ARBORICULTURAL IMPACT ASSESSMENT
AT 6 WESTBOURNE ROAD, COLTISHALL

Prepared for Purcell

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Executive Summary

This assessment outlines the tree constraints that affect the construction of two new dwellings and demonstrates how the retained trees can be protected throughout the development process.

21 of the trees will need to be removed for development purposes. However, the tree losses will be replaced with remedial planting designed to be in keeping with the new development.

All the retained trees will be provided with proper protection as set out in BS5837:2012 during the construction phase. Protection measures will include erecting temporary protective fencing, temporary ground protection, pre-emptive root pruning and the use of No-Dig surfaces as appropriate.

This assessment forms an important stage in the process of managing and protecting the trees on site in relation to the proposed development. However, it will only ensure the protection of the trees on site if the tree protection measures in the Arboricultural Method Statement are implemented in full and the prescribed system of arboricultural supervision is followed. Tree protection works must be fully integrated into the construction process.

From an Arboricultural standpoint the proposed development will involve substantial loss of trees but the remedial tree planting proposed can make good the tree losses and provide tree cover in harmony with the new development.

G.G. Robbie
AT Coombes Associates Ltd.
03 March 2017
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Appendix 6 Timetable for Implementation of Tree Protection Works
1. Terms of Reference

1.1 The aim of this assessment is to survey trees that may be affected by the construction of two new dwellings within the grounds of 6 Westbourne Road, Coltishall.

1.2 The assessment addresses the likely impact of the proposed development on surrounding trees and provides recommendations for the protection of retained trees during construction work based on BS 5837:2012 “Trees in relation to design, demolition and construction-Recommendations”.

1.3 The client has provided a topographical survey showing the accurate position of all trees and features on site. Also provided was the proposed layout for the development. These plans have been used to form the basis of the Tree Constraints Plan (TCP, Appendix 3) and Tree Protection Plan (TPP, Appendix 4).

1.4 This assessment is an update of the previous Preliminary Arboricultural Impact Assessment for the site produced to advise the design process.

2. Site Description

2.1 The site is within the grounds of 6 Westbourne Road, Coltishall, a detached period property with land stretching 125m from Westbourne Road to the south to the Bure Valley Railway Line to the north. Residential properties are located to the east and west of the site.

2.2 There are a number of large trees spread across the site, with a large Austrian pine dominating the view from Westbourne Road (Fig 1). Within the site there is a gravel car parking area with a range of small trees and shrubs, including yew and Lawson cypress (fig 2).

Fig 1: Westbourne Road frontage. Fig 2: Large Austrian pine adjacent to car parking area.

2.3 To the rear of the main building is a lawn area with large trees interspersed, including a large pollarded lime and a birch (Fig 3). The rear garden extends from this lawn area to the rear boundary of the site. Along the western and northern boundaries are a number of lime of varying sizes. The lime close to the house have been regularly pollarded at approximately 5m, whilst further away the
trees have been allowed to regrow from pollard heads at 3m, and the trees on the northern boundary have not been re-pollarded and are now over 20m in height (fig 4).

2.4 The site extends to the east, with another large grassed area. There are a number of large trees including a group of Leyland cypress adjacent to the northern boundary (Fig 5). The eastern and western portions of the site are separated by a hedgerow (Fig 6), with groups of birch, apple and cherry present.

2.5 Apples in the south-eastern corner of the site form a small orchard area, with a number of large and mature fruit trees (Fig 7). The edge of the garden lawn area to the rear of 6 Westbourne Road is marked by two large Leyland cypress (Fig 8).
3. **Tree Survey Details**

3.1 Appendix 1, the Tree Survey Schedule gives the survey findings in tabular form. The schedule contains all the information specified in section 4.4.2.5 of the British Standard. Appendix 2 gives a full explanation of the survey headings.

3.2 The trees were surveyed on 27 January 2017; they were not climbed, but surveyed from ground level.

3.3 The details recorded during the tree survey have been collected independently of any development proposals, and the categorisation of the quality and amenity value of the trees is made purely on arboricultural grounds.

3.4 No assessment of the soil has taken place as part of this report. The British Standard states that a soil assessment should be carried out by a competent person to establish the structure, clay content and potential for volume change of the soil. A survey of this nature is considered outside the scope of this Arboricultural Assessment. For guidance on soil structure in relation to construction advice should be sought from a Structural Engineer. Guidance on foundation depth in relation to building and trees can be found in NHBC Chapter 4.2.

4. **Assessment of Tree Constraints**

4.1 To facilitate the proper assessment of tree constraints a Tree Constraints Plan (TCP) has been prepared and forms Appendix 3. The plan has been produced as a basis for the assessment of the constraints imposed by existing trees on the proposed design.

4.2 Appendix 3 shows the position of trees marked by a coloured dot matching the retention category status and a reference number (as listed in Appendix 1). Heights (Ht) are marked in metres for each tree, together with the predicted ultimate heights (U/Hgt).

4.3 The plan deals with constraints that the trees may place on the development in two areas as follows:
Below ground Constraints

4.4 The Root Protection Areas (RPA) for the trees are shown as a coloured circle to match the retention category colour. The RPA will be used to help inform the closest positions of any future buildings. The RPA will be protected during any development work with temporary barriers as prescribed by the British Standard.

Above Ground Constraints

4.5 The branch spreads were measured at the four cardinal compass points, with a shape drawn around these points to indicate approximate branch spread, represented by green broken lines on the plan. The ultimate crown spread has been shown with an orange dashed line. This is a predicted distance, and is based on personal experience of how far it is likely the crown will grow.

4.6 A shade pattern has been shown for each tree forming an arc from north west to due east. This gives an indication of the patterns of shadows created by the trees around mid-day in the summer. This is as recommended in BS5837:2012 (Section 5.2.2) but actual shade patterns throughout the year will vary widely. If shading is likely to be a serious constraint a more detailed analysis of shade pattern using proprietary software may be deemed necessary.

5. Arboricultural Impact Assessment

5.1 A total of twenty-two individual trees and nine tree groups were included in this report. Groups contain trees forming continuous features or clusters with similar characteristics were present.

5.2 Two tree groups (T7, G8) have been classed as Category A which is the highest category available under the British Standard 5837:2012. These trees are large and have a significant impact on the local landscape, providing screening into and out of the site.

5.3 Seven trees and six tree groups have been classed as Category B. These trees are generally in good condition and confer landscape values. They should be retained where possible in the context of a development.

5.4 Thirteen individual trees and one group have been classified as Category C. These trees are small or in poorer condition and do not play such a significant role in the local landscape. C category trees are usually of such a quality that the Local Authority may consider it acceptable for them to be removed for development purposes, if required.

5.5 Two trees (T13, T16) have been categorised as U category trees. These trees are in poor condition and unlikely to provide a landscape contribution for more than 10 years. These trees should be removed on arboricultural grounds regardless of the progress of the development.

5.6 Any trees that are retained will be provided with their proper protection according to BS5837:2012 regardless of which category they have been placed in.

5.7 The tree constraints for each element of the development, are considered separately overleaf:
<table>
<thead>
<tr>
<th>Element</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction of Dwelling on Plot 6A</td>
<td>The main dwelling and attached garage encroaches into the RPA of B category trees T7, G4 (4 x birch) and four trees from G3, as well as the C category grand fir T11. All these trees will need to be removed for development purposes and replaced elsewhere on site as set out in Section 6.</td>
</tr>
</tbody>
</table>
| Construction of Dwelling on Plot 6B | In the position shown on the plan, the proposed building encroaches into the RPA of A category trees G8 (4 x lime), B category T10 and C category T12 and T14. These trees will all need to be removed for development purposes and replaced elsewhere on site as set out in Section 6.  
  The proposed dwelling is shown within the RPA of trees from the A category lime group G7, with the maximum encroachment into any one of the trees within the group being approximately 10%. Therefore preemptive root pruning will be carried out to minimise the damage caused to roots, should they be present. This will be carried out by excavating a trench up to 500mm outside the line of the strip foundations in the area shown on the TPP using hand tools or an airspade. Any roots found during this excavation will be severed using a sharp handsaw or secateurs. This will ensure that the roots are not ripped or torn, and will have a good point from which to re-grow, and will have a chance to occlude and prevent fungal pathogens from entering.  
  Temporary ground protection will be used to minimise soil degradation and compaction where traffic is likely to require access during the construction process. This is shown on Appendix 4 – TPP as orange crosshatch and detailed further in Appendix 5 – AMS.  
  The dwelling is within the current branch spread of the trees within G7. These trees will need facilitative pruning to provide clearance between the outer branches and the new building and provide sufficient clearance for construction works. The amount of facilitative crown pruning will be agreed and carried out prior to the commencement of construction works.  
  It is also recommended that, as branches from G7 will extend over the top of the dwelling, that in these areas the roofing is reinforced in order to guard against the failure of any limbs from these trees. |
| New Access Road               | The new access road is within the position of, or significantly within the RPA of B category trees G2 and T8, and C category trees T6 and T9 which will need to be removed to facilitate this aspect of the development.  
  In addition, approximately 30m of hedgerow to the south of G8 will require removal and will be replaced as set out in section 6 below.  
  The hard surface is partially within the RPA of trees T1, T5, T19 and G1 and it will need to be constructed using a No-Dig surface at or above ground level in these areas. The key point is that it will be constructed without excavation. The surface should be designed by an engineer to ensure it is suitable for the traffic and loading that will be experienced when it is in use. It is likely that a three dimensional cellular confinement system will provide the best solution. There are several manufactures of cellular confinement systems including “Cellweb” by Geosyn, Geocell by Terram |
<table>
<thead>
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<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Access Road</td>
<td>cont. or another proprietary three dimensional cellular confinement system. The areas in question have been marked with purple hatching on the Tree Protection Plan (TPP, Appendices 4). The surface can be no closer than 0.5m from the stem of any retained tree. Any design must be approved by the consulting arborist and the Local Authority Tree Preservation Officer. The construction of the no-dig surface must be supervised by the consulting Arboriculturist. The road is situated within the current branch spread of T1, T5, T19 and G1 which will need facilitative pruning to provide clearance between the outer branches/foliage and the new access and sufficient clearance for construction works. The amount of facilitative crown pruning will be agreed and carried out prior to the commencement of construction works.</td>
</tr>
<tr>
<td>Services and Soakaways</td>
<td>No details of any new service runs have been provided. They should be routed to avoid the RPAs of trees. If this is not possible, special techniques must be employed to place the services within the RPA of the trees. The British Standard suggests a range of trenchless methods suitable for various applications including microtunnelling, surface launched directional drilling, Pipe ramming and Impact Moleing/thrust boring. It is important common ducts should be used where it is not possible to avoid the RPA. Further guidance on installing underground services adjacent to trees can be found in the NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Volume 4 Issue 2). This document outlines a number of techniques that may be used for trenching near trees, including trenchless techniques, discontinuous trenching and hand digging. It will be necessary to prepare detailed plans for any services that run thorough the RPA of retained trees. This should be produced in conjunction with an arboriculturist, and include allowance for the space needed for access for the installations, and the levels across the proposed area. Any above-ground apparatus including CCTV cameras and lighting should also be positioned to avoid the need for any regular or detrimental pruning to the trees. Minor facilitative pruning is acceptable. However positions that require repetitive and significant tree work must be avoided.</td>
</tr>
<tr>
<td>Garden Fencing</td>
<td>Many of the boundary fences will be within the RPA of retained trees. To ensure that the trees are not damaged when putting the fencing in place, the post holes for the fence will be excavated using an airspade or hand tools. If roots over 25mm diameter are found the position of the hole will be adjusted to avoid them. If roots under this diameter are found they will be pruned to the edge of the hole using a sharp handsaw or secateurs. The holes will then be lined with a rootbarrier material to prevent the leaching of any phytotoxic material from the wet concrete. As there may be the need for adjusting lengths between post holes, this method is not suitable for fixed panel fences. Close board fencing may provide a satisfactory alternative.</td>
</tr>
</tbody>
</table>
6. **Tree Management and Replanting Proposals**

6.1 Remedial tree work has been specified in column 12 of Appendix 1 for arboricultural and health and safety reasons. The work is not considered urgent but it is recommended that it is carried out within 12 months of the date of this report, or prior to the commencement of works, whichever is soonest.

6.2 This schedule does not refer to, and is superseded by, any requirements for tree felling for development purposes that may be required.

6.3 Please note that the inspection of trees on site was of a preliminary nature, gathering, as set out in the British Standard, only information needed to assess tree constraints. While any obvious tree defects that may constitute a risk have been recorded in the survey and appropriate remedial work specified this assessment does not constitute a full tree health and safety survey. In particular inaccessible trees, trees with heavy ivy cover and trees within groups have not been inspected fully and dimensions estimated. However, any comments on the trees relating to health and safety remain valid for 12 months from the date of this report after which the trees will require re-inspection.

6.4 Four A category trees, twelve B category trees (including those from G2, G3 and G4) and five C category trees will be removed for development purposes. In order to mitigate the loss of the above trees a minimum of 15 new heavy standard rootballed or containerised trees (12 to 14cm stem girth) will be planted. The species, selected to be in keeping with the development, should include:

- Pedunculate oak – *Quercus robur*
- Field Maple – *Acer campestre*
- Midland hawthorn – *Crataegus laevigata* ‘Paul’s Scarlet’
- Crabapple – *Malus hupehensis*
- Service berry – *Amelanchier lamarckii* ‘Ballerina’
- Discoulour mountain ash – *Sorbus discolor*
- Downy birch – *Betula pubescens*
- Apple – *Malus* spp.

6.5 The trees will be securely pit planted in holes which are excavated to at least 0.75m wider in all dimensions than the rootball of the tree, planted at a depth no deeper than the height of the root ball / root collar and back-filled with soil excavated from the tree pit. Each tree will supported with a treated softwood stake inserted at a 45 degree angle to the ground, avoiding the rootball. Adjustable rubber ties will secure the trees to the stakes. Spiral guards (60cm x 38mm) will be wrapped around the lower stem to prevent mammal damage. Mulch will be placed around each tree at depth of 50-100mm and at a diameter of 1m to reduce weed growth.

6.6 The trees will be maintained for a 5 year period. Work will include keeping a circular area with a 0.5m radius centred on the stem of the tree/s free from weed growth using either herbicide or much, checking supports and guards and replacing any failures during the period with trees of the same species and quality.
6.7 In addition to the above a new mixed native species hedge of a minimum 30 linear meters will be planted to mitigate the loss of hedgerow to the south of G8. Species will include:

- 40% Hawthorn (*Crataegus monogyna*)
- 20% Blackthorn (*Prunus spinosa*)
- 10% Field Maple (*Acer campestre*)
- 10% Hazel (*Corylus avellana*)
- 10% Holly (*Ilex aquifolium*)
- 10% Crab Apple (*Malus sylvestris*)

6.8 It will comprise of bare rooted transplants (60 to 90cm) protected individually using spiral shelters (600mm x 38mm) supported by 90cm bamboo canes. This would be planted in random mixture in a double staggered row at 0.5m spacing. The exact quantities and location of the hedgerow will depend on the final landscaping layout and will be determined prior to the commencement of works.

6.9 The hedging will be maintained for a 5 year period. Work will include keeping an area of 1m in width centred along the length of the hedgerow free from weed growth using either herbicide or much, checking supports and guards and replacing any failures during the period with trees of the same species and quality.

7. **Further Arboricultural Input into the Design Process, Construction and Aftercare**

7.1 A Tree Protection Plan (TPP), Arboricultural Method Statement (AMS) and Timetable for implementation of Tree Protection Works form Appendices 4, 5 and 6 respectively.

7.2 The AMS contains a timetable for implementation of the tree protection works. No work will commence until the protective fencing is in place.

7.3 If the proposed layout of the development changes it will be necessary to revise this report.

8. **Permissions and Constraints**

8.1 It must be ascertained whether there are any Tree Preservation Orders on any trees within the site. If there are, written permission must be obtained from the Local Authority prior to commencing any work that may affect the condition of the protected trees. If the site is within a Local Authority Conservation Area the Local Planning Authority must be given 6 weeks’ notice of any works on the trees.

8.2 To assist the planning process the LPA should be provided with a copy of this report and invited to comment on the proposals.

8.3 When dealing with developments close to trees, special attention should be paid to related legislation ensuring that the Wildlife and Countryside Act (1994), Conservation of Habitats and Species Regulations (2010) and the Countryside Rights of Way Act (2000) are adhered to. It must be ensured that nesting birds and protected species such as bats and reptiles are considered and protected.
9. **Conclusions**

9.1 Four A category trees, twelve B category and five C category trees and will be removed for development purposes and replaced with new heavy standard trees.

9.2 A 30m long section of hedge will be replaced with a new mixed native hedge of the same length or greater.

9.3 All other trees on or adjacent to the site will be retained and protected according to BS5837: 2012 throughout the works.

9.4 The majority of buildings have been positioned outside the RPA of adjacent trees. In the case of plot 6B, there is minor encroachment into the RPA. This will be addressed by carrying out pre-emptive root pruning.

9.5 In some cases the use of temporary ground protection will be necessary to ensure that there is sufficient space to carry out construction whilst protection the RPA of adjacent trees.

9.6 A section of the proposed access drive will be constructed using No-Dig surfacing.

9.7 Where new structures are located near trees, pruning will be required, either prior to construction to allow enough space between the trees and the buildings, or in the future after construction, to maintain adequate clearance. Additionally, it is recommended that sections of the roof of the dwelling on plot 6B is reinforced in case of any failures from the trees within G7.

9.8 Post holes for garden fences within the RPA of retained trees will be excavated carefully to ensure that major roots are not severed the surrounding roots are protected from leachates from the concrete.

9.9 The proposed new planting will help, in time, to restore any lost tree cover on the site.

G. G. Robbie, BSc Hons For, MICFor, M Arbor A
A.T. Coombes Associates Ltd
03 March 2017
### Tree Survey Schedule

**Site:** 6 Westbourne Road, Coltishall  
**Survey Completed:** 27/01/17

<table>
<thead>
<tr>
<th>Tree No.</th>
<th>Species</th>
<th>Ht (m)</th>
<th>Stem dia (mm)</th>
<th>No of Stems</th>
<th>Branch Spread</th>
<th>Height and Direction of First Branch (m)</th>
<th>Mean Canopy Ht</th>
<th>Life Stage</th>
<th>Physiological Condition</th>
<th>Structural Condition</th>
<th>Preliminary Tree Work</th>
<th>Estimated remaining contribution (Yrs)</th>
<th>Cat grading</th>
<th>Radius of RPA (m)</th>
<th>RPA (sq m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>Yew</td>
<td>8.5</td>
<td>450</td>
<td>1</td>
<td>3.2 4.2 4.0 2.8</td>
<td>2.0 E 2.0</td>
<td>EM</td>
<td>Good</td>
<td>Fair - Moderate vitality.</td>
<td>Good</td>
<td>No work required</td>
<td>20+</td>
<td>C2</td>
<td>5.4</td>
<td>91.6</td>
</tr>
<tr>
<td>T2</td>
<td>Irish Yew</td>
<td>8.5</td>
<td>290</td>
<td>15</td>
<td>2.5 2.5 2.5 2.5</td>
<td>0.2 W 0.5</td>
<td>EM</td>
<td>Good</td>
<td>Good</td>
<td>No work required</td>
<td>20+</td>
<td>B2</td>
<td>3.5</td>
<td>38.1</td>
<td></td>
</tr>
<tr>
<td>T3</td>
<td>Lawson Cypress</td>
<td>6.9</td>
<td>264</td>
<td>7</td>
<td>2 3.6 2.4 1.6</td>
<td>0.5 N 0.1</td>
<td>EM</td>
<td>Good</td>
<td>Moderate - Forked at base.</td>
<td>No work required</td>
<td>10+</td>
<td>C1</td>
<td>3.2</td>
<td>31.5</td>
<td></td>
</tr>
<tr>
<td>T4</td>
<td>Ash</td>
<td>8.0</td>
<td>110</td>
<td>1</td>
<td>2.5 2.5 2.5 2.5</td>
<td>4.0 E 4.0</td>
<td>Y</td>
<td>Good</td>
<td>Good</td>
<td>No work required</td>
<td>20+</td>
<td>C1</td>
<td>1.3</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>T5</td>
<td>Bay</td>
<td>7.5</td>
<td>269</td>
<td>6</td>
<td>3.2 3.6 3.0 3.5</td>
<td>0.5 N 0.3</td>
<td>EM</td>
<td>Good</td>
<td>Good</td>
<td>No work required</td>
<td>20+</td>
<td>C1</td>
<td>3.2</td>
<td>32.7</td>
<td></td>
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<tr>
<td>T6</td>
<td>Lawson Cypress</td>
<td>6.7</td>
<td>200</td>
<td>1</td>
<td>1.6 2.0 2.9 2.0</td>
<td>0.0 S 0.0</td>
<td>SM</td>
<td>Good</td>
<td>Good</td>
<td>No work required</td>
<td>20+</td>
<td>C1</td>
<td>2.4</td>
<td>18.1</td>
<td></td>
</tr>
<tr>
<td>T7</td>
<td>Downy Birch</td>
<td>15.6</td>
<td>590</td>
<td>1</td>
<td>5.5 7.4 9.7 7.0</td>
<td>2.0 S 2.0</td>
<td>M</td>
<td>Good</td>
<td>Moderate - Extended limb to south.</td>
<td>Reduce crown by 3m, focussing on southern side.</td>
<td>20+</td>
<td>B1</td>
<td>7.1</td>
<td>157.5</td>
<td></td>
</tr>
<tr>
<td>T8</td>
<td>Cherry</td>
<td>7.0</td>
<td>300</td>
<td>1</td>
<td>3.5 3.5 5.2 7.0</td>
<td>2.4 S 2.0</td>
<td>EM</td>
<td>Good</td>
<td>Good</td>
<td>No work required</td>
<td>20+</td>
<td>B2</td>
<td>3.6</td>
<td>40.7</td>
<td></td>
</tr>
<tr>
<td>T9</td>
<td>Sumac</td>
<td>5.2</td>
<td>100</td>
<td>1</td>
<td>2.3 2.7 2.6 2.2</td>
<td>2.0 S 2.0</td>
<td>Y</td>
<td>Good</td>
<td>Moderate - Leaning to south.</td>
<td>No work required</td>
<td>10+</td>
<td>C1</td>
<td>1.2</td>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td>T10</td>
<td>Cherry</td>
<td>7.2</td>
<td>550</td>
<td>3</td>
<td>7 7.6 7.6 8.0</td>
<td>1.3 E 1.0</td>
<td>M</td>
<td>Good</td>
<td>Moderate - Extended limbs. Limb to west is splitting and collapsing</td>
<td>Clean out. Remove broken limb.</td>
<td>20+</td>
<td>B1</td>
<td>6.6</td>
<td>136.6</td>
<td></td>
</tr>
</tbody>
</table>

*Surveyed by A.T. Coombes Associates Ltd*  
# denotes estimated dimensions due to lack of access to tree
<table>
<thead>
<tr>
<th>Tree No.</th>
<th>Species</th>
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<th>Structural Condition</th>
<th>Preliminary Tree work</th>
<th>Estimated remaining contribution (Yrs)</th>
<th>Cat grading</th>
<th>Radius of RPA (m)</th>
<th>RPA (sq m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T11</td>
<td>Grand Fir</td>
<td>10.0</td>
<td>670</td>
<td>1</td>
<td>4.5 4.5 4.5 4.7</td>
<td>3.0 W</td>
<td>3.0</td>
<td>M</td>
<td>Poor - Low vitality</td>
<td>Moderate - Topped at 10m.</td>
<td>Clean out.</td>
<td>10+</td>
<td>C1</td>
<td>8.0</td>
<td>203.1</td>
</tr>
<tr>
<td>T12</td>
<td>Whitebeam</td>
<td>9.0</td>
<td>310</td>
<td>1</td>
<td>4.3 3.8 3.4 3.6</td>
<td>1.6 N</td>
<td>1.6</td>
<td>EM</td>
<td>Good</td>
<td>Moderate - dead wood.</td>
<td>No work required</td>
<td>10+</td>
<td>C1</td>
<td>3.7</td>
<td>43.5</td>
</tr>
<tr>
<td>T13</td>
<td>Cherry</td>
<td>7.5</td>
<td>480</td>
<td>1</td>
<td>5.8 3.9 7.5 6.1</td>
<td>2.0 S</td>
<td>2.3</td>
<td>M</td>
<td>Fair - Moderate vitality.</td>
<td>Poor - Dead wood. Tear out on east side exposing internal decay.</td>
<td>Fell</td>
<td>&lt;10</td>
<td>U</td>
<td>5.8</td>
<td>104.2</td>
</tr>
<tr>
<td>T14</td>
<td>Apple</td>
<td>4.3</td>
<td>300</td>
<td>4</td>
<td>2.2 1.6 2.7 2.5</td>
<td>1.0 N</td>
<td>1.5</td>
<td>OM</td>
<td>Fair - Moderate vitality.</td>
<td>Poor - Dead wood.</td>
<td>Clean out.</td>
<td>10+</td>
<td>C1</td>
<td>3.6</td>
<td>40.7</td>
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<tr>
<td>T15</td>
<td>Magnolia</td>
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<td>227</td>
<td>4</td>
<td>4.6 3.5 3.7 4.4</td>
<td>1.0 W</td>
<td>0.5</td>
<td>EM</td>
<td>Good</td>
<td>Good</td>
<td>No work required</td>
<td>20+</td>
<td>C1</td>
<td>2.7</td>
<td>23.3</td>
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<tr>
<td>T16</td>
<td>Apple</td>
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<td>180</td>
<td>1</td>
<td>2   2.0 2.0 2.0</td>
<td>2.0 N</td>
<td>2.0</td>
<td>OM</td>
<td>Poor - Mostly dead.</td>
<td>Poor - Dead wood.</td>
<td>Fell</td>
<td>&lt;10</td>
<td>U</td>
<td>2.2</td>
<td>14.7</td>
</tr>
<tr>
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<td>7.5</td>
<td>450</td>
<td>1</td>
<td>2.5 2.5 2.5 2.5</td>
<td>2.0 W</td>
<td>2.0</td>
<td>M</td>
<td>Good</td>
<td>Good</td>
<td>No work required</td>
<td>20+</td>
<td>C1</td>
<td>5.4</td>
<td>91.6</td>
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<tr>
<td>T18</td>
<td>Laburnum</td>
<td>6.5</td>
<td>223</td>
<td>4</td>
<td>3   3.1 3.0 2.5</td>
<td>1.8 E</td>
<td>2.0</td>
<td>SM</td>
<td>Fair - Moderate vitality.</td>
<td>Moderate - Leaning to east. Multi-stemmed at base.</td>
<td>No work required</td>
<td>10+</td>
<td>C1</td>
<td>2.7</td>
<td>22.5</td>
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<tr>
<td>T19</td>
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<td>12.3</td>
<td>570</td>
<td>1</td>
<td>5.9 5.5 5.5 5.1</td>
<td>3.5 N</td>
<td>3.0</td>
<td>M</td>
<td>Good</td>
<td>Moderate - Multi-stemmed at 3m.</td>
<td>No work required</td>
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<td>B1</td>
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<td>T20</td>
<td>Downy Birch</td>
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<td>500</td>
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<td>5.1 5.0 5.0 5.0</td>
<td>5.9 W</td>
<td>4.0</td>
<td>M</td>
<td>Good</td>
<td>Good</td>
<td>No work required</td>
<td>20+</td>
<td>B1</td>
<td>6.0</td>
<td>113.1</td>
</tr>
</tbody>
</table>

SURVEYED BY A.T. COOMBES ASSOCIATES LTD
# denotes estimated dimensions due to lack of access to tree

Sheet 2 of 4
<table>
<thead>
<tr>
<th>Tree No.</th>
<th>Species</th>
<th>Ht (m)</th>
<th>Stem dia (mm)</th>
<th>No of Stems</th>
<th>Branch Spread</th>
<th>Height and Direction of First Branch (m)</th>
<th>Mean Canopy Ht</th>
<th>Life Stage</th>
<th>Physiological Condition</th>
<th>Structural Condition</th>
<th>Preliminary Tree work</th>
<th>Estimated remaining contribution (Yrs)</th>
<th>Cat grading</th>
<th>Radius of RPA (m)</th>
<th>RPA (sq m)</th>
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<td>T21</td>
<td>Austrian Pine</td>
<td>16.7</td>
<td>750</td>
<td>1</td>
<td>5.4 5.5 6.0 6.0</td>
<td>5.3 E 3.0 M Good Good No work required</td>
<td>20+</td>
<td>B1</td>
<td>9.0 254.5</td>
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<td></td>
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<tr>
<td>T22</td>
<td>Eucalyptus</td>
<td>8.0</td>
<td>244</td>
<td>3</td>
<td>2 6.0 4.0 1.0</td>
<td>1.3 W 1.0 EM Fair - Competition T21 Moderate - Leaning to west.</td>
<td>10+</td>
<td>C1</td>
<td>2.9 26.8</td>
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<tr>
<td>G1</td>
<td>Lawson Cypress #</td>
<td>5.5</td>
<td>200</td>
<td>1</td>
<td>3.5 3.5 3.5 3.5</td>
<td>1.5 W 1.5 EM Good Good No work required</td>
<td>20+</td>
<td>C1</td>
<td>2.4 18.1</td>
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<tr>
<td>G2</td>
<td>Leyland Cypress x 2</td>
<td>11.4</td>
<td>650</td>
<td>1</td>
<td>5.5 5.9 4.5 4.5</td>
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<td>20+</td>
<td>B2</td>
<td>7.8 191.2</td>
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<td></td>
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<td>G3</td>
<td>Apple</td>
<td>7.0</td>
<td>462</td>
<td>2</td>
<td>6 5.8 5.0 6.5</td>
<td>1.5 W 1.0 OM Fair - Moderate vitality. Moderate - Dead wood. Multi-stemmed at base. Leaning to west. Some collapsed stems within group. Clean out.</td>
<td>10+</td>
<td>B3</td>
<td>5.5 96.7</td>
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<td>G4</td>
<td>Silver Birch x 4</td>
<td>18.3</td>
<td>530</td>
<td>1</td>
<td>4.3 5.4 5.5 5.2</td>
<td>2.0 S 2.2 M Good Good No work required</td>
<td>20+</td>
<td>B1</td>
<td>6.4 127.1</td>
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<td>G5</td>
<td>Leyland Cypress x 4 #</td>
<td>17.0</td>
<td>800</td>
<td>1</td>
<td>5 5.0 5.3 5.2</td>
<td>0.5 S 0.5 M Good Moderate - Some limbs have torn out. No work required</td>
<td>20+</td>
<td>B2</td>
<td>9.6 289.6</td>
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<tr>
<td>G6</td>
<td>Ash x 3 #</td>
<td>11.0</td>
<td>500</td>
<td>1</td>
<td>6 6.0 6.0 6.0</td>
<td>2.0 S 1.5 M Good Good No work required</td>
<td>20+</td>
<td>B2</td>
<td>6.0 113.1</td>
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<td>G7</td>
<td>Lime</td>
<td>23.0</td>
<td>680</td>
<td>1</td>
<td>7 7.0 8.5 7.0</td>
<td>5.0 S 5.0 M Good Good No work required</td>
<td>20+</td>
<td>A2</td>
<td>8.2 209.2</td>
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</tr>
<tr>
<td>Tree No.</td>
<td>Species</td>
<td>Ht (m)</td>
<td>Stem dia (mm)</td>
<td>No of Stems</td>
<td>Branch Spread</td>
<td>Height and Direction of First Branch (m)</td>
<td>Mean Canopy Ht</td>
<td>Life Stage</td>
<td>Physiological Condition</td>
<td>Structural Condition</td>
<td>Preliminary Tree work</td>
<td>Estimated remaining contribution (Yrs)</td>
<td>Cat grading</td>
<td>Radius of RPA (m)</td>
<td>RPA (sq m)</td>
</tr>
<tr>
<td>----------</td>
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</tr>
<tr>
<td>G8</td>
<td>Lime</td>
<td>15.5</td>
<td>550</td>
<td>1</td>
<td>7 7.5 7.0 7.0</td>
<td>3.0 E</td>
<td>1.0</td>
<td>M</td>
<td>Good</td>
<td>Moderate - multi-stemmed at 3.0m. Pollarded.</td>
<td>No work required</td>
<td>20+</td>
<td>A2</td>
<td>6.6</td>
<td>136.9</td>
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<tr>
<td>G9</td>
<td>Lime #</td>
<td>6.5</td>
<td>400</td>
<td>1</td>
<td>2.5 2.5 2.5 2.5</td>
<td>3.0 N</td>
<td>3.0</td>
<td>M</td>
<td>Good</td>
<td>Good - Pollarded at 5.0m.</td>
<td>No work required</td>
<td>20+</td>
<td>B2</td>
<td>4.8</td>
<td>72.4</td>
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</table>
Appendix 2: Notes on the Column Headings in Appendix 1

<table>
<thead>
<tr>
<th>Col#</th>
<th>Title</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tree No.</td>
<td>Tree numbers to correspond with those shown on the TCP.</td>
</tr>
<tr>
<td>2</td>
<td>Species</td>
<td>Each tree has been identified and the common name given in each case.</td>
</tr>
<tr>
<td>3</td>
<td>Ht (m)</td>
<td>Height of the tree</td>
</tr>
</tbody>
</table>
| 4    | Stem dia (mm) | The stem diameter measured in millimetres at 1.5 metres above ground.  
For multi-stemmed trees the stem diameter has been calculated according to the formula given in BS 5837:2012: For trees with up to 5 stems, each stem has been measured at 1.5m, squared and added together. The diameter shown is the square root of the total.  
For multi-stemmed trees with over 5 stems a sample of five diameters has been taken at 1.5m, averaged and squared, then multiplied by the total number of stems. The square root of this sum gives the stem diameter figure. |
<p>| 5    | Number of Stems | Total number of stems on the tree. |
| 6    | Branch Spread | The branch spread measured in metres from the stem to the tip of the outer branches has been measured in four directions of the compass North, South, East and West. |
| 7    | Height and Direction of First Branch spread (m) | First significant branch and direction of growth (relative to the four cardinal compass points). |
| 8    | Canopy Ht | Mean height of the canopy above ground level. |
| 9    | Life Stage | The life stage of the tree has been assessed into one of the following categories: Y =Young, SM = Semi Mature, EM = Early Mature M = Mature, OM = Over mature and V=Veteran. |
| 10 and 11 | Condition | The British Standard recommends that a note is made of the structural and physical condition of the tree. |</p>
<table>
<thead>
<tr>
<th>Col#</th>
<th>Title</th>
<th>Notes</th>
</tr>
</thead>
</table>
| 12   | Preliminary Management Recommendations     | This column includes all work considered necessary to, as far as is practicable, ensure health and safety and for the good arboricultural management of the trees. These works are not associated with the development proposals. All work to be carried out to BS 3998: 2010 “Tree Work—Recommendations”.
Recommendations given in respect of Health and Safety remain current for 12 months from the date of this assessment after which further inspection is recommended.
It should be noted that trees are dynamic structures subject to the forces of nature, which can fail without showing external symptoms. |
| 13   | Estimated remaining Contribution (Yrs)      | The estimated remained contribution of each tree in years has been assessed, using personal experience, into the following groupings: < 10 = Less than 10 years 10+ years = More than 10 years 20+ years = More than 20 40+ years = More than 40 years |
| 14   | Category grading                           | U = Those in such a condition that any existing value would be lost within 10 years and which should in the current context, be removed for reasons of sound arboricultural management.
(Trees that have serious, irremediable structural defects, such that their early loss is expected due to collapse or ill health including trees that will become at risk due to the loss of other U category trees).
A = Those trees of high amenity quality and value in such a condition as to be able to make a substantial contribution (A minimum of 40 years is suggested)
1) Trees that are particularly good examples of their species if rare unusual or essential components of groups or formal or semi-formal arboricultural features
2) Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views in or out of the site, or those of particular visual importance.
3) Trees groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran tree or wood pasture) |
<table>
<thead>
<tr>
<th>Col#</th>
<th>Title</th>
<th>Notes</th>
</tr>
</thead>
</table>
| 14 cont | Category grading cont | **B** = Those of Moderate quality and amenity value: those in such a condition as to be able to make a significant contribution (a minimum of 20 years is suggested)  
1) Trees that might be included in the high category but are downgraded because of impaired condition (e.g. remediable defects)  
2) Trees and woodland that form distinct landscape features but are not essential components.  
3) Trees with clearly identifiable conservation or other cultural benefits.  
**C** = Those of low quality and amenity value currently in adequate condition to remain until new planting is established (minimum of 10 years is suggested) or trees under 150 mm stem diameter.  
1) Tree not qualifying in higher categories  
2) Trees present in groups or woodlands but not with a significantly higher landscape value and or offering low or temporary screening benefit.  
3) Trees with very limited conservation or other cultural benefits.  
Note: Category C trees are the least suitable for retention, where they would impose a significant constraint on the development their removal for development purposes may be considered acceptable by the LPA. Trees with a stem diameter under 150mm could be considered for relocation. |
| 15 | Radius of RPA (m) | The distance that would form the radius of a circular protection zone is given in metres calculated by multiplying the stem diameter given in column 4 by 12. The methods for calculating the stem diameter of multi-stemmed trees is given in section 4 above. |
| 16 | RPA (m²) | The area of the RPA is given in square metres calculated by the following formula:  
**Single Stemmed Trees;**  
\[ RPA \ m^2 = \left( \frac{\text{stem diameter mm @ 1.5m} \times 12}{1000} \right)^2 \times 3.142 \]  
The methods for arriving at the stem diameter for multiple stemmed trees are described above in the notes for column 4. |
Appendix 5: Arboricultural Method Statement for a Proposed Development at 6 Westbourne Road, Coltishall

1. **Scope of the Works**

1.1 The document provides a methodology for protection of trees during the construction of two dwellings and an access drive at the above site, and should be read in conjunction with the Tree Protection Plan Appendix 4 and Timetable for Protection Works Appendix 6.

1.2 The main features in the protection of the retained trees on site are as follows:

- Provision of temporary protective barriers
- Provision of temporary ground protection
- Use of a No-Dig surfaces
- Use of pre-emptive root pruning
- Audited arboricultural site monitoring

1.3 A meeting between the site manager/main contractor and a consulting arboriculturist must take place prior to construction work commencing so that the above protection measures set out in this document can be discussed and agreed. At this point a list of contact details for all relevant parties will be produced and circulated including the Tree Officer of the Local Planning Authority.

1.4 Protective measures must be in place prior to any ground or construction works take place.

2. **Timing of Works**

2.1 Tree protection works will be completed as detailed below according to the attached timetable Appendix 6.

2.2 The exact commencement date is not known. However, the timetable provided gives the order that the works need to be implemented to ensure the trees are fully protected and states when specific arboricultural input will be required.

3. **Tree Protection Barriers**

3.1 Remaining trees will be protected by forming Construction Exclusion Zones (CEZ) as shown on Appendix 4 the Tree Protection Plan (TPP).

3.2 Temporary barriers will be erected as shown by the thick green lines on the TPP to form the Construction Exclusion Zone (CEZ). The barriers will consist of 2m tall welded mesh panels (Heras) supported on rubber or concrete feet. The fence panels should be joined together using a minimum of two anti-tamper couplers installed so they can be removed from the inside of the fence. The distance between couplers should be at least 1m and be uniform throughout the fence.
3.3 Panels should be supported on the inner side by stabilizer struts which should normally be attached to a base plate and secured with ground pins. Where the fence will be erected on hard surfacing or it is otherwise unfeasible to use ground pins the struts should be mounted on a block tray.

![Stabilizer strut with base plate secured with ground pins](image1.png)

![Stabilizer strut mounted on block tray](image2.png)

Fig 1: Temporary protective fencing as recommended by the British Standards (2012).

3.4 Figure 1 is an extract from BS5837:2012 showing the method of supporting the panels with ground pins and a block mounted tray for use on hard surfaces. Stabiliser struts should be fitted at each panel junction.

3.5 At least fifteen all-weather notices should be erected on the barriers forming each CEZ stating “Construction Exclusion Zone – No Access”. These should face outwards towards the work area. Signs must be maintained in good condition and remain in place until completion of the works.

3.6 Barriers will be maintained throughout the duration of the works, ensuring that access is denied to the CEZ throughout the process.

4. **Temporary Ground Protection**

4.1 Temporary ground protection will be required as shown on the TPP with orange crosshatching. The ground protection should be constructed as follows depending on the type of traffic that will use it:
• Pedestrian traffic only – a single thickness of scaffold boards on top of a driven scaffold frame to form a suspended walkway, or on top of a compression resistant layer (100mm woodchip) laid on top of a geotextile membrane.
• Light plant up to a gross weight of 2t, proprietary ground protection boards linked to one another on top of a compression resistant layer (150mm woodchip) laid on a geotextile membrane.
• Plant exceeding gross weight of 2t, a specification devised by an engineer will be designed in conjunction with the arboricultural consultant to support the loading that the ground will be subjected to.

4.2 Compaction of the soil can occur from a single pass of a heavy vehicle, especially in wet conditions, and therefore the ground protection must be put in place before any access is allowed.

5. Hard Surfacing within the RPA of Retained Trees

5.1 The areas for hard surfacing shown cross hatched in purple on the Tree Protection Plan Appendix 4 require a No-Dig method of construction. Within the hatched zone no excavation is allowed.

5.2 A hard surface should be designed to avoid localized compaction by evenly distributing the load over the path or car parking space. The proper source of advice on a finished design are the structural engineers for the project to ensure it is fit for the intended loading and ground conditions. The design must also take full account of arboricultural advice. Appropriate methods include three dimensional cellular confinement systems or in some circumstances engineered solutions. The key element is that there will be no excavation.

5.3 In this situation it is likely that a three dimensional cellular confinement system constructed without excavation will be the best solution. Figure 2, below, shows a typical construction method of such a No-Dig surface using Cellweb produced by Geosynthetics. It should be noted that there are other manufacturers of cellular confinement systems.

5.4 It will be important ensure that the surface design merges with the level of the other sections of the road. An appropriate depth of confinement system should be chosen and if necessary ramps to smooth out level changes should be constructed.

5.5 Figure 2 shows a typical construction of a No-Dig surface using Cellweb. This example has block paving as the top surface but gravel and a range of other permeable surfaces can be used.
5.6 The following methodology should be used for the installation of a No-Dig Surface.

a) The construction must be undertaken in dry weather. There will be no machine movement within the RPA of the trees before the ground is protected by a load spreader and sub-base.

b) Any major protrusions such as flints will be removed prior to commencement. Any hollows will be filled with clean sharp sand prior to laying a fibretex F4M separating geotextile.

c) The Cellweb panels will be extended to the full length and pinned into place with staking pins to anchor the cells open. Adjacent panels will be stapled together to form a continuous mattress. The surface must be located at least 0.5m from the base of the retained trees.

d) The mattress will be edged with treated softwood edging boards of sufficient width to accommodate the infill material and held in place with pegs at a minimum spacing of 500mm.

e) The cells will be filled with a minimum of 100mm of no fines angular granular fill (40 to 20mm). The infill material to be piled at the end of the extended web and pushed over the expanded cells working off the infill material. No machinery will encroach on the ground unless supported by the infill material.

f) It is recommended that the No-Dig surface is not used for construction traffic. If it is, a sacrificial layer of stone should be laid on another geotextile membrane and scraped off at the end of the construction to form the final surface.

g) To lay the final surface a second layer of Fibretex F4M Geotextile separation fabric will be laid over the in filled Cellweb sections. Then a layer of sharp sand will be laid and compacted with a vibro-compactor plate prior to laying block paver or concrete blocks dry jointed. A range of
other surface finishes can be used. However the final surface must be permeable to allow continued water and gaseous diffusion.

6. **Pre-emptive Root Pruning**

6.1 Pre-emptive root pruning will take place just outside foundations of the new dwelling to minimise injurious damage to the root system of the neighbouring trees whilst excavating. The position of this work has been shown as a thick light blue line on Appendix 4 – TPP.

6.2 This will be carried out by excavating a trench at most 500mm outside the line of the foundations in the area shown on the TPP using hand tools or an airspade. Any roots found during this excavation will be severed using a sharp handsaw or secateurs. This will ensure that the roots are not ripped or torn, and will have a good point from which to re-grow, and will have a chance to occlude and prevent fungal pathogens from entering.

6.3 Once the root pruning has taken place, rootbarrier material will be put in place to prevent roots entering the foundation area, or any leachates from the wet concrete affecting the tree roots.

6.4 This work will be carried out by a suitably trained operative or under arboricultural supervision.

7. **Site Huts and Temporary Buildings**

7.1 All site huts and temporary buildings will be sited outside the CEZ.

8. **Additional Precautions**

8.1 The movement of plant in proximity to retained trees should be conducted under the supervision of a banksman to ensure adequate clearance from the branches of the trees. Hydraulic cranes, forklifts, excavators or piling rigs (other than small rigs used for mini piling) must be avoided in the immediate vicinity the crown of the trees.

8.2 Cement, oil, bitumen or any other products which spillage would be likely to be detrimental to tree growth should be stored well away from the outer edge of the RPA of retained trees. Precautions should include ensuring all toxic liquids are stored in fully bunded containers. Equipment such as barriers or sandbags must be available on site to deal with any accidental spillages that may occur.

8.3 Lighting of fires on site should be avoided. Where they are unavoidable they must be at such a distance from retained trees that there is no risk of the heat causing fire damage to the trunk or branches. Full account must be taken of wind direction. Fires must be attended at all times until they are completely extinguished.

9. **Service Trenches**

9.1 No details of new service runs have been provided at this stage. They should be routed to avoid the RPAs of trees. If this is not possible, special techniques must be employed to place the services within
the RPA of the trees. The British Standard suggests a range of trenchless methods suitable for various applications including microtunnelling, surface launched directional drilling, Pipe ramming and Impact Moleing/thrust boring. It is important common ducts should be used where it is not possible to avoid the RPA. Further guidance on installing underground services adjacent to trees can be found in the NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Volume 4 Issue 2). This document outlines a number of techniques that may be used for trenching near trees, including trenchless techniques, discontinuous trenching and hand digging.

9.2 It will be necessary to prepare detailed plans for these services that should be produced in conjunction with an arboriculturist, and include allowance for the space needed for access for the installations, and the levels across the proposed area.

9.3 Any overground services including CCTV must also be positioned to avoid the need for any regular or detrimental pruning to the trees.

10. Arboricultural Supervision and Aftercare

10.1 Arboricultural/site monitoring will be carried out throughout the construction phase by a nominated arborist who will be responsible for consultation with the Local Authority’s Tree Officer.

10.2 The arborist will complete regular site visits to check that the tree protection measures are being carried out. The frequency of the visits will be dictated by the level of activity and degree to which the tree protection measures are being respected. A note of the date of each visit and a summary of the findings will be forwarded to both the Tree Officer and the Main Contractor to provide an audit trail enabling the proper implementation of the tree protection measures to be checked and verified.

10.3 There are four key stages where on-site arboricultural advice will be needed

- Prior to commencement, to review the contents of the AMS, and deal with any queries the main contractor may have.
- To confirm that the protective fencing and ground protection is in place.
- To ensure the No-Dig surface is in place prior to commencement of works within the site.
- To supervise pre-emptive root pruning.

10.4 On completion of the works the trees will be inspected by the arborist to check the condition of the trees and advise if any remedial work is necessary.

A.T. Coombes Associates Ltd
3 March 2017
Appendix 6: Timetable for Tree Protection Works at 6 Westbourne Road, Coltishall

<table>
<thead>
<tr>
<th>Item</th>
<th>Operation *</th>
<th>Before Commencing Construction Works</th>
<th>During Construction Works</th>
<th>On Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Carry out a pre-commencement site meeting to discuss any tree protection matters.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Carry out tree work as detailed in Appendix 1, and any tree felling as set out in the AIA.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Erect temporary protective fencing (thick green line) on edge of the CEZ as specified in the AMS and TPP and put temporary ground protection in place (Orange Hatching)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Erect warning signs on fencing around each CEZ stating “Construction Exclusion Zone - Keep Out”.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Maintain Protective fences and signs in good condition.</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Carry out pre-emptive root pruning</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Construct No-Dig surface</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Arboricultural supervision and advice including site visits during the course of the works to check the CEZ and liaison with the Local Authority.</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>9.</td>
<td>Remove protective fencing</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>10.</td>
<td>Check condition of the protected trees and consider if remedial works are necessary.</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>11.</td>
<td>Plant replacement trees.</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

* All work to comply with the attached Arboricultural Method Statement and BS5837: 2012 Trees in relation to design, demolition and construction - Recommendations*