

Trees and Construction

BS5837:2012 Tree Survey, Arboricultural Implications Assessment & Method Statement

Site: 206A Randolph, Avenue, W9 1PF

Ref: 21641/AIA /A2

Client: Peek



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- June 2021 -

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Revision	Description	Date
/	Tree Survey Advice (21641/A1)	16/06/2021

1. INTRODUCTION

- 1.1 **Instruction:** This advice has been prepared for Peek(hereafter; client) and is in respect of the tree related planning considerations at 206A Randolph, Avenue, W9 1PF (hereafter; site).

As the proposal relates to development works at site, the advice herein is produced in accordance with the British Standard 5837 : 2012 '*Trees in Relation to Design, Demolition and Construction - Recommendations*' (hereafter; BS5837).

- 1.2 **BS5837:** The scope of BS5837 is to provide guidance on how trees and other vegetation can be integrated into construction and development design schemes. The overall aim is to ensure the protection of amenity by trees which are appropriate for retention.
- 1.3 **Scope of this advice:** This advice has been produced in accordance with BS5837 and is intended to demonstrate the site's realistic arboricultural constraints and assist with the design process. The objective is to systematically assess and provide suitable recommendations regarding the proposal's potential impact on trees and vice versa.
- 1.4 Following instruction the consultant surveyed the site on the 9th Jan 2021 where a site walkover and BS5837 tree survey were carried out; all trees on site and around the application boundary were surveyed from ground level and plotted as either an individual or a tree group.
- 1.5 This advice is subject to caveat at Appendix I, outlines relevant terms and definitions at Appendix II and constitutes the findings of the preliminary site assessment and associated arboricultural recommendations.
- 1.6 The survey data and site observations use an acquired OS tile to illustrate the surveyed trees in plan format as a 'Tree Constraints Plan' (hereafter; TCP); the TCP and the tree survey data table are at Appendix III.

2. SITE INFORMATION & TREE ASSESSMENT

- 2.1 The site is currently occupied by a mid-terrace property. It occupies a plot with front garden and rear garden, the rear garden is accessed through the house. The rear garden is set on multiple levels. There are similar residential properties with associated garden areas within the immediate vicinity.
- 2.2 **Proposal:** It is understood that it is intended to replace the rear shed and patio with a proposed garden room. This has now been confirmed and the proposal reference P1003 PL201 - is to be submitted.
- 2.3 The site requires consideration from an arboricultural perspective due to the presence of trees on and around the site; these trees are deemed to be within impacting distance of the existing property and potential construction area.
- 2.4 The trees -
- 2.4.1 The tree survey and assessment resulted in the BS5837 quality/retention categories of 'A - high' and 'C - low' being attributed to trees/tree groups.
- 2.4.2 There are well established features adjacent to site, most notable the high quality 'A' category trees.
- 2.4.3 The BS5837 tree survey is a means of objective assessment and reflects the trees' condition, quality contribution, remaining life expectancy and spatial considerations (stem, crown and roots). On this basis and in order to consider the trees' accurate constraints, the survey data has the crown extents for north, south, east west, the stem diameter measurement, and the calculated root protection areas (hereafter; RPAs). Hereafter, the trees are therefore reviewed and considered on their own merits and in line with the guidance of BS5837.

3. FINDINGS & RECOMMENDATIONS

3.1 The following information, as with the prior contents of this report, should be read with the appended tree data table and tree constraints plan (21641/TCP/01).

3.2 General Considerations for Tree Retention / Removal

3.2.1 Based on the boundary line location/neighbour's site location of T1, T2 and T3 their retention and protection are to be assumed as part of the scheme.

3.2.2 The smaller scale, declining or limited contribution trees are categorised as low quality 'C' category trees. These may be suitable for retention for the most part but should not present a significant constraint to the scheme as mitigation planting can replicate and enhance their contribution.

3.2.4 Based on the individual prominence, amenity contribution and future potential of the high quality 'A' category trees, it is recommended that they be retained, protected and be clear of the proposal.

3.2.5 No removal of any trees is anticipated

4. SCHEME / IMPLICATIONS ASSESSMENT

4.1 For this assessment, the proposed scheme has been considered (see; s.2.2 herein). This includes consideration for arboricultural management / tree works for H&S tree risk management, tree removal and pruning options, design solutions, tree protection and sensitive measures to account for trees. As per s.1.6 and s.2.2 herein, the TCP scheme overlay illustrates the proposed scheme.

4.2 *Consideration for T2 and T3-*

4.2.1 Proposed Garden room, is within RPA it is intended to install the foundations using manual installation using pile/pad type foundation with void underneath. The location is as shown on the TPP the specification should be based on engineering guidance and installation specification as per 5.4 and 5.7

4.2.2 Existing hard surfacing should be removed as per 5.6.

4.2.3 Ground protection will be required for access as placed on the TPP the specification will be as 5.8

4.2.5 *Consideration for T1 -*

4.2.6 Is clear of the proposed works and will be protected by avoidance and protective fencing 5.5.

5. METHOD STATEMENT 'CONSIDERATIONS'

5.1 Arboricultural Construction Restrictions

5.1.1 The following restrictions are considered relevant for tree protection purposes which are illustrated on the appended Tree Protection Plan:

- a) **Tree Protection** - a site compound will be set up within the application boundary, excluding the surveyed trees as per the TPP, or Protective Barrier Fencing (PBF) is to be installed as per the TPP.
- b) **Construction Exclusion** - the fenced off areas are Construction Exclusion Zones (CEZ).
- c) **Site Restrictions** - no chemicals/materials are to be transported/stored/used/mixed within the CEZ, and no fires are to be lit and no machinery, plant or vehicles are to be washed down within 10m of the tree's canopy or in a CEZ.
- e) **Ground Works** - during site works RPAs/CEZ may not be breached, i.e. no surface works, without the consultant's prior advice and council consent, and no mechanical digging or scraping is permitted within RPAs/CEZ;
- d) **Sensitive Landscape** - the PBF may be temporarily moved to allow pedestrian access to start sensitive soft landscape works within RPA, i.e. turf removal, retained soil levels, new planting, mulch borders.
- a) **Completion** - only following construction and hard landscape completion can PBF be removed and remaining soft landscape works undertaken within RPAs / CEZ (ground levels to be retained and works undertaken manually with non driven machinery).

5.2 Arboricultural Site Monitoring / Supervision

- 5.2.1 The council will typically request '*a scheme of supervision for the arboricultural protection measures*' to confirm tree protection and adherence to working methods around trees.
- 5.2.2 The appointed site contractor and project manager will be provided with an approved AMS and TPP and will need to be briefed as to prohibited works and tree protection.
- 5.2.3 A record of each site visit will be kept, and a summary letter drafted for the client, the site manager and the local authority (to be sent to the client for distribution), thus -
 - (1) **Pre-commencement** to confirm approved tree works, site hoarding / tree protection fence line, ground protection and construction restrictions for ground works.
 - (2) **Removal of Hard Surface** to confirm adherence 5.6.

- (3) **Installation of Pile and Beam for rear Garden Room.** Suitable pile locations to be excavated avoiding major roots; manual installation
- (4) **After-construction** to confirm location of surfaces and discuss tree protection requirements with the landscape team.
- (5) **Development completion** after all hard landscape works and tree and shrub planting is complete to sign off the site as having adhere to the AMS.

5.3 Tree Works

5.3.1 No tree work is anticipated due to the current clearance of the subject trees

5.4 Sensitive Ground Works (Within or in close proximity to RPAs)

- 5.4.1 Any excavations necessary within a RPA or designated CEZ (as illustrated on the TPP - each RPA and the areas enclosed by PBF) must:
- Only be undertaken when the construction works are completed; and
 - Retain the existing soil levels; and
 - Use sensitive excavation techniques to protect the tree roots and their existing growing conditions, i.e. sensitive manual excavations / air spade.
- 5.4.2 The RPA excavation areas are to be marked out [as per the TPP] on surfaces and undertaken by hand with the use of manually operated (hand held) tools.
- 5.4.3 The excavations are to be preventative and carefully avoid damage to tree roots; therefore, individual 50mm layers are to be excavated at a time within an RPA/CEZ. This is to ensure that excavations do not incur on the existing soil levels, i.e. no downward regrading of soil levels within RPAs.
- 5.4.4 Any exposed roots shall be packed with a clean damp sand (not builders sand) and wrapped in hessian sacking to protect them from temperature changes and drying out.
- 5.4.5 Small roots (those less than 25mm in diameter) may be carefully pruned back with a clean sharp tree saw. However, pruning large roots (those greater than 25mm in diameter) will require the advice of the consultant and permission of the council; these may be necessary for a tree's health and stability.
- 5.4.6 Once the surface layer material has been removed, any hessian wrapping will be removed and roots will be surrounded/packed with a sharp sand and any existing ruts, holes or dips are to be infilled with a mix of sharp sand and high grade tree planting soil.
- 5.4.7 Any exposed roots shall be packed with a clean damp sand (not builders' sand) and wrapped in hessian sacking to protect them from temperature changes and drying out.
- 5.4.8 Small roots (those less than 25mm in diameter) may be carefully pruned back with a clean sharp tree saw.

5.5 Protective Barrier Fencing (PBF) Specification

- 5.5.1 Barrier fencing is to be installed (and signed off by way of arboricultural supervision) following the completion of the tree works. It is illustrated on the Tree Protection Plan and is to remain in situ for the entire duration of preparation/construction processes unless otherwise agreed in writing by the council.
- 5.5.2 To comprise of plastic mesh panels on hand driven metal posts. All weather notices should be erected at regular intervals on the weld mesh panels with words such as "Construction exclusion zone - Keep out".

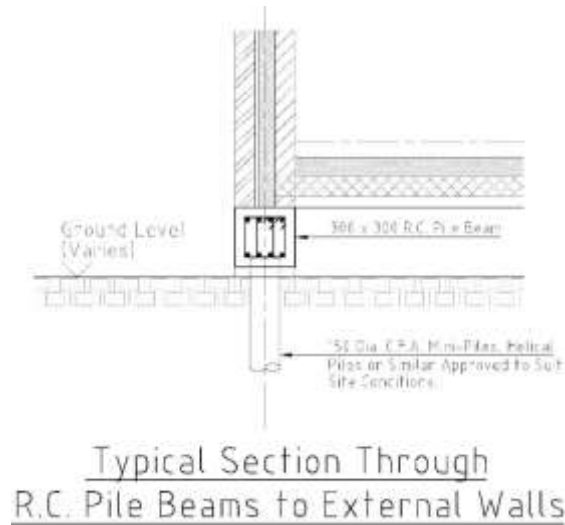
5.6 Hard Surface Removal

- 5.6.1 Removal of and or replacement of hard surfacing situated either partially or completely within the RPAs of retained trees shall be undertaken with care and under the direct on-site arboricultural supervision as these areas are likely to contain roots.
- 5.6.2 Where this is necessary the wearing course will be broken up using a hand held pneumatic breaker, hand tools and a wheel barrow to break up and remove the surfacing. If it is necessary to remove the sub base this is to be undertaken using hand tools such as a fork to loosen the material and removed using shovels and wheels barrows.
- 5.6.3 In some situations and at the discretion of the arborist it may be possibly to use an excavator using a hydraulic breaker and suitably sized toothless grading bucket. If an excavator is to be used it must be situated outside of the RPAs, on top of the hard surfacing working away from the RPAs or from ground boarding.
- 5.6.4 Which ever system is used there is to be NO disturbance of the soil beneath. If roots are found they are to be covered over with damp hessian and a layer of either sharp sand, wood chip or top soil to prevent desiccation.

5.7 Pile and Beam Wall and Slab Foundations within RPA's

- 5.7.1 Root damage can be minimized by using:
- Pile and beam type foundation with site investigation used to be determined the optimal location for the pile whilst avoiding damage to roots important for the stability of the tree, by means of hand tools or compressed air soil displacement, to a minimum depth of 600mm;
 - Beams as described above, laid at or above ground level, and cantilevered as necessary to avoid tree roots identified by site investigation.
 - Suggested pile locations should be checked with a consultant engineer.
- 5.7.2 Where pile and beam are to be installed near to trees, the smallest practical pile diameter should be used, as this reduces the possibility of striking major tree roots and reduces the size and depth of the hole required. Ground boards should be used while installation is in progress. Use of pad and beam with manual installation will negate the need for excessive crown raising. Precast pads or plastic lined holes will

protect the soil and adjacent roots from the potentially toxic effects of uncured concrete.



5.8 Ground Protection

- 5.8.1 Supplementary ground protection and BS5837 Scaffolding are to be used in conjunction with the installation of the PBF; surface works within retained trees' RPAs are to be delayed until construction completion.

At the point of PBF being installed, the enclosed RPA sections become Construction Exclusion Zones (hereafter; CEZ) to protect the trees' rooting areas during construction.

- 5.8.2 Due to the PBF installation and use of ground protection within RPAs (for the duration of works), is anticipated that construction related RPA incursion will occur. However, where this situation arises, it will be necessary to protect tree roots and their growing environment. The advice of the consultant will be sought, and the written permission of the council will be required.
- 5.8.3 It is anticipated that, temporary ground protection will be needed, i.e. for exposed RPAs and access requirements for T1, T2 and T3.

Specifically, the ground is to be protected from impact where it may be subject to direct pedestrian/vehicular movements. The ground protection is to be appropriate for the intensity of the pedestrian or vehicular movements thus -

- For pedestrian movements within an exposed RPA, the ground protection is to consist of "a single thickness of scaffold boards on top of a compressible layer laid onto a geotextile, or supported by scaffold"; and
- For wheeled or tracked movements within an exposed RPA, the ground protection is to "be designed by an engineer to accommodate the likely loading".

5.9 Underground utilities

5.9.1 Underground utilities are to be installed as per a dedicated plan and be clear of RPA by design. Otherwise, and if RPAs cannot be avoided, the following restrictions are recommended for underground utilities within RPAs:

- Any necessary excavations to be undertaken sensitively using either a no-dig method (e.g. Air-Spade) and/or under arboricultural supervision;
- Any exposed roots shall be packed with a clean damp sand (not builders sand) and wrapped in hessian sacking to protect them;
- Small roots which are identified (those less than 25mm diameter) may be carefully pruned back with a clean sharp tree saw; and
- Larger roots which are identified (those greater than 25mm in diameter) are to be retained and protected as they may be necessary for a tree's health and stability.

5.10 Landscape Detail

5.10.1 The new tree planting illustrated on the 'proposed site plan' will need supplementary detail on species and nursery selection, planting method and maintenance.

5.11 Report Handling

5.11.1 This report is released to the client and architect to be distributed at their discretion and the consultant is available for queries relating to this report and/or trees.

5.11.2 The proposed scheme is reviewed in respect of the arboricultural constraints and is considered to be achievable in line with the BS5837 guidance. The tree protection methods herein may be approved by the council for which a planning approval will be subject to a final and detailed Arboricultural Method Statement based on the approved information and other detail perhaps not available at the pre-planning approval stage, i.e. utility layout, final landscape plan, construction management plan (CMP) etc.

5.11.3 This AMS and the TPP may be approved by the council in support of the application, subject to a conditioned final AMS and TPP as a means of authorised tree protection measures; all site personnel will have access to a copy and the tree work and protection details are to be inspected as per s.5.2 for '*Arboricultural Monitoring / Supervision*'.

This concludes our advice.

Appendix I

Caveat

Any and all information supplied to Indigo Surveys Ltd by/on behalf of the client is assumed to be accurate unless otherwise informed. | This advice is limited to the observations made on the date of inspection as detailed herein and any deletion, editing or alteration will result in the advice being null and void in its entirety. | This advice in its entirety may be deemed null and void if remedial works are undertaken on any area of the site, on or after the date of the survey. | No liability is assumed by the author or by Indigo Surveys Ltd for any misuse, misinterpretation or misrepresentation of this advice. | This advice is not valid in adverse or unpredictable weather conditions or for any failure due to 'force majeure' or unpredictable events. | No responsibility is assumed either by the author of this advice or by Indigo Surveys Ltd for any legal matters that may arise as a consequence. | Neither the author nor Indigo Surveys Ltd will be required to attend court or give testimony as part of this agreement. | The responsibility for any works undertaken on the basis of the recommendations of this advice does not form part of this agreement.

Appendix II

Terms and Definitions

“Arboriculturist” - person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction.

“Competent Person” - person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached.

“Topographical survey” - an accurately measured land survey undertaken to show all relevant existing site features. *A method of carrying out topographical surveys is given in RICS specification* Surveys of land buildings and utility services at scales of 1:500 and larger.

“BS5837 Tree survey” - should be undertaken by an arboriculturist to record information about the trees on or adjacent to a site. The results of the tree survey, including material constraints arising from existing trees that merit retention, should be used (along with any other relevant baseline data) to inform feasibility studies and design options. For this reason, the tree survey should be completed and made available to designers prior to and/or independently of any specific proposals for development.

“Tree categorisation method” - trees should be categorised in accordance with the BS5837 cascade chart by an arboriculturist. This is to identify the quality and value (in a non-fiscal sense) of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained in the event of development occurring.

“Root protection area (RPA)” - layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure is treated as a priority, shown as an arboricultural constraint in m². The radius is calculated using the BS5837 calculation method. An arboriculturist may change the shape of an RPA but not reduce its area.

“Arboricultural implications assessment” - a study, undertaken by an arboriculturist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

“Arboricultural method statement” - methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained.

“Tree protection plan” - a scale drawing, informed by descriptive text where necessary, based upon the finalised proposals, showing trees for retention and illustrating the tree and landscape protection measures.

Appendix III

Data Table:	As appended (BS5837 Tree Survey Key & Table)
Tree Constraints Plan: (TCP / Scheme Overlay)	As appended (21641/TCP/01)
Tree Protection Plan: (Application Stage)	As appended (21641/TPP/01)

TREE SURVEY IN ACCORDANCE WITH BRITISH STANDARD 5837:2012 'TREES IN RELATION TO DESIGN, DEMOLITION & CONSTRUCTION - RECOMMENDATIONS'

CLIENT: PEEK

PROJECT REF: 21641/A1

SITE: 206A Randolph, Avenue, W9 1PF

CONTACT: /

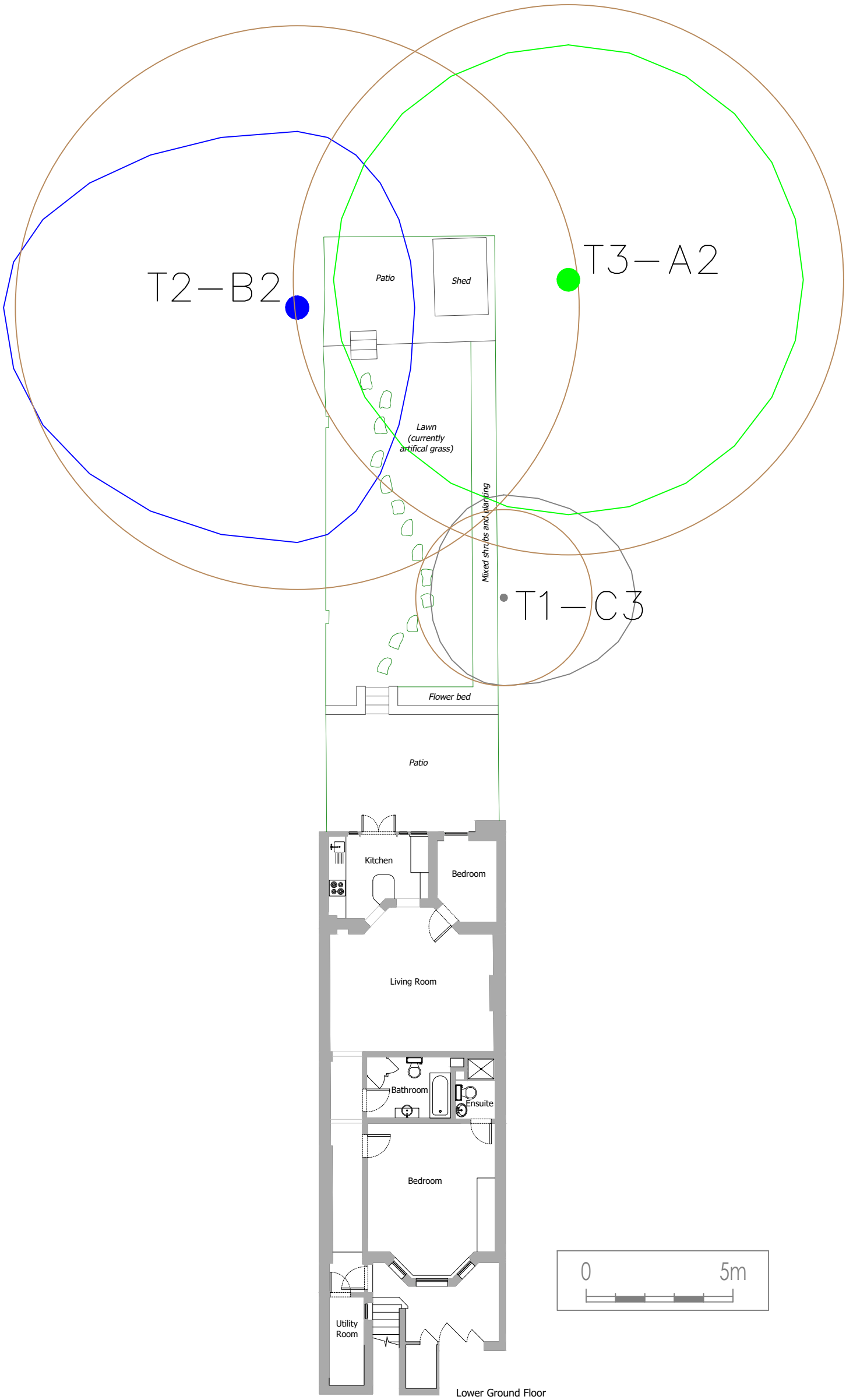
SURVEY DATE: 9 June 2021

ARB CONSULTANT: Andrew Turnbull *FDS ArborA*

TREE REF. #	SPECIES	AGE	HEIGHT (in m)	CANOPY (in m) N - S - E - W				STEM (in mm)	RPA (in m)	CLEARANCE (in m)	1st BRANCH (in m)	VITALITY	LIFE EXPEC.	NOTES	BS CAT.		MANAGEMENT
T1	Cypress; Cupressus, Cupressaceae	EM	10	3.5	3	4.5	2.5	250 *	3.0	1.5	1.5m - all round	Normal	20 - 40	Offsite, behind 1.5m tall side boundary wall, wide lateral spread.	C	3	
T2	Sycamore; Acer, Aceraceae	M	20	6	8	4	10	800 *	9.6	6	6m - all round	Fair	20 - 40	Offsite, growth lean at base to West, Ivy covered to stem and structure, decay column with cambial loss 20-30cm wide at base to 2m, multiple stems at 6m.	B	2	
T3	Ash; Fraxinus, Oleaceae	M	20 +	8	8	8	8	781	9.4	10 +	/	Normal	40 +	2x stems (500mm, 600mm *), offsite, in raised soil mound and garden spoil, co-dominant at 1-1.5m.	A	2	

TREE SURVEY 'KEY' - BRITISH STANDARD 5837:2012 'TREES IN RELATION TO DESIGN, DEMOLITION & CONSTRUCTION - RECOMMENDATIONS'

TPO/CA	-	On client request: presence of Tree Preservation Orders (TPO) / site location within a Conservation Area (CA) & date checked;
TREE REF. #	-	Tree reference number: tag or plan number (T - individual tree, G - group of trees/shrubs, H - hedge);
SPECIES	-	Genus, species and/or common name;
AGE	-	Age classification (NP - new planting, Y - young, EM - Early-Mature, SM - semi mature, M - mature, LM - late mature, OM - over mature);
HEIGHT (in m)	-	Approximate height of tree in metres;
CANOPY (in m) N - S - E - W	-	Approximate branch spread in metres of the four principal compass points;
STEM (in mm)	-	Stem diameter in millimetres: measured in accordance with s.4.6 of BS5837;
RPA (in m)	-	Circle radius of the Root Protection Area: calculated using the stem diameter (single/multiple stem variant, as outlined within BS5837);
CLEARANCE (in m)	-	Crown clearance in metres above the adjacent ground level;
IST BRANCH (in m)	-	Clearance in metres to first significant branch and direction of growth (where relevant);
VITALITY	-	Physiological condition typically gauged from canopy cover and annual extension growth (good, fair, poor, dead);
ESTIMATED REMAINING CONTRIBUTION	-	Approximate number of years a tree will continue to contribute without the need for oppressive arboricultural intervention, categorised in years as <10, 10-20, 20-40 and >40;
NOTES	-	Structural and physiological condition observations;
BS CAT.	-	<ul style="list-style-type: none"> BS5837 tree quality assessment category: resulting from structural/physiological condition and remaining contribution (approximate useful life expectancy); Standard retention category U: in such a condition that any existing value would be lost within 10 years; Standard retention category A: high quality and value, in such a condition as to be able to make substantial contribution of 40+ years; Standard retention category B: moderate quality and value, in such a condition as to make a significant contribution of 20+ years; Standard retention category C: low quality and value, currently in adequate condition to remain until new planting could be established 10+ years; Standard retention sub-category, mainly due to: 1- Arboricultural values, 2- Landscape values, 3- Cultural values, including conservation;
MANAGEMENT	-	Preliminary management recommendations (as appropriate);
' * '	-	Within the survey schedule denotes an estimate



Root Protection Area (RPA) Notes

BS5837:2012 standard circular RPAs are illustrated here, with consideration required for anticipated root growth influence and restrictions, such as -

Root growth from trees generally may be absent restricted or deflected from site due to the lower/higher level changes, raised concrete structures, existing foundations, hard surfaces, longstanding compacted ground and existing structures for example. Further investigation may be required to establish the presence or absence of roots.

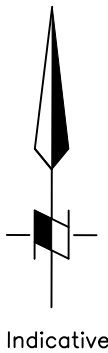
KEY

- Tree Crown Spread
- Root Protection Area (RPA)
- Tree Stem
- T1 Tree No.
- Removed Tree

Tree Condition Category

- A
- B
- C
- U

The surveyed trees are illustrated on this Constraints Plan which is prepared in accordance with British Standard BS5837: 2012 'Trees in Relation to Design, Demolition and Construction – Recommendations'

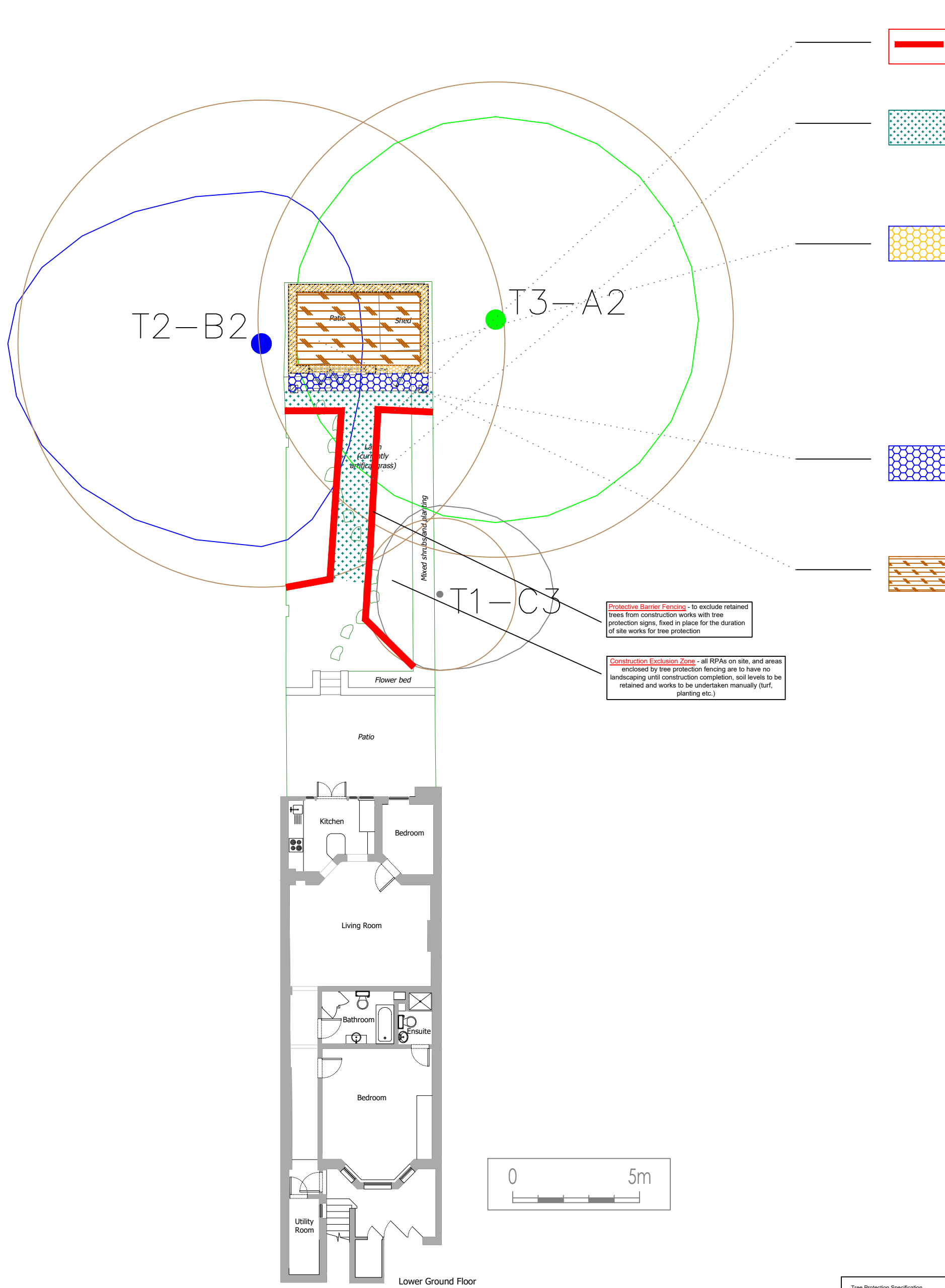
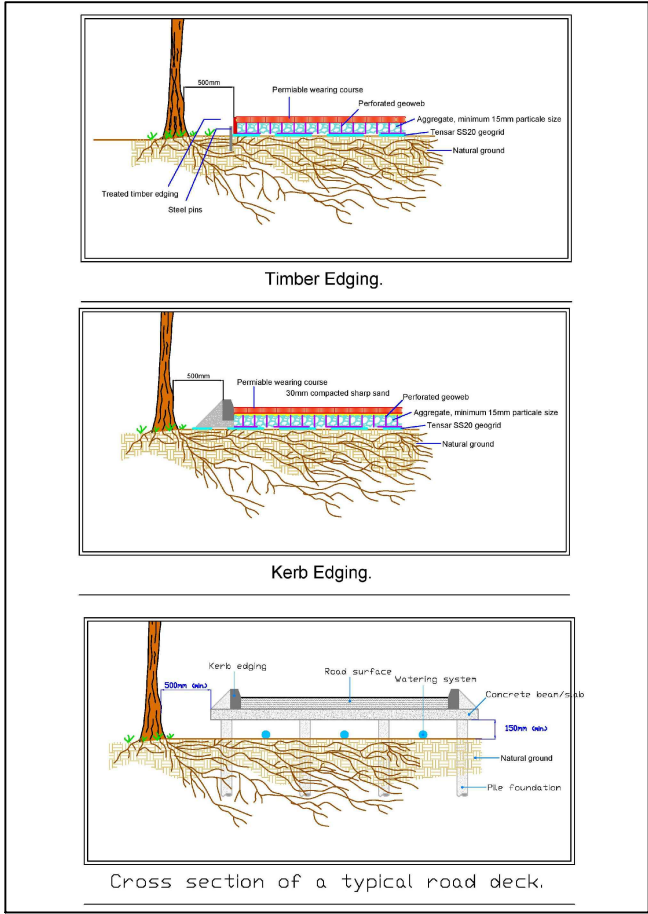


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REV.	DESCRIPTION	DWN	CHK'D	DATE		
CLIENT						
Peek						
PROJECT						
21641/A1 206A Randolph, Avenue, W9 1PF						
TITLE						
Tree Constraints Plan						
DWN	DATE	CHK'D	DATE	APP'D	DATE	SCALE
RPHB	16/06/2021	AT	16/06/2021			1-150
<div><div>Indigo^{Ltd} S u r v e y s</div></div> <div>(Mail) Second Floor, 1 Hunter's Walk, Canal Street, Chester, CH1 4EB Telephone: 0333 123 7080 www.indigosurveys.co.uk</div>						
Drawing Number						A2
21641/A1/TCP/01						REV.

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Protective Barrier Fencing (PBF):
To comprise of plastic mesh panels with metal driven spindle posts described as 'post and rope' and illustrated on the TPP. All weather notices should be erected at regular intervals on the weld mesh panels with words such as "Tree Protection Area - Keep out". See example on TPP.

Ground Protection:
Temporary ground protection to be used as indicated around T2 and T3 with tree protection signs, to be fixed in place for the duration of site works for tree protection and to remain until construction completion, then to be realigned for hard landscape. See example on TPP.

Sensitive Ground Works:
Piled Foundations
Areas indicated are proposed piling locations for the proposed building. Where piling is to be installed near to trees, the smallest practical pile diameter should be used, as this reduces the possibility of striking major tree roots, and reduces the size of the rig required to sink the piles. If a piling mat is required, this should conform to the parameters for ground boarding. Use of the smallest practice piling rig is also important where piling within the branch spread is proposed, as this can reduce the need for access facilitation pruning. The pile type should be selected bearing in mind the need to protect the soil and adjacent roots from the potentially toxic effects of uncured concrete, e.g. sleeved bored piles or screw piles.

Sensitive Ground Works -
To be used on proposed patio only to be undertaken once construction is complete, then prepare grounds manually stripping the existing soil surface and turf only, retain soil levels, use load bearing system (Cellweb or similar) and manual installations.

Hard Surfacing Removal-
Removal of and or replacement of hard surfacing situated either partially or completely within the RPAs of retained trees shall be undertaken with care and under the direct on-site arboricultural supervision as these areas are likely to contain roots. Where this is necessary the wearing course will be broken up using a hand held pneumatic breaker, hand tools and a wheel barrow to break up and remove the surfacing. If it is necessary to remove the sub base this is to be undertaken using hand tools such as a fork to loosen the material and removed using shovels and wheels barrows. In some situations and at the discretion of the arborist it may be possibly to use an excavator using a hydraulic breaker and suitably sized toothless grading bucket. If an excavator is to be used it must be situated outside of the RPAs, on top of the hard surfacing working away from the RPAs or from ground boarding. Which ever system is used the is to be NO disturbance of the soil beneath. If roots are found they are to be covered over with damp hessian and a layer of either sharp sand, wood chip or top soil to prevent desiccation.

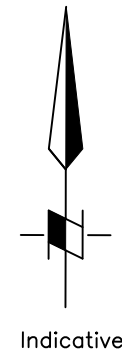
KEY

- Tree Crown Spread
- Root Protection Area (RPA)
- Tree Stem
- T1 Tree No.
- Removed Tree

Tree Condition Category

- A
- B
- C
- U

The surveyed trees are illustrated on this Constraints Plan which is prepared in accordance with British Standard BS5837: 2012 'Trees in Relation to Design, Demolition and Construction - Recommendations'



REV.	Based on TOP 21641 & P1003 - PL201-A- GROUND FLOOR	RB	TB	16/6/21
	DESCRIPTION	DWN	CHK'D	DATE

CLIENT	Peek
PROJECT	21641/A2 206A Randolph, Avenue, W9 1PF
TITLE	Tree Protection Plan

DWN	DATE	CHK'D	DATE	APP'D	DATE	SCALE
RPHB	16/06/2021	AT	16/06/2021			1-150



(Mail) Second Floor, 1 Hunter's Walk, Canal Street, Chester, CH1 4EB
Telephone: 0333 123 7080 www.indigosurveys.co.uk

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21641/A2/TPP/01	REV.

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- Tree Protection Specification
- The tree protection measures outlined within the Arboricultural Method Statement (ref: 21641/A2 AIA) are to be adhered to as illustrated on this Tree Protection Plan (ref: 21641_A2-TPP-01), and the additional details below, thus:
- Protective Barrier Fencing (PBF), with Tree Protection Signs fixed at least every 5m (see detail and illustration on this TPP), is to be installed prior to the site works commencing.
 - Hard Surfaces within RPAs are to be retained where ongoing access is required and supplementary Ground protection is to be installed for exposed soft surfaced RPA sections for material drop-off and storage (needs to be load bearing and prevent chemical run-off or leaching into soils).
 - No chemicals or materials are to be transported or stored or used or mixed within a RPA or Construction Exclusion Zone (CEZ).
 - No fires are to be lit and no machinery, plant or vehicles are to be washed down within 10m of a tree's canopy or in a CEZ.
 - During site works RPAs and CEZs may not be breached, i.e. no surfacing works, without the prior advice of the consultant and the consent of the council.
 - No mechanical digging or scraping is permitted within a RPA or CEZ.
 - When all construction works are completed the PBF can be removed however, should be realigned consistent with the final landscape design to allow for the hard landscape improvement works to be undertaken ahead of the soft landscape shrub and tree planting works.