

Arboricultural Method Statement

RIBA Stages 4 & 5

Forest Hill School, London

A Report To: Labosport Limited Report Number: RT-MME-181796-03 Date: March 2025



 Middlemarch Environmental Ltd, Triumph House, Birmingham Road, Allesley, Coventry, CV5 9AZ







Report	Report Verification						
Report Version	Date	Completed by:	Checked & Approved by:				
Final	13/03/2024	Andrew Hastings FdSc MArborA Senior Arboricultural Consultant	Stefan Harrison BSc (Hons) MArborA Senior Arboricultural Consultant				

Declaration of Compliance

This study has been undertaken in accordance with British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations'.

Disclaimer

Middlemarch accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared. It should be noted that, whilst every effort is made to meet the client's brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Validity of Data

The findings of this study are valid for a period of 12 months from the date of survey. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified and experienced arboriculturist to assess any changes to the trees, groups, and hedgerows on site and to inform a review of the conclusions and recommendations made.

It should be noted that trees are dynamic living organisms that are subject to natural changes as they age or are influenced by changes in their environment. As such following any significant meteorological event or changes in the growing environment of the trees they should be re-assessed by a suitably qualified and experienced arboriculturist.

This Arboricultural Method Statement has been produced following a review of a fixed approved development layout for the site, based on data provided by the client. The methods of work described herein will be a requirement of all relevant contractors associated with the development proposals.



On Site Monitoring Regime & Contact Details

All operations detailed within this AMS will be monitored by the Principal Contractor. The Principal Contractor will ensure that specifications within this document are followed (this will be built into the contract specification) and that the Project Arboriculturist will be contacted for advice in relation to works near to retained trees. The Project Arboriculturist for the site is:

Name: Andrew Hastings Position: Senior Arboricultural Consultant

Mobile: 07485 903 943

Email: andrew.hastings@middlemarch.eco

Action	Project Arboriculturist Attendance Required
Pre-commencement site meeting / toolbox talk / induction	\checkmark
Audit timetable	×
RIBA Stage 5 - Enabling Works (Demolition)	
Tree Surgery	\checkmark
Site set up and logistics	\checkmark
Establishment of Demolition Exclusion Zone	×
Topsoil Stripping / Subsoil Regrading	✓
Demolition of Structures and Removal of Hard Surfaces	\checkmark
RIBA Stage 5 - Main Works (Construction)	-
Establishment of Construction Exclusion Zone (CEZ)	\checkmark
Ground Protection Measures	×
Construction of Structures within the RPA / CEZ	\checkmark
Working space to construct new buildings within RPAs	×
Installation of utilities within RPAs	×
RIBA Stage 6 – Handover and Close Out	
Removal of tree protection measures	\checkmark
Tree Safety Assessment for handover	\checkmark



Responsibilities

It is the responsibility of the Principal Contractor to ensure that the planning conditions attached to the planning consent are always adhered to and that a monitoring regime regarding tree protection is adopted on site.

The Principal Contractor will be responsible for contacting the Local Planning Authority should any issues are raised related to the trees on site.

If pruning works to trees beyond the agreed scope within this Method Statement are required at any time, then permission must be sought from the Local Planning Authority prior to commencement. All tree surgery works must be carried out in accordance with BS3998.

The Principal Contractor will ensure the build sequence is appropriate to ensure that no damage occurs to retained trees during the construction processes. Protective measures will remain in position until completion of the construction phase of development and will only be removed to allow the commencement of soft landscaping works.

The protection measures and signs will always be maintained in position and checked daily by a designated person on site under the responsibility of the Principal Contractor.



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1. Introduction

1.1 Project Background

This Arboricultural Method Statement was commissioned by Labosport Limited to accompany a planning application for development at Forest Hill School, London. A survey of the trees on site and within influencing distance of the boundaries was undertaken on the 5th of February 2025 as part of a Preliminary Arboricultural Assessment (PAA) to aid design and avoid unnecessary tree removal.

An Arboricultural Impact Assessment (AIA) was subsequently undertaken to identify the potential impact of the development on the existing trees surveyed during the PAA in accordance with British Standard 5837:2012 *'Trees in Relation to Design, Demolition and Construction - Recommendations'* (hereafter referred to as BS5837).

This Arboricultural Method Statement has been compiled to provide the information necessary to comply with RIBA Stages 4 & 5 including:

- Audit schedule
- Specific tree protection measures
- Specific tree-friendly construction operations
- Tree pruning specification
- Arboricultural Clerk of Works (ACoW) supervision

1.2 Site Description, Drawings and Appendices

Attribute	Description
National Grid Reference	TQ 35730 72278
Topography	Flat, with banked areas to the northern and eastern boundary extents.
Tree Cover	Medium and low-quality Individual trees and groups of trees, planted and ornamental.
Drawings attached	Tree Survey Plan – C181796-01-01 Tree Retention Plan – C181796-02-01 Tree Protection Plan – C181796-03-01
Appendices	Appendix A: Tree Schedule Appendix B: Tree Protection Barrier Sign Appendix C: Tree Protection Barrier Diagram Appendix D: Ground Protection

Table 1.1: Summary of Site and Surroundings



1.3 Proposed Development

The proposed development of the site includes the construction of a new MUGA sports pitch with associated infrastructure for floodlighting and perimeter fencing.

1.4 Documentation Provided

This statement is based upon the information provided by the client, in addition to information collected by Middlemarch during the Preliminary Arboricultural Assessment, as detailed below.

Author	Document	Drawing Number	Date
LaboSport	Proposed Layout	24 001 01	04.03.25
LaboSport	Block Plan	24 0663 03	04.03.25

 Table 1.2: Documentation Provided



2. Statutory Designation

2.1 Tree Preservation Order and Conservation Area Protection

A desk-based study was undertaken to identify if any of the trees present within or near the site are affected by statutory constraints as detailed below.

Statutory Constraint	Present	Source	Details
ТРО	×	London Borough of Lewisham consultation	None present
Conservation Area	×	London Borough of Lewisham GIS map	None present
Ancient Woodland	×	Multi Agency Geographical Information for the Countryside (MAGIC)	Not present



Where a tree preservation order, conservation area or ancient woodland applies to trees within the assessment area, statutory constraints will apply to the development in respect of trees.

No works must be undertaken on the protected trees without prior permission from the Local Authority unless authorised as part of an approved planning application. Works include pruning, topping, lopping, uprooting or wilful damage or wilful destruction of these trees. Any proposed pruning works not currently approved will need to be fully specified and agreed within a future planning application.

2.2 Protected Species

Bats

Mature trees often contain cavities, hollows, peeling bark or woodpecker holes which provide potential roosting locations for bats. Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017)¹. They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981², as amended. Consequently, causing damage to a bat roost constitutes an offence.

¹ HM Government – The National Archives (2017) [online] The Conservation of Habitats and Species Regulations 2017. Available at: https://www.legislation.gov.uk/uksi/2017/1012/contents/made

² HM Government – The National Archives 2017. *Wildlife and Countryside Act 1981*. [online] Available at: http://www.legislation.gov.uk/ukpga/1981/69/contents



Generally, should the presence of a bat roost be suspected whilst completing works on any trees on site then an appropriately licensed bat worker should be consulted for advice.

Birds

Trees offer potential habitat for nesting birds which are protected under the Wildlife and Countryside Act (WCA) 1981, as amended. Some species (listed in Schedule 1 of the WCA) are protected by special penalties. This legislation makes it an offence to intentionally or recklessly damage or destroy an active bird nest or part thereof.

As the trees on, and adjacent, to the site provide potential habitat for nesting birds all tree work should ideally be completed outside the nesting bird season (Generally March to September).

If this is not possible then the vegetation should be subject to a nesting bird inspection by a suitably experienced ecologist prior to commencement of works. If any active nests are identified then the vegetation, and a defined buffer zone, will need to remain in place until the young have naturally fledged.



3. Arboricultural Method Statement

3.1 Introduction

The following sections of this report detail the specific protection measures, working methodologies and pruning requirements to be adopted as part of the demolition and construction phases of the project.

The principal contractor must ensure that they read and understand all of the following sections prior to commencement of site occupation.

Pre-commencement site meeting and site inductions

A pre-commencement site meeting involving the Project Arboriculturist and Principal Contractor will be undertaken at the beginning of the Enabling Works Phase, Main Construction Phase, Post Construction Phase.

Details of tree protection and methods of working around trees will be included within site inductions to new members of site staff. A copy of this document and the related Tree Protection Plan will be kept on site and referred to by operatives working near retained trees.

Monitoring/Audits

An inspection audit will be implemented by the Project Arboriculturist once the protective measures have been installed and prior to site occupation to ensure they provide the level of protection required for retained trees. Feedback will be provided to the Local Planning Authority Arboricultural Officer on completion of this visit and monthly audits of the tree protection measures will be undertaken by the Project Arboriculturist to ensure they remain in position and fit for purpose.

Use of Subcontractors

The Principal Contractor will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any retained tree. If any issues arise in relation to the retained trees the Project Arboriculturist will be contacted for advice.

3.2 Enabling Works

Tree Work

All tree work should conform to BS3998:2010 and be completed prior to the installation of the tree protection measures and site occupation by demolition or construction contractors.

Tree/ Group/ Hedgerow Reference	Species	BS5837 Category	Retained	Comments
G2*	Mixed species	С	√/x	Partial removal required and lateral pruning to facilitate the installation of the MUGA pitch. Minimal lateral eastern and northern crown pruning to be specified as part of the pre commencement site meeting in liaison with the principal contractor and project arboriculturist to ensure no unnecessary pruning is undertaken.



Tree/ Group/ Hedgerow Reference	Species	BS5837 Category	Retained	Comments	
Т5	Goat willow	С	\checkmark	Branch tips pruning laterally to the southern crown for perimeter fencing installation.	
Т9	Norway maple	В	\checkmark	Branch tips pruning laterally to the southern crown for perimeter fencing installation.	
T13	English oak	В	\checkmark	Branch tips pruning laterally to the eastern crown for perimeter fencing installation.	
T14	English oak	В	\checkmark	Branch tips pruning laterally to the eastern crown for perimeter fencing installation.	
G4	Lawson cypress.	В	\checkmark	Branch tips pruning laterally to the eastern crown for perimeter fencing installation.	

Table 3.1: Trees to be Removed or Pruned

Site Setup, Compound, Materials Storage and Vehicle Parking

The principal contractor has confirmed the location of the site compound, material storage and contractor vehicles parking will be contained within the footprint of the new MUGA pitch development hard surfaced area, and as result outside of the RPAs of retained trees and its establishment is unlikely to result in harm to retained trees.

Topsoil Stripping / Subsoil Regrading

Where regrading works are to be carried out within the RPAs of retained trees in the northeast corner of the development for the re-formation of the new pitch subbase, the works must be supervised by the Project Arboriculturist. No machinery must be located or stored within the RPAs of retained trees and all work must be carried out from the perimeter of RPA, working towards the trees where necessary in a precautionary manner. The spoil created from these works will not be stored within the RPA. Uncovered roots need to be assessed by the Project Arboriculturist. If deemed necessary, minor roots (<25 mm in diameter) uncovered by the works shall be pruned using clean, sterilised pruning saw or secateurs, leaving as small a pruning wound as possible. If a major root (>25 mm in diameter) is found, then works will be redesigned to accommodate any large roots found.

3.3 Main Works (Construction)

Construction Exclusion Zone

Protective barriers will be positioned to define the Construction Exclusion Zone (CEZ). Signs will be installed on the barriers to inform site contractors of the importance of the tree protection measures and no works that cause physical damage to retained trees, compaction of the soil or severance of tree roots will occur within any exclusion zone. The extent of the CEZ encompasses the Root Protection Area (RPA) and / or tree canopy, whichever is the greatest.

No works, including storage of construction materials shall take place within the Construction Exclusion Zone as defined by the protective barriers.

The proposed location of the protective barriers surrounding the CEZ is identified on the Tree Protection Plan attached. The barriers will remain in place until completion of the demolition phase and will be adjusted as required to form the Construction Exclusion Zone (CEZ) prior to the next phase.



Ground Protection Measures

Ground protection measures will be utilised across multiple areas of the development and are clearly marked on the attached Tree Protection Plan drawing, C181796-03-01.

Ground protection for works carried out within retained trees RPAs will be a combination of the extensive existing hard surfacing and where required within the RPAs that are not already hard surfaced a suitable ground protection product must be used, a specification and installation methodology of this type of product can be found within the attached Appendix D: Ground Protection. All ground protection shall support the expected loads in accordance with the Structural Engineers recommendations to avoid soil compaction.

Foundations within RPAs

The construction of the floodlight columns will require a foundation socket excavation within the RPA of G2 at the northwest corner of the MUGA pitch construction area. The foundation of the floodlight column will be located at the periphery of the RPA of G2 within the footprint of the existing hard surfaced sports pitch, and it is considered that root development is likely to have been restricted in that location, however, the combined hand dig/mechanical excavation will be carried out under the supervision of the project arboriculturist to the following methodology as detailed below:

- 1. Prior to works commencing, the area of 'excavation will be marked out.
- 2. The contractors will work from outside the RPA of retained trees on the existing hard surface, and within the RPA on the temporary ground protection which will be a suitable specification for the expected loading of either pedestrian or machinery required to complete the works. The project engineer will determine the loading and specify the appropriate temporary ground protection for installation before the works begin.
- 3. With the use of hand tools, including a pneumatic breaker the marked 500mm square area of the existing hard surface and stone subbase shall be removed, and when the subsoil level is reached, hands tools and air lance will be used to further excavate to a depth of 750mm. The project arboriculturist will clean prune roots found with a diameter of 25mm or less back the wall of the foundation hole with secateur's or a pruning saw to facilitate clearance, to reach the required depth 2m, the contractor will proceed with caution and under supervision with a combination of hand tools and a mechanical excavator.
- 4. Before the concrete is poured, the hole will be lined with a non-permeable material to avoid the leaching of toxic chemicals in the adjacent soil, so as not to adversely affect any surrounding rooting structure.

Tree protection fencing, and ground protection measures as detailed on the Tree Protection Plan, will be required during the works to prevent soil compaction.

Removal of Hard Surfaces

The removal of existing hard surfaces within the RPAs of T5, T7, T11, T13, T14, T16, G2 and G4 is required to facilitate the laying of the new MUGA pitch.

With the exception of the deeper excavation in the north east corner of the pitch as detailed in the 'topsoil stripping / subsoil regrading' section of this report, no reduction level change into the soil and rooting structure of these trees' RPAs is expected as the design of the new pitch



installation will be a replacement of the existing subbase and existing hard surface, therefore, no change to the existing conditions of the trees' RPAs is likely.

Removal of the existing hard surface in the RPAs of these trees will be carried out under the supervision of the project arboriculturist to the following methodology as detailed below:

- 1. Prior to works commencing, the areas of excavation in the RPAs will be marked out.
- 2. The contractors will work from outside the RPA of retained trees on the existing hard surface, and within the RPA on the ground protection which will be to a suitable specification for the expected loading of either pedestrians or machinery required to complete the works. The project engineer will determine the loading and specify the appropriate ground protection measure for installation before the works begin.
- 3. With the use of hand tools, including a pneumatic breaker, the marked areas of the existing hard surface and stone subbase shall be removed to the required 340mm depth, and the reformation of the new subbase shall be installed before the final porous finish surface and synthetic playing surface is laid.

Tree protection fencing, and ground protection measures as detailed on the Tree Protection Plan, will be required during the works to prevent soil compaction.

Perimeter Fencing Installation

All existing perimeter fencing is to be removed, and new fencing installed in the same position and on areas of existing hard surfacing. 300mm diameter x 450mm deep augured holes at 2.5m centres, will be the construction method for the new fencing, and the post hole works will be completed in the presence of the project arboriculturist to ensure that no post holes are located with 2m of a retained trees stem. The project arboriculturist will direct the contractor to hand dig post holes with the use of hand tools and an air lance where it's considered by the project arboriculturist that rooting structure is present and affected, relocation of post holes may also be required.

Installation of utilities within RPAs

The installation of new subterranean utilities to provide power to the floodlight columns will be contained within a trench located in the pitch footprint, and outside of the RPAs of retained trees, no impact to the RPAs of retained trees is foreseen at the time of writing, if any design change of these subterranean utilities installation is made affecting the RPAs of retained, the project arboriculturist must be contacted to advise on the methodology of works and supervise those works to avoid unnecessary root damage and loss.

3.4 Post Construction Works

Removal of Protective Barriers

Protective barriers will be removed once all external main construction works have been completed to allow the completion of soft landscaping. Barriers shall be removed carefully to ensure no damage to retained trees occurs.



Soft Landscaping

All soft landscaping within the exclusion zone will be undertaken by hand and in accordance with BS8545³.

A 500 mm radius from any tree stem will remain uncovered by turf or other planting to allow penetration of water and air into the soil. A propriety mulch will be applied to a depth of 100mm to inhibit weed and growth, reduce groundwater evaporation, resist and mitigate soil compaction, reduce maintenance requirements and act as a slow-release fertilizer.

3.5 Handover and Close Out

Tree Safety Assessment

This BS5837:2012 survey is not a full or thorough assessment of the risk posed by trees on site, and though not specified within this report, a post-development tree risk assessment is advised prior to handing over the site to the client for final use, to ensure all retained trees are still in suitable condition to provide an acceptably low level of risk, and to highlight any potential hazards which may require attention.

All retained trees should positively contribute to the new development and should be included as part of an inspection plan to ensure the long-term safety of site users.

³ British Standards Institution. (2014). *British Standard 8545:2014, Trees: from nursery to independence in the landscape – Recommendations.* British Standards Institution, London.





Lege	Legend		NOTES	Project Forest Hill School		
0	Tree location and stem diameter		All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with Project Arboriculturist. Drawing to be read in conjunction with Preliminary Arboricultural Assessment and Tree Schedule.	Drawing Tree S	urvey Plan	
	Category B		The positions of trees and their current crown spread, root protection area and shade pattern (where appropriate) havenbeen shown on the Tree Survey Plan.	Client	posport	
	Category C		All survey data is based on a topographical survey where possible, supplied by the client. Where topographical information has not identified tree positions	Drawing Number	Revision	
	Category U		or Ordnance Survey mapping has been utilised, trees have been positioned using GPS and aerial photography to provide approximate locations in	Scale @ A3	Date	- 2
	- Current canopy extent		relation to existing surrounding features. Further confirmation of tree and hedgerow locations through a topographical survey of the site is recommended to ensure future design accuracy. The original of this drawing was produced in colour - a monochrome copy	1:500 Approved By	Drawn By	817
<u> </u>	- Root Protection Area		should not be relied upon. The exact position of individual trees or species included as part of a tree	АН	BD	- 8
×	Dead 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 in			0-1-
0	Newly planted tree		accordance with current Building Regulations requirements. Trees are living organisms that change over time, the condition of all trees		DLEMARCH	2
	Indicative tree shadow		illustrated herein, are to be checked by the Project Arboriculturist should works commence 12 months after the date of this survey. TREES INCLUDED DURING THE ASSESSMENT MAY BE SUBJECT TO CALL DOW CONDITIONING ILLUST DUEDEFORT ADVICED TURING OF ADVICED ADVICED TURING AND ADVICED ADVICED TURING OF ADVICED ADVICED TURING AND ADVICED ADVICED TURING OF ADVICED ADVICED ADVICED ADVICED ADVICED ADVICED ADVICED TO ADVICED ADVICED ADVICE			
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Lege	nd	NOTES	Project Forest Hill School		
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	Category C	All survey data is based on a topographical survey where possible, supplied by the client. Where topographical information has not identified tree positions or Ordnappe Survey magning has been utilised trees have been positioned	Drawing Number C181796-02-01	Revision	0
	Category C group to be removed	using GPS and aerial photography to provide approximate locations in relation to existing surrounding features. Further confirmation of three and hedgerow locations through a topographical survey of the site is	Scale @ A3 1:500	Date March 2025	181
'	Current canopy extent	recommended to ensure tuture design accuracy. The original of this drawing was produced in colour - a monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree	Approved By AH	AW	796
	Root Protection Area	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.			-02
×	Dead tree	Further survey work would be required for calculating foundation depths in accordance with current Building Regulations requirements. Trees are living organisms that change over time, the condition of all trees illustrated herein are to be checked by the Project Arboriculturist should		DLEMARCH	<u>-</u> 01
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	Proposed site layout	THROUGH PLANNING CONSENT. This drawing is the property of Middlemarch and is issued on the condition it is not reproduced, related or disclosed to any unauthorised person	C.admin@middlem This map is reproduced from the Ordnance Survey of The Controller of His Maiesty's Stationary Office	material with the permission of Ordnance Survey on behalf	
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	Current canopy extent			hedgerow locations through a topographical survey of the site is recommended to ensure future design accuracy.	1:500 Approved By	Drawn By	March 2025	- 13
	Root Protection Area			The original of this drawing was produced in colour - a monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree	AH		BD	- 20
×	Dead 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. Europe sumewurder would be required for calculating foundation deaths in	\bigcirc			
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	Existing hard surface to provide ground protection			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	Triumph House, Birmingha T:(E:admin@middl	m Road, Alle 1676 525880 amarch-envir	sley, Coventry CV5 9AZ	
	Temporary ground protection		и	THROUGH PLANNING CONSENT. This drawing is the property of Middlemarch and is issued on the condition it is not reproduced, retained, or disclosed to any unauthorised person, either wholly or in part without written consent of Middlemarch. Middlemarch accepts no liability for third party use.	This map is reproduced from the Ordnance S of The Controller of His Majesty's Stationary Crown copyright and m Lice © Crown copyright an	rvey material with the Office. © Crown copyr y lead to prosecution the Number: 10004051 database rights 2025	permission of Ordnance Survey on behalf ght. Unauthorised reproduction infringes of civil proceedings. Ordnance Survey	-



Appendix A - Tree Schedule

Measurements	Age Class	Overall Condition	Root Protection Area (RPA)
Height - measured from ground level at base of stem/s (m).	YNG: Juvenile trees that have been recently planted.	G - Good: Trees with only a few minor defects and in good overall health needing little, if any attention.	 The RPA column gives the required area (m²). The RPA Radius column gives the radius (m) of an equivalent circle. The RPA is calculated using the formulae described in paragraph 4.6.1 of British Standard
Stem Dia Diameter measured (mm) in accordance with Annex C of the BS5837.	SM: Semi-mature, trees upto 1/3 life expectancy.	F - Fair: Trees with minor, but rectifiable, defects or in the early stages of stress from which it may recover.	area in order for a tree to be retained.
Crown - crown spread estimated radially from the main stem (m).	EM: Early mature, trees 1/3 – 2/3 life expectancy.	P - Poor: Trees with major structural and/or physiological defects such that it is unlikely the tree will recover in the long term.	
Abbreviations Est - Estimated stem diameter Avg - Average stem diameter Max - Maximum stem diameter	M: Mature trees, upto 2/3 life expectancy.	D - Dead: Trees no longer alive. This could also apply to trees that are dying and unlikely to recover.	
	OM: Over mature, declining or moribund trees of low vigour.	In the assessment, of the BS category, partice • The health, vigour and condition of each tree • The presence of any structural defects in ea • The size and form of each tree and its suitat • The location of each tree relative to existing features	ular consideration has been given to the following e ch tree and its future life expectancy bility within the context of a proposed development site features e.g. its screening value or landscape
	V: Veteran, tree possessing certain attributes relating to veteran trees.	• Age class • Life expectancy	



Structural Condition Quality Assessment of Retention Category The following has been considered when inspecting structural condition: Category U - Trees in such a condition that they cannot • The presence of fungal fruiting bodies around the base of the tree or on the realistically be retained as living trees in the context of the stem, as they could possibly indicate the presence of possible internal decay. current land use for longer than 10 years. Soil cracks and any heaving of the soil around the base. Category A - Trees of high guality with an estimated remaining Any abrupt bends in branches and limbs resulting from past pruning. life expectancy of at least 40 years. • Tight or weak 'V' shaped forks and co-dominant stems. · Hazard beam formations and other such biomechanical related defects (as described by Claus Mattheck, Body Language of Trees HMSO Research for Category B - Trees of moderate quality with an estimated Amenity Trees No. 4 1994). remaining life expectancy of at least 20 years. Cavities as a result of limb losses or past pruning. Broken branches or storm damage. Category C - Trees of low quality with an estimated remaining Canker formations. life expectancy of at least 10 years, or young trees with a stem • Loose or flaking bark. diameter below 150mm. Damage to roots. Basal, stem or branch / limb cavities. Sub-categories: (i) - Mainly arboricultural value Crown die-back or abnormal foliage size and colour. (ii) - Mainly landscape value Any changes to the timing of normal leaf flush and leaf fall patterns. (iii) - Mainly cultural or conservation value **BS5837 category: Individuals**









Appendix A - Summary

	Individual Trees	Totals	Tree Groups	Totals
Category U	T10	1		0
Category A		0		0
Category B	T1, T3, T6, T9, T12, T13, T14, T18, T19, T20, T21	11	G3, G4	2
Category C	T2, T4, T5, T7, T8, T11, T15, T16, T17	9	G1, G2, G5, G6, G7, G8	6
	Total	21	Total	8

	Hedgerows	Totals	Woodlands	Totals
Category U		0		0
Category A		0		0
Category B		0		0
Category C		0		0
	Total	0	Total	0



			Crown		Stom	C	rown	Radi	us					DDA		
Tree No	Species	Height (m)	Clearance (m)	No. of Stems	Dia. (mm)	N	Е	s	w	Age Class	Structure	Vigour	RPA (m)	Radius (m)	Cat	Comments
T1	English oak	12.0	3.0	1	380	3.0	3.0	3.0	3.0	ЕМ	F	F	72	4.8	B 1,2	Pruning wounds observed Pollarded form Minor deadwood in the crown Tree is located off site but overhangs the study area Building within the rooting area Hard surfaces within the rooting area
T2	English oak	13.0	6.0	2	300 320	3.0	3.0	3.0	3.0	EM	Ρ	F	92	5.4	C 1,2	Pruning wounds observed Pollarded form Minor deadwood in the crown Included unions observed Hard surfaces within the rooting area Branch stubs observed Tree is located off site but overhangs the study area
T3	London plane	16.0	5.0	1	500	4.0	4.0	4.0	4.0	ЕМ	Ρ	F	113	6.0	B 1,2	Branch socket cavity observed Branch stubs observed Building within the rooting area Hard surfaces within the rooting area Area of included bark observed Included unions observed Limited inspection due to access Minor deadwood in the crown Pruning wounds observed Pollarded form



			Crown		Ctore	С	rown	Radi	ius							
Tree No	Species	Height (m)	Clearance (m)	No. of Stems	Dia. (mm)	N	Е	S	w	Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
T4	Ash	11.0	5.0	1	850	2.5	2.5	2.5	2.5	Μ	Ρ	F	327	10.2	C 1,2	Branch stubs observed Epicormic growth observed in the crown Included unions observed Limited inspection due to access Minor deadwood in the crown Pollarded form Pruning wounds observed
T5	Goat willow	7.0	2.0	6	490	3.0	3.0	3.0	3.0	EM	Ρ	F	113	6.0	C 1,2	Basal epicormic growth observed Branch stubs observed Epicormic growth on the main stem Epicormic growth observed in the crown Area of included bark observed Hard surfaces within the rooting area Included unions observed Minor deadwood in the crown
T6	Norway maple	12.0	3.0	1	410	5.0	3.0	3.0	4.0	EM	F	F	81	5.1	B 1,2	Branch stubs observed Area of included bark observed Included unions observed Minor deadwood in the crown Typical crown form Hard surfaces within the rooting area
T7	Plum	4.5	2.5	1	280	1.0	2.0	3.0	3.0	EM	Ρ	F	41	3.6	C 1,2	Apical dieback Branch socket cavity observed Branch stubs observed Hard surfaces within the rooting area Included unions observed Area of included bark observed Minor deadwood in the crown Pruning wounds observed



Tree			Crown		Stom	С	rown	Radi	ius					DDA		
Tree No	Species	Height (m)	Clearance (m)	No. of Stems	Dia. (mm)	N	Е	s	w	Age Class	Structure	Vigour	RPA (m)	Radius (m)	Cat	Comments
Т8	Norway maple	8.0	1.5	1	300	2.5	3.0	3.0	2.5	SM	Ρ	Ρ	41	3.6	C 1,2	Apical dieback Basal epicormic growth observed Branch stubs observed Epicormic growth observed in the crown Epicormic growth on the main stem Estimated dimensions Area of included bark observed Included unions observed Lateral dieback observed Limited inspection due to dense vegetation Limited inspection due to ivy Major deadwood in the crown Minor deadwood in the crown Tree is showing signs of decline
Τ9	Norway maple	14.0	2.5	1	350	4.0	1.0	5.0	4.0	EM	F	F	55	4.2	B 1,2	Branch stubs observed Hard surfaces within the rooting area Included unions observed Dense ivy on the stem Limited inspection due to dense vegetation Limited inspection due to ivy Minor deadwood in the crown Typical crown form



			Crown Stem	Radi	ius					DDA						
Tree No	Species	Height (m)	Clearance (m)	No. of Stems	Dia. (mm)	N	Е	S	w	Age Class	Structure	Vigour	RPA (m)	Radius (m)	Cat	Comments
T10	Cherry	7.0	1.0	1	450	4.0	2.0	1.5	2.0	М	Ρ	Ρ	92	5.4	U	Branch stubs observed Apical dieback Exposed heartwood Estimated dimensions Hard surfaces within the rooting area Area of included bark observed Minor deadwood in the crown Major deadwood in the crown Limited inspection due to dense vegetation Limited inspection due to ivy Lateral dieback observed Tear wounds present Tree is showing signs of decline Wound present on main stem
T11	Purple leaved plum	8.0	2.0	6	450	2.5	2.5	2.5	2.5	SM	Ρ	F	92	5.4	C 1,2	Branch stubs observed Estimated dimensions Hard surfaces within the rooting area Area of included bark observed Included unions observed Limited inspection due to dense vegetation Limited inspection due to ivy Minor deadwood in the crown



					.	C	rown	Radi	us							
Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Dia. (mm)	N	Е	s	w	Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
T12	English oak	18.0	4.0	1	850	8.0	5.0	5.0	8.0	Μ	Ρ	F	327	10.2	B 1,2	Branch socket cavity observed Branch stubs observed Estimated dimensions Exposed heartwood Hard surfaces within the rooting area Area of included bark observed Included unions observed Major deadwood in the crown Minor deadwood in the crown Tear wounds present
T13	English oak	12.0	2.0	1	850	7.0	7.0	7.0	7.0	Μ	Ρ	F	327	10.2	B 1,2	Apical dieback Basal epicormic growth observed Branch socket cavity observed Epicormic growth on the main stem Epicormic growth observed in the crown Exposed heartwood Hard surfaces within the rooting area Area of included bark observed Included unions observed Estimated dimensions Lateral dieback observed Major deadwood in the crown Minor deadwood in the crown Limited inspection due to dense vegetation Pruning wounds observed Tear wounds present



Tree			Crown		Stom	C	rown	Radi	us					DDA		
Tree No	Species	Height (m)	Clearance (m)	No. of Stems	Dia. (mm)	N	Е	S	w	Age Class	Structure	Vigour	RPA (m)	Radius (m)	Cat	Comments
T14	English oak	16.0	2.0	1	920	8.0	8.0	12.0	8.0	Μ	F	F	387	11.1	B 1,2	Branch socket cavity observed Branch stubs observed Exposed heartwood Hard surfaces within the rooting area Area of included bark observed Included unions observed Minor deadwood in the crown Pruning wounds observed Major deadwood in the crown Tree is located off site but overhangs the study area Tear wounds present
T15	Goat willow	6.0	2.0	2	130 120	1.5	3.2	1.0	3.0	SM	Ρ	F	18	2.4	C 1,2	Tree is located off site but overhangs the study area Spreading crown form Pruning wounds observed Minor deadwood in the crown Included unions observed Hard surfaces within the rooting area Branch stubs observed Bifurcation at base



			Crown	rown No. of Stem Crown Radius Age RPA RPA												
Tree No	Species	Height (m)	Clearance (m)	No. of Stems	Dia. (mm)	N	Е	S	w	Age Class	Structure	Vigour	RPA (m)	Radius (m)	Cat	Comments
T16	English oak	10.0	2.0	1	680	2.0	6.0	6.0	7.0	Μ	Ρ	F	222	8.4	C 1,2	Basal epicormic growth observed Branch socket cavity observed Branch stubs observed Epicormic growth on the main stem Exposed heartwood Hard surfaces within the rooting area Area of included bark observed Included unions observed Major deadwood in the crown Minor deadwood in the crown Pruning wounds observed Tear wounds present Tree is showing signs of decline Tree is located off site but overhangs the study area Large basal cavity and evidence of hollowing stem heartwood decay
T17	Goat willow	4.0	1.0	3	150 130 90	0.5	4.0	2.0	0.5	SM	Ρ	F	23	2.7	C 1,2	Branch stubs observed Hard surfaces within the rooting area Included unions observed Basal epicormic growth observed Minor deadwood in the crown Pruning wounds observed



Tree			Crown		Stom	Cı	own	Radi	ius					DDA		
Tree No	Species	Height (m)	Clearance (m)	No. of Stems	Dia. (mm)	N	E	S	w	Age Class	Structure	Vigour	RPA (m)	Radius (m)	Cat	Comments
T18	English oak	10.0	2.5	2	190 280	1.0	4.0	4.0	4.0	ЕМ	Ρ	F	55	4.2	B 1,2	Dense ivy on the stem Dense ivy in the crown Hard surfaces within the rooting area Included unions observed Area of included bark observed Limited inspection due to ivy Minor deadwood in the crown Pruning wounds observed Tree is located off site but overhangs the study area
T19	English oak	16.0	3.0	1	880	8.0	8.0	6.0	6.0	М	Ρ	F	366	10.8	В 1,2	Branch socket cavity observed Branch stubs observed Building within the rooting area Epicormic growth observed in the crown Exposed heartwood Hard surfaces within the rooting area Area of included bark observed Included unions observed Major deadwood in the crown Minor deadwood in the crown Tree is located off site but overhangs the study area Pruning wounds observed Heavy reduction west



	Species	Height (m)	Crown		Stom	С	rown	Radi	ius					DDA		
Tree No			Clearance (m)	No. of Stems	Dia. (mm)	N	Е	S	w	Age Class	Structure	Vigour	RPA (m)	Radius (m)	Cat	Comments
T20	English oak	14.0	3.0	1	420	3.0	6.0	2.0	6.0	EM	F	F	81	5.1	B 1,2	Branch socket cavity observed Branch stubs observed Epicormic growth on the main stem Epicormic growth observed in the crown Hard surfaces within the rooting area Area of included bark observed Included unions observed Major deadwood in the crown Minor deadwood in the crown Pruning wounds observed Tree is located off site but overhangs the study area Tear wounds present
T21	English oak	16.0	4.0	1	550	3.0	3.0	3.0	3.0	М	F	F	137	6.6	B 1,2	Epicormic growth on the main stem Epicormic growth observed in the crown Hard surfaces within the rooting area Building within the rooting area Area of included bark observed Included unions observed Minor deadwood in the crown Major deadwood in the crown Pruning wounds observed Tear wounds present Tree is located off site but overhangs the study area



						Crown Radius			us							
Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	N	E	S	w	Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
G1	Hazel Blackthorn Elder	3.5	0.5	-	100	2.0	2.0	2.0	2.0	Y	Р	F	5	1.2	C 2	Group is sparse in areas Minor deadwood in the crowns Typical crown forms
G2	Ash Blackthorn Elder English oak Goat willow Sycamore Hazel Yew Holly	6.0	0.5	-	200	2.0	2.0	2.0	2.0	Y SM	Ρ	F	18	2.4	C 1,2	Conjoined canopy Group is sparse in areas Hard surfaces within the rooting area Branch stubs observed Minor deadwood in the crowns Provides screening Pruning wounds observed Self seeded trees present
G3	English oak	17.0	4.0	-	550	5.0	5.0	5.0	5.0	EM	Ρ	F	137	6.6	B 1,2	Branch stubs observed Dense ivy on the stems Conjoined canopy Minor deadwood in the crowns Limited inspection due to access Included unions observed Provides screening Pruning wounds observed Pollarded forms
G4	Lawson cypress	20.0	2.0	-	800	5.0	5.0	5.0	5.0	М	F	F	290	9.6	B 1,2	Conjoined canopy Hard surfaces within the rooting area Minor deadwood in the crowns Provides screening No obvious defects observed
G5	Ash	8.0	2.5	-	180	2.0	2.0	2.0	2.0	Y	F	F	18	2.4	C 1,2	Conjoined canopy Branch stubs observed Group is located off site but overhangs the study area Hard surfaces within the rooting area Typical crown forms No obvious defects observed



						Crown Radius										
Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	N	E	S	w	Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
G6	English oak	8.0	2.0	-	500	2.5	2.5	2.5	2.5	M	Ρ	Ρ	113	6.0	C 1,2	Pruning wounds observed Pruning wounds through pollarding Pollarded forms Tear wounds observed Major deadwood in the crowns Minor deadwood in the crowns Limited inspection due to ivy Hard surfaces within the rooting area Included unions observed Group is located off site but overhangs the study area Conjoined canopy Branch stubs observed
G7	Ash Elder Cherry laurel English oak	3.5	0.5	-	180	2.0	2.0	2.0	2.0	Y	Ρ	F	18	2.4	C 1,2	Branch stubs observed Conjoined canopy Dense ivy on the stems Hard surfaces within the rooting area Included unions observed Minor deadwood in the crowns Provides screening Self seeded trees present
G8	Yew	3.0	0.5	-	140	1.0	1.0	1.0	1.0	Y SM	F	F	10	1.8	C 2	Conjoined canopy Hard surfaces within the rooting area Provides screening Pruning wounds observed Typical crown forms



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



TREE PROTECTION AREA KEEP OUT !

(TOWN & COUNTRY PLANNING ACT 1990) TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER. CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY



Tree Protection Barrier in Accordance with BS 5837:2012 Figure 3b.

Tree protection barrier consists of 2 metre tall meshed panels that span up to 3 metres wide. The panels are supported with stabilizer struts mounted on block trays.



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Temporary Ground Protection

Any ground protection must be capable of supporting and spreading the expected loads to avoid compaction and damage to the soil. The following examples provide adequate load spreading within the RPA of retained trees:

- 1. **Ground Protection for Pedestrians:** a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane is sufficient to prevent soil compaction or poaching.
- 2. Ground Protection for pedestrian-operated plant up to a gross weight of 2 t: proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane is sufficient to prevent soil compaction or poaching.
- 3. Ground Protection for wheeled construction traffic weighted between 2 t and 60 t gross weight: Load spreading cellular confinement system to manufacturers specification to accommodate the likely loading to which it will be subjected.

Temporary Ground Protection Installation

A flexible, bolt together track mat system made from ultra-high-molecular-weight polyethylene is to be used for temporary ground protection across the site.

The ground protection will be installed in accordance with the manufacturer's recommendations and will be supervised by the Project Arboriculturist to the following methodology:

- 1. Prior to commencement of the works the location of the ground protection will be marked out and the existing ground cover and vegetation present within the area will be carefully stripped / strimmed using hand tools.
- 2. The exposed soil will be covered with a permeable geotextile membrane. The geotextile layer shall be laid with overlaps of 300 mm beyond the edge of the proposed extent of the ground protection and it shall be temporarily retained with pins, stakes, or weights.
- 3. A 200 mm deep layer of woodchip shall then be placed over the geotextile membrane, any plant equipment used to facilitate this must only operate from areas of existing hardstanding outside the Root Protection Areas of retained trees.
- 4. The edges of the woodchip filled area shall be retained by timber boards staked into place with road pins or similar to prevent lateral movement.
- 5. The track mat system shall then be installed on top of the woodchip layer. The track mats shall be transported to the working area from the existing areas of hardstanding outside the Root Protection Areas of retained trees. Where plant equipment is required to assist in placing the track mats, it must only operate from ground outside the Root Protection Areas of retained trees.

Temporary Ground Protection Removal

The ground protection will be removed in accordance with the manufacturer's recommendations and will be supervised by the Project Arboriculturist to the following methodology:

- 1. The works shall be planned so that the ground protection is removed in stages with works progressing out of the Root Protection Areas of retained trees.
- 2. Working from the ground protection the first section of the installed track mat shall be unbolted and removed.
- 3. The underlying woodchip shall be mechanically removed from the area beneath the removed track mat using an excavator with a smooth bucket. No soil disturbance will occur.
- 4. These works shall be completed sequentially until all sections of the ground protection to be removed have been lifted.
- 5. The underlying geotextile fabric will then be rolled up and removed. Only pedestrian access into the Root Protection Areas of retained trees will be permitted during removal.
- 6. Upon completion of the removal of the ground protection measures, tree protection barriers must be installed to prevent access to any areas of unprotected ground within the Root Protection Areas of retained trees.