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SURVEYS, INSPECTIONS, REPORTS

PLOTS 4-14
SITE OFF OAK DRIVE
COLWYN BAY
CONWY
LL29 7YP

PROPOSED BUILDING DEVELOPMENT

PRELIMINARY ECOLOGICAL APPRAISAL
(Amended 22/08/2023)

Report by:

Stephen Cutmore BSc (Hons), MICFor, MArborA
Chartered Arboriculturist

Client	**Northfield Property Developments Ltd**
Planning Authority	**Conwy County Borough Council**
Grid Reference	**SJ842790**
Dates of Surveys	**4 September 2019, 19 January and 7 October 2022, 26 May 2023**
Reference	**082023/PEA/JN#2**

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1.0 SUMMARY

The site is located at Grid Reference SJ842790. The site is located adjacent to the North of Oak Drive and to the West of Walshaw Avenue, within a residential area in the West section of the town of Colwyn Bay. The site was formerly part of the Rydal School sports grounds.

It is proposed to erect to erect 11 private dwellings (plots 4-14) on the site, with associated parking spaces, access road and landscaping. New tree and hedge planting will compensate for the loss of any trees to be removed.

The Cofnod Data Request (E07584) provided information regarding Priority Species within a 1km radius of the site. Due to the sensitivity of the data, specific records for protected species cannot be disclosed, but there are records of Priority Species mammals (badgers, bats, hedgehog, polecat), amphibians (common frog, common toad, palmate newt), reptiles (adder, common lizard, grass snake, slow worm) within 1km radius of the site. There are records of non-native invasive plant species (Himalayan Balsam, Japanese knotweed, wall cotoneaster) and non-native invasive reptile species (Aesculapian snake) within 1km radius.

The woodland copse area [A1] and scrub [A2] have potential for amphibians, badgers, bats, hedgehogs and nesting birds. These areas have limited potential for reptiles, due to the dense shade. The poor improved grassland [B4] and amenity grass [J1.2] have potential for foraging badgers and some potential for reptiles. These areas and the woodland copse area support a range of invertebrates, which provides a good food-source for birds and for foraging bats. Some trees and vegetation will need to be removed to facilitate the proposed development, which will result in some loss of habitat. The outlier badger sett is to be retained. A post-construction landscaping scheme including new tree and hedge planting and grassed areas, has been prepared (see Woodland Management Plan), to compensate for any loss of habitat and to enhanced the site. The hedges on site do not qualify as 'important' with regards to the Hedgerow Regulations 1997, made under Section 97 of the Environment Act 1995.

The majority of the mature trees on the East section of the woodland copse area will be retained and special measures implemented to protect the retained trees. New hedge and tree planting on the North, South and West boundaries and elsewhere on the site will provide wildlife corridors. It is essential that any trees to be removed to facilitate the proposed development are further inspected, to determine if any roosting bats are present. The results of these further surveys will enable appropriate compensation and mitigation and Reasonable Avoidance Measures to be prescribed, in order to minimise the impact on locally recorded bats. Due to the time limits imposed by NRW on surveys if a derogation licence is required, it is suggested that the LPA place a pre-commencement condition on planning consent, that appropriate bat surveys are carried out and a bat mitigation strategy be submitted for approval to satisfy the condition.

Installing bat boxes and bird nesting boxes in the mature trees and/or incorporating bat-friendly features into the proposed dwellings, would also provide suitable roosting sites and help improve biodiversity on the site. Providing hedgehog houses will benefit this species.

By using mitigation and Reasonable Avoidance Methods (RAM), the proposed development should have no detrimental effect on the favourable conservation status of bats, great crested newts and other amphibians, reptiles, badgers or other mammal species. RAM statements have been provided as separate documents.

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2.0 INTRODUCTION

Stephen Cutmore, a licensed bat worker (NRW[S091618/1]), and licenced Amphibian Worker (NRW[S092048/1) was instructed by Jamie Northcott, of Northfield Property Developments Ltd, to carry out a Preliminary Ecological Appraisal of the site off Oak Drive, Colwyn Bay, Conwy, LL29 7YP. The purpose of the survey was to identify habitats present, assess the conservation value of the survey area, the likely presence of rare or protected species, to identify any features, habitats or species which would constitute potential constraints to any development which might take place and to make recommendations for mitigation and/or further survey work as appropriate.

2.1 Site Location

The site is located at Grid Reference SJ842790. The site is located adjacent to the North of Oak Drive and to the West of Walshaw Avenue, within a residential area in the West section of the town of Colwyn Bay.

2.2 Site Description

The site was formerly part of the Rydal School sports grounds. The West section of the site has hard-surface tennis courts. The East section of the site is a small unmanaged woodland copse area, adjacent to Walshaw Avenue. The woodland copse area slopes gently down from South to North. The woodland consists primarily of mature trees around the margins, with a dense area of young, self-set trees in the centre. A narrow grass strip divides the tennis courts and woodland copse area.

2.3 Proposed development

It is proposed to erect to erect 11 private dwellings (plots 4-14) on the site, with associated parking spaces, access road and landscaping. New tree and hedge planting will compensate for the loss of any trees to be removed.

3.0 METHODOLOGY

3.1 Preliminary Ecological Appraisal

The site was surveyed on the morning of 4 September 2019, in accordance with the JNCC methodology (2010) in order to produce a Phase 1 habitat map. Target notes with supplementary information or identifying the potential for protected species are also given. The site was re-surveyed on 19 January 2022 and 26 May 2023.

The value of the site for foraging bats, great crested newts, reptiles and other protected species and habitat features was also assessed. A search was made for signs of badgers and badger setts. A search was also made for signs of invasive non-native plant species such as Japanese Knotweed.

Any hedgerows present were surveyed to determine if any of the hedges meet the requirements of important hedgerows under the 1997 Hedgerows Regulations.

The site was re-surveyed on 26 May 2023 and following amendments to the proposed layout, this report was updated on 22 August 2023.

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3.0 METHODOLOGY (continued)

3.2 Desk study

The 1: 25000 Ordnance Survey map covering the site and aerial photos accessed from the internet, were scrutinised to initially assess the wildlife value of the proposed development site and surrounding habitat at a basic level. This involved looking for any semi-natural habitat that may be of value to wildlife (e.g. woodland, parkland, hedges, ponds, rivers, wetland, with interconnecting habitat links. A data search request for Priority Species and designated wildlife sites within a 1km radius of the site request was made to Cofnod (Local Records Centre) (www.cofnod.org.uk).

4.0 SURVEY LIMITATIONS

This is solely an ecological survey report and cannot comment on topics outside this discipline. If additional advice is required, it is strongly recommended that other professionals are consulted.

1) information contained in this report covers only the site that was examined:

2) the inspection is limited to visual examination of the site.

3) there is no warranty or guarantee, expressed or implied, that Protected Species may not utilise the site after the survey has been completed, that are not discovered utilising the site during the inspection. This report gives an assessment of the suitability of the habitats on the site to support Protected Species, to determine if there is a the need for further surveys.

4) this report has been prepared for the sole use and benefit of the client. Any liability of Stephen Cutmore Arboricultural & Ecological Services shall not be extended to any third party.

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5.0 SURVEY RESULTS

5.1 Desk Study

The Cofnod Data Request (E07584) provided information regarding Priority Species within a 1km radius of the site. Due to the sensitivity of the data, specific records for protected species cannot be disclosed, but there are records of Priority Species mammals (badgers, bats, hedgehog, polecat), amphibians (common frog, common toad, palmate newt), reptiles (adder, common lizard, grass snake, slow worm) within 1km radius of the site. There are records of non-native invasive plant species (Himalayan Balsam, Japanese knotweed, wall cotoneaster) and non-native invasive reptile species (Aesculapian snake) within 1km radius.

Designated sites within 1km radius of the site include:

- Liverpool Bay (Wales) [SPA].
- Pwllycrochan Woods [Local Nature Reserve and Wildlife site].
- Wildlife Sites include Coed Sempyr and Bryn Euryn Woods.
- Several Ancient Semi Natural Woodland Sites.

Other designated sites within 10km radius of the site include:

Aber Afon Conwy [SSSI], Benarth Wood [SSSI], Bryn Euryn [SSSI], Bwlch Mine [SSSI], Cadnant [SSSI], Coed Ffordd Las [SSSI], Coed Merchlyn [SSSI], Creuddyn [SSSI], Creuddyn Peninsular Woods [SAC], Deganwy Mines and Grasslands [SSSI], Great Ormes Head [SAC], Little Ormes Head [SSSI], Llanddulas Limestone and Gwrych Castle Wood [SSSI], Llyn Ty'n y Llyn [SSSI], Llyn y Fawnog [SSSI], Maes y Facrell [NNR], Menai Strat and Conwy Bay [SAC], Morfa Uchaf [SSSI], Mynydd Marian [SSSI], Pen y Gogarth [SSSI], Sychnant Pass [SSSI], Traeth Pensarn [SSSI].

5.2 Habitats

For the purposes of accurate habitat survey, the site can be divided into five distinct areas (marked and target noted A1, A2 etc. on the plans).

Target Notes

A1: Mixed species woodland. Provides potential for badgers, nesting birds and bats. Provides limited potential for reptiles and amphibians.

A2: Scrub and self-set small trees. Provides potential for badgers, nesting birds and bats. Provides limited potential for reptiles and amphibians.

J5: Hardstanding. No potential for wildlife.

B4: Poor Improved Grassland. Provides potential habitat for foraging/commuting badgers, some potential for reptiles and a good invertebrate population for foraging bats/birds.

J1.2: Amenity Grass. Provides potential habitat for foraging/commuting badgers, some potential for reptiles and a moderate invertebrate population for foraging bats/birds.

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5.0 SURVEY RESULTS (continued)

5.2 Habitats

The wild plant list for Area A comprises:

A1: Mixed species woodland:
Apple (*Malus domestica*), Ash (*Fraxinus excelsior*), Beech (*Fagus sylvatica*), Blackthorn (*Prunus spinosa*), Box-leaved Honeysuckle (*Ligustrum pileata*), Bracken (*Pteridium esculentum*), Bramble (*Rubus fruticosus*), Common Lime (*Tilia* x *europaea*), Common Oak (*Quercus robur*), Common Yew (*Taxus baccata*), Elder (*Sambucus nigra*), Goat Willow (*Salix caprea*), Ground Elder (*Aegopodium podagraria*), Hart's Tongue Fern (*Asplenium scolopendrium*), Hawthorn (*Crataegus monogyna*), Hazel (*Corylus avellana*), Holly (*Ilex aquifolium*), Honeysuckle (*Lonicera periclymenum*), Ivy (*Hedera helix*), Laurel (*Prunus laurocerasus*), Montbretia (*Crocosmia* x *crocosmiiflora*), Moss (*Brachythecium rutabulum*), Rosebay Willow-herb (*Chamaenerion angustifolium*), Sessile Oak (*Quercus petraea*), Silver Birch (*Betula pendula*), Snowberry (*Symphoricarpos albus*), Spear Thistle (*Cirsium vulgare*), Stinging Nettle (*Urtica dioica*), Sycamore (*Acer pseudoplatanus*), White Willow (*Salix alba*), Wild Cherry (*Prunus avium*), Wild Raspberry (*Rubus occidentalis*), Wych Elm (*Ulmus glabra*).

A2: Scrub and small self-set trees:
Ash, Blackthorn, Bramble, Elder, Goat Willow, Hawthorn, Ivy, Japanese Knotweed (*Fallopia japonica*), Moss, Sycamore.

B4: Poor improved grassland:
Birds-foot Trefoil (*Lotus corniculatus*), Bramble, Broadleaved Dock (*Rumex obtusifolius*), Common Bent grass (*Agrostis gigantea*), Common Vetch (*Vicia sativa*), Couch-grass (*Agropyron repens*), Cow Parsley (*Anthriscus sylvestris*), Groundsel (*Senecio vulgaris*), Harebell (*Campanula rotundifolia*), Dandelion (*Taraxacum officinale*), Creeping Buttercup (*Ranunculus repens*), Hawkweed (*Hieraceum brittanicum*), Moss, Ragwort (*Jacobaea vulgaris*), Red Clover (*Trifolium pratense*), Ribwort Plantain (*Plantago lanceolata*), Rosebay Willow-herb, Wild Strawberry (*Fragaria vesca*).

J1.2: Amenity grass:
Broadleaved Dock, Common Bent-grass, Creeping Buttercup, Daisy (*Bellis perennis*), Dandelion, Perennial Ryegrass (*Lolium perenne*), Red Clover, Ribwort Plantain.

See maps in Appendix 1 and photographs in Appendix 2. For ranking of abundance (DAFOR scale) of the habitats, please see Appendix 3.

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6.0 SPECIES

6.1 Bats

Bats often roost in trees in holes/cavities in the trunk, cracks/splits in branches, beneath dead loose bark and behind dense Ivy growth. Some of the mature and veteran trees have potential roosting features (PRF) for roosting bats. Linear features such as hedgerows and tree lines on the boundaries of the site provide valuable flight-lines used by bats whilst foraging and commuting. The hedges and trees provide good foraging habitats for bat species due to the invertebrate species associated with them.

There are records of Brown Long-eared, Lesser Horseshoe, Pipistrelle spp. and Noctule bats within 1km radius of the survey site according to the data search.

6.2 Great Crested Newts and other amphibians

No signs of great crested newts (GCN) were observed during the survey. There are no records of Great Crested Newts within 1km radius of the survey site, according to the data search. There are records of other amphibian species (common frog, common toad, palmate newt) within 1km radius of the survey site, according to the data search. The site has some potential for amphibians in the woodland copse area and taller vegetation at the edges of the poor improved grassland. The nearest pond is some 350m to the Southeast of the site.

6.3 Reptiles

No signs of reptiles were noted during the survey. There are records of reptiles (adder, common lizard, grass snake, slow worm) within 1km radius of the survey site, according to the data search. The site has some potential for reptiles in the grassy vegetation, but limited potential in the woodland copse area due to the dense shade.

6.4 Badgers

Evidence of badger activity was observed on site, in the form of two tunnel entrances (no fresh soil excavation or bedding material observed on initial survey) and a latrine in the woodland copse area. Recent snuffle holes were observed in the grass strip between the tennis courts and the woodland, indicated grubbing/digging for worms etc. Tracks were observed across the grass areas either side of the tennis courts, leading to the woodland copse area. Three trail cameras were set up and left for a three week period between 2/10/19 and 23/10/19. All three cameras recorded badger activity, in the grass strip, by the latrine in the woodland and near one of the tunnel entrances in the woodland. Upon retrieving the cameras, fresh soil excavation was observed outside one of the tunnels, but no bedding material was observed. Two sticks were inserted into the soil in the tunnel entrance on 23/10/19 and when checked on 29/10/19, one of the sticks had been pushed over, indicating a badger had likely entered the tunnel during the previous week. There are records of badgers within 1km radius of the survey site, according to the data search. A large main sett (approx. 30 holes) is located within the woodland adjacent to Llanrwst Road, in the Welsh Mountain Zoo, which is within 250m to the West of the site.

During the re-survey on 19 January 2022, the two tunnel entrances in the woodland area were both partially blocked by fallen leaves, indicating no recent activity. Evidence of fresh grubbing holes was observed on the grass strip between the woodland and the tennis courts, indicating that foraging badgers were still visiting the site.

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6.0 SPECIES (continued)

6.5 Hazel Dormice
No signs of hazel dormice were noted during the survey. There are no records of hazel dormice within 1km radius of the survey site, according to the data search. The site has no potential habitat for this species.

6.6 Otters
No signs of otters were observed during the survey and there is no potential habitat for this species on site. There are no records of otters within 1km of the site, according to the data search.

6.7 Other mammal species
There are records of other Priority Species mammals (hedgehog, polecat, pygmy shrew) within 1km radius of the site according to the data search. The site provides suitable habitat for hedgehogs, but limited potential for the other mammal species.

6.8 Nesting birds
There are numerous records of birds within 1km radius of the site according to the data search. The hedgerows, trees, Ivy and scrub all have potential for nesting birds.

6.9 EPS Plant species
No EPS plant species were observed on site. There are no records of European Protected Species plants within 1km radius of the site according to the data search.

6.10 Invasive non-native species
Invasive non-native species were observed on the site (Japanese Knotweed). There are records of Himalayan Balsam, Japanese knotweed and wall cotoneaster within 1km of the site.

6.11 Survey Constraints
There were no particular constraints to surveys, apart, perhaps from the time of year making it difficult to account for the full range of some species of flowering plants.

6.12 Data Search Results
A summary of the data search results are included in Appendix 3. Designated sites of nature conservation interest is within 1km radius of the site, include Liverpool Bay (Wales) [SPA] Pwllycrochan Woods [Local Nature Reserve and Wildlife site], Wildlife Sites include Coed Sempyr and Bryn Euryn Woods and several Ancient Semi Natural Woodland Sites.

The Cofnod Data Request (E07584) provided information regarding Priority Species within a 1km radius of the site. Due to the sensitivity of the data, specific records for protected species cannot be disclosed, but there are records of Priority Species mammals (badgers, bats, hedgehog, polecat), amphibians (common frog, common toad, palmate newt), reptiles (adder, common lizard, grass snake, slow worm) within 1km radius of the site. There are records of non-native invasive plant species (Himalayan Balsam, Japanese knotweed, wall cotoneaster) and non-native invasive reptile species (Aesculapian snake) within 1km radius.

The absence of recent records for certain species in this area is in part likely due to a lack of survey effort or the non-submission of records, rather than the absence of these species.

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7.0 EVALUATION

Please note that all conclusions and recommendations are based upon the current survey findings and on the proposal outlined in 2.0 above. If the site management changes then the potential for protected species to use the site may change accordingly. Many protected species are highly mobile and re-survey of the site may be necessary in the future.

7.1 Conclusions

7.1.1 Habitats

The site has relatively high ecological value for several species and mitigation will be required to compensate for any lost habitat.

The woodland copse area [A1] and scrub [A2] have potential for amphibians, badgers, bats, hedgehogs and nesting birds. These areas have limited potential for reptiles, due to the dense shade. The poor improved grassland [B4] and amenity grass [J1.2] have potential for foraging badgers and some potential for reptiles. These areas and the woodland copse area support a range of invertebrates, which provides a good food-source for birds and for foraging bats.

The hedges on site do not qualify as 'important' with regards to the Hedgerow Regulations 1997, made under Section 97 of the Environment Act 1995 which came into effect 1 June 1997.

By using mitigation and Reasonable Avoidance Methods (RAM), the proposed development should have no detrimental effect on the favourable conservation status of bats, great crested newts and other amphibians, reptiles, badgers or other mammal species. RAM statements will be provided in separate documents.

7.1.2 Bats

Bats often roost in trees in holes/cavities in the trunk, cracks/splits in branches, beneath dead loose bark and behind dense Ivy growth. Some of the mature and veteran trees have Potential Roosting Features (PRF) for roosting bats. Any trees to be removed to facilitate the proposed development will need to be surveyed for PRF. If PRFs are identified in these trees that have good potential for roosting bats, further inspections will need to be carried out to determine if any bat roosts are present in the trees. If bat roosts are confirmed to be present in trees to be removed, a derogation licence from NRW will be required and mitigation put in place, prior to tree felling works commencing.

Linear features such as hedgerows and mature tree lines on the boundaries of the site provide valuable flight-lines used by bats whilst foraging and commuting. The trees, hedges and long grass/tall vegetation provide good foraging habitats for bat species due to the invertebrate species associated with them.

There are records of Brown Long-eared, Lesser Horseshoe, Pipistrelle spp. and Noctule bats within 1km radius of the survey site according to the data search. If bat boxes are to be installed in some of the mature trees, or on the proposed dwellings, as part of wildlife enhancement for the proposed development, it is important that the bat boxes and flightlines are not directly illuminated.

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7.1.3 Great Crested Newts and other amphibians

No signs of great crested newts (GCN) were observed during the survey. There are no records of Great Crested Newts within 1km radius of the survey site, according to the data search. There are records of other amphibian species (common frog, common toad, palmate newt) within 1km radius of the survey site, according to the data search. The site has some potential for amphibians in the woodland copse area and taller vegetation at the edges of the poor improved grassland. The nearest pond is some 350m to the Southeast of the site.

The woodland copse, scrub and poor improved grassland have some potential to be used by GCN and other amphibians for foraging, emigration corridors and hibernation. There are fallen trunks and brash piles in the scrub and woodland copse areas, which provide some potential for use as hibernacula sites by GCN. If these features require removing to facilitate the development, artificial amphibian hibernacula should be provided as mitigation. If mitigation and Reasonable Avoidance Measures are implemented, the proposed development should have no detrimental effect on the favourable conservation status of GCN or other amphibians.

7.1.4 Reptiles

No signs of reptiles were noted during the survey. There are records of reptiles (adder, common lizard, grass snake, slow worm) within 1km radius of the survey site, according to the data search. The poor improved grassland has some potential to be used by reptiles for foraging, basking and emigration corridors. There are fallen trunks and brash piles in the scrub and woodland copse areas, which provide some potential for use as hibernacula sites by reptiles, but limited potential for basking sites due to the dense shade. If these features require removing to facilitate the development, artificial reptile hibernacula should be provided as mitigation. By using Reasonable Avoidance Methods, the proposed development should have no detrimental effect on the favourable conservation status of locally recorded reptiles.

7.1.5 Badgers

Evidence of badger activity was observed on site, in the form of two tunnel entrances in the woodland copse area (no fresh soil excavation or bedding material observed on initial survey) and a latrine in the woodland copse area. Recent snuffle holes were observed in the grass strip between the tennis courts and the woodland, indicated grubbing/digging for worms etc. Tracks were observed across the grass areas either side of the tennis courts, leading to the woodland copse area. Three trail cameras were set up and left for a three week period between 2/10/19 and 23/10/19. All three cameras recorded badger activity, in the grass strip, by the latrine in the woodland and near one of the tunnel entrances in the woodland. A fox was also photographed in the woodland copse area and in the grass strip. Upon retrieving the cameras, fresh soil excavation was observed outside one of the tunnels, but no bedding material was observed. Two sticks were inserted into the soil in the tunnel entrance on 23/10/19 and when checked on 29/10/19, one of the sticks had been pushed over, indicating a badger had likely entered the tunnel during the previous week. There are records of badgers within 1km radius of the survey site, according to the data search. A large main sett (approx. 30 holes) is located within the woodland adjacent to Llanrwst Road, in the Welsh Mountain Zoo, which is within 250m to the West of the site.

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7.0 EVALUATION (continued)

7.1.5 Badgers

As only two tunnels were observed, the conclusion is it is an outlier sett, most likely linked to a large main sett located within the Welsh Mountain Zoo. There is an Apple tree near the Northwest corner of the woodland, adjacent to the grass strip and brambles in the woodland area, which are providing a seasonal source of food, which may have attracted the badgers.

The photos from the cameras indicate the badgers are travelling to the site from the West, which suggests that they are commuting down from the main sett located in the Welsh Mountain Zoo. It is possible that the fox photographed in the woodland is also using the tunnel entrances.

During the re-survey on 19 January 2022, the two tunnel entrances in the woodland area were both partially blocked by fallen leaves, indicating no recent activity. Evidence of fresh grubbing holes was observed on the grass strip between the woodland and the tennis courts, indicating that foraging badgers were still visiting the site.

The revised proposed layout enables the outlier sett to be retained. Mitigation will be provided in the form of new hedge and tree planting and grassed areas along the North, South and West boundaries and in other areas of the site, to create wildlife corridors and provide foraging areas. Badger gates will be installed so that access for the badgers is not impeded by hedges/fences. By using Reasonable Avoidance Methods, the proposed development should have no detrimental effect on the favourable conservation status of locally recorded badgers.

7.1.6 Hazel Dormice

No evidence of hazel dormice use was observed in the survey site. The data search shows no records of hazel dormice within 1km radius of the survey site. There is no suitable habitat on site for Dormice so the proposed development should have no detrimental effect on the favourable conservation status of locally recorded dormice.

7.1.7 Otters

No signs of otters were observed during the survey and there is no potential habitat for this species on site. There are records of otters within 1km radius of the survey site, according to the data search. The proposed development will have no effect on the favourable conservation status of otters.

7.1.8 Other mammal species

There are records of other Priority Species mammals (hare, hedgehog, water shrew, water vole) within 1km radius of the site according to the data search. The site provides suitable habitat for hedgehogs, but little potential for the other mammal species. The proposed development should have no detrimental effect on the favourable conservation status of these other locally recorded mammal species.

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7.0 EVALUATION (continued)

7.1.9 Nesting Birds

Hedgerows, trees and scrub have potential to be used by a variety of bird species for nesting. Under the Wildlife and Countryside Act, 1981 (as amended), it is illegal to take, damage or destroy the nests of wild birds whilst being built or in use (with exceptions). However it is not an offence to carry out works in areas that they use, outside of the nesting period. Therefore it is recommended that works, particularly clearance of vegetation, are carried out between the period between 1st October and end of February to avoid the breeding season.

If works to clear potential nesting habitat need to be carried out during the nesting period (1st March – 30th September) a check should be made by an ecologist for nesting birds, the day before the works are due to commence. Any birds nesting should be left to complete their breeding (i.e. until the young have fully fledged) before any works that will disturb the birds can take place. New tree and hedge planting will compensate for any loss of habitat.

7.1.10 EPS plant species

No EPS plant species were observed on site. There are no records of European Protected Species plants within 1km radius of the site according to the data search. The proposed development will have no detrimental effect on EPS plant species.

7.1.11 Invasive non-native plant species

Invasive non-native species were observed on the site (Japanese knotweed). There are records of Himalayan Balsam, Japanese knotweed, and wall cotoneaster within 1km of the site. The site entrances will be locked at night, so there is no foreseen potential of access by fly-tippers dumping material containing invasive non-native plants. Biosecurity control measures will be implemented, to minimise risk of spreading invasive non-native species, including steps to control Japanese Knotweed (see separate document).

7.1.12 Summary of further survey

Survey type	Timing	Where	Notes
Bat activity	May - September	Trees to be removed that have PRF present [A1, A2].	Climbing inspection with torch & endoscope to assess potential for bats. Emergence surveys to determine if roosting bats are present.
Nesting birds	March - September	[A1, A2].	Only if scrub/trees/hedges are being removed in these months.
GCN/reptiles	April - October	Fallen trunks, brash piles, [A2, A3].	Soft destructive search, only if brash piles (etc.) to be removed.

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8.0 IMPACT ASSESSMENT

8.1 Short-term impact

Disturbance through increased human presence, noise and changes in site layout may have a detrimental effect on badgers, bats and nesting birds.

Bats

If bats are roosting in any of the trees to be removed, they could be killed or injured if works start when present between spring and summer. Timing of operation will minimise disturbance. Any trees to be removed should be visually inspected to identify Potential Roosting Features (cracks/splits, cavities, loose bark etc.). Any PRF identified should be further inspected utilising an endoscope, to check for bats and evidence of recent use and to assess the potential for bats. This may require a climbing survey. If any PRFs have high potential for bats, further emergence surveys (May-September) should be carried out to determine if any bat roosts are present. Due to the time limits imposed by NRW on surveys if a derogation licence is required, it is suggested that the LPA place a pre-commencement condition on planning consent, that appropriate bat surveys are carried out and a bat mitigation strategy be submitted for approval to satisfy the condition.

Nesting birds

Nesting birds would be affected if hedges/trees were removed during March-September in the nesting season. Timing of operation will minimise disturbance. New tree/hedge/shrub planting, and/or provision of nesting boxes will be required to mitigate for any loss of habitat, to minimise the impact on nesting birds.

Badgers

New foraging areas and wildlife corridors to be provided to mitigate for any loss of habitat, to minimise the impact on badgers. Badger gates to be installed so that access is not impeded by hedges/fences. Planting tree/hedge species that bear fruit/berries (e.g. Crab Apples and Ornamental Pears) will provide seasonal food for foraging badgers.

8.2 Long-term impact – roost losses

Bats

If any of the trees to be removed have bat roosts, this could have an impact on the locally recorded population. The scale of impact would depend on the type of roost affected (e.g. day roost, maternity roost etc.). Providing a replacement roost(s) in the form of bat boxes and incorporating additional new roost opportunities into the proposed development will likely have a positive impact on locally recorded bats.

Nesting birds

Loss of habitat (hedges/trees) will have an impact on nesting birds. New tree/hedge/shrub planting, and/or provision of nesting boxes will be required to mitigate for any loss of habitat, to minimise the impact on nesting birds.

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8.0 IMPACT ASSESSMENT (continued)

8.2 Long-term impact – roost losses

GCN/Reptiles

The fallen trunks, brash piles etc. provide some potential for hibernating GCN and reptiles. The poor improved grassland provides some potential for basking, foraging and commuting reptiles. If these features require removing to facilitate the development, this could have an impact on GCN/reptiles. Re-locating these features to another part of the site, or providing replacement habitat/artificial hibernacula and basking areas, will mitigate for any loss of habitat, to minimise the impact on GCN/reptiles. Loss of terrestrial habitat (scrub vegetation and woodland/scrub) could impact on GCN/reptile foraging and emigration. New tree/hedge planting and grass vegetation will be required to mitigate for any loss of habitat, to minimise the impact on GCN and reptiles.

8.3 Long-term impact – fragmentation and isolation

Bats

Any loss of linear features (hedges, treelines), which provide important bat flightlines would be negative and have an impact on locally recorded bats. New tree/hedge planting will provide new flightlines for foraging bats.

Other fauna species

The woodland copse area has potential for hedgehogs. Some trees/scrub will be removed to facilitate the development, which could have a low impact on foraging, emigrating and hibernating hedgehogs. A post-construction landscape scheme to include new tree/shrub planting and grass vegetation will be required, to mitigate for any loss of habitat. Hedgehog houses will also be provided to benefit this species.

8.4 Post-development interference impacts

Bats and other species can be disturbed by bright, artificial lighting. Where lighting is essential in the vicinity of the proposed development, subdued lighting should be used and the illumination should be directed downwards (upward light ratio 0%). LED luminaires should be used where possible, with a warm white spectrum (<2700Kelvin) to minimise blue light component. Luminaires should have peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats. The use of motion sensor-triggered security lighting with short (1 min) timers, is preferable to permanent lighting. It is essential that bat flightlines used for foraging/commuting (e.g. hedgerows, lines of trees) are not illuminated. The use of soft landscaping and fencing [supported by concrete posts to ensure long-term contribution] can be used to screen light spill. The latest Guide Note 08/18 can be downloaded at www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

If bat boxes are to be installed in some of the mature trees in the woodland copse area and if roosting opportunities are to be incorporated in the new dwellings, as part of wildlife enhancement for the proposed development, it is important that the bat boxes, roost entry points and flightlines are not directly illuminated. Trees/hedges/fencing can be used to baffle Artificial Light At Night (ALAN) from interior light spillage from glazing in the dwellings or from exterior lighting sources.

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8.0 IMPACT ASSESSMENT (continued)

8.5 Predicted scale of impact

Some trees and vegetation will need to be removed, to facilitate the proposed development, which will result in some loss of habitat. New tree/shrub/hedge planting will compensate for any loss of habitat. The scale of impact [low, moderate, high] on locally recorded bats would depend on the type of roost affected (e.g. day roost, maternity roost etc.) and whether important flight lines would likely be affected. It is essential that any trees to be removed to facilitate the proposed development are further inspected, to determine if any bats are present.

The revised proposed layout will enable the outlier badger sett (only used seasonally) to be retained. The loss of foraging habitat will have some low impact on badgers, but mitigation and use of Reasonable Avoidance Measures will help to minimise any impact on badgers. The predicted impact on badgers is low.

By using mitigation and Reasonable Avoidance Methods (RAM), the proposed development should have no detrimental effect on the favourable conservation status of bats, great crested newts and other amphibians, reptiles, badgers or other mammal species. RAM statements will be provided in separate documents.

9.0 MITIGATION

9.1 Habitat creation and biodiversity

The site has relatively high ecological value for several species and mitigation will be required to compensate for any lost habitat. A post-construction landscaping scheme including new tree and hedge planting, has been prepared for the proposed development, to compensate for any loss of habitat and to enhance the biodiversity of the site (see Woodland Management Plan).

New hedge and tree planting and grassed areas will be provided along the North, South and West boundaries and elsewhere on the site, to create wildlife corridors and provide foraging areas for badgers, bats and birds. Further tree planting within the woodland copse area and elsewhere on the site, will help secure long-term tree cover and provide valuable screening for the proposed development.

New tree and hedge planting will help create an uneven age structure and increase shrub and understorey layers. As well as improving the amenity value of the woodland copse, diversifying the woodland structure will enhance the wildlife habitat, promote sustainability and increase the resilience of the woodland against possible pests and diseases. Provision of bird nesting opportunities will be made through planting native species hedgerows and by installing bird nesting boxes around the site. Provision of bat roosting opportunities will be made through installing bat boxes around the site and integrating bat-friendly features into the proposed development. Deadwood will be retained, (where safety considerations allow), to provide habitat for wildlife.

Reasonable Avoidance Measures (RAM) should be used to protect protected species (see separate documents).

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9.0 MITIGATION (continued)

9.2 Ongoing management/maintenance

The developer will need to have a suitable legal framework in place which specifically addresses the ownership and management responsibilities of the woodland copse area. A suggestion is that each owner/tenant signs a management agreement/covenant, with an annual maintenance fee levied on each owner/tenant. It is strongly recommended that a suitably qualified, experienced and insured arboricultural contractor be instructed to carry out the various tasks, so that the work can be carried out to comply with Industry Best Practice and relevant British Standards to ensure a consistency in standards of work and health and safety issues.

Inviting the residents to be involved in tree planting and wildlife schemes will give them a sense of inclusion and that their views are given fair consideration, which often greatly enhances the success of the project. To encourage each owner/tenant to be involved, they could be invited to help plant new trees/hedges in the vicinity of their property. They could be encouraged to help care for the newly planted trees (e.g. through watering during dry periods). They could be consulted on where to locate bird nesting boxes or bird feeding stations and given opportunity to participate in the installation process and encouraged to maintain bird feeders by topping up feeders with seed/nuts etc.

Regular tree safety surveys should be carried out on the woodland copse area (recommended period every 3 years) and where deadwood or other defects in trees poses a safety risk, appropriate pruning will be carried out, or in exceptional cases tree felling. Any resulting timber arisings could be stacked on the ground in habitat piles, where appropriate.

Newly planted trees/hedges will require regular maintenance to ensure successful establishment. This involves watering, weeding, formative pruning, checking tree ties etc. A 10 year Woodland Management Plan has been prepared with SMART targets which are specific, measurable, achievable, realistic and within a specified timeframe. A mechanism has be provided to ensure that the Management Plan is implemented and able to be audited.

10.0 WILDLIFE AND THE LAW

10.1 European Protected Species

The Bern Convention (The convention on the conservation of European Wildlife and Natural Habitats) was adopted in 1979 and came into force in 1982. To implement this agreement, the European Community adopted the EC Habitats Directive. The EC Habitats Directive has been transposed into UK legislation by the Wildlife and Countryside Act, 1981 (as amended) and the Conservation of Habitats and Species Regulations, 2010. The Countryside and Rights of Way Act (CroW), 2000 strengthened the existing wildlife legislation in the UK. The UK has also signed the Bonn Convention (The Convention on the Conservation of Migratory Species of Wild Animals) and is therefore party to various agreements.

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10.0 WILDLIFE AND THE LAW (continued)

10.1.1 Bats

All 17 bat species found in the UK and their roosts are protected in the UK under Schedules 5 and 6 of the Wildlife & Countryside Act 1981 (as amended) and are therefore afforded protection under Section 9 of this Act. The Countryside Rights of Way Act (CroW) 2000 strengthened the existing wildlife legislation in the UK. In addition, five British bat species are also listed on Annex II [and all bats are listed on Annex IV] of the EC Habitats Directive, which is transposed into national law by means of The Conservation of Habitats and Species Regulations (2017).

These are:
- Greater horseshoe bat (*Rhinolophus ferrumequinum*);
- Lesser horseshoe bat (*Rhinolophus hipposideros*);
- Bechstein's bat (*Myotis bechsteinii*);
- Barbastelle (*Barbastella barbastellus*) and
- Greater mouse-eared bat (*Myotis myotis*).

Bats are listed under Appendix III of the Bern Convention. Bats and their habitats are also listed under Appendix II of the Bonn Convention and therefore the UK has an obligation to protect their habitat, including links to important feeding areas. The UK had designated maternity and hibernacula areas as Special Areas of Conservation (SACs) under the Habitats Directive. Implementation of the UK Biodiversity Action Plan also includes action for a number bat species and the habitats which support them.

10.1.2 Amphibians

Great crested newts, natterjack toads and pool frogs are protected under Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended). Great crested newts, natterjack toads and pool frogs are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations, 2010 and listed under Annex II and Annex IV of the EC Habitats Directive.

10.1.3 Reptiles

Sand lizard and smooth snake are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations, 2010 and listed under Annex II and Annex IV of the EC Habitats Directive.

10.1.4 Hazel Dormice

Hazel Dormice are protected under Schedules 5 and 6 of the Wildlife and Countryside Act, 1981 (as amended) and they are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations, 2010.

10.1.5 Otters

Otters are protected under Schedules 5 and 6 of the Wildlife and Countryside Act, 1981 (as amended) and they are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations, 2010 and listed under Annex II and Annex IV of the EC Habitats Directive.

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10.0 WILDLIFE AND THE LAW (continued)

10.1.6 Legislation relating to European Protected Species

In relation to a development a person commits an offence if they –

- Deliberately captures, injures or kills a European Protected Species
- Deliberately or recklessly disturbs wild animals of any such species in such a way as to be likely significant to affect:
  - (i) the ability of any significant group of animals to survive, breed, or rear or nurture their young; or
  - (ii) the local distribution or abundance of that species;

- Damages or destroys a breeding site or resting place (even if unintentional or when the animal is not present)
- Intentionally or recklessly obstructs access to a structure or place used for protection or shelter
- This legislation applies, regardless of the life stage (including eggs).

A European Protected Species Licence is required to carry out any activity that would otherwise involve committing an offence.

To avoid disturbance during habitat management, a written strategy is required following guidance provided by Natural Resources Wales and the Forestry Commission. If the guidance is followed and major disturbance can be avoided, then a licence is not required.

10.1.7 European Protected Species Licences

At the present time, Natural Resources Wales requires the following three 'tests' to be met, in order that a licence may be granted.

Test 1. Regulation 53 (2) (e) states that licences granted to 'preserve public health, or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment'.

Test 2. Regulation 53 (9) (a) states that a licence may not be granted unless the licensing authority is satisfied 'that there is no reasonable alternative'.

Test 3. Regulation 53 (9) (b) states that a licence cannot be issued unless the licensing authority is satisfied that the action proposed 'will not be detrimental to the maintenance of the species concerned at a favourable conservation status in its natural range'.

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10.1.8 Recent changes in Licences

Following a recent intervention from the European Court, there have been significant changes in the interpretation of the way licences are issued. In considering a licence request, Natural Resources Wales will seek information relating to the size and importance of the population/colony and will require evidence to demonstrate that the species will be maintained 'at a favourable conservation status in their natural range'. In effect, this means that to obtain a licence, Natural Resources Wales must be satisfied that the applicant will implement mitigation to safeguard (and ideally enhance) the population concerned. Natural Resources Wales will need to see evidence that the development work which will disturb/destroy a roost/resting site will be undertaken using current best practice, also that the species can be provided with an alternative roost/resting site on or in the immediate area.

10.1.9 Important EPSL Information

Please note that a European Protected Species Licence can only be obtained once planning permission has been granted. When assessing planning applications where a European Protected Species could be affected by proposed works, the local Planning Authority must take into account the potential impacts on the species concerned. In practice this could make further survey work (such as emergence surveys in the case of bats) essential prior to planning permission being granted. The local Planning Authority must also have regard for the three 'tests' as outlined above – Regulations 53 (2) (e), 53 (9) (a) and 53 (9) (b).

Once planning permission has been granted a European Protected Species Licence application can be submitted to Natural Resources Wales. The application requires detailed Method Statements to be produced by a qualified bat ecologist to demonstrate how Regulation 53 (9) (b) can be satisfied.

The applicant will also need to complete a Reasoned Statement form demonstrating (with evidence) that Regulations 53 (2) (e) and 53 (9) (a) are satisfied. This involves producing evidence to show that no reasonable alternative to the proposed action is available and that the action must take place to either 'preserve public health, or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.

10.2 Other Protected Species

10.2.1 Nesting Birds

All wild birds are protected under Part 1 of the Wildlife and Countryside Act, 1981 (as amended). Therefore in the UK it is an offence to:

- Take, damage or destroy the nest of any wild bird whilst it is being built or in use.
- Kill, injure or take any wild bird.
- Take or destroy the eggs of any wild bird.

To avoid committing an offence no works should be carried out on a structure/feature that is being used by nesting birds. Nesting is deemed to be over when the young have fully fledged. Certain species which are listed in Schedule 1 of the Wildlife and Countryside Act receive special protection. In these cases any form of intentional or reckless disturbance when they are nesting or rearing dependent young, constitutes an offence.

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10.2.2 Reptiles

Common lizard, slow worm, adder and grass snake are all protected under Schedule 5 of the Wildlife and Countryside Act, 1981 against intentional injuring, killing or selling.

For development sites in **England, Wales or Scotland,** to avoid prosecution under the ***Wildlife and Countryside Act 1981 (as amended)***, wherever works will impact on slow worms, common lizards, adders and/or grass snakes there must be evidence that every reasonable effort was made to avoid breaking the law – including proof of adequate surveys and mitigation plans. Mitigation measures should, ideally, be agreed with the relevant SNCO (in this case Natural Resources Wales).

Only the sand lizard and smooth snake are fully protected under the Wildlife and Countryside Act, 1981 (Section 9) and Regulation 9 of the Conservation of Habitats and Species Regulations 2010 against killing, injuring, capture, damaging or destroying a breeding or resting site, intentionally obstructing access to a place used for shelter, keeping, transporting or selling. This means that not only are the animals themselves protected but so are their habitats.

10.2.3 Badgers

Badgers are protected under Schedule 6 of the Wildlife and Countryside Act, 1981 (as amended). They are also protected in the UK by the Protection of Badgers Act, 1992. Under this legislation it is an offence to:

- Wilfully kill, injure or take a badger (or attempt to do so).
- Cruelly ill-treat a badger.
- Dig for a badger.
- Intentionally or recklessly damage or destroy a badger sett, or obstruct access to it.
- Cause a dog to enter a badger sett.
- Disturb a badger when it is occupying a sett.

10.3 Environment (Wales) Act 2016

This Act sets out Wales' approach to planning and managing natural resources at a national and local level with a general purpose linked to statutory 'principles of sustainable management of natural resources' defined within the Act.

The Environment (Wales) Act introduces a new, enhanced Biodiversity and Resilience of Ecosystem Duty on public bodies to ensure that biodiversity is an integral part of decision making. The Duty will replace the existing Natural Environment and Rural Communities (NERC) Act 2006 Duty. Public authorities will be required to report on the actions they are taking to improve biodiversity and promote ecosystem resilience. Section 6 of the Act places a duty on public authorities to seek to maintain and enhance biological diversity (referred to as biodiversity). All public bodies, statutory undertakers, Ministers of the Crown and other public office holders are required to apply the duty when they are carrying on any functions in Wales, or in relation to Wales. Section 7 of the Act is similar to the duty in *section 42 of the NERC Act 2006* which it replaces. It places a duty on the Welsh Ministers to publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales.

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10.0 WILDLIFE AND THE LAW (continued)

10.4 Planning Policy Wales Framework

Planning Policy Wales (Edition 11, Feb 2021) sets out the Welsh Government's planning policies and how these are expected to be applied. The planning system manages the development and use of land in the public interest, contributing to improving the economic, social, environmental and cultural well-being of Wales, as required by the Well-being of Future Generations (Wales) Act 2015. It should reconcile the needs of development and conservation, securing economy, efficiency and amenity in the use of land, and protecting natural resources and the historic environment. A well-functioning planning system is fundamental for sustainable development.

10.5 Key Principles of PWW (2021)

Chapter 5 'Conserving and Improving Natural Heritage and the Coast' provides policies for protection of biodiversity and geological conservation.

Para.5.2.3 The Welsh Government will ensure that its policies contribute to the conservation of the abundance and diversity of native wildlife and its habitats and will minimise the adverse effects on wildlife where conflict of interest is unavoidable.

Para 5.5.11 The presence of a species protected under European or UK legislation is a material consideration when a local planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat. Local planning authorities should advise anyone submitting a planning application that they must conform with any statutory species protection provisions affecting the site concerned, and should consult Natural Resources Wales before granting permission. An ecological survey to confirm whether a protected species is present and an assessment of the likely impact of the development on a protected species may be required in order to inform the planning decision.

Para 5.5.12 Developments are always subject to the legislation covering European protected species regardless of whether or not they are within a designated site. New developments for which development works would contravene the protection afforded to European protected species require derogations from the provisions of the Habitats Directive. A derogation may only be authorised if there is no satisfactory alternative and if the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in its natural range. The development works to be authorised must be for the purposes of preserving 'public health or safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment'. Derogations are granted by a licence issued by Natural Resources Wales. Local planning authorities are under a duty to have regard to the requirements of the Habitats Directive in exercising their functions. To avoid developments with planning permission subsequently not being granted derogations in relation to European protected species, planning authorities should take the above three requirements for derogation into account when considering development proposals where a European protected species is present.

Report written and compiled by

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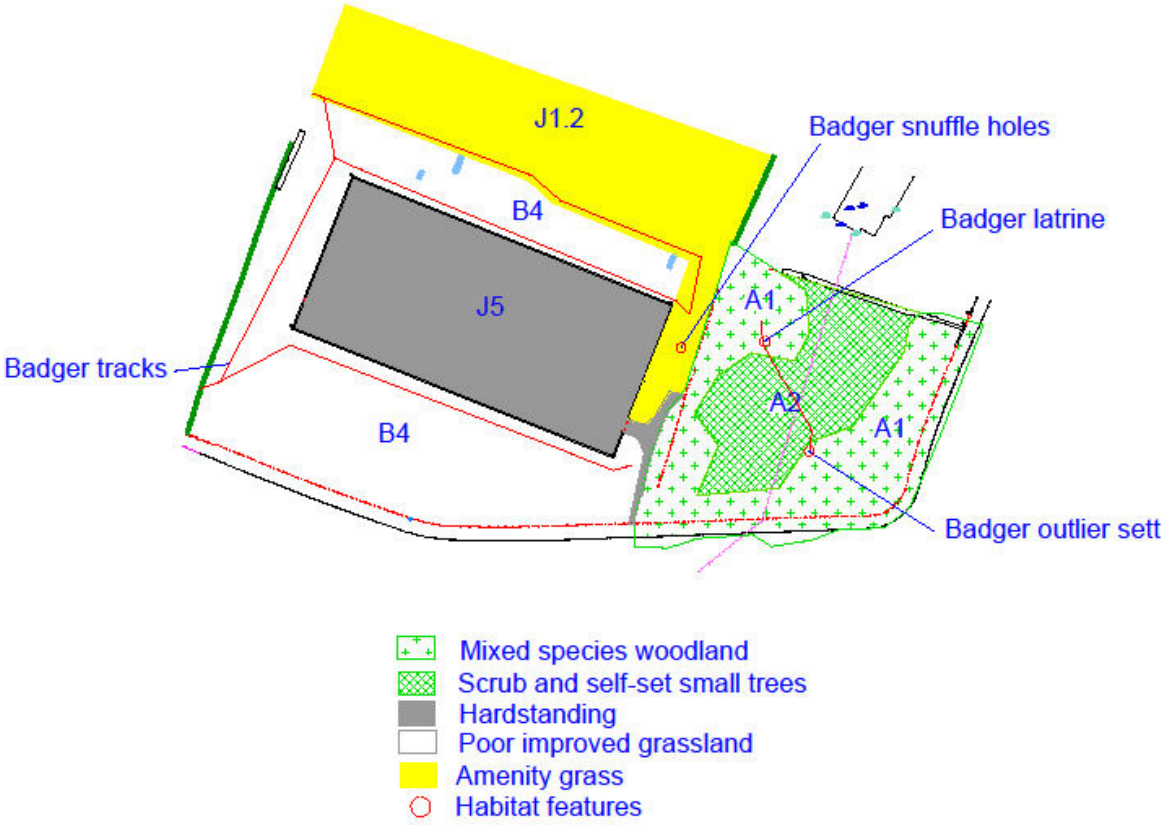
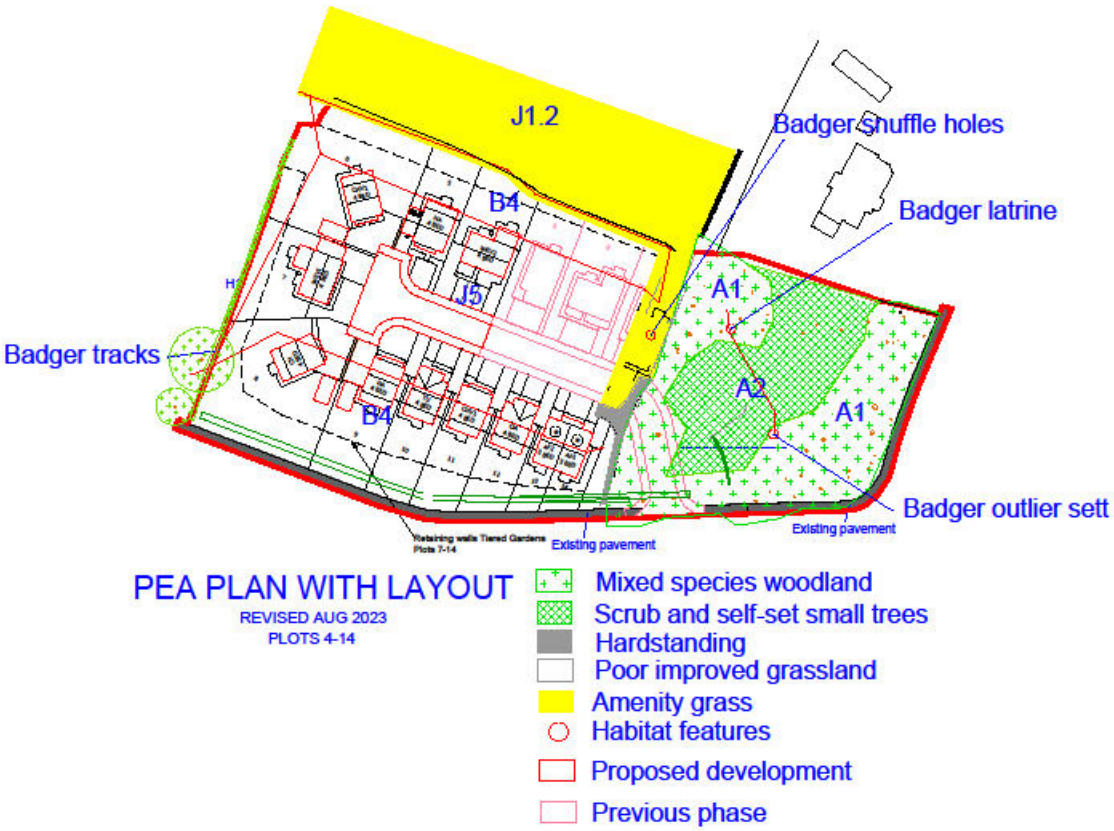
APPENDIX 1 – Site maps

Please see accompanying pdf files 'Oak Drive, PEA Habitat Plan' and 'Oak Drive August 2023, PEA with layout plots 4-14' if you need to see detail more clearly.





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APPENDIX 2 – Photographs

Photo 1: A1 Mixed species woodland copse area.

Photo 2: A3 hardstanding and A4 poor improved grassland.

Photo 3: Grass strip between woodland and tennis courts, leading to A5 amenity grass.

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APPENDIX 2 – Photographs

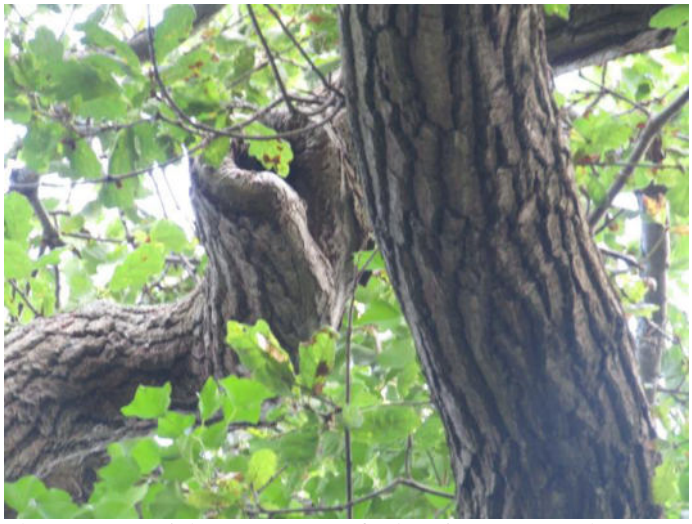

Photo 4: Potential Roost Feature for bats in veteran Oak.

Photo 5: Badger latrine in A1 woodland copse area.

Photo 6: Badger snuffle holes in grass strip between woodland copse and tennis courts.

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APPENDIX 2 – Photographs

Photo 7: Badger tunnel entrance in A1 Woodland copse area.

Photo 8: Left-hand stick (red arrow) in badger tunnel entrance pushed over.

Photo 9: Badger near tunnel entrance [camera 1].

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APPENDIX 2 – Photographs

Photo 10: Badger in woodland near latrine [camera 2].

Photo 11: Badger foraging in grass strip between woodland copse and tennis courts [camera 3].

Photo 12: Fox in woodland [camera 2].

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APPENDIX 2 – Photographs

Photo 13: Fresh snuffle holes in grass strip between woodland copse and tennis courts (Jan 2022).

Photo 14: Tunnel entrance in woodland blocked by fallen leaves (Jan 2022).

Photo 15: Tunnel entrance in woodland blocked by fallen leaves (Jan 2022).

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APPENDIX 3 – Plant species abundance rating (DAFOR)

A1 – Mixed species woodland

Species	Dominant	Abundant	Frequent	Occasional	Rare
Apple					✓
Ash			✓		
Beech				✓	
Blackthorn				✓	
Box-leaved Honeysuckle					✓
Bracken					✓
Bramble			✓		
Common Lime					✓
Common Oak				✓	
Common Yew					✓
Elder				✓	
Goat Willow				✓	
Ground Elder				✓	
Hart's Tongue Fern				✓	
Hawthorn				✓	
Hazel				✓	
Holly				✓	
Honeysuckle					✓
Ivy			✓		
Laurel				✓	
Montbretia					✓
Moss			✓		
Rosebay Willow-herb				✓	
Sessile Oak				✓	
Silver Birch					✓
Snowberry					✓
Spear Thistle					✓
Stinging Nettle				✓	
Sycamore			✓		
White Willow				✓	
Wild Cherry				✓	
Wild Raspberry					✓
Wych Elm				✓	

A2 – Scrub and small self-set trees

Species	Dominant	Abundant	Frequent	Occasional	Rare
Ash			✓		
Blackthorn				✓	
Bramble			✓		
Elder				✓	
Goat Willow		✓			
Hawthorn				✓	
Ivy			✓		
Japanese Knotweed				✓	
Moss			✓		
Sycamore		✓			

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APPENDIX 3 – Plant species abundance rating (DAFOR)

A4 – Poor improved grassland

Species	Dominant	Abundant	Frequent	Occasional	Rare
Birds-foot Trefoil				✓	
Bramble				✓	
Broadleaved Dock			✓		
Common Bent grass		✓			
Common Vetch				✓	
Couch-grass			✓		
Cow Parsley				✓	
Groundsel				✓	
Harebell					✓
Dandelion				✓	
Creeping buttercup				✓	
Hawkweed					✓
Moss				✓	
Ragwort				✓	
Red Clover			✓		
Ribwort Plantain			✓		
Rosebay Willow-herb				✓	
Wild Strawberry					✓

A5 – Amenity grass

Species	Dominant	Abundant	Frequent	Occasional	Rare
Broadleaved Dock				✓	
Common Bent-grass			✓		
Creeping Buttercup				✓	
Daisy				✓	
Dandelion				✓	
Perennial Ryegrass		✓			
Red Clover			✓		
Ribwort Plantain				✓	

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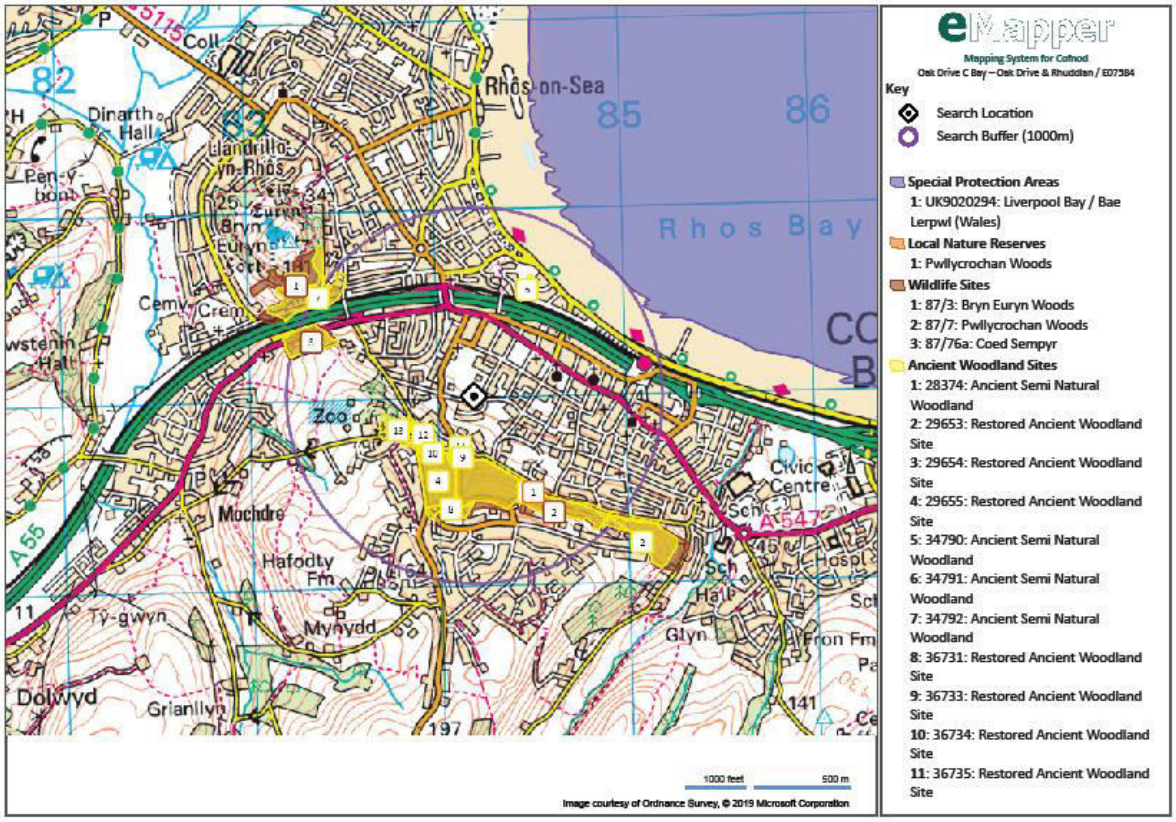
APPENDIX 4 – Data search results

Summary

Statutory and non-statutory sites within 1km of SJ842790

Site Name	Status
Liverpool Bay (Wales)	SPA
Pwllycrochan Woods	Local Nature Reserve/Wildlife Site
Coed Sempyr	Wildlife Site
Bryn Euryn Woods	Wildlife Site
Various sites	Ancient Semi Natural Woodland



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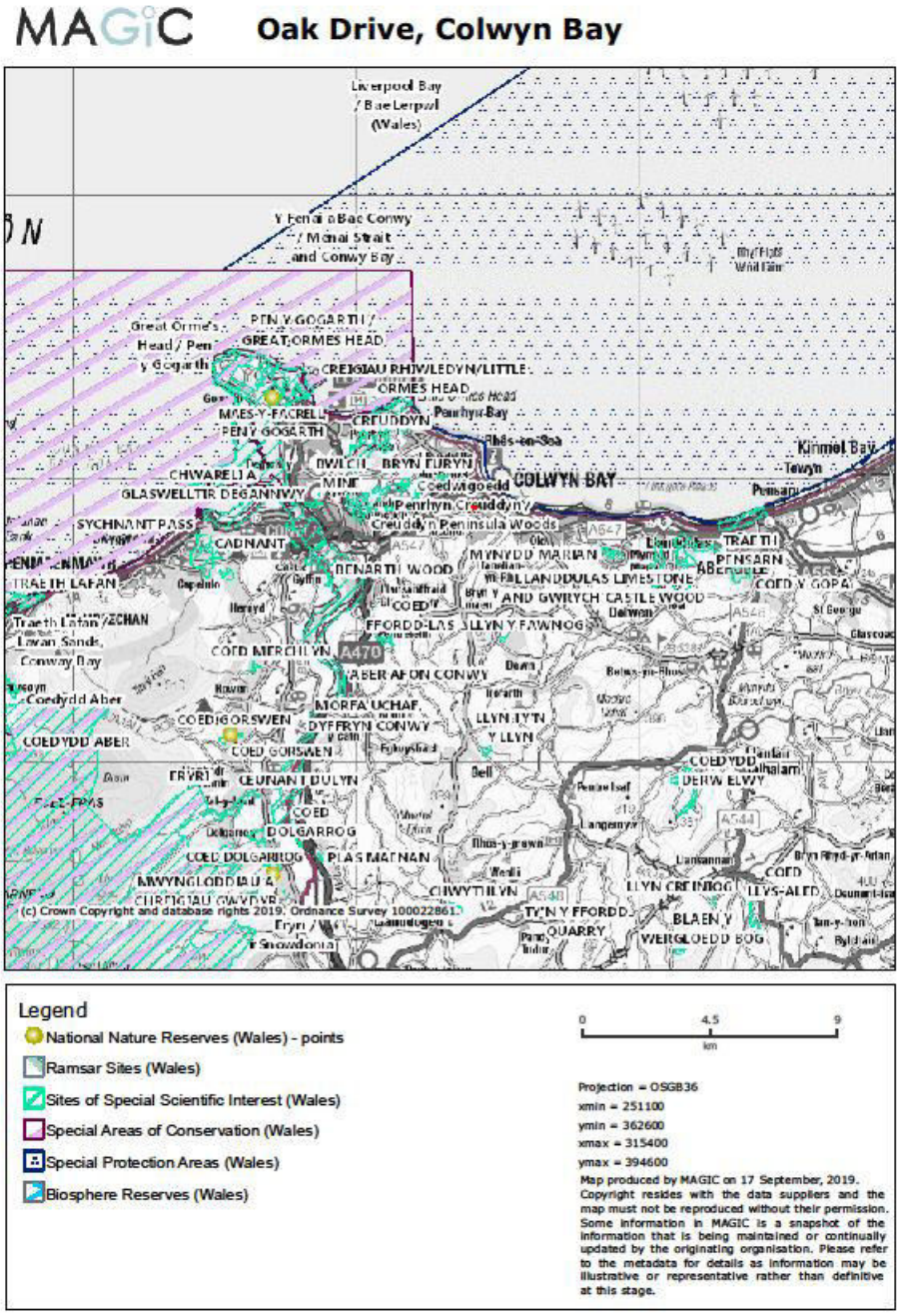
APPENDIX 4 – Data search results

Statutory Designated sites within 10km radius of site



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APPENDIX 4 – Data search results

Records of Priority Species within 1km of survey site.

Mammals

Species	Earliest Year	Latest Year	Records
Badger	1996	2018	29
Bats:			
Unknown bat	1989	2003	5
Noctule	1994	1994	1
Pipistrelle bat species	1990	1995	2
Common Pipistrelle	2014	2014	1
Pipistrelle agg.	1982	1982	1
Brown Long-eared	1984	1984	1
Lesser Horseshoe	1986	1999	11
Hedgehog	2005	2019	6
Polecat	2007	2007	1
Pygmy Shrew	2019	2019	1

Reptiles and amphibians

Species	Earliest Year	Latest Year	Records
Adder	1904	1907	2
Common Frog	1961	2015	2
Common Toad	2005	2005	1
Common Lizard	1903	2006	2
Grass Snake	1901	2013	5
Palmate Newt	1933	2005	2
Slow Worm	1903	2007	6

Invasive non-native species (plants)

Species	Earliest Year	Latest Year	Records
Himalayan Balsam	2015	2015	1
Japanese Knotweed	2013	2017	3
Wall Cotoneaster	2015	2015	1

Invasive non-native species (fauna)

Species	Earliest Year	Latest Year	Records
Aesculapian snake	2004	2018	9

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APPENDIX 5 – Hedgerow Regulations 1997

The Hedgerow Regulations 1997 were made under Section 97 of the Environment Act 1995 and came into effect 1 June 1997.

It is against the law to remove most hedges without permission. Removal is uprooting or otherwise destroying a hedgerow. Serious damage to the root system or over-maintenance resulting in the death of the hedgerow counts as removal. The regulations only cover hedgerows that are at least 20m long or, if shorter, connected to other hedgerows at both ends, or part of a longer hedgerow. They must be in or adjacent to common land, village greens, SSSIs, LNRs, or land used for agriculture, forestry or breeding or keeping of horses, ponies or donkeys. Garden hedges and former hedgerows that have grown to a line of trees are not covered by the regulations. Trees within a hedgerow are considered to be a part of the hedge.

What is an important hedgerow?
To qualify as 'important', a hedgerow must be at least 30 years old and meet at least one of the following eight criteria, which identify hedgerows of particular archaeological, historical, wildlife and landscape value.

- The hedgerow marks the boundary of a historic parish or township existing before 1850.
- The hedgerow incorporates an archaeological feature.
- The hedgerow is a part of or associated with an archaeological site.
- The hedgerow marks the boundary of or is associated with a pre-1600 AD estate or manor.
- The hedgerow forms an integral part of or is associated with a field system pre-dating the Enclosures Act.
- The hedgerow contains a listed species. These have to be listed the Wildlife and Countryside Act 1981 either in Part I of Schedule 1 (birds protected by special penalties), or Schedule 5 (other animals) or Schedule 8 (plants). In addition, species listed in certain red data books qualify. Unfortunately, the list of birds was published in 1990, and does not include species such as song thrush and linnet, whose numbers have declined more recently.
- The hedgerow includes, on average, in a 30 metre length one of:
  a) at least 7 woody shrub and tree species listed in the regulations (see the list below).
  b) at least 6 woody species and has at least 3 associated features.
  c) at least 6 woody species including a black-poplar tree, large-leaved lime, small-leaved lime or wild service tree.
  In northern England, the number of woody species is reduced by one.
- The hedgerow runs alongside a bridleway, footpath, road used as a public path or a byway open to all traffic, and includes at least four woody species, on average, in a 30 metre length and has at least two associated features.

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APPENDIX 5 – Hedgerow Regulations 1997 (continued)

The associated features are:

1. A bank or wall supporting the hedgerow along at least half of its length.
2. Less than 10% gaps.
3. On average, at least one tree per 50 metres of hedge
4. At least three species from a list of 57 herbaceous woodland plants, including bluebell, primrose, wild strawberry and assorted ferns and violets (see list below).
5. A ditch along at least a half of the length of the hedge.
6. A number of connections with other hedgerows, ponds or woodland.
7. A parallel hedge within 15 metres of the hedgerow.

Schedule 2 Woodland plant species
Barren strawberry, bluebell, broad buckler fern, broad-leaved helleborine, bugle, common cow-wheat, common dog violet, common polypody, dog's mercury, early dog violet, early purple orchid, enchanter's nightshade, giant fescue, goldilocks buttercup, great bell-flower, greater wood-rush, hairy brome, hairy woodrush, hard fern, hard shield fern, hart's tongue, heath bedstraw, herb paris, herb-robert, lady fern, lords-and-ladies, male fern, moschatel, narrow buckler-fern, nettle-leaved bell-flower, oxslip, pignut, primrose, ramsons, sanicle, scaly male-fern, small cow-wheat, soft shield fern, sweet violet, toothwort, tormentil, wild strawberry, wood anemone, wood avens/herb bennet, wood false-brome, wood horsetail, wood meadow-grass, wood melick, wood millet, wood sage, wood sedge, wood sorrel, wood speedwell, wood spurge, woodruff, yellow archangel, yellow pimpernel.

Schedule 3 Woody shrub and trees species
Alder, crab apple, ash, aspen, beech, downy birch, silver birch, black-poplar, blackthorn, box, broom, buckthorn, alder buckthorn, butcher's broom, bird cherry, wild cherry, wild cotoneaster, downy currant, mountain currant, dogwood, elder, elm, gooseberry, gorse, dwarf gorse, western gorse, guelder rose, hawthorn, midland hawthorn, hazel, holly, hornbeam, common juniper, large-leaved lime, small-leaved lime, field maple, mezereon, pedunculate oak, sessile oak, osier, Plymouth pear, wild pear, grey poplar, white poplar, wild privet, rose, rowan, sea-buckthorn, wild service-tree, spindle, spurge-laurel, walnut, wayfaring-tree, whitebeam, willow, yew.

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