



Redrow Homes Limited

Condition 40 of DC/15/2151/OUT

Great Wilsey Park, Wilsey Road, Little Wratting, Suffolk

Arboricultural Method Statement

August 2020

FPCR Environment and Design Ltd

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CONTENTS

1.0 INTRODUCTION 2

2.0 CONDITION REQUIREMENTS..... 5

3.0 TREE PROTECTION METHODOLOGY 6

4.0 CONCLUSIONS..... 12

TABLES

- Table 1: Condition Requirements and Evidence of Action
- Table 2: Timelines of Tree Protection for Construction Works

PLANS

- Tree Protection Plan (Drawing no. 8755-TPP-01)
- Tree Protection Plan (Drawing no. 8755-TPP-02)
- Tree Protection Plan (Drawing no. 8755-TPP-03)

APPENDICES

- Appendix A: Tree Schedule
- Appendix B: Protective Fencing Signage
- Appendix C1: Tree Surgery Contractor
- Appendix C2: Tree Protection Fencing Contractor
- Appendix D: What you need to know about working near trees

1.0 INTRODUCTION

- 1.1 This Arboricultural Method Statement (AMS) has been prepared by FPCR Environment and Design Limited on behalf of Redrow Homes Limited to provide the methods of protection and pruning requirements for retained trees located at Great Wilsey Park, Wilsey Road, Little Wratting, Suffolk, (hereafter referred to as 'the site').
- 1.2 This statement is also supported by an updated Arboricultural Impact Assessment and Tree Retention Plan produced in March 2019 by FPCR Environment and Design. This arboricultural assessment forms part of the supplementary information to be submitted as part of an application to address and discharge planning conditions for the development Great Wilsey Park (reference: DC/15/2151/OUT). This was concerned with the arboricultural matters only for Condition 41 of DC/15/2151/OUT at Phases 1A, 1B and 1C. Further reference should be made to this assessment where necessary.
- 1.3 This AMS outlines the methodology by which construction will be undertaken in order to safeguard trees in a satisfactory condition during the construction of residential development within RMA Parcels A1, A2 and A8 as indicated on the tree protection plans. This method statement sets out a definitive account for the treatment of retained trees during construction and specifies industry approved construction methods.
- 1.4 The detail and requirements of this Method Statement comprise commitments to complete the construction phase of the development in a specific manner and will inform the production of all relevant tender documents and instructions to contractors.
- 1.5 **Failure to adhere to the correct sequence, manner and timing of operations detailed in this Method Statement may result in irremediable damage to trees or disturbance to retained tree cover. Retained trees are protected by planning law and reckless damage or tree removal could result in the serving of a stop notice or prosecution by the Local Planning Authority.**

Planning Consent

- 1.6 On the 15th August 2018 West Suffolk Council granted the outline application subject to compliance with the specified condition(s) and the submission of 'Reserved Matters'.
- 1.7 This AMS has provides details to discharge Condition 40 of the outline planning consent granted as detailed below.

Condition 40:

- 1.8 *Within any phase or reserved matters application, no development shall commence until an Arboricultural Method Statement for that particular phase or reserved matters application has been submitted to and approved in writing by the Local Planning Authority. The Statement should include details of the following:*

1. Measures for the protection of trees and hedges on the application site which are to be fixed at the start of construction including site clearance and retained for the duration of the works;

2. Details of all construction measures within the 'Root Protection Area' (defined by a radius of $dbh \times 12$ where dbh is the diameter of the trunk measured at a height of 1.5m above ground level) of those trees on the application site which are to be retained specifying the position, depth, and method of construction/installation/excavation of service trenches, building foundations, hardstandings, roads and footpaths;

3. A schedule of proposed surgery works to be undertaken to those trees and hedges on the application site which are to be retained. Planning and Regulatory Services, St Edmundsbury Borough Council, West Suffolk House, Western Way, Bury St Edmunds Suffolk, IP33 3YU 4. A supervision schedule. The development shall be carried out in accordance with the approved Method Statement and supervised on site by an arboricultural consultant.

Reason: To ensure that the most important and vulnerable trees are considered as part of the design process and adequately protected during the period of construction. This AMS sets out the methodology for all proposed works that affect trees on the site. Compliance with this AMS, once approved by the Local Planning Authorities (LPA) Arboricultural Officer, will be a requirement of all relevant contractors associated with the development proposals.

Overview of Trees on Site

- 1.9 A total of sixty-nine individual trees, thirty groups of trees, seven woodlands and twenty-four hedgerows were surveyed as part of the updated arboricultural assessment for the wider Great Wilsey Park, Haverhill. Trees were surveyed as individual trees and groups of trees where examples are clearly present. Refer to Tree Survey Plan and Appendix A – Tree Schedule for full details of the trees included in this assessment.
- 1.10 It should be highlighted that not all of these trees are situated within the Phase 1 developable areas and as such, reference should be made to Tree Survey Plans provided as part of this assessment.

Statutory Constraints

- 1.11 Local authorities reserve the right to create Tree Preservation Orders (TPO) in order to protect specific trees and woodlands in the interests of preserving the amenity value of a particular site or location. A TPO prohibits cutting down, topping, lopping uprooting or willful damage caused to trees covered by the TPO and such actions, if carried out without the prior written consent of the acting LPA, may be prosecuted and incur an unlimited fine.
- 1.12 The presence of any Tree Preservation Orders or Conservation Area designations that may affect the site has yet to be confirmed by West Suffolk Council. Once this information has been received, the report will be updated accordingly. Before any tree works are undertaken confirmation of the presence of the statutory constraints should be sought from the Local Authority.

Limitations

- 1.13 This arboricultural method statement is concerned solely with the matters arising from the development of the Phase 1 areas (Parcels A1, A2 and A8) of the site only and does not comment upon Archaeological and Geotechnical Investigations.

- 1.14 Reference should be made to the supporting letters produced by FPCR Environment and Design Ltd (December 2018) and February 2019 (document reference: 8755 Condition 41 - Geotechnical Investigation) for further information on any arboricultural impacts pertaining to these aspects of the development.
- 1.15 These documents were provided to support DCON(A)/15/2151 - Application to Partially Discharge Conditions 39 (archaeology) in relation to phases 1a, 1b and 1c only, and Conditions 41 (tree survey), 42 (ecological implementation strategy), and 45 (biodiversity monitoring) of application DC/15/2151/OUT | Great Wilsey Park Wilsey Road Little Wratting Suffolk.
- 1.16 The areas proposed for development as part of Phases A1, A2 and A8 are accurate to the date of this method assessment and the dates cited on the supplied drawings. Any further amendments or alterations to the positioning of the developable areas shown on these plans may require further arboricultural review.
- 1.17 Any changes in ground level, or excavations near to tree roots not detailed within this AMS has the potential of adversely affecting the stability and physical condition of the retained trees and as such further examinations would be required.
- 1.18 The timescales for the construction program are not absolute. The timescales set out in this AMS are based on all supplied preliminary information available at the time of writing and is subject to change. A such the processes set out in the AMS may need to be reviewed and amended to suit as required.

2.0 CONDITION REQUIREMENTS

Specific Condition Requirements

- 2.1 To satisfy planning Condition 40 the following table provides a summary of the specific requirements of the AMS and how evidence of its action shall be provided.

Table 1: Condition Requirements and Evidence of Action

| Condition Reference | Evidence of Action |
|---|--|
| Condition 40(2,3) Updated Tree Schedule within calculated RPA's | A tabulated Tree Schedule has been provided as Appendix A of this AMS and details species; height; canopy spread; stem diameter; age class and overall condition / health. This has been used to formulate positioning of fencing and to assess the need for any facilitation pruning. An updated Tree Survey and Retention plan/s have been provided in the Impact Assessment which has been supplied alongside this AMS. |
| Condition 40(1) Tree Protection details in the form of a Tree Protection Plan (TPP) | <p>A series of Tree Protection Plans have been produced and accompany the AMS. The plans show:</p> <ul style="list-style-type: none"> • Trees to be retained (green) • Tree Groups to be retained (green stripe hatch) • Hedgerow to be retained (solid green line) • Extent of calculated Root Protection Areas (blue circle) • Overlaid development proposals for reference • The position of Temporary Tree Protection fencing (orange line) • The position of Primary / Fixed Tree Protection fencing (pink line) • Measurements and Annotations for ease of interpretation (pink text) <p>The Tree Protection Plans have been annotated for ease of interpretation.</p> |
| Condition 40(1) Tree protection prior to / during construction as indicated on TPP | <p>Specific Tree Protection Plans produced and appended to this AMS.</p> <p>Tree Protection erected to specification – dimensions and specifications shown on plans. Protective Fencing Signage (Appendix B) to be firmly affixed to fencing.</p> <p>Pre-commencement site meeting, tool box talks, periodic site supervision and reporting shall be carried out to ensure compliance.</p> |

General Condition Requirements

- 2.2 This AMS and accompanying Tree Protection Plans should be reproduced in their entirety in colour and copies should be kept on file in the site office for reference.
- 2.3 The relevant contractors should be provided with copies of the Tree Protection Plans, where relevant to their work.
- 2.4 The Site Manager will read this AMS. It will be the responsibility of the Site Manager to ensure its compliance throughout the construction processes.

- 2.5 All operations will be monitored by the Site Manager and they will be responsible for ensuring that any sub-contractors do not carry out any process or operation which is likely to impact adversely upon any retained tree or hedge.
- 2.6 The contractor carrying out each task specific to their work shall be responsible for ensuring the AMS is adhered to at all times, The Site Manager is to ensure there is a monitoring regime for the maintenance of tree protection adopted on site.

3.0 TREE PROTECTION METHODOLOGY

Pre-commencement Tree Work

- 3.1 All agreed works will need to be undertaken prior to the main construction activities commencing and so that tree protection fencing can be erected in the positions demonstrated on the Tree Protection Plans.
- 3.2 A number of trees may require facilitation pruning in the form of crown lifting to allow for the erection of the protective fencing in the correct positions. Where this is necessary, the Tree Protection Plan has been annotated with a working methodology. Those trees which will be removed to facilitate the approved development layout are not detailed within the appendix.
- 3.3 All tree works undertaken will comply with *British Standard 3998 'Tree Work - Recommendations' (2010)* and be carried out by skilled tree surgeons preferably those approved by the Arboricultural Association (AA). The AA is the recognised authority for certification of tree work contractors. To become an Approved Contractor a company must satisfy the Associations Professional Committee of its consistently high standard of tree work.
- 3.4 All vegetation and, particularly, woody vegetation proposed for clearance should be removed outside of the bird-breeding season (March - September inclusive) as all birds are protected under the Wildlife and Countryside Act, 1981 (as amended) whilst on the nest. Where this is not possible, vegetation should be checked for the presence of nesting birds prior to removal by an experienced ecologist.

Tree Protection Programme – Construction Phase

- 3.5 The key stages where tree protection are to be implemented along with the requirements for site supervision have been outlined in the following sections and within the relevant tables.
- 3.6 The timing of these stages may be subject to alteration in line with any future amendments of the construction program and as such, it is important to emphasise that the timeframe is designed to be flexible to accommodate these alterations whilst ensuring the protection of the trees on site.

Table 2: Timelines of Tree Protection for Construction Works

| Timetable | Actions | Project Arboricultural Consultant requirements | Task Specific Method Statement / Appendix reference |
|--|---|---|---|
| <p>Pre-commencement site meeting (est. Autumn / Winter 2019)</p> | <p>Pre-commencement site meeting prior to the start of construction works on site.</p> <p>Timeline of construction processes to be shared with Arboricultural Clerk of Works and changes made to the AMS as required.</p> | <p>Site meeting / Tool box talk by Arboricultural Clerk of Works (refer to Section 3.10 - 3.12) to ensure that the AMS has been read by the relevant person, including the Site Manager and Tree Surgeon. Site Manager to provide working Gantt Chart or Timetable of construction processes and to ensure that Tree Protection measures have been included.</p> <p>Arboricultural Clerk of Works to check that copies of the Method Statement and Tree Protection Plans are present.</p> | <p>AMS.</p> |
| <p>During Pre-commencement site meeting (est. Autumn / Winter 2019)</p> | <p>Temporary and Permanent Tree Protection Fencing positions to be marked out and pegged (where applicable) by the Arboricultural Consultant to ensure that all fencing is erected in the correct positions.</p> | <p>Arboricultural Clerk of Works to assist with measuring out distances from trees in accordance with the Tree Protection Plans. Photos of evidence to be taken for auditing purposes.</p> | <p>Tree Protection plans</p> |
| <p>Commence Earthworks</p> | | | |

| Timetable | Actions | Project Arboricultural Consultant requirements | Task Specific Method Statement / Appendix reference |
|--|--|--|--|
| <p>Permanent Tree Protective Fencing installed</p> <p>Dates TBC during Pre-commencement site meeting and in line with construction program)</p> | <p>Check fencing has been erected.</p> <p>Supervision of Earthworks where required</p> <p>Tree Protective Fencing position and suitability checked by Arboricultural Clerk of Works. Compliance with AMS checked and recorded.</p> | <p>Arboricultural Clerk of Works to check that all Tree Protective Fencing has been erected and is of the required type and specification (as shown on the plans). Any contingencies or action points required shall be outlined.</p> <p>Exact supervision requirements to be determined during Pre-commencement site meeting</p> <p>Record of visit to be completed by Arboricultural Clerk of Works and a copy is to be handed to Site Manager and LPA upon request.</p> | <p>Tablet based Auditing App (Arboricultural Clerk of Works use only)</p> |
| Earthworks Completed | | | |
| Construction Works Commence | | | |
| <p>Date TBC during Pre-commencement site meeting and in line with construction program)</p> | <p>Periodic compliance inspections accompanied by robust auditing of visits.</p> <p>Tree Protective Fencing position and suitability checked by Arboricultural Consultant. Compliance with AMS checked and recorded.</p> | <p>Record of visit to be completed by Arboricultural Clerk of Works and a copy is to be handed to Site Manager and LPA upon request.</p> | <p>Tablet based Auditing App (Arboricultural Clerk of Works use only)</p> <p>Refer to relevant plans</p> |

| Timetable | Actions | Project Arboricultural Consultant requirements | Task Specific Method Statement / Appendix reference |
|--|--|--|---|
| Date TBC during Pre-commencement site meeting and in line with construction program | <p>Soft landscaping to be planted in accordance with the approved landscape proposals.</p> <p>Remove barriers to allow landscaping works to be completed.</p> <p>Use of tracked machinery to be restricted in the RPA's of retained trees.</p> | Tool box talk for contractor (refer to Section 3.10 - 3.12) | |
| Construction Works Completed | | | |
| Post Construction | | | |
| Date TBC during Pre-commencement site meeting and in line with construction program | Removal of Tree Protective Fencing | Arboricultural Clerk of Works to check if all Tree Protective Fencing has been removed and in doing so no damage has occurred to retained trees and hedgerows. | |
| Tree Protection Program Completed | | | |

Arboricultural Supervision

Appointment of Arboricultural Clerk of Works

- 3.7 The Site Manager / Project Manager will be responsible for appointing the Arboricultural Clerk of Works in advance of any operations detailed in this Method Statement and in any instance where full compliance cannot be guaranteed i.e. where construction works within areas fenced off to protect trees may be required.

FPCR Arboricultural Consultant Contact Details

FPCR Arboricultural Consultant: Tom Bennett

Contact Email: tom.bennett@fpcr.co.uk

Contact Number: 01509 672772 / 07957641779

- 3.8 An overview of the specific involvement of the Arboricultural Clerk of Works has been provided in Tables 1 and 2.
- 3.9 An initial site meeting prior to starting any construction works, implementing tree surgery and erection of tree protection fencing, shall be a requirement of this AMS. At the meeting the Site Manager and Arboricultural Clerk of Works will discuss the methodology and various tree protection measures to be implemented subject to approval by the LPA.

- 3.10 A toolbox talk will also be given to the Site Manager and any on site operatives on the day of the meeting. The purpose of this toolbox talk will be to inform the Site Manager and Operatives of how to protect all retained trees. The toolbox talk shall then be repeated by the Site Manager when new external trades / Contractors commence work on site.
- 3.11 The toolbox talk shall focus on informing Contractors on the following topics:
- The protection of trees is a requirement of planning approval and failure to comply could result in stop notices being applied or fines;
 - How trees can be harmed on development sites;
 - How the trees on this site will be protected by tree protection fencing and ground protection;
 - Discussion on particular methods of working near the trees as outlined in this Method Statement;
 - How to report an issue before it becomes a problem;
- 3.12 Evidence of the toolbox being carried out shall be collected. This evidence can be viewed at any time by the Arboricultural Clerk of Works and shared with both the client and the LPA upon request. A periodic review shall be conducted to ensure continued compliance.
- 3.13 The Arboricultural Clerk of Works will periodically verify compliance with this AMS and sign-off elements of the work as various stages of the development commence. This shall be recorded using an online form which the Arboricultural Clerk of Works can share with the client and LPA.
- 3.14 The Arboricultural Clerk of Works will be responsible for specifying any tree work requirements and shall assist in, where required, the appointment of a suitably qualified Arboricultural Contractor to undertake the removal and pruning of trees.

Key Appointment, Supervision and Monitoring Stages of the Arboricultural Clerk of Works

- 3.15 The following stages of supervision shall be required:
- Pre-commencement site meeting and Tool box talk to be carried out.
 - Marking trees to be removed and to be pruned with the appointed tree contractor where relevant (**pre-commencement meeting**)
 - Walking the site with the Site Manager / Fencing Contractor to measure out the locations of the fencing (**pre-commencement meeting**)
 - Full auditing of these visits / supervision requirements to be carried out (**ongoing**)
 - Ongoing visits in accordance with Table 2 to inspect the tree protection fencing and compliance with the AMS. Any other arboricultural matters arising which are unforeseen will need to be discussed with the Arboricultural Clerk of Works during these visits to decide the most appropriate course of action.
 - After each site visit a short report/record will be compiled which will be sent to the client and local authority upon request as a record of evidence.

General Tree Protection Measures

- 3.16 This section details non-specific precautionary measures to be applied at all times.
- 3.17 No trees will be removed or pruned during construction other than those detailed within this method statement. Any proposed deviation from the tree removal and retention presented in this document must be discussed with the project Arboricultural Consultant prior to implementation.
- 3.18 All the retained trees will need to be adequately protected during works. Measures to protect these trees should follow the best practice principles set out in *BS5837: Trees in Relation to Construction Recommendations (2012)*. These have been broadly summarised below.
- 3.19 No Root Protection Areas will be affected by excavation works, storage of materials, plant or machine access, other than as described by this Method Statement.
- 3.20 Site compounds, Portakabins, Containers and other temporary buildings can in some cases be used in root protection area if prior consent is agreed by the acting local planning authority. The method for installing the buildings and an assessment of whether temporary ground protection is required is to be agreed with the project Arboriculturist and specified prior to installation.
- 3.21 No materials or soils are to be stored within the Root Protection Area of the retained trees.
- 3.22 Oil, bitumen, cement or other material that is potentially injurious to trees will not be stacked or discharged within 10m of a tree stem. No concrete mixing will be done within 10m of a tree. Allowance will be made for the slope of ground to prevent materials running towards the tree.
- 3.23 Wide or tall loads etc. should not come into contact with retained trees. Banks man should supervise transit of vehicles where they are in close proximity to retained trees.
- 3.24 No fires will be lit where flames are anticipated to extend to within 5m of tree foliage, branches or trunk, taking into consideration wind direction and size of fire.
- 3.25 Notice boards, telephone cables or other services will not be attached to any part of a retained tree.
- 3.26 If unexpected large roots (>25mm diameter) are encountered during excavation for construction works the arboricultural consultant should be contacted immediately. No exposed roots will be left uncovered. They will be covered over as soon as possible to minimise the risk of drying out and dying.
- 3.27 As recommended within section 8.8.3 of BS5837 Post Development Management of Existing Trees, all retained trees should be subjected to sound arboricultural management where there is public access in order to satisfy the landowner's duty of care.

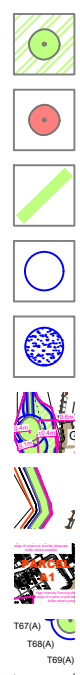
Removal of Tree Protection Measures and Protective Fencing

- 3.28 Following the completion of all construction works and in agreement with the project arboriculturist the tree protection fencing will be removed carefully as to avoid causing root disturbance.

4.0 CONCLUSIONS

- 4.1 Provided that the protection methods in this AMS are followed on site, there shall be no unnecessary or adverse Arboricultural impacts.
- 4.2 Subject to the finalising a precise timeline of construction works and further information being provided on all demolition and earthworks required to facilitate the development; to be confirmed during the pre-commencement site meeting, the AMS is sufficient to satisfy the requirements of the planning Condition 40.
- 4.3 Due to the presence of temporary ground protection for the duration of the development, it is recommended that ground improvement works are carried out following the completion of the development and prior to any hard or soft landscaping.

KEY



- Tree/Group to be Retained
- Category U - Unsuitable for retention on arboricultural grounds
- Hedgerow Proposed to be Retained and Incorporated into the New Development
- Root Protection Area (Shown for retained trees only)
- Veteran Tree Root Protection Area (in accordance with Ancient and Other Veteran Trees: Further Guidance on Management)
- Line of High Intensity Protective Barriers - as per single 3500mm Heras Panel Specification (and distance from tree or retained structure)
- Line of Low Intensity Protective Barriers (and distance from tree or retained structure where applicable)
- RMA Parcels
- Individual / Group Number and BS Category

Scale 1:1250 @ A3



NOTES

All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with project Arboriculturalist. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule.

Drawing has been produced in colour and is based on digital information in .dwg format, aerial images and/or GPS location where appropriate. A monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further assessment may therefore be required where deemed necessary.

Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the project Arboriculturalist should works commence 12 months after the date of this survey.

SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

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project
Great Wilsey Park Haverhill

drawing title
TREE PROTECTION PLAN RMA PARCEL A1

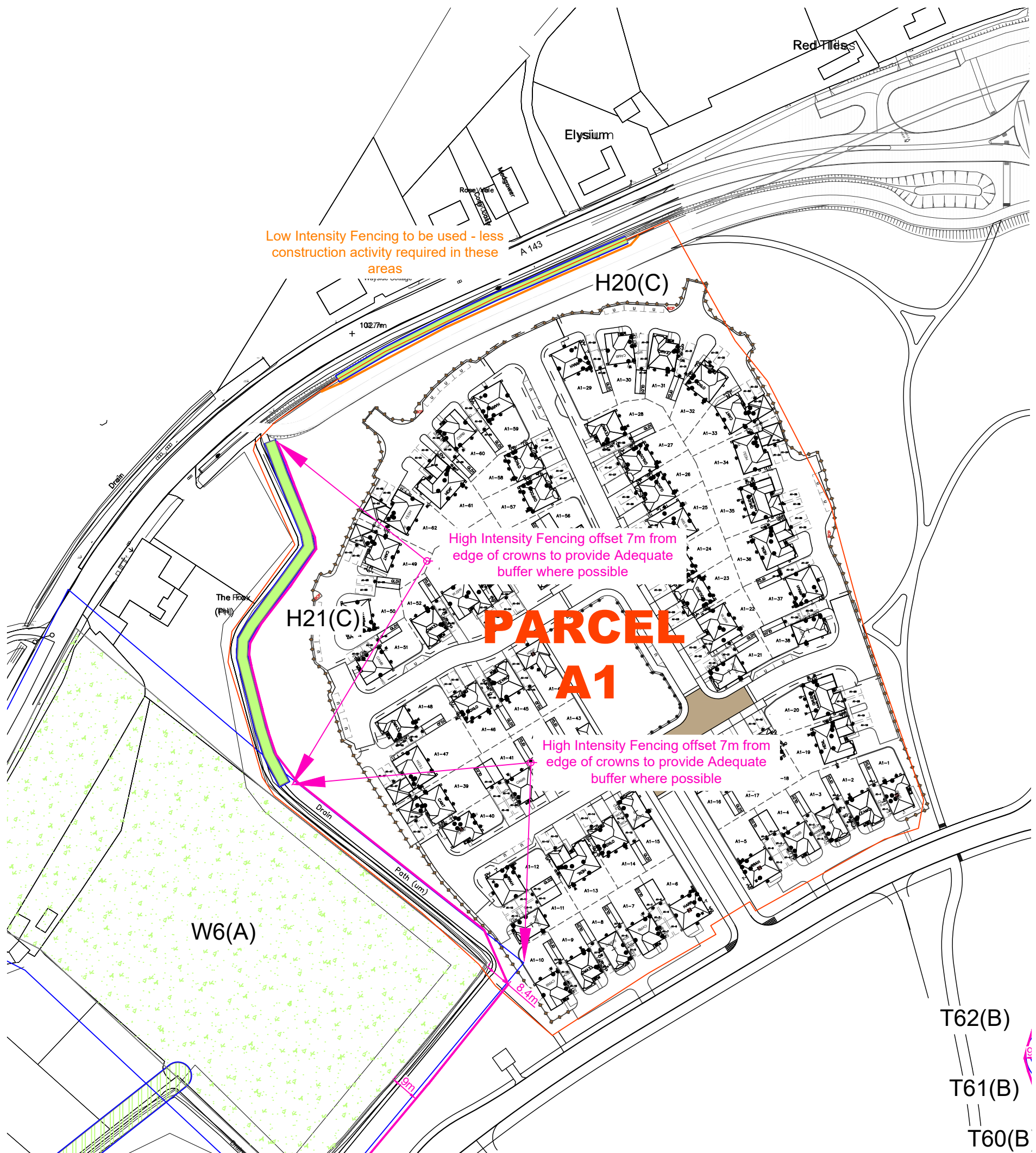
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drawn
TCB

date
August 2020

drawing number
8755-TPP-01 B

CAD file: K:\8700\8755\ARB\AMS\RMA Parcels\Plans\Tree Protection Plan.dwg



HIGH INTENSITY TREE PROTECTIVE FENCING - WORKING METHODOLOGY

Tree Protection Fencing will be installed as detailed on the Tree Protection Plan at, where possible, the extent of the root protection areas or the edge of the crowns of the retained trees. The positioning of the Tree Protective Fencing shall be measured out with assistance from the Arboricultural Clerk of Works and, where deemed necessary, with the Site Manager present. Highly visible fluorescent paint and / or marker pegs / stakes will be used to assist in identification.

STANDARD TEMPORARY FENCING SPECIFICATION

Unless annotated on the plan, Protective Fencing will comprise a Heras HSG151 panel framework supported by scaffold poles driven into the ground. An example of this has been illustrated below.

INSTALLATION GUIDE

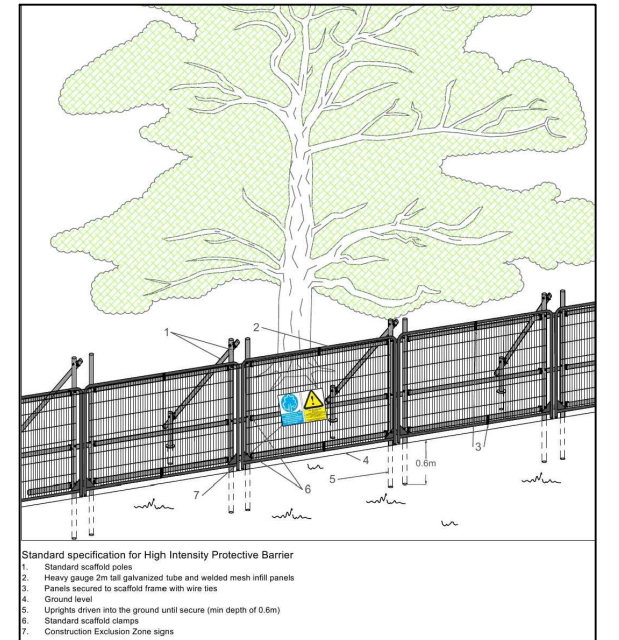
- Heras Fence Panel to be supported by rubberised stabiliser blocks with a base plate which is secured to the ground using ground pins (as shown).
- No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.

GENERAL TREE PROTECTIVE FENCING METHODOLOGY

The fencing will be strong and suitable for the location, type and proximity of construction activity and prevent access of machinery, plant or operative beyond the area required to construct the development.

Tree Protection Fencing and work exclusion zones will be clearly marked using appropriate signage. These signs shall be laminated to ensure they last the duration of the construction works and shall be fixed to the fencing panels every 10 metres along its length.

All Tree Protective Fencing will remain rigid and in place for the duration of the development and should be inspected at weekly intervals by the Site Manager alongside regular inspections to be carried out by the Arboricultural Clerk of Works.



LOW INTENSITY TREE PROTECTIVE FENCING - WORKING METHODOLOGY

Tree Protection Fencing will be installed as detailed on the Tree Protection Plan at, where possible, the extent of the root protection areas or the edge of the crowns of the retained trees. The positioning of the Tree Protective Fencing shall be measured out with assistance from the Arboricultural Clerk of Works and, where deemed necessary, with the Site Manager present. Highly visible fluorescent paint and / or marker pegs / stakes will be used to assist in identification.

LOW INTENSITY FENCING SPECIFICATION

Where site circumstances and associated risk of damaging incursions into the RPA do not necessitate the default level of protection (as above) an alternative specification may be used if agreed with the local authority. An example would be 'Heras' type (Heras HSG151) welded mesh panels on rubber or concrete feet.

It may also be appropriate to utilize a 2m high post and rail fence which is suitably stabilized (as per the example shown).

INSTALLATION GUIDE

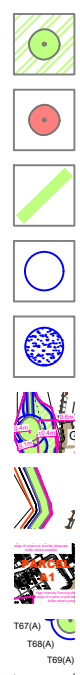
- Heras Fence Panel to be supported by rubberised stabiliser blocks with a base plate which is secured to the ground using ground pins (as shown).
- No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.
- Where using a timber post and rail fence, this shall be at least 2m high with the gaps between each of the horizontal boards not exceeding 50cm.

GENERAL TREE PROTECTIVE FENCING METHODOLOGY

The fencing will be strong and suitable for the location, type and proximity of construction activity and prevent access of machinery, plant or operative beyond the area required to construct the development. Tree Protection Fencing and work exclusion zones will be clearly marked using appropriate signage. These signs shall be laminated to ensure they last the duration of the construction works and shall be fixed to the fencing panels every 10 metres along its length.

All Tree Protective Fencing will remain rigid and in place for the duration of the development and should be inspected at weekly intervals by the Site Manager alongside regular inspections to be carried out by the Arboricultural Clerk of Works.

KEY



- Tree/Group to be Retained
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- Veteran Tree Root Protection Area (in accordance with Ancient and Other Veteran Trees: Further Guidance on Management)
- Line of High Intensity Protective Barriers - as per single 3500mm Heras Panel Specification (and distance from tree or retained structure)
- Line of Low Intensity Protective Barriers (and distance from tree or retained structure where applicable)
- RMA Parcels
- Individual / Group Number and BS Category

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All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with project Arboriculturalist. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule.

Drawing has been produced in colour and is based on digital information in .dwg format, aerial images and/or GPS location where appropriate. A monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further assessment may therefore be required where deemed necessary.

Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the project Arboriculturalist should works commence 12 months after the date of this survey.

SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

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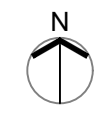
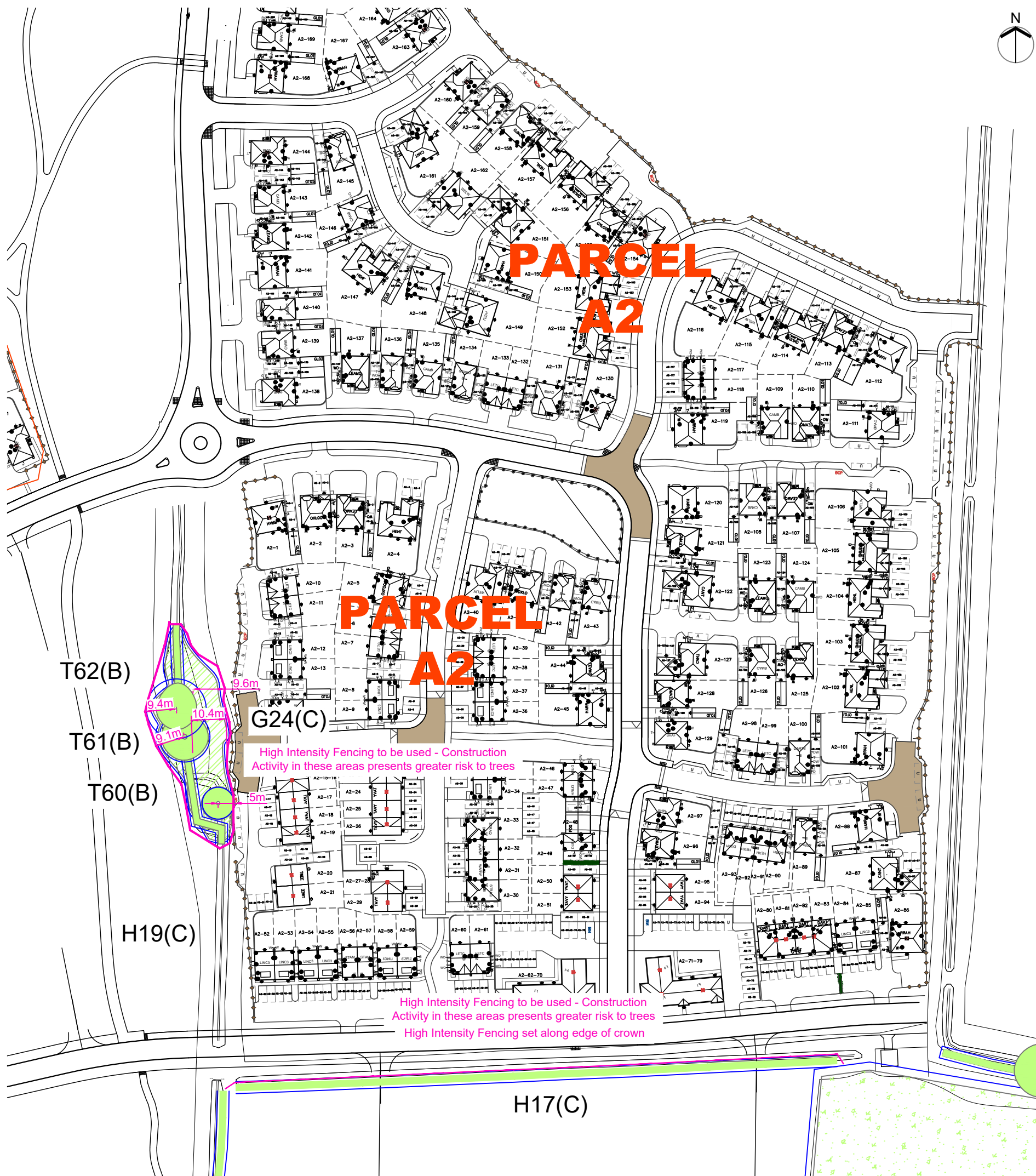
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August 2020

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HIGH INTENSITY TREE PROTECTIVE FENCING - WORKING METHODOLOGY

Tree Protection Fencing will be installed as detailed on the Tree Protection Plan at, where possible, the extent of the root protection areas or the edge of the crowns of the retained trees. The positioning of the Tree Protective Fencing shall be measured out with assistance from the Arboricultural Clerk of Works and, where deemed necessary, with the Site Manager present. Highly visible fluorescent paint and / or marker pegs / stakes will be used to assist in identification.

STANDARD TEMPORARY FENCING SPECIFICATION

Unless annotated on the plan, Protective Fencing will comprise a Heras HSG151 panel framework supported by scaffold poles driven into the ground. An example of this has been illustrated below.

INSTALLATION GUIDE

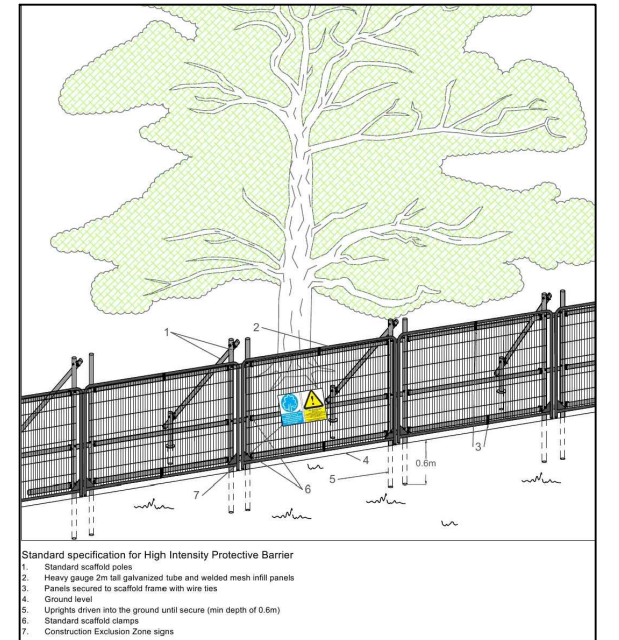
- Heras Fence Panel to be supported by rubberised stabiliser blocks with a base plate which is secured to the ground using ground pins (as shown).
- No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.

GENERAL TREE PROTECTIVE FENCING METHODOLOGY

The fencing will be strong and suitable for the location, type and proximity of construction activity and prevent access of machinery, plant or operative beyond the area required to construct the development.

Tree Protection Fencing and work exclusion zones will be clearly marked using appropriate signage. These signs shall be laminated to ensure they last the duration of the construction works and shall be fixed to the fencing panels every 10 metres along its length.

All Tree Protective Fencing will remain rigid and in place for the duration of the development and should be inspected at weekly intervals by the Site Manager alongside regular inspections to be carried out by the Arboricultural Clerk of Works.



TREE SURGERY CONTRACTORS - TREE WORK METHODOLOGY

The trees to be removed to facilitate the development (as shown) will be marked up by the Arboricultural Clerk of Works during a pre-commencement site meeting and, where required, with the tree surgeon present. Highly visible fluorescent paint will be used to assist in identification. A pre-commencement tool box talk will be given and the works will only be carried out once the project ecologist is satisfied that there are no ecological constraints.

The trees to be removed are shown on as red hatched circles. A key has been provided on the plan to assist with identification.

GENERAL TREE PRUNING RECOMMENDATIONS

All works shall be in accordance with BS 3998:2010 'Tree work. Recommendations'. Any competent arboriculturalist will be aware of this publication and will be able to carry out work to the required standard. Therefore, the use of a competent tree surgery contractor is necessary to comply with this.

Prior to any pruning operations occurring, the tree and its surroundings should be assessed for the presence of any protected species and the timing of works should best avoid the potential for any adverse impact on wildlife. Consideration should be made for the seasonal cycles of species of fauna and flora e.g. nesting birds.

Minor pruning can be carried out at any time of the year however, it is recommended that pruning is avoided when deciduous trees, particularly maples, lime and birch are coming into leaf (Spring). Equally, pruning should be avoided in the autumn months when the trees ability to seal wounds is reduced and thus vulnerability to pathogenic decay fungi is much higher. Pruning in the Autumn depletes valuable energy reserves. This is particularly important if it is necessary to carry out heavy pruning or work on older trees. Pruning should also be avoided during or soon after drought.

TREE WORKS SPECIFICATION

Crown lifting / Raising

A number of trees may require crown lifting in order to facilitate the correct positioning and erection of the perimeter palisade fencing as specified on this plan.

Crown lifting is the removal of the lowest branches and/or preparing of lower branches for future removal. Good practice dictates crown lifting should not normally include the removal of large branches growing directly from the main stem of the tree as this can cause large wounds which can become extensively decayed leading to further long-term problems or more short-term biomechanical instability. Crown lifting should be restricted to less than 15% of the live crown height and leave the crown at least two thirds of the total height of the tree.

As a general rule branches should be removed at their point of attachment or shortened to a lateral which is at least 1/3 of the diameter of the removed portion of the branch, and all cuts should be kept as small as possible.

Appendix A - Tree Schedule

| Measurements | Age Class | Overall Condition | Root Protection Area (RPA) |
|---|---|---|--|
| Height - Measured using a digital laser clinometer (m) | YNG: Young trees up to ten years of age | G - Good: Trees with only a few minor defects and in good overall health needing little, if any attention | <ul style="list-style-type: none"> The RPA Radius column provides the extent of an equivalent circle from the centre of the stem (m). The RPA is calculated using the formulae described in paragraph 4.6.1 of British Standard 5837: 2012 and is indicative of the rooting area required for a tree to be successfully retained. Tree roots extend beyond the calculated RPA in many cases and where possible a greater distance should be protected. Where veteran trees have been identified the RPA has been calculated in accordance with Natural England guidance i.e. 15x the stem diameter, uncapped. |
| Stem Dia. - Diameter measured (mm) in accordance with Annex C of the BS5837 | SM: Semi-mature trees less than 1/3 life expectancy | F - Fair: Trees with minor rectifiable defects or in the early stages of stress from which it may recover | |
| Crown Radius - Measured using a digital laser clinometer radially from the main stem (m) | EM: Early mature trees 1/3 – 2/3 life expectancy | P - Poor: Trees with major structural and/or physiological defects such that it is unlikely the tree will recover in the long term | |
| Abbreviations est - Estimated stem diameter avg - Average stem diameter for multiple stems upto - Maximum stem diameter of a group | M: Mature trees over 2/3 life expectancy | D - Dead: This could also apply to trees in an advanced state of decline and unlikely to recover | |
| | OM: Over mature declining or moribund trees of low vigour | The BS category particular consideration has been given to the following <ul style="list-style-type: none"> The health, vigour and condition of each tree The presence of any structural defects in each tree/group and its future life expectancy The size and form of each tree/group and its suitability within the context of a proposed development The location of each tree relative to existing site features e.g. its screening value or landscape features Age class and life expectancy | |
| | V: Veteran tree possessing certain attributes relating to veteran trees | | |

| Structural Condition |
|--|
| The following is an example of considerations when inspecting structural condition: <ul style="list-style-type: none"> The presence of fungal fruiting bodies around the base of the tree or on the stem, as they could possibly indicate the presence of possible internal decay Soil cracks and any heaving of the soil around the base Any abrupt bends in branches and limbs resulting from past pruning Tight or weak 'V' shaped forks and co-dominant stems Hazard beam formations and other such biomechanical related defects (as described by Claus Mattheck, Body Language of Trees HMSO Research for Amenity Trees No. 4 1994) Cavities as a result of limb losses or past pruning Broken branches or storm damage Damage to roots Basal, stem or branch / limb cavities Crown die-back or abnormal foliage size and colour |

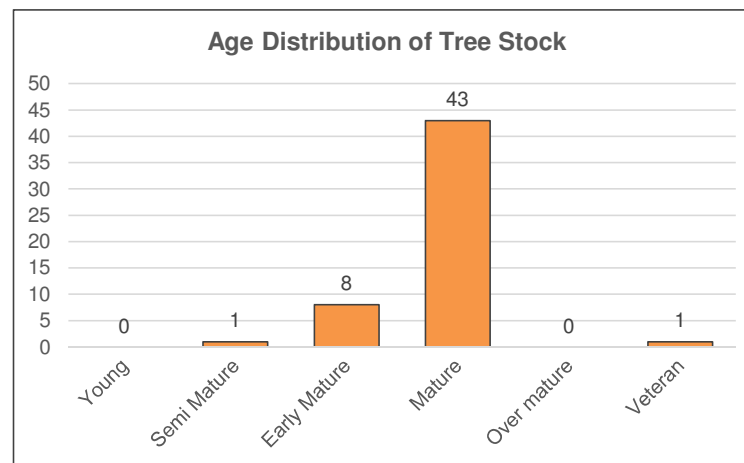
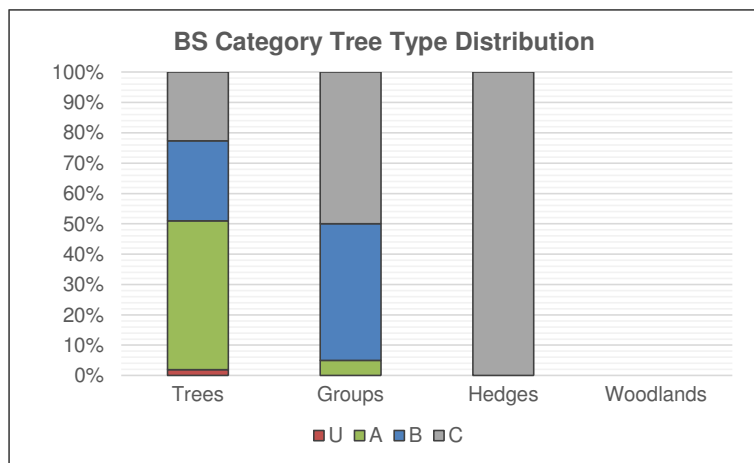
| Quality Assessment of BS Category |
|--|
| Category U - Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. |
| Category A - Trees of high quality with an estimated remaining life expectancy of at least 40 years. |
| Category B - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. |
| Category C - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. |
| Sub-categories: (i) - Mainly arboricultural value (ii) - Mainly landscape value (iii) - Mainly cultural or conservation value |

Appendix Summary

| | Individual Trees | Totals | Tree Groups and Hedgerows | Totals |
|------------|---|--------|---|--------|
| Category U | T56 | 1 | | 0 |
| Category A | T8, T16, T17, T19, T25, T27, T31, T32, T35, T38, T39, T42, T43, T44, T45, T46, T51, T52, T53, T59, T64, T66, T67, T69, T70, T71 | 26 | G18, W3, W5, W7 | 4 |
| Category B | T9, T29, T33, T34, T36, T41, T48, T54, T55, T57, T60, T61, T62, T68 | 14 | G5, G11, G22, G23, G25, G26, G27, G28, G29, W6 | 10 |
| Category C | T1, T2, T10, T18, T28, T30, T37, T40, T49, T50, T58, T63 | 12 | G1, G2, G3, G4, G17, G19, G20, G21, G24, G30, H5, H6, H10, H11, H12, H13, H14, H15, H16, H17, H18, H19, H20, H21, H22, H23, H24 | 27 |
| | Total | 53 | Total | 41 |

BS Category Tree Type Distribution displays the proportion of trees assessed in each type to enable a better understanding of the category distribution.

Age Distribution of Tree Stock shows the number of trees in each age category across the tree stock allowing assessment of their longevity to be made.



| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|-------------------------|--|--------|-----------|--------------|-----------|-------------------|---|-----|------------|------------|
| INDIVIDUAL TREES | | | | | | | | | | |
| T1 | Horse Chestnut Aesculus hippocastanum | 13 | 700 | 6 | M | F | Bark wounds noted Branch socket cavities observed Branch stubs and broken branches evident Included bark unions Minor dead wood evident in the crown Multi leaedered form Pruning wounds noted Typical crown form "Cameraria ohridella Horse chestnut leaf miner" present | 222 | 8.4 | C (i) |
| T2 | Horse Chestnut Aesculus hippocastanum | 10 | 7x 210 | 6 | M | F | Bark wounds noted Branch socket cavities observed Branch stubs and broken branches evident Coppiced form with Multiple stems from base Epicormic growth evident within the crown Included bark unions Minor dead wood evident in the crown "Cameraria ohridella Horse chestnut leaf miner" present | 140 | 6.7 | C (i) |
| T3-T7 | Trees situated outside of Phase 1 area | | | | | | | | | |
| T8 | English Oak Quercus robur | 13 | est 620 | 6 | M | G | Broken branches evident Epicormic growth evident within the crown Even crown form Heartwood exposed Minor dead wood evident in the crown Storm damage present | 174 | 7.4 | A (i) |
| T9 | English Oak Quercus robur | 10 | est 560 | 5 | EM | F | Broken branches evident Dieback of the crown observed Epicormic growth evident within the crown Even crown form Heartwood exposed Minor dead wood evident in the crown Storm damage present | 142 | 6.7 | B (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|--|--------|------------|------------------------------------|-----------|-------------------|---|-----|------------|------------|
| T10 | English Oak Quercus robur | 4 | est 250 | N - 4 S - 0.5 E - 2 W - 2 | SM | F | Bark wounds noted Broken branches evident Dieback of the crown observed Epicormic growth evident within the crown Heartwood exposed Minor dead wood evident in the crown Storm damage present Loss of crown to south | 28 | 3.0 | C (i) |
| T11-T15 | Trees situated outside of Phase 1 area | | | | | | | | | |
| T16 | English Oak Quercus robur | 14.5 | 950 | 12 | M | F | Branch stubs evident Heartwood exposed Minor and major dead wood evident in the crown No major defects were noted Storm damage present Woodpecker holes observed Exposed position Column of decay to branch on west at 3m | 408 | 11.4 | A (i) |
| T17 | English Oak Quercus robur | 14.5 | est 820 | N - 8 S - 10 E - 8 W - 10 | M | F | Base obscured Branch stubs evident Dense ivy cover on main stem Epicormic growth evident within the crown Heartwood exposed Minor and major dead wood evident in the crown No major defects were noted Storm damage present Woodpecker holes observed Exposed position | 304 | 9.8 | A (i) |
| T18 | Sycamore Acer pseudoplatanus | 9 | est 250 | 3 | EM | F | Basal suckers present Base obscured Crossing and rubbing branches Dense ivy cover on main stem Dense undergrowth at the base | 28 | 3.0 | C (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|--|--------|-------------|-----------------------------------|-----------|-------------------|---|-----|------------|------------|
| T19 | English Oak Quercus robur | 14 | est 1030 | 8 | M | F | Base obscured Branch stubs and broken branches evident Dieback of the crown observed Epicormic growth evident within the crown minor and major dead wood evident in the crown Tractor mounted flail damage evident | 480 | 12.4 | A (i) |
| T20-T24 | Trees situated outside of Phase 1 area | | | | | | | | | |
| T25 | English Oak Quercus robur | 20 | 1000 | 11 | M | G | Branch socket cavities observed Branch stubs and broken branches evident Epicormic growth evident within the crown Light ivy cover on main stem Low crown form Minor and major dead wood evident in the crown No major defects were noted Typical crown form | 452 | 12.0 | A (i) |
| T27 | English Oak Quercus robur | 19 | 1160 | 10 | M | G | Branch socket cavities observed Branch stubs and broken branches evident Epicormic growth evident within the crown Heartwood exposed Light ivy cover on main stem Low crown form Minor and major dead wood evident in the crown No major defects were noted Typical crown form Woodpecker holes observed | 609 | 13.9 | A (i) |
| T28 | English Oak Quercus robur | 19 | 870 | N - 6 S - 6 E - 8 W - 10 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Dense ivy cover on main stem Dieback of the crown observed Epicormic growth evident within the crown Heartwood exposed Low crown form Minor and major dead wood evident in the crown Fungal brackets to base east and west "Daedalea quercina Maze gill" | 342 | 10.4 | C (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|------------------------------|--------|-----------|----------------------------------|-----------|-------------------|--|-----|------------|------------|
| T29 | English Oak Quercus robur | 9 | 760 | N - 7 S - 2 E - 5 W - 7 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Crossing and rubbing branches Dense ivy cover on main stem Dieback of the crown observed Epicormic growth evident within the crown Heartwood exposed Low crown form Minor dead wood evident in the crown Lost top at 5m Stream under cutting base to east | 261 | 9.1 | B (i) |
| T30 | English Oak Quercus robur | 14 | 750 | N - 4 S - 4 E - 8 W - 8 | M | P | Branch stubs and broken branches evident Epicormic growth evident within the crown Heartwood exposed Low crown form Minor and major dead wood evident in the crown Loss of main leader to north at 2m Column of decay on remaining leaders | 254 | 9.0 | C (i) |
| T31 | English Oak Quercus robur | 18 | 820 | 10 | M | F | Branch stubs and broken branches evident Epicormic growth evident within the crown Heartwood exposed Light ivy cover on main stem Low crown form Minor and major dead wood evident in the crown No major defects were noted Stream cutting away bank to east | 304 | 9.8 | A (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|------------------------------|--------|------------|--------------|-----------|-------------------|--|-----|------------|------------|
| T32 | English Oak Quercus robur | 20 | 1250 | 6 | M | F | <p>Branch stubs and broken branches evident Dieback of the crown observed Epicormic growth evident within the crown Heartwood exposed Light ivy cover on main stem Low crown form Minor and major dead wood evident in the crown No major defects were noted Storm damage present Woodpecker holes observed Twin stemmed from 3m with swelling around area of lost of leader</p> | 707 | 15.0 | A (i) |
| T33 | Ash Fraxinus excelsior | 14 | est 750 | 8 | M | F | <p>Base obscured Branch stubs and broken branches evident Dense ivy cover on main stem Heartwood exposed Light ivy cover on main stem Low crown form Minor and major dead wood evident in the crown No major defects were noted Inonotus hispidus, Shaggy bracket on floor Twin stemmed from 2m Exposed buttress roots</p> | 254 | 9.0 | B (i) |
| T34 | English Oak Quercus robur | 17 | 750 | 8 | M | F | <p>Branch stubs and broken branches evident Heartwood exposed Light ivy cover on main stem Minor and major dead wood evident in the crown Storm damage present</p> | 254 | 9.0 | B (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|------------------------------|--------|-----------|-------------------------------------|-----------|-------------------|--|-----|------------|------------|
| T35 | English Oak Quercus robur | 22 | 1150 | 12 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Dense ivy cover on main stem Epicormic growth evident within the crown Heartwood exposed Minor and major dead wood evident in the crown Storm damage present Typical crown form | 598 | 13.8 | A (i) |
| T36 | English Oak Quercus robur | 12 | 700 | N - 3 S - 4 E - 7 W - 7 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Dense ivy cover on main stem Dieback of the crown observed Epicormic growth evident within the crown Heartwood exposed Minor and major dead wood evident in the crown Storm damage present Typical crown form Twin stemmed from 3m | 222 | 8.4 | B (i) |
| T37 | English Oak Quercus robur | 16 | 950 | 6 | M | F | Basal cavity observed Branch socket cavities observed Branch stubs and broken branches evident Dense ivy cover on main stem Heartwood exposed Minor and major dead wood evident in the crown Storm damage present Significant exposed heartwood to west from ground level to 4m from loss of leader Loss of structural roots to west | 408 | 11.4 | C (i) |
| T38 | English Oak Quercus robur | 20 | 1170 | N - 10 S - 10 E - 8 W - 13 | M | G | Branch socket cavities observed Branch stubs evident Low crown form Minor and major dead wood evident in the crown No major defects were noted Storm damage present Typical crown form | 619 | 14.0 | A (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|------------------------------|--------|-----------|-------------------------------------|-----------|-------------------|--|-----|---------------|------------|
| T39 | English Oak Quercus robur | 25 | 1050 | N - 8 S - 8 E - 8 W - 10 | M | G | Branch socket cavities observed Branch stubs evident Light ivy cover on main stem Low crown form Minor and major dead wood evident in the crown No major defects were noted Storm damage present Typical crown form | 499 | 12.6 | A (i) |
| T40 | English Oak Quercus robur | 25 | 1040 | N - 4 S - 8 E - 5 W - 5 | M | P | Branch socket cavities observed Branch stubs evident Dieback of the crown observed Light ivy cover on main stem Low crown form Minor and major dead wood evident in the crown Storm damage present Woodpecker holes observed Large pruning wounds to the west at 6 and 10m Large failed limb from adjacent tree to west | 489 | 12.5 | C (i) |
| T41 | English Oak Quercus robur | 22 | 770 | N - 3 S - 3 E - 5 W - 5 | M | F | Branch socket cavities observed Branch stubs evident Dieback of the crown observed Light ivy cover on main stem Low crown form Minor and major dead wood evident in the crown Storm damage present Suppressed crown form Woodpecker holes observed Loss of leader at 10m | 268 | 9.2 | B (i) |
| T42 | English Oak Quercus robur | 25 | 1370 | N - 10 S - 5 E - 10 W - 14 | M | F | Branch socket cavities observed Branch stubs evident Dieback of the crown observed Lateral lever arm observed Light ivy cover on main stem Low crown form Minor and major dead wood evident in the crown Storm damage present Suppressed crown form Woodpecker holes observed Two lateral limbs to west | 707 | Capped at 15m | A (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|------------------------------|--------|-----------|-----------------------------------|-----------|-------------------|--|-----|------------|------------|
| T43 | English Oak Quercus robur | 18 | 930 | 8 | M | F | Branch socket cavities observed Branch stubs evident Dense ivy cover on main stem Lateral lever arm observed Low crown form Minor and major dead wood evident in the crown Storm damage present Suppressed crown form Woodpecker holes observed Loss of limb at 10m to west | 391 | 11.2 | A (i) |
| T44 | English Oak Quercus robur | 22 | 1100 | N - 8 S - 8 E - 5 W - 10 | M | F | Branch socket cavities observed Branch stubs evident Epicormic growth evident within the crown Minor and major dead wood evident in the crown Storm damage present | 547 | 13.2 | A (i) |
| T45 | English Oak Quercus robur | 22 | 1000 | 8 | M | F | Branch stubs evident Epicormic growth evident within the crown Minor and major dead wood evident in the crown Storm damage present Twin stemmed at 5m | 452 | 12.0 | A (i) |
| T46 | English Oak Quercus robur | 22 | 890 | 6 | M | F | Branch socket cavities observed Branch stubs evident Epicormic growth evident within the crown Minor and major dead wood evident in the crown Storm damage present | 358 | 10.7 | A (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|--------------------------------|--------|--------------------------|----------------------------------|-----------|-------------------|---|-----|------------------|------------|
| T47 | | | | | | | Tree no longer present | | | |
| T48 | English Oak Quercus robur | 20 | est 950 | 8 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Dieback of the crown observed Epicormic growth evident within the crown Minor and major dead wood evident in the crown Pruning wounds noted Storm damage present | 408 | 11.4 | B (i) |
| T49 | Crack Willow Salix fragilis | 15 | est 1330 | N - 6 S - 5 E - 8 W - 2 | M | F | Broken branches evident Crossing and rubbing branches Dense undergrowth at the base Included bark unions Light ivy cover on main stem Low crown form Minor dead wood evident in the crown Multi leaedered form Major failed limb to east Hanging dead wood | 707 | Capped at 15m | C (i) |
| T50 | Ash Fraxinus excelsior | 11 | est 330 170 210 | 7 | EM | F | Branch stubs and broken branches evident Coppiced form with Multiple stems from base Crossing and rubbing branches Low crown form Minor dead wood evident in the crown <i>Pseudomonas syringae fraxini</i> Bacterial Ash Canker present | 82 | 5.1 | C (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|------------------------------|--------|-------------|----------------------------------|-----------|-------------------|---|-----|------------------|------------|
| T51 | English Oak Quercus robur | 21 | est 1100 | 11 | M | F | Branch stubs and broken branches evident Dense ivy cover on main stem Minor dead wood evident in the crown Multi leadered form No major defects were noted Typical crown form | 547 | 13.2 | A (i) |
| T52 | English Oak Quercus robur | 22 | 780 | 8 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Epicormic growth evident within the crown Minor and major dead wood evident in the crown Storm damage present Twin stemmed from base Woodpecker holes observed Twin leaders at 8m | 275 | 9.4 | A (i) |
| T53 | English Oak Quercus robur | 23 | 1340 | 11 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Prolific epicormic growth evident within the crown Minor and major dead wood evident in the crown Storm damage present Woodpecker holes observed Loss of leader at 2m to the west | 707 | Capped at 15m | A (i) |
| T54 | English Oak Quercus robur | 12 | 830 | N - 5 S - 4 E - 6 W - 3 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Prolific epicormic growth evident within the crown Minor and major dead wood evident in the crown Storm damage present Suppressed crown form Woodpecker holes observed | 312 | 10.0 | B (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|------------------------------|--------|------------|--------------|-----------|-------------------|--|-----|------------|------------|
| T55 | English Oak Quercus robur | 18 | 930 | 6 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Epicormic growth evident within the crown Minor and major dead wood evident in the crown Storm damage present Woodpecker holes observed Loss of leader at 3m with exposed heartwood | 391 | 11.2 | B (i) |
| T56 | Ash Fraxinus excelsior | 12 | est 700 | 5 | M | P | Dense ivy cover on main stem Dense undergrowth at the base Dieback of the crown observed Limited future potential Minor and major dead wood evident in the crown Specimen in extensive decline | N/A | N/A | U |
| T57 | English Oak Quercus robur | 12 | est 590 | 8 | EM | F | Dieback of the crown observed Minor dead wood evident in the crown | 157 | 7.1 | B (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|------------------------------|--------|---------------|--------------|-----------|-------------------|--|-----|------------|------------|
| T58 | Goat Willow Salix caprea | 7 | est 6x 150 | 4 | EM | F | Crossing and rubbing branches Multi stemmed from base Tractor mounted flail damage evident | 61 | 4.4 | C (i) |
| T59 | English Oak Quercus robur | 14 | est 760 | 8 | EM | F | Minor and major dead wood evident in the crown Pruning wounds noted Tractor mounted flail damage evident | 261 | 9.1 | A (i) |
| T60 | Ash Fraxinus excelsior | 11 | est 400 | 5 | EM | F | Bark wounds noted Minor dead wood evident in the crown No major defects were noted Tractor mounted flail damage evident | 72 | 4.8 | B (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|--------------------------------|--------|------------|----------------------------------|-----------|-------------------|---|-----|------------|------------|
| T61 | Ash Fraxinus excelsior | 15 | est 630 | 7 | M | F | Bark wounds noted Branch socket cavities observed Branch stubs and broken branches evident Minor and major dead wood evident in the crown Tractor mounted flail damage evident Open wound at 8m Pseudomonas syringae fraxini Bacterial Ash Canker present | 180 | 7.6 | B (i) |
| T62 | English Oak Quercus robur | 15 | 750 | N - 8 S - 6 E - 6 W - 6 | M | F | Bark wounds noted Branch socket cavities observed Branch stubs and broken branches evident Minor and major dead wood evident in the crown No major defects were noted Tractor mounted flail damage evident | 254 | 9.0 | B (i) |
| T63 | Hawthorn Crataegus monogyna | 6 | est 250 | 2 | EM | F | Bark wounds noted Minor dead wood evident in the crown No major defects were noted Tractor mounted flail damage evident | 28 | 3.0 | C (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|------------------------------|--------|------------|----------------------------------|-----------|-------------------|---|------|------------|------------|
| T64 | English Oak Quercus robur | 6 | 1285 | N - 1 S - 5 E - 2 W - 4 | V | P | Basal cavity observed Delaminating bark on main stem Prolific epicormic growth evident within the crown Heartwood exposed Limited future potential Minor dead wood evident in the crown Specimen in extensive decline Vandalism present and fire damaged Extensive internal hollowing Supported by fallen timber | 1167 | 19.3 | A (iii) |
| T65 | Tree no longer present | | | | | | | | | |
| T66 | English Oak Quercus robur | 19 | est 780 | 9 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Dense ivy cover on main stem Minor and major dead wood evident in the crown Typical crown form | 275 | 9.4 | A (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|------------------------------|--------|-------------|--------------|-----------|-------------------|--|-----|------------------|------------|
| T67 | English Oak Quercus robur | 16 | est 790 | 9 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Dense ivy cover on main stem Epicormic growth evident within the crown Minor and Major dead wood evident in the crown Typical crown form | 282 | 9.5 | A (i) |
| T68 | English Oak Quercus robur | 19 | est 1260 | 10 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Dense ivy cover on main stem Epicormic growth evident within the crown Heartwood exposed Minor and major dead wood evident in the crown Pruning wounds noted Typical crown form Woodpecker holes observed Fire damage to west with hollowing to base | 707 | Capped at 15m | B (i) |
| T69 | English Oak Quercus robur | 20 | 1430 | 10 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Dense ivy cover on main stem Epicormic growth evident within the crown Heartwood exposed Minor and major dead wood evident in the crown Pruning wounds noted Typical crown form Woodpecker holes observed Lost lateral at 2m to south | 707 | Capped at 15m | A (i) |

| Tree No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|------------------------------|--------|-----------|-----------------------------------|-----------|-------------------|--|-----|------------------|------------|
| T70 | English Oak Quercus robur | 20 | 830 | N - 11 S - 4 E - 5 W - 5 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Dense ivy cover on main stem Epicormic growth evident within the crown Heartwood exposed Minor and major dead wood evident in the crown Pruning wounds noted Typical crown form Woodpecker holes observed Loss of limb to east at 10m Large limbs removed | 312 | 10.0 | A (i) |
| T71 | English Oak Quercus robur | 23 | 1540 | 12 | M | F | Branch socket cavities observed Branch stubs and broken branches evident Dense ivy cover on main stem Epicormic growth evident within the crown Heartwood exposed Minor and major dead wood evident in the crown Pruning wounds noted Storm damage present Typical crown form Woodpecker holes observed Large limbs removed Open form Wooden debris within crown | 707 | Capped at 15m | A (i) |

| Group No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|------------------------|--|--------|-------------|--------------|-----------|-------------------|---|-----|------------|------------|
| GROUPS OF TREES | | | | | | | | | | |
| G1 | Ash Fraxinus excelsior Blackthorn Prunus spinosa Field Maple Acer campestre Goat Willow Salix caprea Hawthorn Crataegus monogyna Goat Willow Salix caprea | 8 | upto 200 | 2.5 | SM,M | F | Branch stubs and broken branches evident Crossing and rubbing branches Dense ivy cover on main stems and dense undergrowth Low interlocking crowns Sporadic self-seeded group of trees | 18 | 2.4 | C (ii) |
| G2 | Hawthorn Crataegus monogyna English Elm Ulmus procera | 10 | upto 180 | 2.5 | SM,EM | F | Branch stubs and broken branches evident Crossing and rubbing branches Dead elms noted Dense ivy cover on main stems and Dense undergrowth Low interlocking crowns Sporadic self-seeded group of trees Mostly Elm | 15 | 2.2 | C (ii) |

| Group No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|--|--------|-----------|--------------|-----------|-------------------|--|-----|------------|------------|
| G3 | <p>Austrian Pine Pinus nigra ssp. Nigra Scots Pine Pinus sylvestris Ash Fraxinus excelsior Blackthorn Prunus spinosa Common Lime Tilia x europaea English Oak Quercus robur Field Maple Acer campestre Goat Willow Salix caprea Hawthorn Crataegus monogyna Horse Chestnut Aesculus hippocastanum Wild Cherry Prunus avium Alder Alnus glutinosa Goat Willow Salix caprea Hazel Corylus avellana Hornbeam Carpinus betulus</p> | 4 | upto 80 | 1 | Yng,SM | F | <p>Multi stemmed from base No major defects were noted Single stem forms New buffer planting as conservation area "Hymenoscyphus fraxinus Chalara Ash dieback" present</p> | 3 | 1.0 | C (ii) |
| G4 | <p>Blackthorn Prunus spinosa English Oak Quercus robur Hawthorn Crataegus monogyna</p> | 10 | upto 190 | 2.5 | SM,M | P,F | <p>Bark wounds noted Branch stubs and broken branches evident Crossing and rubbing branches Low crown forms Minor dead wood evident in the crowns Vandalism in centre Lack of understory</p> | 16 | 2.3 | C (ii) |

| Group No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|--|--------|-------------|--------------|-----------|-------------------|---|-----|------------|------------|
| G5 | Austrian Pine Pinus nigra ssp. Nigra Scots Pine Pinus sylvestris Ash Fraxinus excelsior English Oak Quercus robur Field Maple Acer campestre Goat Willow Salix caprea Hawthorn Crataegus monogyna Silver Birch Betula pendula Wild Cherry Prunus avium Alder Alnus glutinosa Apple Malus domestica Goat Willow Salix caprea Holly Ilex aquifolium Hornbeam Carpinus betulus Sweet Chestnut Castanea sativa Dogwood Cornus sanguinea | 7 | upto 150 | 4 | Yng,SM | G | No major defects were noted Multi and single stem forms Well established buffer planting as conservation area "Hymenoscyphus fraxinus Chalara Ash dieback" present | 10 | 1.8 | B (ii) |
| G6-10 | Trees situated outside of Phase 1 area | | | | | | | | | |

| Group No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|--|--------|-------------|--------------|-----------|-------------------|---|-----|------------|------------|
| G11 | Blackthorn Prunus spinosa Crack Willow Salix fragilis Elder Sambucus nigra English Oak Quercus robur Field Maple Acer campestre Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus Alder Alnus glutinosa English Elm Ulmus procera Dogwood Cornus sanguinea | 14 | upto 680 | 5 | EM,M | F,G | Bark wounds noted Branch socket cavities observed Branch stubs and broken branches evident Crossing and rubbing branches Dead elms noted Dense undergrowth at the base Minor dead wood evident in the crown Tractor mounted flail damage evident Tree group adjacent to watercourse | 209 | 8.2 | B (ii) |
| G12-16 | Trees situated outside of Phase 1 area | | | | | | | | | |
| G17 | Blackthorn Prunus spinosa English Elm Ulmus procera | 7 | upto 150 | 2 | EM | F | Crossing and rubbing branches Dead elms noted Dense ivy cover on main stems and dense undergrowth Tractor mounted flail damage evident | 10 | 1.8 | C (ii) |

| Group No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|---|--------|-------------|--------------|-----------|-------------------|---|-----|------------|------------|
| G18 | English Oak Quercus robur Crab Apple Malus sylvestris | 14 | upto 820 | 7 | EM,M | F,G | Branch stubs and broken branches evident Dense ivy cover on main stems and dense undergrowth Interlocking crowns Minor and major dead wood evident in the crown Typical crown form Collective crown form | 304 | 9.8 | A (i) |
| G19 | Blackthorn Prunus spinosa Field Maple Acer campestre English Elm Ulmus procera | 8 | upto 120 | 2 | SM,EM | F | Crossing and rubbing branches Dense undergrowth at the base Interlocking crowns Tractor mounted flail damage evident | 7 | 1.4 | C (ii) |
| G20 | Blackthorn Prunus spinosa English Oak Quercus robur Field Maple Acer campestre English Elm Ulmus procera | 8 | upto 150 | 2 | SM,EM | F | Crossing and rubbing branches Dense undergrowth at the base Interlocking crowns Tractor mounted flail damage evident Outgrown hedgerow | 10 | 1.8 | C (ii) |

| Group No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|---|--------|-------------|--------------|-----------|-------------------|--|-----|------------|------------|
| G21 | Blackthorn Prunus spinosa Elder Sambucus nigra Hawthorn Crataegus monogyna English Elm Ulmus procera | 8 | upto 180 | 3 | EM | F | Crossing and rubbing branches Dense ivy cover on main stems with dense undergrowth Low interlocking crowns Un-maintained hedgerow | 15 | 2.2 | C (ii) |
| G22 | Common Lime Tilia x europaea | 8 | upto 630 | 3 | EM | F | Basal suckers present Branch socket cavities observed Branch stubs and broken branches evident Crossing and rubbing branches Crowns had been pollarded Epicormic growth evident within the crown Minor dead wood evident in the crown Pruning wounds noted 5 in group | 180 | 7.6 | B (i) |
| G23 | English Oak Quercus robur | 12 | upto 720 | 7 | EM | F | Bark wounds noted Branch socket cavities observed Branch stubs and broken branches evident Crossing and rubbing branches Dense ivy cover on main stems Epicormic growth evident within the crowns Minor dead wood evident in the crowns Overhead cables, Pruning wounds noted Tractor mounted flail damage evident 3 in group | 235 | 8.6 | B (i) |

| Group No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|---|--------|-------------|--------------|-----------|-------------------|--|-----|------------|------------|
| G24 | Ash Fraxinus excelsior Elder Sambucus nigra English Oak Quercus robur Field Maple Acer campestre Hawthorn Crataegus monogyna | 8 | upto 300 | 4 | EM | F | Branch stubs and broken branches evident Crossing and rubbing branches Dense undergrowth at the base Interlocking crowns Minor dead wood evident in the crowns Understory group | 41 | 3.6 | C (ii) |

| Group No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|---|--------|-------------|--------------|-----------|-------------------|---|-----|------------|------------|
| G25 | Common Larch Larix decidua Yew Taxus baccata Ash Fraxinus excelsior Blackthorn Prunus spinosa Elder Sambucus nigra Field Maple Acer campestre Goat Willow Salix caprea Horse Chestnut Aesculus hippocastanum Silver Birch Betula pendula English Elm Ulmus procera Goat Willow Salix caprea Hazel Corylus avellana Lombardy Poplar Populus nigra 'Italica Dogwood Cornus sanguinea | 20 | upto 350 | 4 | EM,M | G | Branch stubs and broken branches evident Crossing and rubbing branches Dead elms noted Dense ivy cover on main stems and dense undergrowth Dieback of the crowns observed Etiolated forms Low interlocking crowns Minor and major dead wood evident in the crown Suppressed crown forms Boundary group | 55 | 4.2 | B (ii) |

| Group No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|--|--------|-----------|--------------|-----------|-------------------|--|-----|------------|------------|
| G26 | Ash Fraxinus excelsior English Oak Quercus robur Goat Willow Salix caprea Horse Chestnut Aesculus hippocastanum Silver Birch Betula pendula Goat Willow Salix caprea Hornbeam Carpinus betulus | 15 | upto 550 | 5 | EM,M | G | Crossing and rubbing branches Dieback of the crowns observed Etiolated forms Included bark unions Low interlocking crowns Minor dead wood evident in the crowns Situated offsite Suppressed crown forms Boundary group 5 m off-site " <i>Cameraria ohridella</i> Horse chestnut leaf miner" present | 137 | 6.6 | B (ii) |
| G27 | Ash Fraxinus excelsior Common Lime Tilia x europaea English Oak Quercus robur Field Maple Acer campestre Horse Chestnut Aesculus hippocastanum Wild Cherry Prunus avium White Poplar Populus alba | 9 | upto 500 | 6 | EM | G | Crossing and rubbing branches Dieback of the crowns observed Included bark unions Low interlocking crowns Minor dead wood evident in the crowns Situated offsite Boundary group situated within school " <i>Cameraria ohridella</i> Horse chestnut leaf miner" present | 113 | 6.0 | B (ii) |

| Group No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|---|--------|-----------|--------------|-----------|-------------------|---|-----|------------|------------|
| G28 | Blackthorn Prunus spinosa Field Maple Acer campestre Horse Chestnut Aesculus hippocastanum | 15 | upto 750 | 7 | EM,M | G | Bark wounds noted Branch stubs and broken branches evident Crossing and rubbing branches Included bark unions Low interlocking crowns Minor and major dead wood evident in the crowns Understory group with large horse chestnuts vandalism present " <i>Cameraria ohridella</i> Horse chestnut leaf miner" | 254 | 9.0 | B (ii) |
| G29 | English Elm Ulmus procera Raywood Ash Fraxinus angustifolia | 11 | upto 300 | 5 | EM | G | Bark wounds noted Crossing and rubbing branches Low crown forms Minor dead wood evident in the crowns Situated offsite Roadside tree group with smaller newly planted trees | 41 | 3.6 | B (ii) |
| G30 | Apple Malus domestica Blackthorn Prunus spinosa Ash Fraxinus excelsior Hawthorn Crataegus monogyna | 8 | upto 200 | 4 | EM | F | Crossing and rubbing branches Low crown forms Out grown boundary group | 18 | 2.4 | C (ii) |

| Hedge No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|------------------|--|--------|--------------|--------------|-----------|-------------------|--|-----|------------|------------|
| HEDGEROWS | | | | | | | | | | |
| H1-4 | Trees situated outside of Phase 1 area | | | | | | | | | |
| H5 | English Elm Ulmus procera Blackthorn Prunus spinosa Field Maple Acer campestre Hawthorn Crataegus monogyna Dogwood Cornus sanguinea | 1.5 | est 6x 60 | 1 | M | F | Maintained hedgerow Tractor mounted flail damage evident | 10 | 1.8 | C (ii) |
| H6 | English Oak Quercus robur Field Maple Acer campestre Hawthorn Crataegus monogyna English Elm Ulmus procera | 1.5 | est 6x 60 | 0.5 | Yng | F | Maintained hedgerow Tractor mounted flail damage evident Newly planted | 10 | 1.8 | C (ii) |
| H7-9 | Trees situated outside of Phase 1 area | | | | | | | | | |

| Hedge No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|---|--------|--------------|--------------|-----------|-------------------|--|-----|------------|------------|
| H10 | Ash Fraxinus excelsior Blackthorn Prunus spinosa Elder Sambucus nigra Field Maple Acer campestre Crab Apple Malus sylvestris Hazel Corylus avellana Dogwood Cornus sanguinea | 1.5 | est 170 | 1 | EM | F | Maintained hedgerow Tractor mounted flail damage evident Standard trees in hedge | 13 | 2.0 | C (ii) |
| H11 | Ash Fraxinus excelsior Blackthorn Prunus spinosa Elder Sambucus nigra Field Maple Acer campestre Hazel Corylus avellana Dogwood Cornus sanguinea | 1.5 | est 6x 60 | 1 | EM | F | Maintained hedgerow Tractor mounted flail damage evident Patchy in places | 10 | 1.8 | C (ii) |
| H12 | Ash Fraxinus excelsior Blackthorn Prunus spinosa Elder Sambucus nigra Field Maple Acer campestre Hazel Corylus avellana Dogwood Cornus sanguinea | 1.5 | est 170 | 1 | EM | F | Maintained hedgerow Tractor mounted flail damage evident Patchy in places | 13 | 2.0 | C (ii) |

| Hedge No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|---|--------|--------------|--------------|-----------|-------------------|---|-----|------------|------------|
| H13 | Blackthorn Prunus spinosa Elder Sambucus nigra Field Maple Acer campestre Hazel Corylus avellana Dogwood Cornus sanguinea | 1.5 | est 6x 60 | 1 | EM | F | Maintained hedgerow Tractor mounted flail damage evident Patchy in places | 10 | 1.8 | C (ii) |
| H14 | Ash Fraxinus excelsior Blackthorn Prunus spinosa Elder Sambucus nigra English Oak Quercus robur Field Maple Acer campestre Hazel Corylus avellana Dogwood Cornus sanguinea | 2 | est 6x 60 | 1 | EM | F | Maintained hedgerow Tractor mounted flail damage evident | 10 | 1.8 | C (ii) |
| H15 | Ash Fraxinus excelsior Blackthorn Prunus spinosa Elder Sambucus nigra English Oak Quercus robur Field Maple Acer campestre Hazel Corylus avellana Dogwood Cornus sanguinea | 2 | est 6x 60 | 1 | EM | F | Maintained hedgerow Tractor mounted flail damage evident | 10 | 1.8 | C (ii) |

| Hedge No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|---|--------|--------------|--------------|-----------|-------------------|---|-----|------------|------------|
| H16 | Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna English Elm Ulmus procera | 1 | est 6x 60 | 1 | EM | F | Gaps present in hedgerow Maintained hedgerow Tractor mounted flail damage evident | 10 | 1.8 | C (ii) |
| H17 | Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna English Elm Ulmus procera Dogwood Cornus sanguinea | 1 | est 6x 60 | 1 | SM | F | Gaps present in hedgerow Maintained hedgerow Tractor mounted flail damage evident | 10 | 1.8 | C (ii) |
| H18 | Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna English Elm Ulmus procera Dogwood Cornus sanguinea | 1 | est 6x 60 | 1 | EM | F | Gaps present in hedgerow Maintained hedgerow Tractor mounted flail damage evident | 10 | 1.8 | C (ii) |
| H19 | Hawthorn Crataegus monogyna Field Maple Acer campestre | 1 | est 6x 60 | 1 | EM | F | Gaps present in hedgerow Maintained hedgerow Tractor mounted flail damage evident | 10 | 1.8 | C (ii) |

| Hedge No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|--|--------|--------------|--------------|-----------|-------------------|---|-----|------------|------------|
| H20 | Ash Fraxinus excelsior Field Maple Acer campestre Hawthorn Crataegus monogyna Hazel Corylus avellana Dogwood Cornus sanguinea | 2.5 | est 6x 40 | 1 | Yng,SM | F | Gaps present in hedgerow Maintained hedgerow Newly planted Guards still attached Standard trees within hedgerow | 4 | 1.2 | C (ii) |
| H21 | Blackthorn Prunus spinosa Dogwood Cornus sanguinea | 3 | est 6x 60 | 1.5 | EM | F | Gaps present in hedgerow Un-maintained hedgerow | 10 | 1.8 | C (ii) |
| H22 | Blackthorn Prunus spinosa Field Maple Acer campestre Hawthorn Crataegus monogyna Dogwood Cornus sanguinea | 1.5 | est 6x 60 | 1 | EM | F | Gaps present in hedgerow Maintained hedgerow | 10 | 1.8 | C (ii) |
| H23 | Blackthorn Prunus spinosa Field Maple Acer campestre Hawthorn Crataegus monogyna English Elm Ulmus procera Dogwood Cornus sanguinea | 2.5 | est 6x 60 | 1 | EM | F | Gaps present in hedgerow Un-maintained hedgerow | 10 | 1.8 | C (ii) |

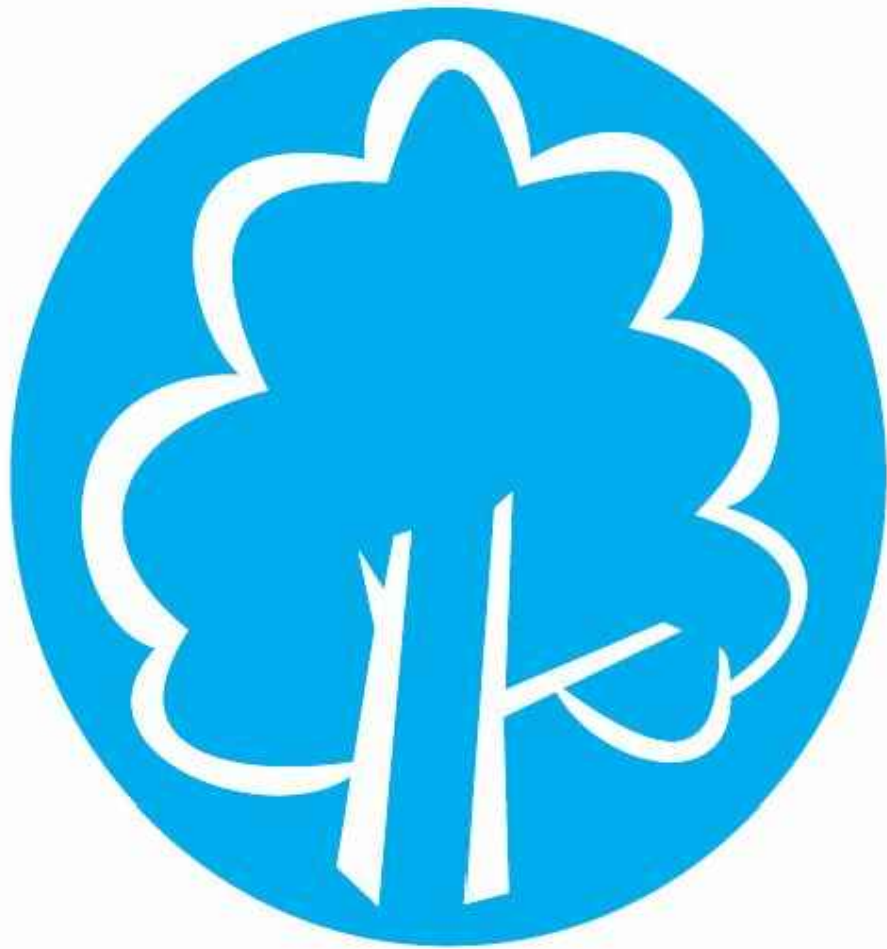
| Hedge No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|----------|--|--------|-----------|--------------|-----------|-------------------|---|-----|------------|------------|
| H24 | English Elm Ulmus procera Blackthorn Prunus spinosa Field Maple Acer campestre Hawthorn Crataegus monogyna Dogwood Cornus sanguinea | 1.5 | est 6x 60 | 1 | EM | F | Gaps present in hedgerow Maintained hedgerow Tractor mounted flail damage evident | 10 | 1.8 | C (ii) |

| Wood No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|------------------|---|--------|-------------|--------------|-----------|-------------------|---|-----|------------|------------|
| WOODLANDS | | | | | | | | | | |
| W1-2 | Trees situated outside of Phase 1 area | | | | | | | | | |
| W3 | Austrian Pine Pinus nigra ssp. Nigra Scots Pine Pinus sylvestris Ash Fraxinus excelsior Blackthorn Prunus spinosa English Oak Quercus robur Hawthorn Crataegus monogyna English Elm Ulmus procera Dogwood Cornus sanguinea | 14 | upto 700 | 7 | EM,M | G | Branch stubs and broken branches evident Crossing and rubbing branches Dead elms noted Dense ivy cover on main stems with dense undergrowth Etiolated forms Low interlocking crowns Minor and major dead wood evident in the crowns Typical woodland form Woodpecker holes observed | 222 | 8.4 | A (ii) |
| W4 | Trees situated outside of Phase 1 area | | | | | | | | | |

| Wood No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|---|--------|--------------|--------------|-----------|-------------------|--|-----|------------------|-------------------------|
| W5 | <p>Austrian Pine Pinus nigra ssp. Nigra Common Larch Larix decidua Grand Fir Abies grandis Norway Spruce Picea abies Scots Pine Pinus sylvestris Beech Fagus sylvatica Elder Sambucus nigra Sycamore Acer pseudoplatanus English Elm Ulmus procera Hazel Corylus avellana Holly Ilex aquifolium Hornbeam Carpinus betulus</p> | 25 | upto 1480 | 12 | EM,M | G | <p>Branch stubs and broken branches evident Crossing and rubbing branches Dense ivy cover on main stems with dense undergrowth Dieback of the crown observed Etiolated forms Low interlocking crowns Minor and major dead wood evident in the crowns Storm damage present Typical woodlans forms Woodpecker holes observed Large oaks on woodland edge Fungi present</p> | 707 | Capped at 15m | A (i), A(ii), A(iii) |

| Wood No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|--|--------|-------------|--------------|-----------|-------------------|--|-----|------------|------------|
| W6 | Ash Fraxinus excelsior Blackthorn Prunus spinosa Field Maple Acer campestre Goat Willow Salix caprea English Elm Ulmus procera Goat Willow Salix caprea Hazel Corylus avellana Dogwood Cornus sanguinea | 23 | upto 650 | 6 | EM,M | G | Branch stubs and broken branches evident Crossing and rubbing branches Dead elms noted Dense ivy cover on main stems with dense undergrowth Dieback of the crowns observed Etiolated forms Low interlocking crowns Minor and major dead wood evident in the crowns Storm damage present Typical woodland forms Woodpecker holes observed | 191 | 7.8 | B (ii) |

| Wood No | Species | Height | Stem Dia. | Crown Radius | Age Class | Overall Condition | Structural Condition | RPA | RPA Radius | BS5837 Cat |
|---------|---|--------|-------------|--------------|-----------|-------------------|--|-----|------------|------------|
| W7 | <p>Austrian Pine Pinus nigra ssp. Nigra Common Larch Larix decidua Grand Fir Abies grandis Norway Spruce Picea abies Scots Pine Pinus sylvestris Beech Fagus sylvatica Elder Sambucus nigra Sycamore Acer pseudoplatanus English Elm Ulmus procera Hazel Corylus avellana Holly Ilex aquifolium Hornbeam Carpinus betulus</p> | 22 | upto 700 | 6 | EM,M | G | <p>Branch stubs and broken branches evident Crossing and rubbing branches Dense ivy cover on main stems with dense undergrowth Dieback of the crown observed Etiolated forms Low interlocking crowns Minor and major dead wood evident in the crowns Storm damage present Typical woodlans forms Woodpecker holes observed</p> | 222 | 8.4 | A (ii) |



PROTECTIVE FENCING. THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.



**TREE PROTECTION AREA
KEEP OUT !**
(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION
ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

The following points are to be considered at all times:

1. Protective fencing has been installed at the extent of the calculated root protection area (RPA) - **DO NOT USE OR ACCESS** the ground within the fenced area. This is particularly the case for placement of site offices, stockpiles of soil or fuel and material storage, storing machinery or parking vehicles, debris or building materials or fires.
2. **AVOID** excavations, changes in ground levels or tracking machinery within the fenced area at ALL TIMES. These activities can seriously compromise the long term survival of trees due to the impact on a trees roots.
3. **REPORT** any instances where the fencing has been removed, repositioned, damaged or is not fit for purpose to the Site Manager. This shall help the Site Manager to ensure that the fencing is maintained throughout the construction process. It will also reduce the risk of any staff and contractors accidentally and inadvertently causing damage to trees as a result.

Retained trees are protected by planning law and reckless damage or non consented tree removal could result in the serving of a stop notice or prosecution by the LPA



For more information on Tree Protection please visit the website link <https://goo.gl/hpBkTv> or scan the QR code on a Smartphone or Tablet.

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Appendix C1: Tree Surgery Contractors – Tree Work Methodology

Table 1: Related Reference Material

| Plan Name | Drawing Number |
|-----------------------|--------------------------|
| Tree Protection Plans | 8755-TTP-01 to 8755-T-03 |
| Appendices | Appendix Title |
| Appendix A | Tree Schedule |

The Site Manager and tree surgery contractor must ensure that any necessary consent has been received from the local authority and that no protected species are harmed whilst carrying out site clearance or tree surgery works.

The trees to be removed to facilitate the development will be marked up by the Arboricultural Clerk of Works during the pre-commencement site meeting and, where required, with the tree surgeon present. Highly visible fluorescent paint will be used to assist in identification. A pre-commencement tool box talk will be given and the works will only be carried out once the project ecologist is satisfied that there are no ecological constraints.

The trees to be removed are shown on the Tree Retention Plans (referenced above) as red circles hatched with red criss-crossing lines. A key has been provided on each of the plans to assist with identification.

Works on all trees cannot commence until all pre-commencement conditions have been discharged.

GENERAL TREE PRUNING RECOMMENDATIONS

All works shall be in accordance with BS 3998:2010 '*Tree work. Recommendations*'. Any competent arboriculturist will be aware of this publication and will be able to carry out work to the required standard. Therefore, the use of a competent tree surgery contractor is necessary to comply with this.

Prior to any pruning operations occurring, the tree and its surroundings should be assessed for the presence of any protected species and the timing of works should best avoid the potential for any adverse impact on wildlife. Consideration should be made for the seasonal cycles of species of fauna and flora e.g. nesting birds.

Minor pruning can be carried out at any time of the year however, it is recommended that pruning is avoided when deciduous trees, particularly maples, lime and birch are coming into leaf (Spring). Equally, pruning should be avoided in the autumn months when the trees ability to seal wounds is reduced and thus vulnerability to pathogenic decay fungi is much higher. Pruning in the Autumn depletes valuable energy reserves. This is particularly important if it is necessary to carry out heavy pruning or work on older trees. Pruning should also be avoided during or soon after drought.

Before any tree work operations commence, the method of disposal, utilization or retention of arisings should be prior agreed. Disposal of arising should not involve burning unless other options of disposal are impracticable or, as in the case of Ash Dieback, the material is affected by a diseases or pest for which industry guidance on sanitation dictates.

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TREE WORKS SPECIFICATION

Crown lifting / Raising

Crown lifting is the removal of the lowest branches and/or preparing of lower branches for future removal. Good practice dictates crown lifting should not normally include the removal of large branches growing directly from the main stem of the tree as this can cause large wounds which can become extensively decayed leading to further long-term problems or more short-term biomechanical instability. Crown lifting on older, mature trees should be avoided or restricted to secondary branches or shortening of primary branches rather than the whole removal wherever possible. Crown lifting should be restricted to less than 15% of the live crown height and leave the crown at least two thirds of the total height of the tree.

As a general rule branches should be removed at their point of attachment or shortened to a lateral which is at least 1/3 of the diameter of the removed portion of the branch, and all cuts should be kept as small as possible.

Trees may require limited crown lifting to install Tree Protection Fencing.

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Appendix C2: Fencing Contractors – Working Methodology

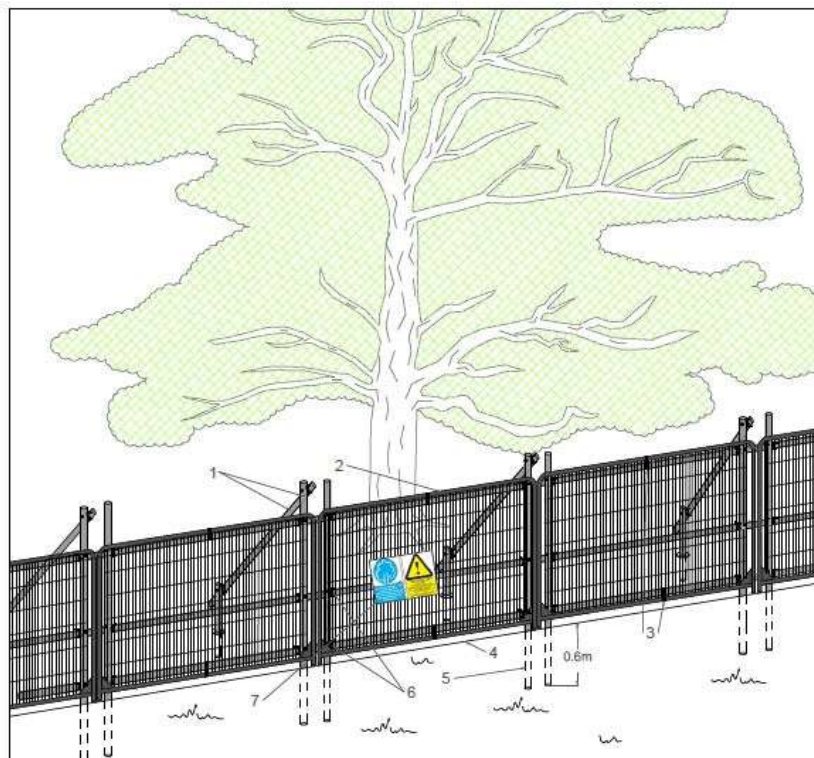
Table 1: Related Reference Material

| Plan Name | Drawing Number |
|-----------------------|----------------------------|
| Tree Protection Plans | 8755-TPP-01 to 8755-T-03 |
| Appendices | Appendix Title |
| Appendix A | Tree Schedule |
| Appendix B | Protective Fencing Signage |

Tree Protection Fencing will be installed as detailed in Tree Protection Plans (referenced above) at, where possible, the extent of the root protection areas of retained trees using the dimensions indicated on the relevant plans. The positioning of the Tree Protective Fencing shall be measured out with assistance from the Arboricultural Clerk of Works and, where deemed necessary, with the Site Manager present. Highly visible fluorescent paint and / or marker pegs / stakes will be used to assist in identification.

STANDARD FENCING SPECIFICATION

Unless stated below, Protective Fencing will comprise a Heras HSG151 panel framework supported by scaffold poles driven into the ground. An example of this has been illustrated below.



Standard specification for High Intensity Protective Barrier

1. Standard scaffold poles
2. Heavy gauge 2m tall galvanized tube and welded mesh infill panels
3. Panels secured to scaffold frame with wire ties
4. Ground level
5. Uprights driven into the ground until secure (min depth of 0.6m)
6. Standard scaffold clamps
7. Construction Exclusion Zone signs

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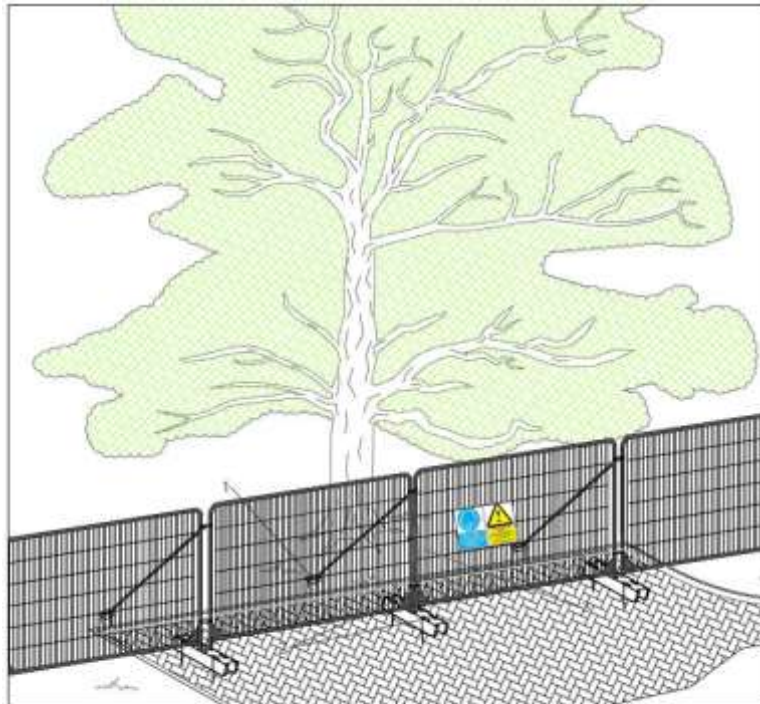


Installation Guide

- The scaffold framework shall comprise of upright poles of at least 3.0 metres in length driven no less than 0.6 metres into the ground at maximum 3.0 metre centres with horizontal and diagonal poles fixed to the uprights.
- The two horizontal rail poles shall be attached to the uprights at heights of 0.6 and 1.8 metres with clamps to each joint.
- The diagonal scaffold pole struts shall be clamped to the top rail of the scaffold framework at a 45° angle and extend back into the root protection area and clamped to a 0.7 metre length of scaffold tube that shall be driven no less than 0.5m into the ground.
- No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.

TEMPORARY FENCING SPECIFICATION

This fencing specification shall only be used where specified on the relevant Tree Protection Plans as is not to be used as an alternative to the standard specification unless determined by the Arboricultural Clerk of Works.



Standard Specification for Above Ground Stabilizing Systems
 1. Stabiliser post with base plate secured with ground pins
 2. Feet blocks secured with ground pins
 3. Construction Exclusion Zone sign

Heras Fence Panel to be supported by rubberised stabiliser blocks with a base plate which is secured to the ground using ground pins (as shown above).

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GENERAL TREE PROTECTIVE FENCING METHODOLOGY

The fencing will be strong and suitable for the location, type and proximity of construction activity and prevent access of machinery, plant or operative beyond the area required to construct the development.

Tree Protection Fencing and work exclusion zones will be clearly marked using appropriate signage, an example of which has been included as Appendix B. These signs shall be laminated to ensure they last the duration of the construction works and shall be fixed to the fencing panels every 10 metres along its length.

All Tree Protective Fencing will remain rigid and in place for the duration of the development and should be inspected at weekly intervals by the Site Manager alongside regular inspections to be carried out by the Arboricultural Clerk of Works.

Following the completion of construction works and in agreement with the Arboricultural Clerk of Works, the Tree Protection Fencing will be removed carefully as to avoid causing root disturbance or leaving in situ any lengths of scaffold framework. This operation can be carried out prior to soft landscaping works such as new planting, mulching grass sowing etc.

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