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**Preliminary Ecological Appraisal  
for a proposed development  
on land adjoining  
Awel-y-mor,  
St Dogmaels  
Pembrokeshire**

**Client:** Obsidian Developments Ltd

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## 1. Introduction

Wyndrush Wild was contracted to carry out a preliminary ecological appraisal in support of an application to Pembrokeshire County Council for a housing development.

The proposed development is adjoining Awel-y-Mor, St Dogmaels, Pembrokeshire. The grid reference is SN167456 (see figure 1 below).

The aim of the survey is to provide baseline data on habitat and species, both on and adjacent to the site, and to investigate potential impacts that may occur during construction and post-construction stages. An assessment is made of any potential impact on protected sites or species in the area.



*Approximate boundary of surveyed site at St Dogmaels*



## Site Description

The proposed site is an area of rough grassland and scrub with a fringe of woodland. There is an abandoned development in the centre of the site, comprising an old site cabin and some building materials. Existing housing adjoins the site on the three sides.



*Part of Proposed Development Site*

## 2. Methodology

### 2.1 Desk Exercise

A limited desk exercise was carried out. The nearest protected site is the Afon Teifi SSSI / SAC, which lies approximately 240m to the north at its nearest point. NBN Atlas has no records of water vole or hazel dormouse from the surrounding area. Otters are regularly recorded on the Teifi estuary around Cardigan and St Dogmaels, but NBN Atlas holds no records from on or near the site itself. NBN Atlas has records of slow worm from the Cardigan area, and the author has recorded them at the Welsh Wildlife Centre, Cilgerran. NBN Atlas holds records of greater and lesser horseshoe bat from south and east of Cardigan, but not from St Dogmaels.

## 2.2 Extended Phase I Survey

A thorough site inspection was made on 21<sup>st</sup> March 2022. The survey followed the methodology set out by the Handbook for Phase 1 Habitat Survey (JNCC, 1993) and then subsequently by the Institute of Environmental Assessment (1995). The methods provide quick and accurate classification of habitats.

In addition, the survey looked for field signs of protected species and assessed the habitat for their potential presence. Measures taken included:-

- A search for signs of badgers on the site.
- Consideration of the potential impact of the development on bats and other protected species.
- Recording breeding birds and identifying the suitability of the habitat for nesting birds especially those listed as species of conservation concern.
- Recording a list of plants found on the site, shown in Appendix 1.

## 2.3 Constraints

The early spring survey date precluded a full assessment of the botanical interest of the grassland, and no insects could be recorded. Although the time of year precluded a full breeding bird survey, an assessment of potentially breeding birds could be carried out.

## 3. Results

### 3.1 Vegetation and habitat survey

The habitats at the site location were recorded in detail. The area comprises several main habitat types; semi-improved neutral grassland (B2.2), semi-natural broad-leaved woodland (A1.1.1), dense and scattered scrub (A2), continuous bracken (C1.1) and hedge with trees (J2.3.2). There is an area of bare / disturbed ground (J4) near the centre of the site, and a ditch with running water (G2).





*Phase I habitat map*

TN1: Badger latrine

TN2: Abandoned cabins and building materials

TN3: Dying ash tree with woodpecker nest-hole and moderate bat roost potential

TN4: Ditch below dense bramble, not accessible

TN5: Culvert and non-return flap at water-pipe outlet



## Semi-Improved Neutral Grassland B2.2 / Scattered Scrub A2.2



*Red bartsia is frequent in semi-improved neutral grassland here*

The western half of the site has areas of grassland, ungrazed but perhaps occasionally mown until recently. The sward is generally dominated by red fescue, but common bent, cock's-foot and false oat-grass become prominent in some areas.

Wildflowers include frequent or locally-abundant lesser knapweed, ribwort plantain, creeping cinquefoil, perforate St. John's-wort, common vetch and hairy tare.

Agriculturally-favoured species are generally rare – there is some curled dock, but little in the way of thistles, rye-grass, white clover or ragwort.

Although lesser knapweed is abundant in places, the best indicator of high-quality old meadows - common bird's-foot trefoil - was not found, and most areas correspond in the National Vegetation Classification to *Arrhenatherum elatius* grassland (MG1) rather than the more highly-valued *Cynosurus cristatus* – *Centaurea nigra* grassland (MG5).

Damper pockets to the east of the site are somewhat transitional to marshy grassland, having some soft rush and hard rush, together with glaucous sedge. Marshy grassland indicators – such as marsh bedstraw and marsh thistle – are rare.

**Scattered scrub**, of native species such as bramble and grey willow and non-natives such as buddleia, occurs across the grassland. There is also a mound of enriched ground with



nettle and great willowherb. A small grassy area in the southern corner of the site is dominated by Yorkshire fog, and was mapped as **poor semi-improved grassland (B6)**.

### Hedge with Trees J2.3.2



*Eastern boundary hedge*

Most of the eastern boundary comprises a line of mature trees. Pedunculate oak, sycamore and ash are dominant, with an understorey of holly, blackthorn, hawthorn, hazel and planted beech saplings. The bank below has navelwort and bluebells and primroses in places. Towards the southern end, the hedge is dominated by tall shrubs with a few standards.

The trees here provide habitat for insects and nesting birds, and potentially a feeding and commuting corridor for bats. It is of some local significance as a result.



**Semi-natural Broad-leaved Woodland A1.1.1 / Dense Scrub A2.1 / Bracken C1.1**



*(top) young birch and willow woodland towards the south-eastern corner of the site; (bottom-left) dense bramble scrub covers much of the western half of the site; (bottom-right) bracken and bramble patches on the eastern side of the site*

Much of the site is covered by a dense growth of bramble, with scattered grey willow and buddleia prominent amongst it. Hazel, blackthorn and a few young oaks were also noted amongst such scrub. There are patches of dense bracken in a few places. In the eastern half of the site, the willow forms young woodland. This forms a dense tangle in the northern part,



but has the appearance of planted woodland in the south, where a few silver birches are mixed with straight trunked willows in a more open, evenly-structured wood. The ground-flora is poor throughout, with cuckoo pint, male fern, nettle, ivy and hart's-tongue fern amongst the prominent species. A few common species of bryophyte were noted; no fungi were seen.

The woodland here will provide habitat for insects and birds; it is of some minor or local ecological significance as a result.

#### **Bare / Disturbed Ground (J4)**



*Shaley subsoil pile near centre of site*

A pile of shaley sub-soil near the centre of the site has sparsely-vegetated slopes with common mosses and liverworts such as *Dicranella varia*, *Atrichum undulatum* and *Riccardia chamaedryfolia*. Prostrate bushes of the invasive wall cotoneaster are present here, and there are scattered willows.

The habitat is of little ecological significance.



### 3.2 Protected species

Badger foraging signs and a latrine were found in the grassland in the western part of the site, together with a run leading into an area of dense bramble. No setts were found, but dense scrub renders large areas of the site inaccessible, and the potential presence of a sett could not be ruled out.

The grassland has some moderate potential for common reptile species such as common lizard and slow worm. None were seen; survey later in spring using Artificial Cover Objects would be required to establish presence or absence.

The small areas of grassland habitat are of no value to nesting birds. However, the dense scrub, woodland and boundary hedge all provide potential nesting habitat. Five birds of conservation concern were seen and are breeding or probably breeding. Dunnocks (amber-listed in Wales and UK) were holding territory in scrub and woodland areas across the site, with 8 singing birds recorded. Two wren (amber-listed in the UK) territories were recorded in the eastern part of the site. A single bullfinch (red-listed in the UK and Wales) was heard in the eastern part of the site. House sparrow (red-listed in the UK) was singing from scrub in the western part of the site. Rook (amber-listed in the UK) was breeding on the eastern site boundary, with 3 nests noted. Additionally, nests of woodpigeon and greater spotted woodpecker were noted in the eastern woodland and boundary.



*Greater-spotted woodpecker nest in ash tree on eastern boundary*



No bat survey was carried out. There are no buildings on site; the site cabin being derelict and of unsuitable construction. The only mature trees are on the eastern boundary. Only one of these, a dying ash tree, had obvious potential roost features, and a hole here was occupied by a breeding greater-spotted woodpecker. The mixture of grassland, scrub and young woodland on the site will provide foraging habitat for bats, and was classed as of low-moderate suitability.

The only water-course on site is an apparently short section of shallow ditch buried deep in bramble scrub. It has no aquatic or marginal plants and is fundamentally unsuitable for water voles. It is unlikely to be used by otters; it appears to run underground before re-appearing in a headwall pipe with a non-return flap at the outlet in the north-east corner of the site. The site is not directly connected to more significant watercourses and although otters are sometimes known to use areas of bramble scrub for maternal dens, the surrounding housing here makes this site unlikely to be used. No further survey should be required.

### 3.3 Invasive Species

Disposal of garden waste has introduced non-native species to the site including sweetest honeysuckle and fuschia. Three invasive species were noted. Buddleia is frequent in scrub and grassland in the western half of the site; it is listed as critical-risk for its invasive potential in Thomas (2010). Wall cotoneaster is frequent on the subsoil pile in the centre of the site, and a larger cotoneaster, possibly bullate cotoneaster, was noted in several places in the western part of the site. These two species are listed as invasive plants on Schedule 9 of the Wildlife and Countryside Act (1981) and it is illegal to plant them or cause them to grow in the wild.



*Buddleia (left); Wall Cotoneaster (right)*

## 4. Discussion

### 4.1 Scheme Details

The proposal is for a housing development; no further details were available prior to survey.



## 4.2 Recommendations

The proposal would entail clearance of semi-improved neutral grassland, scrub and woodland. This provides habitat for several birds of conservation concern, as well as a range of widespread plants, insects and other species. Planning Policy Wales (PPW) 10 sets out that “*planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means that development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity*”.

No vegetation clearance should take place during the bird breeding season, ie. March 1<sup>st</sup> – August 31<sup>st</sup>. Boundary trees with nesting rooks should be retained; if any felling work is essential here, it should take place between August 31<sup>st</sup> and January 31<sup>st</sup> as rooks nest early.

The site may support small populations of common reptiles, and further survey is proposed to assess whether these are present.

The site may provide habitat for foraging bats, and further survey is proposed to assess the significance of the site for bat species.

The Afon Teifi SSSI / SAC lies less than 250m to the north, and site discharges during and post-construction have the potential to reach the site via the drainage outlet on the northern boundary. Impacts of site discharge will require addressing through a Pollution Prevention Plan; a Test for Likely Significant Effect should be carried out by the Local Authority to assess whether a Habitats Regulation Assessment is required to address potential impacts on the SAC.

Two invasive cotoneaster species are present, as well as buddleia. Any soil movements within or off the site could spread these species, and a control programme may be required prior to any site works. Any proposed landscaping or planting within the application area should avoid introduction of invasive or potentially invasive non-native species.

## 4.3 Promotion of Biodiversity at the Site

Pembrokeshire County Council requires that biodiversity enhancements are included in all developments to meet the Authority’s Duty of Care under Section 6 of the Environment Act 2016. There may be opportunities for mitigation and promotion of biodiversity on other land within the applicant’s ownership.

## 5. Summary and Conclusions

The areas of grassland, scrub and woodland here are of some local ecological significance, and support breeding birds including species of conservation concern. No rare plant species are present, but the vegetation will support a range of insect species. These in turn could support foraging bats, and further survey work is proposed to assess the significance of the

site to local bat populations. Reptiles could also be present, and further survey work to ascertain their presence or absence is proposed. Invasive plant species are present, and control is recommended prior to any soil movements within or off site. The potential for site discharges to impact on the Afon Teifi SAC will require further consideration.

## 6. References

Handbook for Phase I habitat survey Nature Conservancy Council 1990

Rodwell, J.S. (1992). *British Plant Communities Vol. 3: Grasslands and Montane Communities*. CUP.

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. British Birds 114: 723-747

Thomas, S (2010). *Horizon-scanning for invasive non-native plants in Great Britain*. Natural England Commissioned Reports, Number 053.

## Appendix 1 Plant species recorded at the site during the walkover visit

Ash	<i>Fraxinus excelsior</i>
Atlantic Ivy	<i>Hedera helix hibernica</i>
Beech	<i>Fagus sylvatica</i>
Blackthorn	<i>Prunus spinosa</i>
Bluebell	<i>Hyacinthoides non-scripta</i>
Bracken	<i>Pteridium aquilinum</i>
Bramble	<i>Rubus fruticosus</i>
Broad-leaved Dock	<i>Rumex obtusifolius</i>
Buddleia	<i>Buddleia x davidii</i>
Bullate Cotoneaster	<i>Cotoneaster cf. rhederi</i>
Bush Vetch	<i>Vicia sepium</i>
Cat's-ear	<i>Hypochoeris radicata</i>
Cock's-foot	<i>Dactylis glomerata</i>
Common Bent	<i>Agrostis capillaris</i>
Common Dog-rose	<i>Rosa canina</i>
Common Figwort	<i>Scrophularia nodosa</i>
Common Ragwort	<i>Jacobaea vulgaris</i>
Common Sorrel	<i>Rumex acetosa</i>
Common Vetch	<i>Vicia sativa</i>
Cow Parsley	<i>Anthriscus sylvestris</i>
Creeping Cinquefoil	<i>Potentilla reptans</i>
Creeping Thistle	<i>Cirsium arvense</i>



Crested Dog's-tail	<i>Cynosurus cristatus</i>
Cuckoo Pint	<i>Arum maculatum</i>
Curled Dock	<i>Rumex crispus</i>
Daisy	<i>Bellis perennis</i>
Dandelion	<i>Taraxacum officinale</i>
Elder	<i>Sambucus niger</i>
Foxglove	<i>Digitalis purpurea</i>
French Honeysuckle	<i>Geranium cf. enderessii</i>
Fuschia	<i>Fuschia magellanica</i>
Glaucous Sedge	<i>Carex flacca</i>
Goosegrass	<i>Galium aparine</i>
Great Willowherb	<i>Epilobium hirsutum</i>
Grey Willow	<i>Salix cinerea</i>
Hairy Tare	<i>Ervilia hirsuta</i>
Hard Rush	<i>Juncus inflexus</i>
Hart's-tongue Fern	<i>Phyllitis scolopendrium</i>
Hazel	<i>Coryllus avellana</i>
Herb Robert	<i>Geranium robertianum</i>
Hogweed	<i>Heracleum sphondylium</i>
Holly	<i>Ilex aquifolium</i>
Honeysuckle	<i>Lonicera periclymneum</i>
Lesser Knapweed	<i>Centaurea nigra</i>
Marsh Bedstraw	<i>Galium palustre</i>
Marsh Thistle	<i>Cirsium palustre</i>
Navelwort	<i>Umbilicus rupestris</i>
Nettle	<i>Urtica dioica</i>
Onion Couch	<i>Arrhenatherum elatius var. bulbosus</i>
Pedunculate Oak	<i>Quercus robur</i>
Pendulous Sedge	<i>Carex pendula</i>
Perforate St. John's-wort	<i>Hypericum perforatum</i>
Primrose	<i>Primula vulgaris</i>
Red Bartsia	<i>Odontites verna</i>
Red Campion	<i>Silene dioica</i>
Red Clover	<i>Trifolium pratense</i>
Red Fescue	<i>Festuca rubra</i>
Ribwort Plantain	<i>Plantago lanceolata</i>
Silver Birch	<i>Betula pendula</i>
Soft Rush	<i>Juncus effusus</i>
Sweetest Honeysuckle	<i>Lonicera cf. fragrantissima</i>
Sycamore	<i>Acer pseudoplatanus</i>
Wall Cotoneaster	<i>Cotoneaster horizontalis</i>
Wild Angelica	<i>Angelica sylvestris</i>
Yarrow	<i>Achillea millefolium</i>
Yorkshire Fog	<i>Holcus lanatus</i>