

***By email only***

To: Stephen Holdship  
Whistler Cottage  
Castle End Road  
Ruscombe  
RG10 9XH

Email: [REDACTED]

Dear Stephen,

**Re: Great Crested Newt Assessment – Whistler Cottage, Castle End Road, Ruscombe, RG10 9XH**

- 1.1 I am writing following our great crested newt (GCN) assessment at Whistler Cottage with details of the findings from the visit and way forwards recommendations.

**2.0 Background and details of proposed works**

- 2.1 A householder planning application has been submitted to Wokingham Borough Council for the erection of a garage and extension of the driveway at the above site (see Appendix 2 for proposed site plan). In addition, a section of hedgerow at the north east of the site - along the frontage of Castle End Road - will be removed and replaced with a new boundary treatment (1.8m high fence or wall).
- 2.2 The application is currently in the validation stage, and the council has requested further information concerning ecology. The comment from the council reads:

*“The site is located with a red or amber risk zone modelled for the protected species 'Great Crested Newt' as identified on the Wokingham Planning Constraints map. It is important that the local planning authority considers the potential risk to this species as a result of the proposal. Please supply a site specific 'Great Crested Newt Statement' to consider this risk and whether mitigation measures or a protected species licence would be required. It may help to seek specialist advice through an Ecological Consultant.”*

- 2.3 You asked GS Ecology to carry out a GCN site visit and produce a site specific 'Great Crested Newt Statement'.
- 2.4 The survey was carried out by Cherry Leung MSc Qualifying CIEEM member and Zoe Maidment BSc (Hons) of GS Ecology Ltd. Cherry is an accredited agent under GCN survey license CL08 [2025-83164-SCI-CL08].
- 2.5 This letter report has been reviewed by Ryan Davies BSc (Hons) ACIEEM (senior ecologist) of GS Ecology Ltd. Ryan holds a Natural England GCN survey licence (WML-CL08), and, is an associate member of the Chartered Institute of Ecology and Environmental Management with more than 10 years' experience as a professional ecologist.

**3.0 GCN legislation and ecology**

- 3.1 GCN receive special protection under UK law and it is an offence under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 (The Habitat Regulations) to deliberately or recklessly destroy or damage their habitat, or to disturb, kill or harm them without first having obtained the relevant licence for derogation from the regulations from the Statutory Nature Conservation Organisation (the SNCO - Natural England in England).

- 3.2 GCN spend most of their lives on land, within up to 500m of a breeding pond. The most important terrestrial habitat is within 100m, where most of the population are likely to be located foraging, resting, sheltering and hibernating relatively close to their breeding site. However, a proportion of the population is also likely to forage for food and shelter in suitable habitats up to 250m from a breeding pond and juvenile animals have been known to disperse up to 500m from it in a single season.
- 3.3 GCN are likely to be disturbed by any work that involves altering their breeding pond (e.g. by introducing fish or deepening or altering its size) or works that involve clearing land up to 500m around ponds, where such land has been managed and maintained in such a way that it is likely to support GCN. In such cases a licence for derogation from the provisions of the habitat regulations may need to be obtained.
- 3.4 In addition, GCN are a species of principal importance for the conservation of biodiversity in England under Section 41 (S41) of the 2006 Natural Environment and Rural Communities (NERC) Act (these are the “priority species” as per the NPPF).

## 4.0 Methodology

- 4.1 A desk study data search was undertaken for ecological data within the zone of influence of the survey area (considered to be a maximum of 500m in this case). This involved:
- Accessing species records on Natural England’s MAGIC website [[magic.defra.gov.uk/](http://magic.defra.gov.uk/)]
  - Studying aerial photographs and Ordnance Survey maps for nearby ponds
  - Reviewing the NatureSpace district licence impact risk map
- 4.2 A walkover survey of the site was undertaken on 05 August 2026. Weather conditions were 24°C, 4/8<sup>th</sup> cloud, wind at Beaufort scale 3 and no rain. During the survey the site was assessed in terms of its suitability for GCN.
- 4.3 In addition, where accessible from public rights of way, nearby ponds shown on Ordnance Survey maps, were visited to determine if they still existed.

### Habitat suitability index appraisal for GCN

- 4.4 Where ponds were accessible, their Habitat Suitability Index (HSI) was calculated. HSI scoring systems were originally developed by the US Fish and Wildlife Service as a means of evaluating habitat quality and quantity for fish.
- 4.5 In the UK a HSI for GCN has been developed (Oldham *et al.*, 2000<sup>1</sup>). The HSI incorporates ten suitability indices, such as waterbody area, water quality, presence of fish, presence of waterfowl etc. These are multiplied to give a score of between 0 and 1. The higher the score the more likely a pond is to host GCN (for example a study of 248 ponds in southern England found that 93% of ponds with a HSI score of greater than 0.8 hosted GCN).

## 5.0 Findings

### Desk study

- 5.1 There are no records of GCN mitigation licences being issued within 500m of the site.
- 5.2 The MAGIC website has a layer which shows "presence only" records for GCN determined through class licence surveys. There are three "presence only" records of GCN within 500m of the application site, all of which are dated in 2017 and within 100m of the site.

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1 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.

- 5.3 There are seven ponds shown on ordnance survey maps within 500m of the application site. The nearest of which is located approximately 25m south of the site. Locations of these ponds are shown in Appendix 3.

#### **Habitats surrounding the application site**

- 5.4 The site is located towards the southern end of Castle End Road, a predominantly rural road in Ruscombe, Wokingham (Grid Reference: SU79877657, see Appendix 1). Directly north is the Northbury Farm, comprising a number of agricultural and residential buildings, and, large gardens with several ponds and numerous trees.
- 5.5 Directly east are residential properties and their associated gardens with trees. Adjacent to the north east is a block of woodland.
- 5.6 Directly west and south are large agricultural fields, bound in places with trees and hedges. This continues further north, east and south.
- 5.7 Further west is the Ruscombe village with numerous residential properties and their associated gardens with trees. Further north is a block of woodland containing a pond.
- 5.8 Approximately 300m south runs a railway track lined with trees along most of its length.

#### **Habitats within the application site**

- 5.9 The application site comprises a detached, one- and two-storey house and its curtilage – driveway and gardens.
- 5.10 The front garden comprises areas of short-cut amenity grassland bound by hedges and a concrete driveway. The north eastern hedge along the frontage of Castle End Road (proposed to be removed) comprises predominantly garden privet with some hawthorn. The hedge is approximately 2m tall and 2m wide.
- 5.11 The rear garden comprises larger areas of short-cut amenity grassland, bound in places by hedges, with a number of scattered trees and a swimming pool.

#### **Nearby ponds**

- 5.12 There are seven ponds shown on ordnance survey maps within 500m of the application site (see Appendix 2).

##### **Pond 1**

- 5.13 The closest pond (see Appendix 3, Pond 1) is located approximately 25m south of the site boundary and 70m from the hedge proposed to be removed. The pond was dry at the time of the survey (there was a drought for a number of weeks prior to the survey). There was water lily in the centre of the pond, with iris and purple loosestrife at the pond peripheries. The pond basin was overgrown with New Zealand pygmyweed (*Crassula helmsii*). It is bound by scrub and tall herb vegetation and is connected to a ditch to the north. It has a HSI score of 0.611 ('Average') [see Appendix 4].

##### **Pond 2**

- 5.14 Pond 2 is located within a block of woodland to the north of the site. It has a very low water level at the time of the survey. There was water lily in the centre of the pond and iris at the pond peripheries. It has a HSI of 0.658 ('Average') [see Appendix 4].

##### **Pond 3**

- 5.15 Pond 3 was dry at the time of the survey and appears to no longer exist.

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2 Oldham et al's study of 248 ponds in South Eastern England found GCN in 93% of ponds within a score of "Excellent", 79% of ponds with a score of "Good", 55% of ponds with a score of "Average", 20% of ponds with a score of "Below average" and 3% of ponds with a score of "Poor".

## **Pond 5**

- 5.16 Pond 5 was viewed from the road and was dry at the time of the survey. It is located at the bottom of a valley and has steep slopes by the roadside. There was bulrush in the centre of the pond. It has a HSI score of 0.783 ('Good') [see Appendix 4].

## **Pond 6**

- 5.17 Pond 6 is a triangular pond located by the roadside. There was water lily in the centre of the pond, with bulrush and purple loosestrife at the pond peripheries. It was bound by a fringe of bramble on the roadside and trees including ash, oak and willow. It has a HSI score of 0.773 ('Good') [see Appendix 4].
- 5.18 Ponds 4 and 7 were not accessible.

## **6.0 Assessment and way forward recommendations**

- 6.1 The NatureSpace "Impact Risk Map" shows the site as within a "Red" zone (defined as "highly suitable habitat – the most important areas for GCN").
- 6.2 The MAGIC website has a layer which shows "presence only" records for GCN determined through class licence surveys. There are three "presence only" records of GCN within 500m of the application site, all of which are dated in 2017 and within 100m of the site.
- 6.3 There are seven ponds within 500m of the application site, five of which were assessed for their suitability for GCN. All the accessible ponds have at least a HSI score of 'average' (see Appendix 3).
- 6.4 If the nearby ponds were to host GCN it is very likely that they will inhabit some areas the application site and may use the hedgerow along the north eastern site boundary as refugia and hibernacula during the terrestrial phases of their lifecycle. In such a case, there is a risk that works on site may harm GCN and the proposals would need to be carried out under licence to Natural England
- 6.5 It is therefore recommended that the site is registered under NatureSpace District Licence scheme – see below. Monies from this scheme are used to provide new habitats for GCN within the wider landscape thereby ensuring that there is no adverse impact upon this important species of amphibian.
- 6.6 Once a licence is in place a method statement would need to be followed whereby the hedgerow is carefully removed under the supervision of an ecologist with any GCN (and other amphibians) moved to a safe area at the peripheries of the site.

## **7.0 District Level Licencing**

- 7.1 The NatureSpace Partnership has designed a GCN District Licence (DL) scheme with participating local planning authorities and the freshwater and amphibian NGOs in the UK. The scheme gives applicants the opportunity to access an alternative GCN licensing option whereby they do not need to provide new survey information with their planning application (often causing substantial delays). Instead NatureSpace provide an impact report and certificate that are submitted to the Local Planning Authority (LPA) with the planning application.
- 7.2 The steps required to obtain a district level licence are as follows:
- Apply to NatureSpace for a DL impact report and certificate. The impact report will detail how the development will be dealt with under the DL.
  - Submit the impact report and certificate to the LPA. They can then grant planning permission for the works subject to conditions requiring the licence to be adhered to. When planning permission is granted the licence is, in effect, granted.
  - NatureSpace provide compensatory habitat (including four ponds for every pond lost) within the wider landscape, manage and monitor these habitats and monitor the GCN population more widely.

- For householder development, a fixed fee of £500 is charged by NatureSpace to register a planning application under the DL.

7.3 The certificate is specific to a single planning application. As such it is best to only pay for the certificate once the planning authority have indicated that planning permission is likely to be granted.

## 8.0 Summary

8.1 In summary:

- (1) There are seven ponds within 500m of the application site. These ponds will be unaffected by the proposals.
- (2) The site is located within the NatureSpace GCN "Red" zone, defined as "highly suitable habitat – the most important areas for GCN". In addition, the MAGIC website has three "presence only" records of GCN within 500m of the application site, including within 100m of the site. GCN are therefore likely to be present in the area.
- (3) If the nearby ponds do host GCN it is very likely that they will inhabit some areas the application site and may use the north eastern hedgerow as refugia and hibernacula during the terrestrial phases of their lifecycle.
- (4) Therefore, removal of the hedgerow could result in the killing or injury of GCN present.
- (5) This would be illegal unless a licence for derogation from the habitat regulations was in place.
- (6) The easiest way to licence the site would be to register the site under the NatureSpace Partnership GCN District Licence scheme.
- (7) This would cost £500 and, as the certificate is specific to a single planning application, it is best to apply and pay for the certificate only once the planning authority have indicated that planning permission is likely to be granted.
- (1) After planning permission has been granted a method statement would then need to be followed whereby the sheet is carefully removed under the supervision of an ecologist with any GCN (and other amphibians) moved to a safe area at the peripheries of the site.

8.2 We can complete the licence forms for you once the planning authority have indicated that planning permission is likely to be granted. You should however inform the planning authority that you intend to register the application under the NatureSpace District Licence (by sending this letter to them).

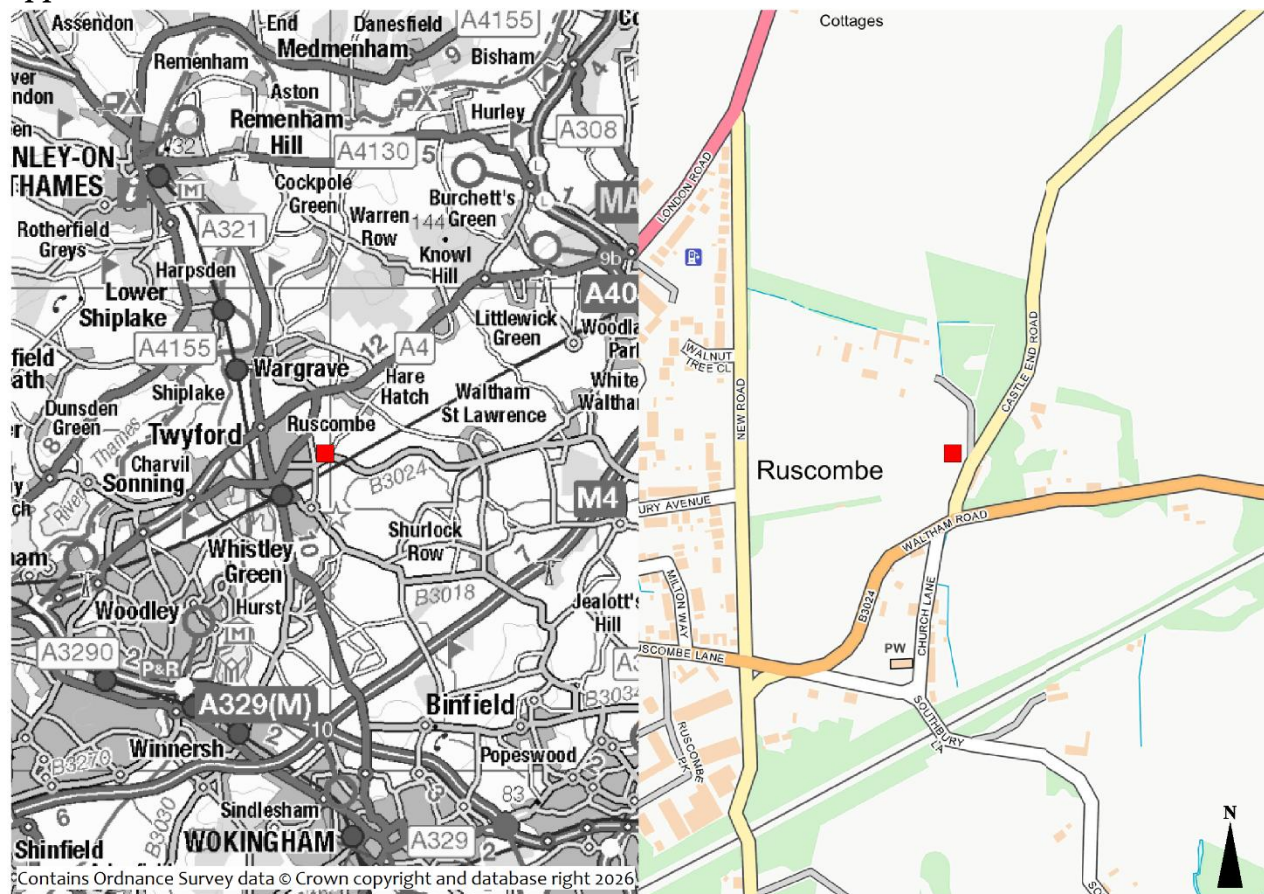
8.3 I trust that the above is clear but please do not hesitate to call or email if you have any questions.

Yours sincerely,

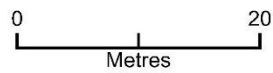
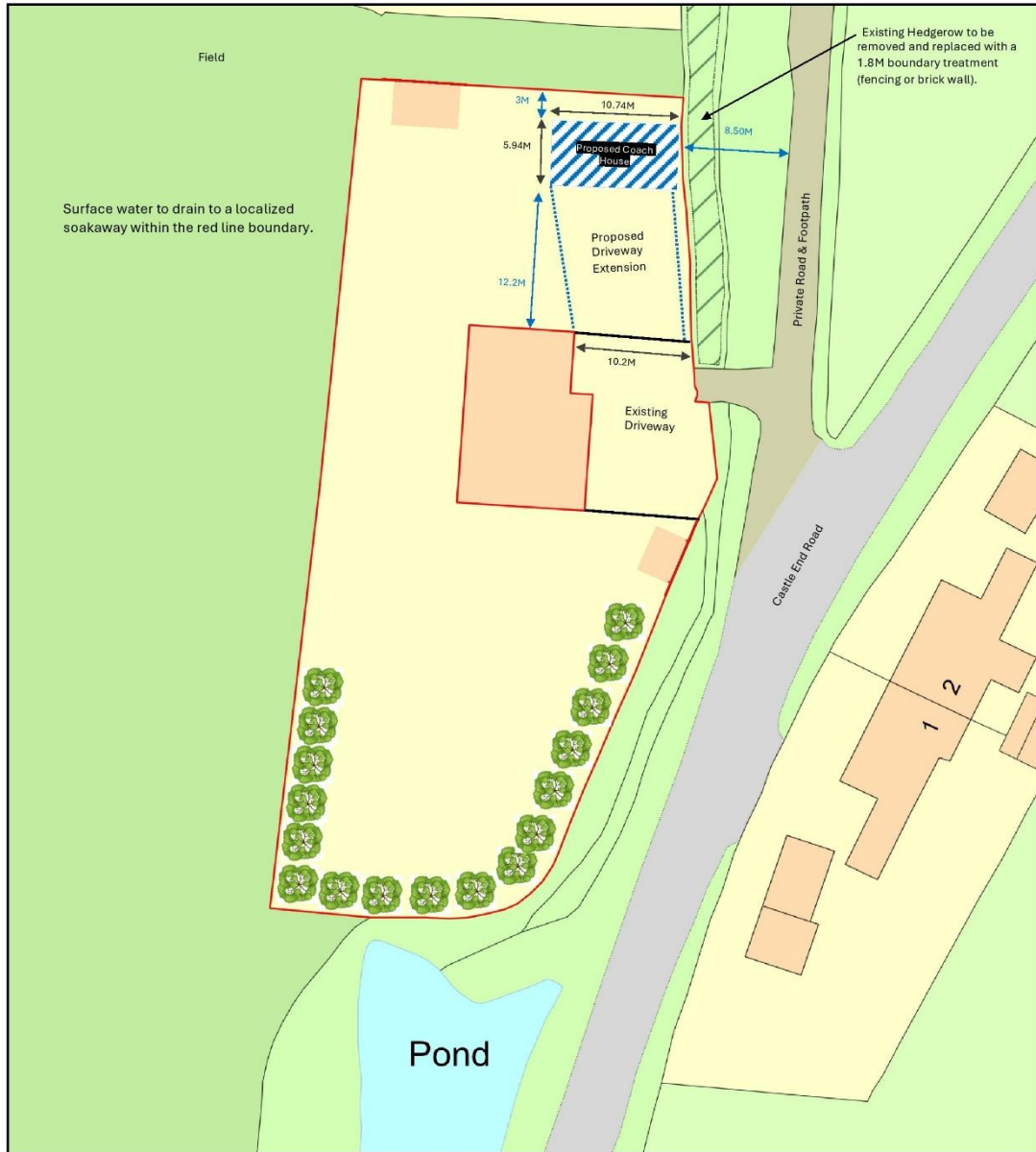


Cherry Leung MSc Qualifying member of CIEEM  
Ecologist  
GS Ecology LTD

## Appendix 1 – Site location



## Whistler Cottage Site Plan



Plan Produced for: Stephen Holdship

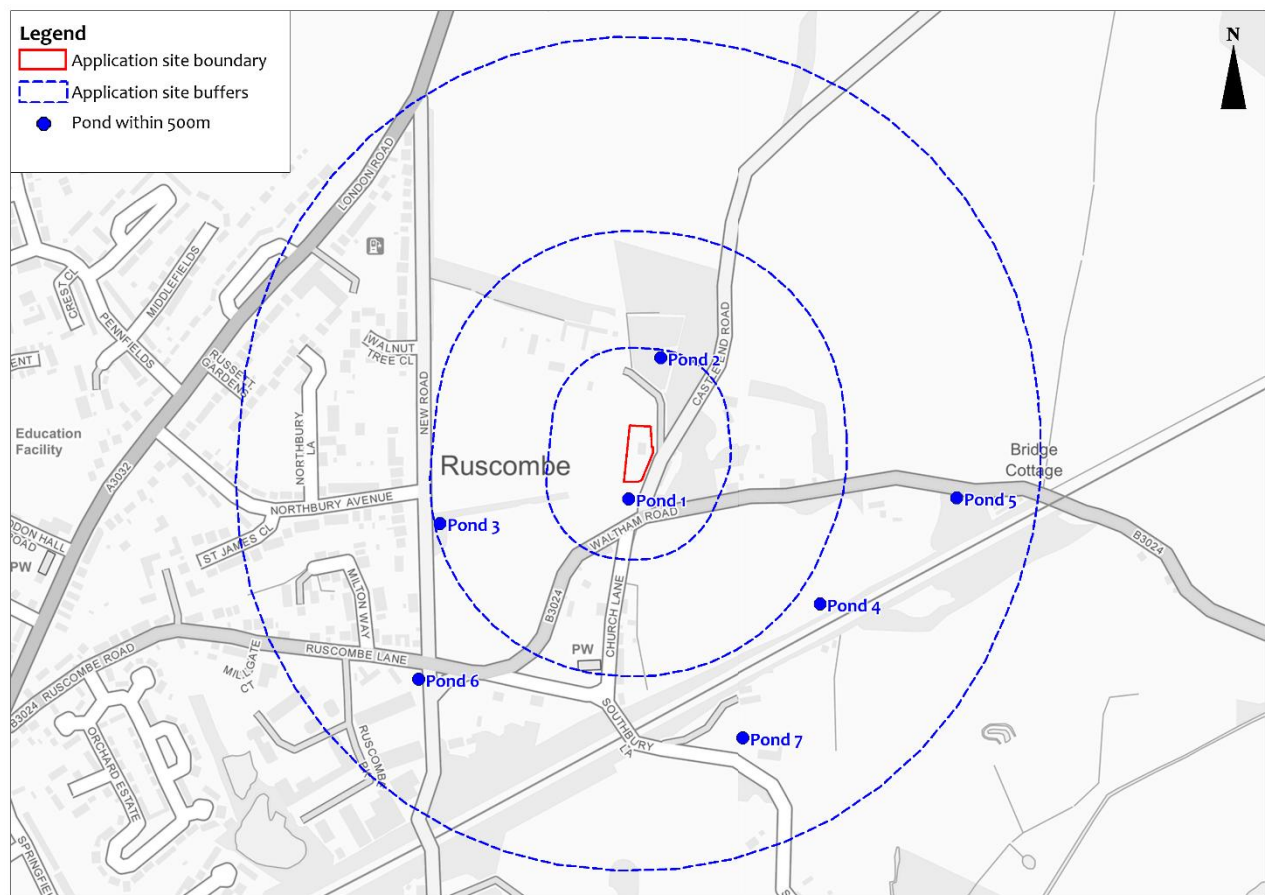
Date Produced: 23 Jun 2026

Plan Reference Number: TQRQM26167114753903 Revision: 1

Scale: 1:500 @ A4

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Appendix 3 – Ponds within 500m of the application site



## Appendix 4 – Habitat Suitability Index for the accessible ponds within 500m

### Pond 1

HSI score: 0.61

HSI index: Average

|                                                                                                                                                                                                                                                                          |             |                                                                                                                                                                                                                                                                                   |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>Factor 1. Geographic location (SI1)</b>                                                                                                                                                                                                                               | <b>1</b>    | <b>Factor 6. Waterfowl</b>                                                                                                                                                                                                                                                        | <b>1</b>    |
| Zone A, location is optimal, SI = 1                                                                                                                                                                                                                                      |             | Absent - No evidence of waterfowl impact (moorhens may be present) - 1                                                                                                                                                                                                            | Y           |
| Zone B, location is marginal, SI = 0.5                                                                                                                                                                                                                                   |             | Minor - waterfowl present, but little indication of impact on pond vegetation. Pond still supports submerged plants and banks are not denuded of vegetation - 0.67                                                                                                                |             |
| Zone C, location is unsuitable, SI = 0.01.                                                                                                                                                                                                                               |             | Major - severe impact of waterfowl. Little or no evidence of submerged plants, water turbid, pond banks showing patches where vegetation removed, evidence of provisioning waterfowl - 0.01                                                                                       |             |
| <b>Factor 2. Pond area</b>                                                                                                                                                                                                                                               | <b>0.92</b> | <b>Factor 7. Fish</b>                                                                                                                                                                                                                                                             | <b>0.67</b> |
| Enter value in m2: 460                                                                                                                                                                                                                                                   |             | Absent - no records of fish stocking and no fish revealed by netting or observed by torchlight - 1                                                                                                                                                                                |             |
|                                                                                                                                                                                                                                                                          |             | Possible - no evidence of fish, but local conditions suggest that they may be present. - 0.67                                                                                                                                                                                     | Y           |
| <b>Factor 3. Permanence</b>                                                                                                                                                                                                                                              | <b>0.1</b>  | Minor - small numbers of crucian carp, goldfish or stickleback known to be present - 0.33                                                                                                                                                                                         |             |
| Never dries = 0.9                                                                                                                                                                                                                                                        |             | Major - dense populations of fish known to be present - 0.01                                                                                                                                                                                                                      |             |
| Rarely dries (dries no more than two years in ten or only in drought) = 1.0                                                                                                                                                                                              |             |                                                                                                                                                                                                                                                                                   |             |
| Sometimes dries (dries between three years in ten to most years) = 0.5                                                                                                                                                                                                   |             | <b>Factor 8. Pond count</b>                                                                                                                                                                                                                                                       | <b>0.95</b> |
| Dries annually - 0.1                                                                                                                                                                                                                                                     | Y           | Enter the number of ponds within 1km of site from OS maps here, exclude those behind major barriers                                                                                                                                                                               | 10          |
| <b>Factor 4. Water quality</b>                                                                                                                                                                                                                                           | <b>0.67</b> | <b>Factor 9. Terrestrial habitat</b>                                                                                                                                                                                                                                              | <b>0.67</b> |
| Good - Water supports an abundant and diverse invertebrate community. Netting reveals handfuls of diverse invertebrates, including groups such as mayfly larvae and water shrimps - 1.0                                                                                  |             | Good - habitat that offers good opportunities for foraging and shelter (e.g. most semi-natural environments, such as rough grassland, scrub or woodland, also brownfield sites and low intensity farmland) covers more than 75% of available area - 1                             |             |
| Moderate - moderate invertebrate diversity - 0.67                                                                                                                                                                                                                        | Y           | Moderate habitat offers opportunities for foraging and shelter but may not be extensive (25-75%) of available area - 0.67                                                                                                                                                         | Y           |
| Poor - low invertebrate diversity (e.g. species such as midge and mosquito larvae). Few submerged plants. - 0.33                                                                                                                                                         |             | Poor - habitat with poor structure (e.g. amenity grassland, improved pasture and arable) that offers limited opportunities (less than 25% of available area) for foraging and shelter - 0.33                                                                                      |             |
| Bad - clearly polluted, only pollution-tolerant invertebrates (such as rat-tailed maggots), no submerged plants - 0.01                                                                                                                                                   |             | None - no suitable habitat around pond (e.g. centre of arable field or large expanse of bare habitat) = 0.01                                                                                                                                                                      |             |
| <b>Factor 5. Shade</b>                                                                                                                                                                                                                                                   | <b>0.5</b>  | <b>Factor 10. Macrophytes</b>                                                                                                                                                                                                                                                     | <b>0.55</b> |
| Estimate percentage pond perimeter shaded, to at least 1m from the shore. Shading is usually from trees, but can include buildings. Shading should not include emergent pond vegetation. The estimate should be made during the period from May to the end of September. | 85          | Estimate the percentage of the pond surface area occupied by macrophyte cover. This includes emergents, floating plants (excluding duckweed) and submerged plants reaching the surface. Make an estimate between March and the end of September. Read off the SI value from graph | 25          |

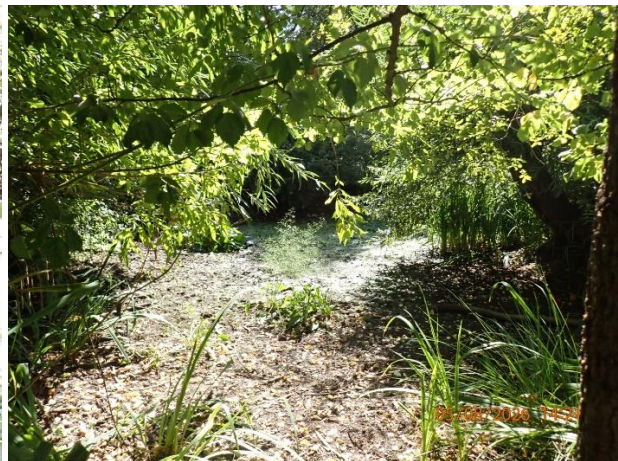


## Pond 2

HSI score: 0.66

HSI index: Average

|                                                                                                                                                                                                                                                                          |             |                                                                                                                                                                                                                                                                                   |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>Factor 1. Geographic location (SI1)</b>                                                                                                                                                                                                                               | <b>1</b>    | <b>Factor 6. Waterfowl</b>                                                                                                                                                                                                                                                        | <b>1</b>    |
| Zone A, location is optimal, SI = 1                                                                                                                                                                                                                                      |             | Absent - No evidence of waterfowl impact (moorhens may be present) - 1                                                                                                                                                                                                            | Y           |
| Zone B, location is marginal, SI = 0.5                                                                                                                                                                                                                                   |             | Minor - waterfowl present, but little indication of impact on pond vegetation. Pond still supports submerged plants and banks are not denuded of vegetation - 0.67                                                                                                                |             |
| Zone C, location is unsuitable, SI = 0.01.                                                                                                                                                                                                                               |             | Major - severe impact of waterfowl. Little or no evidence of submerged plants, water turbid, pond banks showing patches where vegetation removed, evidence of provisioning waterfowl - 0.01                                                                                       |             |
| <b>Factor 2. Pond area</b>                                                                                                                                                                                                                                               | <b>0.24</b> | <b>Factor 7. Fish</b>                                                                                                                                                                                                                                                             | <b>1</b>    |
| Enter value in m2:                                                                                                                                                                                                                                                       | 120         | Absent - no records of fish stocking and no fish revealed by netting or observed by torchlight - 1                                                                                                                                                                                | Y           |
|                                                                                                                                                                                                                                                                          |             | Possible - no evidence of fish, but local conditions suggest that they may be present. - 0.67                                                                                                                                                                                     |             |
| <b>Factor 3. Permanence</b>                                                                                                                                                                                                                                              | <b>0.5</b>  | Minor - small numbers of crucian carp, goldfish or stickleback known to be present - 0.33                                                                                                                                                                                         |             |
| Never dries = 0.9                                                                                                                                                                                                                                                        |             | Major - dense populations of fish known to be present - 0.01                                                                                                                                                                                                                      |             |
| Rarely dries (dries no more than two years in ten or only in drought) = 1.0                                                                                                                                                                                              |             |                                                                                                                                                                                                                                                                                   |             |
| Sometimes dries (dries between three years in ten to most years) = 0.5                                                                                                                                                                                                   | Y           | <b>Factor 8. Pond count</b>                                                                                                                                                                                                                                                       | <b>0.95</b> |
| Dries annually - 0.1                                                                                                                                                                                                                                                     |             | Enter the number of ponds within 1km of site from OS maps here, exclude those behind major barriers                                                                                                                                                                               | 10          |
| <b>Factor 4. Water quality</b>                                                                                                                                                                                                                                           | <b>0.67</b> | <b>Factor 9. Terrestrial habitat</b>                                                                                                                                                                                                                                              | <b>1</b>    |
| Good - Water supports an abundant and diverse invertebrate community. Netting reveals handfuls of diverse invertebrates, including groups such as mayfly larvae and water shrimps - 1.0                                                                                  |             | Good - habitat that offers good opportunities for foraging and shelter (e.g. most semi-natural environments, such as rough grassland, scrub or woodland, also brownfield sites and low intensity farmland) covers more than 75% of available area - 1                             | Y           |
| Moderate - moderate invertebrate diversity - 0.67                                                                                                                                                                                                                        | Y           | Moderate habitat offers opportunities for foraging and shelter but may not be extensive (25-75%) of available area - 0.67                                                                                                                                                         |             |
| Poor - low invertebrate diversity (e.g. species such as midge and mosquito larvae). Few submerged plants. - 0.33                                                                                                                                                         |             | Poor - habitat with poor structure (e.g. amenity grassland, improved pasture and arable) that offers limited opportunities (less than 25% of available area) for foraging and shelter - 0.33                                                                                      |             |
| Bad - clearly polluted, only pollution-tolerant invertebrates (such as rat-tailed maggots), no submerged plants - 0.01                                                                                                                                                   |             | None - no suitable habitat around pond (e.g. centre of arable field or large expanse of bare habitat) = 0.01                                                                                                                                                                      |             |
| <b>Factor 5. Shade</b>                                                                                                                                                                                                                                                   | <b>0.4</b>  | <b>Factor 10. Macrophytes</b>                                                                                                                                                                                                                                                     | <b>0.5</b>  |
| Estimate percentage pond perimeter shaded, to at least 1m from the shore. Shading is usually from trees, but can include buildings. Shading should not include emergent pond vegetation. The estimate should be made during the period from May to the end of September. | 90          | Estimate the percentage of the pond surface area occupied by macrophyte cover. This includes emergents, floating plants (excluding duckweed) and submerged plants reaching the surface. Make an estimate between March and the end of September. Read off the SI value from graph | 20          |



## Pond 5

HSI score: 0.78

HSI index: Good

|                                                                                                                                                                                                                                                                          |                 |                                                                                                                                                                                                                                                                                   |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>Factor 1. Geographic location (SI1)</b>                                                                                                                                                                                                                               | <b>1</b>        | <b>Factor 6. Waterfowl</b>                                                                                                                                                                                                                                                        | <b>1</b>    |
| Zone A, location is optimal, SI = 1                                                                                                                                                                                                                                      |                 | Absent - No evidence of waterfowl impact (moorhens may be present) - 1                                                                                                                                                                                                            | Y           |
| Zone B, location is marginal, SI = 0.5                                                                                                                                                                                                                                   |                 | Minor - waterfowl present, but little indication of impact on pond vegetation. Pond still supports submerged plants and banks are not denuded of vegetation - 0.67                                                                                                                |             |
| Zone C, location is unsuitable, SI = 0.01.                                                                                                                                                                                                                               |                 | Major - severe impact of waterfowl. Little or no evidence of submerged plants, water turbid, pond banks showing patches where vegetation removed, evidence of provisioning waterfowl - 0.01                                                                                       |             |
| <b>Factor 2. Pond area</b>                                                                                                                                                                                                                                               | <b>0.989231</b> | <b>Factor 7. Fish</b>                                                                                                                                                                                                                                                             | <b>1</b>    |
| Enter value in m2: 770                                                                                                                                                                                                                                                   |                 | Absent - no records of fish stocking and no fish revealed by netting or observed by torchlight - 1                                                                                                                                                                                | Y           |
|                                                                                                                                                                                                                                                                          |                 | Possible - no evidence of fish, but local conditions suggest that they may be present. - 0.67                                                                                                                                                                                     |             |
| <b>Factor 3. Permanence</b>                                                                                                                                                                                                                                              | <b>0.5</b>      | Minor - small numbers of crucian carp, goldfish or stickleback known to be present - 0.33                                                                                                                                                                                         |             |
| Never dries = 0.9                                                                                                                                                                                                                                                        |                 | Major - dense populations of fish known to be present - 0.01                                                                                                                                                                                                                      |             |
| Rarely dries (dries no more than two years in ten or only in drought) = 1.0                                                                                                                                                                                              |                 |                                                                                                                                                                                                                                                                                   |             |
| Sometimes dries (dries between three years in ten to most years) = 0.5                                                                                                                                                                                                   | Y               | <b>Factor 8. Pond count</b>                                                                                                                                                                                                                                                       | <b>0.65</b> |
| Dries annually - 0.1                                                                                                                                                                                                                                                     |                 | Enter the number of ponds within 1km of site from OS maps here, exclude those behind major barriers                                                                                                                                                                               | 5           |
| <b>Factor 4. Water quality</b>                                                                                                                                                                                                                                           | <b>0.67</b>     | <b>Factor 9. Terrestrial habitat</b>                                                                                                                                                                                                                                              | <b>0.67</b> |
| Good - Water supports an abundant and diverse invertebrate community. Netting reveals handfuls of diverse invertebrates, including groups such as mayfly larvae and water shrimps - 1.0                                                                                  |                 | Good - habitat that offers good opportunities for foraging and shelter (e.g. most semi-natural environments, such as rough grassland, scrub or woodland, also brownfield sites and low intensity farmland) covers more than 75% of available area - 1                             |             |
| Moderate - moderate invertebrate diversity - 0.67                                                                                                                                                                                                                        | Y               | Moderate habitat offers opportunities for foraging and shelter but may not be extensive (25-75%) of available area - 0.67                                                                                                                                                         | Y           |
| Poor - low invertebrate diversity (e.g. species such as midge and mosquito larvae). Few submerged plants. - 0.33                                                                                                                                                         |                 | Poor - habitat with poor structure (e.g. amenity grassland, improved pasture and arable) that offers limited opportunities (less than 25% of available area) for foraging and shelter - 0.33                                                                                      |             |
| Bad - clearly polluted, only pollution-tolerant invertebrates (such as rat-tailed maggots), no submerged plants - 0.01                                                                                                                                                   |                 | None - no suitable habitat around pond (e.g. centre of arable field or large expanse of bare habitat) = 0.01                                                                                                                                                                      |             |
| <b>Factor 5. Shade</b>                                                                                                                                                                                                                                                   | <b>1</b>        | <b>Factor 10. Macrophytes</b>                                                                                                                                                                                                                                                     | <b>0.6</b>  |
| Estimate percentage pond perimeter shaded, to at least 1m from the shore. Shading is usually from trees, but can include buildings. Shading should not include emergent pond vegetation. The estimate should be made during the period from May to the end of September. | 40              | Estimate the percentage of the pond surface area occupied by macrophyte cover. This includes emergents, floating plants (excluding duckweed) and submerged plants reaching the surface. Make an estimate between March and the end of September. Read off the SI value from graph | 30          |



## Pond 6

HSI score: 0.77

HSI index: Good

|                                                                                                                                                                                                                                                                          |             |                                                                                                                                                                                                                                                                                   |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>Factor 1. Geographic location (SI1)</b>                                                                                                                                                                                                                               | <b>1</b>    | <b>Factor 6. Waterfowl</b>                                                                                                                                                                                                                                                        | <b>1</b>    |
| Zone A, location is optimal, SI = 1                                                                                                                                                                                                                                      |             | Absent - No evidence of waterfowl impact (moorhens may be present) - 1                                                                                                                                                                                                            | Y           |
| Zone B, location is marginal, SI = 0.5                                                                                                                                                                                                                                   |             | Minor - waterfowl present, but little indication of impact on pond vegetation. Pond still supports submerged plants and banks are not denuded of vegetation - 0.67                                                                                                                |             |
| Zone C, location is unsuitable, SI = 0.01.                                                                                                                                                                                                                               |             | Major - severe impact of waterfowl. Little or no evidence of submerged plants, water turbid, pond banks showing patches where vegetation removed, evidence of provisioning waterfowl - 0.01                                                                                       |             |
| <b>Factor 2. Pond area</b>                                                                                                                                                                                                                                               | <b>1</b>    | <b>Factor 7. Fish</b>                                                                                                                                                                                                                                                             | <b>1</b>    |
| Enter value in m2: 620                                                                                                                                                                                                                                                   |             | Absent - no records of fish stocking and no fish revealed by netting or observed by torchlight - 1                                                                                                                                                                                | Y           |
|                                                                                                                                                                                                                                                                          |             | Possible - no evidence of fish, but local conditions suggest that they may be present. - 0.67                                                                                                                                                                                     |             |
| <b>Factor 3. Permanence</b>                                                                                                                                                                                                                                              | <b>0.5</b>  | Minor - small numbers of crucian carp, goldfish or stickleback known to be present - 0.33                                                                                                                                                                                         |             |
| Never dries = 0.9                                                                                                                                                                                                                                                        |             | Major - dense populations of fish known to be present - 0.01                                                                                                                                                                                                                      |             |
| Rarely dries (dries no more than two years in ten or only in drought) = 1.0                                                                                                                                                                                              |             |                                                                                                                                                                                                                                                                                   |             |
| Sometimes dries (dries between three years in ten to most years) = 0.5                                                                                                                                                                                                   | Y           | <b>Factor 8. Pond count</b>                                                                                                                                                                                                                                                       | <b>0.95</b> |
| Dries annually - 0.1                                                                                                                                                                                                                                                     |             | Enter the number of ponds within 1km of site from OS maps here, exclude those behind major barriers                                                                                                                                                                               | 10          |
| <b>Factor 4. Water quality</b>                                                                                                                                                                                                                                           | <b>0.67</b> | <b>Factor 9. Terrestrial habitat</b>                                                                                                                                                                                                                                              | <b>1</b>    |
| Good - Water supports an abundant and diverse invertebrate community. Netting reveals handfuls of diverse invertebrates, including groups such as mayfly larvae and water shrimps - 1.0                                                                                  |             | Good - habitat that offers good opportunities for foraging and shelter (e.g. most semi-natural environments, such as rough grassland, scrub or woodland, also brownfield sites and low intensity farmland) covers more than 75% of available area - 1                             |             |
| Moderate - moderate invertebrate diversity - 0.67                                                                                                                                                                                                                        | Y           | Moderate habitat offers opportunities for foraging and shelter but may not be extensive (25-75%) of available area - 0.67                                                                                                                                                         |             |
| Poor - low invertebrate diversity (e.g. species such as midge and mosquito larvae). Few submerged plants. - 0.33                                                                                                                                                         |             | Poor - habitat with poor structure (e.g. amenity grassland, improved pasture and arable) that offers limited opportunities (less than 25% of available area) for foraging and shelter - 0.33                                                                                      |             |
| Bad - clearly polluted, only pollution-tolerant invertebrates (such as rat-tailed maggots), no submerged plants - 0.01                                                                                                                                                   |             | None - no suitable habitat around pond (e.g. centre of arable field or large expanse of bare habitat) = 0.01                                                                                                                                                                      |             |
| <b>Factor 5. Shade</b>                                                                                                                                                                                                                                                   | <b>0.4</b>  | <b>Factor 10. Macrophytes</b>                                                                                                                                                                                                                                                     | <b>0.6</b>  |
| Estimate percentage pond perimeter shaded, to at least 1m from the shore. Shading is usually from trees, but can include buildings. Shading should not include emergent pond vegetation. The estimate should be made during the period from May to the end of September. | 90          | Estimate the percentage of the pond surface area occupied by macrophyte cover. This includes emergents, floating plants (excluding duckweed) and submerged plants reaching the surface. Make an estimate between March and the end of September. Read off the SI value from graph | 30          |



## Appendix 4 – Photos

Photo 1 – The location of the proposed garage



Photo 2 – The hedge at the north eastern site boundary, along the frontage of Castle End Road

