

PRELIMINARY ECOLOGICAL ASSESSMENT

for

LAND ADJACENT TO BRYNHEULOG

ST CLEARS

CARMARTHEN SA33 4ET

CLIENT: Obsidian Developments Ltd

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This report was prepared for the specific purpose of carrying out a Preliminary Ecological Appraisal for a proposed development on land adjacent to Brynheulog, St Clears and no liability will be accepted for use for other purposes or by third parties. Information supplied by the client and third parties has been taken as being correct and no liability can be accepted for errors and omissions. It has been assumed that the client has disclosed all relevant information whether asked for or not.



## **EXECUTIVE SUMMARY**

Habitat Matters Ltd was instructed by Obsidian Developments Ltd, to provide an ecological assessment in relation to a proposed residential development on land adjacent to Brynheulog, St Clears.

The site covers two fields of agricultural grassland on western side of St Clears, in between the town and an earlier residential development.

It is considered that overall there will be no negative impact on the local or regional ecology through the development of the site.

Enhancement measures will be included that will have a positive impact on the biodiversity interest of the site and the local area. These include bird and bat boxes and bee bricks within the new houses, hedgehog gateways, use of pollinator seed mixes in the SUDS area and planting of a wider wooded strip along the southern boundary of the site.



## 1.0 INTRODUCTION

Habitat Matters Ltd was instructed by the client, Obsidian Developments Ltd, to provide an ecological assessment for an area of land adjacent to Brynheulog, St Clears. The assessment will inform a planning submission for residential development on the site (as detailed in 2128-SP-01 Site Layout Plan).

*(The location of the site is shown at Appendix 1).*

## 1.1 SITE DESCRIPTION & ECOLOGICAL CONTEXT

*(Photos of the site are included at Appendix 4)*

The survey site is two adjoining agricultural fields to the rear of Brynheulog, St Clears. It is located on the western edge of St Clears at OS Grid Reference SN277159. The land is within the LDP settlement boundary.

The fields are agricultural grassland, currently cut for silage. The fields also provide an access route to other land nearby. The site slopes gradually towards the north and east, and is generally free-draining. It is bordered by the A40 dual-carriageway and slip-road below the northern edge, separated by a steeply sloping area of mixed, native woodland; this is outside the site and was planted as a buffer when the road was built (some 40 years ago). A single-track council road (Heol Goi) runs along the southern edge; two houses (Craig Villa and Walnut Cottage) are located on Heol Goi and back onto the site. A wide strip (c30m) on the western side will be undeveloped under this phase but is included in the new LDP for future residential use; beyond this, there is a wire fence and a short access road to a small number of houses on the nearby estate. Brynheulog farm, with large agricultural sheds and slurry store, is situated immediately to the east, together with a small number of houses on Lon Fair, two of which form a boundary with the field.

Access to the site is currently via a gate off Heol Goi and also from a concrete track off the A4066 Laugharne road to the east. This track crosses the eastern field to a second gate on Heol Goi. There is a small building next to this gateway, previously used as a garage or store shed.

There is a narrow, shallow ditch along the field edge on part of the southern boundary; this is piped along the road past neighbouring houses lower down Heol Goi. A service pipe, with inspection chambers, crosses the site from west to east.



## 2.0 METHODOLOGY

The survey, assessment and reporting was carried out in-line with the Preliminary Ecological Appraisal (2012) guidelines produced by the Chartered Institute of Ecology & Environmental Management (CIEEM), the Phase 1 Habitat Survey methodology (JNCC 2010), the British Standards for Biodiversity: Code of Practice for Planning and Development (BS42020:2013) and other relevant species best practice guidelines.

Following an initial desk study, a walk-over survey of the site was carried out to assess the habitat, the potential value for various species and any potential constraints for the development.

### 2.1. Desk Study

A desk-study was carried out prior to the field survey. This included reference to:

- OS Maps and Google Earth images in order to identify potential areas of habitat interest that may be impacted by the proposals or may support species that could be affected.
- BS:42020 and best practise guidelines
- Carmarthenshire Biodiversity Action Plan
- Biodiversity data, obtained from WWBIC/ Aderyn
- MAGIC map, Defra
- Relevant legislation, including Future Wales Policy 9, TAN5 and the Carmarthenshire County Council's Natural Environment & Biodiversity Draft SPG.

### Landscape Context

The site and wider landscape was assessed using Google Earth aerial images and Ordnance Survey maps. This enabled an assessment to be made of off-site features and habitats, and therefore the potential impact of the development on the local biodiversity. The proximity of different habitats and the connectivity of linear features between areas of habitat outside the site boundary and the site itself were included within this assessment.

St Clears lies to the north and east of the site, the area of development being on the southern side of the A40. There are a number of houses, mainly to the east of the site, plus a commercial unit (Wynnstay Farmers) on the opposite side of the slip-road. A small residential development lies to the west.



The landscape surrounding St Clears is predominantly agricultural, with medium to large fields divided by a network of hedgerows and some tree lines. Apart from the woodland planted along the road embankment to the north, there are no areas of woodland within the immediate landscape. The Afon Dewi Fawr, some 330m east of the site, flows to the Afon Taf, approximately 750m downstream.

## **2.2 Phase 1 Habitat Survey**

A walk-over field survey of the proposed site and the immediate area, where accessible, was carried out by Fiona Lanc MCIEEM, on the 25<sup>th</sup> June 2021. Conditions were dry, overcast but clear during the survey and allowed an assessment to be made of the habitats. The suitability of the recorded habitats for supporting different animal species, including signs and incidental sightings, was also considered during the survey.

The survey provided an assessment of the habitat types and the likelihood of the development having an impact on protected fauna. It included:

- A survey for non-native invasive species, including Japanese Knotweed.
- A search for signs of badger activity on the site
- An assessment of the potential for impact on birds, including suitable nest sites within the area.
- An assessment of the potential impact of the development on bats
- An assessment of the potential impact on reptiles
- An assessment of the potential impact on dormice

## **3.0 EVALUATION OF ECOLOGICAL FEATURES & IDENTIFICATION OF POTENTIAL IMPACTS**

### **3.1 HABITATS**

#### **3.1.1 Protected Sites**

The site is approximately 630km from the boundary of the Carmarthen Bay & Estuaries Special Area of Conservation (SAC) which includes the Afon Taf SSSI. There is no direct hydraulic connectivity between the site and these protected areas.

The site lies within a B-Lines designated area. This is a voluntary UK-wide initiative to create “insect pathways” through the landscape by creating or restoring pollinator habitats to link existing wildlife areas, thereby making a major contribution towards the National Pollinator Strategy.



### 3.1.2 Habitat Survey

The survey identified two habitat types on the site, described as follows:

#### Grassland

The proposed development site is agriculturally-improved grassland. The sward comprises ryegrass (*Lolium*), creeping buttercup (*Ranunculus repens*) and clover spp (*Trifolium* spp). The western field includes areas of soft rush (*Juncus effusus*) and signs of tractor wheelings and compaction, presumably where machinery had been on the field in damp conditions. It had been cut for silage prior to the survey.

There is a narrow field margin of approximately 1.5m wide around the field and in the south-east corner of the site. This has been left uncut and includes nettle (*Urtica dioica*), broadleaved dock (*Rumex obtusifolius*), hogweed (*Heracleum sphondylium*), cleavers (*Galium aparine*), bracken (*Pteridium*), bramble and creeping thistle (*Cirsium arvense*).

The site is classified as Improved Grassland (B4) under the Phase 1 Habitat Classification and considered to be of low ecological interest.

#### Boundaries

The site boundaries are described as follows:

The **western boundary and the boundary between the two fields** are wire fences. These are of no ecological interest.

The **northern and eastern boundary** is a wooden Highways fence separating the site from the buffer woodland beyond. Although bramble (*Rubus fruticosus*) and honeysuckle (*Lonicera periclymenum*) have established along the fence in sections, growth has not developed into a hedge. Towards the eastern end, the woodland outside the site thins out to a tree line which continues around the eastern side as a wide grass verge with four semi-mature lime trees (*Tilia* sp). There is no solid boundary to the farm buildings in the east.

The **southern boundary** is predominantly a hedgeline which varies from a regularly trimmed native hedgerow to a managed garden hedge. The western section comprises hawthorn (*Crataegus monogyna*), wych elm (*Ulmus glabra*), sycamore (*Acer pseudoplatanus*), blackthorn (*Prunus spinosa*), grey willow (*Salix cinerea*), ash (*Fraxinus excelsior*) and hazel (*Corylus avellana*). Bracken (*Pteridium*) has established partway along the hedge to the west of the small building. This hedgerow is to be retained in situ.



Approximately halfway down the southern hedge, there is a small group of trees, comprising two mature oak (*Quercus*), an ash and a semi-mature sycamore. Several overhanging branches on the oaks have previously been cut back. Due to shading, the hedge growth below the trees is fairly sparse. All the trees are to be retained, subject to a tree assessment. As it is proposed that the adjacent area of the site will be planted as woodland and a SUDS pond formed nearby, outside of the root protection zone, it is considered that there will be no detrimental impact from the development.

To the east of the trees, the hedgerow behind Walnut Cottage is approximately 2.4m high and managed as a garden hedge of ornamental species, including clipped Leylandii and dogwood (*Cornus sanguinea*). Ornamental plants, including rhubarb, have been planted on the field side. Further east, behind Craig Villa, the hedge is less intensively managed and includes hawthorn, beech (*Fagus sylvatica*), birch (*Betula*), ash and horse chestnut (*Aesculus hippocastanum*) which have been planted by the householder as a garden hedge. The south-eastern section of the boundary includes a small group of semi-mature trees including a sycamore, oak and hawthorn.

Hedgebanks are included within the Farmland Habitats grouping of the Carmarthenshire Local Biodiversity Action Plan due to their importance for biodiversity, landscape and historical aspects. There will be no detrimental impact on the boundaries from the development but there will be a positive gain by new planting along the southern boundary (see Section 5.2 Enhancements).

### **3.1.3 Invasive Non-Native Species**

There was no evidence of invasive species such as Japanese Knotweed (*Fallopia japonica*) or Himalayan balsam (*Impatiens glandulifera*), on the site.

## **3.2 SPECIES**

An assessment was carried out into the suitability of the site and adjacent areas for a number of animal species including those listed under the Conservation of Habitats and Species Regulations 2010 (as amended); the Wildlife and Countryside Act 1981 (as amended); the Natural Environment and Rural Communities (NERC) Act 2006 Section 42 Habitats or Species of Principle Importance for Conservation of Biological Diversity in Wales; UK Biodiversity Action Plan (UK BAP) priority species or Local BAP (LBAP) priority species; Nationally rare or nationally scarce species; and, Species of Conservation Concern (e.g. JNCC Red List, RSPB/BTO Red or Amber Lists).



The data search showed no records of priority species or species of conservation concern within the immediate area; there are two records of hedgehog within 500m of the site (and anecdotal knowledge of hedgehogs in gardens in Lower St Clears) and a record of a roadkill badger on the A40, approximately 245m away.

### Bats

There is a small garage, overgrown with ivy, on the southern boundary. A bat scoping and activity survey carried out on this building found no evidence of bat use. The findings are summarised in a separate report (*Bat Scoping & Activity Report for Land Adj Brynheulog, July 2021*).

The southern boundary is potentially a suitable commuting corridor for bats following the sheltered road, with linkages to foraging habitat in the wider landscape. A small number of bats were seen to be flying along the road during the survey. The site itself does not provide suitable bat feeding habitat.

The oak trees on the southern boundary have potential for bats; they include splits, cracks, and flaky bark, particularly where branches have been trimmed back in the past. There is a street light on Heol Goi immediately next to the hedge; this illuminates the trees at night. The trees are to be retained and the adjoining area of agricultural grassland developed as a wide wooded strip following the southern boundary; this will potentially enhance the suitability of the site for bat foraging.

Overall, it is considered that there will be no negative impact on the local bat population as a result of the proposed development but enhancement measures will provide greater opportunities.

### Birds

The southern boundary hedge and the wooded bank along the A40 and the slip road provide suitable nesting and feeding habitat for songbirds. There may also be potential nesting opportunities within the old garage for small birds such as wrens or robin; a blackbird is nesting within the ivy. The building is unsuitable for barn owls (and no evidence of this species was found).

It is considered that there will be no negative impact on the local bird population as a result of the proposed development; all of the southern boundary hedge will be retained, additional habitat will be created as part of the development and mitigation measures will be included for demolition of the building.



## Badgers

The site was assessed for badger activity (including tracks, latrines, snuffle holes and more extensive digging). There was no sign of badgers within the survey area or the adjacent land.

## Other Notable Species

The agricultural grassland is regularly cut, producing a sward of even height with no areas of refuge. As such, it is unsuitable habitat for reptiles.

The roadside hedge is low and regularly trimmed. It is poorly connected into the wider landscape, running between the roads and buildings of St Clears and a small housing estate with fences and walls to the west. It is not considered suitable habitat for dormice and no evidence of this species was found.

Hedgehogs have been recorded within 500m of the site and there is anecdotal knowledge of hedgehogs within back gardens in Lower St Clears. The site itself is not currently considered to be good hedgehog habitat but as it develops to provide areas of new habitat, including gardens, it may become more attractive.

## **4.0 RECOMMENDATIONS FOR FURTHER SURVEY WORK**

**4.1** There are no recommendations for further survey work under the current proposals.

## **5.0 MITIGATION AND ENHANCEMENT**

### **5.1 MITIGATION**

The Mitigation Hierarchy has been considered as part of the site development, as follows:

1. **Avoid** – the site is included within the LDP and the development has been designed specifically for this location. The land has low ecological value and development will enable a number of biodiversity enhancements to be included.
2. **Minimise** – the development has been designed to utilise the area but to avoid an impact on ecological features.
3. **Rehabilitate / restore** – ecological enhancements will be included that will restore areas of agricultural grassland on the site to provide biodiversity value.
4. **Offset** – unnecessary.



Mitigation measures are included, as follows:

#### Protection of retained hedge

The southern boundary hedge will be protected during construction by fencing off with temporary Heras or orange Netlon fencing to a width of 3m from the field edge of the hedge and around the root protection zone of the trees. Signage will be put in place along the fence to warn the workforce against storing materials in this area.

#### Lighting

Light pollution due to increased nocturnal light levels, could potentially have a detrimental impact on the local wildlife, particularly foraging bats and nesting songbirds. Birds will be encouraged to start an earlier dawn chorus or the extra light may even trigger some species, such as robins, to sing during the night. These changes in natural behaviour can impact on bird reproduction. In addition, increased nocturnal light levels can make roosting birds more visible to predators. Unmitigated development could potentially have a detrimental impact on the local songbird population.

A dark corridor will be maintained along the hedgerow and woodland boundaries by controlling any necessary outdoor lighting on the properties with a time / motion sensor to avoid overnight lighting; this will be directed into the site. Lighting along the estate road will also be controlled with a time sensor and will not remain on overnight.

#### Demolition of Building

The building will be demolished over the autumn to winter period (September to early March) to avoid the bird nesting season. If this is delayed until the spring-summer, a check for nesting birds will be made and, if found, the demolition will be postponed until all nesting activity has ended.

## **5.2 ENHANCEMENT MEASURES**

The development will include a number of measures to improve wildlife interest and enhance the local biodiversity and green network infrastructure. This will be achieved as follows:

- i. Landscape planting will provide an overall positive impact on the biodiversity value of a site and the local area. New habitats will be created through planting small areas of native tree and shrub species within the site and, over time, gardens will develop.



- ii. Approximately 150m x 5m width of mixed, native tree and shrub planting will be carried out along the southern boundary of the site to provide new woodland habitat, improved wildlife linkages and enhance / protect the existing boundary hedge.
- iii. Pollinator-friendly plants will be included in the landscape planting for insects and bee bricks will be included on each property, built into a sheltered south or west facing wall
- iv. Hedgehog gateways will be included in all fences between gardens
- v. Integrated bat boxes on 50% of houses with 1 on each of the houses on southern boundary.
- vi. A bird nesting feature will be provided on each property – all roofs will overhang and be suitable for eg: house martins. Bird nesting blocks will be incorporated in eaves / verge and nesting facility within N or E facing walls for eg: house sparrows.
- vii. 3 no SUDS ponds will hold a given amount of water at all times and will provide natural water body / wetland habitat with appropriate planting
- viii. Pollinator planting – pollinator friendly, local provenance seed mix will be used within SUDS areas.
- ix. Reduced mowing frequency of grassland will be carried out around SUDS ponds to encourage native wildflowers to seed, improved vegetation structure and habitat for insects and small mammals.
- x. Rill / rainwater garden will be planted with native wetland / marginal plants and provide wetland feature
- xi. Light management will ensure that no lights are directed onto boundary vegetation including woodland on the road embankment outside the site.

The ecological enhancements are summarised in a spreadsheet at Appendix 3 and cross-referenced on the landscape drawing TC22003 01-03.

## 6.0 REFERENCES

BS 42020: Biodiversity – Code of Practice for Planning & Development

List of Species & Habitats of Principle Importance for Conservation of Biological Diversity in Wales. Wales Biodiversity Partnership/Welsh Assembly Government.

Carmarthen LBAP

WWBIC/ Aderyn biodiversity data

Defra – MAGIC



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Future Wales, Policy 9

Natural Environment and Biodiversity Draft SPG, Carmarthenshire County Council

TAN 5 – Nature Conservation & Planning



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APPENDIX 1 - SITE LOCATION



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APPENDIX 2: HABITAT CLASSIFICATION



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### APPENDIX 3: BIODIVERSITY ENHANCEMENTS

THE ENHANCEMENTS ARE SUMMARISED ON:

- ATTACHED SPREADSHEET (REF: *LAND ADJACENT TO BRYNHEULOG ST CLEARS ECOLOGICAL ENHANCEMENTS NOV 21*)
- LANDSCAPE DRAWING REF TC22003 01-03



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**APPENDIX 4 – SITE PHOTOGRAPHS**



**1. View N from SW gateway**



**2. View W**



**3. View E along S boundary**





4. Group of trees on S boundary



5. Split limb in oak tree, S boundary



6. View E from central fence boundary



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7. Garden hedge



8. SE boundary



9. View NE towards farm buildings





10. Access track across E field to Heol Goi



11. Access from Laugharne road to E



12. NE boundary, view E





**13. N boundary, view W**



**14. N boundary & central fenceline**



**15. View SW from N boundary**





16. View W along N boundary



17. View E along N boundary of W field



18. Trees planted on sliproad embankment



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19. Trees on sliproad embankment



20. Trees on SE boundary of site



## APPENDIX 5: LEGISLATION

### **Future Wales, Policy 9, Welsh Government - Resilient Ecological Networks and Green Infrastructure**

To ensure the enhancement of biodiversity, the resilience of ecosystems and the provision of green infrastructure, the Welsh Government will work with key partners to:

- identify areas which should be safeguarded and created as ecological networks for their importance for adaptation to climate change, for habitat protection, restoration or creation, to protect species, or which provide key ecosystems services, to ensure they are not unduly compromised by future development; and
- identify opportunities where existing and potential green infrastructure could be maximised as part of placemaking, requiring the use of nature-based solutions as a key mechanism for securing sustainable growth, ecological connectivity, social equality and well-being. Planning authorities should include these areas and/or opportunities in their development plan strategies and policies in order to promote and safeguard the functions and opportunities they provide. In all cases, action towards securing the maintenance and enhancement of biodiversity (to provide a net benefit) the resilience of ecosystems and green infrastructure assets must be demonstrated as part of development proposals through innovative, nature-based approaches to site planning and the design of the built environment.

#### **Birds**

The Wildlife and Countryside Act 1981 (as amended) makes it an offence (with certain limited exceptions) to intentionally kill, injure or take any wild bird, or to damage, take or destroy the nest of any wild bird whilst that nest is being built or in use, or to take or destroy its eggs. Furthermore, the Act affords additional protection to specific species of birds listed in Schedule 1 of the Act. In respect of these species it is unlawful intentionally or recklessly to disturb such a bird whilst it is nest-building or is in, on or near a nest containing eggs or young; or to disturb their dependent young. Following recent revisions, fifty-nine species are listed on the UKBAP.

#### **Bats**

All species of bats and their roosting sites are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation (Natural Habitats etc.) Regulations 1994, updated and consolidated by the Conservation of Habitats and Species Regulations 2012. All species of UK bats are designated as 'European Protected Species' and are covered by a Species Action Plan within Carmarthenshire LBAP.



## **Badgers**

Badgers and badger setts are protected under The Protection of Badgers Act 1992, which makes it illegal to kill, injure or take a badger, or to interfere with a sett. A sett is defined as “any structure or place which displays signs indicating current use by a badger”.

## **Invasive Species**

Japanese Knotweed is listed under Schedule 9, Part 11 of the Wildlife and Countryside Act 1981, making it an offence to plant or otherwise cause it to grow in the wild. Care should be taken to avoid bringing in or removing material contaminated with Japanese Knotweed during the site development.

## **Hedgerows Regulations 1997**

These regulations came into force to protect important hedgerows in the countryside, in particular hedgerows which are more than 20 metres long or those which meet another hedgerow at either end.

