

Ecology Planning

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Land adjacent to Bethesda Chapel, Pontardulais Road, Tycroes

Ecology Appraisal



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Contents

1. Introduction	3
2. Methodology	4
Desk Study	4
Site Survey	4
Constraints.....	4
3. Results.....	5
Desk Study	5
Habitat Survey	5
Protected Species	6
4. Planning Policy, Legislation and Conservation Context	7
Planning Policy	7
5. Discussion and Recommendations.....	9
Evaluation	9
Impact Assessment	9
Enhancements	10
Conclusion	11
Appendix 1 – Photographs.....	12
Plan 1 - Habitat Features.....	14

1. Introduction

- 1.1 This report has been prepared by Ecology Planning on behalf of Jeff McAvoy in support of a planning application for 16 new residential dwellings on Land adjacent to Bethesda Chapel, Pontardulais Road, Tycroes, Carmarthenshire, hereafter referred to as 'The Site'.
- 1.2 The Application Site extends to approximately 0.5 Ha and is a distinct field enclosure. It is bordered to the southeast by Pontardulais Road, to the southwest by Bethesda chapel and to the northeast by a housing. There is a large area of open grassland to the northwest. The Site is centred at National Grid Reference SN 60142 10416.
- 1.3 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 survey, weather conditions and equipment used.

Desk Study

- 2.2 Background records have been purchased from West Wales Biodiversity Information Service. An online search for designated sites has been carried out, which included records of priority habitats and species from a 1km radius. This is considered proportionate to the size of the Site and habitats present.

Site Survey

Phase I Survey

- 2.3 An extended Phase I habitat survey was undertaken on 9th November 2024 by Rebecca Bohane. 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.

Constraints

- 2.6 The Site was wholly accessible but had been extremely closely mown/damaged prior to survey. This meant that an accurate species list was not able to be recorded. However, given the Site is adjacent to/continuous with a large area of grassland to the northwest, habitat type and likely quality is inferred.

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

3. Results

Desk Study

- 3.1 The Caeau Mynydd Mawr SAC lies approximately 2km to the northwest of the Site. This is designated on account of the purple moor grass meadows and marsh fritillary that it supports. The designation covers multiple sites.

Site Setting

- 3.2 The Site is set on the northwestern edge of Tygroes village, adjacent to Pontardulais road. There is relatively low density housing along the Road, interspersed with pastoral farmland. The Site is bordered to the northeast by a small housing development and to the southwest by Bethesda Chapel. Pontardulais Road forms the southeastern boundary. To the northwest lies a large field which appears to be a matrix of semi-improved grassland and marshy grassland. This is considered continuous with the Site since it is separated by a post and wire fence line only. This off Site grassland does not appear to be managed on a regular basis.

Habitat Survey

- 3.3 The following descriptions should be read in conjunction with **Appendix 1 – Photographs** and **Plan 1 – Habitat Features**.
- 3.4 The Site comprises a small discrete field enclosure, which is connected through continuous habitat type with off Site grassland to the northwest. There is a public right of way running along the southwestern side of the Site.
- 3.5 The Site had been severely mown prior to survey, which means that the species recorded is likely to be incomplete, especially given the time of year of survey.

Marshy Grassland

- 3.6 The entire Site comprises marshy grassland, which was relatively wet at the time of survey, with standing water present in damaged tyre ruts and small amounts of standing water in patches. The weeks preceding the survey were unusually dry, but the rainfall overall for 2024 has been high. It is unclear if the Site usually holds standing water, or if this is due to damage to the structure of the grassland community. Given the species recorded, it is most likely that it is wet throughout the year, although not as significantly so as recorded during the survey.
- 3.7 The grassland is dominated by rushes, with hard rush *Juncus inflexus*, soft rush *J. effusus* and jointed rush *J. articulatus* all present. Meadowsweet *Filipendula ulmaria*, sorrel *Rumex acetosa*, curled dock *R. crispus* and creeping buttercup *Ranunculus repens* are present throughout. Small amounts of purple moor-grass *Molinia caerulea* was recorded, although this was not abundant across the Site.
- 3.8 The strip along the southwestern part of the Site has a high proportion of perennial rye *Lolium perenne*, which grades into a very narrow strip of ruderal vegetation along the base of the boundary hedgerow.
- 3.9 Whilst there is some evidence of prolonged disturbance and improvement along the public footpath, the habitat is not sufficiently distinct to comprise a different type of grassland.
- 3.10 The marshy grassland is unlikely to meet the criteria for Rhos pasture, given its relatively poor species diversity. Whilst some species are unlikely to have been visible and therefore the diversity is likely to have been under recorded, the off Site habitat is continuous with the Site and therefore likely a good indicator of the habitat quality of the Site (see below).

Hedgerow

- 3.11 There are two intact hedgerows, which form the southeastern and southwestern boundaries of the Site.
- 3.12 The southeastern hedgerow is dense and regularly managed, being recently flailed at the time of survey. It largely comprises hazel *Corylus avellana*, with smaller amounts of holly *Ilex aquifolium*, grey willow *Salix cinerea*, sycamore *Acer pseudoplatanus*, English oak *Quercus robur*, ivy *Hedera helix* and *cotoneaster* sp. There is no ground flora associated with the hedgerow base, with the marshy grassland extending right up to the hedgerow.
- 3.13 The southwestern hedgerow is similar in species composition although slightly sparser than the southeastern hedgerow and with a proportion of bramble *Rubus fruticosus* agg, which is sometimes dominant. The base of the hedgerow is disturbed, with ruderal species present, including common nettle *Urtica dioica* and rosebay willowherb *Chamaenerion angustifolium*. This is not sufficiently large to be habitat in its own right but is reflective of the disturbance to the grassland from the adjacent footpath.

Defunct Hedgerow

- 3.14 The northeastern boundary is very sparse, comprising stands of grey willow. This was presumably a hedgerow at some point in the past but is no longer functional.

Off Site Habitat

Semi-Improved Neutral Grassland

- 3.15 The Site is continuous with a large area of grassland to the northwestern, which is a matrix of marshy grassland and species-poor semi-improved grassland. The marshy grassland probably dominates but patches of semi-improved grassland are present in undefined patches. The grassland shows no typical signs of improvement, but the original community type is not identifiable.
- 3.16 Red fescue *Festuca rubra* is dominant throughout, with hard rush and purple moor grass across all wet areas. Also present are jointed rush, soft rush, creeping buttercup, Yorkshire Fog *Holcus lanatus*, ribwort plantain *Plantago lanceolata* and glaucous sedge *Carex flacca*. No other species were visible from the public footpath.
- 3.17 Given the lack of management, at least in the current year, it is unlikely that a significant number of species have been missed. The sward is long, with an average height between 20cm in disturbed areas and both an average and maximum height of 50cm in wetter areas. There are no species present indicative of rhos pastures, other than purple moor grass. No other associated species are present that are characteristic of high quality habitat. The marshy grassland was drier than the Site at the time of survey and this is most likely to be due to an intact sward.

Protected Species

Birds

- 3.18 There are limited opportunities for common and widespread species within the Site. The Site is small and the hedgerows are both subject to disturbance.

Reptiles

- 3.19 The off Site grassland is suitable to support all common species of reptiles. Records of slow worm are present within 1km of the Site. The Site is currently unsuitable for reptiles on account of the extremely short/damaged sward and patches of standing water.

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:

Policy EQ4 Biodiversity

- 4.3 “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

- 4.4 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;

4.5 Where relevant, the assessment takes account of the legislative protection afforded to specific habitats and species.

5. Discussion and Recommendations

Evaluation

Habitats

- 5.1 The marshy grassland appears to be relatively species poor, although it is not possible to accurately identify species richness based on current conditions. Given the adjacent habitat present, which does not have the characteristic diversity of rush pasture priority habitat, it is unlikely that the Site will be more diverse.
- 5.2 The Site is small and in very poor condition and therefore the opportunities to support protected species are limited. It is possible that small numbers of common and widespread species of birds could be present. The hedgerow along the roadside is in best condition, although connectivity to this is poor.
- 5.3 The Site is currently of low ecological value, being in a very poor condition. It is not possible to tell if the recent management is indicative of recent years, but there is no evidence that the Site is managed in way that is conducive to species diversity. The lack of connectivity to other grazing habitat (assuming the grassland to the northwest is not grazed frequently) suggests that infrequent topping/mowing is the most likely form of management, possibly coinciding with annual flailing of the hedgerows. Management is clearly intense when undertaken, which has resulted in damage and the aerial photography of the Site appears to show partial clearance of the Site in recent years. The Site is therefore considered to be of low ecological value. Whilst in theory it could be brought into better condition, this seems unlikely to be achieved.

Impact Assessment

- 5.4 The proposals include:
 - Construction of 16 residential units;
 - Creation of two new attenuation basins and the north of the Site (beyond domestic curtilages); and
 - New hedgerow planting, including strengthening of boundary features.
- 5.5 The entire area of marshy grassland within the Site will be lost to the development. The habitat does not appear to be valuable in its own right and has some, albeit limited supporting value to the marshy grassland to the north and west. If viewed as part of this wider area of marshy grassland, the loss of 0.5Ha from a total of 3Ha within the field enclosure (with further habitat in the wider area) accounts for a loss of 17% of the habitat. Whilst no habitat loss is ideal, the Site offers limited connectivity in the landscape being on its own and surrounded on three sides by other buildings/road.
- 5.6 The new attenuation basins will be required since the entire Site is relatively wet. Whilst altering the drainage of the Site is likely to have some off-Site impact to the north (downhill of the Site), this is not considered to be significant. The wetter parts of the marshy grassland are not species rich and therefore any resulting changes in species composition are unlikely to affect the quality of the habitat. Given that the off-Site grassland is a mosaic of marshy grassland and semi-improved neutral grassland, there is already variation in the water table and further changes are unlikely to significantly alter the category of habitat.
- 5.7 Clearance of vegetation will take place outside of the nesting bird season (March to August, inclusive) unless a check immediately prior by suitable qualified Ecologist confirms absence.

Mitigation

- 5.8 The retained boundary hedgerows will be subject to protection throughout works.
- 5.9 Prior to work in the nesting bird season, a suitable qualified Ecologist will visit the Site to confirm absence.

Enhancements

New Hedgerow Planting

- 5.10 The existing specimens within the site boundaries will be retained and further enhanced with native species (not varietals) and contribute towards a final mix of approximately:
 - 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*
- 5.11 This planting mix will form the baseline for all new hedgerows within the Site. All hedgerows will be of staggered double row planting. It is accepted that the hedgerows within private ownership may not be optimal quality, but nevertheless some species diversity is likely to persist, which is an enhancement above the baseline.
- 5.12 Creation/restoration of the boundary hedgerows which lie beyond the domestic curtilage constitute an enhancement.

Bulb Planting

- 5.13 The base of all new hedgerows beyond the domestic curtilages (the existing western and northern Site boundaries, and the attenuation basin side of the hedgerow of the northernmost properties), are unlikely to be subject to heavy human use in the winter and early spring months. As a result native woodland plants are likely to be free from significant trampling and will provide an early nectar source. Whilst the western boundary contains the footpath, this is sufficiently wide to allow bulb planting along either side.
- 5.14 Swathes will be planted along the base of all the identified hedgerows. Plants that have visually attractive and easily recognisable flowers will be planted in order to maximise careful human use, particularly of the footpath, which cannot be controlled.
- 5.15 The following species will be planted, with guidance on density, number and placement provided by an Ecologist:
 - Wood anemone *Anemone nemorosa*
 - Winter Aconite *Eranthis hyemalis*
 - Wild Daffodil *Narcissus pseudonarcissus*
 - Snowdrop *Galanthus nivalis*
 - Ramsons *Allium ursinum*
 - Bluebell *Hyacinthoides non-scripta*.

Attenuation Basin

- 5.16 The attenuation basin and surrounding grassland will be sown with a River Floodplain / Water Meadow (MG8 Grassland)².
- 5.17 This will be suitable for intermittent flooding of the basins and the species composition is likely to vary over time depending on the dryness levels. Given the basins are not expected to hold water for any period of time it is not appropriate to plant it with species reliant on wet conditions. The wet meadow mix set out below will allow adaption to variable conditions, allowing maximum chance of persistence in the long term.
- 5.18 This species rich grassland is also able to act as seed source for the off Site grassland to the north.

New Tree Planting

- 5.19 At least three new standard trees of large, locally native species would be included within the new/infill hedgerow planting.
- 5.20 New medium sized trees of locally native species will be included within the larger plots of the development and within the attenuation basin area, with suitable species being rowan, silver birch, wild cherry, elder and crabapple.

Bird Box Provision

- 5.21 Two bird boxes would be provided per dwelling with integrated models used where possible that will ensure provision for the full lifespan of the development. Each building will include:
- one woodcrete bird boxes with 32mm entrance holes such as 1MR Schwegler Avianex³ or Vivara Pro WoodStone 32mm Nest Box⁴ for various species; and
 - one house sparrow nest boxes such as *CJ Wildlife WoodStone Build-in House Sparrow Nest*.

Bat Box Provision

- 5.22 One bat box will be built into an external wall of each new dwelling. This will be located just below the apex on a gable wall if possible, away from light spill originating from windows. A suitable model would be a larger cavity bat box such as *Schwegler Bat Tube 1FR* or *1WI*.

Conclusion

- 5.23 The loss of an area of poor quality habitat will be compensated for by enhancement of the retained hedgerows and attenuation basins. It is always difficult to achieve a net gain on a greenfield Site, but this Site is heavily disturbed and shows evidence of clearance and damage, suggesting that it is likely to remain in poor condition. Additionally, the off Site green infrastructure assets in the wider landscape will be unaffected, since the Site forms an infill area between the chapel to the west and the development to the east. It does not currently contribute to landscape connectivity. The provision of the measures outlined above will create a seed resource for the off-Site habitat, as well as maximise opportunities for birds and bats within the development, including providing food resources in the new hedgerows. These measures are in accordance with the biodiversity gain required under Planning Policy Wales. It is anticipated that the delivery of all recommended measures will be controlled via an appropriately worded planning condition.

² Available from: <https://germinalamenity.com/re3-river-floodplain-water-meadow-mg8-grassland> (Accessed online 13/12/24]

³ Available from: <http://www.nhbs.com/title/158599/1mr-schwegler-avianex> (Accessed online 13/12/24]

⁴ Available from: <http://www.nhbs.com/title/194565/vivara-pro-woodstone-32mm-nest-box> (Accessed online 13/12/24]

Appendix 1 – Photographs



Photograph 1. The Site, looking southeast from the northwestern corner.



Photograph 2. The Site showing the eastern boundary in the background and neighbouring development.



Photograph 3. The western boundary hedgerow and improved pedestrian footpath.



Photograph 4. Damage to the Site and the defunct hedgerow along the eastern boundary.



Photograph 5. Standing water in damaged sections, polluted with oil.



Photograph 6. The pedestrian footpath along the western boundary.



Photograph 7. Offsite marshy grassland to the north of the Site.



Photograph 8. Offsite semi-improved neutral grassland to the northwest of the Site.

Plan 1 - Habitat Features



KEY

-  Application boundary
-  Marshy Grassland
-  Hedgerow
-  Defunct Hedgerow



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Ecology Planning

Ecological Planning Advice and
Protected Species Surveys

Project: Land adjacent to Bethesda
Chapel, Tycroes

Drawing Number: 1846/01

Drawn by: RJB

Date 13/12/24

