

Vale of Glamorgan Schools - Pencoedtre High School

Bat Roost Survey Report

Project number: 6057132

November 2018

Quality information

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Revision History

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Executive Summary

AECOM was commissioned by Vale of Glamorgan Council to undertake bat roost surveys at the site of the proposed Pencoedtre High School Site in Barry, South Wales. A Preliminary Ecological Appraisal (PEA) completed by AECOM (AECOM, 2018) identified buildings and trees with features suitable to support roosting bats. This report includes the methodologies and results of bat roost surveys and outlines potential impacts and recommendations for mitigation and enhancement.

The proposed Pencoedtre High School site ("the Site") is located on the former Bryn Hafren Comprehensive School site on Merthyr Dyfan Road, Barry CF62 9YQ, South Wales. OS grid reference ST 11349 70032. The Site is located within a residential area on the northern outskirts of Barry.

Habitats at the Site currently comprise amenity grassland, hardstanding and buildings with areas of semi-improved grassland, poor semi-improved grassland, ephemeral short perennial, broadleaved plantation woodland, broadleaved semi-natural woodland, intact species poor hedgerows, defunct species poor hedgerows, hedgerows with trees, dense scrub, rows of trees standalone trees and fences (Figure 1).

The proposed works are for the transformation of the existing Bryn Hafren Comprehensive School into a mixed sex 11-18 school which will be re-named Pencoedtre High School. The school will accommodate 900 11-16 year old pupils and 200 Sixth Form pupils. The development will include the construction of a new sports hall, refurbishment and improvement of the current building, upgrades to the current toilet facilities, provision of new lifts, replacement of roof covering the main building, upgrades to the current catering facilities, upgrades to accommodate wheelchair users, removal of asbestos and Additional Learning Needs (ALN) provisions. Works will commence in April 2019.

Dusk emergence surveys were undertaken on Buildings 1, 2 and 3 in July and August 2018. No bat roosts were recorded. Bat activity, recorded during the roost survey, was limited to occasional passes of foraging and commuting common pipistrelle and noctule bats.

The proposed works on the building will have no impact on roosting bats. Trees with bat roost suitability are being retained.

No further surveys are recommended and a European Protected Species Licence for bats is not required.

As an enhancement, bat boxes should be incorporated into the building design or erected on suitable trees. This will also satisfy an additional requirement under BREEAM LE04.

It is recommended that lighting avoids features used by commuting and foraging bats, potential tree roosts and any newly installed bat boxes. Best practice guidance, to avoid and reduce lighting impacts on bats, should be incorporated into any new lighting scheme at the Site.

The Executive Summary is not a substitute for the full report. Please refer to the full text for further detail.

1. Introduction

1.1 Introduction

AECOM was commissioned by Vale of Glamorgan Council to undertake Bat Roost Surveys at the site of the proposed Pencoedtre High School Site in Barry, South Wales. The Preliminary Ecological Appraisal (PEA) completed by AECOM (AECOM, 2018) included a Preliminary Ground Level Bat Roost Assessment and identified buildings and trees with features suitable to support roosting bats.

This report includes the methodologies and results of the bat roost surveys and outlines potential impacts and recommendations for mitigation and enhancement.

1.2 Site Location and Description

The proposed Pencoedtre High School site ("the Site") is located on the former Bryn Hafren Comprehensive School Site on Merthyr Dyfan Road, Barry CF62 9YQ, South Wales., OS grid reference ST 11349 70032. The Site is located within a residential area on the northern outskirts of Barry. .

The Site is currently dominated by areas of amenity grassland, hardstanding and buildings with areas of semi-improved grassland, poor semi-improved grassland, ephemeral short perennial, broadleaved plantation woodland, broadleaved semi-natural woodland, intact species poor hedgerows, defunct species poor hedgerows, hedgerows with trees, dense scrub, rows of trees standalone trees and fences (Figure 1).

1.3 Proposed Development

The proposed works are for the transformation of the existing Bryn Hafren Comprehensive School into a mixed sex 11-18 school which will be re-named Pencoedtre High School. The school will accommodate 900 11-16 year old pupils and 200 6th form pupils. The development will include the construction of a new sports hall, refurbishment and improvement of the current building, upgrades to the current toilet facilities, provision of new lifts, replacement of roof covering the main building, upgrades to the current catering facilities, upgrades to accommodate wheelchair users, removal of asbestos and Additional Learning Needs (ALN) provisions. Works will commence in April 2019.

1.4 Objectives

The objectives of the survey and report are:

- To establish the presence or likely absence of any bat roosts within the Site;
- To highlight any potential ecological constraints in relation to bats;
- To outline further survey work that may be required;
- To make suggestions for mitigation, compensation and enhancement of the natural features identified within the Site in respect to bats; and,
- To satisfy Mandatory Requirements under BREEAM LE04.

1.5 Legislation

All bats and their roosts in Wales are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). They are also included in Schedule 2 of the Conservation of Habitats and Species Regulations 2017, known as The Habitats Regulations. The Wildlife and Countryside Act 1981 was amended by the Countryside and Rights of Way Act 2000 (CROW) which adds an extra offence of recklessly disturbing roosting bats or obstructing access to their roosts; makes species offences arrestable, increases the time limits for some prosecutions and increases penalties.

The Wildlife and Countryside Act, the Habitats Regulations and the CROW Act, together make it an offence, among other things, to recklessly, deliberately or intentionally:

- Capture, injure or kill any wild animal which is a European Protected Species (EPS),
- Disturb wild animal of any such species; and
- Damage or destroy a breeding or resting site of any such animal.

Disturbance is defined as that which is likely:

- To impair their ability;
- To survive, to breed or reproduce, or to rear or nurture their young;
- In the case of animals of a hibernating or migratory species, to hibernate or migrate; or,
- To affect significantly the local distribution or abundance of the species to which they belong.

A bat roost is defined as "any structure or place (including trees) which any bat uses for shelter and protection". Because bats tend to re-use the same roosts, legal opinion is that the roost is protected whether or not the bat(s) are present at the time.

If the proposed works are likely to destroy or disturb bats or their roosts, then a European Protected Species License (EPSL) will be required from Natural Resources Wales (NRW), which would be subject to appropriate mitigation and working methods to protect bats.

This is a brief summary of the legislation. When dealing with individual cases, the client is advised to consult the full texts of the relevant legislation and obtain further legal advice.

1.6 Quality Assurance

This survey and subsequent report was undertaken in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to establishing and maintaining our certification to the international standards BS EN ISO 9001:2015 and 14001:2004 and BS OHSAS 18001:2007. In addition our IMS requires careful selection and monitoring of the performance of all sub consultants and contractors.

All AECOM Ecologists who worked on this project are members of (at the appropriate level) the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct (CIEEM, 2013) when undertaking ecological work.

2. Methodology

2.1 Desk Study

The desk study was completed as part of the AECOM BREEAM Report undertaken in July 2018 (AECOM 2018). In relation to bats, the objectives of the desk study were to review the existing information available in the public domain to identify the following:

- Special Areas of Conservation (SACs) and Sites of Special Scientific Interest (SSSIs) designated for bats within a 10 km radius of the Site Boundary paying due regard to Bat Conservation Trust (BCT) guidelines (Collins, 2016), using the Multi Agency Geographic Information for the Countryside (MAGIC) website (NE, 2017);
- Bat records up to 2 km from the Site Boundary, purchased from the South East Wales Biodiversity Records Centre (SEWBRc);
- Ancient Semi-Natural Woodland (ASNW), Plantation on Ancient Woodland Site (PAWS), Restored Ancient Woodland Site (RAWS) or Ancient Woodland Site of Unknown category (AWSU) within or adjacent to the Site using Ancient Woodland Inventory 2011 dataset downloaded from the spatial dataset website, Lle (WG and NRW, 2017);
- The Section 7 list of Species of Principal Importance for Conservation of Biological Diversity in Wales;
- Features of ecological interest surrounding the Site, and features connecting these habitats (e.g. hedgerows, watercourses, railway lines) using aerial photographs and Ordnance Survey (OS) maps; and,
- The County Ecologist and Glamorgan Bat Group were consulted regarding locally designated site citations, local bat records not available from SEWBRc and any local knowledge about the area.

2.2 Bat Roost Surveys

2.2.1 Preliminary Ground Level Assessment

During the PEA (AECOM, 2018), all buildings, structures and trees were assessed for their suitability to support roosting bats using category descriptions drawn from Collins, 2016 and Mitchell-Jones, 2004.

Bat surveys were recommended to confirm presence, or likely absence bat roosts. The following surveys, in Table 2.1, were recommended.

Table 2.1 Bat Roost Survey Effort

Building No.	Bat Roost Suitability	Number of Survey Visits Required	Timing
B1	Low*	One survey (dusk emergence or dawn re-entry)	May -September.
B2	Low	One survey (dusk emergence or dawn re-entry)	May- August
B3	Low	One survey (dusk emergence or dawn re-entry)	May- August

*Significant external and internal lighting light spill onto Building 1 was identified during the first night-time emergence visit and assessed as negatively affecting the suitability for roosting bats. During the PEA Building 1 was assessed as Moderate, but this was subsequently downgraded to Low suitability.

Building 4 has negligible bat roost suitability. Surveys on this building are not recommended.

Building 5, has Moderate bat roost suitability, but is outside of the Site Boundary and will not be impacted by the works. Surveys on this building are not currently recommended.

No further surveys are required on trees, which were all assessed as having Low suitability to support roosting bats.

2.2.2 Bat Roost Surveys

Dusk emergence surveys were completed at the Site.

The locations of the Buildings and positions of surveyors are shown on Figure 2.

Surveys paid due regard to Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016). Each survey consisted of a surveyor stood at a vantage point looking at features on the building identified during the bat roost assessment. Surveyors positioned themselves so that bats could be observed leaving suitable roost features. Bat activity was also recorded if observed by the surveyors.

Emergence surveys started at least 15 minutes before sunset and continued for 1.5 hours.

Broadband frequency division detectors were used and digital recordings were made to assist with species identification if required.

The weather conditions during the surveys were recorded and were considered favourable for bat survey. Survey dates and weather conditions are given in Table 2.2.

Table 2.2 Survey Dates and Weather Conditions

Building No.	Date	Sunset/ Sunrise	Start Time	End Time	Surveyors	Weather (start)	Weather (end)
B1	30/07/2018	21:05	20:50	22:35	LN – NRW Bat Licensed Ecologist LF - Ecologist	Wind (Beaufort): 0 Cloud cover: 7/8 Temperature: 17° Humidity: 78.5% Precipitation: Showers during daytime, light rain during survey (21:18)	Wind (Beaufort): 0 Cloud cover: 8/8 Temperature: 16.5° Humidity: 82.3% Precipitation: Showers during daytime, light rain during survey (21:18)
B2 and B3	21/08/2018	20:24	20:09	21:54	LF - Ecologist CM - Ecologist UJ – Senior Ecologist Three surveyors positioned themselves around features on both B2 and B3 simultaneously.	Wind (Beaufort): 1 Cloud cover: 2/8 Temperature: 18° Humidity: 88.8% Precipitation: None	Wind (Beaufort): 0 Cloud cover: 8/8 Temperature: 18° Humidity: 89.2% Precipitation: None

2.2.3 Data Analysis

Calls were checked and verified by a suitably experienced ecologist. Bat echolocation call analysis was undertaken where required with support from reference material including the British Bat Calls Species Identification Guide (Russ, 2012). The AnalookW software programme (version 4.2n) was used to analyse bat echolocation calls.

2.3 Limitations

Bat surveys offer only 'snapshots' of the location being assessed and do not take account for potential future changes in abundance or diversity of bats at a given site. However, by completing surveys according to best practice, the risks of providing unrepresentative assessments are diminished.

The methodology adopted and the sources of information used by AECOM in providing its services are outlined in this Report. The work described in this Report was conducted between July 2018 and November 2018 and is based on the conditions encountered and the information available during the said period of time. The scope of

this Report and the services are accordingly factually limited by these circumstances. AECOM disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report, which may come or be brought to AECOM's attention after the date of the Report.

There are deemed to be no significant limitations to the survey or this report.

3. Results

3.1 Desk Study

The desk study results in relation to bats are summarised in Table 3.1.

Table 3.1: Desk Study Results

Designation / Feature	Description
Designated Sites within 10 km designated for bats	There are no designated sites for bats within 10 km.
Bat Records from the last 10 years within 2 km	Brown long-eared bat <i>Plecotus auritus</i> (single record of injured bat 1.8 km west), common pipistrelle bat <i>Pipistrellus pipistrellus</i> (nearest record 1.5 km east. Two roosts 2.1 km north and 1.8 km east), soprano pipistrelle bat <i>Pipistrellus pygmaeus</i> (nearest record 2 km south), whiskered bat <i>Myotis mystacinus</i> (nearest record 680 m south, injured bat) and noctule bat <i>Nyctalus noctula</i> (nearest record 2 km south).
Priority Species – Section 7 List	The following bat species are listed on Section 7 Species of Principal Importance in Wales: Barbastelle bat <i>Barbastella barbastellus</i> , Bechstein's bat, <i>Myotis bechsteinii</i> , noctule, common pipistrelle, soprano pipistrelle, brown long-eared bat, greater horseshoe bat <i>Rhinolophus ferrumequinum</i> , and lesser horseshoe bat <i>Rhinolophus hipposideros</i> .
Surrounding Land Use	<p>The Site is located in Barry. To the north of the Site Boundary is Port Road (A4050), beyond Port Road are scattered woodland blocks dominated by coniferous plantation woodland, areas of marshy grassland and a crematorium. Further north are fields linked by hedgerows and a golf course. Nant Brynhill watercourse is located 480 m north.</p> <p>To the east of the Site are school playing fields (within the current boundary of the school) and residential buildings. Beyond these, north-east, is Pencoedre Wood SINC (part of Barry Woodlands SSSI) which extends east dissected by the A4231 road.</p> <p>To the south of the Site is a block of woodland and Barry Rugby Football sports pitches. A watercourse Ffynnon Pencotry is located in the woodlands 40 m from the Site Boundary. Further south are the residential areas of Merthyr Dyfan, Cadoxton and Colcot.</p> <p>To the west are residential areas of Colcot and west of the A4050 extends into improved grassland fields with hedgerows and scattered woodland,</p>
Ancient Woodland	6.51 Ha of PAWS is located to north of the Site separated from the Site by Port Road (A4050). This area includes Land North of Port News SINC. There is no ASNW, RAWs or PAWS within the Site Boundary.
Tree Protection Orders (TPO)	<p>Trees with a TPO designation are present along the adjacent to but outside of the Site boundary along the south western and northern boundaries:</p> <ul style="list-style-type: none"> 14 Corsican pine and 2 lime trees have a TPO along Merthyr Drafen Road 0.02 km south west of the Site boundary. A woodland with several TPOs is located to north of the Site, separated from the Site by Port Road (A4050). These trees form part of Land North of Port News SINC.
Council Ecologist and Local Specialist Recorders	<p>The County Ecologist responded stating all records are submitted to SEWBRcC.</p> <p>The local Bat Group were contacted, no response has been received to date.</p>

3.2 Bat Roost Surveys

No roosts were recorded during the surveys. It is concluded that the buildings on Site do not currently support roosting bats. Results are summarised in Table 3.1.

Bat activity, detected during the emergence surveys, was limited to occasional passes of foraging and commuting common pipistrelle and noctule bats.

Table 3.1 Bat Roost Survey Results

Date	Building	Results
30/07/2018	B1	No bats were recorded emerging from the building. Activity was limited to occasional common pipistrelle passes above the building and along the edge of the sports field. There was security lighting illuminating the features which turned on at sunset and lights were left on inside the building. Lighting reduced the suitability of these features.
21/08/2018	B2 and B3	No bats were recorded emerging from the building. Activity was limited to occasional noctule and common pipistrelle passes foraging and commuting across the Site. There was security lighting from an adjacent building with some light spill onto the east face of the building.

4. Potential Impacts

4.1 Roosting Bats

4.1.1 Buildings

No bat roosts were confirmed in Buildings 1, 2 or 3. It has been concluded that the buildings on Site do not currently support roosting bats.

The refurbishment works to buildings will not impact roosting bats.

4.1.2 Trees

Trees which are assessed as having Low suitability to support roosting bats will be retained.

Surveys are not required on trees assessed as having Low suitability.

Lighting plans are not currently available but if potential roost features on trees are lit their suitability to support roosting bats will be reduced. If bat roosts are present, in the absence of mitigation, poorly designed lighting has the potential to disturb bats or damage or destroy a roost.

5. Recommendations for Further Surveys and Mitigation

5.1 Further Surveys

5.1.1 Roost Surveys or Licences

Under the current proposals, no further bat roost surveys are recommended.

No European Protected Species bat licences will be required.

5.1.2 Bat Activity Surveys

As stated in the BREEAM report (AECOM, 2018), it is recommended that external lighting is designed to avoid light spill onto boundary features including rows of trees, hedgerows and woodland edges. If light spill can be avoided, no surveys for bat activity will be required. Institution of Lighting Professionals (ILP), 2018 says that completely avoiding any lighting conflicts in the first instance is advantageous because not only would proposals be automatically compliant with the relevant wildlife legislation and planning policy, but they could avoid costly and time-consuming additional surveys, mitigation and post development monitoring.

If external lighting will not be designed to avoid impacts in the first instance, then activity surveys will be required. The Site has been assessed as having Moderate suitability to support foraging and commuting bats. A walked transect around the Site will be undertaken once per month between April and October and static detectors deployed for 5 days per month between April and October.

If the surveys find that bats are using these features, which is highly likely, then mitigation will be required. This will include the need to avoid light spill onto the linear features used by bats. It is recommended that external lighting is designed to avoid light spill in the first instance.

5.2 Recommendations for Mitigation

5.2.1 Bat and External Lighting

The lighting plan has not been confirmed.

The following recommendations in line with the BCT, 2009, BCT, 2014 and Gunnell et. al., 2012, best practice guidance should be incorporated into any new lighting scheme at the Site:

- Light spill onto any new bat boxes must be avoided;
- In the first instance, external lighting should be designed to avoid light spill onto boundary features including rows of trees, hedgerows and woodland edges; and
- Light spill onto sensitive areas such as the Site boundaries which have the potential to be used by commuting and foraging bats and trees suitable to support roosting bats should be limited to levels of 3 Lux or less.

Suggestions for mitigating external lighting and achieving the lighting recommendations above are outlined in the ILP Guidance Note (ILP, 2018) and best practice guidance (BCT, 2009, BCT 2014 and Gunnell et. al., 2012). These include:

- Only light areas which need to be lit, and use the minimal level of lighting required to comply with guidance such as Institute of Lighting Engineers Guidance Notes for the Reduction of Obtrusive Light (2005);
- LED luminaires should be used where possible due to their sharp cut off, low intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component.

- Eliminate bare lamps and any upward pointing light;
- The spread of light should be at or near the horizontal. Flat cut off lanterns are best;
- Use narrow spectrum lamps. Using lamps with the lowest UV output possible, avoid white and blue spectrums of light;
- Lights should peak higher than 550 nm or use glass lanterns to filter UV light;
- Reduce the height of lighting columns;
- Direct lighting to where needed and avoid spillage e.g. direct lighting towards the building front/foot path and design the luminaire appropriately, including the use of shields to avoid spillage behind the lamps onto adjacent habitats. Footways could, for example, be lit using bollards to keep the light below the tree canopy;
- Street lights can be located so that rear shields face the adjacent habitats or optics selected that stop back light thereby directing light into the task area, avoiding spill onto adjacent habitats.
- Where new lighting is proposed, use lighting modelling programs to indicate where the light spill will occur;
- Any external security lighting should be set to motion sensors and short (1 min) timers;
- Limit the times that the lights are on, to provide some dark periods;
- Avoid using reflective surfaces under lights; and
- Do not use a lamp greater than 150W for security lighting.

This will increase the value of the Site for a number of other nocturnal species, as well as for bats.

5.3 Recommendations for Enhancing Site Ecology

BREEAM credit LE04 requires ecological enhancement. Bat boxes are recommended on the new building to provide roosting opportunities for bats. As roosts were not found, this is not a legal requirement but an option for enhancement; an additional requirement under LE04.

It is recommended a minimum of three boxes of various designs are incorporated into the building at design stage or erected onto suitable trees.

Biodiversity for Low and Zero Carbon Buildings: A Technical Guide for New Builds (Williams, 2010) suggests various ways of including a roost void compliant with Building Regulations within a variety of modern structures. Products such as cavity bat boxes, bat bricks and bat tiles could also be used to match external fabrics. Alternatively, roost space could be provided by fitting pre-made bat boxes to the external face of the new or refurbished buildings. The choice of bat box should be suitable for crevice dwelling species. Example roost provisions to incorporate on buildings or trees are shown in Table 5.1.

Encouraging these species onto a site also provides an interesting educational opportunity. If bats are present, local bat groups or local ecological companies may be willing to lead talks and walks in the school grounds, involving staff, students and the wider community.

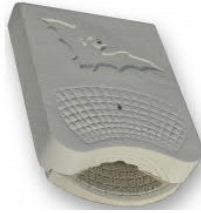
All new roost provision should be situated away from light spill, with clear flight paths towards corridors and foraging suitable to be used by bats. Advice from a suitably qualified ecologist should be sought when drawing up the specifications for bat roosts and locations. Bat boxes should be positioned at least 4 m above ground level to protect any resident bats from disturbance or predation by domestic pets. Each box can be positioned with a different orientation between south east and south west to provide a range of microclimate options.

Table 5.1: Examples of Bat Roost Box Options

Bat Roost Provision

Designed for
Trees/Buildings?

Schwegler 1WQ Summer and Winter Bat Roost

<https://www.wildcareshop.com/summer-and-winter-bat-roost.html><http://www.nhbs.com/title/161275/1wq-schwegler-summer-winter-bat-roost>

Buildings

Schwegler 1WI Summer and Winter Bat Box

<https://www.wildcareshop.com/schwegler-1wi-summer-and-winter-bat-box.html><http://www.nhbs.com/title/177079/1wi-schwegler-summer-and-winter-bat-box>

Buildings

Bat Slope for 1MF Bat and Swift Nest Box

<http://www.nhbs.com/bat-slope-for-1mf-bat-and-swift-nest-box>

Buildings

Habibat Bat Box - Custom Brick Facing

<http://www.nhbs.com/title/183578/habibat-bat-box-custom-brick-facing>

Buildings

1FTH Schwegler Universal Bat Summer Roost

<http://www.nhbs.com/title/203503/1fth-schwegler-universal-bat-summer-roost>

Buildings

1FD Schwegler Bat Box

<http://www.nhbs.com/title/177076/1fd-schwegler-bat-box>

Trees

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Figure 1 Phase 1 Habitat Map

LEGEND

Site Boundary

Target Notes

Trees

Bat Roost Potential for Buildings

Medium Potential

Low Potential

Negligible

Bat Roost Potential for Trees

Low Potential

Phase 1 Habitat Linear Features

Row of trees - broadleaf

Defunct Hedge - Species-Poor

Hedge with Trees - Species-Poor

Fence

Phase 1 Habitat Areas

Broadleaved woodland - semi-natural

Broadleaved woodland - plantation

Dense/Continuous scrub

Semi-improved - neutral grassland

Poor semi-improved grassland

Amenity grassland - cultivated land

Ephemeral/short - cultivated land

Introduced shrub - cultivated land

Buildings

Hard Standing

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**PHASE 1 HABITAT
PLAN
PENCOEDTRE HIGH
SCHOOL**

Scale at A3: 1:2,000

Drawing No:

FIGURE 1

Drawn: Chk'd: App'd: Date:

GM CM LN 08/06/18

Rev:

001

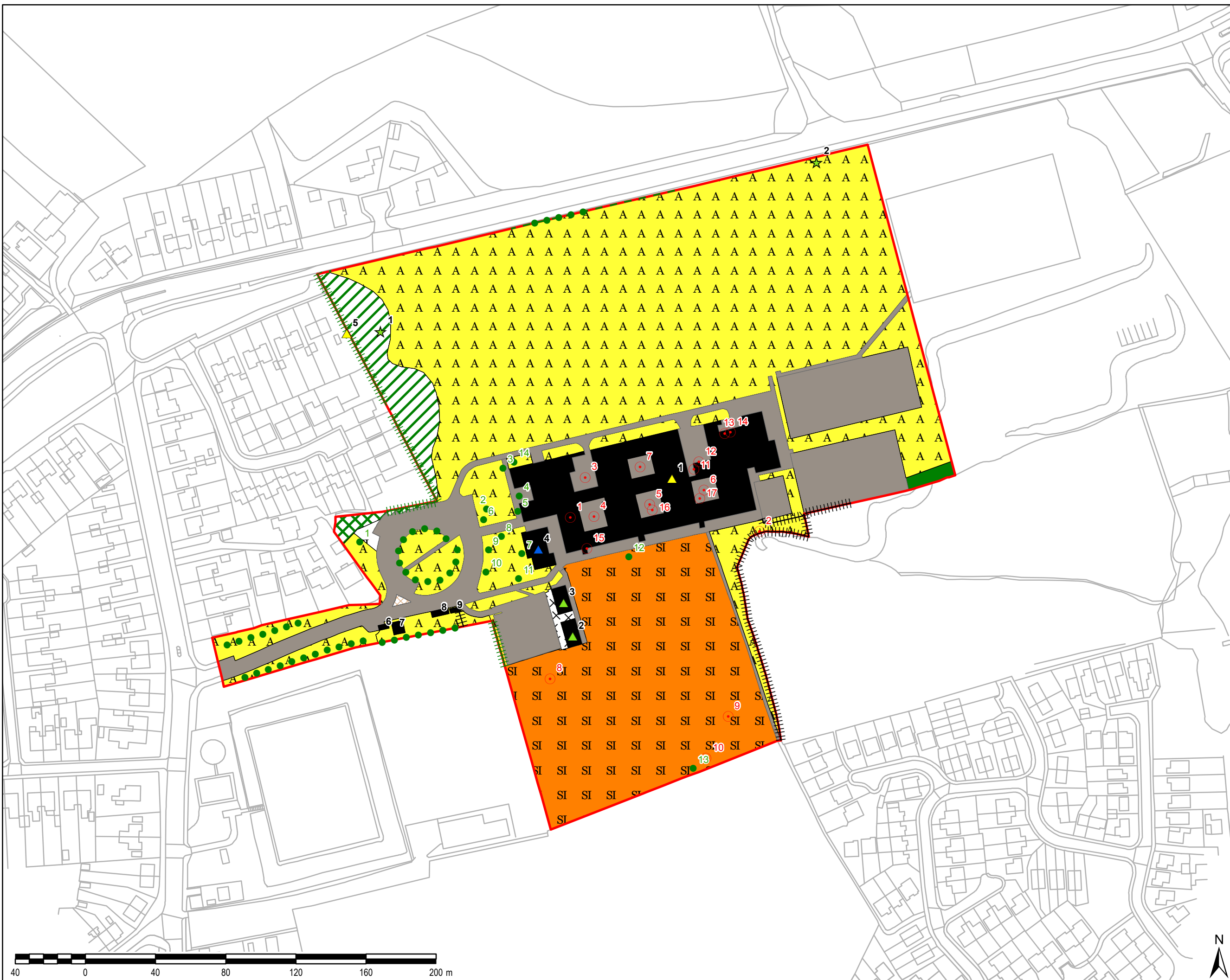
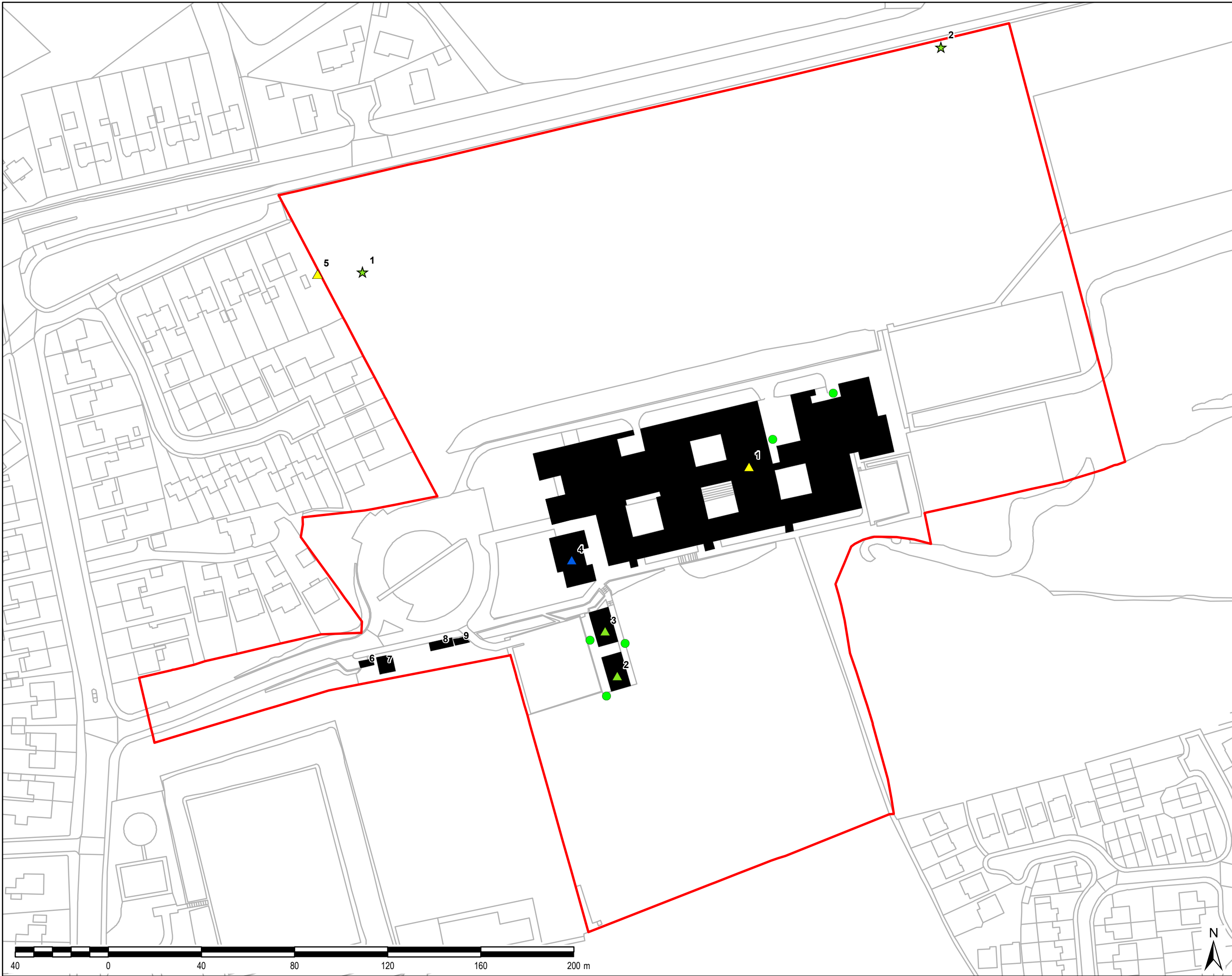


Figure 2 Bat Roost Survey Locations



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www.aecom.com

Project Title:

VALE OF GLAMORGAN
PENCOEDTRE HIGH
SCHOOL

Client:



LEGEND

Bat Roost Suitability for Buildings

- Yellow triangle: Medium Potential
- Green triangle: Low Potential
- Blue triangle: Negligible

Bat Roost Suitability for Trees

- Green star: Low Potential
- Red outline: Site Boundary
- Green dot: Bat Roost Surveyor Positions

Phase 1 Habitat Areas

- Black fill: Buildings

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60571312

Drawing Title:

BAT SURVEY PLAN
PENCOEDTRE HIGH
SCHOOL

Scale at A3: 1:1,500

Drawing No: 001

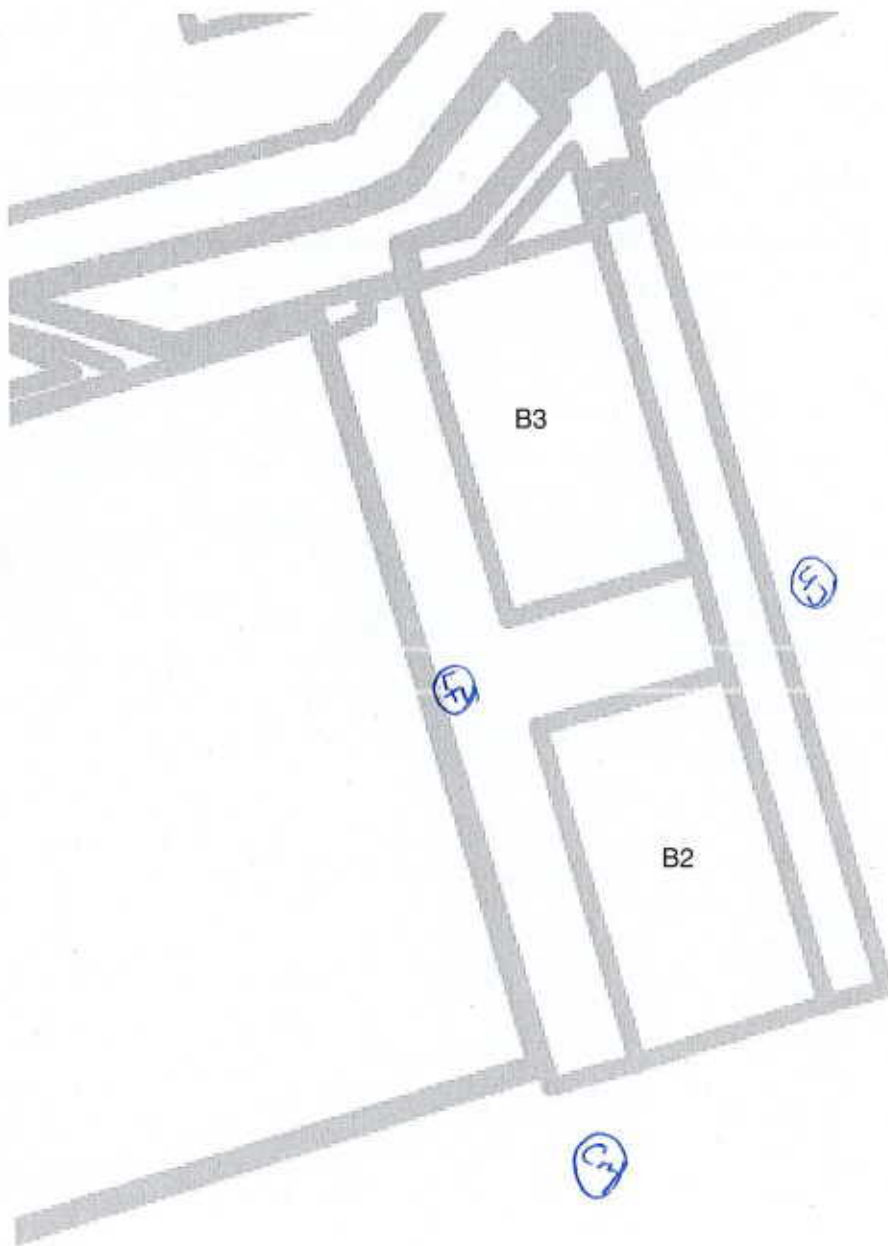
FIGURE 2

Drawn: Chk'd: App'd: Date:

GM CM LN 22/11/18

[illegible]

Pencoedtre B2 & B3



Lucy Foster.
21/08/18.
Dusk.

NO ROOST

Surveyor Name: <u>U. JONES</u> (Mark your survey location on plan)		Site Name: <u>PENCOEDTLE</u>	
Date: <u>21/08/18</u> (Check the date and time on detector is correct)		Survey Position/Transect Number: <u>US B2+B3</u>	
Start time:	<u>20:09</u>	Site Ownership:	<u>VoGC</u>
Finish time:	<u>21:54</u>	Detector Type/Recording Equipment:	<u>BAT LOGGER 2140</u>
Site status/ Land Use: <u>SCHOOL</u>			
Weather conditions: <u>CLOUDY</u>		Rain during survey or day/night before? <u>NONE</u>	
Sunrise:		Sunset: <u>20:24</u>	
Wind speed (mph)	Start:	Finish:	Air temperature (C)
Cloud Cover (Octars)	Start:	Finish:	Humidity (%)

Time of sighting (24 hr clock) (Use clock on bat detector/recording device)	Location of bat (Ref on map)	Bat species*	Behaviour (e.g. foraging / commuting) and/or Description (e.g. flew north to south over building)	Number of bats
20:27	HNS - BRIEF CALL	NOC	C	1
20:52	HNS	POSSIBLY A MOTH 25 kHz - CHECK.	-	-
21:06	FRAGILE AROUND A EAST + SOUTH FACE OF B2	C. PIP	F	1
DID NOT SEE ENG/RE, BUT DID NOT SEE WHICH DIRECTION IT ARRIVED FROM, POSS. FROM SE CORNER OF EAST FACE OF B2 AS BOTH CM + I HEARD IT BUT CM SAW IT FIRST + SAID IT CAME FROM THAT DIRECTION. EAST FACE SUBJECT TO LIGHTSPILL FROM CONTINUOUS ON FLOODLIGHT PHOTOS				
21:14	HNS - V BRIEF CALL	NOC	?	1
21:29	HNS - V BRIEF CALLS	NOC + FLUTTERY SOUND - CHECK?	C	1 ?(1)
21:48	HNS - FAINT + BRIEF	C. PIP	F/C	1
21:50	HNS	CHECK CALL - MOTH?	?	2 (1)

*Suggested species abbreviations - PIPi, PIPY, NYNO, NYLE, EPSE, BABA, MYDA, MYNA, MYsp, PLAU, RHHi, RHFE.

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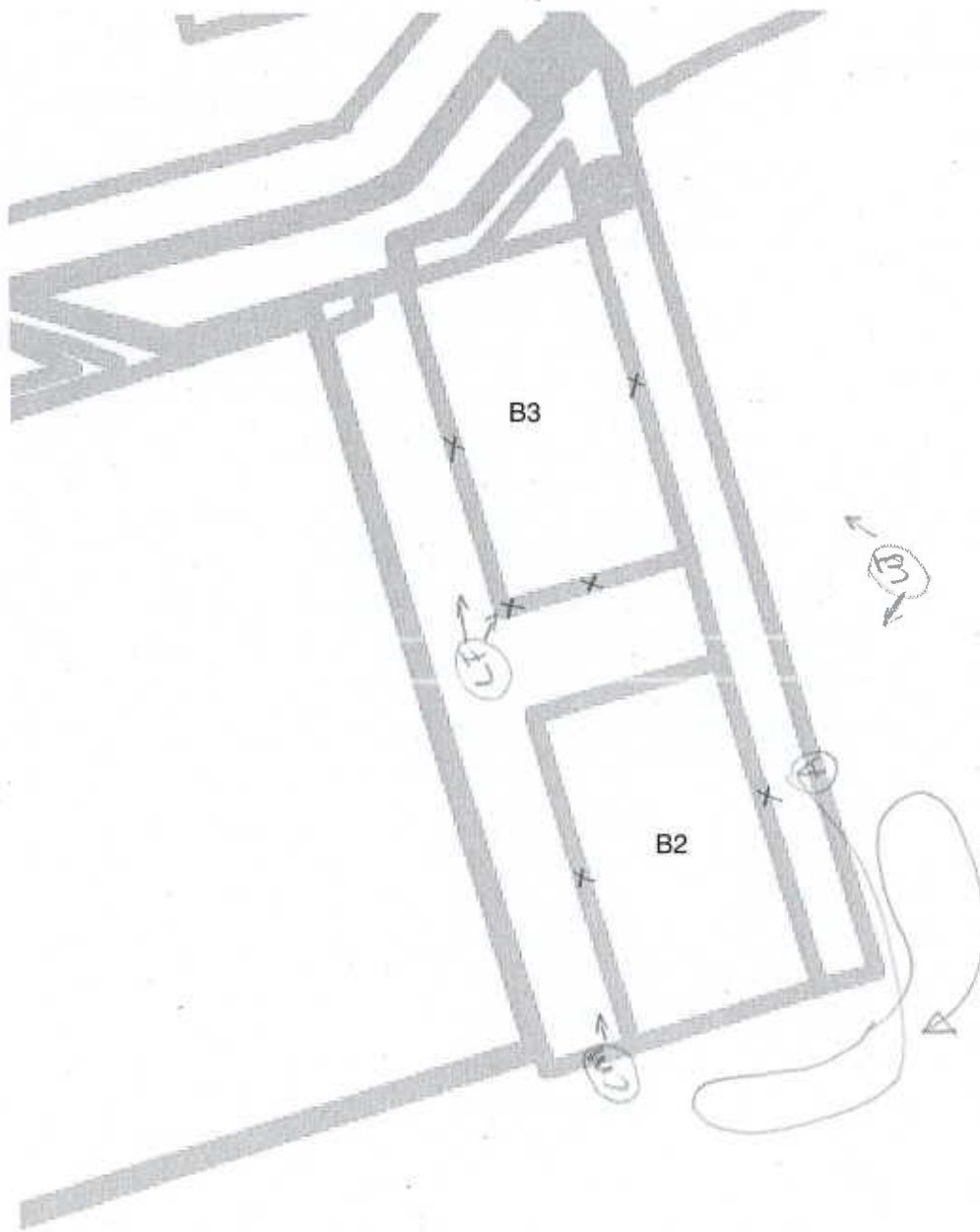
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Pencoedtre B2 & B3

UJONES; PENCOEDTRE
21/8/18 DJSK

X - FACES OR CORNERS
W/ BRP FEATURES

FLOODLIGHT ON BUILDING
BEHIND SPILLING ON TO
EAST FACE OF B2 + B3.
Photos:



ON BUILDING
LIGHT 1200

N
↑

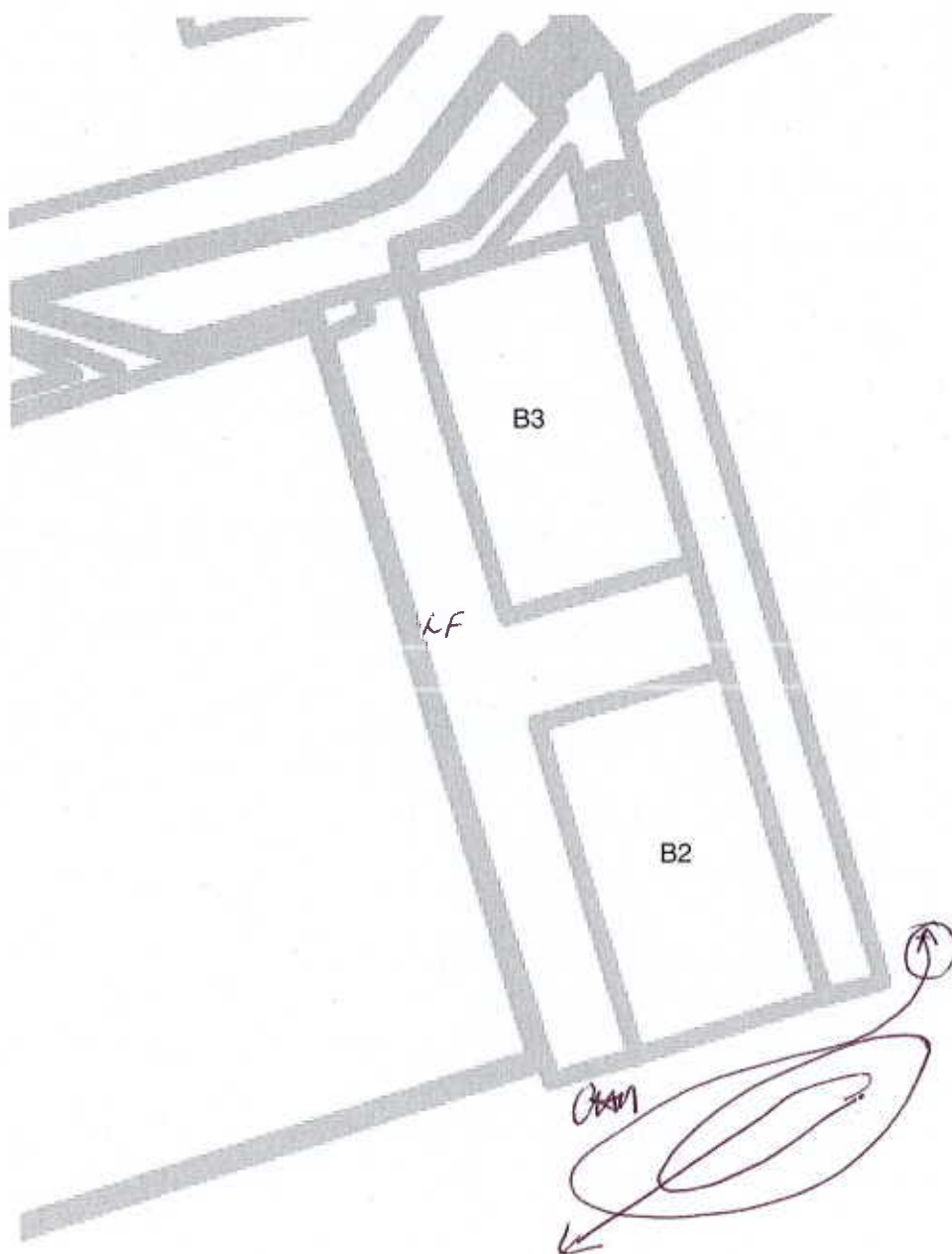
Surveyor Name: <u>CNARE MORGANS</u> (Mark your survey location on plan)	Site Name <u>PENCOEDTRE</u>
Date: <u>21/8/18</u> (Check the date and time on detector is correct)	Survey Position/Transect Number: <u>BUILDING 2 - See Map</u>
Start time: <u>20:09</u>	Site Ownership: <u>VOC SCHOOLS</u>
Finish time: <u>21:54</u>	Detector Type/Recording Equipment: <u>Bat logger / 3076</u>
Site status/ Land Use: <u>ACTIVE SCHOOL</u>	

Weather conditions			Rain during survey or day/night before? <i>No</i>		
Sunrise:			Sunset: <i>20:24</i>		
Wind speed (mph)	Start: <i>gentle breeze</i>	Finish: <i>8/11</i>	Air temperature (C)	Start: <i>18°C</i>	Finish: <i>18°C</i>
Cloud Cover (Octars)	Start: <i>2/8</i>	Finish: <i>8/8</i>	Humidity (%)	Start: <i>88.8</i>	Finish: <i>87.2</i>

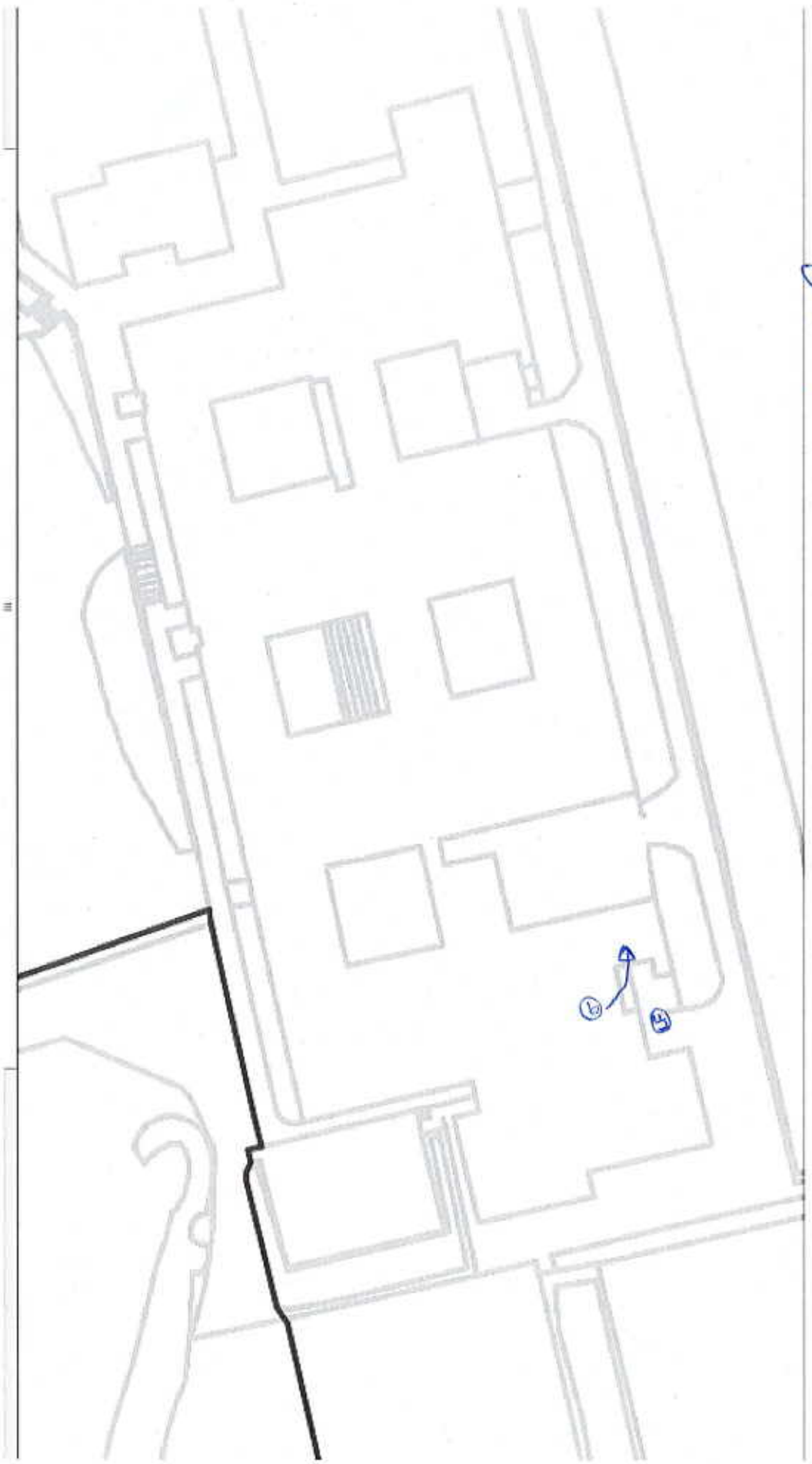
[illegible]

Pencoedtre B2 & B3

Tuesday 21st August 2018
DUSK EMERGENCY
CLARE MORGAN/S



Pen B1 - dusk Mon.
30/07/18. Lucy Foster.



Lighting inside building + security light outside.

No boost.

1899
March 18

Surveyor Name: <u>Lucy Foster</u> (Mark your survey location on plan)		Site Name: <u>Pencodtre</u>	
Date: <u>30/7/18</u> (Check the date and time on detector is correct)		Survey Position/Transect Number: <u>See Map B1</u>	
Start time: <u>20.50</u>	Site Ownership: <u>V&G</u>		
Finish time: <u>22.35</u>	Detector Type/Recording Equipment: <u>Bat logger</u>		
Site status/ Land Use: <u>School</u>	<u>S/N 2973</u>		
Weather conditions		Rain during survey or day/night before? <u>showers during day time</u>	
Sunrise:		Sunset: <u>21.05</u> <u>occasional light rain during survey</u>	
Wind speed (mph)	Start: <u>0 mph</u> Finish: <u>0</u>	Air temperature (C)	Start: <u>17</u> Finish: <u>16.5</u>
Cloud Cover (Octars)	Start: <u>7/8</u> Finish: <u>8/8</u>	Humidity (%)	Start: <u>78.5</u> Finish: <u>82.3</u>

Time of sighting (24 hr clock) (Use clock on bat detector/recording device)	Location of bat (Ref on map)	Bat species*	Behaviour (e.g. foraging / commuting) and/or Description (e.g. flew north to south over building)	Number of bats
<u>2221</u>	<u>9</u>	<u>P45</u>	<u>F</u>	<u>1</u>
<u>2226</u>	<u>HNS</u>	<u>P45</u>	<u>F</u>	<u>1</u>
<u>2233</u>	<u>HNS</u>	<u>P45</u>	<u>F</u>	<u>1</u>
<u>No Roost</u>				

*Suggested species abbreviations - PIPI, PIPY, NYNO, NYLE, EPSE, BABA, MYDA, MYNA, MYsp, PLAU, RHHI, RHFE.

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[illegible]

Additional Comments / Observations/ Summary

DUSK

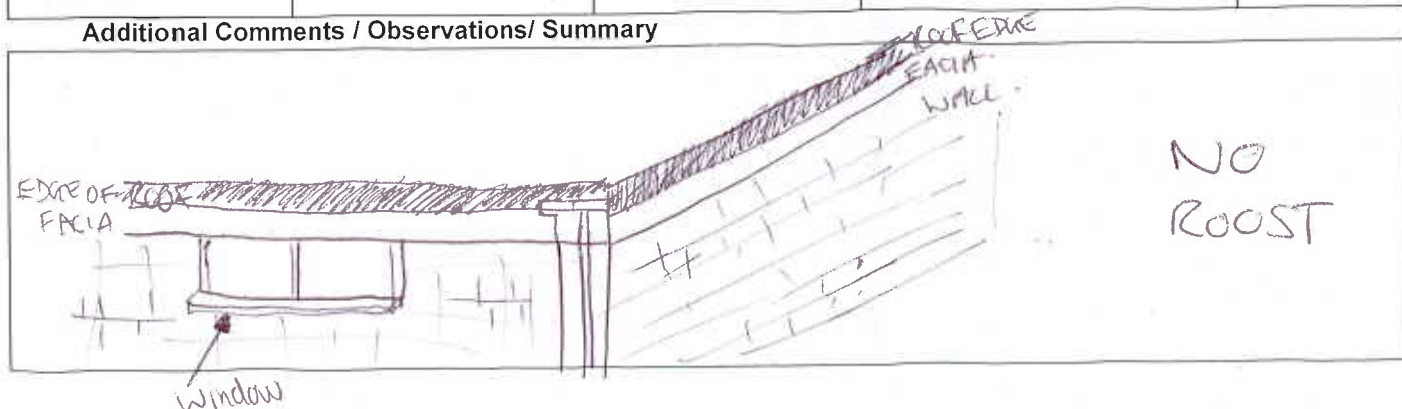
STEP (FASER)
SHEET

SEE
FOSTER
SHEET.

Note

[illegible]

Additional Comments / Observations/ Summary



*Suggested species abbreviations - PIPI, PIPY, NYNO, NYLE, EPSE, BABA, MYDA, MYNA, MYsp, PLAU, RHHI, RHFE

PENCOETTERIE BAT SURVEY BUILDING 1

- NO BAT ACTIVITY
- NO BAT ROOSTS.

30-07-18
Dusk. LNASH.
Covering future
about window +
facia board

