

KJ Ecology Ltd

Preliminary Ecological Appraisal
for
Cranmore Lane, Holbeach.

January 2023



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Executive Summary

Barbara Griffin-Wright of ADSDF Ltd on behalf of Runa Nazan are applying to construct a residential development on land off Cranmore Lane, Holbeach. To comply with planning procedures Barbara Griffin-Wright of ADSDF Ltd on behalf of Runa Nazan commissioned Kevin Johnson of KJ Ecology Ltd to carry out a Preliminary Ecological Appraisal on the 12th December 2022.

The proposed development site is off Cranmore Lane, Holbeach and is at the South-west edge of the parish (Grid Ref TF 3476 2376).

The Eastern boundary consists of a metal security fence with metal gate and at the Northern end this has become overgrown with Cherry Laurel (*Prunus laurocerasus*) and Privet (*Ligustrum ovalifolium*) hedge at the Southern end. There is a ditch on the roadside. The Northern boundary is a Privet hedge interspersed with Aspen (*Populus tremula*) trees which then extends along the Western boundary. The rest of the Western boundary is a post and wire fence adjacent to the arable field and wooden fence panels around the garden. The Southern boundary is a post and wire fence.

The internal habitat of the site consists of a central tarmac road with brick walls at the Western end. There are hedges either side of the central road dividing each area into three compartments. Between these compartments are areas of grass, Tall Ruderal herbs, Bramble (*Rubus fruticosus* agg.) scrub along with piles of overgrown rubble, old building bases and a container.

The immediate vicinity consists of arable fields and a dwelling with garden and duck pond.

On the 16th December 2022 and 10th January 2023 the following methodologies were carried out for the land off Cranmore Lane, :

1. Desk top study – To establish what protected habitats and species are within the area;
2. Preliminary Ecological Appraisal – Used to identify the likelihood of any protected species been found on the site, identify any features, habitats or species which would constitute potential constraints to any development which might take place, and to make recommendations for mitigation and/or further survey work, as appropriate.

The surveys found that:

1. The desk top study revealed that there is one non-statutory site within 2kms of the proposed development - Guy Wells Pit LWS. There are 24 protected and 28 priority species recorded within 2kms of the planned development including Badger (*Meles meles*);
2. The Preliminary Ecological Appraisal found a matrix of habitat and garden style hedges. The only possibility of protected species being on site are nesting birds and amphibians, and reptiles (if present in the area) especially with the rubble piles.

From these survey results, KJ Ecology Ltd has no objections to the proposed dwelling off Cranmore Lane, Holbeach, as long as the following recommendations are followed:

1. As there is potential for nesting birds on site which are protected under the Wildlife and Countryside Act 1981 (as amended), then if the works are to start in the bird nesting season (March to August) then a nesting bird survey will be required before works commence;
2. As there is a suitable ditch for amphibians adjacent to the site, then a precautionary method statement needs to be applied to prevent amphibians being killed or injured as all amphibians are protected under the Wildlife and Countryside Act 1981 (as amended). This includes:
 - a. All materials to be stored off the ground (for example on pallets) to minimise the likelihood of amphibians accessing them for refugia;

- b. All spoil/waste materials to be removed from site at the end of each working day or stored in a skip;
 - c. The site should be maintained as sub-optimal prior to the commencement of works;
 - d. All involved in the construction should be aware of the possible presence of amphibians and know what they look like;
3. As there are piles of rubble on the site, then these should be removed under a watching brief by a trained ecologist in case there are amphibians or reptiles present within them;
 4. A wildflower meadow should be created for the wildlife. This should be cut in late August and if possible, a second cut should be taken in November to reduce the vigour of the grasses. Any other planting around the buildings should include RHS Bee friendly plants;
 5. A variety of bird and bat boxes can be placed around the site;
 6. As there is potential for Hedgehogs within the area, then any trenches need to be covered at night during construction to prevent them from falling in.

Main Report

1 Introduction

1.1 Terms of Instruction

Barbara Griffin-Wright of ADSDF Ltd on behalf of Runa Nazan are applying to construct a residential development on land off Cranmore Lane, Holbeach. To comply with planning procedures Barbara Griffin-Wright of ADSDF Ltd on behalf of Runa Nazan commissioned Kevin Johnson of KJ Ecology Ltd to carry out a Preliminary Ecological Appraisal on the 12th December 2022.

The purpose of the Preliminary Ecological Appraisal is to identify the likelihood of any protected species been found on the site, identify any features, habitats or species which would constitute potential constraints to any development which might take place, and to make recommendations for mitigation and/or further survey work, as appropriate.

1.2 Site Location

The proposed development site is off Cranmore Lane, Holbeach and is at the South-west edge of the parish (Grid Ref TF 3476 2376), as shown in Map 1 (Appendix 1).

1.3 Site Description

The Eastern boundary consists of a metal security fence with metal gate and at the Northern end this has become overgrown with Cherry Laurel (*Prunus laurocerasus*) and Privet (*Ligustrum ovalifolium*) hedge at the Southern end (Photo 1, Appendix 2). There is a ditch on the roadside (Photo 2, Appendix 2). The Northern boundary is a Privet hedge interspersed with Aspen (*Populus tremula*) trees (Photo 3, Appendix 2) which then extends along the Western boundary. The rest of the Western boundary is a post and wire fence adjacent to the arable field and wooden fence panels around the garden (Photo 4, Appendix 2). The Southern boundary is a post and wire fence (Photo 5, Appendix 2).

The internal habitat of the site consists of a central tarmac road (Photo 6, Appendix 2) with brick walls at the Western end. There are hedges either side of the central road dividing each area into three compartments. Between these compartments are areas of grass, Tall Ruderal herbs, Bramble (*Rubus fruticosus agg.*) scrub along with piles of overgrown rubble, old building bases and a container (Photos 7 to 10, Appendix 2).

The immediate vicinity consists of arable fields and a dwelling with garden and duck pond.

1.4 Proposed Development

It is proposed to construct a single dwelling on land off Cranmore Lane, Holbeach as per planning application.

1.5 Report Limitations

This report is for the sole use of the client and its' reproduction or use by anyone else is forbidden unless written consent is given by the author.

The ecological data in this report is only valid for 12 months from the survey date of 16th December 2022, as wildlife, especially Protected Species move about and natural conditions can change over time.

1.6 Background to KJ Ecology Ltd

On the 12th December 2022 KJ Ecology Ltd was appointed to carry out a Preliminary Ecological Appraisal on land off Cranmore Lane, Holbeach. KJ Ecology Ltd is an independent Ecological Consultancy run by Kevin Johnson BSc PgD PGCE MCIEEM (Member of the Chartered Institute of Ecology and Environmental Management) and has several years of experience in environmental consultancy work. This work has ranged from working on the rail, roads, airports, house building projects, barn conversions and pipeline work. Kevin Johnson was initially an Ecology and Environmental Lecturer at various colleges and taught students how to carry out surveys and about the environment. Kevin Johnson then went on to work for a number of ecological consultancies such as Penny Anderson Associates, which is one of the original environmental consultancy companies and is well respected.

2 Methodology

2.1 Desk top study

The purpose of a desk study is to identify any statutory and non-statutory sites of nature conservation importance (such as Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSIs) and County Wildlife Sites (CWSs)) and Protected Species within reasonable distance of the site.

The sources of information used in the desk top study included:

- Lincolnshire Environmental Records Centre;
- Multi-Agency Geographic Information for the Countryside (MAGIC).

2.2 Preliminary Ecological Appraisal

A Preliminary Ecological Appraisal was carried out to Joint Nature Conservation Committee (JNCC) and Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines on the 16th December 2022 by Kevin Johnson of KJ Ecology Ltd who has

numerous years' experience in carrying out Preliminary Ecological Appraisals. The perimeter of the site was walked, then the area inbetween was walked in a zig-zag fashion as much as possible, so that as much wildlife information could be recorded about the site. The immediate area around site was also surveyed for signs of wildlife and how they may influence the proposed development. Two hours was spent on the site looking for signs of wildlife and any species seen were recorded using the DAFOR scale. The DAFOR scale is a way of quantifying the abundance of species on the site as a percentage of the area. All fauna were given a Rare recording unless there were a lot of them. The DAFOR scale used was:

Dominant	Most common species within the survey area >75%
Abundant	Really very common in the survey area.
Frequent	Found the species in several places in the survey area and there was usually more than just a few individuals in each of these places. Also if a species was very common in that part, with many individuals and covered a substantial area.
Occasional	Species that occur in several places in the survey area, but whose populations are usually not very big. Can be used if very common in one small area of habitat within the survey area, but occupies just a small area.
Rare	Species that occur as a small number of individuals in the survey area. This small number of individuals may be located in one place, or scattered over several different locations.

The survey also included:

2.2.1 Habitat and Plant Assessment

The habitat on site was assessed for its ability to support protected species and whether it is of National/ Local importance. Any rare species of plant were noted as were any Invasive Non-natives under Part II of Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

2.2.2 Amphibian Survey

As there is a pond and ditch within 250m of the proposed development, the pond and ditch, and surrounding habitat were assessed for amphibians, in particular Great Crested Newts (GCN) (*Triturus cristatus*). This was done using the Habitat Suitability Index (HSI) Assessment as per ARG UK Advice Note 5: GCN HSI May 2010 guidelines. In summary the HSI scoring system is based upon ten habitat variables for the pond including water quality, pond's flora and fauna, and the immediate surrounding habitat. Each variable was scored between 0 and 1 where 0 is very poor habitat (minimal probability of newts been present), and 1 optimal habitat (high probability of newts occurring). The HSI score can be categorised to show the ponds' suitability for newts.

HSI Score	Pond Suitability
<0.5	Poor
0.5 – 0.59	Below Average
0.6 – 0.69	Average
0.7 – 0.79	Good
>0.8	Excellent

This system then enables judgement to be made on whether or not a GCN Survey will be required.

2.2.3 Badger Survey

A Badger survey was also undertaken and carried out as per The Mammal Society: Surveying Badgers booklet 1989. Any signs of Badger were recorded including sett holes (used, partially used, dis-used), the type of sett (as per table below), trails, footprints, latrines, hairs, snuffle holes, feeding remains, bedding and scratching posts were all recorded.

Sett Characterization

Type of sett	Sett Properties
Main sett	These usually have a large number of holes with conspicuous spoil heaps, and the sett generally looks very active. There are well used paths to and from the sett and between entrances. Normally the breeding sett is in continuous use, but it is possible to find a disused main sett in areas of low Badger density.
Annexe sett	These are close to the main sett, normally less than 150m away, and are usually connected to the main sett by obvious well-worn paths. They usually have several holes, but may not be in use all of the time.
Subsidiary Sett	These often have only a few holes (average of three to five). They are usually at least 50m from a main sett, and do not have an obvious path connecting with another sett. They are not continuously active.
Outlying Sett	These usually have only one or two holes, often have little spoil outside the hole, have no obvious path connecting with another sett, and are only used sporadically. When not in use by badgers, they may be taken over by Foxes or even Rabbits.

2.2.4 Preliminary Bat Roost Assessment

A Preliminary Bat Roost Assessment was also undertaken and carried out to Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines 2016. Using ladders, binoculars and an endoscope, the trees were fully examined for potential access points, and any signs of bats. These signs included droppings, live or dead animals, urine or fur staining, feeding remains, and scratch marks. The trees around the site were then categorised into their suitability to support a bat roost using the following criteria outlined by Collins 2016 as shown in the table below. The categorisation of the buildings then determines the number of bat surveys required.

Bat roost suitability of structures and trees

Category (Potential to support roosting bats)	Description	Number of bat surveys required
Negligible suitability	Negligible habitat features on site likely to be used by roosting bats.	None
Low suitability	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.	Trees – None Buildings - One
Moderate suitability	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely for a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Two
High suitability	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Three

This work was undertaken by licenced bat worker Kevin Johnson (2018-34450-SCI-SCI) of KJ Ecology Limited who is fully trained in bat surveys and has been carrying out bat surveys for over 10 years.

2.2.5 Nesting Bird Survey

A nesting bird survey was carried out which involved looking out for signs of nests and other indications were also used such as families (adult birds with accompanying juveniles), juvenile birds, adults carrying food, adults carrying nesting material, and piles of droppings/ food remains.

2.2.6 Invertebrate Survey

The potential development site was assessed for its suitability to support a variety of invertebrates. No specific surveys were undertaken, but if a known species was seen, it was recorded.

2.2.7 Other Mammals Survey

Evidence of small mammals was searched for such as Shrews and Voles as they are the basis of the food chain for many other species from Kestrels (*Falco tinnunculus*) to Barn Owl (*Tyto alba*). Other mammals and their signs were also noted from Moles (*Talpa europaea*) to deer.

2.2.8 Reptile Survey

The habitat on site was assessed for its suitability to support reptiles, for example Common Lizard (*Zootoca vivipara*) prefer a variety of habitats from open woodland to grassland, while Adders (*Vipera berus*) favour open habitats such as heathland. The area was

examined for individual reptiles (hard) to finding features desired by reptiles to act as basking areas. This is because reptiles are ectotherms so need an external source to heat them up. These include short grass area – embankment/ paths, woodland edges – base of trees, logs, stones or artificial e.g. corrugated metal sheets. Suitable refugia and hibernacula were also searched for.

2.2.9 Water Vole Survey

A Water Vole Survey was carried out for the ditch along the Southern boundary to Water Vole Conservation Handbook (Third Edition) (2011) guidelines by Kevin Johnson of KJ Ecology Ltd who has over 10 years' experience in Water Vole Surveys. The Water Vole survey consisted of searching for signs of Water Voles up to 2m from the water's edge. Water Vole signs include Latrines, Feeding Stations, Burrows, Lawns and runs. All Water Vole signs were then recorded.

2.3 Survey Constraints

The only survey constraints was that there was no access to the neighbour's pond and the time of year the survey was carried out – Winter time. As it was Winter time, signs for wildlife and potential for wildlife was used to assess the site off Cranmore Lane, Holbeach. The weather on the 16th December 2022 was cold (-1 to 1C) with 10% cloud cover and a Gentle South-easterly breeze.

3 Survey Results

3.1 Desk top study

The desk top study revealed the following results:

3.1.1 Habitats

The desk top study revealed that there is one non-statutory site within 2kms of the proposed development - Guy Wells Pit LWS which is also a priority habitat for Reedbeds.

There are numerous habitats within the area which can support or provide opportunities for wildlife, including aquatic habitats, farmland, buildings and gardens.

3.1.2 Protected Species

There are 24 protected species and 28 Priority Species recorded within 2kms of the planned development off Cranmore Lane, Holbeach, including Badger (*Meles meles*) as shown in Appendix 4. The Birds of Conservation Concern 5 (2021) Red Data list for the area includes species such as Fieldfare (*Turdus pilaris*) which is also a Schedule 1 species under the Wildlife and Countryside Act 1981 (as amended). There are no protected plants or insects recorded in the area.

Other species can utilise the site such as Song Thrush (*Turdus philomelos*) which are on the Birds of Conservation Concern Amber list. Other declining species have been recorded within the area and include the Hedgehog (*Erinaceus europaeus*).

3.2 Preliminary Ecological Appraisal

A Preliminary Ecological Appraisal was carried out on the 16th December 2022 by Kevin Johnson BSc Pgd PGCE MCIEEM, who has numerous years' experience in carrying out survey work. The species results of the Preliminary Ecological Appraisal can be found in Appendix 3 and a UK habitat map was produced (Map 2, Appendix 1).

The Preliminary Ecological Appraisal found the following results:

3.2.1 Habitat and Plant Assessment

There were no rare or Invasive Non-natives plants on site. There is fencing all around the site but some has been overgrown by hedges. These hedges are semi-mature garden hedge plants consisting of Cherry Laurel and Privet. The Privet hedges have semi-mature Aspen growing in them at regular intervals. The internal habitat consists of a tarmac road down the centre that is becoming overgrown with mosses and grasses and there are the remains of a brick wall towards the Western end. Both sides of the road consists of a matrix of habitats. Each area either side of the road has hedges which break these areas up into three compartments. There are wet woodland areas of Goat Willow (*Salix caprea*) to shrubby areas with young Silver Birch (*Betula pendula*) and Butterfly Bush (*Buddleja davidii*). There are areas of more dense scrub consisting of Bramble which covers a large part of the site. There are then areas of Tall Ruderal herbs consisting mainly of Hoary Willowherb (*Epilobium parviflorum*) and other Tall Ruderal herbs such as Spear Thistle (*Cirsium vulgare*) and shrubs such as Bramble. The remaining area is grassland with species such as Cocksfoot (*Dactylis glomerata*). This is classed as modified grassland as even though it does have False Oat Grass (*Arrhenatherum elatius*), the species count averaged between 4-5 species per m². The field observations do not match the grassland code g3c5 Arrhenatherum neutral grassland but are more closely matched to g4 Modified Grassland. This grassland was interspersed with herbaceous plants such as Creeping Buttercup (*Ranunculus repens*) and Perforate St John's-wort (*Hypericum perforatum*) showing the wetness of the ground. This grassland was also dissected with woody plants for example Butterfly Bush.

3.2.2 Amphibian Survey

There was no access to the Neighbours Pond, but observations from the site showed it not to be suitable for GCN, mainly due to the

amount of Mallard (*Anas platyrhynchos*) on the pond which affect GCN. The ditch adjacent to the site had poor suitability for GCN and gave the following results:

Ditch	SI										Score
	1	2	3	4	5	6	7	8	9	10	
D1	1.0	0.1	0.1	0.33	0.1	1.0	1.0	0.65	0.33	0.8	0.38

The ditch has a Poor suitability for GCN and as there are no records for GCN within 250m of the area and the ditch and pond will not be affected by the proposed works. For this reason, no other GCN survey work will be required.

3.2.3 Badger Survey

No signs of Badger were found on site.

3.2.4 Preliminary Bat Roost Assessment

None of the trees had bat roost potential so are classified as negligible for bats. The container had no potential access points and was not suitable for bats so was classed as negligible.

3.2.5 Nesting Bird Survey

No nests were observed but the habitat of hedges and Bramble scrub will create ideal conditions for birds to nest, and forage within the site.

3.2.6 Invertebrate Survey

The survey was not carried out at the ideal time of year for invertebrate surveys but the habitat does suggest that the site will support a wide range of insects from Butterflies to moths to beetles.

3.2.7 Other Mammals Survey

There were a few signs of other mammals on site. In the long grasses were signs of Field Vole (*Microtus agrestis*) along with Muntjac Deer (*Muntiacus reevesi*) droppings. A Grey Squirrel (*Sciurus carolinensis*) was seen in the trees in the neighbouring garden.

3.2.8 Reptile Survey

There are no records of reptiles within the area but if there was the site would offer opportunities for them with foraging in the long grasses and hibernacula in the rubble piles.

3.2.9 Water Vole Survey

There are records of Water Vole on New River to the West of the site but the ditch around the site showed no signs of Water Vole.

4 Evaluation and Recommendations

4.1 Evaluation

From the Desktop Ecological Assessment there is one non-statutory site within 2kms of the proposed development - Guy Wells Pit LWS and this proposed development will have no effect upon this site.

The desktop study revealed a few Protected species within 2kms of the site such as Badger. The only signs of protected species found during the Preliminary Ecological Appraisal on the 16th December 2022 was possible nesting birds. As all nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) – See Section 5.1.4., then if works are to proceed between March and August, then a nesting bird survey will be required. The wildflowers in the field will support a wide range of insects which in turn will sustain a variety of other species, so needs maintaining as much as possible.

Amphibians are recorded within the area and as there is a ditch around the site, and piles of rubble that can act as hibernacula, there are possibilities for them being within the area. All amphibians are protected under the Wildlife and Countryside Act 1981 (as amended) (see Section 5.1.2) and as there is a possibility of them being on site, some Reasonable Avoidance Measures should be followed including:

1. All materials to be stored off the ground (for example on pallets) to minimise the likelihood of amphibians accessing them for refugia;
2. All spoil/waste materials to be removed from site at the end of each working day or stored in a skip;
3. The site should be maintained as sub-optimal prior to the commencement of works;
4. All involved in the construction should be aware of the possible presence of amphibians and know what they look like.

As there are piles of rubble on the site, then these should be removed under a watching brief by a trained ecologist in case there are amphibians or reptiles present within them.

4.2 Recommendations

KJ Ecology Ltd has no objections to the proposed dwelling off Cranmore Lane, Holbeach, as long as the following recommendations are followed:

1. As there is potential for nesting birds on site which are protected under the Wildlife and Countryside Act 1981 (as amended), then if the works are to start in the bird nesting season (March to August) then a nesting bird survey will be required before works commence;
2. As there is a suitable ditch for amphibians adjacent to the site, then a precautionary method statement needs to be applied to

prevent amphibians being killed or injured as all amphibians are protected under the Wildlife and Countryside Act 1981 (as amended). This includes:

- a. All materials to be stored off the ground (for example on pallets) to minimise the likelihood of amphibians accessing them for refugia;
 - b. All spoil/waste materials to be removed from site at the end of each working day or stored in a skip;
 - c. The site should be maintained as sub-optimal prior to the commencement of works;
 - d. All involved in the construction should be aware of the possible presence of amphibians and know what they look like;
3. As there are piles of rubble on the site, then these should be removed under a watching brief by a trained ecologist in case there are amphibians or reptiles present within them;
 4. A wildflower meadow should be created for the wildlife. This should be cut in late August and if possible, a second cut should be taken in November to reduce the vigour of the grasses. Any other planting around the buildings should include RHS Bee friendly plants;
 5. A variety of bird and bat boxes can be placed around the site;
 6. As there is potential for Hedgehogs within the area, then any trenches need to be covered at night during construction to prevent them from falling in.

5 Legislation and Policy Guidance

In the 1960s and 1970s concerns were raised about the loss of wildlife habitats and species. This led to The Convention on the Conservation of European Wildlife and Natural Habitats 1979 (Berne Convention) which came into force in 1982. The aim of this Convention is to conserve wild flora and fauna and their natural habitats; Promote cooperation between countries in their conservation efforts and, give particular emphasis to endangered and vulnerable species including migratory species.

In the UK this Convention was implemented by the creation of the Wildlife and Countryside Act 1981 (as amended). This Act was further strengthened by the Countryside and Rights Of Way Act 2000.

The UK has signed up to the EEC Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna 1992 (Habitats Directive). The aim of the Habitats Directive is to contribute towards ensuring bio-diversity by means of the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States. The UK transposed the Habitats Directive into The Conservation (Natural Habitats, &c.) Regulations 1994. To consolidate all the various amendments made to this Act, The

Conservation of Habitats and Species Regulations 2017 has been introduced.

The UK has also signed up to The Convention on the Conservation of Migratory species of Wild Animals 1979 (The Bonn Convention) which came into force in 1983 and so is therefore party to various agreements.

5.1 Protected Species

5.1.1 European Protected Species

Water Voles (*Arvicola amphibius*), Otters (*Lutra lutra*), Bats and Great Crested Newts (*Triturus cristatus*) are classed as European Protected Species. All European Protected Species are protected under Schedules 5 and 6 of the Wildlife and Countryside Act 1981 (as amended) and are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations 2012. They are listed under Appendix III of the Bern Convention and Annex IV of the EC Habitats Directive. These species also have their habitats listed under Appendix II of The Bonn Convention and therefore the UK has an obligation to protect their habitat, including links to important feeding areas.

In relation to a development these laws and regulations make it illegal for a person to:

- Intentionally or recklessly kill, injure or take a European Protected Species;
- Intentionally or recklessly -
 - o Damage or destroy any structure or place which any European Protected Species uses for shelter or protection;
 - o Disturbs any such European Protected Species while it is occupying a structure or place which it uses for shelter or protection; or
 - o Obstructs access to any structure or place which any such European Protected Species uses for shelter or protection;
- Deliberately or recklessly disturbs wild animals of any species in such a way as to be likely significantly to affect :
 - o The ability of any significant group of animals to survive, breed, or rear or nurture their young; or
 - o The local distribution or abundance of that species;
- Possess or transport European Protected Species or any part of a them, unless acquired legally;
- Sell (or offer for sale) or exchange European Protected Species, or parts of European Protected Species.

This legislation applies, regardless of the life stage (including eggs).

A European Protected Species Licence is required to carry out any activity that would otherwise involve committing an offence.

5.1.2 Amphibians

All amphibians are protected under Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended). Under Section 9(4b and c) of the Wildlife and Countryside Act 1981 (as amended), it is an offence to :

- Disturb any GCN while it is occupying a structure or place which it uses for shelter or protection; or
- Obstructs access to any structure or place which a GCN uses for shelter or protection.

Under Section 9(5a and b) of the Wildlife and Countryside Act 1981 (as amended) it is an offence to :

- Possess or transport all Amphibians or any part of a them, unless acquired legally;
- Sell (or offer for sale) or exchange Amphibians, or parts of Amphibians.

GCN and Pool Frog (*Rana lessonae*) are also protected under Schedule 2 of The Conservation of Habitats and Species Regulations 2017. To avoid prosecution under these laws during development of the site, all precautions have to be taken to ensure that no intentional harm is done to these species and any disturbance or obstruction of access is done under licence.

5.1.3 Badgers

Badgers (*Meles meles*) are fully protected in the UK by the Protection of Badgers Act, 1992 and by Schedule 6 of the Wildlife and Countryside Act, 1981(as amended). This makes it an offence to:

- Wilfully kill, injure, take, possess or cruelly treat a badger
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett.

Disturb a badger while it is occupying a sett. (*Disturbance could include digging or scrub clearance within 30m of the sett, and therefore advice should be sought before carrying out such activities*).

5.1.4 Birds

All wild birds are protected under Part 1: 1(1) of the Wildlife and Countryside Act, 1981 which states that:

1 Protection of wild birds, their nests and eggs.

(1)Subject to the provisions of this Part, if any person intentionally or recklessly —

- (a) kills, injures or takes any wild bird;
- (b) takes, damages, destroys or otherwise interferes with the nest of any wild bird while that nest is in use or being built; or

- (ba) at any other time takes, damages, destroys or otherwise interferes with any nest habitually used by any wild bird included in Schedule A1;
 - (bb) obstructs or prevents any wild bird from using its nest;
 - (c) takes or destroys an egg of any wild bird,
- they shall be guilty of an offence.

To avoid committing an offence no works should be carried out on a structure/ feature that is being used by nesting birds. Nesting is deemed to be over when the young have fully fledged.

Certain species which are listed in Schedule 1 of the Wildlife and Countryside Act receive special protection. In these cases any form of intentional or reckless disturbance when they are nesting or rearing dependant young, constitutes an offence.

5.1.5 Plants

Schedule 8 of the Wildlife and Countryside Act, 1981 (as amended) lists a range of rare plants that need protection such as Early Spider Orchid (*Ophrys sphegodes*) and wild plants exploited for commercial reasons for example English Bluebells. Section 13 of the Wildlife and Countryside Act, 1981 (as amended) states that it is illegal to:

- 1(a) Intentional picking, uprooting or destruction of plants on Schedule 8;
- 1(b) Unauthorised (by landowner) intentional uprooting of any wild plant not included in Schedule 8;
- 2(a) Selling, offering for sale, possessing or transporting for the purpose of sale, any plant (live or dead, part or derivative) on Schedule 8;
- 2(b) Advertising for buying or selling such things.

5.1.6 Reptiles

Common lizard (*Zootoca vivipara*), Slow worm (*Anguis fragilis*), Adder (*Vipera berus*) and grass snake are all protected under Schedule 5 of the Wildlife and Countryside Act, 1981 against intentional injuring, killing or selling. For development sites in England, Wales or Scotland, to avoid prosecution under the Wildlife and Countryside Act 1981 (as amended), wherever works will impact on slow worms, common lizards, adders and/or grass snakes there must be evidence that every reasonable effort was made to avoid breaking the law – including proof of adequate surveys and mitigation plans. Mitigation measures should, ideally, be agreed with Natural England.

Only the Sand Lizard (*Lacerta agilis*) and Smooth Snake (*Coronella austriaca*) are fully protected under the Wildlife and Countryside Act,

1981 (Section 9) and Regulation 9 of the Conservation of Habitats and Species Regulations 2010 against :

- Killing, injuring or capture;
- Damaging or destroying a breeding or resting site;
- Intentionally obstructing access to a place used for shelter;
- Keeping, transporting or selling.

This means that not only are the animals themselves protected but so are their habitats.

5.2 Invasive Non-natives

Section 14 of the Wildlife and Countryside Act 1981 (as amended) prevents Invasive Non-native animals and plants being released into the wild which may cause ecological, environmental, or socio-economic harm. Section 14 states:

- (1) Subject to the provisions of this Part, if any person releases or allows to escape into the wild any animal which –
 - (a) Is of a kind which is not ordinarily resident in and is not a regular visitor to Great Britain in a wild state; or
 - (b) Is included in Part I of Schedule 9,he shall be guilty of an offence
- (2) Subject to the provisions of this Part, if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence.

This includes plants such as Himalayan Balsam (*Impatiens glandulifera*) and Japanese Knotweed (*Fallopia japonica*). Japanese Knotweed is controlled by other Acts and Regulations including:

- Environmental Protection Act 1990 - Waste containing Japanese Knotweed is classified as 'controlled waste'. As such, you must observe the appropriate duty of care for its proper handling and disposal as per Section 33 and 34. The movement of Japanese Knotweed is also covered by the Waste (England and Wales) Regulations 2011 and The Hazardous Waste Regulations 2005;
- Community Protection Notices can be issued to the owners of land with Japanese knotweed by the relevant local authority, by a person or body authorised by the local authority, or by a constable;
- Anti-social Behaviour, Crime and Policing Act 2014 - Notice can be given requiring someone to control or prevent the growth of Japanese knotweed or other plants capable of causing serious problems to communities;
- The Infrastructure Act 2015, contains powers to compel landowners to control or eradicate invasive non-native species and permits authorised persons to enter land to carry out species control operations at the landowner's expense.

5.3 National Planning Policy Framework

The National Planning Policy Framework (NPPF) was published on the 27th March 2012 and has several updates with the latest being 20th July 2021. The NPPF sets out the Government's planning policies for England and how these should be applied. As this is an ecological report, the ecological side of the NPPF will be dealt with here. One part of the NPPF is in achieving sustainable development (Chapter 2) and how to secure net gains through the implementation of plans and the application policies with applications in presumption on favour of sustainable development.

Paragraph 8 (iii) states - **An environmental objective** – to contribute to protecting and enhancing our 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.

To achieve sustainability and Biodiversity Net Gain, planning policies should make effective use of land, and conserve, and enhance the Natural Environment. Effective use of land can be achieved by:

- Supporting developments of underutilised land and buildings;
- Recognising the multiple benefits from both urban and rural land;
- Developments that would enable new habitat creation or improve public access to the countryside;
- Recognise that some undeveloped land can perform many functions, such as for wildlife, recreation, flood risk mitigation, cooling/shading, carbon storage or food production.

To conserve and enhance the Natural Environment, leading to Biodiversity Net Gain, planning policies and decisions should contribute to and enhance the natural and local environment by:

- Protecting and enhancing the intrinsic value and beauty of the countryside e.g. Areas of Outstanding Beauty and Nature Reserves (Local and National);
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. These include Wildlife Corridors, the Stepping Stones that connect them and areas identified by national, and local partnerships for habitat management, enhancement, restoration or creation;
- Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

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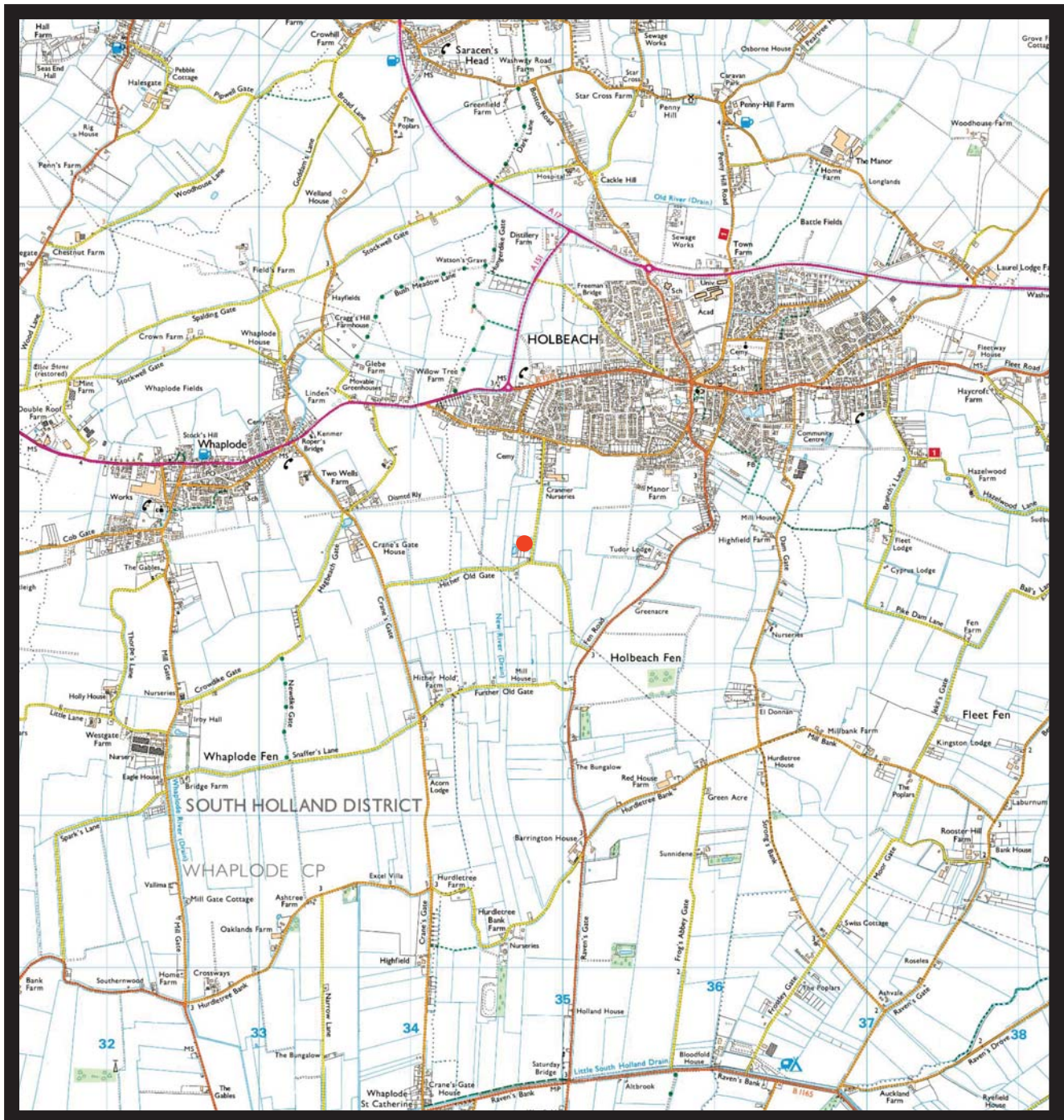
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Appendices

Appendix 1

Maps

Map 1: Location map of the proposed dwelling at Cranmore Lane, Holbeach.



0 0.5 1km

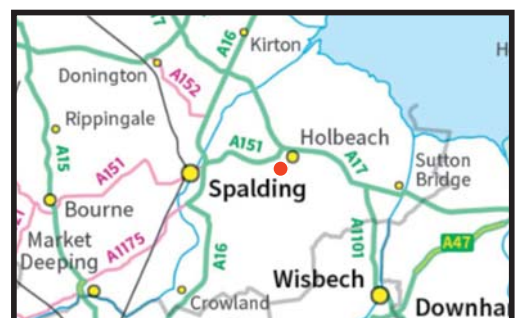
Legend

● Location of site

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Site Plan 1:40,000

KJ Ecology Ltd
Drawn by : KJ
Date : 11/01/2023



Map 2: Habitat map for the proposed dwelling on Cranmore Lane, Holbeach.



0 10 20m

Legend

Modified grassland

Wet woodland

Scrub

Dense scrub

Developed land; sealed surface

Building

Tall Ruderal Herbs

Line of trees

Hedge

Wall

Ditch

Fence

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Site Plan 1:980

KJ Ecology Ltd
Drawn by : KJ
Date : 11/01/2023



Appendix 2

Photos

Photos of the land off Cranmore Lane, Holbeach.



Photo 1: East boundary



Photo 2: Ditch adjacent to site



Photo 3: North boundary



Photo 4: West boundary, South side



Photo 5: South boundary



Photo 6: Central road



Photo 7: Typical grass and Bramble area



Photo 8: Typical vegetation South side of the road



Photo 9: Typical Tall Ruderal herb area



Photo 10: Typical overgrown rubble pile

Appendix 3

Preliminary Ecological Appraisal Results

Survey Results for the land off Cranmore Lane, Holbeach.

Common Name	Scientific Name	DAFOR
Trees		
Goat Willow	<i>Salix caprea</i>	F
Silver Birch	<i>Betula pendula</i>	O
Crack Willow	<i>Salix fragilis</i>	R
Alder	<i>Alnus glutinosa</i>	O
Aspen	<i>Populus tremula</i>	F
Apple	<i>Malus domestica</i> sp.	R
Pedunculate Oak	<i>Quercus robur</i>	R
Nordmann Fir	<i>Abies nordmanniana</i>	R
Shrubs		
Butterfly Bush	<i>Buddleja davidii</i>	F
Garden Privet	<i>Ligustrum ovalifolium</i>	F
Bramble	<i>Rubus fruticosus</i> agg.	F
Holly	<i>Ilex aquifolium</i>	R
Cherry Laurel	<i>Prunus laurocerasus</i>	F
Blackthorn	<i>Prunus spinosa</i>	O
Dogrose	<i>Rosa canina</i> agg	O
Hawthorn	<i>Crataegus monogyna</i>	O
Ivy	<i>Hedra helix</i>	O
Box	<i>Buxus sempervirens</i>	R
Herbaceous plants		
Bristly Oxtongue	<i>Picris echioides</i>	O
Silverweed	<i>Potentilla anserina</i>	R
Black Knapweed	<i>Centaurea nigra</i>	O
Perforate St John's-wort	<i>Hypericum perforatum</i>	O
Black Medick	<i>Medicago lupulina</i>	R
Autumn Hawkbit	<i>Leontodon autumnalis</i>	O
Ribwort Plantain	<i>Plantago lanceolata</i>	O
Spear Thistle	<i>Cirsium vulgare</i>	O
Common Ragwort	<i>Senecio jacobaea</i>	O
Creeping Thistle	<i>Cirsium arvense</i>	O
Hoary Willowherb	<i>Epilobium parviflorum</i>	A
Mugwort	<i>Artemisia vulgaris</i>	O
Perennial Sow-thistle	<i>Sonchus arvensis</i>	R
Goosegrass	<i>Gallium aparine</i>	R
Common Field Speedwell	<i>Veronica persica</i>	O
Daisy	<i>Bellis perennis</i>	O
Hop Trefoil	<i>Trifolium campestre</i>	O
Creeping Buttercup	<i>Ranunculus repens</i>	O
Herb Robert	<i>Geranium robertianum</i>	O
Prickly Sow-thistle	<i>Sonchus asper</i>	R
Groundsel	<i>Senecio vulgaris</i>	R
Common Nettle	<i>Urtica dioica</i>	O
Common Chickweed	<i>Stellaria media</i>	O
Grasses		
False Oat Grass	<i>Arrhenatherum elatius</i>	F
Reed Canary-grass	<i>Phalaris arundinacea</i>	O
Velvet Bent	<i>Agrostis canina</i>	O
Cocksfoot	<i>Dactylis glomerata</i>	A
Common Reed	<i>Phragmites australis</i>	O

Soft Brome	<i>Bromus hordeaceus</i>	R
Red Fescue	<i>Festuca rubra</i>	O
Yorkshire Fog	<i>Holcus lanatus</i>	R
Annual Meadow Grass	<i>Poa annua</i>	R
Sedge		
Lesser Pond Sedge	<i>Carex acutiformis</i>	R
False Fox Sedge	<i>Carex otrubae</i>	R
Pendula Sedge	<i>Carex pendula</i>	R
Rushes		
Hard Rush	<i>Juncus inflexus</i>	O
Soft Rush	<i>Juncus effuses</i>	R
Field Wood-rush	<i>Luzula campestris</i>	R
Horsetails		
Field Horsetail	<i>Equisetum arvense</i>	R
Mammals		
Field Vole (signs)	<i>Microtus agrestis</i>	R
Muntjac Deer (signs)	<i>Muntiacus reevesi</i>	R
Grey Squirrel	<i>Sciurus carolinensis</i>	R
Birds		
Blackbird	<i>Turdus merula</i>	R
Blue Tit	<i>Cyanistes caeruleus</i>	R
Robin	<i>Erithacus rubecula</i>	R
Great Tit	<i>Parus major</i>	R
Wren	<i>Troglodytes troglodytes</i>	R
Woodpigeon	<i>Columba palumbus</i>	R
Goldfinch	<i>Carduelis carduelis</i>	R
Pheasant	<i>Phasianus colchicus</i>	R
Fieldfare	<i>Turdus pilaris</i>	R
Dunnock	<i>Prunella modularis</i>	R
Skylark	<i>Alauda arvensis</i>	R
Woodcock	<i>Scolopax rusticola</i>	R
Moorhen	<i>Gallinula chloropus</i>	R
Mallard	<i>Anas platyrhynchos</i>	R

Appendix 4

LERC Search Summary Report

LERC Search Summary Report

Grid Reference: TF 3476 2376
Buffer: 2km

Date of publication: 10/01/2023
Expires: 10/01/2024

Achieving more for nature



GLNP
GREATER LINCOLNSHIRE
NATURE PARTNERSHIP

Report Details

Produced for	Kevin Johnson, KJ Ecology Ltd
Search area	

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This report summarises a search of statutory sites, non-statutory sites, other sites, habitats and species within the specified area; where no information is returned for a section, it is excluded from this summary report.

About the Lincolnshire Environmental Records Centre

The Lincolnshire Environmental Records Centre (LERC) collates wildlife and geological information for Greater Lincolnshire from various sources and makes it available for various uses. This data is crucial to aid conservation management of sites, to help organisations prioritise action, and to understand the distribution of species and trends over time. For more information on LERC or to request a data search, visit the website at <https://glnp.org.uk/partnership/lerc/>



Lincolnshire Environmental Records Centre is an ALERC accredited LRC, meeting the standard level criteria.
For more information on accreditation, see the ALERC website at <http://www.alerc.org.uk/alerc-accreditation.html>

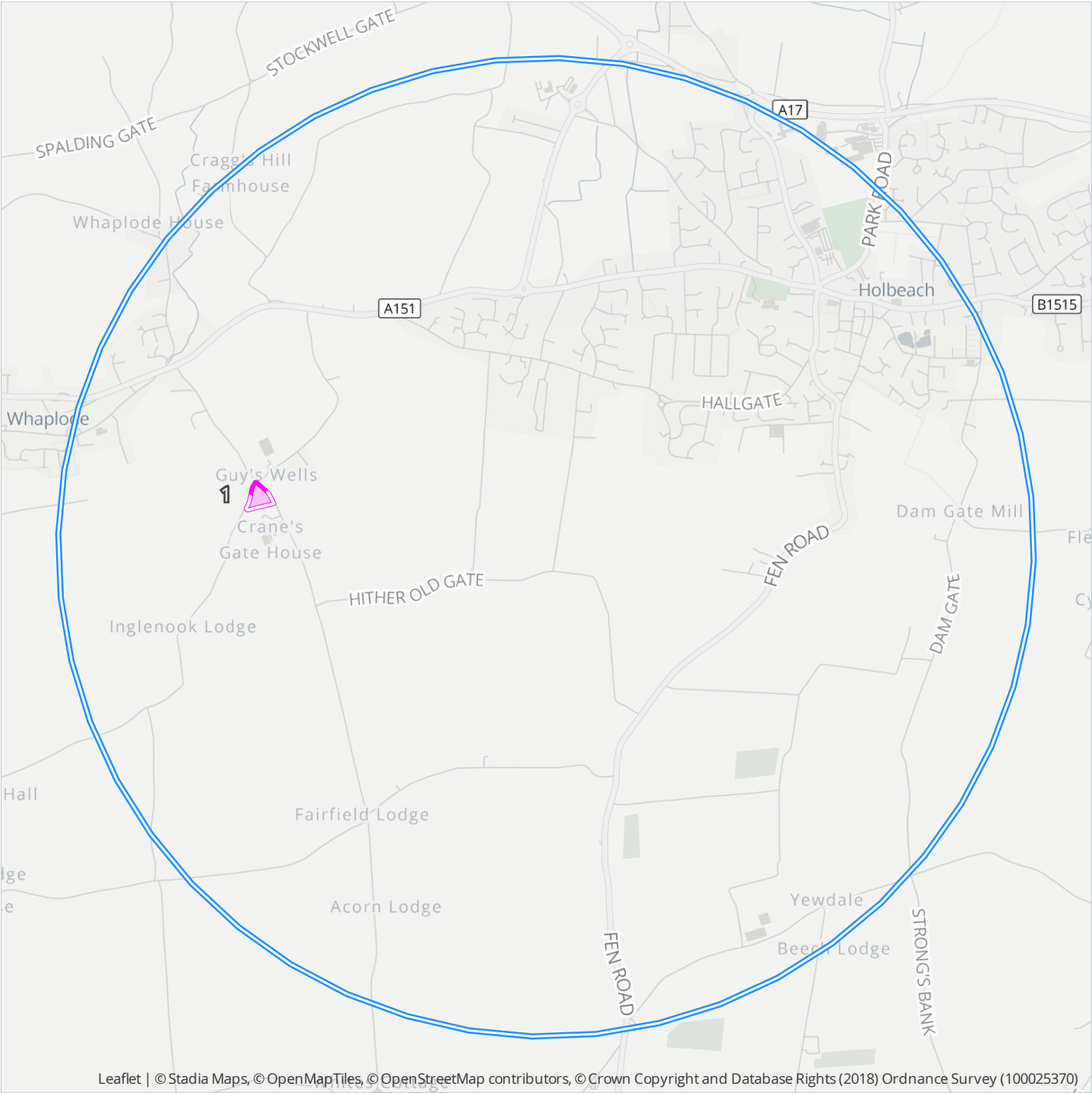
Non-statutory sites

The GLNP works directly with local authorities to coordinate the Local Sites system in Greater Lincolnshire. Sites are selected by the Nature Partnership, based on recommendations made by its expert working groups known as the LWS Panel and LGS Panel. The Register of Local Sites is then submitted for inclusion within local authority planning policy.

These sites are recognition of wildlife or geological value and are a testament to the land management that is already being undertaken on them. Identifying these sites helps local authorities meet their obligations under legislation and government guidance, including reporting on the number of sites in positive management for Single Data List Indicator 160-00.

Code	Designation	Status	Name
1	LWS	Selected	Guy Wells Pit

Non-statutory sites within the search area



Space restrictions on the map may result in some sites not being labelled. Please refer to the site citations for details.

 Local Wildlife Site

 Search area

Habitats

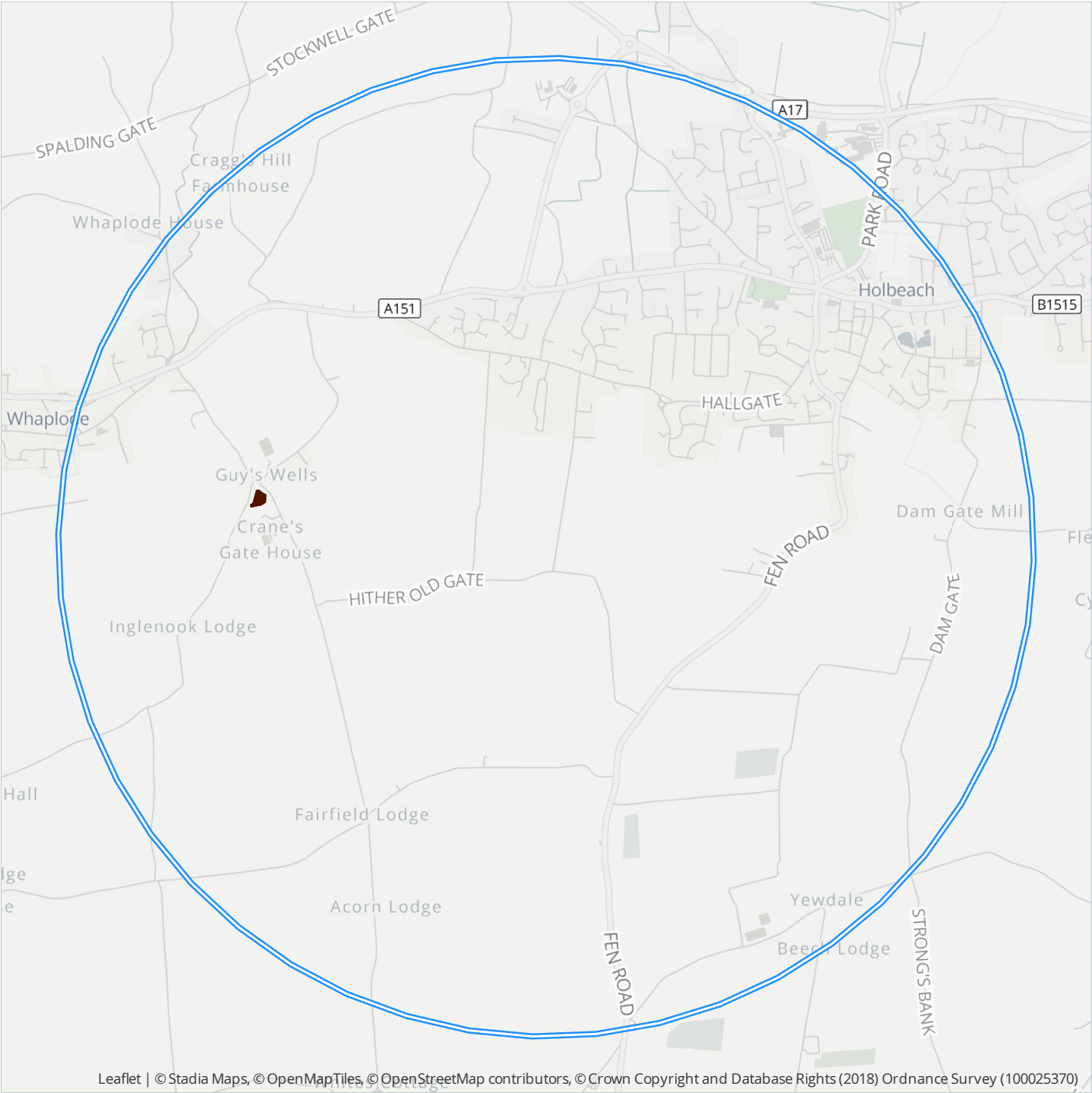
Priority habitats are those identified as being the most threatened and requiring conservation action in the UK. The most-recent list of UK priority species and habitats was published in August 2007 following a 2-year review of the process and priorities, representing the most comprehensive analysis of such information ever undertaken in the UK.

The data presented is the most up-to-date of the data collated by the GLNP and mostly comes from surveys of Local Sites; further historic data and non-Priority habitat data may also be available. Absence of information doesn't mean that the Priority habitat isn't present merely that no information is held.

A number of different datasets have been consulted to produce this report - a summary of attribution statements is available at <https://glnp.org.uk/images/uploads/services/lincolnshire-environmental-records-centre/habitat%20attribution.pdf>.

Type	Habitat	Survey Date	Area (ha)
Priority Habitat	Reedbeds	2010	0.26

Habitats within the search area



Space restrictions on the map may result in some sites not being labelled.

 Reedbeds

 Search area

Species

Lincolnshire Environmental Records Centre holds records on the following species within or overlapping the search area. Data shown is as held by LERC; past records of presence of a species does not guarantee continued occurrence and absence of records does not imply absence of a species, merely that no records are held. Confidential data, zero abundance records, data at poorly defined geographic resolutions and data pending validation and/or verification are also excluded from this report. A number of different datasets have been consulted to produce this report - a summary of attribution statements is available at <https://glnp.org.uk/images/uploads/services/lincolnshire-environmental-records-centre/species%20attribution.pdf>

Amphibian (3 taxa)

Common Frog, <i>Rana temporaria</i>	2	1975 - 1995	Protected
Common Toad, <i>Bufo bufo</i>	1	2009 - 2009	Protected, Priority
Great Crested Newt, <i>Triturus cristatus</i>	1	2017 - 2017	Protected, Priority, Local Priority

Bird (42 taxa)

Barn Owl, <i>Tyto alba</i>	10	1998 - 2021	Protected, Local Priority
Black Swan, <i>Cygnus atratus</i>	1	2011 - 2011	Non-native
Brambling, <i>Fringilla montifringilla</i>	1	2008 - 2008	Protected
Collared Dove, <i>Streptopelia decaocto</i>	70	2009 - 2021	Non-native
Columba livia 'feral', <i>Columba livia 'feral'</i>	16	2010 - 2013	Non-native
Corn Bunting, <i>Emberiza calandra</i>	2	2005 - 2010	Local Priority
Egyptian Goose, <i>Alopochen aegyptiaca</i>	2	2020 - 2021	Non-native
Fieldfare, <i>Turdus pilaris</i>	8	1999 - 2021	Protected
Grasshopper Warbler, <i>Locustella naevia</i>	4	2011 - 2013	Priority
Green Sandpiper, <i>Tringa ochropus</i>	1	2021 - 2021	Protected
Grey Partridge, <i>Perdix perdix</i>	6	2010 - 2020	Priority, Local Priority, Non-native
Greylag Goose, <i>Anser anser</i>	1	2010 - 2010	Protected
Hawfinch, <i>Coccothraustes coccothraustes</i>	1	2009 - 2009	Priority
Hobby, <i>Falco subbuteo</i>	1	1999 - 1999	Protected
House Sparrow, <i>Passer domesticus</i>	100	2008 - 2021	Priority, Local Priority
Indian Peafowl, <i>Pavo cristatus</i>	1	2021 - 2021	Non-native
Lapwing, <i>Vanellus vanellus</i>	25	2000 - 2021	Priority, Local Priority
Lesser Redpoll, <i>Acanthis cabaret</i>	3	2021 - 2021	Priority
Linnet, <i>Linaria cannabina</i>	5	2010 - 2021	Local Priority
Little Egret, <i>Egretta garzetta</i>	4	2011 - 2021	Protected
Little Owl, <i>Athene noctua</i>	18	2010 - 2020	Non-native
Marsh Harrier, <i>Circus aeruginosus</i>	1	2021 - 2021	Protected
Mediterranean Gull, <i>Ichthyaeetus melanocephalus</i>	2	1999 - 2000	Protected
Mute Swan, <i>Cygnus olor</i>	5	2010 - 2011	Non-native

Bird (42 taxa)

Peregrine, <i>Falco peregrinus</i>	2	2021 - 2021	Protected
Pheasant, <i>Phasianus colchicus</i>	32	2009 - 2021	Non-native
Pink-footed Goose, <i>Anser brachyrhynchus</i>	1	2012 - 2012	Non-native
Red-legged Partridge, <i>Alectoris rufa</i>	10	2010 - 2021	Non-native
Redwing, <i>Turdus iliacus</i>	5	2020 - 2021	Protected
Reed Bunting, <i>Emberiza schoeniclus</i>	14	2009 - 2019	Priority, Local Priority
Rock Dove, <i>Columba livia</i>	2	2009 - 2009	Non-native
Skylark, <i>Alauda arvensis</i>	14	2006 - 2021	Local Priority
Song Thrush, <i>Turdus philomelos</i>	6	2009 - 2021	Local Priority
Starling, <i>Sturnus vulgaris</i>	50	2008 - 2021	Local Priority
Swift, <i>Apus apus</i>	19	2004 - 2020	Local Priority
Tree Sparrow, <i>Passer montanus</i>	35	2004 - 2013	Priority, Local Priority
Turtle Dove, <i>Streptopelia turtur</i>	6	2003 - 2013	Priority, Local Priority
White Stork, <i>Ciconia ciconia</i>	1	2011 - 2011	Non-native
White-fronted Goose, <i>Anser albifrons</i>	1	2011 - 2011	Non-native
Whooper Swan, <i>Cygnus cygnus</i>	8	2011 - 2021	Protected, Non-native
Yellow Wagtail, <i>Motacilla flava</i>	11	2001 - 2021	Local Priority
Yellowhammer, <i>Emberiza citrinella</i>	34	1999 - 2013	Priority, Local Priority

Conifer (7 taxa)

Cedar-of-Lebanon, <i>Cedrus libani</i>	2	2013 - 2016	Non-native
European Larch, <i>Larix decidua</i>	1	2013 - 2013	Non-native
Hybrid Larch, <i>Larix decidua x kaempferi</i> = <i>L. x marschlinsii</i>	1	2016 - 2016	Non-native
Lawson's Cypress, <i>Chamaecyparis lawsoniana</i>	1	2016 - 2016	Non-native
Leyland Cypress, <i>Cupressus macrocarpa x Xanthocyparis nootkatensis</i> = <i>X Cuprocyparis leylandi</i>	3	2013 - 2016	Non-native
Wellingtonia, <i>Sequoiadendron giganteum</i>	1	2016 - 2016	Non-native
Western Red-cedar, <i>Thuja plicata</i>	1	2016 - 2016	Non-native

Crustacean (1 taxa)

Signal Crayfish, <i>Pacifastacus leniusculus</i>	1	1900 - 1900	Non-native
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Flowering Plant (108 taxa)

Algerian Ivy, <i>Hedera algeriensis</i>	1	2013 - 2013	Non-native
Alsike Clover, <i>Trifolium hybridum</i>	1	2013 - 2013	Non-native
American Willowherb, <i>Epilobium ciliatum</i>	4	2013 - 2016	Non-native
Apple-mint, <i>Mentha spicata x suaveolens</i> = <i>M. x villosa</i>	1	2016 - 2016	Non-native
Barren Brome, <i>Bromus sterilis</i>	4	2008 - 2016	Non-native

Flowering Plant (108 taxa)

Bird-in-a-bush, <i>Corydalis solida</i>	2	2008 - 2013	Non-native
Black Walnut, <i>Juglans nigra</i>	1	2016 - 2016	Non-native
Blue Globe-thistle, <i>Echinops bannaticus</i>	1	2016 - 2016	Non-native
Bluebell, <i>Hyacinthoides non-scripta</i> x <i>hispanica</i> = <i>H. x massartiana</i>	3	2013 - 2016	Non-native
Box-leaved Honeysuckle, <i>Lonicera pileata</i>	1	2013 - 2013	Non-native
Bristly Oxtongue, <i>Picris echinoides</i>	5	2008 - 2016	Non-native
Butterfly-bush, <i>Buddleja davidii</i>	5	2013 - 2016	Non-native
Canadian Fleabane, <i>Conyza canadensis</i>	2	2016 - 2016	Non-native
Canadian Goldenrod, <i>Solidago canadensis</i>	1	2015 - 2015	Non-native
Caper Spurge, <i>Euphorbia lathyris</i>	1	2013 - 2013	Non-native
Charlock, <i>Sinapis arvensis</i>	2	2013 - 2013	Non-native
Cherry Laurel, <i>Prunus laurocerasus</i>	3	2013 - 2013	Non-native
Cherry Plum, <i>Prunus cerasifera</i>	2	2008 - 2013	Non-native
Chinese Barberry, <i>Berberis julianae</i>	1	2016 - 2016	Non-native
Common Field-speedwell, <i>Veronica persica</i>	7	2008 - 2016	Non-native
Common Mallow, <i>Malva sylvestris</i>	2	2013 - 2016	Non-native
Common Millet, <i>Panicum miliaceum</i>	1	2016 - 2016	Non-native
Common Poppy, <i>Papaver rhoeas</i>	2	2014 - 2016	Non-native
Common Vetch, <i>Vicia sativa</i> subsp. <i>segetalis</i>	1	2013 - 2013	Non-native
Cut-leaved Crane's-bill, <i>Geranium dissectum</i>	1	2008 - 2008	Non-native
Druce's Crane's-bill, <i>Geranium endressii</i> x <i>versicolor</i> = <i>G. x oxonianum</i>	1	2016 - 2016	Non-native
Duke of Argyll's Teaplat, <i>Lycium barbarum</i>	2	2008 - 2013	Non-native
Equal-leaved Knotgrass, <i>Polygonum arenastrum</i>	1	2016 - 2016	Non-native
Evergreen Oak, <i>Quercus ilex</i>	2	2013 - 2016	Non-native
False-acacia, <i>Robinia pseudoacacia</i>	1	2016 - 2016	Non-native
Fennel, <i>Foeniculum vulgare</i>	1	2016 - 2016	Non-native
Feverfew, <i>Tanacetum parthenium</i>	2	2016 - 2016	Non-native
Firethorn, <i>Pyracantha coccinea</i>	1	2016 - 2016	Non-native
Flowering Currant, <i>Ribes sanguineum</i>	4	2008 - 2016	Non-native
Garden Lobelia, <i>Lobelia erinus</i>	1	2016 - 2016	Non-native
Garden Privet, <i>Ligustrum ovalifolium</i>	2	2013 - 2016	Non-native
Glory-of-the-snow, <i>Scilla forbesii</i>	1	2013 - 2013	Non-native
Greater Celandine, <i>Chelidonium majus</i>	1	2016 - 2016	Non-native
Greater Periwinkle, <i>Vinca major</i>	1	2016 - 2016	Non-native
Green Alkanet, <i>Pentaglottis sempervirens</i>	2	2016 - 2016	Non-native
Grey Alder, <i>Alnus incana</i>	1	2016 - 2016	Non-native
Ground-elder, <i>Aegopodium podagraria</i>	2	2013 - 2016	Non-native

Flowering Plant (108 taxa)

Hedge Mustard, <i>Sisymbrium officinale</i>	6	2008 - 2016	Non-native
Henbit Dead-nettle, <i>Lamium amplexicaule</i>	1	2013 - 2013	Non-native
Himalayan Cotoneaster, <i>Cotoneaster simonsii</i>	1	2016 - 2016	Non-native
Himalayan Honeysuckle, <i>Leycesteria formosa</i>	1	2016 - 2016	Non-native
Hjelmqvist's Cotoneaster, <i>Cotoneaster hjelmqvistii</i>	1	2016 - 2016	Non-native
Hoary Cress, <i>Lepidium draba</i>	1	2015 - 2015	Non-native
Honesty, <i>Lunaria annua</i>	1	2013 - 2013	Non-native
Horse-chestnut, <i>Aesculus hippocastanum</i>	2	2013 - 2016	Non-native
Horse-radish, <i>Armoracia rusticana</i>	2	2014 - 2016	Non-native
Italian Alder, <i>Alnus cordata</i>	1	2016 - 2016	Non-native
Ivy-leaved Speedwell, <i>Veronica hederifolia</i>	2	2008 - 2008	Non-native
Ivy-leaved Toadflax, <i>Cymbalaria muralis</i>	2	2013 - 2016	Non-native
Large-flowered Evening-primrose, <i>Oenothera glazioviana</i>	2	2013 - 2015	Non-native
Least Yellow-sorrel, <i>Oxalis exilis</i>	2	2016 - 2016	Non-native
Lesser Swine-cress, <i>Lepidium didymum</i>	2	2020 - 2020	Non-native
London Plane, <i>Platanus occidentalis x orientalis = P. x hispanica</i>	1	2016 - 2016	Non-native
Lovage, <i>Levisticum officinale</i>	1	2016 - 2016	Non-native
Mock-orange, <i>Philadelphus coronarius</i>	1	2016 - 2016	Non-native
Mugwort, <i>Artemisia vulgaris</i>	2	2013 - 2013	Non-native
Narrow-leaved Ash, <i>Fraxinus angustifolia</i>	1	2016 - 2016	Non-native
New Zealand Flax, <i>Phormium tenax</i>	1	2013 - 2013	Non-native
Norway Maple, <i>Acer platanoides</i>	4	2013 - 2016	Non-native
Nuttall's Waterweed, <i>Elodea nuttallii</i>	3	2019 - 2020	Non-native
Oil-seed Rape, <i>Brassica napus subsp. oleifera</i>	2	2008 - 2013	Non-native
Onion, <i>Allium cepa</i>	1	2008 - 2008	Non-native
Oregon-grape, <i>Mahonia aquifolium</i>	1	2016 - 2016	Non-native
Pale Pink-sorrel, <i>Oxalis incarnata</i>	1	2016 - 2016	Non-native
Perennial Candytuft, <i>Iberis sempervirens</i>	1	2016 - 2016	Non-native
Persian Ivy, <i>Hedera colchica</i>	1	2016 - 2016	Non-native
Petty Spurge, <i>Euphorbia peplus</i>	5	2013 - 2016	Non-native
Pineappleweed, <i>Matricaria discoidea</i>	2	2008 - 2016	Non-native
Portugal Laurel, <i>Prunus lusitanica</i>	2	2013 - 2016	Non-native
Prickly Lettuce, <i>Lactuca serriola</i>	3	2016 - 2020	Non-native
Procumbent Yellow-sorrel, <i>Oxalis corniculata</i>	2	2016 - 2016	Non-native
Purple Toadflax, <i>Linaria purpurea</i>	1	2016 - 2016	Non-native
Red Dead-nettle, <i>Lamium purpureum</i>	5	2008 - 2014	Non-native
Red Oak, <i>Quercus rubra</i>	2	2013 - 2016	Non-native
Red Valerian, <i>Centranthus ruber</i>	1	2016 - 2016	Non-native

Flowering Plant (108 taxa)

Root Beet, <i>Beta vulgaris</i> subsp. <i>vulgaris</i>	1	2008 - 2008	Non-native
Scented Mayweed, <i>Matricaria chamomilla</i>	1	2016 - 2016	Non-native
Scentless Mayweed, <i>Tripleurospermum inodorum</i>	7	2008 - 2020	Non-native
Shepherd's-purse, <i>Capsella bursa-pastoris</i>	8	2008 - 2020	Non-native
Slender Speedwell, <i>Veronica filiformis</i>	2	2013 - 2016	Non-native
Small Nettle, <i>Urtica urens</i>	4	2008 - 2020	Non-native
Snowberry, <i>Symphoricarpos albus</i>	1	2016 - 2016	Non-native
Snowdrop, <i>Galanthus nivalis</i>	4	2008 - 2013	Non-native
Spotted-laurel, <i>Aucuba japonica</i>	2	2016 - 2016	Non-native
Sun Spurge, <i>Euphorbia helioscopia</i>	8	2008 - 2020	Non-native
Sweet Chestnut, <i>Castanea sativa</i>	1	2016 - 2016	Non-native
Swine-cress, <i>Lepidium coronopus</i>	1	2008 - 2008	Non-native
Sycamore, <i>Acer pseudoplatanus</i>	4	2013 - 2016	Non-native
Trailing Bellflower, <i>Campanula poscharskyana</i>	2	2013 - 2016	Non-native
Turkey Oak, <i>Quercus cerris</i>	1	2016 - 2016	Non-native
Veronica hederifolia subsp. hederifolia, <i>Veronica hederifolia</i> subsp. <i>hederifolia</i>	2	2013 - 2013	Non-native
Wall Barley, <i>Hordeum murinum</i>	3	2013 - 2016	Non-native
Wall Cotoneaster, <i>Cotoneaster horizontalis</i>	1	2016 - 2016	Non-native
Water Bent, <i>Polypogon viridis</i>	1	2016 - 2016	Non-native
Weeping Crack-willow, <i>Salix euxina x alba x babylonica</i> = <i>S. x pendulina</i>	1	2013 - 2013	Non-native
Weeping Willow, <i>Salix alba x babylonica</i> = <i>S. x sepulcralis</i>	1	2013 - 2013	Non-native
White Campion, <i>Silene latifolia</i>	1	2014 - 2014	Non-native
White Dead-nettle, <i>Lamium album</i>	7	2008 - 2016	Non-native
Wild-oat, <i>Avena fatua</i>	4	2013 - 2020	Non-native
Winter Aconite, <i>Eranthis hyemalis</i>	1	2013 - 2013	Non-native
Winter Heliotrope, <i>Petasites fragrans</i>	1	2013 - 2013	Non-native
Yellow Corydalis, <i>Pseudofumaria lutea</i>	4	2013 - 2016	Non-native
Yellow-flowered Strawberry, <i>Potentilla indica</i>	1	2013 - 2013	Non-native

Insect - Beetle (Coleoptera) (1 taxa)

Harlequin Ladybird, <i>Harmonia axyridis</i>	6	2014 - 2020	Non-native
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Mollusc (1 taxa)

Jenkins' Spire Snail, <i>Potamopyrgus antipodarum</i>	7	1992 - 2005	Non-native
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Terrestrial Mammal (9 taxa)

Brown Hare, <i>Lepus europaeus</i>	7	1976 - 2006	Priority
Brown Rat, <i>Rattus norvegicus</i>	5	1977 - 2000	Non-native
Chinese Muntjac, <i>Muntiacus reevesi</i>	1	1996 - 1996	Non-native
Eastern Grey Squirrel, <i>Sciurus carolinensis</i>	4	2001 - 2018	Non-native
Eurasian Badger, <i>Meles meles</i>	4	2002 - 2017	Protected
European Rabbit, <i>Oryctolagus cuniculus</i>	9	1976 - 2021	Non-native
European Water Vole, <i>Arvicola amphibius</i>	18	2016 - 2021	Protected, Priority, Local Priority
House Mouse, <i>Mus musculus</i>	3	1977 - 1978	Non-native
West European Hedgehog, <i>Erinaceus europaeus</i>	52	1976 - 2021	Priority

Terrestrial Mammal (bat) (5 taxa)

Bat, <i>Chiroptera</i>	118	1889 - 2019	Protected, Priority, Local Priority
Brown Long-eared Bat, <i>Plecotus auritus</i>	10	1997 - 2019	Protected, Priority, Local Priority
Common Pipistrelle, <i>Pipistrellus pipistrellus sensu stricto</i>	12	2002 - 2019	Protected, Local Priority
Pipistrelle Bat species, <i>Pipistrellus</i>	19	1989 - 2020	Protected, Priority, Local Priority
Soprano Pipistrelle, <i>Pipistrellus pygmaeus</i>	2	2007 - 2017	Protected, Priority, Local Priority

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