

# Trees and Construction

## BS5837 Method Statement

**Site:** 15 Wedderburn Road, London, NW3 5QS

**Ref:** 13981.21/A1\_AMS Addendum

**Client:** Mr Dan Wagner



(Mail) 2nd Floor | 1 Hunters Walk | Canal Street | Chester | CH1 4EB

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**- March 2021 -**

**1. Addendum Note to Planning Approval 2017/1006/P**

- 1.1 This addendum relates to recent planning approval at 15 Wedderburn Road, London, NW3 5QS from Camden Council. Application Ref 2017/1006/P.
- 1.2 **Proposal:** A scheme has been granted planning permission for '*change of use from three residential flats to two residential flats; extension of lower ground floor with light wells and excavation of new basement level; erection of a single storey rear extension at lower ground floor with terrace and 2 single storey side extensions and front boundary treatment (following the demolition of the existing side conservatory and rear extension)*'. The advice within the approved AIA rev A relates to tree protection considerations and recommendations for the approved scheme (ref: 2017/1006/P).
- 1.3 The current approved Tree Protection Plan (TPP) within the 17238/A2\_AIA\_Rev.A (AIA) would render the approved basement unimplementable. The document 13981.21/A1\_AMS (attached) shows a new relevant tree protection measures in the form of an amended TPP which is in line with the approved design
- 1.4 The principles of tree protection within the document ref 17238/A2\_AIA\_Rev.A are to remain but document 13981.21/A1\_AMS (attached) updates the Tree Protection Plan (TPP) and site-specific methods. This is in the light of the drawing 201\_P2 which is listed as approved. Drawing 201\_P2 shows the intended agreed line of the proposed sub-basement to the proposal which the new TPP addresses.

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**- February 2021 -**

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Revision	Description	Date
/	/	/

## 1. INTRODUCTION

- 1.1 **Instruction:** This advice has been prepared for Mr Dan Wagner (hereafter; client) and is in respect of the tree related planning considerations at 15 Wedderburn Road, London, NW3 5QS (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 report has been produced in accordance with BS5837 and is intended to demonstrate how trees have been properly considered in relation to the accepted scheme. The objective is to provide recommendations for tree protection relating to the scheme's potential impact on trees and vice versa.
- 1.4 Following instruction the consultant surveyed the site on the 19th October 2020 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 tree survey and site observations were used to illustrate the site's arboricultural constraints in plan format as a 'Tree Constraints Plan' (hereafter; TCP). This is used as a base layer with the approved scheme outline as an overlay to inform this advice as a Tree Protection Plan (hereafter; TPP); the survey table and TPP are at Appendix III.

## 2. SITE INFORMATION & TREE ASSESSMENT

- 2.1 The site has a detached building which is currently subdivided into three residences. It is on the corner of Wedderburn Road and Akenside Road and is bound thereafter by residential property gardens.

The site has an openly accessible driveway off Wedderburn Road which links to a gated front and rear garden walkways. The front garden sits mostly at the street level whilst the gardens at the rear are at differing lower levels and are accessed via stairways and patio sections; these are mostly hard surfaced.

The surveyed trees are within the front, side and rear gardens at site, and within the highway to the North off Wedderburn Road as T1 - T18, G1, G2 and G3.

- 2.2 **Proposal:** A scheme has been granted planning permission for '*change of use from three residential flats to two residential flats; extension of lower ground floor with light wells and excavation of new basement level; erection of a single storey rear extension at lower ground floor with terrace and 2 single storey side extensions and front boundary treatment (following the demolition of the existing side conservatory and rear extension)*'. The advice herein relates to tree protection considerations and recommendations for the approved scheme (ref: 2017/1006/P).

- 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 construction area.

Also, the site requires consideration from an arboricultural perspective due as part of the approved layout and design as acknowledged by the council in the form of planning conditions.

### 3. ARBORICULTURAL ASSESSMENT & METHOD STATEMENT

- 3.1 The following information, as with the prior contents of this report, is to be read in conjunction with the tree survey data table and the appended Tree Protection Plan (13981.21/TPP/01).

Additionally, this report is to supersede the previous report (ref: 13891/A2\_AIA\_rev.A) as a dedicated Method Statement (hereafter; AMS) and Tree Protection Plan (hereafter; TPP) based on the approved detail and other detail not available at the application stage. The recommendations of this AMS require approval by the local authority in accordance with the tree related planing condition as illustrated on the corresponding TPP.

#### 3.2 Arboricultural Site Monitoring / Supervision

- 3.2.1 In accordance with the implemented planning conditions, the local authority require an AMS to be satisfactorily implemented in accordance with BS5837. This will require site inspections by a qualified arboriculturist to then be reported on to inform the client and advise the council during construction.
- 3.2.2 In this instance the retained trees are to be protected by sensitive measures and tree protection fencing in conjunction with phased works and site management; this will be supplemented by the arboricultural supervision / inspection.
- 3.2.3 Based on the proximity of retained trees to the active construction area. It is necessary for *intermittent inspections* which are *recommended at key stages* to ensure this advice is adhered to and the consultant is available for onsite tree queries.

- 3.2.4 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 by email for distribution).

The arboricultural supervision/monitoring is therefore recommended thus:

- Onsite observation/guidance for PBF installation;
- Induction of site management regarding arboricultural considerations and the assignment of key personnel (site manager) responsible for maintaining the AMS;
- Onsite observation and guidance during excavations/foundation work within RPAs;
- On construction completion, onsite observation/guidance regarding removal of the protective measures and to sign off the site as having correctly adhered to this AMS.

### 3.3 Tree Works

- 3.3.1 In accordance with planning conditions for the retention and maintenance of the site's trees and Arboricultural Method Statement; the following tree works are recommended in conjunction with the scheme:

#### TREE WORK SUMMARY

NUMBER	TREE REMOVALS / PRUNING WORKS	
Vegetation (G1) & shrub clearance	Remove	Remove all conflicting vegetation from the replacement rear garden retaining wall and new extension to provide 1.0 - 1.5m clearance for construction.
T1	Remove and plant 2 new trees	Remove to facilitate the proposed scheme: - to be directly replaced in a similar location (rear garden) by new small / medium scale trees
T2 - T5, G2 & T14	Remove and plant 2 new trees	Remove in conjunction with the scheme: - to be replaced with new tree planting as part of the general site landscaping and new ornamental trees
T7 - T9, G3 & T11	Remove and plant 4 new trees	Remove to facilitate the proposed scheme: - to be directly replaced in a similar location (aside boundary or side garden) by new small / medium scale trees or functional hedge / group
Retained trees		Protection by construction restrictions, retained hard surfaces within RPAs during site access, temporary fencing, manual work only (pedestrian access), suitable chemical / material handling, and sensitive hard landscape methods for works within RPAs (see; AMS).

- 3.3.2 All approved tree works must be undertaken with the written permission of the council (subject to the normal statutory exemptions) and must be undertaken to BS3998 by a tree service contractor who is suitably qualified, experienced and insured to carry out the arboricultural contracting.
- 3.3.3 Any additional tree works must only be undertaken with the full and written permission of the council and all tree works must be undertaken to BS3998 and by a tree service contractor who is suitably qualified, experienced and insured.



### 3.4 Protective Barrier Fencing (PBF) Specification

- 3.4.1 Protective barrier fencing (hereafter; PBF) is to be installed to illustrate the no access areas for contractors, limit access to the existing driveway and paths and exclude all ground works, material storage and construction processes outside of the approved scheme and from the soft surfaced RPAs during construction.
- 3.4.2 PBF is to be used in conjunction with retained boundary walls and retained hard surfaces within RPAs for pedestrian access until construction completion (surface works within RPAs will be undertaken sensitively - detail to follow).
- 3.4.3 PBF is to be installed as per the TPP prior to any site works being undertaken and is to remain in place until construction completion.
- 3.4.4 The PBF is to be a fixed line aside the existing pathways to illustrate the Construction Exclusion Zone (CEZ) as the fenced off area. It is to prevent the pedestrian access into the soft surfaces borders and lawn and only allow access via the existing driveway and pathways and will be 1.5m tall ply hoarding with support posts.
- 3.4.5 Tree protection signage denoting the words “TREE PROTECTION ZONE – KEEP OUT” is to be fixed onto each panel of the PBF (see TPP illustration).

### 3.5 Ground Protection

- 3.5.1 In order to avoid the need for supplementary ground protection, phased construction works are to be used in conjunction with the installation of the PBF; the soft surfaced borders are excluded for RPA protection and hard landscape / surface work within RPAs is to be delayed until construction completion (detail pending).

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.

- 3.5.2 Due to the PBF installation and retention of existing hard surfaces within RPAs (for the duration of works), RPA incursion is not anticipated. However, where this is requested, it may be necessary to protect tree roots and the growing environment. If so, the advice of the consultant will be sought and the council's written permission will be required.

### 3.6 Ground Works within RPAs (*Basement excavations*)

- 3.6.1 The basement footprint is close to the anticipated rooting area of retained trees and require a cautionary approach to excavations to minimise the ground and potential root impacts.

- 3.6.2 By way of RPA protection during the sensitive excavations, root pruning and foundation installation, measures are required thus:
- Removal of the existing soil is to be undertaken for the basement footprint;
  - Any identified tree roots may be pruned back to clear the basement extents, using sharp secateurs;
  - No incursion into soils outside of the basement footprint is permitted and no root pruning or impact shall occur other than the above root pruning;
- 3.6.3 Once the extent of excavations are complete, the piles can be installed.
- 3.7 Ground Works within RPAs (hard landscape removal)
- 3.7.1 For the removal of existing hard surfaces from trees' RPAs, the excavations must:
- Be undertaken after construction completion, so as to allow the removal of PBF;
  - Be undertaken manually with hand held tools to break out / lift and remove the existing hard surface within the RPAs
  - Be undertaken manually with hand held tools to remove the sub-base;
  - Stop the excavations when the original soil level is reached, i.e. to excavate no further than the existing garden's turf level; and
  - Apply the approved landscape scheme finish, i.e. mulched border, turf etc
- 3.8 Additional Tree Protection Considerations
- 3.8.1 General consideration for material storage, handling and pollution control is to be detailed within a 'construction management plan' and supplied by the client in addition to this advice.
- 3.8.2 It is important to ensure that delivery, storage, material preparation, access etc. are all located entirely outside of retained trees' RPAs and crowns.

### 3.9 Summary of Construction Restrictions

3.9.1 The following restrictions apply for tree protection purposes: as illustrated on the Tree Protection Plan (TPP/13981.21/01):

- a) There tree works at s.3.3 are required to facilitate the scheme and no additional tree works not specified within this arboricultural method statement (or leaning against or attaching of objects to a tree) are permitted unless agreed in writing by the council.
- b) A secure section of Protective Barrier Fencing (hereafter; PBF) is to be installed around the soft surfaced borders for RPA protection (tree roots) and hard surfaces will be retained for works access; PBF will be installed prior to site works, material delivery or construction commencing.
- c) Once the PBF/ground protection is in place the enclosed areas are to act as Construction Exclusion Zones (no access is permitted); the site cabins and materials are to be situated clear of tree crowns and RPAs.
- d) No chemicals or materials are to be transported or stored or used or mixed within an exposed RPA or Construction Exclusion Zone (CEZ).
- e) 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 within a RPA or CEZ.
- f) During construction processes RPAs / CEZs may not be breached, i.e. no surface work, without the consultant's prior advice and council consent.
- g) Only following hard landscaping completion can the PBF be removed and any remaining soft landscaping / tree planting works be undertaken.

### 3.10 Report Handling

3.10.1 This report is released to the client for them to distribute at their discretion. The consultant is available via telecom and/or email (via the methods on the title page) for any queries relating to this report and/or any other matter relating to arboriculture.

3.10.2 This AMS and the TPP are to be approved by the council as a means of authorised tree protection measures of which all site personnel are to have access to a copy and the details herein are to be inspected as per s.3.2 for '*Arboricultural Monitoring / Supervision*'.

**This concludes our advice.**

## **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 m<sup>2</sup>. 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 Protection Plan:** As appended (13981.21 / TPP / 01)

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

### FIELD KEY:

<b>TPO/CA</b>	-	On client request: presence of Tree Preservation Orders (TPO) / site location within a Conservation Area (CA) & date checked;
<b>TREE REF. #</b>	-	Tree reference number: tag or plan number (T - individual tree, G - group of trees/shrubs, H - hedge);
<b>SPECIES</b>	-	Genus, species and/or common name;
<b>AGE</b>	-	Age classification (NP - new planting, Y - young, SM - semi mature, EM - early mature, M - mature, LM - late mature, OM - over mature);
<b>HEIGHT (in m)</b>	-	Approximate height of tree in metres;
<b>CANOPY (in m) N - S - E - W</b>	-	Approximate branch spread in metres of the four principal compass points;
<b>STEM (in mm)</b>	-	Stem diameter in millimetres: measured in accordance with s.4.6 of BS5837;
<b>RPA (in m)</b>	-	Circle radius of the Root Protection Area: calculated using the stem diameter (single/multiple stem variant, as outlined within BS5837);
<b>CLEARANCE (in m)</b>	-	Crown clearance in metres above the adjacent ground level;
<b>IST BRANCH (in m)</b>	-	Clearance in metres to first significant branch and direction of growth (where relevant);
<b>VITALITY</b>	-	Physiological condition typically gauged from canopy cover and annual extension growth (good, fair, poor, dead);
<b>ESTIMATED REMAINING CONTRIBUTION</b>	-	Approximate number of years the tree will continue to make a contribution without the need for oppressive arboricultural intervention, categorised in years as <10, 10-20, 20-40 and >40;
<b>NOTES</b>	-	Structural and physiological condition observations;
<b>BS CAT.</b>	-	BS5837 tree quality assessment category: resulting from structural/physiological condition and remaining contribution (approximate Standard retention category <b>U</b> : in such a condition that any existing value would be lost within 10 years;
	-	Standard retention category <b>A</b> : high quality and value, in such a condition as to be able to make substantial contribution of 40+ years;
	-	Standard retention category <b>B</b> : moderate quality and value, in such a condition as to make a significant contribution of 20+ years;
	-	Standard retention category <b>C</b> : low quality and value, currently in adequate condition to remain until new planting could be established
	-	Standard retention sub-category, mainly due to: <b>1</b> - Arboricultural values, <b>2</b> - Landscape values, <b>3</b> - Cultural values, including conservation;
<b>MANAGEMENT</b>	-	Preliminary management recommendations (as appropriate);
<b>* * *</b>	-	Within the survey schedule denotes an estimate

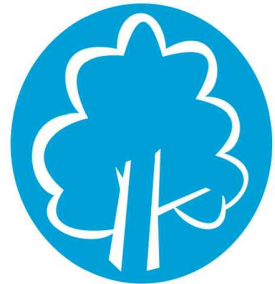
TREE SURVEY IN ACCORDANCE WITH BRITISH STANDARD 5837:2012 'TREES IN RELATION TO DESIGN, DEMOLITION & CONSTRUCTION - RECOMMENDATIONS'																
CLIENT: Mr Dan Wagner				PROJECT REF: 13891/A3				SITE: 15 Wedderburn Road, London, NW3 5QS								
CONTACT: Clive Sall Architects				SURVEY DATE: 24-July-2013 & 01-Dec-2016				ARB CONSULTANT: Andrew Turnbull FDSc MArborA								
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	Apple; <i>Malus</i> , <i>Rosaceae</i>	M / LM	9	4.5	4.5	3	5	360	4.3	2	1.5m - union	Normal	10 - 20	Established free, good crop cover, maintained by pollard. Multiple stem at 1.5m+ with good regrowth but starting to encroach building. Only visible in garden.	C 3	Retain / replace tree cover as part of scheme.
G1	Mixed Border (Laurel, Choisya, Ivy, Apple Blossom, Pyracantha)	SM - M	5 - 7	/	/	/	/	/	/	0	/	Fair	10 - 20	Mixed shrub border pruned laterally to encourage height and screening. Located in retaining wall border and around raised patio.	C 3	Retain / replace functional screen as part of scheme.
T2	Laurel; <i>Laurus</i> , <i>Lauraceae</i>	SM	5.5	3	1	2	1	130	1.6	1	/	Fair	10 - 20	Lapsed planting, likely for formal cover but height encouraged for screen, collective growth.	U	Consider removal in conjunction with the scheme / site works.
T3	Cherry; <i>Prunus</i> , <i>Rosaceae</i>	M	5	0.5	1	2	0	260	3.1	1.5	/	Very Poor	< 10	Almost dead.	U	Remove.
T4	Laurel; <i>Laurus</i> , <i>Lauraceae</i>	M	6	2	2	2	1.5	190	2.3	1	/	Fair	10 - 20	Lapsed planting, likely for formal cover but height encouraged for screen, collective growth. Dieback in crown.	U	Consider removal in conjunction with the scheme / site works.
T5	<i>Cotoneaster</i> , <i>Rosaceae</i>	SM / M	8	2.5	3	2.5	3	120	1.4	0	/	Fair	10 - 20	Lapsed planting, likely for formal cover but height encouraged for screen, collective growth. Multiple stem base.	U	Consider removal in conjunction with the scheme / site works.
G2	Mixed Shrub Border (Laurel, Cotoneaster, Ivy, Virginia Creeper)	SM / M	5 - 8	/	/	/	/	/	/	0	/	Fair	10 - 20	Contains T2 - T5, collective canopy, informal provides screening and blends with Ivy covered wall.	U	Consider removal in conjunction with the scheme / site works.
T6	Crab Apple; <i>Malus</i> , <i>Rosaceae</i>	LM	9.5	4	6	5	7	450	5.4	2.5	2m - union	Normal	10 - 20	Multiple stem at 2m, growing with paved RPA close to wall and house. Slight balcony overhang, multiple stem crown with some branch conflicts. Decay at old pruning points just above multiple stem union, previously reduced.	C 3	Retain (25% reduction required for risk management) or replace tree cover as part of scheme.
G3	Cypress x3	Y / SM	4 - 5	/	/	/	/	/	/	1	/	Fair	10 - 20	3x small stems grow as collective and provide buffer to wall and screening. Limited future contribution.	C 2	Not to guide or constrain the layout - simple replacement landscaping required.
T7	<i>Cotoneaster</i> , <i>Rosaceae</i>	M	10	4.5	3	5	2.5	184	2.2	1.5	/	Fair	10 - 20	Co-dominant at 0.5-1.0m, congested crown from reaction growth, growth lean and low quality form. (Multiple stems measured 140mm and 180mm).	C 2	Not to guide or constrain the layout - replacement planting required (ornamental).
T8	Cherry; <i>Prunus</i> , <i>Rosaceae</i>	M / LM	14	4.5	4.5	4	3.5	334	4.0	4	6m - North	Fair	20 - 40	Co-dominant base, located in shrub border. Previous branch reduction noted in parts, sparse crown and stem scarring on largest stem. (Multiple stem 210mm and 260mm).	C 2	Retain (monitor tree's condition for risk management) or replace tree cover as part of scheme.
T9	Cherry; <i>Prunus</i> , <i>Rosaceae</i>	M / LM	6.5	0.5	4.5	1	4	250	3.0	2.5	2m - S.West	Fair	10 - 20	Multiple stem at 2m, maintained by pollard with average form and regrowth. Suppressed by T8.	C 2	Not to guide or constrain the layout - replacement planting required (ornamental).
T10	Cockspur Thorn; <i>Crataegus</i> , <i>Rosaceae</i>	M	8	2.5	2.5	3.5	3	170	2.0	1.5	1.5	Normal	10 - 20	Multiple stem crown, fairly congested from regrowth after crown reduction.	C 3	Not to guide or constrain the layout - replacement planting required (ornamental).
T11	Ornamental Cherry; <i>Prunus</i> , <i>Rosaceae</i>	SM	6.5	2.5	2	2	1.5	80	1.0	1.5	1.5	Normal	10 - 20	Multiple stem crown, established, fair form and small scale.	C 3	Not to guide or constrain the layout - replacement planting required (ornamental).
T12	Mesplii; <i>Amelanchier</i> , <i>Rosaceae</i>	SM	9	2	2.5	2	1.5	80	1.0	1	1	Normal	10 - 20	Multiple stem stock at base, located in planter with good form and canopy cover, small scale.	C 3	Not to guide or constrain the layout - replacement planting required (ornamental).
T13	Crab Apple; <i>Malus</i> , <i>Rosaceae</i>	M	9	3.5	4	3.5	3.5	200	2.4	3.5	3.5	Normal	10 - 20	Central to block paved driveway, co-dominant at 3-5m with good form and canopy cover from growth at base.	C 3	Not to guide or constrain the layout - replacement planting required (ornamental).
T14	Golden Chain; <i>Laburnum</i> , <i>Fabaceae</i>	SM / M	4.5	1	3	1.5	2	160	1.9	1.5	2.5m - N.East	Fair	< 10	Growing in confined conditions, suppressed by T13.	U	Consider removal.
T15	Street Tree: Lime; <i>Tilia</i> , <i>Tiliaceae</i>	Y	8	2	2.5	2	2	150	1.8	2.5	2.5	Normal	40 +	Established young street planting with stem damage and stub at 2.0-2.5m.	C 1 / 3	Local Authority managed.
T16	Street Tree: Lime; <i>Tilia</i> , <i>Tiliaceae</i>	M	18	5	4	4.5	4	630	7.6	2.5	6m - South	Normal	40 +	Multiple stem at 3.5m, maintained by pollard, good canopy form and leaf cover.	A 2	Local Authority managed.
T17	Street Tree: Lime; <i>Tilia</i> , <i>Tiliaceae</i>	M	20	6	5	6	4.5	590	7.1	2.5	6m - union	Normal	40 +	Multiple stem at 5-6m, maintained by pollard, good canopy form and leaf cover.	A 2	Local Authority managed.
T18	Street Tree: Sycamore; <i>Acer</i> , <i>Aceraceae</i>	SM / M	16	5.5	5	5	5.5	520	6.2	4	5m - union	Normal	40 +	Multiple stem at 6-7m, maintained by pollard, recently pollarded with no current regrowth, tears and rubs of cambial layer from pruning points.	A 2	Local Authority managed.



Tree Protection Specification

These tree protection measures are within the Arboricultural Method Statement (ref: 13891/A3\_AMS) and to be adhered to, thus:

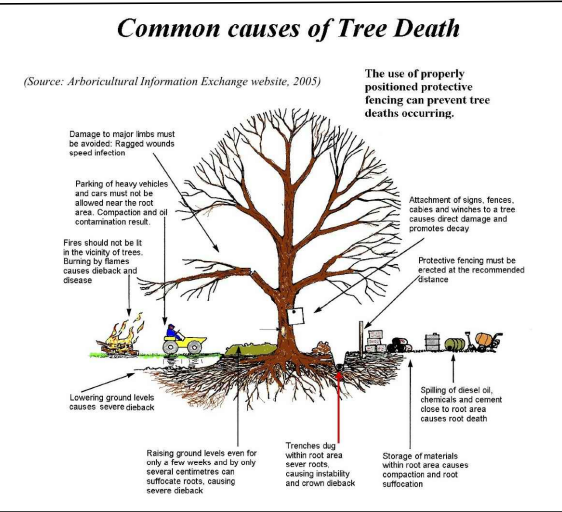
- a) Only the tree works listed here and within the AMS are required and proposed in conjunction with the proposed scheme and no additional tree works are permitted unless agreed in writing by the council (subject to exemptions).
- b) PBF is to be installed prior to site work, i.e. prior to delivery of materials, site set up, site preparation and/or construction, and the existing driveway, patio and walkways are to be retained and the existing hard surfaces for access until construction completion.
- c) Once the PBF is in place the enclosed areas are to act as Construction Exclusion Zones (no access is permitted); any welfare and materials are to be delivered using the existing access and ensure all storage is clear of tree crowns and RPAs (see; TPP);
- d) No chemicals or materials are to be transported or stored or used or mixed within an exposed RPA or Construction Exclusion Zone (CEZ) – cement and chemicals will be delivered, stored and mixed within the existing driveway area and be clear of trees;
- i) No fires are to be lit and no machinery, plant or vehicles are to be washed down within 10m of tree canopy or within a RPA/CEZ.
- j) RPAs/CEZs may not be breached, i.e. no surface work, without consultant advice and council consent; except for pedestrian access for sensitive landscape works (after construction), and no mechanical digging or scraping is permitted within a RPA / CEZ.
- k) When all construction is complete the retained hard surfaces within RPAs can be sensitively excavated and the new hard landscape works completed as well as any remaining soft landscaping/tree planting works be undertaken.



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



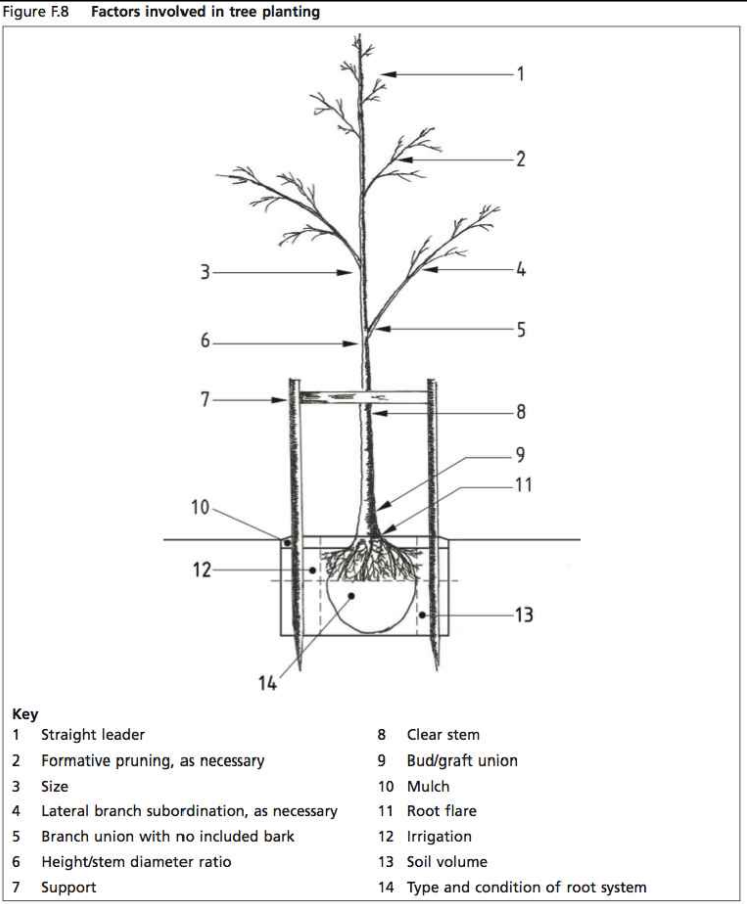
TREE PROTECTION AREA KEEP OUT! (TOWN & COUNTRY PLANNING ACT 1990) TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER. CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION. ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY.



Tree Protection Signage – Example

Tree Planting – Example Design

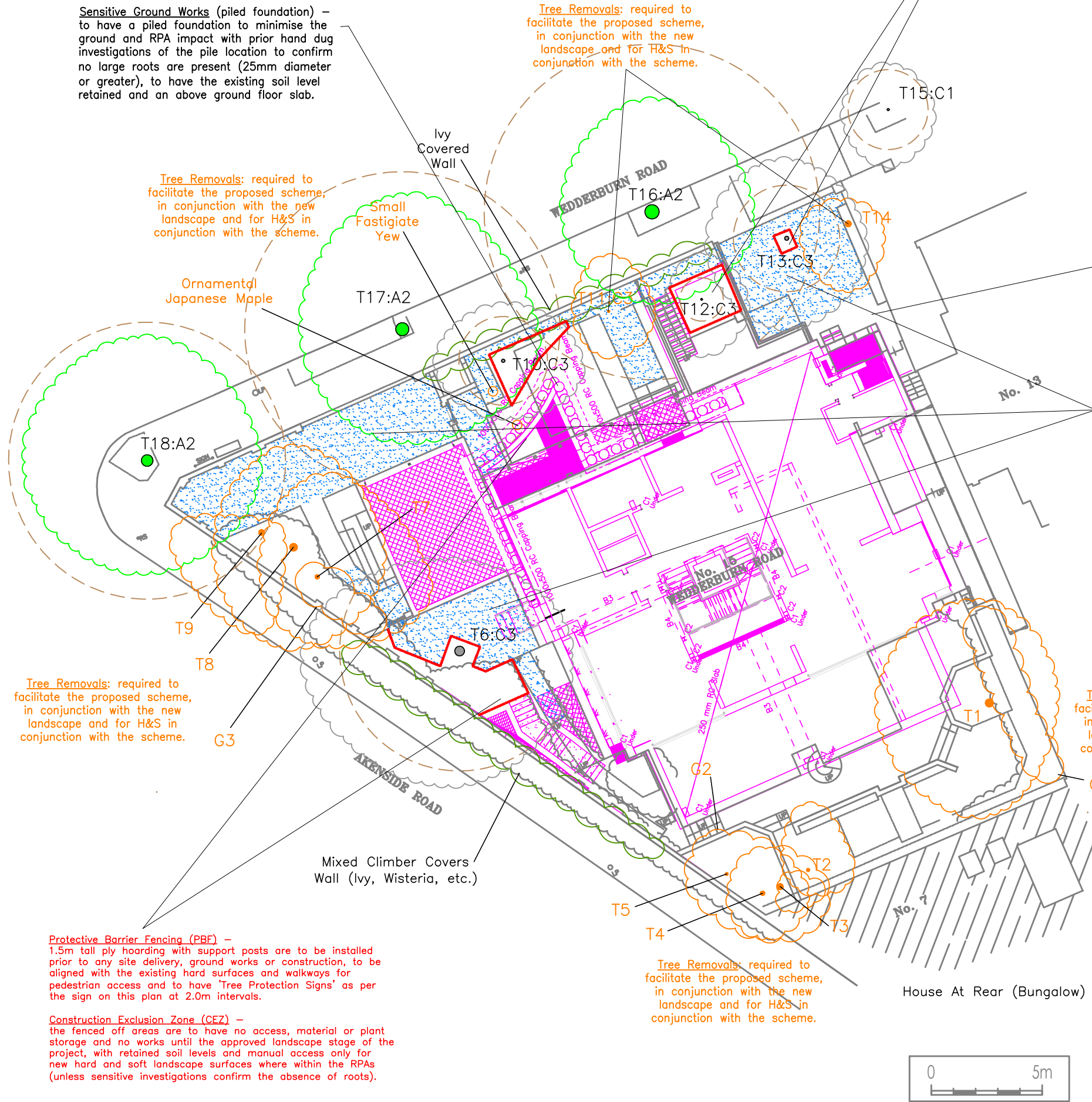
(c) British Standards Institute (www.bsigroup.com)



Tree Protection Specification (for Landscape Works)

The tree protection measures within the Arboricultural Method Statement (ref: 13891/A3\_AMS as 'AMS') are to be adhered to as per the additional details below:

- a) Landscape works will be undertaken as per an approved Landscape Scheme with tree protection measures;
- b) Regrading works and hard landscaping can be conducted in a traditional manner due to the protection of RPAs (where outside of illustrated RPAs, or if investigations confirm the absence of roots) – 'No mechanical digging or scraping is permitted within a RPA';
- c) Protective Barrier Fencing (PBF) may be removed to enable the landscape works to commence within RPAs / CEZs after work to the property is complete.
- d) The existing hard landscape surfaces are to be removed manually using hand held tools only (no driven or tracked machinery) and retain soil levels;
- e) Once the grounds are sensitively prepared within RPAs, manual hard landscape installation may be undertaken within RPAs where soil levels are retained (see; AMS), soft landscape and tree planting be completed (no driven machinery/vehicles).



Protective Barrier Fencing (PBF) – 1.5m tall ply hoarding with support posts are to be installed prior to any site delivery, ground works or construction, to be aligned with the existing hard surfaces and walkways for pedestrian access and to have 'Tree Protection Signs' as per the sign on this plan at 2.0m intervals.

Construction Exclusion Zone (CEZ) – the fenced off areas are to have no access, material or plant storage and no works until the approved landscape stage of the project, with retained soil levels and manual access only for new hard and soft landscape surfaces where within the RPAs (unless sensitive investigations confirm the absence of roots).

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- Sensitive Hard Landscape Works (PBF) –
- The existing hard surfaces and access routes are retained within RPAs during building works;
  - Soft surfaces within RPAs are to have post and rope / chestnut pale fences installed prior to any site delivery, ground works or construction, to be aligned with the existing hard surfaces and walkways for pedestrian access and to have 'Tree Protection Signs' as per the sign on this plan at 2.0m intervals; and
  - Hard landscape works are to be undertaken after building works, to remove the existing hard landscape manually and sensitively down to the existing soil level only, with new hard landscape to be laid manually atop the existing soil level and be permeable.

B	Tree Protection measures for approved scheme	TB	AT	25/02/21
A	Update to Tree Protection measures	TB	AT	12/10/17
/	Use of 13891/TCP-01_Rev.A as base	AT	TB	15/08/17
REV.	DESCRIPTION	DWN	CHK'D	DATE

CLIENT	Mr Dan Wagner
PROJECT	13891_/A3 15 Weddersburn Road, London, NW3 5QS
TITLE	Tree Protection Plan (Application Stage)

DWN	DATE	CHK'D	DATE	APP'D	DATE	SCALE
AT	15/08/2017	TB	15/08/2017			1:200

(Mail) 2nd Floor, 1 Hunters Walk, Chester, CH1 4EB Telephone: 0333 123 7080 www.indigosurveys.co.uk	
Drawing Number	A2
13891/TPP/01	REV. B

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