PBA Consulting

Tree Survey to BS5837:2012
at
69 Patshull Road,
London NW5 2LE

[redacted]

Report Date: 31 July 2018

Author: Mr. Steve Williams, Arboricultural Consultant

Client: Mr. David Mansoor

Table of Contents

Appendix

1.0 Instructions

1.1 PBA Consulting has been instructed by Mr. David Mansoor to undertake a Tree Survey to BS5837:2012 at 69 Patshull Road, London NW5 2LE, [redacted]

1.2 The site was visited Monday 30 July 2018 and Tree Survey undertaken by the author. Weather conditions prevailing were sunny and warm.

1.3 Trees on and close to this site are being assessed in relation to potential site constraints restricting development.

2.0 Site description

2.1 The property is typical of the area being a residential, three storey, semi-detached Victorian construction. The structure is set back from the Patshull Road with a small South facing garden to the front. The rear garden is North facing and extends approximately 11m.

2.2 Front garden contains mixed shrub planting, up to a height of approximately 2 metres, around the boundaries. The rear garden laid to lawn with two mature trees positioned towards the rear boundary. There are mixed shrubs planted along the East and Western boundaries with an average height of approximately 2 metres.

2.3 There is a semi mature Sorbus species tree located within the public footpath. This tree is to the front of number 67 and close to the central boundary with number 69. This is a Highways tree and managed and maintained by London Borough of Camden.

3.0 Additional information

3.1 It is not known if the trees are within a Conservation Area (CA) or covered by a Tree Preservation Order (TPO). Therefore it is assumed that the trees **are** covered by TPO/CA status.

4.0 Methodology and Limitations

4.1 The Tree Survey to BS5837:2012 includes specific products that assist in the design and feasibility process of proposed developments that would ensure successful long term retention of trees:

- Tree Survey Data
- Root Protection Areas (RPA)
- Tree Constraints Plan
- Tree Protection Plan

4.2 A Visual Tree Assessment (VTA) of trees has been undertaken during the survey in compliance with BS5837:2012. The survey is not intended to be a tree safety survey. Where any hazard or defect has been observed this has been noted within the Tree Survey Schedule notes and recommendations given so that the owner or person(s) responsible for the management and maintenance of the trees can arrange work to be undertaken to remove risk.

4.3 The VTA has been undertaken from the ground and no climbing inspections have been undertaken. Where a climbing inspection is recommended this has been noted with the recommendations within the Tree Survey Schedule.

4.4 No invasive or internal decay investigations have been undertaken. Where internal decay detection is recommended this has been noted with the recommendations within the Tree Survey Schedule.

4.5 This report does not consider potential tree root activity upon any development.

4.6 Ground flora, Ivy and lack of access to fully view trees occasionally impede the viewing and inspection of trees. Where this was the case, it has been noted within the comments of the attached tree survey schedule.

4.7 Only trees with a stem diameter over 75cm at approximately 1.5m above ground level have been included within this report unless deemed necessary.

4.8 Tree positions and RPAs on the Tree Constraints Plan are approximate representations only.

4.9 Within the scope of any tree survey it is not possible to completely identify and entirely remove the risk of stem or crown failure of trees, especially in freak or irregular weather conditions. There is a phenomenon whereby mature trees can unexpectedly shed limbs,

even in still conditions. This is a rare occurrence but tree owners should be aware and acknowledge that risk cannot be entirely mitigated.

5.0 Tree Protection Plan (TPP)

5.1 Throughout the construction phase of development trees are prone to indirect damage and direct mechanical damage to above and below ground parts of a tree.

5.2 The above ground parts of a tree such as the trunk and branches are prone to damage by vehicles and machinery passing or being stored close to the tree. Branch loss and bark damage to the trunk and branches is easily damaged.

5.3 Contamination of soil can result from chemicals being stored in close proximity to the tree. The lighting of bonfires can damage a tree directly by causing fire to the tree or indirectly by the high temperatures causing bark damage and ultimately the death of a tree.

5.4 Indirectly, a single pass of a vehicle can compact soil to levels that are detrimental to trees health and vitality due to the majority of roots being found within the upper 600mm of the soil. Compaction alters the soil structure that results in unfavorable, typically anaerobic, growing conditions that can ultimately result in the death of the tree.

5.5 Typically, the main structural roots of a tree quickly taper to small diameter within a few metres of the trunk. This is observed when trees are windthrown and the size of the structural root plate is visible. Therefore the severance of any roots within the Root Protection Area (RPA) can potentially result in tree failure or the loss of large areas of roots essential for long-term health and vitality of the tree.

6.0 Construction Exclusion Zone (CEZ)

6.1 CEZs are determined based upon Root Protection Areas (RPA) of individual trees and groups of trees.

Tree protection comprises of protection fencing and ground protection measures.

6.2 Tree Protection Areas have been calculated by using the Root Protection Area (RPA) results for each individual tree (T) or tree group (TG).

6.3 There will be no plant, machinery, vehicles or storage within the Tree Protection Areas. No fires or chemical storage including cement. No bonfires. No mechanical excavation (only hand tools to be used with Tree Protection Area). Care will be taken not to compact the soil within the RPAs of retained trees.

6.4 Mechanical damage of roots and indirect damage of roots by means of compaction of the soil can adversely affect the growing conditions that tree roots require and

therefore can directly affect the growth and development of the existing and potential new root growth.

6.5 If roots are found, the soil around the roots must be removed by hand. Roots with a diameter great than 25mm must not be severed without prior consent from a suitably qualified Arboriculturist. The excavation will be backfilled or kept moist with damp hessian until it can be examined.

7.0 Changes in Levels/Surfaces

7.1 No changes in ground levels will occur.

8.0 Protective fencing

8.1 Protective fencing is to be installed where indicated on the Tree Protection Plan (TPP) in the appendix. The protective fencing will be of Heras type, metal scaffold construction either braced or with rubber feet / concrete feet.

8.2 All weather, high visibility notices will be secured upon the barrier (example in appendix) at prominent locations.

8.3 Tree Protection Fencing and ground protection will not be removed or re-positioned during the development without the express permission of the Council.

9.0 Arboricultural Impact Assessment

9.1 The footprint of the development proposals to the rear of this property are outside of the trees RPAs.

9.2 Provided the CEZ protection measures are adhered to as detailed, the proposed development should not have an impact upon the trees long term health.

10.0 Concluding Statement

10.1 Following site visit and undertaking a survey to BS5837:2012 the author of this report concludes that the proposed development should have no impact upon the existing trees upon this property should the adequate CEZ be implemented throughout the development. Reasonable concerns have been satisfied in this instance.

10.2 At the time of survey, tree condition was such that a full tree survey was not possible. It is advised that the client arranges for the recommended tree work actions to be undertaken as soon as reasonably practicable (within 2 months of the date of this report) given that defects were observed on T2 and T3. It is likely that T2 will require, at a minimum, a crown reduction. However, tree management recommendations cannot be made until a full condition survey has been undertaken.

Appendix 1

Tree Survey

Tree Ref. No.

Tree reference number prefixed accordingly with T = Individual tree, TG = Tree Group, WG = Woodland Group, H = Hedgerow and S = Shrub within the Tree Schedule and as shown on the Tree Survey Plan and/or Tree Constraints Plan.

In accordance with BS5837:2012 advice, trees are surveyed as a tree group or woodland group where trees grow as a cohesive group feature and surveyed as such.

Species

Trees and shrubs are listed within the schedule by the Common name.

Ht. (m)

Height of tree measured from ground level. Measurements are approximate and rounded up to nearest metre (m). Haglofs ECII D Electronic Clinometer used where applicable.

Stem dia. (mm)

Stem diameter taken at 1.5m above ground (diameter breast height DBH). Where the ground at the base of the tree is not level the measurement is taken at 1.5m from the upper side of the slope. Where it was not possible to measure the stem diameter due to access or Ivy cover this is noted.

Where a multi-stemmed tree occurs each individual stem is measured. Alternatively a mean diameter may be given where appropriate and noted as such.

Where accurate measurements are not possible figures are rounded up.

Crown Spread N S E W

Measurement of radial crown spread to four cardinal points in metres.

Ht. to 1st branch (m)

Measurement (in metres) of the distance between ground level and the emanating point of the first occurring significant branch upon the trunk, or a range (2-4m) where the extremities of the crown hang significantly lower. The general growth direction of the branch may be given to a cardinal point.

No. of stems

A individual stem count figure is given up to 5 stems. Over 5 stems '>5' is noted.

Where there is a single stem or 2 to 5 stems, individual measurements per stem are given in the Stem dia. column. Where there are more than 5 stems an estimated mean average is given.

Tree Life Stages

Y – Young
SM – Semi Mature
M – Mature
OM – Over Mature
V – Veteran

Physical condition

G- Good
F- Fair
P- Poor
D- Dead

Structural condition

A note of condition or observation that is deemed relevant, such as defects, risk, tree form, health & vitality is made where deemed appropriate.

Management recommendations

On occasion it may be necessary for;

- a climbing tree inspection
- a further detailed investigation
- removal of Ivy or other vegetation that impedes inspection

Or other such instances where it was not possible to satisfactorily conclude an inspection.

If a defect is identified that poses an immediate risk this will be noted so that the owner or person(s) responsible for the management and maintenance of the trees can undertake essential maintenance works to remove the risk. Where a recommendation is given this does not constitute a tree work specification and it is advised that further advice is obtained.

Est. remaining contribution (years)

<10
10-20
20-40
40+

RPA r

Root Protection Area radius given in metres

RPA Area

RPA radius converted to measurement of area in m^2. Area capped at maximum $707m^2$.

BS Cat.

Category U, A, B, C based upon BS5837:2012 Cascade Chart for Tree Quality Assessment

Appendix 2

BS5837:2012 Table 1 – Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate			Identification on plan
Trees unsuitable for retention (see note)				
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 **NOTE** Category U trees can have existing or potential conservation value which it might be desirable to preserve; see (BS5837:2012)**4.5.7**			**DARK RED**
	1.Mainly arboricultural qualities	**2.Mainly landscape qualities**	**3.Mainly cultural values, including conservation**	**Identification on plan**
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 4 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 principle 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
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
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 150mm.	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

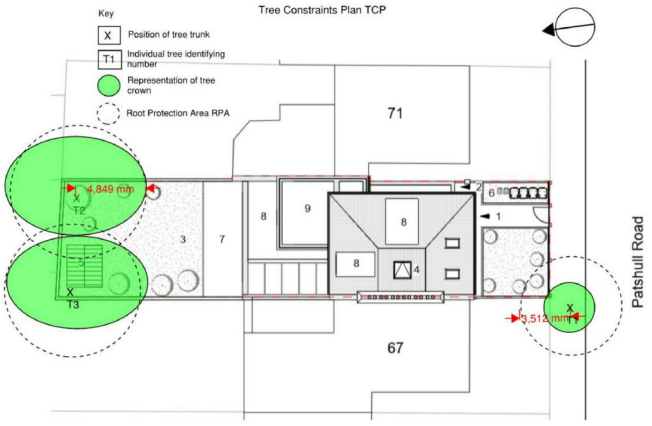
Appendix 3

Tree Survey Schedule

Tree Ref. No.	Species	Ht. (m)	Stem dia. (mm)	Crown Spread (m)				Ht. to 1st branch (m)	No. of stems	Age Class	Condition (G-F-P-D)	Structural condition & Notes	Management recommendations	Est. ret. Span (yrs)	RPA (m)	RPA Area (m^2)	BS Cat
				N	S	E	W										
T1	Whitebeam	6	290	2	2	2	2	2.5	1	SM	F	Maintained as a crown reduced tree. Mechanical damage likely from vehicular strike at 3-4m over road.	Maintained by LB Camden	20-40	3.5	38.1	B1
T2	Lime	13	400+	5	5	5	3	2.5	1	M	Unable to make full assessment	**Partial survey as dense epicormic growth impedes access and visual**. Large longitudinal wound on South side of trunk from ground level up to approx. 1.6m height. Reaction wood formation around wound. Significant proportion of dead wood within crown on south side.	Remove epicormics growth from basal area and lower crown to allow full visual tree assessment VTA to be undertaken.	-	4.8	72.4	C1 From partial inspection
T3	Lime	14	400+	5	5	3	4	4	1	M	Unable to assess	Very dense Ivy growth throughout. **Ivy and epicormic impede inspection of this tree**. Deadwood on North, North Eastern side.	Sever Ivy at base, allowing Ivy to die of and then strip from tree. Remove basal epicormic growth to give full access around trunk and allow VTA to be undertaken.	-	4.8	72.4	C1 From partial inspection

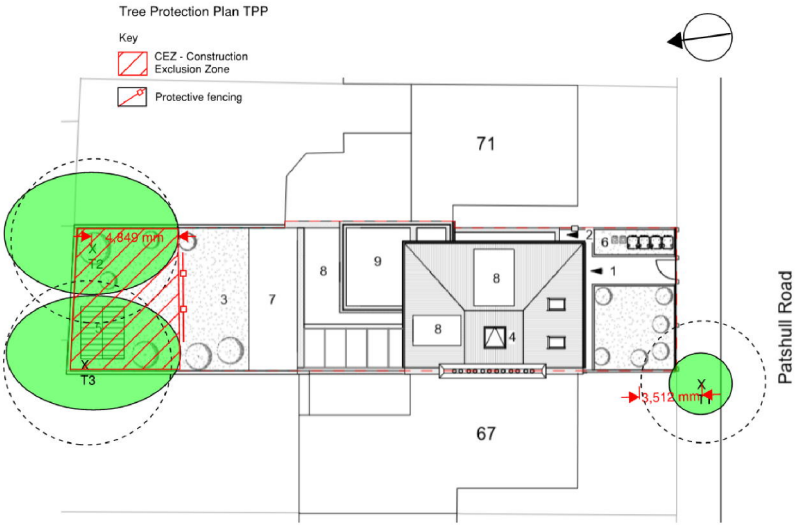
Appendix 4

Tree Constraints Plan



Tree detail overlaid onto Benedetto Litteri Architect Proposed Location Plan

Appendix 5



Tree detail overlaid onto Benedetto Litteri Architect Proposed Location Plan

Appendix 6

Fig. 1. Example Construction Exclusion Zone Notice

Fig. 2. Protective fencing for tree root protection:

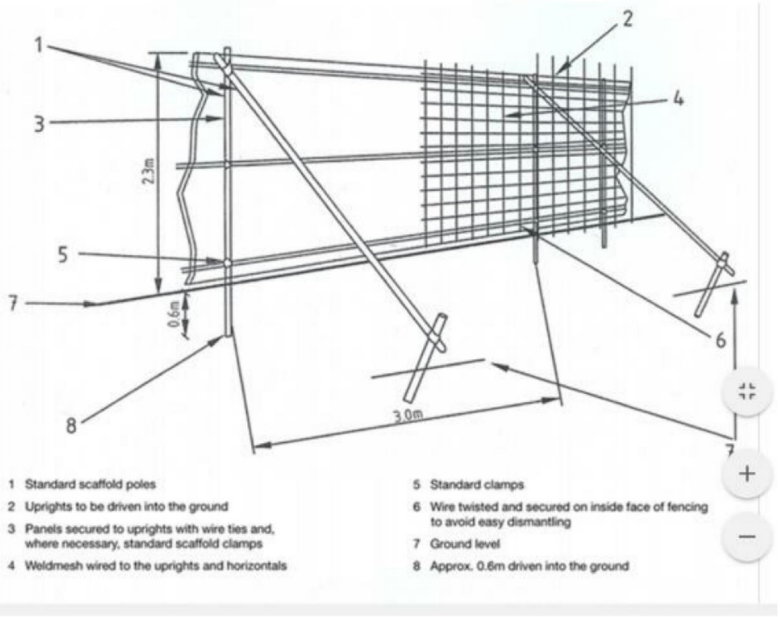
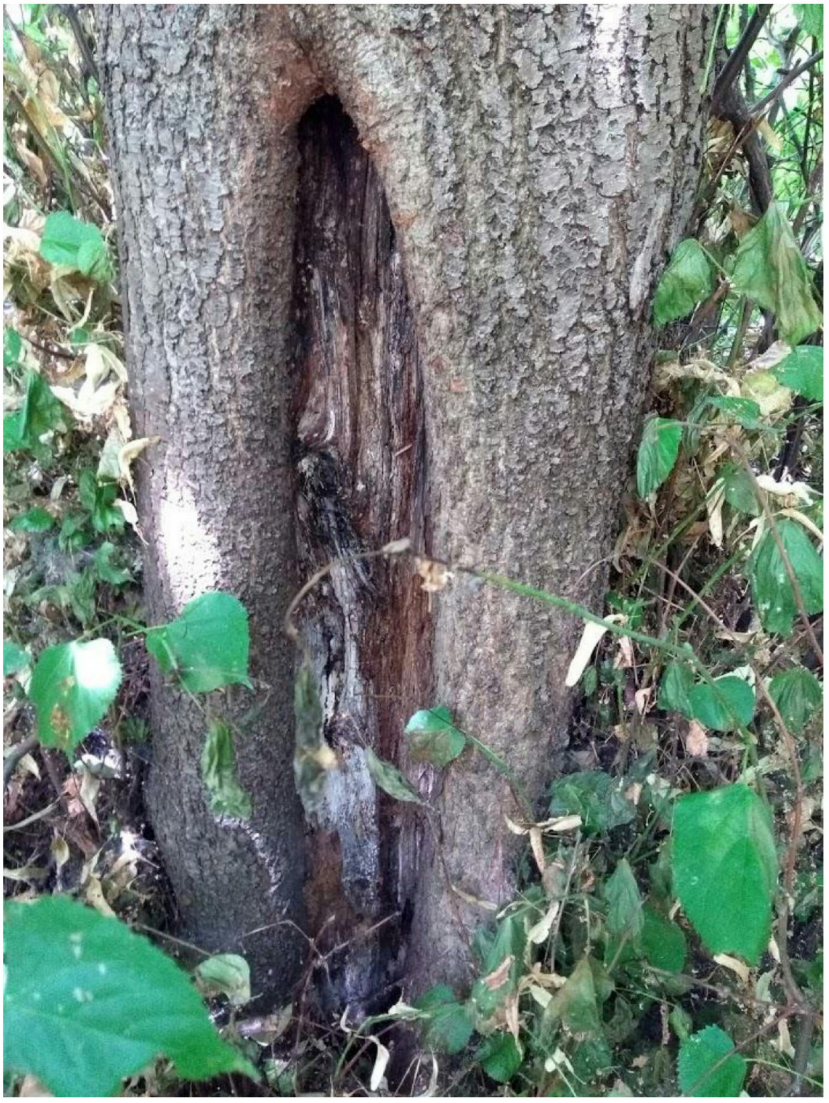
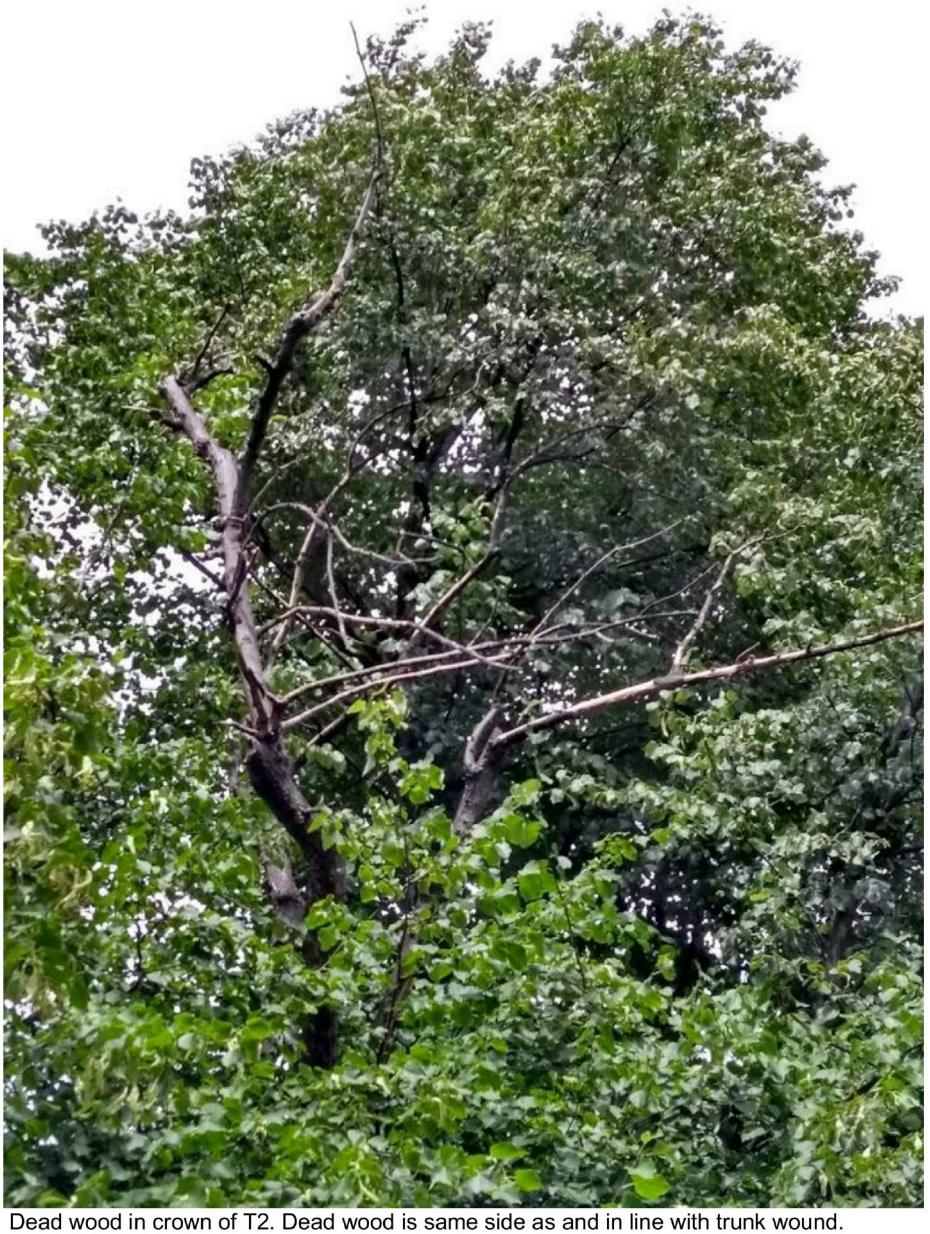


Photo 1



Trunk wound and associated decay upon T2

Photo 2

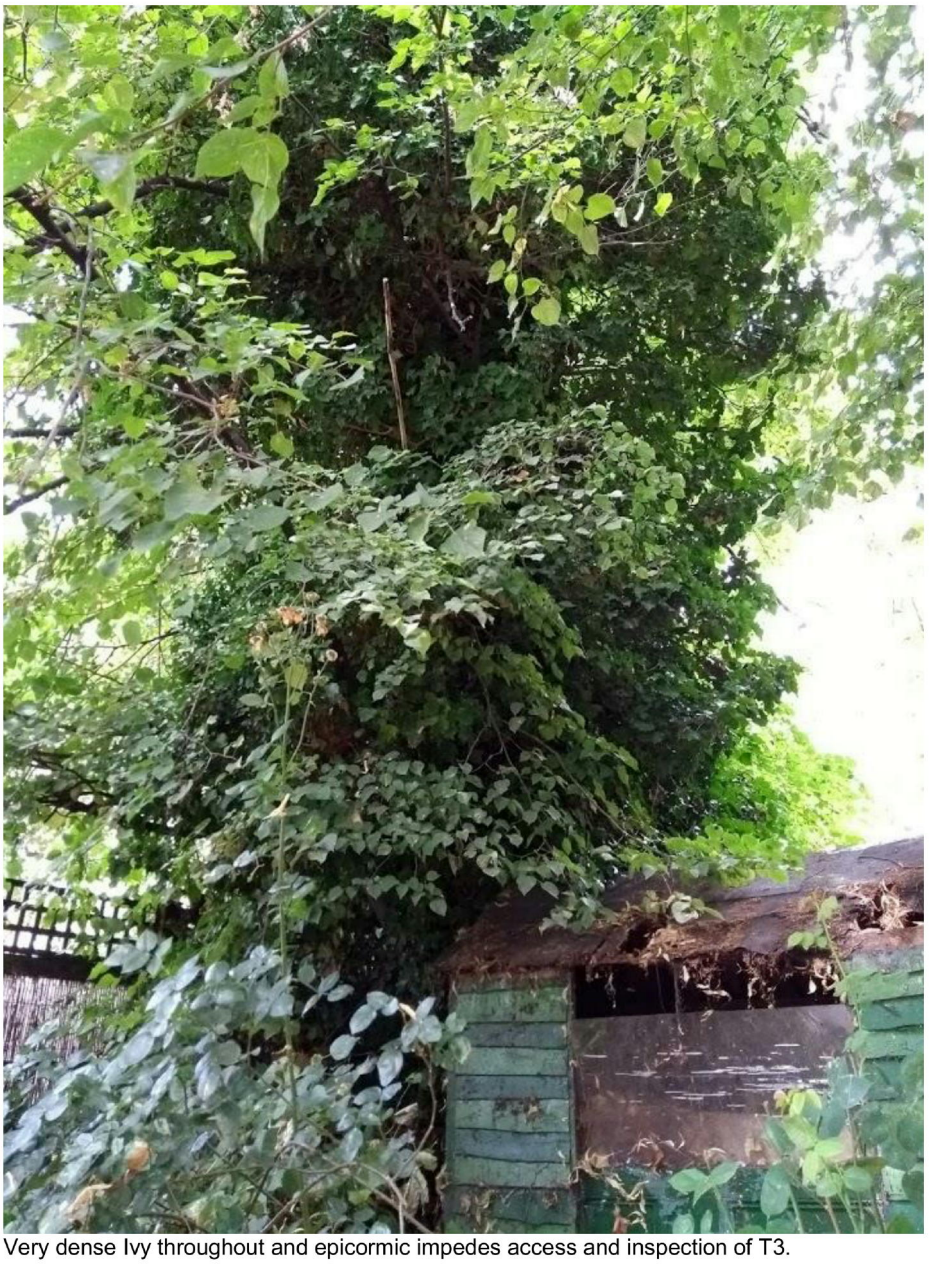


Dead wood in crown of T2. Dead wood is same side as and in line with trunk wound.

Photo 3

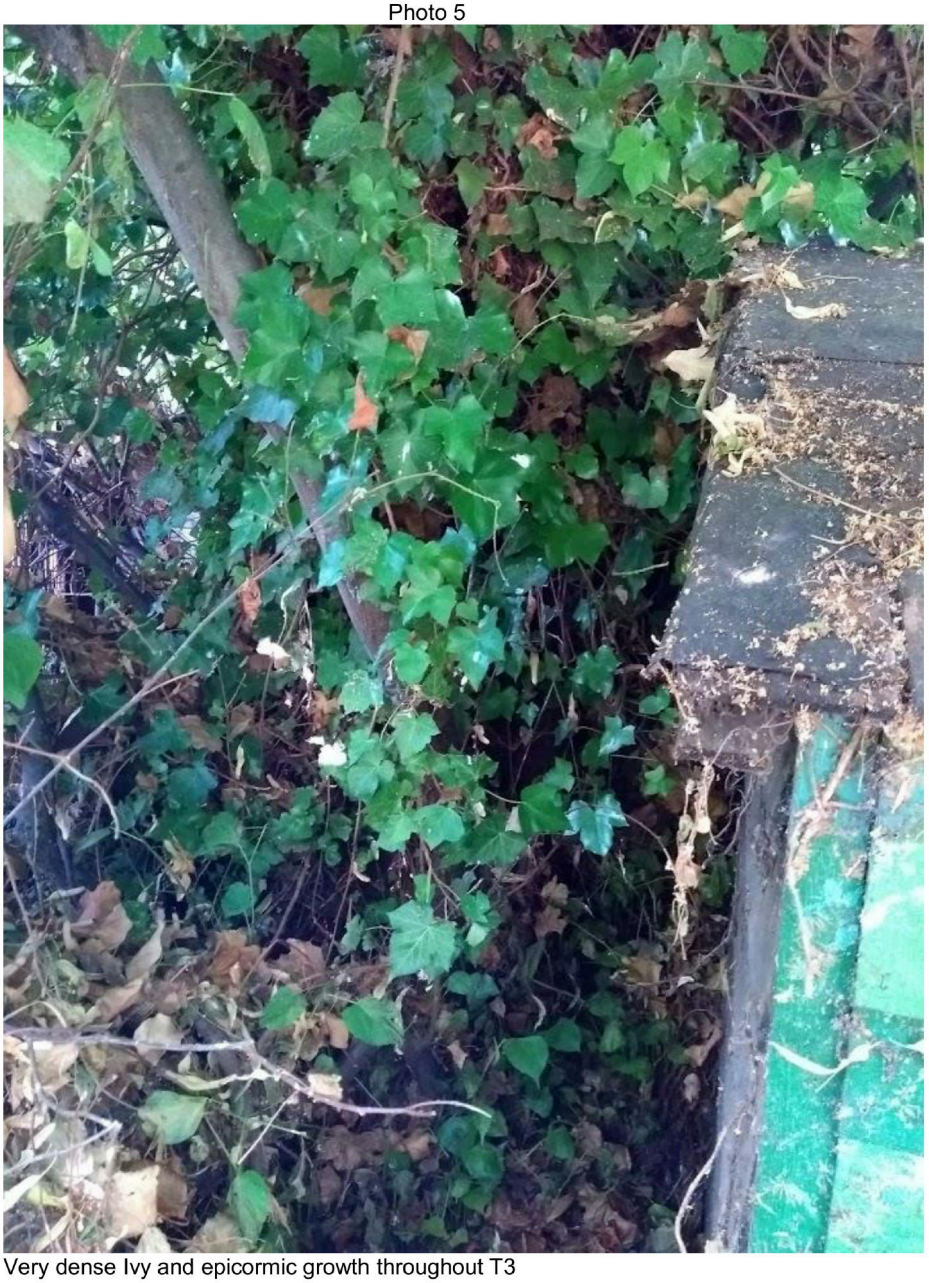
Dense epicormic growth making access and full inspection not possible T2

Photo 4



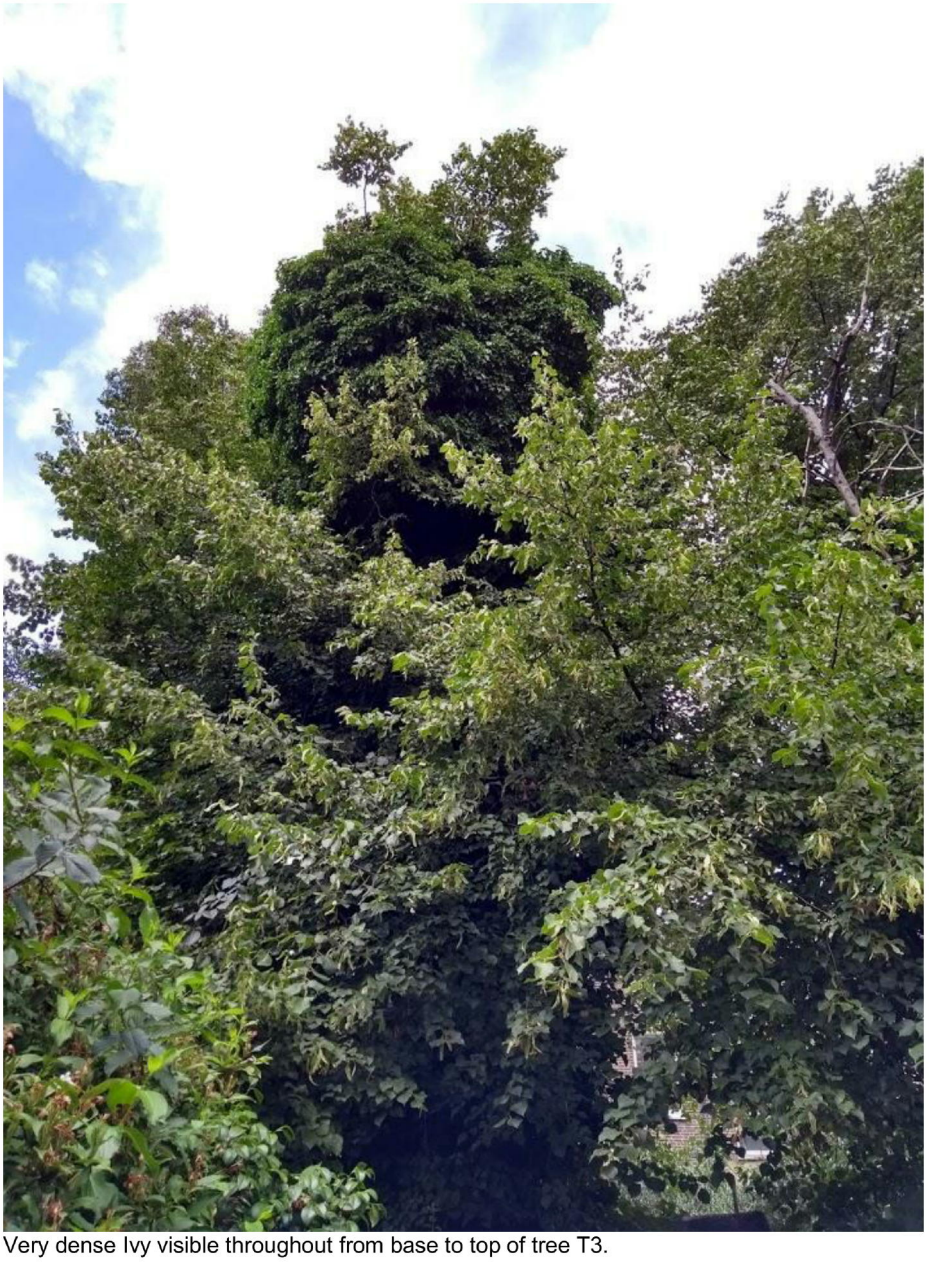
Very dense Ivy throughout and epicormic impedes access and inspection of T3.

Photo 5



Very dense Ivy and epicormic growth throughout T3

Photo 6



Very dense Ivy visible throughout from base to top of tree T3.