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ECOLOGICAL IMPACT ASSESSMENT REPORT

CWM GWYDDON, CWMCARN

CAERPHILLY COUNTY BOROUGH COUNCIL

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This document is available in Welsh, and in other languages and formats on request.

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Site/Job:	Cwm Gwyddon, Cwmcarn
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Surveyed by:	Dr Alex Wilson MCIEEM, Dr Amy Williams Schwartz, Jenny O'Neill

VERSIONING AND QUALITY ASSURANCE

Rev	Status	Date	Author(s)	Reviewed by	Approved by
A	Draft	17/06/2021	Alex Wilson MCIEEM Principal Ecologist Amy Williams Schwartz Ecologist	Carolyn Billingsley MCIEEM Senior Ecologist	Carolyn Billingsley MCIEEM Senior Ecologist

DISCLAIMER

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The evidence which we have prepared and provided is true and has been prepared and provided in accordance with the guidance of The Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

SUMMARY

Purpose	<ul style="list-style-type: none"> • Wildwood Ecology was commissioned by Caerphilly County Borough Council (the client) to undertake an Ecological Impact Assessment (EclA) of Cwm Gwyddon, Cwmcarn. • The site is the subject of a planning application for a new school on the site.
Methodology	<ul style="list-style-type: none"> • A PRA and PEA was undertaken in September 2020 consisting of a desk study and field survey undertaken following best practice in line with the Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edn (Collins 2016). • A reptile survey was carried out at the site in September and October 2020. • Two bat activity surveys were carried out in September 2020 and May 2021 following best practice in line with the Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edn (Collins 2016).
Key issues	<ul style="list-style-type: none"> • The remaining onsite structure was confirmed to be a roost for common pipistrelle bats with 6 individuals emerging from four different locations towards the southern end of the structure. • No reptiles were confirmed to be onsite. • Hedgehogs were confirmed to be using the site.
Recommendations	<ul style="list-style-type: none"> • If works are to be undertaken to the remaining structure onsite a European Protected Species licence for bats must be obtained to ensure legislative compliance. This will require the implementation of mitigation measures -timing of works, maintenance of roosts, supervision of high risk works by an ecologist- and compensation measures -provision of further roosting features within the building and maintenance of dark flight lines. • Further recommendations regarding invasive species eradication, sensitive vegetation removal with respect to nesting birds, hedgehog and dormice, and precautionary methodology to prevent pollution impacts to the River Ebbw are advised. • We also recommend that areas are retained and enhanced for invertebrates, as part of the site is classed as open mosaic on previously developed land (priority habitat).
Conclusions	<ul style="list-style-type: none"> • Providing that the recommendations outlined within this report are successfully implemented, it should be possible for the proposed development to proceed and for there to be no long-term impacts upon the key protected species present at the site. • This ecological report will remain valid for a period of 18 months from the date of the last survey – i.e. until November 2022.

CONTENTS

Summary	iii
List of figures	iv
List of tables	iv
1 Introduction	1
2 Methodology	3
3 Results	7
4 Interpretation and assessment	14
5 Conclusions and recommendations	18
6 References	20
APPENDIX I: PEA Plan	21
APPENDIX II: Proposed development plan	22
APPENDIX III: Mitigation and enhancement Plan	23
APPENDIX IV: Survey images (bat survey)	24
APPENDIX V: Species list	25
APPENDIX VI: Planning policy and legislation	26

List of figures

Figure 1 - Aerial image of the site (red line shows the site boundary). Image used under licence (©2021 Google). Imagery date 28/05/2020	1
Figure 2 – Distant aerial image of the site (red line shows the site boundary). Image used under licence (©2021 Google). Imagery date 28/05/2020.	2
Figure 3 – Approximate locations of reptile refugia. Blue line shows area of site ownership.....	5
Figure 4 - Light pollution at the site is moderate, with the surrounding valley sides being of a lower level	11
Figure 5 - Roost locations are marked with red arrows. Surveyors are marked by blue pins.	12
Figure 6 – Southern end of western aspect.....	24
Figure 7 – Northern end of western aspect.....	24
Figure 8 – Northern aspect, showing bat box (circled).	24
Figure 9 – Eastern aspect, showing bat boxes (circled).	24
Figure 10 – Southern aspect.	24

List of tables

Table 1 – Sources of biodiversity and ecological records.....	3
Table 2 – Summary of guidelines for assessing the potential suitability of proposed development sites for bats (from Collins 2016).....	4
Table 3 – Surveyor information	6

Table 4 – Summary of designated sites in range of the site.....	7
Table 5 – Summary of survey timing and conditions during surveys.	9
Table 6 – Habitats and linear features present onsite.	10
Table 7 – Onsite building information.....	10
Table 8 – PRA results.	11
Table 9 – Bat activity survey results. SS±xx refers to the time in minutes before/after sunset.	12
Table 10 – Results of the reptile survey	13
Table 11 – Value of the site for bats (from Wray et al 2010)	15
Table 12 – Recommendations.....	18

DRAFT

1 INTRODUCTION

- 1.1 Wildwood Ecology was commissioned by Caerphilly County Borough Council (the client) to undertake an Ecological Impact Assessment (EclA) at Cwm Gwyddon, Cwmcarn (the site) centred at grid reference ST 21595 93998.
- 1.2 A Preliminary Ecological Appraisal, Preliminary Roost Assessment, Reptile Survey and two Bat Activity Surveys were subsequently carried out.

Site description

- 1.3 The aerial image of the site (Figure 1) shows the site to consist of grassy habitats, along with hardstanding.



Figure 1 - Aerial image of the site (red line shows the site boundary). Image used under licence (©2021 Google). Imagery date 28/05/2020

- 1.4 The wider habitat bordering the site (Figure 2) is scrub and woodland. An existing building is present on the site just outside the site development area, which is the subject of the bat surveys. The local area includes the River Ebbw to the immediate west, and the railway line running alongside this, and residential areas to the south and east. An industrial/business park and recreation area is found to the north. The site sits within a wooded valley, with upland pasture found on the hillside and plateaus.



Figure 2 – Distant aerial image of the site (red line shows the site boundary). Image used under licence (©2021 Google). Imagery date 28/05/2020.

Proposed development

1.5 The site is the subject of a planning application for a new school at the site (see Appendix II).

Purpose of this report

- 1.6 This report aims where possible to provide sufficient information for the local planning authority to fully assess the potential ecological impacts of the proposed development, or alternatively, to identify what further information is required to fully inform the scheme.
- 1.7 The results of the EclA have been used to establish the need for, and extent of, any mitigation or compensation measures required as part of the proposed development.

2 METHODOLOGY

Desk study

2.1 A biodiversity desk study was undertaken in relation to the site in January 2021. The sources consulted and the type of information obtained are summarised in Table 1.

Table 1 – Sources of biodiversity and ecological records.

Source	Information requested (search buffer from site centre/boundary)
Multi-Agency Geographic Information for the Countryside (MAGIC) ¹	<ul style="list-style-type: none"> International statutory designations (5km) National statutory designations (2km)

2.2 The search buffers are considered to be sufficient to cover the potential zone of influence (ZoI²) of the proposed development.

2.3 The impact of the proposed development on the biological integrity of any nearby designated protected sites has been fully considered.

2.4 A previous survey was carried out at the site by Sylvan Ecology in 2018, with a SEWBRc data search carried out as part of this survey. This found the closest bat record to be 530m from the site, with this for a commuting common pipistrelle. No other details of priority or protected species onsite or nearby were discussed within the report.

2.5 The 2018 survey found common and soprano pipistrelle roosts within the buildings that were subsequently demolished. Five common pipistrelles and two soprano pipistrelles were observed emerging from these buildings in August 2018.

Field surveys

Preliminary roost assessment (PRA) for bats and nesting birds

2.6 A field survey was undertaken on the 25th September 2020.

2.7 An assessment of the building onsite was undertaken in accordance with the latest published best practice guidance (Collins, 2016).

2.8 The building was externally inspected for bats and their signs with the aid of high-powered lamps and close-focussing binoculars.

2.9 The suitability of the building to accommodate bats was assessed, along with a systematic search for signs of bats (e.g. droppings, moth wings, scratch marks, staining, etc.) or actual bats that were present. Particular attention was paid to the roof areas, with searches for any crevices or gaps in walls, gaps between soffits/fascias, droppings stuck to the walls, floors or other surfaces, or feeding remains, in addition to a number of other factors and signs indicative of a bat roost.

2.10 In addition, the building was classified according to its suitability for bats, based on the presence of features within the structure and / or landscape (see Table 2).

¹ <http://magic.defra.gov.uk/MagicMap.aspx>

² ZoI definition – ‘the areas/resources that may be affected by the biophysical changes caused by activities associated with a project’ (CIEEM, 2016).

Table 2 – Summary of guidelines for assessing the potential suitability of proposed development sites for bats (from Collins 2016).

Suitability	Description of building, tree, or structure	Number of activity survey visits required ³
Negligible	Negligible habitat features on site likely to be used by roosting bats.	None
Low	A structure or tree with one or more potential roost sites that could be used by individual bats opportunistically. However, potential roost sites not suitable for larger numbers or regular use (i.e. maternity or hibernation).	One
Moderate	A structure or tree with one or more potential roost sites that could be used by bats, but unlikely to support a roost of high conservation status.	Two
High	A structure or tree with one or more potential roost sites obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time.	Three
Confirmed roost	Evidence of bats or use by bats found.	Minimum of two – to characterise the roost

Reptile survey

2.11 No universally agreed upon methodology for surveying reptiles is currently available. Therefore, the methodology employed in this survey was adapted from the following reptile survey publications:

- Evaluation of reptile survey methodologies (1996), Report No. 200. *English Nature Research*.
- Advice sheet 10 reptile survey: an introduction to conduction and interpreting surveys for snake and lizard conservation (1999). *Froglife*.
- Technical Information Note TIN102, Reptile Mitigation Guidelines (2011) [withdrawn] *Natural England*.
- Herpetofauna workers' manual (2003), *JNCC*.
- Sewell et al. (2013) Survey protocols for British herpetofauna; Version 1.0. *Amphibian and reptile conservation; Durrell Institute of Conservation and Ecology (DICE); University of Kent; University of Sussex*.

2.12 The survey assumed the possible presence of all common UK reptile species (adder, common lizard, grass snake and slow worm).

2.13 An artificial refugia survey (ARS) was carried out to determine the presence or likely absence of reptile species at the site. This type of survey exploits the affinity of reptiles for microhabitats, created beneath objects on the ground, that are warmed by the sun. In this survey the artificial refugia used were made from roofing felt (0.5m x 0.5m and 1m x 0.5m); corrugated roofing material (1m x 0.5m); and carpet tiles.

2.14 The carpet tiles were deployed around the site by the LPA's ecologist prior to the September survey. On commencing the survey, several of these were overgrown and had become soggy/degraded, and so additional refugia were added (corrugated sheets and felts).

³ To provide confidence that bats are absent from the structure

- 2.15 A total of 40 refugia were set out over the site (see Figure 3). The refugia were placed at a density of 100 per hectare but limited to areas that were suitable for reptiles. The artificial refugia were pressed down on to vegetation in order to create a microclimate favoured by reptiles.
- 2.16 A total of 8 separate reptile survey visits were made over a 20-day period from 25/09/2020 to 14/10/2020. In addition to this, searches were undertaken of natural refugia (e.g. stones, rocks) and anthropogenic refugia (e.g. debris left from previous works and rubbish).
- 2.17 Surveys were undertaken at a suitable time of day and in suitable weather conditions as defined by Natural England Technical Information Note TIN102, Reptile Mitigation Guidelines (see Appendix V).



Figure 3 – Approximate locations of reptile refugia. Blue line shows area of site ownership.

Bat activity surveys (dusk emergence)

- 2.18 Two bat activity surveys (dusk emergence surveys – 29th September 2020 & 4th May 2021) were undertaken at the onsite building.
- 2.19 The dusk emergence surveys commenced approximately 15 minutes before the time of local sunset (source www.sunrisesunsetmap.com) and continued for approximately 1.5 hours after sunset.
- 2.20 Surveyors were equipped with broadband bat detectors (Elekon BatLogger M & Elekon Batscanner Stereo).
- 2.21 Note was made of all bat activity recorded including (where appropriate) roost access points, species, time of re-entry, direction of flight, behaviour (foraging or commuting) and use of landscape features. Minimal lighting was used during the surveys as this can alter the behaviour of the bats emerging from or entering a roost, or foraging or commuting over a site.

Surveyor information

- 2.22 The surveys were led by Alex Wilson (September 2020) and Amy Williams Schwartz, with assistance from Jenny O’Neill (May 2021). See Table 3 for further information.

Table 3 – Surveyor information

Surveyor	Licences	Ecological experience
Alex Wilson Ph.D., B.Sc. (Hons) MCIEEM Principal Ecologist	Bat Dormouse Barn owl	Holds a Ph.D (Visual constraints in bird behaviour). Experienced in undertaking ornithological surveys, and bat surveys. Is a licensed bat and dormouse ecologist in England and Wales. Supervisor and advisor to undergraduate and postgraduate ecological research projects.
Amy Williams Schwartz PhD, MSc, BSc (Hons.) Ecologist	Bat GCN	Experienced in surveying for a wide range of protected species including great crested newt, reptiles, and bats within a consultancy and volunteer capacity. PhD on wildlife/road interactions in the UK, and experienced in performing academic ecological research projects, as well as species identification.
Jenny O'Neill BSc (Hons.) Assistant Ecologist	-	Holds a 2:1 honours degree in Ecology. Has field experience through academic and professional training. Experience in undertaking protected species surveys including reptiles and bats.

Limitations and assumptions

- 2.23 The reptile survey was carried out across September and October. The weather in October at the time of the survey visits was optimal in terms of reptiles, with sightings of local reptiles noted into November.
- 2.24 Many species of bat in the UK are crevice dwelling, and bats or signs of bats can be difficult to find within a building. In addition, there may be areas that are inaccessible to the surveyor. In this case, no internal access to the building was made.
- 2.25 No other limitations were encountered, or assumptions made, and it is considered that, with the access gained and recording undertaken, an accurate assessment of the site's ecological value was made.

3 RESULTS

Desk study

Designated sites (statutory)

- 3.1 There were no international statutory designations within 5km of the site and no national statutory designations within 2km. The closest statutory designated site was approximately Coed-y-Darren SSSI at 2.8km to the south-east.
- 3.2 There is one protected area (SSSIs or SACs) designated for its bat populations within 10km of the site (Ruperra Castle Woodlands SSSI 6.6km to the south, designated in part for its greater and lesser horseshoe populations).

Designated sites (non-statutory)

- 3.3 There were 10 non-statutory designations within 1km of the site (see Table 4).

Table 4 – Summary of designated sites in range of the site.

Site name	Designation	Description / key reason for designation	Distance & direction
NH 3.12 River Ebbw	SINC	<p>Primary</p> <ul style="list-style-type: none"> Waters with resident populations of sea/river/brook lamprey, sturgeon, allis/twaite shad, Atlantic salmon, grayling, common goby, bullhead, bleak, smelt, brown trout or sea trout. Watercourses used as regular migratory routes by anadromous species listed above. <p>Secondary</p> <ul style="list-style-type: none"> Probable breeding Otter, plus areas for foraging, laying up and territorial use. Relatively unpolluted main river with unmodified bed and banks. Watercourses with exposed sediment/ erosion features (e.g. soft cliffs). Adjacent semi-natural wetland, grassland and woodland habitats as part of the wider river corridor. 	Adj. W
NH 3.134 Cwm Gofapi Woods, Cwmcarn	SINC	<p>Primary</p> <ul style="list-style-type: none"> Semi-natural woodland with an assemblage of indicator species. Replanted woodland retaining a range of woodland indicators. Grassland supporting a high density of ant hills. Presence of large numbers of Red Wood Ants. <p>Secondary</p> <ul style="list-style-type: none"> Rock exposures. Over-mature trees. Bracken. Scrub 	100m E
NH 3.124 Gwydon Valley Woodlands, Abercarn	SINC	<p>Primary</p> <ul style="list-style-type: none"> Extensive area of open countryside where semi-natural upland features predominate. Acid grassland / heath with at least 7 indicator species. 	101m E

		<ul style="list-style-type: none"> Conifer plantations with an assemblage of semi-natural ground flora indicator species. Presence of locally significant bryophyte species. <p>Secondary</p> <ul style="list-style-type: none"> Rock outcrops. Dry stone walls. Marshy grassland. Semi-improved acid grassland. Ponds. Streams. 	
NH 3.133 Mynydd y Lan Woodlands, Cwmcarn	SINC	<p>Primary</p> <ul style="list-style-type: none"> Semi-natural woodland with an assemblage of indicator species. Semi-natural Beech woodland. Replanted woodland retaining a range of woodland indicators. <p>Secondary</p> <ul style="list-style-type: none"> Rock exposures Streams. 	205m SW
NH 3.135 Cwmcarn Slopes, Cwmcarn	SINC	<p>Primary</p> <ul style="list-style-type: none"> Heathland / acid grassland containing at least 7 indicator species. Replanted woodland retaining a range of woodland indicators. <p>Secondary</p> <ul style="list-style-type: none"> Rock exposures. Bracken. Scrub. Grassland with ant hills. Stream. 	593m SE
NH 3.131 Sychpant Farm, West of Cwmcarn	SINC	<p>Primary</p> <ul style="list-style-type: none"> Semi-natural woodland with an assemblage of indicator species. Acid grassland with at least 7 indicator species. <p>Secondary</p> <ul style="list-style-type: none"> Stream and flush. Scrub. Bracken. 	671m WNW
NH 3.125 Cwm Pennar, Abercarn	SINC	<p>Primary</p> <ul style="list-style-type: none"> Semi-natural woodland with an assemblage of indicator species. Replanted woodland retaining a range of woodland indicators. <p>Secondary</p> <ul style="list-style-type: none"> Marshy grassland. Semi-improved acid grassland. Mature trees. Rock exposures. Stream. 	735m NW
NH 3.129 Distillery Pond, Abercarn	SINC	<p>Primary</p> <ul style="list-style-type: none"> Standing water with wetland vegetation at the margins. 	738m NNE
NH 3.136 Monmouth to Brecon Canal	SINC	<p>Primary</p> <ul style="list-style-type: none"> Wetland habitat with good bank-side plant communities. 	757m SSE

		<ul style="list-style-type: none"> Broad-leaved woodland with an assemblage of semi-natural indicators. <p>Secondary</p> <ul style="list-style-type: none"> Post industrial land (disused railway). Scrub. 	
NH 3.130 Mynydd y Lan, West of Cwmcarn	SINC	<p>Primary</p> <ul style="list-style-type: none"> Extensive area of open countryside where semi-natural upland features predominate. Acid grassland / heath with at least 7 indicator species. <p>Secondary</p> <ul style="list-style-type: none"> Bracken. Ponds. Rock outcrops (quarry on southern slope). 	796m W

Field surveys

Timing and conditions

3.4 The survey timings and prevailing weather conditions during the surveys can be seen in Table 5.

Table 5 – Summary of survey timing and conditions during surveys.

Date	Type	Conditions						
		Temp [°C]	Cloud cover [Oktas]	Wind speed [Beaufort]	Rain			
25/09/2020	Preliminary Roost Assessment, Preliminary Ecological Appraisal, Reptile Survey	15	4	4	Nil			
27/09/2020	Reptile Survey	17	0	2	Nil			
29/09/2020	Reptile Survey	17	1	3	Nil			
01/10/2020	Reptile Survey	13.5	8	2	Nil			
05/10/2020	Reptile Survey	12	6	3	Nil			
07/10/2020	Reptile Survey	14	6	4	Nil			
12/10/2020	Reptile Survey	13	8	2	Occ. Drizzle			
14/10/2020	Reptile Survey	11	8	2	Nil			
Date	Type	Survey Timing			Conditions			
		Start	End	Sunset	Temp [°C]	Cloud Cover [Oktas]	Wind Speed [Beaufort]	Rain
29/09/2020	Dusk emergence	18:39	20:24	18:54	Start: 16 End: 13	Start: 1 End: 0	Start: 3 End: 1	Nil
04/05/2021	Dusk emergence	20:25	22:10	20:40	Start: 8 End: 6	Start: 1 End: 6	Start: 3 End: 1	At the very end of the survey.

Preliminary ecological appraisal (PEA)

3.5 The site is comprised of several habitats type: amenity grassland, semi-improved neutral grassland, introduced shrubs, ephemeral /short perennial, scrub and scattered scrub, hardstanding and building.

3.6 Appendix I shows the distribution of the habitats onsite. Table 6 below outlines the species noted within the habitats onsite. In addition to these, there are several planted trees along the access road at the south of the site.

Table 6 – Habitats and linear features present onsite.

Habitat type / Linear feature	Species present
<p><i>J1.2 Amenity grassland</i> Well managed sports pitch area with goalposts present.</p>	Species likely to be the same as for B2.2.
<p><i>B2.2 Neutral grassland (semi-improved)</i> Found around the periphery of the sport's pitch and the school site where there has been less management in recent years.</p>	Annual meadow-grass, perennial ryegrass, cock's foot, Yorkshire fog, daisy, dandelion, common knapweed, oxeye daisy, ragwort, broad-leaved dock, hoary mustard, ribwort plantain, false-oat grass, mugwort, Himalayan balsam, speedwell sp
<p><i>J1.3 Ephemeral/short perennial</i> (species includes scattered scrub also)</p>	Butterfly bush, bramble, ragwort, vetch sp, annual meadow-grass, bristly oxtongue, hawkbit sp, autumn hawkbit, evening primrose, hoary mustard, rosebay willowherb, greater willowherb, ivy.
<p><i>A2.1 Scrub (dense/continuous)</i> Found around the periphery, along the palisade fencing and along the wooded bank to the east. Encroaching the site.</p>	Bramble, hawthorn, blackthorn, ivy, herb Robert, common nettle.
<p><i>J1.4 Introduced shrub</i> A variety of species are found to the south of the remaining building, with ornamental plantings within a former garden area.</p>	Ornamental varieties with natural colonisation from the rest of the site also. Hedgehog noted within this area.
<p><i>J3.6 Buildings</i> Described below (Table 7 and 8).</p>	
<p><i>J5 Other habitat</i> Hardstanding and bare areas are found where vehicles have left the hardstanding and tracked onto vegetation.</p>	

Preliminary roost assessment (PRA) for bats and nesting birds

3.7 A description of the building inspected during the PRA can be seen in Table 7.

Table 7 – Onsite building information.

Building	Description	Development plans
A	<p>The structure is a brick built two storey structure, over a roughly rectangular footprint. A metal fire exit is situated wrapped around the northern and western end of the building at second storey height. The roof is metal sheet over a shallow pitch, and with metal weather edging/fascias around the eaves. The lower floor windows and doors have metal security grilles fitted.</p> <p>Three bat boxes are present – one on the northern aspect, and two on the eastern aspect (Figures 9 &10).</p>	Retain

3.8 The results of the PRA can be seen in Table 8.

Table 8 – PRA results.

Building	Use by bats	Use by birds	Bat signs and internal and external Potential Roost Features (PRFs) & access points
A	N	N	<p>No confirmed use was determined at the time of the PRA with the bat boxes unable to be fully inspected (there were gaps at the tops of these so were unlikely to be thermally stable for regular use).</p> <p>There were gaps at the metal weather edging, particularly on the southern elevation and the eastern elevation.</p> <p>No birds were seen to be utilising the structure, though the survey was carried out outside the breeding season.</p>

Links to surrounding habitat

- 3.9 Whilst the site is quite open in nature, there are tree lined corridors to the east (along the road) and to the west (along the river), with boundary vegetation providing good linkages to these.
- 3.10 The site is relatively cut off from areas of unmanaged grassland, with the surrounding habitats being either highly managed, hardstanding, river, woodland or buildings. This means that genetic flow for any sedentary species is unlikely to occur – e.g. for reptiles, with any population present being confined to the site itself. The size of the site does not preclude presence however, with some species (i.e. slow worm) found in number on sites far smaller.
- 3.11 In terms of lighting, the site itself is not artificially illuminated, though there is some light spill from the residential properties in the north and south. Figure 4 illustrates the light pollution (radiance) around the site, with the site itself being subject to moderate light pollution ($3.03 \times 10^{-9} \text{ W/cm}^2 \times \text{sr}$) – VIIRS 2020 data www.lightpollutionmap.info.

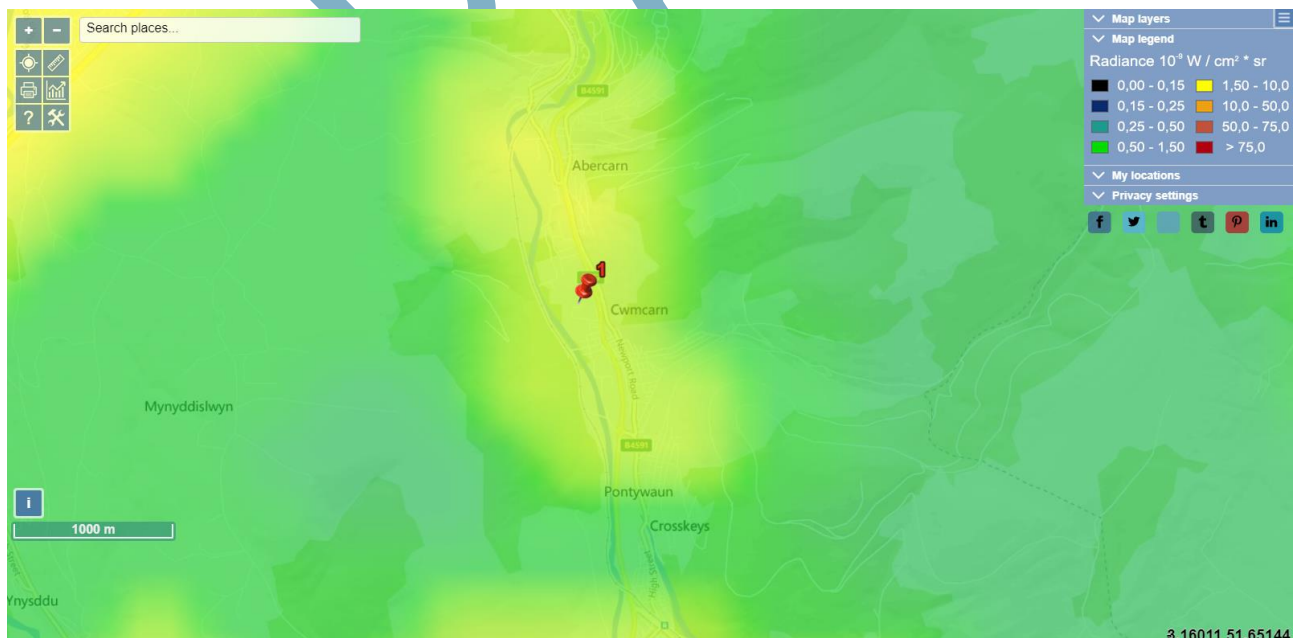


Figure 4 - Light pollution at the site is moderate, with the surrounding valley sides being of a lower level

Bat activity surveys (dusk emergence and pre-dawn re-entry)

3.12 The results of the bat activity surveys are summarised in Table 9.

Table 9 – Bat activity survey results. SS±xx refers to the time in minutes before/after sunset.

Survey type and date	Roosts and activity/points of particular interest	General observations
Dusk emergence 29/09/2020	<ul style="list-style-type: none"> First bats observed at SS+9 emerging from the building (southern elevation) – common pipistrelle. A total of 6 emergences of common pipistrelle from four locations around the southern elevation and towards the south of the western elevation, were noted between SS+9 and SS+20. 	<ul style="list-style-type: none"> Common pipistrelle passes were fairly constant until SS+48 when it was quiet with only sporadic passes. Occasional passes overhead for noctule from SS+25. Occasional soprano pipistrelle passes, which were heard and not seen, but thought to be associated with the road tree lined corridor. A hedgehog was observed foraging around the shrubs to the south of the building.
Dusk emergence 04/05/2021	<ul style="list-style-type: none"> First bat observed at SS+12 – common pipistrelle foraging to the south of the site. A single emergence of common pipistrelle from the southern elevation (easternmost arrow in Figure 5) was noted at SS+29. 	<ul style="list-style-type: none"> Occasional passes/feeding activity of common pipistrelle, but activity was generally very quiet. No other bat species were encountered during the survey,



Figure 5 - Roost locations are marked with red arrows. Surveyors are marked by blue pins.

Reptile survey

3.13 The results of the reptile survey are provided in Table 10 below.

Table 10 – Results of the reptile survey

Visit	Results
1	Nil
2	Nil (1 x wood mouse)
3	Nil
4	Nil
5	Nil
6	Nil
7	Nil
8	Nil

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4 INTERPRETATION AND ASSESSMENT

4.1 The following interpretation and assessment is provided to ensure full compliance with both UK and European legislation and both local and national planning policy (see Appendix IV).

Designated sites

- 4.2 There were both statutory and non-statutory designated sites identified within the vicinity of the site (see Table 4).
- 4.3 The nearest site designated for bats is found to the south of the site, over 6km away. There are no roost features onsite suitable to accommodate roosting horseshoe bats. The river woodland corridor provides optimum foraging and commuting habitat for all bat species present in the local area. This is not being impacted as a result of the proposals.
- 4.4 The River Ebbw SINC corridor will be effectively buffered by the retention of green space (a football field and the adjacent mature trees) and there being no impacts due to new build construction beyond the sports pitch/playing field boundary to the west.
- 4.5 Given the scale of the proposed development, and the lack of likely impacts beyond the site boundary, the other nearby designated sites are sufficiently well separated so that no impacts on their designated features are anticipated as a result of the works.

Priority habitats

- 4.6 The majority of the site's habitats are not considered as priority habitats (Environment (Wales) Act 2016 Schedule 7 listing) however the area where the buildings previously stood, and the sandy substrate sports area may be classed as open mosaic habitats on previously developed land.
- 4.7 The area is 1.75ha in size and fulfils the criterion within the JNCC Priority Habitat Description.
- 4.8 Over time in the absence of development, this area is likely to become of high value for wildlife and in particular for invertebrates.

Bats

- 4.9 The wider site was confirmed to be used by roosting bats (common and soprano pipistrelle) in 2018, prior to the demolition of the buildings. The bat boxes that are present on the remaining school building are likely to constitute mitigation and compensation for the loss of the roosts.
- 4.10 None of the bat boxes were observed being utilised by roosting bats during the bat activity surveys; all the bats observed emerging from the building egressed/exited from beneath the barge boards on the south and western elevations. The likely roosting locations are on the wall tops and within the wall cavities (if present).
- 4.11 The river provides a dark corridor which together with its vegetated boundaries provides optimum foraging and commuting habitat for bats including light intolerant species.
- 4.12 The grassland areas offer foraging opportunities for bats, consequently the site is likely to be used by different species in response to invertebrate emergences e.g. when crane flies emerge, the site may be used by species such as long-eared bats.
- 4.13 The structure onsite had several features suitable for use by roosting bats, though the metal sheet roofing material means that depending on the wall construction, the temperature variation may be too great in the heat of summer, and in the cold of winter, for use by maternity or hibernating bats. Should the wall cavity be sufficient to buffer these fluctuations, then the building may well be used

year-round. There were several small container and utilities structures along the eastern boundary, all of which have negligible suitability for roosting bats.

- 4.14 None of the onsite trees had suitability for roosting.
- 4.15 At present the structure will be retained, however if there should be any changes to the roof covering, fascias or weather edging, then there will be adverse impacts on the roosts present. If any additional artificial lighting is to be introduced onsite in the absence of mitigation this will have an adverse impact on foraging, commuting and roosting bats using the site, particularly upon light intolerant species.
- 4.16 An assessment was made of the value of the bat roost identified onsite (plus the value of the site for commuting and foraging) using the framework suggested by Wray et al (2010) – see Table 11. No maternity use was identified during the spring survey.

Table 11 – Value of the site for bats (from Wray et al 2010)

Site location	Wales					
Type & complexity of linear features	Complex network or mature well-established hedgerows, small fields and rivers/streams					
Foraging habitat characteristics	Larger or connected woodland blocks, mixed agriculture, and small villages/hamlets					
Species on site	Roost type	# of bats	Roosts/potential roosts nearby	Geographic frame of reference [score]		
				Roost	Commuting	Foraging
Common pipistrelle	Small numbers of non-breeding bats	Small	Moderate/unknown	Local	County [21]	Local [20]

Nesting birds

- 4.17 Whilst no nesting birds were observed during the surveys several birds were observed indicating their general presence in the area.
- 4.18 Bird species observed during the surveys included: goshawk (x2), pied wagtail, grey wagtail, woodpigeon, blackbird, robin, goldfinch and buzzard, song thrush, woodpigeon, jay, dunnock, grey heron, and mallard.
- 4.19 The surrounding boundary vegetation and onsite scrub/shrub areas have many opportunities for nesting birds to use, with these remaining largely unimpacted. There appears to be a small area of hedge to be lost (to the east of the northern access route into the site).
- 4.20 This will result in the loss of a section of vegetation of approximately 40m. This is a currently gappy but does constitute habitat that is likely to be used by nesting birds. As such there will be impacts on nesting birds, should nests be present within this area at the time of vegetation removal.
- 4.21 There is no suitability for ground-nesting species to use the grassland areas with the management carried out, and with the predation risk too high.
- 4.22 Goshawk were observed overhead during a survey. This species is known to nest locally, though not onsite. There is no suitable nesting site onsite for this (or other Schedule 1 species) species.
- 4.23 Whilst no nests were observed associated with the remaining onsite building, there is the scope for small passerines to use the same entry points as the bats to enter the wall top.
- 4.24 There may be a negative impact on nesting birds as a result of the proposed development.

Reptiles

- 4.25 The previous management of the site has been to mow the grassland to keep the sward low, for use as playing fields. In addition, the surrounding areas being also intensely managed means that the likelihood of significant reptile populations being present onsite is quite low.
- 4.26 More recently, the playing field area has been retained as a mown amenity space, however the margins have become tussocky in places and are more suitable for reptile use.
- 4.27 To reflect the site's suitability around the margins, a reptile survey was carried out, with the site being found to have no reptiles present.
- 4.28 The reptile survey was carried out in September and October 2020. Whilst the standard calculator for reptile surveys suggesting that October is a sub-optimal month for surveys, this doesn't take into consideration local conditions and climate. As such, the nil return is deemed to constitute an accurate reflection of the status of the site has having no reptile presence.
- 4.29 As reptiles are not anticipated to be utilising the site no adverse impacts upon them in relation to the proposed development are expected.

Hedgehog

- 4.30 The site was confirmed as being used by hedgehogs with one seen foraging around the southern end of the remaining school building. This individual appeared to emerge from within the shrubs before foraging and moving off to the south-west.
- 4.31 The site is currently ecologically permeable to hedgehogs, with the palisade fencing offering sufficient gaps to allow animals to walk underneath or through the gaps.
- 4.32 Any additional less gappy fencing may result in there being a reduction in available habitat for hedgehog to use.
- 4.33 Any uncovered trenching or removal of shrub or vegetation in the absence of could result in the death or injury of this species.

Otters

- 4.34 The site is in close proximity to the River Ebbw (<100m), with otter known to use this watercourse. There are no watercourses onsite, or areas suitable for otter foraging. There is no suitable habitat to the east of the site, indicating that it would be unlikely that otter would cross the site to reach key foraging or holt sites.

Amphibians

- 4.35 There are no waterbodies onsite, and so no breeding amphibians will be present. Neither are there any ponds connected to the site within 500m, and so there is unlikely to be terrestrial phase amphibians within vegetation either.

Dormice

- 4.36 There are dormouse records within 2km of the site, however-these are within unconnected woodland. The boundary vegetation does offer suitable habitat for use by dormice, though this is isolated from the known records by residences and roads. The majority of the boundary vegetation is being retained consequently there are unlikely to be any adverse impacts on dormice if present.

Badgers

4.37 No signs of use of the site or local vicinity was noted by badger, and so no impacts are likely to occur to this species as a result of the development proposals. This species is therefore not considered further.

Terrestrial invertebrates

4.38 The eastern area of soft sandy substrate (previous sports use) has become colonised by scattered scrub and ephemeral vegetation, and with the areas previously built upon, also becoming vegetated in the same way. These areas offer resources for a range of invertebrates, including a range of butterflies. At present, this area appears to be being retained, and so no loss of this habitat is envisaged. It is likely that there will be some management onsite, with this likely to result in the loss of tussocky sections, which support over-wintering invertebrates. As such there is likely to be a local impact on more common invertebrate species.

Fungi

4.39 The management of the grassland suggests that more uncommon grassland fungi are unlikely to be present, with high nutrient levels present in the soil.

Aquatic life

4.40 Adverse indirect impacts upon aquatic life are anticipated only if there are inadequate pollution control measures implemented to prevent run-off, dust, or other potential pollutants from entering the River Ebbw.

4.41 There are unlikely to be impacts on any other priority or protected species as a result of the proposals.

Invasive species

4.42 A stand of Himalayan balsam was noted onsite, at the north-west corner. A treated stand of Japanese knotweed is also present along the bank associated with the road extending along the eastern site boundary.

4.43 The balsam is likely to be disturbed as a result of works relating to the proposed development causing this non-native invasive to spread triggering nature conservation legislation. An appropriate management strategy will need to be implemented.

5 CONCLUSIONS AND RECOMMENDATIONS

- 5.1 Wildwood Ecology was commissioned by Caerphilly County Borough Council (the client) to undertake an ecological impact assessment (EclA) at Cwm Gwyddon, Cwmcarn.
- 5.2 The site is the subject of plans for a new school to be built on the site.

Designated sites

- 5.3 We recommend that pollution control measures are outlined within a CEMP to ensure that there are no pollution related impacts within the River Ebbw SINC – this will consider working practices close to the river itself, with no refuelling of machinery within 10m of the river corridor, and with spill kits onsite, and appropriately trained staff to use them should the need arise. Dust control may also be required, depending on the scope of the works to the lower car park area.
- 5.4 Other designated sites in the vicinity of the site are sufficiently well separated so that no impacts on their designated features are anticipated as a result of the proposed development.

Invasive species

- 5.5 A management plan for Himalayan balsam and Japanese knotweed will need to be implemented (and continued in the case of the knotweed), to prevent any spread of these plants outside the site boundary.

Protected habitats and species

- 5.6 Recommendations regarding protected species are shown in Table 12.

Table 12 – Recommendations.

Species	Recommendations
Bats	<ul style="list-style-type: none"> • If any works are to be done to the existing building on site then a European Protected Species Mitigation Licence will be required to ensure legislative compliance and an appropriate mitigation strategy implemented. • An appropriate bat friendly lighting plan should be produced prior to commencement of development works to ensure dark corridors associated with the site are retained. There must be no lighting above existing levels at locations illustrated in Appendix III. • Installation of integrated bat roost features upon the new build structure is recommended to enhance the site for roosting bats. Additional compensation would also be necessary for the loss of the previous roost in 2018.
Nesting birds	<ul style="list-style-type: none"> • If any suitable habitats for nesting birds are to be removed, then any building works/vegetation clearance will take place outside of the bird nesting season. In the event that clearance work has to be undertaken during the nesting season (generally from 1st March until 31st August, although birds are known to nest outside of these dates in suitable conditions), a nest check will be required and must be carried out by a suitably qualified person. Any active nests identified should be protected until the young have fledged. Where a Schedule 1 species (as defined in the Wildlife and Countryside Act - http://www.jncc.gov.uk/page-3614 is involved, compensation for impacts, e.g., loss of nesting sites, should be devised and implemented.
Non-volant mammals	<ul style="list-style-type: none"> • All excavations will be provided with a means of escape, should they be unable to be covered over at the end of each day. • All chemicals, fuels and materials will be safely stored away from animal access. • Any vegetation removal will be done so cautiously, in a staged manner to prevent the killing or injury of hedgehogs – the staged manner means that full

	<p>vigilance of the cutting arc can be maintained. Where denser layers are encountered, these will be searched by hand (fingertip search) by an ecologist.</p> <ul style="list-style-type: none"> • Gaps will be retained in boundary fencing to allow hedgehogs to cross the site.
Reptiles	<ul style="list-style-type: none"> • No further survey is required or action in relation to this species group.
Dormice	<ul style="list-style-type: none"> • A precautionary removal of the boundary vegetation to the north of the site around the entrance is recommended – this will include a pre-commencement check and tool-box talk by an ecologist (dormouse licenced). Should any evidence of dormouse be found onsite, then works will immediately cease and an NRW licence sought. • The loss of any suitable habitat may be compensated by new planting (or ideally transplantation of the existing to new locations). • Any new planting will be native species of local provenance.
Invertebrates	<ul style="list-style-type: none"> • Should the area to the east of the site be removed or managed, further planting will be required to support invertebrates. Large scrapes can be created with low nutrient soil used (if being brought onsite – or translocating onsite material of low nutrients to these areas) and plug planted with species to include: field scabious, common bird's foot trefoil, ragwort, great mullein, evening primrose, red clover, kidney vetch, agrimony, common knapweed and gorse. • Additional wildflower areas are recommended with all grassland margins allowed to become tussocky (reduced management/mowing with only scrub encroachment management carried out) – this will support flowering grasses to support invertebrates year-round.

Overall conclusion

5.7 Providing that the recommendations outlined within this report are successfully implemented, it should be possible for the proposed development to proceed and for there to be no long-term impacts upon the key protected species and habitats present on or adjacent to the site.

This ecological report will remain valid for a period of 18 months from the date of the last survey – i.e. until November 2022. Further surveys may be required to update the site information if planning is not obtained or works do not commence within that time period.

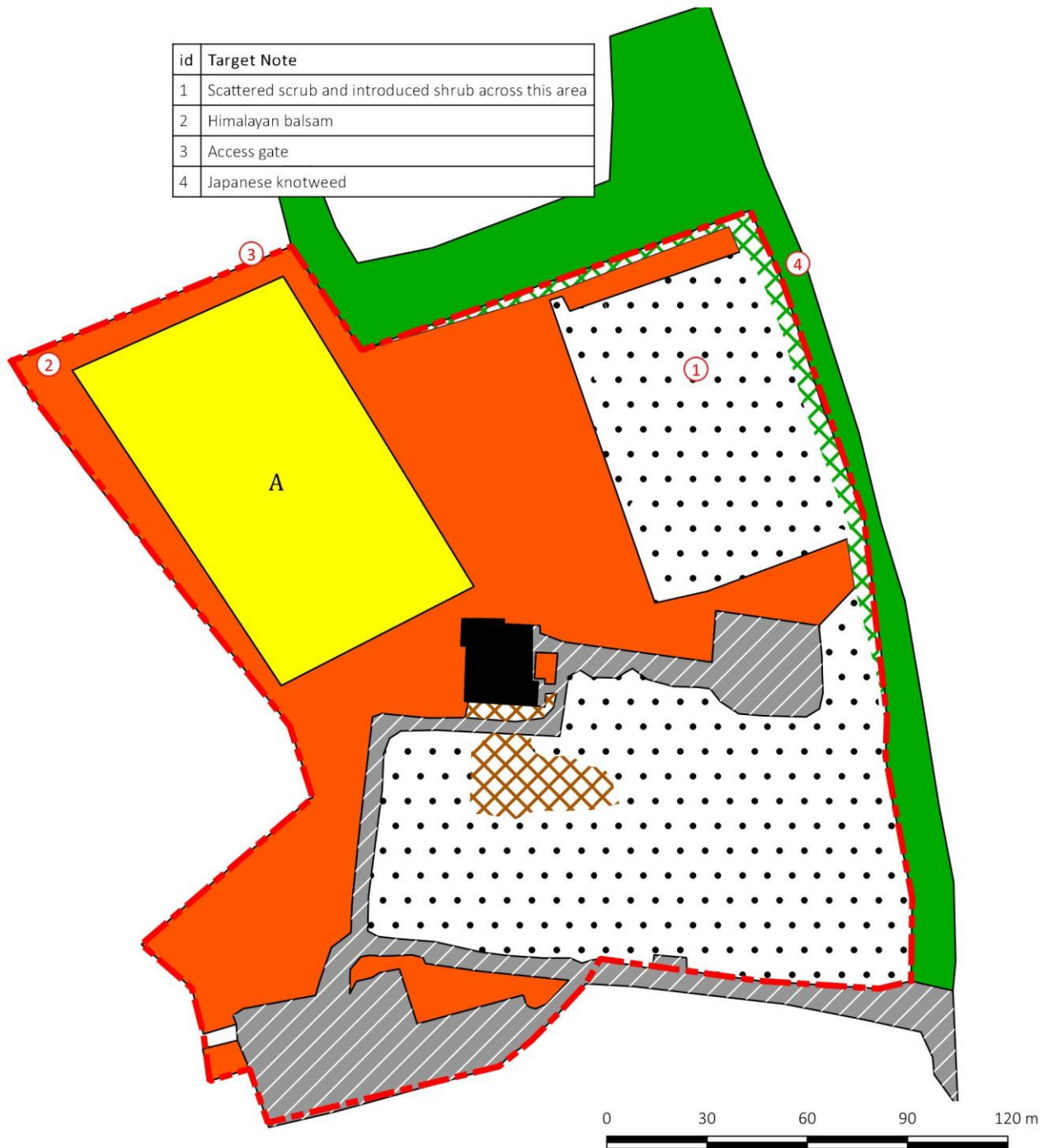
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APPENDIX I: PEA PLAN

id	Target Note
1	Scattered scrub and introduced shrub across this area
2	Himalayan balsam
3	Access gate
4	Japanese knotweed



Key

Site boundary

Habitats

A.1.1 Broad-leaved woodland, semi-natural

A.2.1 Scrub, dense/continuous

B.2 Neutral grassland

J.1.2 Amenity grassland

J.1.3 Ephemeral/short perennial

J.1.4 Introduced shrub

J.3.6 Buildings

Hard standing

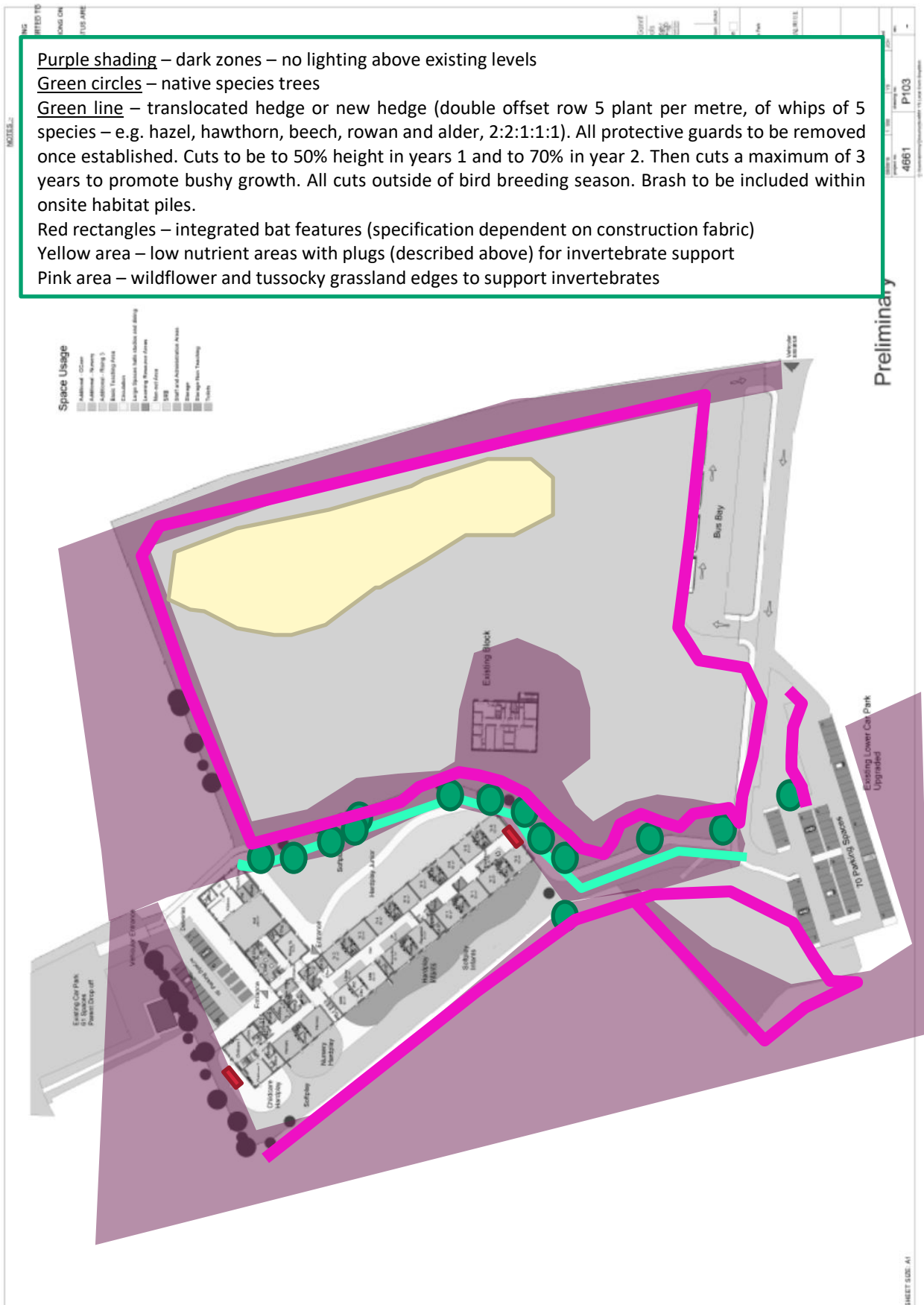
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APPENDIX II: PROPOSED DEVELOPMENT PLAN



APPENDIX III: MITIGATION AND ENHANCEMENT PLAN

Purple shading – dark zones – no lighting above existing levels
Green circles – native species trees
Green line – translocated hedge or new hedge (double offset row 5 plant per metre, of whips of 5 species – e.g. hazel, hawthorn, beech, rowan and alder, 2:2:1:1:1). All protective guards to be removed once established. Cuts to be to 50% height in years 1 and to 70% in year 2. Then cuts a maximum of 3 years to promote bushy growth. All cuts outside of bird breeding season. Brash to be included within onsite habitat piles.
 Red rectangles – integrated bat features (specification dependent on construction fabric)
 Yellow area – low nutrient areas with plugs (described above) for invertebrate support
 Pink area – wildflower and tussocky grassland edges to support invertebrates



APPENDIX IV: SURVEY IMAGES (BAT SURVEY)



Figure 6 – Southern end of western aspect.



Figure 7 – Northern end of western aspect.



Figure 8 – Northern aspect, showing bat box (circled).



Figure 9 – Eastern aspect, showing bat boxes (circled).



Figure 10 – Southern aspect.

APPENDIX V: SPECIES LIST

To be submitted to the appropriate Local Records Centre

Site Name: Cwm Gwyddon, Cwmcarn **Provided by:** Wildwood Ecology
Grid ref: ST 21595 93998 **Verified by:** Alex Wilson

Common name	Scientific Name (if known)	Number	Comment	Survey Date
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	6	Roost	29/9/2020 & 04/05/2021
Hedgehog	<i>Erinaceus europaeus</i>	1	Onsite	29/9/2020
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	1+	Onsite foraging	29/9/2020
Noctule	<i>Nyctalus noctule</i>	1+	Onsite foraging	29/9/2020
Goshawk	<i>Accipiter gentilis</i>	2	Overhead	29/9/2020
Pied wagtail	<i>Motacilla alba</i>	1	Onsite	25/9/2020
Grey wagtail	<i>Motacilla cinerea</i>	1	Onsite	25/9/2020
Woodpigeon	<i>Columba palumbus</i>	2	Onsite	25/9/2020 & 04/05/2021
Blackbird	<i>Turdus merula</i>	1	Singing	25/9/2020 & 04/05/2021
Robin	<i>Erithacus rubecula</i>	1	Singing	25/9/2020
Goldfinch	<i>Carduelis carduelis</i>	3	Overhead	25/9/2020
Buzzard	<i>Buteo buteo</i>	1	Overhead	25/9/2020
Jay	<i>Garrulus glandarius</i>	1	Overhead	04/05/2021
Song thrush	<i>Turdus philomelos</i>	1	Singing	04/05/2021
Dunnock	<i>Prunella modularis</i>	1	Singing	04/05/2021
Grey heron	<i>Ardea cinerea</i>	1	Overhead	04/05/2021
Mallard	<i>Anas platyrhynchos</i>	3	Overhead	04/05/2021

APPENDIX VI: PLANNING POLICY AND LEGISLATION

The following local and national planning policy and both primary and European legislation relating to nature conservation and biodiversity status are considered of relevance to the current proposal.

Planning and biodiversity

Local Authorities have a requirement to consider biodiversity and geological conservation issues when determining planning applications under the following planning policies.

Planning Policy Wales (2018) and Technical Advice Note 5 (2009)

Planning Policy Wales (Edition 10, December 2018) sets out the land use planning policies of the Welsh Government, integrating fully with the Environment (Wales) Act 2016. The advice contained within Planning Policy Wales (PPW) is supplemented for some subjects by Technical Advice Notes (TAN's).

TAN 5 (Welsh Government, 2009) specifically provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. The TAN provides advice for local planning authorities on the key principles of positive planning for nature conservation; nature conservation and Local Development Plans; nature conservation in development management procedures; development affecting protected internationally and nationally designated sites and habitats; and development affecting protected and priority habitats and species.

Under Section 2.4 within the TAN 5, 'when deciding planning applications that may affect nature conservation local planning authorities should':

- Pay particular attention to the principles of sustainable development, including respect for environmental limits, applying the precautionary principle, using scientific knowledge to aid decision making and taking account of the full range of costs and benefits in a long term perspective;
- Contribute to the protection and improvement of the environment, so as to improve the quality of life and protect local and global ecosystems, seeking to avoid irreversible harmful effects on the natural environment;
- Promote the conservation and enhancement of statutorily designated areas and undeveloped coast;
- Ensure that appropriate weight is attached to designated sites of international, national and local importance;
- Protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans;
- Ensure that all material considerations are taken into account and decisions are informed by adequate information about the potential effects of development on nature conservation;
- Ensure that the range and population of protected species is sustained;
- Adopt a step-wise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects local planning authorities will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered;

Legislation and biodiversity

Certain species of animals and plants found in the wild in the UK are legally protected from being harmed or disturbed. These species are listed in the Wildlife and Countryside Act 1981 (as amended) or are named as European Protected Species (EPS) in the Conservation of Habitats and Species Regulations 2017 (as amended). These two main pieces of legislation have been consulted when writing this report and are therefore described in detail within this section.

Other relevant legislation and policy documents that have been consulted include – The Environment (Wales) Act 2016; The Countryside and Rights of Way Act 2000; The Hedgerow Regulations 1997; Biodiversity Action Plans, both UK-wide (UKBAP) and Local plans (LBAPs), and The National Planning Policy Framework (NPPF).

There is also legislation that legally protects certain animals - for example, the Protection of Badgers Act (1992) protects badgers and their setts, and the Deer Act (1991) places restrictions on actions that can be taken against deer species.

Environment (Wales) Act 2016

Section 6 of the Act places a duty on public authorities to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'. The duty replaces the section 40 duty in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to those authorities that fell within the previous duty.

Public authorities will be required to report on the actions they are taking to improve biodiversity and promote ecosystem resilience.

Section 7 replaces the duty in section 42 of the NERC Act 2006. The Welsh Ministers will publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales.

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

Wildlife & Countryside Act 1981 (as amended)

The Wildlife & Countryside Act 1981 (as amended) [WCA] is the primary legislation for England and Wales for the protection of flora, fauna and the countryside. Part I within the Act deals with the protection of wildlife.

Most European Protected Species offences are now covered under the Conservation of Habitats and Species Regulations (see below), but some 'intentional' acts are still covered under the WCA, such as obstructing access to a bat roost.

The WCA prohibits the release to the wild of non-native animal species listed on Schedule 9 (e.g. Signal Crayfish and American Mink). It also prohibits planting in the wild of plants listed in Schedule 9 (e.g. Japanese Knotweed and Rhododendron ponticum) or otherwise deliberately causing them to grow in the wild. This is to prevent the release of invasive non-native species that could threaten our native wildlife.

The provisions relating to animals in the Act only apply to 'wild animals'; these are defined as those that are living wild or were living wild before being captured or killed. It does not apply to captive bred animals being held in captivity.

There are 'defences' provided by the WCA. These are cases where acts that would otherwise be prohibited by the legislation are permitted, such as the incidental result of a lawful operation which could not be reasonably avoided, or actions within the living areas of a dwelling house.

Licensing: certain prohibited actions under the Wildlife and Countryside Act may be undertaken under licence by the proper authority. For example scientific study that requires capturing or disturbing protected animals can be allowed by obtaining a licence – e.g. bat surveys.

Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) (which are the principal means by which the EC Habitats Directive is transposed in England and Wales) update the legislation and consolidate all the many amendments which have been made to the Regulations since they were first made in 1994.

These regulations provide for the:

- protection of European Protected Species [EPS] (animals and plants listed in Annex IV Habitats Directive which are resident in the wild in Great Britain) including bats, dormice, great crested newts, and otters;
- designation and protection of domestic and European Sites - e.g. Site of Special Scientific Interest [SSSI] and Special Area of Conservation [SAC]; and
- adaptation of planning controls for the protection of such sites and species.

Public bodies (including the Local Planning Authority) have a duty to have regard to the requirements of the Habitats Directive in exercising their function – i.e. when determining a planning application.

There is no defence that an act was the incidental and unavoidable result of a lawful activity.

Licensing: it is possible for actions which would otherwise be an offence under the Regulations to be undertaken under licence issued by the proper authority. For example, where a European Protected Species has been identified and the development risks deliberately affecting an EPS, then a 'development licence' may be required.

Species protection

The following protected species information is relevant to this report. Legislation is only discussed in relation to planning and development; other offences may exist.

Amphibians

The common frog, common toad, common newt, and palmate newt receive limited protection under the Wildlife and Countryside Act 1981 (as amended), making it illegal to sell or trade them.

The Great Crested Newt and Natterjack Toad are fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended) as European Protected Species. It is illegal to:

- Deliberately capture, injure, kill, or disturb either species,
- Intentionally or recklessly obstruct access to any structure/place used for shelter or protection, or
- Damage or destroy a breeding site or resting place.

Badger

Badgers are protected in the UK under the Protection of Badgers Act 1992. Under the act it is an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat⁴ a Badger, or attempt to do so;

⁴ The intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence by constituting "cruel ill treatment" of a Badger

- To intentionally or recklessly interfere with a sett⁵ (this includes disturbing Badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it).

The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain; it is not intended to prevent properly authorised development.

Bats

All British bats are classed as European Protected Species and therefore receive protection under the Conservation of Habitats and Species Regulations 2017 (as amended), making it an offence inter alia to:

- Deliberately kill, injure or capture a bat;
- Deliberately disturb bats;
- Damage or destroy a breeding site or resting place of a bat.

In addition, all British bats are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which contains further provisions making it an offence to intentionally or recklessly:

- Obstruct access to any structure or place which any bat uses for shelter or protection; or
- Disturb any bat while occupying a structure or place which it uses for that purpose.

If proposed development work is likely to destroy or disturb bats or their roosts, then a licence will need to be obtained from Natural England, which would be subject to appropriate measures to safeguard bats.

Birds

In the UK, the provisions of the Birds Directive are implemented through the Wildlife & Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2017 (as amended). All wild birds, their nests and eggs are protected it an offence to:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any such bird whilst it is in use or being built; or
- take or destroying an egg of any such wild bird.

The law covers all species of wild birds including common, pest or opportunistic species.

Special protection against disturbance during the breeding season is also afforded to those species listed on Schedule 1 of the Act.

Dormice

The common dormouse is classed as a European Protected Species and therefore receive protection under the Conservation of Habitats and Species Regulations 2017 (as amended), making it an offence inter alia to:

- Deliberately capture, injure, or kill a dormouse;
- Deliberately disturb dormice;
- Damage or destroy a breeding site or resting place of a dormouse.

In addition, the dormouse is listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which contains further provisions making it an offence to intentionally or recklessly:

- Obstruct access to any structure or place which a dormouse uses for shelter or protection; or

⁵ A sett is defined as “any structure or place which displays signs indicating current use by a Badger”. Advice issued by Natural England (June 2009) is that a sett is protected as long as such signs remain present, which in practice could potentially be for some time after the last actual occupation by Badger.

- Disturb a dormouse while occupying a structure or place which it uses for that shelter or protection.

Otters

The European Otter, *Lutra lutra* is a European Protected Species and therefore receive protection under the Conservation of Habitats and Species Regulations 2017 (as amended), making it an offence inter alia to:

- deliberately capture, injure or kill any wild otter;
- deliberately disturb wild otters;
- damage or destroy a breeding site or resting place of an otter.

In addition, the otter is listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which contains further provisions making it an offence to intentionally or recklessly:

- disturbs an otter while it is occupying a structure or place which it uses for shelter or protection; or
- obstructs access to such a place.

If proposed development work is likely to destroy or disturb otters or their resting places, then a licence will need to be obtained from Natural Resource Wales, which would be subject to appropriate measures to safeguard otters.

Reptiles

Adders, slow worms, grass snakes and common lizards are protected against killing and injuring under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). This legislation makes it illegal to intentionally kill or injure a common reptile. As a result, reptiles must be removed from areas of development and relocated onto suitable release sites before any site works can commence.

Smooth snakes and sand lizards are European Protected Species under schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). This makes it illegal to carry out the following activities:

- Deliberately or recklessly disturb, capture or kill these animals;
- Deliberately or recklessly take or destroy eggs of these animals;
- Damage or destroy a breeding site or resting place of such a wild animal; or

Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead animal, or any part of, or anything derived from such a wild animal.