

Ecology Planning

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Land off Penlan Road, Carmarthen

Update Ecology Assessment



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1. Introduction

- 1.1 This report has been prepared by Ecology Planning on behalf of Omnicorp Ltd in support of a planning application for residential development on a greenfield site adjacent to the east of Penlan Road, Carmarthen, hereafter referred to as 'The Site'.
- 1.2 The Site extends to approximately 2 Ha immediately adjacent to the east of Penlan Road. This includes approximately 1.2 Ha subject to residential development of 20 units and a further 0.8 Ha proposed for mitigation. It is centred at National Grid Reference SN 41101 20891. A small traditional building is located approximately 125m to the south of the Site at National Grid Reference SN 41089 20743.
- 1.3 The Site is currently greenfield and is becoming dominated by ruderal vegetation and scrub. It is former pasture than appear to have been ungrazed/unmanaged for a number of years.
- 1.4 This report updates previous ecology survey work undertaken in 2020 by I&G Consulting. This report is an update and should be read in conjunction with the 2020 report since all initial findings are not reproduced in full. The following reports contain the findings of the original ecology assessment and are referred to throughout this report:
 - I&G Consulting (2020). *Ecological Appraisal Report: Parc y Delyn, Penlan Road, Carmarthen, Carmarthenshire.*
 - I&G Consulting (2020). *Reptile Survey and Mitigation: Parc y Delyn, Penlan Road, Carmarthen, Carmarthenshire.*
 - ArbTS - Arboricultural Technician Services Ltd (2020). *Arboricultural Report, Penlan Road, Carmarthen.*
 - Amber Environmental Consultancy (2021). *Dormouse Survey: Land at Parc y Delyn, Carmarthen.*
- 1.5 The report includes full descriptions of all methods undertaken to gather ecological data, the results of survey with analysis and recommendations for appropriate mitigation and enhancement with regard to relevant legislation, planning policy and conservation documents.

2. Methodology

- 2.1 This section provides details of all methods used in this ecological assessment including timing of works, weather conditions and equipment used.

Desk Study

- 2.2 Background data has not been purchased since this was obtained in 2020 as part of the initial ecology survey work. Given the lack of change of type and quality of habitats present at the Site, the records are considered to remain valid.

Site Survey

Phase I Survey

- 2.3 An extended Phase I habitat survey was undertaken on 16th July 2024 by Laurence Brooks. The methodology used was based on that used for Phase I habitat survey¹ and entailed walking the Site and mapping habitat types, including dominant and notable species. Any potential for protected species to be present within the habitats or features found at the Site was also recorded and surrounding offsite areas were surveyed where possible.
- 2.4 Habitats and features may be used by protected species throughout the year or within certain seasons and may provide potential breeding sites, commuting routes, hibernation sites or resting places. Note was made of any direct evidence of protected species presence, which might include: droppings or latrines, burrows, nests or roosts, feeding remains or tracks.
- 2.5 The weather was suitable for survey being dry and still, with many plants species visible.

Bats - Building Assessment

- 2.6 An external and internal assessment of the Building was made in terms of its suitability to support roosting bats on 12th August 2024 by Laurence Brooks, a licensed bat worker.
- 2.7 The survey followed standard methodologies and consisted of a visual inspection of the interiors and exteriors of the Building for:
- direct evidence of bat use including droppings, feeding remains and scratches and staining from fur oil or urine around roost exit/entry points;
 - features that have the potential to be used by bats including loft voids, soffits, wooden beams, hanging tiles; and
 - general conditions including roof structure, temperature, disturbance and connectivity of suitable habitat.
- 2.8 The survey was aided by the use of ladders, close-focussing binoculars and high-powered torches where necessary.
- 2.9 The roosting potential of the building was classified into one of the following categories:
- High Roosting Potential – Buildings with significant potential containing a large number of suitable features or features present appear optimal;
 - Medium Roosting Potential – Buildings with roosting features appearing less suitable;
 - Low or No Roosting Potential – Buildings with few if any features suitable for roosting.

¹ Joint Nature Conservation Committee (2010) *Handbook for Phase I habitat survey: a technique for environmental audit* JNCC

Bats – Emergence Surveys

- 2.10 **Plan 2 – Bat Results** illustrates results and surveyor locations.
- 2.11 Surveys of the Barn were undertaken in August and September. Surveys were undertaken in accordance with best practice guidelines for buildings with moderate potential to support roosting bats. The dates and weather conditions were suitable for all surveys, as detailed in **Table 1** below.

Date	Dawn/ Dusk time	Duration	Temperature (Start - End)	Cloud Cover	Wind	Precipitation
07.08.2024	20:55	20:40 – 22:30	18.5 – 16.3°C	8/8	V light S breeze	Shower prior to survey
09.09.2024	19:40	19:30 – 21:05	17.8 – 13.3°C	6/8	None	None

Table 1. Dates durations and weather conditions of night-time bat surveys.

- 2.12 Both surveys were undertaken by Rebecca Bohane and Laurence Brooks, both licensed bat workers and very experienced surveyors, with 20 years survey experience each.
- 2.13 Surveyors used Duet frequency division detectors alongside an Echometer Touch 2 Pro detector, together with a Xinfrared Thermal Eye t2Pro camera. Two static automated Anabat detectors were used for additional coverage, with one located within the Building during each survey.

Static Detector Survey

- 2.14 Following the results of the September emergence survey, an Anabat Express static detector was left in situ in the building for three nights in September and five nights in October. This was specifically positioned in an open doorway on the eastern elevation where a greater horseshoe bat had been seen entering and emerging from in September. The weather throughout the static detector period was suitable for survey, with all nights being dry and with night time temperatures above 7°C.

Reptile Survey

- 2.15 All suitable habitat within the Site (including mitigation area) was subject to a reptile survey. This followed standard guidance whereby artificial refugia (0.5m² medium weight 1F bitumen felt) were spread throughout suitable habitat on 21st August 2023. A total of 30 refugia were used across suitable habitat, giving a density far in excess of that used for monitoring and considered suitable to establish presence.
- 2.16 Refugia were left to bed in for 11 days and were checked on seven separate occasions between 27th July and 2nd September 2024. All checks were carried out under suitable weather conditions, avoiding midday conditions, except when the weather was cool, as shown in **Table 2** below.
- 2.17 This updates the reptile survey undertaken in 2020. A very similar number of refugia were used and the area surveyed was extremely similar, although there is almost certainly a little more bracken/scrub encroachment which has probably reduced the areas of suitable habitat slightly.

Date	Time	Temperature	Cloud Cover	Wind	Notes
27.07.2024	11:00	16 °C	5/8	Light breeze	Dry following rain
06.08.2024	15:00	17 °C	4/8	Light breeze	-
20.08.2024	14:15	17 °C	3/8	None	-
26.08.2024	13:00	19 °C	8/8	Light breeze	-
29.08.2024	17:00	19 °C	8/8	Light breeze	-
31.08.2024	10:30	17 °C	0/8	None	-
02.09.2024	16:45	15 °C	8/8	Light breeze	-

Table 2. Dates, times and weather conditions of reptile surveys.

Dormouse Survey

- 2.18 All suitable habitat within the Site was subject to a dormouse nest tube survey. This updated survey work carried out in 2021. A total of 47 tubes were placed in suitable habitat in 2021 at a spacing of approximately one tube per 20m and this was increased in 2024 to a total of 78 tubes at an approximate spacing of 15m. This allowed the tubes to be dispersed at a density of 1.5 times the recommended minimum as set out in the Dormouse Conservation Handbook² which enabled the required survey score (minimum 20) to be achieved within the 2024 survey. The dates and conditions for surveys are set out below in **Table 3**, below. Nest tubes were set out on 27th June 2024 and 30 days were allowed for individuals to locate the tubes before the first survey was undertaken on 27th July 2024. A total survey score of 22 was achieved.

Date	Index of Probability	Index uplift due to increased density	Weather Conditions
27.07.2024	2	3	
29.08.2024	5	7.5	
30.09.2024	7	10.5	
23.10.2024	2	3	Overcast and dry
TOTAL		23	

Table 2. Dates and score of dormouse surveys (as per Table 5, page 27 of The Dormouse Conservation Handbook).

Constraints

- 2.19 The bat survey work commenced in August owing to extremely poor weather throughout July, which could theoretically be after maternity roosts have disbanded. This is considered highly unlikely to affect the results of the Building since the majority of opportunities are suitable for small numbers of bats only and there was no evidence recorded internally.
- 2.20 Visibility of the Barn is suboptimal given dense scrub and tree encroachment, with a thick hedgerow/tree line obscuring the western elevation. However, this only affects the older metal section of the Building and the extremely dense vegetation cover would likely make flight for bats in this area unviable. The lack of visibility on this elevation is therefore not considered to be a significant constraint.

² Bright, P. Morris, P, and Mitchell-Jones, T. (2004). *The Dormouse Conservation Handbook Second edition*. English Nature.

3. Results

Desk Study

- 3.1 The Afon Tywi SAC and SSSI lies approximately 1km to the south of the Site. Given the intervening built nature of Carmarthen town centre, this designated Site is considered sufficiently removed both in habitat type and distance as to be unaffected. It is not considered further in this report.
- 3.2 No non-statutory designated sites are present within a 2km radius.

Site Setting

- 3.3 The Site is located on the northern fringe of Carmarthen town centre, immediately to the north of the Parc y Delyn housing development. To the north lies open countryside, which predominantly comprises improved grassland. The Site is no longer easily accessible, surrounded by dense scrub with mature hedgerows on all sides.
- 3.4 The CCW 1997 habitat data from the Site show is was identified as improved grassland with patches of semi-improved neutral grassland, bracken and scrub.

Habitat Survey

- 3.5 The following descriptions should be read in conjunction with **Appendix 1 – Photographs** and **Plan 1 – Habitat Features** (**NOTE: the photographs show the Site in 2024 and the Habitat Features Plan dates from 2020**). The following descriptions are largely taken from the original Preliminary Ecological Appraisal and photographs within that report should be referenced as they are not reproduced here. The habitats present have remained the same and there appears to be very little change since 2020. The exact extent of scrub and ruderal habitats is likely to have increased, but the mapping is not sufficiently accurate enough to be able to determine this. Likewise it is very difficult to map this mosaic of habitats accurately. However, this does not detract from the habitat assessment since the proportions of habitats present are unlikely to vary significantly.

Scattered Scrub

- 3.6 The 2020 report states:
- 3.7 “a band of dense bramble scrub over 2m high encircles the grassland. Bramble is dominant, with frequent nettle and cleavers. More open areas have stands of rosebay willowherb. Trees and shrubs are developing within the bramble and include oak, sycamore and hazel. Bracken is frequent, and there are occasional male and harts tongue fern. There is a small stand of montbretia to the north of the access spur. There are three discrete areas of dense blackthorn scrub. Ivy is the only species present on the ground layer.”
- 3.8 This is unchanged in 2024, except that the bramble encroaches slightly further into the grassland.

Semi-improved Grassland

- 3.9 The 2020 reports states:
- 3.10 “Within the development boundary is a small area of semi-improved neutral grassland. This is dominated by Yorkshire fog, with coarser species such as cocksfoot and false oat grass indicating the lack of grazing. Forbes include abundant creeping buttercup, with angelica, hogweed, lesser stitchwort and ragwort frequent and occasional common knapweed, birds-foot trefoil and docks. This then grades to an edge of dense bracken or bramble scrub on all but the northern edge.
- 3.11 To the north of the development boundary and contiguous with it is a larger area of semi-improved grassland. False oat grass is conspicuously dominant here, but there is a good variety of meadow grass species. More open areas support a diverse forbe community with yarrow, broad

leaved willowherb, germander speedwell, common knapweed, hedge woundwort and a number of stands of male and lady fern.”

- 3.12 The grassland is more open towards the northern top of the slope, but the entire area is rank and appears to have been ungrazed for several years. The sward is an average of 50cm high, with thatching present across the entirety. Whilst it is likely to have been neutral grassland, the dominance of coarse grasses make an assessment of previous grassland type impossible.

Bracken/Ruderal

- 3.13 The 2020 report states:
- 3.14 “A dense stand of bracken separates the bramble scrub from the grassland in a number of areas. The bracken is tall and there is little ground layer present due to the heavy shading.”
- 3.15 Bracken remains and has likely increased in area as the Site appears to have been unmanaged in the intervening years. The bracken is interspersed with stands of common nettle and Himalayan balsam, which does not appear to have been present in 2020. The encroachment of ruderal stands will be at the expense of open grassland.

Hedgerow / Tree Line

- 3.16 The 2020 report states:
- 3.17 “The dense scrub precluded a full examination of the hedgelines within the field. All the hedgerows were accessed at a number of locations, and the western boundary hedgerow was surveyed from the roadside.
- 3.18 The hedgerow running along the south-eastern boundary is formed on a bank sloping away to the adjacent fields. The hedge is dense, with poor ground cover, and comprises of mature, outgrown hazel, holly, and blackthorn, elm, and mature and semi-mature ash and sycamore. Most of the ash is showing signs of die-back. The sparse ground flora includes nettle, hogweed, cow parsley, herb Robert and wood avens, with ivy dominating the more shaded sections. This then transitions to a fringe of suckering elm and then dense bramble.
- 3.19 The hedge running along the western boundary of the site fronts a farm access lane. It is formed on a high earth and stone bank. Blackthorn is dominant with frequent oak, sycamore and hazel are occasional. The road side of the bank is diverse with species including wood sage, bluebell, enchanter’s nightshade, cow parsley, red campion, harts tongue and broad buckler fern.”
- 3.20 Whilst the roadside has a diverse flora along the steep raised bank, diversity within the Site is severely restricted by dense bramble extending right up to the boundaries. The hedgerows show no management in the intervening period and strongly resemble tree lines.
- 3.21 Overall, there is little change to the habitats recorded in 2020. Minor changes in proportions of scrub to open grassland are likely, but not sufficiently so as to substantially alter the initial conclusions.

Protected Species

Bats

Building Assessment

- 3.22 The Building comprises a small two storey section with the ridge oriented east-west. This is referred to as the ‘Main Building’ and is a rendered building with a simple pitched corrugated fibreboard roof. A further large perpendicular two storey section, which has a curved corrugated metal roof forms the northern end and the referred to as the ‘Northern Section’. A small single storey flat roof section joins the two former section. All sections are joined, forming a single built

structure.

- 3.23 **Main Building.** The Main Building is a small two storey building, which is rendered externally. It is likely of brick construction, which is evident on the internal walls. It supports a pitched corrugated fibreboard roof, which has a fibreboard ridge. The ridge and roof are in good condition but there is access beneath the ridge along the length. There are fibreboard verge coverings on the eastern and western elevations, which appear to be well fitted. The northern pitch on the western elevation is not visible owing to dense ivy growth. There are timber fascia boards on the southern elevation and there are minor gaps below these.
- 3.24 There are doors on the east and south, and the southern door is poorly fitted and damaged. The eastern door is a stable door and the top section is missing allowing free flight access. There are windows on both floors and much of the glass is missing, also allowing free flight access on the ground floor. The window on the upper floor has been blocked with wire mesh.
- 3.25 Internally the ground floor is relatively light from the windows. It is extremely cluttered and no obvious opportunities for bats.
- 3.26 Internally the upper floor is open to the roof, which results in a large open space. The simple cut and pitch design means the entire roof space is uncluttered. There is a double timber ridge, although the gap between the ridge beams is possibly rather wide for bats to use. There significant cobweb and debris build up along the ridge, suggesting no recent bat use.
- 3.27 No evidence of bats was recorded internally or externally.
- 3.28 **Central Flat-Roofed Section.** The central section is a small and brick built, comprising a single room width only. It is divided into a larger eastern room and smaller western room. There is a damaged door and window on the eastern elevation, allowing free flight into the room. Internally the room is filled with rubbish and is very damp.
- 3.29 Approximately 12 intact bat droppings were recorded in the rear, western section. The droppings were in poor condition and are likely to be a pipistrelle-type dropping. There is a window on the rear, but this has been blocked with mesh, preventing free flight access.
- 3.30 **Northern Section.** This is two storey, single skin, brick built section, with a curved self-supporting corrugated metal roof. The Building is in poor condition overall.
- 3.31 The roof is intact for the northern two thirds, but has collapsed at the southern end adjacent to the single storey central section, leaving the interior damp and exposed.
- 3.32 There is an open doorway on the east, and a window at first floor height on the north, both allowing free flight into the building at both levels.
- 3.33 The brickwork on the rear, western wall is in moderate condition, with solid concrete lintels and few crevices.
- 3.34 There is a small single storey brick lean-to on the western elevation, with a corrugated metal roof. This appears to be former kennels and is in reasonable condition, if generally unsuitable for bats being low and damp, with no obvious roost locations.
- 3.35 Internally the northern section is difficult to survey on account of debris and an unsafe ceiling, although the ceiling is only intact in parts, with a missing section towards the south and again at the north end, allowing flight throughout the whole building. There are small cavities at ceiling height between the ceiling and floor of the upper storey. The cavities are exposed where the ceiling is damaged. A former nest is present at the north, which is attributed to pigeon or jackdaw or squirrel. Overall it cannot be thoroughly surveyed internally, but is damp and generally of low suitability. Crevices are limited with the brickwork being single skin and the wall tops narrow and

sealed.

- 3.36 No evidence of bats was recorded internally or externally.
- 3.37 Whilst the Building is large and complex overall, it's built structure offers few suitable opportunities. The encroachment of the woodland, particularly on the east, has resulted in a very damp interior which is largely unsuitable for bats. Overall, the Building is considered to have moderate potential to support roosting bats.

Night Time Survey

Survey 1 – August 2024

- 3.38 No bats were recorded emerging from the Building.
- 3.39 Activity was extremely low throughout the survey, with passes by a single common pipistrelle bat only.
- 3.40 No further activity was recorded by the automated detectors.

Survey 2 – September 2024

- 3.41 A single unidentified pipistrelle bat emerged from the ridge of the main part of the Building and flew to the east.
- 3.42 Two further common pipistrelle passes were recorded, followed by a foraging soprano pipistrelle bat in the adjacent yard to the south.
- 3.43 A greater horseshoe bat was observed flying within the woodland to the east of the Building. It appeared to be light sampling from 19:50, repeatedly flying into the northern section of the Building, through an open doorway on the east. It emerged at 20:08 and flew through the woodland to the east of the Building.

Static Detector Survey

- 3.44 Activity was extremely low during the surveys in both September and October. Only one night during the September monitoring yielded any bat passes and this was restricted to a couple of common pipistrelle passes shortly after sunset.
- 3.45 No other species were recorded.

Birds

- 3.46 There is potential for the scrub to support common and widespread species.

Reptiles

- 3.47 2020 survey results showed an extremely small population of slow worm and common lizard. However, all surveys were undertaken in temperatures exceeding the recommended values for survey.
- 3.48 Both slow worm and common lizard were recorded throughout the open grassland. **Table 4** below sets out the results of the reptile survey. Individuals were recorded under nearly all of the 30 refugia (varying according to time of inspection/sun/shade), with individuals spread throughout the grassland towards the edge of the scrub. Abundant neonate lizards were present throughout all surveys.

		Survey						
		1	2	3	4	5	6	7
Slow Worm <i>Anguis fragilis</i>	Neonate		3		5	6		6
	Juvenile	7	9	4	30	18	3	8
	Ad. Male	4	2	2	2	2	2	5
	Ad. Female	7	8	4	9	15	2	12
	Unid. Adult	2	2		13	5		4
	Total	20	24	10	59	46	7	35
Common Lizard <i>Zootoca vivipara</i>	Neonate		21	54	46	47	51	18
	Juvenile		1			2		
	Adult Male		2	4		1	1	
	Adult Female	1	1	5			2	1
	Unid. Adult	8	5		16	9		6
	Total	9	30	63	62	59	54	25

Table 4. Results of reptile surveys.

Dormouse

- 3.49 No evidence of common dormouse was recorded during the surveys. Surveys were equally spaced throughout the survey period, which included peak survey months of August and September. The nest tubes had been in situ nearly two months prior to the August survey, which would be expected to yield positive results if the species were present.

4. Planning Policy, Legislation and Conservation Context

- 4.1 This section briefly recounts the various levels of planning policy, legislation and conservation status pertaining to the Site and the species, or likely species, of importance contained therein.

Planning Policy

Carmarthenshire Local Plan 2006-2021

- 4.2 The Core Strategy will guide development within the county until the new Local Development Plan is in place. The following policies are relevant to the Site:

- 4.3 Policy EQ4 Biodiversity

- 4.4 “Proposals for development which have an adverse impact on priority species, habitats and features of recognised principal importance to the conservation of biodiversity and nature conservation, (namely those protected by Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006 and UK and Local BAP habitats and species and other than sites and species protected under European or UK legislation) will not be permitted, except where it can be demonstrated that:

- The impacts can be satisfactorily mitigated, acceptably minimised or appropriately managed to include net enhancements;
- There are exceptional circumstances where the reasons for the development or land use change clearly outweighs the need to safeguard the biodiversity and nature conservation interests of the site and where alternative habitat provision can be made in order to maintain and enhance local biodiversity.”

Policy EQ5 Corridors, Networks and Features of Distinctiveness

“Proposals for development which would not adversely affect those features which contribute local distinctiveness/qualities of the County, and to the management and/or development of ecological networks (wildlife corridor networks), accessible green corridors and their continuity and integrity will be permitted.

Proposals which include provision for the retention and appropriate management of such features will be supported (provided they conform to the policies and proposals of this Plan).”

Legislation

- 4.5 Specific ecological resources, including habitats and species receive legal protection in the UK under various pieces of legislation, including:
- The Conservation of Habitats and Species Regulations 2019 - this affords protection to: sites known as Special Areas of Conservation (SACs) that are of importance at a European level for habitats and species, excluding birds; sites known as Special Protection Areas (SPAs) that are of importance to birds; and it also protects certain species of plant and animal that are considered to be most in need of conservation at a European level;
 - The Wildlife and Countryside Act (WCA) 1981 (as amended) forms the key legislation protecting habitats and species. Sites of Special Scientific Interest (SSSIs), representing the best examples of our natural heritage, are notified under the Act. All species of common reptiles are protected from killing and injury under Schedule 5;
 - The Countryside and Rights of Way Act (CROW) 2000 strengthens the species enforcement provisions of the WCA 1981 (as amended) and makes it an offence to ‘recklessly’ harm or disturb a place of

rest or shelter of a protected species;

- The Natural Environment and Rural Communities Act 2006 includes a duty on all public authorities, including Local Authorities, to have regard to biodiversity conservation.
 - The Environment Act (Wales) 2016 places an obligation for all development to deliver a biodiversity net gain as a result of development;
- 4.6 Where relevant, the assessment takes account of the legislative protection afforded to specific habitats and species.

5. Discussion and Recommendations

Evaluation

- 5.1 The 2020 evaluation of the ecological baseline remains valid is not updated further here. Consideration must be given to ecological connectivity around and off Site, which is achievable under the current outline design. Connectivity along the boundaries will be maintained with a new boundary along the northern edge of the Site.
- 5.2 Losses of habitat will be predominantly scrub, with smaller areas of bracken and grassland.
- 5.3 It is unclear whether the population of slow worm and common lizard is isolated within the Site or whether suitable habitat exists off Site to the east. From the aerial photography, the habitat to the east of the Site appears likely to contain a large amount of scrub, but it is possible that there is sufficient open grassland to support further population. For the purposes of this report, it is assumed that there may be some connectivity and therefore maintaining connectivity is essential to ensuring the viability of the population. The population is clearly self-sustaining and of value within the local area.
- 5.4 The minor pipistrelle bat roost present within the Building is of low conservation importance within the local area only. Hibernation at the Site is unlikely.
- 5.5 Use of the Building by the greater horseshoe bat appears to be infrequent, with no evidence visible inside the Building, which was inspected again following the recorded use in September. The individual is likely to be part of the population present within the (Tywi Gateway) Carmarthen Museum and the Building is not suitable for maternity use. There is no recorded maternity use at Carmarthen Museum, with a maximum of six individuals present. The lack of evidence or recorded use of the Building in the summer does not suggest the Building is used as a satellite roost. It is likely to be used very occasionally as a minor day roost, although the Building is extremely suboptimal. It is possible that it is used as a night roost, but this type of roosting behaviour was not recorded.
- 5.6 Nesting birds are likely to be present in the scrub. Common and widespread species only are likely to be present.

Impact Assessment

- 5.7 The proposals include:
- Clearance of the southern part of the field and the majority of the scrub;
 - Construction of a new access road and 20 new residential units;
 - Planting of a new native hedgerows along the northern boundary of the Site; and
 - Enhancement of the Mitigation Area to the north of the Site.
- 5.8 The enhancement of the mitigation area (identified in the *Ecological Appraisal Report and Reptile Survey and Mitigation*) is anticipated to offset losses of suitable reptile habitat. This includes the entirety of land within the blue land boundary. The areas of suitable habitat to be lost are at the bottom of the slope and these are generally becoming gradually lost to scrub encroachment. The creation of a managed mitigation area is considered to be a preferable means to ensuring long term viability of the reptile populations. Enhancement of the Mitigation Area will also involve removal of the Himalayan Balsam and management of ruderal vegetation/bracken. The restoration of grassland will result in a more diverse and valuable habitat, in addition to ensuring the viability of the reptile populations.

- 5.9 There will inevitably be a loss of habitat and a reduction in extent of habitat overall. The habitat is considered of low ecological value overall but the loss of almost all habitat still constitutes a loss. All habitat will be under private ownership and whilst ecological enhancements are incorporated, the success of some elements cannot be guaranteed. However, this has is not an unusual situation within a very small Site and has been accounted for. The replacement gardens and planting have been designed so that even under suboptimal management, some value will persist. Any such value is considered incidental, with the Mitigation Area the key ecological enhancement.
- 5.10 The location of the Site, adjacent to existing development to the south, means that the fragmentation impacts or further impacts beyond the Site boundary will be minimised because connectivity can be maintained along the north of the Site. The ecological connectivity is addressed in the Ecological Landscape Strategy.
- 5.11 In the absence of mitigation, there is a risk of harm and injury to bats and a loss of the minor roosts present.
- 5.12 In the absence of timing restrictions, removal of trees and bramble has the potential to affect nesting birds.
- 5.13 Clearance of reptile habitat is likely to result in a significant risk to reptiles. A clearance strategy, as outlined in the Reptile Survey and Mitigation report, will be required to enable works to proceed lawfully.

Mitigation

Bats

- 5.14 A licence from Natural England will be required prior demolition of the Building.
- 5.15 The minor roosts will be accommodated through provision of boxes both in retained habitat and integrated within new dwellings. A further hot box will be provided within the farm to the north. Boxes will include both integrated models and models on trees and include opportunities for a variety of species.
- 5.16 There are no strict timing constraints regarding works to the building and work will be set out in a Method Statement as part of the licence application. Works to, and in the vicinity of, the recorded roost sites will be subject to supervision, which will be detailed in the licence application.
- 5.17 It is assumed that new external lighting will be present on each new dwelling. This will be directional and set on a timer in order to avoid unnecessary lighting of the Site. The precise position of the bat boxes will only be determined once the lighting plan is available in order to prevent disturbance of new roost sites.

Birds

- 5.18 Removal of the will be undertaken outside of the nesting bird season (March to August, inclusive) unless a check by a suitably qualified Ecologist immediately prior to works, confirms that no nesting birds are present. Given the density of the bramble around much of the boundary, it is unlikely to be possible to check these areas adequately.
- 5.19 The new trees and hedgerows will fall under private ownership following development and it is not possible to guarantee their long term survival. However, both are considered desirable and therefore the likelihood of retention is high. The nearby properties contain trees and planting and the inclusion within the Site is therefore very much in keeping with the surrounding development.

Reptiles

- 5.20 As set out above, the reptile population will be retained to the north of the development Site. The

2020 Reptile report sets out measures proportionate to very small populations present, which is not consistent with the survey data in 2024. The Site can only have deteriorated in suitability between 2020 and 2024 so it assumed that the population size present has always been of at least the size recorded.

- 5.21 A standard translocation exercise will be undertaken with a minimum density of 100 refugia per hectare. This was the density used during the survey, with consistent use recorded. In order to maximise capture, it is recommended that the number of refugia is doubled or trebled. Capture will be undertaken over a minimum of 30 days under suitable weather conditions. Capture will only cease following five consecutive days of no capture.
- 5.22 The reptiles will be moved to the receptor Site immediately following capture.
- 5.23 The Site will then be subject to a phased destructive search following standard measures. There is no requirement for fencing following clearance since there is no connectivity allowing new colonisation of the Site. Temporary fencing of the Site will be required to prevent recolonisation during works. It is anticipated that a detailed method statement setting out the methodology and timings will be subject to an appropriately worded planning condition.

Enhancements

- 5.24 There are various elements that, if incorporated within the design of the development and if managed appropriately, could result in longer term overall enhancement. The enhancements below aim to maximise biodiversity in accordance with planning policy. The measures are summarised below but will be incorporated into an Ecological Landscape Strategy.

Mitigation Area

- 5.25 Enhancement of the Mitigation Area has been set out in the *Reptile Report and Mitigation Strategy (I&G Consulting, 2020)* and is not repeated here. It is anticipated that any further detail would be dealt with by Reserved Matters.

Hedgerow and Tree Planting

- 5.26 New hedgerow planting will be planted along the northern perimeter of the development. This will follow best practice guidance and will be a staggered, double line of hedgerow. The new hedgerows will be protected with suitable fencing whilst they establish, conferring a value to the hedgerows. Ideally some new hedgerows will be provided between plots, particularly on the eastern end where the plots are larger and there is potential to increase connectivity off Site. There is no means to protecting the hedgerows in future and it is assumed that they may be trimmed but it is likely that they will be allowed to become more taller to increase privacy from neighbours.
- 5.27 The new hedgerows will be of locally native species of local provenance, with a suitable example mix being:

- 15% Holly *Ilex aquifolium*
 - 15% Hazel *Corylus avellanara*
 - 15% Rowan *Sorbus aucuparia*
 - 15% Goat willow *Salix caprea*
 - 10% Guelder rose *Viburnum opulus*
 - 10% Hawthorn *Crataegus monogyna*
 - 10% Blackthorn *Prunus spinosa*
 - 5% Elder *Sambucus nigra*
 - 5% Honeysuckle *Lonicera periclymenum*
- 5.28 There will be new trees planted across the Site, with the detail to be determined. Some of these will be standard trees within hedgerows and will be of locally native species. English oak *Quercus robur* is recommended.
- 5.29 There is potential to include small orchard tree specimens within gardens. These need not be on a large rootstock and can managed and maintained at controlled size. Providing a small tree per plot would create a stepping stones across the development, with the total providing a small orchard, even if spaced across plots.

Amenity Grassland

- 5.30 There is currently limited scope within the development design for any creation of significant wildflower verges or other biodiverse areas. It is possible that small grassland areas could be managed as wildflower meadow patches/verges where visibility splays are required and on the verges along the access road.
- 5.31 All lawn and other grassland areas will be sown with the *Flowering Lawn Mix* available from *Habitataid*. The areas of bare topsoil will be sown at a rate of 4g/m² and seed will be well raked in. Reseeding would ideally take place in autumn or early spring and the sward will require mowing roughly every 6 weeks during the first year to aid establishment.
- 5.32 When established, the majority of the lawn should be mown infrequently between April and September and left unmown for a period of at least one month between June and August to allow most species to flower and set seed. More intensive mowing over a number of years would reduce the number of lowers present. Whilst the mowing regime of private lawn areas cannot be controlled, the mix will provide a basic diversity of species that will survive in most areas, with more surviving in less intensively managed gardens and even more in suitably managed public spaces.

Bird Box Provision

- 5.33 At least one bird box would be provided per new dwelling of several types suitable for various species and models that will ensure provision for the full lifespan of the development. The provision would include:
- 50% external woodcrete bird boxes with 32mm entrance holes such as 1MR Schwegler Avianex³ or Vivara Pro WoodStone 32mm Nest Box⁴ for various species;
 - 30% house sparrow nest boxes such as *CJ Wildlife WoodStone Build-in House Sparrow Nest*

³ <http://www.nhbs.com/title/158599/1mr-schwegler-avianex>

⁴ <http://www.nhbs.com/title/194565/vivara-pro-woodstone-32mm-nest-box>

*Box*⁵ or *Schwegler House Sparrow terrace 1SP*⁶;

- 10% double house martin nest boxes; and
- 10% *Schwegler No. 17A Swift Nest Box (Triple Cavity)*.

5.34 The boxes can be set on various aspects and all built into/onto external walls just under the eaves at a height of about 5m. Swift boxes should be prioritised for taller buildings.

Bat Box Provision

5.35 At least one bat box per new dwelling would be provided, of a range of types suitable for various species and models that will ensure provision for the full lifespan of the development.

5.36 The provision would include:

- 50% larger cavity bat boxes built into external walls such as *Schwegler Bat Tube 1FR* or *1WI*;
- 30% self-contained soffit bat boxes;
- 20% external bat boxes such as *Schwegler 1FQ Summer/Winter Bat Box*; and including
- 1x large box such as *Schwegler 1FTH Universal Bat Summer Roost* for larger roosts.

5.37 Further boxes will be sited on retained trees within boundary features.

Hedgehogs

5.38 It is recommended that gardens be made accessible to hedgehogs via the inclusion of at least two 200mm x 200mm holes at ground level in any wooden fencing panels used as plot boundaries. One should be in rear boundary and one in a side boundary, so that all back gardens are easily accessible.

Conclusion

5.39 It is expected that the proposals including the above mitigation and enhancements would serve local and national policy requirements. Detailed design and delivery of mitigation and enhancements are expected to be controlled via suitably worded planning conditions.

⁵ <http://www.nhbs.com/title/200469/woodstone-build-in-house-sparrow-nest-box>

⁶ <http://www.nhbs.com/title/174850/1sp-schwegler-sparrow-terrace>

Appendix 1 – Photographs



Photograph 1. 2024. Ruderal vegetation is increasing and becoming dominant in parts.



Photograph 2. 2024. Coarse grasses dominate the grassland but it is more open towards the north of the Site.



Photograph 3. 2024. The grassland is becoming interspersed with ruderal vegetation which will reduce suitability for reptiles.



Photograph 4. 2024. There remains tall hedgerows around the perimeter of the Site, separated from the open areas by dense bramble scrub.



Photograph 5. View of the Building from the southwestern corner.



Photograph 6. View of the Building from the southeastern corner.



Photograph 7. The flat roofed central section.



Photograph 8. The eastern elevation of the Building, showing the open doorway where a greater horseshoe bat was observed emerging.



Photograph 9. The collapsing metal roof at the southern end on the Northern Section.



Photograph 10. The eastern elevation is within woodland.



Photograph 11. The single storey lean-to section on the western elevation.



Photograph 12. The western elevation is entirely obscured by the tree line.



Photograph 13. The upper floor of the main Building.



Photograph 14. The double ridge and corrugated fibreboard roof of the main Building.



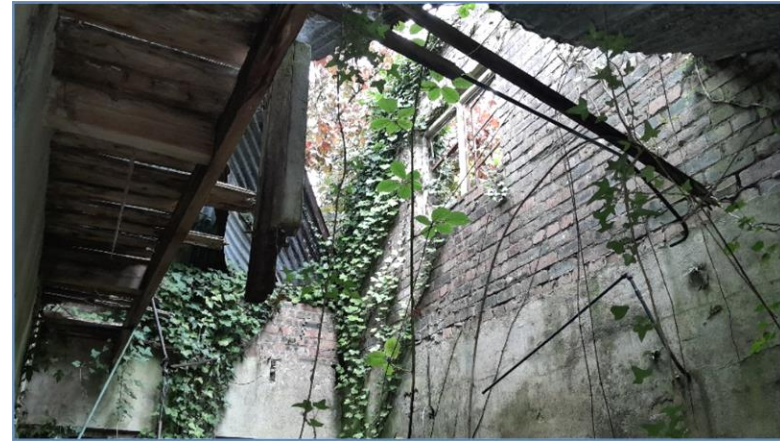
Photograph 15. The internal ground floor space of the Main Building.



Photograph 16. The ground floor space of the northern section where the ceiling is intact.



Photograph 17. The upper floor of the northern section (looking south).



Photograph 18. Significant damage at the southern end of the northern section.



Photograph 19. The internal space of central flat roofed section, with the small western room just visible.



Photograph 20. The exposed ceiling cavity at the north of the Northern Section.

Plan 1 - Habitat Features *(taken from the Preliminary Ecological Appraisal, 2020)*

I&G Ecological Consulting
landGEology.com

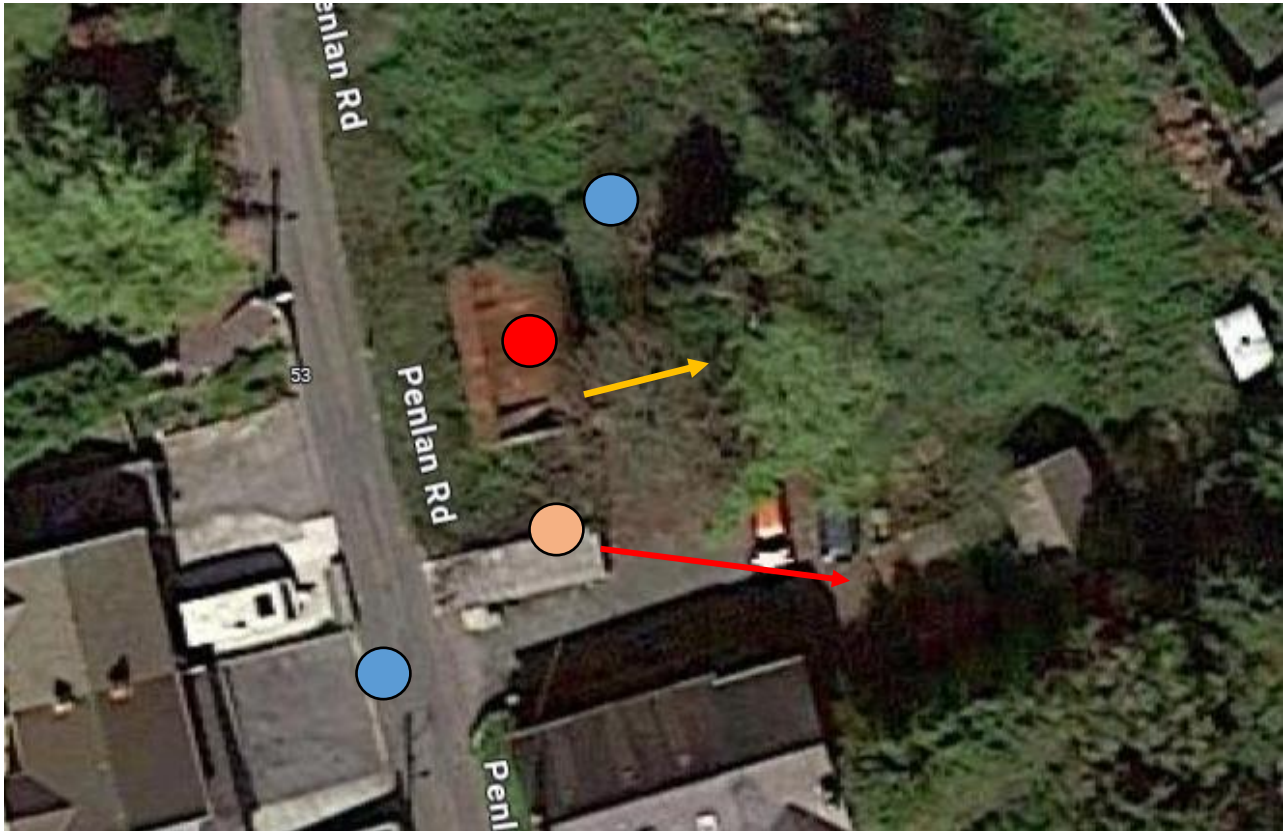
Fig. 13 Phase 1 Habitat Plan.

Colour	Code	Description
 SI	B2.2	Semi-improved neutral grassland
	A2.1	Blackthorn Scrub
	A2.1	Bramble scrub
	J3.1	Hedgerow / Tree line
	C1.1	Bracken

Phase 1 Habitat Code Key:



Plan 2 - Bat Results



KEY

BAT RESULTS

-  Surveyor position
-  Automated detector position
September and October survey
-  Automated detector position
-  Unidentified Pipistrelle bat
roost*
-  Greater Horseshoe Roost

** Echolocation falls between 45
and 55 pipistrelle species*



Not to scale

Ecology Planning
Ecological Planning Advice and
Protected Species Surveys

Project: Land at Penlan Road
Drawing Number: 1824/ 01
Drawn by: RJB
Date 10/10/24

