Elite Ecology

Passionate about Ecology

Rose Hill,
Alton

Construction and Ecological Management Plan

January 2022

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1 Introduction

1.1 Report Rationale

This report has been prepared at the request of Mr. Rob Duncan (Rob Duncan Planning Ltd.). It relates conditions 4 of the planning consent for Rose Hill, Nabb Lane, Alton, Staffordshire, ST10 4AY (Central OS Grid Reference: SK 07504 41624).

This is to address Condition 4, which is as follows:

"*Before the commencement of the development hereby approved, construction method statements outlining protection and mitigation measures for badgers, great crested newts, bats and birds shall be submitted to and approved in writing by the Local Planning Authority and the measures approved shall be undertaken in the construction of the development and any mitigation measured identified shall be provided and maintained for the lifetime of the development. Reason:- In the interests of the ecological value of the site.*"

2 Proposals

2.1 Proposals

Under the current proposals, the garage is to be converted into holiday lodge with a porch extension on the north-western elevation. A second unit is to be built directly to the south-east.

3 Recommendations

3.1 Avoidance measures

3.1.1 Amphibians including Great crested newts

The site contains very limited potential for any terrestrial amphibians, including great crested newts (*Triturus cristatus*). The proposed works area contains bare ground and rubble piles, although scattered scrub may colonise the site if left unmanaged. Therefore, the impacts on amphibians will be low during the construction phase only. Therefore, the method statement (as outlined below) is deemed the most suitable option for this project. This method statement needs to be adhered by to ensure that no amphibians get harmed by the works.

The following methods should be adhered to:

- Keep the vegetation below 15cm in height to ensure that amphibians are deterred from using the site.
- Prior to day 1 of the works onsite, one artificial hibernacula will need to be created just offsite. The specification can be found in figure **1** and the location in figure **2**.
- On day 1 of the works, a toolbox talk will be undertaken by a licenced great crested newt (*Triturus cristatus*) ecologist. This will educate contractors in relation to the amphibians that could be encountered and the legislation covering them. Associated documentation will be left with the site manager/project manager. This documentation will include contact details for Elite Ecology and the licenced ecologist appointed to the project.
- Prior to the commencement of the construction works, a fingertip search of the area will be undertaken by a licenced great crested newt (*Triturus cristatus*) ecologist. Any rubble on site will need to be removed by hand, under the supervision of the licenced ecologist.
- Any u amphibians found will be collected and translocated to the nearby hibernacula (as shown in figure 2). The overnight temperature before this fingertip search is required to be 5^{o}C or higher. This is to ensure that no hibernating amphibians are affected by the works and therefore put at undue risk by translocation.
- At the end of every working day, all construction materials need to be stored on raised platforms (i.e. pallets). This is to deter the amphibians from using the construction materials as temporary resting sites. If any amphibians are found within trenches dug into the ground, the licenced ecologist shall be contacted and these amphibians translocated to the chosen site.

  If any great crested newts (*Triturus cristatus*) are found during the construction phase, then works will stop immediately and the licenced ecologist contacted.

- At the completion of the works, Elite Ecology will produce a letter statement to detail all amphibians captured and translocated. This will include photographic evidence of the works, the amphibians translocated and the site at the completion of the works.

  It is recommended that scrubland, hedgerows, woodland and/or rough grassland is included around the site. It is also recommended that at least two hibernacula are included into the design scheme. These are usually comprised of rubble, rock, log piles and earth banks. An example design for the hibernacula can be seen within **Figure 1**. The location of these are shown in **Figure 1**.

  Figure 1: A diagram illustrating the recommended hibernacula (GCN Mitigation Guidelines)

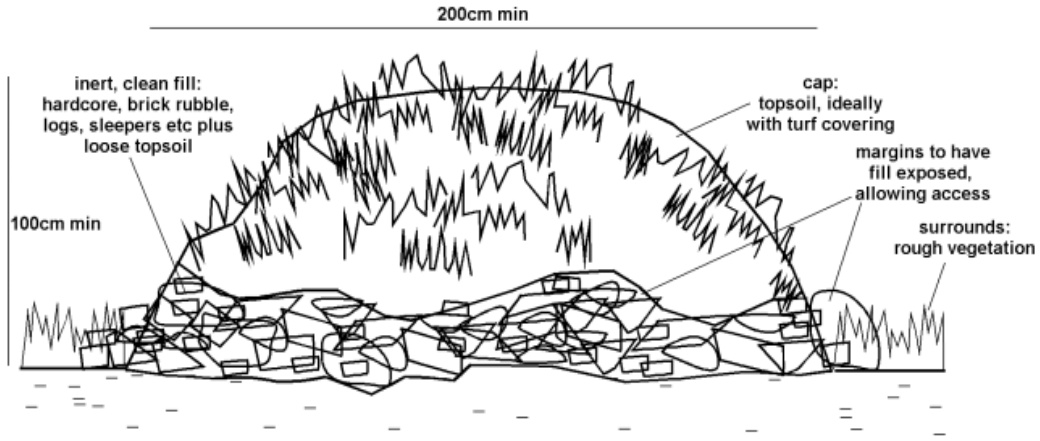
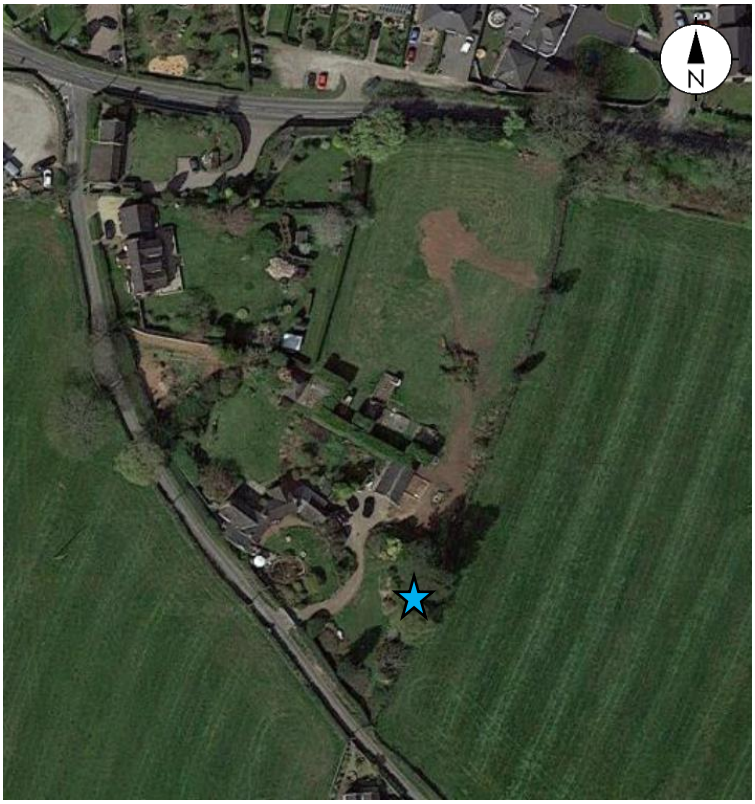


Figure 2: Recommended location of the hibernacula (blue star)



3.1.3 Hedgehog

It is recommended that precautionary measures are incorporated. Provisions for hedgehogs to escape from all trenches dug into the ground, by creating slopes or providing ramps at the end of each working day.

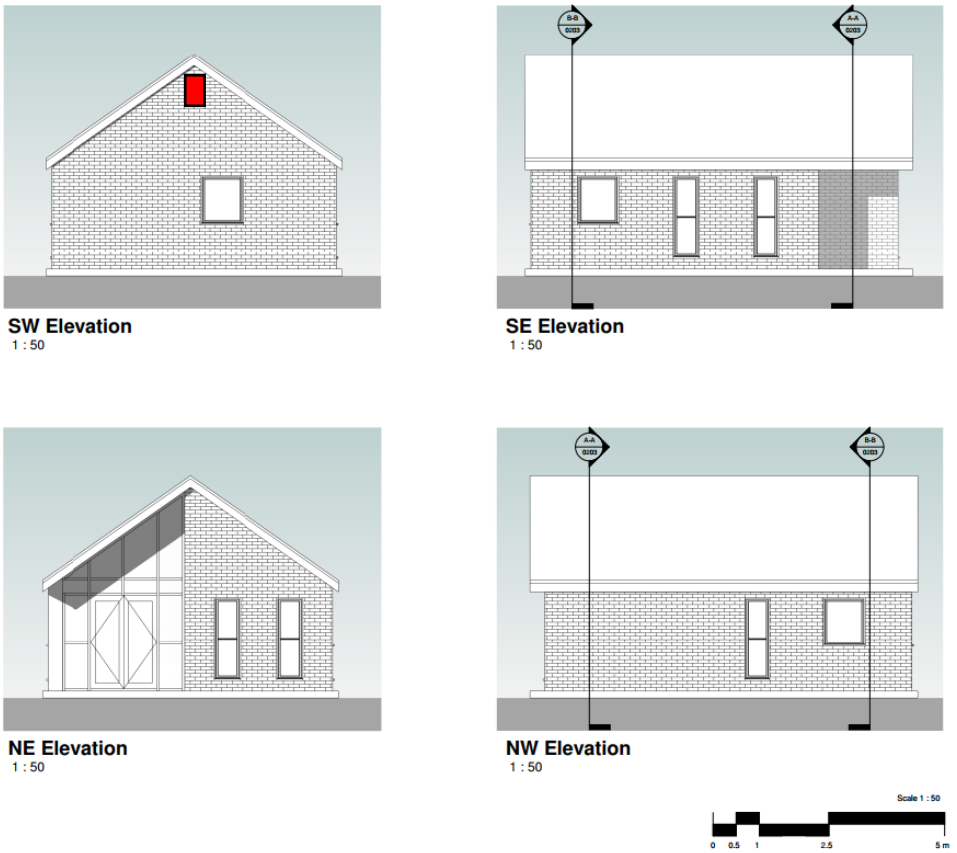
Additionally, any pipework left on site that is greater than 150mm in diameter will need to be planked off. Should this information be strictly adhered to, then the development works will not negatively impact on the local mammal populations.

3.2 Species-Specific Enhancements

3.2.1 Bats

One Integrated Eco Bat Boxes is to be incorporated on site to enhance the site for other local bat species populations by providing further roosting opportunities. The location of which is shown in the annotated plans bellow.

Figure 3: Location of the integrated bat box on unit 2 (red shape - not to scale)



Artificial lighting **must avoid** the field boundary hedgerows and trees. If it is necessary to include artificial lighting in areas overlooking both hedgerows and trees, then this must include sensors to be triggered by larger bodies only. An artificial lighting plan should be drawn up to illustrate the spill of light. This is to include the proposed security lighting on the residential dwellings as well as all street lighting. This document should then be approved by a licenced bat ecologist. More information on bats and artificial lighting can be found within **Appendix D**.

The site can be enhanced by introducing a bat friendly planting scheme in the soft landscaping plan. The table below outlines species recommended by the Bat Conservation Trust, all of which could be incorporated into the site post development

Flowers for borders	Trees, shrubs & climbers
Aubretia	Bramble
Candytuft	Buddleia
Cherry pie	Common alder
Corncockle	Dogrose
Corn marigold	Elder
Corn poppy	English oak
Echniacea	Gorse
English bluebell	Guelder rose
Evening primrose	Hawthorn
Field poppies	Hazel
Honesty	Honeysuckle (native)
Ice plant 'pink lady'	Hornbeam
Knapweed	Ivy
Mallow	Jasmine
Mexican aster	Pussy willow
Michaelmas daisy	Rowan
Night-scented stock	Silver birch
Ox-eye daisy	**Herbs**
Phacelia	Angelica
Poached egg plant	Bergamot
Primrose	Borage
Red campion	Coriander
Red valerian	English marigolds
Scabious	Fennel
St. John's Wort	Feverfew
Sweet William	Hyssop
Tobacco plant	Lavenders
Verbena	Lemon balm
Wallflowers	Marjoram
Wood forget-me-not	Rosemary
Yarrow	Sweet Cicely
	Thyme

3.2.3 Birds

The proposed habitat creation areas should incorporate a minimum of the following:

- 1x House sparrow terrace
- 1x Apex bird box (28mm)

Bird boxes installed on building should face between north and east to avoid the strong sunlight and wet winds. All bird enhancements must be situated in a way that prevents access to predators such as cats.

Figure 4: Location of the Apex bird box unit 2 (Blue shape - not to scale)

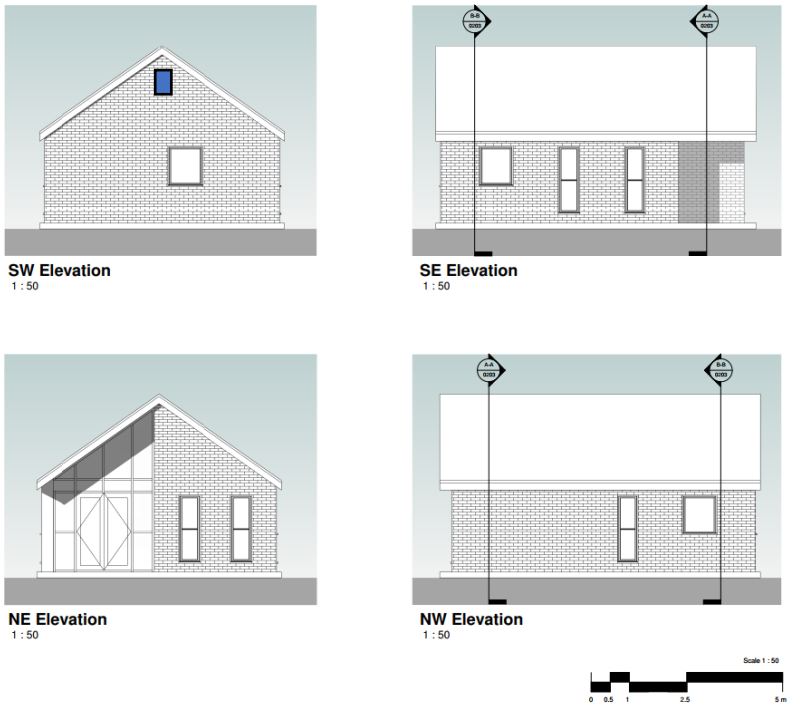
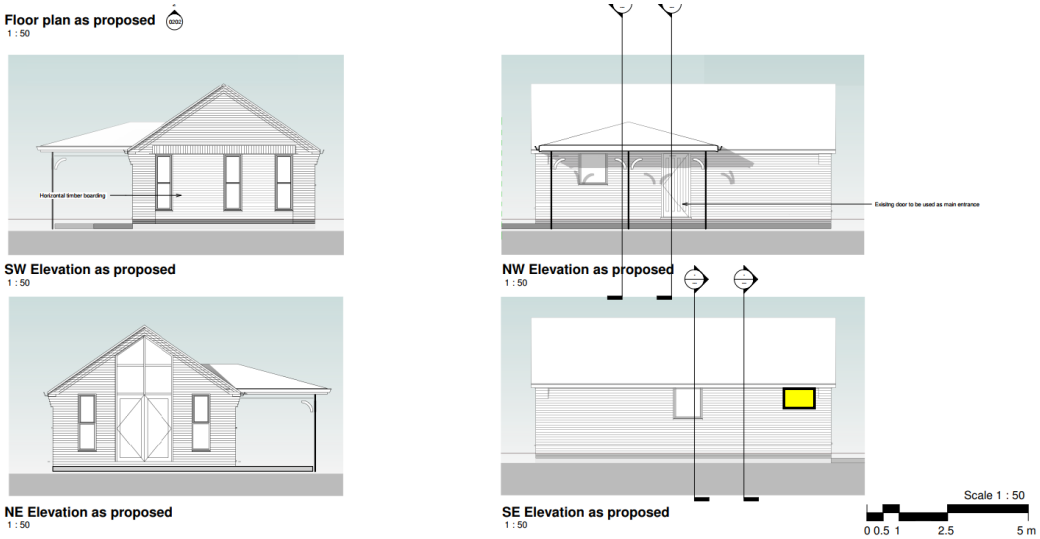


Figure 4: Location of the sparrow terrace on unit 1 (yellow shape - not to scale)



4 Project Roles, Responsibilities and Contacts

4.1 Project Roles

Everybody working on site has the responsibility to ensure that ecological impacts are kept to a minimum. In addition to this, everyone has a base level Duty of Care to prevent Environmental Harm as described in the Environmental Protection Act 1986.

The project roles outlined in the table below may be amended in a revised document once contractors have been appointed to the project.

POSITION	NAME(s)	Contact Details
Project Manager	Mr Rob Duncan	Tel: 07779 783521 Email: rob78duncan@gmail.com
Site Supervisor	Mr Rob Duncan	Tel: 07779 783521 Email: rob78duncan@gmail.com
Ecological Advisor	Mr Adam Harper Mr Richard Millington	Tel: 01782 308418 Email: adam@eliteecology.co.uk richard@eliteecology.co.uk

Project Manager:
The project manager is responsible for:

- Ensuing that the CEMP that has been developed is held on site and that it is implemented throughout every stage of the project.
- Maintaining the CEMP and ensuring that all contractors and any site visitors comply implicitly with it.
- Any ecological issues identified within pre-construction information and the pre-construction site surveys are addressed.
- Producing a project-specific control to address all significant risks identified and implementing appropriate control measures.
- Communicating the CEMP and other related documents to employees, contractors, sub-contractors, client representatives and visitors to the site.

Site Supervisor:
The site supervisor is responsible for:

- Ensure that all site and stored materials and chemicals are safe and secure to ensure no fauna can gain access to them.
- Ensure the mitigation and compensation measures outlined within the CEMP are undertaken by site staff on a daily basis.
- Inducting all employees, contractors and visitors to make them aware of the CEMP and to guarantee that they will abide by the details outlined within the document at all times on the site.
- Ensuring that project specific ecological toolbox talks are undertaken by all employees, contractors and visitors to the site prior to gaining access to the site itself.

Ecological Advisor:

Elite Ecology staff members will be available to address and advise on any ecological issues which may arise during the project, in addition to those covered within the CEMP. The roles of the advisor is to:

- Ensure the works comply with all relevant legislation regarding flora, fauna and habitats.
- Undertaking inspections, audits and non-conformance checks to ensure the site works are abiding by the measures outlined within the CEMP.
- Updating the CEMP as and when relevant information is provided by the stakeholders associated with each section of the CEMP.
- Liaising with the project manager and site supervisors to ensure that any issues are addressed and amended within the working constraints.

5 Ecological Risk Management

The works within the working area could impact upon a variety of ecological factors. During previous site visits, the site was found to contain the potential to support breeding birds and hedgehogs.

Amphibians Including Great crested newt			
Objective(s)	To ensure that no amphibians are injured or killed by the proposed works.		
Justification	The habitats around the site have the potential to support amphibians including GCN.		
Management Strategy	Prior to the commencement of the construction works, a fingertip search of the area will be undertaken by a licenced great crested newt (*Triturus cristatus*) ecologist. Any rubble on site will need to be removed by hand, under the supervision of the licenced ecologist. The overnight temperature before this fingertip search is required to be 5^{o}C or higher. This is to ensure that no hibernating amphibians are affected by the works and therefore put at undue risk by translocation.		
		Responsibility	**Timing**
Control(s)	Site induction and toolbox talk to all contractors. fingertip search of the area to be undertaken by a licenced ecologist. Any rubble on site will need to be removed by hand, under the supervision.	Site Supervisor and Ecological Advisor	Prior to the commencement of works and during construction.
Performance Indicator(s)	No amphibians to be injured or killed by the proposed works.	Project Manager and Site Supervisor	From the start date through to the end date.
Monitoring	Daily ground checks for new vegetation and amphibian presence	Site Supervisor	Prior and during the construction phase.
Reporting	Monthly compliance email to the ecological advisor If amphibians, the corrective action should be adhered to and the ecological advisor contacted **immediately**.	Site Supervisor	Prior and during the construction phase.
Corrective Action(s)	Any amphibians found will be collected and translocated to a nearby hibernacula.	Project Manager, Site Supervisor and Ecological Advisor	Prior and during the construction phase.

Hedgehogs			
Objective(s)	To ensure that no hedgehogs are harmed by the works.		
Justification	The habitats on and nearby to the site are deemed suitable to support hedgehogs throughout the year.		
Management Strategy	The management will include: ➢ excavations should be left closed overnight, or a mammal ladder installed to allow escape.		
		Responsibility	**Timing**
Control(s)	Site induction and toolbox talk to all contractors.	Site Supervisor and Ecological Advisor	Prior to the commencement of any site works.
Performance Indicator(s)		Project Manager, Site Supervisor and Ecological Advisor	From the start date through to the end date.
Monitoring	Daily inspections: - Morning inspection of trenches and pipework to ensure no adgers are trapped within the feature. - Late afternoon/evening inspections to ensure all trenches have their escape ladders in place.	Site Supervisor	During the construction phase.
Reporting	Monthly compliance email to the ecological advisor	Site Supervisor	During the construction phase.
Corrective Action(s)	Any escape ramps not in place are required to be amended by the site supervisor. I	Project Manager, Site Supervisor and Ecological Advisor	During the construction phase.

6 Post Works Monitoring

To ensure the features of this management plan are successful, the following post monitoring will be undertaken. The timescales have been devised on a proposed completion date of 2020. All post works monitoring will be accompanied by a letter statement documenting the findings and any corrective measures required at the completion of that years' work.

Two Years:

One bat activity survey and breeding bird inspection two years following the completion of the works. This should be undertaken in the spring of 2024.

Five Years:

One bat activity survey and breeding bird inspection two years following the completion of the works. This should be undertaken in the spring of 2029.

Once 5 years has lapsed, this management plan's monitoring scheme will have been completed. No further monitoring would be necessary, unless the ecological advisor appointed to this project deems further action is required.

7 References

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8 Appendices

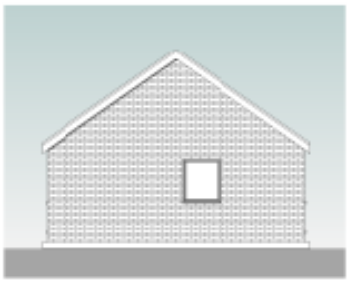
Appendix A: Site Plans

Appendix B: Phase 1 Habitat Map

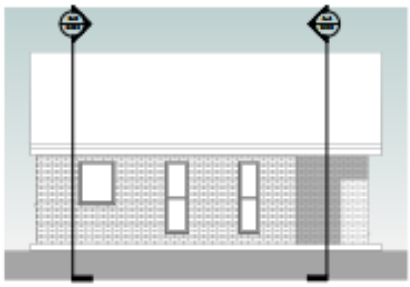
Appendix C: Bat and Artificial Light

Appendix A: Site Plans





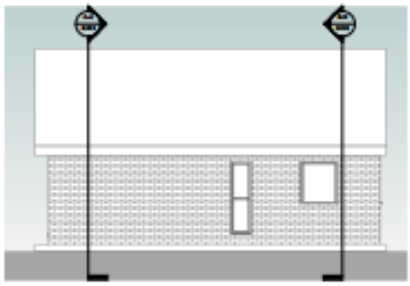
SW Elevation
1 : 50



SE Elevation
1 : 50

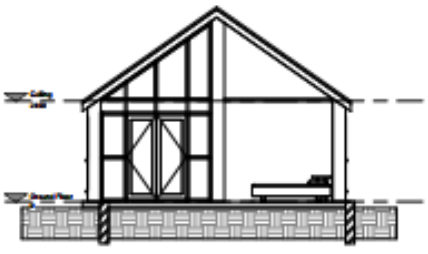


NE Elevation
1 : 50

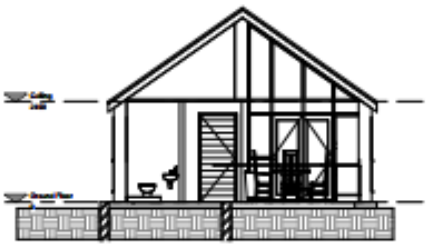


NW Elevation
1 : 50



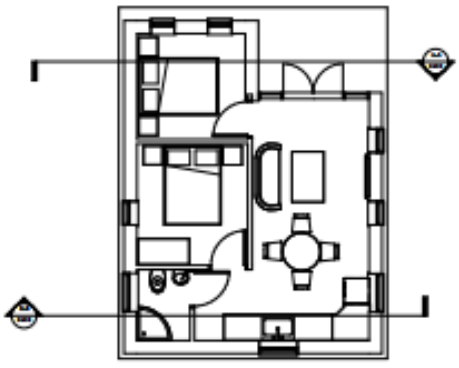


Section A-A
1 : 50



Section B-B
1 : 50





Ground Floor
1 : 50

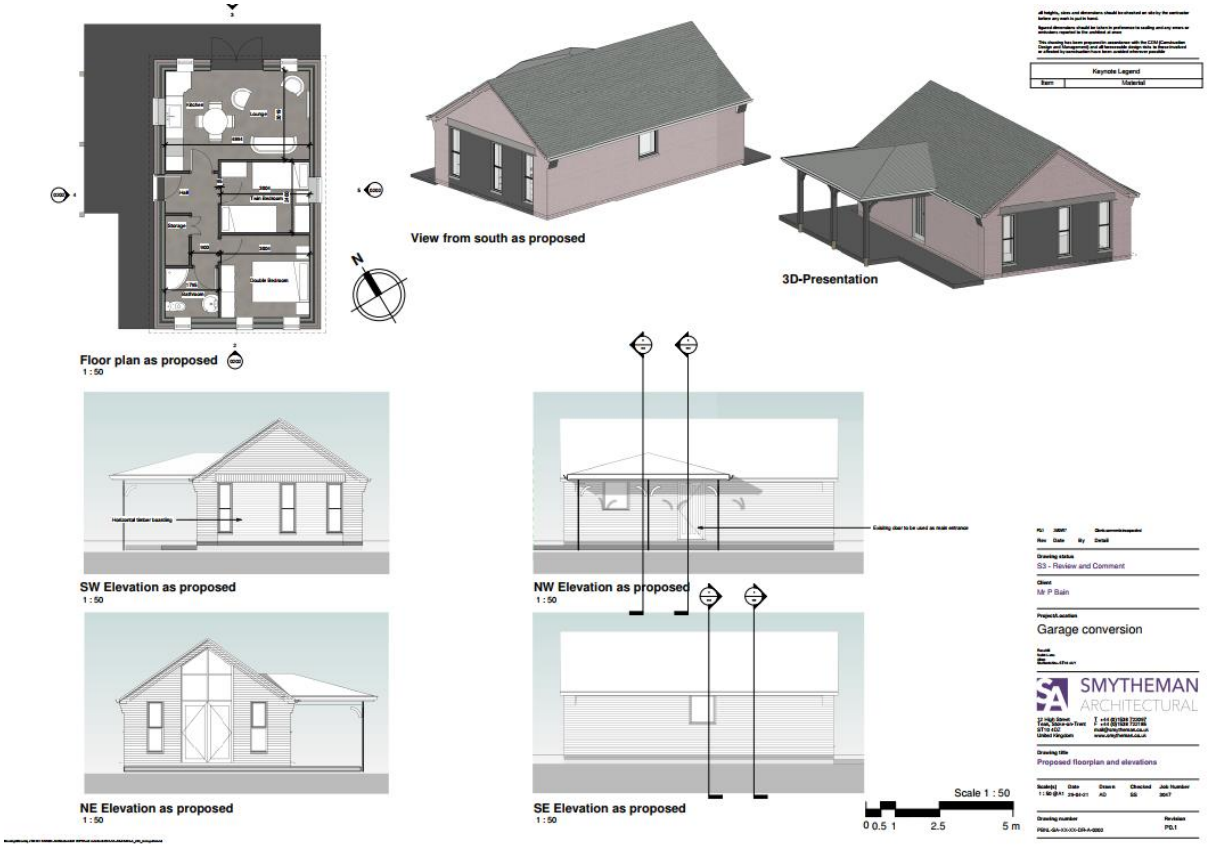
S3 - Review and Comment

Mr P Rain

Holiday Unit

SMYTHEMAN ARCHITECTURAL

Proposed Plan & Elevations & Sections


Floor plan as proposed
1 : 50
View from south as proposed
3D-Presentation
SW Elevation as proposed
1 : 50
NW Elevation as proposed
1 : 50
NE Elevation as proposed
1 : 50
SE Elevation as proposed
1 : 50
Scale 1 : 50
0 0.5 1 2.5 5 m
Keynote Legend
Item
Material
S3 - Review and Comment
M P Bain
Garage conversion
SMYTHEMAN
ARCHITECTURAL
Proposed floorplan and elevations

Appendix B: Phase 1 Habitat Map

No Preliminary Habitat Survey Map has been provided.

Appendix C: Bats and Artificial Light

Artificial lighting is known to affect bat's roosting and foraging behaviour, with lighting resulting in a range of impacts that includes roost desertion (BCT, 2009), delayed emergence of roosting bats (Downs et al., 2003), increased activity of some bat species and decreased activity by others (Stone et al., 2012).

An experimental approach using LED units, demonstrated that relatively fast-flying bat species, including the common pipistrelle, showed no significant impacts as a result of new artificial lighting, even when lighting was set at relatively high levels close to 50 lux.

In contrast, slow flying bats such as the myotid bats (Myotis spp.) showed sharp reductions in presence, even at low light levels of 3.6 lux (Stone et al., 2012).

Current recommendations for all bat species specifies that no bat roost should be directly illuminated.

Due to the impacts of lighting, mitigation and sensitive lighting design schemes are required for projects where bats are present. These should include bat friendly lighting plans that should aim to avoid lighting wherever possible. If this is not possible, then the minimisation of any lighting impacts is required by adopting the following measures:

- To introduce lighting curfews or use of PIR sensors.

  Lighting curfews can be an effective way of avoiding impacts on bats. These curfews may involve either turning off lighting or dimming light units at specific times of the night, dimming units at key times of the year, providing the luminaire allows for this option via a control unit. Lighting to be triggered by PIR sensors can be expected to be illuminated only when required and for a low proportion of time.

- To consider no lighting solutions where possible.

  Options such as white lining, good signage and LED cats eyes should be considered as preferable. Reflective fittings may help make use of headlights to provide any necessary illumination in some areas.

- To use only high pressure sodium or warm white LED lamps where possible.

  High pressure sodium and warm white LED lamps emit lower proportions of insect attracting UV light than mercury, metal halide lamps and white LED lighting. Generally, lamps should have a lower proportion of white or blue wavelengths, with a colour temperature <4200 kelvin recommended (BCT, 2014).

- To minimise the spread of light.

  The light spread should be kept at or near horizontal to ensure that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Baffles, hoods, louvres and shields should be used where necessary to reduce light spill.

- To consider the height of the lighting column.

  While downward facing bollard lighting is often preferable, it should be noted that a lower mounting height does not automatically reduce impacts to bats as bollard lighting can often be designed to provide up-lighting. Where bollard lighting is considered to be the most appropriate system, bollard spacing or unit density should be kept to a minimum and units should be fitted with the appropriate hoods/deflectors to reduce any up-lighting.

- To avoid reflective surfaces below lights.

  The polarisation of light by shiny surfaces attracts insects increasing bat activity (BCT, 2012). Consequently, surface materials around lighting require consideration.