

LAKELAND
TREE CONSULTANCY
ARBORICULTURAL PLANNING SPECIALIST

Arboricultural Impact Assessment

36 Kingston Road
Didsbury
Manchester
M20 2RZ

April 2024

Project details

Job no.	LTC254
Site	36 Kingston Road, Didsbury, Manchester, M20 2RZ
Client	Richard Dundas
Agent	Buju Architects
Arboriculturist	Jennie Keighley PhD MSc MArborA
Local authority	Manchester City Council
Date	26 April 2024
Issue	Final issue for planning

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1. Executive Summary

1.1 This arboricultural impact assessment relates to a planning application at the site in question for alterations to the existing dwelling and external works, including raising of the existing driveway.

1.2 A tree survey identified eight individual trees and one group of trees with potential to be impacted by the works. These were located both within the site and on neighbouring land.

1.3 Assessment of the proposal plan indicates that construction of the development will not require the removal of any trees and there is not projected to be any requirement for facilitation pruning.

1.4 The proposals will involve operations within the root protection areas (RPAs) of some of the retained trees. These must be carried out in accordance with BS5837, as discussed within the preliminary arboricultural method statement included herein.

1.5 The retained trees can also be protected by installing ground protection and stem protection, and by following the general tree recommendations provided.

2. Introduction

2.1 The client instructed Lakeland Tree Consultancy to survey the trees at the site in question and undertake an arboricultural impact assessment (AIA) in relation to a planning application for alterations to the existing dwelling and external works, including raising of the existing driveway.

2.2 Arboriculturist Jennie Keighley PhD MSc MArborA visited the site on 24 February 2024 and surveyed all trees with reasonable potential to be impacted by the proposed works in accordance with the British Standard guidance BS5837 (2012) *Trees in relation to design, demolition and construction - recommendations*.

2.3 This report will assess the potential impacts of the proposed development upon the existing tree population and outline the tree protection measures needed to prevent retained trees from being damaged during the construction works. It should be supplied to the Local Planning Authority (LPA) to allow them to determine the planning application and its contents should be adhered to by the appointed contractor, should the development be approved.

3. The Site and Tree Population

3.1 The site is located within a residential area in Didsbury, Greater Manchester, and is currently a detached, three-storey residential dwelling (see Figure 1). There are three large lime trees growing at the site frontage and several smaller trees within the back garden. The site is bounded to the north and south by neighbouring residential properties, to the east by Kingston Road and to the west by Millgate Lane.

3.2 A tree survey identified eight individual trees and one group of trees with potential to be impacted by the proposed works. These were located both within the site and on neighbouring land. The positions of the surveyed trees in relation to the existing site are shown on the appended tree survey plan.

3.3 The retention value of the surveyed trees was categorised using the guidance given in Table 1 of BS5837 (2012), which is explained in the appended tree survey schedule. Four individual trees were categorised as moderate quality (B-category) and four trees and the group of trees were categorised as low quality (C-category).



Figure 1: Google Earth image of application site (dated 24 April 2022)

4. The Development Proposal and Arboricultural Impact Assessment

The proposal

4.1 The drawing package provided by Buju Architects indicates that the planning application is for alterations to the existing residential dwelling and associated external works. To the front elevation, the existing steps leading up to the front door will be removed and the front door will be lowered to street level. The currently down-sloping driveway will be raised to meet street level. The existing garage will be incorporated into the main house as living space. To the rear elevation, a small extension will be erected and a canopy will be installed. The rear boundary wall is to be rebuilt and the rear access widened slightly to facilitate the installation of a sliding gate.

Services and drainage

4.2 The proposal plan provided does not show proposed services or drainage at this stage. Whilst there is no foreseeable requirement for new services or drainage to be routed within the root protection areas (RPAs) of retained trees, this can be ensured at detailed design stage through provision of a proposed services and drainage plan. Any new service trenches, such as to supply electricty to the new rear gate, ground source heat pump infrastructure or foul and surface water drainage required, including pipes, channels, sewage treatment plants or surface water attenuation features, if required, must be sited so as to avoid the RPAs of retained trees.

Tree removals

4.3 Assessment of the proposed site plan indicates that construction of the development will not require the removal of any trees.

Tree works

4.4 There is not projected to be any requirement for facilitation pruning works to the retained trees in order to implement the development. If facilitation tree works are found to be required, they should be carried out by a suitably qualified, experienced and insured arborist and must be in accordance with the British Standard guidance BS3998 (2010) *Tree work - recommendations.*

5. Protection of Retained Trees

Tree protection fencing

5.1 Adequate protection of the retained trees during the development is paramount in ensuring their health and survival. Creating a construction exclusion zone by erecting temporary fencing around the perimeter of the trees' root protection areas (RPAs) is the most effective way of protecting them during the works.

5.2 At the site in question, however, spacial constraints render the use of tree protection fencing impractical, so it is not deemed to be necessary for this development.

Ground protection

5.3 Where RPAs cannot reasonably be excluded from the construction area using tree protection fencing, the exposed sections of RPA can be covered by ground protection in order to help prevent soil compaction, which can damage tree roots. Ground protection usually comprises a geotextile membrane base layer, on top of which a compressible layer of wood chip is laid before topping with load-appropriate plywood sheets, scaffold boards or similar.

5.4 At the site in question, the existing shrub beds at the front of the property directly adjacent to the works are to be retained, making the use of ground protection here unfeasible. At the rear of the property, existing planting beds also limit the use of ground protection, although the client may wish to install some around the base of birch T6 to help protect it from foot traffic and other damage during the walling works.

Stem protection

5.5 Where tree stems are at risk of damage from movement of construction vehicles and machinery, and they cannot reasonably be excluded from the construction area using tree protection fencing, the exposed stems shall be covered by stem protection.

5.6 At the site in question, two large lime trees sit at the site frontage on either side of the driveway where they will be in very close proximity to the construction works. As shown in the example in Figure 2, stem protection shall cover these two trees from their bases to the point at which their branches start and shall comprise hessian fabric wrapped around the full stem, on top of which timber slats shall encircle the stem and be appropriately secured in place. If there is potential for machinery to also conflict with primary branches, then branches with potential to be impacted shall also be similarly covered. One of these trees is evidently under neighbouring ownership, so permission from the tree's owner should be sought prior to installing the stem protection.

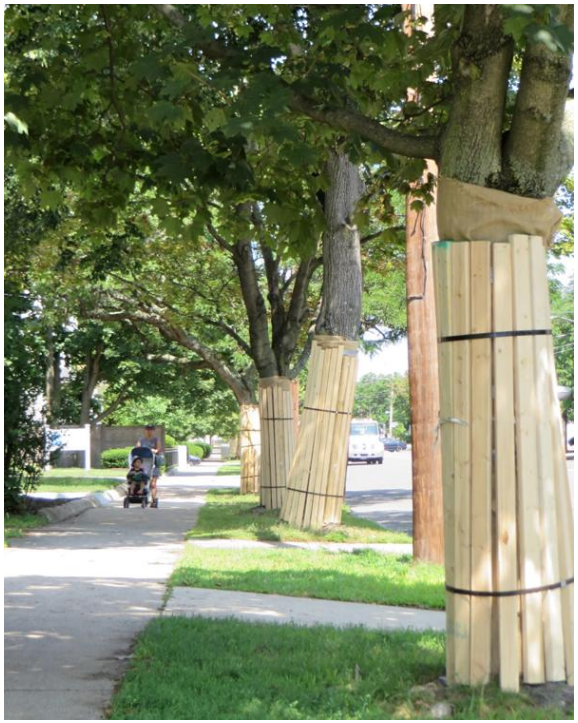


Figure 2: Example of suitable tree stem protection

5.7 The stem protection must be fitted prior to any works on site, including deliveries and shall remain in place until the development is complete and all associated materials have been removed from site. An alternative stem protection specification can be agreed with the LPA Tree Officer prior to commencement, if required.

Preliminary arboricultural method statement

5.8 An arboricultural method statement intends to identify site operations with reasonably foreseeable potential to adversely impact the health of trees within or close to the development site and outlines the necessary actions and precautions required during the development process to minimise the risk of causing damage to trees (see Table 1, below).

5.9 As this arboricultural method statement is provided pre-determination, it should be considered preliminary, pending the confirmation of all design details, such as services, drainage, boundary treatments and detailed construction specifications. A detailed arboricultural method statement, including a sequence of works and program of site monitoring and arboricultural supervision, should be conditioned to a planning approval.

Table 1: Site-specific guidance for operations within tree RPAs

Operation	BS5837 Guidance
Removal of front steps and lowering of front door	• The current split-level arrangement at the front of the property involves a number of existing retaining walls that present barriers to root growth and dictate the distribution of the RPAs of the large lime trees T1, T2 and T3 • It is important that existing ground levels are retained where tree roots are likely to be present and that there is no excavation proposed within these areas • The proposed removal of the front steps and the lowering of the front door to street level will involve working within the RPA of mature lime tree T1 • The walls forming the new entrance must be of a BS5837-compliant design where within the RPA, being sited on piled foundations or similar and not strip footings, as these could require the severing of important tree roots that may be integral for health or structural stability • A suitable foundation design for the entrance, where within the RPA of T1, can be prepared at detailed design stage • If any requirement to excavate within this area emerges, it must be carried out in consultation with the project arboriculturist

Raising of driveway	• The existing sloping driveway is to be raised to meet street level, in order to provide safer vehicle egress from the site • Given the very close proximity of mature lime tree T2, it is likely that this tree will be rooting under the existing driveway surface to some extent. Some of these roots may be important for the tree's structural integrity • To ensure tree protection, the new driveway must be of a BS5837-compliant design. This should be prepared by a structural engineer at the detailed design stage • The design must not involve excavation into the ground, other than for the siting of piles, pads or pillars, which could potentially be arranged around tree roots • Ground investigation, using hand-held tools or compressed air displacement only, can be carried out in consultation with the project arboriculturist in order to identify the locations of important tree roots and to inform a foundation specification • There must be no mechanical excavation or lowering of ground levels within the RPA • The design must not have a detrimental impact on the existing soil structure, such as by compressing the soil profile • Ideally the design would incorporate a feature that allowed water and air to penetrate down to root level • Where removal of the existing cobbled surface is required, it shall be carried out using hand-held tools only, taking care not to damage or disturb any tree roots that may be growing directly underneath • Any roots exposed during removal of the existing surface are to be wrapped or covered to protect them from rapid temperature changes and prevent dessication • Wrapping shall be removed prior to backfilling, which should take place as soon as possible • To give them the best chance of recovery, roots should be surrounded with topsoil, uncompacted sharp sand (not builders' sand, which has high salt content that is toxic to trees) or other loose inert granular fill
Installation of rear canopy	• Holes for posts to support the rear canopy may be required within the RPAs of trees T5, T8 and G1 • Post holes shall be dug using hand-held tools only and shall be sited so as to avoid any significant tree roots • Post holes shall be lined with impermeable sheeting prior to the pouring of wet concrete to prevent toxic leachate from contaminating the RPAs
Rebuilding of rear wall	• Rebuilding of the rear boundary wall will involve working close to trees T6 and T7 • As discussed at 5.3, ground protection can be installed within the RPAs to protect them from soil compaction, if desired • If renewal of the wall foundations is required, then it is possible that this may expose tree roots. Whilst exposed, roots should be wrapped or covered to protect them from rapid temperature changes and dessication. • Roots that are less than 25mm in diameter may be pruned back if required, making a clean cut with a sharp tool • Roots encountered that are more than 25mm in diameter must not be severed, as these may be essential for the tree's health or stability, and the project arboriculturist should be consulted • Brick, stone or any other materials should not be stored within RPAs, unless ground protection is in place • Cement washings are toxic to tree roots and must not be allowed to contaminate the RPAs

General tree protection recommendations

5.10 The following recommendations should be heeded throughout the development in order to prevent damage to retained trees: -

- Vehicles and plant shall not operate within RPAs, unless there is an existing hard surface in place or load-appropriate ground protection has been installed
- Soil levels within RPAs shall not be raised or lowered, unless authorised in advance by the LPA
- Soil shall not be scraped, skimmed or mechanically compacted within RPAs. The majority of tree roots are found in the top 600mm of soil, so even a shallow scrape can cause detrimental root damage
- Materials, equipment, vehicles, skips, demolition arisings, stone or earth shall not be stored within soft-surfaced RPAs
- Oil, fuel, chemicals, cement or any other material with potential to cause damage to trees shall not be poured, stored, mixed, washed or discharged within tree RPAs. Consideration shall also be given to the topography of the site to prevent materials running towards trees
- Services and drainage shall not be installed below ground level within RPAs, unless authorised in advance by the LPA
- Surface water run-off shall not be re-diverted into or out of RPAs
- Fires shall not be lit within 15m of any tree crown or RPA
- Temporary buildings, including welfare units and portable toilets, shall not be sited within RPAs
- Notice boards, telephone cables, anchorage for equipment or any other services shall not be attached to trees
- Deliveries by crane shall be supervised by the site manager, ensuring the vehicle operates in a manner in which trees are not put at risk of damage

6. Tree Preservation Orders, Conservation Areas and Other Legal Constraints

6.1 Trees may be subject to legal protection, by means of being covered by a Tree Preservation Order (TPO) or by being located within a Conservation Area. It is an offence to cut down, uproot, top, lop, cause wilful damage or destruction of protected trees without the appropriate consent from the Local Authority. Fines for carrying out unauthorised works to protected trees can be considerable. The Local Authority must be given six-weeks' notice prior to the removal of trees within a Conservation Area with a stem diameter greater than 75mm (at a height of 1.5m above ground level). To carry out works on trees covered by a TPO, a formal application must be made to the Local Authority, which should be determined within an eight-week period.

6.2 According to Manchester City Council's website (www.manchester.gov.uk), the site is located within the Didsbury St James Conservation Area and the surveyed trees are therefore afforded the associated protection. Details of specific TPOs are not publicly available on the website, so it would be necessary to contact the Council directly to check for the presence of any additional TPOs at the site. It is always advisable to contact the Council to check for any statutory tree protection prior to carrying out any tree works that are not authorised as part of a detailed planning approval.

6.3 It should be noted that, subject to certain exemptions, a felling license must be obtained from the Forestry Commission for felling of trees that will equate to more than five cubic metres of timber in a calendar quarter. This does not, however, apply to tree removals that are authorised under a detailed planning approval.

6.4 Hedgerows meeting a particular series of criteria may be classed as ‘important’ and afforded legal protection under the Hedgerows Regulations 1997. It is an offence to remove an important hedgerow without appropriate consent from the Local Authority.

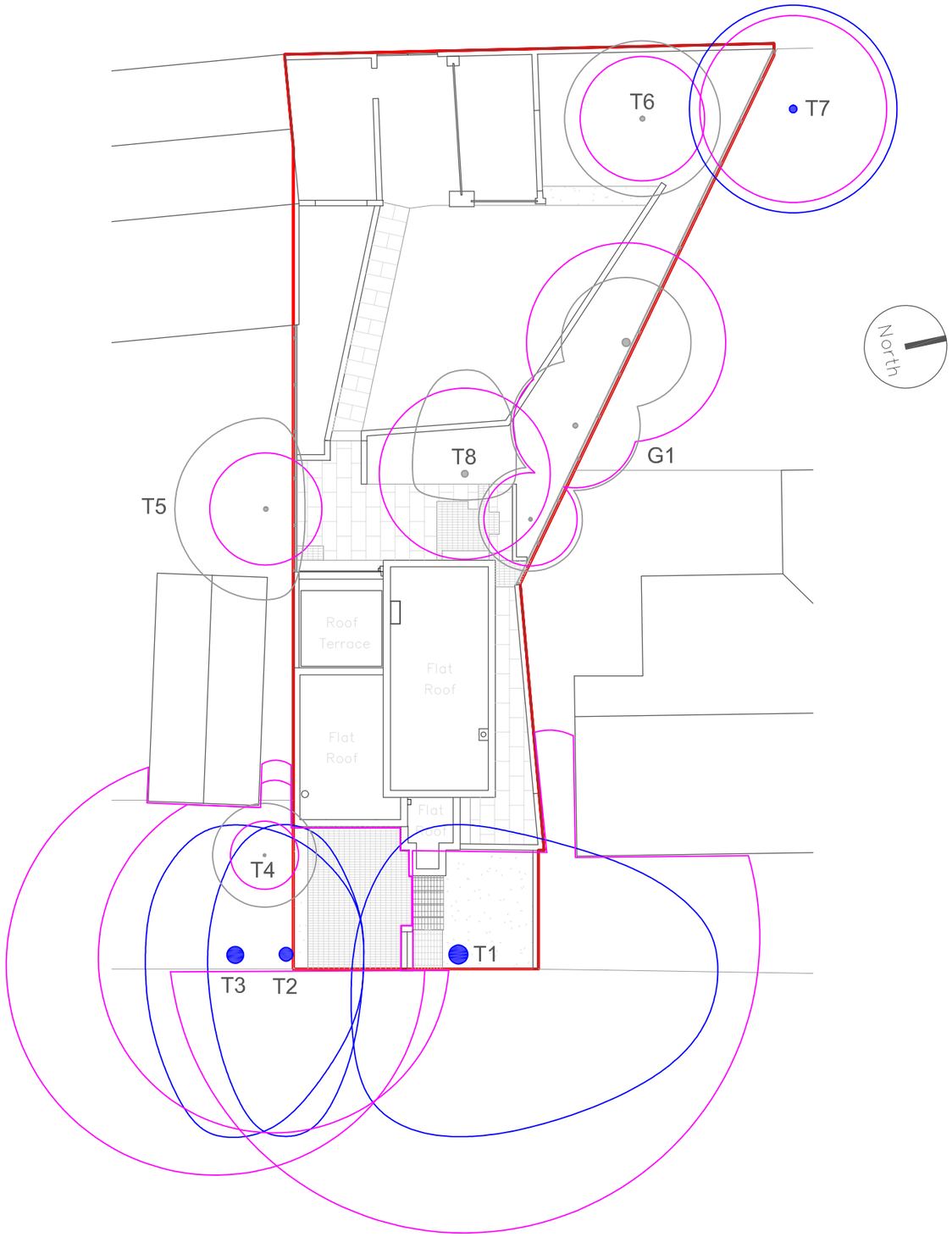
6.5 Birds, bats and certain other species are protected by the Wildlife and Countryside Act 1981. It is an offence to disturb wild birds within the nesting season (from March to August inclusive) and bats at any time of year, and this must be taken into account whilst carrying out tree works. The advice of a suitably qualified and licensed ecologist must be sought if the presence of birds, bats or other protected species is identified before or during tree works.

References

British Standards Institute (2012) *BS5837 Trees in relation to design, demolition and construction - recommendations*

British Standards Institute (2010) *BS3998 Tree work - recommendations*

Tree Survey Plan



Site Plan as Existing

Tree Survey Schedule Summary		
ID	Species	Cat.
T1	Lime	B
T2	Lime	B
T3	Lime	B
T4	Holly	C
T5	Magnolia	C
T6	Birch	C
T7	Sycamore	B
T8	Magnolia	C
G1	2no. crab, 1no. hawthorn	C

BS5837 Tree retention categories:

- Category A — High quality tree
- Category B — Moderate quality tree
- Category C — Low quality tree
- Category U — Unsuitable for retention
- Root protection areas (RPAs)

Identification numbers:

T = individual tree
G = group of trees
W = woodland
H = hedge

Site:
36 Kingston Road
Didsbury
Manchester
M20 2RZ

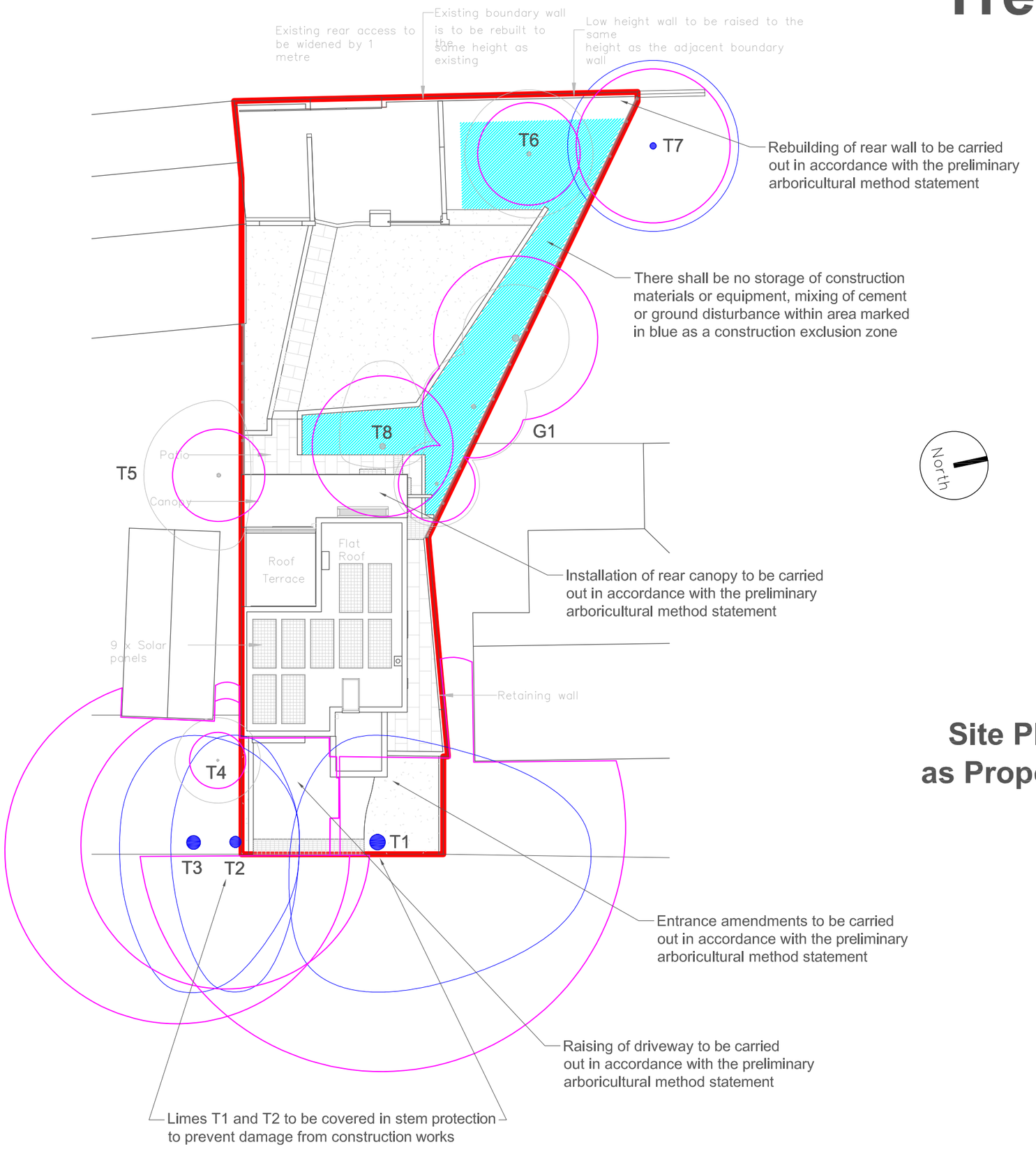
Client:
Richard Dundas

Date: February 2024
Scale: 1:200 at A3
Drawing: LTC254-TSP
Drawn by: JK

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Tree Protection Plan



Site Plan as Proposed

- Category A — High quality tree
- Category B — Moderate quality tree
- Category C — Low quality tree
- Category U — Unsuitable for retention
- Root protection areas (RPAs)
- Construction exclusion zone

Identification numbers:

T = individual tree
G = group of trees
W = woodland
H = hedge

Site:
36 Kingston Road
Didsbury
Manchester
M20 2RZ

Client:
Richard Dundas

Date:	April 2024
Scale:	1:200 at A3
Drawing:	LTC254-TPP
Drawn by:	JK

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BS5837 Tree Survey Schedule

The trees surveyed have been assigned one of the following categories, in line with the guidance outlined in British Standard 5837 (2012) *Trees in relation to design, demolition and construction - Recommendations*: -

A	Trees of **high quality** with an estimated remaining life expectancy of at least 40 years
B	Trees of **moderate quality** with an estimated remaining life expectancy of at least 20 years
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
U	**Unsuitable for retention** Those 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

Key to tree survey schedule: -

T G W H	**Tree** **Group** **Woodland** **Hedge**	**Age** is classed as either: young; semi-mature, early-mature, mature or post-mature **Life expectancy** is classed as either: <10 years; 10+ years; 20+ years or 40+ years
RPA	**Root protection area**	The radial RPA is calculated as twelve times the stem diameter and represents the area where protection of the tree roots during development works is essential to the tree's future health and survival Where the RPA is not shown as circular on the tree survey plan, it may have been modified to take account of built structures such as buildings, roads or retaining walls
#	**Estimated values**	Measurements may have been estimated where the tree is inaccessible, such as if it is located on neighbouring land or if the stem is heavily covered in ivy Where trees have multiple stems, an average stem diameter may be given
≤ ≥ ≈		For groups of trees and hedges, measurements for the largest individual will be given or average measurements may be given where the individuals are approximately uniform

BS5837 Tree survey schedule

Site 36 Kingston Road, Didsbury, Manchester, M20 2RZ
Surveyor Jennie Keighley PhD MSc MArborA
Survey date 24 February 2024
Client Richard Dundas
Conditions Clear skies, settled
Job no. LTC254

ID no.	Species Latin name	Stem diameter (mm)	Age	Height (m)#	Crown spread (m)	Crown clearance (m)	Structural condition Physiological condition	Life expectancy (years)	Radial RPA (m)	BS5837 category	General observations
T1	Lime *Tilia* sp.	730	Mature	20	N 10 E 7 S 4 W 5	6	Good Good	20+	8.76	B	• Large tree at road frontage • Crown reduced and lifted; wounds partially to fully occluded • RPA constrained by retaining walls to north and west
T2	Lime *Tilia* sp.	540	Mature	20	N 3 E 7 S 3 W 5	5	Good Good	20+	6.48	B	• Large tree at road frontage • Crown reduced and lifted; wounds partially to fully occluded • Evidently under neighbouring ownership
T3	Lime *Tilia* sp.	650	Mature	20	N 5 E 7 S 3.5 W 5	6	Good Good	20+	7.8	B	• Large tree at road frontage • Crown reduced and lifted; wounds partially to fully occluded • Evidently under neighbouring ownership
T4	Holly *Ilex aquifolium*	110	Early-mature	4	N 2 E 2 S 2 W 2	0	Good Good	20+	1.32	C	• Small tree growing in shrub bed at side of driveway • Evidently under neighbouring ownership

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BS5837 Tree survey schedule

Site	36 Kingston Road, Didsbury, Manchester, M20 2RZ	**Surveyor**	Jennie Keighley PhD MSc MArborA	**Survey date**	24 February 2024
Client	Richard Dundas	**Conditions**	Clear skies, settled	**Job no.**	LTC254

ID no.	Species Latin name	Stem diameter (mm)	Age	Height (m)#	Crown spread (m)	Crown clearance (m)	Structural condition Physiological condition	Life expectancy (years)	Radial RPA (m)	BS5837 category	General observations
T5	Magnolia *Magnolia* sp.	180 #	Mature	6	N 1.5 E 3.5 S 3.5 W 3.5	3	Good Good	10+	2.16	C	• Growing within neighbouring garden • Unable to view stem due to boundary fence • Crown overhangs site by approx. 0.5m
T6	Himalayan birch *Betula utilis*	4x100 #	Early-mature	8	N 3 E 3 S 3 W 3	2	Good Good	10+	2.4	C	• Growing at bottom of garden • Multi-stemmed from base
T7	Sycamore *Acer pseudoplatanus*	300 #	Early-mature	14	N 4 E 4 S 4 W 4	7	Good Good	20+	3.6	B	• Growing at bottom of neighbouring garden • Unable to view lower stem due to boundary fence • Heavily crown lifted; wounds partially to fully occluded
T8	Magnolia *Magnolia* sp.	230 150	Mature	5.5	N 2 E 1 S 2 W 4	2.5	Good Good	10+	3.3	C	• Growing at edge of rear patio • Crown slightly reduced

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ID no.	Species Latin name	Stem diameter (mm)	Age	Height (m)#	Crown spread (m)	Crown clearance (m)	Structural condition Physiological condition	Life expectancy (years)	Radial RPA (m)	BS5837 category	General observations
G1	2no. flowering crab 1no. hawthorn *Malus* sp. *Crataegus monogyna*	≤ 320	Mature	≤ 8	N ≤ 2.5 E ≤ 2.5 S ≤ 2.5 W ≤ 2.5	≥ 1.5	Moderate/ Good Good	10+	≤ 3.84	C	• Linear group growing close to boundary • Crowns significantly reduced

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