



Arboriculture Impact Assessment And Method Statement

Project:
5 Bradfield Road,
Liverpool L14

Date:
February 2023

MPTREES

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Disclaimer:

Unless otherwise stated, tree inspections have been undertaken from ground level and using non-invasive techniques only. Comments upon the condition and safety of any tree relate to the condition of the tree at the time of the survey. It should be recognized that tree condition is subject to change due to, for example, the effects of disease, wind or nearby development works. Changes in land use are also significant in respect of risk assessment. Trees should therefore be inspected at intervals relative to identified site risks.

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Appendix 2: BS5837: 2012 Tree Survey Data Tables 5 Bradfield Road February 2023

Appendix 3: Tree Protection Plan Drawing MPT269.02.23

Appendix 4: Tree Protection Fencing Detail

Appendix 5: BS5837: 20005 Fig 3 – Scaffolding in RPA installation detail

Appendix 6: Temporary Ground Protection Example

1.0 Introduction

- 1.1 MPTrees have prepared this Arboriculture Impact Assessment (AIA) further to the instructions of Mr S Davies, who seeks planning permission at 5 Bradfield Road, Liverpool L14, hereafter referred to as the application site or the site.
- 1.2 The purpose of this AIA is to provide an assessment of the existing arboricultural resource on/adjacent the application site, and of the significance of the potential impacts of this planning application on the resource.
- 1.3 To assess the significance of the potential impacts of this application, all trees on/adjacent the application site were surveyed by a qualified surveyor using ground based, non-invasive, visual survey techniques.
- 1.4 The surveyor recorded the baseline arboricultural conditions on/adjacent site in accordance with British Standard 5837: 2012 *Trees in relation to construction – Recommendations*. The survey details recorded in the format recommended by BS5837: 2012 can be found at appendices 1 and 2 of this report.

2.0 Site Description

- 2.1 The application site is a modern detached residential property with formal hard and soft landscaping, located in an urban residential estate. Landscaping to the front of the house includes formal shrub and tree planting, and a grassed lawn area with a light weight shed, sat on a concrete slab.
- 2.2 Trees potentially impacted by the application proposal are all adjacent the application site, on adjacent property. They consist of mature Austrian pine trees and a mature holm oak. Individually and collectively, they offer a certain level of visual and wider amenity benefit value to the local landscape.
- 2.3 The existing site layout and the location of all trees potentially impacted by the application can be seen on drawing MPT269.01.23 at appendix 1 of this report.

3.0 Application Proposal

- 3.1 Mr S Davies seeks planning approval for the conversion of an existing garage into a residential space and for the construction of a new detached garage in the lawn area at the front of the property. The proposed site layout can be seen on drawing MPT269.02.23 at appendix 3 of this report.

4.0 Impact Assessment

- 4.1 As can be seen on drawing MPT269.02.23 at appendix 3 and detailed in the survey data tables at appendix 2, the application will not require the removal of any trees on, or adjacent, the application site.
- 4.2 The application will however have the potential for a significant negative impact on trees to be retained adjacent site through root damage and loss. As can be seen on drawing MPT269.02.23 an existing shed sits within the root protection area (RPA) of tree T1, a mature Austrian Pine. The removal of the shed base has the potential to cause root damage and loss to T1. To reduce the potential for damage or loss the shed base will need to be removed by hand and any exposed roots treated as per the recommendations of BS5837: 2012. As long as these measures are implemented there will be a low risk of root damage or loss from the RPA of T1 and the impact to T1 of the removal of the existing shed and its base will be negligible.
- 4.3 As can also be seen on drawing MPT269.02.23 the proposed new detached garage sits within the RPA of trees T1, T2 and T3. The construction of foundations for the new garage has the potential to cause root damage and loss to T1, T2 and T3. The level of potential root damage and loss to trees T2 and T3 is low and the potential negative impact on these trees is minor. The level of potential root damage and loss to T1 is higher however and the potential negative impact on this tree is moderate.

- 4.4 Soils and the ground on site are poor and heavily disturbed and the use of piled foundations will be necessary. Using as small a diameter displacement piles as possible, with a ground or ring beam and a pre-cast concrete floor slab that is sat on existing ground levels for the foundation of the new detached garage, will reduce the level of potential root damage and loss from the RPA of T1 and the potential negative impact of the new foundations on T1 will be reduced to minor from moderate.
- 4.5 Although the new detached garage will create an impermeable surface within the RPA of T1, this will be less than the 20% maximum limit recommended by BS5837: 2012. The rest of the of the RPA of T1 consists of soft ground which will allow unimpeded root growth and gas and moisture exchange. Therefore, the new impermeable surface in its RPA will only have a minor negative impact on T1.
- 4.6 Scaffolding and the passage of men and machinery required to facilitate the construction of the new detached garage will also have the potential to cause root damage and loss to T1, T2 and T3 through compaction, rutting and contamination of their RPA. To reduce the potential, tree protection fencing and temporary ground protection in accordance with recommendations of BS5837: 2012 will need to be installed prior to the start of any development activities on site. Providing fencing and ground protection are installed before the start of activities and are maintained for the duration of all activities, the potential for compaction, rutting and contamination of their RPA will be reduced and consequently the potential negative impact on trees T1, T2 and T3 from scaffolding and construction activities will be negligible.

5.0 Conclusions & Recommendation

- 5.1 No trees will be removed to facilitate this application. However, construction of the proposed new detached garage has the potential for significant negative impact on retained trees adjacent site through root damage and loss.

- 5.2 To mitigate the potentially significant negative impacts of the application proposal on retained trees, the Method Statement at section 6 of this report will need to be understood and agreed by all relevant parties before the start of any development activities on site.
- 5.3 Provided that the Method Statement at section 6 of this report is understood and agreed by all relevant parties, it is recommended that there are no arboriculture reasons why planning permission cannot be granted for this application.
- 5.4 It is further recommended that any planning permission granted for this application should include relevant conditions to ensure that the details of the Method Statement at section 6 of this report are fully implemented.

6.0 Arboriculture Method Statement

6.1 Relevant Contact Details –

Client / Developer: Mr S Davies

Site address: 5 Bradfield Road, Liverpool L14

Site manager: Unconfirmed

Local Planning Authority: Knowsley Council

Arboriculture Planning Officer: Unconfirmed

Project Arboriculturist: M Potier, matthew@mptrees.com, 07575360202.

Arboriculture Clerk of Works: Unconfirmed

6.2 Tree Protection Fencing

6.21 Install tree protection fencing as per specification at appendix 4 in locations shown on drawing MPT269.02.23 at appendix 3.

6.22 Areas behind fencing to be exclusion zone to all site activities including the raising or lowering of existing ground levels, the storage or discharge of materials or liquids, and the passage of men and machinery.

6.23 Fencing to remain in locations shown until completion of all development activities.

6.3 Temporary Ground Protection

6.31 Install ground protection in locations shown on drawing MPT269.02.23 at appendix 3 at the same time as Tree Protection Fencing.

6.32 Place inter-linked ground protection boards, or scaffold boards, on top of a compression-resistant layer of 150 mm depth of woodchip, laid onto a geotextile membrane on existing ground. See appendices 5 and 6 for examples.

6.33 Ground Protection to remain in locations shown until completion of all development activities.

6.4 Site Compound and Storage Specification

6.41 Site Compound and storage of all materials to be located outside of Root Protection Areas (RPA) as shown on drawing MPT269.02.23 at appendix 3.

6.5 Demolition of existing shed

6.51 Remove existing shed using hand tools only. No machine access (except for piling rig, see section 6.6 below) permitted in RPA.

6.52 Shed base to be broken up and removed using hand tools only. All spoil and debris to be stored outside of RPA.

6.53 Any tree roots that are exposed during demolition to be treated as follows:

- Any roots less than 25mm diameter exposed to be pruned back to edge of excavations using sharp secateurs or saw.
- Any exposed roots greater than 25mm or occurring in clumps to be cut only after agreement from project Arboriculturist.
- Any exposed roots to be covered with sheeting or sacking if left exposed overnight or longer.
- Any exposed roots left overnight or longer to be kept moist by watering with clean tap or rain water, as and when required, depending on prevailing weather conditions.

6.6 Construction of new detached garage

6.61 New foundations to be constructed using as small as possible diameter displacement piles (to be specified by project architects/engineers), driven through existing ground in locations specified by project architects/engineers by use of a lightweight piling hammer, with a ground or ring beam(s) placed on pile caps at existing ground level.

6.62 New floor to be pre-cast concrete slab sat on ground/ring beam at or above existing ground levels.

6.63 Any tree roots that are exposed during construction to be treated as per section 6.53.

6.7 Sequence of Operations

Pre-start:

- Nominate Arboriculture Clerk of Works (ACoW) and provide copy of this Method Statement.
- Nominated construction contractor(s) to be provided with a copy of this Method Statement and to be fully aware of its implications prior to the start of site activities. Any issues should be raised immediately to the ACoW before the start of any development activities on site.
- Nominated ACoW and nominated construction contractor(s) to hold pre-commencement site meeting to agree on details of this Method Statement.

Site set-up:

- Install Tree Protection Fencing as per section 6.2 and appendices 3 and 4.
- Install Temporary Ground as per section 6.3 and appendices 5 and 6.
- Install cabins and site compound and store materials as per section 6.4.

Demolition:

- Remove existing shed and treat any exposed roots as per section 6.5.

Construction:

- Construct new garage and treat any exposed roots as per section 6.6.

Completion:

- Carry out any remedial works to retained trees and their RPA only after consultation with ACoW and agreement from Arboriculture Planning Officer.

6.8 Monitoring Specification

The ACoW is to be notified by site agent at the following times and is to visit site when notified to ensure compliance with this Method Statement:

- I. After tree protection fencing and temporary ground protection installation and during demolition of existing shed.
- II. During construction of new garage foundations.
- III. At Completion. Any remedial works to retained trees or amelioration works to their RPA to be notified by project ACoW to client and Arboriculture Planning Officer.



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Appendix 1

MPTrees

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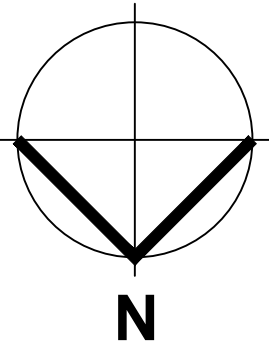
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LEGEND

	Category B Trees as per BS5837: 2012.
	Category C Trees as per BS5837: 2012.
	Nominal Root Protection Area (RPA) as per BS5837: 2012. See notes below.

- Notes:
- PLAN TO BE READ IN CONJUNCTION WITH MPTREES AIA&AMS 5 BRADFIELD ROAD, LIVERPOOL, FEBRUARY 2023.
 - ALL COORDINATES RELATED TO LOCAL GRID LOCATED TO OS NG BY BEST FIT TO DETAIL, EXTRACTED FROM OS DIGITAL DATA.
 - DO NOT SCALE FROM THIS DRAWING AS PRINTING MAY DISTORT THE SCALE. WORK FROM FIGURED DIMENSIONS ONLY.



PLANNING APPLICATION ISSUE

These drawings have been prepared for the purposes of submission to the Local Authority as part of a planning application and are not to be used for any other purpose without the express permission of MPTrees.

	MP	CS	MP		10/02/2023
VERSION	DRWN	CHKD	REVD		DATE
DRAWING NO.				MPT269.01.23	



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MPTrees.com

CLIENT:
S Davies

LOCATION:
5 Bradfield Road, Liverpool

DRAWING TITLE:
BS5837: 2012 Tree Constraints Plan

SCALE:
1:100@ A1

Appendix 2

BS5837: 2012 Tree Data Tables

Site: 5 Bradfield Road, Liverpool L14

Date: 09/02/2023

Key:

Ref. No.: Reference number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)

Ht: Height of tree/group of trees measured in meters (to nearest 0.5m)

Species: Common name used

Stem DBH: Diameter at Breast Height measured at 1.5m above ground level (in mm to nearest 10mm).

RPA Area & Radius: Root Protection Area dimensions in m2/m

Branch Spread: in meters to each of the four cardinal points (to nearest 0.5m)

Cr. Cl.: Canopy ground clearance (to nearest 0.5m) with compass direction of lowest primary branch

Age Class: Y=Young, SM=Semi Mature, EM=Early Mature, M=Mature, FM=Fully Mature, D=Dead

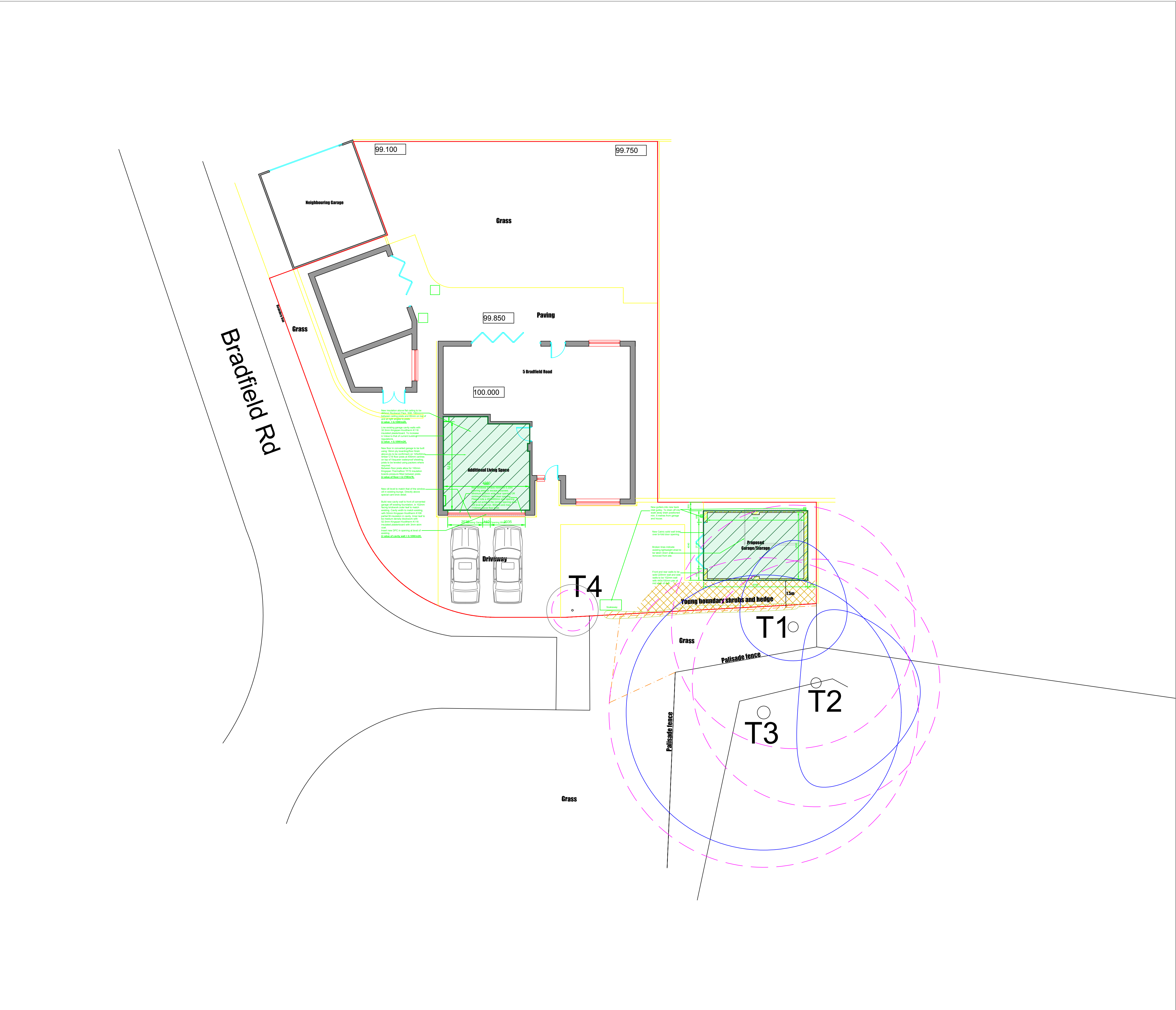
Observations and Recommendations: General observations and preliminary recommendations for planning

Est. (yrs): Estimated remaining contribution in years

Cat.: Tree Category in accordance with Table 1 of BS5837: 2012. **Cat. A - High Value Trees**, **Cat. B - Medium Value Trees**, Cat. C - Low Value Trees, **Cat. U - Trees recommended for removal irrespective of development.**

Ref. No.	Species	Ht.	Stem DBH	RPA Area & Radius	Branch Spread				Cr. Cl.	Age Class	Observations & Recommendations	Est. Yrs	Cat.
					N	S	E	W					
T1	Austrian Pine	14.00	590	157.48	2.0	5.0	3.0	3.0	5.5S	M	Canopy bias to south due to proximity to T3. Will require protection to BS5837.	60	B1
				7.08									
T2	Austrian Pine	8.00	600	162.86	6.0	4.0	1.0	6.0	2.5W	M	Leading stem bends ninety degrees to east at 8m. Dbh estimate. Tree off site behind palisade fence.	60	B1
				7.20									
T3	Holm Oak	12.00	750	254.47	8.0	8.0	8.0	8.0	2.0S	M	Twin stem at base with one leader to north and one to south east. Primary branch at 3m on leader to south east extends over site boundary and bends down with branch tips at ground level. Dbh estimate. Tree off site behind palisade fence.	60	B1
				9.00									
T4	Rowan	4.00	100	4.52	2.0	2.0	2.0	2.0	1.5E	Y	Formal landscaping tree.	40	C1
				1.20									

Appendix 3

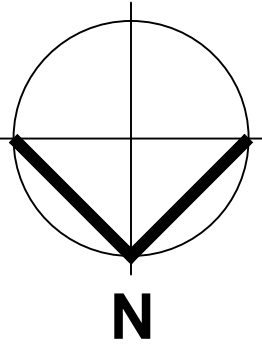


LEGEND

-
- Category B Trees as per BS5837: 2012 proposed for retention/removal.
-
- Category C Trees as per BS5837: 2012 proposed for retention/removal.
-
- Nominal Root Protection Area (RPA) as per BS5837: 2012.
-
- Temporary Ground Protection. See section 6.4 of MPTrees Arboriculture Impact Assessment and Method Statement, 5 Bradfield Road, February 2023.
-
- Tree Protection Fencing. See section 6.4 of MPTrees Arboriculture Impact Assessment and Method Statement, 5 Bradfield Road, February 2023.

Notes:

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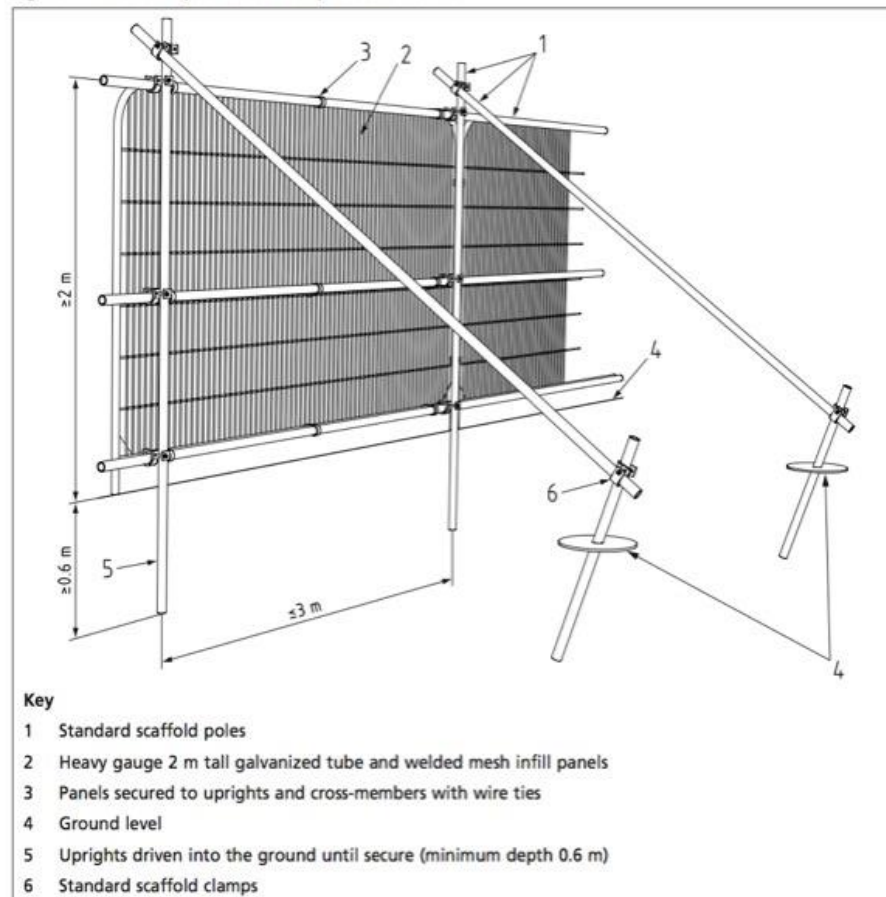
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CLIENT:
S Davies
LOCATION:
5 Bradfield Road, Liverpool
DRAWING TITLE:
BS5837: 2012 Tree Protection Plan
SCALE:
1:100@ A1

Appendix 4

Figure 2 Default specification for protective barrier



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

Appendix 5

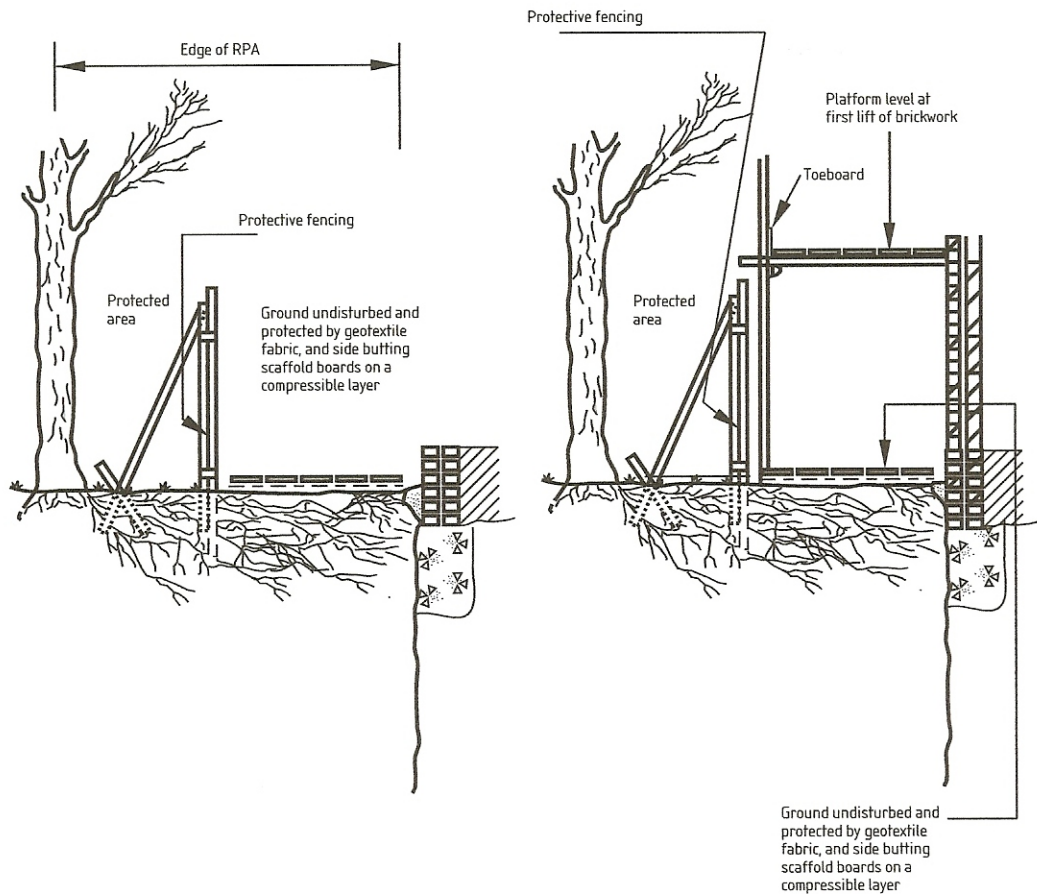


Figure 3 — Scaffolding within the RPA



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Appendix 6

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TREE ROOT PROTECTION DURING CONSTRUCTION PROJECTS

The Department for Communities and Local Government's guide **"Tree Roots in the Built Environment"** states that **"ground protection should be installed before any materials or machinery is brought onto the site"** (Section 9.3.3.2) [Crown Copyright acknowledged]

It has been shown that **"the major contribution to soil compaction from vehicle movements comes from the first passes of vehicles over the ground"** (Section 4.2.3) Thus it is essential that ground protection is specified and installed from day one of construction projects.

Failure to protect the ground from compaction will lead to reduced water and oxygen infiltration to the tree roots and can ultimately lead to the decline of the tree.

TREE ROOT PROTECTION METHOD

GroundGuards trackway mat systems are frequently used on construction sites to protect the ground from erosion and damage by construction vehicles. Where a temporary roadway must pass near to trees, the following extra precautions must be taken in order to provide cushioning for the ground under the tree canopy:

1. Edge rails of 200 x 50mm sawn timber should be installed where the trackway will pass under the tree canopy. These should be staked on either side of the trackway using 50 x 50 x 500mm timber stakes at 1.5m spacings.
2. A layer of geotextile membrane should be laid to cover at least the area under the tree canopy and preferably under the whole of the trackway.
3. A pad of trackway mats should be laid on top of the geotextile membrane, between the timber rails.
4. A 150mm deep layer of wood chipping should be laid over the mats
5. The trackway can then be laid so that it rises over the wood chippings as it passes under the tree canopy.

50x50x500 timber stakes
200x50 timber rails
Geotextile Membrane
Base layer of trackway mats
Wood chippings
Upper layer of trackway mats



Three trackway systems suitable for tree root protection are available for hire or sale:

MultiTrack



MultiTrack
These mats quickly clip together and are suitable for medium weight construction traffic. Where they pass over tree roots, install a double layer of mats with 150mm of wood chippings between to cushion the ground.

MaxiTrack



MaxiTrack
This is a unique heavy duty matting system with overlapping flanges and bolt-together connection, for heavier traffic. Again, use a sandwiched layer of wood chippings where there are tree roots.

XtremeMats



XtremeMats
For very heavy traffic, over extended periods, these rigid 4x2m mats spread the load to protect the ground. Double layering is not necessary, but 150mm of wood chippings should be used in areas with tree roots.

GroundGuards®

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