

2433 Bridgend Clusters

Report on a Preliminary Roost Assessment

Fulcrum Group
2433
September 2023



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List of Abbreviations

Abbreviation	Full Description
BCT	Bat Conservation Trust
CIEEM	Chartered Institute of Ecology and Environmental Management
GLTA	Ground Level Tree Assessment
ILP	Institute of Lightning Professionals
MRSB	Full member of the Royal Society of Biology
NRW	Natural Resources Wales
PRA	Preliminary Roost Assessment
PRF	Potential Roost Feature
SAC	Special Area of Conservation
SINC	Site of Interest for Nature Conservation
SSSI	Site of Special Scientific Interest

1 INTRODUCTION

1.1 Background

1.1.1 Following a Preliminary Ecological Appraisal (PEA) carried out by CSA Environmental in 2020, recommendations were made for a Preliminary Roost Assessment (PRA), incorporating a Ground Level Tree Assessment (GLTA), to be carried out at Corneli Primary School, in north Cornelly, Bridgend. TACP were commissioned In July 2023 to complete the necessary survey work.

1.1.2 The survey was carried out on 1st August 2023.

1.2 Proposed Works

1.2.1 It is currently proposed that the current English medium Corneli Primary and Welsh medium Ysgol Y Ferch o Sger schools currently on site will be replaced with modern low-carbon buildings.

1.3 Objectives

1.3.1 The aim of a PRA is to identify, through a combination of both desk study and a site visit, the potential for bats to occur, and to determine the need for further survey work as necessary. It is specifically the aim, during the site visit, to identify potential roost features associated with the structures/trees under assessment as well as any evidence of bat presence. The results of the PRA are then used to identify the need for follow up activity surveys in such circumstances where bats are suspected. Between one and three activity surveys can be required dependent on PRA findings.

1.3.2 It may be possible during this initial assessment to identify where any roosts occur, the species and numbers of bats present and, if possible, how they utilise the site in general. However, this is not the primary aim of a PRA.

1.3.3 It is also an aim of the initial site visit to assess the probability of the site supporting other protected species such as breeding birds and barn owls.

1.3.4 The overall objectives of this report are to:

- Document the methodology and findings of the desk study.
- Document the methodology and findings of the Preliminary Roost Assessment.
- Detail any use of the site by bats, both observed and inferred.
- Detail any use of the site by other protected species, both observed and inferred.
- Make recommendations for additional surveys if necessary.

1.4 Personnel

- 1.4.1 Surveys were conducted by James Bilham BSc(Hons) MSc MRSB ACIEEM, Senior Ecologist for TACP, supervised by Victoria Nicholls BSc(Hons) MSc MRSB, also a Senior Ecologist for TACP, who holds an NRW bat survey licence for disturbance and handling (licence no: S092378/1).
- 1.4.2 James Bilham has 10 years of experience in ecological consultancy with expertise in protected species surveys (particularly bats and great crested newts) and Ecological Impact Assessment. Victoria Nicholls has worked as an ecologist for 17 years in both consultancy and local authority roles and has consistently held an NRW bat survey licence since 2008. She also holds a Natural England Class 2 licence for disturbance and handling.

2 METHODOLOGY

2.1 Desk Study

2.1.1 Prior to visiting the development site pre-existing information relevant to the site was assessed as part of the desk study. Online sources utilised included, but were not limited to:

- Magic (<http://www.magic.gov.uk>) – For information on protected sites (e.g. SSSIs, SACs)
- Google Maps (<http://www.googlemaps.com>) – for aerial photographs.
- Data Map Wales – for information on habitats and protected sites
- UK Grid Reference Finder (<http://gridreferencefinder.com/>) – for OS maps and similar data

2.1.2 A data search request for bats and roof nesting birds within the local area was also placed with the South East Wales Biodiversity Records Centre (SEWBRec).

2.2 Preliminary Roost Assessment (PRA)

2.2.1 The PRA referenced “Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Ed)” as the guiding principle, along with following CIEEM’s Guidelines for Preliminary Ecological Appraisal (2nd Ed, 2017). During the writing of this report the 4th edition of the Bat Survey Guidelines was launched and although consideration was given to it’s publication, the primary reference was the 3rd edition for continuity. None of the buildings on site were known to have any roof voids therefore the assessment was confined to an external assessment of the structures only. This involved identifying any potential roost features (PRFs) including:

- Access behind roof lining,
- Gaps behind fascia or barge boards,
- Loose, lifted, slipped or broken roof tiles/slates or other roofing material,
- Raised sections of lead flashing in roof valleys and elsewhere,
- Spaces behind weather boarding or other external cladding,
- Cracks, gaps or crevices in any brick or stonework.

2.2.2 A detailed search of all accessible PRFs for evidence of use by bats was also carried out. Evidence searched for consisted of:

- Live and dead bats (e.g. behind loose cladding).
- Droppings,
- Feeding remains (e.g. moth wings),
- Fur-rubbing marks,
- Urine staining,
- Claw marks,
- Areas kept clear of dust/cobwebs due to regular access.

2.2.3 The PRA visit utilised a high-powered torch to make sure all relevant features could be clearly seen, e.g. to illuminate the interior of any cracks or crevices. Binoculars were used where necessary to gain a clearer view of such features as lifted tiles, cladding or soffits. A fibrescope (endoscope) was available to use in the interior of any features (crevices, gaps behind cladding etc) where it was not possible to view with the naked eye.

2.3 Ground Level Tree Assessment (GLTA)

2.3.1 As for the PRA of the buildings on site, the GLTA referenced the 3rd Edition of the Bat Survey Guidelines as the relevant guidance available at the time of survey. To this end, all accessible trees on site were reviewed from ground level for potential roost features including, but not limited to:

- Woodpecker holes
- Splits in branches,
- Peeling bark,
- Cavities,
- Crevices

2.3.2 Binoculars and a high-powered torch were used where necessary to gain a clearer view of observed features. The roost potential of the tree was then classified as negligible, low, moderate or high based on the PRFs identified, if any were present.

2.4 Survey Constraints

2.4.1 Four buildings were present on site (Refer to Appendix C). Of those, one (Building B3, refer to Section 3.2, paragraphs 3.2.24-3.2.27) could not be fully accessed for assessment due to boundary fencing and locked gates. Assessment was therefore predominantly carried out from a distance using binoculars. Although this allowed for a broad assessment of the building's roost potential the lack of close assessment was mitigated for by taking a precautionary approach to the interpretation of the results. As such, the limited accessibility is not considered to be a significant constraint to the survey and conclusions.

2.4.2 The Preliminary Roost Assessment was carried out prior to the launch of the updated 4th Edition of the Bat Survey Guidelines (launched with pdf publication September 2023, main publication to be released October 2023) therefore, for continuity, this report and associated recommendations is based on the 3rd Edition 2016 Guidelines (as referenced in Section 2.2). This is not considered a limitation to the conclusions drawn.

3 RESULTS

3.1 Desk Study

Site Overview

3.1.1 Reviewing OS Maps and aerial imagery, the survey site was shown to be in a relatively central position within the village of North Cornelly, which forms a larger urban conurbation and Pyle. The M4 motorway lies approximately 450m to the south with associated trees/woodland vegetation alongside as a noise barrier and visual screen. Woodland also occurs along the A4229 approximately 650m to the east and associated with the Afon Cynffig and nearby railway line approximately 540m to the north. However, although a small area of woodland type vegetation occurs around the south-east corner of the survey site connectivity to the mentioned woodland areas and other suitable habitat within the wider landscape appears relatively poor, particularly when considering the likely presence of streetlights and other manmade disturbances within the locality.

Statutory Designated Sites

3.1.2 There are six statutory sites within 2.5km of the survey site (Table 1) however none are designated for reasons related to bats. There are no bat-specific designated sites within 10km of the survey site.

Table 1: Statutory designated sites within 2.5km of the survey site

Name	Distance From Survey Site	Reason for Designation
Kenfig SSSI	934m	Designated for the sand dune and other coastal habitats with associated assemblages of plants, fungi and invertebrates. Part of the Kenfig SAC
Kenfig Pool and Dunes NNR	1162m	A nationally important conservation area for the reasons listed under the SAC designation.
Kenfig SAC	1162m	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Fixed coastal sand dunes with herbaceous vegetation (grey dunes) • Dunes with <i>Salix repens</i> ssp. <i>Argentea</i> (<i>Salicion arenariae</i>) • Humid dune slacks • Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:</p> <ul style="list-style-type: none"> • Atlantic salt meadows <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • Petalwort (<i>Petalophyllum ralfsii</i>) • Fen orchid (<i>Liparis loeselii</i>)

Name	Distance From Survey Site	Reason for Designation
Cefn Cribwr Grasslands SAC	2154m	Annex I habitats that are a primary reason for selection of this site <ul style="list-style-type: none"> Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) Annex II species present as a qualifying feature, but not a primary reason for site selection <ul style="list-style-type: none"> Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i>, <i>Hypodryas</i>) <i>aurinia</i>
Penycastell, Cefn Cribwr SSSI	2389m	Designated for its marshy grassland and species-rich neutral grassland and for the association of these vegetation types with others including swamp, carr woodland and scrub. Part of Cefn Cribwr Grasslands SAC.
Stormy Down SSSI	2461m	Designated for geological reasons. An important site in facies and palaeogeographic analysis of the 'Rhaetic' in South Wales.

Non-statutory

3.1.3 The following non-statutory sites are present within 2.5km of the survey site:

- Ty Tanglwyst Wood SINC - 1.44km south,
- Cornelly Quarry SINC – 1.45km south.

3.1.4 Both sites likely provide foraging and , potentially, roosting for bats. However both lie south of the M4 which may present a barrier to movement.

Protected Species Records

3.1.5 Local bat records are listed in Table 2. The nearest record is for common pipistrelle bats, 637m from the survey site.

Table 2: Bats within 2.5km of the survey site (SEWBRec records)

Species	Common name	No. Records	Nearest record
Chiroptera	Bat	4	1203m
Eptesicus serotinus	Serotine	4	1233m
Myotis daubentonii	Daubenton's Bat	1	2428m
Myotis	Myotis Bat species	2	1233m
Nyctalus noctula	Noctule Bat	5	1191m
Pipistrellus nathusii	Nathusius's Pipistrelle	1	1887m
Pipistrellus pipistrellus	Common Pipistrelle	11	637m
Pipistrellus pygmaeus	Soprano Pipistrelle	7	1233m
Plecotus auritus	Brown Long-eared Bat	3	729m
Rhinolophus hipposideros	Lesser Horseshoe Bat	2	1233m

3.1.6 Local records for roof/building nesting birds are presented in Table 3. The nearest records are 455m from the survey site.

3.1.7 It should be noted that a lack of records does not automatically mean an absence of that species.

Table 3: Roof nesting birds within proximity of the survey site (SEWBRec records)

Species	Common Name	No. Records	Nearest Record
<i>Apus apus</i>	Swift	3	455m
<i>Cyanistes caeruleus</i>	Blue Tit	3	455m
<i>Delichon urbicum</i>	House Martin	3	455m
<i>Falco peregrinus</i>	Peregrine	1	602m
<i>Falco tinnunculus</i>	Kestrel	2	455m
<i>Hirundo rustica</i>	Swallow	3	455m
<i>Larus argentatus</i>	Herring Gull	3	455m
<i>Larus fuscus</i>	Lesser Black-backed Gull	1	602m
<i>Motacilla alba</i>	Pied Wagtail	2	602m
<i>Parus major</i>	Great Tit	3	455m
<i>Passer domesticus</i>	House Sparrow	3	455m
<i>Phoenicurus ochruros</i>	Black Redstart	2	455m
<i>Sturnus vulgaris</i>	Starling	3	455m
<i>Tyto alba</i>	Barn Owl	1	602m

3.2 Site Assessment

- 3.2.1 The site assessment (including both preliminary roost assessment and ground level tree assessment) was carried out on Wednesday 1st August. The weather was dry and 17°C. The assessment was started at 10am and completed at 4pm.
- 3.2.2 Four buildings were assessed for the preliminary roost assessment. For this report these have been designated as B1, B2, B3 and B4. The larger buildings were assessed in sections for ease and with each section labelled a, b, c etc.
- 3.2.3 For the GLTA a small cluster of trees near building B4, as well as the trees making up a narrow band of woodland vegetation along the south-east boundary, were assessed.

Site Overview (Habitat suitability)

- 3.2.4 The survey site is dominated by the four school buildings with accompanying tarmac access roads, parking areas, and playing fields. It is surrounded by a built-up area of residential streets with associated street lighting. Site boundaries are mixed with trees and shrubby vegetation predominantly to the south-east, and residential properties with variable garden boundaries (walls, fencing, some shrubs etc) making up the majority of the remaining boundaries.
- 3.2.5 The trees and shrubby vegetation to the south-east are approximately 100m from the nearest school building with no direct connectivity suitable for bats. Potential flightlines north and west of the school buildings are poor quality and appear to likely be impacted by street and domestic lighting.



PRA: Building B1



- 3.2.6 **Building B1** is the main Ysgol Y Ferch o'r Sgêr school building (refer to Tables 4- 7, and Images 1 to 26 for photographs). This is a single storey structure consisting of multiple inter-connected units constructed of pre-fabricated panel walls (a mix of corrugated metal and other materials) and a mix of shallow pitched concrete roofs and bitumen type flat roofs. A large chimney is positioned on the north-west side. For the purpose

of assessment the building was split into four sections - a. b. c and d – roughly corresponding to the separate units.

- 3.2.7 **Section 1(a)** is at the eastern end of the unit (image 1) and was noted to be generally well sealed with a lack of access points along the roof edge, to either front (more northerly facing, where there was a section of flat roof) or rear, or elsewhere along the roof, or around windows (Image 2). The north-east gable end had an attached wooden board with a painted mural, with a similar board on the north-west facing front wall. Both had gaps behind due to the corrugated panels preventing the boards lying flush with the walls. These gaps offer some roosting potential although this is sub-optimal and not significant (Images 3 and 4).



Table 4: Photographs of Building B1, Section (a)

Building	Description	Photographs
B1 (a)	North-east corner of Building B1. Shallow pitched roof, separate flat roof. Flat roof appeared well sealed with no potential access points suitable for bats.	 <p style="text-align: center;">Image 1</p>
B1 (a)	Rear of Building B1 (SE side) Section a. Roof and walls appeared well-sealed with no gaps under the roof overhang or any other access points or PRF's identified.	 <p style="text-align: center;">Image 2</p>

Building	Description	Photographs
B1 (a)	<p>Gaps between painted boards and corrugated wall panelling (NW and NE walls) offer roost potential for occasional ad-hoc use (sub optimal). Cobwebs behind and no evidence of use by bats at time of assessment</p>	 <p style="text-align: center;">Image 3</p>  <p style="text-align: center;">Image 4</p>

3.2.8 **Section 1(b)** (Images 5 and 6) is of a similar structure to Section 1(a) with corrugated panel walls and both pitched and flat roofs. Small vegetable beds and a selection of shrubs were present on the north side. No obvious potential roost features were noted in this section.



Table 5: Photographs of Building B1, Section (b)



Building	Description	Photographs
B1 (b)	Section B1 (b) – no obvious potential roost features noted.	 <p style="text-align: center;">Image 5</p>  <p style="text-align: center;">Image 6</p>




- 3.2.9 **Section 1(c)** is single storey consisting of three separately roofed units (Images 7-9) with the larger of the three (positioned centrally) having a roughly north-west/south-east pitch with the SW gable facing the access road. The remaining two units have a roughly south-east/north-west roof pitch, with the more southern of the two units connected to Section d at its south-east end and Section b to its rear (NE facing).
- 3.2.10 A free-standing chimney stack is positioned near the north-east facing gable of the largest unit (between Sections b and c) and stairs accessing a boiler room/cellar under Section c are present alongside the chimney .
- 3.2.11 All walls of Section 1(c) were covered in corrugated metal panels which appeared secure with no PRFs noted. The roofing material appeared generally well sealed.
- 3.2.12 A mural covered the north-west facing gable wall and a variety of shrubs were planted along the base in this area with ivy growth partially obscuring the mural (Image 9). The roof edging had been pulled away at the northern corner of this wall creating an obvious access point under the roof overhang (Image 10).

- 3.2.13 Material along the roof edge/fascia of the south-western gable was noted to be peeling (Images 11 and 12). This offered minor gaps behind, although roosting potential is considered low.
- 3.2.14 The cellar/boiler room had open vents in the doors and a hole in the wall allowing access into the interior (Images 13 and 14). Access could allow for roosting to occur within the boiler room although cobwebs and detritus in this area indicated a lack of recent movement. Hibernation is unlikely if the boiler room is in active use as temperatures won't be at the low, constant levels required for torpor.
- 3.2.15 The chimney stack (Images 15-17) was of stone/brick construction with concrete edging. Some partial ivy covering was present on the northern side and gaps in the brickwork were noted at height on both the northern and southern side, offering minor roost potential.

Table 6: Photographs of Building B1, Section (c)

Building	Description	Image
<p>B1 (c)</p>	<p>Three units making up Section (c) with free standing chimney present at NE end.</p>	<div style="text-align: center;">  <p>Image 7</p> </div> <div style="text-align: center;">  <p>Image 8</p> </div>

Building	Description	Image
<p>B1 (c)</p>	<p>North-west gable with gap at roof corner.</p>	 <p style="text-align: center;">Image 9</p>  <p style="text-align: center;">Image 10</p>
<p>B1 (c)</p>	<p>Examples of peeling material at roof edges.</p>	 <p style="text-align: center;">Image 11</p>

Building	Description	Image
		 <p data-bbox="1018 725 1150 757">Image 12</p>
<p data-bbox="102 1263 181 1294">B1 (c)</p>	<p data-bbox="339 1234 647 1328">Potential access points into boiler room (cellar) – hole in wall and vent.</p>	 <p data-bbox="1018 1232 1150 1263">Image 13</p>  <p data-bbox="1018 1733 1150 1765">Image 14</p>

Building	Description	Image
<p>B1 (c)</p>	<p>Free standing brick chimney with gaps/crevices present near top.</p>	 <p>Image 15</p>  <p>Image 16</p>  <p>Image 17</p>



3.2.16 **Section 1(d)** is an L-shaped entirely flat-roofed section, with a small porch area covered in a polycarbonate roof on the north-west facing side (Image 18). Gaps were present behind the plastic fascia on this side although careful checking provided no indication of roosting and overall potential was considered low. A corrugated metal tower on the




roof on this side has some gaps at the top due to the shaping of the panels but this was considered to offer negligible likelihood of roosting (Images 19-21).

3.2.17 The south-west side (Image 22) had a mix of wood panelling and plastic walls with windows, all of which was well sealed with no potential roost features. Minor gaps were present in sections along the roof edge but were generally considered to have low roost potential. Similarly along the south-east facing walls (Images 23-24), minor gaps were present behind some of the plastic panelling and behind the fascia but was considered to have low roost potential.


3.2.18 The north-east end (Images 25 and 26) was wood panelled and, had some minor gaps behind the plastic fascia which generally offered low roost potential.

Table 7: Photographs of Building B1, Section (d)

Building	Description	Image
B1 (d)	Porch area with polycarbonate roof	 <p style="text-align: center;">Image 18</p>
B1 (d)	Corrugated metal tower and minor gaps behind plastic panelling along the roof edging offered limited potential for roosting	 <p style="text-align: center;">Image 19</p>

Building	Description	Image
B1 (d)		 <p data-bbox="1018 725 1150 757">Image 20</p>  <p data-bbox="1018 1232 1150 1263">Image 21</p>
B1 (d)	SW side of section.	 <p data-bbox="1018 1753 1150 1785">Image 22</p>




Building	Description	Image
<p>B1 (d)</p>	<p>SE length of section. Low to negligible bat roost potential with minor gaps behind plastic panelling and roof edging.</p>	 <p style="text-align: center;">Image 23</p>  <p style="text-align: center;">Image 24</p>
<p>B1 (d)</p>	<p>NE end of section, minor gap where plastic roof edging was broken but low to negligible potential overall.</p>	 <p style="text-align: center;">Image 25</p>




Building	Description	Image
		 <p data-bbox="1023 734 1145 766" style="text-align: center;">Image 26</p>


PRA: Building B2

- 3.2.19 **Building B2** (Table 8, Images 27-33) is a more modern yellow brick building with four roofed sections, all tiled with a north-south pitch. The four sections have been labelled a-d (from west to east).
- 3.2.20 **Section B2(a)** is an entrance porch/atrium at the western end of the building (Image 27) with tiled roof and floor-to-ceiling windows. A minor gap was noted under the ridge however this was considered to have low roost potential.
- 3.2.21 **Section B2(b)** had both brick walls and roof edging that was secure. Gaps were present behind the lead flashing (Image 28) between its roof and the adjacent wall of Section 2(c).
- 3.2.22 **Section B2(c)** is the main section of the building (Image 29), and its tiled roof had a pyramidal-style roof window along part of the ridge. The roof appeared secure with no lifted tiles. No suitable gaps were noted under the soffits or elsewhere.
- 3.2.23 **Section B2(d)** is a small section at the eastern end of the building (Image 30). Double doors were present in the south-facing wall and a single door present in the eastern gable. A brick was noted to be missing under the roof edge in the south-east corner and staining by bird droppings underneath indicated nesting had likely been occurring (Image 31). It is considered to have moderate bat roost potential in the absence of habitat considerations, dependent on the extent of bird use. A narrow gap was also present between the soffit and wall across the eastern gable end (low roost potential) and a further small hole was present due to a broken brick in the north wall underneath the soffit (Images 32-33).

Table 8: Photographs of Building B2

Building	Description	Image
<p>B2 (a)</p>	<p>Glass and brick atrium at western end of Building B2</p>	 <p style="text-align: center;">Image 27</p>
<p>B2 (b)</p>	<p>Gaps behind lead flashing on N side.</p>	 <p style="text-align: center;">Image 28</p>
<p>B2 (c)</p>	<p>Main section of Building B2 with pyramidal roof window.</p>	 <p style="text-align: center;">Image 29</p>

Building	Description	Image
B2 (d)	Section at eastern end of Building B2	 <p data-bbox="1023 725 1145 757">Image 30</p>
B2 (d)	Missing brick at top of wall under soffit with evidence of bird use.	 <p data-bbox="1023 1232 1145 1263">Image 31</p>
B2 (d)	Very minor gaps between soffit and wall. Low bat roost potential.	 <p data-bbox="1023 1738 1145 1769">Image 32</p>




Building	Description	Image
B2 (d)	Small gap under soffit on N wall due to broken brick. Low roost potential.	 <p data-bbox="1023 725 1145 757">Image 33</p>



PRA: Building B3




- 3.2.24 **Building B3** (Table 9, Images 34-44) is predominantly a two-storey structure and brick built with a flat roof. For the purpose of assessment it was divided into 3 sections – a, b and c. It was not fully accessible during the assessment due to boundary gates being locked, therefore Section (c) was primarily assessed from a distance utilising binoculars (as referenced in Section 2.4).
- 3.2.25 **Section B3(a)** is a two-storey section constructed of red brick with prefabricated concrete panels, plastic cladding and a flat roof (Image 34). Assessment noted that some of the cladding along the roof edge, above the windows on the eastern aspect, was coming away from the building, potentially allow access for roosting (Image 35). On the southern aspect (Image 36), a hole was noted in the soffit behind a drainpipe near the south-west corner while a minor gap where the panels met at this corner was also present (Image 37). It was not possible to view the western aspect but based on the condition of the panelling along the roof edge around the rest of the building, minor gaps are presumed.
- 3.2.26 **Section B3(b)** is a brick-built section at the north-east corner with multiple levels and flat roofs (Images 38-42). It was noted that the roof material was peeling in the south-western corner and a gap was present above the windows on the south eastern aspect. A broken section plastic soffit above a drainpipe on was also present on the south aspect, and the gap appeared to go into a void. Roof lining/felt was visible and its appearance suggested it may have been eaten/chewed (e.g. by rodents)
- 3.2.27 **Section B3(c)** is a two-storey brick-built structure with a flat roof (Images 43-44). Scaffolding was in place during the survey. Along the south side minor gaps were noted along the roof edge and cracks in the soffit were noted where aerials were attached. However, the brickwork was secure (no gaps, cracks or crevices associated with missing mortar) and there were no gaps around window frames. Along the north side no obvious potential roost features were noted. The brickwork and plastic cladding appeared to be in good repair.

Table 9: Photographs of Building B3

Building Section	Description	Image
<p>B3 (a)</p>	<p>Eastern aspect with gap behind plastic cladding near roof edge</p>	<div data-bbox="727 322 1441 851" data-label="Image"> </div> <p data-bbox="1018 857 1147 891">Image 34</p> <div data-bbox="727 902 1441 1431" data-label="Image"> </div> <p data-bbox="1018 1438 1147 1471">Image 35</p>

Building Section	Description	Image
<p>B3 (a)</p>	<p>Southern aspect with hole behind drainpipe</p>	 <p>Image 36</p>  <p>Image 37</p>
<p>B3 (b)</p>	<p>NE corner section of Building B3 – variable levels</p>	 <p>Image 38</p>

Building Section	Description	Image
<p>B3 (b)</p>	<p>Example of peeling roof material in corner</p>	 <p>Image 39</p>
<p>B3 (b)</p>	<p>Gap above window</p>	 <p>Image 40</p>


Building Section	Description	Image
<p>B3 (b)</p>	<p>Broken section of plastic soffit above drainpipe on southern aspect with lining visible, having a chewed appearance.</p>	 <p style="text-align: center;">Image 41</p>  <p style="text-align: center;">Image 42</p>
<p>B3 (c)</p>	<p>South side of section B3 (c)</p>	 <p style="text-align: center;">Image 43</p>

Building Section	Description	Image
B3 (c)	North side of section B3 (c)	 <p data-bbox="1018 721 1145 757">Image 44</p>

PRA: Building B4

3.2.28 **Building B4** (Table 10, Images 45-46) was a small pre-fabricated unit with plastic clad windows on the north and south side. Careful assessment noted that it appeared well sealed with no gaps behind the fascia and no obvious features suitable for roosting bats.

Table 10: Photographs of Building B4

Building/Section	Notes	Photographs
B4	Small, pre-fabricated unit, No gaps around windows, behind fascia, or elsewhere, that could provide suitable roosting opportunities for bats.	 <p data-bbox="1018 1594 1145 1630">Image 45</p>

Building/Section	Notes	Photographs
		 <p data-bbox="1018 723 1145 757" style="text-align: center;">Image 46</p>

Ground Level Tree Assessment

3.2.29 A small cluster of trees were present adjacent to Building 4 (Figure 1, Grid reference: SS 81963 81717). This consisted of one field maple (*Acer campestre*), one horse chestnut (*Aesculus hippocastanum*), one rowan (*Sorbus acuparia*), two small oaks (*Quercus* sp.) and a lime tree (*Tilia* sp.) The horse chestnut was noted to have a small area of split/peeling bark approximately 2m up on one stem which offered negligible bat roost potential. No roost potential roost features were noted in the other trees. .

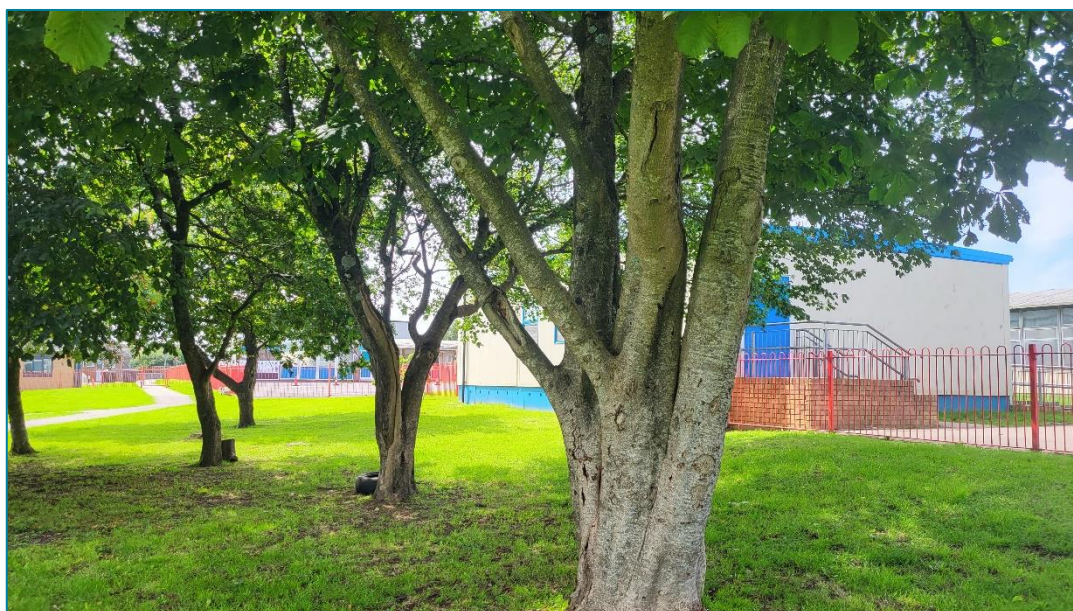






Figure 1: Small cluster of trees present near building B4.

3.2.30 A mix of tree species were present along the south-east boundary (Table 11, images 47-50), forming a woodland learning area which thinned out to a scrubby boundary toward the east. Trees consisted of young beech, field maple, sycamore and ash with some apple, cherry and elder. Twenty-nine trees were present in the woodland learning area, with seven trees on the south-eastern boundary adjacent to woodland learning area, and 20+ scrubby trees on north-eastern boundary. Ivy growth across the

trees was common. A minor split was noted in a single tree at the southern end of the eastern boundary (Image 50, approx. grid reference SS 81947 81583) which offered negligible to low roosting potential. No other potential roost features were record.

Table 11: South-eastern boundary of site

Notes	Photographs
<p>Woodland learning area at southern boundary</p>	 <p style="text-align: center;">Image 47</p>
<p>South-east boundary beyond playing field.</p>	 <p style="text-align: center;">Image 48</p>

Notes	Photographs
<p>Example of scrubby trees along eastern edge of boundary</p>	 <p style="text-align: center;">Image 49</p>
<p>Example of ivy covering that commonly occurred across the trees present in the woodland learning area</p>	 <p style="text-align: center;">Image 50</p>

Notes	Photographs
<p>Minor crevice/split branch at southern end of eastern boundary</p>	 <p>Image 51</p>

4 CONCLUSIONS

4.1 Interpretation

- 4.1.1 The vegetation to the south-east boundary provides negligible roosting opportunities but does provide foraging and commuting opportunities for bats, however there is no direct connectivity between the school buildings and this area. Elsewhere the built-up nature of the surrounding landscape reduces overall bat suitability, particularly when considering both street and domestic lighting and how this will impact bat behaviour i.e. all bat species are impacted negatively by lighting (refer to Guidance Note GN08/23 Bats and Artificial Lighting at Night, by the ILP), although common and soprano pipistrelles and noctules may be less so. Further, there is no direct connectivity between the school site and areas of suitable bat foraging/commuting habitat and the vegetation to the south-east may offer the only dark corridor for foraging bats while itself being isolated.
- 4.1.2 The surveyed buildings had no roof voids reducing the available roosting opportunities to exterior features only. The exterior of Buildings B1, B2 and B4 were carefully searched for potential roost features while the exterior of Building B3 was searched as much as access would allow. A range of potential roost features were identified that can be considered typical of the types of buildings present on site e.g. minor gaps behind fascia/soffits, peeling roofing felt or behind lead flashing. However, no significant features were noted.

4.2 Conclusions

- 4.2.1 **Building B1** has a range of potential roost features across the building however the type and structure of the identified features are limited in extent and only offer ad hoc roosting opportunities for individual bats. No evidence of bat presence was identified during the survey associated with the identified features. The cellar may offer additional roosting opportunities, but the sub-optimal local habitat and poor connectivity reduces this likelihood. Based on available evidence it is concluded that Building B1 has low to negligible roost potential.
- 4.2.2 **Building B2** had a number of potential roost features, the majority of which likely offer only occasional roosting opportunities and thus have low roost potential. Conversely, the missing brick with evidence of bird presence likely allows access into the soffit and/or wall and may offer greater opportunities depending on the extent of bird use. However, when considering the immediate habitat available for foraging and commuting, the lack of connectivity across the site and the likely impacts of lighting across the adjacent residential streets beyond the school site, the suitability of that specific gap can be considered to be low.
- 4.2.3 **Building B3** had several minor potential features identified which offer low to negligible roost potential. The hole in the soffit/roof overhang on the north-west corner is considered to have moderate roost potential if considered purely in terms of access. However, as with building B2, when considering the habitat and overall site viability for bats, this gap is considered to offer low roosting potential.
- 4.2.4 **Building B4** did not have any identified roost features, it is therefore classified as having no roost potential.

- 4.2.5 **The ground level tree assessment** identified negligible roost potential in the cluster of trees adjacent to building B4. Roost potential in the trees of the woodland area along the south-eastern boundary was confirmed to be negligible with a single minor roost feature identified.

5 REFERENCES

Bat Conservation Trust (2021) Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys. The Bat Conservation Trust, London

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Institute of Lighting Professionals (2023) Guidance Note GN08/23 Bats and Artificial Lighting at Night, ILP, Rugby

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APPENDICES

Appendix A

Bat Ecology

Bat Ecology

- Bats (*Chiroptera*) are a group of mammals that have evolved to be capable of true flight. They are a diverse group and fill a range of ecological niches across the globe.
- Within the UK there are 17 species of bats known to be present as breeding residents, with several other species occurring as occasional migrants/vagrants. All bats in the UK are insectivorous and typically hibernate through the winter months when food availability is reduced.
- A bat's place of rest is called a roost and their choice of roost is dependent on the time of year, with bats moving between different sites depending on whether it is used for breeding, mating or hibernating. Traditionally bats have utilised natural features such as hollow trees, spaces under peeling bark, and caves for roosting but, as human beings have encroached on their natural environment, most of the UK species have come to utilise human-built structures to some degree. These include (but are not limited to) roof voids of dwellings, farm buildings, cellars, old mines/quarries, bridges and other features.
- Some bats roost singly (e.g. some non-breeding males of some species) while others roost in groups, particularly females during the breeding season (forming maternity colonies). These groups can be as small as half a dozen individuals or can number in the hundreds. Bats are typically extremely loyal to their roosts returning time and time again to the same summer or winter site for years, sometimes decades.
- During the 20th Century all species of bat suffered population declines through a combination of habitat loss, changes in agricultural practices, use of pesticides, destruction of roost areas and other associated issues. Due to this, bats and their roosts first became legally protected from harm in 1981. The protection extends to the roost even when bats are absent. Further protection has come into being since that time.

Appendix B

Legislation and Planning Policy

Relevant Legislation

Regarding the legal protection of bats, the following legislation applies: Section 9 of the Wildlife and Countryside Act 1981 (as amended) and Section 43 of the Conservation of Habitats and Species Regulations 2017 (as amended). These make it an offence to:

- Deliberately or recklessly kill, injure, or take any bat species.
- Deliberately or recklessly damage, or destroy a bat roost (any structure used for breeding, shelter, or rest)
- Deliberately or recklessly disturb a bat while occupying a roost.
- Deliberately or recklessly obstruct access a roost.

Regarding the legal protection of birds (all species) the following legislation applies: Section 1 of the Wildlife & Countryside Act 1981 (as amended) makes it an offence to:

- Intentionally kill, injure or take any wild bird.
- Take, damage or destroy the nest of any wild bird while that nest is in use or being built.
- Take or destroy an egg of any wild bird.

In addition to the general protection provided to birds by the Wildlife and Countryside Act, birds listed on Schedule 1 (<https://www.legislation.gov.uk/ukpga/1981/69/schedule/1>) of the Act are afforded additional protection under Section 1 whereby it is an offence intentionally or recklessly disturb a listed bird while it is building a nest or is in, on or near a nest containing eggs or young. It is also an offence to intentional or recklessly disturb dependent young. Roof

Further to the above species-specific legislation, the Environment (Wales) Act 2016 states that public authorities (including local councils and the National Parks) must “*seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions.*”

This Act also states in Section 7 that: “*Without prejudice to section 6, the Welsh Ministers must—*

(a) take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section, and

(b) encourage others to take such steps.”

Eight bat species are currently listed as priority species under Section 7 of the Act: Barbastelle (*Barbastellus barbastella*), Bechstein’s (*Myotis bechsteinii*), Noctule (*Nyctalus noctula*), Common pipistrelle (*Pipistrellus pipistrellus*), Soprano pipistrelle (*Pipistrellus pygmaeus*), Brown long-eared bat (*Plecotus auritus*), Lesser horseshoe bat (*Rhinolophus hipposideros*), and Greater horseshoe bat (*Rhinolophus ferrumequinum*.)

Planning Policy and Associated Guidance

National and local planning policy provides strategic guidance on enacting legislation as it relates to protected species and biodiversity. Planning Policy Wales Edition 11 is the most recently published National Policy Document with Section 6 on Distinctive and Natural Places being of relevance (https://www.gov.wales/sites/default/files/publications/2021-02/planning-policy-wales-edition-11_0.pdf). Technical Advice Note (TAN) 5 on Nature Conservation and Planning provides further guidance (<https://www.gov.wales/sites/default/files/publications/2018-09/tan5-nature-conservation.pdf>)

Regarding local planning policy, the relevant Local Development Plan should be referred to. The survey site falls within the Bridgend County Council planning authority. Referring to the Local Development Plan, Strategic Policy SP4 on the Conservation and Enhancement of the Natural Environment states:

Development which will conserve and, wherever possible, enhance the natural environment of the County Borough will be favoured.

Development proposals will not be permitted where they will have an adverse impact upon:

- *The integrity of the County Borough's countryside;*
- *The character of its landscape;*
- *Its biodiversity and habitats; and*
- *The quality of its natural resources including water, air and soil.*

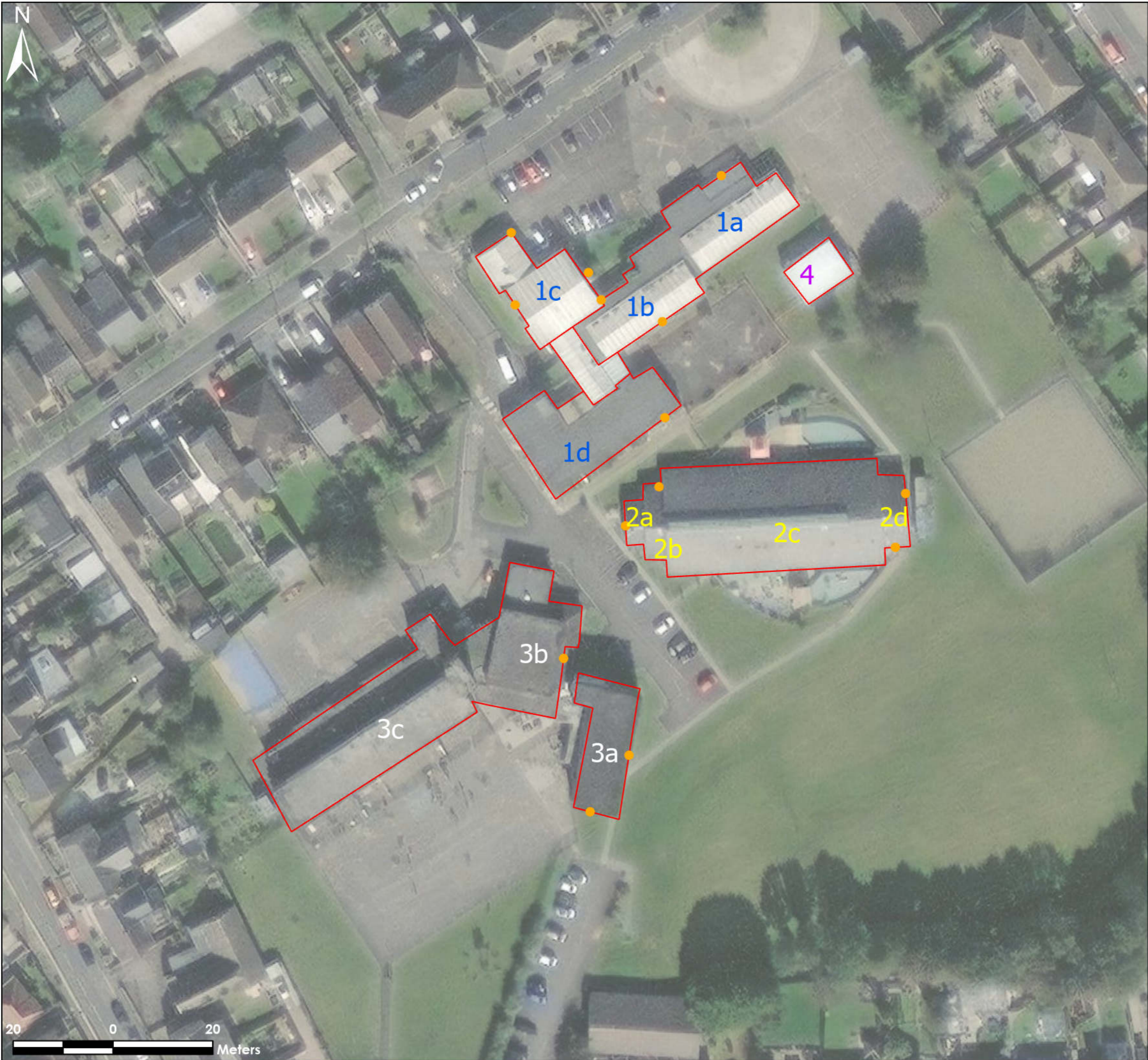
Areas having a high and/or unique environmental quality will be protected and the following strategically important areas within the County Borough will specifically be protected from inappropriate development which directly or indirectly impacts upon them.

- *SP4(1) Natura 2000 Network Sites (including Special Areas of Conservation (SACs);*
- *SP4(2) Sites of Special Scientific Interest (SSSIs);*
- *SP4(3) Kenfig and Merthyr Mawr National Nature Reserves (NNRs);*
- *SP4(4) The Glamorgan Heritage Coast;*

The Bridgend Local Biodiversity Action Plan (Bridgend LBAP) provides a framework within which existing and new actions are co-ordinated to conserve and enhance biodiversity in Bridgend, taking account of local and national priorities. This includes Action Plans that cover the protection and enhancement of bat habitats within the county as well as plans to maintain and enhance current populations.

Appendix C

Site Plan



- Buildings
- Bat Roost Features

P1	FI	28.09.23	PRA Bats	JB	VN	JW
V.	S.	Date	Description	B.	C.	A.



10 Park Grove, Cardiff CF10 3BN

Fulcrum Group
 Bridgend Clusters
 Preliminary Roost Assessment
Bat Roost Features

Drawing no.: 2433_DWG_BatRoostFeatures_P1