Newlands Developments

Land to the West of Sheffield Road, Hoyland

Tree Protection Details (Arboricultural Method Statement)

September 2020

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1.0 INTRODUCTION

1.1 This Arboricultural Method Statement (AMS) has been prepared by FPCR Environment and Design Limited on behalf of Newlands Development to provide the methods of protection and pruning requirements for retained trees located at the Sheffield road, Hoyland, Barnsley (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 June 2020 by FPCR Environment and Design.

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 phase of a development of employment uses (B1, B2 and B8), new link road, associated works including provision of internal access roads, drainage and landscaping.. 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.**

1.6 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

1.7 A total of sixty-two individual trees, forty-eight groups of trees, one woodland and twenty hedgerows were surveyed as part of the Arboricultural Assessment, some of which were considered to be off-site. All detailed information on individual trees, groups and hedgerows can be found in Appendix A – Tree Schedule and identified on the Tree Survey Plan provided as part of the Arboricultural Assessment / AMS.

1.8 The tree stock consists mostly of naturally colonised individual trees and groups of native broadleaved trees which were predominately located upon the field boundaries. Due to the intensive nature of land management and agricultural use, tree cover across the site was generally low and of moderate and low arboricultural quality.

Statutory Constraints

1.1 Local authorities have a Duty under the Town and Country Planning Act to create Tree Preservation Orders (TPO) in order to protect and preserve specific trees and woodlands that bring significant amenity benefit to a particular site or location. Under a TPO it is a criminal offence to cut down, top, lop, uproot or willfully destroy a tree protected by that Order, or to cause or permit such actions, if carried out without the prior written consent of the acting LPA.

1.2 Anyone found guilty of such an offence is liable and in serious cases, may result in prosecution and incur an unlimited fine.

1.3 No direct consultation with the Local Planning Authority has taken place, however, it is understood having used the online search facility on the website for the Local Planning Authority, Barnsley Metropolitan Borough Council that there are no Tree Preservation Orders and Conservation Areas that would apply to any trees present on, or in close proximity to the assessment site and therefore no statutory constraints would apply to the development in respect of trees. Before any tree works are undertaken confirmation of the online information should be sought from the Local Authority.

Limitations

1.4 The Method Statement is concerned solely with arboricultural issues related to the site referenced only.

1.5 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.

1.6 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 TREE PROTECTION METHODOLOGY

Pre-commencement Tree Work

2.1 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.

2.2 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.

2.3 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

2.4 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.

2.5 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 1: Timelines of Tree Protection for Construction Works

Timetable	Actions	Arboricultural Clerk of Works (ACoW) requirements	Task Specific Method Statement / Appendix reference
Pre-commencement site meeting	Pre-commencement site meeting prior to the start of construction works on site following demolition of existing buildings and removal of areas of hardstanding. Timeline of construction processes to be shared with ACoW and changes made to the AMS as required.	Site meeting / Tool box talk by ACoW (refer to Section 2.6) 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. ACoW to check that copies of Task Specific Arboricultural Method Statements (located in Appendix C) are present.	Appendix C and AMS.
During Pre-commencement site meeting	Permanent Tree Protection Fencing positions to be marked out and pegged (where applicable) by the ACoW to ensure that all fencing is erected in the correct positions.	ACoW to assist with measuring out distances from trees in accordance with the Tree Protection Plans. Photos of evidence to be taken for auditing purposes.	Appendix C and relevant Tree Protection plans
Construction Works Commence			

Timetable	Actions	Arboricultural Clerk of Works (ACoW) requirements	Task Specific Method Statement / Appendix reference
Date TBC during Pre-commencement site meeting and in line with construction program)	Periodic compliance inspections accompanied by robust auditing of visits. Tree Protective Fencing position and suitability checked by ACoW. Compliance with AMS checked and recorded.	Record of visit to be completed by ACoW and a copy is to be handed to Site Manager and LPA upon request.	Appendix C Tablet based Auditing App (Arboricultural Clerk of Works use only) Refer to relevant plans
Construction Works Completed			
Post Construction			
Date TBC during Pre-commencement site meeting and in line with construction program	Removal of Tree Protective Fencing	ACoW 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

2.6 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.

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2.7 An overview of the specific involvement of the Arboricultural Clerk of Works has been provided in Tables 1 and 2.

2.8 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.

2.9 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.

2.10 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 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;
- 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;

2.11 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.

2.12 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.

2.13 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

2.14 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 **(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.

Specific Tree Protection Measures

2.15 For each of the works required a Task Specific Method Statement has been provided outlining the action required. These Method Statements have been provided in chronological order and have been produced as 'pull out' sheets to be kept on record in the site office and handed to the appropriate contractors during site inductions.

2.16 The methodologies accompanying this AMS have been provided as separately titled appendices for ease of identification. These include:

- Appendix C: Fencing Contractor – Working Methodology

General Tree Protection Measures

2.17 This section details non-specific precautionary measures to be applied at all times.

2.18 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.

2.19 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.

2.20 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.

2.21 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.

2.22 No materials or soils are to be stored within the Root Protection Area of the retained trees.

2.23 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.

2.24 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.

2.25 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.

2.26 Notice boards, telephone cables or other services will not be attached to any part of a retained tree.

2.27 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.

2.28 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

2.29 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.

3.0 ARBORICULTURAL MONITORING AND TREE MANAGEMENT

3.1 Trees will require several years to adjust to environmental changes that occur during construction. Stressed trees are more prone to health problems, such as disease and insect infestations. Despite the enforcement of the recommendations continued within this AMS and the best intentions of the developer, including the implementation of the most stringent tree protection measures across the site, injury to trees may still occur.

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 earthworks required to facilitate the development; to be confirmed during the pre-commencement site meeting.

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
- 6.0m — Line of Protective Barriers (and distance from tree or retained structure)
- Root Protection Area (Shown for retained trees only)
- T1 (A) G1 (A) — Individual / Group Number and BS Category

Scale 1:2000 @ A1

0 50 100 150 200m

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 survey work would be required for calculating foundation depths.

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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A	19.05.20	Layout Update	AZS
B	05.06.20	Layout Update	AZS
C	16.06.20	Updated Layout	AZS

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Hoylands

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TREE PROTECTION PLAN

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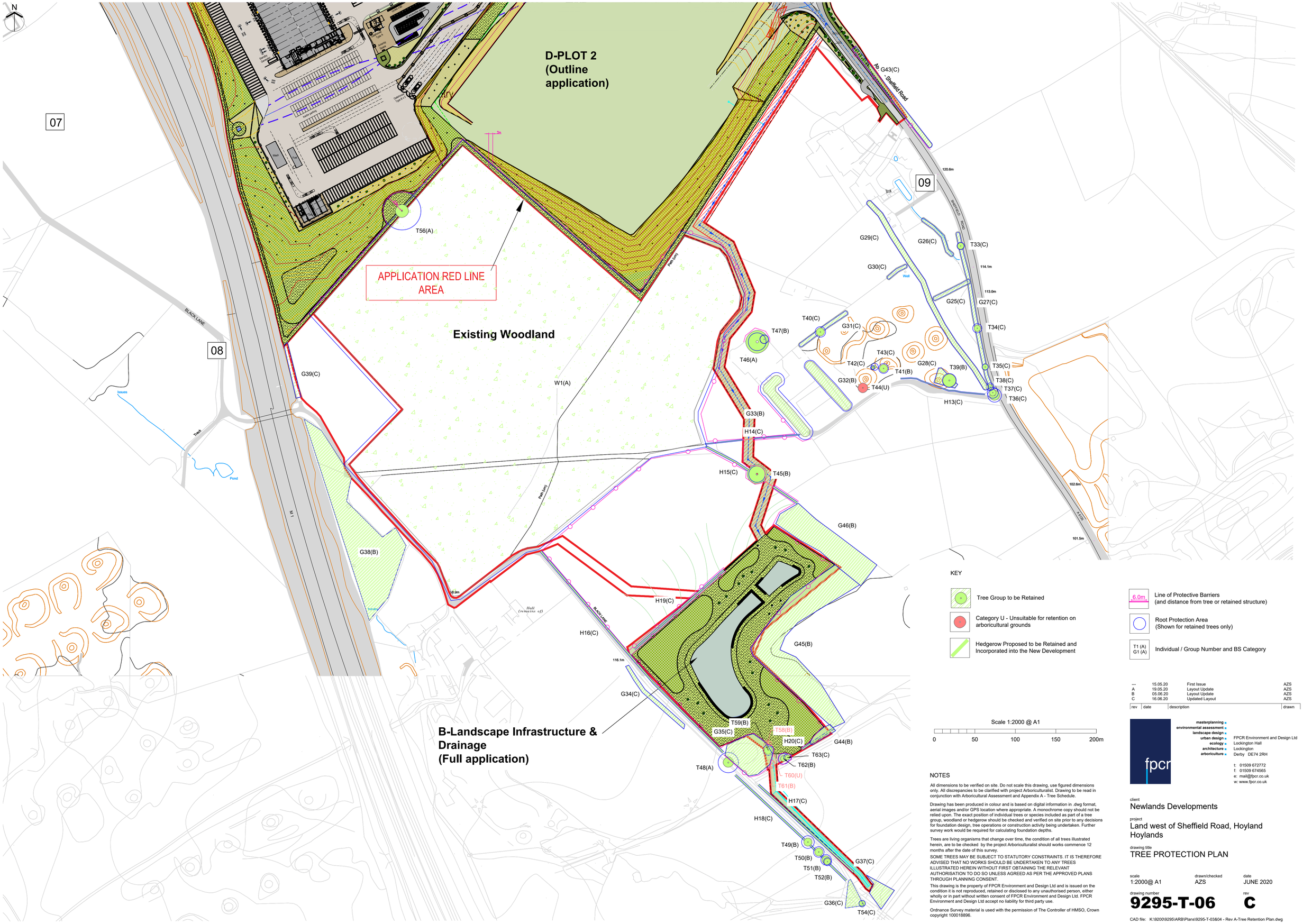
rev
C

CAD file: K:\9200\9295\ARB\Plans\9295-T-03&04 - Rev A-Tree Retention Plan.dwg



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project
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drawing title
TREE PROTECTION PLAN

scale	drawn/checked	date
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drawing number	rev
9295-T-06	C

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Appendix A - Tree Schedule

Measurements	Age Classes	Quality Assessment of BS Category	ULE (relates to BS Category)
Height - Measured using a digital laser clinometer (m)	**YNG**: Establishing, typically with good vigour and fast growth rates and strong apical dominance; c. less than 1/3 life expectancy	**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.	<10 years
Stem Dia. - Diameter measured (mm) in accordance with Annex C of the BS5837	**SM:** Semi-mature trees less than 1/3 life expectancy	**Category A -** Trees of high quality with an estimated remaining life expectancy of at least 40 years.	40+ years
Pyrus communis	**EM:** Established, typically vigorous and increasing in apical height and lateral spread; 1/3 - 2/3 life expectancy. Offers landscape significance	**Category B -** Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	20-40 years
Horse Chestnut Aesculus hippocastanum Cider Gum Eucalyptus gunni Pear Pyrus communis Contorted Willow Salix matsudana Tortuosa	**M:** Fully established over 2/3 life expectancy, generally good vigour and achieving full height potential with crown still spreading	**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.	10-20 years
	OM: Fully mature, at the extremes of expected life expectancy, vigour decreasing, declining or moribund	Sub-categories: (i) - Mainly arboricultural value (ii) - Mainly landscape value (iii) - Mainly cultural or conservation value	
	V: biological, cultural or aesthetic value comprising niche saproxylic habitat. Individuals of large proportions (stem girth) in comparison to trees of the same species/surviving beyond the typical age range for their species.	**The BS category particular consideration has been given to the following:** • 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	

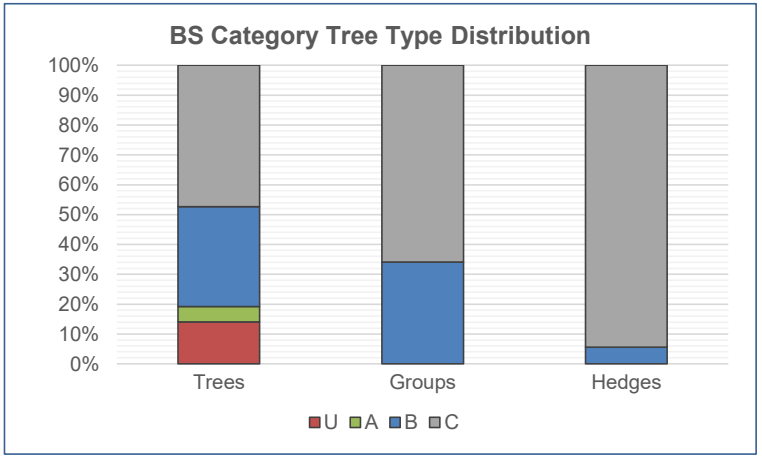
Structural Condition	Physiological Condition
Good - No significant structural defects	**Good -** No significant health problems
Fair - Structural defects that can be remediated	**Fair -** Symptoms of ill-health that can be remediated
Poor - Significant defects beyond remediation, present a risk of failure in the foreseeable future	**Poor -** Significant ill-health. Unlikely the tree will recover in the long term
Dead - Dead tree with structural integrity of tree severely compromised	**Advanced Decline / Dead -** Advanced state of decline and unlikely to recover or Dead

Root Protection Area (RPA)
• 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.

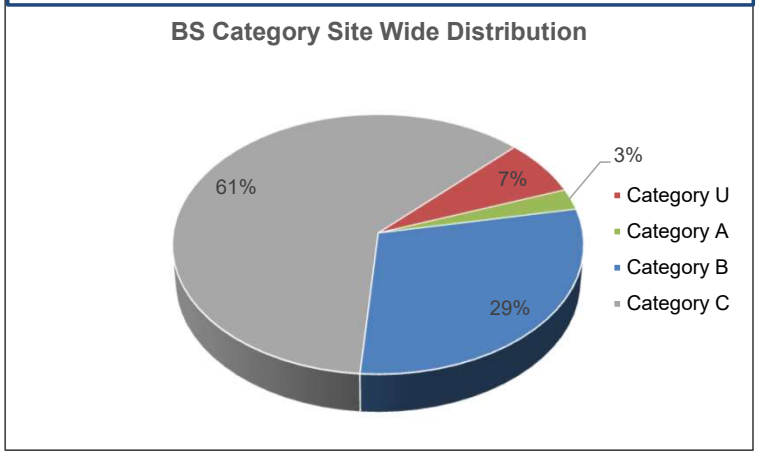
Appendix Summary

	Individual Trees	Totals	Tree Groups and Hedgerows	Totals
Category U	T6, T11, T14, T16, T20, T25, T30, T44, T60	8		
Category A	T46, T48, T56	3	W1	1
Category B	T5, T12, T15, T17, T18, T19, T21, T26, T32, T39, T41, T45, T47, T49, T50, T51, T52, T53, T55, T58, T59, T61, T62	23	G1, G4, G7, G12, G13, G15, G17, G18, G19, G20, G22, G32, G33, G38, G44, G45, G46, H5	18
Category C	T1, T2, T3, T4, T7, T8, T9, T10, T13, T22, T23, T24, T27, T28, T29, T31, T33, T34, T35, T36, T37, T38, T40, T42, T43, T54, T57, T63	28	G2, G3, G5, G6, G8, G9, G10, G11, G14, G16, G21, G23, G24, G25, G26, G27, G28, G29, G30, G31, G34, G35, G36, G37, G39, G40, G41, G42, G43, H1, H2, H3, H4, H6, H7, H8, H9, H10, H11, H12, H13, H14, H15, H16, H17, H18, H19 H20	49
	Total	62	**Total**	68

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



BS Category Site Wide Distribution shows the proportion of trees assessed in each category across the whole site which allows an



Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
INDIVIDUAL TREES										
T1	Silver Birch Betula pendula	8	est 180	3	SM	F	Characteristic for species Potential future nuisance due to close proximity to telegraph pole	15	2.2	C (ii)
T2	Hawthorn Crataegus monogyna	6	est 300	3	EM	F	Characteristic for species Crossing and rubbing branches Minor dead wood evident in the crown (<75mm)	41	3.6	C (i)
T3	Hawthorn Crataegus monogyna	6	est 200	3	EM	F	Characteristic for species Crossing and rubbing branches Minor dead wood evident in the crown (<75mm)	18	2.4	C (i)
T4	Hawthorn Crataegus monogyna	4	est 200	3	EM	F	Characteristic for species Crossing and rubbing branches Minor dead wood evident in the crown (<75mm)	18	2.4	C (i)
T5	Goat Willow Salix caprea	9	9x 300	4	M	G	Crossing and rubbing branches Included bark union Minor dead wood evident in the crown (<75mm) Multi stemmed from base	366	10.8	B (i)
T6	Elder Sambucus nigra	3	90 90	1	SM	P	Limited future potential Auricularia auricula-judae (jelly ear)	N/A	N/A	U
T7	Apple Malus domestica	5	220	3	EM	F	Basal cavity observed Crossing and rubbing branches Pollarded form(s)	22	2.6	C (i)
T8	Ash Fraxinus excelsior	9	270	4	SM	F	Characteristic for species Multi leadered form	33	3.2	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T9	Lawson Cypress Chamaecyparis lawsoniana	6	120	1	Yng	G	Characteristic for species	7	1.4	C (i)
T10	Goat Willow Salix caprea	10	300 33	5	EM	P	Basal cavity observed Branch stubs evident Broken branches evident Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted	41	3.6	C (i)
T11	Swedish Whitebeam Sorbus intermedia	5	140	3	SM	P	Limited future potential	N/A	N/A	U
T12	Blue Cedar Cedrus atlantica Glauca	10	est 400	5	SM	F	Branch stubs evident Broken branches evident Characteristic for species Multi leadered form	72	4.8	B (i)
T13	Ash Fraxinus excelsior	10	est 200 220 200 150	4	SM	F	Branch stubs evident Broken branches evident Minor dead wood evident in the crown (<75mm) Multi stemmed from base	68	4.7	C (i)
T14	Elder Sambucus nigra	3	110 110 90	2	SM	P	Compacted ground at the base Limited future potential	N/A	N/A	U
T15	English Oak Quercus robur	12	750	8	M	F	Bark wounds noted Branch socket cavities observed Branch stubs evident Broken branches evident Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Wound at base of stem to south tree including well	254	9.0	B (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T16	Hawthorn Crataegus monogyna	5	150 280	1	EM	D	Dead trees noted	N/A	N/A	U
T17	English Oak Quercus robur	10	670	6	M	F	Barbed Wire attached to stem/s Bark wounds noted Branch socket cavities observed Branch stubs evident Broken branches evident Browsing damage noted on main stem Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Wound at 1m to 1.5m on stem to south tree including well	203	8.0	B (ii)
T18	Hawthorn Crataegus monogyna	8	270 310 180	4	M	G	Basal suckers present Characteristic for species Multi stemmed from base	91	5.4	B (i)
T19	English Oak Quercus robur	12	est 450	6	EM	G	Branch stubs evident Broken branches evident Characteristic for species Minor dead wood evident in the crown (<75mm) Multi leadered form	92	5.4	B (i)
T20	Goat Willow Salix caprea	10	300 300 150 150	6	M	P	Branch socket cavities observed Branch stubs evident Broken branches evident Dieback of the crown observed	N/A	N/A	U
T21		6	210 160 320	4	M	G	Crossing and rubbing branches Minor dead wood evident in the crown (<75mm) Multi leadered form	78	5.0	B (i)
T22	Lawson Cypress Chamaecyparis lawsoniana	8	280	1	SM	F	Characteristic for species Multi stemmed from base	35	3.4	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T23	Horse Chestnut Aesculus hippocastanum	10	est 400	4	EM	P	Crossing and rubbing branches Delaminating bark on main stem Minor dead wood evident in the crown (<75mm)	72	4.8	C (i)
T24	Ash Fraxinus excelsior	7	est 150 150	3	SM	F	Base obscured Minor dead wood evident in the crown (<75mm) Multi stemmed from base Situated offsite	20	2.5	C (i)
T25	Wild Cherry Prunus avium	7	250	2	SM	D	Dead trees noted	N/A	N/A	U
T26	English Oak Quercus robur	9	340	4	SM	G	Characteristic for species Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted	52	4.1	B (i)
T27	Norway Maple Acer platanoides	11	320	N - 3 S - 3 E - 5 W - 3	SM	F	Branch stubs evident Broken branches evident Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted Minor damage to exosed roots on banking	46	3.8	C (i)
T28	English Oak Quercus robur	9	320	5	SM	P	Branch stubs evident Included bark union Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted Bifurcated at 4m up eastern most bifurcared stem fibre buckling present with delaminated bark present	46	3.8	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T29	Norway Maple Acer platanoides	9	430	6	EM	P	Bark wounds noted Branch socket cavities observed Branch stubs evident Broken branches evident Compacted ground at the base Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted Minor excavation and storage unit within RPA Soiled piled upmagainst stem	84	5.2	C (i)
T30	Norway Maple Acer platanoides	9	400	N - 7 S - 1 E - 5 W - 4	SM	P	Bark wounds noted Basal cavity observed Basal suckers present Branch socket cavities observed Branch stubs evident Broken branches evident Limited future potential Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted Previously topped at 1.5m Excavation and storage unit within rpa Crown growing into building Soil piled against stem	N/A	N/A	U
T31	Ash Fraxinus excelsior	10	160 350	N - 5 S - 3 E - 4 W - 5	SM	F	Branch stubs evident Limited future potential Minor dead wood evident in the crown (<75mm) Multi stemmed from base Pruning wounds noted Retaining wall and 2m drop 0.01m to north of tree 50cm to south hard standing car park	67	4.6	C (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T32	English Elm Ulmus procera	14	upto 600	N - 8 S - 8 E - 8 W - 1	M	F	Bark wounds noted Basal suckers present Branch socket cavities observed Branch stubs evident Broken branches evident Crossing and rubbing branches Low crown form Minor dead wood evident in the crown (<75mm) Multi stemmed from base Pruning wounds noted Retaining wall with 2m drop present 1m north of stem Tree growing into lamppost Bifurcated from 2m Hard standing within rpa to south east of stem	163	7.2	B (i)
T33	Ash Fraxinus excelsior	8	300 160 170	4	SM	F	Basal suckers present Growing from wall	65	4.6	C (i)
T34	Ash Fraxinus excelsior	8	350 320	4	SM	F	Characteristic for species Minor dead wood evident in the crown (<75mm)	102	5.7	C (i)
T35	Ash Fraxinus excelsior	8	310	4	SM	F	Characteristic for species Minor dead wood evident in the crown (<75mm)	43	3.7	C (i)
T36	Ash Fraxinus excelsior	12	350 610	6	SM	F	Characteristic for species Crossing and rubbing branches Minor dead wood evident in the crown (<75mm) Twin stemmed from base	224	8.4	C (i)
T37	Ash Fraxinus excelsior	8	570	4	M	F	Characteristic for species Minor dead wood evident in the crown (<75mm)	147	6.8	C (i)
T38	Hawthorn Crataegus monogyna	7	340 210	3	M	P	Minor dead wood evident in the crown (<75mm) Pruning wounds noted Suppressed crown form	72	4.8	C (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	9	710	8	M	F	Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Burrowing around base	228	8.5	B (i)
T40	Ash Fraxinus excelsior	9	540	5	EM	P	Basal cavity observed Branch socket cavities observed Branch stubs evident Broken branches evident Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Waterlogged ground at base	132	6.5	C (i)
T41	English Oak Quercus robur	11	420 280	5	EM	F	Characteristic for species Minor dead wood evident in the crown (<75mm)	115	6.1	B (i)
T42	Silver Birch Betula pendula	10	200 80	2	SM	P	Minor dead wood evident in the crown (<75mm) Suppressed crown form	21	2.6	C (i)
T43	Silver Birch Betula pendula	10	200 240 180	2	SM	P	Minor dead wood evident in the crown (<75mm) Suppressed crown form	59	4.3	C (i)
T44	Sycamore Acer pseudoplatanus	10	400 420	6	EM	P	Bark wounds noted Branch socket cavities observed Branch stubs evident Broken branches evident Heartwood exposed Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Pruning wounds noted Suppressed crown form	N/A	N/A	U
T45	Ash Fraxinus excelsior	15	850	12	M	F	Branch stubs evident Broken branches evident Minor dead wood evident in the crown (<75mm)	327	10.2	B (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T46	English Oak Quercus robur	19	est 480 550 550	14	M	F	Branch stubs evident Broken branches evident Characteristic for species Minor dead wood evident in the crown (<75mm) No major defects were noted	378	11.0	A (i)
T47	English Oak Quercus robur	10	est 450	5	EM	F	Branch stubs evident Broken branches evident Minor dead wood evident in the crown (<75mm) Typical crown form	92	5.4	B (i)
T48	Horse Chestnut Aesculus hippocastanum	17	Over ivy 1040	N - 7 S - 5 E - 6 W - 6	M	G	Basal suckers present Branch socket cavities observed Characteristic for species Close cultivation of the soil Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted Good vigour and form Hard packed road running to north of stem by 50cm	489	12.5	A (i)
T49	Ash Fraxinus excelsior	11	650	5	EM	F	Branch stubs evident Characteristic for species Dense ivy cover on main stem	191	7.8	B (ii)
T50	Ash Fraxinus excelsior	13	360 410	5	EM	F	Branch stubs evident Characteristic for species Dense ivy cover on main stem	135	6.5	B (ii)
T51	Ash Fraxinus excelsior	13	538	5	EM	F	Branch stubs evident Characteristic for species Dense ivy cover on main stem Overhead cables	131	6.5	B (ii)
T52	Ash Fraxinus excelsior	8	410	4	EM	F	Branch stubs evident Characteristic for species Dense ivy cover on main stem Overhead cables	76	4.9	B (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T53	Sycamore Acer pseudoplatanus	16	690	5	EM	F	Branch stubs evident Characteristic for species Dense ivy cover on main stem Exposed roots and cavity at base	215	8.3	B (ii)
T54	Ash Fraxinus excelsior	10	330	4	EM	F	Branch stubs evident Browsing damage noted on main stem Characteristic for species Dense ivy cover on main stem Overhead cables	49	4.0	C (i)
T55	English Oak Quercus robur	12	680	7	M	F	Branch socket cavities observed Branch stubs evident Broken branches evident Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Potential Roost Features (PRF) Typical crown form	209	8.2	B (i)
T56	Ash Fraxinus excelsior	15	1560	8	V	F	Branch stubs evident Broken branches evident Heartwood exposed Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Pollarded form(s) Pruning wounds noted Loss of eastern crown. Extensive decay at bowl	1720	23.4	A (iii)
T57	Ash Fraxinus excelsior	8	190 190 280	3	EM	F	Branch stubs evident Characteristic for species Multi stemmed from base No major defects were noted	68	4.7	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T58	Sycamore Acer pseudoplatanus	17	490 560	5	M	F	Bark wounds noted Basal suckers present Branch stubs evident Broken branches evident Close cultivation of the soil Minor dead wood evident in the crown (<75mm) Multi leadered form Multi stemmed from base Pruning wounds noted Bark wound 30cm x 100cm present at 1m on east side of stem	250	8.9	B (i)
T59	Ash Fraxinus excelsior	16	540	5	M	F	Basal suckers present Broken branches evident Flail damage evident Minor dead wood evident in the crown (<75mm) Rubbish rubble and debris at base of stem	132	6.5	B (i)
T60	Ash Fraxinus excelsior	16	570	N - 2 S - 6 E - 4 W - 4	M	P	Bark wounds noted Basal cavity observed Basal suckers present Minor dead wood evident in the crown (<75mm) Large wound from base to 4m with incipient decay and hollowing present on north side of stem	N/A	N/A	U
T61	Sycamore Acer pseudoplatanus	15	600	6	M	F	Branch socket cavities observed Branch stubs evident Broken branches evident Dense ivy cover on main stem Dense undergrowth at the base Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form	163	7.2	B (ii)
T62	Sycamore Acer pseudoplatanus	12	550	N - 4 S - 3 E - 2 W - 4	EM	F	Basal suckers present Characteristic for species Close cultivation of the soil Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted	137	6.6	B (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T63	Sycamore Acer pseudoplatanus	12	380	3	SM	P	Basal suckers present Characteristic for species Close cultivation of the soil Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted Sparse / thinning crown	65	4.6	C (i)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
GROUPS OF TREES										
G1	Leyland Cypress Cupressocyparis leylandii	17	est 300	4	EM / M	F	Characteristic for species Interlocking crowns Situated offsite	41	3.6	B (ii)
G2	Ash Fraxinus excelsior Horse Chestnut Aesculus hippocastanum Silver Birch Betula pendula Rowan Sorbus aucuparia Common Larch Larix decidua Leyland Cypress Cupressocyparis leylandii Norway Spruce Picea abies	8	avg 160	2	Yng / SM	F / G	Characteristic for species Group of ornamental buffer planting	12	1.9	C (ii)
G3	Apple Malus domestica	7	avg 300	2	SM / EM	P / F	Basal suckers present Dead trees noted Phellinus ignarius Willow bracket	41	3.6	C (i)
G4	Horse Chestnut Aesculus hippocastanum Cider Gum Eucalyptus gunni Pear Pyrus communis Contorted Willow Salix matsudana Tortuosa		est 300	5	SM / EM	F / G	Base obscured Group of ornamental garden planting	41	3.6	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G5	Leyland Cypress Cupressocyparis leylandii	8	upto 320	4	EM	F	Characteristic for species Interlocking crowns Maintained hedgerow Situated offsite Previously topped	46	3.8	C (ii)
G6	Ash Fraxinus excelsior English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna	8	avg 250	2	SM	F	Bark wounds noted Crossing and rubbing branches Dead trees noted Interlocking crowns Minor dead wood evident in the crown (<75mm)	28	3.0	C (ii)
G7	Hawthorn Crataegus monogyna	7	upto 270	3	Yng / SM / EM / M	F / G	Characteristic for species Crossing and rubbing branches As a group B but as individuals C	33	3.2	B (ii)
G8	Ash Fraxinus excelsior Common Lime Tilia x europaea Elder Sambucus nigra English Oak Quercus robur Field Maple Acer campestre Goat Willow Salix caprea Hawthorn Crataegus monogyna Horse Chestnut Aesculus hippocastanum Norway Maple Acer platanoides	9	avg 300	4	SM	F	Characteristic for species Low crown form Situated offsite Motorway buffer	41	3.6	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G9	Hawthorn Crataegus monogyna	3	90 90 90	2	SM	F	Characteristic for species Crossing and rubbing branches	11	1.9	C (i)
G10	Field Maple Acer campestre Hawthorn Crataegus monogyna	6	avg 160	3	SM	F	Browsing damage noted on main stem Dense undergrowth at the base Minor dead wood evident in the crown (<75mm) Outgrown hedgerow	12	1.9	C (ii)
G11	Goat Willow Salix caprea Hawthorn Crataegus monogyna Privet Ligustrum ovalifolium	4	avg 80	1	Yng	F	Multi leadered form	3	1.0	C (i)
G12	Common Lime Tilia x europaea Field Maple Acer campestre Hawthorn Crataegus monogyna Wild Cherry Prunus avium Swedish Whitebeam Sorbus intermedia	9	avg 280	4	SM	F	Bark wounds noted Basal suckers present Branch stubs evident Minor dead wood evident in the crown (<75mm) Pruning wounds noted Ornamental planted avenue Hard standing road 0.5m on west side of stem Individuals Category C as group Category B	35	3.4	B (ii)
G13	Wild Cherry Prunus avium	9	upto 350	4	SM	F	Bark wounds noted Basal suckers present Branch socket cavities observed Branch stubs evident Broken branches evident Minor dead wood evident in the crown (<75mm) Pruning wounds noted Ornamental planted avenue Hard standing road 0.5m on west side of stem Individuals Category C as group Category B	55	4.2	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G14	Field Maple Acer campestre Goat Willow Salix caprea Hawthorn Crataegus monogyna Wild Cherry Prunus avium	9	upto 350	4	Yng / SM	F	Bark wounds noted Basal suckers present Branch socket cavities observed Branch stubs evident Broken branches evident Dead trees noted Failed trees Minor dead wood evident in the crown (<75mm) Pruning wounds noted Ornamental planted avenue Individuals Category C as group Category B Understorey of hawthorn and field maple	55	4.2	C (ii)
G15	Ash Fraxinus excelsior Blackthorn Prunus spinosa Elder Sambucus nigra English Oak Quercus robur Field Maple Acer campestre Goat Willow Salix caprea Hawthorn Crataegus monogyna Horse Chestnut Aesculus hippocastanum Norway Maple Acer platanoides Hazel Corylus avellana	7	avg 160	3	Yng / SM	F / G	Basal suckers present Branch stubs evident Broken branches evident Characteristic for species Included bark union Low crown form Minor dead wood evident in the crown (<75mm) Pruning wounds noted Ornamental boundary planting Litter present at base of trees Dense understorey of hazel and blackthorn	12	1.9	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G16	Blackthorn Prunus spinosa English Oak Quercus robur Goat Willow Salix caprea	8	avg 6x 200	5	SM	P	Basal suckers present Base obscured Branch socket cavities observed Branch stubs evident Broken branches evident Crossing and rubbing branches Dense undergrowth at the base Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Multi leadered form Water ditch running through group Oak tree in group has been topped at 1m			C (i)
G17	Blackthorn Prunus spinosa Common Lime Tilia x europaea Elder Sambucus nigra English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna Horse Chestnut Aesculus hippocastanum Wild Cherry Prunus avium	8	upto 270	4	Yng / SM	F / G	Bark wounds noted Basal cavity observed Basal suckers present Branch socket cavities observed Branch stubs evident Broken branches evident Characteristic for species Dense undergrowth at the base Ornamental planted boundary group Rubbish and fly tipping at base of trees	33	3.2	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G18	Blackthorn Prunus spinosa Common Lime Tilia x europaea Goat Willow Salix caprea Hawthorn Crataegus monogyna Horse Chestnut Aesculus hippocastanum Wild Cherry Prunus avium Common Walnut Juglans regia	8	avg 340	N - 3 S - 3 E - 5 W - 3	SM	G	Broken branches evident Characteristic for species Included bark union Interlocking crowns Minor dead wood evident in the crown (<75mm) Multi leadered form Pruning wounds noted	52	4.1	B (i)
G19	Alder Alnus glutinosa	12	upto 420	5	SM / EM	G	Branch stubs evident Broken branches evident Characteristic for species Minor dead wood evident in the crown (<75mm) Pruning wounds noted 5 trees in group	80	5.0	B (ii)
G20	Ash Fraxinus excelsior Wych Elm Ulmus glabra	12	upto 400	6	SM	F	Basal suckers present Branch socket cavities observed Branch stubs evident Broken branches evident Included bark union Interlocking crowns Minor dead wood evident in the crown (<75mm) Pruning wounds noted Fence line within rpa to south Retaining wall with 2m drop present to 1m north of stems 6 trees present - 4 x elm 2 x ash	72	4.8	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G21	Ash Fraxinus excelsior Blackthorn Prunus spinosa Elder Sambucus nigra English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna Wild Cherry Prunus avium	7	avg 160	3	Yng / SM	F	Base obscured Characteristic for species Dense undergrowth at the base	12	1.9	C (ii)
G22	Ash Fraxinus excelsior Blackthorn Prunus spinosa Hawthorn Crataegus monogyna Wild Cherry Prunus avium Common Larch Larix decidua Scots Pine Pinus sylvestris	10	est 300	4	Yng / SM / EM	F	Branch stubs evident Broken branches evident Flail damage evident Hazard beam present Minor dead wood evident in the crown (<75mm) Multi leadered form Motorway buffer group	41	3.6	B (ii)
G23	Ash Fraxinus excelsior Goat Willow Salix caprea Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus Wych Elm Ulmus glabra	10	avg 240	3	Yng / SM	P / F	Bark wounds noted Basal suckers present Branch stubs evident Broken branches evident Dead trees noted Flail damage evident Interlocking crowns Minor dead wood evident in the crown (<75mm) Pruning wounds noted Situated on steep banking	26	2.9	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G24	Ash Fraxinus excelsior Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus	10	avg 240	3	Yng / SM	P / F	Bark wounds noted Basal suckers present Branch stubs evident Broken branches evident Dead trees noted Flail damage evident Interlocking crowns Minor dead wood evident in the crown (<75mm) Pruning wounds noted Boundary buffer planting to motorway	26	2.9	C (ii)
G25	Elder Sambucus nigra Hawthorn Crataegus monogyna	6	avg 100 100 100	3	M	F	Scrappy outgrown hedgerow	14	2.1	C (ii)
G26	Elder Sambucus nigra Hawthorn Crataegus monogyna	6	avg 100 100 100	3	M	F	Scrappy outgrown hedgerow	14	2.1	C (ii)
G27	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna	6	avg 100 100 100	3	M	F	Scrappy outgrown hedgerow	14	2.1	C (ii)
G28	Hawthorn Crataegus monogyna	5	upto 300	3	M	F	Sporadic mature hawthorn on bank within horse bushes	41	3.6	C (ii)
G29	Hawthorn Crataegus monogyna	5	upto 300	3	M	F	Sporadic mature hawthorn on bank within horse bushes	41	3.6	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G32	Common Lime Tilia x europaea	15	upto 600	6	M	F	Characteristic for species Minor dead wood evident in the crown (<75mm) Situated offsite Typical crown form	163	7.2	B (ii)
G33	Beech Fagus sylvatica Common Lime Tilia x europaea Horse Chestnut Aesculus hippocastanum Sycamore Acer pseudoplatanus	15	upto 800	6	M	F	Characteristic for species Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Situated offsite Typical crown form	290	9.6	B (ii)
G34	Hawthorn Crataegus monogyna English Elm Ulmus procera	6	avg 6x 90	2.5	SM	P	Outgrown hedge with dead elm throughout	22	2.6	C (ii)
G35	Ash Fraxinus excelsior Hawthorn Crataegus monogyna Horse Chestnut Aesculus hippocastanum	10	upto 500	6	M	P	Bark wounds noted Base obscured Branch socket cavities observed Broken branches evident Dense ivy cover on main stem Dense undergrowth at the base Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Potential Roost Features (PRF)	113	6.0	C (ii)
G36	Ash Fraxinus excelsior Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus	12	upto 400	5	M	P	Broken branches evident Dense undergrowth at the base Minor dead wood evident in the crown (<75mm)	72	4.8	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G37	Ash Fraxinus excelsior Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus English Elm Ulmus procera	12	upto 400	5	M	P	Broken branches evident Dense undergrowth at the base Minor dead wood evident in the crown (<75mm)	72	4.8	C (ii)
G38	Ash Fraxinus excelsior Sycamore Acer pseudoplatanus Common Larch Larix decidua	12	upto 400	5	M	F	Broken branches evident Dense undergrowth at the base Minor dead wood evident in the crown (<75mm) Fail trees within group	72	4.8	B (ii)
G39	Crack Willow Salix fragilis Elder Sambucus nigra English Elm Ulmus procera	10	upto 300	4	M	F	Broken branches evident Dense undergrowth at the base Minor dead wood evident in the crown (<75mm) Embankment planting	41	3.6	C (ii)
G40	Elder Sambucus nigra Hawthorn Crataegus monogyna	4	est 100 100 100	2	EM	F	Outgrown hedgerow material	14	2.1	C (ii)
G41	Elder Sambucus nigra Field Maple Acer campestre Hawthorn Crataegus monogyna	5	est 100 100 100	2	EM	F	Outgrown hedgerow material	14	2.1	C (ii)
G42	Elder Sambucus nigra Hawthorn Crataegus monogyna	4	est 100 100 100	2	EM	F	Outgrown hedgerow material	14	2.1	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G43	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus	4	est 100 100 100	2	EM	F	Outgrown hedgerow material	14	2.1	C (ii)
G44	English Oak Quercus robur	9	avg 350	4	SM	F	Interlocking crowns Minor dead wood evident in the crown (<75mm) Multi leadered form	55	4.2	B (ii)
G45	Ash Fraxinus excelsior Elder Sambucus nigra English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna Silver Birch Betula pendula Sycamore Acer pseudoplatanus	12	avg 280	3	Yng / SM	P / F / G	Characteristic for species Crossing and rubbing branches Dead trees noted Dense undergrowth at the base Minor dead wood evident in the crown (<75mm)	35	3.4	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G46	Ash Fraxinus excelsior Elder Sambucus nigra English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna Silver Birch Betula pendula Sycamore Acer pseudoplatanus Wych Elm Ulmus glabra	8	avg 250	3	Yng / SM	P / F / G	Characteristic for species Crossing and rubbing branches Dead trees noted Dense undergrowth at the base Minor dead wood evident in the crown (<75mm) Predominantly hawthorn and goat willow	28	3.0	B (ii)
T14	Elder Sambucus nigra	3	110 110 90	2	SM	P	Compacted ground at the base Limited future potential	N/A	N/A	U
G48	Ash Fraxinus excelsior Alder Alnus glutinosa Hawthorn Crataegus monogyna Silver Birch Betula pendula Sycamore Acer pseudoplatanus Elder Sambucus nigra	8	avg 200	2	SM	P / F	Characteristic for species Crossing and rubbing branches Minor dead wood evident in the crown (<75mm) Overhead cables Pruning wounds noted Flail damage	18	2.4	C (i)

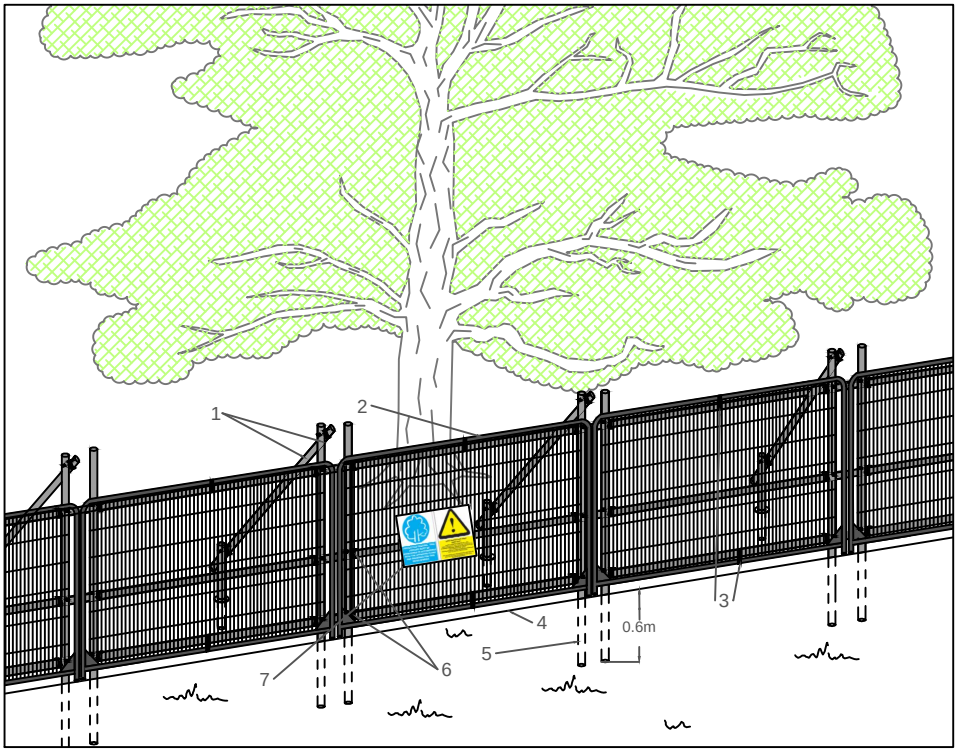
Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G49	Ash Fraxinus excelsior Elder Sambucus nigra Common Lime Tilia x europeae Hawthorn Crataegus monogyna	14	avg 400	5	EM	F	Characteristic for species Crossing and rubbing branches Minor dead wood evident in the crown (<75mm) Pruning wounds noted Basal suckers present Dense undergrowth and ivy at the base	72	4.8	B (ii)
G50	Blackthorn Prunus spinosa Hawthorn Crataegus monogyna Norway Maple Acer platanoides	8	avg 250	2	SM	G	Ornamental planting Characteristic for species Hardstanding path running through group Minor dead wood evident in the crown (<75mm)	28	3.0	B (ii)

Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
HEDGEROWS										
H1	Elder Sambucus nigra Goat Willow Salix caprea Hawthorn Crataegus monogyna	6	est 80 80 80	2	SM	P / F	Basal suckers present Gaps present in hedgerow Situated offsite Un-maintained hedgerow	9	1.7	C (i)
H2	Elder Sambucus nigra Goat Willow Salix caprea Hawthorn Crataegus monogyna	6	est 80 80 80	2	SM	P / F	Basal suckers present Gaps present in hedgerow Situated offsite Un-maintained hedgerow	9	1.7	C (i)
H3	Pyrus communis	6	est 100 100 80	3	SM	P / F	Basal suckers present Gaps present in hedgerow Un-maintained hedgerow	12	1.9	C (i)
H4	Horse Chestnut Aesculus hippocastanum Cider Gum Eucalyptus gunni Pear Pyrus communis Contorted Willow Salix matsudana Tortuosa		avg 100 100 100	2	SM / EM	P / F	Basal cavity observed Gaps present in hedgerow Outgrown hedgerow	14	2.1	C (ii)
H5	Hawthorn Crataegus monogyna	6	avg 8x 200	3	M	G	Characteristic for species Gaps present in hedgerow Historically laid but now lapsed	145	6.8	B (ii)

Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
H6	Hawthorn Crataegus monogyna	4	avg 80 80 80	1	EM	F	Gaps present in hedgerow Outgrown hedgerow	9	1.7	C (ii)
H7	Hawthorn Crataegus monogyna	4	avg 80 80 80	1	EM	F	Gaps present in hedgerow Outgrown hedgerow	9	1.7	C (ii)
H8	Blackthorn Prunus spinosa Elder Sambucus nigra Hawthorn Crataegus monogyna Wild Cherry Prunus avium Privet Ligustrum ovalifolium	7	avg 130	2	SM	P / F	Dead trees noted Gaps present in hedgerow	8	1.6	C (ii)
H9	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna	4	avg 90	2	SM	F	Dead trees noted Dense undergrowth at the base Gaps present in hedgerow Minor dead wood evident in the crown (<75mm) Outgrown hedgerow	4	1.1	C (ii)
H10	Elder Sambucus nigra Hawthorn Crataegus monogyna Holly Ilex aquifolium	2	est 50	2	Yng / SM	F	Flail damage evident Gaps present in hedgerow Interlocking crowns Maintained hedgerow	1	0.6	C (ii)
H11	Hawthorn Crataegus monogyna	1	avg 60	1	SM	F	Flail damage evident Maintained hedgerow Previously laid hedgerow	2	0.7	C (ii)
H12	Hawthorn Crataegus monogyna	1	avg 60	1	SM	F	Flail damage evident Gaps present in hedgerow Maintained hedgerow Previously laid hedgerow	2	0.7	C (ii)

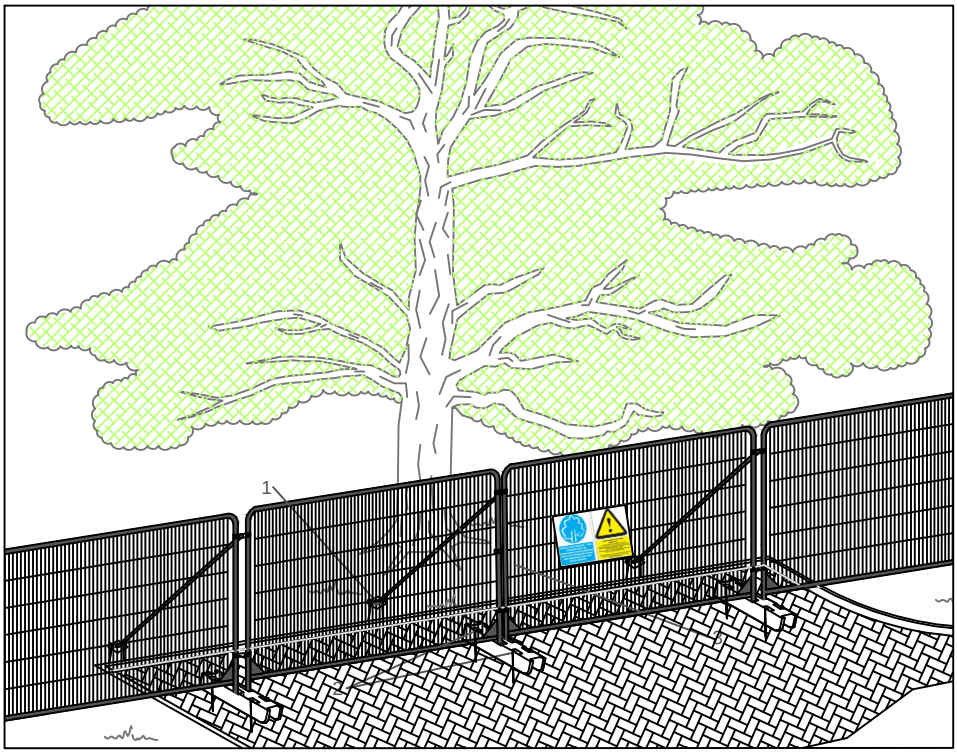
Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
H13	Hawthorn Crataegus monogyna	3	est 50	1	EM	F	Maintained hedgerow	1	0.6	C (ii)
H14	Hawthorn Crataegus monogyna	3	est 50	1	EM	F	Maintained hedgerow	1	0.6	C (ii)
H15	Hawthorn Crataegus monogyna	4	est 50 58 50	2	EM	F	Un-maintained hedgerow	4	1.1	C (ii)
H16	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna	2	est 50 58 50	1	EM	F	Maintained hedgerow			C (ii)
H17	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna	2	est 50 58 50	1	EM	F	Maintained hedgerow	4	1.1	C (ii)
H18	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn	2	est 50 58 50	1	EM	F	Maintained hedgerow	4	1.1	C (ii)
H19	Hawthorn Crataegus monogyna	3	avg 70	1	SM	G	Maintained hedgerow	2	0.8	C (i)
H20	Elder Sambucus nigra Hawthorn Crataegus monogyna	3	avg 40 40 40	2	SM	F	Un-maintained hedgerow	2	0.8	C (i)

Wood No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
WOODLANDS										
W1	Ash Fraxinus excelsior Beech Fagus sylvatica English Oak Quercus robur Goat Willow Salix caprea Hawthorn Crataegus monogyna Silver Birch Betula pendula	15	upto 400	4	EM	F	Characteristic for species Crossing and rubbing branches Interlocking crowns Minor dead wood evident in the crown (<75mm)	72	4.8	A (iii)



Standard specification for 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



Above ground stabilising systems

1. Stabiliser strut with base plate secured with ground pins
2. Feet blocks secured with ground pins
3. Construction Exclusion Zone signs

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APPENDIX B
PROTECTIVE FENCING SPECIFICATIONS

CAD file: S:\Arb resources\Basic Templates\Tree Protection\Appendix B - Protective Fencing A4.dwg

Appendix C: Fencing Contractors – Working Methodology

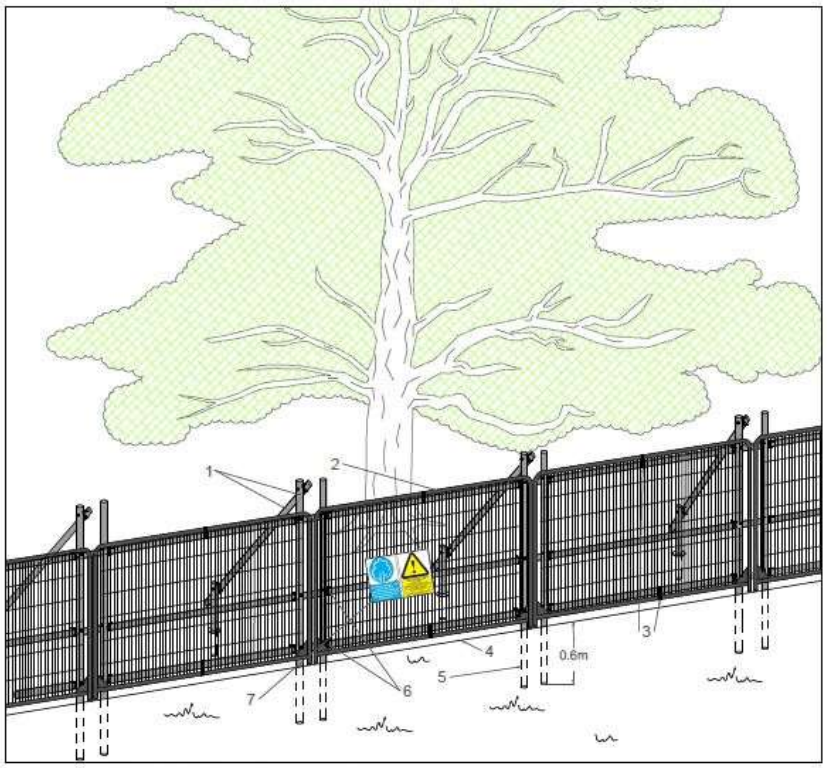
Table 1: Related Reference Material

Plan Name	Drawing Number
Tree Protection Plans	9295-T-05 9295-T-06
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

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.

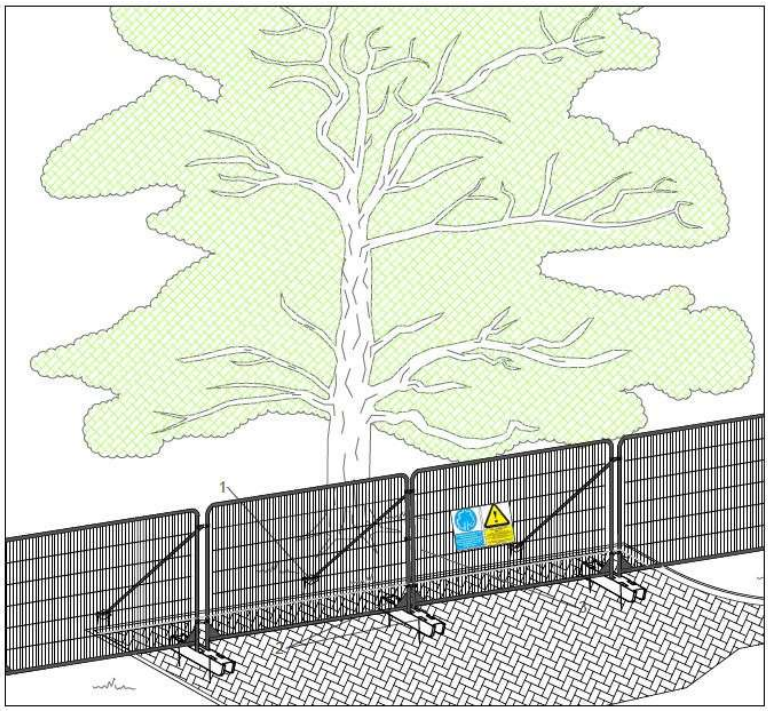
- The two horizontal rail poles shall be attached to the uprights at heights of 0.6 and 1.8 metres with clamps to each joint.

- The diagonal scaffold pole struts shall be clamped to the top rail of the scaffold framework at a 45º 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 strut with base plate secured with ground pins
2. Feet blocks secured with ground pins
3. Construction Exclusion Zone signs

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).

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.

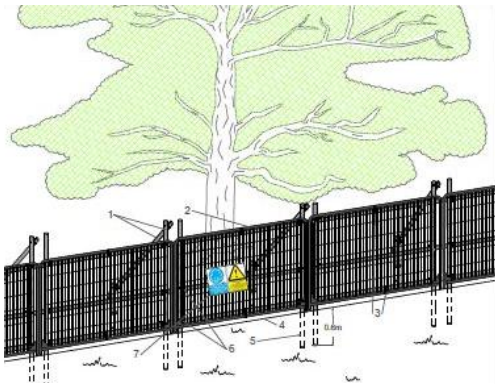
WHAT YOU NEED TO KNOW ABOUT WORKING NEAR TREES

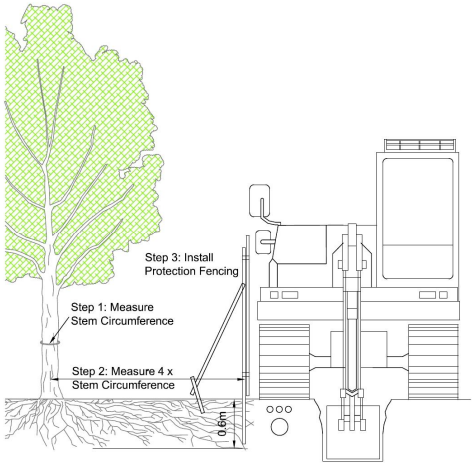
This advice note provides a brief overview of the methods of protection for trees located across the site. Compliance with these guidelines will be a requirement of all contractors working near retained trees.

Any construction works which are to be carried out near to or within the fenced off areas should be carried out in accordance with the Arboricultural Method Statement and as explained by the Site Manager during the site induction. Failure to adhere to the correct sequence, manner and timing of operations detailed in the Arboricultural 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 non consented tree removal could result in the serving of a stop notice or prosecution by the LPA.

Trees make a significant contribution to the landscape character of the development and they are to be treated as important assets. To protect these assets, tree protective fencing has been installed where required across the site.





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 of vehicles, debris or building materials or fires.
2. **Avoid** excavations, changes in ground levels or tracking of 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 (see images below) 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 accidently and inadvertently causing damage to trees as a result.

Unacceptable example of tree protection due to a lack of adequate fencing and poor site management. Note mounds of soil have been placed within the Root Protection Area.

Tree Protection Fencing which has been erected prior to the commencement of any site works and the correct signage has been provided to clearly highlight that this is a protected zone.

Please acknowledge you have read and understand this document by visiting the website http://bit.ly/2EprKu8 or scanning the QR Code on a Smartphone or Tablet.

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