Land adjacent to Lle Hyfryd
Mount Pleasant
Heolgerrig
Merthyr Tudful
CF48 1RY

A Preliminary Ecological Appraisal

Including proposals for Net Benefits for Biodiversity and a Green Infrastructure Scheme

For

Judith Budding

December 2024

Morgan Ecology

An Ecological Survey Report by Morgan Ecology, Llys Newydd, Llanfihangel Talyllyn, Aberhonddu LD3 7TG

Status	Name	Date
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Reviewer	Diane Morgan BA (Hons) ACIEEM, Senior Ecologist	5 December 2024

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1 Summary

1.1 Outline planning permission (P/23/0021) was granted on 2 June 2023 for the construction of a detached dwelling on a parcel of land adjacent to Lle Hyfryd, Mount Pleasant, Heolgerrig. The owner is now seeking to obtain full planning consent and has submitted detailed plans to the local planning authority – Merthyr Tudful County Borough Council. A consultation response from the planning authority stated that a Preliminary Ecological Appraisal was required for the site, and four specific points were indicated that must be addressed in the resulting report.

1.2 The site appraisal was undertaken by two experienced, independent ecologists in late November 2024, and all matters relating to the four points were considered when on site. The property is a bare plot between two dwellings along Mount Pleasant, and the proposed development is in keeping with existing houses nearby. Opening out onto Mount Pleasant at the front, the property backs onto an area of intensely used coal spoil and other industrial uses, related to the former Cyfarthfa Iron Works. Land use in the immediate area is therefore characterised as a post-industrial brownfield site.

1.3 Site assessment revealed that most of the property comprises compacted hardcore, sandwiched between two existing dwellings. At the front, the property faces on to Mount Pleasant, a metalled road serving other homes in the vicinity, whilst to the rear, the ground rises relatively steeply to open ground. A modest concrete block retaining wall effectively marks the boundary of the proposed development, although the sloping bank above is within the red line site boundary.

1.4 The site was considered to be of negligible ecological value with no evidence for the presence of protected species and no previous records to suggest that such species have been historically found at the property or within the immediate environs. No invasive non-native plant species were found during the appraisal. No additional survey effort is recommended. Development offers the opportunity to improve the site for nature conservation, and recommendations are therefore made with respect to Net Benefits for Biodiversity and Green Infrastructure, in line with the requirements of Planning Policy Wales 12.

2 Background

2.1 A modest parcel of land, on the north-western side of Mount Pleasant is proposed for the construction of a detached dwelling. Outline planning consent has been granted for the development (P/23/0021), dated 2 June 2023, and the owner is now seeking full planning permission for a 5 bedroomed detached house to be constructed on the site.

2.2 Located at National Grid Reference (NGR) SO 0332 0635, at an altitude of some 247m Above Ordnance Datum (AOD), the property will look south-east towards the centre of Merthyr Tudful. This part of the town, like other areas, is subject to continuous development, and a significant retail site is situated some 150m to the north-east. The proposed dwelling is in keeping with development along Mount Pleasant, which comprises residential properties of various ages.

2.3 Consultation with the planning authority led to detailed comments relating to the development and four points were specifically raised with respect to any ecological assessment of the site. The four points specified by the planning ecologist were:

- *That An Aderyn data search is required from the South East Wales Biodiversity Record Centre (Package C 2km);*
- *In line with the Environment (Wales) Act 2016 there will need to be ecological enhancement of the site.*
- *Planning Policy Wales 12, Chapter 6 [Sic] must be considered and as such a Green Infrastructure Statement is required. This will describe how green infrastructure has been incorporated into the proposal having regard to the stepwise approach and net benefit to*

biodiversity. The Green Infrastructure Statement should be taken into account by the commissioned Ecologist within the report in relation to the PEA;

- *The submitted plans state that native woodland species would be planted on the bank but the list of species provided includes mainly non-native or introduced species together with invasive species. In addition, the only native species included is not native to this area of the country. This is not acceptable but before amendments are made, the habitat(s) currently present on the site must be assessed (as outlined above).*

2.4 A Preliminary Ecological Appraisal (PEA) was conducted of the site on the 26th of November 2024 in good weather conditions, by two experienced independent ecologists. This report sets out the findings of the appraisal and a record search. Principal objectives of the survey effort were to:

- assess and describe the ecological features of the site according to recognised JNCC Phase 1 assessment protocols;
- determine if protected or invasive non-native species were present;
- consider if there will be negative ecological impacts from the proposed works;
- to gather sufficient information to be able to make appropriate recommendations;
- to make recommendations with respect to Net Benefits for Biodiversity; and,
- make comments to contribute to a Green Infrastructure Statement.

3 Survey team experience

3.1 Lead surveyor and author of this report is Phil Morgan, who has over 40 years' experience of field ecology. He holds Natural Resources Wales licences for several protected species and has advised on conservation efforts and development activity affecting mammals, herpetiles, and key habitat types. Phil was previously the Ecologist with Dŵr Cymru Welsh Water, and responsible for nature conservation activities over 37,000ha of land. He is Principal Ecologist with Morgan Ecology. He is a Chartered Environmentalist, with the Society for the Environment (CEnv), and a full Member of the Chartered Institute for Ecology and Environmental Management (MCIEEM). Phil has for many years, been County Mammal Recorder for Vice County 42: Sir Frycheiniog/Brecknockshire; responsible for verifying bat/terrestrial mammal records in that area.

3.2 Assisting with the survey was Diane Morgan, an Associate Member of the Chartered Institute of Ecology and Environmental Management (ACIEEM). Diane has considerable experience (over 30 years) of surveying-built structures for bats, and has conducted ringing of greater horseshoe and Daubenton's bats as part of a multi-year projects on the species, undertaken monitoring work on several important lesser horseshoe maternity sites, and assisted in radio tracking projects on the same species. Prior to her current role, she was the Director of Brecknock Wildlife Trust, and involved in a wide range of nature conservation work including species and habitat protection, and conservation land management. Diane holds an NRW licence to disturb bats (expiry February 2026). Other areas of interest include otter, dormice, water voles, reptiles, amphibians, fungi, and crayfish. Diane is a Senior Ecologist with Morgan Ecology.

4 Assessment methodology

4.1 Prior to the site visit, a desktop study was undertaken, which involved a standard search area of a 2km radius from the site (using a central grid reference). Details of statutory sites, designated for nature conservation interest were obtained.

4.2 A PEA was conducted on Tuesday 26 November 2024. Assessment comprised a survey employing the Phase 1 habitat survey methodology. This is a standardised technique for classifying and mapping British habitats. All areas within the survey zones were inspected and assessed for indicators of ecological value, including the presence and/or field signs of any protected or rare habitats and species. The site was walked over, recording plant species and features onto a custom-made recording sheet. Habitats and notes were drawn onto a map of the survey site and photographs were taken. A coloured Phase 1 habitat map was produced (see Appendix II).

4.3 As there are no built structures on the site, these were not a material consideration. However, the boundaries were subject to particular inspection, as well as well as any discarded items, to confirm or dismiss the presence, which might have to be taken into consideration in the development. Possible presence of terrestrial mammal species, such as badger (*Meles meles*), hazel dormouse (*Muscardinus avellanarius*), and west European hedgehog (*Erinaceus europaeus*), was undertaken, as well as reptiles such as slow-worm *(Anguis fragilis*), and common lizard (*Zootoca vivipara*). Presence of amphibians, such as common frog (*Rana temporaria*), and common toad (*Bufo bufo*), was also undertaken.

4.4 Possible presence of invasive non-native species (INNS), such as Japanese knotweed (*Reynoutria japonica*), Himalayan balsam (*Impatiens glandulifera*), giant hogweed (*Heracleum mantegazzianum*), and other introduced plants or animals was also appraised during the survey.

4.5 Table 1 below details the equipment used by the surveyors when conducting the PRA.

Table 1: Equipment used in the assessment

Equipment items	Purpose used
Canon IXUS 100IS digital camera (1)	Taking photographs

4.6 Additionally, and in compliance with the latest guidance in Section 6 of Planning Policy Wales 12 (PPW12) – the surveyors considered the property with respect to enhancements, to contribute to Net Benefits for Biodiversity (NBB), and a Green Infrastructure Statement (GIS).

5 Site description

5.1 The property lies on the north-west side of Mount Pleasant at SO 0332 0635, and is sandwiched between two existing detached dwellings – Lle Hyfryd to the north-east and Cavallino to the south-west. The property lies on a north-west/south-east alignment and is on slightly rising ground.

5.2 A substantial proportion of the site is compacted hardcore bounded by a combination of wooden fences and concrete block walls on the sides facing the adjacent properties. Access is by means of a ramp, at the top of which is another upright timber fence and access gate. To the rear, a cement block retaining wall holds back an earth bank of ground that slopes up towards a post and wire livestock fence.

5.3 Consideration of historic maps and aerial photographs indicate that the land to the north-west was formerly used as an area for spoil from the former Cyfarthfa Iron Works and coal levels, and that it is likely that soils are shallow and impoverished. The same area is currently characterised by short grasses and shrubs, such as hawthorn (*Crataegus monogyna*).

5.4 Currently the vicinity largely comprises domestic dwellings, focussed on Mount Pleasant, and with significant retail parks and the A470 trunk road to the east. There are domestic and small commercial premises to the south as part of Heolgerrig, and to the north around Clwydyfagwyr, whilst to the west land rises to Bryn y Badell and the county borough boundary.

6 Constraints or limitations

6.1 There were no particular constraints to undertaking the appraisal: complete freedom of access was granted, and weather conditions were suitable, with good visibility. A limitation to the PEA was the time of year when the appraisal was conducted – by late autumn plants are generally in a die-back condition. However, the mild weather for most of October/November meant that it was possible to identify most of the plants on the site.

7 Record search

7.1 As specified by the planning authority, a Package C record search was commissioned from the South East Wales Biodiversity Record Centre (SEWBReC), covering a 2km radius of the property. The search (unique reference 0245-671) revealed a total of 3,175 species records, the vast majority of which are unassessed, which automatically calls into question the validity of most of them. None of the records related to the survey site under consideration.

7.2 Of these records, some 1,508 of them related to priority species with just eleven records being within 500m of the property. Species recorded in this 500m zone included west European hedgehog – from a questionable source – and verified records of starling (*Sturnus vulgaris*), peregrine (*Falco peregrinus*), dunnock (*Prunella modularis*), and house sparrow (*Passer domesticus*). Within 500m of the site there were also unassessed records of pipistrelle bat (*Pipistrellus sp.*), which are of dubious reliability. Botanical species of note included a verified record of bluebell (*Hyacinthoides non-scripta*), and an unverified record, by a respected recorder of big blue pinkgill fungus (*Entoloma bloxamii s. lat.*). With respect to barn owl (*Tyto alba*), there were several records, the nearest being an unconfirmed sighting nearly 700m away.

7.3 There were no historic records of other mammals such as badger, or hazel dormouse, within 500m, or any amphibians or reptiles records. With respect to species of conservation concern, again there were few records, just five within 500m, and including verified records of swallow (*Hirundo rustica*), and sand martin (*Riparia riparia*). Locally important species within 500m included jackdaw (*Coloeus monedula*), and wren (*Troglodytes troglodytes*), as well as a verified record of the plant viper's-bugloss (*Echium vulgare*).

7.4 With respect to Invasive Non-native Species (INNS), there are three verified records within 500m including Japanese knotweed over 230m to the north-east, butterfly bush (*Buddleja davidii*), at the same location, and snowberry (*Symphoricarpos albus*), over 380m to the south-east.

7.5 Protected sites were also captured in the record search. Whilst the property is not covered by any site designation, the Cwm Glo a Glyndyrys Site of Special Scientific Interest (SSSI) is some 385m to the south, and the Cwm Taf Fechan Woodlands SSSI is over 1.3km to the north. There are several Wildlife Sites or Sites Important for Nature Conservation (SINC) within the search radius, with the closest being Cwm Glo, 377m to the south, Winchfawr East and Clwydyfagwr, some 536m to the north-west, and Cwm Taf Fields and Cefn Coed Tip, approximately 563m to the east. It is considered unlikely that any of these sites will be impacted by the proposed development.

7.6 Heolgerrig is within a B-line route. These are routes proposed by Buglife, as locations where efforts must be made to provide food plants for bees, and other insects. The presence of the site within such a route was therefore considered when making recommendations in this report.

8 Survey findings

8.1 A Preliminary Ecological Appraisal (PEA) of the small site was conducted by two experienced ecologists on Tuesday the 26th of November 2024, in dry and sunny weather conditions. Details of the timing and conditions under which survey was conducted are given in Table 2 below. Wind speeds employ the Beaufort scale.

Table 2: Survey and conditions

Date	Survey type	Timing	Weather conditions
26/11/2024	Preliminary Ecological Appraisal (PM/DM)	9.45 – 10.45 hours Greenwich Mean Time (GMT)	Air temperature: 3°C Cloud cover: 0/8 oktas Conditions: Dry Wind speed: F0, calm
Surveyors	Diane Morgan (DM), Phil Morgan (PM)		

8.2 The surveyors considered the habitat features of the site. No structures are present. Following standard classifications, the site was divided into five different habitat types, and mapped according to the codes and conventions described in the Phase 1 Habitat Survey Handbook (JNCC 2010). Table 3 below describes the on-site habitats in order of surface area indicating dominant species, with the most extensive habitats listed first. A complete species list is provided in Table 4 (see Appendix IV).

Table 3: Summary of Phase 1 habitat notes

Habitat	Phase 1 classification	Description of area and typical species
Type 1	J4 Bare ground	The main part of the site consists of land rising gently from the surface level of the public highway, formed of compacted bare ground. A variety of stored equipment and materials are present in the secure mid part of the plot
Type 2	J1.3 Ephemeral/short perennial	A bank of sloping ground at the rear (north-west) end of the site extends up the hillside from a retaining concrete block wall. With thin shale soils exposed in places, the low growing vegetation on the bank is dominated by creeping buttercup (*Ranunculus repens*), greater plantain (*Plantago major*), rosebay willowherb (*Chamaenerion angustifolium*) and various tussocky grass species. Other plant species typical of this habitat type are present including white clover (*Trifolium repens*) and black medic (*Medicago lupulina*). Along the north-west edge of this habitat against the boundary post and wire fence is a planting of whip stage *Cupressus species* conifers which match the established boundary hedge along the north-east side of the bank against the neighbouring dwelling known as Lle Hyfryd. The south-west edge of this habitat is open to the adjacent land with no boundary feature
Type 3	J2.3.5 Wall	A concrete block wall forms the south-western boundary of the site beside the property known as Cavallino. In addition, a section of concrete block wall acts as a retaining wall where the ground rises up a bank at the rear of the site. Another stone-faced low wall forms part of the north-eastern boundary against Lle Hyfryd
Type 4	J2.3.4 Fence	A timber fence of close-set upright planking separates the front section of the site and the mid-section where a small quantity of equipment and materials are stored. An upright timber fence also forms part of the north-eastern boundary against Lle Hyfryd
Type 5	J2.1.2 Intact hedge: species poor	A tall conifer hedge separates the sloping ground at the rear of the site from the adjacent garden of Lle Hyfryd to the north-east. The established hedge is a single species of *Cupressus*

8.3 In its current condition, the site contains features of extremely limited natural habitat suitable to support wildlife. The plants growing the rear bank of sloping ground are fast colonising 'weedy' species which are capable of establishing themselves in the harsh environment of thin shale soils. Overall the property was adjudged to have negligible ecological value.

8.4 A small number of common garden birds were recorded during the site visit. Most flew over the site, but a pair of robins (*Erithacus rubecula*) were present, demonstrating territorial behaviour.

9 Discussion

9.1 The plot of land adjacent to Lle Hyfryd was found to be of negligible ecological value. No protected species, or species of conservation concern were found to be based on the property, and no invasive non-native plant species were noted. The features of the site do not provide habitat to support fauna. Overall, the land in question is effectively valueless for wildlife, and only 22 common plant species could be identified at the site with reasonable confidence. The plants are typical of disturbed or waste ground. Whilst it is acknowledged that the time of year is not ideal for botanical assessment, nothing was evident to suggest the presence of unusual or rare plants.

9.2 As proposed, the development appears to be in keeping with other dwellings in the vicinity, and will take advantage of a site which has no ecological worth. It is effectively a brownfield site, which is usually considered as an appropriate location for development to occur.

9.3 It is appropriate at this point to discuss the appraisal in relation to the four points set out by the planning authority (see Section 2). A Package C – 2km radius record search was commissioned from SEWBReC, and this demonstrated that the site – which is very modest in size – was not a

location where protected species, invasive non-native species or important habitats had previously been recorded.

9.4 Ecological enhancement was stipulated under the provisions of Environment (Wales) Act 2016, and as indicated below, this is duly considered in the recommendations made in the following section. Section 6 of PPW12 requires that any new planning proposal includes measures for Net Benefits for Biodiversity, and the provision of a Green Infrastructure Scheme. Indeed, such measures in the context of this site will make a meaningful contribution, both to biodiversity and carbon sequestration in the area. Consequently proposals are made below, which if delivered will benefit the local community and wildlife. The second and third points emphasised by the planning authority are therefore addressed.

9.5 The fourth and last point relates to the planting of native species for the site enhancements, and in particular, species which are local to the area. This also has been considered in the recommendations made in the following section.

10 Recommendations

10.1 The development site is of negligible ecological value. The Package C record search commissioned from SEWBReC, covering a 2km radius of the site demonstrated that no protected species had previously been recorded at the property and there were no previous records of invasive non-native species at the site, or that the site was within a particularly important habitat. The search covered an area of Merthyr Tudful which has seen considerable development over the past 10 years, so it is likely that any significant species in the area would have been detected and recorded. Having said this, most of the records in the search were unassessed or unconfirmed, and therefore of dubious validity.

10.2 Artificial light is highly disturbing to wildlife. A Bat Conservation Trust study of the impacts of lighting on bats has considered the increased risk of the bats being preyed on in well illuminated areas. Lighting was also found to be harmful when present near woodland edges and hedgerows, as well as causing isolation of colonies and altering insect prey behaviour. If external security lights are to be fitted as part of the proposals, these much be installed no higher than 2.3m above ground level, and use low wattage bulbs. There must be no upward light spill and shrouds or deflector fittings are a straightforward way of avoiding this. Lights must be on timers to ensure that lights are extinguished within 30 seconds of movement ceasing, and limited to areas where they are essential for health and safety reasons.

Net benefits for biodiversity

10.3 The proposed provision of 2 x Schwegler 1FR integrated bat boxes (see Drawing Lle Hyfryd 01B) is appropriate. However, the locations for the installation of such boxes on both gable ends of the new dwelling will require amendment. Whilst the proposed bat box at the gable apex at the south-western gable apex is acceptable, the box at the north-eastern gable apex is situated above a window, and there is a risk that bat droppings resulting from occupation of this box will foul the window causing a nuisance. It is recommended therefore that this box is located further down the roof line approximately 2.5m to the north – in a location where it is less close to the neighbouring dwelling Lle Hyfryd.

10.4 Provision was made for the movement of hedgehogs in the original outline planning consent, and provision of gaps at the bottom of fences is appropriate as the species has previously been recorded within 500m. The proposed development will allow hedgehogs to pass along the sides of the new dwelling, but it is appropriate to reinforce here the need to leave a gap 15cm x 15cm on one side of the house to allow free movement by hedgehogs. If a side gate is provided, this would suffice as a mechanism for movement of hedgehogs by hanging the gate so that there is a

gap of 15cm at the bottom. The back wall is not a barrier to hedgehogs as the surface is rough enough for hedgehogs (which are good climbers) to scale.

10.5 As part of the application for outline consent, a hedge had been proposed to be planted along the north-western edge of the red line boundary. As indicated by the planning authority, this proposal was unacceptable, because it did not comprise native, and locally present shrub species. At the time of survey, a few specimens of a cypress species were noted to have been planted along this boundary, but did not appear to be thriving.

10.6 Two alternative hedgerow options are possible. Both options require good substrate preparation to enable the plants to become established. If it is desirable to have a formal hedge, which can be managed by annual trimming, the yew (*Taxus baccata*) would be a suitable option, being attractive to wildlife, and being slow growing and long-lived that birds and small mammals can exploit it readily. However, whilst it is a native species, there are no previous records of the plant in the 2km search area. The species is often associated with ecclesiastical properties, and it may be absent purely because there are no churches in the vicinity. Of course, it is equally possible that it is present, and not recorded. If this option is preferred, then it is important that young saplings are purchased from local suppliers to avoid plant diseases, which can be introduced with imported stock. Yew saplings will be planted in a line with 30cm gaps between plants.

10.7 A second option would be to plant a mixed species hedgerow with a view to laying this at the proper time as a farm hedge. This would be out of keeping with the area, where there is an absence of such hedges, but if this option is preferred then it must be composed of species such as hawthorn (*Crataegus monogyna*), hazel (*Corylus avellana*), field maple (*Acer campestre*), rowan or mountain ash (*Sorbus aucuparia*), and holly (*Ilex aquifolium*). Again, none of these species were revealed to be present in the record search, but it seems highly likely that they are in the surrounding area. Again these must be locally sourced plants. Planting in this instance will be in the form of two parallel lines, forming a zig-zag pattern again with 30cm gaps between plants.

10.8 Given that the property lies within a B-line route. The nature of the site offers limited opportunities to benefit bees and other insects. However, a native honeysuckle (*Lonicera periclymenum*) must be provided in a planter/pot on the north-eastern fence line of the property. This plant can then spread along the fence and provide flowers/pollen to insects. It will need to be well watered during dry periods until established and watered during sustained hot, dry weather to ensure survival. However, the species is hardy, and relatively drought resistant. It is essential that this species only is used, and not a cultivated variety.

Green infrastructure statement

10.9 A number of birds were noted around the property during the survey. Birds can be encouraged to nest if a suitable box is provided. It is therefore recommended that a woodcrete bird box Vivara Barcelona design (or equivalent), with an open front is provided, as this design is used by species such as robin, and pied flycatcher (*Ficedula hypoleuca*). The box can be mounted on a post at the north-west corner of the earth bank to the rear of the property. It must be at least 2m from the ground, to avoid predation by domestic cats, and positioned to face north-east.

10.10 There is scope to plant a small standard tree on the bank to the rear, and it is recommended that a rowan or mountain ash is planted at the north-east corner of the property boundary. This native species offers berries much favoured by birds in autumn. It will need to be staked to ensure that it stands upright, but it is a species which usually thrives on poor, thin soils, such as those present at Mount Pleasant. The tree will also contribute to carbon sequestration.

10.11 Provision of a water butt is also recommended. Although it is expected that rainfall in Wales will generally increase by at least 30% by 2050, due to climate change, periods of local drought, where there can be no rain for several weeks, is also expected to occur. A water butt, connected to one

of the down pipes on the new dwelling, can capture such rainfall to be used to water the tree and garden shrubs during such drought periods.

Timescale for provision and maintenance

10.12 It is not possible to predict when any planning consent may be granted, or indeed if permission is given, when development may occur. However, in the event that the development proceeds, then any tree or hedge planting is best done in autumn. Provision of the bird box can be done prior to hedge planting, but ideally would be done after the hedge has been planted. Provision of planters, water butts etc, cannot be done until completion of the construction works are largely completed.

10.13 On going maintenance of the hedge is vital for it to succeed. Although most of the grasses on the bank to the rear of the proposed dwelling are thin in nature, they can choke young saplings, so occasional hand weeding around the base of the new plants is important until they are clearly growing well and have established good roots. On no account must a herbicide be used. Additionally, in dry periods it will be essential to regularly water the young saplings in periods of dry weather until they are growing well, when their roots will usually provide sufficient water to sustain them. The water butt will provide a suitable source of rain water for this purpose, and is preferable to the use of tap water. Any failed planning within 5 years from completion of the development will be replaced on a like-for-like basis.

11 Conclusions

11.1 In addition to undertaking the PEA, all four of the specific points made by the planning authority have been addressed. It is therefore considered no additional survey or actions are required.

11.2 Proposals are made which will benefit the local community with a native species hedge, planting of a standard tree, as well as measures to benefit bees and other insects, hedgehogs, birds, and to assist in combatting climate change. If these measure are put in place, then the development can make a positive contribution to biodiversity.

12 References

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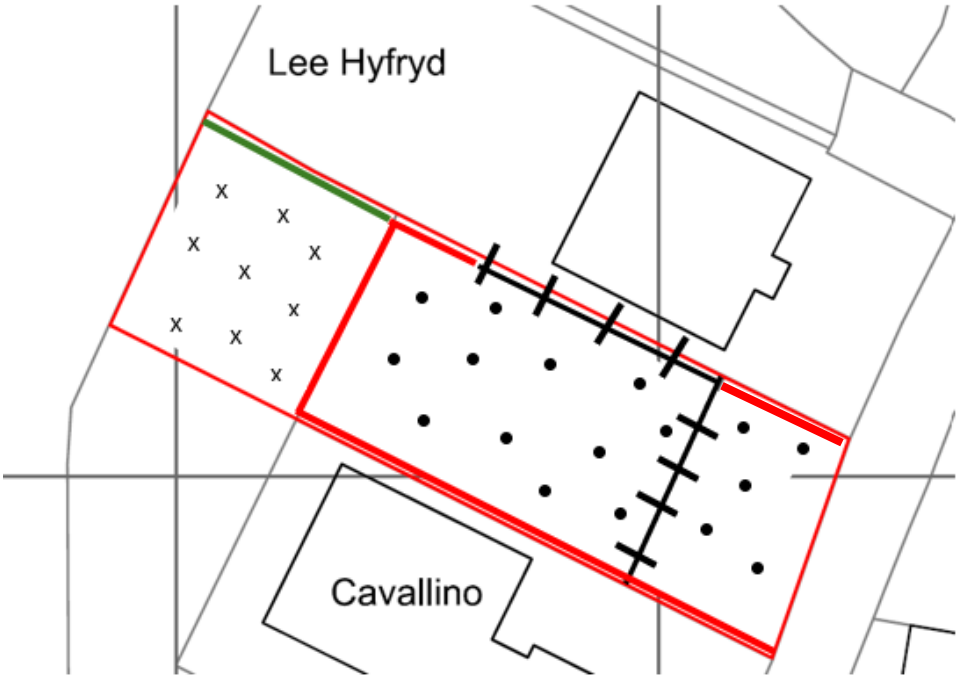
Appendix I: Site location photograph

Figure 1: Site location photograph

© Google satellite imaging 2024 Property boundary shown in red

Appendix II: Phase I survey plan

Figure 2: Phase 1 survey plan



Key

= Site boundary

= J1.3 Ephemeral/short perennial

= J2.1.2 Intact hedge species poor

= J2.3.4 Fence

= J2.3.5 Wall

= J4 Bare ground

Appendix III: Site photographs

Plate 1: Front (south-east) section of site

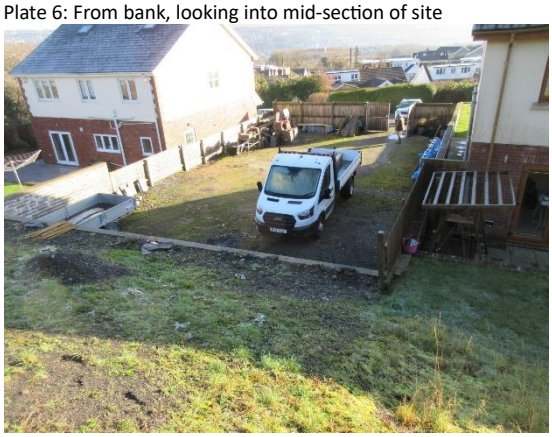
Plate 2: Mid-section of site looking to north-west bank at rear

Plate 3: Mid-section of site, looking north-east

Plate 4: Bank at rear (north-west) of site

Plate 5: Thin soils and vegetation on rear bank

Plate 6: From bank, looking into mid-section of site



Appendix IV: Recorded site species

Table 4: Site species list

Species (common name)	Species (scientific name)	Nature of observation
A speedwell	*Veronica sp.*	Present
A vetch	*Vicia sp.*	Present
Barren strawberry	*Potentilla sterilis*	Present
Black medic	*Medicago lupulina*	Present
Bramble	*Rubus fruticosus*	Present
Broad-leaved dock	*Rumex obtusifolius*	Present
Bugle	*Ajuga reptans*	Present
Creeping buttercup	*Ranunculus repens*	Present
Cypress conifers	*Cupressus sp.*	Present
Grasses (various)	*Poa sp.*	Present
Great mullein	*Verbascum thapsus*	Present
Greater plantain	*Plantago major*	Present
Herb-Robert	*Geranium robertianum*	Present
Nettle	*Urtica dioica*	Present
Perennial sow thistle	*Sonchus arvensis*	Present
Pineappleweed	*Matricaria discoidea*	Present
Ribwort plantain	*Plantago lanceolata*	Present
Rosebay willowherb	*Chamaenerion angustifolium*	Present
Shepherd's-purse	*Capsella bursa-pastoris*	Present
Thistle	*Cirsium sp.*	Present
White clover	*Trifolium repens*	Present
Yarrow	*Achillea millefolium*	Present
Fauna		
Robin	*Erithacus rubecula*	Present
Blackbird	*Turdus merula*	Flew over, feeding on adjacent vegetation
Jackdaw	*Corvus monedula*	Flew over
Magpie	*Pica pica*	Flew over
Blue tit	*Cyanistes caeruleus*	Flew over
Great tit	*Parus major*	Flew over

Appendix V: Biodiversity enhancements

Plate 7: Schwegler 1FR integrated bat box

Plate 8: Typical installation inside exterior wall

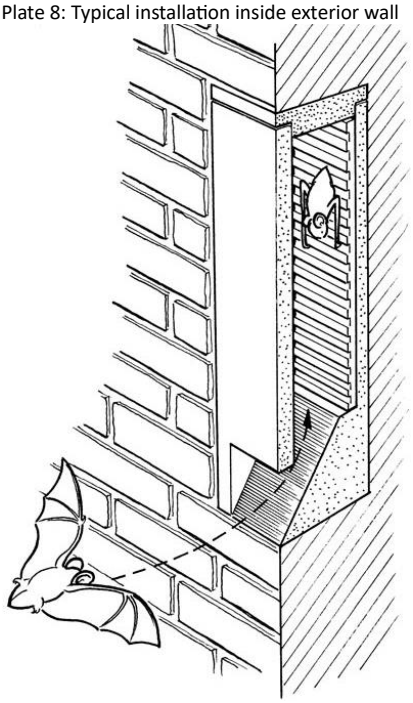


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Plate 9: Open fronted bird nest box

In preparing this document, we assert that we have exercised reasonable skill and care, taking into account the project objectives, the agreed scope of the work, prevailing site conditions, the degree of manpower and resources allocated to the project, and in compliance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct.

This document is valid for a defined period, in compliance with National Guidelines, for a period of one year from the front cover date.

Morgan Ecology provides ecological services with respect to bats and terrestrial mammals, and is based in Mid-Wales. It specialises in providing affordable, and expert services on protected species, for a wide range of clients.

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