
Ecology Report

**PROPOSED EXTENSION TO A RECENTLY BUILT
BUNGALOW**
Meadow View Farm, Earl Stonham, Suffolk

August 2023



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1	0	Final Report	09/07/21	C. Whiting
1	1	Updated following comments from RBD	09/07/21	C. Whiting
1	2	Updated report for the new application for a replacement dwelling	04/10/21	C. Whiting
2	0	Updated report for the proposed application to extend the new building	04/08/23	C. Whiting

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Executive Summary

MHE Consulting Ltd were originally instructed to undertake an ecological survey and assessment of a Class Q Prior Approval residential conversion of a former agricultural barn at Meadow View Farm, Earl Stonham, Suffolk (TM 11314 59340; Figure 1). This was approved by submitted to Mid Suffolk District Council (MSDC) and for building operations reasonably necessary for the conversion.

A subsequent planning application was submitted to MSDC for a new dwelling and double garage, 2 additional car parking spaces and gardens ("Fairfield Cottage") and this was granted planning permission (Ref: DC/21/05529) and the building is now built.

A new application (Ref: DC/23/03545) has been submitted to extend the new dwelling which was only recently completed. The application has not been validated as the MSDC as they have requested an ecological impact assessment report due to the dwelling being within 100m of a pond.

The proposed development site comprises a newly built bungalow with lawn to the south. A pond P1 is located within 100m of the new dwelling. Habitats in the wider landscape include other former agricultural barns with areas of hard standing, scrub and scattered trees, arable farmland and areas of permanent pasture.

The new dwelling supports no suitable roosting niches for bats or evidence of current bird nesting, whilst the area for the proposed extension comprises bare ground and is not suitable for foraging or as refuge habitat.

Great crested newts (*Triturus cristatus*) (GCN) eDNA was not recorded from pond P1 and given the very small footprint of the proposal GCNs are unlikely to be encountered during construction works. Common amphibians may forage over the area of lawn to the south and east of the building, though the likelihood of any significant reptile populations being present is low, and perhaps limited to the occasional grass snake (*Natrix helvetica*) on-route to forage nearby ponds. The lawn has the potential to support foraging hedgehog (*Erinaceus europaeus*) which may also nest/overwinter in areas of dense bramble scrub.

Measures are proposed to avoid, mitigate and compensate impacts and ecological effects upon habitats and associated species, whilst enhancements are suggested which could deliver biodiversity gains.

1 Introduction

1.1 BRIEF

MHE Consulting Ltd were originally instructed to undertake an ecological survey and assessment of a Class Q Prior Approval residential conversion of a former agricultural barn at Meadow View Farm, Earl Stonham, Suffolk (TM 11314 59340; Figure 1). This was approved by submitted to Mid Suffolk District Council (MSDC) and for building operations reasonably necessary for the conversion.

A subsequent planning application was submitted to MSDC for a new dwelling and double garage, 2 additional car parking spaces and gardens ("Fairfield Cottage") and this was granted planning permission (Ref: DC/21/05529) and the building is now built (Photos 1 and 2).

A new application (Ref: DC/23/03545) has been submitted to extend the new dwelling which was only recently completed. The application has not been validated as the MSDC as they have requested an ecological impact assessment report due to the dwelling being within 100m of a pond.

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 net gains.

This report will be used to develop the proposals and to form the basis for the submission of biodiversity information to the Local Planning Authority (LPA). 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 comprises a newly built bungalow (Photos 1 and 2) with lawn (Photo 3) to the south. A pond P1 (Photo 3, Figure 1) is located within 100m of the new dwelling. Habitats in the wider landscape include other former agricultural barns with areas of hard standing, scrub and scattered trees, arable farmland and areas of permanent pasture.

Photos of the buildings and surrounds are provided in 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 most recently revised in July 2021. 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 integrate and 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/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf . Policies of particular relevance to development and biodiversity include 174, 180, 181 and 182.

174. 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.

180. 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, 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 Sites of Special Scientific Interest;
- 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.

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

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

182. 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 Mid Suffolk District area can be found at <https://www.midsuffolk.gov.uk/planning/planning-policy/>.

Babergh and Mid Suffolk District Councils are currently in the process of generating a new joint Local Plan.

2.3

LEGISLATION

2.3.1

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.

2.3.2 *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 detail relevant to this scheme. Species afforded legal protection are referred to by their relevant schedule (“Sch.”) within the act, i.e. “Sch. 1” (birds), “Sch. 5” (other animals), or “Sch. 8” (plants).

Invasive plant species such as Japanese knotweed (*Fallopia 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.

2.3.3 *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 SSSI 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.

2.3.4 *The Conservation of Habitats and Species Regulations 2017*

The Conservation of Habitat and Species Regulations 2017 (as amended) transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) into UK law. They have been recently 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 (National Site Network) 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 Regulations.

2.3.5 *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 (NE) open source 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 presence of local, national and international designated sites; and
- NE's great crested newt (GCN) (*Triturus cristatus*) survey licence record data were plotted to determine the shortest distance from the application site and assess this in the context of landscape cover and connectivity.

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

- Amphibians including great crested newts (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 development, the 'zone of influence' of the scheme is considered restricted to habitats on the site and species within 250m of the site boundary, unless stated otherwise.

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'.

3.3 FIELD SURVEY

An initial site walkover was undertaken on 16 June 2021 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. 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. Care was taken to record as many species as possible.

3.3.2 *Amphibians and reptiles*

a) Amphibians

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

A pond P1 (Figure 1) located c. 50m to the north-east of the building was surveyed for the presence of GCN eDNA with a sample sent SureScreen Scientifics to determine GCN presence-absence (Biggs *et al.*, 2014). Three other ponds (Figure 1) were not surveyed as landowner permission was not secured.

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 were assessed with regards to suitability for supporting roosting bats with reference to the NE Bat Mitigation Guidelines (Mitchell-Jones, 2004) and the Bat Conservation Trust (BCT) "Bat Surveys: Good Practice Guidelines, 3rd edition" (Collins, 2016).

b) Foraging and commuting habitat

Consideration was given to the value of any potential foraging and commuting habitats (i.e. hedgerows, trees, ponds) on or adjacent to the application site (Collins, 2016).

3.3.4 *Nesting birds*

The value of the buildings were 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 habitats and species*
The site was surveyed to determine the presence of any S. 41 habitats and 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.

3.4 **SURVEY CONSTRAINTS**

Given the nature of the site and limited extent of works, the timing of the survey visit was considered appropriate for this report.

3.5 **SURVEYORS**

The survey was undertaken by Christian Whiting BSc (Hons) MSc MCIEEM who has over 21 years' experience working as an ecologist and Alex Gregory.

Christian Whiting holds NE survey licences for bats (2015-14745-CLS-CLS – Bat Survey Level 2, barn owl 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 authorised agent on the Environment Agency's and Water Management Alliance IDB water vole class licences respectively. His main areas of expertise are bats, vascular plants, amphibians and reptiles, otter (*Lutra lutra*) and water vole.

Alex Gregory is an assistant ecologist and undergraduate student studying Environmental management at Harper Adams University, and currently undertaking an industrial placement with MHE Consulting Ltd.

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*

No locally designated sites such as Local Nature Reserves (LNR) are located within 2km of the site.

The Gipping Great Wood SSSI, Lingwood Meadows Earl Stonham SSSI, Gosbeck Wood SSSI, Mickfield Meadow SSSI and the Creeting St Mary Pits SSSI are located within 5km of the site. The Lingwood Meadows Earl Stonham SSSI is located c. 0.8km to the south-east and a public footpath runs adjacent to the northern site boundary of the SSSI but there is no public access to the meadow and as such the building of a new dwelling is unlikely to result in any damage to the site as a result of trampling by people.

No International sites are located within 13km of the site.

The application site falls within a SSSI Impact Risk Zone, though the proposed development does not fall under any listed risk criteria. No impacts are anticipated as a result of the proposed scheme.

4.2.2 *Priority habitats*

Assessment of the MAGIC Map data base identifies no Priority habitats on site.

4.2.3 *Species*

Assessment of NE open source GCN data confirmed the closest GCN record to be 3km to the south-east.

4.3 BASELINE ECOLOGICAL CONDITIONS – FIELD SURVEY

4.3.1 *Habitats and vascular plants*

Descriptions of the habitats and the characteristic plants/species present are provided below, with photos provided in Appendix A1.

The site comprises a former livestock shed with some species poor lawn to the east and south with some scattered trees including immature oak (*Quercus* sp), Leyland cypress (*Cupressocyparis x leylandii*) along with some bramble (*Rubus fruticosus* agg.) scrub and elder (*Sambucus nigra* agg.). The north side of the building is partially covered with dense ivy (*Hedera helix*).

4.3.2 *Amphibians and reptiles*

a) Amphibians

i) Ponds

Pond P1 (Photo 6) supports yellow flag iris (*Iris pseudacorus*) with frequent curled pondweed (*Potamogeton crispus*). An eDNA sample taken in 2021 was analysed by Surescreen Scientific was negative. The results of this test are valid for 4 years and it is considered unlikely that GCNs will have colonised the pond in the last 2 years.

Folio No: E11194
 Report No: 1
 Purchase Order: Meadow View Farm
 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: 25/06/2021
Date Reported: 06/07/2021
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
5211	Meadowview Farm Pond 1	TM 1136 5937	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

ii) *Terrestrial habitat*

The site supports limited habitat for amphibians and reptiles with areas of bare ground where the proposed extension would be built. The retained area of lawn is still maintained and provides not suitable habitat for reptiles, whilst common species may forage over lawns during warm, wet nights.

4.3.3

Bats

a) Building assessment

The new dwelling has only recently been constructed and supports no suitable habitat for roosting bats.

b) Tree roost assessment

No trees are present where the extension is proposed which have the potential to support roosting bats.

c) Foraging and commuting habitat

No bat foraging or commuting habitat will require clearance to allow the construction of the new extension.

4.3.4

Nesting birds

The new dwelling has wide soffits which provide potential nesting habitat for house martins in the future. However, no birds currently nest within the new dwelling.

- 4.3.5 *Badger*
No evidence of badger (e.g. snuffle holes, runs, latrines, setts) was observed.
- 4.3.6 *S. 41 list habitats and species*
a) Habitats
None exist on site.
- b) Species
The lawn provides some suitable hedgehog foraging habitat and the bramble scrub provides potential nesting habitat including for overwintering.
- 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 sites are provided in Table 4.1; values are based upon the criteria in Table A2.1 (Appendix A2) and expert best judgements.

Table 4.1 Feature value based on geographic context

Feature	Value
Lawn	Local
Amphibians and reptiles	Local
S. 41 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 extension to a recently constructed dwelling and garage will be built on an area of bare ground recently landscaped. No ecological impacts are predicted but good working practice measures are recommended.

The assessment and recommendations below provide preliminary recommendations for mitigation, compensation, and enhancements for the proposed development. They are based on drawings available at the time of writing (Roger Balmer Design Ltd) and should be updated accordingly if the scheme is subsequently amended.

5.3 FURTHER SURVEYS REQUIRED

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.

Existing management regimes should be maintained on the site prior to works commencing.

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 extension will result in the disturbance and permanent loss of a small areas of currently bare ground which is not significant at the local level.

Pollution incidents during the construction phase (e.g., fuel oil or chemicals) could impact pond P1 or P2 if the pollution got into any drains connected to the ponds which would be considered a significant effect at the local level.

b) Mitigation

As good practice, the building contractors site compound (if required) should be located away from pond P1 ideally on the existing hard standing/driveway adjacent to the buildings. Temporary (e.g. Heras) fencing and Root Protection Areas (RPAs) must be used as necessary to protect retained trees and areas of lawn to the south and east of the building.

A contractor Risk Assessment Method Statement (RAMS) should be developed ahead of works commencing to ensure Good Practice measures are used to avoid and/or minimise the risk of pollution upon pond P1 and pond P2 (down gradient of the existing farmyard). Measures may include, but are not exclusive to:

- Locating any site compounds (including any fuel storage) away from the pond;
- Limiting topsoil removal as required and covering topsoil whilst stockpiled;
- Cleaning machinery in designated areas with a sump and re-using waste water where possible or discharging via a sewer or tanker only;
- Storing chemical and fuels securely within double-bunded bowzers or chemical stores (with a 110% capacity to contain any spillage) away from the pond;
- Using water based, non-toxic and biodegradable chemicals and fuels where possible;
- Mixing and washing chemicals and associated equipment in designated areas with waste water safely disposed of via mains sewerage or tanker as appropriate;
- Use of biodegradable hydraulic and fuel oils;
- Having adequate site security in place; regularly checking equipment for failures and/or leaks; and
- Keeping spill kits and booms present on the site and ensuring staff are trained in their use.

Although prepare for other areas of the UK, useful further information is available via the Guidance for Pollution Prevention – Works and maintenance in or near water: GPP 5 January 2017 document, produced by Natural Resources Wales (NRW), the Northern

Ireland Environment Agency (NIEA) and the Scottish Environment Protection Agency (SEPA)⁸.

c) Residual effects

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

5.6 AMPHIBIANS AND REPTILES

a) Potential impacts

The proposed extension will be located on an area of bare ground and no loss of refuge habitat will occur. Building operations (e.g. the presence of open trenches and caustic materials) could result in the injury and mortality of amphibians if they fell into trenches.

Pollution of the ponds P1 and P2 could potentially kill or injure amphibians and affect breeding success. Gully pots and silt pots used for site drainage could result in entrapment and ultimately death of animals (Muir, 2012).

Combined, the above impacts are considered a significant negative effect at the local level.

b) Mitigation

As per section 5.5.

Given the limited footprint of the proposed dwelling, good working practises required to avoid direct impacts upon amphibian present are as follows:

1. Areas of hard standing should be used for the builders site compound or if the lawn area is used, it should be kept short with regular mowing;
2. Clearance of any taller vegetation should be undertaken sensitively during the months of April to September inclusive. Hand tools (e.g. strimmers and hedge trimmers) should be used to take taller vegetation down to ground level using a 2-stage cut as follows:
 - The first cut should be to no lower than 150mm above ground level with brash raked removed from site; and
 - The area should be left for a minimum of 1 hr to allow any animals to move and the second cut should be to just above ground level. The arising should again be raked off and removed from site to prevent any wildlife seeking refuge.
3. Excavations should be filled on the same day they are dug or covered overnight with ply boarding and any gaps filled with damp sharp sand;
4. If this is not feasible access ramps should be created to allow animals to escape and the excavations should be inspected prior to infilling. Any animals present should be moved into retained hedgerow, scrub or ruderal habitat;
5. Uncovered excavations should be checked daily and immediately prior to filling;
6. Footings and concrete slabs should be poured during the morning where possible to ensure it has solidified prior to dusk to reduce the risk of animals coming into contact with wet concrete;
7. Any hand mixing of mortar or concrete should be on ply boarding over a tarpaulin which is folded over the boarding at the end of each day to prevent animals coming into contact;

⁸ <http://www.netregs.org.uk/media/1418/gpp-5-works-and-maintenance-in-or-near-water.pdf>

8. Any excess concrete should be poured into a concrete skip, so it can then set to prevent animals coming into contact. Concrete mixers and shovels, rakes, boots etc. must be cleaned off in a safe location;
9. All building materials and waste materials should be stored on bare ground or hard standing, or stored off the ground on pallets to reduce risk of animals seeking refuge;
10. Should any GCNs be encountered, works must stop immediately, and advice be sought from a suitably experienced ecologist. Any other animals should be allowed to move out of the works area, or safely relocated. The poster in (Appendix A3) should be erected in the welfare facilities provided for construction staff onsite; and
11. If used, any installed gully pots should be situated $\geq 150\text{mm}$ from kerbs to maintain function while reducing the probability of animals falling in OR a wildlife friendly kerb⁹ be installed, AND a gully pot ladder¹⁰ be placed into each gully pot. Down pipes taking water off the roofs should be sealed at ground level by using a leaf and debris screen¹¹ or similar to prevent amphibians becoming trapped.

c) Residual effects

With mitigation implemented there will be no significant residual effects.

5.7

BATS

a) Potential impacts

Lighting during both construction and operational phases has the potential to impact bats as some species 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 are likely to relate to security lighting external to the new dwelling, and from light spillage resulting from internal lighting once the building is in use.

Research has shown bats can become entangled in modern breathable roofing membranes such as Tyvek and other woven membranes if used under clay pantiles or peg/plain tiles (Waring *et al.*, 2013) where gaps $>4\text{mm}$ exist between the tiles. Without mitigation, the impacts above could result in significant effects at a local level.

b) Mitigation

i) Lighting design

Lighting design should minimise lighting impacts upon adjacent habitats (e.g. waterbodies, hedgerow and trees) and should follow current guidance¹²¹³:

- *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 $>550\text{nm}$ (2700 or 3000°K) and no UV component; and
- *Lighting design*: Lighting should be directed to where it is needed, with minimal horizontal spillage towards retained habitats This can be achieved by restricting the

⁹ <https://www.aco.co.uk/products/wildlife-kerb>

¹⁰ <https://www.thebhs.org/shop/the-bhs-amphibian-gully-pot-ladder>

¹¹ <https://www.drainagepipe.co.uk/leaf-and-debris-gully-110mm-p-D94G/>

¹² <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting>

¹³ www.eurobats.org/sites/default/files/documents/publications/publication_series/WEB_DIN_A4_EUROBATS_08_ENGL_NVK_28022019.pdf

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 must be used to minimise the 'lit time' (up to 1 minute) for all external lighting. Over-ride switches can be used for residents' use of outdoor areas in the evening.

d) Residual effects

Subject the appropriate mitigation there will be no residual effect.

5.8

NESTING BIRDS

a) Potential impacts

Works to extend the newly built dwelling will require the removal of some roof tiles and the soffits to allow the tying in of the new extension. Undertaking these works during the breeding/nesting season (1st March to 31st August) has the potential to impact nesting birds such as house martin. 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.

b) Mitigation

As per section 5.5.

If any soft demolition 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 including the clearance of any scrub or trees. If any nests are found exclusion zones must be established until young have fledged. The builder's compound (if required) should be sited away from any trees, scrub and hedgerows to minimise disturbance.

c) Residual impact

No significant effects.

5.9

OTHER S. 41 LIST HABITATS AND SPECIES

a) Potential impacts

During the construction phase hedgehog could potentially fall into excavations including wet concrete, take shelter in piles of building materials on site, or be harmed during clearance of dense scrub resulting in serious injury or death. Such impacts could have a significant negative effect upon individuals at the local level.

b) Mitigation

Habitat avoidance and mitigation as per section 5.5 and 5.6.

c) Residual effects

No significant effect.

5.10 COMPENSATION

None.

5.11 CUMULATIVE EFFECTS

The Mid Suffolk District Council planning website was searched on 4 August 2023 for relevant applications within a 1km buffer of the application site dating back 2 years. Refused and withdrawn applications were not considered in relation to cumulative ecological effects. Numerous small householder and agricultural applications were identified.

Based on the scale of the proposed works there will be any significant cumulative impact with the current application.

5.12 ENHANCEMENT OPPORTUNITIES

To achieve a biodiversity gain, it is recommended that 3 out of the following 6 measures (Table 5.1) are implemented as part of the scheme.

Table 5.1 Enhancement opportunities

Feature	Enhancement suggestion
Landscaping	<ol style="list-style-type: none">1. A flowering lawn area could be established using the Emorsgate EL1 seedmix.2. Heritage fruit trees (minimum of 3) could be planted using cultivars that originate from Suffolk. See www.applesandorchards.org.uk3. A native hedgerow with a minimum of 6 native woody species could be planted to mark part of the site boundary.4. A mixture of wild clematis (<i>Clematis vitalba</i>) and honeysuckle (<i>Lonicera periclymenum</i>) could be trained up fences/trellises and garden walls (at intervals of 5 -10m) of the converted building to provide nectar sources for pollinator species.
Small passerine bird boxes	<ol style="list-style-type: none">5. Three small passerine nest boxes (Appendix A5) could be erected the new dwelling or local trees with exact locations agreed with a suitably experienced ecologist.
Amphibians and reptiles	<ol style="list-style-type: none">6. A grass snake egg laying heap (Appendix A6) could be created within the applicant's land holding, e.g. in an area of grassland left to grow long but with direct sunlight for much of the day.

Peat based composts should not be used for any planting or landscaping in order to preserve existing carbon stores and avoid damage to sensitive habitats.

6.13 CONCLUSIONS

The proposed mitigation, compensation and enhancement measures will ensure the proposed scheme avoids net losses of biodiversity and will maximise biodiversity enhancements provided.

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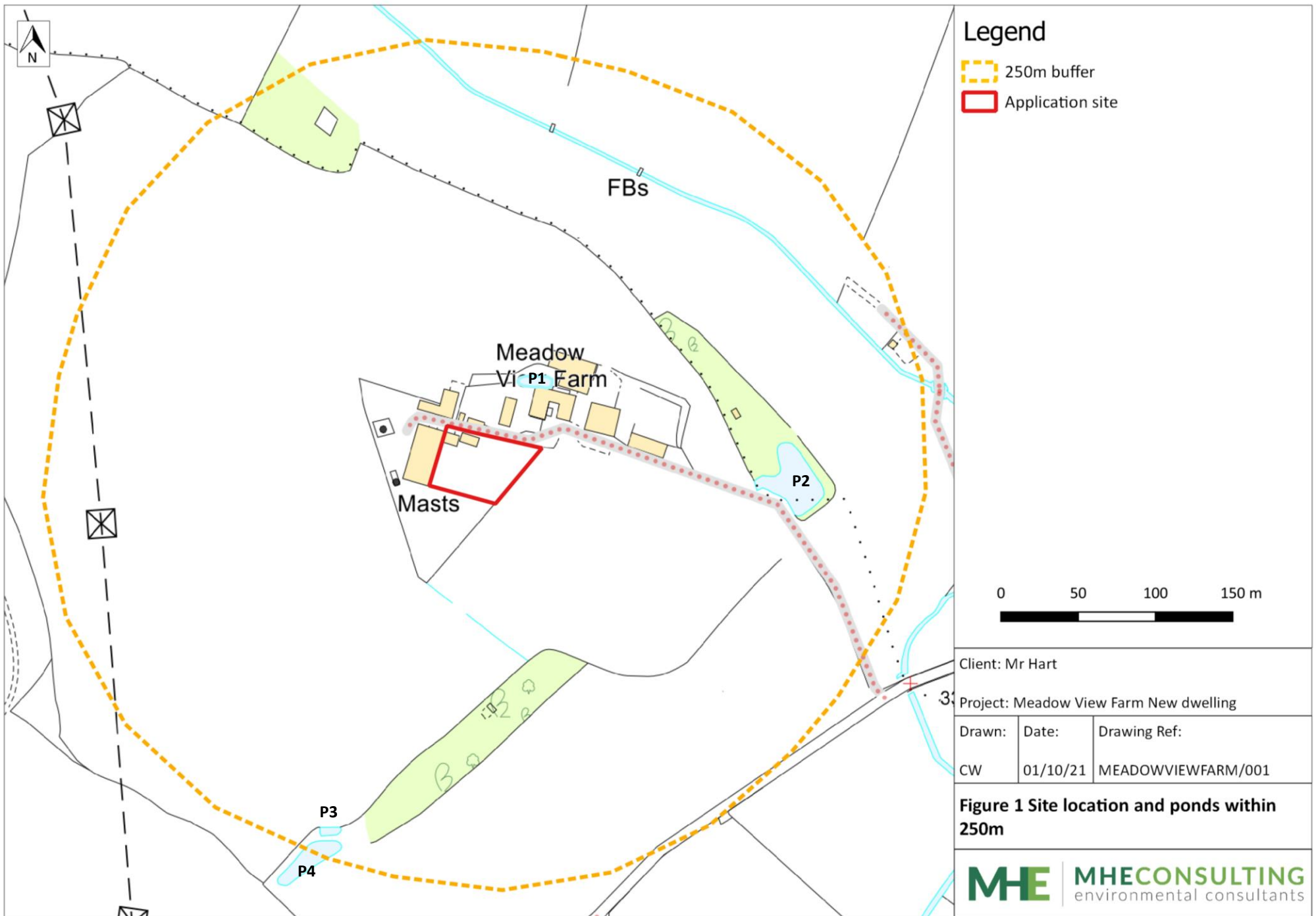
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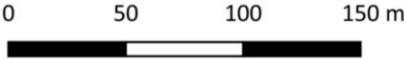
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Figures



Legend

- 250m buffer
- Application site



Client: Mr Hart		
Project: Meadow View Farm New dwelling		
Drawn:	Date:	Drawing Ref:
CW	01/10/21	MEADOWVIEWFARM/001

Figure 1 Site location and ponds within 250m

Appendices

Appendix A1 Photos



Photo 1 South elevation of the new dwelling



Photo 2 North elevation of the new dwelling and garage



Photo 3 Lawn area to the south - 2021



Photo 8 Pond P1 - 2021

Appendix A2 EclA criteria

A2.1 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. • A sustainable population of a 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 A3 Great-crested newt poster

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 A4 Bat boxes



Chillon WoodStone Bat Box

£26.35 ex VAT



Eco Bat Shelter

Price From:
£15.93 ex VAT



Beaumaris Bat Box

Price From:
£26.39 ex VAT



Large Multi-Chamber Bat Box

£42.23 ex VAT



Woodstone Interconnecting Bat Box

£52.54 ex VAT



Class Bat Box Making Kit - Single Kit

£8.80 ex VAT



Kent Bat Box

£15.73 ex VAT



Chavenage Cavity Bat Box

£17.00 ex VAT



Improved Crevice Bat Box, Triple

£29.83 ex VAT



Almodovar Bat Box

£39.38 ex VAT


Appendix A5 Small passerine bird boxes

barkboxes.co.uk/product/open-fronted-nest-box/

Sign In | Fulcrum ... UK Grid Reference... National Biodiversit... Bing Maps ~ Santander Online... Microsoft Office Ho... Jacobs Engineering... Jacobs Engineering... Worldw...

BARK BOXES
Conserve and Enhance

Home About Us Other Services Gallery Contact



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)
<p><i>Description</i></p> <p>Height tbc</p> <p>Width</p> <p>Depth</p> <p>Typical Weight</p>		

RSPB Sparrow terrace nest box

Product Code: R407816

Qty 1




£ 29.99

In Stock **ADD TO BASKET**

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

Please allow 2 - 3 days for delivery. [Details](#)

[Home](#) > [Bird care](#) > [Bird houses & nest boxes](#) > [Garden bird nest boxes](#) > Apex starling nestbox

 Print



Apex starling nestbox

Product Code: R405836

£ 23.99

★★★★☆ [Read all reviews](#)

Beautifully made FSC ® certified timber nest box designed with starlings in mind. The 45mm entry hole allows the larger birds to nest in the box.

Features include drainage holes and one side that pivots open for easy end-of-season cleaning.

Nest box measures 31.5 x 18.5 x 18cm.

[Read full information](#)

SAVE £2 WHEN YOU BUY TWO PROMOTIONAL NEST BOXES!

- Add two promotional nest boxes to your basket to save £2
- Offer ends 6th July 2021 and is subject to availability
- Loyalty points can be collected/redeemed as usual
- Not available in conjunction with any other offer



Currently unavailable

£ 23.99

Appendix A6 Grass snake egg laying heap & log pile examples

Creating grass snake egg-laying heaps



RAVON



ARG UK

Identification

The grass snake *Natrix helvetica* is the largest British native snake, and can grow to over 1 metre in length. Grass snakes range from grey to green or brown in colour. They have a distinctive yellow or cream collar, bordered to the rear by contrasting dark markings. There is a series of dark bars running along the flanks and some individuals have dark spots on the back as well. Often found near water, grass snakes can sometimes be spotted swimming, or hunting for favoured prey species, which are mainly amphibians. Grass snakes are non-venomous, but they can exude an unpleasant smelling musk if caught. They can live for up to 15 years in the wild.

Introduction



Life cycle

In common with other native reptiles, grass snakes hibernate over winter from October to March, emerging as the weather warms in early spring to replenish their energy reserves by feeding and basking. During April and May they find a mate, and in June or July females lay 10 to 40 leathery white eggs, often in warm compost, piles of leaves or manure heaps, which helps the eggs to incubate and hatch. Several females may use the same egg laying spot, so it may be possible to find large numbers of eggs in a suitable heap. After 6 to 10 weeks the pencil sized (14-22 cm long) young grass snakes emerge. Hatchlings cut their way out of the egg with an egg tooth, which they lose once they have emerged. It then takes three to four years for the young grass snakes to reach adulthood and sexual maturity.



Hatched grass snake eggs

Grass snake distribution
in the British Isles
(© NBN Atlas)

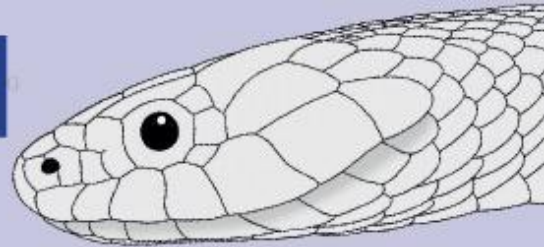


Distribution and habitat

Grass snakes are widely distributed across much of England and Wales, though they are less commonly recorded in the North East of England, and Scotland. Generally, grass snakes prefer to live near water, where they can readily find their amphibian prey; but two other essential habitat features are egg-laying sites and places to hibernate. Natural grass snake egg-laying sites include heaps of organic material, or rotted tree stumps. Many grass snakes, however, take advantage of human activities and lay their eggs in manure or compost heaps. As a result, grass snakes are sometimes seen near riding stables and allotments during the spring and summer months. Over-wintering or hibernation occurs in dry, frost free and relatively undisturbed locations. Hibernation sites may be located in burrows or holes, heaps of rubble or wood, or dilapidated stone walls or buildings. In some areas, a vegetated earth bank or hedge bank, sea wall or even a road or rail embankment may be used.



Why create egg-laying heaps?



How you can help grass snakes

Grass snakes and humans have been intricately linked through livestock husbandry for many thousands of years across large parts of Europe. Historically, grass snakes have made use of manure heaps, and latterly compost heaps, as egg-laying sites, since these structures generate the heat that the snakes need to incubate and successfully hatch their eggs. In previous times this close association led to the grass snake being regarded as a house god in some parts of Europe, the symbol of spring, wisdom and protecting livestock.

However, in common with much of our native wildlife, we are seeing declines in grass snakes as agricultural and livestock husbandry practices change. One factor is thought to be availability of egg-laying sites, since there are fewer suitable heaps of manure accessible to grass snakes in the wider countryside. One means of boosting grass snake numbers may therefore be to create egg-laying heaps. These heaps also provide shelter and overwintering sites for slow-worms, amphibians, invertebrates and small mammals such as hedgehogs, mice and voles.



How to create a grass snake egg-laying heap



- **Where:** In a sunny spot, adjacent to tall vegetation, away from busy roads and no more than 400m from a water body. Female grass snakes become habituated to using a successful heap for several years, so when refreshing a heap, ensure you always use the same location.
- **When:** Mid-March to late April
- **Materials:**
 - One third fresh horse manure
 - One third vegetation (leaves, clippings) or compost.
 - One third large sticks or branches.
- **Instructions:**
 - Clear the ground where you want the heap
 - Create a base layer of leaves and clippings
 - Lay the largest sticks/branches on top of this
 - Place half of the horse manure on top of the sticks and branches.
 - Add another layer of smaller sticks.
 - Mix the remaining manure with the vegetation/compost and add this to the heap. Add some branches and smaller sticks to keep these layers well ventilated.
 - Ensure that the egg-laying heap is not too compacted, so the animals can easily get into it, and to prevent it from overheating.



For more information about grass snakes

Amphibian and Reptile Groups of the UK (ARG UK) - www.arguk.org
 Amphibian and Reptile Conservation - www.arc-trust.org
 Froglife - www.froglife.org

If you find a dead or diseased grass snake please report the incident to the Garden Wildlife Health Project (GWH) - www.gardenwildlifehealth.org.
 GWH investigates disease threats to British wildlife.

If you spot a grass snake at any stage of its life cycle (eggs, juvenile, adult), or even a shed skin, please share the information either through Record Pool - www.recordpool.org.uk, or your preferred biological recording scheme.

ARG UK

The Amphibian and Reptile Groups of the UK (ARG UK) is a network of volunteers committed to the conservation of native amphibians and reptiles. ARG UK is a registered charity (no. 1165504).

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Log pile



Log pile with vegetation growing through it providing more cover for wildlife.