

**Tree Condition Report  
Arboricultural Impact Assessment  
Arboricultural Method Statement  
Tree Protection Plan**

**Land at Mulsford Farm, Mulsford SY14 7LP**

**For**

**Huxley Farms  
c/o Arbor Vitae Environment Ltd**



**15.4.2019**

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### Appendix 1

Photo Detail: Tree condition illustration ref. Sect 2.2

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Tree Location and Protection Plan Drawings x2

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BS 5837 2012 Protection illustrations x2

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Appendix 4 Glossary of Arboricultural Terms

**Remit:** Inspect the condition of trees within and adjacent to the proposed development. Provide an Arboricultural Impact Assessment, Method Statement and Tree Protection Plan to BS5837 (2012) Trees in relation to design, demolition and construction – Recommendations

## 2.0 Report limitations:

The tree condition conclusion and recommendations in this report are valid for a period of one year, or a lesser period where indicated in the report. All trees are susceptible to exceptional weather events or deterioration resulting from other environmental changes in close proximity to the tree. The evaluation is based upon Visual Tree Assessment (Mattheck & Breloer 2001). Observations have been made from ground level with the aid of binoculars.

## 2.1 Statutory Obligations

### **Bats and the Law** (Woodland Management for Bats 2005)

'The Wildlife and Countryside Act 1981 makes it an offence to disturb, damage or destroy bats or their roosts. The Act applies in both England & Wales and requires consultation with the appropriate SNCO before carrying out activities which might harm or disturb bats or their roosts.

The Act is amended by the CROW Act 2000. This adds *recklessness* to the offence of damaging or destroying a place a bat uses for shelter or disturbing a bat while using a roost.

The Conservation (Natural Habitats Regulations 1994) implements the European Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora 1992, amended August 2007 & Oct 2010. Under the regulations, damaging or destroying a breeding site or resting place is an absolute offence, regardless of whether the act of doing so may be regarded as reckless, deliberate or incidental.

**Wild Birds** (Mynors 2002) The Primary legislation affecting wild birds in England, Scotland and Wales is the Wildlife and Countryside Act 1981 (as amended). In January 2001, the Countryside and Rights of Way Act 2000 (CROW) included amendments, which strengthened the law in England and Wales. The basic principle of the Wildlife and Countryside Act 1981 (as amended) is that all wild birds, their nests and eggs, are protected by law and some rare species are afforded special protection. There are certain exemptions to this notably in respect of wildfowl, game birds and various species that may cause damage. (Cowan 2002)

**Felling licence:** Subject to tree size, location, condition and other Statutory protection, or prior planning approval, not more than 5m<sup>3</sup> of timber can be felled in any Calendar quarter without first obtaining a Forestry Commission (FC) felling licence. Failure to obtain a licence where required is a prosecutable offence. Detailed information including exemptions can be found on the FC web site

**Conservation Area and Tree Protection Orders:** The Local Authority protects trees within the district by the use of and administration of Tree Preservation Orders (TPOs). Trees can also be protected if they are within a Conservation Area. TPOs are used to protect trees (including areas of woodland) where their removal would have a significant impact on the local environment and its enjoyment by the public. TPOs prohibit the cutting down, uprooting, wilful damage or destruction of trees. Any works to a tree(s) protected by a TPO or falling within a Conservation Area first requires the consent of the Local Authority.

It is a prosecutable offence to carry out work to a tree protected by a TPO, or remove it, without the prior consent of the Local Authority. Detailed information including exemptions can be found on the Local Authority web site

## 2.2 Tree Condition Survey and Arboricultural Impact Assessment (AIA)

**Inspection method:** Visual Tree Assessment (VTA) from ground level.

**Location:** Land at Mulsford Farm, Mulsford SY14 7LP

**Inspection Date:** 15.4.2019

**Protection Status:** No known at date of inspection

**Limitations:** Trees and shrubs have been identified, current height measured to the nearest metre and ultimate height assessed with reference to The Hillier Manual of Trees and Shrubs. A Visual Tree Assessment (VTA) has been carried out on trees in, or adjacent to, the development site. Refer to proposed site layout drawing for tree locations. The risk assessment and recommendations are valid for a period of one year. No detection equipment has been used other than a sounding hammer and metal probe. NB. All trees are at risk of failure through exceptional weather conditions.

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| <b>Identification No.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>T1</b>                            |
| <b>Species</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Common oak <i>Quercus robur L.</i>   |
| <b>Current Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 17m                                  |
| <b>Ultimate Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 20m                                  |
| <b>Current Stem Dia. (cm) at 1.5m</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 85cm                                 |
| <b>Crown clearance (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4m (over headland track)             |
| <b>Crown Spread (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Radius: N = 8; E = 7; S= 8m; W = 7m. |
| <b>Growth stage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Late-Mature                          |
| <p><b>Tree Condition:</b></p> <p><b>Root:</b> No evidence of soil movement.</p> <p><b>Stem:</b> no evidence of bark necrosis</p> <p><b>Crown:</b> Scaffold limbs obscured by ivy growth. No evidence of recent breakouts or significant dieback. Major deadwood.</p> <p><b>Tree Quality Assessment:</b> Ref.BS5837 (2012) 4.5.1 <b>Category B3.</b> Trees with material conservation value. Life expectancy of at least 40 years</p> <p><b>Water Demand NHBC 4.2-B: High</b></p> <p><b>Root Protection Area RPA:</b> for tree of 85cm diameter at 1.5m <math>(0.85 \times 12) = 10.2\text{m}</math>. <b>Radius</b></p> <p>Total RPA required at current stage of growth = <math>384\text{m}^2</math></p> <p><b>Arboricultural Impact Assessment AIA:</b></p> <ul style="list-style-type: none"> <li>The footprint of the concrete apron falls outside of the RPA</li> <li>No strip excavation or raising or lowering of existing <u>soil</u> levels is permitted within the RPA. 'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'.</li> </ul> <p><b>Method Statement: construction of new poultry unit</b></p> <ul style="list-style-type: none"> <li>Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.</li> </ul> |                                      |

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| <b>Identification No.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>T2</b>                            |
| <b>Species</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Common oak <i>Quercus robur</i> L.   |
| <b>Current Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 16m                                  |
| <b>Ultimate Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20m                                  |
| <b>Current Stem Dia. (cm) at 1.5m</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 60cm                                 |
| <b>Crown clearance (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 4m (over headland track)             |
| <b>Crown Spread (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Radius: N = 8; E = 5; S= 6m; W = 8m. |
| <b>Growth stage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Mature                               |
| <b>Tree Condition:</b><br><b>Root:</b> No evidence of soil movement.<br><b>Stem:</b> no evidence of bark necrosis<br><b>Crown:</b> Scaffold limbs obscured by ivy growth. No evidence of recent breakouts or significant dieback. Major deadwood.<br><b>Tree Quality Assessment:</b> Ref.BS5837 (2012) 4.5.1 <b>Category B3.</b> Trees with material conservation value. Life expectancy of at least 40 years<br><b>Water Demand NHBC 4.2-B: High</b><br><b>Root Protection Area RPA:</b> for tree of 60cm diameter at 1.5m $(0.60 \times 12) = 7.2\text{m}$ . <b>Radius</b><br>Total RPA required at current stage of growth = $163\text{m}^2$<br><b>Arboricultural Impact Assessment AIA:</b> <ul style="list-style-type: none"> <li>The footprint of the concrete apron falls outside of the RPA</li> <li>No strip excavation or raising or lowering of existing <u>soil</u> levels is permitted within the RPA. 'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'.</li> </ul> <b>Method Statement: construction of new poultry unit</b> <ul style="list-style-type: none"> <li>Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.</li> </ul> |                                      |

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| <b>Identification No.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>T3</b>                            |
| <b>Species</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Common oak <i>Quercus robur</i> L.   |
| <b>Current Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 8m                                   |
| <b>Ultimate Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | N/a                                  |
| <b>Current Stem Dia. (cm) at 1.5m</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 60cm Estimated diameter of regrowth  |
| <b>Crown clearance (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2.5m (over headland track)           |
| <b>Crown Spread (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Radius: N = 5; E = 5; S= 6m; W = 5m. |
| <b>Growth stage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Regrowth from collapsed stem         |
| <b>Tree Condition:</b><br><b>Root:</b> No evidence of soil movement.<br><b>Stem:</b> Regrowth from hollow shell<br><b>Crown:</b> Scaffold limbs obscured by ivy growth. No evidence of recent breakouts or significant dieback. Ivy overwhelming crown<br><b>Tree Quality Assessment:</b> Ref.BS5837 (2012) 4.5.1 <b>Category B3.</b> Trees with material conservation value. Life expectancy of at least 40 years<br><b>Water Demand NHBC 4.2-B: High</b><br><b>Root Protection Area RPA:</b> for tree of 60cm diameter at 1.5m $(0.60 \times 12) = 7.2\text{m}$ . <b>Radius</b><br>Total RPA required at current stage of growth = $163\text{m}^2$<br><b>Arboricultural Impact Assessment AIA:</b> <ul style="list-style-type: none"> <li>The footprint of the concrete apron falls outside of the RPA</li> <li>No strip excavation or raising or lowering of existing <u>soil</u> levels is permitted within the RPA. 'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'.</li> </ul> <b>Method Statement: construction of new poultry unit</b> <ul style="list-style-type: none"> <li>Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.</li> </ul> |                                      |

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| <b>Identification No.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>T4</b>                            |
| <b>Species</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Common oak <i>Quercus robur</i> L.   |
| <b>Current Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 14m                                  |
| <b>Ultimate Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 20m                                  |
| <b>Current Stem Dia. (cm) at 1.5m</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 108cm                                |
| <b>Crown clearance (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6m (over headland track)             |
| <b>Crown Spread (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Radius: N = 5; E = 5; S= 5m; W = 5m. |
| <b>Growth stage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Late-Mature                          |
| <b>Tree Condition:</b><br><b>Root:</b> No evidence of soil movement.<br><b>Stem:</b> no evidence of bark necrosis<br><b>Crown:</b> Retrenched crown. No evidence of recent breakouts or significant dieback.<br><b>Tree Quality Assessment:</b> Ref.BS5837 (2012) 4.5.1 <a href="#">Category B3</a> . Trees with material conservation value. Life expectancy of at least 40 years<br><b>Water Demand NHBC 4.2-B: High</b><br><b>Root Protection Area RPA:</b> for tree of 108cm diameter at 1.5m (1.08 x 12) = <b>13m. Radius</b><br>Total RPA required at current stage of growth = 529m <sup>2</sup><br><b>Arboricultural Impact Assessment AIA:</b> <ul style="list-style-type: none"> <li>The footprint of the concrete apron falls outside of the RPA</li> <li>No strip excavation or raising or lowering of existing <u>soil</u> levels is permitted within the RPA. 'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'.</li> </ul> <b>Method Statement: construction of new poultry unit</b> <ul style="list-style-type: none"> <li>Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.</li> </ul> |                                      |

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| <b>Identification No.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>T5</b>                               |
| <b>Species</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Common ash <i>Fraxinus excelsior</i> L. |
| <b>Current Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 18m                                     |
| <b>Ultimate Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 23m                                     |
| <b>Current Stem Dia. (cm) at 1.5m</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 95cm                                    |
| <b>Crown clearance (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4m (over headland track)                |
| <b>Crown Spread (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Radius: N = 7; E = 8; S= 8m; W = 8m.    |
| <b>Growth stage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Late-Mature                             |
| <b>Tree Condition:</b><br><b>Root:</b> No evidence of soil movement.<br><b>Stem:</b> no evidence of bark necrosis<br><b>Crown:</b> No evidence of recent breakouts or significant dieback. Major deadwood<br><b>Tree Quality Assessment:</b> Ref.BS5837 (2012) 4.5.1 <a href="#">Category B3</a> . Trees with material conservation value. Life expectancy of at least 40 years<br><b>Water Demand NHBC 4.2-B: High</b><br><b>Root Protection Area RPA:</b> for tree of 95cm diameter at 1.5m (0.95 x 12) = <b>11.4m. Radius</b><br>Total RPA required at current stage of growth = 408m <sup>2</sup><br><b>Arboricultural Impact Assessment AIA:</b> <ul style="list-style-type: none"> <li>The footprint of the concrete apron falls outside of the RPA</li> <li>No strip excavation or raising or lowering of existing <u>soil</u> levels is permitted within the RPA. 'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'.</li> </ul> <b>Method Statement: construction of new poultry unit</b> <ul style="list-style-type: none"> <li>Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.</li> </ul> |                                         |

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| <b>Identification No.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>T6</b>                            |
| <b>Species</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Common oak <i>Quercus robur</i> L.   |
| <b>Current Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10m                                  |
| <b>Ultimate Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | n/a                                  |
| <b>Current Stem Dia. (cm) at 1.5m</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 102cm                                |
| <b>Crown clearance (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4m (over headland track)             |
| <b>Crown Spread (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Radius: N = 2; E = 4; S= 4m; W = 2m. |
| <b>Growth stage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Over-Mature                          |
| <b>Tree Condition:</b><br><b>Root:</b> No evidence of soil movement.<br><b>Stem:</b> Hollow – large cavity at stem base. Obscured by ivy growth<br><b>Crown:</b> Retrenched crown. No evidence of recent breakouts or significant dieback.<br><b>Tree Quality Assessment:</b> Ref.BS5837 (2012) 4.5.1 <a href="#">Category B3</a> . Trees with material conservation value. Life expectancy of at least 40 years<br><b>Water Demand NHBC 4.2-B: High</b><br><b>Root Protection Area RPA:</b> for tree of 102cm diameter at 1.5m (1.02 x 12) = <b>12.2m. Radius</b><br>Total RPA required at current stage of growth = 469m <sup>2</sup><br><b>Arboricultural Impact Assessment AIA:</b> <ul style="list-style-type: none"> <li>The footprint of the concrete apron falls outside of the RPA</li> <li>No strip excavation or raising or lowering of existing <u>soil</u> levels is permitted within the RPA. 'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'.</li> </ul> <b>Method Statement: construction of new poultry unit</b> <ul style="list-style-type: none"> <li>Protection provided by existing building and pile of crushed building rubble</li> </ul> |                                      |

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| <b>Identification No.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>T7</b>                            |
| <b>Species</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Common oak <i>Quercus robur</i> L.   |
| <b>Current Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10m                                  |
| <b>Ultimate Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N/a                                  |
| <b>Current Stem Dia. (cm) at 1.5m</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 96cm                                 |
| <b>Crown clearance (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4m                                   |
| <b>Crown Spread (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Radius: N = 8; E = 0; S= 5m; W = 6m. |
| <b>Growth stage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Over-Mature                          |
| <b>Tree Condition:</b><br><b>Root:</b> No evidence of soil movement.<br><b>Stem:</b> Hollow – lightning strike damage on east side<br><b>Crown:</b> Asymmetric, remnant crown following a lightning strike. No evidence of recent breakouts or significant dieback on retained crown<br><b>Tree Quality Assessment:</b> Ref.BS5837 (2012) 4.5.1 <a href="#">Category B3</a> . Trees with material conservation value. Life expectancy of at least 40 years<br><b>Water Demand NHBC 4.2-B: High</b><br><b>Root Protection Area RPA:</b> for tree of 96cm diameter at 1.5m (0.96 x 12) = <b>11.5m. Radius</b><br>Total RPA required at current stage of growth = 416m <sup>2</sup><br><b>Arboricultural Impact Assessment AIA:</b> <ul style="list-style-type: none"> <li>The footprint of the new access road entrance falls outside of the RPA</li> <li>No strip excavation or raising or lowering of existing <u>soil</u> levels is permitted within the RPA. 'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'.</li> </ul> <b>Method Statement: New access entrance off public highway</b> <ul style="list-style-type: none"> <li>Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.</li> </ul> |                                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <b>Identification No.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | H1 (internal field hedge)                                                                    |
| <b>Species</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Common hawthorn <i>Crataegus monogyna</i> Jacq<br>Common blackthorn <i>Prunus spinosa</i> L. |
| <b>Current Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1.6m                                                                                         |
| <b>Ultimate Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | N/a managed hedgerow                                                                         |
| <b>Current Stem Dia. (cm) at narrowest point below fork</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 20cm averaged                                                                                |
| <b>Crown clearance (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0m                                                                                           |
| <b>Crown Spread (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Radius: 2m                                                                                   |
| <b>Growth stage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | mature                                                                                       |
| <p><b>Tree Condition:</b><br/> <b>Root:</b> No evidence of soil movement.<br/> <b>Stem:</b> No evidence of bark necrosis<br/> <b>Crown:</b> No evidence of recent breakouts or dieback<br/> <b>Tree Quality Assessment:</b> Ref.BS5837 (2012) 4.5.1 <b>Category B2</b> not visible from public road.<br/> <b>Water Demand NHBC 4.2-B: High</b><br/> <b>Root Protection Area RPA:</b> for trees of 20cm diameter at narrowest point below fork (0.20 x 12) = <b>2.4m. Radius</b><br/> Total RPA required at current stage of growth = 18m<sup>2</sup> /tree<br/> <b>Arboricultural Impact Assessment AIA:</b> <ul style="list-style-type: none"> <li>The footprint of the concrete apron falls outside of the RPA</li> <li>No strip excavation or raising or lowering of existing <u>soil</u> levels is permitted within the RPA. 'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'.</li> </ul> <b>Method Statement: construction of new poultry unit</b> <ul style="list-style-type: none"> <li>Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.</li> </ul> </p> |                                                                                              |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <b>Identification No.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | H2 (roadside hedge)                            |
| <b>Species</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Common hawthorn <i>Crataegus monogyna</i> Jacq |
| <b>Current Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 3m                                             |
| <b>Ultimate Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | N/a managed hedgerow                           |
| <b>Current Stem Dia. (cm) at narrowest point below fork</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20cm averaged                                  |
| <b>Crown clearance (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0m                                             |
| <b>Crown Spread (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Radius: 2m                                     |
| <b>Growth stage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | mature                                         |
| <p><b>Tree Condition:</b><br/> <b>Root:</b> No evidence of soil movement.<br/> <b>Stem:</b> No evidence of bark necrosis<br/> <b>Crown:</b> No evidence of recent breakouts or dieback<br/> <b>Tree Quality Assessment:</b> Ref.BS5837 (2012) 4.5.1 <b>Category A2</b> visible from public road.<br/> Life expectancy of at least 40 years.<br/> <b>Water Demand NHBC 4.2-B: High</b><br/> <b>Root Protection Area RPA:</b> for trees of 20cm diameter at narrowest point below fork (0.20 x 12) = <b>2.4m. Radius</b><br/> Total RPA required at current stage of growth = 18m<sup>2</sup> /tree<br/> <b>Arboricultural Impact Assessment AIA:</b> <ul style="list-style-type: none"> <li>• 13m of hedgerow is proposed for removal for construction of new entrance and visibility splay</li> <li>• No strip excavation or raising or lowering of existing soil levels is permitted within the RPA. 'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'.</li> </ul> <b>Method Statement: construction of new access road entrance</b> <ul style="list-style-type: none"> <li>• Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.</li> </ul> </p> |                                                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <b>Identification No.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | H3 (internal field hedge                                                                     |
| <b>Species</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Common hawthorn <i>Crataegus monogyna</i> Jacq<br>Common blackthorn <i>Prunus spinosa</i> L. |
| <b>Current Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1.6m                                                                                         |
| <b>Ultimate Height (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | N/a managed hedgerow                                                                         |
| <b>Current Stem Dia. (cm) at narrowest point below fork</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20cm averaged                                                                                |
| <b>Crown clearance (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0m                                                                                           |
| <b>Crown Spread (M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Radius: 2m                                                                                   |
| <b>Growth stage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | mature                                                                                       |
| <p><b>Tree Condition:</b><br/> <b>Root:</b> No evidence of soil movement.<br/> <b>Stem:</b> No evidence of bark necrosis<br/> <b>Crown:</b> No evidence of recent breakouts or dieback<br/> <b>Tree Quality Assessment:</b> Ref.BS5837 (2012) 4.5.1 <b>Category B2</b> not visible from public road.<br/> <b>Water Demand NHBC 4.2-B: High</b><br/> <b>Root Protection Area RPA:</b> for trees of 20cm diameter at narrowest point below fork (0.20 x 12) = <b>2.4m. Radius</b><br/> Total RPA required at current stage of growth = 18m<sup>2</sup> /tree<br/> <b>Arboricultural Impact Assessment AIA:</b> <ul style="list-style-type: none"> <li>• 13m of hedgerow is proposed for removal for construction of junction with existing track</li> <li>• Maintain 15m distance (RPA radius) from nearest mature hedgerow oak.</li> <li>• No strip excavation or raising or lowering of existing <u>soil</u> levels is permitted within the RPA. 'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'.</li> </ul> <b>Method Statement: construction of new access road entrance</b> <ul style="list-style-type: none"> <li>• Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.</li> </ul> </p> |                                                                                              |

**General Arboricultural Method Statement ref. BS 5837 (2012)**

**3.0 The root protection area (RPA)** recommendation in BS 5837 2012 (Trees in relation to design, demolition and construction – Recommendations), is based upon a minimum area (in m<sup>2</sup>) calculated from the measurement of the stem diameter and a factor of the radial distance between the tree stem and the outer extent of the main lateral roots. The resulting area is usually recorded as a generalised circle on the tree survey. However, the significant figure is the equivalent available rooting area in m<sup>2</sup> rather than the circular shape; tree roots exploit the optimum ground conditions for their physical development dependant upon soil aeration, plant-available water, mineral elements and physical barriers to growth. Providing the total minimum area in m<sup>2</sup> recommended in the RPA is available to the tree, the actual shape of the area is less significant, *providing* it can be demonstrated that the construction process will not result in significant damage to existing roots greater than 25mm in diameter. 'The viable retention of trees on construction sites is dictated by the successful protection of their root systems throughout the development process from initial site clearance to installation of the new landscape. Healthy soils contain five basic components: oxygen, organic matter, mineral matter, living organisms and moisture. A soil's porosity allows water to drain through, carbon dioxide to escape and oxygen to enter. Construction vehicles operating on exposed soils, particularly in wet conditions, compact the soil pores and prevent these processes from occurring'(Cowan 2005)

**3.1 The Tree Protection Plan (TPP)** and method statement details how the construction work will be carried out in proximity to the retained trees, protective barrier specification, timing of work, other mitigation measures where required and supervision of the protection measures during construction.

**3.2 Summary of works**

**Drainage and Utilities:** Follow recommendation in the NJUG Volume 4 Code of practice relating to work in proximity to tree roots within the RPA; specifically, the avoidance of trench excavations within the RPA. Any drainage or service-related works to be carried out within the Root Protection Area must be subject to the prior written approval of the LPA of a method statement detailing how such works are to be carried out and monitored, so as to avoid undue damage to the tree.

**Site Compound, construction materials, soil/demolition debris storage mixing of concrete and washings:** Must be located outside of the Root Protection Areas. Vehicle movements, storage of vehicles or heavy machinery, lighting of fires and no excavations or alterations of ground level is permitted within the protective barrier or areas of temporary ground protection

**Method of work for individual trees retained in proximity to construction works or access to the works:** refer to the work method described for each retained tree ref. section 2.2 of the report.

**3.3 Protective Fencing**

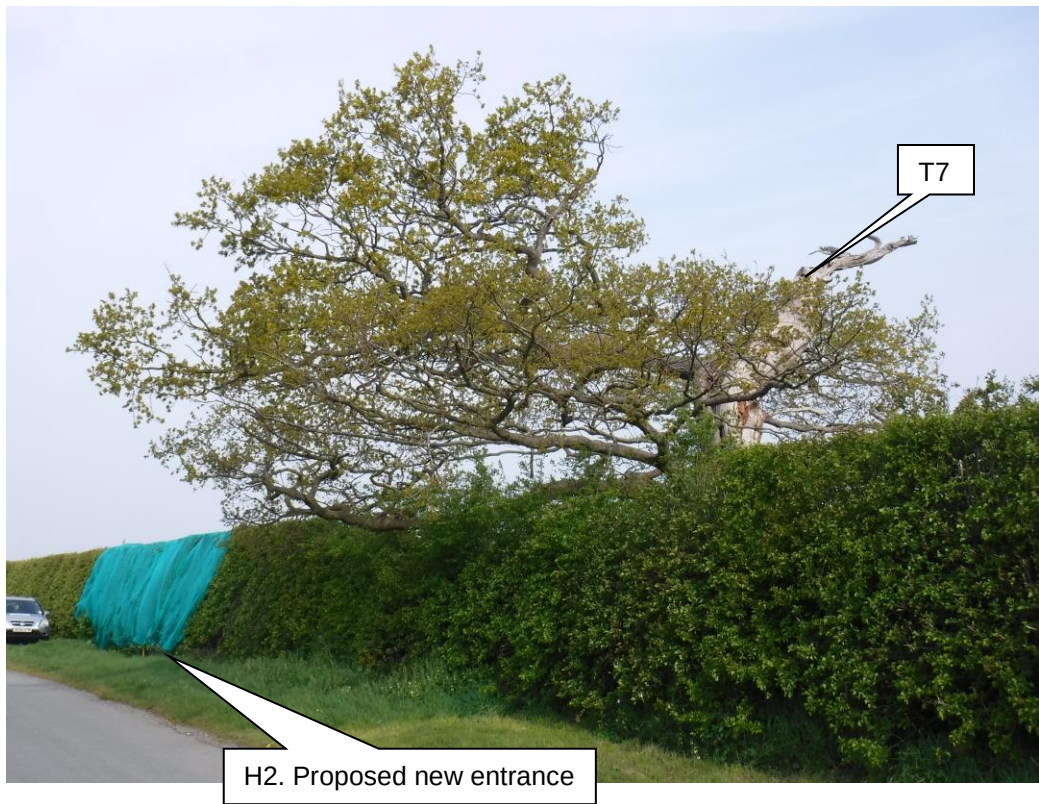
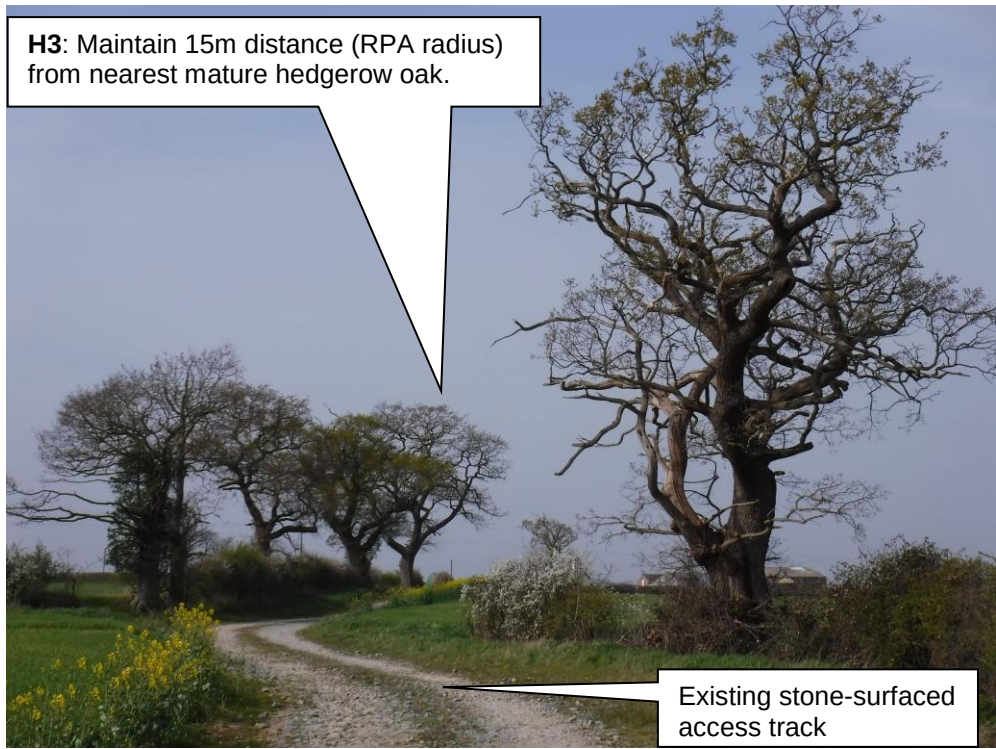
- Protective barriers should be erected with verticals positioned to avoid the lateral roots of the larger trees. Refer to BS 5837 (2012) figure 3 Protective barrier for details of the recommended specification.
- Protective barrier should be erected and then approved by the Local Planning Authority before the start of demolition and construction works on site, including the installation of temporary site office, storage and welfare facilities if required
- The barrier and ground protection shall be maintained in a satisfactory condition throughout the duration of development. There is to be no access or operations of any kind within the barrier, nor repositioning of the barrier even temporarily, without the prior written approval of the LPA.

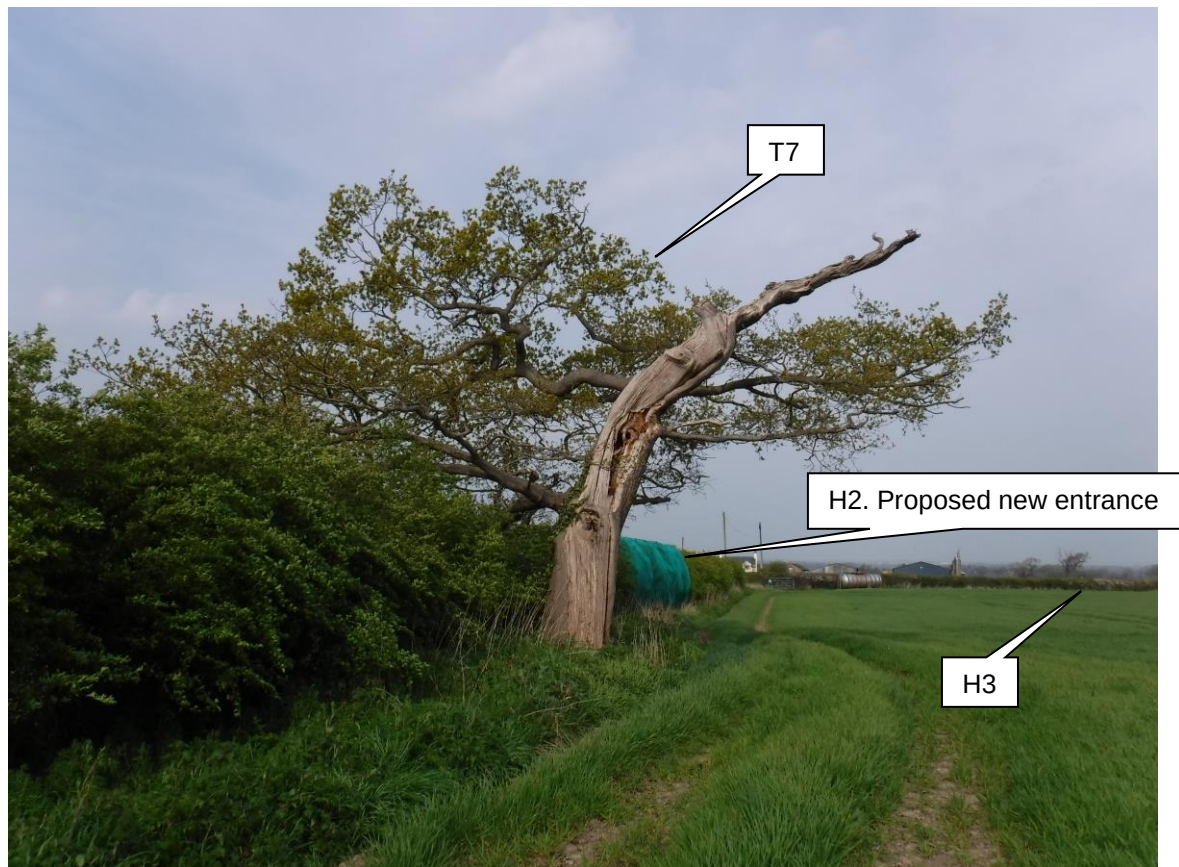
## Appendix 1

Photo Detail: Tree condition illustration ref. Sect 2.2









## Appendix 2

Tree Location and Protection Plan appended as separate drawing x2

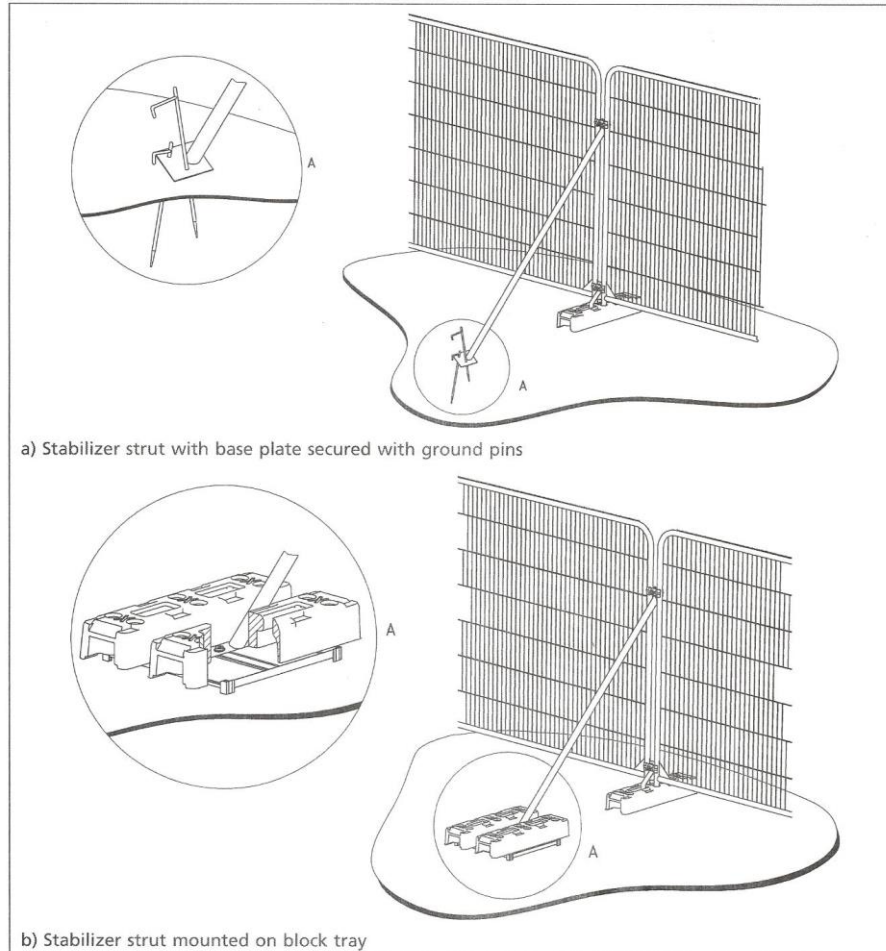
## Appendix 3

### BS 5837 2012 Protection illustrations

BRITISH STANDARD

BS 5837:2012

Figure 3 Examples of above-ground stabilizing systems



#### 6.2.3 Ground protection during demolition and construction

6.2.3.1 Where construction working space or temporary construction access is justified within the RPA, this should be facilitated by a set-back in the alignment of the tree protection barrier. In such areas, suitable existing hard surfacing that is not proposed for re-use as part of the finished design should be retained to act as temporary ground protection during construction, rather than being removed during demolition. The suitability of such surfacing for this purpose should be evaluated by the project arboriculturist and an engineer as appropriate.

6.2.3.2 Where the set-back of the tree protection barrier would expose unmade ground to construction damage, new temporary ground protection should be installed as part of the implementation of physical tree protection measures prior to work starting on site.

6.2.3.3 New temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.

*NOTE The ground protection might comprise one of the following:*

- a) *for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;*
- b) *for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;*
- c) *for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.*

6.2.3.4 The locations of and design for temporary ground protection should be shown on the tree protection plan and detailed within the arboricultural method statement (see 6.1).

6.2.3.5 In all cases, the objective should be to avoid compaction of the soil, which can arise from the single passage of a heavy vehicle, especially in wet conditions, so that tree root functions remain unimpaired.

#### 6.2.4 Additional precautions outside the exclusion zone

6.2.4.1 Planning of site operations should take sufficient account of wide loads, tall loads and plant with booms, jibs and counterweights (including drilling rigs), in order that they can operate without coming into contact with retained trees. Such contact can result in serious damage to the trees and might make their safe retention impossible. Consequently, any transit or traverse of plant in proximity to trees should be conducted under the supervision of a banksman, to ensure that adequate clearance from trees is maintained at all times. Access facilitation pruning should be undertaken where necessary to maintain this clearance.

*NOTE In some instances, local planning authority consent for pruning might be required.*

6.2.4.2 Fires on sites should be avoided if possible. Where they are unavoidable, they should not be lit in a position where heat could affect foliage or branches. The potential size of a fire and the wind direction should be taken into account when determining its location, and it should be attended at all times until safe enough to leave.

*NOTE Local environmental health authorities might have specific restrictions.*

6.2.4.3 Any materials whose accidental spillage would cause damage to a tree should be stored and handled well away from the outer edge of its RPA.

BS 5837:2005

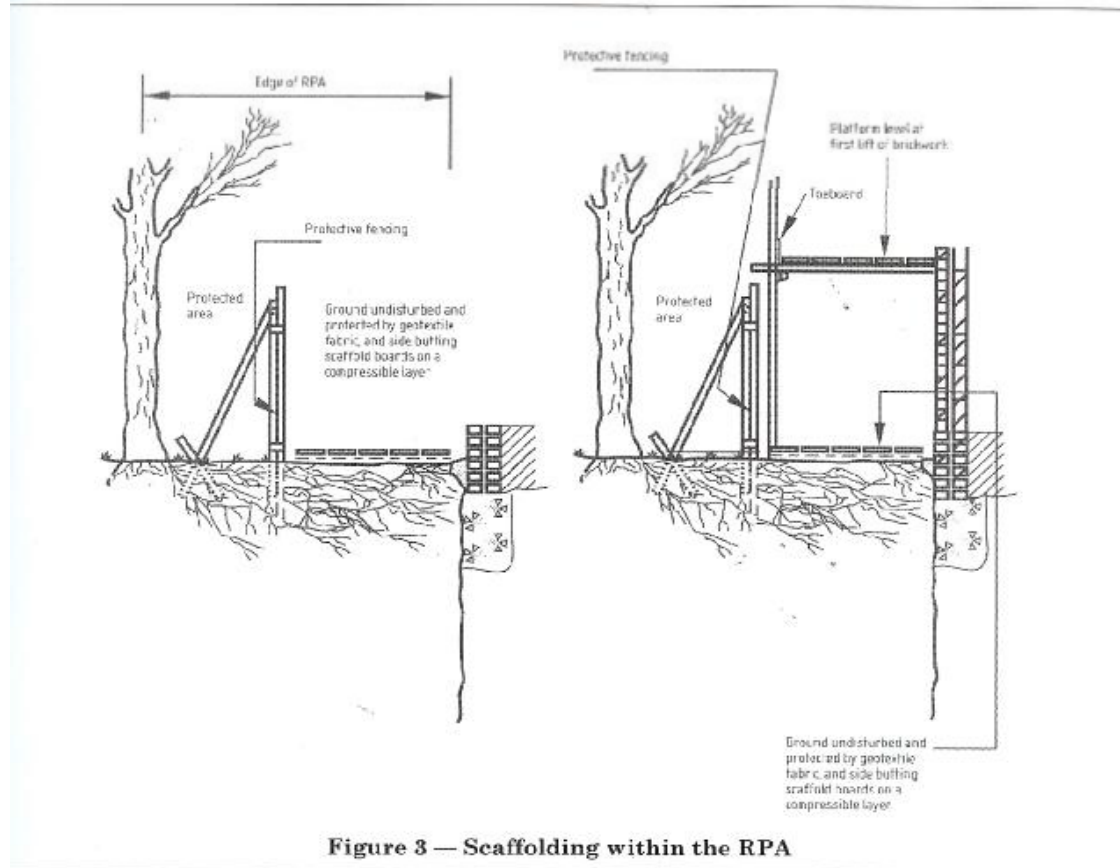


Figure 3 — Scaffolding within the RPA

#### 4.4 Additional precautions outside the exclusion zone

4.4.1 Once the exclusion zone has been protected by barriers and/or ground protection, construction work can commence. All weather notices should be erected on the barrier with words such as:

"Construction exclusion zone — Keep out".

4.4.2 In addition the following should be addressed or avoided.

- Care should be taken when planning site operations to ensure that wide or tall loads, or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to them and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman to ensure that adequate clearance from trees is maintained at all times. In some circumstances it may be impossible to maintain adequate clearance thus necessitating access facilitation pruning (see 11.2.1).
- Material which will contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, should not be discharged within 10 m of the tree stem.
- Fires should not be lit in a position where their flames can extend to within 5 m of foliage, branches of trunk. This will depend on the size of the fire and the wind direction.
- Notice boards, telephone cables or other services should not be attached to any part of the tree.

#### Appendix 4

##### Glossary of Arboricultural Terms

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Adaptive Growth: Woundwood.</b> | New strengthening woody growth in response to loss of tissue through decay or physical damage                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Age Class: Young</b>            | Up to 1/3 <sup>rd</sup> life expectancy                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Early-mature</b>                | Between 1/3 <sup>rd</sup> and 2/3rds life expectancy                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Mature</b>                      | Over 2/3rds life expectancy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Late-mature</b>                 | Onset of natural limb loss; increase in dysfunctional tissue                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Over-mature</b>                 | Declining or moribund trees of low vigour.<br><b>NB</b> Late-mature and over-mature trees are more prone to structural failure than young or early-mature trees.                                                                                                                                                                                                                                                                                                                                               |
| <b>Breakout:</b>                   | Loss of a limb usually close to the junction the main stem or scaffold limb                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Branch bark ridge:</b>          | Natural feature in the axil of the branch providing a simple guide for locating the best position for the top edge of a pruning cut.                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Buttressing:</b>                | Root flare at the base of the stem                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Crown dieback:</b>              | Significant loss of foliage throughout the crown; often the result of root damage. Usually indicating a tree in decline.                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Deadwood:</b>                   | Dead secondary branching persisting on the scaffold limbs. Minor deadwood <50mm diameter is less likely to cause damage in the event of failure. Major deadwood >50mm present a greater hazard and is a greater risk of failure in trees without durable heartwood e.g. Lime and ash. Deadwood which is not presenting a hazard to the highway is excluded from the inspection report.<br>Deadwood stubs: Prevent the sealing of the wound site, providing sites of decay and increasing risk of limb failure. |
| <b>Epicormic Response:</b>         | Growth of dormant buds on areas of the stem or scaffold limbs effected by loss of woody tissue or foliage. New woody tissue is laid down in areas of vigorous epicormic growth.                                                                                                                                                                                                                                                                                                                                |
| <b>Included bark:</b>              | Weak regions of bark-to-bark contact at the stem or branch junctions.                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Retrenchment:</b>               | Describes the response in new growth in the lower crown, following dieback in the upper crown. A feature of some over-mature trees, enabling survival into great age (veteran trees)                                                                                                                                                                                                                                                                                                                           |
| <b>Scaffold limbs:</b>             | 1 <sup>st</sup> order limbs; the major limbs supporting the secondary branching or 2 <sup>nd</sup> & 3 <sup>rd</sup> order branches                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Soil Heave:</b>                 | Raised lateral roots or loosened soil surrounding the base of the tree.                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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