# HSI Assessment & Report

## Land at Chidswell, Dewsbury

Report reference: R-3280-01

March 2018

| | |
|---|---|
| Report Title: | HSI Assessment & Report<br>Land at Chidswell, Dewsbury |
| Report Reference: | R-3280-01 |
| Written by | Christopher Shaw BSc (Hons) MCIEEM<br>Senior Ecologist |
| Technical review: | Peter Brooks BSc (Hons), MA, MCIEEM, CEnv<br>Managing Director |
| QA review: | Victoria Baker BSc (Hons) MSc<br>Ecologist |
| Approved for issue | Peter Brooks BSc (Hons), MA, MCIEEM, CEnv<br>Managing Director |
| Date | 16.03.18 |

Unit A, 1 Station Road, Guiseley, Leeds, LS20 8BX
Phone: **01943 884451**
**01943 879129**
Email:admin@brooks-ecological.co.uk
www.brooks-ecological.co.uk
Registered in England Number 5351418

## Summary Statement

All ponds, situated within a 500m radius of the Site, and not separated by significant barriers to amphibian movement, have been found to present 'poor' potential great crested newt (GCN) breeding habitat.

These ponds are therefore highly unlikely to support GCN and thus, the risk of this species being impacted is considered to be minimal.

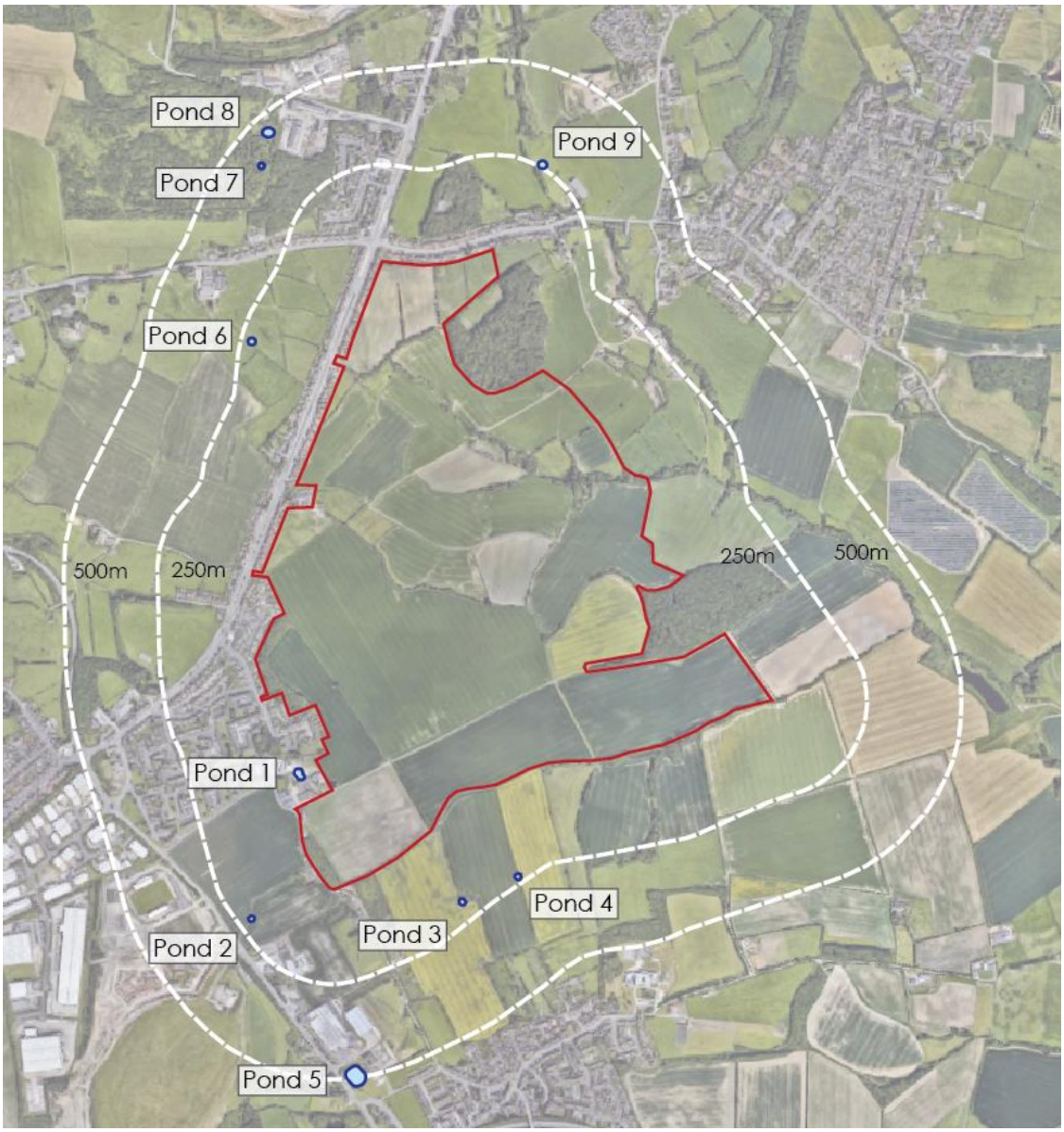
No further survey is considered necessary in support of this conclusion.

## Introduction

1. Subsequent to recommendations set out in the WYG, December 2016, Extended Phase 1 Habitat Survey Report (Ref. A054074), Brooks Ecological Ltd were commissioned to carry out a Habitat Suitability Index (HSI) Assessment of off-site ponds, situated within 500m's of the Chidswell Site boundaries.

2. The WYG report shows nine ponds to be present within a 500m radius of the Site; see figure 1 below.

**Figure 1** Aerial view of Site & nine off-site ponds. Labelling consistent with WYG



*Background information*

3. The closest pond, (Pond 1) was surveyed by WYG during the initial extended phase 1 habitat survey and found to present 'poor' habitat for great crested newt (GCN) due to the high population of fish and lack of egg laying substrate. The HSI score is shown in the Table below.

| Pond | Grid Ref. | HSI Score | HSI Assessment | Description |
|---|---|---|---|---|
| P1 | E26745 23005 | 0.18 | Poor | Man made with artificial lining; island in the centre supporting a *Salix sp.*; heavily fish stocked |

4. Ponds 2, 3, 4 and 5 are all considered to be connected to the site by surrounding hedgerows, ditches and field margins, and habitats including tall ruderal, scrub, hedgerows and semi-improved grassland across the site are considered to provide suitable foraging habitat and commuting corridors for GCN.

5. Ponds 2, 3, 4 and 5 have all previously been subject to a HSI assessment, which found them to present 'poor' GCN habitat. However, this was conducted five years ago and these ponds were thought likely to have changed over this period of time. Therefore, an updated HSI assessment of these four ponds (2, 3, 4 and 5) was recommended to determine the likelihood of breeding GCN being present within 500m of the site.

6. The remaining four ponds (Ponds 6, 7, 8 and 9) are well separated from the Site by busy roads and built development, which together act as a significant barrier to amphibians; any GCN populations here would not be expected to disperse into the Site and as such, no further survey or assessment was recommended,

*Records*

7. As part of the Extended Phase 1 Habitat Survey, WYG requested a data search from West Yorkshire Ecology (WYE).

8. This search returned no records of great crested newt within a 2km search radius.

9. Only two records for common toad (located 1km from the site) and six records for common frog (the closest approximately 1km from the site) were returned for amphibians.

*Legal background*

10. Great crested newts receive full legal protection being listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are therefore subject to the provisions of Section 9 which make it an offence to:

    - intentionally kill, injure or take a great crested newt;
    - possess or control any live or dead specimen or anything derived from a great crested newt;
    - intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt; or
    - intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose.

11. It is also listed under the Conservation of Habitats and Species Regulations 2010 which under the provisions of Regulation 41 make it an offence to:

    (a) deliberately capture, injure or kill any wild animal of a European protected species;

    (b) deliberately disturb wild animals of any such species;

    (c) deliberately take or destroy the eggs of such an animal; or

    (d) damage or destroy a breeding site or resting place of such an animal.

12. Works affecting protected species require a licence from Natural England. Licences can only be granted if there is no satisfactory alternative or if the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in its natural range.

## Pond Descriptions

13. All four ponds (2 – 5) were visited on the 9th March 2018.

14. Ponds 2 & 4, both formerly positioned within arable field margins, are no longer present.

15. Pond 3 is located within an arable field margin, surrounded immediately by rough neutral grass, scattered scrub and tall ruderal vegetation. Mature trees are present a short distance to the south, and a typical field hedgerow to the north. The pond has been fly tipped, and measures approximately 4m long by 2.5m wide, and less than 0.2m deep. The pond is in the later stages of terrestrialising, with a lack of management leading to a build-up of silt and dense growth of tall ruderal vegetation. It is likely to dry out annually, and early on in summer.

**Figure 2** View of pond 3

16. Pond 5 is a large ornamental/ SUDS pond, located within a small light industrial estate, associated with Newly Weds Food Ltd. Fishing platforms have been installed at regular intervals around the pond edge, indicating it has been stocked with coarse fish. The waterbody measures c.50m by 40m, with an unknown depth, and is surrounded by a mix of amenity grass and tree planting.

**Figure 3** View of pond 5

## Habitat Suitability Index (HSI)

17. Based on an index produced by Oldham et al (2000), the HSI is recognised by Natural England as a useful tool in evaluating the potential of ponds to support great crested newt (GCN) and therefore the likelihood of offences in relation to this species.

18. HSI scores range from 0.1 - 1.0 (see Table 1 below) with 1.0 representing an ideal breeding pond for GCN. Anything below 0.5 is categorised as a poor pond unlikely to support this species - particularly if isolated from other populations.

**Table 1** Categorisation of HSI score

| HSI | | Pond suitability |
|---|---|---|
| < 0.5 | = | poor |
| 0.5 - 0.59 | = | below average |
| 0.6 - 0.69 | = | average |
| 0.7 - 0.79 | = | good |
| > 0.8 | = | excellent |

19. HSI analysis of Ponds 3 and 5 is presented in Tables 2 & 3 below.

**Table 2** HSI score for Pond 3

| S1 Location | S2 Pond area | S3 Pond drying | S4 water Quality | S5 Shade | S6 Fowl | S7 Fish | S8 ponds | S9 Terrestrial habitat | S10 Macrophytes |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.05 | 0.1 | 0.33 | 1 | 1 | 1 | 0.6 | 0.67 | 0.8 |

| | |
|---|---|
| **HSI Score** | **0.47** |

**Table 3** HSI Score for Pond 5

| S1 Location | S2 Pond area | S3 Pond drying | S4 water Quality | S5 Shade | S6 Fowl | S7 Fish | S8 ponds | S9 Terrestrial habitat | S10 Macrophytes |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.8 | 0.9 | 0.33 | 0.8 | 0.67 | 0.01 | 0.55 | 0.33 | 0.5 |

| | |
|---|---|
| **HSI Score** | **0.40** |

5. Both ponds fall into the <u>*poor*</u> category, which is largely achieved due to the small size and regular drying of Pond 3 and the stocking of Pond 5.

## Evaluation & Conclusion

6. All ponds situated within a 500m radius of the Site, and not separated by significant barriers to amphibian movement (Ponds 1, 3 & 5 on Figure 1), have been found to present 'poor' potential GCN breeding habitat.

7. A similar result was returned in 2011, when the ponds were surveyed by WYG.

8. Based on an absence of records, and the 'poor' HSI scores, Ponds 1, 3 & 5 are all considered highly unlikely to support GCN and thus, the risk of this species being impacted upon by the proposed development is negligible.

9. No further survey is considered necessary in support of this conclusion.

## References

English Nature (2001) Great Crested Newt Mitigation Guidelines.

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus). Herpetological Journal 10 (4), 143-155.

Natural England (2013) Standing Advice Species Sheet: Great crested newts
http://publications.naturalengland.org.uk/publication/810429?category=30014