

## Ecological Report: Wildlife pond project at Wagtails, Wattisfield



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<b>Site address</b>	Wagtails, Walsham Road, Wattisfield, Diss, Norfolk, IP22 1NZ
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### Declaration of Compliance

This report has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct and British Standard Institution's (BSI) BS 42020:2013 *Biodiversity – Code of practice for planning and development*. We confirm that the opinions expressed within this document are our bona fide professional opinions.

The information which is being provided is a true representation of the survey methods used and the results assembled, with respect to the stated dates of survey and assessment. The future validity of this report is conditional on any changes which occur to the assessment site, and in any case will be limited by professionally accepted survey lifespans<sup>1,2</sup>.

### Third Party Disclaimer

Any disclosure of this report to a third party is subject to this disclaimer. The report was prepared by Norfolk Wildlife Services Ltd on behalf of the client named above. It does not in any way constitute advice to any third party who is able to access it by any means.

<sup>1</sup> <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>

<sup>2</sup> Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3<sup>rd</sup> edition). The Bat Conservation Trust London. Section 2.6.3 Age of survey data (pg 20).

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## 1. Non-Technical Summary

Norfolk Wildlife Services was commissioned to complete an ecological impact assessment of a proposed new wildlife pond on the Wagtails residential property in Wattisfield, Diss.

The purpose of this report is to describe the current ecological baseline of the survey area and to detail a summary of potential impacts to ecological receptors from a pond installation.

The survey area was evaluated on 16/05/2023 by Ben Christie MCIEEM (Natural England Level 2 bat survey Class Licence registration 2019-43514-CLS-CLS and great crested newt survey Class Licence registration 2016-25528-CLS-CLS).

The proposed development will require no land-take of any designated nature conservation site, and the distance/screening from any designated site is sufficient that there is no credible potential for construction or operational impacts to occur. A neutral impact has been determined for potential direct or indirect impacts to designated sites from the pond creation.

The proposed development would primarily affect amenity grassland, and therefore a neutral impact on valued natural habitats is predicted. Pond creation and management advice is provided in the enhancements section which, if followed, is predicted to result in a positive impact to the site's habitat value.

The site boundary hedgerows will be retained, but there is potential for these to be damaged by machinery during the works. Mitigation is advised.

Based on the small-scale of the development project, there is no indication that the proposed development should reasonably be expected to result in impacts to bats or great crested newts such as would be considered an offence under Conservation of Habitats and Species Regulations 2017 (as amended).

There is a potential for minor negative impacts on a local hedgehog population by way of accidents occurring to transient hedgehogs during the construction phase. Mitigation is advised.

## 2. Introduction

### 2.1. Description of the project

The survey area is located at the back garden of Wagtails residential property in Wattisfield, Diss (grid reference TM 00922 73332, shown in Figure 1).

It is proposed to create a new wildlife pond within the residential garden, as shown in Figure 2.

### 2.2. Purpose

The purpose of this report is to:

- Describe the ecological baseline of the survey area (as shown in Figure 3);
- Evaluate the habitats within the survey area for their ecological value in a geographic context;
- Identify the requirement for further ecological surveys to fully inform the assessment of effects as a result of the proposal;
- Identify and describe all potentially significant ecological effects as a result of the proposal;
- Outline appropriate avoidance or mitigation measures for significant effects as a result of the proposal and how these could be secured;
- Clearly identify requirements to ensure compliance with nature conservation legislation;
- Identify potential ecological enhancement measures beyond avoidance or mitigation;
- Set out any requirement for post-development monitoring.

Figure 1: Proposed pond location (red star)

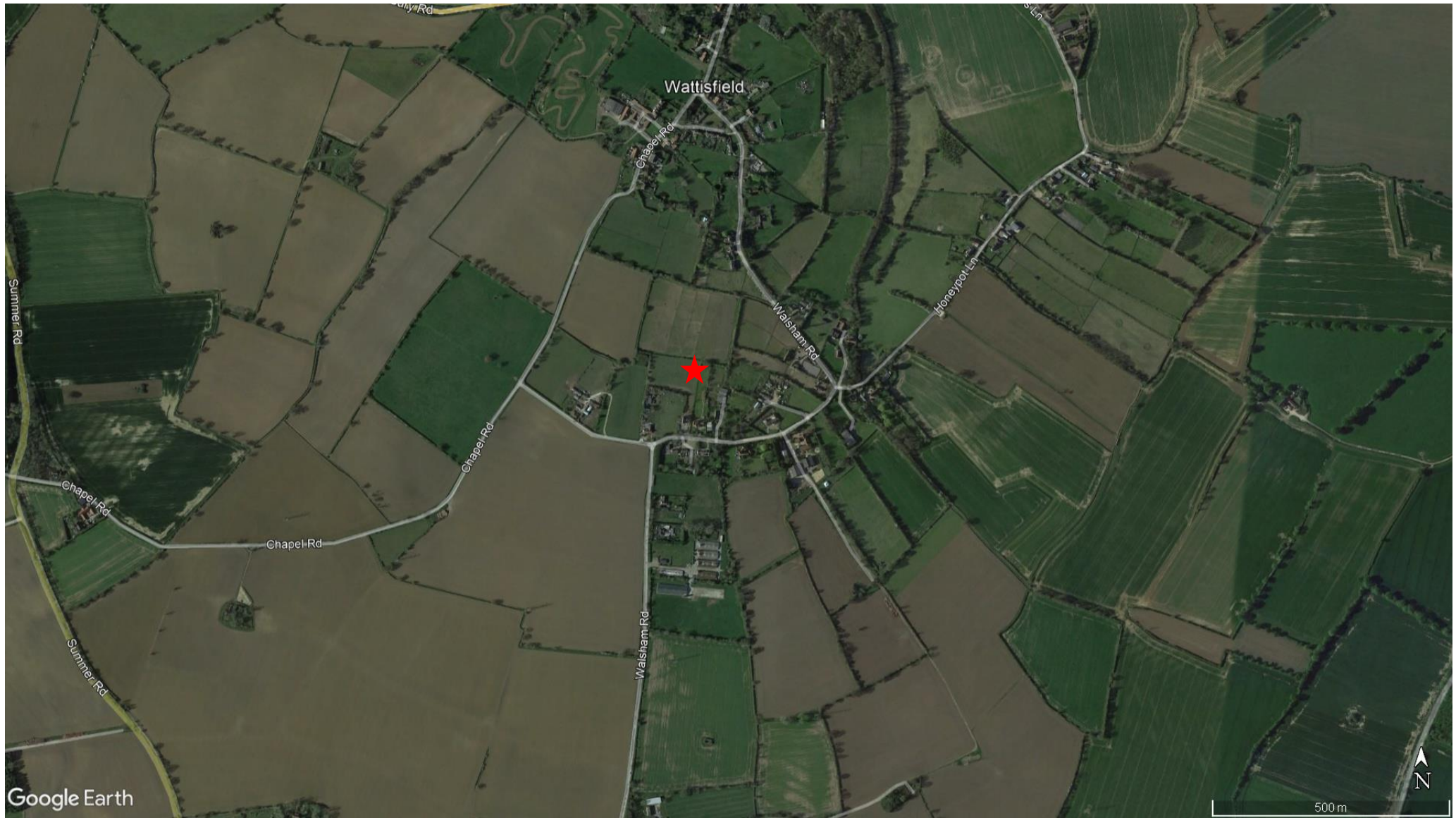
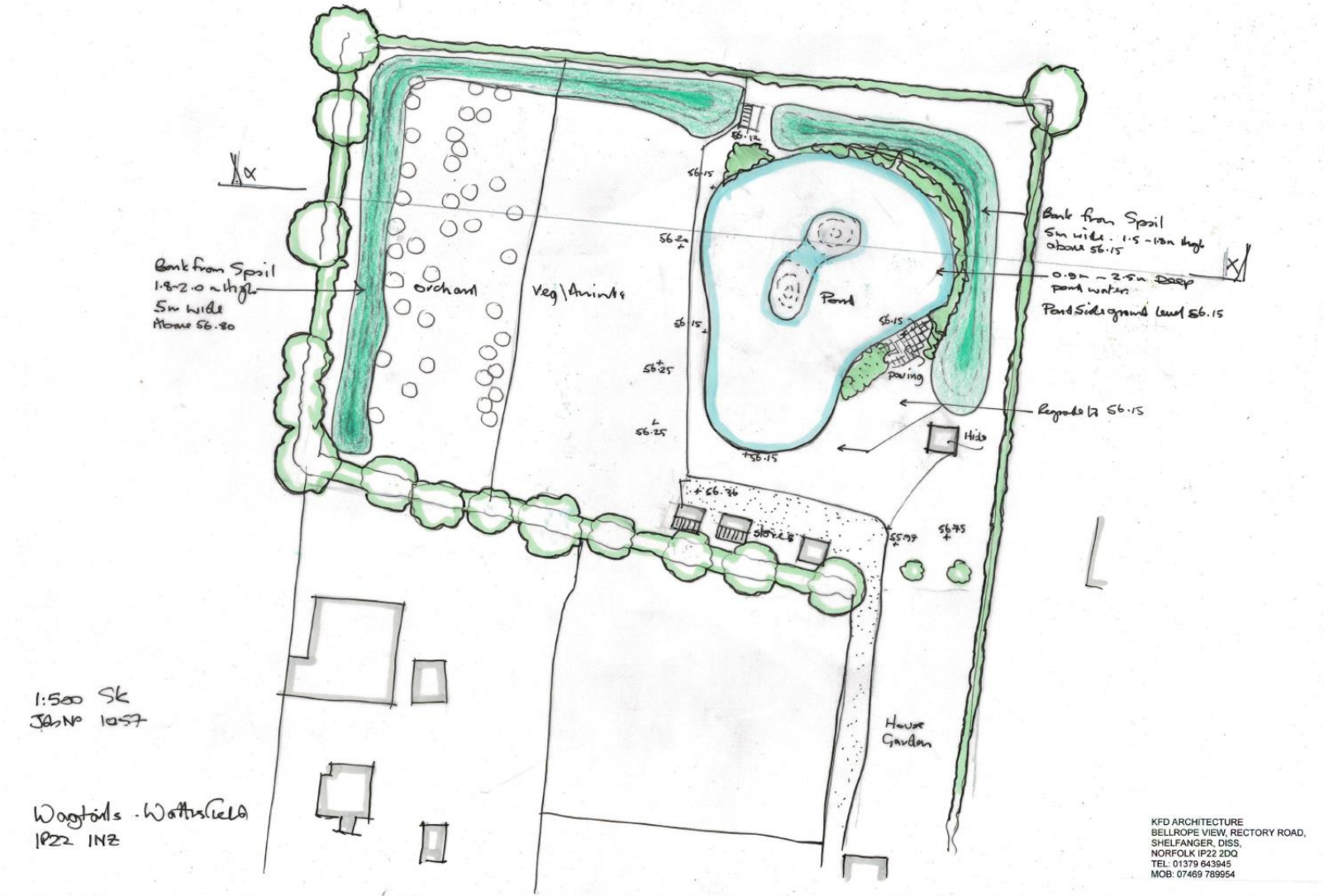


Figure 2: Site layout plan (provided by KFD Architecture)



## 3. Methods

### 3.1. Zone of Influence

The Zone of influence (Zoi) is defined by the CIEEM Guidelines for Ecological Impact Assessment (2018) as: *“The areas/resources that may be affected by the biophysical changes caused by activities associated with a project”*.

The Zoi for this project considers multiple areas for the potential changes to ecological features as a result of the proposed development. The extents of these areas are:

- Within the application site boundary (Figure 1) and immediately adjacent habitats for direct impacts to valued ecological features (e.g. habitats and protected species).
- Within a 2km radius of the application site boundary for designated nature conservation sites which may be indirectly impacted as a result of the proposed development.
- Within 250m of the development site for water-bodies (potential amphibian breeding site), as based on the small-scale of the proposal.

### 3.2. Desktop study

A detailed desktop study was made of the survey area using the search criteria and sources described in the Table 1 below.

Table 1: Desktop study searches

Search	Sources
A 2km search radius for designated sites and features of interest	Natural England Magic Map Application ( <a href="http://www.magic.gov.uk">www.magic.gov.uk</a> )
A 2km radius for significant records of protected and priority species and European Protected Species mitigation licences	Natural England Magic Map Application ( <a href="http://www.magic.gov.uk">www.magic.gov.uk</a> )
A 250m radius for extant waterbodies	Natural England Magic Map Application ( <a href="http://www.magic.gov.uk">www.magic.gov.uk</a> ) Google Earth Pro Ordnance Survey maps (1:10,000)
A 1 mile radius for lodged planning applications with potential for cumulative impacts	<a href="http://baberghmidsuffolk.gov.uk">Map Search (baberghmidsuffolk.gov.uk)</a>

### 3.3. Field survey and establishment of baseline ecological conditions

The survey area was evaluated on 16/05/2023 by Ben Christie MCIEEM (Natural England Level 2 bat survey Class Licence registration 2019-43514-CLS-CLS and great crested newt survey Class Licence registration 2016-25528-CLS-CLS).

Photographs of ecological features within the survey area are referenced within the Results Section and are shown in Appendix 2.

#### 3.3.1. Habitats

A Phase 1 habitat assessment of the survey area was conducted based on the UK Habitat Classification System (UKHab 2021) and the Phase 1 Habitat Survey methodology (JNCC 2010).



### 3.3.2. Species

#### Mammals

The proposed development area and its adjacent surrounds was evaluated for its potential value for badgers, roosting bats, hedgehogs and brown hare.

#### Birds

An assessment was made of the features likely to support breeding birds and Schedule 1 birds within the survey area.

#### Reptiles

An assessment was made of the features likely to support reptiles within the survey area.

#### Amphibians

A desktop search for ponds within 250m of the survey area was conducted using the Natural England Magic Map Application (Magic Maps) and Google Earth Pro, and an assessment was made of the features likely to support great crested newts within the survey area.

### 3.4. Assessment of impact potential / risk

Potential impacts on ecological features are characterized using the following criteria.

#### Positive or Negative

The definition of a positive or negative impact/effect is as per CIEEM (2018):

- *“Positive – a change that improves the quality of the environment e.g. by increasing species diversity, extending habitat or improving water quality. This may also include halting or slowing an existing decline in the quality of the environment.*
- *Negative – a change which reduces the quality of the environment e.g. destruction of habitat, removal of foraging habitat, habitat fragmentation, pollution.”*

#### Spatial Extent

The spatial extent of an impact’s predicted effects is estimated according to the following categories: international and European; national; regional / river basin district; county; local planning authority district; local (≈ parish); site (within the proposed development boundaries).

#### Magnitude

- *Major* – an impact which is predicted to have a crucial effect (positive or negative) on a designated conservation site, habitat or species population within a specified spatial extent. Normally the effect will be considered either long-term (potentially reversible) or permanent.
- *Moderate* – an impact which is predicted to have a modest effect (positive or negative) on a designated conservation site, habitat or species population within a specified spatial extent. Normally the effect will be considered temporary in either the short- or medium-term, and reversible.
- *Minor* – an impact which is predicted to result in a slight but unimportant effect (positive or negative) on a designated conservation site, habitat or species population within a specified spatial extent. Normally the effect will be considered to be short-term and reversible.
- *Neutral* – a ‘non-impact’, with no appreciable effects on a designated conservation site, habitat or species population.

#### Duration

The duration of an impact’s predicted effect may be quantified, or else broadly defined as either short-term, medium-term, long-term or permanent.



## 4. Results

### 4.1. Local context

Wagtails is located in the southern extremity of the village of Wattisfield. The surrounding landscape is mainly scattered rural development and arable fields, but the field boundaries largely have hedgerows with trees, and there is a scattering of permanent grazed grassland paddocks.

### 4.2. Desktop study results

The only designated site within 2km is the Westhall Wood & Meadow Site of Special Scientific Interest, which is 1.7km east. The woodland is ancient coppice with standards, and the site also contains an unimproved meadow.

No nearby issued European Protected Species mitigation licences or records from the Natural England Great Crested Newt Pond Surveys were identified on the Magic Map Application within 2km.

Wagtails has been subject to various planning applications in the last five years. This includes:

- DC/18/00562 | Planning Application - Erection of 1 no. dwelling and associated garage. – Granted in 2018. No associated ecology assessment.
- DC/22/03315 | Planning Application. Change of use of part of agricultural land to domestic garden curtilage – Granted in 2022. No associated ecology assessment.
- DC/22/04344 | Full Planning Application - Change of Use of paddock for keeping of horses/donkeys, portable stabling and fencing – Granted in 2022. No associated ecology assessment.

The only other applications in the vicinity of any relevance found are:

- DC/18/05287 | Outline Planning Application (some matters reserved) - Erection of 1no. dwelling; parking, turning and access. | 1 Martineau Cottages Walsham Road Wattisfield Diss Suffolk IP22 1NZ. Refused in 2019. An ecology assessment of the proposal found no potential for protected species impacts.
- DC/20/01892 | Planning Application. Erection of 3no dwellings with associated works, including creation of vehicular access and provision of landscaping. | Land West Of Walsham Road And South Of Kudu Lodge Walsham Road Wattisfield IP22 1PB – Granted in 2020. An ecology assessment of the proposal found no potential for protected species impacts.

### 4.3. Field survey results

#### 4.3.1. Habitats

The proposed pond site consists of grassland, and is a small area of a larger 1ha amenity (private garden) grassland field (photographs 1 and 2). The habitat is ascribed to modified grassland, which is classified via UKHabs as g4 64 75 'modified grassland, mown, active management'. The grassland does not meet the criteria for any of the habitats listed in the Level 5 Habitat Hierarchy. The sward consists of *Bellis perennis*, *Dactylis glomerata*, *Geranium pratense*, *Holcus lanatus*, *Lolium perenne* and *Trifolium pratense*. Average species richness is 3 per m<sup>2</sup>.

Native-species hedgerows are present on the north and east boundaries of the field (photograph 2), consisting of *Cornus sanguinea*, *Crataegus monogyna*, *Prunus spinosa*, *Rosa arvensis* and *Salix caprea*. These hedgerows are classified as h2a 'Hedgerow: Priority Habitat'.

### **4.3.2. Species**

#### **Mammals**

No evidence of badgers or hedgehogs was identified within the survey area. Badgers are considered likely absent from the development site, but the presence of transient hedgehogs is expected.

Foraging and commuting bats are a possibility through the site with particular emphasis on the boundary hedgerows. However, no potential bat roost features are present.

#### **Birds**

Low numbers of BoCC Red and Amber-listed species (e.g. dunnock, song thrush) may use the hedgerows on the site boundaries. At present the site is not suitable for ground-nesting birds, given the lack of suitable sward. Schedule 1 species are not expected to frequent the site.

#### **Reptiles**

The grassland does not provide a varied structure or refuge features, such as grass tussocks, for reptiles, and the area is also subject to regular disturbance from mowing activities. Therefore, reptiles are considered likely absent from the development site.

#### **Amphibians**

No ponds are present within the site, but three ponds are present within 250m, all to the southeast. The closest is approximately 100m. The proposed pond site is largely unsuitable for great crested newt, being very small and composed of short amenity grassland and a building. Given the distance to the nearest off-site pond, the development site would not form the core sustenance zone for any great crested newts even if they were present in that pond (Jehle and Arntzen, 2000). The likelihood of terrestrial great crested newts being present within the proposed pond creation area is concluded as negligible.

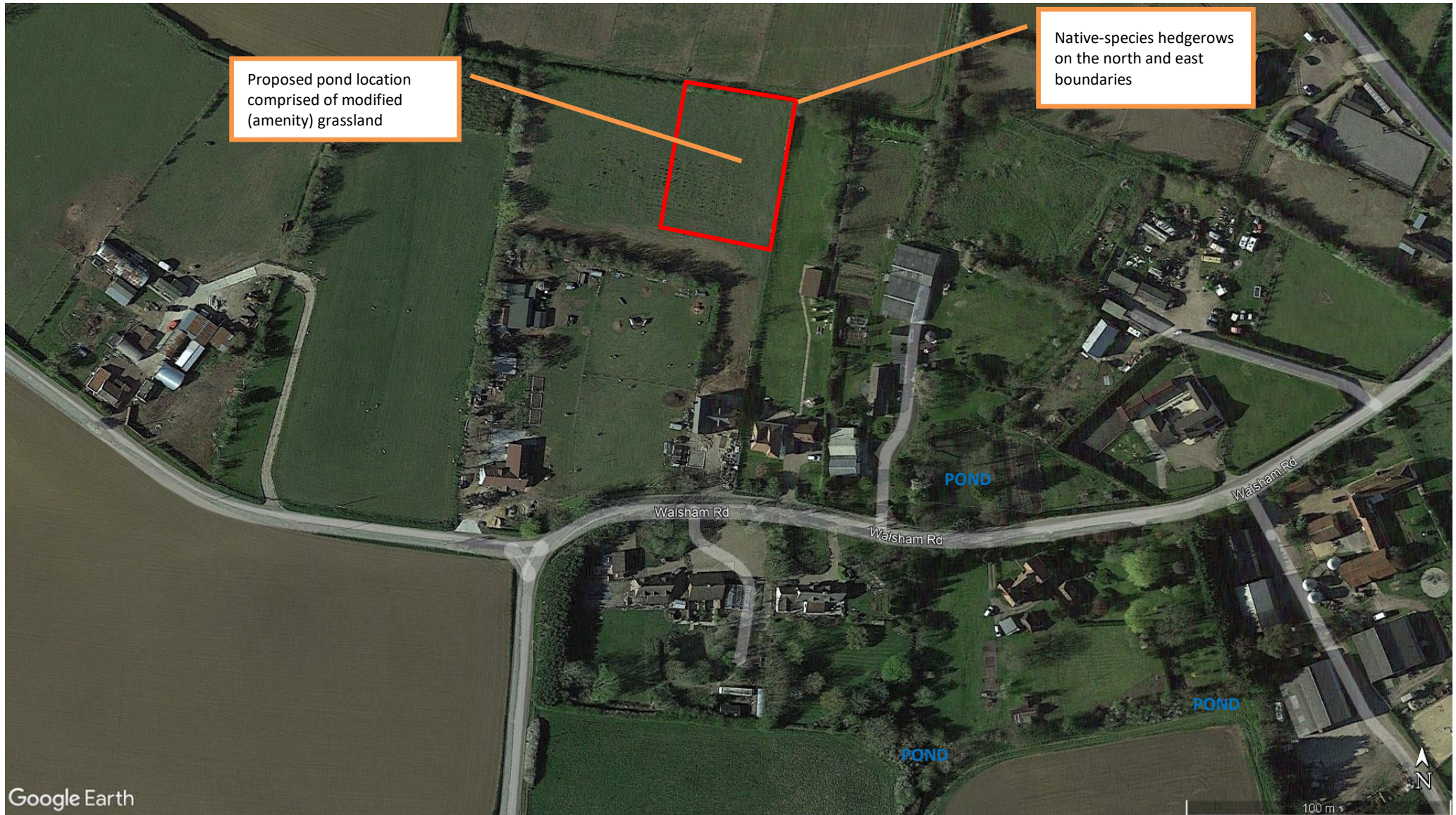
### **4.4. Limitations**

Access to the off-site ponds within 250m of the proposed development site was not possible. Based on the scale of the proposed development, this is not considered to be a significant limitation, as there is a negligible risk to great crested newts even if present within surrounding ponds.

### **4.5. Further survey recommendations**

None.

Figure 3: Results map of survey area (red line)



## 5. Ecological Impact Risk Assessment

### 5.1. Potential Impacts

#### 5.1.1. Designated nature conservation sites

The small and confined extent of the proposed development presents no risk of impact to the nearest statutory and non-statutory designated nature conservation sites. A *neutral* impact on designated nature conservation sites is predicted for the construction and use of the new pond.

#### 5.1.2. Habitats

The grassland habitat on the site are associated with regular amenity garden use, and the proposal is considered to result in a positive impact by way of providing a source of open water for nearby wildlife. Pond creation and management recommendations for the benefit of wildlife are provided in the Enhancements Section 6.

The hedgerows will be retained, but there is a potential for them to be damaged by machinery during the works. Mitigation is advised.

#### 5.1.3. Protected species

##### Mammals

No negative impacts to any local badger or bat populations is expected.

There is a potential for *minor negative* impacts on a local hedgehog population by way of accidents occurring to transient hedgehogs during the construction phase. Mitigation is advised. Boundary exclusion fencing is not proposed along site boundaries, and therefore no operational impacts are predicted.

##### Birds

As the hedgerows are being retained, no negative impacts to nesting birds is predicted, i.e. a *neutral impact*.

##### Reptiles

Given an expected site absence, a *neutral* impact on reptiles is predicted.

##### Amphibians

Given an expected site absence, a *neutral* impact on amphibians is predicted from the construction phase. Once established, the pond will have the potential to provide benefits to any local amphibian populations.

### 5.2. Cumulative effects

No significant development projects expected to impact the same populations of protected species were found in the vicinity. Therefore no cumulative effects are predicted.

## 5.3. Mitigation Measures

### 5.3.1. Habitats

The boundary hedgerows will need to be protected during the construction of the pond. A suitable exclusion fencing set 3m from the hedgerow edge is considered to be appropriate to protect stems and root systems.

### 5.3.2. Protected species

#### Hedgehogs

Between March and November, any excavated pit or trench that will be left open overnight will either be completely covered by weighted OSB sheeting (or similar), or alternatively will be provided with an escape route. A means of escape can be achieved by a graded slope or by using boards (no less than 20cm wide) in two locations to a maximum incline of 20° / 1:2.75.

Wet concrete must not be left exposed overnight.

All stored construction materials will be kept either on an area of hardstanding or raised off the ground (e.g. on pallets) to prevent them being used as temporary refugia (use as a refuge would increase the likelihood of injury or death to animals when the materials are used/moved). Storage areas, waste material and site compounds are best placed in areas not adjacent to suitable off-site or retained habitat which may act as a resting place for hedgehogs.

## 5.4. Mitigation Licensing for European Protected Species

There are no European Protected Species mitigation licence requirements anticipated for the proposed pond creation.

## 5.5. Residual impact assessment

Table 2: Residual impact risk assessment

Receptor	Potential impact	Mitigation	Residual impact
Habitats	Minor but insignificant loss of amenity grassland.	Creation of a pond suitable for wildlife colonization (see Enhancements, Section 6)	Positive
	Damage to retained boundary hedgerows	Exclusion fencing 3m from hedge edge to prevent damage	Neutral
Hedgehogs	Minor negative impacts through entrapment in open excavations/ untidy site if left overnight	Cover all open excavations if left overnight or leave with shallow graded ends. Limiting ground works to Nov-Feb else covering pits and wet concrete overnight, storing materials away from boundaries and on hardstanding/pallets	Neutral

## 6. Enhancements

### 6.1. Pond creation

The creation of a pond, as shown in Figure 2, is a well-documented way of providing an incredibly valuable resource for wildlife (Sayer *et al.* 2013). Pond creation is site-specific, and until the process starts it is not pragmatic to prescribe exact details for the methods of creation and for the proportions of the finished pond. However, the following guidelines are to be followed:

- Pond creation is recommended to commence between August and October, due to the ground being easiest to work;
- The use of hand tools or a toothed bucket digger is recommended to create an uneven finish which increases microhabitat diversity;
- The pond edges will be gently sloping (gradient no steeper than 1 in 10), and excavated spoil may be used to create a raised pond edge;
- It is not necessary for the pond depth to exceed 1.2m, so long as a natural pond lining can be achieved;
- The pond will encompass a range of depths including shallow areas less than 30cm deep;
- The pond will have an irregular shape;
- If a water source is required this will be rainwater or ground water only, but also not direct run-off from ditches or drains which could carry pollutants or nutrient loading;
- Avoid fish stocking;
- The pond will be stocked with native plant species only (e.g. common reed *Phragmites australis*) from a reputable source to avoid introducing non-native species or diseases.

### 6.2. Pond management action prescriptions

Management actions have been set out in the following Table and are prescribed for five years to ensure establishment (this schedule can be rolled-over indefinitely). A site inspection each year during the growing season will enable the identification of management alterations.

Table 3: Management action prescriptions

Ecological feature	Action	Implementation year (post development)	Timing	Details
Pond	Aquatic vegetation removal	Year 2 or 3 (depending on growth)	July - September	The optimum plant cover is between 60 and 85% of the surface area, therefore remove no more than a quarter of the aquatic plants present in any one cycle
	Silt removal	Year 5	September - November	Depending on siltation rate, remove no more than a quarter of the pond sediment every three to five years. Do not steepen the water's edge profile or reduce the extent of the drawdown zone



Ecological feature	Action	Implementation year (post development)	Timing	Details
	Pond bank vegetation cutting	Year 2 or 3 (depending on growth)	October - February	To control vegetation such as nettle and bramble or shading shrubs and trees, cutting may be required. For wildlife this cutting is best done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge
	Management review	Year 5	April - September	Assessment of the pond to ensure it is functioning as expected as a wildlife pond. Review of management actions required if pond is not functioning as expected, using easily accessible information <sup>3</sup>

## 7. Conclusions

An ecological impact assessment of a proposed pond creation project at Wagtails, Wattisfield makes the following predictions:

- No negative impacts to nearby statutorily and non-statutorily designated nature conservation sites.
- No negative impacts to valued habitats. There is high potential for overall site biodiversity enhancement by following a wildlife-oriented pond creation and management strategy.
- No impacts to protected species.
- A potential for a minor negative impact on local hedgehogs during the construction phase, which can be mitigated by fitting any open excavations with escape ramps and having precautionary methods of material storage and movement.

<sup>3</sup> Suffolk Wildlife Trust Pond Restoration information, available online: <https://www.suffolkwildlifetrust.org/pond-restoration-and-management>; Accessed July 2023

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## Appendix 1: Relevant Legislation and Policy Guidance

### Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981, Section 9, states protections from intentional or reckless actions upon the certain animal species that are listed in Schedule 5 and the plant species listed in Schedule 8. The Schedule 5 listed species have different types of safeguards depending on whether they are protected by Section 9.1, 9.2, 9.4 and/or 9.5.

- Section 9.1 – protection from killing or injury; includes water vole, grass snake, common lizard, slow-worm and adder.
- Section 9.4a – protection from intentional damage or destruction to any structure or place used for shelter or protection; includes water vole.
- Section 9.4b – protection from intentional disturbance while occupying a structure or place used for shelter or protection; includes all bat species, hazel dormouse, otter, water vole and great crested newt.
- Section 9.4c – protection from access to any structure or place used for shelter or protection being obstructed; includes all bat species, hazel dormouse, otter, water vole, great crested newt and natterjack toad.

All wild birds are protected from destruction of their nests (with minor exceptions) under the Wildlife and Countryside Act 1981. A higher level of disturbance protection is extended to Schedule 1 species, such as barn owls, and their active nest sites.

Plants listed under Schedule 9 of the act are invasive and generally need controlling on a development site. It is an offence to “plant or otherwise cause to grow in the wild”, the invasive species listed on this schedule. Disposal of the plants or soil contaminated by them may need to be to a controlled waste site.

### Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017, as amended by the Conservation of Habitats and Species Amendment (EU Exit) Regulations 2019, broadly retains the habitat and species protections that are required under the European Habitats Directive (EC Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna) and the Birds Directive (Council Directive 2009/147/EC on the Conservation of Wild Birds). The statutory protection for European Protected Species and Natura 2000 sites (now referred to as ‘National Site Network’ sites) remains unchanged for now.

This legislation affords very strict protection to its Schedule 2 listed species, which includes all species of bats, hazel dormouse, otter, great crested newt and natterjack toad (Habitats Directive Annex IV species). Developments that are likely to have a significant impact upon any Schedule 2 listed species (e.g. bats and great crested newts) require a European Protected Species mitigation license from Natural England in order for the development to legally proceed.

### Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities Act 2006 (NERC) came into force on 1 October 2006. Under Section 40 of the Act, all public bodies (including planning authorities) now have a legal duty to consider biodiversity in their work (i.e. a material consideration for planning applications). As such, in order to increase the likely success of any planning application, consideration should be given to enhancing the biodiversity value of the site following redevelopment. Section 41 lists priority (Principal Importance) habitats and species which are to be particularly considered with respect to potential impacts, and may include species which are not otherwise protected by UK legislation.

## Appendix 2: Photographs



Photograph 1: Area of grassland proposed for new wildlife pond



Photograph 2: Native-species hedgerow on property boundary