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Report Verification

Report Version	Date	Completed by:	Checked & Approved by:
Final	14/03/2025	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	✓
Audit timetable	✗
RIBA Stage 5 - Enabling Works (Demolition)	
Tree Surgery	✓
Site set up and logistics	✓
Topsoil Stripping / Subsoil Regrading	✓
Demolition of Structures and Removal of Hard Surfaces	✗
RIBA Stage 5 - Main Works (Construction)	
Establishment of Construction Exclusion Zone (CEZ)	✓
Temporary Ground Protection Measures	✓
Construction of Structures within the RPA / CEZ	✓
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	✓
Tree Safety Assessment for handover	✓

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 to accompany a planning application for commercial development at Manley Par, Clarendon Road, Whalley Range, Manchester. A survey of the trees on site and within influencing distance of the boundaries was undertaken on the 30th and 31st of October 2024 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 protect retained trees through the development works program and to comply with RIBA Stage 5 including:

- 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	SJ 82220 94620
Topography	Flat
Tree Cover	High quality mature planted residential avenue trees
Drawings attached	Tree Survey Plan – C181389-01-01_Rev A Combined Tree Retention/Protection Plan – C182078-01-02
Appendices	Appendix A: Tree Schedule Appendix B: Tree Protection Barrier Sign Appendix C: Tree Protection Barrier Diagram Appendix D: Temporary Ground Protection

Table 1.1: Summary of Site and Surroundings

1.3 Proposed Development

The proposed development of the site includes the construction of and new MUGA sports pitch with associated soft and hard landscaping.

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	Development Layout	24-0478-03P-01	06.01.25
SEA Consulting Engineers	Proposed Drainage Layout	00226/E02	28.10.24
LaboSport	Construction access and site compound sketch	n/a	25.02.25

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
	✓	✗		
TPO		✗	Manchester City Council consultation	None present
Conservation Area		✗	Manchester City Council consultation	None present
Ancient Woodland		✗	Multi Agency Geographical Information for the Countryside (MAGIC)	Not present

Table 2.1: Summary of Statutory Constraints that Affect the Site

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
			✓	✗	
G1	European lime	A	✓		Minimal lateral branch tips pruning and or branch tie back, to provide contractor traffic access to site. Exact specification to be briefed by the project arboriculturist at the pre commencement site meeting in liaison with the principal contractor to ensure that no unnecessary pruning is undertaken.

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.

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.

Excavation of Subsoil

Where a 300mm deep excavation is proposed to be carried out within the RPAs of 4 retained trees within G1, the works must be supervised by the Project Arboriculturist. Please refer the attached Tree retention/Protection Plan drawing for reference to the location of the area of excavation.

The works are at the periphery of the northern extent of the trees RPAs and the area of incursion is calculated to be less than 7% of the total area of the 4 trees RPAs, and as a result it is considered that the works will not likely adversely affect the trees structural or physiological condition. The works will be completed under ACoW supervision and must be completed 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 for 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. Using the smallest necessary tracked excavator (i.e. <1.5tonne) with a flat toothed bucket attachment, slow incremental scrapes of the topsoil in 100mm deep bands will be completed with project arboriculturist supervising. Whilst roots <25mm in diameter can be pruned with the use of clean secateurs or a pruning saw, works will cease if larger diameter roots are found, and the project arboriculturist will consult and advise with the LA tree officer, before any larger roots are removed.
4. Where the new pitch subbase edge abuts the remaining RPAs of the retained trees, a layer of non-permeable membrane will be laid to ensure there is no leaching of any salts or toxic chemicals into the RPAs should they be present in the stone subbase mix, as they have the potential to adversely affect any surrounding rooting structure.

General note: No machinery is to be 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.

Ground Protection Measures

Ground protection measures will be utilised across multiple areas of the development and are clearly marked on the attached Tree Retention / Protection Plan drawing, C182078-02-01.

The ground protection will be a combination of the existing hard surfacing and where ground protection is 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: Temporary Ground Protection. All ground protection shall support the expected loads in accordance with Structural Engineers recommendations to avoid permanent soil compaction.

Installation of utilities within RPAs

The installation of new subterranean utilities will require works within the Root Protection Areas of retained trees. The route of the proposed trench is proposed to follow the existing hard surfaced footpath in a northern linear route from the northern edge of the new MUGA pitch and passes through the eastern extents of two trees within the group G1.

The proposed excavation works will be completed using a handheld pneumatic breaker, Airspade and soil vacuum excavator to prevent damage to root systems of retained trees and will be supervised by the Project Arboriculturist. The following methodology must be adhered to:

1. The route of the pipe installation shall be marked out on the hard surfaced footpath that runs through the RPAs.
2. With the use of the handheld pneumatic breaker the line of the trench shall be broken up and material removed. Upon reaching the subsoil surface the Airspade will then be used to expose any surface level rooting structure.

3. Whilst roots smaller than 25 mm in diameter may be pruned back to permit access for the vacuum excavator nozzle / utilities, roots larger than 25mm in diameter will be retained.
4. All exposed roots must be wrapped or covered with damp hessian or similar material, as soon as possible, to prevent desiccation and to protect them from rapid temperature changes.
5. Once the trench is complete the proposed service can be inserted into the trench through or below the network of retained tree roots.
6. Prior to backfilling all root coverings shall be removed and retained roots shall, where possible, be surrounded with topsoil and lightly compacted sharp sand, or other loose inert granular fill, before soil or other suitable material is replaced into the excavated area. The fill material shall be free of contaminants and other foreign objects potentially injurious to tree roots.

Works will not occur where the ambient air temperature is less than +4 °C. Roots shall be temporarily recovered with soil where the ambient temperature exceeds 14 °C or completion of the works is not foreseen within 24 hours of the finished excavation.

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 hard and soft landscaping. Barriers shall be removed carefully to ensure no damage to retained trees occurs.

Hard Landscaping

Hard landscaping works that have the potential to cause physical damage to retained trees, compaction of the soil or severance of tree roots shall not occur within the precautionary zones (RPA / canopy) unless under supervision of the Project Arboriculturist. Any hard landscaping works taking place within the precautionary zones surrounding retained trees should be completed in accordance with this AMS following advice from the Project Arboriculturist.

No unsupervised works or storage of hard landscaping construction materials shall occur within the Precautionary Zones (former CEZ).

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.

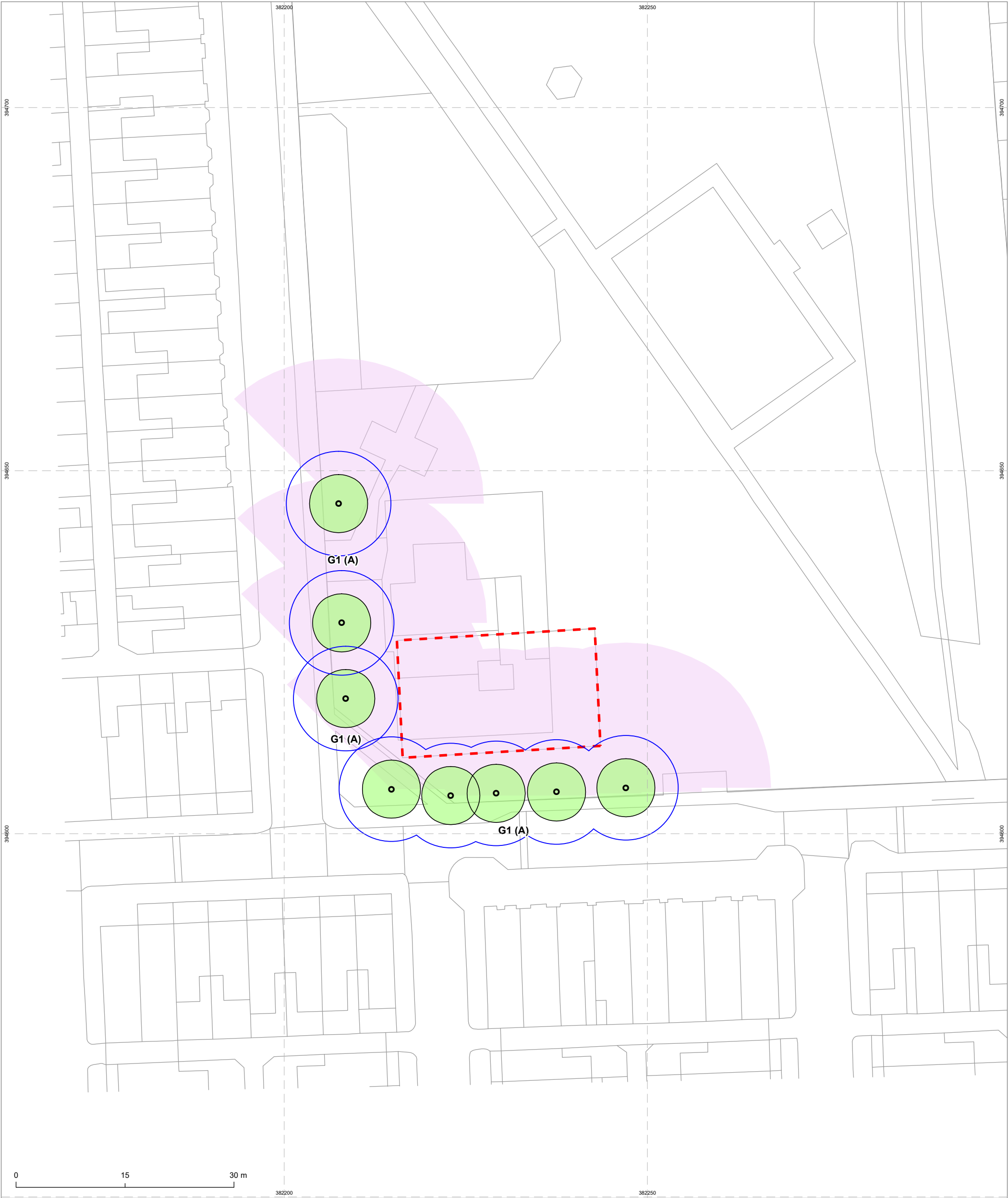
³ British Standards Institution. (2014). *British Standard 8545:2014, Trees: from nursery to independence in the landscape – Recommendations*. British Standards Institution, London.

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.



Legend

- Tree location and stem diameter
- Category A
- Current canopy extent
- Root Protection Area
- Indicative tree shadow
- Site Boundary

NOTES

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.

The positions of trees and their current crown spread, root protection area and shade pattern (where appropriate) have been shown on the Tree Survey Plan.

All survey data is based on a topographical survey where possible, supplied by the client.

Where topographical information has not identified tree positions or Ordnance Survey mapping has been utilised, trees have been positioned using GPS and aerial photography to provide approximate locations in 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 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 in accordance with current Building Regulations requirements.

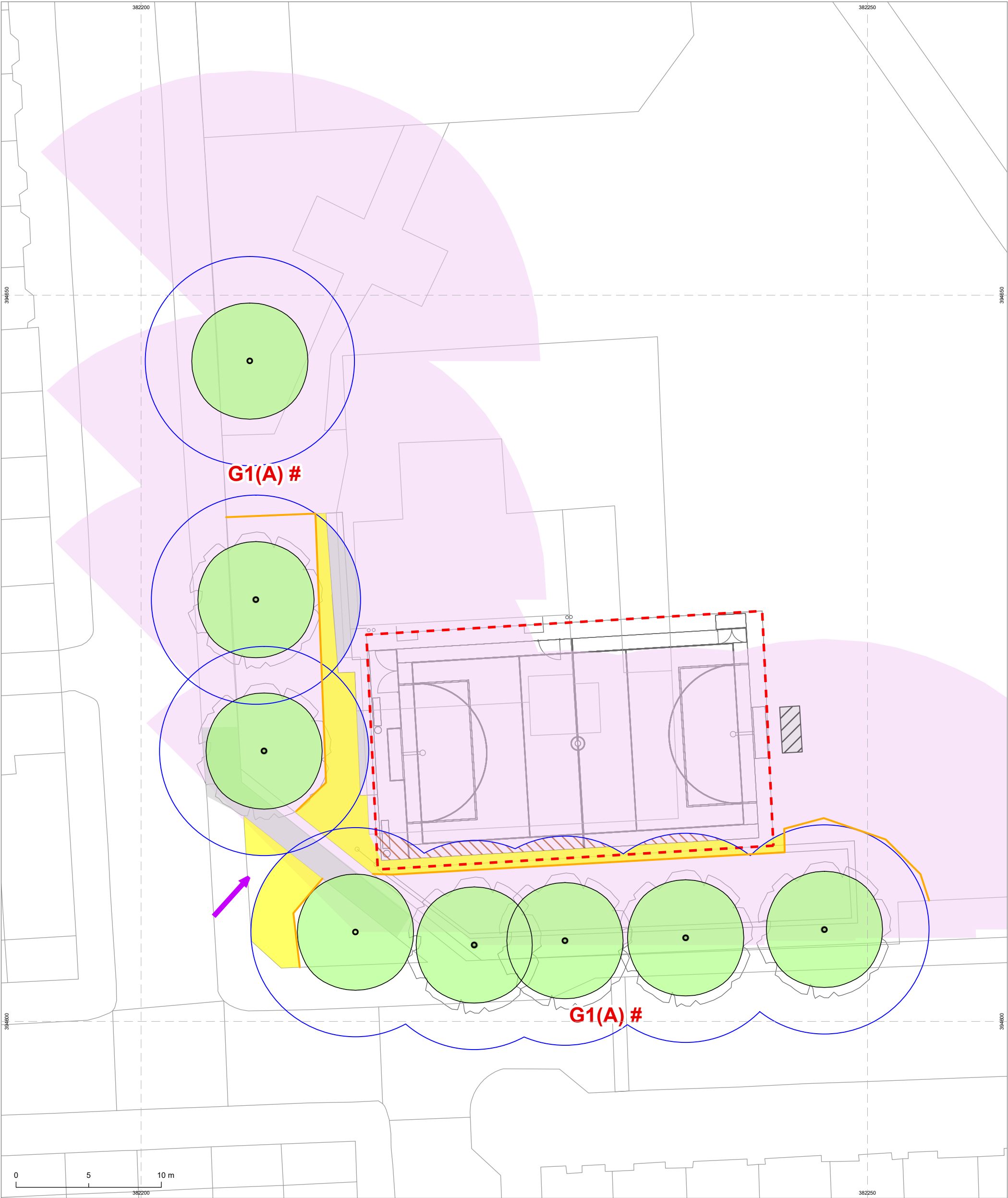
Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the Project Arboriculturist should works commence 12 months after the date of this survey.

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

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Project	Manley Park	
Drawing	Tree Survey Plan	
Client	Labosport	
Drawing Number	C181389-01-01	Revision
Scale @ A3	1:500	Date
Approved By	AH	Drawn By
MIDDLEMARCH		
Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ		
E:admin@middlemarch-environmental.com		
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C181389-01-01



Legend

●

Tree location and stem diameter

Category A

—

Current canopy extent

—

Root Protection Area

Indicative tree shadow

Site Boundary

#

Tree pruning works required

Tree protection barrier subjectc to BS5837

Site compound welfare unit

Minimal lateral crown pruning and/or branch tie back to two trees in G1 for contractor access

Existing hard surface ground protection

Temporary ground protection required

Area of 300 mm level reduction in RPAs under ACoW supervision

NOTES

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.

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Project

Manley Park

Drawing

Tree Protection Plan

Client

Labosport

Drawing Number

C182078-01-02

Revision

00

Scale @ A3

1:250

Date

March 2025

Approved By

AH

Drawn By

CD

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C182078-01-02

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 5837: 2012 and is indicative of the required rooting area in order for a tree to be retained.
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.	
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, particular consideration has been given to the following - The health, vigour and condition of each tree - The presence of any structural defects in each tree and its future life expectancy - The size and form of each tree 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	
	V: Veteran, tree possessing certain attributes relating to veteran trees.	- Age class - Life expectancy	

Structural Condition

The following has been considered when inspecting structural condition:

- The presence of fungal fruiting bodies around the base of the tree or on the stem, as they could possibly indicate the presence of possible internal decay.
- Soil cracks and any heaving of the soil around the base.
- Any abrupt bends in branches and limbs resulting from past pruning.
- Tight or weak 'V' shaped forks and co-dominant stems.
- Hazard beam formations and other such biomechanical related defects (as described by Claus Mattheck, Body Language of Trees HMSO Research for Amenity Trees No. 4 1994).
- Cavities as a result of limb losses or past pruning.
- Broken branches or storm damage.
- Canker formations.
- Loose or flaking bark.
- Damage to roots.
- Basal, stem or branch / limb cavities.
- Crown die-back or abnormal foliage size and colour.
- Any changes to the timing of normal leaf flush and leaf fall patterns.

Quality Assessment of Retention Category

Category U - Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

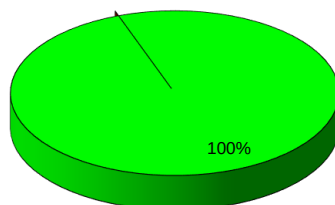
Category A - Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category B - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

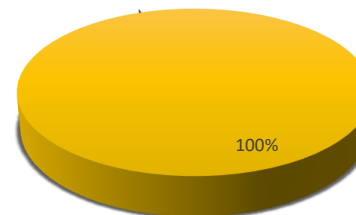
Category C - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

Sub-categories: (i) - Mainly arboricultural value
(ii) - Mainly landscape value
(iii) - Mainly cultural or conservation value

BS5837 category: Groups of trees



Age distribution of tree stock



Appendix A - Summary

	Individual Trees	Totals	Tree Groups	Totals
Category U		0		0
Category A		0	G1	1
Category B		0		0
Category C		0		0
	Total	0	Total	1

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

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
G1	European lime	20.0	2.0	-	580	4.0	4.0	4.0	4.0	M	F	F	163	7.2	A 1,2	Branch stubs observed Branch socket cavities Conjoined canopy Group is located off site but overhangs the study area Group is sparse in areas Hard surfaces within the rooting area Included unions observed Minor deadwood in the crowns Provides screening Pruning wounds observed Small hanging branches in the crowns Typical crown forms Maturing avenue lime trees forming a prominent arborivultural landscape feature



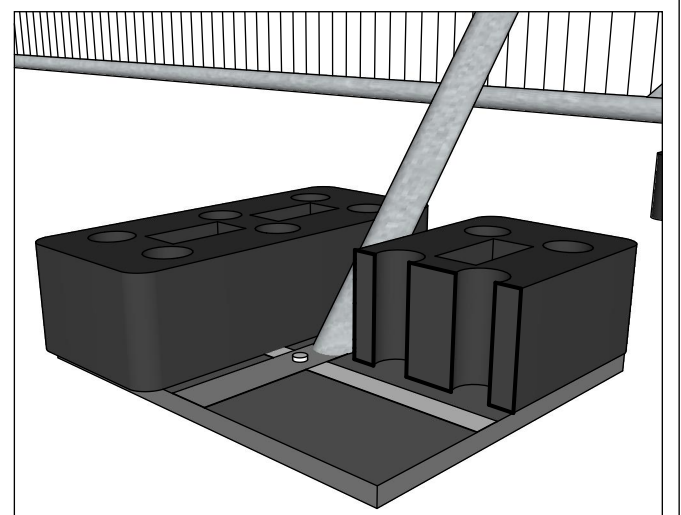
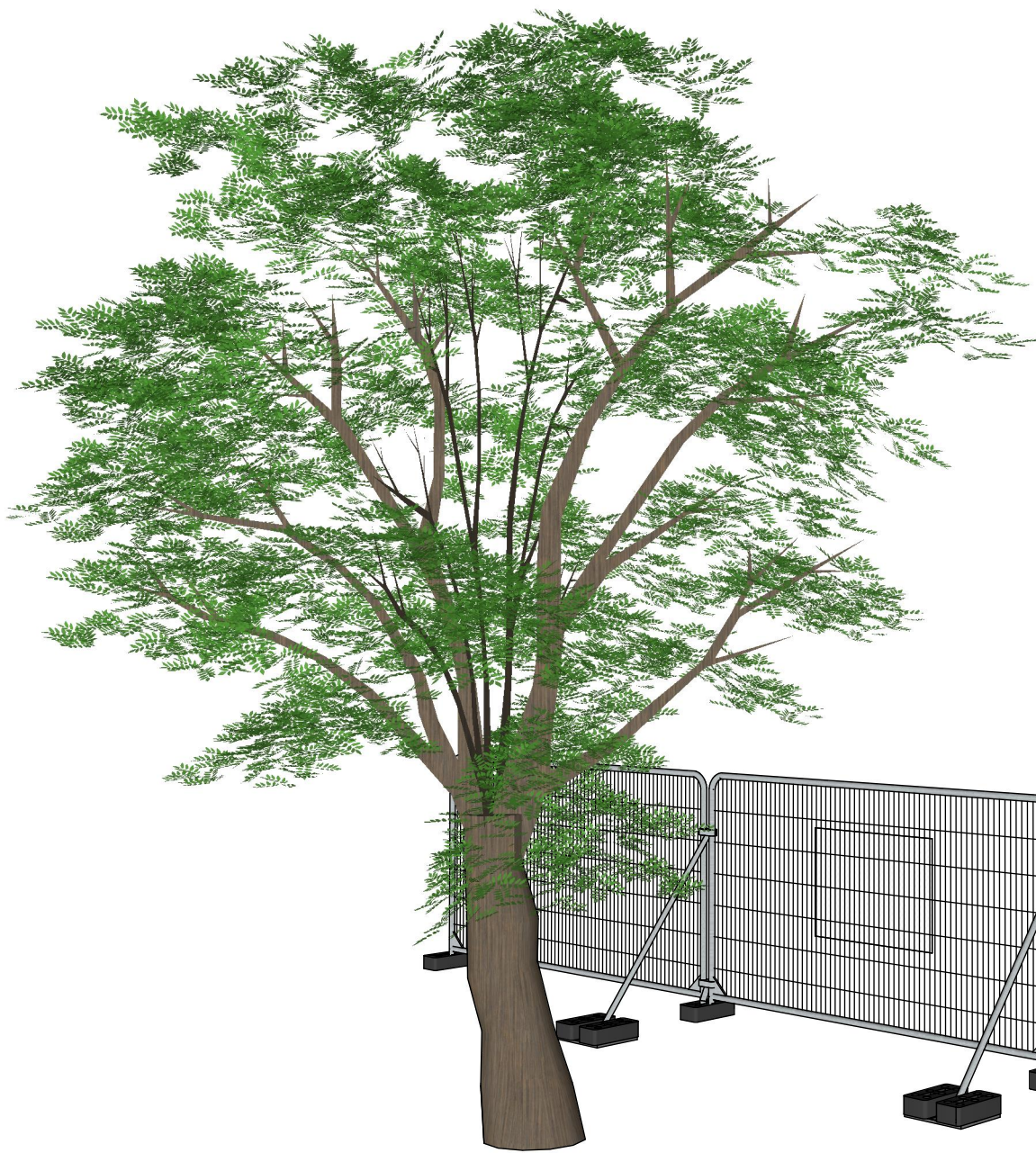
**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



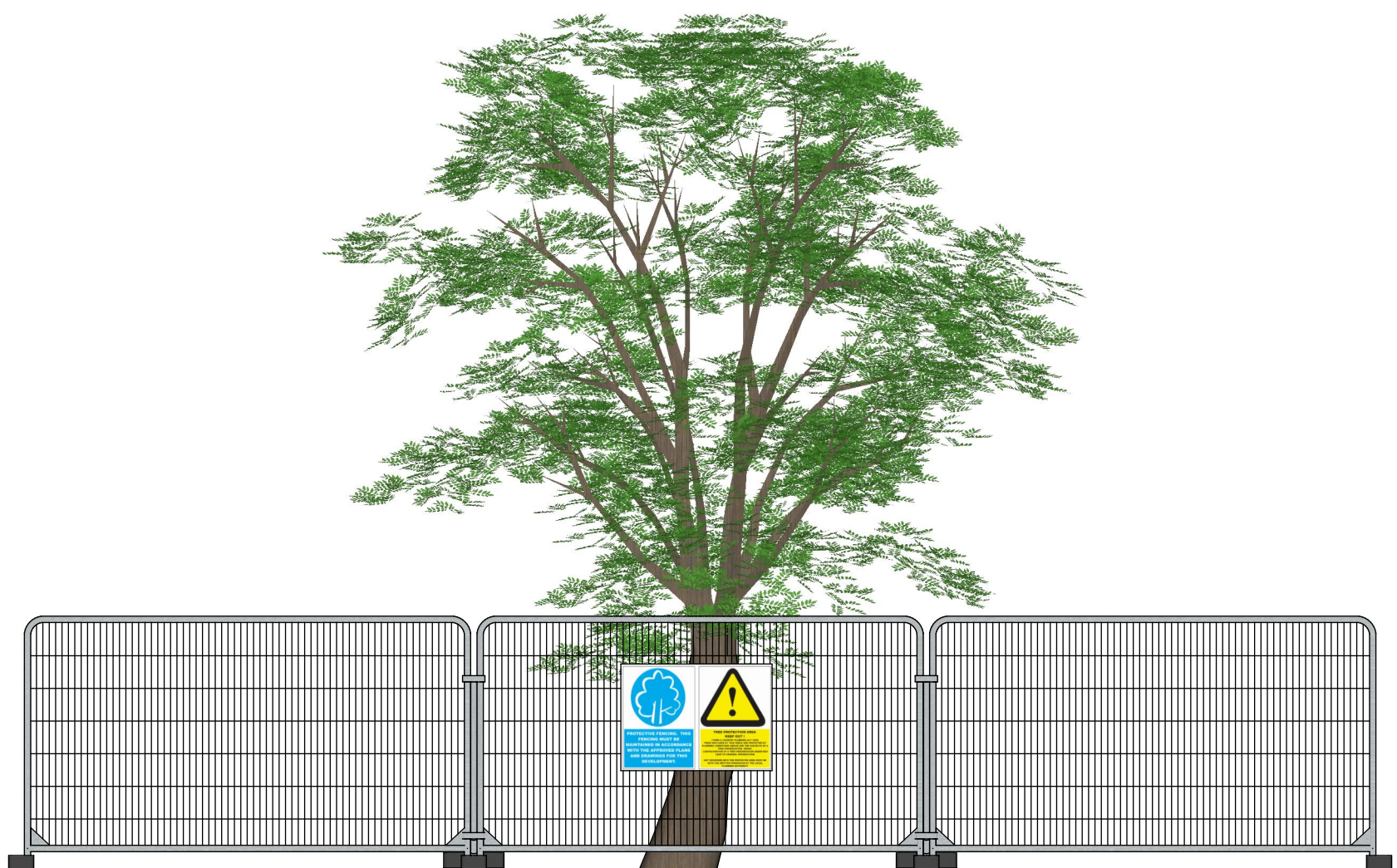
**TREE PROTECTION AREA
KEEP OUT !**

**(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**



Block tray and block cross-section



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 / trimmed 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.