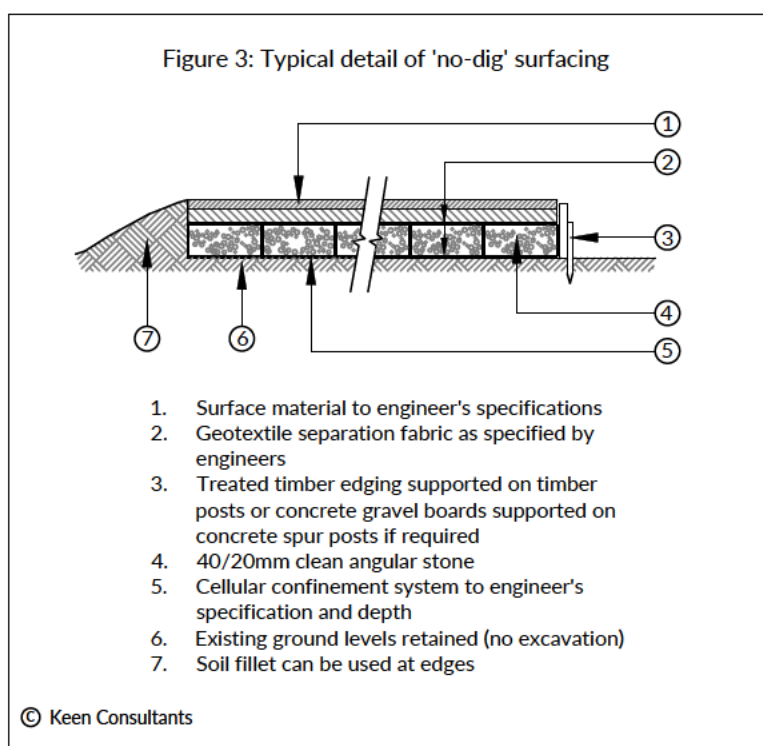
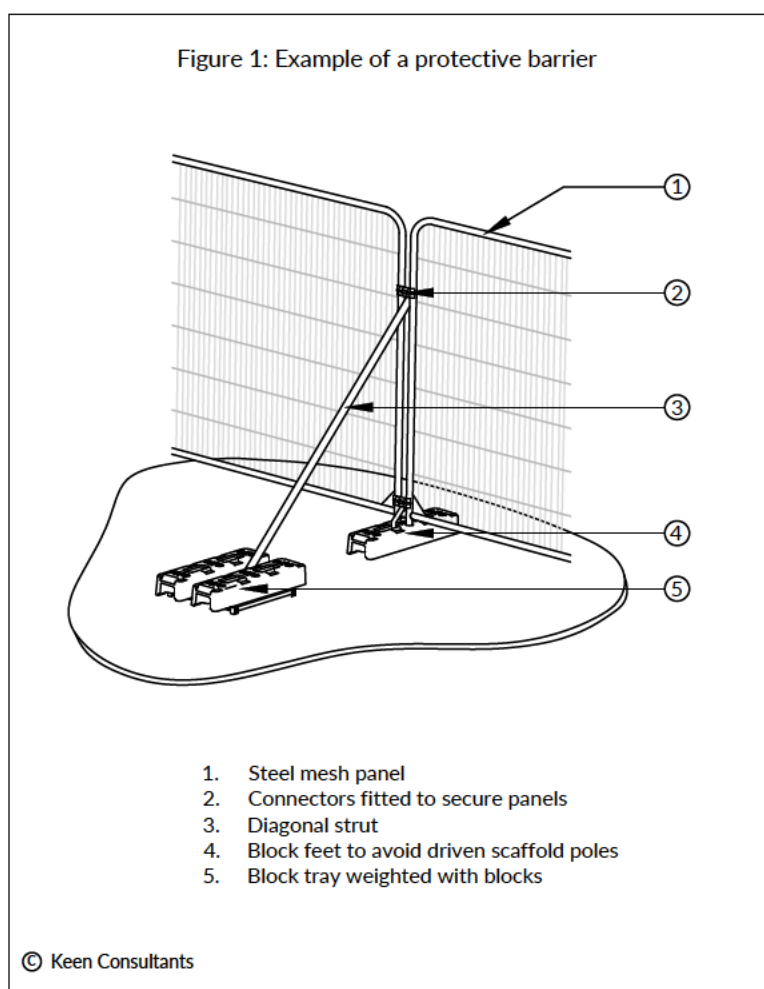


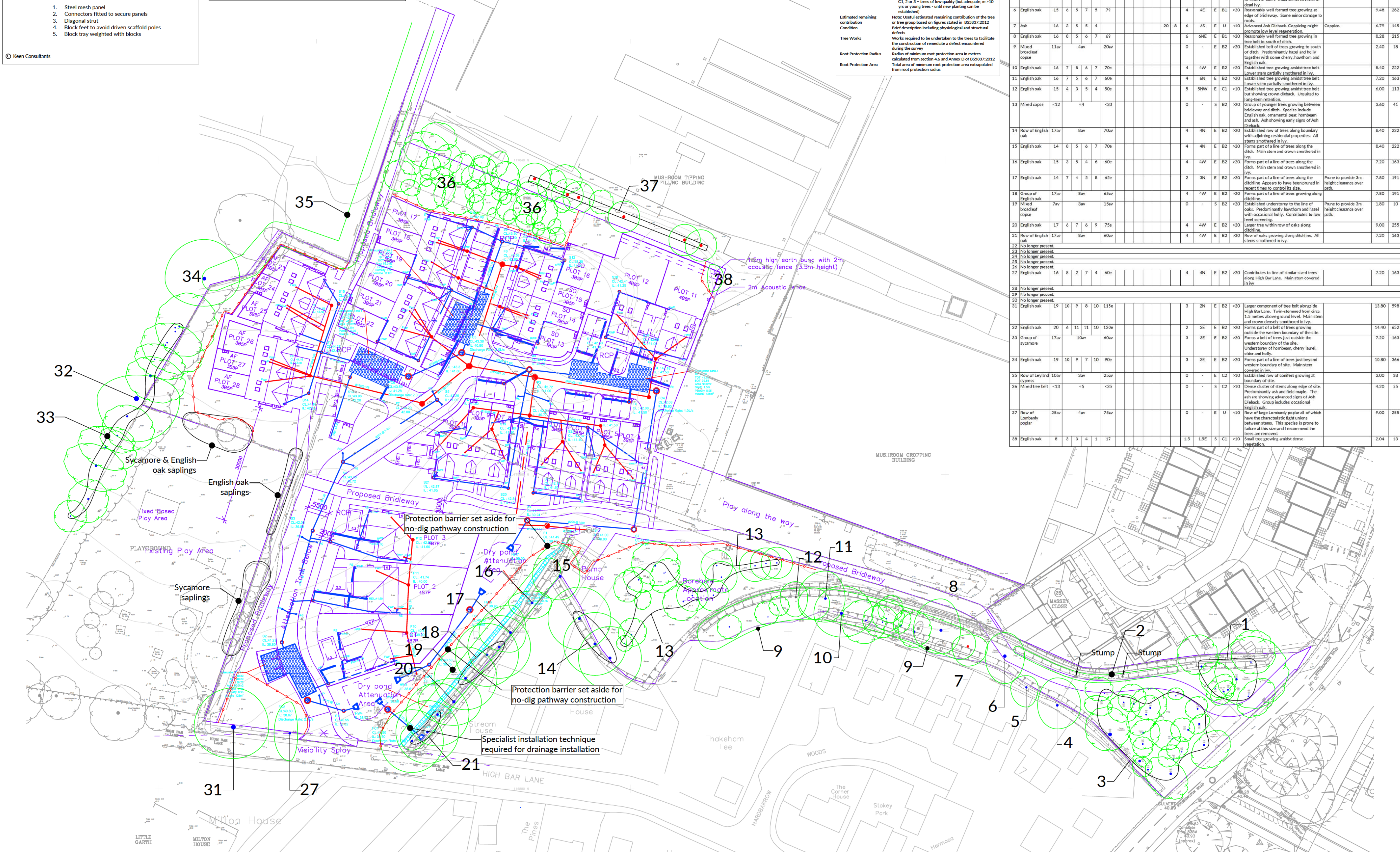
**Figure 2**  
Tree Protection Plan  
Drawing No. 1721-KC-XX-YTREE-TPP01 Rev F



KEY TO TREE SCHEDULE

| Column Heading                                              | Explanation                                                                                                                                              |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tree No.                                                    | Unique number corresponding with number on plan                                                                                                          |
| Species                                                     | English names                                                                                                                                            |
| Height (m)                                                  | Height in metres                                                                                                                                         |
| Branch Spread                                               | Crown radius in metres to cardinal points of the compass                                                                                                 |
| Stem Dia                                                    | All measurements conform to Annex C of BS 5837:2012                                                                                                      |
|                                                             | Single stem - Stem diameter in centimetres measured at 1.5m above ground level                                                                           |
|                                                             | Multi-stemmed tree with 2 to 5 stems - Diameter of each stem                                                                                             |
|                                                             | Multi-stemmed tree with more than 5 stems - Average stem diameter and number of stems                                                                    |
| Height of crown clearance                                   | Height in metres between the ground and underside of canopy                                                                                              |
| Height of first major branch and direction of growth        | Height from ground level to base of first major branch and the approximate direction of growth                                                           |
| Abbreviations as suffix to a dimension                      | Suffix 'e' denotes an estimated dimension                                                                                                                |
| Age Class                                                   | Suffices 'ar' denotes an average dimension                                                                                                               |
|                                                             | Y = Young S = Semi-mature E = Early mature                                                                                                               |
|                                                             | M = Mature O = Over-mature                                                                                                                               |
| Category grading and Estimated remaining Contribution (yrs) | Summary of BS 5837:2012 categorisation:                                                                                                                  |
|                                                             | 1. Trees unsuitable for retention:                                                                                                                       |
|                                                             | U = those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years |
|                                                             | 2. Trees to be considered for retention:                                                                                                                 |
|                                                             | A1, 2 or 3 = trees of high quality (substantial contribution >40 yrs)                                                                                    |
|                                                             | B1, 2 or 3 = trees of moderate quality (significant contribution >20 yrs)                                                                                |
|                                                             | C1, 2 or 3 = trees of low quality (but adequate, ie >10 yrs or young trees - until new planting can be established)                                      |
|                                                             | Note: Useful estimated remaining contribution of the tree or tree group based on figures stated in BS5837:2012                                           |
|                                                             | Tree description including physiological and structural defects                                                                                          |
|                                                             | Works required to be undertaken to the trees to facilitate the construction of remediate a defect encountered during the survey                          |
|                                                             | Radius of minimum root protection area in metres calculated from section 4.6 and Annex D of BS5837:2012                                                  |
|                                                             | Total area of minimum root protection area extrapolated from root protection radius                                                                      |
| Estimated remaining contribution                            |                                                                                                                                                          |
| Condition                                                   |                                                                                                                                                          |
| Tree Works                                                  |                                                                                                                                                          |
| Root Protection Radius                                      |                                                                                                                                                          |
| Root Protection Area                                        |                                                                                                                                                          |

| Schedule of trees on land at High Bar Lane, Thakeham, West Sussex |                        |        |                   |        |        |        |        |                     |        |        |        |        |                   |                                                    |           |                  |                                       |                                                                                                                                                                                                                                                                |                                                                       |                      |                            |                      |        |  |
|-------------------------------------------------------------------|------------------------|--------|-------------------|--------|--------|--------|--------|---------------------|--------|--------|--------|--------|-------------------|----------------------------------------------------|-----------|------------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------|----------------------------|----------------------|--------|--|
| Tree No.                                                          | Species                | Ht (m) | Branch Spread (m) |        |        |        |        | Stem diameters (cm) |        |        |        |        | More than 5 stems | Height of first branch (m) and direction of growth | Age class | Category grading | Estimated remaining contribution (yr) | Condition                                                                                                                                                                                                                                                      | Physiological / Structural                                            | Tree Works to BS5998 | Root protection radius (m) | Root protection area |        |  |
|                                                                   |                        |        |                   |        |        |        |        | 2-5 stems           |        |        |        |        |                   |                                                    |           |                  |                                       |                                                                                                                                                                                                                                                                |                                                                       |                      |                            |                      |        |  |
|                                                                   |                        |        | Single Stem       | Stem 2 | Stem 3 | Stem 4 | Stem 5 | Mean of all         | Stem 1 | Stem 2 | Stem 3 | Stem 4 |                   |                                                    |           |                  |                                       |                                                                                                                                                                                                                                                                |                                                                       |                      |                            |                      | Stem 5 |  |
| 1                                                                 | Mixed broadleaf copse  | <17    | 6av               |        |        |        |        | <60                 |        |        |        |        | 0                 | -                                                  | E         | B2               | >20                                   | Established copse of trees at junction of driveway with Storrington Road. Taller trees predominantly ash. These are showing signs of Ash Dieback. Some holly and field maple in the understorey that will develop as and when the ash are removed.             | Remove ash as and when they show advanced Ash Dieback.                | 7.20                 | 163                        |                      |        |  |
| 2                                                                 | Row of hazel           | 1.5av  | 1av               |        |        |        |        | 30av                |        |        |        |        | 0                 | -                                                  | E         | B2               | >20                                   | Established row of hazel coppice growing between driveway and ditch. All have been recently reduced in height to develop the hedgerow.                                                                                                                         |                                                                       | 3.60                 |                            |                      |        |  |
| 3                                                                 | Mixed broadleaf copse  | <17    | <9                |        |        |        |        | <60                 |        |        |        |        | 0                 | -                                                  | E         | B2               | >20                                   | Established copse of trees at junction of driveway with Storrington Road. Taller trees predominantly ash. These are showing signs of Ash Dieback. Some yew, hazel, holly and field maple in the understorey that will develop as and when the ash are removed. | Remove ash as and when they show advanced Ash Dieback.                | 7.20                 | 163                        |                      |        |  |
| 4                                                                 | English oak            | 17     | 7                 | 6      | 6      | 5      | 60e    |                     |        |        |        |        | 6                 | 6N                                                 | E         | B1               | >20                                   | Reasonably well formed tree growing to south of ditch. Main stem and crown smoothed in ivy.                                                                                                                                                                    |                                                                       | 7.20                 | 163                        |                      |        |  |
| 5                                                                 | Ash                    | 17     | 3                 | 3      | 5      | 4      |        | 30e                 | 30e    | 30e    |        |        | 7                 | 7S                                                 | E         | B2               | >20                                   | Established single-stemmed tree growing to south of ditch. Main stems covered in dead ivy.                                                                                                                                                                     |                                                                       | 6.24                 | 122                        |                      |        |  |
| 6                                                                 | English oak            | 15     | 6                 | 5      | 7      | 5      | 79     |                     |        |        |        |        | 4                 | 4E                                                 | E         | B1               | >20                                   | Reasonably well formed tree growing at edge of driveway. Some minor damage to roots.                                                                                                                                                                           |                                                                       | 9.48                 | 282                        |                      |        |  |
| 7                                                                 | Ash                    | 16     | 3                 | 5      | 5      | 4      |        |                     |        |        |        | 20     | 8                 | 6                                                  | 6S        | E                | U                                     | <10                                                                                                                                                                                                                                                            | Advanced Ash Dieback. Coppicing might improve low level regeneration. | Coppicing.           | 6.79                       | 145                  |        |  |
| 8                                                                 | English oak            | 16     | 8                 | 5      | 6      | 7      | 69     |                     |        |        |        |        | 6                 | 6NE                                                | E         | B1               | >20                                   | Reasonably well formed tree growing in tree belt to south of ditch.                                                                                                                                                                                            |                                                                       | 8.28                 | 215                        |                      |        |  |
| 9                                                                 | Mixed broadleaf copse  | 11av   | 4av               |        |        |        | 20av   |                     |        |        |        |        | 0                 | -                                                  | E         | B2               | >20                                   | Established belt of trees growing to south of ditch. Predominantly hazel and holly together with some cherry, hawthorn and English oak.                                                                                                                        |                                                                       | 2.40                 | 18                         |                      |        |  |
| 10                                                                | English oak            | 16     | 7                 | 8      | 6      | 7      | 70e    |                     |        |        |        |        | 4                 | 4W                                                 | E         | B2               | >20                                   | Established tree growing amidst tree belt. Lower stem partially smoothed in ivy.                                                                                                                                                                               |                                                                       | 6.40                 | 222                        |                      |        |  |
| 11                                                                | English oak            | 16     | 7                 | 5      | 6      | 7      | 60e    |                     |        |        |        |        | 4                 | 6N                                                 | E         | B2               | >20                                   | Established tree growing amidst tree belt. Lower stem partially smoothed in ivy.                                                                                                                                                                               |                                                                       | 7.20                 | 163                        |                      |        |  |
| 12                                                                | English oak            | 15     | 4                 | 3      | 5      | 4      | 50e    |                     |        |        |        |        | 5                 | 5NW                                                | E         | C1               | >10                                   | Established tree growing amidst tree belt but showing crown dieback. Unsuitable for long-term retention.                                                                                                                                                       |                                                                       | 6.00                 | 113                        |                      |        |  |
| 13                                                                | Mixed copse            | <12    | <4                |        |        | <30    |        |                     |        |        |        |        | 0                 | -                                                  | S         | B2               | >20                                   | Group of younger trees growing between driveway and ditch. Species include English oak, ornamental pear, hornbeam and ash. Ash showing early signs of Ash Dieback.                                                                                             |                                                                       | 3.60                 | 41                         |                      |        |  |
| 14                                                                | Row of English oak     | 17av   | 8av               |        |        |        | 70av   |                     |        |        |        |        | 4                 | 4N                                                 | E         | B2               | >20                                   | Established row of trees along boundary with adjoining residential properties. All stems smoothed in ivy.                                                                                                                                                      |                                                                       | 8.40                 | 222                        |                      |        |  |
| 15                                                                | English oak            | 14     | 8                 | 5      | 6      | 7      | 70e    |                     |        |        |        |        | 4                 | 4N                                                 | E         | B2               | >20                                   | Forms part of a line of trees along the ditch. Main stem and crown smoothed in ivy.                                                                                                                                                                            |                                                                       | 8.40                 | 222                        |                      |        |  |
| 16                                                                | English oak            | 15     | 3                 | 5      | 4      | 6      | 60e    |                     |        |        |        |        | 4                 | 4W                                                 | E         | B2               | >20                                   | Forms part of a line of trees along the ditch. Main stem and crown smoothed in ivy.                                                                                                                                                                            |                                                                       | 7.20                 | 163                        |                      |        |  |
| 17                                                                | English oak            | 14     | 7                 | 4      | 5      | 8      | 65e    |                     |        |        |        |        | 2                 | 3N                                                 | E         | B2               | >20                                   | Forms part of a line of trees along the ditch. Appears to have been pruned in recent times to control its size.                                                                                                                                                | Pune to provide 3m height clearance over path.                        | 7.80                 | 191                        |                      |        |  |
| 18                                                                | Group of English oak   | 17av   | 8av               |        |        | 65av   |        |                     |        |        |        |        | 4                 | 4W                                                 | E         | B2               | >20                                   | Forms part of a line of trees growing along the ditch. Main stem and crown smoothed in ivy.                                                                                                                                                                    |                                                                       | 7.80                 | 191                        |                      |        |  |
| 19                                                                | Mixed broadleaf copse  | 7av    | 3av               |        |        | 15av   |        |                     |        |        |        |        | 0                 | -                                                  | S         | B2               | >20                                   | Established understorey to the line of oaks. Predominantly hawthorn and hazel with occasional holly. Contributes to low level screening.                                                                                                                       | Pune to provide 3m height clearance over path.                        | 1.80                 | 10                         |                      |        |  |
| 20                                                                | English oak            | 17     | 6                 | 7      | 6      | 9      | 75e    |                     |        |        |        |        | 4                 | 4W                                                 | E         | B2               | >20                                   | Larger tree within row of oaks along the ditch.                                                                                                                                                                                                                |                                                                       | 9.00                 | 255                        |                      |        |  |
| 21                                                                | Row of English oak     | 17av   | 8av               |        |        | 60av   |        |                     |        |        |        |        | 4                 | 4W                                                 | E         | B2               | >20                                   | Row of oaks growing along ditchline. All stems smoothed in ivy.                                                                                                                                                                                                |                                                                       | 7.20                 | 163                        |                      |        |  |
| 22                                                                | No longer present.     |        |                   |        |        |        |        |                     |        |        |        |        |                   |                                                    |           |                  |                                       |                                                                                                                                                                                                                                                                |                                                                       |                      |                            |                      |        |  |
| 23                                                                | No longer present.     |        |                   |        |        |        |        |                     |        |        |        |        |                   |                                                    |           |                  |                                       |                                                                                                                                                                                                                                                                |                                                                       |                      |                            |                      |        |  |
| 24                                                                | No longer present.     |        |                   |        |        |        |        |                     |        |        |        |        |                   |                                                    |           |                  |                                       |                                                                                                                                                                                                                                                                |                                                                       |                      |                            |                      |        |  |
| 25                                                                | No longer present.     |        |                   |        |        |        |        |                     |        |        |        |        |                   |                                                    |           |                  |                                       |                                                                                                                                                                                                                                                                |                                                                       |                      |                            |                      |        |  |
| 26                                                                | No longer present.     |        |                   |        |        |        |        |                     |        |        |        |        |                   |                                                    |           |                  |                                       |                                                                                                                                                                                                                                                                |                                                                       |                      |                            |                      |        |  |
| 27                                                                | English oak            | 16     | 8                 | 2      | 7      | 4      | 60e    |                     |        |        |        |        | 4                 | 4N                                                 | E         | B2               | >20                                   | Contributes to line of similar sized trees along High Bar Lane. Main stem covered in ivy.                                                                                                                                                                      |                                                                       | 7.20                 | 163                        |                      |        |  |
| 28                                                                | No longer present.     |        |                   |        |        |        |        |                     |        |        |        |        |                   |                                                    |           |                  |                                       |                                                                                                                                                                                                                                                                |                                                                       |                      |                            |                      |        |  |
| 29                                                                | No longer present.     |        |                   |        |        |        |        |                     |        |        |        |        |                   |                                                    |           |                  |                                       |                                                                                                                                                                                                                                                                |                                                                       |                      |                            |                      |        |  |
| 30                                                                | No longer present.     |        |                   |        |        |        |        |                     |        |        |        |        |                   |                                                    |           |                  |                                       |                                                                                                                                                                                                                                                                |                                                                       |                      |                            |                      |        |  |
| 31                                                                | English oak            | 19     | 10                | 9      | 8      | 10     | 115e   |                     |        |        |        |        | 3                 | 2N                                                 | E         | B2               | >20                                   | Larger component of tree belt alongside High Bar Lane. Twin-stemmed from circa 1.5 metres above ground level. Main stem and crown densely smoothed in ivy.                                                                                                     |                                                                       | 13.80                | 598                        |                      |        |  |
| 32                                                                | English oak            | 20     | 6                 | 11     | 11     | 10     | 120e   |                     |        |        |        |        | 2                 | 3E                                                 | E         | B2               | >20                                   | Forms part of a belt of trees growing outside the western boundary of the site.                                                                                                                                                                                |                                                                       | 14.40                | 652                        |                      |        |  |
| 33                                                                | Group of sycamore      | 17av   | 10av              |        |        | 60av   |        |                     |        |        |        |        | 3                 | 3E                                                 | E         | B2               | >20                                   | Forms a belt of trees just outside the western boundary of the site. Understorey of hornbeam, cherry laurel, elder and holly.                                                                                                                                  |                                                                       | 7.20                 | 163                        |                      |        |  |
| 34                                                                | English oak            | 19     | 10                | 9      | 7      | 10     | 90e    |                     |        |        |        |        | 3                 | 3E                                                 | E         | B2               | >20                                   | Forms part of a line of trees just beyond western boundary of site. Main stem covered in ivy.                                                                                                                                                                  |                                                                       | 10.80                | 366                        |                      |        |  |
| 35                                                                | Row of Leyland cypress | 10av   | 3av               |        |        | 23av   |        |                     |        |        |        |        | 0                 | -                                                  | E         | C2               | >10                                   | Established row of conifers growing at boundary of site.                                                                                                                                                                                                       |                                                                       | 2.00                 | 28                         |                      |        |  |
| 36                                                                | Mixed tree belt        | <13    | <5                |        |        | <35    |        |                     |        |        |        |        | 0                 | -                                                  | S         | C2               | >10                                   | Dense cluster of stems along edge of site. Predominantly ash and field maple. The ash are showing advanced signs of Ash Dieback. Group includes occasional English oak.                                                                                        |                                                                       | 4.20                 | 55                         |                      |        |  |
| 37                                                                | Row of Lombardy poplar | 25av   | 4av               |        |        | 75av   |        |                     |        |        |        |        | 0                 | -                                                  | E         | U                | <10                                   | Row of large Lombardy poplar all of which have the characteristic tight unions between stems. This species is prone to failure at this size and I recommend the trees are removed.                                                                             |                                                                       | 9.00                 | 255                        |                      |        |  |
| 38                                                                | English oak            | 8      | 3                 | 3      | 4      | 1      | 17     |                     |        |        |        |        | 1.5               | 1.5E                                               | S         | C1               | >10                                   | Small tree growing amidst dense vegetation.                                                                                                                                                                                                                    |                                                                       | 2.04                 | 13                         |                      |        |  |



**NORTH**

0 5m 10m 25m 50m

NOTES

1. This tree survey information has been prepared for planning purposes only. Additional detail will be needed for foundation design.
2. The original of this drawing was produced in colour - a monochrome copy should not be relied upon.
3. Scale for planning purposes only.
4. All dimensions to be checked on site.
5. The copyright of this document resides with Keen Consultants unless assigned in writing by the company.
6. Details shown on this drawing are devised with reference to BS5837:2012 Trees in relation to design, demolition and construction Recommendations.
7. Check if Tree Preservation Order or Conservation Area protection applies to trees before undertaking tree works.
8. Topographical survey based on drawing Thakeham topo Final & Thakeham Rev F Proposed Bridge Way and K.A.Ryance Limited job number 22-5588.
9. Where trees were not identified on the topographical survey they have been plotted by eye.
10. Proposed layout based on Mitchell Evans Proposed Site Plan drawing number 25-2125-101 F.
11. Proposed drainage layout based on Price & Myers Drainage Layout Full Site Drawing No 30005/6000 Rev C01.

KEY

- Existing site features
- Proposed layout
- Proposed drainage layout
- Trees retained (Green-coloured line indicates extent of canopy)
- Trees for removal (Red-coloured dash line indicates extent of canopy)
- 2.0m high barrier as detail in Figure 1
- Minimum extent of no-dig construction. Actual deployment may be greater. As detail in Figure 3

|   |                                                                            |          |
|---|----------------------------------------------------------------------------|----------|
| F | Latest layout & drainage layout overlay and tree no longer present removed | 05.05.26 |
| E | Tree no longer present removed                                             | 16.12.24 |
| D | Client name updated                                                        | 02.10.23 |
| C | Latest layout overlay                                                      | 29.09.23 |
| B | Tree survey updated                                                        | 04.01.23 |
| A | Latest layout overlay                                                      | 21.12.22 |
| O | Preliminary issue                                                          | 14.11.22 |

| Rev | Description | Date |
|-----|-------------|------|
|-----|-------------|------|

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Client  
**HIGH BAR LANE LTD**

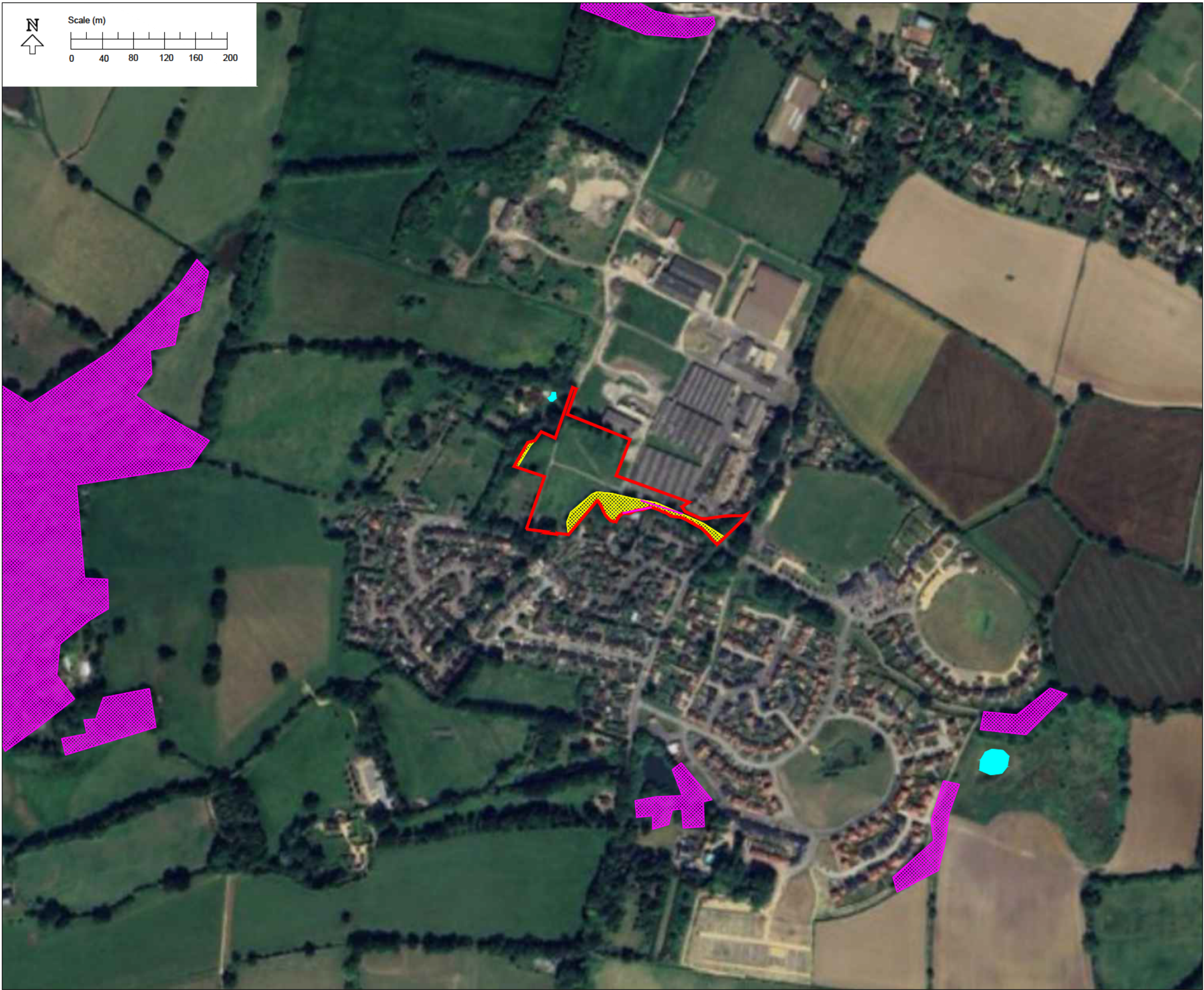
Project  
**LAND AT HIGH BAR LANE, THAKEHAM**

Title  
**TREE PROTECTION PLAN**

|          |            |
|----------|------------|
| Date     | Scale      |
| NOV 2022 | 1:500@A1   |
| Drawn by | Checked by |
| ML       | JTK        |

Drawing Number  
**1721-KC-XX-YTREE-TPP01RevF**

**Figure 3**  
Plan Showing Ecological Sensitive Features



**UK HABS KEY**

- Site Boundary\*
- HPI Deciduous Woodland\*
- Off-site Ponds\*
- Dry Ditch\*
- Biodiversity Protection Zone\*

\* Indicative Location

**Notes**

Biodiversity protection zones include the boundary woodland and scrub habitats which provide some potential habitats for amphibians and reptiles. The biodiversity protection zone also include ecological sensitive features including log/brash piles and dry ditches which provides commuting routes for wildlife.

| Rev.                                                                                                                                                                                                                                                                                              | Details  |          | Drawn | Date |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|-------|------|
|                                                                                                                                                                                                                                                                                                   |          |          | Chkd. |      |
| Project                                                                                                                                                                                                                                                                                           |          |          |       |      |
| 263205                                                                                                                                                                                                                                                                                            |          |          |       |      |
| High Bar Lane                                                                                                                                                                                                                                                                                     |          |          |       |      |
| Thakeham                                                                                                                                                                                                                                                                                          |          |          |       |      |
| Title                                                                                                                                                                                                                                                                                             |          |          |       |      |
| Plan Showing Ecological Sensitive Features                                                                                                                                                                                                                                                        |          |          |       |      |
| <div><div>AA Environmental Ltd<br/>Units 4-8<br/>Cholswell Court<br/>Shippon Abingdon<br/>Oxon OX13 6HX<br/>T: (01235) 536042<br/>F: (01235) 523849<br/>info@aae-ltd.co.uk<br/>www.aae-ltd.co.uk</div></div> |          |          |       |      |
| Scale                                                                                                                                                                                                                                                                                             | Date     | Drg. No. |       | Rev. |
| As shown                                                                                                                                                                                                                                                                                          | 09.07.26 | Drawn    |       |      |
|                                                                                                                                                                                                                                                                                                   | NAB      | Chkd.    |       |      |
|                                                                                                                                                                                                                                                                                                   | ARB      | Figure 3 |       |      |

## **Appendix A**

### Register of Environmental Effects

|             |                         |                    |                    |             |            |
|-------------|-------------------------|--------------------|--------------------|-------------|------------|
| <b>Site</b> | High Bar Lane, Thakeham | <b>Prepared by</b> | Nicholas Braybrook | <b>Date</b> | 09.07.2026 |
|             |                         | <b>Reviewed by</b> | Alan Beaumont      | <b>Date</b> | 09.07.2026 |

## NOTES

The consented scheme is for the erection of 28 dwellings and associated engineering operations and works including an onsite borehole water supply.

In the table below, under **Environmental Impacts**, assess levels of impact significance for each **Development Activity and Aspect**, as L, M or H, in accordance with following risk matrix. Mitigation measures are required where significance of impact is assessed as M or H.

| Likelihood of Activity resulting in impact. | Severity of Subsequent Impact |              |          |
|---------------------------------------------|-------------------------------|--------------|----------|
|                                             | Low (L)                       | Moderate (M) | High (H) |
| Negligible                                  | L                             | L            | M        |
| Unlikely                                    | L                             | M            | M        |
| Likely                                      | L                             | M            | H        |
| Certain                                     | M                             | H            | H        |

| Activity                                              | Aspect                                                | Impact                                                                                   | Impact Significance (without design or operation mitigation) |          |        |         |          |          |      | Control and Mitigation<br><br>(Include ref. to appropriate method statement, etc.) | Residual Impact Significance                                                     |                        |
|-------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------|----------|--------|---------|----------|----------|------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------------|
|                                                       |                                                       |                                                                                          | Likelihood                                                   |          |        |         | Severity |          |      |                                                                                    |                                                                                  | Resulting Significance |
|                                                       |                                                       |                                                                                          | Negligible                                                   | Unlikely | Likely | Certain | Low      | Moderate | High |                                                                                    |                                                                                  |                        |
| A. Activities affecting water resources               |                                                       |                                                                                          |                                                              |          |        |         |          |          |      |                                                                                    |                                                                                  |                        |
| N/A                                                   | Abstraction of surface or groundwaters                | Deterioration in water resource quantity & quality                                       |                                                              |          |        |         |          |          |      | N/A                                                                                |                                                                                  | N/A                    |
| N/A                                                   | Impoundment of watercourses                           | Deterioration in water resource quantity & quality                                       |                                                              |          |        |         |          |          |      | N/A                                                                                |                                                                                  | N/A                    |
| N/A                                                   | Discharge of process effluent                         | Deterioration in water resource quality                                                  |                                                              |          |        |         |          |          |      | N/A                                                                                |                                                                                  | N/A                    |
| Run-off; Use of water for dust suppression            | Discharge of site drainage                            | Deterioration in water resource quality                                                  |                                                              |          | x      |         |          | x        |      | Moderate                                                                           | Refer to CEMP                                                                    | Low                    |
| Site welfare                                          | Discharge of foul drainage                            | Deterioration in water resource quality                                                  |                                                              |          | x      |         |          | x        |      | Moderate                                                                           | Site facilities to be disposed of by third party contractor on a periodic basis. | Low                    |
| Land drainage                                         | Physical (temp & perm) works to watercourses & Rivers | Deterioration in water resource quality<br>Change in flow regime<br>Loss of Biodiversity |                                                              |          | x      |         |          | x        |      | Moderate                                                                           | Refer to CEMP                                                                    | Low                    |
| N/A                                                   | Physical (temp & perm) works to flood defence works   | Deterioration in water resource quality<br>Change in flow regime<br>Loss of Biodiversity |                                                              |          |        |         |          |          |      | N/A                                                                                |                                                                                  | N/A                    |
| Oil and fuel storage for plant; refuelling            | Spillages of hazardous chemicals                      | Pollution to watercourses and land contamination                                         |                                                              |          | x      |         |          | x        |      | Moderate                                                                           | Refer to CEMP                                                                    | Low                    |
| Oil and fuel storage; Possible coincidental haz waste | Storage and Processing of hazardous substances        | Pollution to watercourses and land contamination                                         |                                                              |          | x      |         |          | x        |      | Moderate                                                                           | Refer to CEMP                                                                    | Low                    |

| Activity                                                                                      | Aspect                                                         | Impact                                            | Impact Significance (without design or operation mitigation) |          |        |         |          |          |      |                        | Control and Mitigation<br><br>(Include ref. to appropriate method statement, etc.)         | Residual Impact Significance |
|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------|----------|--------|---------|----------|----------|------|------------------------|--------------------------------------------------------------------------------------------|------------------------------|
|                                                                                               |                                                                |                                                   | Likelihood                                                   |          |        |         | Severity |          |      | Resulting Significance |                                                                                            |                              |
|                                                                                               |                                                                |                                                   | Negligible                                                   | Unlikely | Likely | Certain | Low      | Moderate | High |                        |                                                                                            |                              |
| Surface run-off                                                                               | Flooding                                                       | Pollution to watercourses and land contamination  |                                                              |          | x      |         |          | x        |      | Moderate               | Refer to CEMP                                                                              | Low                          |
| <b>B. Works affecting Ecological Habitat and Species</b>                                      |                                                                |                                                   |                                                              |          |        |         |          |          |      |                        |                                                                                            |                              |
| Disturbance/nuisance to Habitats of Principal/National Importance                             | Works affecting Ecological Important Habitats                  | Loss or improvement of bio-diversity              |                                                              |          | x      |         |          | x        |      | Moderate               | Refer to CEMP                                                                              | Low                          |
| Protected/notable species                                                                     | Works affecting species during site clearance and construction | Killing/injury of protected/notable species       |                                                              | x        |        |         |          |          | x    | Moderate               | Refer to CEMP                                                                              | Low                          |
| <b>C. Impact to Historic/Archaeological Importance</b>                                        |                                                                |                                                   |                                                              |          |        |         |          |          |      |                        |                                                                                            |                              |
| N/A                                                                                           | Direct Impact                                                  | Loss of Historic/Archaeological value             |                                                              |          |        |         |          |          |      | N/A                    |                                                                                            | N/A                          |
| <b>D. Disturbance of Contaminated Land</b>                                                    |                                                                |                                                   |                                                              |          |        |         |          |          |      |                        |                                                                                            |                              |
| Earthworks                                                                                    | Physical Disturbance                                           | Potential spread of contaminated land & pollution |                                                              | x        |        |         |          | x        |      | Moderate               | Site derived materials to be re-used or disposed of in accordance with Waste Duty of Care. | Low                          |
| <b>E. Nuisance (atmospheric emissions, noise, mud on the road, vibration light emissions)</b> |                                                                |                                                   |                                                              |          |        |         |          |          |      |                        |                                                                                            |                              |
| Haulage and site works                                                                        | Mud and debris on road                                         | Nuisance to local population                      |                                                              |          |        | x       |          | x        |      | High                   | Refer to CEMP                                                                              | Low                          |
| Importation and placement of material                                                         | Construction dust                                              | Nuisance to local population                      |                                                              |          | x      |         |          | x        |      | Moderate               | Refer to CEMP                                                                              | Low                          |
| Construction of structures                                                                    | Process dust emissions                                         | Nuisance to local population                      |                                                              |          | x      |         |          | x        |      | Moderate               | Refer to CEMP                                                                              | Low                          |
| Lighting                                                                                      | Construction light emissions                                   | Nuisance or driver distraction                    |                                                              | x        |        |         | x        |          |      | Low                    | Refer to CEMP                                                                              | Low                          |

| Activity                            | Aspect                                            | Impact                                 | Impact Significance (without design or operation mitigation) |          |        |         |          |          |      |                        | Control and Mitigation<br><br>(Include ref. to appropriate method statement, etc.) | Residual Impact Significance |
|-------------------------------------|---------------------------------------------------|----------------------------------------|--------------------------------------------------------------|----------|--------|---------|----------|----------|------|------------------------|------------------------------------------------------------------------------------|------------------------------|
|                                     |                                                   |                                        | Likelihood                                                   |          |        |         | Severity |          |      | Resulting Significance |                                                                                    |                              |
|                                     |                                                   |                                        | Negligible                                                   | Unlikely | Likely | Certain | Low      | Moderate | High |                        |                                                                                    |                              |
| Construction / Demolition           | Construction noise                                | Nuisance to local population           |                                                              |          | x      |         |          | x        |      | Moderate               | Set working hours. Refer to CEMP                                                   | Low                          |
| N/A                                 | Process odour emissions                           | Nuisance to local population           |                                                              |          |        |         |          |          |      | N/A                    |                                                                                    | N/A                          |
| Construction operations             | Impacts to public areas i.e. Public Rights of Way | Loss of amenity value                  |                                                              | x        |        |         |          | x        |      | Moderate               | Refer to CEMP and boundary fencing.                                                | Low                          |
| Haulage and construction operations | Impacts on visual amenity                         | Loss of amenity value                  |                                                              | x        |        |         | x        |          |      | Low                    | Refer to CEMP                                                                      | Low                          |
| F. Waste                            |                                                   |                                        |                                                              |          |        |         |          |          |      |                        |                                                                                    |                              |
| Site generated materials            | Waste Disposal (Duty of Care)                     | Contamination<br>Nuisance<br>Pollution |                                                              |          |        | x       |          | x        |      | Moderate               | Refer to CEMP                                                                      | Low                          |
| G. Emergency Preparedness           |                                                   |                                        |                                                              |          |        |         |          |          |      |                        |                                                                                    |                              |
| All operations                      | Emergency Scenario testing                        | Emergency preparedness                 |                                                              | x        |        |         |          | x        |      | Moderate               | Emergency Incident Plan to be developed and implemented by Site Manager.           | Low                          |

## **Appendix B**

### Toolbox Talk (Bats)

# TOOLBOX TALK: BATS

## Did you know?

- Bats are the world's only flying mammal.
- There are 17 species of bat known to be breeding in the UK, 6 of which are endangered or rare and 6 are classed as vulnerable.
- Bats can be found across the country in urban and rural locations.
- They are often sighted at dusk as they leave their roost, flying around hedgerows, woodland and waterbodies, feeding on insects.
- Throughout the year bats will often change their roost, depending upon the season.
- Usually a pregnant female will only have one baby a year, this makes colonies vulnerable to population decline.
- During the winter bats hibernate and may not wake up, even if disturbed. Therefore it's important not to work on sites with bats during these months.
- Bats may not use the same roost throughout the year, however they are legally protected with or without a bat occupying them.

## Identification

- You may find bats in any number of places, they tend to prefer dark, quiet spots with good shelter, such as holes and cracks in trees, roofs and walls of buildings, under bridges, old tunnels and in caves.
- Signs of bat presence include discarded moth wings, staining around crevices and small mouse-like droppings which crumble easily.

## Legislation

- All bats and their roosts are protected by UK and European Law. This makes it **illegal to kill, injure, capture or disturb bats** or obstruct access to, damage or destroy their roosts and protects important feeding areas from damage or disturbance.
- Under law, a roost is any structure or place used for shelter or protection.

## Site Controls

- There is always a **risk** that bats, as they move between different roost sites and occupy new roosts, could be encountered during site works.
- **If any bats are encountered during works the following controls must be applied to avoid breaking the law:**
  1. If bats are discovered/suspected works must stop **immediately** with any bat left in-situ and AAe immediately contacted (contact details above).
  2. If any injured bats are found during the works AAe would care for them and where possible be released in the same location once recovered.
  3. During works staff must wear gloves in case of accidental contact with bats.
  4. Any roof tiles will be lifted straight up, rather than being rolled over, minimising the risk of harming bats which may be sheltering underneath.
  5. Areas must be fully checked for any bats or their evidence prior to filling any gaps and repointing any brickwork.
  6. Any lighting must be installed must avoid illuminating vegetation and or bat boxes/access points.

These controls have been put in place to protect all site operatives from breaking the law. You're not expected to be able to identify bats or their presence so remember, **if in doubt shout and contact the relevant person.**

## Key Contacts

AA Environmental Ltd, Units 4-8 Cholswell Court, Shippon, Oxfordshire, OX13 6HX  
Tel: 01235 536042



Brown long-eared bat.



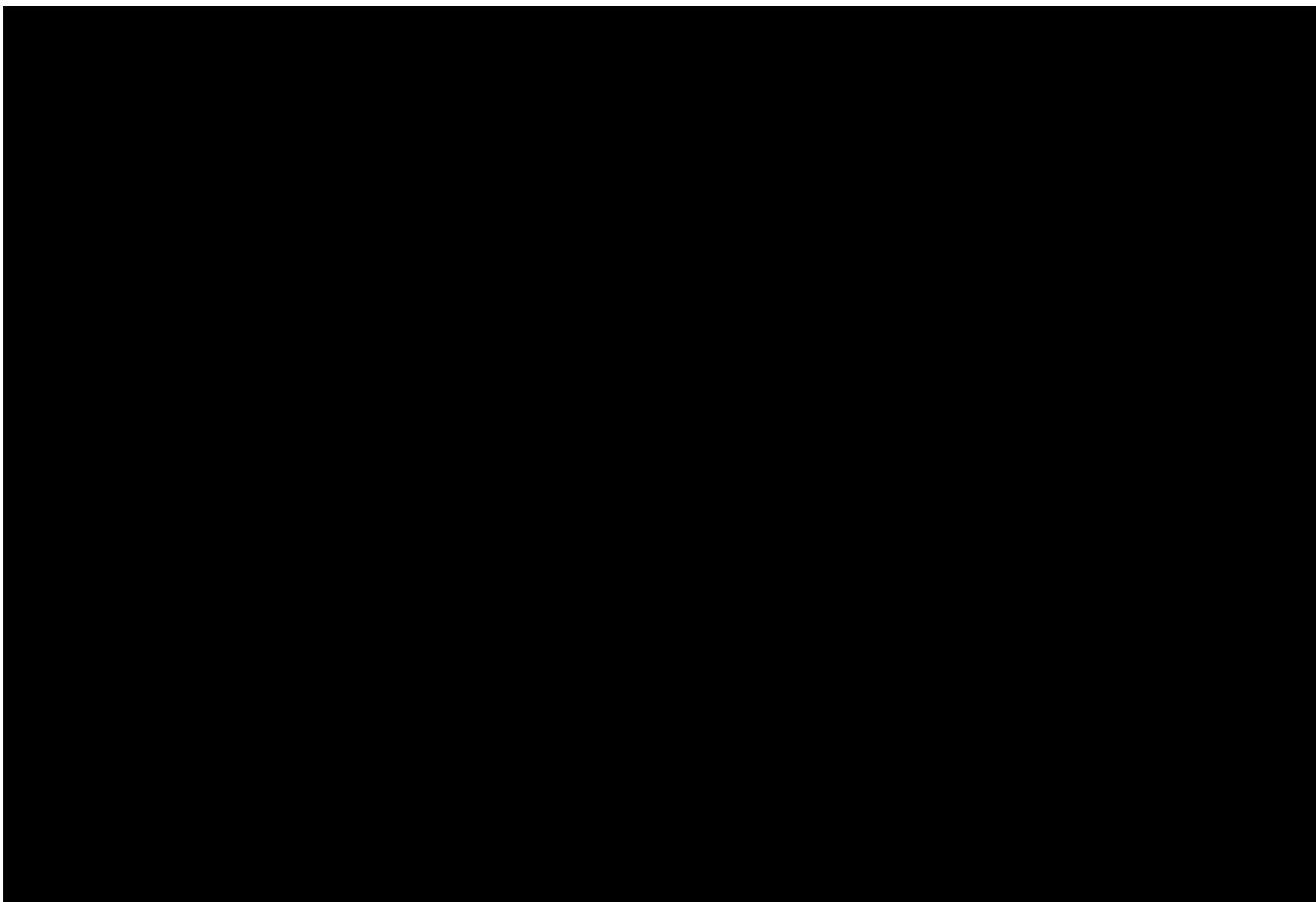
Lesser horseshoe bat in rail tunnel.



Common pipistrelle bat.

## Appendix C





## **Appendix D**

### Toolbox Talk (Hedgehogs)

# TOOLBOX TALK: HEDGEHOGS

## Did you know?

- Hedgehogs eat all kinds of invertebrates, as well as amphibians, birds' eggs and anything else they can catch; they particularly like beetles and earthworms
- Hedgehogs are mostly nocturnal, you may see or hear one snuffling around the garden.
- Hedgehogs hibernate over winter, from about November to April, in a nest of leaves or logs called a 'hibernaculum'.

## Identification

- Hedgehogs are unique and unmistakable, the hedgehog is small, brown and round, with yellow-tipped spines over its back, and a fur-covered face.
- As hedgehogs are elusive, footprints and droppings (*spraint*), which are dark in colour and contain bits of insects and worms, are used as indicators of their presence.
- In summer they spend most of the day sheltering in a nest of leaves, moss and grass.

## Legislation

- Hedgehogs are a Protected Species under the Wildlife and Countryside Act 1981; the Wild Mammals Protection Act (1996) and are a Species of Principle Importance in England under the Natural Environment and Rural Communities (NERC) Act 2006.
- This makes it **illegal** to kill or capture hedgehogs by certain methods.
- Cruel treatment to hedgehogs is prohibited.

## Site Controls

The following site controls should be implemented to avoid contravention of current legislation and to prevent harm to any hedgehogs that may be present within the site:

- Caution is needed in case of nesting or sheltering hedgehogs when clearing the ground prior to development, particularly piles of deadwood or leaves and areas of long grass or dense vegetation.
- In accordance with good practice, removal of potential hibernation habitats such as log piles, dense scrub, piles of leaf litter and brash piles should be avoided during November to March.
- Any deep excavations that remain open overnight must have a means of escape (e.g. a ramp), in case any animals fall in.
- Any obvious access to shelters should **not** be blocked.
- All pipework and other materials stored on site should be checked for hedgehogs before being moved. N.B. Hedgehogs can enter narrow pipework, and therefore all pipework should be capped-off in accordance with good practice.
- In the event that a hedgehog or an active or suspected active nest is recorded, then all works will cease, with the area made safe and the nest left in-situ until advice from the Project Ecologist has been sought.

Hedgehogs, like all wild animals, are dynamic and react to internal and external stimuli in ways which are not always predictable and can excavate new shelters or re-occupy others, therefore, there is always a **risk** that they could be encountered during site works.

These controls have been put in place to protect all site operatives from breaking the law. You're not expected to be able to identify their presence on site so remember, **if in doubt shout and contact AAe** (details provided above).

## Key Contact

AA Environmental Ltd, Units 4-8 Cholswell Court, Shippon, Oxfordshire, OX13 6HX  
Tel: 01235 536042



Adult hedgehog.

Photo credit © Tom Marshall



Hedgehog hibernaculum.

Photo credit © Judith Wakelam



Hedgehog spraint, note dark colour and insect fragments.

Photo credit © Darren Tansley



Hedgehog Prints

Otatara Landcare

## **Appendix E**

### Toolbox Talk (Amphibians and Reptiles)

# TOOLBOX TALK: AMPHIBIANS

## Key Contact

AA Environmental Ltd, Units 4-8 Cholswell  
Court, Shippon, Oxfordshire, OX13 6HX

Tel: 01235 536042

## Did you know?

- Species of common amphibian include common toad, common frog, smooth newt and palmate newt. Whereas great crested newts or **GCNs** are the largest and rarest species of newt found in the UK.
- These species can be found on a wide range of sites, including brownfield, industrial, residential and rural.
- Populations are showing a general decline.
- All amphibians require waterbodies for breeding but will spend much of their lives on land.
- For their survival, a link between a suitable breeding pond and terrestrial habitat is essential.
- During winter, amphibians will mostly hibernate on land (although young may over-winter in ponds) and may not wake up if disturbed. Furthermore, they are cold blooded and may be very slow moving when cold. This makes them vulnerable to site works, especially during the winter months.
- Unlike GCNs the four species are not protected by European law and so you do not require a Natural England licence to handle or work near them.
- GCNs are protected by UK and European Law.** This makes it **illegal** to intentionally or recklessly kill, injure or take, intentionally or recklessly disturb whilst occupying a 'place used for shelter or protection' and protects these places against destruction.

## Common Toad, Common Frog, Great Crested Newt, Smooth Newt & Palmate Newt

### Identification

- Smooth and palmate newts can easily be mistaken for great crested newts (GCNs) and common lizards due to their similar size, body shapes and colouring.
- On land, lizards are much faster than newts and can disappear in the blink of an eye. Newts movement however is slow and lumbered.
- Smooth and palmate newts are smaller than GCNs, growing up to 11 cm long and their skin is smooth and velvety in appearance, whereas GCN skin is warty and common lizard skin is scaly.
- Mature GCNs may grow up to about 17 cm long. Most of their skin is dark brown or black and warty in texture/appearance with a orange/yellow and black pattern on their tummy.
- Common frogs and toads look similar to each other but can be told apart by their skin. Toads have loose, warty skin and frogs have tight, smooth skin.
- All four species breed in ponds. The eggs, or spawn, of frogs and toad look like black pin heads covered in a clear jelly. Frog spawn is clustered together, whereas toad spawn forms chains.

### Legislation

- All species are protected under Section 9(5) of the Wildlife and Countryside Act 1981 against being sold, offered for sale or being held or transported for sale either dead or alive, whole or part.
- GCNs are protected by UK and European Law.** This makes it **illegal** to intentionally or recklessly kill, injure or take, intentionally or recklessly disturb whilst occupying a 'place used for shelter or protection' and protects these places against destruction.
- Common toads have been identified as a UK Priority Species, of principal conservation importance, under Section 41 of the NERC Act 2006.

### Site Controls

- Although not specifically protected, in accordance with good practice, care should be taken when clearing sites or draining down ponds to ensure no species of amphibian are harmed.
- Although considered unlikely, in the event of GCNs being encountered during the works it is a legal requirement to stop work immediately and Natural England informed so that appropriate advice can be provided.
- Additional controls may be necessary if GCNs are present on site as they are legally protected by additional legislation.
- Remember, you are not expected to be an expert, **if in doubt shout and contact the relevant person.**



Adult common toad.



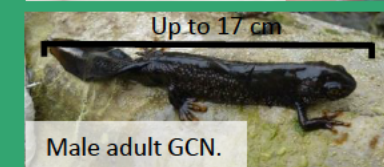
Adult common frog.



Female smooth newt.



Male palmate newt.



Male adult GCN.

# TOOLBOX TALK: REPTILES

## Did you know?

- There are six species of reptile native to the UK, three of which are snakes and three are lizards.
- Smooth snakes and Sand lizards are very rare and are presently restricted to a few localised areas.
- Adders, Grass snakes, Common lizards and Slow-worms are widespread and found in a number of different urban and rural habitats across the UK.
- All reptiles are ectothermic. This means they rely upon the sun's heat for warmth. As a result, you may find reptiles basking in sunny places. If it becomes too warm they will seek shade, to avoid overheating.
- Reptiles movement will be slower in cooler conditions.
- Reptiles hibernate during the winter and may not wake up if disturbed. This makes them vulnerable to site works during winter months.
- Reptiles depend upon a varied habitat for survival. They need basking spots, shade, protection from predators, food resources and somewhere to hibernate!

## Identification

- Reptiles may be found in a variety of habitats within a site. Most species favour scrubland, heathland or long grassland. Railway embankments are also highly favoured.
- On the right are photos of the reptiles you are most likely to encounter on a site, if any.
- Adders can be distinguished from Grass snakes by the diamond (or jagged) stripe running down the centre of their back.
- Slow-worms look a lot like a snake but are in fact legless lizards! They tend to be light brown/golden in colour, with a smooth appearance.
- Common lizards are fast-moving, but may be sighted from a distance when basking.

## Legislation

- All reptile species are protected under UK law.
- This makes it **illegal** to intentionally or recklessly kill or injure and protects them against sale and transporting for sale.

## Site Controls

- There is always a **risk** that as reptiles move through the habitat that they could be encountered during site works.
- **If any reptiles are encountered during works the following controls must be applied to avoid breaking the law:**
  1. If reptiles are discovered/suspected works must stop **immediately**, with any reptiles left in-situ and AAe immediately contacted (contact details above).
  2. During works, operatives must wear gloves in case of accidental contact with reptiles.
  3. Site operative must not intentionally handle reptiles.
  4. Care must be taken when moving logs, stones or rubble. These are favoured habitats for reptiles and they may be found sheltering underneath.
  5. Stockpiling of materials is only permitted within designated areas. Any building materials must be stored above ground on pallets and any waste material must be placed into skips, to prevent the risk of reptiles taking refuge within them.
  6. Trenches must be covered overnight to prevent animals falling into them.

These controls have been put in place to protect all site operatives from breaking the law. You are not expected to be able to identify reptiles or their presence so remember, **if in doubt shout and contact the relevant person.**

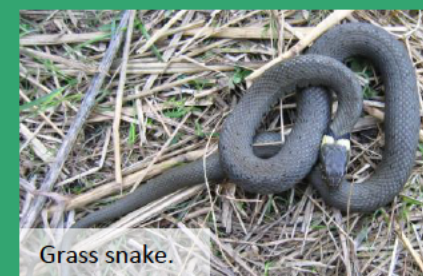
## Key Contact

AA Environmental Ltd, Units 4-8 Cholswell Court, Shippon, Oxfordshire, OX13 6HX

Tel: 01235 536042



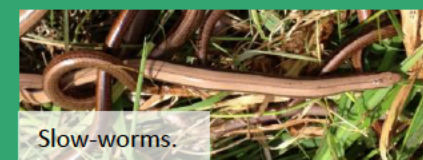
Adder.



Grass snake.



Pair of Common lizards.



Slow-worms.

