



**Boverton, Vale of Glamorgan**

**Desk Study and Extended Phase 1  
Habitat Survey,**

For

**Barratt Homes South Wales**

Project No.: ABAW105 / 002 / 002

August 2014

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## Contents

1.	Summary and Main Recommendations .....	6
1.1	Summary .....	6
1.2	Main Recommendations .....	6
2.	Introduction .....	8
2.1	Development Background .....	8
2.2	The Brief and Objectives .....	8
2.3	Limitations .....	8
3.	Methodology .....	10
3.1	Desk Study .....	10
3.2	Field Survey .....	10
4.	Results .....	12
4.1	Background .....	12
4.2	Desk Study .....	12
4.3	Field Survey .....	17
5.	Legislation and Planning Policy Issues .....	20
5.1	Background .....	20
5.2	Designated Sites .....	20
5.3	Habitats of Principal Importance .....	20
5.4	Ancient Woodland .....	21
5.5	Protected Species .....	21
5.6	Ecological Enhancement .....	21
6.	Potential Further Ecological Issues .....	22
6.1	Background .....	22
6.2	Great Crested Newt .....	22
6.3	Birds .....	22
6.4	Mammals .....	22
7.	Recommendations .....	24
7.1	Mitigation .....	24
7.2	Ecological Enhancements .....	25
8.	Conclusion .....	26
9.	References .....	27
10.	Appendix 1 - Identification of Legal and Planning Policy Issues in Wales .....	28
11.	Appendix 2: Plant Species List .....	31

FIGURE 1	SITE LOCATION, STUDY AREA AND DESK STUDY RESULTS
FIGURE 2	EXTENDED PHASE 1 HABITAT SURVEY MAP
FIGURE 3	PHOTOGRAPHS OF THE SITE

## 1. Summary and Main Recommendations

### 1.1 Summary

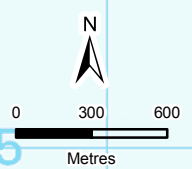
- 1.1.1 Barratt Homes South Wales is proposing the development of a site located in Boverton, Vale of Glamorgan for the construction of 64 residential units, including up to 30% affordable homes. The site location is shown on Figure 1. It is understood the current proposals include the removal of an existing building and the removal of a section of grassland and hedgerow to create a new access road to the site from the Llantwit Major bypass.
- 1.1.2 Barratt Homes South Wales will be seeking planning permission for the development from Vale of Glamorgan Council. The site is within an area allocated for housing development within the Vale of Glamorgan draft Deposit Local Development Plan 2011-2026.
- 1.1.3 The brief was to undertake a preliminary ecological assessment of the site and discuss the legal and planning policy issues associated with the proposed development and biodiversity. To that end, a desk study and Phase 1 habitat survey were undertaken to gather baseline ecological data for the site.
- 1.1.4 The main findings of the desk study were that the site is within 2km of four sites with local non-statutory designations, the nearest of which is 1.96km from the site (see Figure 1) and is also within 2km of two parcels of ancient woodland greater than 2ha. In addition, the desk study found records of seven protected species of birds including two birds, barn owl and osprey, listed on Schedule 1 of the Wildlife and Countryside Act 1981, as amended, and two records of hedgehog within 1km of the site.
- 1.1.5 During the field survey, the site was found to support dense scrub, species-poor semi-improved grassland, scattered trees, species-poor hedge, species-poor hedge with trees, fences, a wall, a building, hard standing with some scattered scrub and tall ruderal vegetation, and a track (see Figure 2). An area of broadleaved woodland is adjacent to the site outside the north-eastern site boundary. The hedgerows and broadleaved woodland are habitats of principal importance under Section 42 of the NERC Act 2006. Five common breeding birds were observed on, or flying over, the site. Breeding birds are protected by the Wildlife and Countryside Act (1981) as amended, from killing or injuring.
- 1.1.6 No statutory sites, non-statutory sites or ancient woodlands are present either inside or bordering the site. The development should not have a significant effect on the four non-statutory nature conservation sites within 2km of the site. Hedgerow habitat will be lost, as will habitat for breeding birds however, mitigation proposals set out in Section 1.2 and the main body of the report, if followed, should ensure that the development is compliant with the law and planning policy with respect to hedgerows and breeding birds.

### 1.2 Main Recommendations

- 1.2.1 The following measures are recommended for the development to comply with relevant biodiversity legislation and policy:

- Retain hedgerows where possible or, where removal is necessary, the hedgerow should be replaced on a like-for-like basis as a minimum. Retained hedgerows should be enhanced with additional planting of similar native species;
- Retained trees, including those outside the site on the edge of the woodland BW1, should be protected in accordance with British Standard BS5837:2012, in accordance with recommendations made in the Arboriculture Survey Report (Thomson Ecology Report Ref: BBRR118/002/001);
- Any necessary clearance of vegetation and demolition of buildings should be undertaken outside of the bird breeding season *i.e.* from September to February inclusive; and
- To enhance biodiversity on the site, recommendations made in Section 7.2, including using native trees and shrubs in the landscape design, and providing bird and bat boxes, should be followed.

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







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Figure Title	Site Location, Study Area and Desk Study Results		Drawn	KM	Checked
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		Date	21/07/2014	Date	21/07/2014

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Legend

-  Photograph Location and Direction
-  Scattered Broadleaved Tree
-  Target Note
-  Species-poor Hedge
-  Species-poor Hedge With Trees
-  Fence
-  Wall
-  Semi-natural Broadleaved Woodland
-  Dense Scrub
-  Poor Semi-Improved Grassland (SI)
-  Building
-  Hard Standing
-  Site Boundary

Site Grid Reference: 298,673 168,556

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

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Date 21/07/2014	Date 21/07/2014

Client  
Barratt Homes South Wales

Figure Number  
2

Figure Title  
Extended Phase 1  
Habitat Survey Map





Photograph 1:  
Semi-improved grassland (SI1), looking south.



Photograph 2:  
Building adjacent to the north-east boundary of field SI1.



Photograph 3:  
Semi-improved grassland (SI2), and broadleaved woodland (BW1) along the north-western site boundary.




Photograph 4:  
Species-poor hedge with trees (PHT1), and semi-improved grassland (SI2).



Photograph 5:  
Semi-improved grassland (SI2), looking north-west.

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Figure Title	Drawn	KM	Checked	NS	
	Date	21/07/2014	Date	21/07/2014	
	 <p>www.thomsonecology.com enquiries@thomsonecology.com</p>				
Photographs of the Site					

## 2. Introduction

### 2.1 Development Background

- 2.1.1 Barratt Homes South Wales is proposing the development of a site located in Boverton, Vale of Glamorgan for 64 residential units. The site currently comprises likely horse-grazed fields and hedgerows with one building. The development will include the construction of an access road joining the B4256 at the southern edge of the site. The proposals described above are hereafter referred to as “the development”.
- 2.1.2 The development will be located an area of farmland (Grid Reference SS986685), approximately 1.85ha, between the B4265 Llantwit Major bypass and the Vale of Glamorgan railway line on the eastern edge of Boverton, see Figure 1. The area affected by the development is hereafter referred to as “the site.”
- 2.1.3 Planning permission for the development is currently being sought by Barratt Homes South Wales. The site lies within an area identified in the Vale of Glamorgan Deposit Local Development Plan 2011 - 2026 for proposed housing to which Proposal MG2 applies. Policy MG2 - Housing allocations states that '*in order to meet the housing requirement identified in policy SP3 land is allocated for residential development at the following locations*' where the site is identified as '*MG 2 (22) Land adjacent to Llantwit Major bypass*'.

### 2.2 The Brief and Objectives

- 2.2.1 Barton Willmore LLP commissioned Thomson Ecology, on behalf of Barratt Homes South Wales, on 3<sup>rd</sup> July 2014 to undertake a preliminary ecological assessment of the development site. The brief was to include:
- An extended Phase 1 habitat survey of land north of B4265 (as indicated by the red line boundary provided in email on 12/06/2014);
  - An ecological desk study;
  - A combined report including an introduction, methodology and results of the survey, a discussion of any relevant legal and planning policy issues, and our recommendations as to how these may be overcome; and
  - Appropriate digitised mapping.
- 2.2.2 The brief was subsequently amended to include consideration of the habitat adjacent to the site around the north-eastern, south-western and north-western site boundaries as the development may have the potential to impact upon these habitats.

### 2.3 Limitations

- 2.3.1 The species data collated during the desk study is mainly derived from records submitted by members of the public and *ad hoc* surveys undertaken by volunteers. Therefore, it should not be taken as a definitive list of the protected species and other species of conservation concern that occur in the local area.

- 2.3.2 No species list has been provided for the grassland habitat that forms the edge of the Boverton bypass because this habitat was outside the scope of the survey at the time of the site visit. The grassland, however appears to comprise poor semi-improved grassland which had been cut short, and it is unlikely that the lack of a species list has affected the conclusions of this survey.
- 2.3.3 The survey was carried out in July, a suitable time of year for this type of survey.

## 3. Methodology

### 3.1 Desk Study

3.1.1 A study area was defined that encompasses the site and all land within 2km of the perimeter of the site, see Figure 1. South East Wales Biodiversity Records Centre (SEWBReC) was then approached and asked to provide up-to-date information on sites designated for their nature conservation value, local nature reserves, records of protected species and other species of conservation concern and any other information that they considered relevant. Records of designated sites were sought for the full study area, whereas records for species were sought for part of the study area encompassing the site and within 1km of the perimeter of the site.

3.1.2 SEWBReC was contacted for the purchase of biological data on 3<sup>rd</sup> July, 2014 with responses requested as soon as possible.

3.1.3 In addition, published data was consulted including the following:

- Vale of Glamorgan Proposed Deposit Local Development Plan 2011-2026; and
- Vale of Glamorgan Council Identification of Sites of Importance for Nature Conservation (SINCs) and Priority Habitats (2010).

### 3.2 Field Survey

3.2.1 A survey area was defined that encompassed the site and the habitats immediately adjacent to the site boundary, see Figure 2.

3.2.2 An extended Phase 1 habitat survey (JNCC, 2010; IEA, 1995) was conducted throughout the survey area. Phase 1 habitat survey is a standard technique for rapidly obtaining baseline ecological information over a large area of land. It is primarily a mapping technique and uses a standard set of habitat definitions for classifying areas of land on the basis of the vegetation present. For this survey, the technique was modified (or extended) to provide more detail over a smaller area, and give further consideration to fauna. The standard habitat definitions were used with an additional category of coarse grassland for unmanaged, secondary grasslands that are species poor.

3.2.3 The dominant and readily identified species of higher plant species from each habitat type within the survey area were recorded and their abundance was assessed on the DAFOR scale:

- D Dominant
- A Abundant
- F Frequent
- O Occasional
- R Rare

3.2.4 These scores represent the abundance within the defined area only and do not reflect national or regional abundances. Plant species nomenclature follows Stace (2010).

- 3.2.5 Incidental records of fauna were also made during the survey and the habitats identified were evaluated for their potential to support protected species and other species of conservation concern, including species of principal importance under Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006 and local biodiversity action plan (BAP) priority species. However, no specific faunal surveys were undertaken.
- 3.2.6 The survey was conducted on 9<sup>th</sup> July, 2014.

## 4. Results

### 4.1 Background

4.1.1 The contents of the results section are the factual results of the desk study and extended Phase 1 habitat survey. Excluded from this section is the assessment of the site to support species of conservation concern not recorded during the survey. Instead, potential further ecological issues are discussed in Section 6.

### 4.2 Desk Study

4.2.1 Biological records from SEWBRc were received on 14<sup>th</sup> July 2014. The results are summarised within Tables 1, 2, and 3 and the locations of designated sites are shown on Figure 1.

#### *Designated Sites*

4.2.2 There are no internationally or nationally statutory designated sites within 2km of the site boundary. There are four locally-designated Sites of Importance for Nature Conservation (SINCS) within 2km of the site, one of which is also designated as a Wildlife Trust Reserve (WTR). These are summarised in Table 1.

Table 1: Locally-designated sites within 2km of the site

Site Designation	Grid Reference	Area (ha)	Distance to site (km)	Description
<b>SINCS</b>				
Frampton Court Farm (D39 P1)	SS9729569662	0.07	1.60	Bulrush dominated flood alleviation pond managed by the Environment Agency Wales. Hard Rush, Common Spike-rush, Brooklime and Fool's-watercress are locally abundant.
Summerhouse Bay West (C53-W1)	SS9946866491s	2.41	1.96	Semi-natural broadleaved woodland and scrub on and around remains of a hillfort.

Site Designation	Grid Reference	Area (ha)	Distance to site (km)	Description
East of Meadowvale Nursery (D39 G1)	SS9679569911	3.19	1.98	This SINC supports areas of purple moor grass and rush pasture.
Cwm Colhuw (C47-S2)	SS9636767668	7.05	1.98	A mosaic of semi-improved neutral and calcareous grassland with dense scrub and lowland mixed deciduous woodland along Iron Age earthworks, supporting Section 42 bird species including Yellowhammer.
<b>Wildlife Trust Reserves</b>				
Cwm Colhuw	SS9636767668	5.54	1.98	As above for Cwm Colhuw SINC.

### *Habitats of Principal Importance*

4.2.3 The locally-designated SINC (listed in Table 1) support the following habitats of principal importance:

- Lowland mixed deciduous woodland;
- Purple moorgrass and rush pastures;
- Reedbeds; and
- Ponds.

### *Ancient Woodland*

4.2.4 Two ancient woodland sites greater than 2ha were identified in the desk study, the closest of which is 1.07km from the site. These are summarised in Table 2.



Table 2: Ancient woodland greater than 2ha within 2km of the site.

Grid Reference	Area (ha)	Distance to site (km)
SS9756167880	2.28	1.07
SS9717367943	2.02	1.40

*Protected Species and Other Species of Conservation Concern*

- 4.2.5 Records of protected species and species of conversation concern derived from the desk study are shown in Table 3. Only records from the last ten years have been included. If multiple records for one species exist, then the nearest, most recent record has been given. Where a four-figure grid reference was provided by the records centre and an accurate distance from the site cannot be calculated, the distance has been omitted.

Table 3: Records of Protected and Other Species of Conservation Concern derived from the desk study.

Common Name	Scientific Name	HR Sch 2 or 4	WCA Sch1, 5 or 8	Species of Principal Importance (NERC, 2006)	Local BAP species	Other	Grid Ref.	Distance from site (m)
<b>Birds</b>								
Barn Owl	<i>Tyto alba</i>		1			CITES, WBAm, UKBAm, RD2	SS991680	549
House Sparrow	<i>Passer domesticus</i>			✓	✓	WBAm, UKBR	SS9868	
Marsh Tit	<i>Poecile palustris</i>			✓	✓	UKBR, WBR, RD2	SS9768	
Meadow Pipit	<i>Anthus pratensis</i>			✓	✓	WBAm, UKBAm	SS9967	
Osprey	<i>Pandion haliaetus</i>		1	✓	✓	CITES, WBAm, UKBAm	SS9768	
Reed Bunting	<i>Emberiza schoeniclus</i>			✓	✓	WBAm, UKBR, UKBAm	SS9967	
Starling	<i>Sturnus vulgaris</i>			✓	✓	UKBR, WBR, RD2	SS9868	
<b>Mammals</b>								
Hedgehog	<i>Erinaceus europaeus</i>			✓	✓		SS98936839	174

Hedgehog	<i>Erinaceus europaeus</i>			✓	✓		SS983687	232
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HR = Conservation (Habitats &c) Regulations 1994

WCA = Wildlife and Countryside Act 1981, as amended

RD2 = UK Red Data Book Species not based on IUCN guidelines

WBR = RSPB Welsh Red listed birds

WBAm = RSPB Welsh Amber listed birds

UKBR = RSPB UK Red listed birds

UKBAm = RSPB UK Amber listed birds

CITES = Convention on International Trade in Endangered Species

## 4.3 Field Survey

### *Habitats and Flora*

4.3.1 The following Phase 1 habitat types were identified within the survey area:

- Semi-natural broadleaved woodland;
- Dense scrub;
- Scattered broadleaf trees;
- Poor semi-improved grassland;
- Species-poor hedge;
- Species-poor hedge with trees;
- Fence;
- Wall;
- Building;
- Hard Standing/scattered scrub/tall ruderal mosaic; and
- Hard standing.

4.3.2 These habitats are described below and their distribution is given on Figure 2. A species list for each habitat is given in Appendix 2. Photographs of the site are shown on Figure 3.

### *Semi-natural Broadleaved Woodland*

4.3.3 There is an area (approximately 0.3ha) of semi-natural broadleaved woodland (BW1 on Figure 2, Photograph 3 on Figure 3) between the north-eastern boundary of the site and the Vale of Glamorgan railway line. The woodland features a canopy of abundant ash (*Fraxinus excelsior*), and frequent sycamore (*Acer pseudoplatanus*). The shrub layer includes abundant hawthorn (*Crataegus monogyna*) with occasional elm (*Ulmus procera*) and blackthorn (*Prunus spinosa*) and sycamore saplings, and the ground flora includes abundant ivy (*Hedera helix*).

### *Dense Scrub*

4.3.4 There is one small parcel (26m<sup>2</sup>) of dense scrub (DS1 on Figure 2) dominated by bramble (*Rubus fruticosus* agg.) located between building B1 and the north-eastern boundary of the site.

### *Poor Semi-improved Grassland*

4.3.5 Two fields of poor semi-improved grassland were identified during the survey, both of which had recently been cut. The northern-most semi-improved grassland (SI1 on Figure 2, Photograph 1 on Figure 3) is approximately 0.5ha and includes frequent yorkshire-fog (*Holcus lanatus*) and cock's-foot (*Dactylis glomerata*), with occasional red fescue (*Festuca rubra*), ribwort plantain (*Plantago lanceolata*), creeping buttercup (*Ranunculus repens*) and field bindweed (*Convolvulus arvensis*). This field includes a localised patch of ivy (TN1 on Figure 2) along the north-eastern

boundary between the northern corner of the field and the area of dense scrub (DS1) where the ground is in the shadow of overhanging trees and the building.

- 4.3.6 A second field of poor semi-improved grassland (SI2 on Figure 2, Photographs 3, 4 and 5 on Figure 3) is approximately 1.25ha and lies adjacent to poor semi-improved grassland SI1 to the south-east. It features abundant Yorkshire-fog and red fescue, with occasional cock's foot, ribwort plantain, and cut leaved cranesbill (*Geranium dissectum*) also present. A third parcel of poor semi-improved grassland (SI3, approximately 0.12ha) forms the grass verge adjacent to the Llantwit Major bypass, outside the site to the south-west. This habitat, which was comprised of short grass was observed from the opposite side of the road and no species list was recorded.

#### Scattered Broadleaved Trees

- 4.3.7 There is a group of five young ash trees in the northern corner of poor semi-improved grassland SI1 and another ash sapling next to the wall adjoining building B1 (see Figure 2).

#### Species-poor Hedge

- 4.3.8 Two species-poor hedges are present on the site. PH1 (see Figure 2) forms the boundary between the two fields SI1 and SI2 and is 57m long. PH1 features a shrub layer of frequent elder (*Sambucus nigra*), hawthorn and blackthorn with frequent bramble in the understorey.
- 4.3.9 The second species-poor hedge (PH2 on Figure 2) is 73m long and forms the south-eastern boundary of the site. This hedge is dominated by hawthorn with occasional elder. Ivy is frequent throughout the hedge, and the understorey is dominated by bramble.

#### Species-poor Hedge With Trees

- 4.3.10 There are two species-poor hedges with trees on the site. PHT1 (see Figure 2, Photograph 4 on Figure 3) is 330m long and forms the north-western and south-western boundary of the site. This hedge features abundant mature ash and occasional sycamore and hornbeam (*Carpinus betulus*) trees, with Scots pine (*Pinus sylvestris*) also present. The shrub layer features abundant hawthorn with bramble, ivy and elder also present.
- 4.3.11 A second species-poor hedge with trees (PHT2 on Figure 2) is present in the north corner of the site. This hedgerow is 30m long and runs adjacent to the current access track and joins up with the woodland BW1. This hedgerow features frequent mature ash and sycamore trees, with an understorey of hawthorn and bramble.

#### Fence

- 4.3.12 Fences form the perimeter of the two fields SI1 and SI2 (see Figure 2). A wooden fence forms the south-western and north-western boundaries of the site and is adjacent to the hedgerows PHT1 and PHT2. A barbed wire fence runs along the long north-eastern boundary of the site, separating the two fields SI1 and SI2 from the woodland BW1). Two other barbed wire fences form the south-eastern and north-western boundaries of poor semi-improved grassland SI2.

### Wall

- 4.3.13 A concrete brick wall forms the boundary around a courtyard outside the building adjacent to the north-eastern boundary of field SI1.

### Buildings

- 4.3.14 There is one building (B1) present against the northern boundary of field SI1 (see Figure 2, Photograph 2 on Figure 3). This structure is divided into two parts, the north-western section is constructed of concrete with a corrugated metal roof, and is open on the south-western side; the south-eastern half of the building is constructed of corrugated metal and is open on the south-eastern side.

### Hard Standing and Scattered Scrub/Tall Ruderal Mosaic

- 4.3.15 There is a courtyard of hard standing (0.01ha) next to the building enclosed by a wall (see Figure 2). This area features emerging scrub species such as ash and sycamore saplings, and ruderal species such as ragwort (*Senecio jacobaea*) and common nettle (*Urtica dioica*).

### Hard Standing

- 4.3.16 An area of hard standing (0.01ha) in the northern corner of the site (see Figure 2) forms an access track into the site.

### Fauna

- 4.3.17 The following bird species were observed during the survey:
- Blue tit (*Cyanistes caeruleus*);
  - Chiffchaff (*Phylloscopus collybita*);
  - Greenfinch (*Carduelis chloris*);
  - Herring gull (*Larus argentatus*); and
  - Swallow (*Hirundo rustica*).

## 5. Legislation and Planning Policy Issues

### 5.1 Background

5.1.1 The content of the legislation and planning policy section is the legislation and planning policy issues that we know are relevant based on this desk study and extended Phase 1 habitat survey. The legislation and policy issues that might arise following further surveys are excluded. Potential further ecological issues are discussed in Section 6. A detailed description of the method for this section is given in Appendix 1.

### 5.2 Designated Sites

5.2.1 There are no statutory designated sites within 2km of the site. There are, however, four non-statutory designated SINC's within 2km of the site, one of which is also a Wildlife Trust Reserve (see Table 1). These sites are protected by Technical Advice Note (TAN) 5 (paragraph 6.5.1) and from the Vale of Glamorgan Deposit LDP policy MG19 which states: "*Development which has an unacceptable impact on Sites of Importance for Nature Conservation (SINC's) will not be permitted*".

5.2.2 The nearest SINC is 1.6km from the proposed development site. The proposals are unlikely to have an impact on these designated sites and their important attributes for the following reasons:

- The development will be restricted to within the site boundary;
- The development will be separated from the four designated sites by existing roads and urban infrastructure;
- Waste water from the development will be treated to national standards before discharge into the river system; and
- Pollution will be controlled during construction works in accordance with Environment Agency pollution prevention guidelines.

5.2.3 The development proposals should therefore be compliant with the relevant legislation and policy with respect to designated sites.

### 5.3 Habitats of Principal Importance

5.3.1 Broadleaved woodland was recorded adjacent to the north-eastern perimeter of the site (BW1 on Figure 2). Semi-natural woodland is a habitat of principal importance in Wales under the NERC Act. Under the current proposal, the broadleaved woodland should not be affected by the development.

5.3.2 Four hedgerows were recorded during the survey. These are two species-poor hedges (PH1 and PH2 on Figure 2) and two species-poor hedges with trees (PHT1 and PHT2). Hedgerows are a habitat of principal importance in Wales under the NERC Act and are also protected by the Hedgerows Regulations (1997).

5.3.3 Under the NERC Act local authorities, in this case the Vale of Glamorgan Council, have a duty to have regard to the purpose of conserving biodiversity including this habitat type. In addition,

TAN 5 states that habitats of principal importance for the conservation of biodiversity should be protected from the adverse effects of development.

- 5.3.4 The current proposals require the removal of hedgerow PH1 which runs through the interior of the site and the removal of a small section of the hedgerow PHT1 to construct a new access road into the site from the Llantwit Major bypass. Recommendations for mitigating the loss of this habitat are set out in Section 7.

## 5.4 Ancient Woodland

- 5.4.1 Ancient woodlands are protected under Planning Policy Wales (PPW), which states that *“Ancient and semi-natural woodlands are irreplaceable habitats of high biodiversity value which should be protected from development that would result in significant damage.”*
- 5.4.2 There are two areas of ancient woodland greater than 2ha to the south-west of the site, the closest being 1.07km away. The proposed development is unlikely to have an impact on these ancient woodlands for the reasons described in Section 5.2 and the proposals should therefore be compliant with the relevant legislation and policy with respect to ancient woodland.

## 5.5 Protected Species

- 5.5.1 A number of common bird species were recorded on the site, some of which are most likely to breed on the site as suitable habitat is present in the form of hedgerows (PH1, PH2, PHT1, PHT2), dense scrub (DS1) and building B1. All birds, eggs and nests are protected from damage and destruction under the Wildlife and Countryside Act 1981, as amended.
- 5.5.2 PPW states that *“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.”*
- 5.5.3 The mitigation measures set out in Section 7 should ensure that the development proposals are compliant with the law and PPW with respect to birds. It should be noted however that other protected species may be present, as detailed in Section 6.

## 5.6 Ecological Enhancement

- 5.6.1 Central and local government policy now points towards ecological enhancement on development sites. One of the points of Policy MD10 of the Deposit LDP of the Vale of Glamorgan states *“Incorporating new biodiversity features either on or off site to enable a net gain in biodiversity interest”*. PPW 5.5.2 states that *“Authorities should seek to... where practicable, enhance features of conservation importance”*.
- 5.6.2 Recommendations for ecological enhancement are included in Section 7.



## 6. Potential Further Ecological Issues

### 6.1 Background

6.1.1 The potential further ecological issues section sets out our assessment of the potential of the site to support protected species and other species of conservation concern which were not detected during the extended Phase 1 habitat survey, either because their presence is seasonal or because specialist survey techniques are required. Further survey work or appropriate mitigation is likely to be required before these issues can be addressed. Further information on the methods of assessment is given in Appendix 1.

### 6.2 Great Crested Newt

6.2.1 Suitable terrestrial habitat was identified on the site in the form of hedgerows and dense scrub (PH1, PH2, PHT2 and DS1 on Figure 2), and surrounding the site in the form of woodland and hedgerow (BW1 and PHT2 on Figure 2). There are, however, no records of great crested newt within 1km of the site and no standing waterbodies were identified on OS 1:10000 mapping within 500m of the site.

6.2.2 Great crested newt and its habitats are fully protected under European and national legislation. The likelihood of this species being present on the site is very low due to the absence of records and aquatic habitat in the area therefore the development proposals will be compliant with the relevant legislation and policy with respect to great crested newt.

### 6.3 Birds

6.3.1 The desk study identified seven species of birds within the search area. Two of these species, barn owl (*Tyto alba*) and osprey (*Pandion haliaetus*) are listed on Schedule 1 of the Wildlife and Countryside Act 1981, as amended. This gives them protection against disturbance whilst they are breeding, in addition to the protection from killing and injuring afforded to all birds. The barn owl record is over 500m from the perimeter of the site and the location of the osprey record is unknown, as a precise grid reference was not provided. No suitable breeding habitat for either of these species was identified on the site, however the broadleaved woodland adjacent to the north-eastern boundary of the site could offer potential breeding habitat for barn owl. No further surveys are recommended but mitigation recommendations are made in Section 7.

### 6.4 Mammals

6.4.1 There were no records of bats returned in the desk study, and building B1 is considered unsuitable for roosting bats (see Photograph 2 on Figure 3), however suitable habitat for bats may be present in woodland BW1 adjacent to the north-east site boundary (see Figure 2). All bats and their roosts are protected under the Wildlife and Countryside Act 1981, as amended and the Conservation of Habitats and Species Regulations (2010) as well as planning policy. Providing that works do not cause any significant disturbance above that regularly caused by the Llantwit Major bypass and the Vale of Glamorgan railway line, the development should not impact upon any bats which may be occupying woodland BW1.

6.4.2 There are two records of hedgehog (*Erinaceus europaeus*) over 150m from the site. Habitats on the site, including hedgerows (PH1, PH2, PHT1 and PHT2 on Figure 2), woodland (BW1 on Figure 2) and dense scrub (DS1 on Figure 2) are considered to be suitable to support this species. Hedgehog is a species of principal importance under the NERC Act, is a priority species in the Vale of Glamorgan Biodiversity Action Plan (2006) and is protected under the Wild Mammals (Protection) Act (1996). Recommendations for mitigating impacts on hedgehog are included in Section 7.2.

## 7. Recommendations

### 7.1 Mitigation

- 7.1.1 The recommendations for mitigation (including avoidance, mitigation and compensation) measures given in this section are based on the findings of the desk study and extended Phase 1 habitat survey and include precautionary mitigation measures for some species which could occur on the site.

#### *Habitats of Principal Importance*

- 7.1.2 The south-western, north-western and south-eastern boundaries of the site are comprised of hedgerows (PHT1, PHT2 and PH2), and a hedgerow (PH1) runs through the interior of the site. Any hedgerow or section of hedgerow which is lost as a result of the development should be replaced on a like-for-like basis, as a minimum, in terms of length. Replacement hedgerows should comprise at least five woody species per 30m length and include the native species found on this site such as hawthorn, blackthorn, elder and elm.

#### *Trees*

- 7.1.3 Trees which are to be retained should be protected to prevent damage during or following development, by a suitable buffer zone to protect the rooting area adjacent to each tree, from construction activities. In accordance with British Standard BS5837:2012 '*Trees in relation to design, demolition and construction - recommendations*', this root protection area is calculated in relation to the circumference of the tree trunk. Further details regarding the trees on site are provided within the Arboricultural Survey Report (Thomson Ecology Report Ref: ABAW105/001/001).

#### *Protected Species*

- 7.1.4 Site clearance of habitats suitable for breeding birds should be undertaken outside the bird breeding season, *i.e.* site clearance should be undertaken in the period September to February inclusive. If site clearance needs to occur within the bird breeding season, it should be conducted carefully, and the presence of birds and their nests checked for immediately before and throughout the process by a suitably qualified ecologist. If an active nest is discovered, then work in that area should cease and the nest protected until the young have fledged or the nest is no longer active.
- 7.1.5 If barn owls are seen nesting in or flying into woodland BW1, additional precautions will be required. If a barn owl is seen, works should stop immediately and potential nest locations should be checked by a suitably qualified ecologist to ensure that nesting barn owls are not disturbed. Suitable buffer zones would need to be created around nesting locations to protect the birds from disturbance during construction. The size of a buffer zone would depend on the type of construction activity taking place and could potentially be up to 175m (Shawyer 2011).

## 7.2 Ecological Enhancements

7.2.1 The design of the development should incorporate enhancements for the benefit of wildlife in line with national and local planning policy. Recommendations are:

- Inclusion of bird nesting opportunities on buildings including self-contained chambers specifically designed for species such as house sparrows and swifts;
- Inclusion of bird nesting opportunities in areas of retained hedgerows, PH2 and PHT2;
- Installation of bat boxes on suitable trees within or adjacent to the site (*i.e.* those with a trunk diameter of at least 20cm);
- Ensuring that the site will not result in a loss of habitat connectivity around the northern perimeter of the site for hedgehogs and that suitable habitat intended to be retained, such as hedgerows PH2 and PHT2 are maintained. New fences should have a suitable gap to allow hedgehogs to pass through the new development. Guidance from the Hedgehog Preservation Society states that a 13x13cm gaps is suitable to allow hedgehogs to pass through fences; and
- The use of native trees and shrubs should be incorporated into the landscape design, for example pedunculate oak (*Quercus robur*), silver birch (*Betula pendula*), hazel (*Corylus avellana*), hawthorn and blackthorn.

## 8. Conclusion

- 8.1.1 Four locally-designated sites and two parcels of ancient woodland lie within 2km of the site. The closest designated site is located 1.96km, and the closest ancient woodland parcel is 1.07km from the site. The development should have no adverse impacts on the conservation interest of the designated sites or ancient woodlands identified in the desk study.
- 8.1.2 The site supports habitat and species, in the form of hedgerows and nesting birds, to which legislation and planning policy applies. Providing that the recommendations set out in Section 7 are followed, the development should comply with legislation regarding habitats of principal importance and breeding birds.

## 9. References

- 9.1.1 British Standard BS5837:2012 *Trees in Relation to Design, Demolition and Construction recommendations*.
- 9.1.2 Environment Agency (2012). *Working at construction and demolition sites: PPG6 Pollution Prevention Guidelines*.
- 9.1.3 Hedgehog Preservation Society ([www.britishhedgehogs.org.uk](http://www.britishhedgehogs.org.uk)). Find the Gap, ([http://www.britishhedgehogs.org.uk/posters/Find\\_The\\_Gap.pdf](http://www.britishhedgehogs.org.uk/posters/Find_The_Gap.pdf)). Accessed July 2014.
- 9.1.4 Institute of Environmental Assessment (1995). *Guidelines for Baseline Ecological Assessment*. E & FN Spon, London.
- 9.1.5 JNCC (2010). *Handbook for Phase 1 habitat survey: A technique for environmental audit*. Joint Nature Conservancy Committee, Peterborough.
- 9.1.6 Shawyer, C. R. (2011). *Barn Owl *Tyto alba* Survey Methodology and Techniques for use in Ecological Assessment: Developing Best Practice in Survey and Reporting*. IEEM, Winchester.
- 9.1.7 Stace C (2010). *New Flora of the British Isles (second edition)*. Cambridge University Press, Cambridge.
- 9.1.8 Vale of Glamorgan (2002). *Local Biodiversity Action Plan*.
- 9.1.9 Vale of Glamorgan (2003). *Vale of Glamorgan Deposit Local Development Plan 2011 - 2026*.
- 9.1.10 Welsh Assembly Government (2009). *Planning Policy Wales, Technical Advice Note 5: Nature Conservation and Planning*. Welsh Assembly Government.
- 9.1.11 Welsh Assembly Government (2014). *Planning Policy Wales, Edition 6*. Welsh Assembly Government.

## 10. Appendix 1 - Identification of Legal and Planning Policy Issues in Wales

### *Scope of Assessment*

- 10.1.1 The first step is to identify any biodiversity features found on the site that are subject to legal or policy controls, as follows:

### *Designated Sites*

- 10.1.2 The location of the site is compared to the distribution of sites with a statutory or non-statutory nature conservation designation using information derived from the desk study. Consideration is given to designated sites that could be affected directly or indirectly by the proposed development.

### *Habitats outside Designated Sites*

- 10.1.3 The habitats known to occur on the site are compared to those which receive some protection, in law or policy, outside of designated sites i.e. hedgerows, uncultivated land and semi-natural areas, habitats listed as Habitats of Principal Importance for the Conservation of Biodiversity under Section 42 of the NERC Act 2006.

### *Ancient Woodland*

- 10.1.4 The ancient woodland inventory is checked to determine whether any known ancient woodland occurs either on the site or nearby.

### *Protected Species*

- 10.1.5 The species known to occur on the site as a result of the desk study and Phase 1 habitat survey are compared with those listed in nature conservation legislation i.e. the Wildlife and Countryside Act 1981, as amended and the Conservation (Habitats &c) Regulations 2010.
- 10.1.6 In addition, the species known to occur on the site as a result of the desk study and Phase 1 habitat survey are compared with those listed in animal welfare legislation, i.e. the Badgers Act 1992 and the Wild Mammals (Protection) Act 1996.

### *Species of Principal Importance*

- 10.1.7 The species known to occur on the site are compared with those listed as Species of Principal Importance for the Conservation of Biodiversity under Section 42 of the NERC Act 2006 or requiring action in the Local Biodiversity Action Plan.

### *Other Species of Conservation Concern*

- 10.1.8 The species known to occur on the site are compared with other nature conservation listings, such as red data books.

### *Invasive Plant Species*

- 10.1.9 The species of plant present on the site are compared with those listed by government agencies as invasive non-natives, with particular attention given to those listed in the Wildlife and Countryside Act.

### *Review of Legislation and Policy*

- 10.1.10 If any of the above are found to occur on or near the site and are likely to be affected by the development in any way, the relevant legislation and planning policy (including national, regional, county and borough policies) are examined to determine whether the proposed development is compliant.

### *Ecological Enhancement*

- 10.1.11 Planning policy generally requires new developments to be enhanced for biodiversity. The existing proposals are considered to determine whether biodiversity enhancements are offered and whether they are adequate to meet the policy requirements. Again, national, regional, county and borough policies are considered.

### **Identification of Potential Further Ecological Issues**

- 10.1.12 Further ecological issues are those which can not be resolved during the desk study and extended Phase 1 habitat survey for any reason, including the following:
- The development is near a designated site and consultation with the relevant regulator is required in order to determine whether further assessment is required;
  - Suitable habitat is present on or near the site for a protected species/species of conservation concern and specialist survey techniques are required for their detection;
  - Suitable habitat is present on or near the site for a protected species/species of conservation concern and the extended Phase 1 habitat survey was not undertaken at a suitable time of year for their detection; and
  - A protected species/species of conservation concern was found on or near the site but further information on population size or distribution is required in order to resolve any legal and planning policy issues (such as obtaining licences).
- 10.1.13 Discussion of issues raised by 3rd parties, *e.g.* reports of protected species from the site by local people, may also be discussed under this heading.
- 10.1.14 The desk study is used as a guide to the protected species/species of conservation concern in the local area, however, the list is not taken to be exhaustive and it is borne in mind that some species may no longer occur in the locality.



- 10.1.15 No attempt is made to evaluate the importance of the site for species not yet confirmed to be on or near the site, nor to discuss the implications for the development if the species were to be found on the site.

## 11. Appendix 2: Plant Species List

### *Broadleaved Woodland BW1*

Common name	Scientific name	Abundance (DAFOR)
Ash	<i>Fraxinus excelsior</i>	A
Sycamore	<i>Acer pseudoplatanus</i>	F
Hawthorn	<i>Crataegus monogyna</i>	A
Elm	<i>Ulmus procera</i>	O
Ivy	<i>Hedera helix</i>	A
Dog rose	<i>Rosa canina</i>	O
Blackthorn	<i>Prunus spinosa</i>	O
Traveller's joy	<i>Clematis vitalba</i>	R

### *Dense scrub (DS1)*

Common name	Scientific name	Abundance (DAFOR)
Bramble	<i>Rubus fruticosus agg.</i>	D

Poor semi-improved grassland (SI1)

Common name	Scientific name	Abundance (DAFOR)
Yorkshire-fog	<i>Holcus lanatus</i>	A
Cock's foot	<i>Dactylis glomerata</i>	O
Creeping bent	<i>Agrostis stolonifera</i>	O
Common bent	<i>Agrostis Capillaris</i>	O
Creeping buttercup	<i>Ranunculus repens</i>	O
Red fescu	<i>Festuca rubra</i>	O
Ribwort plantain	<i>Plantago lanceolata</i>	O
Ivy	<i>Hedera helix</i>	R
Field bindweed	<i>Convolvulus arvensis</i>	R

Poor semi-improved grassland (SI2)

Common name	Scientific name	Abundance (DAFOR)
Yorkshire-fog	<i>Holcus lanatus</i>	A
Red fescu	<i>Festuca rubra</i>	A
Common bent	<i>Agrostis Capillaris</i>	O
Creeping bent	<i>Agrostis stolonifera</i>	O
Cock's foot	<i>Dactylis glomerata</i>	O
Field bindweed	<i>Convolvulus arvensis</i>	O
Ribwort plantain	<i>Plantago lanceolata</i>	O
Creeping buttercup	<i>Ranunculus repens</i>	O
Dandelion	<i>Taraxacum agg.</i>	R
Cut-leaved cranesbill	<i>Geranium dissectum</i>	R

*Species-poor hedge (PH1)*

Common name	Scientific name	Abundance (DAFOR)
Elder	<i>Sambucus nigra</i>	
Hawthorn	<i>Crataegus monogyna</i>	
Blackthorn	<i>Prunus spinosa</i>	
Bramble	<i>Rubus fruticosus agg.</i>	

*Species-poor hedge (PH2)*

Common name	Scientific name	Abundance (DAFOR)
Hawthorn	<i>Crataegus monogyna</i>	D
Bramble	<i>Rubus fruticosus agg.</i>	D
Ivy	<i>Hedera helix</i>	F
Elder	<i>Sambucus nigra</i>	O

*Species-poor hedge with trees (PHT1)*

Common name	Scientific name	Abundance (DAFOR)
Ash	<i>Fraxinus excelsior</i>	A
Hawthorn	<i>Crataegus monogyna</i>	A
Bramble	<i>Rubus fruticosus agg.</i>	A
Ivy	<i>Hedera helix</i>	A
Sycamore	<i>Acer pseudoplatanus</i>	O
Hornbeam	<i>Carpinus betulus</i>	O
Elder	<i>Sambucus nigra</i>	O
Scots pine	<i>Pinus sylvestris</i>	R
Beech	<i>Fagus sylvatica</i>	R

*Species-poor hedge with trees (PH2)*

Common name	Scientific name	Abundance (DAFOR)
Hawthorn	<i>Crataegus monogyna</i>	A
Ash	<i>Fraxinus excelsior</i>	F
Sycamore	<i>Acer pseudoplatanus</i>	F
Bramble	<i>Rubus fruticosus agg.</i>	F
Ivy	<i>Hedera helix</i>	O

*Hard Standing/scattered scrub/tall ruderal mosaic (HS/SS/TR)*

Common name	Scientific name	Abundance (DAFOR)
Common nettle	<i>Urtica dioica</i>	F
Ash	<i>Fraxinus excelsior</i>	O
Sycamore	<i>Acer pseudoplatanus</i>	O
Ragwort	<i>Senecio jacobaea</i>	O
Ribwort plantain	<i>Plantago lanceolata</i>	R