# TECHNICAL NOTE

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|---|---|
| JBA Project Code | 2016s3858 |
| Contract | WATI and Doveside |
| Client | Garganey Trust |
| Day, Date and Time | October 2018 |
| Author | D Whitaker |
| Reviewer / Sign-off | A Jones |
| Subject | Arboricultural Method Statement |

## 1 Arboricultural Method Statement

### 1.1 Introduction

This method statement sets out details and procedures for the protection of trees in relation to proposed developments at Wombwell Ings. It should be read in conjunction with the tree survey and works schedule (Appendix A) and the Tree Protection Plan (Appendix B).Tree protection Details (Appendix C).

This method statement does not replace other technical or safety-related method statements which may be prepared for other activities to be undertaken during the proposed development.

### 1.2 Responsibilities for Tree Protection

The site manager shall provide all sub-contractors with a copy of this method statement. Each sub-contractor shall be responsible for ensuring construction and tree protection in line with this method statement.

No alteration to the construction method or tree protection measures shall take place without the prior approval of the site manager and arboricultural consultant (see section 2.2).

### 1.3 Planning Conditions

There are a number of planning conditions (LPA ref: 2017/1264) relating to trees and development of the site. These are:

| |
|---|
| No development or other operations being undertaken on site shall take place until the following documents in accordance with British Standard 5837:2012 Trees in relation to design, demolition and construction - Recommendations have been submitted to and approved in writing by the Local Planning Authority:<br><br>Tree protective barrier details<br>Tree protection plan<br>Arboricultural method statement<br><br>Reason: To ensure the continued wellbeing of the trees in the interests of the amenity of the locality in accordance with Core Strategy Policy CSP 36 Biodiversity and Geodiversity |
| The erection of barriers and any other measures specified for the protection of any retained tree shall be undertaken in accordance with the approved plans and particulars before any equipment, machinery or materials are brought on to the site for the purposes of the development, and shall be maintained until all equipment, machinery and surplus materials have been removed from the site. Nothing shall be stored or placed in any area fenced off in accordance with this condition and the ground levels within those areas shall not be altered, nor shall any excavation be made, without the written consent of the Local Planning Authority.<br><br>Reason: To safeguard existing trees, in the interest of visual amenity. |

The planning conditions should be complied with at all times. The planning conditions and protection of trees by TPO (Tree Protection Order) (see section 3.1) shall be drawn to the attention of all contractors working on site during the site induction process.

## 1.4 Supervision & Monitoring

The developer shall provide the LPA with 14 days written notice of the commencement of development operations in accordance with the planning conditions.

The developer shall appoint an arboricultural consultant to provide advice, and supervise and monitor construction works adjacent to the retained trees where this is identified in this method statement.

During each visit, the arboricultural consultant will ensure compliance with this method statement and provide a written monitoring report to the site agent.

The site agent will notify the arboricultural consultant of all deviations from this method statement. In such cases, the consultant will visit the site and provide a written report to the site agent.

All reports by the arboricultural consultant will be made available to the local planning authority (LPA).

## 1.5 Key Personnel & Contacts

Details on key personnel related to tree protection shall be entered below. This information shall be made available to the LPA prior to the commencement of works on the site.

| | Name | Company / Authority | Telephone / Mobile No. | E-mail |
|---|---|---|---|---|
| Project Manager | Alex Jones | JBA Consulting | | alex.jones@jbaconsulting.com |
| Site Manager | P Bichan | Bittern Excavations | | paul.bichan72@me.com |
| Arboricultural Consultant | Darren Whitaker | JBA Consulting | | Darren.whitaker@jbaconsulting.com |
| LPA Planning Officer | Hannah Andrews | Barnsley MBC | | HannahAndrew@barnsley.gov.uk |
| LPA Arboricultural Officer | TBC | | | |

## 1.6 Arboricultural Works – Felling & Pruning

Works to the trees are limited to those specified in the arboricultural works schedule (Appendix A). No other work shall take place without the approval of the appointed arboricultural consultant.

All arboricultural felling and pruning works will take place in advance of site construction works commencing. Any additional facilitative pruning that is not marked on the schedule may be

required during construction works and should be specified and approved by the arboricultural consultant.

All tree works will be carried out in accordance with BS3998:2010 'Tree Work – Recommendations'[1].

All tree felling and pruning works will be carried out by suitably experienced and competent arboricultural contractors. No pruning will be carried out by ground workers or other non-arboricultural contractors.

## 1.7 Protective Fencing

Protective fencing is required to protect retained trees, hedges and shrubs on the site and the soil in which they are growing from accidental damage during the development. Trees are easily damaged, or even killed, on a construction site and the protective fencing will be considered an important and integral part of the development.

Protective fencing will be erected following the tree pruning and relocation, but before any demolition or construction works take place on site, including stripping of topsoil.

Protective fencing will be erected in accordance with the Tree Protection Plan. The area contained by the protective fencing will be referred to as the construction exclusion zone (CEZ). The ground to the west of the site is to be protected to allow for the planting of new trees.

The Tree Protection Plan includes a detail of the protective fencing to be used. The fence is to comply with BS5837: 2012 and is composed of 2.0m weld-mesh panels attached securely by wire or scaffold clamps to a scaffold framework. The scaffold framework shall comprise a vertical and horizontal framework, well-braced against impact. Vertical tubes will be placed at a maximum spacing of 3.0m and driven at least 600mm into the ground.

## 1.8 Root Protection Area - Precautions

Within the construction exclusion zone, all damaging operations will be excluded. In particular, the following activities must not take place within the construction exclusion zone:

- changes in levels;
- excavation;
- storage of materials (including soil and rubble);
- movement or parking of plant and vehicles;
- siting of site cabins or other temporary buildings;
- mixing of materials and chemicals; and
- disposal of liquids.

Tree protection should be put in place around the whole of the RPA where practicable and correspond with the TPP. Once construction needs to proceed within the RPA of any retained trees, fencing can be adjusted. Once adjusted the new positions must be approved from the arboricultural consultant.

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1 *BS3998:2010 Tree Work – Recommendations,* British Standards Institute, 2010

In addition to the above, no herbicides shall be applied within the construction exclusion zone without the consent of the arboricultural consultant and no fires will be lit within 20m of the crown of any retained trees.

Protective fencing shall remain intact for the full duration of the development. It shall be inspected daily by a competent person (reporting directly to the site manager) and any damage shall be made good immediately. If for any other reason than what is stated within the arboricultural report, it is necessary to make any changes to its position or construction, then prior approval must be sought from the arboricultural consultant, who will inform the LPA.

### 1.9 Site Compound & Parking

The location of the site compound and parking details are not currently available and the impact of these have not been assessed in this report. Plans for the proposed utility services

## 2 Soft Landscaping

There are no Plans for any tree replacement and landscaping of the site.

## 3 Utility Service Installation

There are no existing or new utilities to consider within this report

The project arboriculturist should be consulted once details are available and this method statement should be revised to included appropriate precautions where it is proposed to route services within the RPA of retained trees.

### 3.1 Scheme implementation

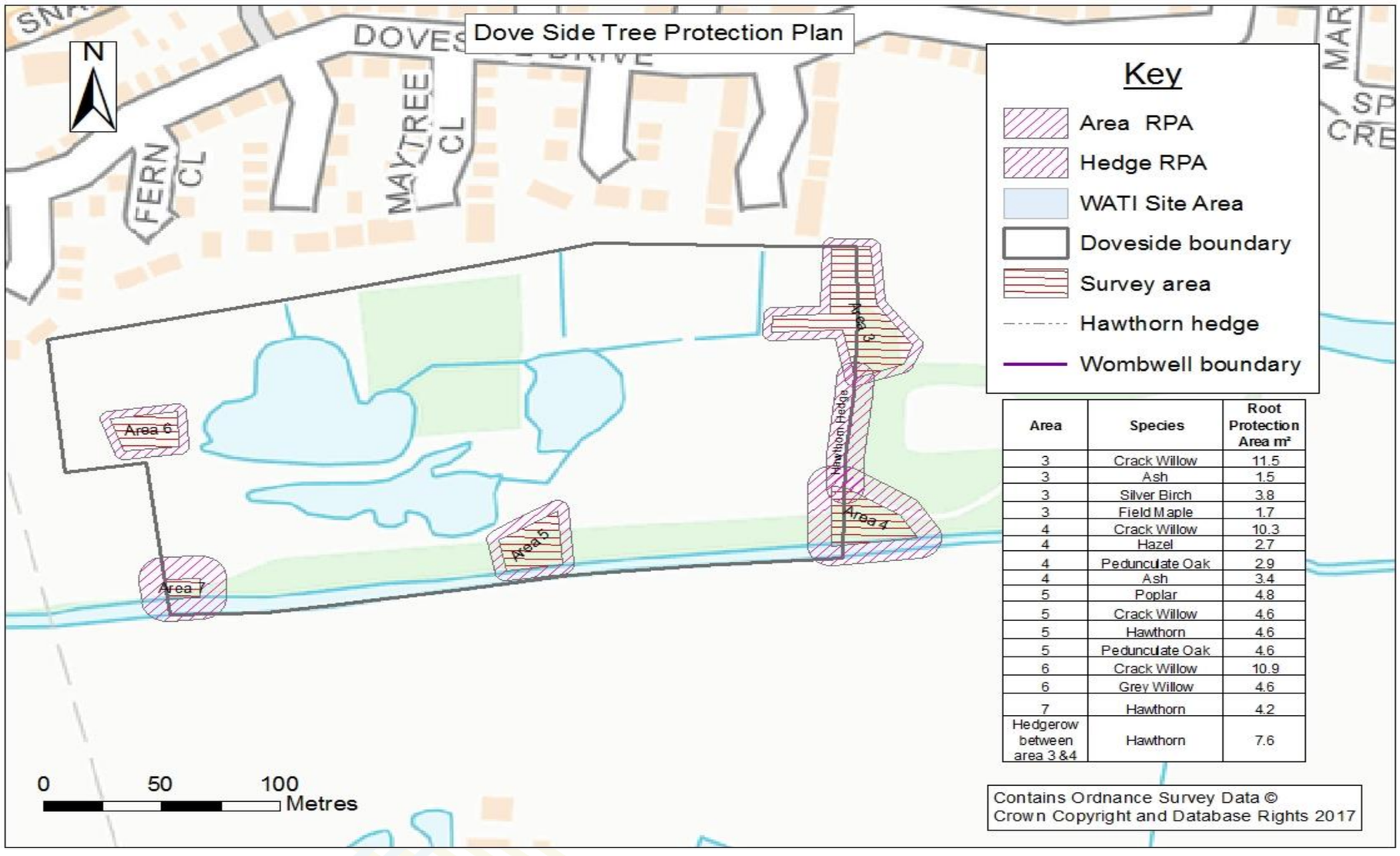
The Tree Protection Plan (See Appendix B) shows indicative tree felling necessary to allow the construction of the proposed drainage scheme. The number and extent of trees effected will be subject to definition on site and the design of the finalised watercourse details, the project arborist will liaise with the contractor to route drain outfall to minimise the impact of the works on the sites existing trees and shrubs.

The line of new bunding will be marked outside the RPA of existing trees to minimise the impact on the sites trees and shrubs.

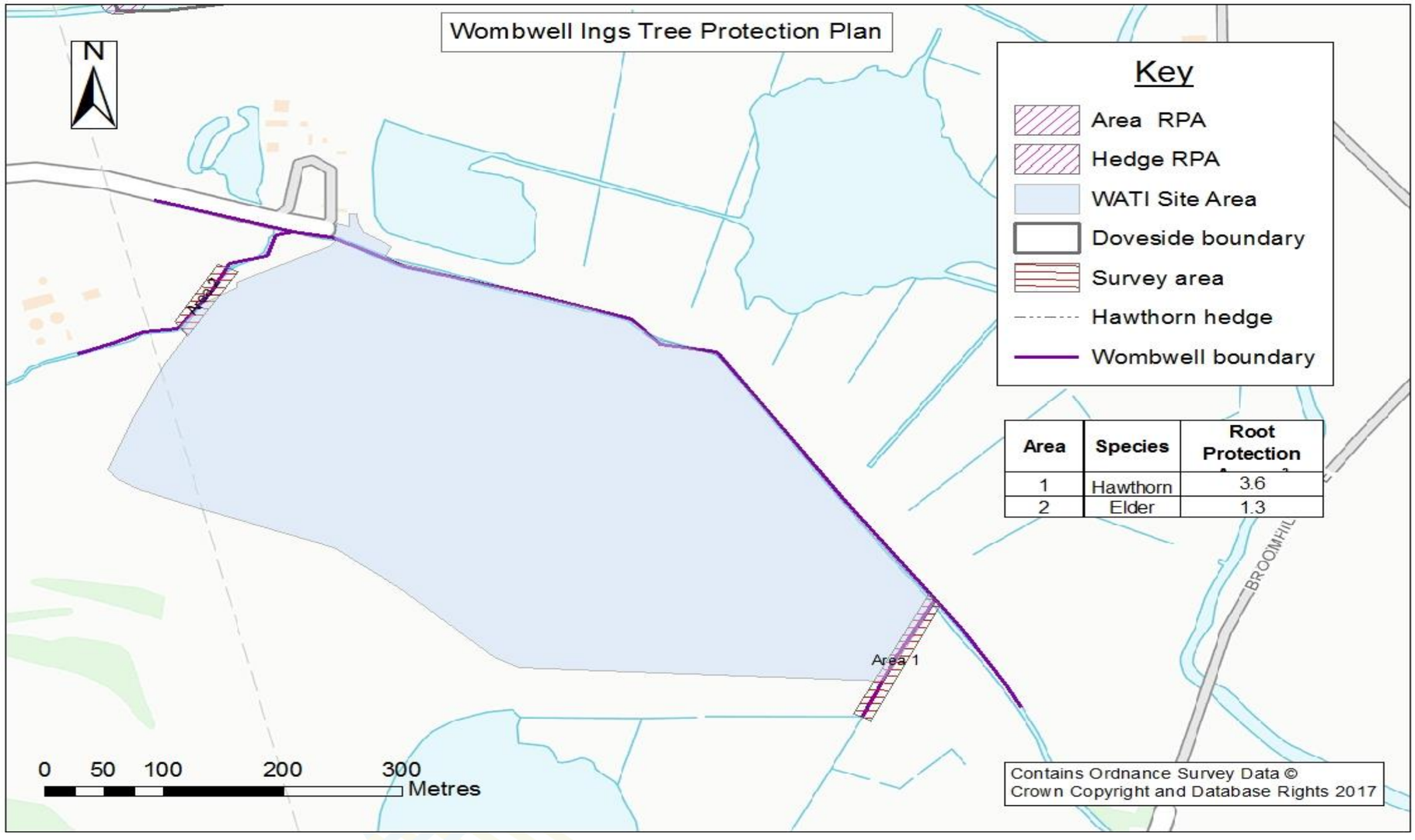
## A Tree Survey & Works Schedule

| Area | Species | Circumference | Stem Diameter (mm) | Branch Spread (m) | | | | Crown Clearance (m) | Age | Height (m) | Class Estimated Remaining Contribution (Years) | Root Protection Area m² | Physiological Condition | Structural Condition | Category Grading | Preliminary Management Recommendations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | N | S | E | W | | | | | | | | | |
| 1 | Hawthorn | 950 | 303 | 2 | 2 | na | na | 0.25 | Mature | 5 | 40+ | 4 | Good | Good | A2 | Remove to facilitate works |
| 2 | Elder | 350 | 111 | 3 | 3 | 2 | 2 | 1 | Mature | 3 | 20+ | 1 | Fair | Fair | B2 | |
| 3 | Crack Willow | 3000 | 955 | 6 | 7 | 7 | 5 | 1 | Overmature | 10 | 40+ | 11 | Good | Poor | A1 | Fence off to protect RPA and isolate potential targets |
| 3 | Ash | 400 | 127 | 3 | 3 | 5 | 4 | 3 | Early Mature | 6 | 40+ | 2 | Good | Good | A2 | Fence off to protect RPA |
| 3 | Silver Birch | 1000 | 318 | 3 | 3 | 3 | 3 | 3 | Early Mature | 6 | 40+ | 4 | Good | Good | A2 | Fence off to protect RPA |
| 3 | Field Maple | 450 | 143 | 3 | 3 | 3 | 3 | 3 | Mature | 6 | 40+ | 2 | Good | Good | A2 | Fence off to protect RPA |
| 4 | Crack Willow | 2700 | 860 | 6 | 6 | 7 | 8 | 2 | Overmature | 10 | 40+ | 10 | Good | Ok | A1 | Fence off to protect RPA and isolate potential targets |
| 4 | Hazel | 700 | 223 | 2 | 3 | 3 | 3 | 0.5 | Overmature | 4 | 40+ | 3 | Good | Fair | A2 | Fence off to protect RPA |
| 4 | Pedunculate Oak | 750 | 239 | 4 | 5 | 4 | 4 | 3 | Early Mature | 6 | 40+ | 3 | Good | Good | A2 | Fence off to protect RPA |
| 4 | Ash | 900 | 287 | 4 | 5 | 4 | 4 | 3 | Early Mature | 6 | 40+ | 3 | Good | Good | A2 | Fence off to protect RPA |
| 5 | Poplar | 1250 | 398 | 5 | 6 | 4 | 5 | 3 | Mature | 7 | 40+ | 5 | Good | Good | A2 | Fence off to protect RPA |
| 5 | Crack Willow | 1200 | 382 | 7 | 8 | 9 | 9 | 4 | Overmature | 9 | 40+ | 5 | Good | Ok | A1 | Fence off to protect RPA and isolate potential targets |
| 5 | Hawthorn | 1200 | 382 | 2 | 3 | 2 | 2 | 2 | Mature | 5 | 40+ | 5 | Good | Fair | A2 | Fence off to protect RPA |
| 5 | Pedunculate Oak | 1200 | 382 | 4 | 5 | 4 | 4 | 3 | Early Mature | 6 | 40+ | 5 | Good | Good | A2 | Fence off to protect RPA |
| 6 | Crack Willow | 2850 | 908 | na | na | na | na | 0.5 | Overmature | 4 | 40+ | 11 | Good | Ok | A2 | Fence off to protect RPA and isolate potential targets |
| 6 | Grey Willow | 1200 | 382 | na | na | na | na | 0.5 | Mature | 4 | 40+ | 5 | Good | Fair | A2 | Fence off to protect RPA |
| 7 | Hawthorn | | 350 | 2 | 2 | na | na | 0.2 | Young | 3 | 40+ | 4 | Good | Good | A2 | Fence off to protect RPA |
| Hedgerow between area 3 &4 | Hawthorn | 2000 | 637 | 6 | 5 | 3 | 3 | 2 | Overmature | 6 | 40+ | 8 | Good | Fair | A2 | Fence off to protect RPA |

## B Tree Protection Plan




| Area | Species | Root Protection Area m² |
|---|---|---|
| 3 | Crack Willow | 11.5 |
| 3 | Ash | 1.5 |
| 3 | Silver Birch | 3.8 |
| 3 | Field Maple | 1.7 |
| 4 | Crack Willow | 10.3 |
| 4 | Hazel | 2.7 |
| 4 | Pedunculate Oak | 2.9 |
| 4 | Ash | 3.4 |
| 5 | Poplar | 4.8 |
| 5 | Crack Willow | 4.6 |
| 5 | Hawthorn | 4.6 |
| 5 | Pedunculate Oak | 4.6 |
| 6 | Crack Willow | 10.9 |
| 6 | Grey Willow | 4.6 |
| 7 | Hawthorn | 4.2 |
| Hedgerow between area 3 &4 | Hawthorn | 7.6 |


Wombwell Ings Tree Protection Plan
N
Key
Area RPA
Hedge RPA
WATI Site Area
Doveside boundary
Survey area
Hawthorn hedge
Wombwell boundary
Area 2
Area 1
BROOMHIL
Area
Species
Root Protection
1
Hawthorn
3.6
2
Elder
1.3
0 50 100 200 300
Metres
Contains Ordnance Survey Data ©
Crown Copyright and Database Rights 2017

## C Tree Protection Advice

All trees that are being retained on site should be protected by barriers and/ or ground protection before any materials or machinery are brought onto site and before any demolition, development or stripping of soil commences. Where all activity can be excluded from the RPA, vertical barriers should be erected to create a construction exclusion zone. Where, due to site constraints, construction activity cannot be fully or permanently excluded in this manner form all or part of a tree's RPA, appropriate ground protection should be installed (British Standards Institution, 2012).

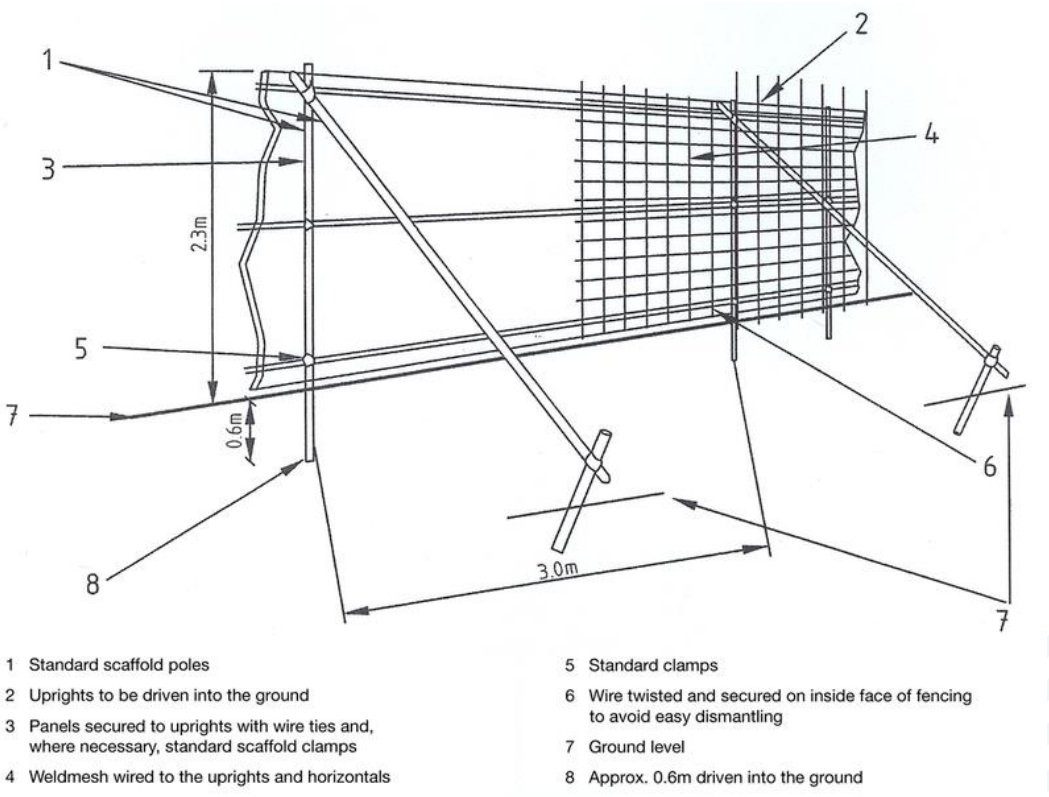
The Tree Protection Plan includes a detail of the protective fencing to be used. The fence is to comply with BS5837: 2012 and is composed of 2.0m weld-mesh panels attached securely by wire or scaffold clamps to a scaffold framework. The scaffold framework shall comprise a vertical and horizontal framework, well-braced against impact. Vertical tubes will be placed at a maximum spacing of 3.0m and driven at least 600mm into the ground.

Areas of retained structural plantings, or designated for new structural planting, should be similarly protected, based on the extent of the soft landscaping shown in the approved drawings. The protected area should be regarded as sacrosanct and, once installed, barriers and ground protection should not be removed or altered without prior recommendations by the project arboriculturalist and, where necessary, the local planning authority. Where required, pre-development tree work may be undertaken before the installation of tree protection measures with the agreement of the project arboriculturalist or Local Planning Authority (LPA) if appropriate. It should be confirmed by the project arboriculturalist that the barriers and ground protection have been correctly set out on site, prior to the commencement of any operation (British Standards Institution, 2012).

Barriers should be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of the works taking place around the retained trees. Barriers should be maintained to ensure that they remain rigid and complete. The default specification should consist of a vertical and horizontal scaffold framework, well braced to resist impacts. The vertical tubes should be spaced at a maximum interval of 3m and driven securely into the ground. Onto this framework welded mesh panels should be securely fixed (see Figure A 1). Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, also avoid contact with structural roots. If the presence of underground services precludes the use of driven poles, an alternative specification should be prepared in conjunction with the project arboriculturalist that provides an equal level of protection. Such alternatives could include the attachment of the panels to a free-standing scaffold support framework (British Standards Institution, 2012).

Where the site circumstances and associated risk of damaging incursion into the RPA do not necessitate the default level of protection, an alternative specification should be prepared by the project arboriculturalist and, where relevant, agreed with the LPA. By way of example 2m tall welded mesh panels on rubber or concrete feet might provide an adequate level of protection from cars, vans and manually operated plant as well as pedestrians. In such cases the fence panels should be joined together using a maximum of two anti-tamper couplers installed in such a way that they can only be removed from inside the fence. The distance between the fence

couplers should be at least 1m and should be uniform throughout the length of the fence. The panels should be supported on the inner side by stabiliser struts, which should normally be attached to the base plate, secured with ground pins. Where the fencing is to be erected on retained hard surfaces or anywhere else where ground pins cannot be used, i.e. where there are buried services, the stabiliser struts should be mounted on a block tray (British Standards Institution, 2012).




1 Standard scaffold poles
2 Uprights to be driven into the ground
3 Panels secured to uprights with wire ties and, where necessary, standard scaffold clamps
4 Weldmesh wired to the uprights and horizontals
5 Standard clamps
6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
7 Ground level
8 Approx. 0.6m driven into the ground

**Figure A 1 Root Protection Area (RPA) Standard Fencing Configuration (RBK&C, 2014)**

Within the construction exclusion zone, all damaging operations will be excluded. In particular, the following activities must not take place within the construction exclusion zone:

- changes in levels;
- excavation;
- storage of materials (including soil and rubble);
- movement or parking of plant and vehicles;
- siting of site cabins or other temporary buildings;
- mixing of materials and chemicals; and
- disposal of liquids.

Tree protection should be put in place around the whole of the RPA where practicable and correspond with the TPP. Once construction needs to proceed within the RPA of any retained trees, fencing can be adjusted. Once adjusted the new positions must be approved from the arboricultural consultant.

In addition to the above, no herbicides shall be applied within the construction exclusion zone without the consent of the arboricultural consultant and no fires will be lit within 20m of the crown of any retained trees.

Protective fencing shall remain intact for the full duration of the development. It shall be inspected daily by a competent person (reporting directly to the site manager) and any damage shall be made good immediately. If for any other reason than what is stated within the arboricultural report, it is necessary to make any changes to its position or construction, then prior approval must be sought from the arboricultural consultant, who will inform the LPA.

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. The suitability of such surfacing for this purpose should be evaluated by the project arboriculturalist or engineer.

Where such a set-back would expose unmade ground to construction damage, temporary new ground protection should be installed as part of the implementation of physical tree protection measures prior to the commencement of works on site. Any such ground protection should be capable of supporting any traffic using the site without suffering distortion or causing the compaction of the underlying soil. The locations and design of any ground protection should be shown on the tree protection plan and detailed within the arboricultural method statement. It needs to be remembered that the overall objective is to avoid soil compaction so that tree root functions continue to be unimpaired (British Standards Institution, 2012).

Out with the exclusion zone the planning of site operations should take sufficient account of wide loads and plant with booms, jibs and counterweights so that they can operate without coming into contact with retained trees. Any such contact has the potential to damage trees and make their retention impossible. Therefore, any plant traversing in proximity to retained trees should ensure sufficient clearance and be under the supervision of a banksman at all times. If necessary, facilitative pruning should be undertaken to maintain such clearance. Fires on site should also be avoided whenever possible. If not, they should never be lit where heat could affect foliage or branches and the size of the site and the wind direction should also be considered when determining the location of any such fire. The fire should be attended at all times until it is safe to leave. Any materials, the spillage of which could damage a tree, should be stored and handled well away from the outer edges of the RPA (British Standards Institution, 2012).