Gladstone Road, Exeter

Ecological Appraisal

March 2020

Control sheet

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This report has been prepared by an ecological specialist and does not purport to provide legal advice. You may wish to take separate legal advice.

The information which we have prepared and provided is true, and has been prepared and provided in accordance with the BS42020:2013 and the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

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Signed (Author)	Signed (QA)
	

Contents

Executive Summary

An ecological appraisal was completed in July 2019 to inform proposals to demolish the ambulance service headquarters, located off Gladstone Road, Exeter (NGR: SX 93062 92761) and redevelop the site into Co-living accommodation. Key ecological features, potential impacts and outline mitigation measures are summarised in Table 1 below.

Table 1. Summary of ecological considerations

Ecological Feature	Potential Impact	Further surveys if affected	Outline Mitigation
Scattered trees	Loss of habitat	N	Replacement of trees at a ratio of 2:1
Roosting bats	Direct during demolition works	N	Adherence to Reasonable Avoidance Measures (RAMs)
Nesting birds	Direct impacts Loss of habitat	N	Habitat clearance outside of nesting season (March – August inclusive) or pre-clearance nesting bird check by an ecologist required

1. Introduction

1.1 Bowland Ecology Ltd was commissioned by Newmarket Developments to complete a preliminary bat roost assessment and extended Phase 1 Habitat survey of the ambulance service headquarters, located off Gladstone Road, Exeter (NGR: SX 93062 92761). Proposed works include demolition of the building on site and re-development into a 146 unit Co-Living development over 5 storeys

1.2 The site is located very close to the city centre of Exeter. The surrounding area is mixed use and comprises residential properties, food stores, hospitals, police stations, universities and religious buildings The site boundary is shown on the Phase 1 Habitat plan in Appendix B.

1.3 The purpose of the surveys was to 1) make an assessment of the value of the building and site for bats, with particular reference to legal requirements, 2) identify and map all habitats occurring within the survey area, 3) identify the presence of (or potential for) wildlife interests with particular reference to the need for further surveys and legal requirements, and 4) provide an ecological assessment, identify potential impacts and provide recommendations pertaining to the proposal.

1.4 This report includes a description of survey methods, a summary description of habitats and fauna present and outlines recommendations to provide protection and enhancements for biodiversity and protected species.

2. Methodology

2.1 The desk study, building inspection survey, extended Phase 1 Habitat survey and ecological appraisal followed the Guidelines for Preliminary Ecological Appraisal and the Guidelines for Ecological Report Writing (CIEEM, 2017a & b) and are in line with the British Standard BS42020:2013 'Biodiversity – Code of practice for planning and development'.

Desk Study

2.2 The aim of the desk study was to identify the presence of statutory and non-statutory wildlife sites within the area and any legally protected species or Habitats and Species of Principal Importance (HPI and SPI) for the conservation of biodiversity (Section 41 NERC Act, 2006).

2.3 The Multi-Agency Geographic Information for the Countryside (MAGIC) website (https://magic.defra.gov.uk) was reviewed for information on locally, nationally and internationally designated sites of nature conservation importance (statutory sites only) on or within 1 km of the site boundary.

2.4 Local records on and within 1 km of the site were obtained following a data search with Devon Biodiversity Records Centre (DBRX)[1].

2.5 Ordnance Survey (OS) maps and aerial photographs (http://maps.google.co.uk/maps) were reviewed to help identify any continuous habitat and any other notable habitats within the surrounding area, together with any ponds within 0.25 km of the site.

2.6 Natural England's great crested newt (*Triturus cristatus*) licensing method statement template (Form WML-A14-2 (version December 2017[2])) advises that, for developments resulting in permanent or temporary habitat loss at distances over 0.25 km from the nearest pond, careful consideration should be given to whether a survey is appropriate. Although the species may use suitable terrestrial habitat up to 0.5 km from a breeding pond, in this instance a 0.25 km search radius was considered appropriate due to the small scale of the project and low suitability of habitats for great crested newt within the developmental footprint and surrounding area.

Building Inspection Survey

2.7 A daytime internal and external inspection of the building was undertaken on the 4th July 2019 by Jack Sykes, BSc (Hons), MCIEEM (Natural England Bat Licence No. 2015-16340-CLS-CLS). The survey followed the Bat Conservation Trust (BCT) 'Good Practice Guidelines' (Collins, 2016). The weather during the inspection was mild with 10% cloud cover, no wind or rain and an average air temperature of 23°C.

2.8 The external building inspection involved checking for field signs of bats on external features of the building, with particular attention being paid to ledges, walls, doors and the surrounding ground. The internal inspection involved a search of the building for field signs such as; bats, bat droppings, urine stains, bat feeding remains (moth wings, insect cases), bat staining, a distinctive smell of bats, scratch marks and smoothing of surfaces, which would indicate a roosting site. Ladders, binoculars and high-power torches (Cluson Clu-lite 500,000 candlepower and LED Lenser 7.2) were used to aid the survey. An assessment of the potential of the building to support bats was also made during the survey i.e. searching for suitable roosting crevices.

[1] Records from 2000 onwards are included within the data search from DBRC.
[2] https://www.gov.uk/government/publications/great-crested-newts-apply-for-a-mitigation-licence

2.9 Natural England's Bat Mitigation Guidelines (2004) states that a significant bat roost can normally be determined on a single visit at any time of the year, provided that the entire structure is accessible and that signs of bats have not been removed by others. Using the information collected during the external and internal assessment, a 'roost potential' score was given to the building according to the criteria shown in Appendix D (Collins, 2016). The inspection was completed at an appropriate time of year and the weather conditions were suitable, therefore there were no limitations to the survey.

2.10 An assessment of the suitability of the surrounding habitats for bats was also undertaken, including the identification of potential foraging and roosting areas, potential flight lines and important commuting corridors.

Field Survey

2.11 The extended Phase 1 Habitat survey was undertaken on the same day at the building inspection survey, and by the same surveyor. The survey followed standard methodology (JNCC, 2010 and CIEEM, 2017). All features of ecological significance were target noted and a colour coded map of the habitats on site has been produced (Appendix B).

2.12 The survey methodology records information on the habitats together with any evidence of and potential for legally protected and notable fauna, in particular:

- potential roosting sites for bats within buildings and trees (identification of suitable cracks and crevices – survey undertaken externally and from ground level only). An assessment of suitability was undertaken according to Collins, 2016 (Appendix D);
- assessing the suitability of habitats for other notable and protected species such as nesting birds (including any active or disused nests), reptiles, water vole (*Arvicola amphibius*), otter (*Lutra lutra*), white-clawed crayfish (*Austropotamobius pallipes*), badger (*Meles meles*) and invertebrates;
- checking for the most common invasive plant species subject to strict legal control including: Japanese knotweed (*Fallopia japonica*), giant knotweed (*F. sachalinensis*), hybrid knotweed (*F. x bohemica*), giant hogweed (*Heracleum mantegazzianum*), rhododendron (*R. ponticum, R. ponticum x R. maximum* and *R. luteum*) and Himalayan balsam (*Impatiens glandulifera*);
- assessing the suitability of the habitat for amphibians including the protected GCN. Ponds on site and within 0.25 km (access permitting) were subject to a habitat suitability index (HSI) (Oldham *et al*. 2000) assessment for GCN[3].

Limitations

2.13 Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. Therefore, the survey of the study area has not produced a complete list of plants and animals.

2.14 Desk study data should not be treated as a comprehensive list of species present within a search area. Many species are under-recorded and low numbers of records can indicate a lack of survey effort in some areas, rather than confirm the absence of a species.

[3] A HSI is a numerical index, between 0 and 1. Values close to 0 indicate unsuitable habitat, 1 represents optimal habitat. The HSI for the great crested newt incorporates ten suitability indices, all of which are factors known to affect this species. The HSI for great crested newts is a measure of habitat suitability - it is not a substitute for newt surveys.

2.15 The list of invasive plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) is extensive and these plants are found in a range of different habitats, including aquatic habitats. The extended Phase 1 Habitat survey checked, in particular, for the presence of Japanese knotweed, giant knotweed, hybrid knotweed, giant hogweed, rhododendron and Himalayan balsam. There may be other invasive plant species present on the site which were not recorded, but it is considered that this survey is sufficient to identify any significant constraints posed by invasive plants.

3. Results

Designated Sites and Habitats of Principal Importance

3.1 There are no statutory or non-statutory designated wildlife sites within 1 km of the site. The site is located within an Impact Risk Zone for statutory designated sites. However, development of the site does not fall into any of the categories that require consultation with Natural England. Therefore, no further consideration regarding the Impact Risk Zone is required.

3.2 The search of MAGIC identified several areas of deciduous woodland HPI within 1 km of the site boundary. The closest is located 0.62 km east north east of the site.

3.3 Based on a review of aerial photographs and OS maps, habitat connectivity in the area is limited to scattered trees in the gardens of residential properties, and there are no ponds on or within 0.25 km of the site.

Habitats

3.4 Target notes summarising key interest features for wildlife recorded during the extended Phase 1 Habitat survey are included in Appendix C. The Phase 1 Habitat plan of the site presented in Appendix B includes the locations of the target notes. Plant species nomenclature follows Stace (2010).

Amenity grassland

3.5 Amenity grassland is located on the eastern edge of the site. The sward is short, uniform and regularly maintained. Species present include perennial rye grass (*Lolium perenne*), annual meadow grass (*Poa annua*), dandelion (*Taraxacum officinale* agg.), common daisy (*Bellis perennis*), selfheal (*Prunella vulgaris*), white clover (*Trifolium repens*), greater plantain (*Plantago major*) and chickweed (*Senecio vulgaris*).

Scattered trees (TN1)

3.6 A single, semi-mature ash (*Fraxinus excelsior*) tree is located on the eastern boundary of the site.

Building (TN2)

3.7 A single storey, flat corrugated roofed building is present on site (TN2). The eastern section of the building comprises a smaller, concrete flat roofed, two storey extension. The walls of the building comprises metal corrugated sheeting, rendered block and red brick. UPVC windows and doors are also present.

Bare ground

3.8 The majority of the site comprises concrete and tarmac driveway, parking areas and footpaths.

Species

Bats

3.9 The data search returned 13 records of bats in the search area, including four common pipistrelle (*Pipistrellus pipistrellus*), one soprano pipistrelle (*Pipistrellus pygmaeus*), one myotis sp. (*Myotis* sp.) and seven unidentified bat species.

3.10 The scattered trees in the surrounding area and the single semi-mature ash on site provide **low/negligible** foraging and commuting opportunities for bats. The site is also heavily illuminated by adjacent street lighting and lighting around the building, further reducing the suitability for bats.

3.11 Externally the building (TN2) comprises rendered walls which are in in excellent condition. There are no structural cracks or areas of crumbling render present. A single (former) gas pipe hole is located on the northern elevation of the building at head height (approximately 2-3 m from the ground). No evidence of bats including droppings, urine staining or grease marks was noted within the gap. The render is flush with uPVC windows and doors offering no gaps suitable for roosting bats around the frames. The render extends to the wall top cap stones and seals the wall tops on all elevations, allowing no wall top roosting potential for bats. There is a vented boiler room accessible from the northern elevation also present.

3.12 The southern elevation of the building comprises red brick walls which are in excellent condition. The full extent of the elevation could not be closely inspected due to the neighbouring police station building. However the majority of the elevation could be viewed from the site with close focus binoculars. The mortar is well sealed offering no potential for crevice dwelling bats.

3.13 Corrugated metal sheeting located at the western end of the building was found to be in excellent condition, with no gaps present in the panel joints. Due to the shape of the corrugated sheeting, there are shallow overlaps at the eaves where the roof panels overhang the western elevation. The full extent of these gaps was inspected from the ground with a hand torch and no evidence of roosting bats was noted.

3.14 The roof of the building is flat. The wall tops of the rendered block sections seal the roof to the wall surfaces. The roof of the western section of the building comprises single skin, corrugated sheeting. The panels are fully jointed and provide negligible roosting potential for bats.

3.15 The internal walls of the buildings are considered unsuitable for roosting bats as they are in current use as offices and subject to high levels of disturbance. Bats could potentially access the internal space via the roller shutter doors at the western and eastern elevations, however, no suitable bat roosting habitat is present within the building. There are no internal wall crevices, enclosed voids or cavities suitable for roosting bats. The boiler room off the northern elevation was found to be undisturbed, clean and with no evidence of use by bats. No enclosed roof voids are present within the building, and all the ceilings are suspended and sealed both inside and out. No evidence of the presence of bats was noted on any surfaces inside the building. Therefore the building is considered to have **low/negligible** potential to support roosting bats.

3.16 The semi-mature ash tree was assessed as having **negligible** potential to support roosting bats due to the absence of any Potential Roosting Features (PRFs).

Other mammals

3.17 13 records of European hedgehog (*Erinaceus europaeus*) were returned by the data search, the nearest record is located 0.29 km from the site; four records of badger were also returned, the closest being located 0.3 km from the site.

3.18 The habitats on site provide negligible potential for badger, hedgehog and other small mammals due to the lack of cover. Therefore they are not considered further within this report.

Birds

3.19 The data search returned the following records of protected and notable birds that may be present in the aforementioned habitats on site; common bullfinch (*Pyrrhula pyrrhula*), dunnock (*Prunella modularis*), herring gull (*Larus argentatus*), house sparrow (*Passer* song thrush (*Turdus philomelos*) and starling (*Sturnus vulgaris*).

3.20 The former gas pipe hole on the buildings northern elevation potentially provides suitable nesting habitat for small passerines including house sparrow (*Passer domesticus*). The semi-mature ash tree on site provides suitable nesting bird habitat for tree and shrub nesting birds.

Amphibians

3.21 The data search returned 16 records of amphibians within 1 km of the site, two of the records are of great crested newt, located 0.6 km from the site.

3.22 There are no ponds within 0.25 km of the site and the terrestrial habitats on site provide negligible refuge habitat for amphibians due to the lack of cover. Therefore amphibians are not considered further within this report.

4. Evaluation and Assessment of Potential Impacts

4.1 An assessment of effects on ecological features has been made using the available design and survey information and the professional judgement of the ecologist. This includes a consideration of the relevant legislation (see Appendix A) and planning guidance.

Scheme Proposal

4.2 Current proposals for the site include the demolition of the ambulance headquarters building and re-development of the site into Co-living accommodation.

Habitats of Principal Importance

4.3 Several areas of deciduous woodland HPI were identified during the desk study, the closest of which is located 0.62 km east north east of the site. Due to the distance of the woodland from the site and lack of connecting habitat, it is anticipated that redevelopment of the site will not directly or indirectly impact the deciduous woodland HPI. As such, deciduous woodland HPI is not considered further within this report.

Habitats

4.4 The development will result in the loss of amenity grassland, hard standing and one building. These habitats are locally common, botanically species-poor and of limited ecological value.

4.5 The semi-mature ash tree (TN1) will be removed to accommodate the proposed works. This will result in the loss of low value habitat that is very common in the surrounding area.

Species

Bats

4.6 The building was assessed as having **low/negligible** potential to support roosting bats during the daytime building inspection survey due to the presence of a gap pipe hole on the northern elevation and potential internal access via the shutters on the eastern and western elevations. However, no evidence of roosting bats was located during the survey and use of these features by bats is considered to be unlikely due to 1) the relatively high levels of disturbance in and around the building, and 2) the heavily illuminated nature of the site and surrounding area. In addition, the corrugated metal sheeting located on the roof and walls is considered to be unsuitable for roosting bats as they prefer to roost against a rough surface. The roofing material will also make the internal space susceptible to frequent changes in temperature due to its poor insulating properties, making it cold in winter and hot in the summer. This further reduces the potential of the building as roosting habitat for bats, which favour stable internal environments. As such, the potential of the building to support roosting bats is reduced to **negligible.**

4.7 It is considered unlikely that removal of the semi-mature ash tree will negatively impact foraging and commuting bats in the area due to its isolated nature. However, any additional lighting within the site has the potential to negatively impact foraging and commuting bats in the area.

Birds

4.8 Removal of the semi-mature ash tree and loss of the gas pipe hole has the potential to result in impacts to nesting birds if works are undertaken within the nesting season (March to August inclusive) and/or without due care and attention, which would constitute an offence (see Appendix A).

5. Recommendations

5.1 This section provides the required measures to mitigate the impacts of the proposed development. A key element of the National Planning Policy Framework is to minimise impacts to biodiversity and provide enhancements. Paragraph 170 states that '*The planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible'*. It also states in Paragraph 175 that '*when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by encouraging opportunities to incorporate biodiversity in and around developments'*. This section also therefore includes suggested enhancement measures. The following recommendations are designed to comply with legal requirements and national and local planning policy.

Habitats

5.2 Replacement planting at a ratio of 2:1 will be undertaken to mitigate the loss of the semi-mature ash tree. Species planted will be native, appropriate to the locality and berry bearing. Species that could be used include rowan (*Sorbus aucuparia*), hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*).

Bats

5.3 Whilst the building was assessed as having **negligible** bat roost potential, bats are a highly mobile species and there is potential for them to utilise features within the building occasionally, at any time. Therefore, as a precautionary measure, works to demolish the building will be undertaken under Reasonable Avoidance Measures (RAMs) as described below. RAMs are considered appropriate to mitigate the risk of encountering a low number of bats within the building and reduce any encounters to a negligible level.

- Before any works proceed all contractors will be made aware of the possible presence of bats, bat field signs to look for and procedure if bats are found or discovered (see Appendix E);
- Careful timing of works is recommended. For works to conform with best ecological practice in this instance, it is recommended that any works to demolish the building are scheduled to occur within the period of least impact to bats – during the autumn (late October and November) or early spring (late February and March);
- A suitably qualified ecologist should be on call during the works and if a bat is found, the ecologist will attend site, remove the bat, check the health of the bat and then place it in a suitable, pre-installed bat box; and
- If a bat is in immediate danger it should only be picked up with gloved hands and placed in a secure container with air holes.

5.4 The site is considered to have negligible potential for foraging bats. However, it is advised that any new lighting schemes for the development of the site will be designed so that they are 'bat friendly'. Examples of low impact lighting schemes (BCT/ILP, 2018) include, but are not limited to:

- Use of low pressure sodium lamps or high pressure sodium instead of mercury or metal halide lamps;
- Lighting should be directed to where it is needed and light spillage avoided in particular along the site boundaries.

Birds

5.5 The removal of nesting bird habitat will take place outside the breeding bird season which runs from March – August inclusive, in order to prevent any impacts upon nesting birds.

5.6 Habitat clearance that must be carried out within the bird breeding season will be subject to a pre-clearance bird survey carried out by a suitably experienced ecologist. No works will be carried out within 5 m of an identified nest until the young have fledged and are no longer returning to the nest site. Works will only be undertaken once a scheme ecologist has declared the nest to be no longer in use.

Enhancement measures

5.7 As designs for the site develop an ecologist can provide site specific advice on ways to provide enhancements, in addition to mitigation, to improve the wildlife value of the final development and contribute towards a net gain in biodiversity. Simple examples of enhancement measures which could be considered and designed into the proposals include (but are not limited to):

- The installation of bat and bird boxes on buildings on site; and
- The incorporation of bat friendly features into the new building designs. Roosting opportunities within the proposed development should be achievable, and can be designed to meet with planning requirements and building regulations. It is recommended that one of the following is incorporated into the southern or western aspects of each building;
    - Access gaps between soffits and walls (15-20 mm);
    - Access points to the roof void via bat tiles incorporated into the roof structure or bat tubes built into gaps in the masonry or into wall surfaces (tubes such as the Schwegler 2FR Bat Tube would be suitable);
    - Access points over the top of cavity walls by specifically constructed gaps; and
    - External bat bricks installed at a height of 3 m (or close to the roof line), in the south or west facing elevations (Schwegler 1FR Bat Tube would be suitable).

Re-survey of the Site

5.8 If no works are undertaken on site within 12 months of this survey or if any changes to the proposals are made, a further ecological survey may be necessary (because of the mobility of animals and the potential for colonisation of the site).

References

British Standards Institution (2013) *BS 42020:2013 Biodiversity – Code of practice for planning and development*. British Standards Institution, London.

CIEEM (2017a) *Guidelines on Ecological Report Writing.* Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2017b) *Guidelines for Preliminary Ecological Appraisal 2nd Edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

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English Nature (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough.

Institute of Lighting Professionals (2018) *Bats and artificial lighting in the UK.* The Bat Conservation Trust, London.

JNCC (1993 revised 2010) *Handbook for Phase 1 Habitat Survey: A technique for environmental audit (reprint).* Joint Nature Conservation Committee, Peterborough.

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155.

Stace, C. (2010) *New Flora of the British Isles*. Third Edition. Cambridge University Press, Cambridge.

Appendix A – Legal Information

This report provides guidance of potential offences as part of the impact assessment. This report does not provide detailed legal advice and for full details of potential offences against protected species the relevant acts should be consulted in their original forms i.e. The Wildlife and Countryside Act, 1981, as amended, The Countryside and Rights of Way Act 2000, The Natural Environment and Rural Communities Act, 2006 and The Conservation of Habitats and Species Regulations 2017.

Species	Legislation	Offences	Notes on licensing procedures and further advice
Species that are protected by European and national legislation			
Bats *European protected species*	Conservation of Habitats and Species Regulations 2017 Reg 41	Deliberately[1] capture, injure or kill a bat; Deliberate disturbance[2] of bats; Damage or destroy a breeding site or resting place used by a bat. The protection of bat roosts is considered to apply regardless of whether bats are present.	An NE licence in respect of development is required in England. https://www.gov.uk/bats-protection-surveys-and-licences *European Protected Species: Mitigation Licensing- How to get a licence* (NE 2010) *Bat Mitigation Guidelines* (English Nature 2004) *Bat Workers Manual* (JNCC 2004) *BS8596:2015 Surveying for bats in trees and woodland* (BSI, 2015)
	Wildlife and Countryside Act 1981 (as amended)[4] S.9	Intentionally or recklessly[3] obstruct access to any structure or place used for shelter or protection or disturb a bat in such a place.	Licence from NE is required for surveys (scientific purposes) that would involve disturbance of bats or entering a known or suspected roost site.
Birds	Conservation of Habitats and Species (Amendment) Regulations 2017	N/A	Authorities are required to take steps to ensure the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat. This includes activities in relation to town and country planning functions.
	Wildlife and Countryside Act 1981 (as amended)[4] S.1	Intentionally kill, injure or take any wild bird; Intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; Intentionally take or destroy the nest or eggs of any wild bird. **Schedule 1 species** Special penalties are liable for these offences involving birds on Schedule 1 (e.g. most birds of prey, kingfisher, barn owl, black redstart, little ringed plover). Intentionally or recklessly[3] disturb a Schedule 1 species while it is building a nest or is in, on or near a nest containing eggs or young; intentionally or recklessly disturb dependent young of such a species.	No licences are available to disturb any birds in regard to development. Licences are available in certain circumstances to damage or destroy nests, but these only apply to the list of licensable activities in the Act and do not cover development. General licences are available in respect of 'pest species' but only for certain very specific purposes e.g. public health, public safety, air safety. https://www.gov.uk/wild-birds-protection-surveys-and-licences https://www.gov.uk/prevent-wild-birds-damaging-your-land-farm-or-business

Other species			
Rabbits, foxes and other wild mammals **For BAP species and Species of Principal Importance, see below**	Wild Mammals (Protection) Act 1996	Intentionally inflict unnecessary suffering to any wild mammal.	Natural England provides guidance in relation to rabbits (Technical Information note TIN003, Rabbits- management options for preventing damage, July 2007) and foxes (which are also protected under the Wildlife and Countryside Act 1981 from live baits and decoys, see Species Information notes SIN003 (2011), *Urban foxes* and SIN004 (2011) *The red fox in rural areas* as well as other wild mammals. Lawful and humane pest control of these species is permitted.

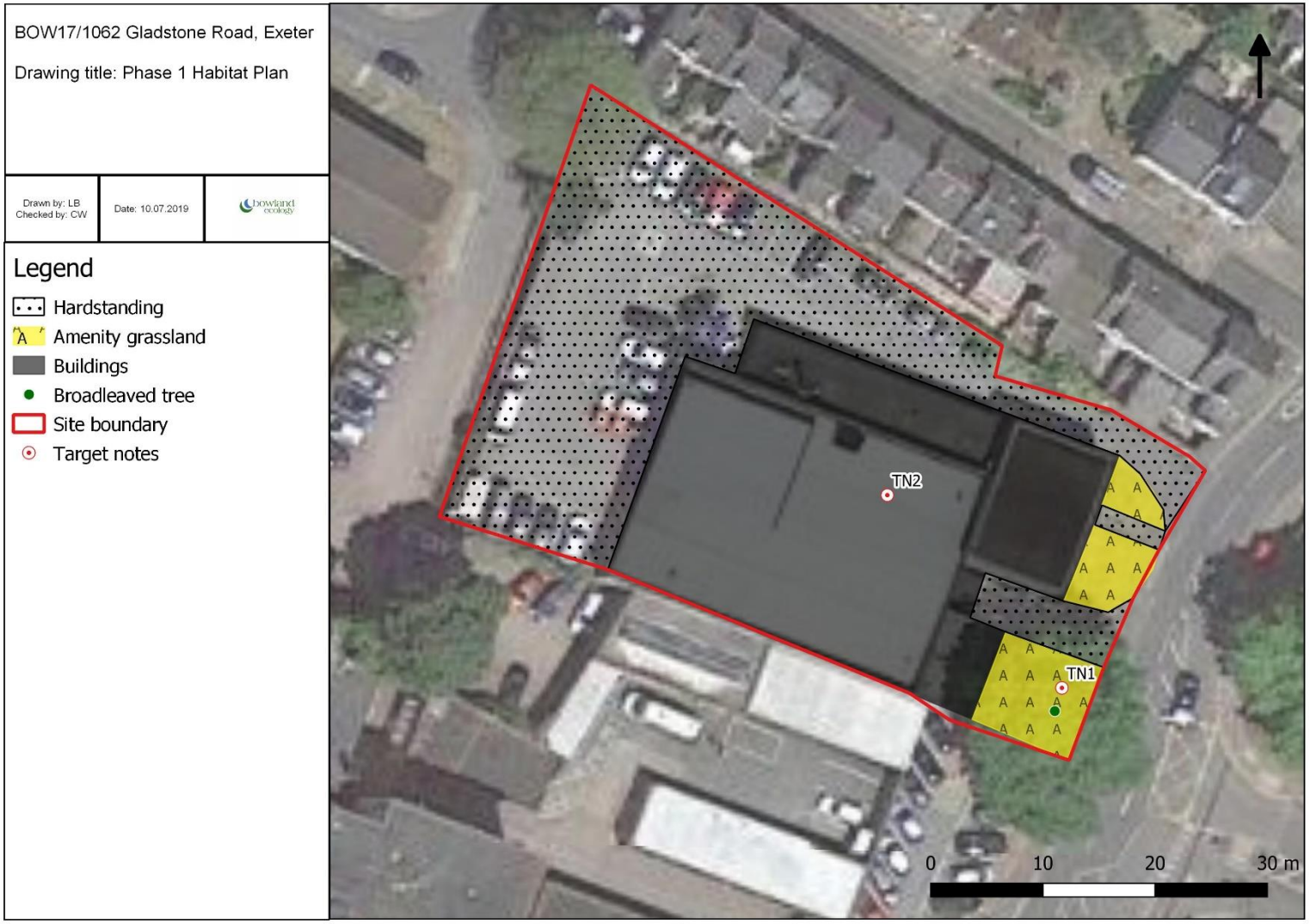
[1]Deliberate capture or killing is taken to include "accepting the possibility" of such capture or killing

[2]Deliberate disturbance of animals includes in particular any disturbance which is likely a) to impair their ability (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of hibernating or migratory species, to hibernate or migrate; or b) to affect significantly the local distribution or abundance of the species to which they belong.
Lower levels of disturbance not covered by the Conservation of Habitats and Species Regulations 2017 remain an offence under the Wildlife and Countryside Act 1981 although a defence is available where such actions are the incidental result of a lawful activity that could not reasonably be avoided. Thus deliberate disturbance that does not result in either (a) or (b) above would be classed as a lower level of disturbance.

[3]The term 'reckless' is defined by the case of Regina versus Caldwell 1982. The prosecution has to show that a person deliberately took an unacceptable risk, or failed to notice or consider an obvious risk.

[4] The Wildlife and Countryside Act (1981) has been updated by various amendments, including the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act 2006. A full list of amendments can be found at http://jncc.defra.gov.uk/page-1377.

Appendix B – Phase 1 Habitat Plan



Appendix C – Target notes

Target Note	Description	Photograph
1	Semi-mature ash tree at the eastern boundary of the site. The tree provides negligible potential for roosting bats and habitat for nesting birds.	
2	Ambulance building - single storey building with a flat roof. The walls comprise a variety of construction materials including corrugated metal sheeting, red brick and rendered walls. Internally, the building comprises suspended ceiling with no separate	  

Appendix D – Bat Roost Potential and Habitat Suitability Categories

Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape (Collins, 2016).

Suitability	Description of Roosting Habitat	Commuting & Foraging Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitats to be used on a regular basis or by a larger number of bats (i.e. unlikely to be suitable maternity or hibernation). A tree of sufficient size and age to contain potential roosting features but with none seen from the ground, or feature seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status.	Continuous habitat connected to the wider landscape that could be used by bats for commuting, such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging, such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis, and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats, such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close and connected to known roosts.

Appendix E – Information for Contractors on Bats

BATS

Information, legal responsibilities and best practice for the construction industry

Legal Protection

All UK Bat species are protected by European and UK law, in practical terms this means it is an offence to:

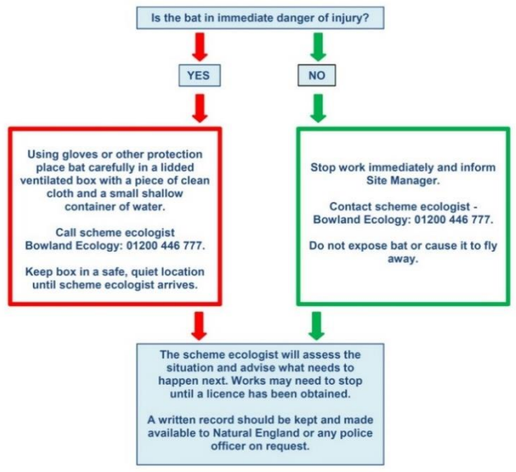
- Deliberately capture, injure or kill a bat;
- Deliberately disturb bats;
- Damage or destroy a breeding site or resting place (even if bats are not occupying the roost at the time);
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb a bat in such a place;
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat.

Penalties on conviction: the maximum fine is £5,000 per incident or per bat (some roosts contain several hundred bats), up to six months in prison, and forfeiture of items used to commit the offence, e.g. vehicles, plant, machinery.

Defences include:

1. Tending/caring for a bat solely for the purpose of restoring it to health and subsequent release.
2. Mercy killing where there is no reasonable hope of recovery (provided that person did not cause the injury in the first place – in which case the illegal act has already taken place).

Found a bat during unsupervised works?



Field signs of bat presence:

- Live or dead bats: the smallest UK bat species, the pipistrelle is only 3.5-4.5cm long.
- Droppings: bat droppings look like mouse droppings but will crumble between your fingers (they are dry and made entirely of insects).
- Feeding remains: piles of butterfly/moth wings are often left below bat feeding perches.

Schematic from www.bats.org.uk

Bats can roost in the following places:

- The top of gable end or dividing wall;
- The top of chimney breasts;
- Ridge and hip beams and other roof beams;
- Mortise and tension joints;
- All beams/ceilings/pipework (free hanging bats);
- The junction of roof timbers, especially where ridge and hip beams meet;
- Behind purlins;
- Between tiles and the roof lining;
- Under flat felt roofs;
- Under barge boards;
- In cavity walls;
- In cracks in stone or concrete;
- Behind peeling paint/wall coverings;
- Gaps behind window and door frames;
- Between window panes and timber boarding.
- In trees (cracks/holes/ivy cladding).

Why wear gloves?

There is a small risk that some bats carry a rabies virus – European Bat Lyssavirus. The purpose of wearing gloves is to reduce the chance of being bitten, as the virus is transmitted via bat saliva. Thick leather gloves are appropriate for removing a bat from imminent danger but these should be clean.

In the event that you are bitten, wash the wound, gently but thoroughly, with soap and water. Speak to a health professional immediately, advising them that you have been bitten by a bat.

References:
Bat Conservation Trust. August 2016. Why wear gloves when handling bats?
BCT Bat Surveys for Professional Ecologists, Good Practice Guidelines, 3rd Edition, 2016

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