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Low Barugh, Barnsley

Great Crested Newt Survey Report

June 2014

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Contents

1 Introduction

Site Description

1.1 The site is the proposed location of new residential housing occupying an area of approximately 10ha which is located to the southeast of Dearne Hall Road in Low Barugh, Barnsley, centred at OS gird reference SE 317 087. Residential housing and Dearne Hall Road form the north-western site boundary. Industrial premises are located to the south of the site, and the eastern site boundary is formed by a live railway line.

1.2 The site is composed of two arable fields, with hedgerows and fencing located at the southern, eastern and northern boundaries. Two ponds are located at the eastern side of the fields, which are linked and surrounded by marshy grassland and swamp vegetation. A wet ditch is located to the east of these ponds. Semi-mature broadleaved woodland is located on the railway embankment, and semi-mature broadleaved woodland with areas of neutral grassland is located on a section of disused railway located at the south-eastern site boundary. Two residential properties are situated at the south-western corner of the site.

Description of Project

1.3 Commercial Estates Projects and Hallam Land Management propose to develop the site for residential use. The extent of the proposed works is based on the current illustrative land use plan (NLP drawing number IL21235-020RevB, September 2013).

Background to Commission and Aims of Study

1.4 BSG Ecology was originally commissioned in 2008 by Commercial Estates Projects to undertake an Extended Phase 1 Habitat Survey (JNCC, 2010) of the site, in order to identify habitats or species that may be affected by the proposed works, and provide a preliminary ecological assessment.

1.5 BSG Ecology was subsequently commissioned in February 2012 by Commercial Estates Projects and Hallam Land Management to update the Extended Phase 1 Habitat Survey, and to undertake further bat activity surveys, bat roost surveys, great crested newt *Triturus cristatus* presence/absence surveys and breeding bird surveys.

1.6 In April 2014, BSG Ecology was commissioned to update the great crested newt survey work previously undertaken at the site in 2012, to support a future great crested newt European Protected Species (EPS) licence application.

2 Methods

Field Survey

Habitat Suitability Index Assessment

2.1 During the first great crested newt presence/absence visit (22 April 2014) the site was re-assessed for its potential to support great crested newt and the two ponds within the site were re-assessed using the Habitat Suitability Index (HSI, Oldham *et al.*, 2000) scoring method, which is a quantitative means of evaluating habitat quality for great crested newt measured over ten suitability indices. The HSI provides a numerical index between 0 and 1 where scores closer to 0 indicate poor habitat with lower probability of great crested newt occurrence, and scores closer to 1 represent optimal habitat with a higher probability of occurrence:

Table 1: Pond suitability to support great crested newts according to HSI score

HSI score	Pond suitability for great crested newts (ARG UK, 2010)
<0.5	Poor
0.5-0.59	Below average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

Population Size Class Assessment Survey

2.2 The survey methodology followed the methods set out in the Natural England (formerly English Nature) Guidelines (2001) and included searches for great crested newt, smooth newt *Lissotriton vulgaris*, palmate newt *Lissotriton helveticus*, common frog *Rana temporaria* and common toad *Bufo bufo*.

2.3 These guidelines state that, to determine presence/absence within ponds, four survey visits using three methods per visit, including torch survey, bottle-trapping, terrestrial searches and egg searching, should be used. Surveys should be undertaken between mid-March and mid-June, with at least two survey visits during mid-April to mid-May. Since great crested newt was located within Pond A, two further surveys of this pond were undertaken, in order to undertake a population size class assessment. Table 2 below details the survey dates, surveyors and weather conditions during each survey visit. Tables 3 and 4 detail the survey methodologies used during each survey visit.

2.4 During presence/absence surveys for great crested newt undertaken in 2014, four survey visits were initially made to Ponds A and B during April and May 2014. Two further visits to Pond A were undertaken during late May and early June 2014. The surveys were conducted by Senior Ecologist Liz Rose-Jeffreys MCIEEM, Ecologist Ruth Walker ACIEEM, and field assistant Grant Bramall ACIEEM, each of whom holds a Natural England great crested newt scientific survey class licence. Field assistance was provided by Ecologist Rachel Hall Grad CIEEM.

2.5 Each survey comprised an evening visit in which torch searches of aquatic habitats were conducted and a search for great crested newt eggs carried out. The fifth and sixth survey visits to Pond A also included a terrestrial search of surrounding habitats. Bottle traps were set and the following morning the bottle traps were checked and removed.

Table 2: Great crested newt survey dates and weather conditions

Date	Surveyors	Weather
22/04/14	Liz Rose-Jeffreys MCIEEM (Class Survey Licence number:	Partially cloudy, still and dry. Air temperature 13°C.

	CLS00244) and Ruth Walker ACIEEM (Class Survey Licence number: CLS001590)	
30/04/14	Liz Rose-Jeffreys and Grant Bramall (Class Survey Licence number: CLS00769)	Overcast and still. Heavy rain prior to survey easing to drizzle at start of survey, dry at the end. Air temperature 12°C.
06/05/14	Liz Rose-Jeffreys and Grant Bramall	Overcast and dry with light breeze. Air temperature 13°C.
15/05/14	Liz Rose-Jeffreys and Grant Bramall	Mostly clear, dry and still. Air temperature 12°C.
27/05/14	Liz Rose-Jeffreys and Rachel Hall Grad CIEEM	Overcast, light breeze and light rain. Air temperature 11°C.
05/06/14	Liz Rose-Jeffreys and Rachel Hall Grad CIEEM	Clear dry and still. Air temperature 9°C.

Table 3: Great crested newt survey methodologies for Pond A

Date	**Methods**			
	Bottle trap (number of bottles)	Egg search	Terrestrial search	Torch
22/04/14	✔ (50)	✔	x	✔
30/04/14	✔ (99)	✔	x	✔
06/05/14	✔ (99)	✔	x	✔
15/05/14	✔ (99)	✔	x	✔
27/05/14	✔ (98)	✔	✔	✔
05/06/14	✔ (98)	✔	✔	✔

2.6 Pond A regularly fluctuates in size depending on levels of rainfall. As such, during the first visit the depth of open water meant that it was only possible to set 50 traps within the pond. Periods of rainfall following this visit meant that the water levels increased and it was possible to set 99 traps on subsequent visits. Despite the fluctuation in numbers of bottle traps used this is not considered to provide a significant constraint to the findings, since it was possible to thoroughly survey the pond using three survey methods during each visit.

Table 4: Great crested newt survey methodologies for Pond B

Date	**Methods**			
	Bottle trap (number of bottles)	Egg search	Terrestrial search	Torch
22/04/14	✔ (5)	✔	x	✔
30/04/14	✔ (5)	✔	x	✔
06/05/14	✔ (5)	✔	x	✔
15/05/14	✔ (5)	✔	x	✔

Limitations to Methods

2.7 The non-native, invasive New Zealand stonecrop *Crassula helmsii* currently forms a dense mat of vegetation within Pond A and it has expanded in area since the previous survey work for great crested newt undertaken at this pond in 2012. The expansion of this species within the pond meant access to survey the central areas of Pond A was limited.

3 Results and Interpretation

Great Crested Newt

3.1 The data trawl provided one record for great crested newt on the Barnsley Canal in 1983, situated approximately 210m to the east of the site at OS grid reference SE 321 088. A study of OS plans and aerial photographs shows that this record relates to the disused section of the Barnsley Canal, separated from the site by a live main railway line. The two on-site ponds (Pond A and Pond B) are described below and are mapped on Figure 1: Extended Phase 1 Habitat Survey Plan, in Appendix 1. Photographs referred to in the text are set out in Appendix 2. The results of the targeted great crested newt surveys of Pond A and Pond B are also set out below.

Pond A

3.2 This pond is situated within the site at OS grid reference SE 3188 0884 (Photographs 1-3). The size of the pond varied significantly throughout the 2014 survey season depending on the levels of precipitation preceding the survey. The water is clear, and vegetation occupies approximately 85% of the pond surface, with submerged aquatic vegetation (New Zealand stonecrop) forming a dense mat beneath the surface of the water. Other aquatic species include water-crowfoot *Ranunculus* sp., water-cress *Nasturtium officinale* and water-starwort *Callitriche* sp.. Marginal vegetation includes stands of common reedmace *Typha latifolia*, greater willowherb *Epilobium hirsuitum*, soft rush *Juncus effusus*, hard rush *Juncus inflexus* and spike-rush *Eleocharis* sp..

3.3 The HSI score for Pond A is 0.87, indicating that the pond contains features that are of excellent suitability to support a breeding population of great crested newts (ARG UK, 2010). The open water within Pond A provides opportunities for great crested newt to undertake mating displays, and the presence of a variety of aquatic vegetation also provide suitable egg-laying material for newts.

3.4 A range of habitats within the site are considered to provide suitable terrestrial habitats for newts, in particular the marshy grassland and swamp vegetation located to the south of Pond A (Photographs 4 and 5), rubble piles and bricks located within the semi-mature broadleaved woodland to the southeast of the pond. Features such as rubble piles within 100 metres of a pond can provide suitable hibernacula for great crested newts. In addition, the presence of woodland within close proximity to the pond is considered to provide further valuable terrestrial habitat for great crested newts.

Summary of Previous Population Size Class Assessment Results (2012)

3.5 In summary, great crested newts were recorded on every visit with a maximum of 161 adult great crested newts recorded during the torchlight survey on 24 April 2012. Smooth newts were also recorded on each of the survey visits, with a maximum count of 95 on 24 April 2012 and common toad was recorded on four of the six visits.

Summary of Revised Population Size Class Assessment Results (2014)

3.6 Table 5, in Appendix 3, sets out the full results of the six survey visits to Pond A. In summary, great crested newts were recorded on every visit with a maximum of 19 great crested newts (18 adult, 1 juvenile) recorded during the bottle trap survey on 15 May 2014. Smooth newts were also recorded on each of the survey visits, with a maximum count of 53 on 15 May 2014 and common toad was recorded on two of the six visits.

Pond B

3.7 This pond is situated within the site at OS grid reference SE 3175 0860 (Photograph 6). The pond is approximately 6m by 4m, surrounded by swamp habitat and marshy grassland with occasional scattered willow *Salix* scrub. The water is shallow and relatively clear, and the pond margins are densely vegetated with common reedmace.

3.8 The HSI score for Pond B is 0.54, indicating that the pond contains features that are of below average suitability to support a breeding population of great crested newts (ARG UK, 2010). The

open water within the pond, albeit limited, provides some opportunity for great crested newts to undertake mating displays.

Summary of Previous Presence/Absence Survey Results (2012)

3.9 No great crested newts were located during any of the surveys of Pond B in 2012, although individual common toads were located on two separate occasions during the torchlight surveys.

Summary of Revised Presence/Absence Survey Results (2014)

3.10 No great crested newts were located during any of the survey visits of Pond B. A maximum of three smooth newts were recorded on two separate visits during the bottle trapping survey. One common frog tadpole was also located during the torchlight survey on one visit.

Summary of 2014 Great Crested Newt Survey Results

3.11 The larger on-site pond (Pond A) supports a breeding population of great crested newts. No great crested newts were recorded within the smaller on-site pond (Pond B). The great crested newt mitigation guidelines explain the difficulty of establishing the true size of a population of great crested newts due to a range of factors, notably the variable sampling efficiency attained, even by the best methods, and the complex (meta) population dynamics involved. Research suggests that surveys may reveal between 2% and 30% of a population, but there is likely to be even greater variation. Natural England (formerly English Nature) therefore recommends that, where development projects are concerned, an approximate indication of population size class is used in survey reports (Great Crested Newt Mitigation Guidelines, 2001).

3.12 Natural England (Great Crested Newt Mitigation Guidelines, 2001) recommend that survey results should be expressed as the maximum adult count per pond per night gained through torchlight survey or bottle trapping and that population size should be estimated from the peak count per pond. Populations can be classed as follows:

- Small – maximum count up to 10
- Medium – maximum count between 11 and 100
- Large – maximum count over 100.

3.13 The peak count of great crested newt (by bottle trapping survey) in Pond A was 19 (18 adults, 1 juvenile) on 15 May 2014, equating to the presence of a medium-sized population. However, previous presence/ absence surveys for great crested newt at the site in 2012, recorded a peak count of great crested newts (by torchlight survey) in Pond A was 161 on 24 April 2012, which equated to the presence of a large-sized population. The expansion of the New Zealand stonecrop within Pond A prevented surveyor access to survey the centre of this pond, and it is considered that this limitation to the survey method is largely accountable for the reduced population size class, given that other factors, such as the pond's surface area, had not varied significantly since the 2012 survey.

3.14 No great crested newt and a peak count of three smooth newts were located within Pond B. The mosaic of swamp habitat and marshy grassland surrounding this pond and the rubble piles and bricks located within the semi-mature broadleaved woodland within the site provide suitable terrestrial habitats for amphibians, including great crested newt. Pond B is situated 240m from Pond A, where a confirmed breeding population of great crested newt is present.

3.15 Natural England guidelines broadly classify terrestrial habitats into three categories according to distance from a great crested newt breeding pond:

- Immediate – within 50m
- Intermediate – between 50m and 250m
- Distant – Between 250m and 500m

3.16 Approximately 0.81ha of the site falls within the 'immediate' terrestrial habitat (i.e. within 50m of Pond A), of which 0.20ha is considered to present optimal habitat (broadleaved woodland and rank

neutral grassland)). Approximately 6.87ha of the site falls within the 'intermediate' terrestrial habitat (i.e. between 50m and 250m of the great crested newt breeding pond), of which 1.63ha is considered to present optimal habitat, and is connected to the pond by suitable terrestrial habitat (broadleaved woodland, marshy grassland, swamp habitat and rank neutral grassland). Approximately 2.82ha of the site falls within the 'distant' terrestrial habitat (i.e. between 250m and 500m of the pond), of which 0.35ha is considered to present optimal habitat (marshy grassland and swamp habitat). It is considered highly likely that great crested newts will be present within the suitable terrestrial habitats within the site.

3.17 In addition, common toad, a Species of Principal Importance under the provisions of the NERC Act 2006, was recorded on two separate occasions within Pond A.

4 Potential Impacts and Recommendations

Great Crested Newt

4.1 Great crested newts and their habitats are protected under the Wildlife and Countryside Act 1981 (as amended), and by the Conservation of Habitats and Species Regulations 2010 (as amended). In addition, common toad was recorded within Pond A. Great crested newt and common toad are both listed as Species of Principal Importance under the provisions of the NERC Act 2006.

4.2 Given the presence of a great crested newt breeding pond within the site and the presence of 2.18ha of optimal great crested newt terrestrial habitat (0.20ha 'immediate', 1.63ha 'intermediate' and 0.35ha 'distant' habitat), the presence of this species within the suitable terrestrial habitats within the site is highly likely.

4.3 Although the law provides strict protection to great crested newts, it also allows this protection to be set aside (derogation) under Section 53 of the Conservation of Habitats and Species Regulations 2010 through the issuing of licences. These licences in England are currently determined by Natural England (NE) for development works and are known as European Protected Species (EPS) licences.

4.4 Where a lawful operation is required to be carried out, which is likely to result in an offence under the legislation set out above, an EPS licence may be obtained from NE to allow the operation to proceed. However, in accordance with the requirements of Section 53 of the Conservation of Habitats and Species Regulations 2010, an EPS licence can only be issued where the following derogation requirements are satisfied:

- The proposal is necessary '*to preserve public health or public safety or 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 proposal '*will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range*.'

4.5 The proposed development will not directly affect the great crested newt breeding pond but is likely to result in the loss of a proportion of the immediate (0-50m from the breeding pond), intermediate (50-250m) and distant (250-500m) terrestrial habitat. This comprises 0.20ha of optimal habitat within the immediate habitat, 1.63ha within the intermediate habitat and 0.35ha within the distant optimal habitat. The development could therefore, without mitigation, result in great crested newts being killed or injured, and their resting places (i.e. terrestrial habitats) being damage or destroyed and any newts present could be disturbed or killed. This would constitute an offence under the above legislation.

4.6 Due to the proposed clearance of suitable terrestrial habitats that are likely to be used by great crested newt, it is considered that a European Protected Species licence will need to be secured for the development to proceed. A detailed mitigation strategy will need to be drawn up in the form of a Method Statement. The mitigation approach will be to avoid killing or injury to great crested newts and to minimise the impact on the great crested newt population.

4.7 The proposed development will retain Pond A as part of landscaping within the eastern part of the site. In addition, the landscaping and proposed site drainage will be designed in such a way as to ensure that this pond will be protected from the indirect adverse impacts that could result due to changes in hydrology and pollutants in surface water runoff. This will involve the establishment of a buffer of optimal terrestrial habitat around the pond to separate it from the adjacent development. In addition, a series of pre-treatment areas formed of swales and ponds will be established to create a hydrological buffer between the development, the terrestrial habitats and the pond, to reduce the risk of indirect impacts to the terrestrial and aquatic habitats via pollution.

4.8 As compensation for the loss of 0.63ha optimal terrestrial habitat, 1.08ha of high quality aquatic and terrestrial habitats for great crested newts will be created within the proposed landscaping within the eastern part of the site, in close proximity to the great crested newt breeding pond (Pond A). The new landscaping will comprise swamp habitat, marshy grassland and hibernacula, and the creation of at least one new wildlife pond. A proportion (0.8ha) of this habitat will serve a dual function as public open space, and will involve the incorporation of a boardwalk through part of the terrestrial habitat.

4.9 In total, this will result in a net increase of 0.45ha (128%) of optimal newt habitat within the proposed development. The creation of high quality terrestrial habitat in close proximity to the breeding pond (Pond A) will provide a network of optimal terrestrial habitats along the eastern and southern areas of the proposed development, including the retained woodland, thereby enhancing the opportunities for great crested newts in the local area. The new pond(s) should be designed to create suitable breeding conditions for great crested newts. The creation of optimal terrestrial habitats and new pond(s) would form the basis of the mitigation strategy.

New Zealand Stonecrop

4.10 This species currently forms a dense mat of vegetation within Pond A. Material containing New Zealand stonecrop is classified as controlled waste and there are strict guidelines relating to its disposal. Guidance can be found in the “Environment Agency Managing invasive non-native plants in or near fresh water” (revised April 2010). Control measures can include chemical treatment, cutting or complete removal of all root and shoot material.

4.11 Since Pond A supports a breeding population of great crested newts, the removal of this invasive species should not involve the use of chemicals and will need to be timed to avoid the period which great crested newt will be present within the pond (i.e. March – July). It should be removed by hand and disposed of by burning or composting unless seeds are present.

4.12 Since the New Zealand stonecrop forms such as extensive area of cover within the pond, its loss is likely to involve the loss of some shelter for great crested newt. As such, following its removal, additional planting of appropriate native species should be undertaken to provide replacement shelter for newts within this pond.

5 References

ARG UK (2010) *Advice Note 5: Great Crested Newt Habitat Suitability Index*

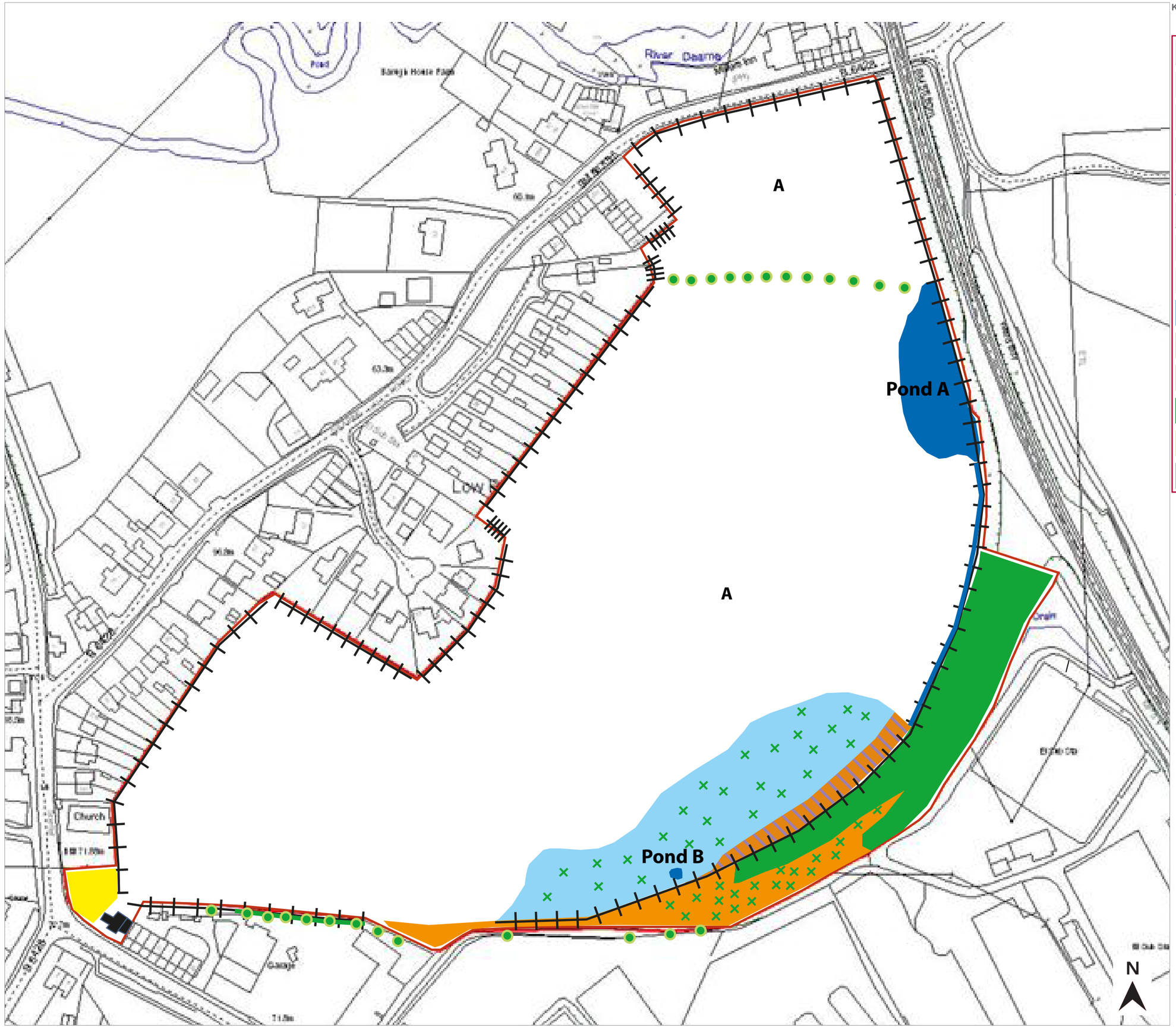
English Nature (2001) *Great Crested Newt Mitigation Guidelines*, Peterborough

Environment Agency (2010) *Managing invasive non-native plants in or near fresh water*

Oldham, R.S. et al (2000). *Evaluating the suitability of habitat for great crested newt (Triturus cristatus)*. The Herpetological Journal, Vol 10

Appendix 1: Extended Phase 1 Habitat Survey Plan

(overleaf)



KEY

- Survey boundary
- Broadleaved tree (indicative location)
- Scattered scrub (indicative location)
- Fence
- Wet ditch
- Species-poor hedgerow
- Arable field
- Pond/waterbody
- Swamp vegetation
- Marshy grassland
- Semi-improved neutral grassland
- Semi-mature broadleaved woodland
- Amenity-managed grassland
- Building

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PROJECT TITLE
LOW BARUGH, BARNSLEY

DRAWING TITLE
Extended Phase 1 Habitat Survey Plan

DATE: 250614 | CHECKED: LRJ | SCALE: NTS
DRAWN: LRJ | APPROVED: PH | STATUS: FINAL

Appendix 2: Photographs

(overleaf)

Photograph 1: Western margin of Pond A

Photograph 2: Northern edge of Pond A

Photograph 3: View north towards Pond A

Photograph 4: Swamp habitat between Ponds A and B

Photograph 5: Marshy grassland

Photograph 6: Pond B

Appendix 3: Survey Results 2014

Table 5: Pond A survey results

Method	Species	Survey visit					
		1: 22/04/14	**2: 30/04/14**	**3: 06/05/14**	**4: 15/05/14**	**5: 27/05/14**	**6: 05/06/14**
Bottle trapping	Great crested newt	3 (1 male, 2 young females)	7 (4 males, 3 females)	4 (4 females)	19 (4 males, 14 females, 1 juvenile)	2 (1 male, 1 female)	14 (1 male, 13 females)
	Smooth newt	2 (2 males)	25 (19 males, 6 females)	17 (8 males, 9 females)	50 (25 males, 25 females)	9 (3 males, 5 females, 1 eft)	14 (5 males, 5 females, 4 efts)
	Palmate newt	0	0	0	0	0	0
	Common frog	0	0	0	0	0	0
	Common toad	0	0	0	0	0	1 adult
Torch count	Great crested newt	0	1 (1 male)	10 (8 males, 2 females)	13 (6 males, 6 females, 1 juvenile)	10 (4 males, 6 females)	6 (2 males, 4 females)
	Smooth newt	34 (13 males, 17 females, 4 unknown)	41 (15 males, 19 females, 7 unknown)	29 (16 males, 13 females)	53 (25 males, 28 females)	19 (9 males, 9 females, 1 unknown)	11 (4 males, 4 females, 3 efts)
	Palmate newt	0	0	0	0	0	0
	Common frog	1 adult 1 tadpole	0	0	1 adult	0	0
	Common toad	0	1 adult	0	0	0	0
Egg search	Great crested newt	0	Present (c. 7 eggs)	Present	Present	0	0
	Smooth newt	0	0	0	Present	0	0
	Palmate newt	0	0	0	0	0	0
	Common frog	0	0	0	0	0	0
	Common toad	0	0	0	0	0	0
Terrestrial search	Great crested newt	-	-	-	-	1 female juvenile	1 female juvenile
	Smooth newt	-	-	-	-	0	0

	Palmate newt	-	-	-	-	0	0
	Common frog	-	-	-	-	0	0
	Common toad	-	-	-	-	0	0

Table 6: Pond B survey results

Method	**Species**	**Survey visit**			
		1: 22/04/14	**2: 30/04/14**	**3: 06/05/14**	**4: 15/05/14**
Bottle trapping	Great crested newt	0	0	0	0
	Smooth newt	3 (3 males)	1 (1 male)	0	3 (1 male, 2 females)
	Palmate newt	0	0	0	0
	Common frog	0	0	0	0
	Common toad	0	0	0	0
Torch count	Great crested newt	0	0	0	0
	Smooth newt	0	1 (1 male)	1 (1 female)	0
	Palmate newt	0	0	0	0
	Common frog	0	0	1 tadpole	0
	Common toad	0	0	0	0
Egg search	Great crested newt	0	0	0	0
	Smooth newt	0	0	0	0
	Palmate newt	0	0	0	0
	Common frog	0	0	0	0
	Common toad	0	0	0	0
Terrestrial search	Great crested newt	-	-	-	-
	Smooth newt	-	-	-	-
	Palmate newt	-	-	-	-
	Common frog	-	-	-	-
	Common toad	-	-	-	-

Appendix 4: Summaries of Relevant Legislation, Policy and Other Instruments

5.1 This section briefly summarises the relevant legislation, policy and related issues that are mentioned in the main text of the report. The following text does not constitute legal advice.

National Planning Policy Framework

5.1 The government published the National Planning Policy Framework (NPPF) on 27th March 2012. The NPPF states that, "*the planning system should contribute to and enhance the natural and local environment by*:

a. *Protecting and enhancing valued landscapes, geological conservation interests and soils;*

b. *Recognising the wider benefits of ecosystem services;*

c. *Minimising impacts on biodiversity and providing net gains in biodiversity, where possible contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*

d. *Preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and*

e. *Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."*

Planning – land allocation and policies

5.2 The NPPF indicates that '*in preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least environmental or amenity value, where consistent with other policies in this Framework*.'

5.3 In paragraph 111, the NPPF refers to brownfield land as follows: '*planning policies and decisions should encourage the effective use of land by re-using land that has been previously developed (brownfield land), provided that it is not of high environmental value*.'

5.4 Local planning authorities are advised in paragraph 113 to '*set criteria-based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.*'

5.5 Local planning authorities are advised further to '*set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure*…'

5.6 In paragraph 115 the NPPF states that for National Parks, the Broads and Areas of Outstanding Natural Beauty '*the conservation of wildlife and cultural heritage are important considerations in all these areas and should be given great weight in National Parks and the Broads*.' The accompanying Paragraph 116 sets out the assessment requirements should planning applications be considered in these areas although the default is that *' planning permission should be refused for major developments in these designated areas except in exceptional circumstances and where it can be demonstrated they are in the public interest*.'

5.7 The NPPF also states that, "*to minimise impacts on biodiversity and geodiversity, planning policies should:*

a. *Plan for biodiversity at a landscape-scale across local authority boundaries;*

b. Identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation;

c. Promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets; and identify suitable indicators for monitoring biodiversity in the plan;

d. Aim to prevent harm to geological conservation interests; and

e. Where Nature Improvement Areas are identified in Local Plans, consider specifying the types of development that may be appropriate in these Areas."

Planning applications and biodiversity

5.8 "When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

a. 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;

b. Proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;

c. Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;

d. Opportunities to incorporate biodiversity in and around developments should be encouraged;

e. 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; and

f. The following wildlife sites should be given the same protection as European sites:

i. potential Special Protection Areas and possible Special Areas of Conservation

ii. listed or proposed Ramsar sites; and

iii. sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites."

5.9 "*The presumption in favour of sustainable development (paragraph 14 [of NPPF]) does not apply where development requiring appropriate assessment under the Birds and Habitats Directives is being considered, planned or determined*."

5.10 In paragraph 125 the NPPF stipulates that '*by encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation*.'

Species and Habitats of Principal Importance

5.1 The NPPF (paragraph 117) indicates that local authorities should take measures to "*promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species*" linking to national and local targets through local planning policies. Priority species are those species shown on the England Biodiversity List published by the Secretary of State under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Planning authorities have a duty under Section 40 of the NERC Act to have regard to

priority species and habitats in exercising their functions including development control and planning.

European and National Legislation

European protected species

5.2 The Conservation of Habitats and Species Regulations 2010 consolidates the various amendments that have been made to the Regulations. The original (1994) Regulations transposed the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law.

5.3 "European protected species" (EPS) are those which are present on Schedule 2 of the Conservation of Habitats and Species Regulations 2010. They are subject to the provisions of Regulation 41 of those Regulations. All EPS are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:

a. Intentionally or deliberately capture, injure or kill any wild animal included amongst these species

b. Possess or control any live or dead specimens or any part of, or anything derived from a these species

c. deliberately disturb wild animals of any such species

d. deliberately take or destroy the eggs of such an animal, or

e. intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place

5.4 For the purposes of paragraph (c), disturbance of animals includes in particular any disturbance which is likely—

a. to impair their ability—

   i. to survive, to breed or reproduce, or to rear or nurture their young, or

   ii. in the case of animals of a hibernating or migratory species, to hibernate or migrate; or

b. to affect significantly the local distribution or abundance of the species to which they belong.

5.5 Although the law provides strict protection to these species, it also allows this protection to be set aside (derogation) through the issuing of licences. The licences in England are currently determined by Natural England (NE) for development works. In accordance with the requirements of the Regulations (2010), a licence can only be issued where the following requirements are satisfied:

a. The proposal is necessary 'to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'

b. 'There is no satisfactory alternative'

c. The proposals 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.