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BS5837:2012 Arboricultural Survey Impact Assessment & Arboricultural Method Statement

**Site Address:
Land between
26 and 32 Padnell Road
Cowplain
PO8 8DZ**

Robert Toll
HND Urban Forestry - ND Forestry - MArborA
Ref: RMT565 – Rev B
Site inspection date: 6th January 2021
Date report published: 12th January 2021
Date report revised: 26th July 2023
Prepared for Alwyn Desouza



PRO2239

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1 Instructions

- 1.1** I was instructed by Alwyn Desouza on the 12th July 2023 to undertake a survey of trees that are on or adjacent to land between 26 and 32 Padnell Road, Cowplain, PO8 8DZ in accordance with *British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations*.
- 1.2** I am a qualified arboriculturalist as detailed at as it is detailed at **Appendix 7** and this report has been produced in support of a planning application to Havant Borough Council for construction of two dwellings.

2 Introduction

Site Description

- 2.1** The site is an open piece of land which is accessed from Padnell Road to the north. To the east and west are residential properties, and to the south are the grounds of Padnell Junior School.

Image 1 – Land between 26 and 32 Padnell Road, Cowplain, PO8 8DZ is shown by an indicative yellow line



Image courtesy of Google Map Data © 2023

Limitations

- 2.2 I carried out the survey from ground level with the aid of a Bosch GLM 120 C Professional Laser Measure to measure distances, a Nikon Forestry Pro height measurer and diameter tape.
- 2.3 I was supplied with a topographical survey showing the growing locations of all trees on or immediately adjacent to the property was provided prior to the survey being carried out.
- 2.4 All measurements taken to calculate root protection areas and canopy spreads have been measured wherever possible. Where it has not been possible to access certain areas, dimensions have been estimated.
- 2.5 This report does not constitute a safety survey of the trees included within it. It is advised that if there are concerns regarding the risk posed by trees to persons and property then a tree condition inspection should be commissioned.

Legal Restrictions

- 2.6 I have not contacted the local planning authority (LPA) directly to ascertain whether the trees on or adjacent to the site are protected by Tree Preservation Orders (TPO) or if they are within a Conservation Order.
- 2.7 On the 26th July 2023 I carried out a check on the Havant Borough Council online protected tree maps. They indicate that trees and groups T1, T2 and G3 are within Area TPO reference 2107. The online system does not provide a date when the Area TPO was made.
- 2.8 Trees protected by a TPO benefit from statutory protection and no work can be carried out to them (including cutting roots, branches or felling) without the written consent of the LPA. An Area TPO only protects those trees that were growing when the order was made, so any tree planted or generating after the date when the TPO was made are not protected. In the event that planning permission is granted and trees are shown as removed or requiring works to facilitate development then this overrides the protection afforded by a TPO or Conservation Area. The removal of deadwood, the removal of dead trees or works to trees that are urgently necessary to remove an immediate risk of serious harm, can be carried out under exemption and without the submission of a formal application.
- 2.9 It is an offence under the Wildlife and Countryside Act 1981 and the Rights of Way Act 2000 to disturb nesting birds or roosting/breeding bats. When carrying out tree work care should be taken to avoid disturbance. If necessary, advice should be taken to avoid disturbance. If necessary, advice may need to be sought from a qualified Ecologist.

Tree survey

- 2.10 I visited the site on 6th January 2021 and surveyed a total of two trees and one group. The surveyed trees and group have been categorised in accordance with British Standard 5837:2012 as shown at **Appendix 1** and the tree survey schedule can be seen at **Appendix 2**.

- 2.11** At the time of my survey one tree was considered to be category A and high value, one tree was considered to be category B and moderate value. The remaining group was considered to be category C and low value.

Table 1 – Tree categorisations as BS5837:2012

Category A	Category B	Category C	Category U
T1	T2	G3	-

- 2.12** It was noted that there are other trees that are located on or adjacent to land between 26 and 32 Padnell Road, Cowplain, PO8 8DZ but they have not been included within this report. This is because it is deemed that they are:

- far enough from the area proposed for development that they will not be affected;
- they will be adequately protected by the tree protection measures afforded to the surveyed trees;
- they are specimens of limited significance;

Measurements

- 2.13** Wherever possible all diameter measurements have been measured using a diameter tape at a height of 1.5m. Where it has not been possible to access the stems at 1.5m above ground level due to such things as dense Ivy, trees being offsite or the tree being inaccessible, an estimated measurement has been taken. All estimated measurements include the word “estimated” or the abbreviation “est” in the tree survey schedule shown at **Appendix 2**.
- 2.14** In some instances the diameter measurement has been taken at a height other than 1.5m due to such things as low fork unions. Where this has occurred, I have detailed this in the tree survey schedule shown at **Appendix 2**.

Canopy spreads

- 2.15** The canopy spreads have been measured from ground level using a laser measure and visual assessment. The canopy spreads have been annotated on the tree constraints plan and tree protection plan at **Appendices 3 and 4**.

Root protection area (RPA) definition

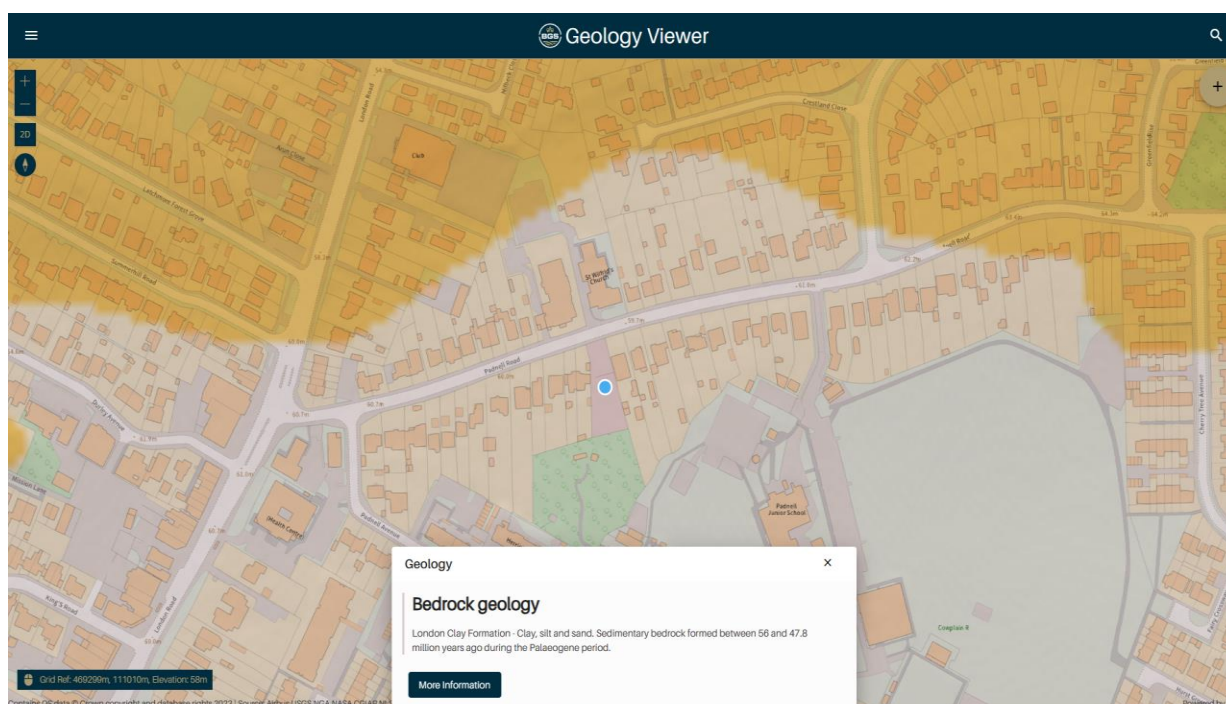
- 2.16** The RPA is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure are treated as a priority.

(British Standard 5837:2012 – Trees in relation to design, demolition and construction – Recommendations – The British Standard Institute 2012).

3 Soil Assessment

- 3.1** The soil assessment is necessary to establish whether the soil on the proposal site is shrinkable. Tree roots and those of other vegetation have the potential to extract moisture from shrinkable soils such as clay, making the soil expand and contract as the soil desiccates and re-hydrates. Where new structures are proposed on shrinkable soils and close to trees, foundations will need to be sufficiently deepened or able to withstand to minimise the risk of indirect damage to foundations.
- 3.2** No soil assessments have been undertaken however a check on the Geology of Britain Viewer gives the soil type as London Clay Formation - Clay, silt and sand. This means that the underlying soil is shrinkable and as such foundations will need to be deepened because of the risk indirect damage by clay shrinkage. If further assessments are undertaken that show that there is shrinkable clay, then foundations must be designed in accordance with the guidance within the National House Building Council's Standards Chapter 4.2 Building near trees or similar guidance.

Figure 2 – The Geology of Britain Viewer 1:50,000 scale indicates that the underlying geology at land between 26 and 32 Padnell Road, Cowplain, PO8 8DZ is shrinkable London Clay Formation - Clay, silt and sand.



4 Arboricultural Impact Assessment

Arboricultural Impact Assessment overview

- 4.1** The arboricultural impact assessment assesses the direct and indirect effects of the proposed design on trees that are growing or adjacent to the site. Where appropriate mitigation will be recommended to prevent or minimise harm and details mitigation as appropriate. Consideration will be given to the practicality of the design and the viability of tree retention.

Tree protection fencing

- 4.2** Tree protection fencing will be required throughout the construction process to restrict construction access within the RPA of tree T1. The areas to be protected by the tree protection fencing can be seen as blue lines on the accompanying Tree Protection Plan at **Appendix 4**.
- 4.3** Tree protection fencing will consist of 1.8m high wire mesh panels placed in rubber blocks. The panels will be securely bolted together to prevent movement and a backstay must be attached to each panel to prevent movement and resist impacts. Un-braced weld mesh panels on unsecured rubber or concrete feet will not be used as these are not resistant to impact and are too easily removed by site operatives.
- 4.4** A notice will be attached to the fencing which says 'Tree Protection Area. Keep Out!'
- 4.5** Tree T2 and group G3 will be adequately protected by the existing boundary fence and tree protection fencing required for tree T1.

Areas for site compounds, storage and mixing

- 4.6** Site compounds will be located away from trees wherever possible and ideally 2m from any protective barriers.
- 4.7** On this occasion it is proposed to utilise the proposed driveway for the site compound, storage and mixing as shown at **Appendix 4**.

Services

- 4.8** The proposed layout of incoming (water, gas and electricity) and outgoing (foul sewer) services is not yet established but they should be installed outside root protection areas. If it is necessary for a trench to be dug through an RPA a specific method statement will be required which will need to specify that the trench will be hand dug and that care will be taken to preserve all roots encountered which are larger than 25 mm diameter.
- 4.9** There is considered to be adequate room for new services to be constructed without requiring trenches that pass-through RPAs of B trees.

Conclusions

- 4.10** I visited the land between 26 and 32 Padnell Road, Cowplain, PO8 8DZ on 6th January 2021 and surveyed a total of two trees and one group in accordance with BS5837:2012.
- 4.11** At the time of my survey one tree was considered to be category A and high quality, one tree was considered to be category B and moderate value. The remaining group was considered to be category C and low value.
- 4.12** All trees were categorised in accordance with British Standard 5837:2012 as shown at **Appendix 1**.
- 4.13** The development will not require the removal or pruning of any trees or groups.
- 4.14** The trees to be retained will be protected during development and methods for ensuring their protection have been described.
- 4.15** The development is sympathetic to the leafy character of the area.

5 Arboricultural Method Statement

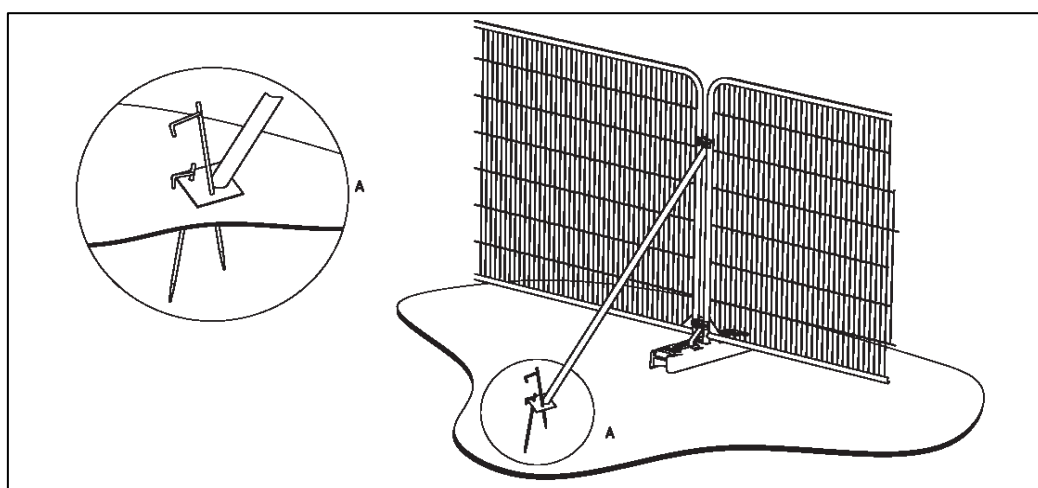
Pre-commencement meeting

- 5.1 Prior to the commencement of development all tree protection will be erected and a site meeting will be held between the appointed building contractors and the local authority Tree Officer as it is stipulated at **Appendix 5**. This meeting is necessary to agree that the position of the tree protection is correct.

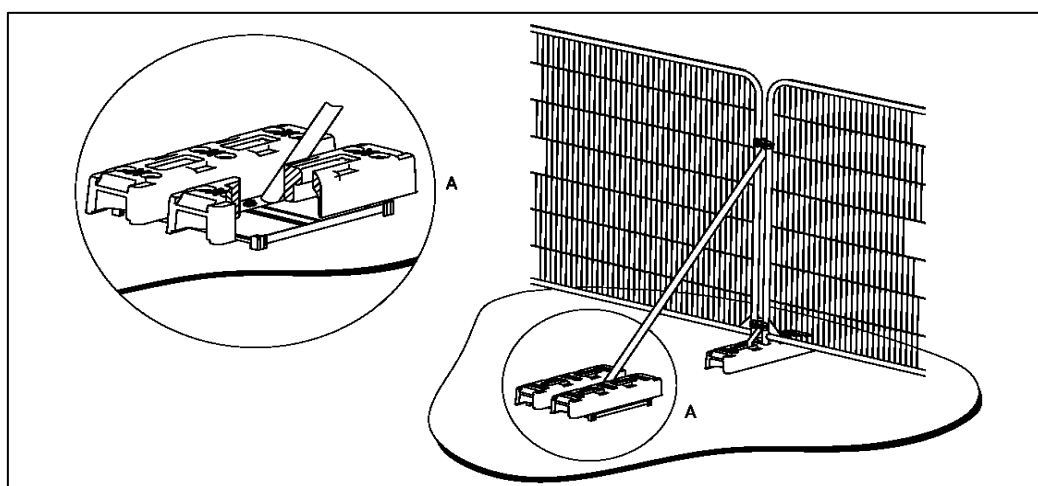
Protective barriers/fencing

- 5.2 All tree protection barriers will be erected in the positions shown in **Appendix 4** and in accordance with the specifications detailed in Figures 2 and 3.

Figures 2 and 3 – Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Image taken from British Standard 5837:2012 – Trees in relation to design, demolition and construction – Recommendations.

Warning signs

- 5.3 All weather notices will be attached to the tree protection fencing.

Figures 4 – Examples of tree protection warning sign.



- 5.4 Development can commence in accordance with the planning consent.
- 5.5 Following completion of all development the tree protection can be dismantled to allow landscaping works to take place.

Appendix 1 – British Standard 5837:2012 tree categorisation chart

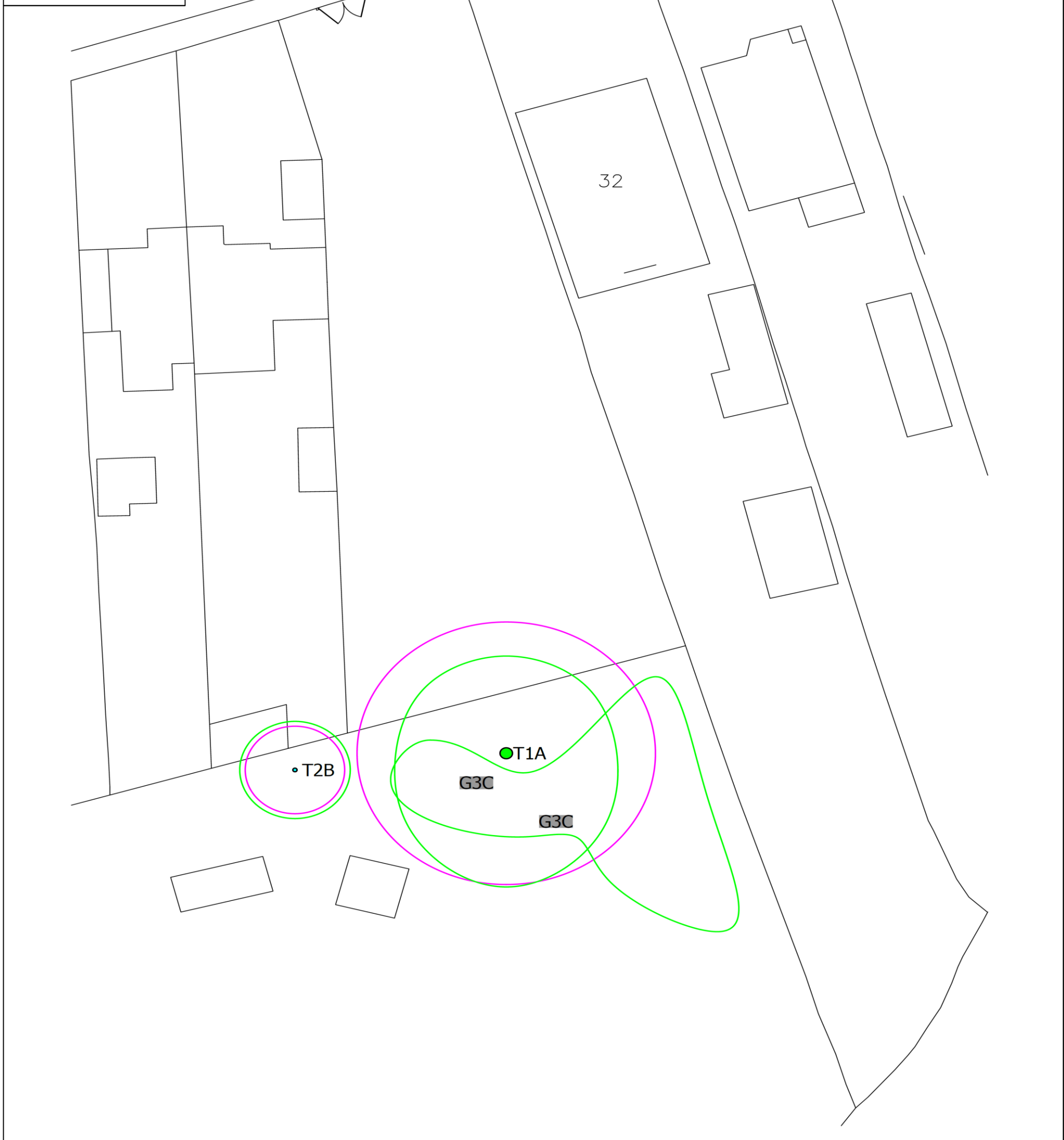
TREES UNSUITABLE FOR RETENTION				
CATEGORY AND DEFINITIONS	CRITERIA			IDENTIFICATION ON PLAN
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality. <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5 of BS5837:2012</i>			RED  RGB 127.000.000
TREES TO BE CONSIDERED FOR RETENTION				
CATEGORY AND DEFINITIONS	CRITERIA - SUBCATEGORIES			IDENTIFICATION ON PLAN
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue).	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN  RGB 000.255.000
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.	Trees with material conservation or other cultural value	MID BLUE  RGB 000.000.255
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.	GREY  RGB 091.091.091

Appendix 2 - Tree survey schedule

Tree No.	Species	Height (m)	Trunk dia. at 1.5m	Canopy Spread	Crown Height (m)	Age Class	Physiological Condition	Structural Condition	Comments/ Recommendations	Useful Life Expect	BS5837 grade	Root Protection Area	
												Radius	RPA Area
T1	Common Oak (<i>Quercus robur</i>)	20m	900mm est	N8m E8m S11m W8m	8m	Mature	Good	Good	Off-site tree Medium deadwood.	40+	A	10.8m	366.4m ²
T2	Common Oak (<i>Quercus robur</i>)	16m	300mm est	N4m E4m S4m W4m	7m	Early mature	Good	Good	Off-site tree.	40+	B	3.6m	40.7m ²
G3	Group of Common Ash Sycamore	Max 12m	Max 150mm	-	-	Young	Fair	Fair	Off-site group. Group consisting of natural regeneration. Several dead trees are close to the boundary with the proposal site.	10+	C	1.8m	10.2m ²

Appendix 3 – Tree Constraints Plan – RMT565 – TCP – Rev B

Tree constraints plan (TCP) showing retained trees, tree numbers, root protection areas (magenta circles/polygons) and canopy spreads (green lines). The plan has been provided separately as a PDF at a scale of 1: 200 @ A2.



Tree protection plan (TPP) showing retained trees, tree numbers, root protection areas (magenta circles/polygons) and canopy spreads (green lines). The location of protective fencing is shown as blue lines. The plan has been provided separately as a PDF at a scale of 1: 200 @ A2.



Storage & Mixing

CEZ

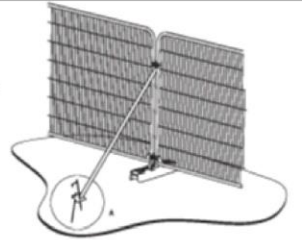
CEZ

- T2B

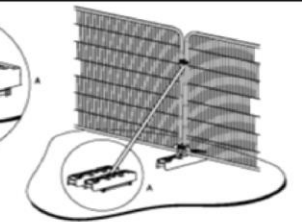
●T1A

G3C

G3C



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Images taken from British Standard 5837:2012 - Trees in relation to design, demolition and construction - Recommendations

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND ARE SUBJECTS OF
A TREE PRESERVATION ORDER
(TOWN & COUNTRY PLANNING ACT 1990)

CONTRAVENTION OF TREE PRESERVATION ORDERS MAY LEAD TO CRIMINAL PROSECUTION

- THE PROTECTIVE FENCING MUST NOT BE REMOVED
- NO PERSON SHALL ENTER THE PROTECTED AREA
- NO MACHINE OR PLANT SHALL ENTER THE PROTECTED AREA
- NO MATERIALS SHALL BE STORED IN THE PROTECTED AREA
- NO SPOIL SHALL BE DEPOSITED IN THE PROTECTED AREA
- NO EXCAVATION SHALL OCCUR IN THE PROTECTED AREA

ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

Root Protection Area and Construction Exclusion Zones

- All tree protection measures will be erected as agreed within the B55837:2012 Arboricultural Survey, Implications Assessment and Arboricultural Method Statement;
- There will be access to foot or vehicular traffic within fenced off areas once development (including demolition) has commenced;
- Once development (including demolition) has commenced the tree protection must not be moved for any reason without the written consent of the local planning authority;
- There will be no excavations, storage of materials, mixing of materials or dumping of spoil within construction exclusion zones (CEZ) unless agreed in writing with the local planning authority;
- All caustic substances e.g. oil, diesel, cement etc will not be stored within 2m of CEZs;
- No fires will be lit within 10m of CEZs or tree canopies;
- Protection area signage will be displayed on protective barriers for the duration of development;

PLEASE BE AWARE – The tree protection specified on this tree protection plan and within the Arboricultural Survey, Implications Assessment and Arboricultural Method Statement document are conditioned to be erected. Failure to protect trees in full accordance with the approved scheme is likely to result in local planning authority taking enforcement action, including prosecution.

Appendix 5 – Arboricultural site supervision schedule

Activity	Supervision Required
Pre-commencement meeting between the local authority arboricultural officer and the appointed building contractor.	✓
At any time that there are conflict issues with the agreed tree protection.	✓

Following every visit the appointed arboriculturalist will fill out the site monitoring form which is shown at **Appendix 6** and this will be forwarded to the LPA.

Appendix 6 – Site monitoring form

RMTTree Consultancy Ltd 			
Site monitoring form			
Date of visit		Site	
Consultant in attendance			
Observations/status of tree protection/comments:			
Recommendations (if necessary):			
Date of next visit		Signature	

Appendix 7 – Qualifications and experience

Robert Toll has been working with trees since 2004 when he completed his studies.

In 2000 he began his studies at Riseholme College, Lincoln where achieved a pass with merit in Forestry at National Diploma level. In 2002 he attended Moulton College in Northampton where he gained a Level Five Higher National Diploma in Urban Forestry with merit.

In 2004 Robert began work as a temporary tree inspector at Northampton Borough Council, undertaking inspections of trees in response to enquiries from the public. After 4 months Robert took up a permanent tree inspector role at Coventry City Council which predominantly involved undertaking safety inspections of trees on school sites.

In 2006 Robert moved to Warwick District Council to take up a temporary post of Tree Protection Officer which involved reviewing old area tree preservation orders and identifying those trees which were considered worthy of protection under new specific orders. He also streamlined the council procedure for making new tree preservation orders, cutting the time from making to serving from up to 2 weeks to within 2 hours.

In 2008 Robert moved to Hart District Council, Hampshire to take up the role of Tree Officer within the planning department. This role included determining works trees applications, commenting on planning proposals, liaising with the public and providing arboricultural advice to other departments within the Council.

Between 2014 and 2016 Robert took up the role of Tree Officer at Elmbridge Borough Council, Surrey, once again carrying out tasks such as determining works trees applications, commenting on planning proposals and liaising with the public. While at Elmbridge Borough Council he passed the Arboricultural Association's Professional Tree Inspection course.

Robert is a professional member of the Arboricultural Association.