Preliminary Ecological Appraisal for a proposed development on land at Cynwyl Elfed Carmarthen Carmarthenshire

Client: Obsidian Developments

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1. Introduction

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

The proposed development is on agricultural land and buildings at Cynwyl Elfed. The grid reference is SN372277 (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 species or sites in the area.

Survey Site at Cynwyl Elfed (approximate boundary)

Site Description

The proposed site is a former farmyard and adjoining agriculturally-improved field on the edge of the village of Cynwyl Elfed.

Existing roads / housing adjoins the site to three sides, whilst planning permission has been granted for a first phase housing development to the north. Soils are free-draining and underlain by shale; there are no watercourses on site.

Proposed Development Site

2. Methodology

2.1 Desk Exercise

A limited desk exercise was carried out.

There are no protected sites in close proximity. There are numerous bat roosts in the surrounding area. Common reptiles are known from the area. There are no known populations of hazel dormouse in the surrounding area. The Carmarthenshire Rare Plant Register (Pryce, 2010) holds no records from the site or close by. The British Bryological Society database holds no records of rare or scarce mosses or liverworts from the site or nearby.

2.2 Extended Phase I Survey

A thorough site inspection was made on 10th March 2025. 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, hazel dormice 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

There were no significant constraints to survey. The early spring survey date meant that plants could not be fully recorded, but an assessment of habitat quality could be made from identification of vegetative material. Breeding birds could not be fully recorded, but good weather meant that many birds were singing and an assessment could be made of the likely breeding presence of species of conservation concern.

3. Results

3.1 Vegetation and habitat survey

The habitats at the site location were recorded in detail. The area comprises improved grassland (B4), built ground (J3.6) and intact species-poor hedgerow (J2.1.2).

Phase I habitat map

Improved Grassland B4

The sward is strongly grass-dominated

The grassland across the field is strongly grass-dominated, with perennial rye-grass dominant, and creeping bent and Yorkshire fog also abundant. Associates are limited to agriculturally-favoured species such as broad-leaved dock and creeping buttercup. Indicators of semi-improved grassland such as lesser knapweed or common bird's-foot trefoil are entirely lacking. The habitat is of no ecological significance.

Built Ground J3.6

There are shale tracks along either side of the field, with common ruderal plants such as lesser trefoil and procumbent pearlwort. The southern part of the site is a former agricultural yard, with sheds, hard-standings and a slurry lagoon. Spear thistle, prickly sow-thistle and field forget-me-not are amongst the plants on disturbed hardstandings, together with common mosses such as *Bryum argenteum* and *Syntrichia ruralis*. A bat scoping assessment on the buildings is provided below.

Intact Species-poor Hedgerow J2.1.2

The roadside hedge is dominated by blackthorn and hawthorn, with some hazel and sycamore

The western, roadside boundary comprises an annually-flailed hedge with no standard trees. The field level is over 1m higher than the road level, so the hedge sits atop a bank on the roadside only. Blackthorn and hawthorn dominate, and there are a few bushes of hazel, sycamore and holly. The hedge-bottom and verge flora comprises typical, widespread species such as cow parsley, bluebell, lesser celandine and greater stitchwort. The hedge outside of the eastern boundary has a similar woody species composition. Both fail to class as Important under the Hedgerow Regulations (1997). However, hedgerows are a Priority Habitat under the Environment Wales Act (2016). The examples here are of some minor or local ecological interest.

3.2 Bat Scoping Assessment

There are no mature trees within the field or hedges. A bat scoping assessment was carried out on all three of the barns still standing (two further barns apparent on aerial photography have been dismantled and removed).

Building 1

This large, open-ended barn has a roof and sides of bare metal sheets, with partial side walls of concrete panels. It has no internal or external features suitable for use by roosting bats. No signs of bats were evident, and no further survey is required.

Building 2

This is a Dutch barn with a lean-to. It was formerly used as a cattle-shed. The main, curved roof section has lost its northern end and is exposed to the elements as a result. The lean-to section, partitioned with a concrete block wall has an intact roof and block wall sides. Neither section has any suitable features for roosting bats, and no signs of bats were apparent. No further survey is required.

Building 3

This two-part barn previously had a slate roof, now stripped and with only the timber frame remaining. Walls are mostly concrete block, partly rendered internally, but the upper part of the southern gable end retains original stonework. This is mortared, and no crevices were apparent. A small lean-to on the southern section has a corrugated sheet roof. No signs of bats were apparent, and the building has negligible potential for roosting bats. No further survey should be required.

3.3 Other Protected Species

No badger setts, runs or foraging signs were found on the site. The proposed development would not affect badgers.

The site is of low suitability for amphibian species. There are no water features on the site which would attract amphibians, and no significant potential hibernacula features.

The site has only minor potential for reptiles; there could conceivably be common lizards in association with the hedges or a small shale bank between the field and yard.

The hedges have negligible potential for hazel dormice, and this species has not been recorded from the area. The annually-flailed hedges are poorly structured and there is no connectivity to other hedges or areas of good quality habitat. No further survey should be required.

The site is of minor value to nesting birds; hedges are likely to hold common species. Two Birds of Conservation Concern (Stanbury et al, 2021) were seen on site; dunnock was singing from a small bramble patch at the edge of the yard, and house sparrows were seen in one of the sheds.

3.4 Invasive Non-Native Species

No invasive species were found.

4. Discussion

4.1 Scheme Details

The development proposal is for a housing development of 22 units across the site. A section of the western boundary hedge would be removed to create access. Outline plans show an amenity area in the south-western part of the site currently occupied by a slurry lagoon. No further details were available prior to survey.

4.2 Recommendations

4.2.1 Lighting

To reduce or avoid potential impacts on nocturnal wildlife, any external lighting associated with the scheme should be minimised. Lights should be downward-directed and hooded to avoid excess light-spill, and on time sensors with a short duration.

4.2.2 Invasive Species

Any landscaping associated with the scheme should avoid the use of potentially invasive species listed by Thomas (2010) in addition to known invasives such as wall cotoneaster listed on Section 9 of the Environment (Wales) Act (2016). Use of locally-native species or should be preferred.

4.2.3 Hedgerow Removal / Translocation

The new access will require removal of a section of hedgerow. Clearance should be undertaken outside of the bird nesting season (March 1st to August 31st) unless a specific check for nesting birds is carried out by a competent ecologist.

4.3 Compliance with Environment Act (Wales) 2016 / Net Biodiversity Gain

Impacts on the existing hedgerow, classed as 'Priority Habitat' under the Environment (Wales) Act, should be mitigated for by the planting of new native broadleaved species within the development or in a suitable location off-site. Bird and bat boxes should be incorporated onto or into buildings, including swift bricks. The site is currently of low biodiversity interest, and achievement of net biodiversity gain on-site may be achievable with a well-designed landscaping scheme.

5. Summary and Conclusions

The proposed development does not present a risk to protected species or sites in the area. Opportunities may exist for the proposal to demonstrate net biodiversity gain.

6. References

Handbook for Phase I habitat survey Nature Conservancy Council 1990

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. Available online at https://britishbirds. co.uk/content/status-our-bird-populations.

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

Sycamore	*Acer pseudoplatanus*
Creeping Bent	*Agrostis stolonifera*
Cow Parsley	*Anthriscus sylvestris*
Parsley-piert	*Aphanes sp.*
Hart's-tongue Fern	*Asplenium scolopendrion*
Hairy Bittercress	*Cardamine hirsuta*
Common Mouse-ear	*Cerastium fontanum*
Sticky Mouse-ear	*Cerastium glomeratum*
Spear Thistle	*Cirsium vulgare*
Hazel	*Coryllus avellana*
Hawthorn	*Crataegus monogyna*
Crested Dog's-tail	*Cynosurus cristatus*
Foxglove	*Digitalis purpurea*
American Willowherb	*Epilobium ciliatum*
Red Fescue	*Festuca rubra*
Lesser Celandine	*Ficaria verna*
Snowdrop	*Galanthus nivalis*
Goosegrass	*Galium aparine*
Herb Robert	*Geranium robertianum*
Atlantic Ivy	*Hedera helix hibernica*
Yorkshire Fog	*Holcus lanatus*
Bluebell	*Hyacinthoides non-scripta*
Holly	*Ilex aquifolium*
Red-dead Nettle	*Lamium purpureum*
Perennial Rye-grass	*Lolium perenne*
Honeysuckle	*Lonicera periclymneum*
Field Forget-me-not	*Myosotis arvensis*
Daffodil	*Narcissus sp.*
Common Polypody	*Polypodium vulgare*
Trailing Tormentil	*Potentilla anglica*
Barren Strawberry	*Potentilla sterilis*
Blackthorn	*Prunus spinosa*
Creeping Buttercup	*Ranunculus repens*
Bramble	*Rubus fruticosus*
Broad-leaved Dock	*Rumex obtusifolius*
Procumbent Pearlwort	*Sagina procumbens*
Groundsel	*Senecio vulgaris*
Prickly Sow-thistle	*Sonchus asper*
Greater Stitchwort	*Stellaria holosteoides*
Dandelion	*Taraxacum officinale*
Wood Sage	*Teucrium scorodonia*
Lesser Trefoil	*Trifolium dubium*
White Clover	*Trifolium repens*
Nettle	*Urtica dioica*
Germander Speedwell	*Veronica chamaedrys*