

Trees and Construction

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

Site: 5 Vincent Avenue, Chorlton-cum-Hardy,
M21 9GR

Ref: 221005/AIA/A2

Client: Kyle



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

0333 123 7080 | info@indigosurveys.co.uk

www.IndigoSurveys.co.uk

Arboricultural Consultant (Author):
Rod Benzies ND Arb, BSc Forestry, MArborA

- Aug 2022 -

TABLE OF CONTENTS

Chapter	Title	Page
1	Introduction	3
2	Site & Application Information	4
3	Findings & Recommendations	5
4	Scheme / Impact Assessment	5 - 6
5	Method Statement 'Considerations'	7 - 13

Appendices

Caveat	I
Terms and Definitions	II
Tree data table, Tree Constraints Plan & Tree Protection Plan	III

Revision	Description	Date
/	Tree Survey Advice (221005/A1)	26/8/2022

1. INTRODUCTION

- 1.1 **Instruction:** This advice has been prepared for the Kyle (hereafter; client) and is in respect of the tree related planning considerations at 5 Vincent Avenue, Chorlton-cum-Hardy, M21 9GR (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 the site 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 Aug 2022 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 the supplied maps to illustrate the surveyed trees in plan format as a 'Tree Constraints Plan' (hereafter; TCP).

2. SITE INFORMATION & TREE ASSESSMENT

- 2.1 The site has a residential dwelling consisting of a semidetached Victorian Villa. Therte area gardens to the front and rear. The site is accessed from the front via Vincent Ave.
- 2.2 **Proposal:** It is understood that proposals renovation and extension of the existing property as per supplied plans *m-plan GF m-site plan and A205_18_site plan as proposed (A)*
- 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.
- 2.4.1 The tree survey and assessment resulted in the BS5837 quality/retention categories of 'A' – Good, 'B'- Moderate, C - low' and 'U' -Uncategorized being attributed to trees/tree groups; it is also worth noting that the BS5837 circular RPAs are considered to halt at the extents of existing property such as walls etc.
- 2.4.2 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 (221005/TCP/01).
- 3.2 General Considerations for Tree Retention / Removal
- 3.2.1 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 any proposal. This is best achieved by avoidance where their crowns and RPAs are accommodated in the design and layout of any scheme.
- 3.2.2 The 'B' Class trees are considered of value both individually and in the landscape and should be retained by design. Proposed encroachment or removal would need to be justifiable and mitigated in any scheme.
- 3.2.3 There a number of low quality 'C' category trees and groups which have been noted as such due to either their small scale, defects and limited current contribution and/or limited future potential. Hence, they should not significantly constrain nor guide the scheme. However, retention may be preferable to retain landscape maturity.
- 3.2.4 Due to the poor condition and defects noted to the trees categorised as 'U' they should be removed if the risk of targets around the tree is to increase. If a low target risk around the tree is maintained then the tree can be retained for habitat interest.
- 3.2.5 Many of the trees have defects, these largely relate to the general age and collective growth of trees. Aside from those categorised as 'U', and in the context of the present woodland environment little on going management would need to be undertaken. Opening pedestrian access to the interior of the wooded area may increase the need for ongoing management with a view to public liability and safety.

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 TPP scheme overlay illustrates the proposed scheme.

4.2 It is understood that the following group will be require to be partially removed in order to facilitate the scheme; G1 to be partially removed to facilitate the scheme; replacement tree detail to be included within the landscape scheme. T2 could be removed for Arboricultural reasons but could be retained for interest

4.3 The remaining trees will be retained and protected throughout the development. The specific considerations and implications for these are as follows

4.3.1 *Consideration for T1*

Within the RPA of the above trees, it is proposed to improve the new access/parking as per the TPP. The access will be constructed manually under arboricultural supervision using sensitive ground works techniques. This will involve retaining existing levels and no-dig surfaces to avoid damaging existing roots. Access road installation is to be engineered with porous surface retaining existing ground levels, installed by hand under supervision installed using Sensitive Ground Works techniques. The trees will also be selectively pruned over the new structures to statutory clearances.

4.3.2 *Consideration for Remaining trees-*

Remaining trees will be protected by avoidance, ground protection and temporary protective fencing.

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 Works** - are to be completed prior to any and all site works: no tree works not specified within this AIA (or leaning against or attaching of objects to a tree) are permitted unless agreed in writing by the council (subject to standard exemptions).
- b) **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 with works clearance, i.e. 1.5-2.0m around the hard landscape extents, existing boundary walls retained and supplemented to prevent RPA, stem or crown impact; to be installed after tree works and prior to site works.
- c) **Construction Exclusion** - the fenced off areas are Construction Exclusion Zones (CEZ).
- d) **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;
- e) **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) ***Construction Phase*** to confirm retention of existing hard surfaces and installation of new porous surfaces with the RPA of trees..
 - (3) ***After-main construction*** To confirm maintained tree protection, no tree damage and exclusion of RPA access.
 - (4) ***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 All approved tree works must be undertaken with the council's written permission (subject to statutory exemption) and undertaken to BS3998 by a tree service contractor who is suitably qualified, experienced and insured to for arboricultural contracting.
- 5.3.2 In accordance with the approved scheme and the tree related planning condition(s), the following tree works are recommended in conjunction with the scheme (additional tree works must only be undertaken with the full and written permission of the council):

TREE WORK SUMMARY

NUMBER	TREE REMOVALS / PRUNING WORKS	
G1	Partially Remove	Remove in conjunction with the scheme: Replacements to be provided within the landscape scheme.
T2	Remove or retain	For Arboricultural reasons
Retained trees		Protection by placement of fixed BS5837 specification Heras panels around the crown / RPA extents to have no access during construction and manually operative sensitive surface works and retained soil levels within RPAs. Ground protection to be used as indicated on the TPP within RPA's outside of PBF,

5.4 Protective Barrier Fencing (PBF) Specification

- 5.4.1 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.
- 5.4.2 To comprise of 2m tall welded mesh panels on rubber or concrete feet. Panels are to be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The panels should be supported on the inner side by stabilizer struts, which should be attached to a base plate and secured with ground pins. All weather notices should be erected at regular intervals on the weld mesh panels with words such as "Construction exclusion zone - Keep out".

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

- 5.5.1 Any excavations necessary within a RPA or designated CEZ (as illustrated on the TPP - each RPA and the areas enclosed by PBF) must:

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.

- 5.5.2 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.
- 5.5.3 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.
- 5.5.4 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.
- 5.5.5 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.
- 5.5.6 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.
- 5.5.7 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.
- 5.5.8 Small roots (those less than 25mm in diameter) may be carefully pruned back with a clean sharp tree saw.

5.6 Ground Protection

- 5.6.1 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.

- 5.6.2 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.

- 5.6.3 It is anticipated that, temporary ground protection will be needed, i.e. for exposed RPAs and access requirements for T1, T5, T6, T7, and T8.

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 -

- a) 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
- b) For wheeled or tracked movements within an exposed RPA, the ground protection is to "be designed by an engineer to accommodate the likely loading".

5.7 Underground utilities

5.7.1 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.

5.8 Landscape Detail

5.8.1 The finer details of the site landscaping proposals are to be illustrated on a landscape plan. This is to include the exact proposals for hard and soft landscaping together with the details for any new trees' planting locations, species and stock selection, installation and maintenance; this is to be undertaken by the appointed landscape architect who will have the full support of the arboricultural consultant where required.

5.9 Report Handling

5.9.1 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.

5.9.2 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.

5.9.3 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:	As appended (221005/TCP/01)
Tree Protection Plan: (Application Stage)	As appended (221005/TPP/01)

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

CLIENT: Kyle

PROJECT REF: 221005

SITE: 5 Vincent Avenue, Chorlton-cum-Hardy, M21 9GR

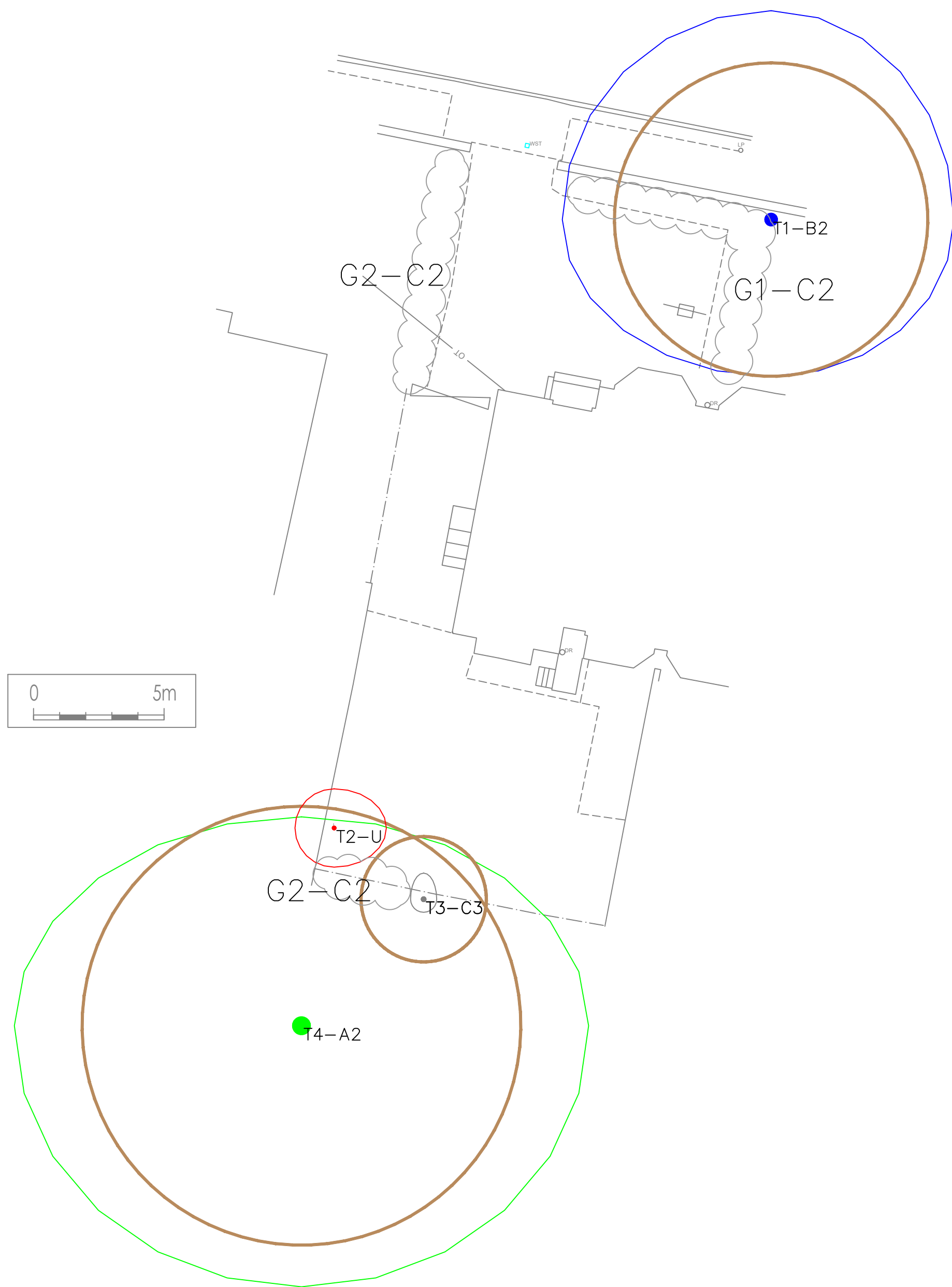
CONTACT:

SURVEY DATE: 9 August 2022

ARB
CONSULTANT: Rod Benzie ND Arb, BSc, 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	Birch; Betula (species); betulaceae	M	20+	8	6	7	8	500*	3.4	9	7E	Low/ Norm	20-40	Ivy covering main stem and lower crown preventing VTA. Within neighbouring property. Lamppost nearby (clear). Within garden at higher level than road side. Next to retaining wall showing slight deflection. Slight dieback in areas. Leaf size and lustre is good	B	2	
T2	Apple; Malus (Spps); Rosaceae	M	4	5	1.5	2	1.5	160	2.0	3	2S	Low	<10	Apple cankers on stem and throughout crown. Ivy on stem and detritus around base restricting VTA	U		
T3	Magnolia; Magnolia (species); Magnoliaceae	SM/E M	4	2	0.5	0.5	0.5	200*	0.9	1.5	1.5 All round	Low	10_20	Poor adhoc pruning recently undertaken to crown. Once regrowth has occurred could be evaluated for formative pruning. Behind fence	C	3	
T4	Sycamore; Acer pseudoplatanus; Aceraceae	M	20+	8	10	11	11	*700	5.8	3	2 All round	Norm	40+	Un sighted assessment. Bifurcates at 3m or above. Ivy covering main stem and lower crown preventing VTA	A	2	
G1	Privet; Ligustrum vulgare; Oleaceae; Hybrid Holly; Ilex alterclarendensis; Aquifoliaceae	M	1.75	n/a	n/a	n/a	n/a	100	0.9	0	0	Norm	20-40	Managed boundary hedge	C	2	
G2	Common Beech; Fagus sylvatica; Fagaceae	M	2	n/a	n/a	n/a	n/a	100	0.9	0	0	Norm	20-40	Managed boundary hedge	C	2	
G3	Ivy; Elderberry; Sambucus nigra; Adoxaceae	SM/E M	5	n/a	n/a	n/a	n/a	100	0.9	0	0	Norm	10_20	Self seeded marking fence line	C	2	

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
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;										
	1ST 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.	-	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.

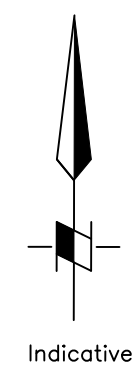
KEY

- 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'



DO NOT SCALE FROM DRAWING

The original of this drawing was produced in colour – a monochrome copy should not be relied upon.

A	Minor edits	RB	TB	12/8/22
REV.	DESCRIPTION	DWN	CHK'D	DATE

CLIENT	Kyle
--------	------

PROJECT	221005/A1
	5 Vincent Avenue, Chorlton-cum-Hardy
	M21 9GR

TITLE	Tree Constraints Plan
-------	-----------------------

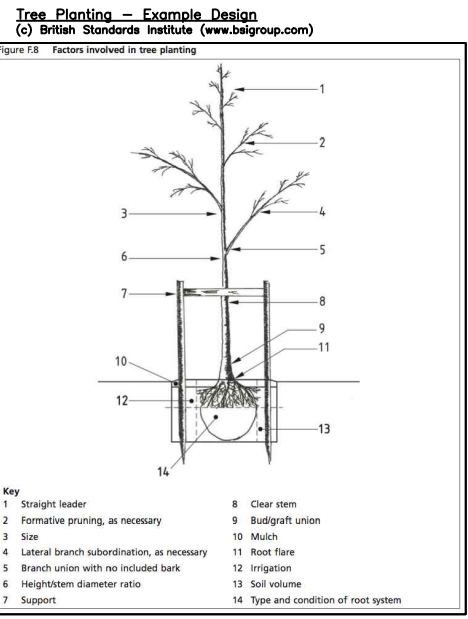
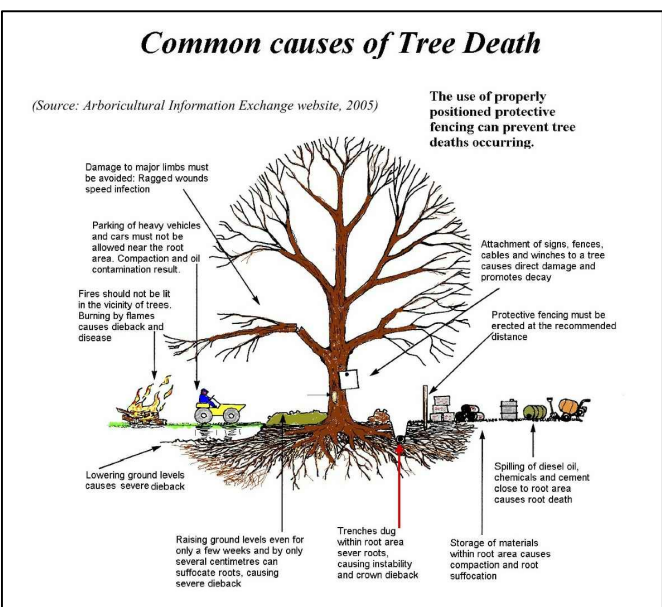
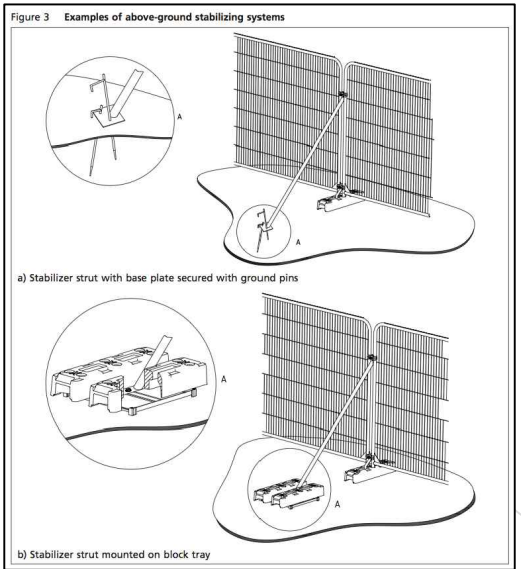
DWN	DATE	CHK'D	DATE	APP'D	DATE	SCALE
RPHB	10/08/2022	AT	10/08/2022			1-150



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

Drawing Number	221005/A1/TCP/01	REV. A
----------------	------------------	--------

THIS DRAWING IS CONFIDENTIAL AND MUST NOT BE REPRODUCED WITHOUT THE CONSENT OF INDIGO SURVEYS LTD.



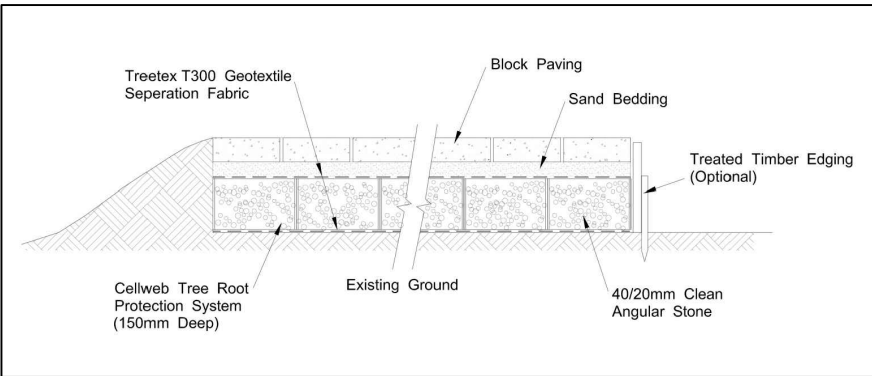
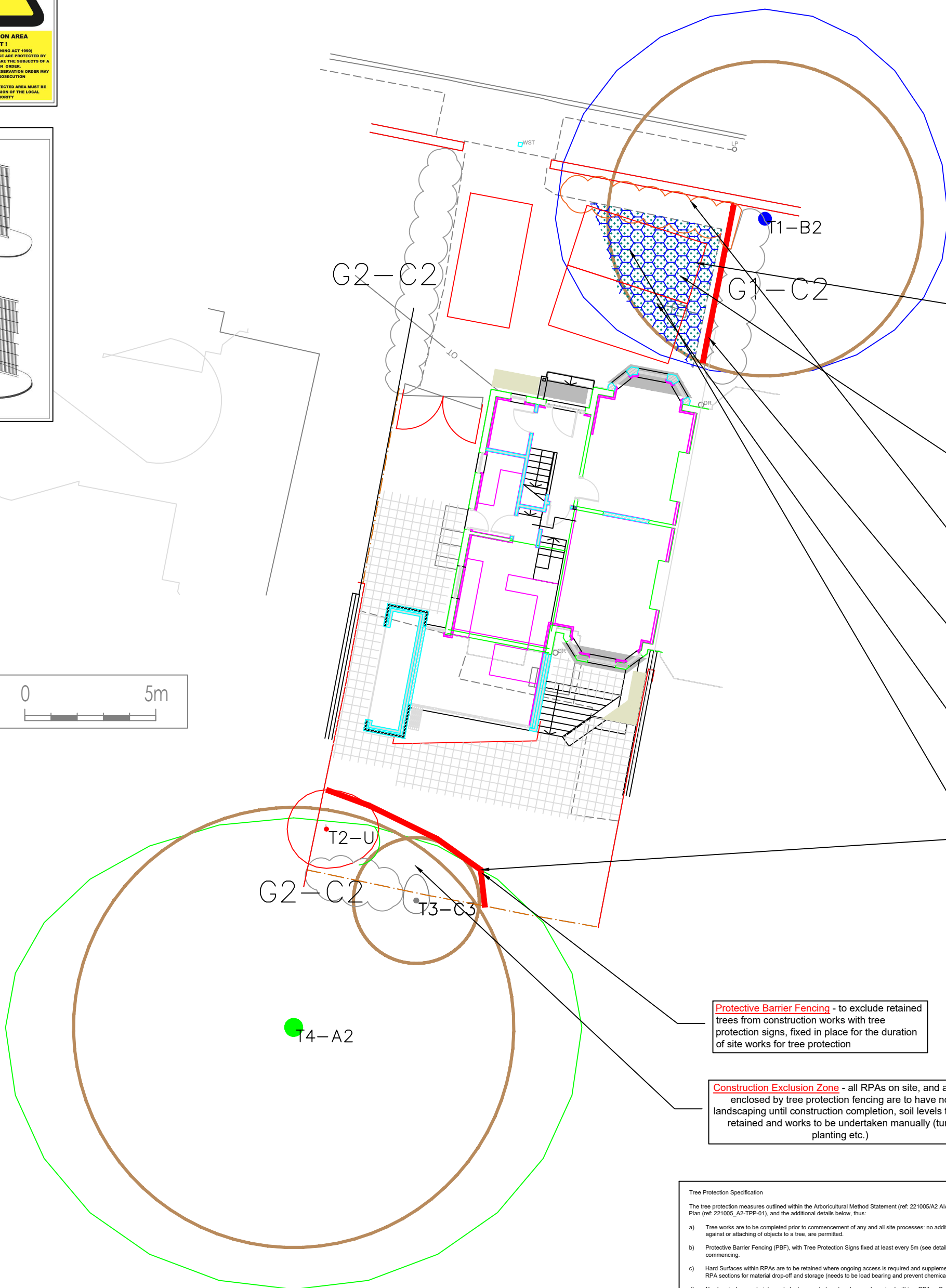
KEY

- 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'



Tree Removals:
Part of G1 to front boundary replacement tree detail to be included within the landscape scheme.

Protective Barrier Fencing (PBF):
Heras panels to be installed (as per the illustration on this plan) with tree protection signs, to be fixed in place for the duration of site works for tree protection and to remain until the completion of construction, then to be realigned for landscaping stage.

Ground Protection:
The grounds outside of PBF are to be protected by temporary ground protection. Evetrak boards are to be installed (as per the hatched area) to protect the grounds during the demolition and construction stage, only to be removed during landscape works (manually, with hand held tools and to retain the existing soil level).

Sensitive Ground Works:
Proposed Driveway Existing vegetation may be removed with hand tools or sprayed with an approved non residual herbicide such as 'Glyphosate'. The new hard surfacing will be constructed using a 'No Dig' surfacing situated entirely above the existing soil surface and where needed using a proprietary cellular confinement system (GeoWeb or similar) laid over a bi-axel geo-grid (tensar TriAx or similar). Prior to this any small hollows on the surface may be filled with clean sharp sand (not builders sand) to a maximum depth of 150mm. The 'GeoWeb' is to be back filled by hand with a no-fines aggregate of 20mm - 30mm. The area of 'GeoWeb' will be covered with a permeable geotextile fabric and the finished wearing course laid on top. Edge supports of an appropriate size and strength should be set above ground level and secured with haunching or steel pins driven into the ground. the outer edge of the supports may be banked up with clean top soil. Please example on the TPP for the principle.

Protective Barrier Fencing - to exclude retained trees from construction works with tree protection signs, fixed in place for the duration of site works for tree protection

Construction Exclusion Zone - all RPAs on site, and areas enclosed by tree protection fencing are to have no landscaping until construction completion, soil levels to be retained and works to be undertaken manually (turf, planting etc.)

- Tree Protection Specification
- The tree protection measures outlined within the Arboricultural Method Statement (ref: 221005/A2 AIA_AMS) are to be adhered to as illustrated on this Tree Protection Plan (ref: 221005_A2-TPP-01), and the additional details below, thus:
- Tree works are to be completed prior to commencement of any and all site processes: no additional tree works (not specified in the method statement), or leaning against or attaching of objects to a tree, are permitted.
 - 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.

DO NOT SCALE FROM DRAWING

The original of this drawing was produced in colour – a monochrome copy should not be relied upon.

REV.	DESCRIPTION	DWN	CHK'D	DATE
		RB	TB	12/8/22

CLIENT
Kyle

PROJECT
221005/TPP/A2
5 Vincent Avenue, Chorlton-cum-Hardy
M21 9GR

TITLE
Tree Protection Plan

DWN	DATE	CHK'D	DATE	APP'D	DATE	SCALE
RPHB	10/08/2022	AT	10/08/2022			1-150

Indigo Ltd
surveys

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

Drawing Number
221005/A2/TPP/01

A2
REV.

THIS DRAWING IS CONFIDENTIAL AND MUST NOT BE REPRODUCED WITHOUT THE CONSENT OF INDIGO SURVEYS LTD.