ENVIRONMENTAL MANAGEMENT LTD

'managing the environment today – to safeguard its future tomorrow'

Preliminary Ecological Appraisal (PEA)

Land at: Partfield House, Holmrook,
Drigg, Cumbria, CA19 1XG

CIEEM REGISTERED PRACTICE 2019-2020

ISO 14001 ISOQAR REGISTERED · ISO 45001 ISOQAR REGISTERED · ISO 9001 ISOQAR REGISTERED · ISOQAR REGISTERED UKAS MANAGEMENT SYSTEMS 0026

Certificate No. 5816

29th December 2020

Report Reference: PEA_20-013_v1.0

ADK Environmental Management Ltd
2 Foldside, Freckleton, Preston, Lancashire, PR4 1JX

Preliminary Ecological Appraisal (PEA)

Land at:

Partfield House
Holmrook
Drigg
Cumbria
CA19 1XG

Client

Mr & Mrs Usher

Commissioned by

Mr & Mrs Usher
(via HDP Ltd)

Survey & Report Author

Andrew D. King B.Sc. (Hons) Environmental Management
FInstLM FCMI MCIEEM MRSB MICWCI MEECW MEM.R.E.S. GCGI AIEMA
Principal Ecologist, Environmental Advisor & Qualified ECoW

Quality Reviewed by:

Lew King
DMS BSc MBA MCGI FInstLM FCMI FInstAM
Director of Operations

NOTICE

Permission to copy

This report, commissioned by Messrs Usher ('The Client'), was prepared by **ADK** Environmental Management Limited solely for the use by ('The Client'). This report is not addressed to and may not be relied upon by any person or entity other than ('The Client') for any purpose without the prior written permission of **ADK** Environmental Management Limited and ('The Client').

ADK Environmental Management Limited, its directors, employees and affiliated companies (including 3rd party sole traders and independent specialist sub-consultants) accept no liability for reliance upon or use of this report (whether or not permitted) other than by ('The Client') for the purpose(s) for which it was originally commissioned and prepared.

In producing this report, **ADK** Environmental Management Limited has relied upon information provided by others. The completeness or accuracy of this information/data cannot and is not guaranteed by **ADK** Environmental Management Limited.

Whilst every endeavour is made to meet the client's brief, no site survey and investigation can ensure complete assessment, prediction, or interpretation of the natural environment.

Further to the above statement, no part of this report may be reproduced or transmitted in any form without the prior permission of the author(s) and/or the client.

All photographs are authors own and therefore copyright and consequently may not be reproduced or transmitted in any form without the prior permission of the author and Directors of **ADK** Environmental Management Limited.

ADK Environmental Management Ltd

2 Foldside, Freckleton, Preston, Lancashire, UK, PR4 1JX

TABLE OF CONTENTS

EXCUTIVE SUMMARY

ADK Environmental Management Ltd has been commissioned by *'The Client'* to carry out a Preliminary Ecological Appraisal (PEA), formerly referred to as an 'Extended' Phase 1 Habitat Survey, on land at Partfield House, Holmrook, Drigg, Cumbria, CA19 1XG, in order to inform and satisfy the Local Planning Authority (LPA) in respect of a proposed Planning Application for recreation camping cabins.

The survey site consists of a garden and woodland area of land of approximately 1.9 acres currently overgrown with a range of 'pioneer' and ornamental species.

A site walk-over survey was carried out on Sunday 29th November 2020 by the author accompanied by an experienced field worker.

The walk-over survey produced no evidence of any mammal, nesting birds, reptile, or invertebrate presence of any European Protected Species (EPS) or any alien non-native invasive species such as Japanese Knotweed (F*allopia japonica*).

Additional supporting third party desk top data from Cumbria Biodiversity Data Centre (CBDC) the Local Biological Records Centre based in Carlisle, was also requested to check EPS activity and habitats within a radius of 1 km of the site mid-point.

It is considered that any proposed development of the survey site by the client would have no deleterious impact on any European Protected Species (EPS) or their habitat, either currently, or in the future of any surrounding statutory or non-statutory sites.

PART 1: INTRODUCTION

Reason for the study

ADK Environmental Management Ltd has been commissioned by 'The Client' to carry out a site survey by way of a Preliminary Ecological Appraisal (PEA), (formerly known as an Extended Phase 1 Habitat Survey, required by the Local Planning Authority to inform and support a Planning Application.

Aims of the Survey

The aims and objectives of the survey, and therefore this report, are to:

- undertake a site walkover survey of the site
- obtain additional desk top data from 'CBDC'. Magic and NBN Atlas
- report the findings of the site walkover relative to the current ecological value of the site.
- to determine the potential of any protected species and/or habitats on the site.
- document the methodologies and findings of the surveys.
- inform the development proposals of the ecological significance of the site and highlight any ecological constraints to development.
- make recommendations considered appropriate, together with any precautionary measures to be undertaken prior to the commencement of any development works taking place.
- Identify opportunities for ecological enhancement.

PART 2: INFORMATION

Qualifications of Author, Andrew King (Principal Ecologist)

Andrew King obtained a BSc (Hons) Environmental Management in June 2003 and has been employed as the full time Principal Ecologist and Managing Director of ADK Environmental Management Ltd. for the past sixteen years. He is a full member of The Chartered Institute of Ecology and Environmental Management (MCIEEM) and an associate member of the Institute of Environmental Management & Assessment (AIEMA). In addition, he is a full member of the Royal Society of Biology (MRSB) and is a qualified ECoW as a full member of the Association of Environmental & Ecological Clerk of Works (MEECW).

He is a full Member of the Institute of Clerks of Works and Construction Inspectorate GB (Environmental) (MICWCI). In addition to his ecological qualifications, he is a Fellow of the Institute of Leadership and Management (FInstLM), a Fellow of the Chartered Management Institute (FCMI) and a Graduate Member of the City & Guilds Institution of London (GCGI). He is also a full member of the Royal Entomological Society Mem.R.E.S.

He is an experienced and professionally qualified ecologist having undertaken numerous Preliminary Ecological Appraisals (PEA's), (formerly known as Extended Phase 1 Habitat Surveys), including species specific surveys for European Protected Species (EPS). He is registered to use Class Licence CL08 (Great Crested Newt Survey Level 2).

As a member of these professional institutions, he is obliged to follow strict Codes of Practice and demonstrate a standard of knowledge and experience monitored annually through peer review and documentary confirmation of Continuing Professional Development (CPD).

PART 3: SITE LOCATION & DESCRIPTION

The survey site consists of the gardens attached to Partfield House, (a detached domestic dwelling currently undergoing renovation) at Holmrook, Drigg, Cumbria, CA19 1XG.

Drigg is a rural village in character, situated on the B5344 (off the A 595) in the civil parish of Drigg and Carleton on the west Cumbria coast of the Irish Sea and on the boundary of the Lake District National Park in the Borough of Copeland in the county of Cumbria. Drigg sits to the north of the River Irt with Carleton to the South.

The (British National) Grid Reference for the survey site mid-point is located at SD 066 991.The survey site consists of mature gardens and a large woodland area situated to the rear of the domestic dwelling totalling approximately 1.9 acres containing a mixture of mature deciduous and coniferous trees and is currentlyovergrown with a range of ‘pioneer’ and ornamental species.

The area also supports a large, ornamental pond to the central area of the garden which is overgrown with both submerged and surface vegetation.

PART 4: SURVEY METHODOLOGIES

The site was surveyed by the author assisted by one field worker on the 29th November 2020 by undertaking a walk-over survey broadly in accordance with the JNCC methodology (2010) and CIEEM *'Guidelines for Preliminary Ecological Appraisal'* (2017), in order to produce a survey report. Target notes (if applicable) together with supplementary information for identifying the potential for protected or notable species or habitats are also given where appropriate. Weather was overcast with a daytime temperature of 8° C. with 100% cloud cover. Conditions and time of year were acceptable for survey work.

The desk-based assessment focused on the proposed development area (and those immediately adjacent areas that may potentially, either directly or indirectly, be affected by the consequence of the proposed development) and its broader ecological context.

The local biological records centre based in Carlisle (CBDC) was requested to undertake a 'Baseline Search' and supply all relevant data pertinent to the site within a 1km 'buffer zone' of the survey site mid-point. Additional secondary data was also searched online from sources listed in the Appendices.

Additional secondary data was sought via 'Google Earth', MAGIC and NBN Atlas.

The value of the site for protected flora and fauna and their habitats (actual or potential) was assessed together with a search for any notable invasive none-native plant species such as Japanese Knotweed (*Fallopia japonica*), Himalayan Balsam (*Impatiens glandulifera*) and Giant Hogweed (*Heracleum mantegazzianum*) listed in Schedule 9 (Section 14) of the Wildlife & Countryside Act 1981 (as amended).

Whilst this PEA Survey does not constitute a full protected species-specific survey it will enable experienced ecologists to obtain an understanding of the site such that it is possible to confirm the conservation significance of the site and assess the potential for impacts on habitats/species likely to represent a material considerationin planning terms.

The purpose of the PEA field walkover survey of the land, was to carry out an assessment survey of the site, noting and recording all ecological features and habitats of importance relating to the actual or potential presence of European Protected Species (EPS) and their habitat and any (ecological) impacts the potential development may have.

PART 5: SURVEY RESULTS

Site walkover (Preliminary Ecological Appraisal)

The Preliminary Ecological Appraisal field walkover was conducted on the 29th November 2020, by the author assisted by one experienced field worker. It was a damp overcast morning with a temperature of 8°C. with occasional drizzle and 100% cloud cover. Conditions were considered acceptable for carrying out survey work relating to this site. The 100 metre (British National) Grid Reference for the site mid- point is SD 066 991

The site walkover of this survey site plot of land consisted of a systematic walk over of the delineated site survey area of approximately 7,500 sq/m (approx. 1.9 acres) by a qualified and experienced ecologist, designed to determine the overall characteristics of the site and its potential value for all habitats and for the presence (actual or potential) of any EPS (European Protected Species).

The site was situated to the rear of the domestic dwelling and comprised a mixture of garden and mixed woodland. Most of the site consisted of pioneer species and grasses with some introduced/ornamental plants and shrubs within this woodland area setting of mature deciduous and coniferous trees.

An ornamental pond was located towards the central area of the site approximately 25m in diameter which was significantly overgrown with submergent pond vegetation.

There were no built structures on site and no incidental field observations of anybirds, mammals, amphibians, or reptiles. No incidental field sign observations were recorded in respect of invasive alien species such as Japanese Knotweed (*Fallopia japonica*), Himalayan Balsam (*Impatiens glandulifera*) or Giant Hogweed (*Heracleum mantegazzianum*).

Assessment of Desk Top Data (Google Earth and Magic)

Drigg Coast was identified as a SSSI approximately 1.9k west of the survey site. Drigg Holme (SSSI) was identified approximately 540m south east of the survey site. Hallsenna Moor Nature Reserve (SSSI) was identified approximately 1.4k due north of the survey site.

Assessment of Desk Top Data (NBN Atlas)

Of 243 species identified via NBN within 1k of the survey site, there were data for 4 Amphibians, 3 Reptiles and 5 Mammals.

Reference to the various Appendices identifies the 4 amphibians and further searches found 3 records for the Common Toad between 1988 and 1992 at Drigg Station. There were 15 recorded sightings all during 1994 at Drigg Coast. Common Frog had 3 records in 1964, 1988 and 2010 at Drigg Coast and Drigg Dunes. There were 9 (alleged) sightings of Great Crested Newts all during 2015 (location and species not verified).

In relation to Reptiles, 3 records were identified in total showing 2 for Slow-Worm, 1 in 1964 on Drigg Coast and 1 in 1990 at Drigg Hall. There were 4 records for Adder in 1973, 1974, 1976 and 1981, location unknown.

There was 1 record only for the Common Lizard in 1833, location not recorded.

There were 5 data for Mammals identifying 1 sighting only for Brown Hare 2015, European Rabbit 2015, Brown Rat 1970, Eastern Grey Squirrel 2010, and European Mole 1949. No locations were recorded for any of these sightings.

There were no recorded data in relation to Bats and Badgers.

Assessment of Desk Top Data (CBDC) 1km Buffer-Zone

The desk-top data supplied by CBDC returned the following.

x1,980 Total number of records were returned for the 1km buffer zone from the site's midpoint. The main breakdown is as follows:

BIRDS	1,820	
AMPHIBIANS	25	
Great Crested Newt	*3*	*(1983/1996/1996 Drigg Dunes)*
Natterjack Toad	*1*	*(1991 Drigg Dunes)*
INSECTS	58	
REPTILE	11	
Slow Worm	*2*	*(1990/1991 Drigg Hall)*
Adder	*7*	*(1981-2011 Drigg Coast/Drigg Dunes)*
FLOWERING PLANTS	8	
MAMMALS	43	
Badger	*4*	*(1991/ 1997 location unspecified)*
Otter	*1*	*(2001 Drigg Dunes)*
Bats	*5*	*(2010- 2017 location unspecified)*
Hedgehog	1	*(1991 location unspecified)*

All sightings of the above varied between 0.6 km and 1.7km of the survey site mid-point.

Further analysis of the data indicated 862 records of the 1,980 (43%) were recorded within 500m of the survey site and all records were between 1988 and 2015.

842 of those 862 records related to birds.

x3no. Statutory Sites were noted within 2km of the site's centroid.

- Hall senna Moor SSSI (Approx. 1.4 km away to the North)
- Drigg Coast SSSI (Approx. 1.9 km away to the South. South West)
- Drigg Holme SSSI (Approx. 1 km away to the East)

PART 6: EVALUATION & CONCLUSION

The survey used standard, 'best-practice' methods and techniques in respect of conducting surveys for protected species and their habitat, together with a list of recommendations for any future or additional surveys to be conducted prior to any final evaluation or conclusion on the site's importance, or any future mitigation in respect of protected species.

The survey broadly followed the JNCC and CIEEM methodologies. Incidental observations of protected and/or Biodiversity Action Plan (BAP) priority species and the potential for such species to occur on site (and in the surrounding landscape where relevant) were also noted where relevant. There were no survey constraints.

As no existing ecology or statutory & non-statutory sites are to be affected, any proposed development by the client would have no deleterious impact on the existing ecology of the site or on any conservation population status of any protected species.

Overall, having regard to the distances away of the x3no. Statutory Sites (SSSIs), together with the distances of the sparse species records derived from the various desk top data sources, it is considered that there would be no deleterious impact on any European Protected Species (EPS) or their habitat, either currently, or in the future.

"Consideration for further enhancing the ecology of the site however would enhance, enrich and increase the biodiversity 'net gain' and habitat of the site in line with the governments' vision of promoting sustainable development, conserving, enhancing, and restoring the diversity of England's wildlife and geology and contributing to rural renewal and urban renaissance (ODPM)."

The emphasis of any design would be based on the use of native species of plants and trees, or those known to be of wildlife value. This would create new habitat for the bird, insect and mammal population and additionally soften any visual impact.

In terms of enhancing the ecology and biodiversity of the site, the choice of native wildflower, shrub and tree planting would ensure that this requirement would be fully met, also installation of bird and bat boxes on any new build or within the site boundaries would be beneficial.

It is considered that any proposed development of the survey site by the client would have no deleterious impact on any European Protected Species (EPS) or their habitat, either currently, or in the future of any surrounding statutory or non-statutory sites.

ADK Environmental Management Ltd

2 Foldside, Freckleton, Preston, Lancashire, UK, PR4 1JX

PART 7: RECOMMENDATIONS

In respect of the centrally located artificial pond, there is no primary survey evidence relating to great crested newts which are a European Protected Species. Reference to secondary data from NBN Atlas and Cumbria Biodiversity Data Centre elicited only minimal isolated references to GCN all of which were outside 0.5km of the survey site mid-point and many for which exact locations had not been recorded.

However, this lack of substantive current and historic evidence is considered by the author insufficient to rule out the possibility of GCN's somewhere within the survey site and **it is therefore recommended that a Habitat Suitability Index (HSI) survey is carried out in accordance with** '***Oldham et al 2000'.*** It should also be noted that an HSI survey is only a measure of 'habitat suitability' and not a substitute for (Presence & Absence) surveys for great crested newts.

It is further recommended that all works are undertaken under the Precautionary Principle Working Method Statement, and all construction workers should be subject to 'toolbox talks' (both prior to and during any construction activities) to identify potential species which may be encountered, and what action to take should that event arise.

PART 8: REFERENCES AND INFORMATION SOURCES

Conservation (Natural Habitats, &c.) Regulations 1994. Statutory Instrument 1994 No. 2716 Wildlife, Countryside. HMSO

Handbook for Phase 1 Habitat Surveys (2010), Joint Nature Conservation Committee 'Guidelines for Preliminary Ecological Appraisal, 2nd. Edition Chartered Institute of Ecology and Environmental Management, CIEEM Winchester.

The Wildlife and Countryside Act 1981 (as amended) and Regulation 39 of The Conservation (Natural Habitats & c.) Regulations 1994. HMSO.

Chartered Institute of Ecology and Environmental Management. (2006). *Guidelines for Ecological Impact Assessment in the United Kingdom.*

Chartered Institute of Ecology and Environmental Management. (2006). *Developing Best Practice in Survey and Reporting.*

CBDC - Cumbria Biodiversity Data Centre
[Biological Records Centre serving the Cumbria area]

Electronic References

Google Earth

'Magic': Multi-Agency Geographic Information for the Countryside

National Biodiversity Network (NBN)

https://nbn.org.uk/

https://nbnatlas.org/

https://spatial.nbnatlas.org

Ordnance Survey Mapping (Bing Maps)

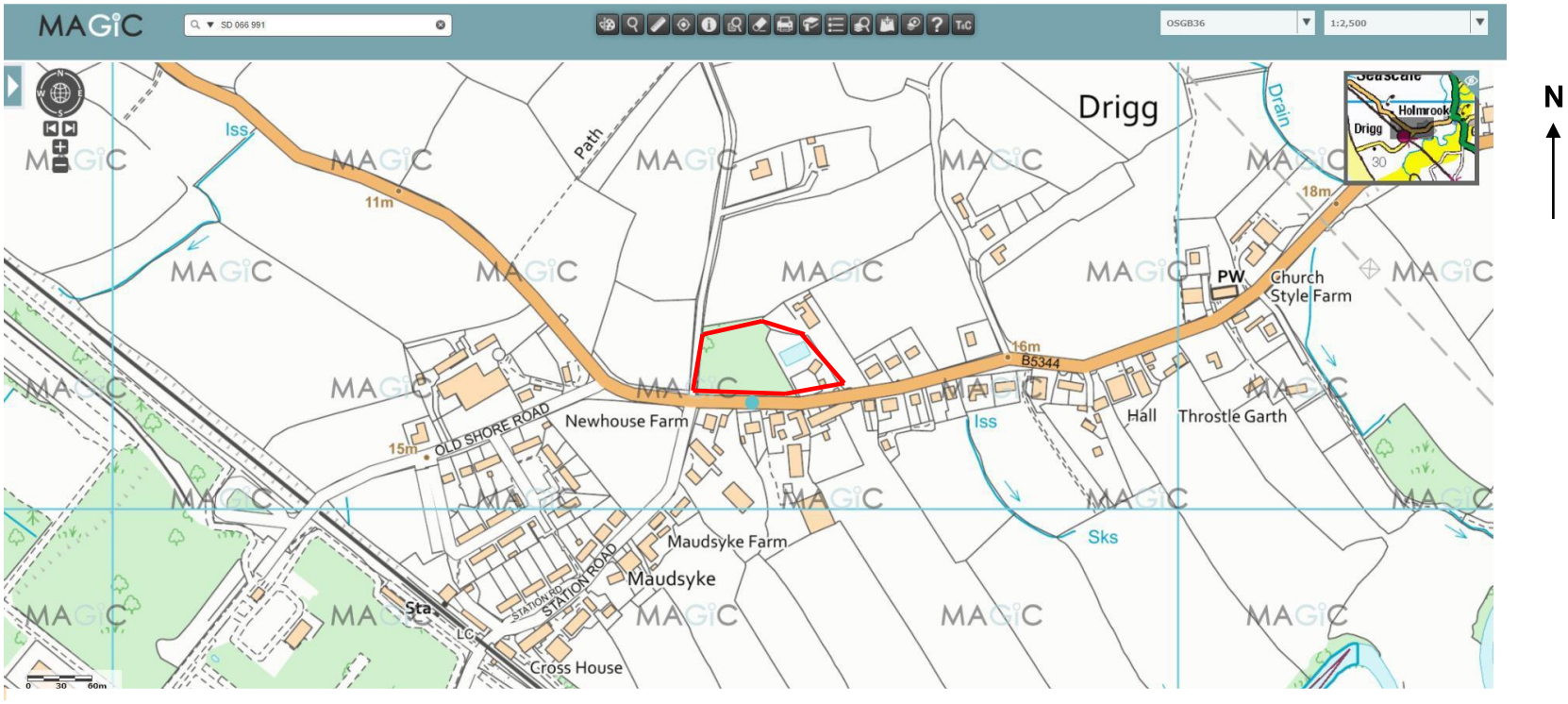
http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx

PART 9: APPENDICES

ADK Environmental Management Ltd

2 Foldside, Freckleton, Preston, Lancashire, UK, PR4 1JX

Appendix 1- Survey Site Location Map (survey area outlined in red)



Source: magic.gov.uk (accessed December 2020)

Appendix 2 – Aerial Site Location Map (survey area outlined in red)

Source: Google Earth (accessed November 2020)

ADK Environmental Management Ltd

2 Foldside, Freckleton, Preston, Lancashire, UK, PR4 1JX

Appendix 3i – Site photographs: General (all photographs taken by author 29/11/2020)









Appendix 3ii – Site photographs: General cont. (all photographs taken by author 29/11/2020)





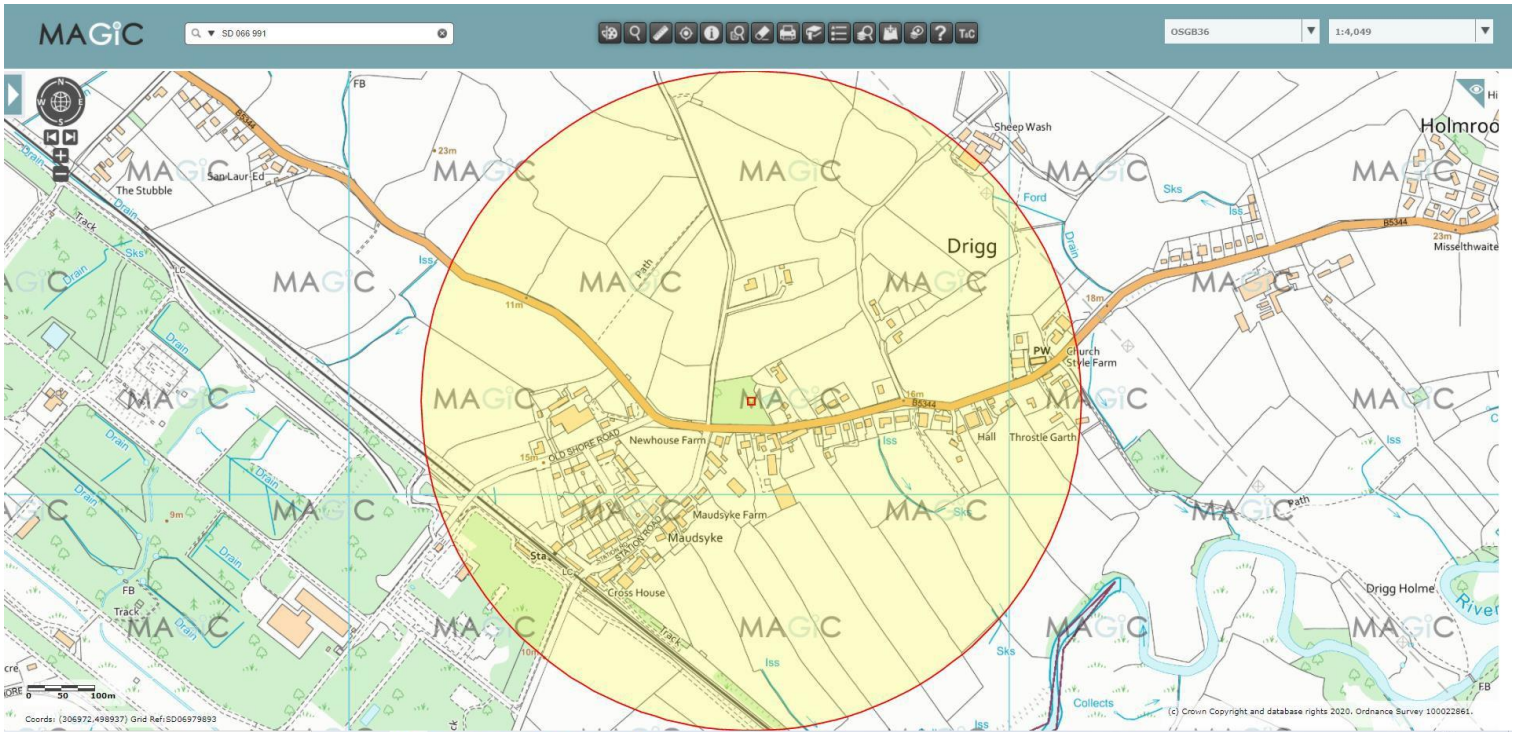




Appendix 4i – MAGIC : Aerial Desk-top data search: 500m buffer zone site check map for protected species (from site mid-point)

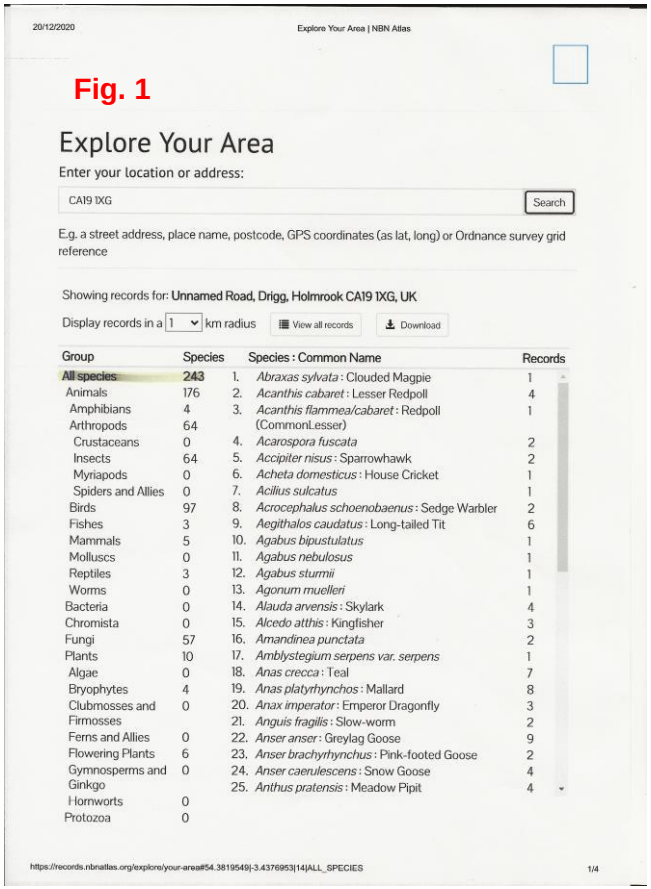
Source: magic.gov.uk (accessed December 2020)

Appendix 4ii – MAGIC : Plan view Desk-top data search: 500m buffer zone site check map for protected species (from site mid-point)



Source: magic.gov.uk (accessed December 2020)

Appendix 5: NBN Desk-top data (1km buffer zone map) – All Species



20/12/2020 Explore Your Area | NBN Atlas

Fig. 1

Explore Your Area

Enter your location or address:

CA19 1XG Search

E.g. a street address, place name, postcode, GPS coordinates (as lat, long) or Ordnance survey grid reference

Showing records for: **Unnamed Road, Drigg, Holmrook CA19 1XG, UK**

Display records in a 1 km radius View all records Download

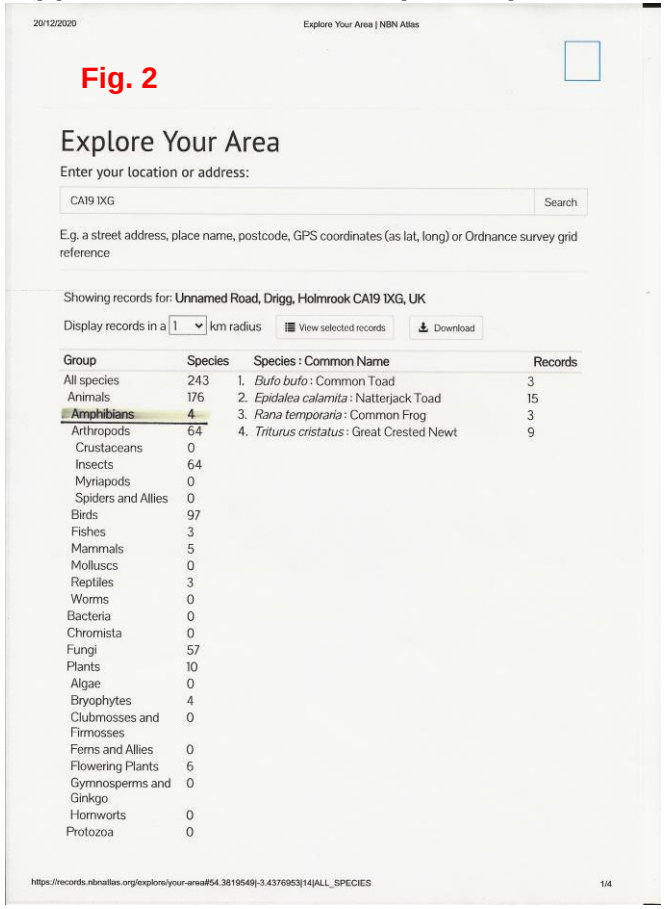
Group	Species
All species	243
Animals	176
Amphibians	4
Arthropods	64
Crustaceans	0
Insects	64
Myriapods	0
Spiders and Allies	0
Birds	97
Fishes	3
Mammals	5
Molluscs	0
Reptiles	3
Worms	0
Bacteria	0
Chromista	0
Fungi	57
Plants	10
Algae	0
Bryophytes	4
Clubmosses and Firmosses	0
Ferns and Allies	0
Flowering Plants	6
Gymnosperms and Ginkgo	0
Hornworts	0
Protozoa	0

	Species : Common Name	Records
1.	*Abraxas sylvata* : Clouded Magpie	1
2.	*Acanthis cabaret* : Lesser Redpoll	4
3.	*Acanthis flammea/cabaret* : Redpoll (CommonLesser)	1
4.	*Acarospora fuscata*	2
5.	*Accipiter nisus* : Sparrowhawk	2
6.	*Acheta domesticus* : House Cricket	1
7.	*Acilius sulcatus*	1
8.	*Acrocephalus schoenobaenus* : Sedge Warbler	2
9.	*Aegithalos caudatus* : Long-tailed Tit	6
10.	*Agabus bipustulatus*	1
11.	*Agabus nebulosus*	1
12.	*Agabus sturmii*	1
13.	*Agonum muelleri*	1
14.	*Alauda arvensis* : Skylark	4
15.	*Alcedo atthis* : Kingfisher	3
16.	*Amandinea punctata*	2
17.	*Amblystegium serpens var. serpens*	1
18.	*Anas crecca* : Teal	7
19.	*Anas platyrhynchos* : Mallard	8
20.	*Anax imperator* : Emperor Dragonfly	3
21.	*Anguis fragilis* : Slow-worm	2
22.	*Anser anser* : Greylag Goose	9
23.	*Anser brachyrhynchus* : Pink-footed Goose	2
24.	*Anser caerulescens* : Snow Goose	4
25.	*Anthus pratensis* : Meadow Pipit	4

https://records.nbnatlas.org/explore/your-area#54.3819549|-3.4376953|14|ALL_SPECIES 1/4

Source: NBN atlas (accessed December 2020)

Appendix 6: NBN Desk-top data (1km buffer zone map) – Amphibians, Reptiles & Mammals



20/12/2020 Explore Your Area | NBN Atlas

Fig. 2

Explore Your Area

Enter your location or address:

CA19 1XG Search

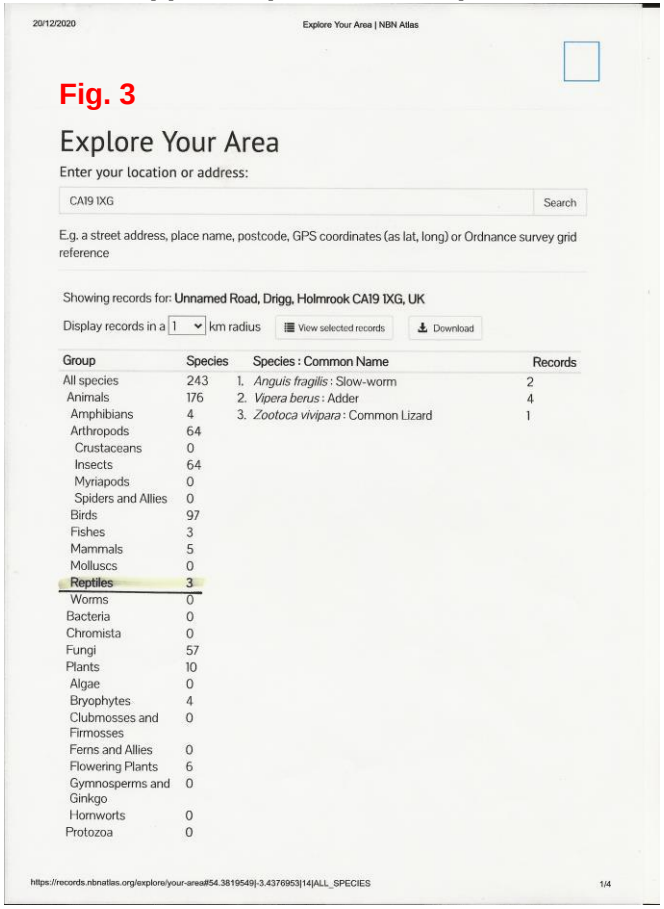
E.g. a street address, place name, postcode, GPS coordinates (as lat, long) or Ordnance survey grid reference

Showing records for: **Unnamed Road, Drigg, Holmrook CA19 1XG, UK**

Display records in a 1 km radius | View selected records | Download

Group	Species	Species : Common Name	Records
All species	243	1. *Bufo bufo* : Common Toad	3
Animals	176	2. *Epidalea calamita* : Natterjack Toad	15
Amphibians	4	3. *Rana temporaria* : Common Frog	3
Arthropods	64	4. *Triturus cristatus* : Great Crested Newt	9
Crustaceans	0		
Insects	64		
Myriapods	0		
Spiders and Allies	0		
Birds	97		
Fishes	3		
Mammals	5		
Molluscs	0		
Reptiles	3		
Worms	0		
Bacteria	0		
Chromista	0		
Fungi	57		
Plants	10		
Algae	0		
Bryophytes	4		
Clubmosses and Firmosses	0		
Ferns and Allies	0		
Flowering Plants	6		
Gymnosperms and Ginkgo	0		
Hornworts	0		
Protozoa	0		

https://records.nbnatlas.org/explore/your-area#54.3819549|-3.4376953|14|ALL_SPECIES 1/4



20/12/2020 Explore Your Area | NBN Atlas

Fig. 3

Explore Your Area

Enter your location or address:

CA19 1XG Search

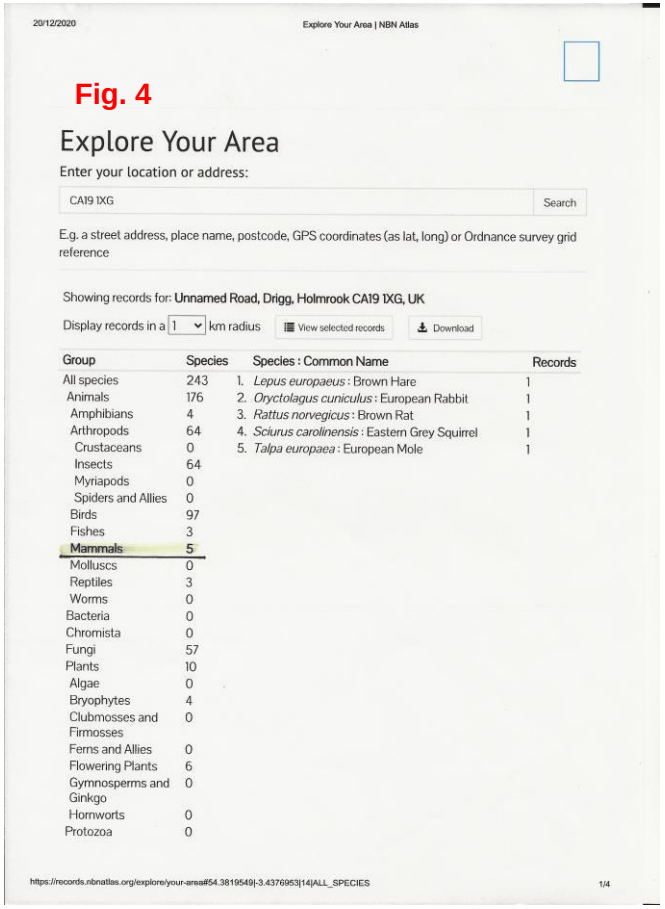
E.g. a street address, place name, postcode, GPS coordinates (as lat, long) or Ordnance survey grid reference

Showing records for: **Unnamed Road, Drigg, Holmrook CA19 1XG, UK**

Display records in a 1 km radius | View selected records | Download

Group	Species	Species : Common Name	Records
All species	243	1. *Anguis fragilis* : Slow-worm	2
Animals	176	2. *Vipera berus* : Adder	4
Amphibians	4	3. *Zootoca vivipara* : Common Lizard	1
Arthropods	64		
Crustaceans	0		
Insects	64		
Myriapods	0		
Spiders and Allies	0		
Birds	97		
Fishes	3		
Mammals	5		
Molluscs	0		
Reptiles	3		
Worms	0		
Bacteria	0		
Chromista	0		
Fungi	57		
Plants	10		
Algae	0		
Bryophytes	4		
Clubmosses and Firmosses	0		
Ferns and Allies	0		
Flowering Plants	6		
Gymnosperms and Ginkgo	0		
Hornworts	0		
Protozoa	0		

https://records.nbnatlas.org/explore/your-area#54.3819549|-3.4376953|14|ALL_SPECIES 1/4



20/12/2020 Explore Your Area | NBN Atlas

Fig. 4

Explore Your Area

Enter your location or address:

CA19 1XG Search

E.g. a street address, place name, postcode, GPS coordinates (as lat, long) or Ordnance survey grid reference

Showing records for: **Unnamed Road, Drigg, Holmrook CA19 1XG, UK**

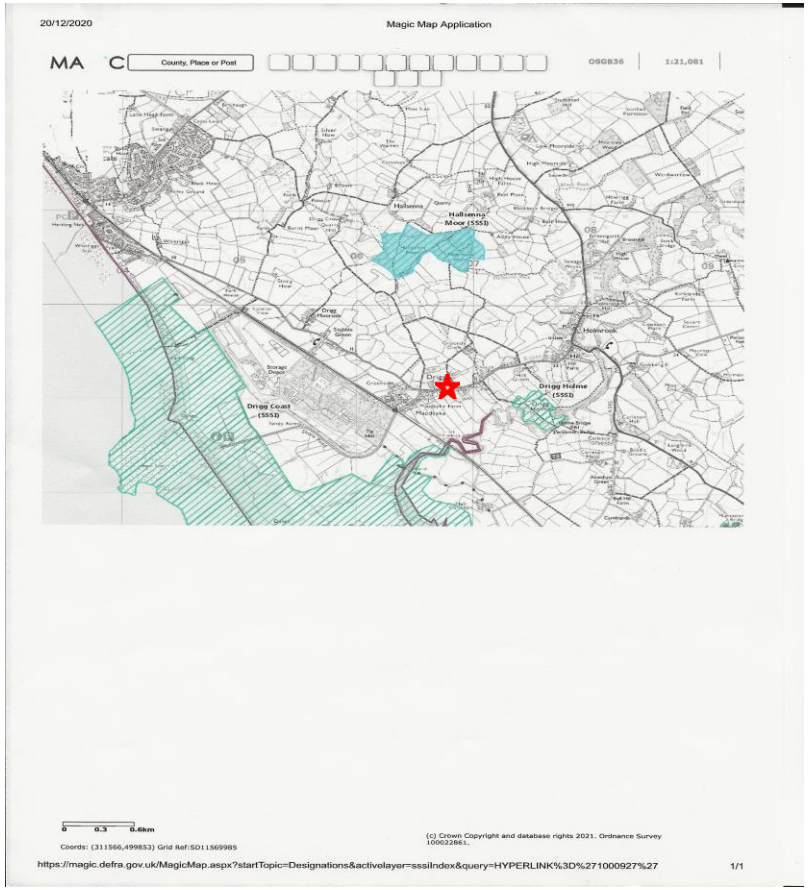
Display records in a 1 km radius | View selected records | Download

Group	Species	Species : Common Name	Records
All species	243	1. *Lepus europaeus* : Brown Hare	1
Animals	176	2. *Oryctolagus cuniculus* : European Rabbit	1
Amphibians	4	3. *Rattus norvegicus* : Brown Rat	1
Arthropods	64	4. *Sciurus carolinensis* : Eastern Grey Squirrel	1
Crustaceans	0	5. *Talpa europaea* : European Mole	1
Insects	64		
Myriapods	0		
Spiders and Allies	0		
Birds	97		
Fishes	3		
Mammals	5		
Molluscs	0		
Reptiles	3		
Worms	0		
Bacteria	0		
Chromista	0		
Fungi	57		
Plants	10		
Algae	0		
Bryophytes	4		
Clubmosses and Firmosses	0		
Ferns and Allies	0		
Flowering Plants	6		
Gymnosperms and Ginkgo	0		
Hornworts	0		
Protozoa	0		

https://records.nbnatlas.org/explore/your-area#54.3819549|-3.4376953|14|ALL_SPECIES 1/4

Source: NBN atlas (accessed December 2020)

Appendix 7: MAGIC Desk-top data (1km buffer zone) – Designated Sites



Source: magic.defra.gov.uk (accessed December 2020)

For further copies of this report or for more information on this project or on our services, please contact:

ADK Environmental Management Ltd (Northern REGISTERED Office)

2 Foldside
Freckleton
Preston
Lancashire
UK
PR4 1JX

t:

e:

w:

A full compendium of site photos is available to view on CDROM by written request to ADK Environmental Management

SIGNED ....

[**For and on behalf of ADK Environmental Management Limited**]

PRINT NAME: Andrew D. King

DESIGNATION: Principal Ecologist & Principal Environmental Advisor

DATED: 29th December 2020