



Letchworth Garden City Heritage  
Foundation Development: LG1 Public  
Consultation - Ecology

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# 1 Introduction

## 1.1 Background

Letchworth Garden City Heritage Foundation (LGCHF) is a self-funding charitable organisation with a significant landholding in Letchworth Garden City. The Heritage Foundation manages its property portfolio to generate income which is invested back into the community for the long-term benefit of Letchworth Garden City.

North Hertfordshire District Council identified a number of potential housing development sites in their Local Development Framework for 2011 to 2031, which underwent consultation in early February 2013. Land to the north of Letchworth Garden City (parcel LG1), was included within this consultation. In addition to the land identified by North Hertfordshire District Council, Letchworth Garden City Heritage Foundation identified additional sites with potential to support housing growth.

Ricardo Energy & Environment ('Ricardo', formally Cascade Consulting) was commissioned in November 2013 by Letchworth Garden City Heritage Foundation to provide the Foundation's Board with a strategic understanding of the key ecological constraints to this potential development. The study sought to identify potentially significant constraints within the study area and ecological impacts which could arise as a result of these development proposals required by the Board to enable them to identify whether or not they can support the development proposals.

Ricardo have continued to provide ecological support to LGCHF including undertaking, ecological appraisals, protected species reports and a hydrology and flood risk assessment. A summary of the assessments undertaken by Ricardo Energy & Environment on behalf of LGCHF is provided below:

### **Site Overview Reports**

- Letchworth Garden City Heritage Foundation Housing Development Technical Report: Update Preliminary Ecological Appraisal Report, Ricardo, 2016
- Letchworth Garden City Heritage Foundation Housing Development Technical Report: Update Preliminary Ecological Appraisal Report, Ricardo, 2017 revised version
- Letchworth Garden City Heritage Foundation Housing Development: Housing Development: Executive Summary Report – Hydrology and Flood Risk Assessment, Ricardo, 2017

### **Species Specific Reports**

- Letchworth Garden City Heritage Foundation Housing Development: Reptile Presence/Likely Absence Survey Report, Ricardo, 2017
- Letchworth Garden City Heritage Foundation Housing Development: Housing Development Technical Report: Great Crested Newts eDNA Report, Ricardo, 2017
- Letchworth Garden City Heritage Foundation Housing Development: Badger Survey Report, Ricardo, 2017
- Letchworth Garden City Heritage Foundation Housing Development: Bat Activity Survey Report, Ricardo, 2018
- Letchworth Garden City Heritage Foundation Housing Development: Preliminary Ground Level Roost Assessment – Bats, Ricardo, 2018
- Letchworth Garden City Heritage Foundation Housing Development: Bat Tree Climbing and Dawn Re-entry Survey, Ricardo, 2018
- Letchworth Garden City Heritage Foundation Housing Development: Wintering and Breeding Bird Surveys, Ricardo, 2018
- Letchworth Garden City Heritage Foundation Housing Development: Dormouse Survey, Ricardo, 2018

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## 1.2 Public Consultation Event, 11/07/29 – Ecology

Ricardo were commissioned by LGCHF to provide ecological assistance during a public consultation event, held on 11<sup>th</sup> July 2019 at One Garden City, regarding the ecological interest of land to the north of the Grange, known as 'LG1' in the North Hertfordshire District Council Local Plan. This followed significant interest on the possible impact of a development on this site on the natural environment and was advertised via the LGCHF website as well as by informing local interest groups.

As summarised in **Section 1.1**, Ricardo have been undertaking a range of ecological surveys of this site on behalf of LGCHF and were therefore uniquely placed to provide professional support and site knowledge in relation to the development proposals for this site.

The consultation event was attended by Ricardo Ecologists Ken Lipscomb and Ben Jones both of whom have extensive knowledge of LG1 having undertaken multiple ecological surveys of the site. And prepared associated reports. The event was also attended by LGCHF employees David Ames, Elizabeth Towler, Joanne Burnham and Emma Hone and six members of the public who are also members of Save The World's First Garden City (STWFGC).

Save The World's First Garden City produced a Desktop Biodiversity Report<sup>1</sup> which was also subject to the discussions conducted during the consultation event.

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<sup>1</sup> Save The World's First Garden City: Desktop Biodiversity Report, Mr Coates and Dr Desiree Scott, 2017

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## 2 Event Discussions

The Public Consultation Event centred around the following key discussions/key themes presented below.

### 2.1 Introductions

At the beginning of the event, introductions were made by LGCHF, Ricardo and STWFGC representatives, each detailing the context of their involvement/interest in the proposed development. Ricardo's introduction included details of their professional experience in ecology, qualifications and professional memberships and adherence to industry professional ethics and standards.

### 2.2 Overview of the Ecology Work Undertaken at LG1 Since 2016

Ricardo began by providing an overview of the survey work undertaken to date on site since 2016, outlining and summarising the assessments listed in **Section 1.1**. In addition, Ricardo explained how the site was initially assessed in terms of ecology, through the undertaking of a Preliminary Ecological Appraisal (PEA) which provided the rationale and scope for the further surveys to be undertaken. It was also explained that the required surveys were determined by particular legislative drivers relevant to developments of this type and the flora and fauna likely to be impacted. Furthermore, it was explained that such assessments were undertaken in accordance with nationally recognised good practice guidelines, a list of such guidelines utilised is provided as **Appendix 3**.

Ricardo were questioned about the number of days spent on site and responded that the number of days was greater than ten, owing to the various surveys undertaken, some of which requiring more than one visit. Survey visits were conducted during a range of seasons and at different times of day and night.

Ricardo also added that the surveys undertaken to date will need to be repeated and additional ones conducted to secure a robust baseline against which to measure biodiversity net gain.

### 2.3 Discussion Surrounding the Scope of the Ecology Surveys

The key types of survey that were discussed in terms of scope and requirement related to badgers, great crested newts (GCN), invertebrates (particularly moths) and detailed botanical surveys such as National Vegetation Classification (NVC) surveys.

#### Badgers

The scope of the badger survey was questioned owing to the fact that badger can occupy large territory ranges and as such may use the site. Ricardo explained that the conservation status of badger in the UK was common and widespread and the legislation relevant to badgers relates to welfare rather than conservation. It was explained that the survey area for badger comprised the site and the addition of a 30m buffer surrounding the site, as this is considered to be the maximum likely distance at which a development may directly impact a sett.

#### Great crested newt

GCN were briefly discussed including their known presence in Norton Pond to the east of the site. Ricardo explained that previous attempts had been made to survey two additional ponds within 500m of the site however, these were both at an extreme distance from the site and due to the limited size and low quality of the habitat to be lost within 500m of these ponds it was likely that no translocation/Natural England licence would be required.

#### Invertebrates

The existence of numerous invertebrate records included within STWFGC's Desktop Biodiversity Report<sup>2</sup> was highlighted and it the requirement to undertake an invertebrate survey was discussed.

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<sup>2</sup> IBID Page 4.

Ricardo explained that the records identified through the Ricardo desk study (as undertaken through the PEA) did not relate to any invertebrate species that are afforded protection through UK legislation and as such there were no legislative drivers for such a survey to be undertaken. Furthermore, the habitats represented on site were generally of poor quality for invertebrates owing to its intensive arable nature.

Invertebrates, particularly moths were identified as a key concern of STWFGC's and as such LGCHF suggested they would be willing to commission a moth survey of the site to inform the ecological baseline and biodiversity considerations of subsequent development proposals.

### NVC

The need to undertake detailed botanical surveys was discussed, as Ricardo stated no NVC surveys had been undertaken at the site. Ricardo explained that the records identified through the Ricardo desk study (as undertaken through the PEA) did not relate to any botanical species that are afforded protection through UK legislation and as such there were no legislative drivers for such a survey to be undertaken. Furthermore, the site comprised predominantly intensive arable land and were unlikely to support any notable habitats or plant species. It was also explained that such a conclusion was arrived at having undertaken an Extended Phase 1 Habitat survey as part of the PEA.

## 2.4 Information presented by members of public/STWFGC at the Consultation Event

Ricardo were informed of the potential presence of a badger sett to the west of the site. No setts have been recorded on-site during any of the protected species surveys undertaken by Ricardo to date however, Ricardo explained that a number of the protected species surveys would require updating prior to any development taking place and, as such, the area in question would not go without further consideration. We were told of the existence of a badger sett that we have not encountered - this will be revisited to confirm.

There was a lengthy discussion in relation to recent cutting/spraying of arable field margins and how this had regrettably been done in order to comply with a delayed Natural England Higher Level Stewardship (HLS) agreement in order to prepare the ground for sowing of a specific seed mix. The cutting of field margin habitats was challenged for its impact to existing biodiversity/floristic diversity however, Ricardo and LGCHF explained that field margins would succeed to scrub if left unmanaged and that bare ground left unsown would be colonised by a low number of aggressive grass and ruderal species which would dominate the field margin, resulting in a habitat with low floristic diversity.

Concerns were raised about a large amount of fly-tipped waste that had been ploughed into the ground during the aforementioned field margin management. Ricardo did not respond to these concerns as this was not in relation to the proposed development of LG1, but LGCHF will be taking this up with its farm tenants.

## 2.5 Discussing the Desktop Biodiversity report

The findings of the Desktop Biodiversity Report were discussed particularly in relation to the large numbers of records identified within 1km of the site as well as their specific relevance to the site. Ricardo acknowledged that there were numerous biological records within 1km of the site but asserted that many of those records were not relevant to the site as the habitats required to support the species in question (e.g. wetland birds such as kingfisher *Alcedo atthis* and moorhen *Gallinula chloropus*) were not present on site.

## 2.6 Key theme of public interest

The overriding theme of public interest in relation to the development of the site was with respect to biodiversity loss and the conservation of overall biodiversity. LGCHF have committed to the objective of a net gain in biodiversity and retention of existing semi-natural vegetation such as hedgerows and woodlands. Extensive ecological surveys have been undertaken by Ricardo, the findings of which will be used to avoid or minimise impacts to protected and notable species and support LGCHF's mitigation strategy. Ricardo also iterated that the vast majority of the habitat to be developed was arable monoculture which is of little biodiversity value. Ricardo and LGCHF described examples of mitigation

and enhancements such as the incorporation of bird and bat boxes into the development design including a range of box designs, heights and aspects predominantly located on/integral to buildings.

## 2.7 Ricardo thoughts on Masterplan

LGCHF presented the winning conceptual masterplan design and confirmed they would be maintaining influence over the project, through design, development and stewardship phases. The concept was based heavily around the promotion of biodiversity with the retention and creation of ecological networks being a key theme. LGCHF stated that hedgerows and trees would be almost entirely retained across the site except for a few localised exceptions for access. In addition, the following features were described as being part of the development proposals:

- Habitat creation through SUDS design.
- All hedges and trees to be retained and enhanced with additional planting.
- Bird/bat boxes as integral elements in the buildings.
- Additional 2000 native trees to be planted as a buffer around the site.
- Landscape led design incorporating meadow creation, wetlands and woodland grant schemes.
- The scheme is aiming for a net biodiversity gain.

Ricardo considered the conceptual masterplan to be well thought out and delivered on its key themes of biodiversity networks through development design, the considered incorporation of SUDS and landscape planting. Ricardo considered the concept was likely to achieve a net biodiversity gain in comparison to the existing low diversity arable land where the development would be focussed.

## 2.8 Concluding remarks

It was noted by LGCHF that STWFGC were opposed to the proposed development of LG1 however, LGCHF were keen to take the concerns of STWFGC on board and work together to address their issues regarding biodiversity with an aim to achieve a biodiversity net gain at the site.

LGCHF stated that it understood the concerns of local residents and would be making best endeavours to mitigate the impact, which it hoped it would be able to do in partnership with local interest groups.



# Appendices

**Appendix 1:** Legislation and Planning Policy

**Appendix 2:** Ecological Survey Work Summary

**Appendix 3:** Ecological Best Practice Guidance Followed by Ricardo in Their Assessment of LG1

# Appendix 1 – Legislation and Planning Policy

## *The Wildlife & Countryside Act 1981 (as amended)*

Provides for **designation** and protection of Sites of Special Scientific Interest (SSSI), which are areas that represent the most valuable habitats in the UK for nature conservation.

The Act creates the following **offences**:

- To intentionally kill, injure, or take any wild bird or their eggs or nests (with exception to species listed in Schedule 2). Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young.
- To intentionally or recklessly kill, injure, or take, possess, or trade in any wild animal listed in Schedule 5, and intentionally or recklessly interfere with places used for shelter or protection, or disturb animals occupying such places.
- Certain methods of killing, injuring, or taking wild animals listed in Schedule 6.
- To pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.
- The release of certain non-native animals and planting of plants listed in Schedule 9.

It also provides a mechanism making any of the above offences legal through the granting of licences by the appropriate authorities.

## *Conservation of Habitats and Species Regulations 2017*

The principal means by which the European Habitats Directive is transposed in England and Wales.

Provide for the **designation** and protection of a network of 'European Sites' (also termed Natura 2000), including Special Areas of Conservation (SAC) and Special Protection Areas (SPA).

Regulation 43 creates the following offences relating to European Protected Species (EPS):

- deliberately capture, injure or kill any wild animal of a European Protected Species;
- deliberately disturb animals of any such species in such a way as to be likely to:
  - impair their ability to survive, breed, rear or nurture their young, hibernate or migrate, or
  - significantly affect the local distribution or abundance of the species to which they belong;
- deliberately take or destroy the eggs of such an animal; or
- damage or destroy a breeding site or resting place of such an animal.

The Regulations also make it an offence (subject to exceptions) to deliberately pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 5.

However, the actions listed above can be made lawful through the granting of licences (European Protected Species Licence) by the appropriate authorities (Natural England in England). Licences may be granted for a number of purposes, but only after the appropriate authority has determined that the following regulations are satisfied:

- the works under the licence are being carried out for the purposes of 'preserving public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment'.
- there is 'no satisfactory alternative'
- the action 'will not be detrimental to the maintenance of the population of the species concerned at favourable conservation status in their natural range'.

To apply for a licence, the following information is required:

- The species concerned.
- The relative size of the population at the site (note this may require a survey to be carried out at a

particular time of the year).

- The impact(s) (if any) that the development is likely to have upon the populations.
- What measures will be conducted to mitigate for the impact(s).

### *The Protection of Badgers Act 1992*

This makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so and to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it.

Under Section 10 (1)(d) of the Protection of Badgers Act 1992, a licence may be granted by Natural England to interfere with a badger sett for the purpose of development, as defined by Section 55(1) of the Town & Country Planning Act 1990.

### *The Wild Mammals (Protection) Act 1996*

The Wild Mammals (Protection) Act 1996 makes it an offence for any person to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

### *The Animal Welfare Act 2006*

This imposes a duty of care on anyone responsible for an animal to take reasonable steps to ensure that the animal's needs are met. This means that a person has to look after the animal's welfare and ensure that it does not suffer. The Act says that an animal's welfare needs include:

- a suitable environment;
- a suitable diet;
- the ability to exhibit normal behaviour patterns;
- any need it has to be housed with, or apart from, other animals; and
- protection from pain, suffering, injury and disease.

With regards to development, this may have implications when capture and translocations of animals are proposed.

### *Natural Environment & Rural Communities (NERC) Act 2006*

Section 40 of NERC carries an extension of the earlier CRoW Act biodiversity **duty to public bodies and statutory undertakers** to ensure due regard to the conservation of biodiversity. Section 41 requires the Secretary of State, as respects England, to publish a list of species and habitats which are of 'principal importance for the purpose of conserving biodiversity'. These lists generally reflect the species and habitats previously listed as priorities under the UK Biodiversity Action Plan.

### *National Planning Policy Framework*

This framework replaces Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS 9) (ODPM 2005b) and sets out the view of central Government on how planners should balance nature conservation with development.

The NPPF states that development plan policies and planning decisions should be based upon up-to-date information about the environmental characteristics of their areas, including biodiversity. It also states that the aim of planning decisions should be to prevent harm to biodiversity conservation interests and to 'promote the preservation, restoration and re-creation of priority habitats, ecological networks and the recovery of priority species'.

Where determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principals; 'if significant harm 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'; and, 'planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees

found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss’.

This means that full ecological surveys should be carried out and suitable mitigation measures proposed prior to any planning application being submitted.

### ***Biodiversity 2020: A strategy for England's wildlife and ecosystem services***

This biodiversity strategy for England builds on the Natural Environment White Paper and the earlier UK Biodiversity Action Plan. It provides a comprehensive picture of how Government is implementing our international and EU commitments and sets out the strategic direction for biodiversity policy up to 2020. Its mission is to:

*“halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.”*

In relation to planning and development its priority is to:

*“take a strategic approach to planning for nature within and across local areas. This approach will guide development to the best locations, encourage greener design and enable development to enhance natural networks. We will retain the protection and improvement of the natural environment as core objectives of the planning system.”*

## Appendix 2 – Ecological Survey Work Summary

Species	Type of survey	Method and number of visits	Timing	Progress	Results Summary	Requirement for future survey work?
Habitats, protected and notable species	Preliminary Ecological Appraisal (PEA)	Walk the site, categorise and map the habitats present in accordance with the Phase 1 Habitat Survey methodology. Undertake a desk study to identify designated sites and records of protected and notable species. Assess the potential for protected and notable species on site to inform future survey requirements. One visit.	Any time of year but May – September optimal for identifying flowering plants.	Completed in October 2016. Final report in January 2017.	Typical lowland farmland habitats identified including arable, hedgerows, broadleaved woodland and standing water. The potential for the following protected species was identified: badgers, bats, birds, dormice, great crested newts and reptiles. Further surveys were advocated for these in a proposal in March 2017. The required surveys were divided between 2017 and 2018.	It would be prudent to update the survey prior to future ES production.
Badger	Field sign search – presence/absence	A systematic search of the habitats on site for diagnostic field sign – especially the location and type of any setts. One visit.	Any time of year but spring and autumn most reliable.	Survey completed – May 2017. Final report in June 2017.	No definitive evidence of badger observed – certainly no setts. Badger presence suspected due to finding a predated hedgehog carcass in the northern part of the site. Badger footprints subsequently seen during a winter bird survey near Norton Road confirming they are in the wider area.	It would be prudent to update the survey prior to future ES production.
Great crested newt	Environmental DNA (eDNA) – presence/absence	Two ponds required survey. 20 water samples required per pond. One visit.	Mid-April-end June.	Survey not complete because of lack of access to ponds.	N/A	Liaise with Anglian Water for results from their site from adjacent housing development. It would be prudent to try to secure access for the surveys prior to future ES production.

Species	Type of survey	Method and number of visits	Timing	Progress	Results Summary	Requirement for future survey work?
Reptiles	Presence/absence survey using artificial cover objects	Artificial cover objects (squares of roofing felt) are positioned regularly in areas of suitable reptile habitat and checked on seven separate occasions.	April – October with April/May and September being optimal. Suitably mild but not hot weather conditions required.	Survey completed – August 2017. Final report in September 2017.	No reptiles encountered on site during the survey (or any other survey) Likely absence.	It would be prudent to update the survey prior to future ES production.
Bats	Tree roost assessment of TN1-TN4 (identified during 2016 PEA)	Tree climbing to inspect potential roost features by a licenced bat worker and tree climber. One visit.	Any time of year.	Survey completed – August 2018 proposal. Report completed October 2018.	Tree 1 retained its score as offering moderate potential for roosting bats – three other trees were downgraded to either low or negligible potential. Tree 1 required a single dawn re-entry survey (see below).	N/A
Bats	Woodland survey – tree roost potential	Ground assessment for bat potential of trees within a woodland strip to the north of the site. One visit.	Any time of year. Undertaken in May 2018.	Survey completed – May 2018. Report completed July 2018.	Three trees were assessed as requiring a climb and inspect survey (seven in total). Three trees were assessed as requiring ground-based endoscope inspection and one high potential tree that was unsafe to climb required three dusk emergence/dawn re-entry surveys.	N/A
Bats	Additional tree roost assessments of seven new trees identified during May 2018 woodland survey (as detailed above)	Ground endoscope of three trees, climbing of additional three trees and three dusk emergence or dawn re-entry surveys of high potential tree that is unsafe to climb (with two of these visits to be completed by end of August)	August and September 2018	Survey completed – August and September 2018. Report completed October 2018.	All trees highlighted as offering high/moderate potential for roosting bats were downgraded to either low or negligible potential upon close inspection and therefore require no further survey. A single dusk emergence survey was carried out on Tree 1 in early September 2018 and no evidence of roosting bats was identified.	It would be prudent to conduct 2 x dawn surveys of tree TN1 (moderate potential) prior to future ES production.

Species	Type of survey	Method and number of visits	Timing	Progress	Results Summary	Requirement for future survey work?
Bats	Activity survey – habitat usage for commuting and foraging	Walked transects around the site with bat detectors coupled with static monitoring equipment. 3 survey periods.	Minimum of one survey visit in each of spring (April/May); summer (June/July); and autumn (August/September).	Survey completed – October 2018. Data analysis is ongoing. Report completed December 2018.	Low numbers of common species were recorded on all transect surveys: common pipistrelle, soprano pipistrelle and noctule. Serotine and brown-long eared bat were also encountered. Dawn survey in autumn cut short by heavy rain but some bat activity recorded prior to that and have back-up data from the static detectors. Common pipistrelle was the most commonly recorded species, although there was notable soprano pipistrelle activity during autumn. Other species recorded included noctule, Nathusius' pipistrelle, brown long-eared bat, serotine and unidentified <i>Myotis</i> species. It is possible that Leisler's bat were also encountered on site although it was not possible to confidently distinguish their calls from the much more common noctule bat. All of the species recorded are known to exist in Hertfordshire.	N/A - the species assemblage and their use of habitats is unlikely to change radically prior to the ES being prepared
Dormice	Presence/absence	Install a minimum of 50 nest tubes in suitable habitat. Tubes checked monthly during the active season for dormice.	March installation, with subsequent monthly visits from May to October inclusive.	Survey completed. The 70 nest tubes have now been removed from site. Report completed October 2018.	No dormice have been recorded during any of the survey visits. Likely absence.	N/A

Species	Type of survey	Method and number of visits	Timing	Progress	Results Summary	Requirement for future survey work?
Birds	Wintering bird survey – presence/absence and relative abundance	Wintering Farmland Bird Survey and the standardised BTO/JNCC/RSPB Breeding Bird Survey (BBS) survey technique. Surveyors record bird activity by following six 1km long transects per visit. Three visits	Three visits to be undertaken in December 2017 and January and February 2018.	Survey completed. Report completed September 2018.	The site supports a range of wintering birds including those listed on Schedule 1 part 1 and part 2 of the Wildlife and Countryside Act as amended and red and amber-listed species (on the Birds of Conservation Concern list) typically associated with farmland habitats. Key winter migrants observed were redwing and fieldfare flocks.	N/A – the species assemblage and their use of habitats is unlikely to change radically prior to the ES being prepared
Birds	Breeding bird survey – presence/absence and relative abundance	BTO/JNCC/RSPB Breeding Bird Survey (BBS) survey technique. Surveyors record bird activity by following six 1km transects per visit. Two visits.	Two breeding bird survey visits were undertaken in May and June 2018.	Survey completed. Report completed September 2018.	The site supports a range of breeding birds including those listed on Schedule 1 part 1 and part 2 of the Wildlife and Countryside Act as amended and red and amber-listed species (on the Birds of Conservation Concern list) typically associated with farmland habitats. This includes skylark, linnet, grey partridge and yellowhammer. Corn bunting have not been observed during any of the surveys conducted at this site. Key summer migrants observed included whitethroat and lesser whitethroat.	N/A



## Appendix 3 – Ecological Best Practice Guidance Followed by Ricardo in Their Assessment of LG1

Andrews, R. (2013). Classification of badger setts *Meles meles* in the UK: A Review and Guidance for Surveyors. CIEEM, In Practice.

BTO/JNCC/RSPB (2018) Breeding Bird Survey Instructions, British Trust for Ornithology Norfolk.

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

Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3<sup>rd</sup> edn). The Bat Conservation Trust, London.

Gillings, S., et al. (2008) Winter Farmland Bird survey. Norfolk: British Trust for Ornithology

Herpetofauna Groups of Britain and Ireland (1998) Evaluating local mitigation/translocation: best practice and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARGs). HGBI, c/o Froglife, Halesworth. Unpubl.

<https://www.gov.uk/guidance/great-crested-newts-surveys-and-mitigation-for-development-projects>

JNCC, (2010), Handbook for Phase 1 habitat survey - a technique for environmental audit, ISBN 0 86139 636 7

Mitchell-Jones, A.J. & McLelsh, A.P. (eds.) (2004) Bat Workers Manual (3<sup>rd</sup> edn.). JNCC

Oldham, R.S., Keeble, J., Swan, M.J.S, and Jeffcote, M. (2000) *Evaluation the suitability of habitat for the Great Crested Newt (Triturus cristatus)*

The Dormouse Conservation Handbook, Second Edition, Bright. P, Morris. P, Mitchell-Jones. T, 2006



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