Preliminary Ecological Assessment of land at Sarn, Bridgend to inform future site development.

# Report prepared on behalf of Farm Tack Ltd

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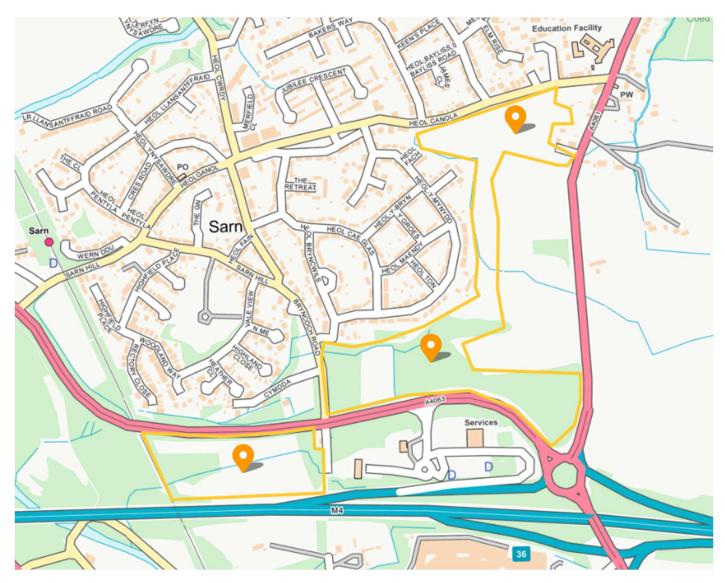




CADNO CONTRACTING & CONSULTANCY

# 1.0 Site Context

Cadno Contracting & Consultancy has been contracted by Farm Track Ltd to undertake a preliminary ecological scoping exercise of the woodland and wooded components of land located to the north and south of the A4063 (SS 90264 82929 – 4.7ha & SS 90812 83339 9.1ha)



Map Above: South & North survey areas outlined in yellow. (Source: OS Opendata)

The survey is comprised of approximately 4.7ha of grazed pasture, including small areas of woodland and mature hedgerows, located to the south of the main A4063 highway with the remainder located to the north, comprising of approximately 9.1ha.

The land to the south is gently undulating with a gentle south facing aspect of predominantly improved pastures with areas of mature woodlands to the east and west, inter-cut by a series of mature Ash and Holly dominated hedges. Some small areas of semi-improved damp pastures occur

in hollows and fringes where agricultural improvement has been difficult. The land appears to be farmed for livestock and haylage making purposes.

To the north, comprises of areas of purple moor grass and willow scrub mosaics with willow and damp soils forming the western fringes of the search area. The majority of this land is level with a gentle south facing aspect throughout, bordered by housing to the west and north and areas of open ground, damp purple moor grass pastures to the east. This assessment will highlight any areas of ecological note.

## 2.0 Site Survey method and aims.

The site survey was undertaken on 2<sup>nd</sup> and 19<sup>th</sup> May 2024. A walkover survey was undertaken to assess the main habitat types and target noting of areas of particular ecological note. Target notes (TN) in the test are shown on the maps on the following page. The survey focused on the woodland areas including hedgerows.

In addition to the field assessment, a request was made to SE Wales Biodiversity Records Centre (SEWBREC) for the following data within a 500m buffer of the site;

- EU Protected & Priority species (Section 42, UK BAP, CITES)
- Other Species of Conservation Concern (Red Data Book, Nationally Scarce, EU Birds
- Directive)
- Locally Important Species/Sites
- Schedule 9 Wildlife & Countryside Act 1981 Invasive species.
- Barn owls and bats
- International, National and Local designations
- Phase 1 habitat data

The final section of the report uses this information to make recommendations about the most suitable sites for woodland creation, species choice and areas that could be retained as open habitats. Advice is also offered for the management of retained habitats to enhance their value for wildlife.

#### 3.0 Habitat Assessment

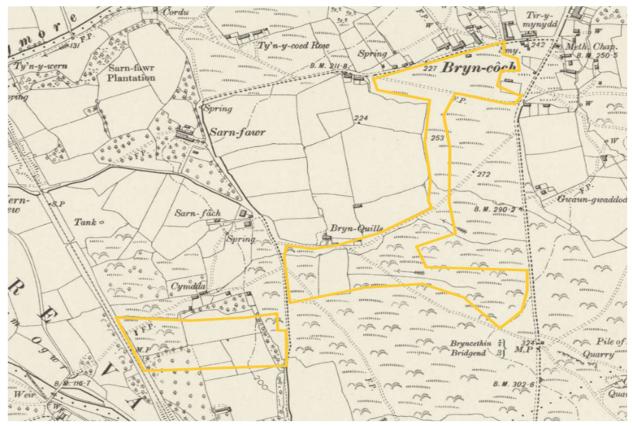
Land to the south of the main highway A4063, comprised of a series of small pasture fields, lies around 60m asl, falling gently to the west, to a height of 45m asl. Bedrock of the land comprises mostly of Siliciclastic and Ferroan Carbonate, associated with river and coastal marine habitats. Given the close proximity of the Afon Ogwr / Ogmore River, this would suggest that the landforms part of the riparian corridor and Ogmore Valley.

Areas of Ancient Woodland (AW) are located to the east, adjoining the narrow public highway adjacent to the Dwr Cymru station. The majority of the centre ground, forming the grazed component is listed as Acid grassland under the phase 1 habitat survey for Wales. The remaining, sloping aspects on the western flanks are noted as Marsh/Marsh grassland B.5, often known as Wet Meadows. Overall, the southern section wooded areas lie within Britain's 'oceanic zone' - the climatic region in which temperate rainforest is most likely to thrive. This zone covers around 20% of Britain. As part of this classification, it means likely results for lower plant life may be found on site that are temperate climate specific, although no records to date have been recorded.

The land areas have changed quite dramatically over the last 200 years with gradual decline in woodland cover, leaving remnant ground flora, changing to rhos pasture habitats as result of industrial usages locally and part of agricultural intensification.



Map Above: 1885 – 1900 OS One-Inch – Site search boundaries in Yellow.



Map Left: 1888-1915 OS Six Inch Map – Site boundaries in yellow. The land to the north (9.1ha) is listed as mostly Marsh/Marsh grassland B.5 and C.1 Bracken to the northern sections of the survey area. Purple moor-grass and rush pasture is wetland acid grassland. It is called rhôs pasture in Wales. It is flower rich with ragged-robin, wavy St John's-wort, three-lobed water-crowfoot, greater and lesser butterfly orchids, flowering rush and purple moor-grass. The marsh fritillary is particularly associated with rush pasture and devil's-bit scabious, which is the sole food plant for caterpillars.

Recent record centre searches show that some of the area has *Succisa pratensis* (Devil's Bit Scabious) present, which is a positive indicator of Marhsy grasslands along with *Ficaria verna* (Lesser Celendine). However, some or possibly many of these records are incomplete for mis-identified and mapped in error as much of the zone marked as M24 purple moor-grass is now dominated by Willow and Ash scrub areas and is mostly dry (possibly due to adjacent ditch line) with examples of garden escapee plants along the western boundaries of the majority of the site.



Photo: Example of secondary woodland and scrub succession along western boundaries with adjacent housing of Sarn village (TN 2.1)

Much of the area is dominated by Grey Willow *Salix cinerea* and Downy Birch *Betula Pubescens* with a field layer of Marshy grassland species including Molinia and Lesser Celandine species. Much of the canopy shading is reducing the vigour of the field layer species associated with a M24 purple moor-grass, <u>Molinia caerulea-Cirsium dissectum fen-meadow</u>. This is a commonly occurring and most widespread throughout Wales. Marsh fritillary *Euphydryas aurinia*, is closely associated with marshy grassland hotspots in Wales, and especially areas with a strong presence of M24 (the larval food-plant devil's-bit scabious Succisa pratensis is a constant of the community). Occasional areas of Reed mace *Typha latifoli* can be seen throughout the areas of Willow succession across the southern half of the larger site, north of the A4063.



Photo: Pockets of Great Reedmace throughout secondary woodlands along periphery of site (TN 2.2).



Photo: Internal understory of secondary woodlands, heavily dominated by Himalayan Balsam Impatiens glandulifera

There are a number of damp areas on low lying land in the target area and in particular where the surrounding soil is poorly drained allowing certain plants to thrive. The commonly occurring soft rush is the dominant plant with patches of compact rush J. conglomeratus and more notably sharp flowered rush J. acutiflorus. Amongst the rushes a few flowering plants typically grow including marsh thistle Cirsium palustre, greater birds foot trefoil Lotus pedunculatus, marsh bedstraw Galium palustre, sneezewort Achillea ptarmica, fleabane Pulicaria dysenterica, tufted hairgrass Deschampsia cespitosa, hoary willowherb Epilobium parviflorum, broad-leaved willowherb Epilobium montanum, lady fern Athyrium felix-femina, oval sedge Carex laporina and buckler fern (possibly narrow buckler fern Dryopteris carthusiana). Grey willow Salix cinerea and goat willow S. caprea have become established in these wetter areas. The wider range of flowering plants in these small areas of rush pasture are attractive to pollinating insects and other invertebrates, dragonflies and damselflies in particular.



Photo: adjacent open ground habitat lined by mature trees a characteristic of the site generally



The drier areas to the north shown as the uncut "brown" bank with scrub above the wetter habitat in the photograph above (TN1.0) supports some quite interesting unimproved grassland more characteristic of NVC MG5 grassland with meadow plants such as tormentil Potentilla erecta, self-heal, common knapweed Centaurea nigra, sneezewort, lesser birds foot trefoil, field vetchling, meadow buttercup and red clover. The bank is west facing and sheltered. The drier areas show likelihood of historic drainage as indicated by presence of Bracken species. The loss of grazing on the bank in recent years has allowed a thatch of dead grasses to build up beneath the sward and rank grasses such as cocksfoot are becoming established along with dominance of Bracken and Willow scrub. Reinstatement of a grazing regime in association with the wet area below is likely to increase the botanical interest of this bank and provide some valuable grassland habitat within the site that would be particularly beneficial for insect life and small mammals.

A narrow linear woodland feature along the course of a small, incised stream (TN 3.0) is a feature of this site. It includes an Oak/Willow lined riparian corridor which should be retained or buffered to enhance the current habitat present. Wetland species including Water Mint *Mentha aquatica* and Watercress *Rorippa nasturtium-aquaticum* are found along this corridor and an indicator of clean water quality.

Much of the area as a whole is dominated by external INNS including Impatiens glandulifera (Balsam), Lady Fern and general garden plants that have made their way into the northern section of the site or through discarded fly-tipping garden waste from adjacent housing.

### 3.2 Woodlands and trees

Note: Ash is frequent along field boundaries and streams and observations about the status of Ash Dieback/Chalara were made using the Ash Dieback Class Classification in the Tree Council Ash Dieback Action Plan Toolkit; Class 1 - >75% canopy remaining, Class 2 - >50% canopy remaining, Class 3 ->25% canopy remaining, Class 4< 25% canopy remaining.

Maure woodland areas are located to the east of the southern section of land to the south of the A4360 highway, bordered by the Dwr Cymru pumping station.

This area is identified as Ancient Semi Natural and comprises of a diverse number of woodland species associated with the ancient natu8re of the stand. These include Field Maple, Ash, Cherry, Large Leaved Lime, Aspen, Crab Apple, Beech, Holly, Sweet Chestnut, Alder Wych Elm, Hazel and Hawthorn.



Much of the area has historic disturbance shown, likely as result of location adjacent to a public right of way (PROW). Historic embankments are likely a 'sunken highway' as shown by early Ordnance Survey Maps (appendix 1.0 Target Notes) and shown as part of TN5.0. The woodland flora is quite diverse; red campion Silene dioca, bluebell Hyacinthoides non-scripta, honeysuckle Lonicera periclymenum, wood sorrel Oxalis acetosella, lady fern Athyrium felix-femina, broad buckler fern D. dilitata and tufted hairgrass all occur indicative of NVCW8 Fraxinus excelsior - Acer campestre -Mercurialis perennis woodland. Ivy and non-native (INNS) species and coarse vegetation are an immediate threat to this area of woodland which is also scattered with historic and recent fly-tipping and general litter. There is a particularly mature Sessile Oak *Quercus Patrea* within the wooded area (TN4.0) which is of conservation significance and should be conserved, particularly due to the decline of Ash within the area as result of Ash die-back and would form an important refugia for bat species.

Many of the ash trees are showing early signs of ash dieback (Class 1) and should be monitored due to their location close to tracks used by walkers.

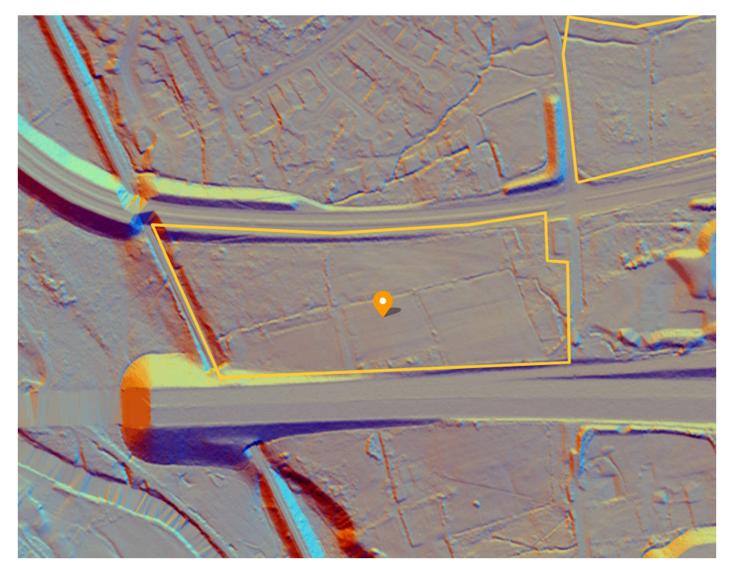


Photo: View inside small area of Ancient Semi Natural Woodland along eastern boundary with Dwr Cymru



To the north of the ASNW stand, a mature Sessile Oak tree (see left photo TN4.0), which is classified as 'veteran'. Veteran trees may support a wide range of faunae and fugal bodies, many of which are only associated with long periods of continuity in their habitat, so combined with the inventory status, and species diversity, this part of the site would form possibly the most ecologically diverse section for woodland components.

The remainder of the southern half of the site, is lined with mature hedgerows dominated by Ash and Holly species. These hedgerows are part of historic landscape and include stone banks and walls (TN5.1) to form small field parcels or boundaries. A historic stone wall is located to the south bordering the M4 motorway and provides suitable conditions for lime-loving ferns to establish. Rusty back fern Asplenium ceterach and black spleenwort A. adiantum-nigrum occur, both noteworthy species.



Map: LiDAR DTM 50cm-1m Eng Scot Wales. Nat. Library Scot 2024.Note Historic field boundaries and ditch line features. Note sunken pathway through area of ancient woodland along eastern boundary.



Photo: Mature Hedgerows as internal boundaries across site



Photo: Historic stone wall (TN6.0) along southern boundary of southern section of woodland. Note presence of Dog Mercury *Mercurialis perennis* at base of wall indicating ancient woodland origins for the remainder of the site, not currently forming part of the 20212 AWI.

The woodland areas to the northern section of the site are dominated by secondary willow scrub, but with occasional Oak and Ash regeneration. A small, wooded glade (TN2.0) in the southwestern corner of the site forms a structurally complex woodland feature, previously grazed and includes Oak, Guelder rose and Ash species with notable mature Oak species along narrow streams and ditch lines. This area provides a warm south facing sheltered part of the site with examples of likely ancient woodland components and secondary and successional natural regeneration examples and would benefit from occasional grazing or low livestock numbers, ideally cattle at between 0.2 and 0.8 livestock units per hectare.

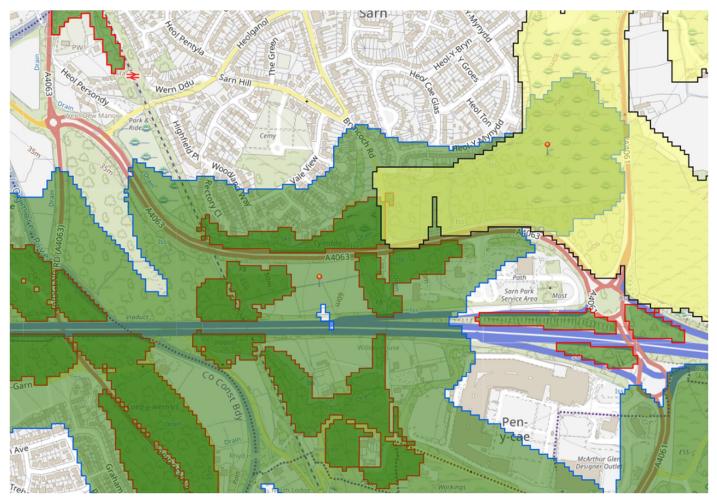


Photo: Tree lined glade in southwestern corner of northern search area and mature veteran oak lining nearby stream/ditch line (TN2.0).

### 4.0 Data search – SEWBREC Biological Records

A search for biological records within a 500m buffer of the survey site was requested from the local biological records centre SEWBREC. There are no Nationally or Internationally important sites (e.g. SSSIs, SACs, SPAs) within the search buffer, however a number of Sites of Importance for Nature Conservation sites (SINCs) within the area, namely Penyfai Common (ref: NH-3-M) to the west, a Semi-improved acidic grassland. Acidic marshy grassland. Continuous bracken. Improved grassland. Dense scrub. Broad-leaved semi-natural woodland. Scattered scrub. Upland species-rich ledges. Unimproved acidic grassland which includes part of the Ogwr river itself.

Much of the northern and southern section's form part of the Habitat Networks for Welsh Woodlands, Grasslands, Heathlands, Bogs and Fens (CCW), with the purpose of data capture was to allow the scope and range of potential networks to be rapidly explored. Predicted habitat networks can be used to guide large-scale planning for nature conservation, provide insight into how the landscape is likely to be functioning and prioritise action to improve the connectivity and viability of protected sites. The northern parts of the site are listed as Lowland Grassland and southern sections classified as potential for woodland connectivity. This contradicts the Priority habitats map for Wales somewhat, which was carried out between 1970 and 1990, whereby it classifies some of the land to the west of the southern section as Purple Moor Grass and Rush Pastures, which goes against the historic context as shown in the 1888-1915 OS map which suggests there to be a greater woodland component and possibly cleared as part of periodic railway track side maintenance given the historic mineral railway to the west.



Map: Habitat Networks for Welsh Woodlands, Grasslands, Heathlands, Bogs and Fens (CCW) Woodland – Green, Grasslands – Yellow.

# Priority species within the buffer area

There are a number of Invasive Non-Native Species (INNS) within the buffer area and should be monitored and controlled if necessary. Those recorded by SEWBREC are yellow archangel, cherry laurel (recorded near the Dwr Cymru building), wall cotoneaster, Japanese knotweed, Himalayan balsam, Himalayan honeysuckle. (present at number of locations).

The Phase 1 map data supplied by SEWBREC record areas of semi-improved neutral grassland on the fields (see below hatched diagonal). It is likely that the fields may have been more species-rich in the past as indicated by patchy distribution of species 15 such as self-heal, yellow rattle and field vetchling etc. However, this diversity appears to have declined and the swards are rather homogenous, punctuated in places by localised but relatively low plant diversity and areas of greater species interest on damp soils where marshy grassland occurs.

Datamap Wales lists part of the northern section of the site(s) as being Purple Moor Grass Rush Pastures but also Marsh Fritillary Habitat adjacent to the housing areas (TN1.1). This with the presence of Devil's Bit Scabious (primary food source), would suggest the woodland now covering a large proportion of the area to be secondary and successional scrub. (TN 2.1)

# 5.0 Recommendations for woodland & Other Habitats

### Land to North of A4063

- Implement program of INNS removal, focusing on Himalayan Balsam which could be achieved through cutting or periodic grazing to reduce dominance of secondary woodland areas.
- Remove garden debris from along western boundaries.
- Continue grazing of wooded glade in southwestern corner of site (TN 2.0)
- Allow development of secondary woodland in northern section of search area, to north of A4063, to allow willow scrub to develop within areas outlined in Habitat Networks for Welsh Woodlands, Grasslands, Heathlands, Bogs and Fens (CCW)
- Retain mature Field Maple *Acer campestre* (TN4.0) and Sessile Oak (Quercus Patrea) in northwest corner of search site and along ditch lines/stream around wooded glade TN2.0

## Land to South of A4063

- Control INNS including Balsam and garden debris (Honeysuckle) along eastern boundary with public footpath.
- Expansion of woodland alongside eastern area of ASNW into field area (up to 'drip line'), through natural succession and removal of grazing/mowing by re-fencing accordingly. (TN5.0)
- Clear fly-tipped rubbish and litter from eastern flanks of ASNW
- Coppice/cut within northwest corner of southern section of land (TN5.2) to develop structural complexity and conserve remnants of Purple Moor grass habitats as shown on Datamap Wales priority habitats layer, focussing on Willow Coppice. Retain mature and semi-mature tree species and allow to develop.
- Retain mature tree-lined internal hedges to retain as possible flight corridors for bat species within the area. (TN 5.1)
- Buffer all internal hedges on south aspect with movement of fence to allow woodland edge habitat to develop (TN 5.1)
- Continue with low impact grazing regime (summer) to allow plant assemblages to develop within sward. If this is not possible, buffering hedgerows by moving fence lines into field areas could be considered to remove/restrict grazing, creating a 1 to 2m buffer alongside each hedge line.

# 6.0 Suggestions for further survey work

Tree Safety Survey to BS5837 / 5998 along public footpath and boundaries with housing area

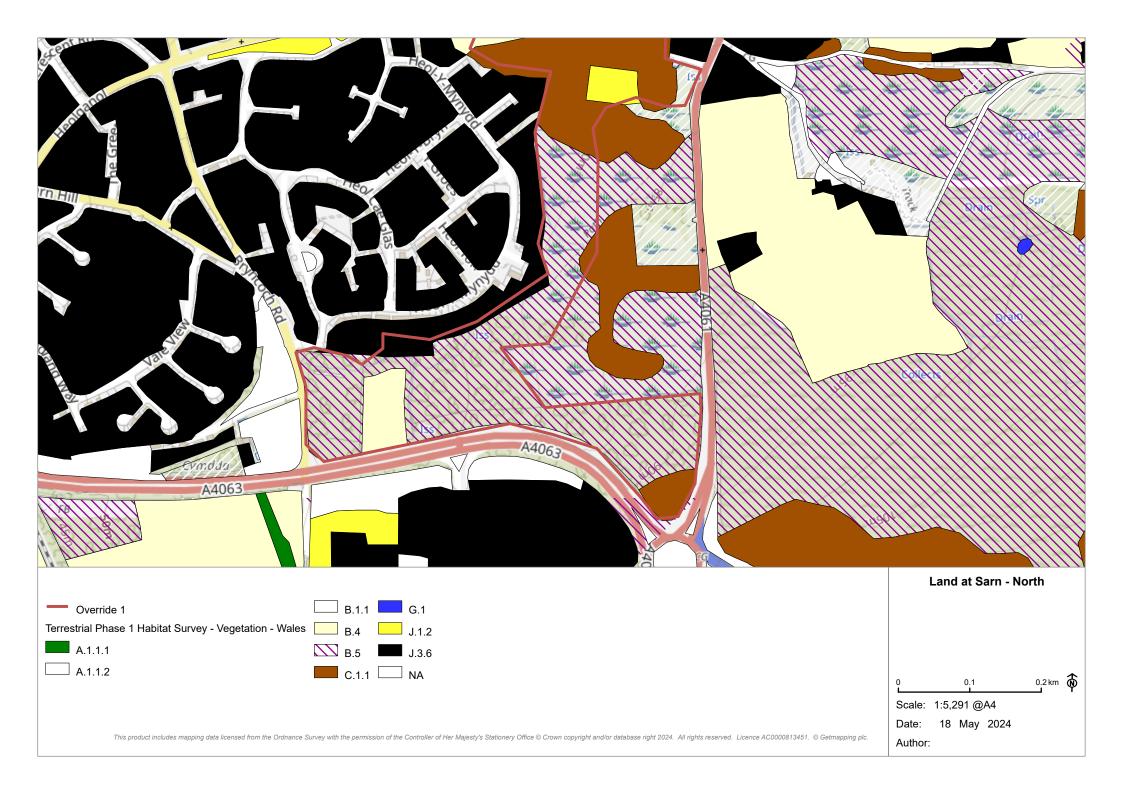
Tree Survey / Report once construction plans are in place to determine development area and in relation to retained trees and tree habitats on site.

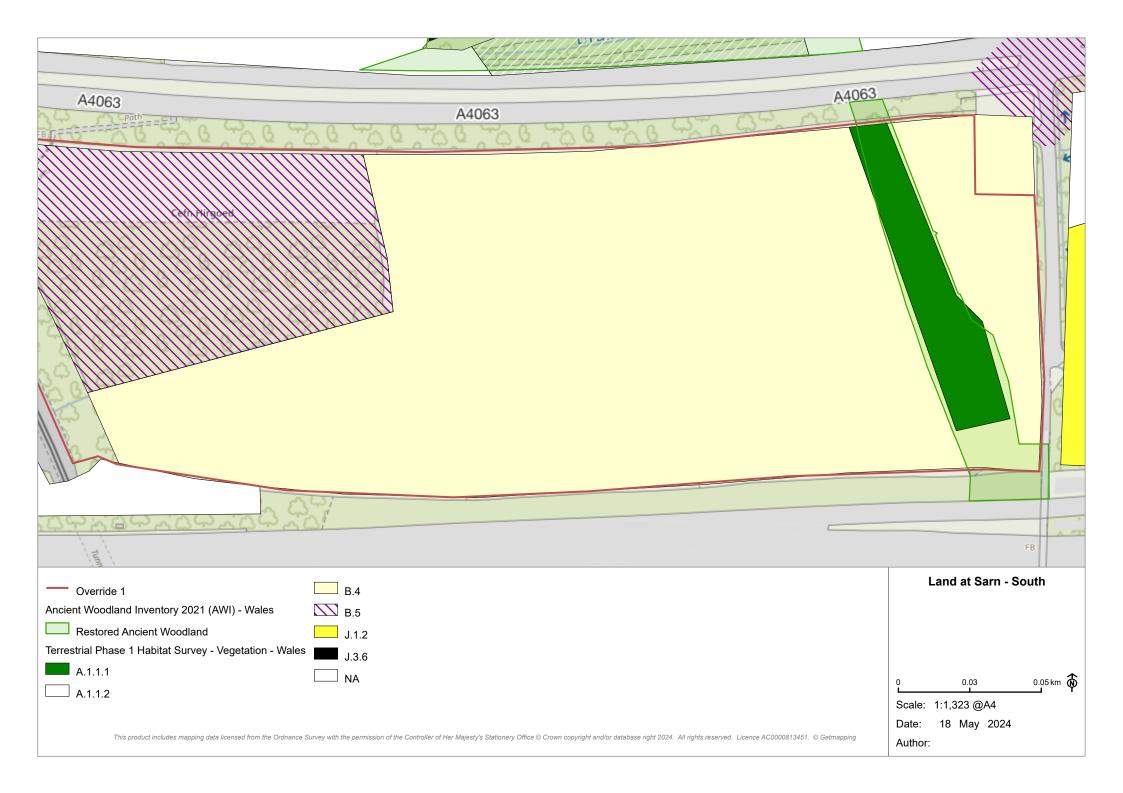
### 7.0 References

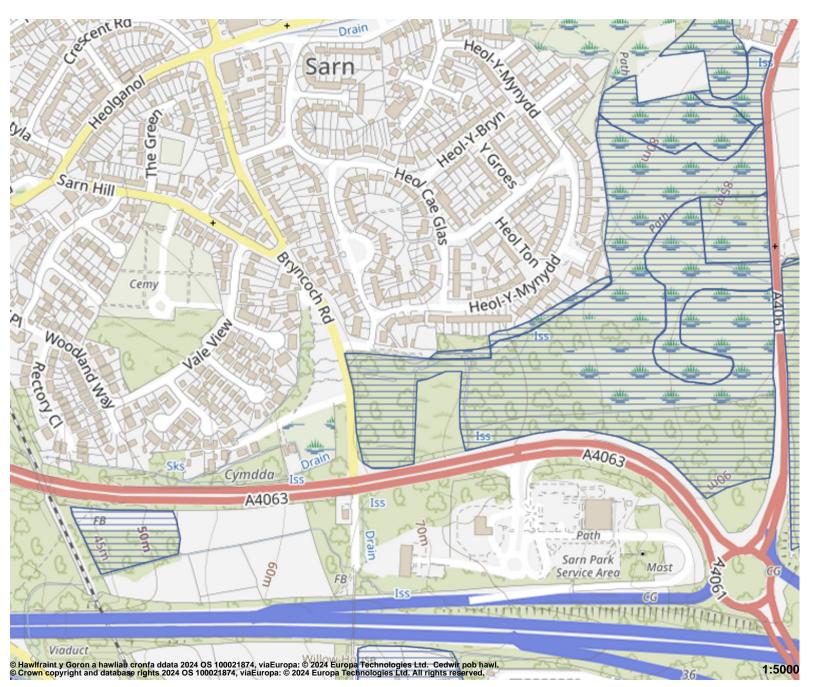
- I. Ash dieback Action Plan toolkit. The Tree Council (2019) https://www.treecouncil.org.uk/What-We-Do/Ash-Dieback
- II. Ancient Woodland Inventory Wales, Natural Resources Wales http://lle.gov.wales/catalogue/item/AncientWoodlandInventory2011/?lang=en
- III. Rodwell J.S. (Ed)1992 British Plant Communities Volume 3 Grasslands and montane 10) communities
- IV. Soil Survey England & Wales (1983)











WOM21 Priority Habitat - High Sensitivity

Priority Habitat - High Sensitivity

| Ficaria vernaLesser CelandinePrunus spinosaBlackthornPhragmatobia fuliginosaRuby TigerColoeus monedulaJackdawErithacus rubeculaRobinApodemus sylvaticusWood Mouse   | CAT1<br>CAT3<br>CAT4<br>CAT4 | flowering plant<br>insect - beetle (Coleopte<br>flowering plant<br>flowering plant<br>insect - moth<br>bird<br>bird<br>terrestrial mammal<br>bird<br>flowering plant<br>flowering plant<br>flowering plant<br>flowering plant<br>flowering plant<br>flowering plant<br>flowering plant | Vascular Plants<br>Invertebrates (insect)<br>Vascular Plants<br>Vascular Plants<br>Invertebrates (insect)<br>Birds<br>Birds<br>Mammals (terrestrial)<br>Birds<br>Vascular Plants<br>Vascular Plants<br>Vascular Plants<br>Fungi and Slime Moulds | 1<br>1<br>1<br>3<br>2<br>1<br>2<br>1<br>1<br>1 | 19/04/2024<br>09/04/2024<br>29/03/2024<br>29/03/2024<br>18/03/2024<br>29/03/2013<br>27/06/2001<br>16/11/2023<br>01/10/2009<br>27/10/2023<br>27/10/2023 | 19/04/2024<br>09/04/2024<br>29/03/2024<br>29/03/2024<br>18/03/2024<br>29/11/2023<br>26/11/2023<br>16/11/2023<br>15/11/2023<br>27/10/2023 |
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| Pica picaMagpieCirsium palustreMarsh ThistleJacobaea vulgarisCommon RagwortJuncus effususSoft-rushPsathyrella spadiceaChestnut BrittlestemRanunculus acrisMeadow ButtercupAchillea millefoliumYarrowAngelica sylvestrisWild AngelicaEricaHeathParmeliaceaeParmeliaceae  | CAT4                         | bird<br>flowering plant<br>flowering plant<br>flowering plant<br>fungus<br>flowering plant   | Birds<br>Vascular Plants<br>Vascular Plants<br>Vascular Plants   | 2<br>1<br>1                                    | 01/10/2009<br>27/10/2023   | 15/11/2023   |
| Cirsium palustreMarsh ThistleJacobaea vulgarisCommon RagwortJuncus effususSoft-rushPsathyrella spadiceaChestnut BrittlestemRanunculus acrisMeadow ButtercupAchillea millefoliumYarrowAngelica sylvestrisWild AngelicaEricaHeathParmeliaceaeParmeliaceae   | CAT4                         | flowering plant<br>flowering plant<br>flowering plant<br>fungus<br>flowering plant   | Vascular Plants<br>Vascular Plants<br>Vascular Plants  | 1<br>1   | 27/10/2023   |  |
| Jacobaea vulgarisCommon RagwortJuncus effususSoft-rushPsathyrella spadiceaChestnut BrittlestemRanunculus acrisMeadow ButtercupAchillea millefoliumYarrowAngelica sylvestrisWild AngelicaEricaHeathParmeliaceaeParmeliaceae  |                              | flowering plant<br>flowering plant<br>fungus<br>flowering plant  | Vascular Plants<br>Vascular Plants   | 1  |  | 27/10/2023   |
| Juncus effususSoft-rushPsathyrella spadiceaChestnut BrittlestemRanunculus acrisMeadow ButtercupAchillea millefoliumYarrowAngelica sylvestrisWild AngelicaEricaHeathParmeliaceaeParmeliaceae   |                              | flowering plant<br>fungus<br>flowering plant   | Vascular Plants  |  | 27/10/2023   |  |
| Psathyrella spadiceaChestnut BrittlestemRanunculus acrisMeadow ButtercupAchillea millefoliumYarrowAngelica sylvestrisWild AngelicaEricaHeathParmeliaceaeParmeliaceae  |                              | fungus<br>flowering plant  |  | 1  |  | 27/10/2023   |
| Ranunculus acrisMeadow ButtercupAchillea millefoliumYarrowAngelica sylvestrisWild AngelicaEricaHeathParmeliaceaeParmeliaceae  |                              | flowering plant  | Fungi and Slime Moulds   |  | 27/10/2023   | 27/10/2023   |
| Achillea millefoliumYarrowAngelica sylvestrisWild AngelicaEricaHeathParmeliaceaeParmeliaceae  |                              |  | -  | 1  | 27/10/2023   | 27/10/2023   |
| Angelica sylvestrisWild AngelicaEricaHeathParmeliaceaeParmeliaceae  |                              | flowering plant  | Vascular Plants  | 1  | 27/10/2023   | 27/10/2023   |
| Erica Heath<br>Parmeliaceae Parmeliaceae  |                              |  | Vascular Plants  | 1  | 21/10/2023   | 21/10/2023   |
| Parmeliaceae Parmeliaceae   |                              | flowering plant  | Vascular Plants  | 1  | 21/10/2023   | 21/10/2023   |
|   |                              | flowering plant  | Vascular Plants  | 1  | 21/10/2023   | 21/10/2023   |
| Quercus robur Pedunculate Oak   |                              | lichen   | Lichens  | 1  | 21/10/2023   | 21/10/2023   |
|   |                              | flowering plant  | Vascular Plants  | 1  | 21/10/2023   | 21/10/2023   |
| Salix cinerea Common Sallow   |                              | flowering plant  | Vascular Plants  | 1  | 21/10/2023   | 21/10/2023   |
| Potentilla erecta Tormentil   |                              | flowering plant  | Vascular Plants  | 1  | 15/10/2023   | 15/10/2023   |
| Betula pubescens Downy Birch  |                              | flowering plant  | Vascular Plants  | 1  | 11/10/2023   | 11/10/2023   |
| Bombus pascuorum Common Carder Bee  | CAT3                         | insect - hymenopteran  | Invertebrates (insect)   | 2  | 20/07/2013   | 10/10/2023   |
| Succisa pratensis Devil's-bit Scabious  | CAT3                         | flowering plant  | Vascular Plants  | 2  | 09/10/2002   | 10/10/2023   |
| Sphagnum Bog Moss   | CAT4                         | moss   | Bryophytes   | 1  | 10/10/2023   | 10/10/2023   |
| Trifolium Clover  |                              | flowering plant  | Vascular Plants  | 1  | 10/10/2023   | 10/10/2023   |
| Phalacrocorax carbo Cormorant   | CAT2                         | bird   | Birds  | 1  | 27/08/2023   | 27/08/2023   |
| Chamerion angustifolium Rosebay Willowherb  |                              | flowering plant  | Vascular Plants  | 1  | 19/06/2023   | 19/06/2023   |
|   | CAT1                         | flowering plant  | Vascular Plants  | 1  | 04/06/2023   | 04/06/2023   |
| Dactylorhiza praetermissa Southern Marsh-orchid   | CAT3                         | flowering plant  | Vascular Plants  | 1  | 04/06/2023   | 04/06/2023   |
| Silene flos-cuculi Ragged-Robin   | CAT3                         | flowering plant  | Vascular Plants  | 1  | 04/06/2023   | 04/06/2023   |
| Digitalis purpurea Foxglove   |                              | flowering plant  | Vascular Plants  | 1  | 04/06/2023   | 04/06/2023   |
| Myosotis sylvatica Wood Forget-me-not   |                              | flowering plant  | Vascular Plants  | 1  | 04/06/2023   | 04/06/2023   |
| Ranunculus repens Creeping Buttercup  |                              | flowering plant  | Vascular Plants  | 1  | 04/06/2023   | 04/06/2023   |
| Typha latifolia Bulrush   |                              | flowering plant  | Vascular Plants  | 1  | 04/06/2023   | 04/06/2023   |
| Silene dioica Red Campion   |                              | flowering plant  | Vascular Plants  | 1  | 28/05/2023   | 28/05/2023   |
| Corvus frugilegus Rook  | CAT4                         | bird   | Birds  | 1  | 06/04/2023   | 06/04/2023   |
| Acer pseudoplatanus Sycamore  |                              | flowering plant  | Vascular Plants  | 1  | 19/10/2022   | 19/10/2022   |
| Pholidoptera griseoaptera Dark Bush-cricket   |                              | insect - orthopteran   | Invertebrates (insect)   | 1  | 19/10/2022   | 19/10/2022   |
| Rhytisma acerinum Sycamore Tarspot  |                              | fungus   | Fungi and Slime Moulds   | 1  | 19/10/2022   | 19/10/2022   |
|   | CAT1                         | terrestrial mammal   | Mammals (terrestrial)  | 2  | 22/07/2021   | 12/05/2022   |
| Accipiter nisus Sparrowhawk   | CAT3                         | bird   | Birds  | 3  | 17/11/2006   | 14/01/2022   |
| Anguis fragilis Slow-worm   | CAT1                         | reptile  | Reptiles and Amphibians  | 4  | 29/04/2007   | 15/06/2019   |
| Falco tinnunculus Kestrel   | CAT1                         | bird   | Birds  | 5  | 30/10/2006   | 12/12/2018   |
| Dendrocopos major Great Spotted Woodpecker  | CAT3                         | bird   | Birds  | 2  | 02/06/2010   | 12/12/2018   |
| Rana temporaria Common Frog   | CAT1                         | amphibian  | Reptiles and Amphibians  | 2  | 10/08/2018   | 10/08/2018   |
| Pararge aegeria Speckled Wood   |                              | insect - butterfly   | Invertebrates (insect)   | 2  | 17/08/2017   | 05/06/2018   |
| Pieris brassicae Large White  |                              | insect - butterfly   | Invertebrates (insect)   | 2  | 17/08/2017   | 05/06/2018   |
| Pieris rapae Small White  |                              | insect - butterfly   | Invertebrates (insect)   | 2  | 07/04/2017   | 05/06/2018   |
| Vulpes vulpes Red Fox   |                              | terrestrial mammal   | Mammals (terrestrial)  | 1  | 13/02/2018   | 13/02/2018   |
| Maniola jurtina Meadow Brown  |                              | insect - butterfly   | Invertebrates (insect)   | 3  | 17/07/2002   | 17/08/2017   |
| Impatiens glandulifera Himalayan Balsam   | CAT4                         | flowering plant  | Vascular Plants  | 3  | 13/05/1996   | 12/08/2017   |
| Bombus hypnorum Tree Bumblebee  |                              | insect - hymenopteran  | Invertebrates (insect)   | 1  | 10/02/2016   | 10/02/2016   |
| Mergus merganser Goosander  | CAT3                         | bird   | Birds  | 2  | 09/02/2016   | 09/02/2016   |
| Fallopia japonica Japanese Knotweed   | CAT4                         | flowering plant  | Vascular Plants  | 11   | 13/05/1996   | 28/08/2015   |
| Streptopelia decaocto Collared Dove   | CAT4                         | bird   | Birds  | 3  | 27/03/2014   | 06/06/2015   |
| Vanessa atalanta Red Admiral  |                              | insect - butterfly   | Invertebrates (insect)   | 1  | 04/06/2015   | 04/06/2015   |
| Buteo buteo Buzzard   | CAT3                         | bird   | Birds  | 2  | 17/02/2015   | 23/02/2015   |
| Bombus hortorum Small Garden Bumble Bee   | CAT3                         | insect - hymenopteran  | Invertebrates (insect)   | 1  | 20/07/2013   | 20/07/2013   |
| Bombus lapidarius Red-tailed Bumblebee  | CAT3                         | insect - hymenopteran  | Invertebrates (insect)   | 1  | 20/07/2013   | 20/07/2013   |
| -   | CAT3                         | insect - hymenopteran  | Invertebrates (insect)   | 1  | 20/07/2013   | 20/07/2013   |
|   | CAT3                         | insect - hymenopteran  | Invertebrates (insect)   | 1  | 20/07/2013   | 20/07/2013   |
|   | CAT3                         | insect - dragonfly (Odona  | · · · ·  | 1  | 20/07/2013   | 20/07/2013   |
| Apis mellifera Western Honey Bee  |                              | insect - hymenopteran  | Invertebrates (insect)   | 1  | 20/07/2013   | 20/07/2013   |
| Pseudochorthippus parallelus Meadow Grasshopper   |                              | insect - orthopteran   | Invertebrates (insect)   | 1  | 20/07/2013   | 20/07/2013   |
|   | CAT2                         | bird   | Birds  | 1  | 16/04/2013   | 16/04/2013   |
|   | CAT3                         | bird   | Birds  | 1  | 11/12/2012   | 11/12/2012   |
| 5   | CAT2                         | bird   | Birds  | 1  | 04/08/2012   | 04/08/2012   |
| ••  | CAT2                         | bird   | Birds  | 1  | 04/08/2012   | 04/08/2012   |
| , .   | CAT3                         | liverwort  | Bryophytes   | 1  | 09/09/2011   | 09/09/2011   |
|   |                              |  | Vir Vir  | -  |  |  |

| Bryum argenteum               | Silver-moss                       | CAT3         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
|-------------------------------|-----------------------------------|--------------|--------------------|------------------------|--------|------------|--------------------------|
| Kindbergia praelonga          | Common Feather-moss               | CAT3         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Tortula muralis               | Wall Screw-moss                   | CAT3         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Weissia controversa var. cont | ı Weissia controversa var. contro | CAT3         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Barbula unguiculata           | Bird's-claw Beard-moss            | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Brachythecium rivulare        | River Feather-moss                | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Brachythecium rutabulum       | Rough-stalked Feather-moss        | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Bryum capillare               | Capillary Thread-moss             | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Bryum dichotomum              | Dune Thread-moss                  | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Calliergonella cuspidata      | Pointed Spear-moss                | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Ceratodon purpureus           | Redshank                          | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Dicranella schreberiana       | Schreber's Forklet-moss           | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Dicranella varia              | Variable Forklet-moss             | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Dicranoweisia cirrata         | Common Pincushion                 | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Didymodon insulanus           | Cylindric Beard-moss              | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Didymodon luridus             | Dusky Beard-moss                  | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Didymodon rigidulus           | Rigid Beard-moss                  | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Didymodon sinuosus            | Wavy Beard-moss                   | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Hypnum cupressiforme          | Cypress-leaved Plait-moss         | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Metzgeria furcata             | Forked Veilwort                   | CAT4         | liverwort          | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Mnium hornum                  | Swan's-neck Thyme-moss            | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Oxyrrhynchium hians           | Swartz's Feather-moss             | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Plagiomnium undulatum         | Hart's-tongue Thyme-moss          | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Rhytidiadelphus squarrosus    | Springy Turf-moss                 | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Schistidium crassipilum       | Thickpoint Grimmia                | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Syntrichia montana            | Intermediate Screw-moss           | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Syntrichia ruralis            | Great Hairy Screw-moss            | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Tortula acaulon var. acaulon  | Schreberian Earth-moss            | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Tortula truncata              | Common Pottia                     | CAT4         | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Atrichum undulatum            | Common Smoothcap                  | C/TI I       | moss               | Bryophytes             | 1      | 09/09/2011 | 09/09/2011               |
| Chroicocephalus ridibundus    | Black-headed Gull                 | CAT1         | bird               | Birds                  | 1      | 01/10/2009 | 01/10/2009               |
| Columba palumbus              | Woodpigeon                        | CAT4         | bird               | Birds                  | 1      | 01/10/2009 | 01/10/2009               |
| Saxicola rubicola             | Stonechat                         | CAT3         | bird               | Birds                  | 1      | 21/12/2006 | 21/12/2006               |
| Hydrobates leucorhous         | Leach's Petrel                    | CAT1         | bird               | Birds                  | 1      | 07/12/2006 | 07/12/2006               |
| Phylloscopus collybita        | Chiffchaff                        | CAT3         | bird               | Birds                  | 1      | 04/04/2005 | 04/04/2005               |
| Garrulus glandarius           | Jay                               | CAT4         | bird               | Birds                  | 1      | 04/04/2005 | 04/04/2005               |
| Motacilla alba                | Pied Wagtail                      | CAT3         | bird               | Birds                  | 1      | 01/01/2003 | 01/01/2003               |
| Aphantopus hyperantus         | Ringlet                           | CATJ         | insect - butterfly | Invertebrates (insect) | 2      | 17/07/2002 | 17/07/2002               |
| Petrophora chlorosata         | Brown Silver-line                 |              | insect - moth      | Invertebrates (insect) | 2      | 17/07/2002 | 17/07/2002               |
| Thymelicus sylvestris         | Small Skipper                     |              | insect - butterfly | Invertebrates (insect) | 2      | 17/07/2002 | 17/07/2002               |
| Locustella naevia             | Grasshopper Warbler               | CAT1         | bird               | Birds                  | 1      | 27/06/2001 | 27/06/2001               |
| Turdus philomelos             | Song Thrush                       | CAT1         | bird               | Birds                  | 1      | 27/06/2001 | 27/06/2001               |
| Turdus merula                 | Blackbird                         | CAT3         | bird               | Birds                  | 6      |            |                          |
|                               |                                   | CAT3<br>CAT3 | bird               | Birds                  | о<br>1 | 20/10/1989 | 27/06/2001<br>18/05/1995 |
| Acrocephalus schoenobaenus    | Sedge warbler<br>Blue Tit         | CAT3<br>CAT3 | bird               | Birds                  | 1      | 18/05/1995 | 18/05/1995               |
| Cyanistes caeruleus           |                                   | CAIS         |                    |                        |        | 16/11/1989 |                          |
| Fringilla coelebs             | Chaffinch                         | C 1 T 1      | bird               | Birds                  | 1      | 30/05/1989 | 30/05/1989               |
| Cuculus canorus               | Cuckoo                            | CAT1         | bird               | Birds                  | 1      | 02/04/1988 | 02/04/1988               |
| Turdus iliacus                | Redwing                           | CAT1         | bird               | Birds                  | 1      | 10/03/1986 | 10/03/1986               |
| Sturnus vulgaris              | Starling                          | CAT1         | bird               | Birds                  | 1      | 02/12/1962 | 02/12/1962               |
|                               |                                   |              |                    |                        |        |            |                          |