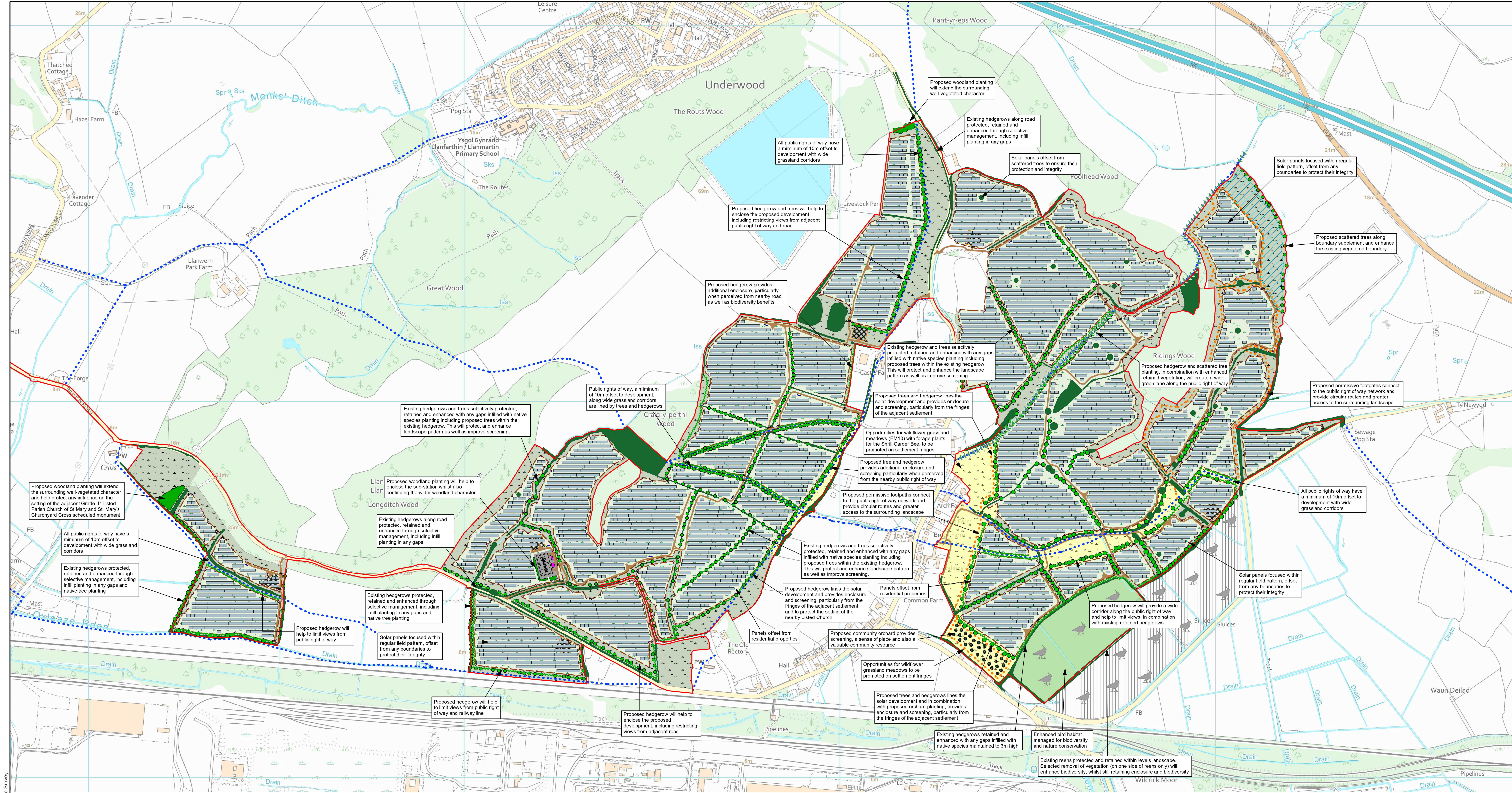
Location Plan

Scale

1:25,000 @A3

Date

July 2026



Key

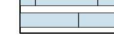
Proposed



Site boundary



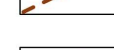
Solar panels



Deer fence



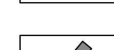
Transformer container



Spares container



Customer switch gear container



Access track

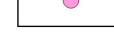
Existing



Permissive path



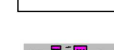
CCTV



Access gate



Substation



Temporary construction compound

Existing



Woodland, hedgerows and trees to be protected and retained.



Public right of way. Public rights of way within the development will be improved so that they can be used all year round with improved accessibility with restoration of all footpath bridges

Landscape and Ecological Mitigation

Grazing grassland that supports pollinators, appropriate for solar schemes, sown on any bare ground following construction activities to maintain a continuous sward.

Wildflower EM2 or similar enhanced with Shril Carder food plants

Wildflower EM10 or similar enhanced with Shril Carder food plants

Wetland Meadow EM8 or similar

Nesting bird habitat

Nesting bird habitat in SSSI (secured via condition or S106)

Green lane

Native species hedgerow

Native woodland planting

Native tree planting

Orchard tree planting

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Scale 1:5,000 @ A1
0 100 200 300m

Drawn: PS
Ref: P0554
Date: 02/06/2026

Checked: AJW
Revision: 000

Illustrative Landscape Masterplan Figure 7

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