

LAND ADJACENT TO SIX BELLS ESTATE, HEOLGERRIG, MERTHYR TYDFIL

PRELIMINARY ECOLOGICAL APPRAISAL 2025



Produced for Nick Meaney

QUALITY ASSURANCE

Author	Reviewer	Revision	Date Issued
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		V1.2	03/09/2025
		V1.3	24/09/2025

Revision	Notes
V1.2	Enhancement details added with other minor amendments
V1.3	Removal of incorrectly identified hedge and minor amendments

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SUMMARY

The owner of the plot at the corner of Six Bells Estate, Heolgerrig wishes to obtain planning permission for a single detached dwelling with associated parking and gardens following permaculture principles.

A preliminary ecological appraisal was commissioned in support of the planning application and a site visit carried out in July and Sept 20025 by Rebecca Sheahan-East of East Ecology.

The desk study found no statutorily designated sites were close enough to the plot to be directly or indirectly affected by the proposals and sites for highly mobile species within 10km were designated for a species unlikely to be found within the built-up area. Several non-statutory and local designations were found nearby, but none are thought to be affected by the proposed construction. No records of priority and protected species were found to originate from the plot.

The preliminary ecological appraisal found that the habitats recorded within the survey boundary were scattered trees, ephemeral/short perennial vegetation a non-native hedge and bare ground. The habitat directly affected by the proposals would be the bare ground, ephemeral vegetation.

No mitigation for habitat losses were thought to be necessary as the hedge will be maintained in situ by land owner in adjacent property.; and no surveys for priority or protected species needed.

Biodiversity enhancements recommended for the site consist of a bat box high up on the south gable end of the new dwelling, two swift boxes for the north gable end, low level external lighting in compliance with latest bats and lighting guidance, access gaps for hedgehogs, native shrub planting at the north and west boundaries and native climbers along the south and east boundaries.

INTRODUCTION

The land adjacent to Six Bells Estate, Heolgerrig, Merthyr Tydfil CF48 1TR lies at an approximate National Grid Reference: **SO035062**. The study site is an undeveloped plot on the corner of Heolgerrig and Six Bells Estate. The area is surrounded housing in all directions. The nearest semi-natural habitats lie approximately 100m away to the north and south in the form of woodland or scrub. These habitats are fairly well connected in the landscape. The relative position of the site is shown in Figure 1.

This report is intended to contribute to the information required for a planning application by Nick Meaney to develop the plot for one detached dwelling house, car parking and gardens. The proposals are shown in Figure 2.

This report aims to assess the habitats at the land adjacent to the Six Bells Estate for biodiversity value and potential for protected and priority species to be present including bats, reptiles, amphibians, birds, invertebrates and mammals providing any proposals for mitigation or enhancement where necessary.

The author of this report, Rebecca of East Ecology has over twenty years post graduate experience in ecological consultancy and nature conservation and holds Natural Resources Wales survey licences for protected species including bats. Rebecca is also a full member of the Chartered Institute of Ecology and Environmental Management and a Chartered Environmentalist.

SPECIES ECOLOGY AND LEGISLATION

Reptiles

There are four common species of reptile present in Wales common lizard, slow worm, adder and grass snake with one further species which has a very restricted range in north Wales. Slow worms by far are the more common species occupying a variety of habitats such as tall grasslands and scrub, railway embankments and derelict sites. Adders require a good supply of small mammal prey as do grass snake, but will also take amphibians and small birds. Grass snake are often associated with still water habitats and adders with heath and upland areas. All reptiles require habitat in which to bask and warm their bodies, nearby cover and foraging opportunities and shelter for winter where they go into a type of hibernation called brumation. Hibernaculum can consist of gaps between tree roots, rubble, stone walls and log piles.

Nesting birds

Different bird species make use of a variety of habitats. Woodland, trees and scrub provide habitat for a great many species, but others require grassland, cliffs, buildings or bare ground for ground nesting. Food preference dictates the habitat in which they are found including mudflats, grassland, agricultural land, rivers, moorland and woodland although some are more generalist.

Bats

Bats are nocturnal insectivorous mammals which have been a conservation priority for many years mainly due to habitat loss. Bats occupy a variety of structures including houses, barns, churches and halls as well as other structures, rock faces and tree hollows and move throughout the seasons. The species of bat and life stage dictates the habitat preference, which may be large fly-in spaces or small crevices as well as their foraging style and prey preference. Some species have more specific prey while other such as the pipistrelle species are more generalist. Bats require shelter with nearby unlit vegetation with an abundance of small flying invertebrates on which to feed but can fly several kilometres per night to find good foraging.

Conservation of Species and Habitats Regulations (Amendment) 2017

All bats, great crested newts, dormice and otters found in the UK are Higher Level Protected Species (HLPS) being protected under the Conservation of Habitats and Species Regulations 2017, known as the 'Habitats Regulations'.

Under the Habitats Regulations, it is an offence to:

- Deliberately capture, injure or kill any wild animal of an HLPS,
- Deliberately disturb wild animals of any such species,
- Damage or destroy a breeding site or resting place of such an animal.

Disturbance is defined as that which is likely:

1. To impair the animal's ability:
 - to survive, to breed or reproduce, or to rear or nurture their young, or
 - in the case of animals of a hibernating or migratory species (e.g. bats), to hibernate or migrate; or
2. To affect significantly the local distribution or abundance of the species to which they belong.

Other offences also exist relating to possession, transport and sale.

Wildlife and Countryside Act 1981

Section 9 of the Wildlife and Countryside Act 1981 (as amended) offers varying degrees of protection to species including otter, bats, dormice, amphibians and reptiles. Animals listed on Schedule 5 of the Act are protected against one or more of the following:

- intentional killing, injuring or taking;
- intentional or reckless damage or destruction, or obstruction of access to any structure or place which any wild animal included in Schedule 5 uses for shelter or protection;
- disturbance of any such animal while it is occupying a structure or place which it uses for that purpose;
- sell, offer or exposes for sale, or has in his possession or transports for the purpose of sale, any live or dead wild animal included in schedule 5, or any part of, or anything derived from such an animal.

Wild birds are protected under the Wildlife and Countryside Act (1981) (as amended). It is an offence to intentionally kill, injure or take wild birds, intentionally take, damage or destroy a wild bird's nest while it's being used or built, intentionally take or destroy a wild bird's egg, possess, control or transport live or dead wild birds, or parts of them, or their eggs, sell wild birds or put them on display for sale, use prohibited methods to kill or take wild birds.

Environment Act (Wales) 2016

Section 7 of the Environment (Wales) Act has replaced the Section 42 of the NERC Act 2006 in Wales. Section 7 lists the living organisms and types of habitat in Wales which are considered to be of key significance to sustain and improve biodiversity in relation to Wales.

The Act states that Welsh Ministers must take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section and encourage others to take such steps.

Planning Policy (Wales) 2024

Section 6.4.3 of Planning Policy Wales states that: 'The planning system has a key role to play in helping to reverse the decline in biodiversity and increase the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement¹²⁴. Recognising that development needs to take place and some biodiversity may be impacted, the planning system should ensure that overall there is a net benefit for biodiversity and ecosystem resilience, resulting in enhanced well-being'

Well-Being of Future Generations (Wales) Act 2015

places a duty upon public bodies to produce well-being objectives, in addition, the Act also establishes Public Service Boards for each Local Authority area in Wales, who must prepare and publish a local Well-Being Plan, setting out objectives and how the board or its individual members will achieve them.

METHODOLOGY

Data search

A search was made for available information relating to designated for bats within a 10km area, including Internationally and Nationally important sites; Special Areas of Conservation (SAC) and Sites of Special Scientific Interest (SSSI) due to the highly mobile nature of this group. The South East Wales Biodiversity Records Centre (SEWBRc) supplied a data search for protected and priority species and other species and sites of local and National importance within 2km of the land adjacent Six Bells Estate (LERC Reference: 0256-178). Freely available information was obtained from internet source Multi Agency Geographical Information for the Countryside (MAGIC). The data search was conducted to the latest ecological survey guidelines.

Site survey - preliminary ecological appraisal

The site survey broadly followed a recognised survey method sometimes known as extended Phase 1.

The Phase 1 habitat survey technique is a standardised habitat mapping system used by consultants, wildlife organisations and agencies throughout the UK. Habitat information is conveyed by means of colour coded maps and symbols with descriptive text and target notes regarding features of wildlife interest (NCC 1990).

Limitations of the method, common to all surveys, are that it provides a 'snapshot' of plant species present and animals tracks and signs at the time of survey. Other plants may be more apparent at different times of year, but most plants are thought to be visible during the summer months. Phase 1 habitat surveys are ordinarily carried out between April and September, but broad habitat types may be identified outside of this season.

Rebecca Sheahan-East of East Ecology, a surveyor experienced in Phase 1 habitat survey carried out a site visit on 8th July 2025 using the extended Phase 1 habitat survey technique. The weather on the day of the survey was cool and overcast. The most dominant plant species were identified to assist in placing the habitat into the correct classification.

Any species not immediately identified were examined with the use of a hand lens and several wildflower keys.

Tracks and signs of fauna were also searched for, including examining opened hazel nuts, droppings, footprints and burrows.

Constraints

There were no constraints to the survey which would produce invalid results.

BASELINE CONDITIONS

Data search

Designated sites

Two Sites of Special Scientific Interest lay within the search area designated for their habitat interest and the fauna they support. Mynyddoedd Llangynidr a Llangatwg, Cefn yr Ystrad a Chomin Merthyr SSSI lies approximately 4.87 Km to the northeast and is designated for many features including hibernating lesser horseshoe bats.

- Cwm Glo a Glyndyrys (206m)
- Cwm Taf Fechan Woodlands (1375m)

Fifteen Sites of Importance for Nature Conservation also fell within the search area;

- [Cwm Glo](#) (153m)
- [Cwm Taf Fields & Cefn Coed Tip](#) (579m)
- Cwm Taf Fechan (673m)
- Winchfawr East & Clwydyfagwr (769m)
- [Afon Taf](#) (857m)
- [Cwm Taf Fawr](#) (927m)
- [Rhydycar West](#) (969m)
- [Winchfawr West](#) (982m)
- [Gellideg North Fields](#) (1120m)
- [Gethin Forest](#) (1166m)
- Blaencanaid (1280m)
- [Cwm Ffrwd](#) (1336m)
- [Cyfarthfa Park](#) (1359m)
- [Coed Meirig Pastures](#) (1542m)
- [Y Graig](#) (1622m)

Within the search area were; one Local Nature Reserve, One Wildlife Trust Reserve and one Regionally Important Geological Site as well as; eight semi-natural ancient woodlands, four restored ancient woodlands, one plantation on ancient woodland and one ancient woodland of unknown category. Further to this one NRW priority area for heathland and grassland and one for woodland was also recorded.

None of the designations fell on or adjacent to the site at Six Bells Estate other than the B-Lines designation which covers the Heolgerrig built up area and surrounding areas.

Habitats

Within the data search was habitat information for the area. The site itself was not mapped but nearby habitat areas were, such as acidic, neutral and calcareous grasslands, wet and dry heathland, marshy grasslands, flushes, scrub and bracken. The site is however quite isolated from these habitats of interest and isolated from tall vegetation serving as bat commuting routes due to the built-up nature of the area.

Species records

No species records originated from the site itself but 1568 priority and protected species records were found within the search area and summarised in table 1. 663 species of conservation concern and 2195 locally important species with 252 records of invasive non-native species records were also found within the search area but not included in the table. Records occurring at the same distance from the central grid reference are typically submitted by the same recorder visiting the same site.

Scientific name	Common name	Proximity	Number of records	Conservation status
<i>Clavaria zollingeri</i>	Violet coral	993m	1	S7, LBAP(CON, POW), LI(BIS), CHEGD, WS_P
<i>Entoloma bloxamii</i> s. lat.	Big blue pinkgill	468m	1	S7, , CHEGD, WS_P
<i>Microglossum atropurpureum</i>	Dark purple earthtongue	674m	2	S7, LI(BIS), CHEGD, WS_P
<i>Microglossum olivaceum</i> agg.	Olive earth tongue	993m	2	S7, LBAP(BBNP, CER, MON, POW), LI(BIS), CHEGD, WS_P
<i>Poronia punctata</i>	Nail fungus	760m	1	S7, WS_P
<i>Placynthium nigrum</i>	Placynthium nigrum	991m	1	S7, RDB1(Wales) - LC, WS_P
<i>Usnea articulata</i>	<i>Usnea articulata</i>	1173m	1	S7, RDB1(Wales) - VU, RDB1(UK) - NT, LI(VC42, R), WS_P
<i>Usnea florida</i>	Witches' whiskers lichen	1770m	1	S7, RDB1(Wales) - LC, WS_P
<i>Centaurea cyanus</i>	Cornflower	1983m	1	S7, RDB1(Wales) - CR, LBAP(CON, GWY, VOG), LI(BIS), LI(VC49, LR), LI(VC50, LR)
<i>Euphrasia officinalis</i> subsp. <i>anglica</i>	English sticky eyebright	448m	1	S7, RDB1(Wales) - VU, LBAP(GWY), LI(BIS), LI(SEWBRcC), LI(VC47), LI(VC48, LS), LI(VC49, LR)
<i>Euphrasia officinalis</i> subsp. <i>pratensis</i>	Large flowered sticky eyebright	714m	4	S7, RDB1(UK) - VU, LBAP(GWY, NPT, VOG), LI(BIS), LI(SEWBRcC), LI(VC43), LI(VC47), LI(VC49, LS)
<i>Hieracium angustatifforme</i>	Small-leaved hawkweed	2241m	1	S7, RDB1(Wales) - CR, RDB2(UK) - R
<i>Hycinthoides non-scripta</i>	Bluebell	243m	31	WCA8, LBAP (ANG, CLY, CON, FLI, SNP, TRA, TRF)
<i>Lycopodium clavatum</i>	Stagg's horn clubmoss	1281m	4	HDir, S7, CITES, LI(VC50, LS), LI(VC51, LR), LI(VC52, LR), WS_P
<i>Platanthera bifolia</i>	Lesser butterfly orchid	853m	1	S7, RDB1(UK) - VU, LBAP(CON, GWY, TRA), LI(BIS), LI(VC43), LI(VC47), LI(VC48, LS), LI(VC49, LR), LI(VC50, LR), LI(VC51, LS), LI(VC52, LS)
<i>Sorbus leyana</i>	Ley's whitebeam	2467m	1	S7, RDB1(Wales) - CR, RDB2(UK) - R, LBAP(BBNP, POW), LI(BIS), WS_P
<i>Acronicta psi</i>	Grey dagger	988m	3	S7, LBAP(GWY, VOG)
<i>Acronicta rumicis</i>	Knot grass	760m	16	S7, LBAP (GWY, VOG)
<i>Agrochola lychnidis</i>	Beaded chestnut	998m	1	S7, LBAP (GWY, VOG)
<i>Allophyes oxyacanthae</i>	Green brindled crescent	1231m	2	S7, LBAP (GWY, VOG)
<i>Amphipoea oculaea</i>	Ear moth	1231m	2	S7, LBAP (GWY, VOG)
<i>Amphipyra tragopoginis</i>	Mouse moth	998m	1	S7, LBAP(GWY, VOG)

Anchoscelis helvola	Flounced chestnut	1231m	1	S7, LBAP (GWY, VOG)
Anchoscelis litura	Brown spot-pinion	998m	1	S7, LBAP(GWY)
Apamea remissa	Dusky brocade	998m	10	S7, LBAP(GWY, VOG)
Arctia caja	Garden tiger	998m	6	S7, LBAP(GWY, VOG)
Boloria euphrosyne	Pearl bordered fritillary	998m	1	WCA5, S7, RDB1(UK) - EN, LBAP(BBNP, CER, CON, DEN, PEM, POW), LI(SEWBRcC), LI(VC43), WS_P
Boloria selene	Small pearl bordered fritillary	760m	15	S7, RDB1 (UK) - NT, LBAP (BGW, BRG, CON, DEN, FLI, GWY, MTR, NEW, POW, RCT, SNP, SWN, TRF, VOG), LI(SEWBRcC), LI(VC43)
Bombus humilis	Brown banded carder bee	1753m	3	S7, LBAP (CER, CON, FLI, GWY, PEM, POW, VOG)
Bombus rudarius	Red shanked carder bee	1855m	1	S7, LBAP(MTR, VOG), LI(BIS)
Brachylomia viminalis	Minor shoulder knot	998m	1	S7, LBAP(GWY, VOG)
Caradrina morpheus	Mottled rustic	1231m	1	S7, LBAP (GWY, VOG)
Ceramica pisi	Broom moth	760m	17	S7, LBAP (GWY, VOG)
Chiasmia clathrata	Latticed heath	1209m	2	S7, LBAP(GWY, VOG), LI(BIS)
Chrysis fulgida	Shimmering ruby	1722	1	S7
Cirrhia icteritia	Sallow	988m	3	S7, LBAP (GWY, VOG)
Coenonympha pamphilus	Small heath	378m	18	S7, RDB1 (UK) - NT, LBAP (GWY, VOG)
Cupido minimus	Small blue	243m	3	WCA5, S7, RDB1(UK) - NT, LBAP(CON, PEM, VOG), LI(BIS), LI(SEWBRcC), WS_P
Diarsia rubi	Small square spot	1231m	7	S7, LBAP (GWY, VOG)
Ecliptopera silaceata	Small phoenix	659m	11	S7, LBAP (GWY, VOG)
Ennomos fuscantaria	Dusky thorn	1574m	2	S7, LBAP (GWY, VOG)
Erynnis tages	Dingy skipper	381m	8	S7, RDB1(UK) - VU, LBAP(BGW, BRG, CON, GWY, SWN, VOG), LI(SEWBRcC), WS_C
Eugnorisma glareosa	Autumnal rustic	998m	4	S7, LBAP (GWY, VOG)
Euphydryas aurinia	Marsh fritillary	417m	48	HDir, WCA5, S7, Bern, RDB1(UK) - VU, LBAP(ANG, BBNP, CER, CON, CRM, GWY, PEM, POW, SNP, TRA, VOG), LI(BIS), LI(SEWBRcC), WS_P
Euxoa nigricans	Garden dart	2008	1	S7, LBAP(GWY), LI(BIS)
Graphiphora augur	Double dart	998m	2	S7, LBAP(BRG)
Hemaris tityus	Narrow bordered bee hawkmoth	998m	2	S7, LBAP(CER, CON, GWY, POW), LI(BIS), WS_P
Hepialus humuli	Ghost moth	998m	4	S7, LBAP (GWY, VOG)
Hipparchia semele	Grayling	1494m	7	S7, RDB1 (UK) - VU, LBAP (BRG, CDF, GWY, RCT, VOG), LI(SEWBRcC), LI(VC43), WS_C
Hoplodrina blanda	Rustic	998m	4	S7, LBAP (GWY, VOG)
Hydraecia micacea	Rosy rustic	998m	1	S7, LBAP (GWY, VOG)
Lasiommata megera	Wall	1855m	3	S7, RDB1 (UK) - NT, LBAP (GWY, VOG), WS_C
Leucania comma	Shoulder striped wainscot	998m	10	S7, LBAP (GWY, VOG)
Litoligia literosa	Rosy minor	998m	1	S7, LBAP (GWY, VOG)
Lycia hirtaria	Brindled beauty	1704m	2	S7, LBAP (GWY, VOG)
Macaria wauaria	V moth	998m	1	S7, LBAP(BRG)
Melanchra persicariae	Dot moth	998m	4	S7, LBAP (GWY, VOG)
Meloe violaceus	Violet oil beetle	1470	1	S7, RDB2(UK) - NB

Mniotype adusta	Dark brocade	998m	5	S7, LBAP(GWY, VOG)
Orthosia gracilis	Powdered quaker	998m	2	S7, LBAP(GWY, VOG)
Pelurga comitata	Dark spinach	998m	1	S7, LI(BIS)
Perizoma albulata	Grass rivulet	1584m	7	S7, LBAP(VOG), LI(BIS)
Rheumaptera hastata hastata	Argent and Sable	998m	1	S7, LBAP(BBNP, CON, MON, POW), LI(BIS)
Satyrium w-album	White letter hairstreak	1233m	1	WCA5, S7, RDB1(UK) - EN, LBAP(BRG, NEW, SWN, VOG), LI(SEWBRcC), WS_C
Scotopteryx chenopodiata	Shaded broad-bar	988m	4	S7, LBAP (GWY, VOG)
Spilosoma lubricipeda	White ermine	760m	15	S7, LBAP (GWY, VOG)
Spilosoma lutea	Buff ermine	760m	14	S7, LBAP (GWY, VOG)
Stilbia anomala	Anomalous	1281m	2	S7, LBAP(GWY, VOG)
Tholera cespitis	Hedge rustic	988m	3	S7, LBAP (GWY, VOG)
Tholera decimalis	Feathered gothic	988m	1	S7
Timandra comae	Blood vein	1231m	3	S7, LBAP (VOG)
Tyria jacobaeae	Cinnabar moth	899m	20	S7, LBAP (GWY, VOG)
Xanthorhoe ferrugata	Dark-barred twin-spot carpet	988m	5	S7, LBAP (GWY, VOG)
Xestia castanea	Neglected rustic	1231m	4	S7, LBAP(GWY)
Xylena exsoleta	Sword grass	998m	1	S7, LBAP(CON, DEN, POW), WS_P
Anguis fragilis	Slow worm	1194m	4	WCA5, S7, Bern, LBAP (ANG, CLY, CON, DEN, FLI, GWY, POW, SNP, TRA, VOG), WS_C
Bufo bufo	Common toad	964m	18	WCA5, S7, Bern, LBAP (ANG, CLY, CON, DEN, FLI, GWY, POW, TRA, VOG)
Lissotriton	Lissotriton	1139m	6	WCA 5
Lissotriton helveticus	Palmate newt	760m	15	WCA5, Bern, LBAP (ANG, CLY, CON, DEN, FLI, POW, TRA), LI(BIS), WS_C
Lissotriton vulgaris	Smooth newt	1462m	1	WCA5, Bern, LBAP(CLY, CON, DEN, POW, TRA), LI(BIS), WS_C
Natrix helvetica	Grass snake	497m	2	WCA5, S7, Bern, LBAP (ANG, CLY, CON, DEN, FLI, GWY, POW, SNP, TRA, VOG), LBAP (ANG, CLY, DEN, FLI, POW, SNP, TRA, VOG)
Rana temporaria	Common frog	560m	26	HDir, WCA5, Bern, LBAP (ANG, CLY, CON, FLI, POW, TRA)
Triturus cristatus	Great crested newt	646m	59	EPS, HDir, WCA5, S7, Bern, RDB2(UK), LBAP(ANG, BBNP, CLY, CON, DEN, MON, POW, SNP, TRA, TRF, VOG, WRE), LI(BIS), WS_P
Zootoca vivipara	Common lizard	760m	6	WCA5, S7, Bern, LBAP (ANG, CLY, CON, DEN, FLI, GWY, POW, SNP, TRA, TRF, VOG)
Anguilla anguilla	European eel	1662m	1	S7, RDB1 (UK) - CR, LBAP (CLY, CON, GWY, VOG), WS_P
Salmo salar	Atlantic salmon	880m	7	HDir, S7, Bern, RDB2(UK), LBAP(CLY, CON, DEN, GWY, POW, TRA, VOG), WS_P
Salmo trutta	Brown/sea trout	880m	15	S7, LBAP (BGW, CLY, CON, GWY, MTR, RCT, TRA, TRF, VOG), LI(BIS), WS_P
Acanthis cabaret	Lesser redpoll	760m	18	S7, LBAP (CON), LBAP (DEN, POW, VOG), WBAm(RSPB), UKBR(RSPB)
Accipiter gentilis	Goshawk	1306m	11	WCA1.1, WCA9, CITES, LBAP (CLY, CON, POW, VOG)
Alauda arvensis	Skylark	912m	17	BDir22, S7, LBAP (ANG, BBNP, CER, CLY, CON, CRM, DEN, FLI, GWY, PEM, POW, SNP, TRF, VOG), WBAm(RSPB), UKBR(RSPB)

Alcedo atthis	Kingfisher	998m	15	Bdir1, WCA1.1, Bern, LBAP (CLY, CON, DEN, FLI, GWY, POW, TRA), WBAm(RSPB), UKBAm(RSPB)
Anthus trivialis	Tree pipit	760m	17	S7, Bern, LBAP (CON, DEN, FLI, GWY, POW, VOG), WBAm(RSPB), UKBR(RSPB)
Bucephala clangula	Goldeneye	1574m	1	BDir22, WCA1.2, LBAP (CON, POW), UKBAm(RSPB)
Caprimulgus europaeus	Nightjar	760m	9	BDir1, S7, Bern, LBAP (BBNP, CER, CLY, CON, CRM, DEN, FLI, GWY, MON, PEM, POW, SNP, VOG), WBAm(RSPB), LI(VC43), UKBAm(RSPB)
Chroicocephalus ridibundus	Black headed gull	912m	14	BDir22, S7, WBR(RSPB), LBAP (GWY, VOG), UKBAm(RSPB), WS_P
Circus cyaneus	Hen harrier	1106m	2	BDir1, WCA1.1, S7, CITES, WBR(RSPB), LBAP (BBNP, CON, DEN, FLI, GWY, POW, SNP, VOG), LBAP (BBNP, DEN, FLI, POW, SNP, VOG), LI(VC43), WS_P
Crex crex	Corncrake	1241m	1	BDir1, WCA1, WCA9, S7, Bern, WBR(RSPB), UKBR(RSPB), LBAP(ANG, CON, GWY, PEM), LI(BIS)
Cuculus canorus	Cuckoo	620m	17	S7, WBR(RSPB), LBAP (CON, DEN, FLI, GWY, VOG), UKBR(RSPB)
Dryobates minor	Lesser spotted woodpecker	1241m	1	S7, Bern, WBR(RSPB), LBAP (BBNP, CON, DEN, FLI, GWY, POW, VOG), LI(VC43), UKBR(RSPB), WS_P, WS_C
Emberiza schoeniclus	Reed bunting	518m	12	S7, Bern, LBAP (BBNP, CER, CLY, CON, DEN, FLI, GWY, PEM, POW, VOG), WBAm(RSPB), UKBAm(RSPB), WS_C
Falco columbarius	Merlin	1241m	1	BDir1, WCA1, Bern, CITES, WBR(RSPB), UKBR(RSPB), LBAP(CON, DEN, GWY, POW), LI(VC43), WS_P, WS_C
Falco peregrinus	Peregrine	243m	16	BDir1, WCA1.1, Bern, CITES LI(VC43)
Falco subbuteo	Hobby	998m	1	WCA1.1, Bern, CITES, LBAP (CON, GWY, POW, VOG), LI(VC43), WS_P
Falco tinnunculus	Kestrel	714m	12	S7, Bern, CITES, WBR(RSPB) LI(VC43), UKBAm(RSPB)
Ficedula hypoleuca	Pied flycatcher	1231m	2	S7, WBR(RSPB), LBAP (CON, GWY, POW, SNP, VOG), UKBR(RSPB)
Fringilla montifringilla	Brambling	1241m	3	WCA1.1, LBAP (CON), WBAm(RSPB)
Larus argentatus	Herring gull	811	30	BDir22, S7, WBR(RSPB), LBAP (CON, GWY, POW, VOG), UKBR(RSPB)
Linaria cannabina	Linnet	518m	22	S7, Bern, WBR(RSPB), LBAP (ANG, BBNP, CER, CLY, DEN, FLI, PEM, VOG), LBAP (CON, GWY), UKBR(RSPB)
Locustella naevia	Grasshopper warbler	760m	13	S7, WBR(RSPB), LBAP (BBNP, CON, DEN, FLI, GWY, POW, VOG), UKBR(RSPB), WS_C
Loxia curvirostra	Crossbill	760m	18	WCA1.1, Bern, LBAP (CON, POW), LI(VC43)
Milvus milvus	Red kite	243m	21	BDir1, WCA1.1, WCA9, CITES, LBAP (CON, CRM, GWY, POW), WBAm(RSPB), WS_P
Muscicapa striata	Spotted flycatcher	2039m	2	S7, Bern, WBR(RSPB), LBAP (BBNP, CER, CLY, CON, DEN, FLI, GWY, PEM, POW, VOG), UKBR(RSPB)
Passer domesticus	House sparrow	243m	38	S7, WBAm(RSPB), UKBR(RSPB)
Phoenicurus phoenicurus	Redstart	518m	9	WCA1.1, Bern, LBAP (GWY, VOG), WBAm(RSPB), UKBR(RSPB)
Phylloscopus sibilatrix	Wood warbler	760m	7	S7, WBR(RSPB), LBAP (CON, GWY, SNP, VOG), UKBR(RSPB)
Plectrophenax nivalis	Snow bunting	1974m	1	WCA1, Bern, WBAm(RSPB), LBAP(CON), LI(BIS)
Poecile montanus	Willow tit	1342m	5	S7, Bern, WBR(RSPB), LBAP (BBNP, DEN, FLI, POW, VOG), LBAP (CON, GWY), LI(VC43), UKBR(RSPB)
Poecile palustris	Marsh tit	1231m	1	S7, Bern, WBR(RSPB), LBAP (BBNP, CON, DEN, FLI, GWY, POW, VOG), UKBR(RSPB)

Prunella modularis	Dunnock	243m	41	S7, Bern, LBAP (CON, POW, VOG), UKBAm(RSPB)
Pyrrhula pyrrhula	Bullfinch	714m	44	S7, WBR(RSPB), LBAP (BBNP, CER, CLY, CON, DEN, FLI, GWY, PEM, TRF, VOG), UKBAm(RSPB)
Regulus ignicapilla	Firecrest	1342m	1	WCA1.1, Bern, LBAP (BRG, CON, GWY, POW), WBAm(RSPB), LI(VC43), WS_P, WS_C
Sturnus vulgaris	Starling	234m	27	BDir22, S7, Bern, WBR(RSPB), LBAP (BBNP, CON, FLI, GWY, VOG), UKBR(RSPB)
Tringa ochropus	Green sandpiper	1241m	3	WCA1.1, Bern, LBAP (CON, VOG), WBAm(RSPB), UKBAm(RSPB)
Turdus iliacus	Redwing	998m	23	BDir22, WCA1.1, WBAm(RSPB), UKBR(RSPB)
Turdus philomelos	Song thrush	629m	49	BDir22, S7, Bern, LBAP (ANG, BBNP, CER, CLY, CON, DEN, FLI, GWY, PEM, POW, SNP, TRF, VOG, WRE), WBAm(RSPB), UKBR(RSPB)
Turdus pilaris	Fieldfare	1281m	13	BDir22, WCA1.1, WBAm(RSPB), UKBR(RSPB)
Turdus torquatus	Ring ouzel	1854m	2	S7, Bern, WBR(RSPB), LBAP (BBNP, CON, DEN, FLI, GWY, POW, VOG), LI(VC43), UKBR(RSPB), WS_P
Tyto alba	Barn owl	629m	21	WCA1.1, WCA9, Bern, CITES, LBAP (ANG, CLY, CON, CRM, DEN, FLI, GWY, PEM, POW, SNP, TRA, VOG, WRE), LI(VC43), WS_C
Vanellus vanellus	Lapwing	1647m	10	BDir22, S7, WBR(RSPB), UKBR(RSPB), LBAP(ANG, BBNP, CLY, CON, CRM, DEN, GWY, MON, PEM, POW, SNP, TRF, VOG), LI(VC43), WS_C
Arvicola amphibius	Water vole	714m	3	WCA5, S7, LBAP (ANG, BBNP, CER, CLY, CON, CRM, DEN, FLI, GWY, PEM, POW, SNP, TRA, TRF, VoG), WS_P
Chiroptera	Bat	998m	28	EPS, WCA5, LBAP (ANG, DEN, FLI, RCT, SNP, TRA, TRF)
Eptesicus serotinus	Serotine	1261m	5	EPS, HDir, WCA5, Bern, RDB2(UK), LBAP(GWY, POW, TRA, TRF), LI(BIS), WS_P
Erinaceus europaeus	European hedgehog	243m	29	S7, Bern
Lepus europaeus	Hare	1654m	4	S7, LBAP(ANG, BBNP, CER, CLY, CON, CRM, DEN, GWY, PEM, POW, SNP, TRF, VOG), WS_P
Lutra lutra	Otter	698m	30	EPS, HDir, WCA5, S7, Bern, CITES, RDB2 (UK),
Meles meles	Badger	714m	6	BA, Bern, LBAP (CLY, CON, DEN, FLI, PEM, POW, TRF, WRE), WS_C
Micromys minutus	Harvest Mouse	760m	1	S7, LBAP(BRG, CON, GWY, VOG), LI(BIS), WS_P
Mustela putorius	Polecat	2169m	1	HDir, S7, Bern, RDB2 (UK), LBAP (BGW, BRG, CON, FLI, GWY, NEW, POW, SNP, VOG)
Myotis	Myotis bat	649m	38	EPS, HDir, WCA5, Bern, LBAP (ANG, DEN, FLI, SNP, TRA, TRF)
Myotis daubentonii	Daubenton's bat	1161m	14	EPS, HDir, WCA5, Bern, RDB2 (UK), LBAP (ANG, CLY, CON, DEN, FLI, GWY, POW, SNP, TRA, TRF), WS_P
Myotis nattereri	Natterer's bat	1309m	9	EPS, HDir, WCA5, Bern, RDB2(UK), LBAP(ANG, CLY, CON, DEN, GWY, POW, SNP, TRA, TRF), LI(BIS), WS_P
Nyctalus noctula	Noctule	655m	18	EPS, HDir, WCA5, S7, Bern, RDB2 (UK), LBAP (ANG, CLY, CON, DEN, FLI, GWY, POW, SNP, TRA, TRF, VOG), WS_P
Nyctalus	Nyctalus bat species	1380m	12	EPS, HDir, WCA5, Bern, LBAP(ANG, DEN, SNP, TRA), LI(BIS)
Pipistrelle	Pipistrelle bat species	491m	48	EPS, WCA5, LBAP (ANG, DEN, FLI, SNP, TRA, TRF)

Pipistrellus pipistrellus	Common pipistrelle	491m	104	EPS, Hdir, WCA5, S7, Bern, RDB2 (UK),
Pipistrellus pygmaeus	Soprano pipistrelle	655m	47	EPS, Hdir, WCA5, S7, Bern, RDB2 (UK)
Plecotus auritus	Brown long-eared bat	655m	27	EPS, HDir, WCA5, S7, Bern, RDB2 (UK), LBAP (ANG, CLY, CON, DEN, FLI, GWY, POW, SNP, TRA, TRF, VOG)
Plecotus	Long eared bat species	1621m	1	EPS, HDir, WCA5, Bern, LBAP (ANG, DEN, FLI, SNP, TRA, TRF)
Rhinolophus ferrumequinum	Greater horseshoe bat	649m	14	EPS, HDir, WCA5, Anll, S7, Bern, RDB2 (UK), LBAP (ANG, BBNP, CER, CLY, CRM, DEN, FLI, MON, PEM, POW, SNP, TRA, TRF, VOG), WS_P
Rhinolophus hipposideros	Lesser horseshoe bat	649m	31	EPS, HDir, WCA5, S7, Bern, RDB2 (UK), LBAP (ANG, BBNP, CLY, CON, CRM, DEN, FLI, GWY, MON, PEM, POW, SNP, TRA, TRF, VOG, WRE)
Sciurus vulgaris	Red squirrel	1574m	1	WCA5, S7, Bern, LBAP(ANG, BBNP, CON, CRM, DEN, GWY, POW, SNP), WS_P

Table 1. Summary of data search results relating to bats from SEWBrEC.

UKBAP = UK Biodiversity Action Plan Priority Species, UKBAP (R) = UK Biodiversity Action Plan Priority Species (Research only species), BDir1 = EC Birds Directive Annex 1 Species, BDir21 = EC Birds Directive Annex 2.1 Species, BDir22 = EC Birds Directive Annex 2.2 Species, Bern = The Bern Convention on the Conservation of European Wildlife and Natural Habitats Bonn = The Bonn Convention on the Conservation of Migratory Species of Wild, Animals Species, CITES = Convention on International Trade in Endangered Species, EPS = European Protected Species, HDir = EU Habitats Directive Species, NRW = Natural Resources Wales Priority Species, RD1 (Wales) = Welsh Red Data Book listing based on IUCN guidelines RD1 (UK) = UK Red Data Book listing based on IUCN guidelines, RD2 (UK) = UK Red Data Book listing not based on IUCN guidelines (Nationally, Rare and Scarce), WBR (RSPB) = RSPB Welsh Red listed birds (not based on IUCN criteria), WBAm (RSPB) = RSPB Welsh Amber listed birds (not based on IUCN criteria), UKBR (RSPB) = RSPB UK Red listed birds (not based on IUCN criteria), UKBAm (RSPB) = RSPB UK Amber listed birds (not based on IUCN criteria) S7 = Environment Act (Wales), Section 7 Species, WCA1.1 = Wildlife and Countryside Act Schedule 1 Part 1 Species, WCA5 = Wildlife and Countryside Act Schedule 5 Species, WCA8 = Wildlife and Countryside Act Schedule 8 Species, WCA9 = Wildlife and Countryside Act Schedule 9 Species, INNS = Invasive Non-Native Species, WSG.P = Guidelines for the Selection of Wildlife Sites in South Wales – Primary, species, WSG.C = Guidelines for the Selection of Wildlife Sites in South Wales -Contributory species, WVP = IUCN Threat Listing of Welsh Vascular Plants, LBAP (xxx) = Local Biodiversity Action Plan Species (see key below), LI (SEWBrEC) = Locally Important Species (as identified by local specialists) in SEWBrEC area, LI (BIS) = Locally Important Species (as identified by local specialists) in BIS area, LI (BRYO-MON) = Locally or nationally scarce or rare bryophyte in Monmouthshire, LI (VC##) = Locally Important Species (as identified by local specialists) in Vice County ##, LI (VC##, LS) = Locally Scarce in Vice County ##, LI (VC##, LR) = Locally Rare in Vice County ##, LI (VC##, EX) = Extinct in Vice County ##, LI (VC##, UR) = Under Recorded in Vice County ##

Site survey

Habitats

The study area consisted of gently sloping vacant plot with rubble spread over the surface. some weedy species were present with bramble as well as a non-native hedge and a single non-native conifer. The habitats have been mapped in Figure 3 and a species list can be found in Appendix B.

Scattered trees

One mature but mis-shaped conifer tree stood to the northwestern corner of the plot. It was thought that the tree may have been a spruce and planted on made ground. The tree appeared to have had the top removed in the past and had regrown from lower down the stem.

Ephemeral short perennial

The plot was covered by disturbed ground which had partly vegetated with short vegetation at the western end with scattered vegetation to the east. Species such as broad-leaved dock *Rumex obtusifolius*, creeping thistle *Cirsium arvense* and nipplewort *Lapsana communis* were recorded frequently in those areas. Some other weedy species were present and reported in Appendix B.

Hedge

One hedge was recorded along the northern edge of the plot this was comprised mostly of Wilson's honeysuckle, *Lonicera nitida* with some fuchsia *Fuchsia* sp. and garden privet *Ligustrum ovalifolium*. The hedge appeared to have been clipped in the past but had become very wide. This will be retained in situ and maintained by land owner in adjacent property.

Bare ground

Rubble and stone had been spread over the plot mainly to the south and eastern end. Some recent disturbance to the plot occurred due to the removal of Japanese knotweed while following an approved Japanese knotweed removal strategy produced by 'Clearsafe knotweed Ref Land@sixbells'. The land has since been left to rewild.

Potential for priority and protected species

Bats

The nearest records of bats were approximately 600m away and some common light tolerant species are likely to fly through the Heolgerrig area. The plot itself has no features which could be used by bats for shelter and does not offer any foraging or commuting habitat.

Hedgehog

There are several relatively nearby records of hedgehog and are likely to move through the built-up area.

ECOLOGICAL CONSTRAINTS, FURTHER SURVEYS OPPORTUNITIES AND RECOMMENDATIONS FOR MITIGATION

Designated sites

The site was small enough and far enough away from the statutorily designated sites for the development not to have any direct or indirect impacts.

Habitats

The areas most affected by the proposals is a bare ground and ephemeral short perennial vegetation and the non-native hedge. The site is poorly connected to any nearby habitats of interest such as heathlands and grasslands due to its position in the built-up area. Connectivity for bats in this area is also poor due to a lack of shrubs and trees.

Scattered trees

The conifer tree is reported to be outside of the ownership boundary and will remain in situ.

Ephemeral short perennial

The ephemeral/short perennial vegetation will be affected by the construction of the dwelling and garden, but as the habitat has a negligible biodiversity value the loss need not be mitigated.

Hedge

Although previously thought to be in the ownership of the applicant, it is not within the legal title and will be retained. The hedge was made up of non-native species, it is likely to serve as shelter for a small number of common invertebrates and possibly birds. The hedge feature will be retained in situ and maintained by land owner in adjacent property.

Bare ground

As the bare ground habitat has negligible biodiversity value, impacts to it will not be mitigated.

Species

A large number of records and a diversity of protected and priority plants, fungi, invertebrates, amphibians, reptiles, birds and mammals were noted from the data search. This is representative of the good quality habitats surrounding the built-up area of Heolgerrig. No

records derived from the site itself, but provision for species will be included in the design as enhancement.

Reptiles

Slow worm, common lizard and grass snake have all been recorded in the area but are very unlikely to be present on the site due to its isolated nature from other semi-natural habitats and the history of disturbance the site has received, most recently in line with the Japanese knotweed removal strategy, the land has since been left to rewild. No survey or mitigation for reptiles is proposed, but if found during the construction phase advice should be sought from an ecologist.

Birds

House sparrow and swift were noted on the day of the survey visit. No impacts are anticipated on birds through the construction of the new dwelling, however there is opportunity for enhancing habitat for them. Installation of two swift boxes on the dwelling will be needed to fulfil this. The swift boxes will be positioned on the north gable end of the dwelling at 5m or more above ground level. The PRO UK rendered build-in swift boxes is a suitable model.

https://www.nhbs.com/vivara-pro-rendered-build-in-swift-box-uk-brick-size?bkfno=256322&ca_id=1495&adlocale=uk&qad_source=1&qad_campaignid=231032408&qclid=Cj0KCQjwzt_FBhCEARIsAJGFVvKH_8xTbVFpQ5yIRe5AXXoTtEUKGJ5a4sM_zqL-eHRS8ugkjb64wyMaAmezEALw_wcB

Bats

Since no features are present on the site which could be used for bat roosting and barely any vegetation to attract night flying insects exists on the plot no impacts are anticipated on bats via the construction of the new dwelling. Therefore, no further surveys or mitigation is required.

There is a streetlamp on the opposite side of the street on the south and west side. The newer style of street lighting is likely to avoid spill up to and on the proposed dwelling. Future exterior lighting of the dwelling and the access in particular must comply with the ILP and Bat Conservation Trust guidance document. <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>. No light spill will be allowed on the bat box on the south elevation.

In terms of enhancement of the site for bats an integrated bat box will be added to the south facing gable end of the new dwelling, away from windows as far as possible and street lighting. Models such as the Vivara Pro build-in woodstone bat box or bat access brick would be appropriate. https://www.nhbs.com/vivara-pro-build-in-woodstone-bat-box?bkfno=252139&ca_id=1495&adlocale=uk&qad_source=1&qclid=Cj0KCQIA0--6BhCBARIsADYqyL9iiV6idQ5iGfErgOqf5ti3YY0Zxmsf0PnsuOt8PshLsopRkjqxTWcaAkRIEALw_wcB.

Bat Access brick https://www.wildcare.co.uk/wildlife-nest-boxes/bat-boxes/bat-access-brick-10601.html?gad_source=1&gclid=Cj0KCQiA0--6BhCBARIsADYqyL9BA3gXFwjMbPB-0cEmQH-M26-sDpXNEQgiNwIDCW3cHp2z-wd955IaAnv7EALw_wcB

Hedgehog

It is likely that hedgehogs are present and move through the built-up Heolgerrig area. To mitigate for any proposed barriers and facilitate their movement holes of 15cm x 15cm will be created within or underneath boundary fences on the south side.

CONCLUSIONS

No nationally or locally important designated sites fell at the site or nearby which would be impacted directly or indirectly by the proposals and need not be considered further.

The impacts to the habitats present are also thought to be negligible as the proposed building will affect habitats of negligible biodiversity value such as the bare ground and ephemeral/short perennial vegetation. The centre of the plot will be utilised for fruit and vegetable growing following permaculture principles, while climbing plants will be used on the south and east.

No impacts are anticipated on any priority or protected species. Due to the location and nature of the site, it was thought to be largely unsuitable for protected species including reptiles and bats.

To enhance the site for species biodiversity an integrated bat box will be installed on the south gable end to the side of the house, two swift boxes will be installed on the north gable end and access will be provided on the south boundary for hedgehogs.

External lighting will be compliant with the latest bats and lighting guidance in its maximum lux and direction of lighting.

FIGURES

Figure 1. Location of the land adjacent to Six Bells Estate Heolgerrig..



Figure 2. Proposed site layout Adapted from Indigo Design Drawing number SB-09



Figure 3. Phase 1 Habitats at land adjacent to Six Bells Estate Heolgerrig

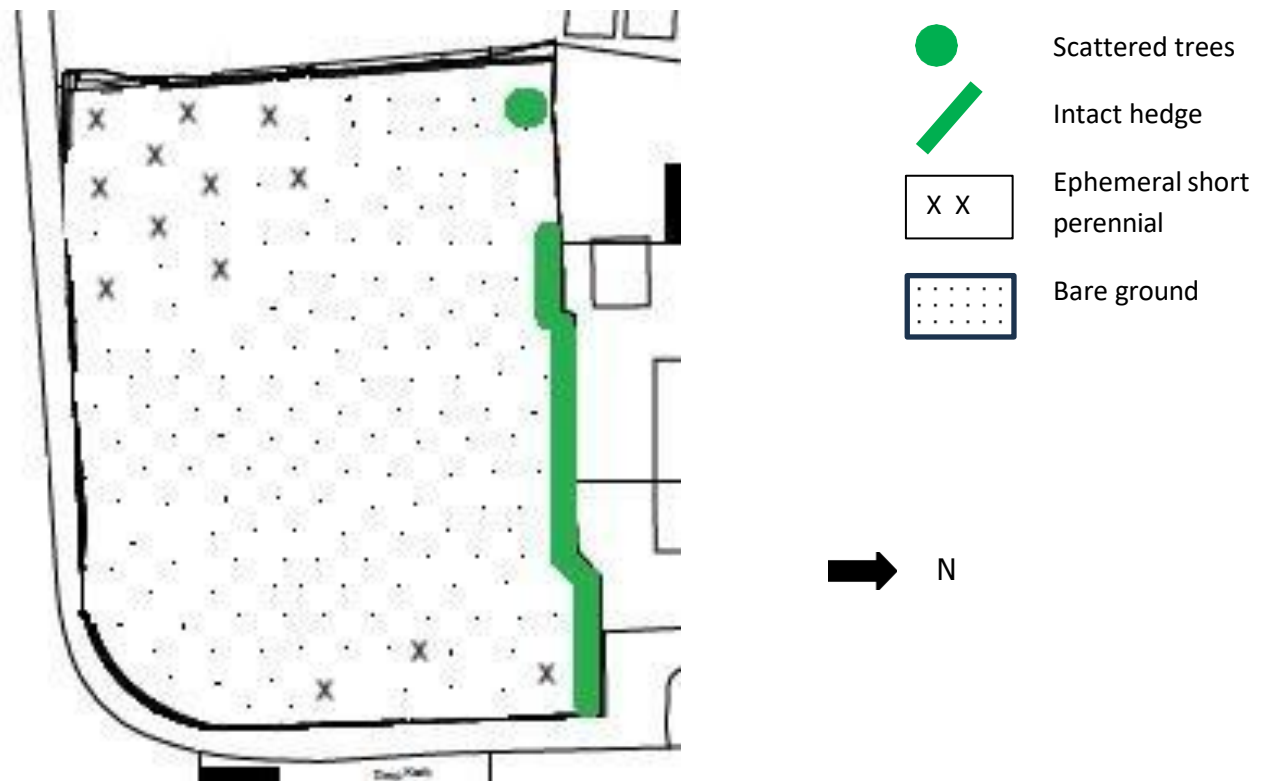
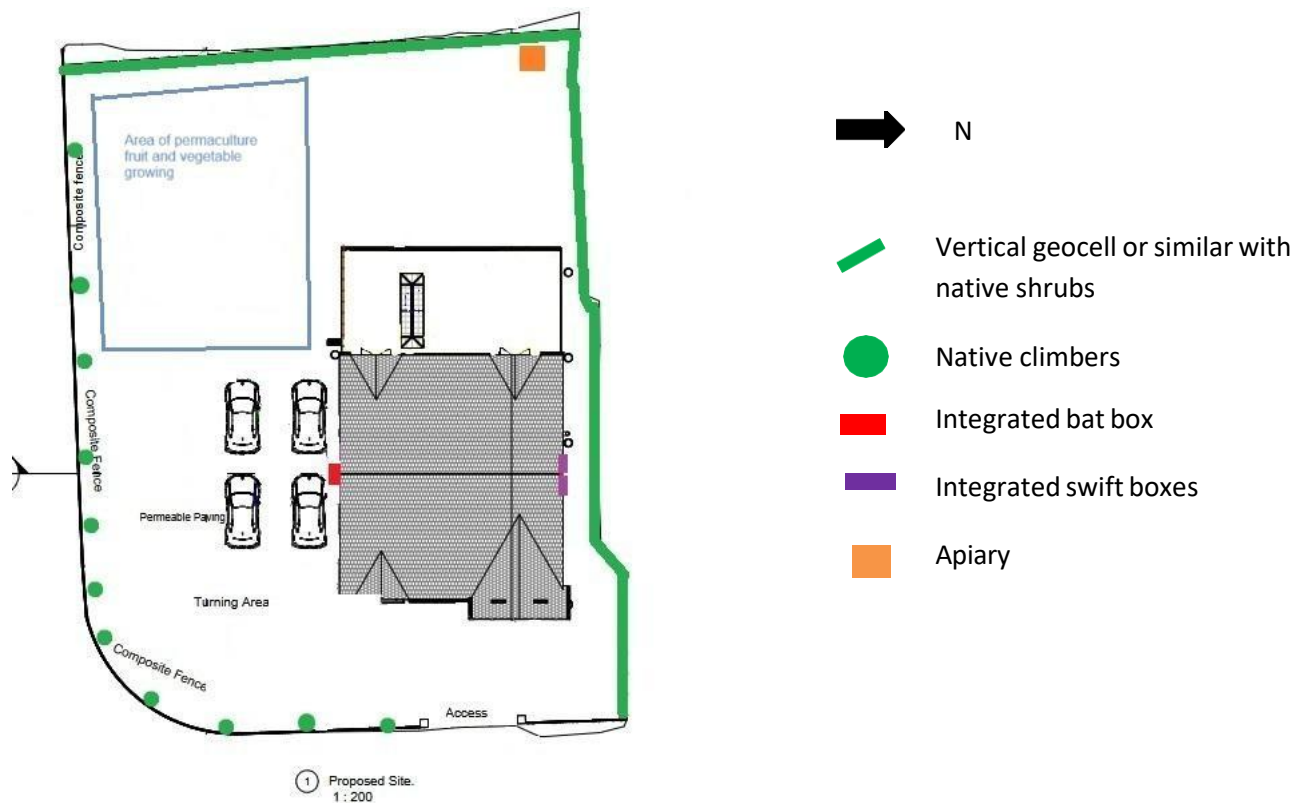


Figure 4. Proposed enhancements



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APPENDIX A. SITE PHOTOS



Photo 1.
View across the site east to west



Photo 2. View to the corner of the site



Photo 3. Ephemeral short perennial vegetation rewilded



Photo 4. Non-native intact hedge to north boundary to remain in situ and be maintained by land owner in adjacent property.



Photo 5. Block wall making up the West Boundary.

APPENDIX B FIELD NOTES

Species over whole site

Scientific name	Common name	Relative abundance
<i>Arrhenatherum elatius</i>	False oat grass	O
<i>Calystegia sepium</i>	Hedge bindweed	F
<i>Cardamine flexuosa</i>	Wavy bittercress	O
<i>Chamaenerion angustifolium</i>	Rosebay willowherb	O
<i>Cirsium arvense</i>	Creeping thistle	F
<i>Epilobium montanum</i>	Brad leaved willowherb	O
<i>Equisetum arvense</i>	Field horsetail	O
<i>Euphorbia helioscopia</i>	Sun spurge	R
<i>Geranium dissectum</i>	Cut-leaved cranesbill	R
<i>Geum urbanum</i>	Wood avens	O
<i>Holcus lanatus</i>	Yorkshire fog	O
<i>Lapsana communis</i>	Nipplewort	O
<i>Ranunculus repens</i>	Creeping buttercup	o
<i>Rubus fruticosus</i> agg.	Bamble	O
<i>Rumex obtusifolius</i>	Broad leaved dock	F
<i>Senecio jacobea</i>	Ragwort	O
<i>Taraxacum officinale</i> agg.	Dandelion	O
<i>Trifolium repens</i>	White clover	O

