
Ecology Report

**PROPOSED ALTERATIONS 1 & 2 GARNHAMS
COTTAGES**
Tannington Hall, The Green, Tannington, Suffolk

March 2024



ADDRESS | Mill House, Homersfield, Harleston, Suffolk IP20 0ET

TELEPHONE | 01986 788791

EMAIL | millhouseecology@gmail.com

REPORT PRODUCED BY:

MHE Consulting Ltd
Mill House
Homersfield
Harleston
IP20 0ET

01986 788791
07766 771305
millhouseecology@gmail.com

ARCHITECTS:

Roger Balmer Design
Fountain House Studio
The Street
East Bergholt
Colchester
Co7 6tb

01206 299477
enquiries@rogerbalmerdesign.co.uk

Contents Amendment Record

REPORT NUMBER: TANNINGTONHALL/2024/ER/001

This report has been issued and amended as follows:

Issue	Revision	Description	Date	Signed
1	0	Initial draft	02/11/2023	K. Bathgate
1	1	Internal review	08/03/2024	C. Whiting
1	2	Updated final version	13/03/2024	C. Whiting

This report has been prepared in accordance with the instructions of the client for their sole and specific use. Any other persons who use any information contained within do so at their own risk.

Contents

EXECUTIVE SUMMARY

1	Introduction	1
1.1	BRIEF	1
1.2	SITE LOCATION AND DESCRIPTION	1
2	Planning policy and legislation	1
2.1	INTRODUCTION	1
2.2	PLANNING POLICY	1
2.3	LEGISLATION	3
3	Methodology	5
3.1	INTRODUCTION	5
3.2	DESK SURVEY	5
3.3	FIELD SURVEY	5
3.4	SURVEY CONSTRAINTS	9
3.5	SURVEYORS	9
3.6	ASSESSMENT	10
4	Results	11
4.1	INTRODUCTION	11
4.2	BASELINE ECOLOGICAL CONDITIONS - DESK STUDY	11
4.3	BASELINE ECOLOGICAL CONDITIONS – FIELD SURVEY	12
4.4	GEOGRAPHIC CONTEXT	14
5	Assessment and recommendations	15
5.1	INTRODUCTION	15
5.2	DESCRIPTION OF PROPOSED DEVELOPMENT	15
5.3	NEED FOR FURTHER SURVEYS	15
5.4	ASSESSMENT OF IMPACTS	15
5.5	HABITATS AND VASCULAR PLANTS	16
5.6	AMPHIBIANS AND REPTILES	16
5.7	BATS	17
5.8	NESTING BIRDS	18
5.9	OTHER S. 41 LIST HABITATS AND SPECIES	19
5.10	COMPENSATION	19
5.11	CUMULATIVE EFFECTS	19
5.12	ENHANCEMENT OPPORTUNITIES	19
5.13	CONCLUSIONS	20
6	References	21

Figures

Figure 1 Location and ponds plan

Appendices

- Appendix A1** Photos
- Appendix A2** SBIS data map
- Appendix A3** GCN eDNA survey results
- Appendix A4** EclA criteria
- Appendix A5** GCN poster
- Appendix A6** Small passerine nest box
- Appendix A7** Kestrel nest box
- Appendix A8** Bat boxes
- Appendix A9** Amphibian and reptile hibernaculum

Executive Summary

MHE Consulting Ltd were instructed to undertake an ecological survey and assessment of two uninhabited existing 1 and 2 Garnham Cottages at Tannington Hall Farm, The Green, Tannington, Suffolk. (TM 24789 68565). A Listed Building Consent application is to be submitted to Mid Suffolk District Council for external and internal alterations.

The proposed development site is located off Dennington Road, Tannington (Figure 1) and comprises two semi-detached cottages with areas of hard standing and amenity grassland surrounding the cottages and a native hedgerow to the east. Nearby habitats include a moat at Tannington Hall to the north, agricultural fields to the west and east, and scattered trees.

The site offers some *Low* value foraging habitat for widespread amphibians (e.g. species-poor grassland). Two potential breeding ponds (moats M1 and M2) located within 250m of the site were sampled for GCN eDNA and a negative result was returned for each pond. Whilst a small area of scrub habitat is present north of the adjacent barn the site is unlikely to support common reptile species such as slow-worm (*Anguis fragilis*) or common lizard (*Zootoca vivipara*) due to the absence of areas of rough/tussocky grassland and scrub habitat but could support occasional grass snake (*Natrix helvetica*), which may hunt in the moats by Tannington Hall. The nature of adjacent habitats (e.g., arable farmland) is likely to limit potential dispersal of individuals onto the site.

No evidence of roosting bats was found in the cottages and no bats emerged during two emergence surveys in 2023, whilst cavities allow for small passerines to potentially nest within the soffits. Adjacent areas of lawn, some scrub by the adjacent barn and an established hedgerow to the east offer suitable refuge, foraging, dispersal and/or nesting habitat for birds and hedgehogs whilst offering *Low to Moderate* foraging and commuting habitat value for bats.

Recommendations are made to avoid wildlife offences and ecological impacts. Where impacts cannot be avoided, measures are proposed to mitigate remaining effects including timing of works and good working practices. Compensation measures and biodiversity enhancements are proposed. Standard planning conditions are referenced to secure the recommended measures.

1 Introduction

1.1 BRIEF

MHE Consulting Ltd were instructed to undertake an ecological survey and assessment of two uninhabited existing 1 and 2 Garnham Cottages at Tannington Hall Farm, The Green, Tannington, Suffolk. (TM 24789 68565; Figure 1). A Listed Building Consent application is to be submitted to Mid Suffolk District Council for external and internal alterations.

The ecological survey and this report are necessary to:

- Identify the existing ecological value of the site;
- Identify the need for further (e.g. protected species) surveys;
- Assess any potential adverse impacts of the proposed development on ecological features of the site or nearby designated sites;
- Make recommendations for mitigation (if required); and
- Identify opportunities for biodiversity enhancements and, consistent with national and local planning policy, net gains.

This report will be used to develop the proposals as necessary, and to form the basis for the submission of biodiversity information with any planning application. It reflects the site at the time of the survey and should be reviewed and revised as appropriate.

1.2 SITE LOCATION AND DESCRIPTION

The proposed development site is located off Dennington Road, Tannington (Figure 1) and comprises two semi-detached cottages with areas of hard standing and amenity grassland surrounding the cottages and a native hedgerow to the east. Nearby habitats include a moat at Tannington Hall to the north, agricultural fields to the west and east, and scattered trees.

Photos referred to within this report are provided within Appendix A1.

2 Planning policy and legislation

2.1 INTRODUCTION

This chapter summarises the key legislation and policies relevant to assessing the biodiversity impacts of the scheme upon habitats and species.

2.2 PLANNING POLICY

2.2.1 *National Planning Policy Framework (NPPF)*

The National Planning Policy Framework was originally published in 2012 and recently revised on 19 December 2023. This document replaces the previous version of the NPPF, published in September 2023. The document sets out the Government's planning policies for England and provides guidance on how these policies are expected to be applied. It provides a framework for, and must be taken account of within, locally prepared plans for housing and other development, and is a material consideration in planning decisions.

An overarching objective of the NPPF, which aims to secure net gains, is to contribute to protecting and enhancing the natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

The full NPPF is available to view online using the gov.uk website: https://assets.publishing.service.gov.uk/media/65829e99fc07f3000d8d4529/NPPF_December_2023.pdf

Policies of particular relevance to development and biodiversity include: 180, 186, 187 and 188, which are listed below.

180. Planning policies and decisions should contribute to and enhance the natural and local environment by:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

186. When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a Site of Special Scientific Interest (SSSI), and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSIs;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

187. The following should be given the same protection as habitats sites:

- a) potential Special Protection Areas (SPAs) and possible Special Areas of Conservation (SACs);
- b) listed or proposed Ramsar sites; and
- c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential SPAs, possible SACs, and listed or proposed Ramsar sites.

188. The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects) unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

2.2.2

Local Plan

Adopted local plans provide the framework for development across England, and include policies related to conserving and enhancing the natural environment. Planning policies and supporting documents that are used to plan, deliver and monitor development across the Babergh and Mid Suffolk District Council areas:

<https://www.midsuffolk.gov.uk/planning/planning-policy/adopted-documents/babergh-district-council/babergh-local-plan/>

These policies encourage environmental net gains from new development through the creation of new habitats and green infrastructure. Both policies also implement the mitigation hierarchy to avoid, mitigate and compensate for any losses due to new development. However, neither policy specifies the need for the 10% biodiversity net gain. Net gains for biodiversity are secured as per para 180 d) of the NPPF (2023).

2.2.3

Biodiversity Net Gain

Biodiversity net gain (BNG) is an approach to the development and management of land that aims to leave biodiversity in a measurably better state than it was before development occurred. It will ensure habitats for wildlife are retained, enhanced and created through the development process.

Under the Environment Act 2021, all planning permissions, with a few exceptions, are required to deliver a minimum of 10% increase in the biodiversity net gain delivered compared to the pre-development baseline. BNG will be measured using Defra's Statutory biodiversity metric for Major applications and the Small Sites Metric for Small applications. All net gains will need to be secured and monitored for at least 30 years.

These commitments are further developed in Policy LP16 of the new Joint Local Plan and in the Biodiversity Net Gain Interim Planning Guidance Note for Suffolk. More detailed guidance on BNG will also be set out in a new Biodiversity and Trees Supplementary Planning Document. Listed Building Consent applications are exempt from the BNG requirement.

2.3

LEGISLATION

2.3.1

Environment Act 2021

The Environment Act received royal assent in November 2021. The Act will set clear statutory targets for the recovery of the natural world in four priority areas: air quality, biodiversity, water and waste, and includes an important new target to reverse the decline in species abundance by the end of 2030. Of particular relevance to development planning will the requirement for all new development to deliver a quantified (10%) Biodiversity Net Gain.

2.3.2

Natural Environment and Rural Communities (NERC) Act 2006

Section 40 places a duty on every public body in exercising its functions, to have regard to the purpose of conserving biodiversity; this includes restoring or enhancing populations or habitats. A key purpose of this duty is to embed consideration of biodiversity as an integral part of policy and public-sector decision making. *Species and habitats of principal importance* in this respect are those published under Section 41 ("S. 41") of the NERC Act 2006.

2.3.3

Wildlife and Countryside Act 1981 (as amended)

Rare and scarce habitats and species are afforded varying levels of protection under the Wildlife and Countryside Act 1981 (as amended) (hereafter "WCA 1981"). Some species and groups are afforded full protection (e.g., Schedule 1 bird species, bats), whilst others receive partial protection (e.g., widespread reptiles). Section 3.1 provides further details relevant to this scheme. Species afforded legal protection are referred to by their relevant schedule ("Sch.") within the act, i.e., "WCA1i" (birds), "WCA5" (other animals), or "Sch. 8" (plants).

Invasive plant species such as Japanese knotweed (*Reynoutria japonica*) and giant hogweed (*Heracleum mantegazzianum*) are listed on Schedule 9 of the WCA 1981. It is an offence to plant or otherwise cause these species to grow in the wild and this includes the development of sites such that the plant colonises land owned by a third party.

2.3.4 *The Countryside and Rights of Way (CROW) Act 2000*

The CROW Act 2000 strengthened and updated elements of the WCA 1981, and gave a statutory basis to biodiversity conservation, requiring government departments to have regard for biodiversity in carrying out its functions and to take positive steps to further the conservation of listed habitats and species. It strengthened the protection of SSSIs and threatened species. Many of its provisions have been incorporated as amendments into the WCA 1981 and some have been superseded by the NERC Act 2006.

2.3.5 *The Conservation of Habitats and Species Regulations 2017*

The Conservation of Habitat and Species Regulations 2017 (hereafter referred to as the Habitat Regulations 2017) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), and elements of the EU Wild Birds Directive, into national law. The 2017 Regulations provide for the designation and protection of 'European sites' (SPAs, and SACs), the protection of 'European Protected Species' ("EPS"), and the adaptation of planning and other controls for the protection of European Sites.

They have been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019, which continue the same provision for European protected species, licensing requirements, and protected areas after Brexit.

Under the Regulations, competent authorities i.e. any Minister, government department, public body, or person holding public office, have a general duty, in the exercise of any of their functions, to have regard to the relevant EC Directives.

2.3.6 *Protection of Badgers Act 1992*

The Protection of Badgers Act 1992 (hereafter "PBA 1992") consolidates and improves upon the previous Badgers Act 1973, Badgers Act 1991, and Badgers (Further Protection) Act 1991. Under the PBA 1992 (except when holding a licence to do so) it is illegal for a person to wilfully; kill, injure, take, possess, sell, or otherwise cruelly treat a badger. It is also illegal to dig out, damage, destroy, or obstruct entry to setts (including by use of dog(s)). Further information on offences, exceptions, and penalties are listed on the PBA 1992 on legislation.gov.uk.

3 Methodology

3.1 INTRODUCTION

This report has been produced with reference to relevant guidance, most notably:

- Guidelines for Ecological Report Writing (CIEEM, 2017);
- Biodiversity – Code of Practice for Planning and Development (BS 42020:2013¹);
- Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018); and
- Biodiversity Net Gain: good practise principles for development (CIRIA, CIEEM and IEMA, 2016).

The following sections summarise the approaches used to review existing data, and to undertake appropriate field surveys to scope and inform an Ecological Impact Assessment (EclA) for the scheme. Where further surveys are considered necessary, this is identified in section 5.

3.2 DESK SURVEY

The following data sources were consulted to assess the potential for the application site to support protected or notable habitats/species:

- Aerial photos, Ordnance Survey maps, Natural England open source GCN survey data, and the MAGiC website (<http://magic.defra.gov.uk>): These were used to identify habitat types including priority habitats, suitability for particular species/groups, and the locality of nationally and internationally designated sites; and
- Historical biological records provided by SBIS (Appendix A2).

From this exercise, it was concluded that the following legally protected species/groups may be present on the sites and/or land immediately adjacent:

- Amphibians including great crested newt (GCN) (*Triturus cristatus*)² and reptiles such as grass snake (*Natrix helvetica*)³;
- Mammals including badgers (*Meles meles*)⁴ and bats²;
- Breeding birds⁵ including Red and Amber status⁶ species; and
- S. 41⁷ list habitats such as hedgerows, and species such as hedgehog (*Erinaceus europaeus*).

In the context of the setting and nature of the developments, the 'zone of influence' of the scheme is considered restricted to habitats on the sites and species within 250m of the site boundaries.

3.3 FIELD SURVEY

An initial site walkover was undertaken on the 28 June 2023 to 1) record habitats present; and 2) assess the value of the habitats present for protected and notable species. A list of vascular plants and a description of the vegetation was made, including the location and extent of any Schedule 9 (WCA 1981) plants.

¹ BSI Standards publication BS 42020:2013 Biodiversity – Code of practice for planning and development.

² GCNs and all species of bats receive full protection under the WCA 1981 and Habitats Regulations 2017.

³ Widespread reptiles and amphibians receive partial protection under the WCA 1981.

⁴ Badgers and their setts are afforded protection by the PBA 1992.

⁵ All wild birds, their nests and eggs are protected under the WCA 1981 (as amended), level of protection varies per species.

⁶ The conservation statuses of UK bird species are listed within the Birds of Conservation Concern 4 (Eaton *et al.*, 2015).

⁷ S. 41 of the NERC Act 2006 lists 'habitats and species which are of principal importance for the conservation of biodiversity in England'.

Photos of the habitats present, and any field signs are provided in Appendix A1.

3.3.1 *Habitats and vascular plants*

The site was walked with all distinct vegetation and habitat types, and any features of interest identified using the Phase 1 Habitat Survey methodology (JNCC, 2010). Care was taken to record as many species as possible.

3.3.2 *Amphibians and reptiles*

a) Amphibians

Two sections of moat M1 and M2 to the north (Figure 1) were previously surveyed in April 2021 for the presence of GCN eDNA (Biggs *et al.*, 2014) to determine presence of GCNs. Pond P3 was not surveyed as aerial images show it has been filled in.

The terrestrial habitat suitability of the site was assessed with respect to refugia and foraging habitat based on the known habitat preferences of GCN and widespread amphibians such as common frog (*Rana temporaria*), smooth newt (*Lissotriton vulgaris*), and common toad (*Bufo bufo*).

b) Reptiles

Habitats on and around the application site were assessed with respect to the known foraging and refuge habitat preferences of widespread reptile species.

3.3.3 *Bats*

a) Preliminary Roost Assessment

The buildings on the site were assessed for their suitability to support roosting bats with reference to the Bat Conservation Trust (BCT) "Bat Surveys: Good Practice Guidelines, 4th edition" (Collins, 2023) and updated Bat Mitigation Guidelines (Reason and Wray, 2023). The criteria used to determine the level of Bat Roost Potential (BRP) of buildings is outlined in Table 3.1 below.

Table 3.1 Bat Roost Potential (BRP) of buildings.

Bat Roost Suitability	Description
<i>Confirmed presence</i>	Bat presence confirmed during the scoping survey
<i>High</i>	Buildings that have many areas suitable for roosting which are obviously suitable for use by a larger number of bats including maternity colonies.
<i>Moderate</i>	Buildings with a small number of areas suitable for roosting, but still supporting features that could be attractive to bats and potentially support maternity colonies.
<i>Low</i>	Buildings with limited roosting opportunities but which could be used on a sporadic or occasional basis by a low number of bats, but which are unsuitable for maternity roosts.
<i>Negligible</i>	Buildings which appear unsuitable for roosting bats due to a clear lack of roosting spaces such as voids and/or absence of suitable access points.

Existing trees around the site boundaries were visually checked to assess their suitability for use by roosting bats, using the criteria outlined in the BCT "Bat Surveys: Good Practice Guidelines, 4th edition" (Collins, 2023) and summarised in below in Table 3.2.

Table 3.2 Guidelines for assessing the suitability of trees for roosting bats on proposed development sites.

Suitability	Description
NONE	Either no Potential Roosting Features (PRFs) in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present.
PRF	A tree with at least one PRF present. Where a PRF is recorded a further distinction is made between those that are likely to only be suitable for individual/low numbers of bats (PRF – I) or multiple bats (PRF – M) such as a maternity colony.

c) Foraging and commuting habitat

Consideration is given to the value of any potential foraging and commuting habitats (i.e., hedgerows, trees, streams, ponds, composting areas) on the application site as per Table 3.3.

Table 3.3 Commuting and foraging habitats

Suitability	Description
<i>High</i>	<p>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.</p> <p>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, trees-lined watercourses, and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>
<i>Moderate</i>	<p>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.</p>
<i>Low</i>	<p>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 habitats.</p> <p>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in parkland situation) or a patch of scrub.</p>
<i>Negligible</i>	<p>Negligible habitat features on site likely to be used by commuting and foraging bats.</p>

d) Dusk emergence surveys

Dusk emergence surveys of the barn complexes (27/07/23, 05/09/23) were undertaken (as per the following methodology:

- The emergence surveys commenced 15 minutes prior to and for up to 1.5 hours after sunset to cover the main emergence period and when some bats may return;
- Bat activity such as bats leaving or returning to roost within buildings on site was recorded. In addition, commuting bats and foraging bats were recorded;
- Ecologists used full spectrum Wildlife Acoustic Echo Meter Pro and Elekon Batlogger M full spectrum detectors; and
- A range of Night Vision Aids (Examples: Plates 1 and 2), including thermal Imaging devices and IR cameras with IR lighting, were used during the surveys.



Plate 1 North and east elevations of the cottages



Plate 2 SE corner of the cottage

3.3.4

Nesting birds

The value of the site was assessed in relation to nesting birds. This was supplemented with field records of birds seen or heard within the site, or nests observed.

3.3.5

Badger

The application site and adjacent habitats were surveyed for evidence of badger activity including setts, day beds, latrines, diggings/snuffle holes, paths/runs, scratching posts, hair, and footprints. Any potential sett found was then assessed for evidence of recent use by badger and classified as per current guidance (Scottish Badgers, 2018).

3.3.6

S. 41 list habitats and species

The site was surveyed to determine the presence of any S. 41 habitats such as native species-rich hedgerows. The site's suitability for S. 41 list species such as hedgehog was assessed based on their habitat preferences.

3.3.7

Non-native invasive plant species

The site was inspected for Schedule 9 species such as Japanese knotweed and giant hogweed. It is an offence to plant or otherwise cause these species to grow in the wild and this includes the development of sites such that the plant colonises land owned by a third party.

3.4

SURVEY CONSTRAINTS

Given the nature of the habitats present on the site and the survey carried out, the timing of the survey visit was considered appropriate for this report.

3.5

SURVEYORS

The site assessment was undertaken by Alex Gregory, an MHE ecologist with 2 years' experience conducting surveys. He was assisted by Katya Bathgate, a seasonal ecologist.

The bat emergence surveys were led by Christian Whiting BSc (Hons) MSc MCIEEM who has over 24 years' experience working as an ecologist. He holds Natural England (NE) survey licences for bats (2015-14745-CLS-CLS - Bat Survey Level 2), barn owl (CL29/00213) and great crested newts (Class A licence 2015-17633-CLS-CLS).

He is a Registered Consultant (Registration RC089) on NE's Bat Low Impact Class Licence and is an agent under the Environment Agency's and IDB water vole (*Arvicola amphibius*) organisational and class licences respectively. His main areas of expertise are bats, vascular plants, amphibians and reptiles, otter (*Lutra lutra*) and water vole.

Christian was assisted by MHE ecologists Alex Gregory, Katya Bathgate, Chris Strachan and Carrie Riddleston (all experienced unlicensed ecologists).

3.6

ASSESSMENT

Impacts and effects upon habitats and species are assessed with reference to the CIEEM Guidelines for Ecological Impact Assessment (2018) and are reported in Section 5, based on the baseline conditions reported in Section 4.

The assessment includes potential impacts upon habitats and species during the construction and operational phases of the scheme. It considers positive and negative impacts, their extent, magnitude and duration, frequency and timing and reversibility.

4 Results

4.1 INTRODUCTION

This chapter summarises the results of the desk and field surveys.

4.2 BASELINE ECOLOGICAL CONDITIONS - DESK STUDY

4.2.1 *Designated sites*

Any locally designated sites (e.g. Local Nature Reserves) within 2km of the application site are listed below in Table 4.1. No nationally designated sites or internationally designated sites are present within 5km and 13km of the application site, respectively.

Table 4.1 Relevant designated sites

Site name	Site designation
RNR 189	RNR

Locally designated sites

No Local Nature Reserves (LNR) or County Wildlife Sites (CWS) exist within 2km of the application site though a single Roadside Nature Reserve (RNR), RNR 189, is located within 2km. This RNR supports the nationally scarce and declining plant sulphur clover (*Trifolium ochroleucon*).

Given the limited size of the development and nature of the locally designated site, no significant ecological effects are anticipated.

4.2.2 *Species*

Relevant records for within 2km of the application site boundary are provided in Table 4.2.

Table 4.2 Protected/notable species within 2km of the site (SBIS)

Latin Name	Common Name	Designation
Amphibians and reptiles		
<i>Natrix helvetica</i>	Grass snake	Sch. 5, S. 41
<i>Triturus cristatus</i>	Great-crested newt	EPS, Sch. 5, S. 41
Birds		
<i>Alauda arvensis</i>	Skylark	Red Status, S. 41
<i>Anthus pratensis</i>	Meadow pipit	Amber Status
<i>Apus apus</i>	Swift	Amber Status
<i>Delichon urbicum</i>	House martin	Amber Status
<i>Emberiza citrinella</i>	Yellowhammer	Red Status, S. 41
<i>Falco subbuteo</i>	Hobby	WCA1i
<i>Falco tinnuclous</i>	Kestrel	Amber Status
<i>Fringilla montifringilla</i>	Brambling	WCA1i
<i>Linaria cannabina</i>	Linnet	Red Status
<i>Motacilla flava</i>	Yellow wagtail	Red Status
<i>Muscicapa striata</i>	Spotted flycatcher	Red Status, S. 41
<i>Passer domesticus</i>	House sparrow	Red Status, S. 41
<i>Prunella modularis</i>	Dunnock	Amber Status
<i>Pyrrhula pyrrhula</i>	Bullfinch	Amber Status

<i>Streptopelia turtur</i>	Turtle dove	Red Status, S. 41
<i>Strix aluco</i>	Tawny owl	Amber Status
<i>Sturnus vulgaris</i>	Starling	Red Status, S. 41
<i>Turdus iliacus</i>	Redwing	Red Status, WCA1i
<i>Turdus philomelos</i>	Song thrush	Red Status, S. 41
<i>Turdus pilaris</i>	Fieldfare	Red Status, WCA1i
<i>Turdus viscivorus</i>	Mistle thrush	Red Status
<i>Tyto alba</i>	Barn owl	WCA1i
<i>Vanellus vanellus</i>	Lapwing	Red Status, S. 41
Bats		
<i>Eptesicus serotinus</i>	Serotine	EPS, Sch. 5
<i>Myotis nattereri</i>	Natterer's	EPS, Sch. 5
<i>Pipistrellus Pipistrellus</i>	Common pipistrelle bat	EPS, Sch. 5
<i>Plecotus auritus</i>	Brown long-eared bat	EPS, Sch. 5, S. 41
Other Mammals		
<i>Erinaceus europaeus</i>	West European hedgehog	S. 41
<i>Lutra lutra</i>	Otter	S. 41
Plants		
<i>Trifolium ochroleucon</i>	Sulphur clover	RLGB/ENG.VU

Assessment of Natural England's GCN class licence return data and eDNA pond survey records show the closest positive record to be located c. 3.4km south-east of the application site (dated 2015).

4.3

4.3.1

BASELINE ECOLOGICAL CONDITIONS – FIELD SURVEY

Habitats and vascular plants

Descriptions of the habitats (Appendix A1; Figure 1) and the characteristic plants species present are provided below.

The existing cottages (Photos 1 and 2) have rendered walls with red pantile roofs, with areas of hard standing immediately adjacent and areas of mown species poor lawn to the north and south (Photo 3). with a native species rich hedgerow to the east (Photo 4). A former agricultural barn exists to the west (Photos 5 and 6) with scrub and ruderal vegetation.

4.3.2

Amphibians

a) Terrestrial habitat

The grassland area supports potential foraging habitat for common amphibians, although cover/refuge and dispersal habitats are limited to the hedgerow along the eastern boundary and any shrubs scattered throughout wider gardens. Animals could potentially pass through the site overnight when migrating to nearby breeding ponds. The overall terrestrial habitat suitability of the site for GCNs and common amphibians is therefore considered to be Low.

b) Ponds

GCN eDNA samples taken to determine presence of GCNs in moats M1 and M2 (16/04/2021) returned a negative result for both waterbodies (Appendix A3).

b) Reptiles

The existing habitat around the cottages is unsuitable for reptiles such as common lizard (*Zootoca vivipara*) and slow worm (*Anguis fragilis*). Unless areas of rough grassland and scattered scrub (for refuge from predators) develop, these species will

likely be absent from the site. In addition, the nature of habitats in the wider landscape (e.g. arable farmland) and absence of local historical records also reduces the likelihood of individuals dispersing onto the site.

Local historical records do exist for grass snakes, which regularly inhabit agricultural landscapes and are often found in gardens with large ponds. As such, individual grass snakes may occasionally disperse through the site when on-route to hunt in nearby ponds including the moats to the north.

The overall habitat suitability of the site for reptiles is assessed as Low.

4.3.3

Bats

a) Preliminary roost assessment

A thorough internal and external inspection of cottages found no evidence of roosting bats within the attics or rooms, whilst some potential access points exist under the eaves including a large hole on the southwest corner (Photo 7) with gaps in soffits (Photo 8).

b) Emergence surveys

Emergence surveys undertaken of the cottages recorded no bats emerging or entering the cottages and based on the poor condition of the cottages the likelihood of bats being present is negligible.

Common pipistrelle, Brown long-eared and barbastelle were recorded roosting in the adjacent barn which will be unaffected by the works proposed.

c) Commuting and foraging habitat

The overall bat commuting habitat value of the building and land immediately adjacent was assessed as Low, with suitable commuting habitats limited to the hedgerow marking the eastern garden boundary and over adjacent moats (Collins, 2023). These habitats should remain unaffected by the proposed development.

The wider gardens at Tannington Hall offer suitable foraging habitat around the fruit trees (small orchard) and mature broadleaved trees, along hedgerows and over the lawn areas and moats. These habitats will also support several invertebrate prey species.

4.3.4

Nesting birds

An internal inspection of the cottages but given the potential access points (Photos 7 and 8), the cottages could potentially support nesting and roosting small passerines such as house sparrow (*Passer domesticus*) (Red Status; S.41) and wren (*Troglodytes troglodytes*).

The mature hedgerow to the east offers potential nesting, foraging and song perch habitat for various species of garden bird such as dunnock (*Prunella modularis*) (Amber Status; S. 41 List), song thrush (*Turdus philomelos*) (Red List; S. 41 List) and blackbird (*Turdus merula*). The hedgerow will provide seasonal foraging opportunities for frugivorous species and seed eaters, including migrant species such as fieldfare (*Turdus pilaris*) (Red Status, WCA1i) and redwing (*Turdus iliacus*) (Red Status, WCA1i). The grassland will support foraging insectivores e.g., starlings (*Sturnus vulgaris*) (Red Status, S. 41).

4.3.5 *Badger*
No evidence of badger (e.g. snuffle holes, runs, latrines, setts) was observed.

4.3.6 *S. 41 habitats and species*
a) Habitats
The hedgerow to the east meets the criteria of a S. 41 list hedgerow habitat.

b) Species
Hedgehogs will forage over the lawn areas and will seek refuge within the bases of the adjacent hedgerow. Brown hare (*Lepus europaeus*) may inhabit adjacent arable fields and occasionally enter the garden.

The hedgerow, scattered trees, grassland, and moat could support some S. 41 list invertebrates, including Lepidoptera and Odonata.

4.3.7 *Non-native invasive plants*
No non-native invasive species were recorded within the application site boundary.

4.4 **GEOGRAPHIC CONTEXT**

The geographic context of a feature is a useful consideration within an assessment of impacts. For this report, the geographic frames of reference for the habitats and species present on site are provided in Table 4.3; values are based upon the criteria in Table A4.1 and expert best judgements.

Table 4.3 Feature value based on geographic context

Feature	Value
Lawn and hedgerow	Local
Amphibians and reptiles	Local
Bats	Local
Nesting and foraging birds	Local
S. 41 Habitats and Species	Local

5 Assessment and recommendations

5.1 INTRODUCTION

The following section provides a summary description of the proposed development, with an assessment of associated impacts and likely significant effects upon biodiversity.

The assessment and recommendations are based on use of the mitigation hierarchy, which in the first instance aims to avoid impacts. Where impacts cannot be avoided, they should be minimised (through mitigation). Only where impacts cannot be avoided or minimised should there be compensation for biodiversity harm.

Ecological enhancements are suggested, and consideration is given to individual as well as overall net gains or losses of biodiversity.

5.2 DESCRIPTION OF PROPOSED DEVELOPMENT

The proposed alterations to the cottages will result in localised disturbance and clearance of some areas of scrub habitat, with and low numbers of broadleaved trees and shrubs.

The assessment and recommendations provide preliminary recommendations for mitigation, compensation, and enhancements for the proposed development. They are based on the most recent drawings by Roger Balmer Design and information available at the time of writing and should be updated accordingly as the scheme is subsequently amended.

5.3 NEED FOR FURTHER SURVEYS

It is generally advised that subject to no significant change in site management regimes, and dependent on the species present, baseline survey results remain valid for approximately 12 – 18 months (CIEEM, 2019). Exceptions include where mobile species are/may be present, where site management practices cease or change, or where existing guidance indicates otherwise.

No significant habitat manipulation, clearance, or change from current management regimes should occur prior to development, other than as specified below without advice from a suitably experienced ecologist.

5.4 ASSESSMENT OF IMPACTS

The EclA assessment process (CIEEM, 2018) involves:

- Identifying and characterising impacts and their effects;
- Incorporating measures to avoid and mitigate negative impacts and effects;
- Assessing the significance of any residual effects after mitigation;
- Identifying appropriate compensation measures to offset significant residual effects; and
- Identifying opportunities for ecological enhancement.

The emphasis in EclA is on the assessment of 'significant effects' i.e. an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. In broad terms significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species including extent, abundance, and distribution.

The ecological features to be subject to detailed assessment in this report are those judged to be important and potentially affected by the project; protected species are included where the development will result in a potential breach of legislation.

5.5 HABITATS AND VASCULAR PLANTS

a) Potential impacts

The proposed works to the cottages will result in the disturbance and localised loss of some small areas of scrub considered an insignificant negative effect at Local level. The mature hedgerow to the east and the new hedgerows to the north and south will be retained.

b) Mitigation

Existing site management practices should be maintained ahead of works commencement.

As good practice, the building contractors site compound (if required) should be located on the existing hard standing. The footprint of works must be minimised to the smallest areas required, to avoid unnecessary disturbance to lawn areas, the established hedgerow to the east and scrub around the adjacent barn.

Temporary (e.g. Heras) fencing and Root Protection Areas (RPAs) must be used as necessary to protect retained trees, scrub and areas of lawn to the south and north of the cottage as well as the adjacent hedgerow.

c) Residual effects

With mitigation measures implemented, there will be no significant residual ecological effects for the scheme.

5.6 AMPHIBIANS AND REPTILES

a) Potential impacts

Any removal of vegetation around the building is unlikely to result in injury or mortality of amphibians as the vegetation is maintained short and/or unfavourable. though given suitable terrestrial habitats present in the wider garden and proximity to potential breeding ponds, vegetation clearance and building operations (e.g. the presence of open trenches and caustic materials) could result in the injury and mortality of reptiles and amphibians which are dispersing through the site. No significant negative effects are predicted.

b) Mitigation

As per 5.5.

Good working practices will be employed to avoid impacts upon amphibians (potentially including GCNs) and to ensure that wildlife offences are avoided as follows:

- Vegetation close to the cottages should be cleared sensitively and maintained close to ground level. If amphibians are active (i.e. early February to October inclusive) any longer vegetation should be trimmed to ground level using a 2-stage cut with the first cut to c. 150 mm above ground level; the area should be left overnight, before cutting to ground level (after a visual inspection).
- Excavations should be filled on the same day as excavation where possible to prevent animals falling in. Where this is not possible the trenches must be covered

overnight with ply/OSB sheets and damp sand used to fill any gaps. Larger excavations should have mammal ladders (e.g. rough planks securely placed at an angle to allow safe egress) installed.

- Open excavations will be inspected for the presence of amphibians, reptiles, and small mammals immediately prior to filling with any aggregates or concrete.
- Concrete pours will be undertaken in the morning to allow them to harden prior to the evening when amphibians become active, or must be covered overnight.
- Excess cement/concrete must be disposed of in such a way as to prevent contact with animals e.g. poured into a concrete skip and covered.
- Any caustic materials (e.g. concrete) to be hand mixed must be on ply boarding over a tarpaulin which is folded over the boarding at the end of each day's use to prevent animals coming into contact.
- All building materials will be stored on areas of hard standing (e.g. gravel) or stored off the ground on pallets, and not on areas of vegetated ground.
- All building waste must be removed from site as promptly as possible. Any waste that must be stored on site temporarily will be stored within skips which must rest on areas of hard standing to prevent animals from seeking refuge; waste should be removed as promptly as possible to prevent animals seeking refuge.
- Unless connected directly to the moat with no impediments such as silt traps or sumps, raised or sealed hoppers must be used for drainpipe connections.
- Any new surface water gully pots should have a cover to prevent amphibians falling in.
- **A poster to aid GCN identification (Appendix A5) should be erected in any welfare facilities on site.**
- **Should any amphibians be encountered, and particularly GCNs, works should stop immediately, and advice be sought from a suitably experienced ecologist.**

c) Residual effects

With mitigation implemented there will be no significant residual effects.

5.7

BATS

a) Potential impacts

i) Roosting bats

No impacts are predicted but in the event of the re-roofing works bats could potentially be encountered – see mitigation section.

ii) Foraging and commuting habitats

Removal of trees and shrubs within the footprint of the new extension will result in a small net loss of bat foraging habitat, albeit very small in extent and not considered to be significant upon conservation status.

ii) Light disturbance

Lighting during both construction and operational phases has the potential to impact bats roosting in the adjacent barn as some species (e.g., barbastelle and brown long-eared bats) will actively avoid lit areas due to an increased risk of predation, whilst emergence times) can be significantly delayed due to illumination of roost access/egress points which in turn impacts upon feeding success. Lighting impacts relate to security lighting external to the building, and potentially from light spillage resulting from internal lighting once the cottages are back in use.

iii) Roofing membranes

Research has shown bats can become entangled in modern breathable roofing membranes (BRMs) causing injury or death to individuals (Waring *et al.* 2013).

b) Mitigation

i) Foraging and commuting habitat

As per 5.5, protective fencing will be used to protect retained trees and the hedgerow along the eastern garden boundary and scrub by the barn.

ii) Light disturbance

Exterior lighting (as well as temporary security lighting during the construction phase) design must minimise lighting impacts upon boundary habitats and should follow current guidance as necessary^{8,9}:

- *Type of lamp (light source)*: Light levels should be as low as possible as required to fulfil the lighting need. Exterior lighting should have a maximum of 7.5 to 10 lux and LED lights should be used using the warm white (or amber) spectrum, with peak wavelengths >550nm (2700°K) and no UV component; and
- *Lighting design*: Lighting should be directed to where it is needed, with minimal horizontal spillage towards retained habitats including hedgerows. This can be achieved by restricting the height of the lighting columns/fixtures and the design of the luminaire, including the following measure:
 - ❖ Light columns/fixtures in general should be as short as possible as light at a low level reduces the ecological impact.
 - ❖ Luminaires with an upward light ratio of 0% should be mounted on the horizontal i.e. with no upward tilt.
 - ❖ If taller lights are required, and as a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill; and
 - ❖ PIR movement sensors and timers should be used to minimise the 'lit time' outside of operational periods (i.e. events/functions).

iv) Roofing membranes

The re-roofing of the cottages should use bat friendly roofing felt (e.g. Type 1F) if bats are able to access (gaps >4mm) around roofs or cladding. If a modern woven non-bitumen coated roofing membrane (NBCRM) is to be used then one that has passed a snagging propensity test must be used (see <https://www.bats.org.uk/our-work/buildings-planning-and-development/non-bitumen-coated-roofing-membranes>).

c) Residual effects

With the mitigation measures implemented, there will be negligible residual negative effects upon bats.

5.8

NESTING BIRDS

a) Potential impacts

Building works including any internal demolition or removal of roofs, felling/crown removal of trees or hedgerow trimming during the breeding/nesting season (1st March to 31st August) has the potential to impact nesting birds. The destruction of nests and possible injury or death of nesting young birds present would be considered a significant negative effect (as an offence under wildlife legislation) at the local level.

⁸ <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting>

⁹ www.eurobats.org/sites/default/files/documents/publications/publication_series/WEB_DIN_A4_EUROBATS_08_ENGL_NVK_28022019.pdf

b) Mitigation

As per 5.5.

If building works are proposed to commence during the bird breeding season (e.g. March to August inclusive for most species) a nesting bird check is required prior to works commencing. If any nests are found exclusion zones must be established until any young have fledged. The builder's compound (if required) should be sited on hard standing away from any trees and hedgerow.

c) Residual impact

Loss of small passerine nesting opportunities will be compensated as per 5.10.

5.9 OTHER S. 41 LIST HABITATS AND SPECIES

a) Potential impacts

During the construction phase hedgehogs could potentially fall into open trenches, resulting in entrapment and possible injury and mortality of individuals due to falling in or via contact with caustic substances such as fresh concrete. Such impacts would result in negative effects upon individuals.

b) Mitigation

As per 5.5 and 5.6.

Site clearance should always consider the potential presence of hedgehogs with vigilance. Animals encountered should be moved to suitable cover, e.g. within the garden boundary hedgerow.

During construction, concrete should be poured early in the day or covered with ply boarding or membrane overnight to prevent animals coming into contact. Trenches should be covered overnight, or mammal ladders (large rough planks placed at shallow angles) placed to allow animals to escape. Uncovered trenches must be inspected on a daily basis, and any animals encountered should be relocated out of the works area.

c) Residual effects

No significant residual effect.

5.10 COMPENSATION

None required.

5.11 CUMULATIVE EFFECTS

The Mid Suffolk District Council website was searched on the 07 March 2024 for significant planning applications within 1km of the application site dating back by two years. No relevant planning applications have been submitted within 1km of the application site during the past 2 years. Therefore, no significant cumulative effects are anticipated.

5.12 ENHANCEMENT OPPORTUNITIES

To minimise losses and maximize ecological enhancement opportunities, a minimum of 3 of the 5 biodiversity enhancements (Table 5.1) will be implemented as part of the scheme.

Table 5.1 Biodiversity enhancements

Feature	Enhancement suggestion
1. Small passerine nest boxes	<p>Four small passerine boxes (Appendix A6) comprising x1 tree creeper nest boxes, x1 sparrow terrace, x1 open fronted robin/spotted flycatcher box and x1 robin/wren box could be erected on the cottages or barn (e.g. under the eaves) and suitable mature trees within the wider gardens at Tannington Hall.</p> <p>Exact locations to be agreed with a suitably experienced ecologist or ornithologist.</p>
2. Raptor nest boxes	<p>A kestrel box (Appendix A7) could also be erected on suitable mature trees or within a modern agricultural barn (with access created).</p> <p>Exact locations to be agreed with a suitably experienced ecologist or ornithologist.</p>
3. Bat boxes	<p>Two artificial bat boxes (Appendix A8) could be mounted on suitable trees in the wider garden area at Tannington Hall.</p>
4. Amphibians and reptiles	<p>An amphibian and reptile hibernaculum (Appendix A9) could be constructed from dead wood from any broadleaved trees/shrubs requiring removal and/or thinning (exact location agreed with a suitably experienced ecologist).</p>
5. Heritage fruit trees	<p>Some heritage fruit trees (minimum 6) could be planted in the lawn to the east or north of the cottages.</p>

Peat-based compost will not be used in any planting scheme to avoid impacts upon habitats and carbon storage.

5.13

CONCLUSIONS

Whilst minor habitat losses cannot be avoided, residual effects can be compensated and measures are proposed to maximise biodiversity enhancement opportunities. Measures should be secured through appropriate planning conditions such as a Biodiversity Enhancement Strategy to ensure ecological gains are secured.

6 References

Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F (2014) Analytical and methodological development for improved surveillance of the Great Crested Newt. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA. Freshwater Habitats Trust, Oxford.

CIEEM (2017) Guidelines for Ecological Report Writing. Second edition. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2019) Advice Note: on the lifespan of ecological reports and surveys.

CIRIA, CIEEM and IEMA (2016) Biodiversity Net Gain: good practice principles for development.

Collins, J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition), Bat Conservation Trust, London.

Eaton, M.A., Brown, A.F., Noble, D.G., Musgrove, A.J., Hearn, R., Aebischer, N.J., Gibbons, D.W., Evans, A. and Gregory, R.D. (2015) Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 102, pp296-341.

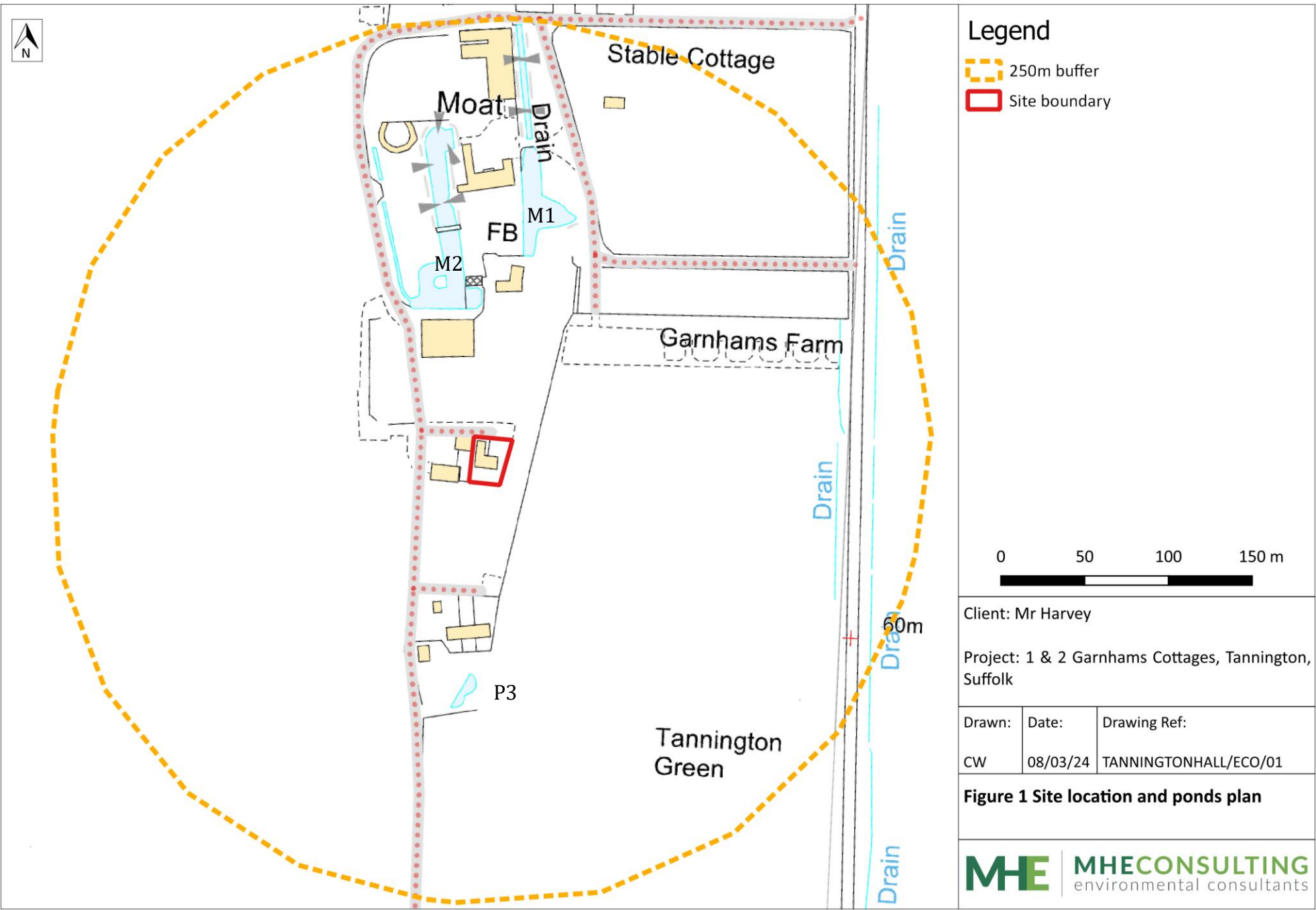
JNCC (2010) Handbook for Phase 1 habitat survey – A technique for environmental audit, JNCC, Peterborough.

Muir D. (2012), Amphibians in drains project report summary. *Biodiversity News*, 59, 16-18.

Scottish Badgers (2018) Surveying for Badgers: Good Practice Guidelines. Version 1.

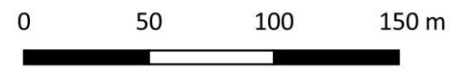
Waring, S., Essah, E., Gunnell, K. and Bonser, R. (2013) Double jeopardy: the potential for problems when bats interact with breathable roofing membranes in the United Kingdom. *Architecture & Environment*, 1 (1). pp. 1-13.

Figures



Legend

- 250m buffer
- Site boundary



Client: Mr Harvey
 Project: 1 & 2 Garnhams Cottages, Tannington, Suffolk

Drawn:	Date:	Drawing Ref:
CW	08/03/24	TANNINGTONHALL/ECO/01

Figure 1 Site location and ponds plan

Appendices

Appendix A1 Photos



Photo 1 Northwest elevation of buildings B1 and B2



Photo 2 South elevation of buildings B1 (left) and B2 (right)



Photo 3 Lawn and hard standing with a new hedgerow to the south of the cottages



Photo 4 Lawn and hedgerow to the east



Photo 5 Barn – west and south elevation



Photo 6 East elevation

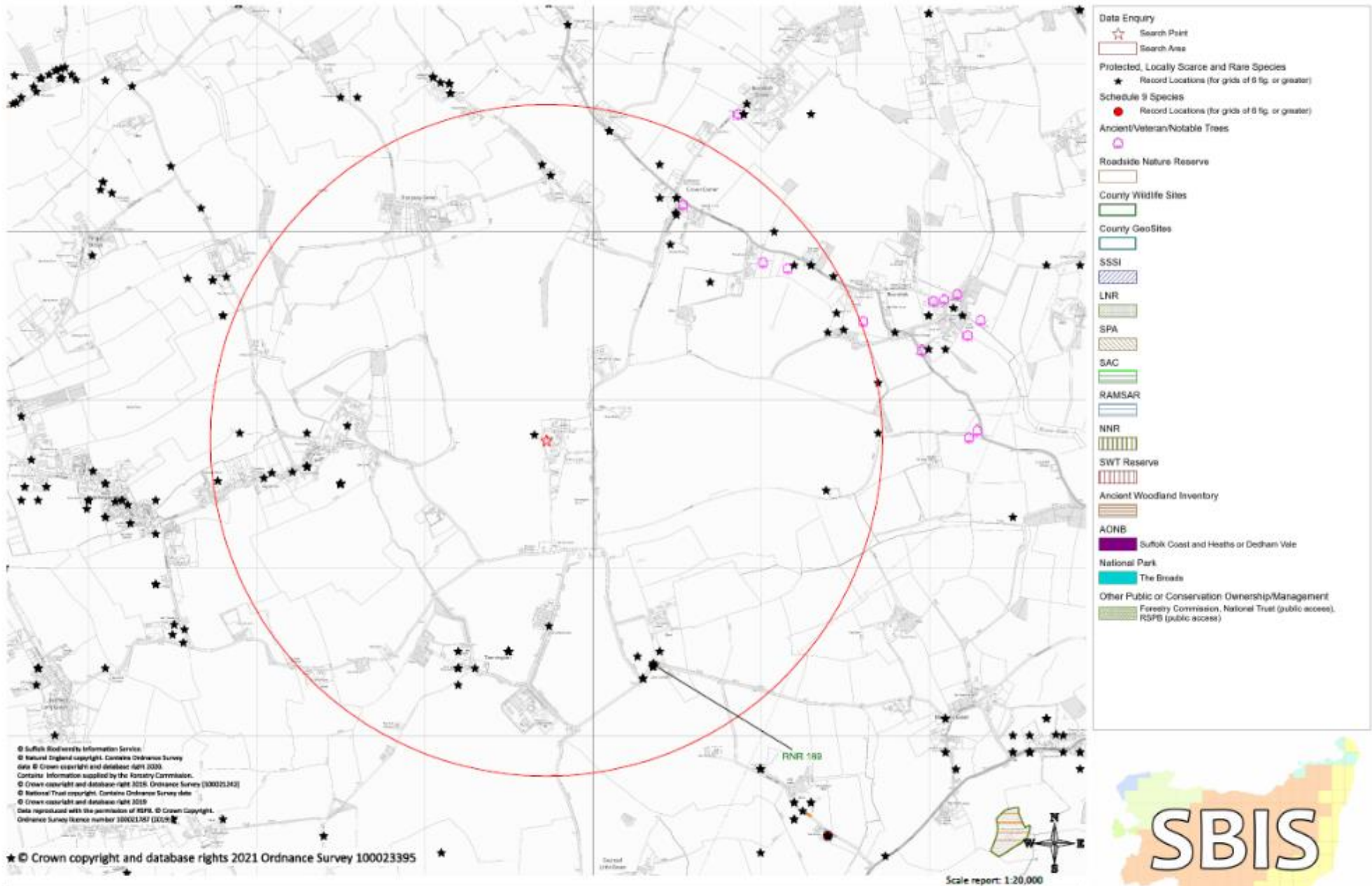


Photo 7 H



Photo 8 Cavity on soffit box of building B1

Appendix 2 SBIS data search map



© Suffolk Biodiversity Information Service
 © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2020. Contains information supplied by the Forestry Commission. © Crown copyright and database right 2020. Ordnance Survey (100021242) © National Trust copyright. Contains Ordnance Survey data © Crown copyright and database right 2019. Data reproduced with the permission of RSPB. © Crown Copyright. Ordnance Survey licence number 100021267 (2020)

© Crown copyright and database rights 2021 Ordnance Survey 100023395

MHE Consulting (Tannington Hall TM2472568754) 2km Data Enquiry

SBIS

Suffolk Biodiversity Information Service

Date: 17/02/2021 | Drawn by: Andy Mercer

Appendix A3 GCN eDNA survey results



Folio No: E9446
Report No: 1
Purchase Order: Hill farm/Tannington hall
Client: MHE CONSULTING LTD.
Contact: Christian Whiting

TECHNICAL REPORT

ANALYSIS OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS (TRITURUS CRISTATUS)

SUMMARY

When great crested newts (GCN), *Triturus cristatus*, inhabit a pond, they continuously release small amounts of their DNA into the environment. By collecting and analysing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

RESULTS

Date sample received at Laboratory: 21/04/2021.
Date Reported: 03/05/2021
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
2156	Tannington Hall, Moat 1		Pass	Pass	Pass	Negative	0
2158	Tannington Hall, Moat M2		Pass	Pass	Pass	Negative	0

If you have any questions regarding results, please contact us: ForensicEcology@surescreen.com

Reported by: Chris Troth

Approved by: Chris Troth



Appendix A4 EclA criteria

A4.1 General criteria for geographic context/value

Designation	Example
International	<ul style="list-style-type: none"> • SPA, SAC and Ramsar sites and the features that they have been designated for. • A sustainable area of habitat listed in Annex I of the Habitats Directive or smaller areas of such habitat which are essential to maintain the viability of a larger whole. • A sustainable population of an internationally important species e.g. UK Red Data Book (RDB) species or European Protected Species (EPS) of unfavourable conservation status in Europe (e.g. Annex II species: bats, GCNs etc.), of uncertain conservation status or of global conservation concern in the UK BAP.
National	<ul style="list-style-type: none"> • SSSI or a discrete area that meets the selection criteria for designation. • A sustainable area of priority habitat identified included on the S. 41 NERC Act list or smaller areas of such habitat that are essential to maintain the viability of a larger whole. • A sustainable population of priority species (listed under S. 41 of the NERC Act 2006). • A sustainable population of a nationally important species i.e. RDB species not included in above category but which is listed on Schedules 5 or 8 of the WCA 1981 (as amended). Also, sites supporting a breeding population of such species or supplying a critical element of their habitat requirements. • A sustainable population of uncommon or threatened Annex IV EPS species at a UK level. • A nationally scarce species (occurs in 30-100 10km squares in the UK) that has its main UK population within the district.
County	<ul style="list-style-type: none"> • A viable area of habitat identified in the county BAP. • A County Wildlife Site. • A sustainable population of common or non-threatened Annex IV EPS species at a UK level. • A Nationally Scarce species that does not have its main population within the county. • Any BAP species not included in the 'national' category above for which a county Action Plan exists.
Local	<ul style="list-style-type: none"> • Individual members of local populations of priority or other nationally/internationally important species which are not in themselves key for maintaining a sustainable population (e.g. individual dog otter passing through area with no holts or resting sites). • Other habitats and species not in the above categories but are considered to have some value at the district/borough level.

Appendix A5 GCN

notification

signage

Great Crested Newt

If seen by any employee, works must cease immediately and an ecologist be contacted for advice

It is an offence to intentionally or recklessly disturb, injure or kill great crested newts

Further information can be found at www.arguk.org



Appendix A6 Small passerine nest boxes



Willow Tit/Tree Creeper

£35.00

A long, thin box designed for fitting to smaller willow/birch trees, low to the ground, to encourage willow tit. Filled internally with damp sawdust/shavings/rotting wood as this species likes to excavate their own holes. The narrowing top crevice is designed to be suitable for roosting bats. Also suitable for tree creeper without the sawdust infill.

7 in stock (can be backordered)

- 1 + [Add to basket](#)

Category: bird and bat boxes

[Description](#) [Additional information](#) [Reviews \(0\)](#)

Description

RSPB Sparrow terrace nest box

Product Code: R407816



[Product Information](#) [Product details](#) [Ratings & Reviews](#)

PROMOTIONAL NEST BOXES!

- Add two promotional nest boxes to your basket to save £2
- Offer ends 5th January 2020 and is subject to availability
- Loyalty points can be collected/redeemed as usual
- Not available in conjunction with any other offer



Qty

£ 29.99

In Stock

[ADD TO BASKET](#)





Open Fronted Nest Box

£25.00

For birds such as robin and pied wagtail. Open fronted but with a generous canopy to screen from aerial predators. Place in good cover not in the open.

43 in stock

- 1 + [Add to basket](#)

Category: bird and bat boxes

Description Additional information Reviews (0)

Description

Height tbc
Width
Depth
Typical Weight

RSPB Robin and wren diamond nestbox

Qty

Product Code: R401640

£ 13.99



In Stock

[ADD TO BASKET](#)

[Product Information](#) [Product details](#) [Ratings & Reviews](#)

SAVE £2 WHEN YOU BUY TWO PROMOTIONAL NEST BOXES!

- Add two promotional nest boxes to your basket to save £2
- Offer ends 9th Jul 2019 and is subject to availability
- Nature rewards – points can be collected/redeemed as usual
- Not available in conjunction with any other offer



Appendix A7 Kestrel nest box

Please allow 14 - 21 days for delivery. [Details](#)

Home > Bird care > Bird houses & nest boxes > Bird of prey nest boxes > Kestrel nest box

Print



Kestrel nest box

Product Code: R403706

£ 69.99

Although designed for kestrels, other species may set up home in this lovely designed home for birds of prey!

Made from FSC cedar with recycled plastic mounting plates, this nest box has an interchangeable perch.

As there are a few things to look out for when handling birds of prey, please read the information in the 'advice' section before purchasing this nestbox.

[Read full information](#)

Qty

In Stock

£ 69.99

[ADD TO BASKET](#)

Appendix A8 Bat boxes

Vincent Pro Bat Box



The Kent bat box

Simple to construct, self-cleaning and low maintenance.

The only critical measurement is the width of the crevices—these should be no larger than suggested. Other measurements are approximate.

Materials and construction

Box to be made from untreated rough-sawn timber.
Timber should be a 25mm thick.
The box should be rainproof and draught-free.
Crevices can be between 15 and 25 mm wide.
Fixing may be by use of brackets, durable bands or wires.

Location

Boxes are best fixed as high as possible in a sheltered wind-free position, exposed to the sun for part of the day.
They can be fitted to walls, other flat surfaces or trees.
A clear flight line to the entrance is important.



Appendix A9 Example log/brash pile creation



Logs generated during local clearance placed in a stable position, with access (arrow) provided to centre of pile.



Brush generated during local clearance placed over logs in generous quantities to provide thick cover.

