Thomson
environmental
consultants

Harefield Academy, Hillingdon

Arboricultural Survey

For ISG Engineering Services Ltd

Project No.: ISG001-010

September 2023

ARBORICULTURE

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Project Number	Report No.
ISG001-010	001

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001	04.09.2023	Robert Armitage	Andrew Poynter	Andrew Poynter

Disclaimer:

1. Summary

1.1.1 ISG Engineering Services Ltd commissioned Thomson Environmental Consultants to undertake an arboricultural survey of trees within and adjacent to Harefield Academy, Hillingdon, Uxbridge, UB9 6ET.

1.1.2 The arboricultural survey was carried out in accordance with BS5837:2012 '*Trees in Relation to Design, Demolition and Construction – Recommendations'* (BS5837:2012) on the 21st August 2023.

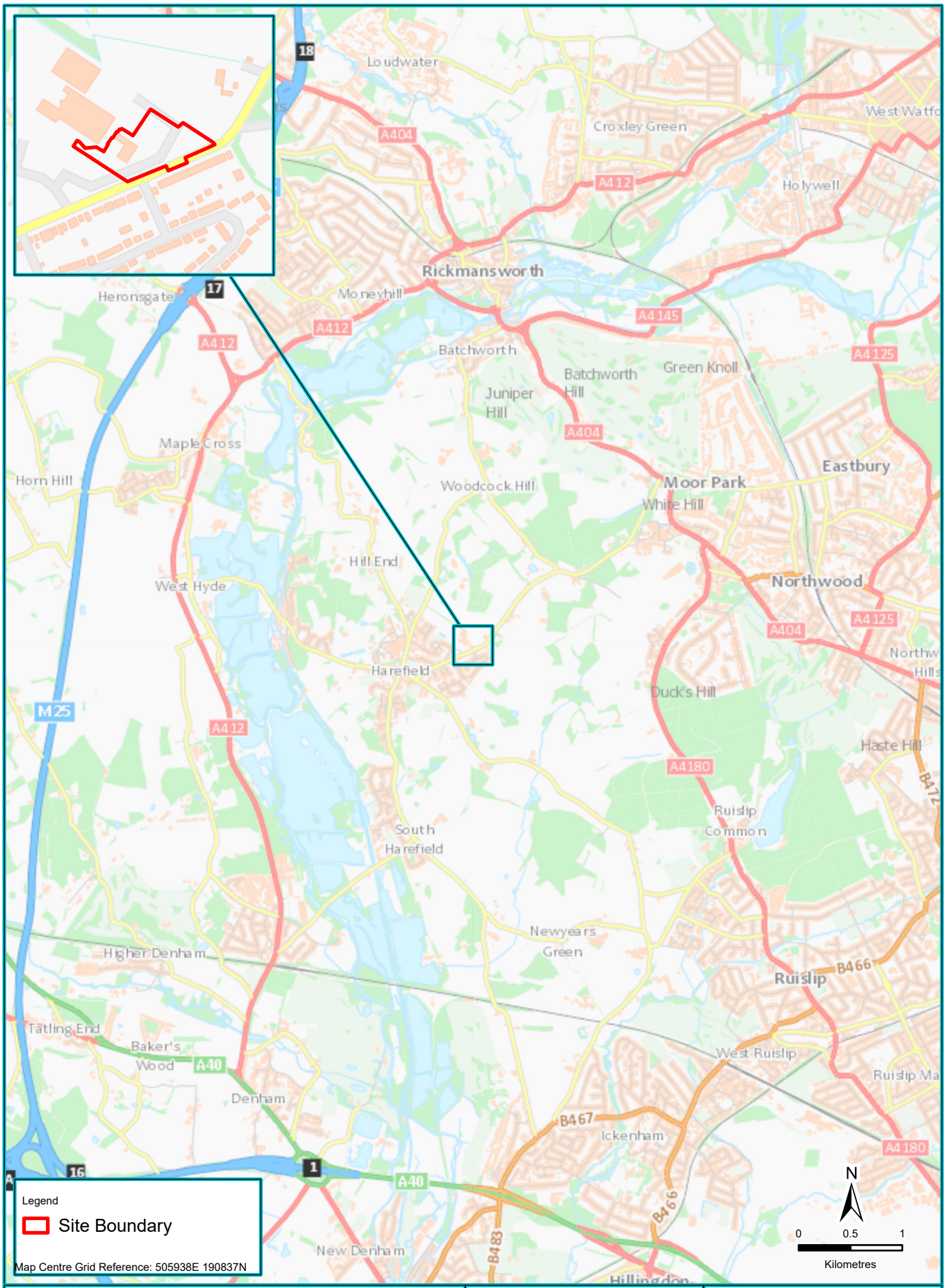
1.1.3 All trees were categorised in accordance with the cascade chart for tree quality assessment in BS5837:2012 (see Appendix 2). Trees were given a ranking of A, B or C in descending order of value and assigned one or more subcategories qualifying the basis of that value as either arboricultural, landscape or cultural. Trees with only short-term remaining value or that require immediate removal for safety or management reasons are given a U rating.

1.1.4 A total of 24 individual trees and four groups of trees were recorded during the survey, details of which are listed in the Tree Schedule at Appendix 1. This comprised of 20 Category 'B' individual trees, four Category 'C' individual trees and four Category 'C' groups of trees.

1.1.5 Category A, B and C trees represent a material consideration to development. Concerted effort should be made to retain A and B category trees within the development. While Category C trees should be retained where possible, they should not be retained where they would present a serious constraint to development.

1.1.6 Checks made on London Borough of Hillingdon Council's online interactive mapping software indicate that no trees included within this survey report are subject to any tree preservation orders and the site is not located within a conservation area. There is a tree preservation order affecting the trees along the north east boundary of the site, but the designation area is located outside the site boundary further north than tree group 'G003' of our survey.

1.1.7 In order to meet the requirements of the Local Planning Authority, an Arboricultural Impact Assessment and Arboricultural Method Statement should be undertaken once detailed plans of the proposed development are available.



Client: ISG Engineering Services Ltd		Drawing Ref: ISG001-010/403256/1	
Figure Number: 1		Scale at A4: 1:50,000	
Figure Title: Site Location		Drawn: JB	Checked: AS
		Date: 29/08/2023	Date: 29/08/2023

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Legend

- Canopy Extent of Category 'B' Tree
- Canopy Extent of Category 'C' Tree
- Root Protection Area of Tree / Group
- Extent of Tree Stems within Groups / Hedges
- Site Boundary

Map Centre Grid Reference: 505943E 190835N

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of an Arboricultural survey. The level of accuracy depends on both the size of the area involved, GPS accuracy and the detail of topographic mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning where an accurate topographical survey has not been provided to help inform the arboricultural survey.

Drawing Ref	ISG001-010/403256/1
Scale at A3	1:700
Drawn: JB	Checked: AS
Date: 29/08/2023	Date: 29/08/2023
Client	ISG Engineering Services Ltd
Figure Number	2
Figure Title	Tree Constraints Plan (TCP01)

2. Introduction

2.1 Development Background

2.1.1 ISG Engineering Services Ltd is providing consultancy services to support the development proposals at Harefield Academy, Hillingdon, Uxbridge, UB9 6ET and instructed Thomson Environmental Consultants Ltd to carry out an arboricultural survey of the site.

2.1.2 There are a number of trees within the site and adjacent to the site boundary that may be affected by future development proposals.

2.1.3 The site is located on an approximately 1.6 Hectare area of land (Map Centre Grid Reference: 505943E 190835N), shown on Figure 1. The area affected by the development is hereafter referred to as 'the site'.

2.2 Brief and Objectives

2.2.1 The objective of the survey and report was to assess the condition of the existing trees on site and any off-site trees that might be affected by future development, providing sufficient information to enable decisions to be made on potential design layout and tree retention for the proposed development. The brief was to complete:

- An Arboricultural Survey of trees within or immediately adjacent to the site, in line with BS5837:2012;
- A desktop exercise to determine whether trees on site are subject to a Tree Preservation Order or are covered by Conservation Area restrictions; and
- An Arboricultural Report detailing our survey methods, results and recommendations, including the Tree Schedule and Tree Constraints Plan, which should be used to inform feasibility studies and design options at an early stage.

2.2.2 This report details the methods and results of the tree survey and provides the Tree Schedule and Tree Constraints Plan.

2.3 Limitations

2.3.1 The information provided within this report and in the accompanying Tree Schedule covers only those trees that were inspected and their condition at the time of survey.

2.3.2 A full hazard assessment has not been made and therefore no guarantee is given as to the structural integrity of any of the trees on site.

2.3.3 Whilst this report makes general observations on the long-term potential of the trees surveyed, trees are dynamic organisms and subject to continual change, thus this report should not be relied upon for the purposes of development for more than 12 months from the date of survey.

3. Methodology

3.1 Desk Study

3.1.1 As part of the instruction to Thomson, London Borough of Hillingdon Council's interactive mapping software was checked for any Tree Preservation Orders and Conservation Area designations affecting the sites on the 4th of September 2023.

3.2 Tree Survey

3.2.1 All significant trees at the site were assessed for their potential to be affected by the development proposals. Significant trees are defined as those with a trunk diameter of greater than 75mm at 1.5m above ground level according to the survey methodology outlined in BS5837:2012. Off-site or third-party trees have been included where it is likely they would influence the development.

3.2.2 The trees surveyed were inspected from ground level only and no internal investigations were undertaken.

3.2.3 Trees were categorised as single trees or those that formed part of a distinct group such as a woodland or hedgerow. Groups can be defined as cohesive arboricultural features, either aerodynamically (for example, companion shelter), visually or culturally including for biodiversity (BS5837:2012). The information recorded for each tree can be seen in Table 1.

Table 1: Information recorded for each tree during survey

Attribute	Description
Tree No.	Numerical reference given in sequential order starting at number '1', corresponding with the numbers as set out in Figure 2; trees are given the prefix 'T', groups 'G', woodlands 'W' and hedgerows 'H'.
Species	The common names are based upon on site identification and expressed according to *Tree Guide* (Johnson & More, 2004).
Height	Measured approximately from ground level with the aid of a clinometer and shown in metres (m).
Stem Diameter	Diameter measured at approximately 1.5m above ground level. In the case of multi-stemmed trees, measurement is taken of each stem at 1.5m, where there are two to five stems; or a mean stem diameter at 1.5m, where there are more than five stems. Given in millimetres (mm).
Canopy Spread	Maximum branch spread measured in metres from the centre of the trunk in the direction of the four cardinal points of the compass (or an average can be given if branches demonstrate an even spread).
Crown Clearance	Height above ground level of the first significant branch and direction of growth, and the height above ground level of the overall canopy.

Attribute	Description
Age Class	• Young – less than one-third natural life span spent; • Early-Mature – between one-third and two-thirds natural life span spent; • Mature – greater than two-thirds life span completed; • Over-mature – mature, and in an overall state of decline; • Veteran – surviving beyond the typical age range for the species with a high value in terms of conservation and amenity.
Physiological Condition	Overall health, condition and function of the tree in comparison to a 'normal' example of the species of a similar age; e.g. 'good', 'fair', 'poor' or 'dead'. If deemed necessary, these gradings may be elaborated upon in the 'Comments' section.
Structural Condition	The overall structural condition of the tree including the roots, butt, trunk, limbs and their unions, and the presence of any structural defects, decay or pathological defects. • Good - no significant visible structural defects with a form typical for the species; • Fair - a specimen with only minor defects that are easily remedied or of no long term significance; • Poor - significant and irremediable physiological or structural defects that may lead to early or premature decline; • Hazardous - significant structural defects of such a degree that there is a risk of imminent collapse or failure. If deemed necessary, these gradings may be elaborated upon in the 'Comments' section.
Comments	Comments have been made, where appropriate, relating to location, health and condition, structure and form, estimated life expectancy, conservation value and amenity value within the local landscape.
Preliminary Management Recommendations	Tree work that should be undertaken for good arboricultural management, regardless of the requirements of the development.
Estimated Remaining Contribution	The estimated time, in years, that the tree will provide a safe contribution to the site (i.e. <10, 10+, 20+ and >40).

Quality Assessment

3.2.4 During the survey, the trees were assessed qualitatively, categorising the quality and value of the trees based on arboricultural, landscape and cultural (including conservation) features. Each tree was then placed into one of four categories. The four categories can be seen in Table 2. Definitions for these categories can be found in Appendix 2.

Table 2: Quality assessment categories

Category	Description
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 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.

3.2.5 Trees categorised as either A, B or C, were also allocated up to three subcategories. The subcategories chosen for each tree are dependent on the main reasons for selection of the particular category grading. The three subcategories are as follows:

1. Category grading based on mainly arboricultural qualities;
2. Category grading based on mainly landscape qualities; and
3. Category grading based on mainly cultural values, including conservation.

Root Protection Areas (RPAs)

3.2.6 Trees that are selected for retention on the site could be at risk of damage during construction, such as root damage during excavations for foundations or services, or any ground-working for landscaping. Further impacts on the trees may potentially result from vehicle movements and materials storage, including root severance, compaction of the soil and exclusion of air and water to the soil. The risk of tree damage is minimised if construction activities are planned to avoid the roots of trees.

3.2.7 The area of ground adjacent to each tree or group of trees that contains the majority of the roots can be calculated using the equation provided in the BS5837:2012. This Root Protection Area (RPA) is a radius around the tree of 12 times the stem diameter for a single stem. For multi-stemmed trees of two to five stems and greater than five stems, the cumulative stem diameters to be multiplied by 12, are calculated as per the equations in Table 3.

Table 3: Equations for the calculation of the RPA of multi-stemmed trees

Number of stems	Equation
Two to five	$\sqrt{((\text{stem diameter } 1)^2 + (\text{stem diameter } 2)^2 \ldots + (\text{stem diameter } 5)^2)}$
More than five	$\sqrt{(\text{mean stem diameter})^2} \times \text{number of stems}$

3.2.8 The RPA for each tree in the Tree Schedule has been calculated and, where relevant, has been adjusted to take into account site conditions. For example, when a tree is growing in a confined root space adjacent to an existing building or other solid structure that would restrict root growth in that direction, the RPA has been adjusted accordingly (see Figure 2).

3.2.9 The RPA for tree groups is calculated using the stem diameter of the largest tree within the group. The RPA radius is calculated as per Section 3.2.7 and then used to define the RPA by following the outline of the group's extent.

3.2.10 Where the calculated RPA exceeds 707m^2, it has been capped at this figure, as per BS5837:2012. This is equivalent to a circle with a radius of 15m or a square with approximately 26m width and length.

Date of Survey

3.2.11 The site was visited and the survey undertaken on 21st August 2023 by Arboricultural Consultant James Baker.

Weather Conditions

3.2.12 At the time of survey, it was clear and overcast. All deciduous trees were in full leaf.

4. Results

4.1 Desk Study

4.1.1 Checks made on London Borough of Hillingdon Council's online interactive mapping software indicate that no trees included within this survey report are subject to any tree preservation orders and the site is not located within a conservation area.

4.1.2 There is a tree preservation order affecting the trees along the north east boundary of the site, but the designation area is located outside the site boundary further north than tree group 'G003' of our survey.

4.1.3 Before any works to trees within the site are carried out, those proposing to carry out the works should satisfy themselves that all appropriate consents are in place to avoid any potential breach of legislation.

4.2 Tree Survey

4.2.1 A total of 24 significant individual trees and four groups of trees located within or immediately adjacent to the site boundary were recorded during the survey. A breakdown of categories can be found in Table 4. The locations of all trees, RPAs, retention categories and reference numbers are shown on Figure 2. A detailed description of each tree is given in the Tree Schedule in Appendix 1.

Table 4: Number of significant trees allocated to each retention category.

Tree Category	Number of Trees	Tree Numbers	Number of Groups	Group numbers	Total
A	0	-	0	-	0
B	20	T001 T002 T003 T004 T005 T006 T007 T008 T009 T010 T011 T012 T014 T016 T019 T020 T021 T022 T023 T024	0	-	20
C	4	T013 T015 T017 T018	4	G001 G002 G003 G004	8
U	0	-	0	-	0
Total	**24**		**4**		**28**

Root Protection Areas (RPAs)

4.2.2 The RPAs for the trees and groups surveyed can be seen in Figure 2. The actual RPAs, in m^2, for the individual trees surveyed are shown in Appendix 1.

5. Recommendations

5.1 General Tree Retention Guidance

5.1.1 All trees on site should be considered for retention where possible, with the greatest consideration given to Category A trees and then B trees where these specimens occur, and finally Category C trees. However, the retention of Category C trees should not be at the expense of an efficient design. Category U trees are recommended for removal for sound arboricultural reasons. Where trees of any category are on adjacent land, and removal is required for the development, permission must be sought from the landowner before any works can be undertaken.

5.2 Site Specific Guidance

5.2.1 Category A trees are high quality trees worthy of retention. They are excellent examples of typical form for their species and removal of these trees would adversely affect the amenity value of the local landscape. However, on this occasion, no Category 'A' trees were recorded during the survey.

5.2.2 Category B trees are also in good condition and are important features within the locality. Loss of these trees would adversely affect the landscape and reduce the canopy cover in the area. Category 'B' tree features are shown with a blue canopy on the attached Tree Constraints Plan at Figure 2.

5.2.3 Category C trees could be a constraint to any future development and removal or some or all of the trees may be necessary if the site is to be developed. Whilst the loss of these Category C trees will have an impact on the arboricultural value of the site, it will provide an opportunity to plant suitable species of a better quality with a longer useful life expectancy. Over time, this will increase the arboricultural and landscape value of the site and the impact of the tree losses will be negated. Category 'C' tree features are shown with a grey canopy on the attached Tree Constraints Plan at Figure 2.

5.2.4 Category U trees are recommended for removal due to them having less than 10 years useful life expectancy. Category 'U' tree features are shown with a maroon canopy on the attached Tree Constraints Plan at Figure 2.

5.3 Tree Protection

5.3.1 For those trees selected to be retained as part of the redevelopment, it will be necessary to maintain Construction Exclusion Zones (CEZs) during the construction phase. The purpose of CEZs is to prevent damage to the tree roots from severance, compaction of the soil, or exclusion of air and water to the soil.

5.3.2 The CEZ should cover the area around the RPAs of all trees at the site that are not directly affected by the works. The CEZ should be maintained by suitable stout fencing (see Appendix 3) and identified by marking with suitable notices (see Appendix 5) or adequate ground protection suitable to withstand any likely loading. The fencing should be fit for the purpose of excluding construction activity and remain rigid and complete throughout the duration of the works. If the ground protection is intended for pedestrian movements, a single thickness of scaffold boards on top of a compressible layer laid onto a geotextile may be acceptable; however, if intended for wheeled or tracked construction traffic, the ground protection should be designed by an engineer.

5.3.3 Where CEZs overlap with existing areas of tarmac, restricted working may be allowed and may not require protection by fencing. Such areas should, however, be clearly identified as restricted working areas within the CEZ by markings on the ground and notices. Within restricted working areas in CEZs, construction activities should be limited to surfacing works only. Strictly no digging should be allowed within these areas, except in cases where root-sensitive excavation techniques have been recommended in an Arboricultural Method Statement.

5.3.4 An adequate water and air supply to roots should be provided for all trees both during and after construction. This should include preventing impermeable surfacing from being allowed to cover more than 20% of the RPA.

5.4 General Recommendations

5.4.1 The following points are made as general recommendations:

- Building lines should be kept outside the RPA where possible. Limited use of RPAs may be made for parking, drives or hard surfaces, subject to advice from a qualified arboriculturist;
- Wherever possible, service runs should be routed outside the RPAs. If this is not possible, they should be kept together and trenchless techniques should be used. At all times where services pass within an RPA, detailed plans showing the proposed routing should be drawn up in conjunction with an arboriculturist.
- On residential developments consideration must be given to future tree growth and orientation (BS5837:2012), i.e., adverse shading and blocked views from windows, which may lead to pressure to fell or remove trees in the future. Wherever possible, the windows of primary rooms should be orientated to avoid any potential conflict with tree canopies;
- A full ecological survey should be undertaken in order to determine the presence of any protected species; and
- An Arboricultural Impact Assessment and Arboricultural Method Statement should be produced once detailed plans for the development are available.

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6. Bibliography

6.1.1 British Standards Institution (2012) BS5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*. BSI, London.

6.1.2 British Standards Institution (2010) BS 3998:2010 *Recommendations for Tree Work.* BSI, London.

6.1.3 Plant Health Service (2012) *Biosecurity Guidance* Forestry Commission, Edinburgh

6.1.4 Johnson, O. & More, D. (2004) *Collins Tree Guide*. London: HarperCollins.

6.1.5 Lonsdale, D. (1990) *Principles of Tree Hazard Assessment and Management*. The Stationery Office, London.

6.1.6 Matheny, N. & Clark, J.R. (1998) *Trees and Development.* ISA, Champaign, IL.

6.1.7 Mattheck, C. & Breloer, H. (1994) *The Body Language of Trees.* The Stationery Office, London.

6.1.8 National Joint Utilities Group (NJUG) (2007) NJUG Volume 4: *Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees*. NJUG, London.

6.1.9 National Tree Safety Group (2011) *Common Sense Risk Management of Trees* Forestry Commission, Edinburgh

6.1.10 Patch, D. & Holding, B. (2007) Arboricultural Practice Note 12: *Through the Trees to Development.* London: AAIS.

6.1.11 Robertson, J, Jackson, N & Smith, M (2006) *Tree Roots in the Built Environment.* The Stationery Office, London.

6.1.12 Rose, B. (2020) Guidance Note 12*: The use of cellular confinement systems near trees. A guide to good practice*. The Arboricultural Association.

Appendix 1 - Tree Schedule

Tree/ Group No	Species	Height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution (years)	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
T001	hornbeam; Carpinus betulus	8	190.00	3	3	3	3	0 N	0	Young	20+	Good	Good	Dense canopy, adjacent to a car park	None	B 1	16.32	2.28
T002	fastigiate pedunculate oak; Quercus robur 'Fastigiata'	8	140.00	2	2	2	2	0 W	0	Young	20+	Good	Good	Well-formed tree, adjacent to a car park	None	B 1	8.86	1.68
T003	fastigiate pedunculate oak; Quercus robur 'Fastigiata'	8	140.00	2	2	2	2	0 W	0	Young	20+	Good	Good	Well-formed tree, adjacent to a car park	None	B 1	8.86	1.68
T004	fastigiate pedunculate oak; Quercus robur 'Fastigiata'	8	140.00	2	2	2	2	0 W	0	Young	20+	Good	Good	Well-formed tree, adjacent to a car park	None	B 1	8.86	1.68
T005	fastigiate pedunculate oak; Quercus robur 'Fastigiata'	6	140.00	2	2	2	2	0 W	0	Young	20+	Good	Good	Well-formed tree, adjacent to a car park	None	B 1	8.86	1.68
T006	fastigiate pedunculate oak; Quercus robur 'Fastigiata'	8	140.00	2	2	2	2	0 W	0	Young	20+	Good	Good	Well-formed tree, adjacent to a car park	None	B 1	8.86	1.68
T007	manna ash; Fraxinus ornus	7	140.00	3	3	3	3	2 S	2	Young	20+	Good	Good	Well-formed tree	None	B 1	8.86	1.68
T008	field maple; Acer campestre	5	130.00	3	3	3	3	2 S	2	Young	20+	Good	Good	Well-formed car park tree	None	B 1	7.64	1.56

T009	field maple; Acer campestre	5	130.00	3	3	3	3	2 S	2	Young	20+	Good	Good	Well-formed car park tree	None	B 1	7.64	1.56
T010	field maple; Acer campestre	5	130.00	3	3	3	3	2 S	2	Young	20+	Good	Good	Well-formed car park tree	None	B 1	7.64	1.56
T011	hornbeam; Carpinus betulus	7	210.00	4	4	4	4	0 E	0	Semi-mature	20+	Good	Good	Very low drooping crown, adjacent to a footpath	None	B 1	19.94	2.52
T012	field maple; Acer campestre	5	130.00	3	3	3	3	2 S	2	Young	20+	Good	Good	Well-formed car park tree	None	B 1	7.64	1.56
T013	ash; Fraxinus excelsior	9	320.00	6	6	6	6	2 S	2	Early mature	10+	Fair	Fair	Off site tree unable to fully inspect, canopy is showing signs of Ash die back	None	C 1	46.31	3.84
T014	pedunculate oak; Quercus robur	9	280.00	5	5	5	5	2 S	2	Early mature	20+	Good	Good	Off site tree unable to fully inspect	None	B 1	35.45	3.36
T015	ash; Fraxinus excelsior	10	260.00	5	5	5	5	2 S	2	Early mature	10+	Poor	Good	Off site tree unable to fully inspect, showing signs of ash die back	None	C 1	30.57	3.12
T016	pedunculate oak; Quercus robur	11	300.00	5	5	5	5	2 W	2	Early mature	20+	Fair	Fair	Off site tree unable to fully inspect	None	B 1	40.70	3.60
T017	crack willow; Salix fragilis	7	210.00	3	3	3	3	1 W	1	Early mature	10+	Fair	Fair	Growing adjacent to the boundary fence	None	C 1	19.94	2.52

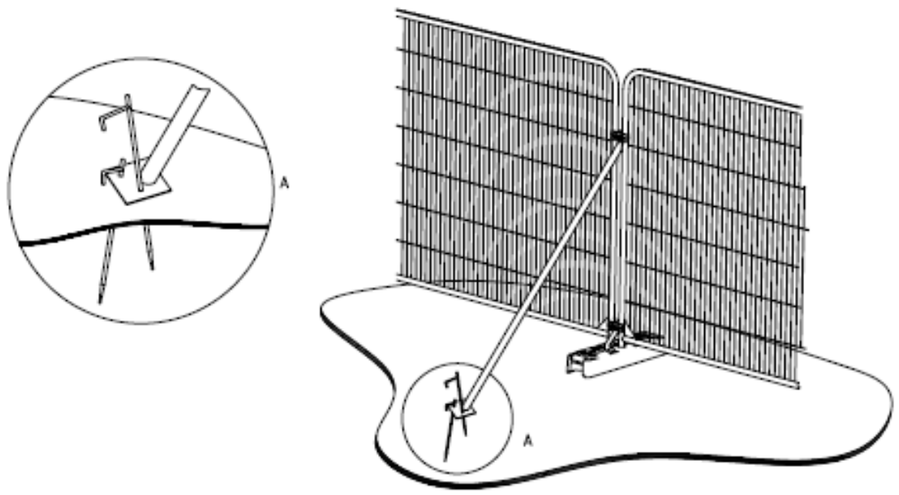
T018	goat willow; Salix caprea	7	220.00	3	3	3	3	0 S	0	Early mature	10+	Fair	Fair	Growing adjacent to the boundary fence	None	C 1	21.89	2.64
T019	pedunculate oak; Quercus robur	21	750.00	8	8	8	8	3 S	3	Over-mature	20+	Good	Good	Off-site tree unable to fully inspect	None	B 1	254.37	9.00
T020	pedunculate oak; Quercus robur	21	600.00	8	8	8	8	3 S	3	Mature	20+	Good	Good	Off-site tree unable to fully inspect	None	B 1	162.79	7.20
T021	pedunculate oak; Quercus robur	19	500.00	8	8	8	8	3 S	3	Mature	20+	Good	Good	Off-site tree unable to fully inspect	None	B 1	113.05	6.00
T022	fastigiate pedunculate oak; Quercus robur 'Fastigiata'	7	120.00	1	1	1	1	2 E	2	Young	20+	Good	Good	Set within a court yard, recently planted tree	None	B 1	6.51	1.44
T023	fastigiate pedunculate oak; Quercus robur 'Fastigiata'	7	120.00	1	1	1	1	2 E	2	Young	20+	Good	Good	Set within a court yard, recently planted tree Set within a court yar, recently planted tree	None	B 1	6.51	1.44
T024	fastigiate pedunculate oak; Quercus robur 'Fastigiata'	7	120.00	1	1	1	1	2 E	2	Young	20+	Good	Good	Set within a court yard, recently planted tree	None	B 1	6.51	1.44
G001	ash; Fraxinus excelsior / sycamore; Acer pseudoplatanus / hawthorn; Crataegus monogyna / hornbeam; Carpinus betulus / pedunculate oak; Quercus robur	9	200	4	4	4	4	-		Semi-mature	20+	Good	Good	Mixed species group, adjacent to a footpath and with a boundary fence running through the middle of it.	None	C	-	2.40

G002	hornbeam; Carpinus betulus	1	75	1	1	1	1	-	0	Early mature	20+	Good	Good	Previously maintained hedge	None	C	-	0.90
G002	hornbeam; Carpinus betulus	1	75	1	1	1	1	-	0	Early mature	20+	Good	Good	Previously maintained hedge	None	C	-	0.90
G003	ash; Fraxinus excelsior / common dogwood; Cornus sanguinea / oak species; Quercus sp. / hawthorn; Crataegus monogyna / blackthorn; Prunus spinosa	5	100	2	2	2	2	-	1	Early mature	20+	Good	Good	Mixed species group, unable to fully inspect due to being off site trees	None	C	-	1.20
G004	hornbeam; Carpinus betulus / hazel; Corylus avellana	3	75	2	2	2	2	-	0	Early mature	20+	Good	Good	Gorup set within a court yard	None	C	-	0.90

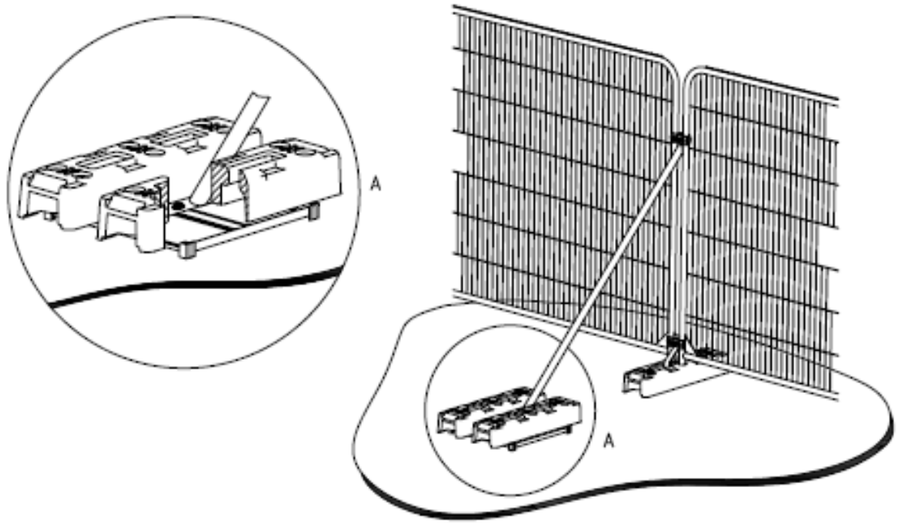
Appendix 2 – Table of Quality Assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have serious, irremediable, structural defects, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which might be desirable to preserve			DARK RED
	1 Mainly arboricultural values	**2 Mainly landscape values**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or of formal or semi-formal arboricultural features (e.g. the dominant and/or principle trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	MID BLUE
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	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY

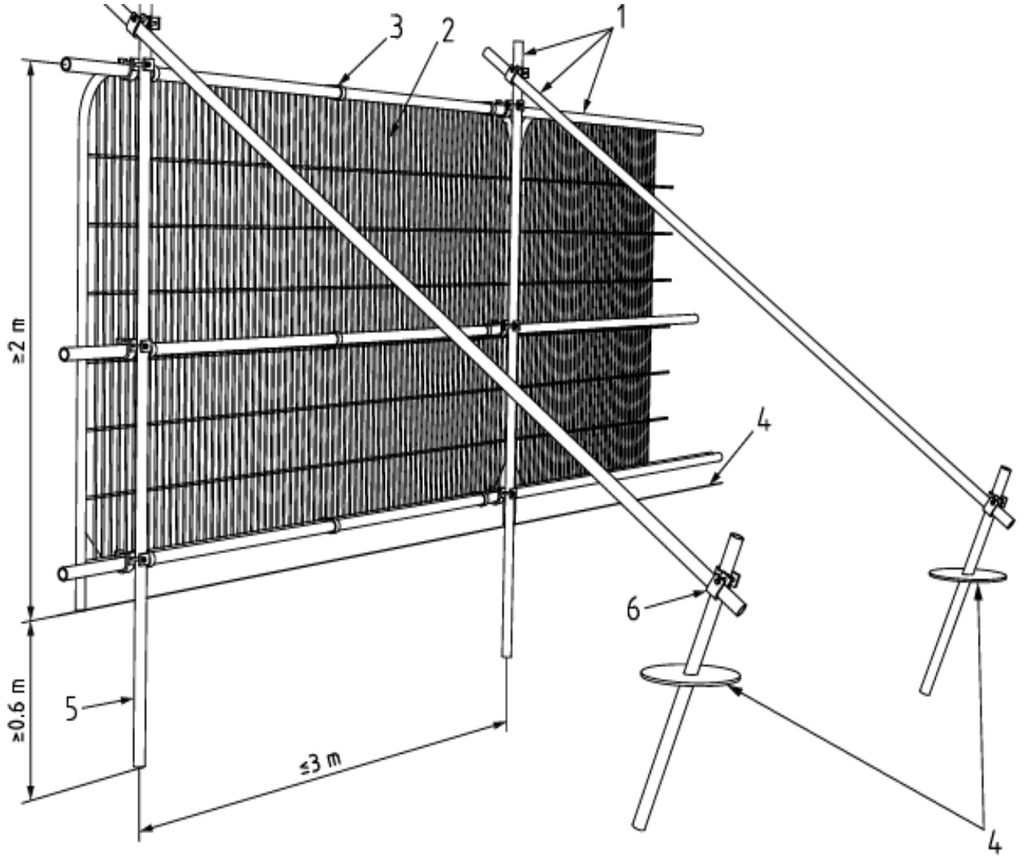
Appendix 3 – Example of Protective Fencing



a) Stabilizer strut with base plate secured with ground pins



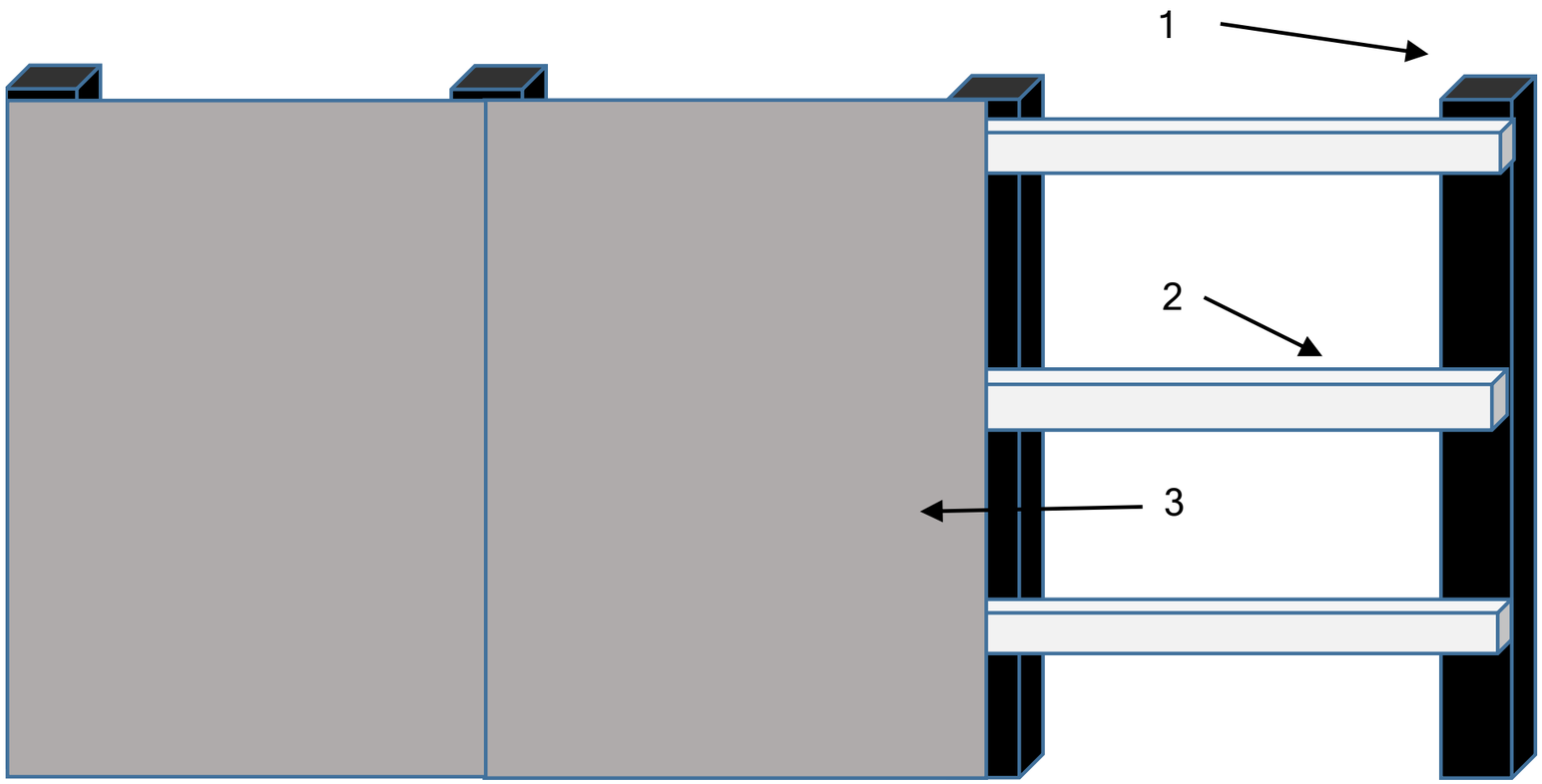
b) Stabilizer strut mounted on block tray



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Appendix 4 - Example of Protective Fencing



1. 100mm x 100mm timber posts at 1.2m centres

2. Three 100mm x 50mm timber rails

3. 12mm WBP Virola hardwood through plywood framed panels

Appendix 5 - Tree Protection Fencing Notice