



Candwr Solar Farm

Pre Application Consultation

Environmental Statement

Appendix 6.1 Habitats and Vegetation Survey Report

2 July 2026



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Appendix 6.1: Habitats and Vegetation Survey Report



Document Control				
Project Name:		Candwr Solar Farm		
Project / Report Number:		Pegas-075-5994		
Report Title		Habitats and Vegetation Survey Report		
Issue	Date	Notes	Prepared	Reviewed
V1	07/10/2025	First issue for Client comment	B. Gray BSc (Hons.) MCIEEM	J. Whittick BSc (Hons.) MCIEEM
V2	09/10/2025	Amendments following Client comments	B. Gray BSc (Hons.) MCIEEM	J. Whittick BSc (Hons.) MCIEEM
V3	05/06/2026	Amendments following site boundary changes	B. Gray BSc (Hons.) MCIEEM <i>Principal Ecologist</i>	J. Whittick BSc (Hons.) MCIEEM <i>Managing Director</i>

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1 INTRODUCTION

1.1 Background

- 1.1.1 Avian Ecology Limited (AEL) was commissioned by Pegasus Planning Group to undertake baseline habitat surveys in relation to a proposed solar development (the 'Proposed Development') located within land north of Ponthir, Monmouthshire (hereafter referred to as the 'Site').
- 1.1.2 The purpose of this report is to present the results of the habitat and botanical desk study and field surveys undertaken in April and May 2025, the results of which will inform the Developments of National significance (DNS) submission, Environmental Impact Assessment (EIA), any required mitigation requirements and enhancement measures.
- 1.1.3 The objectives of this report are to:
- Establish the spatial distribution of habitats and vegetation communities which may be impacted by the Proposed Development.
 - Identify the presence and distribution of any protected and/notable flora, lichen and bryophyte species and habitat types.
 - Record the presence of any protected and/or invasive, non-native flora species.
- 1.1.4 Common species names are used throughout the text of this Appendix.

1.2 Site description

- 1.2.1 The Site is dominated by cattle and sheep grazed pasture within a rolling pastoral farmland landscape. Pockets of broadleaved woodland are connected via hawthorn dominated hedgerows. Within the wider surrounding landscape, habitats include further agricultural fields and pockets of woodland. The Afon Lwyd flows between the pockets of land located within the Site, before flowing into the River Usk.

1.3 Quality assurance and environmental management

- 1.3.1 All ecologists involved in the production of this report are members of the CIEEM and are bound by its code of conduct (CIEEM, 2022). Additionally, this report has been subject to Avian Ecology Limited's internal quality assurance checks in line with ISO9001:2015.
- 1.3.2 All surveys and assessments were undertaken by suitably experienced ecologists as per CIEEMs competency framework (CIEEM, 2021) and have been undertaken with reference to the recommendations given in BS 42020:2013 Biodiversity: Code of practice for planning and development (British Standards Institute, 2013).
- 1.3.3 As per the advice note from CIEEM (2019) On the Lifespan of Ecological Reports & Surveys; the findings presented in this report are valid for up to 18 months from the date of survey.
- 1.3.4 Following this, the survey data should be reviewed and, if appropriate, updated to ensure baseline conditions remain valid.

2 METHODOLOGY

2.1 Zone of Influence

2.1.1 The current guidance on ecological impact assessments (EcIA) (CIEEM, 2018) recommends that all ecological features that occur within a 'Zone of Influence' (Zol) for a proposed development are investigated. The Zol includes:

- Areas directly within the land take for the proposed development and access;
- Areas which will be temporarily affected during construction;
- Areas likely to be impacted by hydrological disruption; and
- Areas where there is a risk of pollution and noise disturbance during construction and/or operation.

2.1.2 The Zol is variable depending on the ecological receptors affected. The size of study areas are determined by considering the potential Zol for each receptor. **Table 2.1** summaries the study area used for ecological receptors relating to habitats and vegetation.

Table 2.1: Study Area

Ecological receptor	Study Area
Sites designated for their international or national importance for nature conservation with habitat or botanical qualifying interest.	The Site and within 10 km of the Site
Sites designated for their county or local importance for nature conservation with habitat or botanical qualifying interest.	The Site and within 2 km of the Site
Desk study records (protected/notable flora, bryophyte and lichen species)	Within 2 km of the Site
UK Habitat Classification Survey	The Site
Habitats of Principal Importance (HPI)	The Site and within 50m of the Site
Ancient Woodland	The Site and within 50m of the Site

2.2 Desk Study

2.2.1 A desk study was undertaken in June 2025 in accordance with current guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) to determine the presence of any designated nature conservation sites and protected or notable species within the Zol of the Site. Data was obtained from the South East Wales Biodiversity Centre (SEWBC) database and relevant publicly available data, publications, reports and online databases. These include:

- Joint Nature Conservation Committee (JNCC);
- Multi-Agency Geographic Information for the Countryside (MAGIC);
- DataMap Wales;
- South East Wales Biodiversity Records Centre (SEWBRC);

- Local Nature Recovery Action Plans; and,
- Natural Resources Wales.

2.3 Field Surveys

- 2.3.1 The field survey consisted of an UK Habitat Classification (UKHab) survey, which involved mapping of habitats by suitably experienced ecologists from Avian Ecology. The habitat types were identified and mapped in compliance with the UKHab guidance documents. Primary habitats on-site were classified using Level 3, Level 4 and Level 5 of the UKHab hierarchy and urban features have been classified up to Level 5 of the hierarchy. Secondary codes have been used on the UKHab Map (**Figure 1**) to further describe the primary habitat present. Dominant plant species were noted, as were any protected, uncommon, invasive species or species indicative of particular habitat types.

Limitations

- 2.3.2 Biological records obtained from records centres do not necessarily represent a full and complete list for a given area and the absence of an individual species or habitat record does not prove it is not present. Records are not often collected as a result of systematic surveys and therefore geographic, temporal (annual and seasonal) and species coverage is not often representative. However, this data is considered sufficient alongside the other sources reviewed and the UKHabs survey of the Site. Records older than 10 years were considered on a case-by-case basis, with those less than 10 years old used as standard. This is to ensure that changes in local conditions and habitats do not skew results, for example inferring species may be present from an older record prior to development of an area, when no suitable habitats exist anymore.
- 2.3.3 The HPI catalogue entry on DataMap Wales is incomplete, this is due to an ongoing review of the data. DataMap Wales anticipate releasing the complete updated version of the data towards the end of 2025. This is not deemed to be a significant constraint due to the comprehensive baseline habitat survey effort undertaken and obtainment of habitat data as part of the biological record data request from SEWBRC.
- 2.3.4 A field being used by grazing horses was not directly access due to health and safety concerns. However, this is not deemed to be a significant constraint as it was possible to identify the broad habitat types from a vantage point.
- 2.3.5 Direct access to Shaftesbury Farm, situated to the west of the Court Farm Reservoir along Candwr Road, was not possible at time of survey. Therefore, habitats in this location were mapped from a vantage point and supplemented by the use of aerial imagery.

3 RESULTS: DESK STUDY

3.1 Statutory designated sites with habitat and/or botanical qualifying features and/or reasons for designation

- 3.1.1 In review of MAGIC, Datamap Wales and SEWBRC, the Site is not situated wholly or in part of any statutory designated sites for nature conservation with habitat and/or botanical qualifying features and/or reasons for designation. There are however 21 statutory designated sites within 10km of the Site that are designated for habitat and/or botanical qualifying features and/or reasons for designation. These are listed in **Table 3.1** below and locations are depicted on **Figure 2**.

Table 3.1: Statutory designated sites with habitat or botanical qualifying features or reasons for designation within 10km of the Site.

Site	Designation(s)	Distance from Site	Qualifying features and/or reason for designation (habitat / botanical)
River Usk / Afon Wysg	Special Area of Conservation (SAC)	1.4 km	Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: 3260 Water courses of plain to montane levels with the <i>Ranunculus fluitans</i> and <i>Callitriche-Batrachion</i> vegetation.
River Usk (Lower Usk) / Afon Wysg (Wysg Isaf)	Site of Special Scientific Interest (SSSI)	1.4 km	The reasons for the Lower Usk designation are; mesotrophic lowland river and plant communities and aquatic flora.
St. Julians	Local Nature Reserve (LNR)	2.54 km	Remnant ancient woodland, ponds and grassland, which supports numerous breeding birds.
Llwyncelyn	LNR	3.10 km	Designated for its conservation value.
Church Wood and Springvale Ponds	LNR	3.70 km	Remnant ancient woodland, ponds and grassland.
Henllys Open Space	LNR	4.30 km	Accessible green space of grassland and woodland.
Allt-Yr-Yn	LNR	4.92 km	Designated for its diverse flora.
Langstone-Illanmartin Meadows	SSSI	5.0 km	Two unimproved wet meadows located in the same hydrological unit which are the remnants of a formerly more extensive low lying area of meadow and fen. Together they exemplify a wide range of mesotrophic grassland and wetland community types. The soils are a mixture of loamy clays of the Worcester Series and peat which is near or at the surface. Part of the site is flushed with base rich water originating from Carboniferous Limestone strata located within the catchment. The two main mesotrophic grassland communities are the typical sub-community of <i>Holcus lanatus</i> – <i>Juncus effusus</i> rush pasture and <i>Cynosurus cristatus</i> – <i>Caltha palustris</i> flood pasture. The wetter areas support Fen Meadow and the <i>Molinia caerulea</i> mire variant of the Wet Meadow Complex. The site is also important for the large number of locally rare species which are present, most notably meadow thistle, fen orchid, fragrant orchid, fen bedstraw and blunt flowered rush.
Henllys Bog	SSSI	5.6 km	This small fen with a ground flora rich in plant species lies in pastoral lowlands at the eastern part of the coalfield uplands. It is the only site in the County for marsh helleborine.

Gwent Levels – Nash and Goldcliff	SSSI	5.9 km	The Gwent Levels an example of one of the most extensive areas of reclaimed wet pasture in Great Britain and is the largest area of its kind in Wales. The Gwent Levels reens are rich in plant species and communities, many of which are rare or absent in other Levels systems. The regular maintenance of some reens provides conditions for submerged species such as hairlike pondweed and openwater emergents such as arrowhead an opportunity to flourish. The Nash and Goldcliff area forms an important part of the Gwent Levels system and is of particular botanical interest as it is the only area in Wales for the Least Duckweed. There is also an interesting community where two species of hornwort grow together.
Cwmynyscoy Quarry	LNR	6.1 km	Designated for its calcareous grassland and orchids.
Parc Seymour Woods	SSSI	6.5 km	Area of coppiced sessile oak woodland, overlying Upper Old Red Sandstone and Quartz Conglomerate rocks, is the last major relict of the formerly extensive ancient woodland of Wentwood Forest.
Gwent Levels Whiston	SSSI	7.2 km	This area of the Gwent Levels is important for its botanical interest as it contains the nationally rare hairlike pondweed and is the only location in Gwent for the tussock sedge. Arrowhead also grows in abundance in several main reens in this area.
Gwent Levels - Redwick And Llandevenny	SSSI	7.7 km	This area of the Gwent Levels contains a number of nationally rare plant species including the rare <i>Myriophyllum verticillatum</i> located in peaty ditches in the northern part of the site and the brackish water crowfoot associated with the ditches bordering the sea wall.
Gwent Levels – St. Brides	SSSI	7.8 km	The reens in the St Brides area support a number of interesting plant species most notably thread-leaved water-crowfoot and small pondweed. Reen bank and green lane habitats in this area are also important for relict meadow plant species such as the regionally notable grass vetchling and common meadow-rue. The St Brides area also supports rich invertebrate communities with a number of nationally notable and notable marshland species, e.g. the true fly <i>Chrysogaster macquarti</i> and the beetle <i>Hydaticus transversalis</i> . It is the only area on the Gwent Levels where the rare fly <i>Stenomicroa cogani</i> has been recorded.
Cwrt Y Bela A Springdale	SSSI	7.9 km	Neutral grassland.

Penhow Woodlands	SSSI and National Nature Reserve (NNR)	8.0 km	Two areas of ancient semi-natural woodland. The structure is a mixture of high forest, coppice and coppice-with-standards comprising a range of woodland types, several of which have a restricted distribution in Britain. The dominant canopy tree species are lime, ash, wild cherry, elm and hybrids, field maple and localised oak. The absence of birch and oak from much of the wood and the presence of a number of fine ancient pollarded trees along a complex of parish boundaries are additional features. The ground flora is predominately calcicolous and includes a number of nationally rare and locally distributed species, for example Tintern spurge, green hellebore, bird's nest orchid and wild daffodil.
Severn Estuary	SSSI	8.4 km	Beds of eel-grass occur on the more sheltered mud and sand banks. The estuary fringes have large areas of saltmarsh. These are generally grazed by sheep and/or cattle, a significant factor determining the plant communities. A range of saltmarsh types is present, with both gradual and stepped transitions between bare mudflat and upper marsh. •
Severn Estuary	SAC	8.5 km	Annex I habitats that are a primary reason for selection of this site • 1130 Estuaries • 1140 Mudflats and sandflats not covered by seawater at low tide • 1330 Atlantic salt meadows Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site • 1110 Sandbanks which are slightly covered by sea water all the time 1170 Reefs

Gwlyptiroedd Casnewydd / Newport Wetlands	SSSI and NNR	8.5 km south	This site is of special interest for aquatic and marginal flora, also of special interest are the ditch habitat and reedbeds. Newport Wetlands is part of the larger Newport Wetlands Reserve constructed to meet the commitment by the UK Government to create “a substantial area of wetland habitat on the shores of the Severn Estuary” as part of the compensation for the loss of the Taf/Ely Estuary SSSI following the construction of the Cardiff Bay Barrage. The watercourses are rich in plant species and communities, many of which are rare or absent in other levels systems. This is due to the variety of ditch types, the different management regimes and timing of the management; all of which results in a mosaic of ditch habitats across the site. This provides opportunities for a range of aquatic plants. In the ditches themselves, submerged species such as curly pondweed, rigid hornwort and, occasionally, stoneworts grow. Amongst the more notable species is hairlike pondweed which, in Wales, is almost entirely confined to the Gwent Levels area. There is a high diversity of floating plants, with all five British native duckweed species and frog-bit frequently abundant. Newport Wetlands is one of the few places on the Levels where nationally scarce least duckweed the world’s smallest flowering plant, is found at the north-western extent of its British range. Along the banks, fool’s watercress, lesser water-parsnip, tubular water dropwort and water plantain occur. The reedbeds at Newport Wetlands are the largest within the south-east Wales area. In wetter areas with standing water, the vegetation is almost entirely composed of common reed. However, in drier areas, it is joined by marsh bedstraw, hemp agrimony and great willowherb. In addition, the site has a number of other habitats that add to its overall wildlife value. These include hedgerows, scrub, woodland and grassland.
Tir Pentwys	LNR	8.7 km	Ancient beech woodland, reclaimed grassland, ponds, quarries and streams.

Ty'r Hen Forwyn	SSSI	9.7 km	Ty'r Hen Forwyn is of special interest for its species-rich neutral grassland and for the association of this habitat with others including acid grassland, scrub, bracken and well-developed hedgerows. Species rich neutral grassland can be found throughout and is characterised by a high herb cover. Common bird's foot trefoil and common knapweed occur frequently together with grasses such as crested dog's tail, common bent, sweet vernal-grass and red fescue. Accompanying herbs include common cat's-ear, yellow rattle, eyebright, oxeye daisy, Bitter vetch and rough hawkbit. In places, where there is a slightly acid or nutrient-poor nature to the soil, neutral grassland grades into vegetation more associated with acid grassland. Here, heath grass, devil's-bit scabious, tormentil and heath bedstraw can be found. Although acid grassland is generally a habitat of the uplands and upland fringe, in places at Ty'r Hen Forwyn it can have a marked 'lowland' character. These areas can be particularly species-rich, with plants such as bird's foot trefoil, autumn hawkbit and common knapweed. The site is also of special interest for its large population of nationally scarce wood bitter-vetch, an uncommon and declining grassland plant. The site is thought to have the best population in the Gwent AoS. It is found frequently throughout the south-west corner of the eastern field. Ty'r Hen Forwyn is an important stronghold for the plant. Ty'r Hen Forwyn has a number of other habitats that add to the ecological diversity of the site. These include scrub, semi-improved grassland and mature, well-developed hedgerows. Ty'r Hen Forwyn includes the UK Biodiversity Action Plan Priority Habitats: Lowland meadow and Lowland dry acid grassland.
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3.2 Non-statutory designated sites with habitat or botanical reasons for designation

- 3.2.1 In review of MAGIC, Datamap Wales and SEWBRC, the Site is not situated wholly or in part of any non-statutory designated sites for nature conservation with habitat or botanical reasons for designation. There are however 44 non-statutory designated sites within 2km of the Site with habitat or botanical reasons for designation. These are listed in **Table 3.2** below and locations are depicted on **Figure 3**.

Table 3.2: Non-Statutory designated sites with habitat or botanical reasons for designation within 2km of the Site.

Site	Designation(s)	Distance from Site	Reason for designation (habitat / botanical)
Afon Llwyd Grasslands	SINC	Abuts the southern extent of the Site boundary	Large areas of semi-improved marshy and dry neutral grassland.
Ancient Semi-Natural Woodland	SINC	Abuts the southern extent of the Site boundary	Three stands of ancient semi-natural woodland.
Ponthir Sewage Work	Site of Importance for Nature Conservation (SINC)	Abuts the southern extent of the Site boundary	Mosaic of habitats comprising; lowland grassland, woodland, open standing water, wetland, scrub and young trees backing on to Afon Llwyd.
Afon Llwyd	SINC	0.006 km	Freshwater linear stream.
Coed y Gatlas	SINC	0.17 km	Ancient semi-natural woodland.
Wood south east of Common Cefn	SINC	0.24 km	Ancient semi-natural woodland / planted ancient woodland.
Lan-Sor Wood	SINC	0.38 km	Ancient semi-natural woodland / planted ancient woodland
Llantarnam Abbey Bat Roost	SINC	0.39 km	Ancient woodland and species-rich hedgerow are present.
Graig Yr Eurych	SINC	0.48 km	Ancient semi-natural woodland.
Ty Llwyd Wood	SINC	0.50 km	No citation available
White House Meadows	SINC	0.54 km	Fields comprising MG5 and MG6 neutral grassland.
Lan-Sor Wood North	SINC	0.56 km	Ancient semi-natural woodland / planted ancient woodland.
Rose Cottage	SINC	0.60 km	Neutral grassland.

Llanfrechfa Grange	SINC	0.75 km	Ancient mown grassland, parkland trees, scrub, species-rich hedgerows. The site is mown extensively and the clippings are taken away, this management contributes to the low fertility of the underlying soil, providing ideal conditions for a wide range of grassland fungi. Many of the trees and most of the habitats on site also provide ideal conditions for fungi.
Cefn Tilla Meadow	SINC	0.76 km	Species rich neutral grassland (MG5) and marshy grassland (M23).
Graig Wood	SINC	0.84 km	Ancient semi-natural woodland.
Cwm-y-wiwer Brake, Colomendy Wood	SINC	0.91 km	No citation available (from a review of aerial imagery; assumed to be designated for ancient woodland).
Lodge Wood	SINC	0.92 km	Ancient semi-natural woodland.
Land at Edgehill, Llanfrechfa, Cwbran	SINC	0.92 km	No citation available (from a review of aerial imagery; assumed to be designated for grassland)
Cwm Heron Wood	SINC	0.95 km	No citation available.
Llantarnam Wetland	SINC	1.1 km	No citation available.
Llantarnam Abbey Wetland 2	SINC	1.1 km	Mosaic of habitats comprising; marshy grassland, neutral grassland, stream and pond, wet woodland, banked species-rich grassland and scrub.
Llanthewy Vach	SINC	1.18 km	No citation available (from a review of aerial imagery; assumed to be designated for ancient woodland).
Llantarnam Grasslands	SINC	1.2 km	No citation available (from a review of aerial imagery; assumed to be designated for marshy grassland).
Llantarnam Grasslands – the Alders	SINC	1.14 km	No citation available (from a review of aerial imagery; assumed to be designated for grassland and woodland).
Llantarnam Abbey Wetland 1	SINC	1.2 km	Mosaic of habitats comprising; marshy grassland, neutral grassland, stream and pond, wet woodland, ancient woodland, banked neutral grassland, fen/wetland and scrub.
Hillcroft Field	SINC	1.50 km	Ancient semi-natural woodland.
Wilderness Wood	SINC	1.50 km	Ancient woodland.
Ivybridge Wood	SINC	1.53 km	No citation available (from a review of aerial imagery; assumed to be designated for ancient woodland).

Llwyn-celyn Wood	SINC	1.54 km	No citation available (from a review of aerial imagery; assumed to be designated for ancient woodland).
Trinity View	SINC	1.60 km	Mosaic habitat of scrub, woodland and grassland.
Whitehouse Farm Woods (3 parts)	SINC	1.61 km	Species-rich grassland and woodlands.
Llanyravon Farm, Cwmbran	SINC	1.65 km	No citation available (from a review of aerial imagery; assumed to be designated for heritage asset and gardens).
Cwm-ffrwd Wood	SINC	1.69 km	No citation available (from a review of aerial imagery; assumed to be designated for ancient woodland).
Madam Rodgers' Wood	SINC	1.68 km	No citation available (from a review of aerial imagery; assumed to be designated for ancient woodland).
Ivybridge Wood East	SINC	1.75 km	No citation available (from a review of aerial imagery; assumed to be designated for ancient woodland).
Woodbank	SINC	1.81 km	No citation available (from a review of aerial imagery; assumed to be designated for ancient woodland).
Cefn-henllan Wood	SINC	1.84 km	No citation available (from a review of aerial imagery; assumed to be designated for ancient woodland).
Llantarnam Road / Court Road, Cwmbran	SINC	1.88 km	No citation available (from a review of aerial imagery; assumed to be designated for watercourse and woodland).
Graigwith Wood	SINC	1.89 km	No citation available (from a review of aerial imagery; assumed to be designated for ancient woodland).
Coed Llwyd Wood	SINC	1.98 km	No citation available (from a review of aerial imagery; assumed to be designated for ancient woodland).

3.3 Protected and/or notable flora species

3.3.1 SEWBRC data returned records of the following flora species which are listed on Section 7 and/or returned as species on local biodiversity action plans¹ from within 2km of the Site within the last 10 years. None of the records returned were from within the Site:

- Bee orchid;
- Butcher's broom;
- Sea barley;
- Tubular water-dropwort;
- Daffodil;
- Mistletoe;
- Red hemp-nettle; and,
- Bluebell.

3.3.2 The only record returned from flora species listed on Schedule 8 of the Wildlife and Countryside Act 1981 was bluebell. Schedule 8 protects bluebell from sale only, therefore, bluebell is not considered within the impact assessment with reference to its listing on Schedule 8.

3.4 Protected and/or notable lichen and/or bryophyte species

3.4.1 The data returned by SEWBRC did not include records of any bryophyte or lichen species, dated within the last 10 years, within the Site or within 2km of the Site.

3.5 Invasive, non-native flora species

3.5.1 SEWBRC data returned records of the following invasive, non-native flora species which are listed on Schedule 9 of the Wildlife and Countryside Act 1981 and/or the Invasive Alien Species (Enforcement and Permitting) Order 2019 from within 2km of the Site within the last 10 years. None of the records returned were from within the Site:

- Japanese knotweed;
- Indian balsam;
- Virginia creeper;
- Giant hogweed;
- Spanish bluebell;
- Three-cornered garlic;

¹ Torfaen, Newport and Monmouthshire local biodiversity action plan species were considered only.

- Wall cotoneaster;
- Montbretia; and,
- Variegated yellow archangel.

3.6 Habitats of Principal Importance

3.6.1 SEWBRC data returned a list of the following habitat types which may contain HPI within the Site and a 50m buffer:

- Semi-natural broadleaved woodland;
- Semi-improved neutral grassland;
- Running water; and,
- Standing water;

3.6.2 From a review of DataMap Wales data set Environment (Wales) Act Section 7 Terrestrial HPI the following HPI² were returned from within the Site and a 50m buffer:

- Coastal and floodplain grazing marsh; and,
- Traditional orchard.

3.6.3 The locations of these potential HPI, returned from DataMap Wales, are depicted on **Figure 4**.

3.7 Ancient Woodland

3.7.1 Following a review of DataMap Wales and SEWBRC data, five stands of ancient semi-natural woodland³ were returned from within the ZOI. Two stands of ancient semi-natural woodland overlap with and are partially situated within the Site boundary with the remaining three stands situated immediately adjacent to the Site boundary. For locations of ancient woodland within the ZOI refer to **Figure 5**.

4 RESULTS

4.1 UK Habitat Classification Survey

4.1.1 These results should be read with reference to **Figure 1**.

4.1.2 The survey recorded 27 UK Habitat Classification primary habitat types. Habitat classification, description and photographs are recorded in **Table 4.1** below.

² Confidence in the accuracy of the DataMap Wales HPI data entry is variable depending on the age of the survey data.

³ Ancient semi-natural woodland is defined as a woodland site with evidence of continuous wooded cover since 1600 AD.

Table 4.1: Summary of habitats recorded within the Site.

Habitat code and classification	Secondary code	Location	Description of habitat	Photograph
c1d: Non-cereal crops	N/A	Recorded in the northwestern extents of the Site.	Multiple fields of oilseed rape, pepper weed, brassica crop, barley, mayweed and remnants of fallow crop were recorded.	
g1c: Bracken	N/A	Recorded within the northwestern extents of the Site	Two stands of dominant bracken were recorded; one along the boundary edge of a block of woodland and a second along a field margin of other neutral grassland.	

g3: Neutral grassland	100 - grazed	North and south of Court Farm Water Treatment Works	Species recorded within neutral grassland comprise; perennial ryegrass, Yorkshire fog, sweet vernal grass, meadow grass, meadow foxtail and cock's foot.	
g3c: Other neutral grassland	10 – scattered scrub 12 – scattered bracken 14 – scattered rushes 19 – coastal and floodplain grazing marsh 106 – mown 524 – invasive non-native species	Recorded across the Site extents	Species recorded within the fields of other neutral grassland comprise; Yorkshire fog, creeping buttercup, soft rush, sweet vernal grass, creeping thistle, dandelion, cuckoo flower, bent species, fescue species, speedwell species, bindweed species, meadow foxtail, meadow buttercup, dock species, lesser celandine, common sorrel, field woodrush, meadow thistle and lesser trefoil.	

g3c8: Holcus-Juncus neutral grassland	14 - scattered rushes 502 – seasonally wet	Localised to the western extents of the Site with a small patch in the south.	A concentration of <i>Holcus-juncus</i> neutral grassland is situated in the western extent of the Site and a small patch was recorded within a field of modified grassland. Species recorded include Yorkshire fog, meadow foxtail, soft rush, creeping buttercup, meadow buttercup and cuckoo flower.	
g4: Modified grassland	27 – traditional orchard 29 - plantation 100 – grazed 214 – fallen deadwood abundant 504 - waterlogged	Scattered across the Site extents	Species recorded within the fields comprise; ribwort plantain, creeping buttercup, perennial ryegrass, Yorkshire fog, dandelion, ragwort, hogweed, dock species, meadow buttercup, annual meadow grass, fescue species, sweet vernal grass, bent species, white clover, sticky mouse-ear and soft rush.	

h3a: Blackthorn scrub	N/A	One small pocket in the northeastern extent of the Site	Patch of scrub, dominated by blackthorn.	
h3d: Bramble scrub	12 – scattered bracken	Predominantly located in the northern and northeastern extents. Located on edges of tree lines, along stream banks and in field margins.	Patches of scrub, dominated by bramble.	

h3h: Mixed scrub	N/A	Predominantly located in the northern and northeastern extents.	Patches of mixed scrub, species recorded include rose species, hawthorn, oak, hazel, bramble, elder, gorse, ivy, blackthorn, alder, holly, willow species, willowherb species, nettle, soft rush and bracken.	
u1b: Developed land; sealed surface	524 – invasive non native species	Situated around a barn in the southern extent of the Site	Sealed surface around barn, however, some successional herbs were recorded; Indian balsam, nettle annual meadow grass, creeping buttercup and meadow foxtail.	

u1b5: Buildings	833 - barn	Barn situated in the southern extent of the Site	Barn appeared to be in use for sheep husbandry. The barn is constructed of a breeze block base, corrugated metal roof/sides with some wooden side panelling.	
u1c: Artificial unvegetated, unsealed surface	839 - track	Throughout the Site extents	Roads and track throughout the Site extents. Conditions of roads and track vary from tarmac roads to gravel and dirt tracks.	

w1d: Wet woodland	215 – standing dead wood	One stand located in the northeastern extent of the Site	Located on bank of stream with alder, ash and oak species recorded. The understorey comprised hawthorn, ivy and hazel. The ground flora layer comprises lord's-and-ladies, lesser celandine and wood sorrel. Standing deadwood was also recorded within the woodland stand.	
w1f: Lowland mixed deciduous woodland	N/A	Two stands; one located in the northern extent of the Site and a second in the southeastern.	Species recorded within lowland mixed deciduous woodland comprised; oak species, willow species, ash and alder.	

w1g: Other broadleaved woodland	12 – scattered bracken 30 – semi-natural woodland 524 – invasive non-native species	Stands scattered across the Site extents with the majority in the east.	Canopy species recorded comprise; oak species, ash, alder, hazel and poplar. Understorey species recorded comprise; holly, blackthorn, hawthorn, hazel, sycamore, rose species and bramble Ground flora species recorded comprise; bramble, wood avens, lesser celandine, Indian balsam, ivy, wood avens, bluebell, violet species, lords-and-ladies, garlic mustard, cleavers and wood sorrel Some disease and damage were recorded in the stands of other broadleaved woodland.	
r1f6: Other temporary ponds and scrapes	N/A	Located within Court Farm Water Treatment Works	Three temporary pools which are used by the Water Treatment Works for operational activities. Two of the three ponds were holding water at the time of survey, although water levels were low. Limited macrophytes around edges of the pond were recorded and the pond bed comprised soft mud.	

h2a: Native hedgerow	11 – hedgerow with trees 12 – scattered bracken 50 - ditch 116 – flailed hedgerow 500 – dry 503 – wet 524 – invasive, non-native species	Network of native hedgerows across the Site	Trees recorded in hedgerows comprise; crack willow, osier, ash, sycamore, oak species, hawthorn, hazel, alder and conifer. Hedgerow species recorded include; hawthorn, hazel, willow species, blackthorn, elder, holly, ivy, dogwood, privet, dog-rose, cherry, cypress, gorse, birch, mistletoe, elm, field maple, Leyland cypress and sycamore. Ground flora species recorded comprise; nettle, cleavers, hogweed, bramble, bluebell, lesser celandine, yellow archangel, bitter vetch, red campion, violet species, dog's mercury, greater stitchwort, bracken, meadowsweet and ragwort. Heights and widths of hedgerows recorded range from 1.5m to 5m in height and from 50cm to 1.5m in width.	
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h2a5: Species-rich native hedgerow	11 – hedgerow with trees 12 – scattered bracken 503 – wet 524 – invasive, non-native species	Network of native hedgerows across the Site	Trees recorded in hedgerows comprise; oak, willow, ash, alder, hawthorn, willow, Hedgerow species recorded include; hawthorn, sycamore, hazel, blackthorn, beech, dog-rose, elder, ivy, holly, field-maple, apple and bramble. Ground flora species recorded comprise; nettle, Indian balsam, bramble, red campion, bluebell, honeysuckle, greater stitchwort and bracken. Heights and widths of hedgerows recorded were approximately 1.5m in height and 1.5m in width.	
h2a6: Other native hedgerows	11 – hedgerow with trees	One other native hedgerow was recorded within the centre parcel of the Site	Trees recorded in the hedgerow comprise; oak, holly and ash. Hedgerow species recorded include; hawthorn, blackthorn and bramble. Ground flora species comprise; other neutral grassland, forbs and bramble scrub. Height and width of hedgerow was approximately 1.5m in height and 1.5m in width.	

r1: Standing open water and canals	50 – ditch 500 – dry 502 – seasonally wet	One feature recorded in the south western extent of the Site and one recorded on the north eastern boundary.	Ditches recorded as dry at the time of survey, however, assessed as seasonally wet. Ditches were shaded by trees with no evidence of macrophytes recorded. Terrestrial vegetation recorded within the ditches comprised soft rush with bramble recorded on the banks.	
r1g: Other standing water	50 – ditch	Two features recorded in the northern extent of the Site and one recorded in the south western extent of the Site.	One of the features in the northern extent of the Site was recorded as the remnant of a ditch colonised by dense overgrown vegetation. The second feature in the northern extent of the Site was noted to be overgrown with banks of willowherb species and soft rush, however, shallow water was noted within the ditch. The feature in the south western extent of the Site was appeared to be a drainage track and that may also be used for the movement of farm vehicles.	

r2: Rivers and streams	N/A	Network of watercourses which run throughout the Site extents.	Watercourses comprising main rivers and streams are situated along field boundaries, tree lines and hedgerows across the Site extents. All of these features were recorded as holding shallow, slow flowing water. Channel widths and depths varied across the Site.	
r2b: Other rivers and streams	N/A	Network of watercourses which run throughout the Site extents.	Streams recorded within the Site extents. All recorded as containing flowing water at the time of survey.	

u1e: Built linear features	612 – fence	Linear features recorded in the northwestern and south western extents of the Site	Features such as gravel tracks and fences noted within the Site extents.	
w1g: Other broadleaved woodland	33 – Line of trees	Lines of trees recorded on field boundaries concentrated in the northwestern and eastern extents of the Site	Canopy species recorded comprise; alder, willow, birch, beech, ash, oak, poplar, and cherry. Understorey species recorded comprise bramble, willow, alder, hazel, hawthorn and holly. Ground flora species comprise violet species, nettle, ivy and bracken.	

w1h5: Other woodland; mixed; mainly broadleaved	34 – Ecologically valuable line of trees	Recorded in the south western extents of the Site along the boundary.	Feature was recorded as comprising oak and Scots pine.	
w1h6: Other woodland; mixed; mainly conifer	34 - Ecologically valuable line of trees	Recorded in the southeastern extents of the Site along the boundary.	Feature was recorded as comprising dominant Scots pine and oak.	

4.2 Protected and/or notable flora species

- 4.2.1 No species (other than bluebell) listed on Schedule 8 of the Wildlife and Countryside Act, Section 7 of the Environment (Wales) Act 2016, Monmouthshire Local Nature Recovery Action Plan⁴, Torfaen Local Nature Recovery Action Plan⁵ or on the priority species list⁶ for Newport were recorded during the UK Habitat Classification Survey.

4.3 Protected and/or notable lichen and/or bryophyte species

- 4.3.1 No species listed on Schedule 8 of the Wildlife and Countryside Act, Section 7 of the Environment (Wales) Act 2016, Monmouthshire Local Nature Recovery Action Plan⁴, Torfaen Local Nature Recovery Action Plan⁵ or on the priority species list⁶ for Newport were recorded during the UK Habitat Classification Survey.

4.4 Invasive, non-native flora species

- 4.4.1 Indian balsam and Japanese knotweed were recorded within the Site during the UK Habitat Classification Survey. These species were recorded along watercourses and field margins within the Site.

4.5 Habitats of Principal Importance

- 4.5.1 The following habitats listed on Section 7 of the Environment (Wales) Act 2016, Monmouthshire Local Nature Recovery Action Plan⁴, Torfaen Local Nature Recovery Action Plan⁵ and/or on the priority species list for Newport⁶ were recorded during the UK Habitat Classification Survey:

- Woodland;
- Wet woodland;
- Lowland mixed deciduous woodland;
- Freshwater;
- Farmland;
- Lowland grassland;
- Hedgerows; and,
- Rivers.

- 4.5.2 Coastal and floodplain grazing marsh was recorded within the southern extent of the Site, however, it was noted to be in a degraded condition due the lack of pools, ditches and bird assemblage.

- 4.5.3 DataMap Wales returned a record of traditional orchard within the Site, at land at Shaftesbury Farm, located to the west of Court Farm Reservoir along Candwr Road. The DataMap Wales record states

⁴ Monmouthshire County Council (2024). Local Nature Recovery Action Plan. Available at: [Local NRAP](#)

⁵ Torfaen County Borough Council (2024). Local Nature Recovery Action Plan. Available at: [FINAL-designed-version-ENG-03-01-24.pdf](#)

⁶ Newport City Council (no date). Biodiversity. Available at: [Biodiversity | Newport City Council](#)

that the HPI may be present, however, evidence is insufficient to determine presence confidently and that it is a possible remnant of traditional orchard. Direct access to this land was not possible at the time of survey. This area of potential traditional orchard was surveyed from a vantage point and supplemented by a review of aerial imagery. The area mapped as traditional orchard, by DataMap Wales, comprises modified grassland and native hedgerow with trees along the field boundary line. It is assessed that this area is likely to be relict traditional orchard and does not qualify as prime traditional orchard or meet the minimum size of traditional orchard.

- 4.5.4 Three temporary ponds were recorded within the Site within the Court Farm Water Treatment Works, however, these are not considered to meet the criteria of a HPI as these waterbodies have been created as operational sludge lagoons for use at the Court Farm Water Treatment Works.

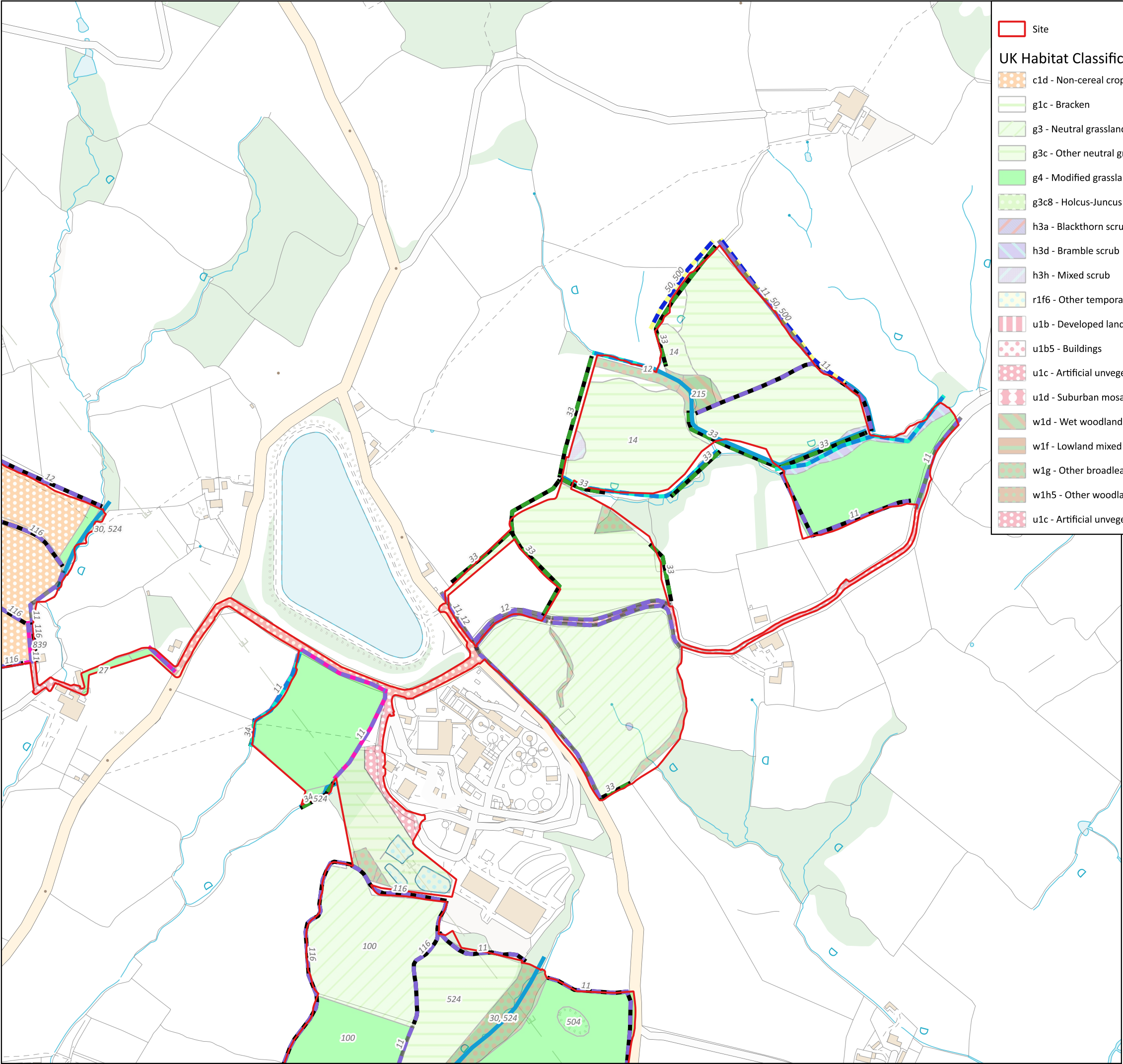
4.6 Ancient Woodland

- 4.6.1 The UK Habitat Classification Survey concurs with the biological record data, two stands of ancient woodland partially overlap and are situated within the Site boundary with three stands immediately adjacent the Site boundary.

5 CONCLUSION

- 5.1.1 The UK Habitat Classification survey identified eight habitat types within the Site boundary as qualifying as HPI and ancient woodland stands are present on the peripheries of the Site boundary. No protected or notable flora, lichen or bryophyte species were recorded. However, invasive, non-native species Indian balsam and Japanese knotweed are present within the Site boundary.
- 5.1.2 Construction safeguards to avoid and minimise impacts on HPI and ancient woodland will form part of the standard mitigation measures for the Proposed Development.
- 5.1.3 Measures to restore and enhance habitats will form part of the design for the Proposed Development (refer to the Biodiversity Management Plan for further details).

Figure 1: UK Habitat Classification Map



Site

UK Habitat Classification

c1d - Non-cereal crops

g1c - Bracken

g3 - Neutral grassland

g3c - Other neutral grassland

g4 - Modified grassland

g3c8 - Holcus-Juncus neutral grassland

h3a - Blackthorn scrub

h3d - Bramble scrub

h3h - Mixed scrub

r1f6 - Other temporary ponds and scrapes

u1b - Developed land; sealed surface

u1b5 - Buildings

u1c - Artificial unvegetated, unsealed surface

u1d - Suburban mosaic of developed and natural surface

w1d - Wet woodland

w1f - Lowland mixed deciduous woodland

w1g - Other broadleaved woodland

w1h5 - Other woodland; mixed; mainly broadleaved

u1c - Artificial unvegetated, unsealed surface

h2a - Native hedgerow

h2a5 - Species-rich native hedgerow

h2a6 - Other native hedgerows

h2b - Non-native and ornamental hedgerow

r1 - Standing open water and canals

r1g - Other standing water

r2 - Rivers and streams

r2b - Other rivers and streams

u1e - Built linear features

w1g - Other broadleaved woodland

w1h5 - Other woodland; mixed; mainly broadleaved

w1h6 - Other woodland; mixed; mainly conifer

Individual tree

Scattered scrub

Secondary codes - for description of secondary codes refer to Section 4 of the Habitats and Vegetation Technical Appendix

CANDWR SOLAR FARM

UK Habitat Classification

Map 3

Version: 01

Date: 03/06/2026

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0100500200

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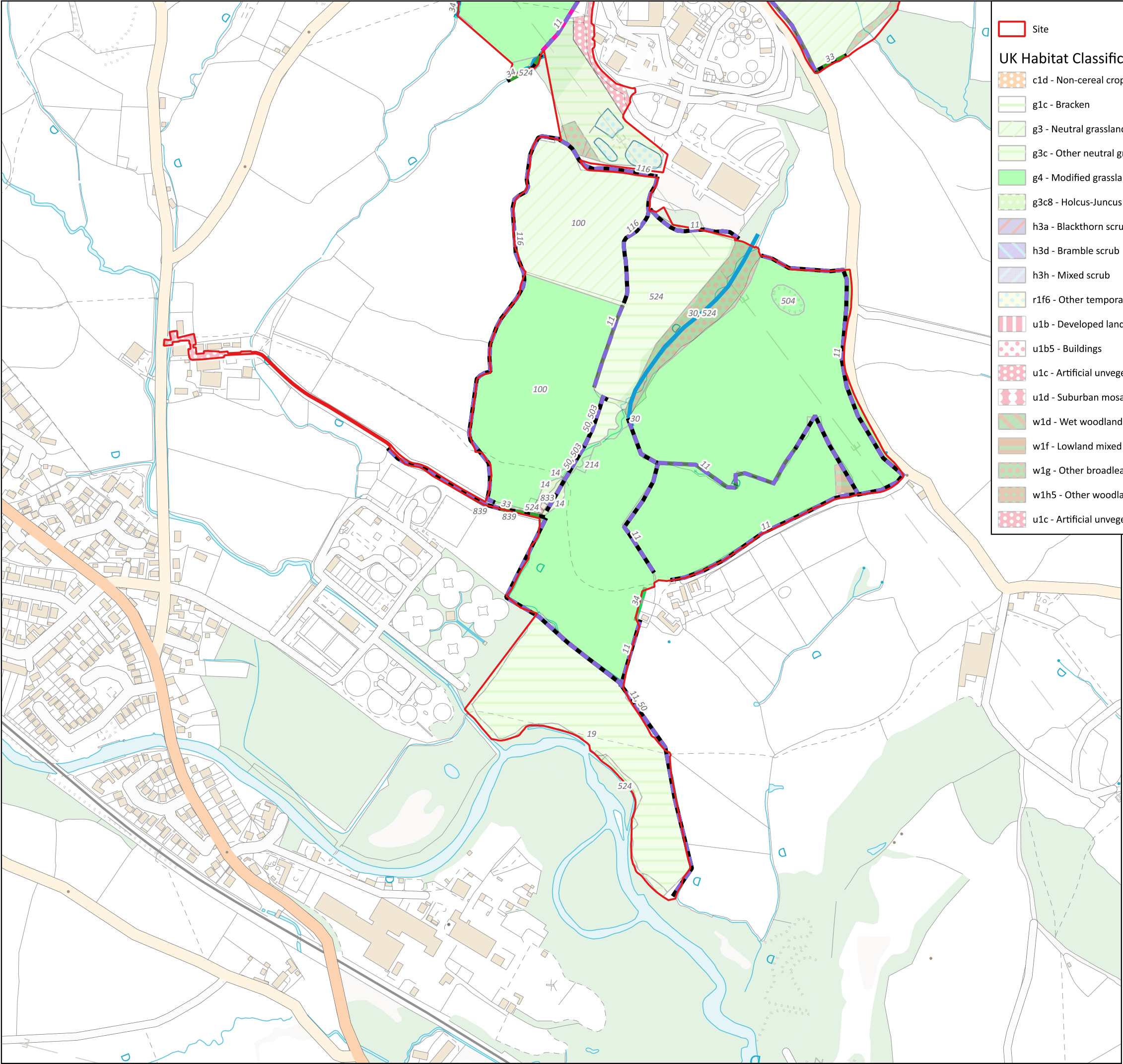
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Co-ordinate System : British National Grid

Projection: Traverse Mercator Datum: OSGB 1936 Units: Metres

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Site

UK Habitat Classification

c1d - Non-cereal crops

g1c - Bracken

g3 - Neutral grassland

g3c - Other neutral grassland

g4 - Modified grassland

g3c8 - Holcus-Juncus neutral grassland

h3a - Blackthorn scrub

h3d - Bramble scrub

h3h - Mixed scrub

r1f6 - Other temporary ponds and scrapes

u1b - Developed land; sealed surface

u1b5 - Buildings

u1c - Artificial unvegetated, unsealed surface

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w1d - Wet woodland

w1f - Lowland mixed deciduous woodland

w1g - Other broadleaved woodland

w1h5 - Other woodland; mixed; mainly broadleaved

u1c - Artificial unvegetated, unsealed surface

h2a - Native hedgerow

h2a5 - Species-rich native hedgerow

h2a6 - Other native hedgerows

h2b - Non-native and ornamental hedgerow

r1 - Standing open water and canals

r1g - Other standing water

r2 - Rivers and streams

r2b - Other rivers and streams

u1e - Built linear features

w1g - Other broadleaved woodland

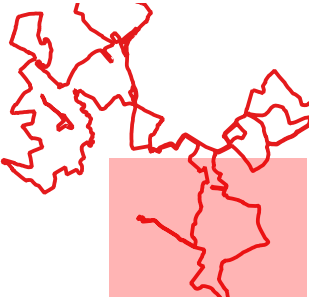
w1h5 - Other woodland; mixed; mainly broadleaved

w1h6 - Other woodland; mixed; mainly conifer

Individual tree

Scattered scrub

Secondary codes - for description of secondary codes refer to Section 4 of the Habitats and Vegetation Technical Appendix



CANDWR SOLAR FARM

UK Habitat Classification

Map 4

Version: 01

Date: 03/06/2026

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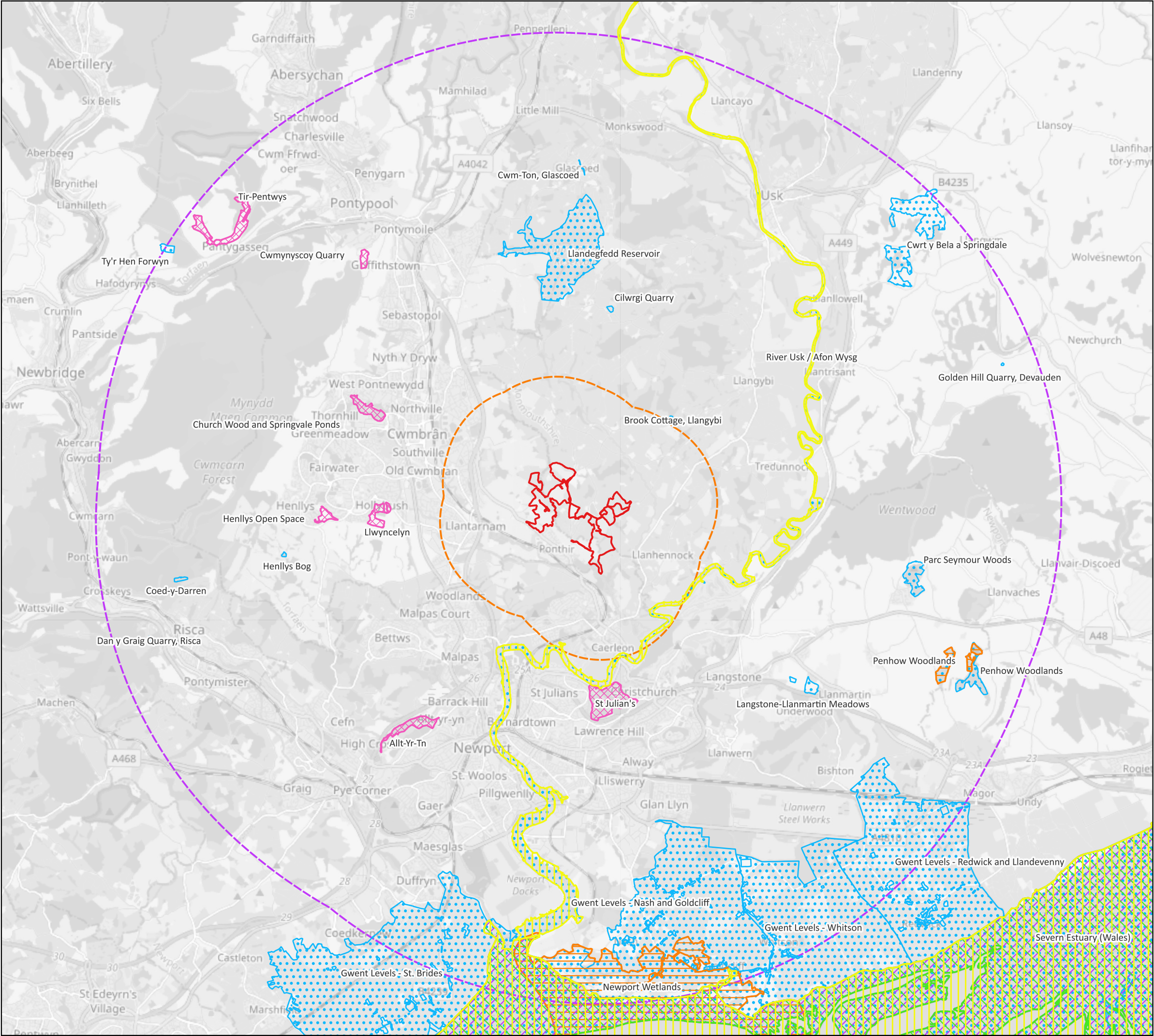
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Figure 2: Statutory Designated Sites



- Site
- 10km Search Buffer
- 2km Search Buffer
- Statutory Designated Sites
 - RAMSAR
 - Special Area of Conservation (SAC)
 - Special Protection Area (SPA)
 - Site of Special Scientific Interest (SSSI)
 - Local Nature Reserve
 - National Nature Reserve

CANDWR SOLAR FARM

Statutory Designated Sites

Version: 01

Date: 27/05/2026



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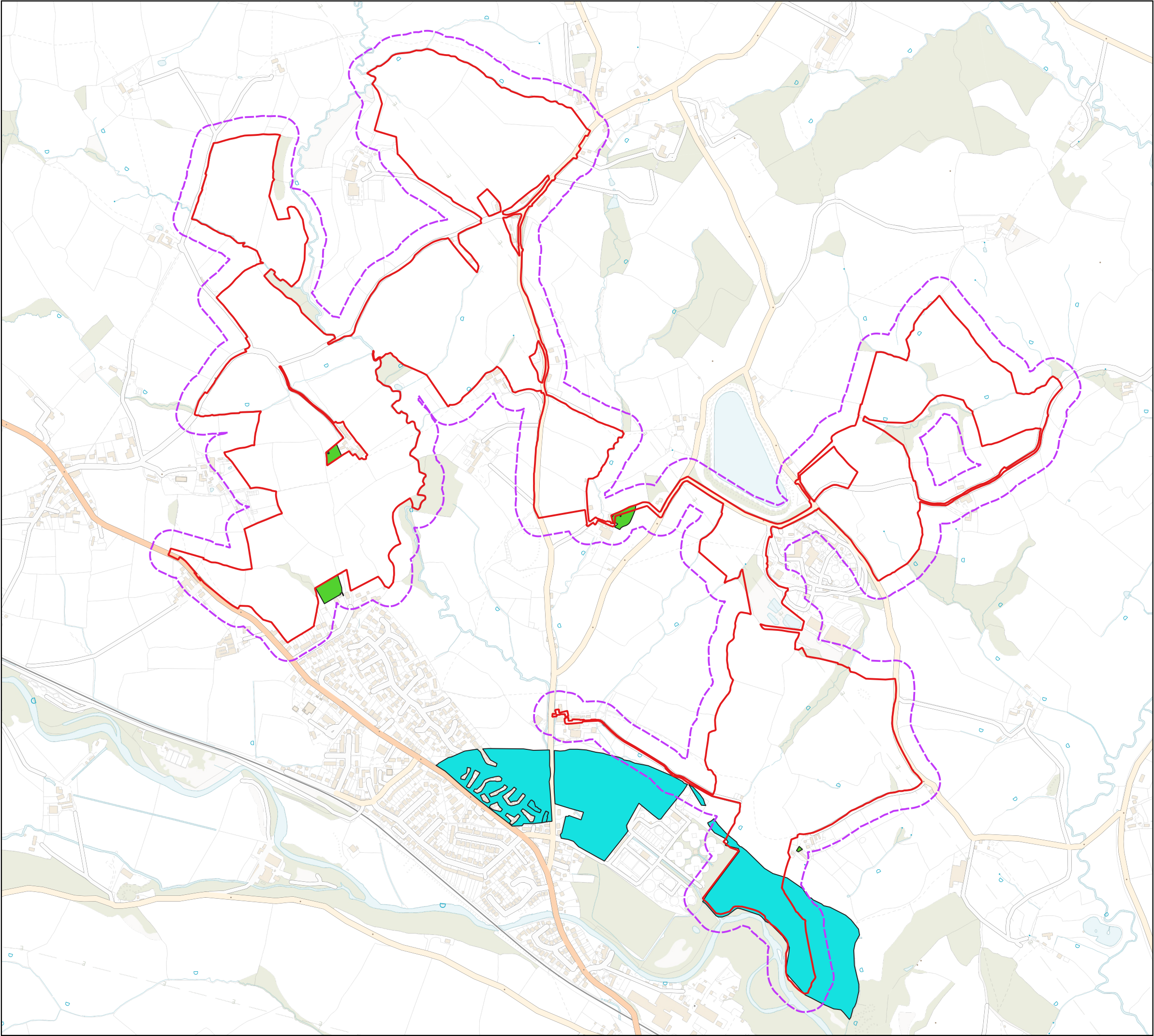
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Figure 3: Non-Statutory Designated Sites

Figure 4: Habitats of Principal Importance



- Site
- 50m Search Buffer
- Habitats of Principal Importance**
- Coastal and Floodplain Grazing Marsh
- Traditional Orchard

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Habitats of Principal Importance

Version: 01

Date: 27/05/2026



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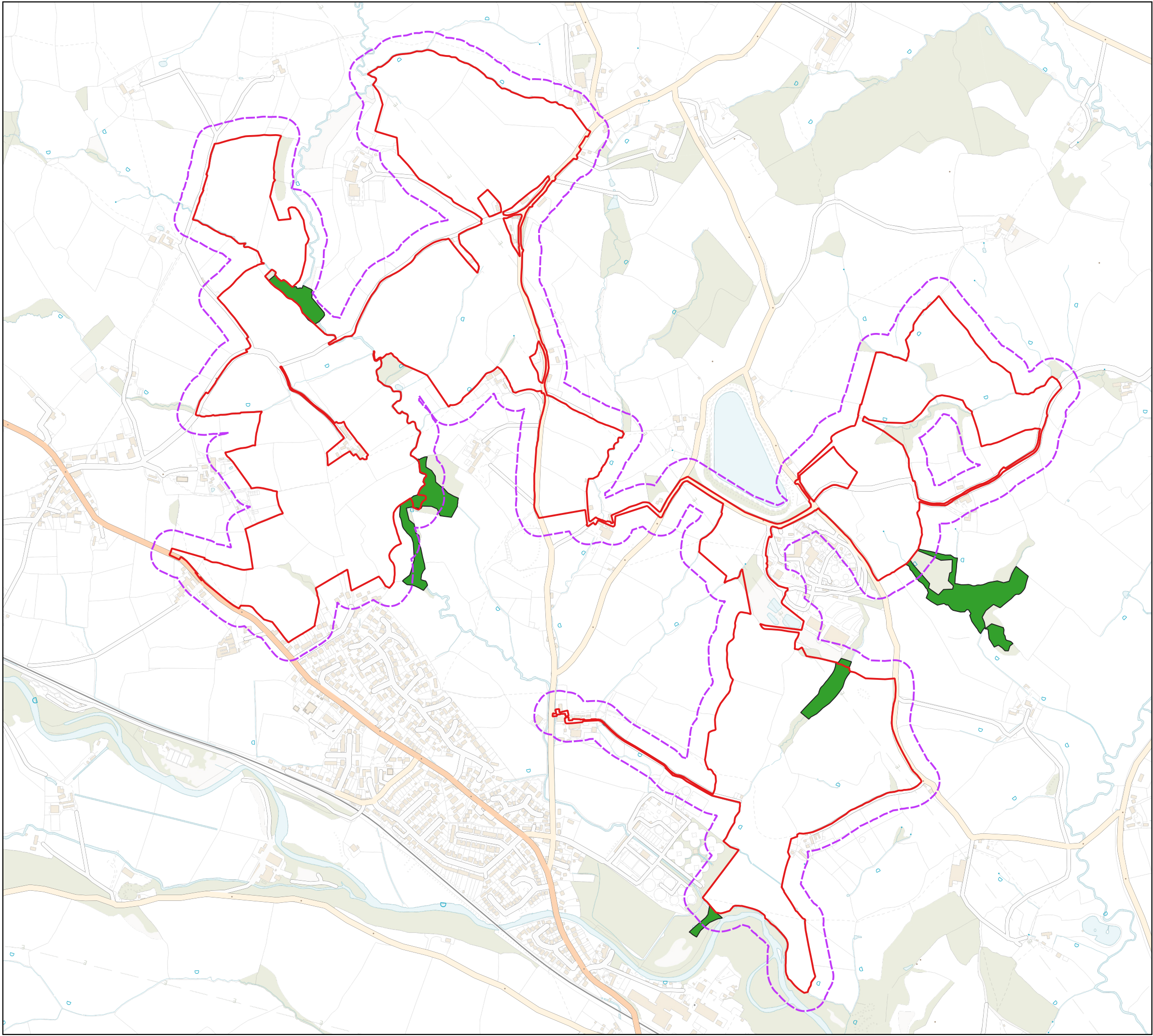
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Figure 5: Ancient Woodland



- Site
- 50m Search Buffer
- Ancient Semi Natural Woodland

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Ancient Woodland

Version: 01 Date: 19/06/2026



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