Sharon Hosegood
ASSOCIATES

ARBORICULTURAL IMPACT ASSESSMENT REPORT

BS 5837:2012 'Trees in relation to design, demolition and construction. Recommendations'

report

SITE

Branch Hill,

London,

NW3 7LT

CLIENT

Almax Group

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DATE: 6 December 2019
OUR REF: SHA 681

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Executive summary

This report is submitted in connection with a planning application for *'Change of use of Branch Hill House from care home (Use Class C2) to residential (Use Class C3) and associated external alterations, demolition of the 1960s extension and erection of replacement building, including basement, comprising residential accommodation (Use Class C3), ancillary plant, access and servicing and car parking'* at Branch Hill, London, NW3 7LT. I have provided all information in accordance with the British Standard (BS 5837: 2012 ''*Trees in relation to design, demolition and construction. Recommendations*'' (referred to as BS).

The site is a former care home comprising an Edwardian building (Branch Hill House) with a 1960s extension. The property is set in a large plot with a triangular wooded area to the north of the internal drive (Spedan Close) which is designated as a Site of Importance for Nature Conservation (SINC) along with a surrounding area. The application sit is within the Hampstead Conservation Area. There are no current Tree Preservation Areas affecting the site.

The layout follows a pre-design site meeting with the relevant consultants to ensure that there is minimal impact on trees, and two on site meetings with the Arboricultural Officer from Camden Council.

The development retains and enhances the woodland SINC by removing low quality laurel and rhododendron and planting native trees and shrubs and creating habitat features. There will be an informal woodland trail and natural play area. To the immediate south of the site are a line of mature limes, horse chestnut and sycamore trees which are important to the landscape setting. This report provides details of their protection during demolition and construction. A group of overcrowded holly trees (classified as low value under the BS) which internal to the site will be removed. A small area of excavation is required along Spedan Close near three trees. The effect of this has been evaluated by a TreeRadar investigation (referred to in this report) and a draft method statement to minimise impact is included.

The site will be supervised at key stages by the Arboricultural consultant and this will be reported to Camden Council. Development will result in a net gain in tree numbers and species, and positive management of the SINC woodland which would otherwise decline due to invasive species.

In conclusion, the scheme results in a **positive arboricultural impact assessment**, and requires specialist working is areas identified in this report.

Contents

Appendices

1. Introduction:

1.1. This report accompanies a planning application made by WSP Indigo on behalf of Almax Group to Camden Council for *'Change of use of Branch Hill House from care home (Use Class C2) to residential (Use Class C3) and associated external alterations, demolition of the 1960s extension and erection of replacement building, including basement, comprising residential accommodation (Use Class C3), ancillary plant, access and servicing and car parking'*. The work is in accordance with BS 5837:2012 *'Trees in relation to design, demolition and construction. Recommendations'* (referred to as BS).

1.2. This report details tree condition, the impact of the proposal on, and from, the existing trees and the measures taken to protect trees to be retained. It also includes tree surgery recommendations.

1.3. The survey, preliminary discussions and design team meetings have resulted in a layout as shown in the tree protection plan at Appendix 3. Where technical terms are used, explanations are found in the glossary.

2. Statement of instructions and the issues addressed:

2.1. I was instructed by WSP Indigo on behalf of Almax Group to:-

2.1.1. Carry out a tree survey in accordance with BS 5837:2012 '*Trees in relation to design, demolition and construction – Recommendations*' (BS);

2.1.2. Analyse the proposals and the impact on trees to be retained;

2.1.3. Produce a tree protection plan, showing the location of the tree protection fencing in accordance with the BS and a specification for the protection of the existing trees;

2.1.4. Provide a tree surgery schedule which includes work to facilitate construction, based on the layout of, and works to, trees due to their condition or previous management;

2.1.5. Provide arboricultural method statements in as much detail as is practical at this stage.

2.2. The issues addressed are tree condition, and how the proposal impacts on the site and vice versa. The value and condition of the woodland area and the rooting area of trees next to Spedan Close is discussed.

3. The site:

3.1. Branch Hill House is on the western side of Branch hill and bordered by Heysham Lane to the north, Branch Hill to the east, allotments to the south and Spedan Close Estate to the west. Spedan Close dissects the site from south-east to north west.

3.2. The woodland area occupies c.0.3Ha and has a steep topography sloping down from 130m datum in the north to 123m at Spedan Close. The site slopes down from Spedan close to c.119m and there is a raised grass embankment along the south-western boundary. The building occupies much of the southern part of the site with a belt of holly trees to the south-east. A wide tarmac drive is along the southern boundary, but this is not a public right of way.

3.3. *Site soils:* An assessment of soils on-site was carried out by a desktop analysis using the National Soil Resources Institute website which identified the soils as likely to be 'Freely draining slightly acid loamy soils'. This is a guide only and detailed on-site soil analysis should be undertaken by the project engineer to inform the foundation design. The likelihood is that there is made ground containing rubble (reference: TreeRadar report TRUK 0027 Branch Hill House TreeRadar 1) and experience. The ground has been cut and filled and retained with structures built in the 1960s.

4. The trees:

4.1. *Generally:* There are 62 individual trees, 1 woodland and 4 groups of trees which form the subject of this survey. Full details are found in the survey sheets at appendix 1 and their location on the tree survey plan *SHA 681 TSP* at appendix 2.

4.2. *Legislation:* A Tree Preservation Order was served on the site in 2016 but allowed to lapse. The site is in The Hampstead Conservation Area and the triangular portion of land north of Spedan Close, and much of the surrounding area is identified as a Site of Importance for Nature Conservation (SINC). Further information on legislation, and relevant policies, are found at appendix 7.

4.3 *BS retention category:*

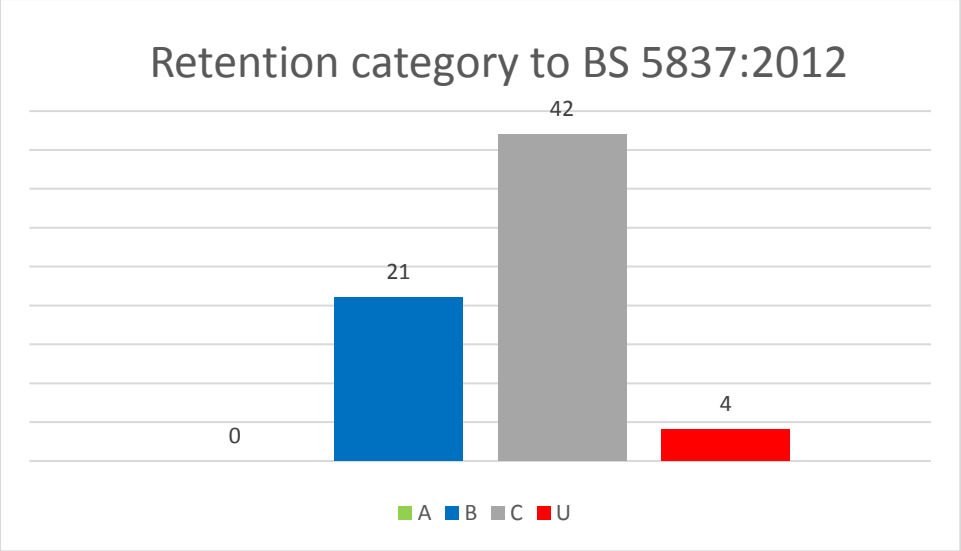


Table 1 – Retention category
A – high quality
B – moderate quality
C – low quality
U – unsuitable for retention

5. The Proposal

5.1. For *'Change of use of Branch Hill House from care home (Use Class C2) to residential (Use Class C3) and associated external alterations, demolition of the 1960s extension and erection of replacement building, including basement, comprising residential accommodation (Use Class C3), ancillary plant, access and servicing and car parking'.*

6. Arboricultural impact assessment:

6.1. *Summary of the impact on trees*: Development can adversely impact on trees by causing them to be removed to facilitate the development, or in the future, by adversely affecting their potential for retention through disturbance in root protection areas (RPAs) or through post development pressure to prune or remove.

6.2. Tree roots can be asphyxiated and die if the rooting zone becomes compacted and soil structure damaged which can easily occur, particularly on clay soils, even with the passage of light vehicles. At the design stage, disturbance within the RPA should be avoided. If unavoidable (which may need demonstrating), consideration must be given to any construction activity such as demolition, including removal of existing hard surfaces, changing soil levels and the provision of services where within RPAs, as well as new surfaces and structures.

6.3. At the planning stage, any works proposed with RPAs must be shown to be achievable with minimal impact on retained trees. Areas should be identified where a detailed Arboricultural Method Statement will be required post planning consent.

6.4. Building lines ideally should be at least 2m outside of the RPA to allow for scaffolding and other build-ability issues and to allow for service runs and paths around the edge of buildings. Trees are long-lived organisms which take a long time to mature and if considered at an early stage can complement and increase the value of a development.

6.5. *Comments on specific trees and the arboricultural impact: Trees offsite, next to the southern boundary: G1 privet (category C under the BS – low value), T2 -T5 lime (category B under the BS – moderate value), T6 & T7 horse chestnut (B), T8 lime (category B under the BS – unsuitable for retention), T10 sycamore (C), T11 – T13 lime (B), T14 beech (C), T15 – T17 sycamore (C), T18 & T19 lime (C), T20, T22 & T23 sycamore (C) and T21 ash (C)*

6.5.1 This line of trees, in particular trees T2 – T9 and T11 – T13 (excluding stump T8) are mature and approximately 18m high. Collectively they form a dense screen between the allotment site, in which they grow, and the site. The limes have been reduced in the past and have regrown vigorously. A full inspection could not be made as the trees are offsite and clothed in epicormic growth and ivy, but the crowns appear to be in good health. They also provide a linear habitat. The cluster of trees T16 – T23 are growing close together resulting in asymmetric crown spreads and poor stem taper. Never the less they provide collective landscape and habitat value.

6.5.2 The trees are separated from the main site by a wide tarmac path parallel to the southern boundary, to the north of which is a low wall retaining a higher bank of holly trees. This wall and bank of holly trees restricts the root protection area, at least in the top 600mm, due to competition for soil space from the dense matting of holly trees. There is a low possibility of deeper roots below this, but it is more likely to be rooting south and along the path.

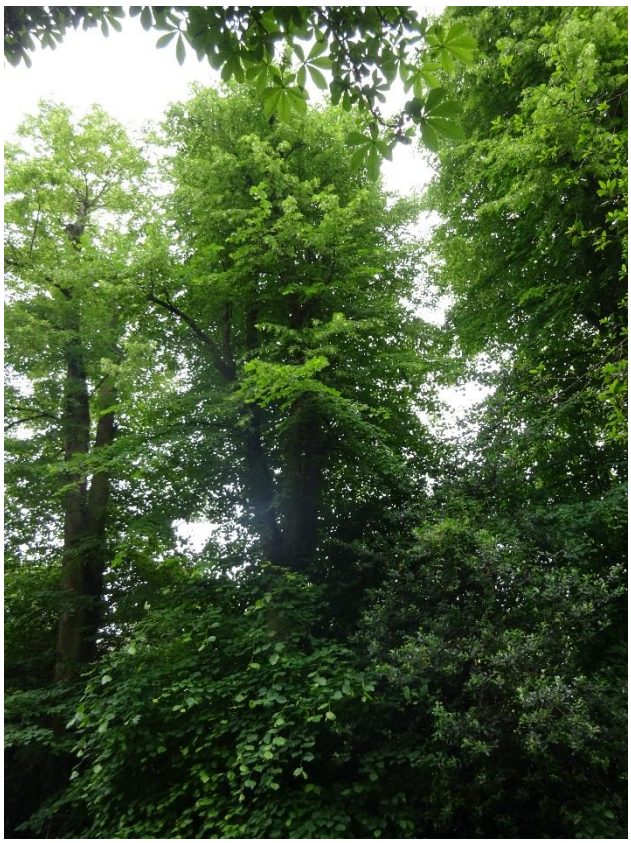


Photo 1 of T3 in centre looking south

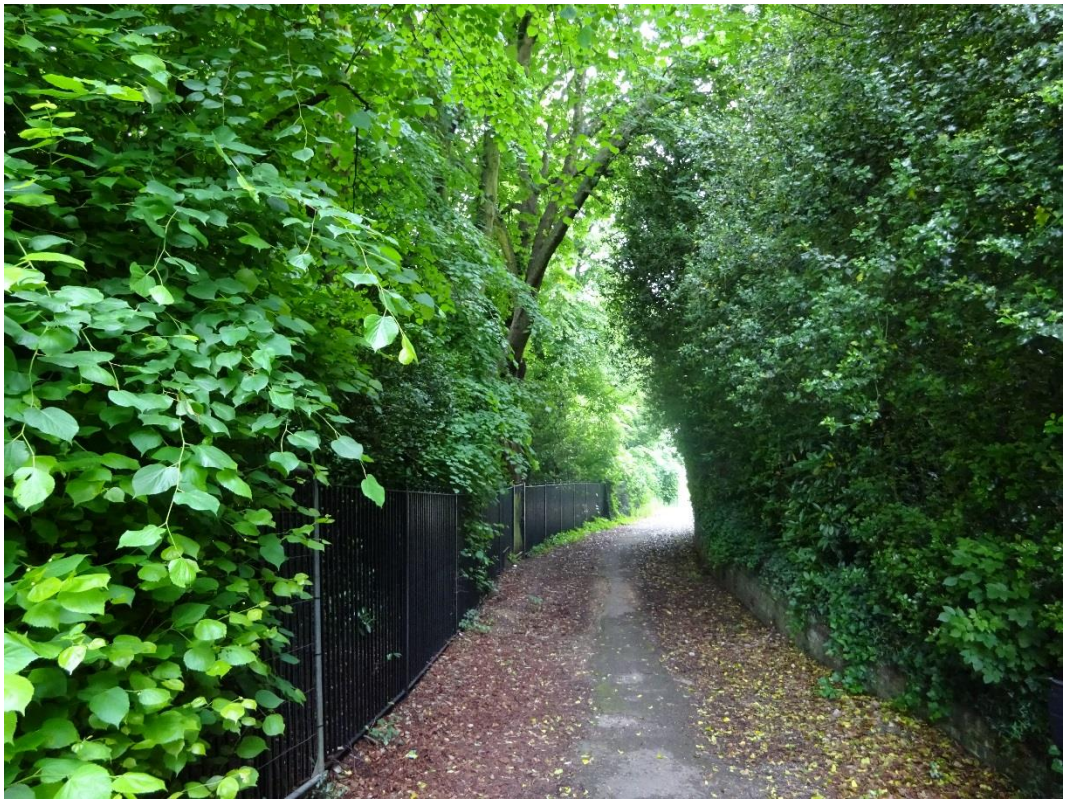


Photo 2 of off the offsite limes on the left and hollies on the right (from T4)

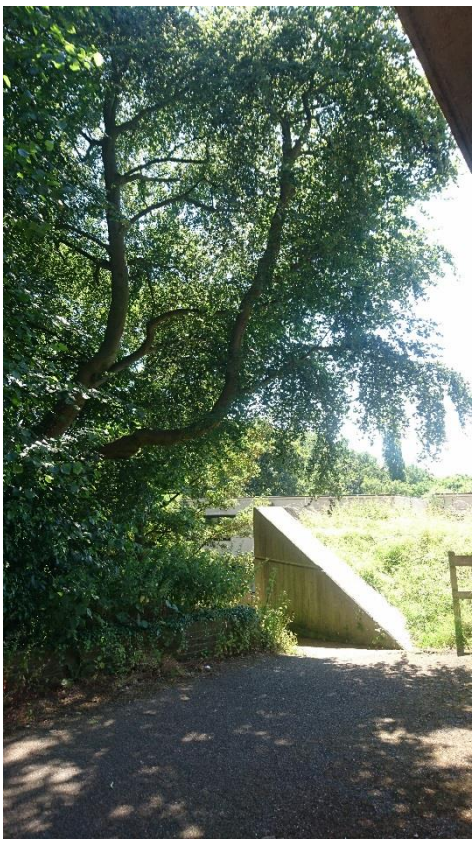


Photo 3 showing ungainly form of T14 to be removed

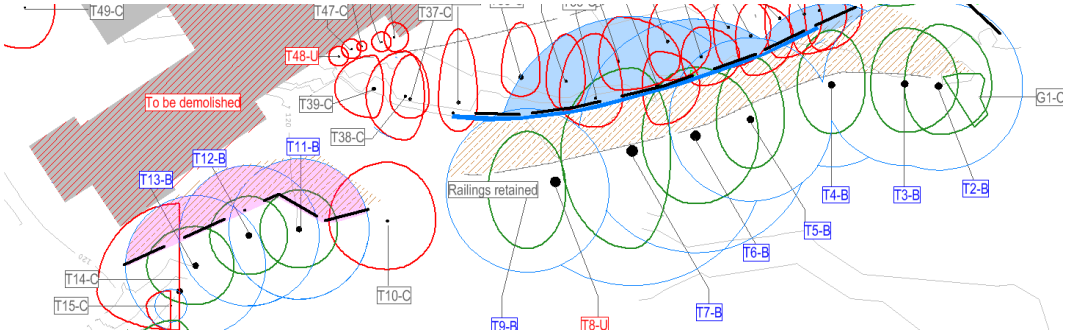
Arboricultural impact assessment:

6.5.3 The trees will be retained, except T10 and T14 (if in site ownership) which are low quality sycamore and beech respectively. T15, a spindly leaning sycamore, is also recommended for removal due to its condition.

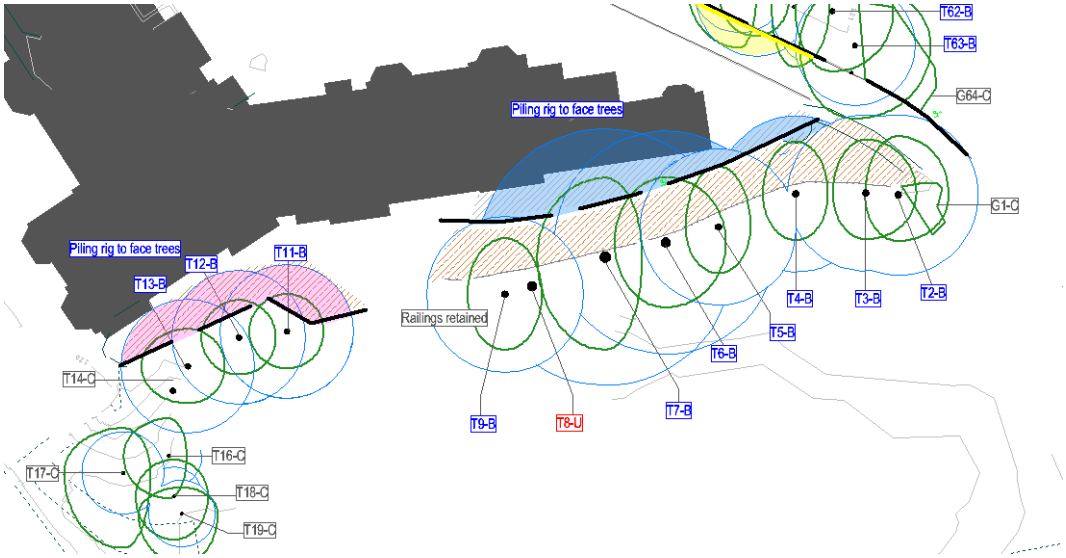
6.5.4 <u>Effect on the roots:</u>

At the planning stage it is not clear if the southern route will be used for machinery for demolition and construction. If it is, the loading capacity of the tarmac will be tested to see if it is strong enough to cope with the loading of machinery. If not, it will be reinforced during works by a bespoke method (such as concrete) to be determined by an engineer and included in a subsequent arboricultural method statement.

As previously discussed, the calculated root protection area of the lime trees, in particular T4 to T7, is not representative of actual rooting due to the presence of holly trees which will be removed. This shown shaded blue on the plan extract below. Therefore, I am comfortable with the proximity of the proposed building to the trees and have agreed this with the Arboricultural Officer during site meetings. The piling mat to the south of the building normally requires a 600mm excavation. As this space is occupied by the roots of the holly trees, this will not be a concern. This is not the case with T11 – T13, but there is a change in level and hard surfacing, which minimises risk of tree roots being damaged.



Plan 1 – extract from SHA 681 TPP1 for demolition. Do not scale. North is vertical. For information on the key, see the drawing at appendix 3.



Plan 2 – extract from SHA 681 TPP2 for construction. Do not scale. North is vertical. For information on the key, see the drawing at appendix 3.

The wall to the north of T2 – T9 will be removed with care under arboricultural supervision.

The existing tarmac path will remain, and top dressed with resin bound gravel.

The trees will be protected during demolition and construction with tree protection fencing shown on *SHA 681 TPP1* and *SHA 681 TPP2* at appendix 3 and to a specification at appendix 5.

6.5.5 Effect on the crowns:

The crowns are fairly high, and only a small amount of pruning is required to lower epicormic growth and branches to achieve a 5m clearance for machinery. The basement will be piled with the piling rig facing the trees to avoid clashing with the branches.

No pruning is required to facilitate construction. Details of tree works are found at appendix 4 in the tree surgery schedule.

6.5.6 Effect on amenity:

The trees provide a dense screen and will help assimilate the proposed building in the wider landscape. The trees will provide some shading in summer, but given the 'Climate Emergency' this is can be seen as a positive attribute due to the climate modifying effect of trees (cooler in summer, warmer in winter).

6.6. *Trees in the southern part of the site, and close to the extension: T24 – T39 holly (C) and T40 – T48 yucca (C).*

6.6.1 The holly trees are growing in a tight group to the immediate north of a low retaining wall. They are mature and as they are growing so close together, they have asymmetric crowns and lean out towards the light. Some have ivy growing up the stems and pockets of decay on stems and main branches. T35 is identified in the Ecological Impact Assessment by Hybrid Ecology as having a potential bat roost feature. The trees are internal to the site and screened from the south by the lime trees, to the east from the woodland area and to the north by the existing building. The yucca's are planted very close to the building and are of very low arboricultural and landscape value.

Photo 4 of T30 – T39 left to right, looking south west

Photo 5 of typical interior of the group of hollies with T36 in foreground

Arboricultural impact assessment:

6.6.2 All will be felled to facilitate construction. There will be little visual impact from their removal. T35 will be inspected by a licensed bat ecologist prior to removal. The trees will be replaced by a holly hedge along this boundary and by trees throughout the development. A feature tree will be planted on the eastern end of this current group to act as a focal point.

6.6.3 The chippings from the tree surgery should be left in situ, and raked to form an even surface as a buffer from demolition. The stems and branches will be stored in clearer area of the woodland for use as habitat/path edging. Note holly timber will rot down after 5 years.

6.7. *Trees on the north western boundary: T49 cotoneaster (C) and T50 sycamore (B).*

6.7.1 The cotoneaster is a low quality small tree which has been coppared in the past and regrown. T50 is a mature sycamore growing on a raised area enclosed by the brick wall which acts as a root barrier. It is in a reasonable form and condition with a large crown (c.16m diameter). It is recommended to sever the ivy so that a full inspection can be made of the tree's condition.

Photo 6 of T50 sycamore showing how the tree is elevated

Arboricultural impact assessment:

6.7.2 The cotoneaster will be removed due to its condition and to enable new landscaping. The sycamore will be retained. There will be no works near the crown or roots of this tree and it is protected as it is elevated on the raised area from all activity. Therefore there is no impact from the proposed sub station as the existing raised walls act as a root barrier.

6.8. *The SINC woodland: T51 sycamore (B), T52 monkey puzzle (C),T53 beech (C), T54 pine (B), T55 holm oak (C), T56 yew (B), T57 Norway maple (C), T58 sycamore (B), T59 yew (B), T60 yew (C), T61 & T62 yew (B), T63 horse chestnut (B), G64 holly and laurel (C), G65 & G67 holly, laurel and rhododendron (C) and W66 mix of birch, holly, laurel, oak and yew (B).*

6.8.1 The triangular woodland slopes up to the north-eastern corner. It is approximately 0.3 hectares and contains sycamore, laurel, rhododendron, a single monkey puzzle, a single holm oak, Norway maple and birch. The holm oak is leaning very heavily west and is recommended for removal for safety reasons. T53 beech leans very heavily south and should also be removed for safety reasons. The low quality group G65 comprises holly, laurel and rhododendron. Rhododendron and laurel are spreading throughout the woodland, and if left unmanaged, the rhododendron would dominate by creating toxicity in the soil to prevent the growth of other species (allelopathy). The woodland has high landscape value collectively, but many of the trees are poor quality. There is very little understory and the woodland requires holistic management to restore its value as a SINC.

Photo 7 showing the prominence of T52 monkey puzzle above the tree line

Photo 8 showing the pronounced lean of T55 holm oak

Photo 9 of T63 horse chestnut looking south east towards the entrance

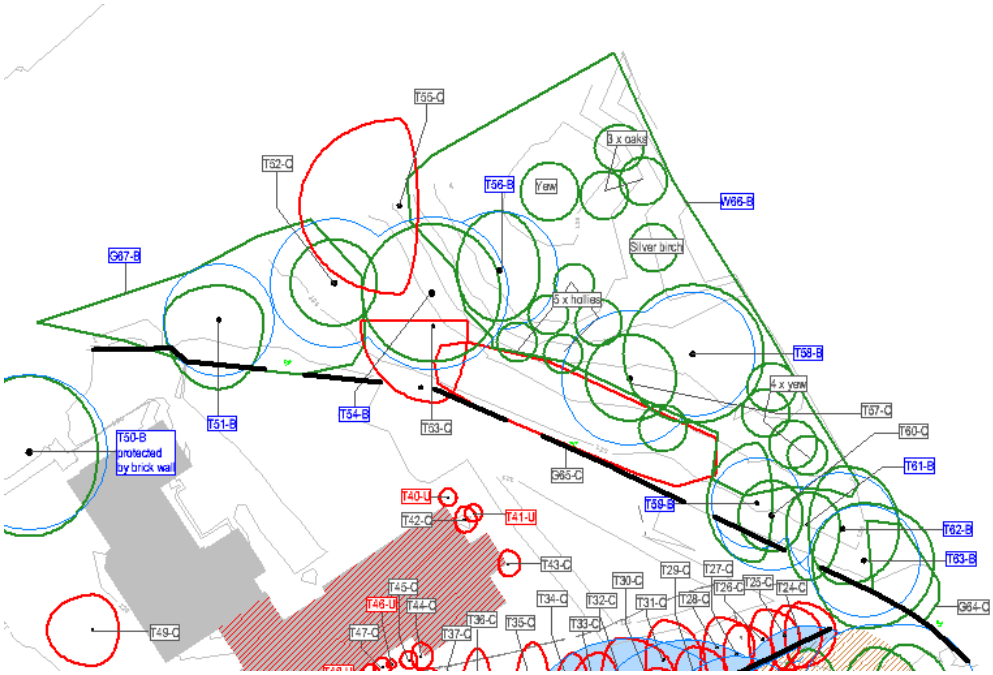
Photo 10 general view of the south-western end of the woodland

Arboricultural impact assessment:

6.8.2 The two leaning trees will be removed. The timber from the holm oak will be cut into stepping logs to a specification by the landscape architect and the woodchip from the holm oak and sycamore will be used to create a woodchip path. G65, and all other laurels and rhododendrons will be removed to prevent invasion and to open up the front of the woodland. Woodchip from these will be removed offsite. The space created will enable remodeling of the frontage of the woodland to create a gentler gradient for public access, as well as room for new planting.

6.8.3 Within the woodland there will be informal natural play and the installation of bat boxes, bird boxes and bug hotels. A woodland management plan will be produced by the ecologist, landscape architect and arboriculturist post planning. The woodland management plan will include recommendations for regular inspections by an arboriculturist, management of new planting (trees/shrubs/bulbs and wild flowers) and management of dead wood. The monkey puzzle has sharp spines, and these will need to be removed from the path/play area by the grounds maintenance team regularly. The woodland edge will be protected during works by tree protection fencing.

6.8.4 The levels around trees to be retained will be unaltered. Works near trees (such as the levelling at the front between trees) will take place under arboricultural supervision and the area will be temporarily fenced as shown at *SHA 681 TPP3.*



Plan 3 – extract from SHA 681 TPP1 for demolition. Do not scale. North is vertical. For information on the key, see the drawing at appendix 3.

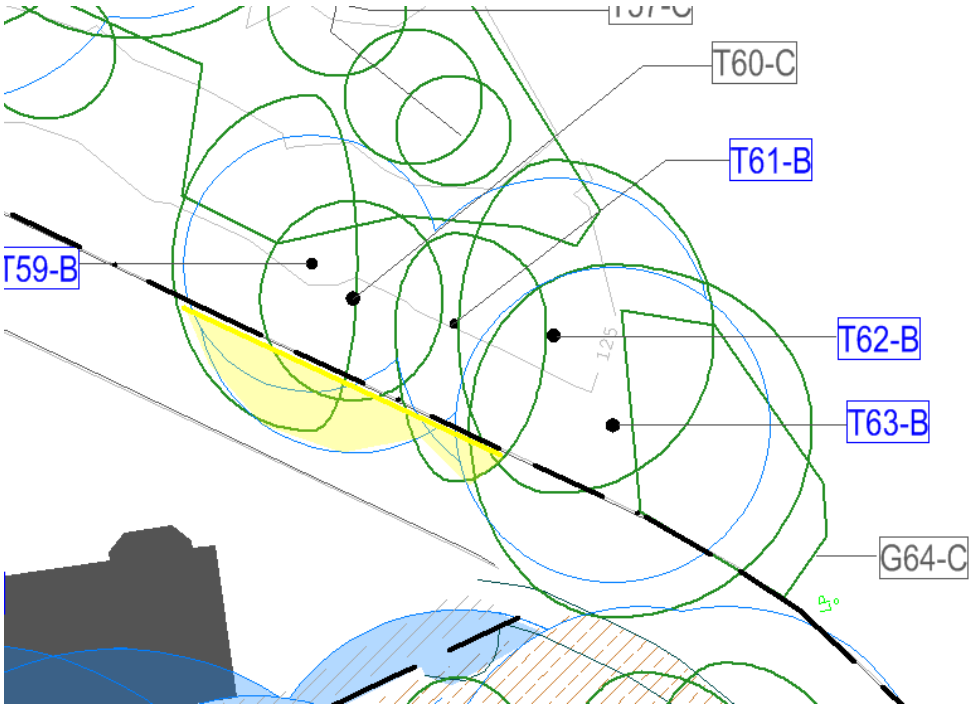
Extract from Planit E Landscape Pre-App presentation document showing the removal of G65 outlined in red.

Plan 5 - extract from Landscape General arrangement plan by Planit E Ltd drawing number 1926-PLA-00-GF-DR-L-0001 Rev P01. Do not scale, north is vertical.

6.8.5 Spedan Close will need to be lowered within the root protection area of T59 - T61 yew. A TreeRadar survey was conducted by TreeRadar UK in September 2019. The results showed that *'Roots are found in very low rooting densities throughout the scan lines, with the majority of the roots found in an unevenly distributed band between 35-50cm deep and few deeper. This shallow rooting pattern indicates adventitious roots, growing to exploit the condensation layer beneath the surface, rather than larger structural roots. Again a very large number of non-root reflectors and services were found within the data.'*

Given the data, I am content the impact on the trees structure and vitality will be negligible. A full method statement for the root pruning will be produced post planning, but the principle is one of root pruning and facing back with plastic sheeting and hessian. The edge of the drive would need to be retained to prevent the bank from slipping, and the detail of this will also form part of the method statement.

A scan line on the verge next to the trees found a much higher root density, as would be expected. Further details of this are available on request.



Plan 6 – extract from SHA 681 TPP2 – yellow area is the area for root pruning by the arboriculturist to allow for the excavation for a sloping level including the construction make up of the road. Do not scale. North is vertical.

7. Conclusions:

7.1. All boundary trees will be retained, and the woodland will be managed to enhance its ecological and landscape value. The scheme has evolved over 18 months with intense team working, including site meetings with the Arboricultural Officer to minimise impacts on trees and to maximise the landscape potential of the site. Some tree works are recommended for safety reasons irrespective of the proposal.

7.2. The visual impact of the removal of the holly trees and the yuccas will be low as they are internal to the site. There will be an increase in tree numbers and species diversity. New planting within the SINC will be native, and other planting will be will also have ecological as well as landscape value. Species included birch, hornbeam, field maple, sweet chestnut, beech, holly, Tibetan cherry, oak and pear.

7.3. Sustainable use of felled trees is a key part of the management of the landscape and will be incorporated in the final landscape design for the woodland.

7.4. The site will be supervised at key stages by the Arboricultural consultant and this will be reported to Camden Council.

7.5. In conclusion, the scheme results in a **positive arboricultural impact assessment**, a **net gain** in tree numbers and species, and positive management of the SINC woodland which would otherwise decline due to invasive species.

8. Recommendations:

8.1. That a copy of this report, and subsequent more detailed arboricultural method statement, is kept on site, including A3 colour copies of the tree protection plans. The arboricultural documents will be part of site induction by the main contractor to all sub-contractors.

8.2. That the arboricultural method statements are developed further and are observed by all site personnel and supervised at key stages by the project arboricultural consultant. Short supervision reports are to be written after each inspection as a record of compliance and audit trail to the Local Authority within 5 days of inspection.

8.3. That the foundation design takes into account trees to be retained, trees to be removed and trees to be planted.

8.4. That there are no ground level changes with the area shown on the plan by tree protection fencing.

8.5. That the line of the underground services should be ideally located outside of Root Protection Areas. However, as a precaution the final service plan should be assessed by an arboriculturist. If it is unavoidable that services are to be located in RPAs, then a method statement must be produced.

8.6. That the landscaping scheme includes a mix of native trees from a cross section of species to ensure biosecurity against host specific pests and diseases. The trees must be planted and maintained in accordance with BS 8545:2014 *Trees: from nursery to independence in the landscape – Recommendations.*

8.7. That no tree works take place until consent is granted as the site is in a Conservation Area.

8.8. That the tree protection fencing is installed before machinery enters the site and remains in place until the soft landscaping stage.

8.9. That the excavation of the drive near T59 – T61, the removal of the wall near T1 – T9 and excavation of the levels in the SINC where G65 will be removed is carried out under arboricultural supervision.

8.10. That the locations of the exploratory intrusive investigation for contamination are assessed by the arboricultural consultant and that the ground remediation methodology near trees is discussed with the arboricultural consultant.

8.11. That the drainage strategy detailing on and/or offsite drainage works, including SUDS, is reviewed by the arboricultural consultant to ensure minimum impact on trees to be retained and is mindful of new trees to be planted.

8.12. That there is an onsite meeting with the demolition, piling and main contractor and the arboricultural consultant before the arboricultural method statement is produced post planning.

8.13. That the tree surgeon is briefed about sustainable use of timber.

8.14. That there is a detailed woodland management plan produced by the arboriculturist, landscape architect and ecologist working in collaboration, and that this is briefed in person to the ground management team for discussion and embedded in the site wide management plan. In the future, residents will be part of the reviews. Annual updates to be reported to Camden Council biodiversity officer.

8.15. That the allotment managers are sent the recommendations in the tree surgery schedule relating to T6, T8 and they consider carrying out their own full investigations of their trees for safety reasons.

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Director
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Appendix 1

Tree survey sheets

BRANCH HILL Tree schedule (BS5837)

Branch Hill

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Group G1	1	Ligustrum sp. (Privet sp.)	4.5	10	1									0.0		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Restricted / obscured. Base / stems obscured - Vegetation. Numbers in group not counted Overhanging access slightly End-weight reduction - Specified extent. Reduce overhang by 1m to clear access	04/06/2018	4.5	1.2	10-20	C2
Tree T2	1	Tilia sp. (Lime sp.)	18.0	72	1	6.3		5.5		5.0		3.5		2.5		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Restricted / obscured. Base / stems obscured - Vegetation. Epicormic growth - Base. Ivy or climbing plant. Previously reduced height and spread Calloused pruning wounds on main stem Forks at 5.5m Epicormic growth - Remove from base. To allow closer inspection of lower stem	04/06/2018	234.5	8.6	20-40	B1/B2
Tree T3	1	Tilia sp. (Lime sp.)	18.0	70	1	5.7		5.5		5.0		3.5		5.0		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Not possible. Base / stems obscured - Vegetation. Epicormic growth - Base. Forks at approximately 6m, with three main leaders Previously reduced height and spread	04/06/2018	221.7	8.4	20-40	B1/B2
Tree T4	1	Tilia sp. (Lime sp.)	18.0	70	1	5.6		3.5		5.0		3.5		2.5		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Not possible. Base / stems obscured - Vegetation. Epicormic growth - Base. Forks at approximately 6m, with three main leaders Previously reduced height and spread	04/06/2018	221.7	8.4	20-40	B1/B2

Stem green Estimated value
Stem AVE Average stem diameter for tree groups
Stem COM Combined stem diameter in accordance with BS5837
L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Branch Hill

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T5	1	Tilia sp. (Lime sp.)	18.0	70	1	6.5		3.5		5.0		3.5		4.0		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Not possible. Base / stems obscured - Vegetation. Epicormic growth - Base / bole / principal stems. Forks at approximately 4.5m, with two main leaders Previously reduced height and spread Epicormic growth height above road is 2-4m	04/06/2018	221.7	8.4	20-40	B1/B2
Tree T6	1	Aesculus hippocastanum (Horse Chestnut)	20.0	100	1	7.0		6.5		7.0		5.5		10.5		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Not possible. Base / stems obscured - Vegetation. Epicormic growth - Base. Fork - Suspected structurally sound. Foreign object - Ingrown metal. Forks at 4m Buttress roots protruding beyond railings Calloused wound on main stem with exudations, probed and appears sound Vertical regrowth on main lateral over drive and fused lateral Rib on western scaffold may hide internal crack Detailed investigation - Internal decay assessment. of rib on western scaffold limb Inspect. Check integrity of rubbing limb and vertical regrowth joint on main scaffold over road and reduce / remove if required	04/06/2018	452.4	12.0	20-40	B1/B2
Tree T7	1	Aesculus hippocastanum (Horse Chestnut)	20.0	115	1	8.5		4.0		10.0		7.3		7.0		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Not possible. Arboricultural work - Historic. Deadwood - Minor. Epicormic growth - Bole / principal stems. Fork - Suspected structurally sound. Foreign object - Ingrown metal. Forks at 4m Swelling of stem below fork, old pruning wound to the west at 2.5m with exudations, possible decay entry point Wire embedded in main stem at 1m above ground level	04/06/2018	598.3	13.8	20-40	B1/B2
Tree T8	1	Tilia sp. (Lime sp.)	3.0	70	1	0.5		0.5		0.5		0.5		2.0		Mature	Structural condition Poor. Physiological condition Poor. Ivy or climbing plant. Stump / stumps. Stump 3m	04/06/2018	221.7	8.4	0-10	U

Stem green Estimated value
Stem AVE Average stem diameter for tree groups
Stem COM Combined stem diameter in accordance with BS5837
L.B. Height of lowest branch attachment (m) - where relevant

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Generated By MyTREES tree management software

Branch Hill

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T9	1	Tilia sp. (Lime sp.)	18.0	70	1	6.0		4.0		6.0		4.0		2.5		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Not possible. Base / stems obscured - Vegetation. Deadwood - Minor. Epicormic growth - Base / bole / principal stems. Ivy or climbing plant. Forks at approximately 2.5, with three main leaders Previously reduced height and spread	04/06/2018	221.7	8.4	20-40	B1/B2
Tree T10	1	Acer pseudoplatanus (Sycamore)	15.0	25	1	6.0		5.0		5.0		6.0		3.0		Early Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Crown reduction - Historic. Ivy or climbing plant. Smothered in ivy, slightly thinning crown Lower crown reduced in spread	04/06/2018	28.3	3.0	20-40	C1/C2
Tree T11	1	Tilia sp. (Lime sp.)	18.0	60	1	4.0		4.0		4.0		4.0		4.0		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Not possible. Arboricultural work - Historic. Base / stems obscured - Vegetation. Deadwood - Minor. Epicormic growth - Base / bole / principal stems. Pruning wounds - Decayed. Previously reduced height and spread Significant vegetation obscuring inspection	04/06/2018	162.9	7.2	20-40	B1/B2
Tree T12	1	Tilia sp. (Lime sp.)	18.0	60	1	4.0		4.0		4.0		4.0		4.0		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Not possible. Arboricultural work - Historic. Base / stems obscured - Vegetation. Epicormic growth - Base / bole / principal stems. Fork - Weak with included bark. Previously reduced height and spread Forks at 2.5m, secondary stem rubbing main leader Significant vegetation obscuring inspection	04/06/2018	162.9	7.2	20-40	B1/B2

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Branch Hill

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T13	1	Tilia sp. (Lime sp.)	18.0	60	1	4.0		4.0		4.0		5.0		4.0		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Not possible. Arboricultural work - Historic. Base / stems obscured - Vegetation. Epicormic growth - Base / bole / principal stems. Fork - Weak with included bark. Pruning wounds - Decayed. Previously reduced height and spread Forks at 5m Significant vegetation obscuring inspection	04/06/2018	162.9	7.2	20-40	B1/B2
Tree T14	1	Fagus sylvatica (Common Beech)	16.0	60	1	9.0		0.0		4.0		8.5		2.0		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Not possible. Crown reduction - Historic. Ivy or climbing plant. Phototrophic lean to west	04/06/2018	162.9	7.2	20-40	C1/C2
Tree T15	1	Acer pseudoplatanus (Sycamore)	6.0	14	1	1.5		0.0		2.5		2.5		3.0		Semi Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Suppressed crown - Major.	04/06/2018	8.9	1.7	20-40	C1/C2
Tree T16	1	Acer pseudoplatanus (Sycamore)	16.0	30	1	4.0		2.0		4.6		4.8		3.0		Early Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Restricted / obscured. Deadwood - Minor. Previously crown lifted	04/06/2018	40.7	3.6	40+	C1/C2
Tree T17	1	Acer pseudoplatanus (Sycamore)	16.0	37	1	4.8		3.0		8.1		6.3		4.0		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Restricted / obscured. Deadwood - Minor. Epicormic growth - Base. Previously crown lifted Deadwood stub (limb shedding) at 3.5m to south Possible squirrel damage on underside of lower lateral branches. Buttress root opening at base to north, probed appears solid	04/06/2018	61.9	4.4	40+	C1/C2
Tree T18	1	Tilia sp. (Lime sp.)	16.0	26	1	3.9		3.7		4.7		4.1		0.5		Early Mature	Structural condition Good. Physiological condition Good. No significant faults observed.	04/06/2018	30.6	3.1	40+	C1/C2

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Branch Hill

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T19	1	Tilia sp. (Lime sp.)	16.0	30	1	2.8		3.9		5.4		4.6		1.5		Early Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Restricted / obscured. Base / stems obscured - Vegetation. Epicormic growth - Base. Ivy or climbing plant. Damage to stem bark at 2.5m to east - possible mechanical damage / turning area	04/06/2018	40.7	3.6	40+	C1/C2
Tree T20	1	Acer pseudoplatanus (Sycamore)	8.0	21	1	5.5		4.0		3.2		2.8		3.0		Early Mature	Structural condition Fair. Physiological condition Fair. Deadwood - Minor. Suppressed crown - Major. Ivy severed	04/06/2018	20.0	2.5	10-20	C1/C2
Tree T21	1	Fraxinus excelsior (Ash)	14.0	28	1	4.0		4.0		4.0		4.0		4.0		Early Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Girdling roots - Minor. Ivy or climbing plant. Susceptible to ash dieback	04/06/2018	35.5	3.4	10-20	C1/C2
Tree T22	1	Acer pseudoplatanus (Sycamore)	11.0	30	1	4.0		4.0		4.0		2.0		7.0		Early Mature	Structural condition Poor. Physiological condition Good. Access to inspect base - Not possible. Fork - Weak with included bark. Forks at 4.5m Topped at approx 9m	04/06/2018	40.7	3.6	10-20	C1/C2
Tree T23	1	Acer pseudoplatanus (Sycamore)	11.0	30	1	4.0		2.0		4.0		4.0		7.0		Early Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Not possible. Topped at approximately 9m	04/06/2018	40.7	3.6	10-20	C1/C2
Tree T24	1	Ilex aquifolium (Holly)	11.0	25	1	3.4		4.4		4.1		1.5		2.0		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Ivy or climbing plant. Internal landscape feature Slight lean to east	04/06/2018	28.3	3.0	20-40	C2
Tree T25	1	Ilex aquifolium (Holly)	11.0	28	1	3.4		4.4		4.1		1.5		2.0		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Epicormic growth - Base. Ivy or climbing plant. Internal landscape feature Slight lean to east	04/06/2018	35.5	3.4	20-40	C2

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Branch Hill

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T26	1	Ilex aquifolium (Holly)	11.0	38 COM	2	3.4		4.4		4.1		1.5		2.0		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Epicormic growth - Base. Twin-stemmed. Internal landscape feature	04/06/2018	66.0	4.6	20-40	C2
Tree T27	1	Ilex aquifolium (Holly)	13.0	39 COM	2	3.4		4.4		4.1		1.5		2.0		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Deadwood - Minor. Epicormic growth - Base. Internal landscape feature	04/06/2018	71.3	4.8	20-40	C2
Tree T28	1	Ilex aquifolium (Holly)	10.0	26	1	3.4		4.4		4.1		1.5		2.0		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Deadwood - Minor. Internal landscape feature Variegated holly Lean to the east	04/06/2018	30.6	3.1	20-40	C2
Tree T29	1	Ilex aquifolium (Holly)	8.0	28 COM	2	3.0		4.0		3.0		2.0		2.0		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Deadwood - Minor. Internal landscape feature Significant lean to the east, main stem appears solid when probed Decayed stem to west	04/06/2018	37.1	3.4	20-40	C2
Tree T30	1	Ilex aquifolium (Holly)	10.0	55 COM	3	3.4		4.4		4.1		1.5		5.0		Late Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Crown reduction - Historic. Epicormic growth - Base. Internal landscape feature, but old for holly Sitting on top of wall (partially), bricks have been displaced Minor decay pocket to north at base	04/06/2018	141.0	6.7	10-20	C1/C2

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Branch Hill

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T31	1	Ilex aquifolium (Holly)	12.0	30	1	4.5		4.5		4.0		2.0		3.5		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Deadwood - Minor. Ivy or climbing plant. Internal landscape feature Variegated holly Wooden fence nailed to stem	04/06/2018	40.7	3.6	20-40	C2
Tree T32	1	Ilex aquifolium (Holly)	12.0	24	1	4.5		6.4		3.0		2.0		2.0		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Deadwood - Minor. Ivy or climbing plant. Internal landscape feature Variegated holly Significant lean to east	04/06/2018	26.1	2.9	20-40	C2
Tree T33	1	Ilex aquifolium (Holly)	12.0	33 COM	2	6.6		2.8		3.0		3.7		2.5		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Deadwood - Minor. Ivy or climbing plant. Internal landscape feature Forks at 1m	04/06/2018	50.0	4.0	20-40	C2
Tree T34	1	Ilex aquifolium (Holly)	11.0	26 COM	2	4.8		2.0		3.0		2.0		3.0		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Ivy or climbing plant. Internal landscape feature	04/06/2018	30.6	3.1	20-40	C2

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Branch Hill

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T35	1	Ilex aquifolium (Holly)	11.0	51	1	5.6		2.0		2.0		2.0		3.0		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Ivy or climbing plant. Internal landscape feature Large decay pocket on main stem 18cm wide x 35cm long probed downwards into main stem x 30cm Stem sounds hollow below cavity Sheltered location Detailed investigation - Internal decay assessment.	04/06/2018	117.7	6.1	10-20	C2
Tree T36	1	Ilex aquifolium (Holly)	13.0	64 COM	5	7.5		2.0		3.0		2.0		2.5		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Fused limb / limbs. Ivy or climbing plant. Internal landscape feature Leaning stem to north, ivy in fork makes difficult to assess. End-weight reduction - Specified extent. Northern main stem by 1.5m	04/06/2018	187.6	7.7	20-40	C2
Tree T37	1	Ilex aquifolium (Holly)	11.0	29	1	4.5		2.0		2.0		2.0		0.0		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Ivy or climbing plant. Internal landscape feature Rubbing stem of adjacent tree	04/06/2018	38.0	3.5	10-20	C2

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Branch Hill

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T38	1	Ilex aquifolium (Holly)	11.0	37 COM	2	4.6		2.0		4.5		4.0		0.0		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Decay / structural defect - Open cavity / cavities. Ivy or climbing plant. Internal landscape feature Cavity on eastern stem with decay, when probed 8cm deep, 50cm long x 10cm wide Detailed investigation - Internal decay assessment. Of eastern stem adjacent road	04/06/2018	63.6	4.5	10-20	C2
Tree T39	1	Ilex aquifolium (Holly)	10.0	33	1	3.4		1.0		3.0		4.0		0.5		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Ivy or climbing plant. Internal landscape feature Leaning stem to west Matured ivy throughout tree	04/06/2018	49.3	4.0	20-40	C2
Tree T40	1	Yucca sp. (Desert Yucca)	3.0	15 COM	2	1.0		1.0		1.0		1.0		0.0		Mature	Structural condition Poor. Physiological condition Poor. Die-back - Upper crown.	04/06/2018	11.0	1.9	0-10	U
Tree T41	1	Yucca sp. (Desert Yucca)	3.5	11	1	1.0		1.0		1.0		1.0		3.0		Mature	Structural condition Poor. Physiological condition Fair. Die-back - Upper crown. Dead patch of bark up to 0.75cm above ground level	04/06/2018	5.5	1.3	0-10	U
Tree T42	1	Yucca sp. (Desert Yucca)	4.0	18 COM	2	1.5		1.5		1.5		1.0		2.0		Mature	Structural condition Fair. Physiological condition Fair. Slight lean away from building	04/06/2018	16.1	2.3	10-20	C1
Tree T43	1	Yucca sp. (Desert Yucca)	6.0	23 COM	3	1.5		1.5		1.5		1.0		0.0		Mature	Structural condition Fair. Physiological condition Fair. Touching building	04/06/2018	25.9	2.9	10-20	C1

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Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T44		Yucca sp. (Desert Yucca)	6.0	17	1	1.5		1.5		1.5		1.0		1.5		Mature	Structural condition Fair. Physiological condition Fair. Touching building	04/06/2018	13.1	2.0	10-20	C1
Tree T45	1	Yucca sp. (Desert Yucca)	6.5	12	1	1.0		1.0		1.0		1.0		4.5		Mature	Structural condition Fair. Physiological condition Fair. No significant faults observed.	04/06/2018	6.5	1.4	10-20	C1
Tree T46	1	Yucca sp. (Desert Yucca)	4.5	11	1	0.5		0.5		0.5		0.5		4.0		Mature	Structural condition Poor. Physiological condition Fair. Decay / structural defect - Extensive. Fell - Ground level.	04/06/2018	5.5	1.3	0-10	U
Tree T47	1	Yucca sp. (Desert Yucca)	6.5	14	1	1.0		1.0		1.0		1.0		0.5		Mature	Structural condition Fair. Physiological condition Fair. Touching building	04/06/2018	8.9	1.7	10-20	C1
Tree T48	1	Yucca sp. (Desert Yucca)	6.0	15	1	1.0		1.0		1.0		1.0		1.5		Mature	Structural condition Fair. Physiological condition Fair. Almost touching building	04/06/2018	10.2	1.8	10-20	C1
Tree T49	1	Cotoneaster sp. (Tree Cotoneaster)	8.0	37 COM	7	4.0		3.1		4.2		5.2		0.0		Late Mature	Structural condition Poor. Physiological condition Fair. Decay / structural defect - Base. Decay / structural defect - Localised. Multi-stemmed. Coppard at 1.2m and regrown	04/06/2018	62.1	4.4	10-20	C1
Tree T50	1	Acer pseudoplatanus (Sycamore)	18.0	75	1	8.8		8.0		9.8		8.4		3.5		Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Restricted / obscured. Epicormic growth - Base. Ivy or climbing plant. Pruned back from building (approx 2.5m separation) Climbing plant - Sever and strip. To allow closer inspection of lower stem, and inform design conclusively about retention if essential	04/06/2018	254.5	9.0	20-40	B1
Tree T51	1	Acer pseudoplatanus (Sycamore)	17.0	54	1	3.9		5.2		8.1		6.3		3.5		Mature	Structural condition Good. Physiological condition Good. Deadwood - Minor.	04/06/2018	131.9	6.5	20-40	B1/B2
Tree T52	1	Araucaria araucana (Monkey Puzzle)	17.0	62	1	5.0		5.0		5.0		5.0		6.0		Mature	Structural condition Fair. Physiological condition Fair. Deadwood - Minor. Stem exudations north	04/06/2018	173.9	7.4	10-20	C1

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Branch Hill

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T53	1	Fagus sylvatica (Common Beech)	18.0	45 COM	2	0.0		3.7		9.5		8.8		1.5		Mature	Structural condition Poor. Physiological condition Good. Rubbing limbs. Significant growth lean to south Crown clearance over road is 2.5m Two main stems rubbing	04/06/2018	94.1	5.5	20-40	C1/C2
Tree T54	1	Pinus nigra (Black Pine)	21.0	74	1	8.0		8.0		8.0		8.0		7.5		Mature	Structural condition Good. Physiological condition Good. Deadwood - Minor. Bark flaking / possible buckling lower stem to south Slightly thin crown Stem sounds solid with hammer	04/06/2018	247.7	8.9	20-40	B1/B2
Tree T55	1	Quercus ilex (Holm Oak)	10.0	50	1	10.0		2.2		10.3		11.5		4.0		Mature	Structural condition Fair. Physiological condition Good. Bark wound - Minor. Deadwood - Minor. Significant lean away from bank to the west, no target, needs reviewing from a risk persective if access is permitted	04/06/2018	113.1	6.0	20-40	C1/C2
Tree T56	1	Taxus baccata (Yew)	11.0	57	1	6.8		4.8		5.9		4.8		4.8		Mature	Structural condition Good. Physiological condition Fair. Arboricultural work - Historic. Die-back - Throughout crown. Deadwood - Minor. Exposed roots to south (side of bank) Forks at 2.5m	04/06/2018	147.0	6.8	20-40	B1/B2
Tree T57	1	Acer platanoides (Norway Maple)	16.0	65	1	5.0		5.5		5.0		5.0		4.0		Mature	Structural condition Fair. Physiological condition Good. Fork - Weak with included bark. Forks at 1.8m Diameter measured at narrowest point below fork Lean to south	04/06/2018	191.1	7.8	10-20	C1/C2
Tree T58	1	Acer pseudoplatanus (Sycamore)	20.0	60	1	8.0		8.3		8.0		8.0		4.8		Mature	Structural condition Good. Physiological condition Good. Deadwood - Minor. Ivy or climbing plant. Forks at 4.5m Gap between buttress roots to south appears sound when probed	04/06/2018	162.9	7.2	20-40	B1/B2
Tree T59	1	Taxus baccata (Yew)	14.0	44	1	6.9		1.9		6.9		5.7		4.0		Mature	Structural condition Fair. Physiological condition Good. Arboricultural work - Historic. Deadwood - Minor. Fire damage - Base / bole / principal stems. Fork - Weak with included bark. Forks at 4m	04/06/2018	87.6	5.3	20-40	B1/B2

Stem green Estimated value
Stem AVE Average stem diameter for tree groups
Stem COM Combined stem diameter in accordance with BS5837
L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Branch Hill

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T60	1	Taxus baccata (Yew)	14.0	53	1	4.0		3.7		4.2		3.8		4.0		Mature	Structural condition Fair. Physiological condition Good. Arboricultural work - Historic. Deadwood - Minor. Epicormic growth - Base. Fire damage - Base / bole / principal stems. Fork - Weak with included bark. Forks at 0.75m Diameter measured at narrowest point below fork Large bark wound on main stem to north from just below fork to 0.5m above with possible decay	04/06/2018	127.1	6.4	20-40	C1/C2
Tree T61	1	Taxus baccata (Yew)	14.0	37	1	3.7		3.8		6.5		2.4		6.0		Mature	Structural condition Fair. Physiological condition Fair. Arboricultural work - Historic. Decay / structural defect - Base. Secondary stem removed to stump Wound at base to north, appears solid when probed	04/06/2018	61.9	4.4	20-40	B2
Tree T62	1	Taxus baccata (Yew)	14.0	54	1	7.2		6.6		6.5		3.9		5.0		Mature	Structural condition Fair. Physiological condition Good. Arboricultural work - Historic. Deadwood - Minor. Lower branch fused into main stem and shortened to the south	04/06/2018	131.9	6.5	20-40	B1/B2
Tree T63	1	Aesculus hippocastanum (Horse Chestnut)	18.0	54	1	6.6		8.2		7.9		5.9		6.0		Mature	Structural condition Good. Physiological condition Good. Arboricultural work - Historic. Ivy or climbing plant. Wound southern side of stem at 0.75cm above ground level Slight lean to the east	04/06/2018	131.9	6.5	20-40	B1/B2
Group G64	1 1	Ilex aquifolium (Holly) Laurocerasus officinalis (Cherry Laurel)	4.0	15 AVE	1									0.0		Mature	Structural condition Fair. Physiological condition Good. Numbers in group not counted	04/06/2018	10.2	1.8	10-20	C2

Stem green Estimated value
Stem AVE Average stem diameter for tree groups
Stem COM Combined stem diameter in accordance with BS5837
L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Branch Hill

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Group G65	1	Ilex aquifolium (Holly)	8.0	12 AVE	1									0.0		Mature	Structural condition Fair. Physiological condition Good. Maintained back to road edge to a height of 2-2.5m Numbers in group not counted Reduce crown by - Specified extent. Reduce crown overhanging road edge to a height of 5m (construction access)	04/06/2018	6.5	1.4	20-40	C2
	1	Laurocerasus officinalis (Cherry Laurel)																				
	1	Rhododendron sp. (Rhododendron sp.)																				
Woodland W66		Betula pendula (Silver Birch)	17.0	45 AVE	1									0.0		Mature	Structural condition Fair. Physiological condition Good. Wooded area of mixed density, areas of open canopy and ground. Undulating levels, some areas of ground is quite high Numbers in group not counted Mixed age range sm - m Dbh given for average larger trees	04/06/2018	91.6	5.4	20-40	B2
		Ilex aquifolium (Holly)																				
		Laurocerasus officinalis (Cherry Laurel)																				
		Quercus robur (English Oak)																				
		Taxus baccata (Yew)																				

Stem green Estimated value
Stem AVE Average stem diameter for tree groups
Stem COM Combined stem diameter in accordance with BS5837
L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Branch Hill

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Group G67		Ilex aquifolium (Holly)	8.0	25 AVE	1									0.0		Mature	Structural condition Fair. Physiological condition Good. Maintained adjacent road edge to a height of 2-2.5m. Dbh estimated and given for average largest stem Reduce crown by - Specified extent. Reduce crown overhanging road edge to a height of 5m (construction access)	04/06/2018	28.3	3.0	20-40	B2
	1	Laurocerasus officinalis (Cherry Laurel)																				
	1	Rhododendron sp. (Rhododendron sp.)																				

Stem green Estimated value
Stem AVE Average stem diameter for tree groups
Stem COM Combined stem diameter in accordance with BS5837
L.B. Height of lowest branch attachment (m) - where relevant

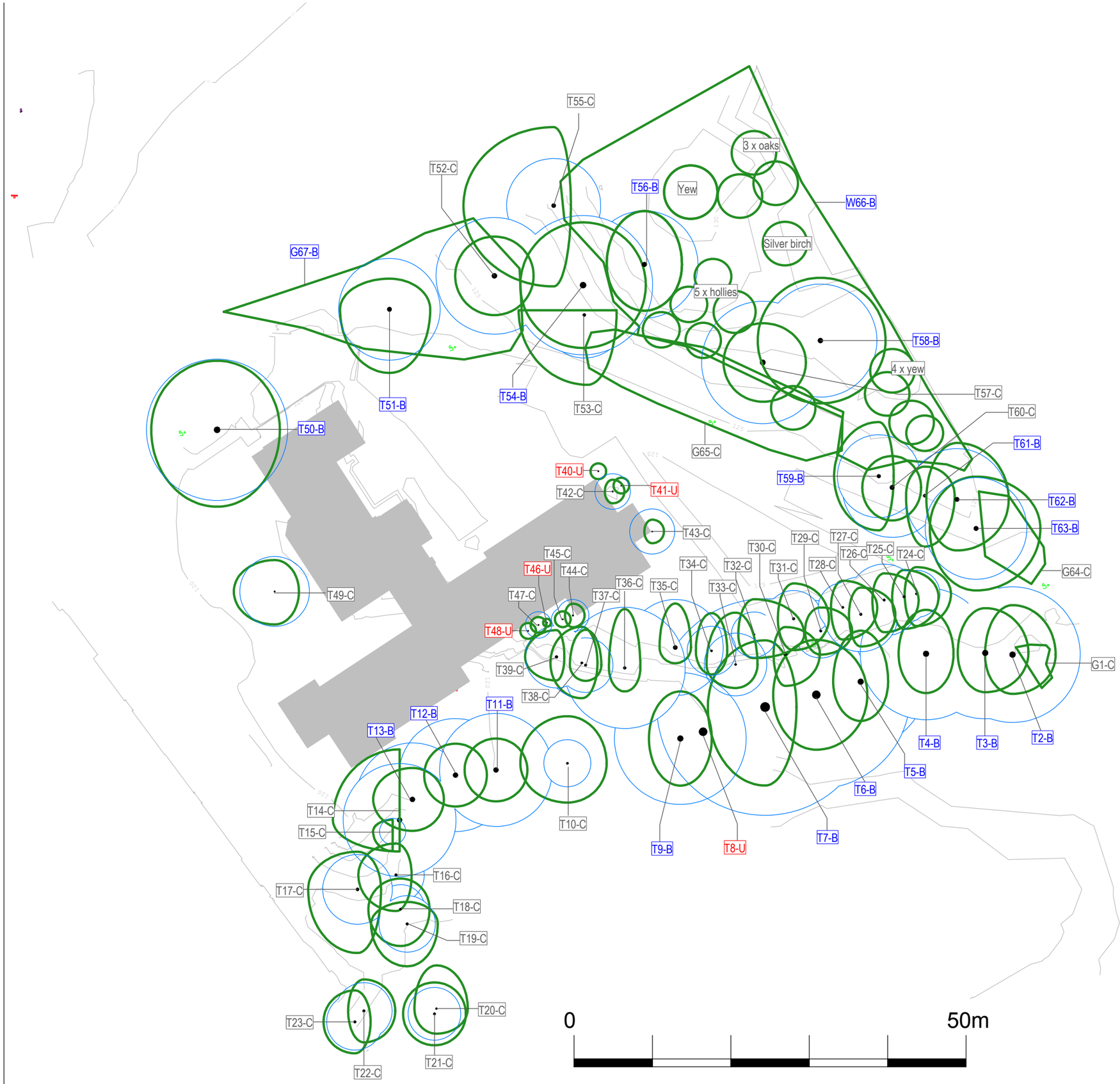
The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Table 1 of BS5837 (2012) 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 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 4.5.7			RED
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Tree 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 arboricutural and/or landscape features.	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture).	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.	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 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

Appendix 2

Tree survey plan SHA 681 TSP



T1-B Category B - moderate quality and value

T1-C Category C - low quality and value

T1-U Category U - unsuitable for retention

Crown spread

RPA - root protection area as defined by Table 2 BS 5837:2012

Group/Woodland

Notes

1. Contractors to check all dimensions on site
2. Discrepancies must be reported to the Arboricultural Consultant before proceeding
3. The original of this drawing was produced in colour, a monochrome copy should not be relied upon.
4. It is the responsibility of the contractor to ensure necessary consents for tree works are in place
5. This drawing is copyright © Sharon Hosegood Associates Ltd

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Client

Almax Group

Site Address

Branch Hill House, Branch Hill, London NW3 7LT

Drawing Title	Orientation	Drawn	Authorized
Tree Survey Plan		ND-H	SMH
Date	**Drawing Number**	**Scale**	**Drawing Status**
13.6.18	SHA 681 TSP	1:500@A3	For Issue

Revision

-

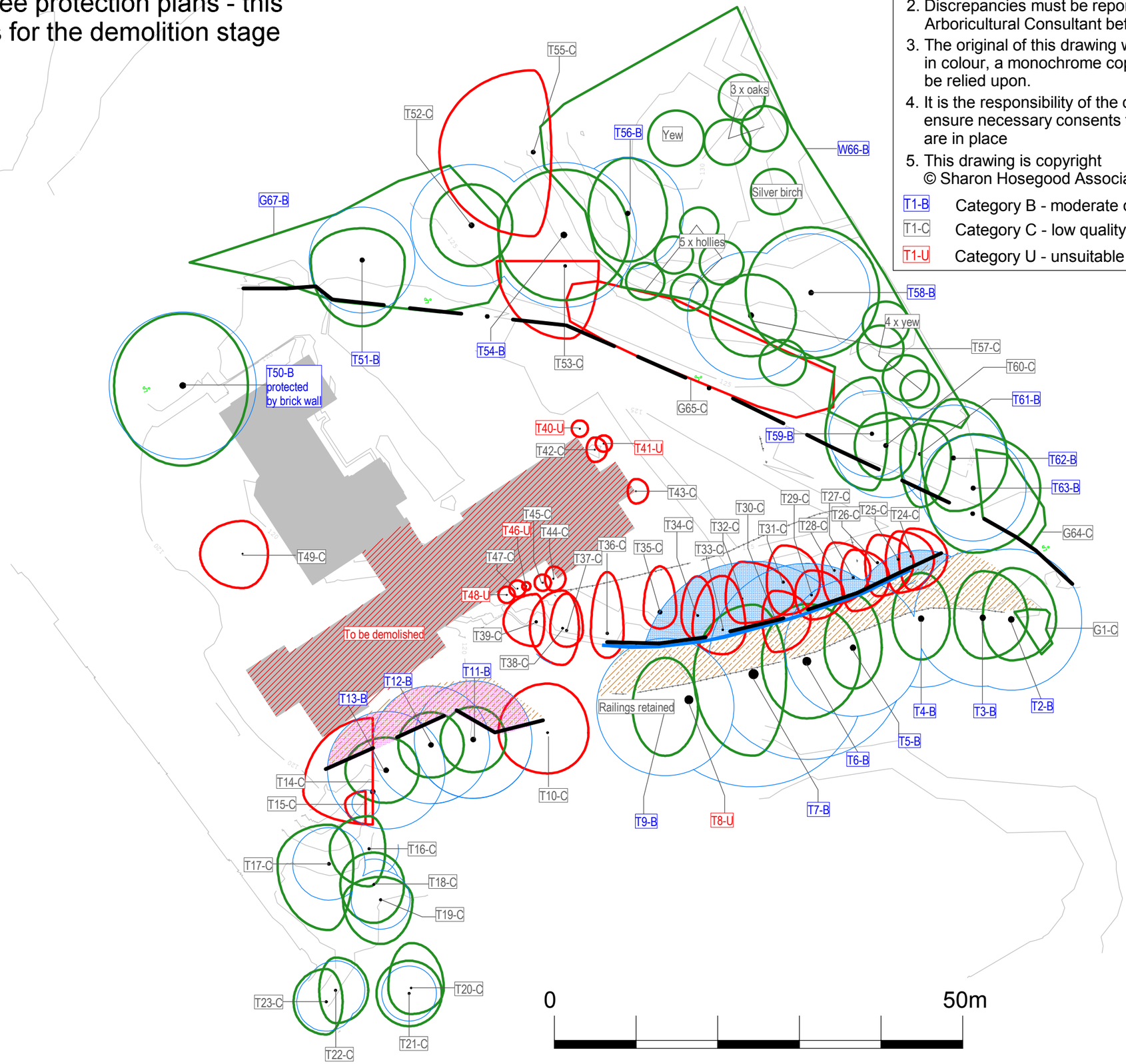
Appendix 3

Tree protection plan SHA 681 TPP1 for the tree surgeon and demolition

Tree protection plan SHA 682 TPP2 for construction

Tree protection plan SHA 682 TPP3 for external works

This is the first of three tree protection plans - this is for the demolition stage



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T1-B Category B - moderate quality and value

T1-C Category C - low quality and value

T1-U Category U - unsuitable for retention

Tree to be retained

RPA - root protection area as defined by Table 2 BS 5837:2012

Woodland to be retained and managed

Tree to be removed

Low quality group of holly, laurel and rhododendron to be removed and replaced with new planting

Wall to be demolished in accordance with the arboricultural method statement

Area of lime trees RPA in which will not have any roots in the top 600mm due to presence of holly trees and the retaining wall. Low possibility of deeper roots below this, but more likely to be rooting south and along path. Spread woodchip from hollies as ground protection.

Area of trees RPA below wall's foundations and under tarmac path. Tree roots likely to be deep and low density.

Area of tarmac which might be used for demolition traffic. If this is the case an assessment will be made by a structural engineer on the loading capacity. If necessary, the tarmac will be reinforced with a method to be agreed.

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Site Address

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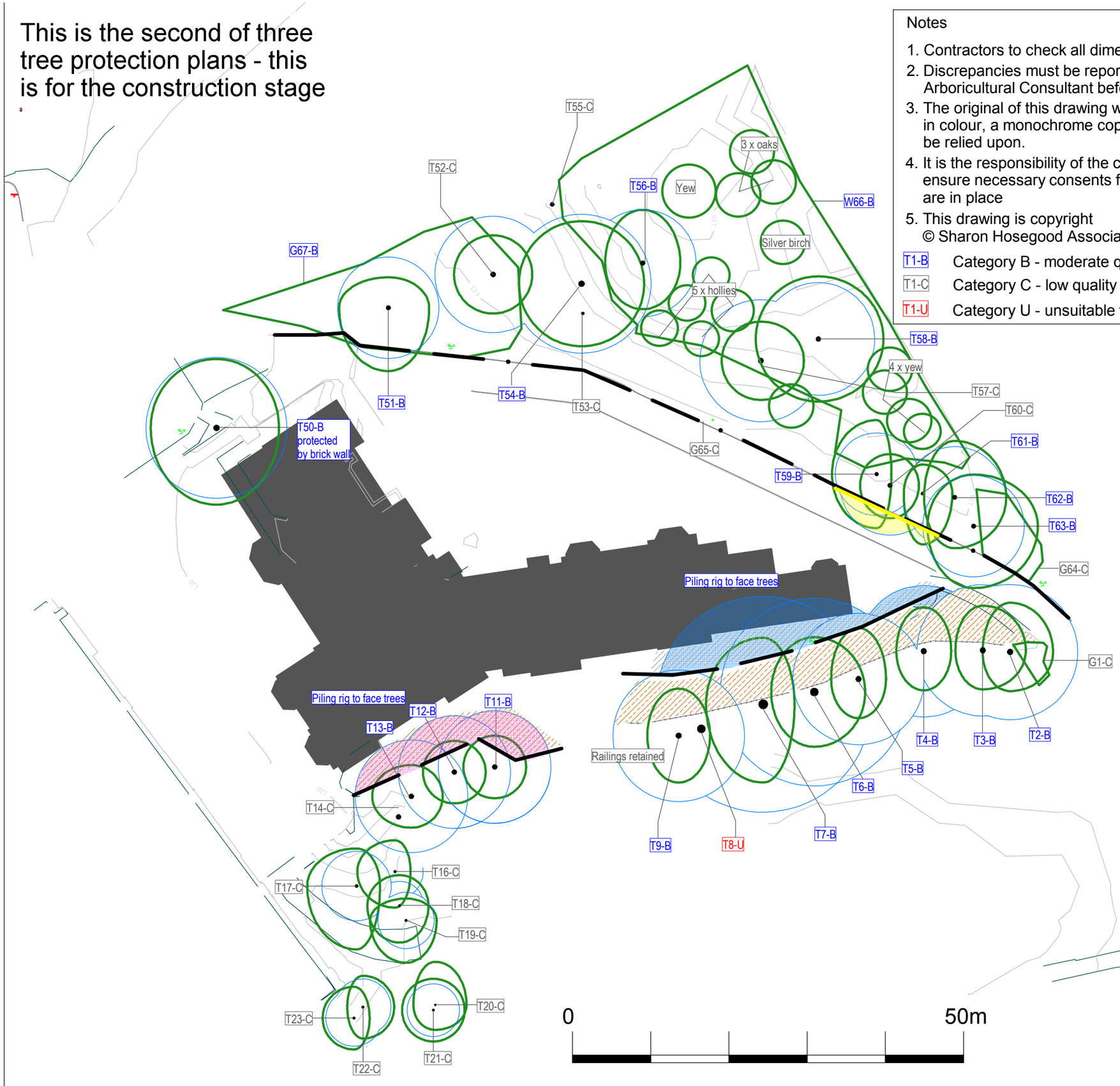
Drawing Title	Orientation	Drawn	Authorized
Tree Protection Plan (demolition)		SMD-H	SMD-H

Date	Drawing Number	Scale	Drawing Status
6.12.19	SHA 681 TPP1	1:500@A3	For Issue

Revision

-

This is the second of three tree protection plans - this is for the construction stage



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4. It is the responsibility of the contractor to ensure necessary consents for tree works are in place
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T1-B Category B - moderate quality and value

T1-C Category C - low quality and value

T1-U Category U - unsuitable for retention

Tree to be retained

RPA - root protection area as defined by Table 2 BS 5837:2012

Woodland to be retained and managed

Area of lime trees RPA in which will not have any roots in the top 600mm due to presence of holly trees and the retaining wall. Low possibility of deeper roots below this, but more likely to be rooting south and along path. Spread woodchip from hollies as ground protection.

Area of trees RPA below wall's foundations and under tarmac path. Tree roots likely to be deep and low density.

Area of tarmac which might be used for construction traffic. If this is the case an assessment will be made by a structural engineer on the loading capacity. If necessary, the tarmac will be reinforced with a method to be agreed.

Area for piling mat installation method statement.

Area for supervised root pruning to acheive level change - refer to report, with extract from TreeRadar survey for details of work and the impact.

Tree protection fencing comprising braced Heras panels.

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Site Address

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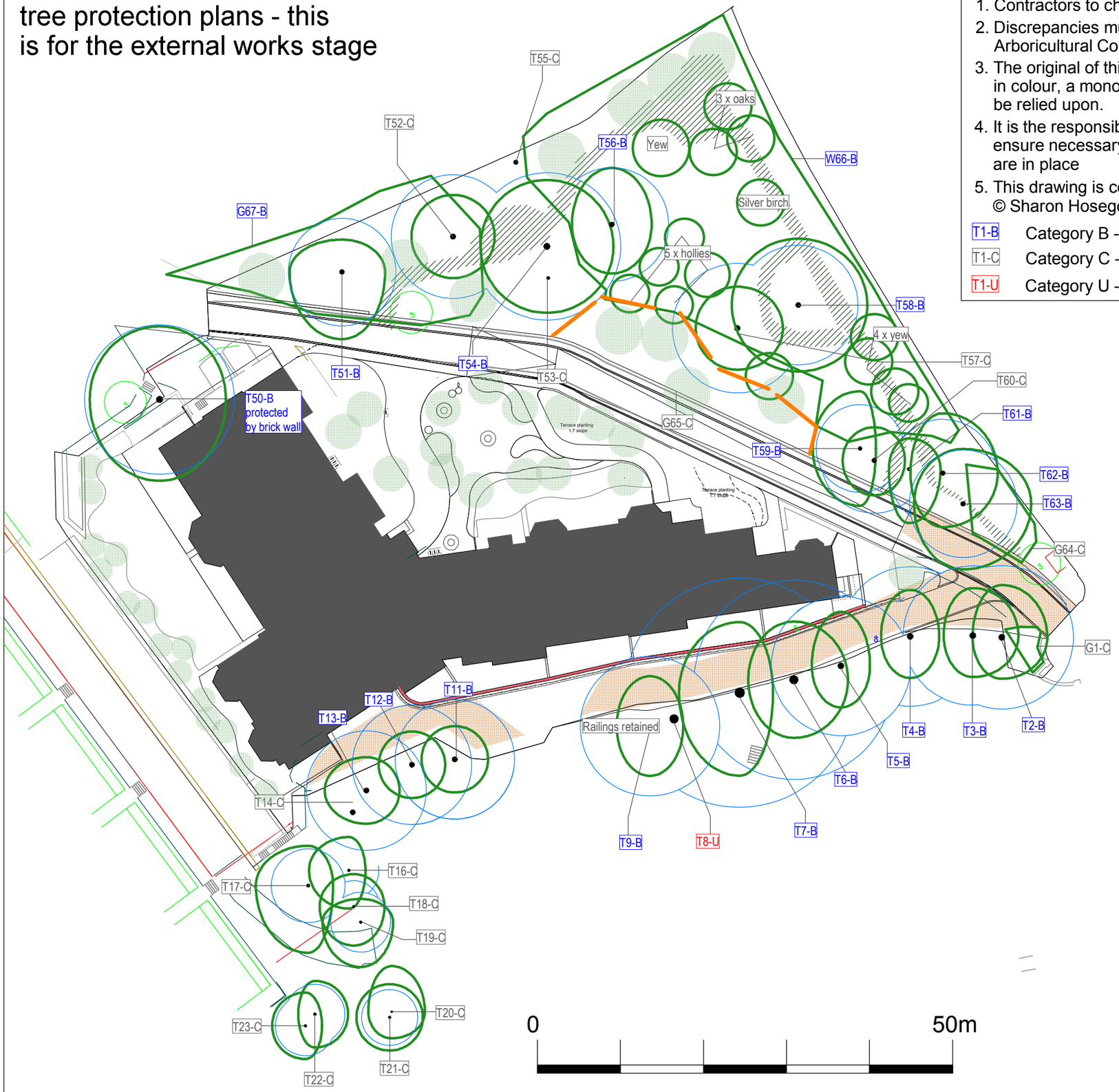
Drawing Title	Orientation	Drawn	Authorized
Tree Protection Plan (construction)		SMD-H	SMD-H

Date	Drawing Number	Scale	Drawing Status
6.12.19	SHA 681 TPP2	1:500@A3	For Issue

Revision -

This is the third of three tree protection plans - this is for the external works stage



Notes

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T1-B Category B - moderate quality and value

T1-C Category C - low quality and value

T1-U Category U - unsuitable for retention

Tree to be retained

RPA - root protection area as defined by Table 2 BS 5837:2012

Woodland to be retained and managed

Tree protection fencing comprising orange mesh fencing supported by metal pins every 1m
The change in level within this area will be supervised by the arboriculturist

Informal path created by using the wood chip from the tree surgery, and the suitable branches are edging. Depth and exact location to be determined by the landscape architect.

Informal play will be installed in accordance with the method statement

Area for method statement for top dressing of existing hard surface with Resin Gound Gravel

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Site Address

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Drawing Title	Orientation	Drawn	Authorized
Tree Protection Plan (external works)		SMD-H	SMD-H
Date	Drawing Number	Scale	Drawing Status
6.12.19	SHA 681 TPP3	1:500@A3	For Issue

Revision

-

Appendix 4

Tree surgery schedule

Tree surgery schedule

All works to be carried out in accordance with BS 3998:2010 'Tree works – Recommendations'. All pruning cuts to be made at suitable growing points in the line with the principles of 'Natural target pruning'. An ecological check is required by a competent person prior to tree works being carried. Works should not take place until planning permission is granted and all pre-commencement conditions are discharged. Refer to the Ecological Management Plan by Hybrid Ecology. The site is in a Conservation Area.

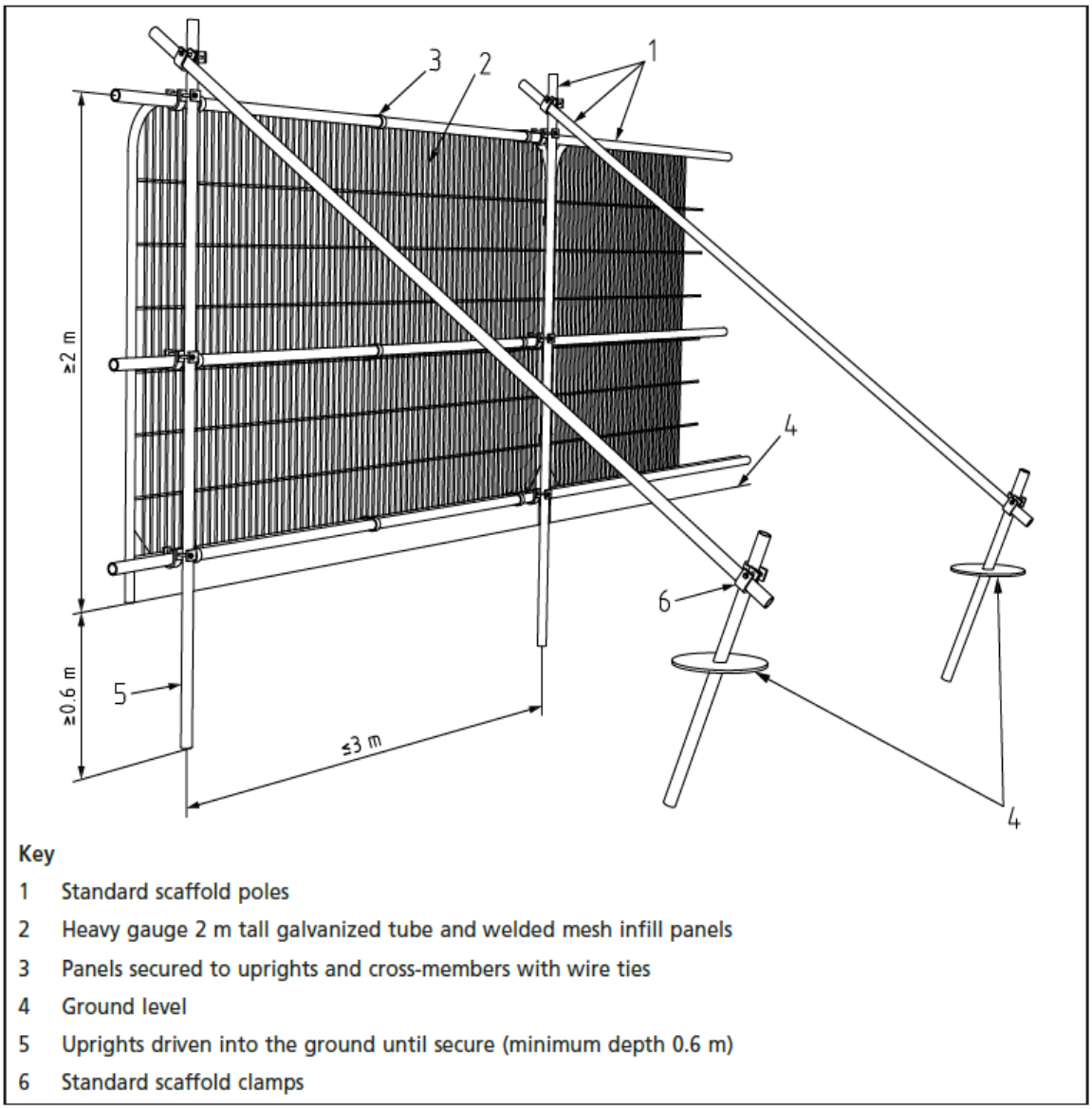
Tree no.	Species	Proposed works	Reason
G1	Privet	Reduce overhang by 1m to clear access	Good management
T2 – T5 **T7, T9, T11, T12 and T13**	Lime	Remove epicormic growth on site side and ensure 5m height clearance Remove any dead wood overhanging the site	For clearance and safety reasons
T6	Horse chestnut	Carry out a detailed internal decay assessment of the rib on the western scaffold limb. Check integrity of rubbing limb and vertical regrowth joint on main scaffold over the road and reduce/remove if required Remove epicormic growth on site side and ensure 5m height clearance Remove any dead wood overhanging the site	For clearance and safety reasons Discuss with owner
T10	Sycamore	Fell to ground level and remove stump if within site control. If not, crown lift to 5m and remove any dead wood overhanging the site	To enable view
T14	Beech	Fell to ground level and grind stump	Ungainly form with heavy lean west
T15	Sycamore	Fell to ground level and grind stump (low priority)	Heavily suppressed tree

Tree no.	Species	Proposed works	Reason
T24 – T39	Holly	Fell to ground level and remove stumps Retain trunk and cord wood and store in SINC in a location to be agreed by the arboriculturist and site manager Chip arising onto the felled area and rake T34 must be inspected by a bat ecologist prior to removal	To facilitate construction To form a ground protection barrier for demolition
T40 – T48	Yucca	Remove	To facilitate demolition
T49	Cotoneaster	Fell to ground level and remove stump	To facilitate construction
T50	Sycamore	Sever ivy and remove as much as possible and re-inspect Remove any dead wood with a diameter greater than 25mm	For safety reasons
T53	Beech	Fell to ground level and remove stump	Leans heavily south
T55	Holm oak	Fell to 600mm and use the trunk and branches on site to be agreed by the ecologist and landscape architect An aerial inspection found no bats, however, there are suitable crevices. The Ecological Impact Assessment recommends that 'in the unlikely event that bats are encountered during tree work, work must cease until the advice of an ecologist has been sought'.	For safety reasons
G65	Holly, laurel and rhododendron	Remove, including roots and all arisings from site	To prevent spread and to enable new landscaping
W66 and G67	Rhododendron and laurel	Remove, including roots and all arisings from site	To prevent spread and to enable new landscaping
Within SINC		Over the path remove any dead wood and crown lift to 3m	For safety reasons and to enable clearance

Appendix 5

Tree protection specification

Figure 2 Default specification for protective barrier



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Tree protection fencing specification from BS 5837:2012 Figure 2

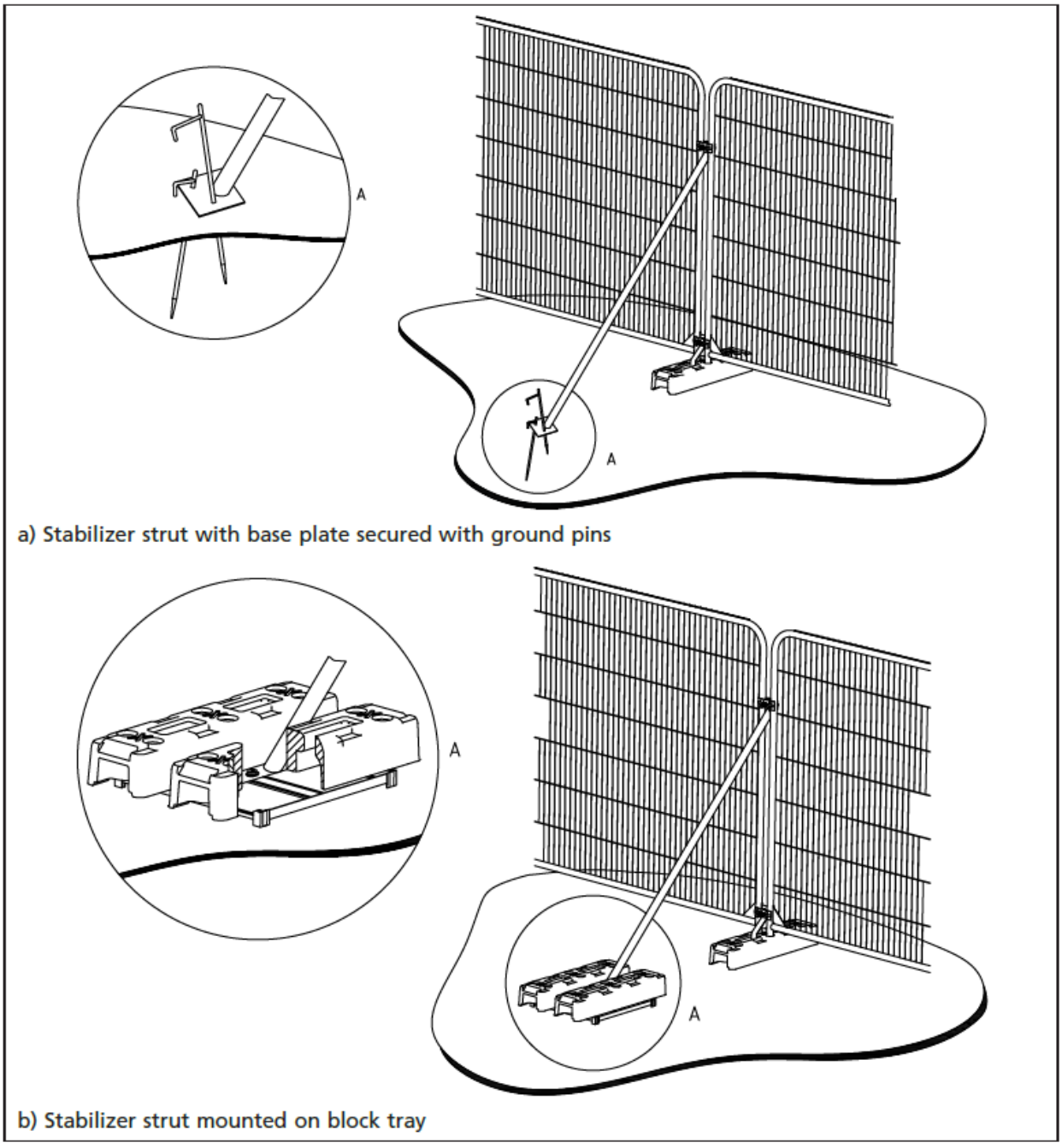
Section 6.2.2 of BS.

Barriers should be fit for purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained trees(s). Barriers should be maintained to ensure that they remain rigid and complete.

The default specification is shown above at Figure 2. Care should be taken when locating the vertical poles to avoid underground services and structural roots. Where it is not possible to drive a pole into the ground, for example on hard surfacing, figure 3 overleaf, applies.

The location for the tree protection fencing is shown on the tree protection plan delineated by a black dashed line. The location of the fencing is out the outer edge of the root protection area and the dimensions from fixed points are shown on the drawings. All weather signs should be affixed to the barriers, no more than 12m apart.

Figure 3 Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

Suggested site warning sign format

Ground protection during demolition and construction

Where working space 'temporary access' is needed within the root protection area during works, fencing should be set back the minimum amount to achieve the required room. If there is existing hard surfacing in this area, it should remain during the works as ground protection. The suitability of this surfacing for ground protection, and whether it needs to be reinforced to bear the weight of machinery, should be assessed by an engineer and discussed with an arboriculturist.

Where the set back of the fencing exposes unmade ground, the ground must be protected before any works take place on site. This is to prevent root damage and soil compaction.

The ground protection might comprise of one of the following: (section 6.2.3.3 of BS)

A) For pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100mm depth of woodchip), laid onto a geotextile membrane;
B) For pedestrian-operated plant up to a gross weight of 2 tonnes, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150mm depth of woodchip), laid onto a geotextile membrane;
C) For wheeled or tracked construction traffic exceeding 2 tonnes gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

The location for ground protection is shown on the tree protection plan by brown diagonal hatching, identified in the key.

Appendix 6

Draft arboricultural method statement

Tree works:

Recommendations for tree works can be found in the tree surgery schedule in Appendix 5. All works shall be in accordance with BS 3998:2010 '*Tree work. Recommendations'*. The use of a competent and insured tree surgery contractor is necessary to comply with this. The main contractor and tree surgery contractor must ensure that any necessary consents have been received from the local authority and that no protected species are harmed whilst carrying out site clearance or tree surgery works. Within root protection areas, stumps, shrubs and other vegetation must be removed by hand or using stump grinding machinery to minimize root damage of retained trees. Where poisoning of stumps is specified, this must be carried out by competent operatives. Only chemicals approved for this purpose and used in accordance with the manufacturer's instructions will be used.

The following information must be sought:

- Current employers, public and product liability insurance
- Waste carriers' licence
- Qualification and experience of key personnel, including relevant NPTC certificates
- COSHH assessment
- Tool and task based risk assessment, including a Working at Height Risk Assessment
- Site specific risk assessment
- Emergency procedure plan
- Method Statement

A list of suitable tree surgeons is found at:
http://www.trees.org.uk/find-a-professional/Directory-of-Tree-Surgeons
Bio security measures are important and found at:
https://www.forestry.gov.uk/biosecurity

Fires: Fires on site should be avoided if possible. If unavoidable, they should be situated far enough so that there is no risk of damage to the trees, taking into consideration the wind direction.

Site and fuel storage, cement mixing and washing points: All site storage areas, cement mixing and washing points for equipment and vehicles and fuel storage areas should be outside root protection areas unless otherwise agreed with the Local Planning Authority. No discharge of potential contaminants should occur within 10m of a retained tree stem or where there is a risk of run off into Root Protection Areas.

Temporary buildings for site use: Site cabins, trailers and other temporary buildings can sometimes be used in root protection area if consent is agreed by the local planning authority. This can be very useful if there is a robust existing hard surfacing in place. The method for installing the buildings, and assessment of whether ground protection is needed is to be agreed with the Arboriculturist and specified prior to installation.

Protection of tree canopies: Piling rigs and cranes are often used close to trees. Work must be carefully planned so that there is sufficient room to avoid hitting the canopy during transportation or operation. Arboricultural supervision may be required, however, it is the responsibility of the contractor to assess and plan the work. Any access facilitation pruning required is detailed in the tree surgery schedule.

New landscaping: Within the root protection areas of trees to be retained, the preparation of soil for planting and turfing will be carried out by hand. Cultivation will be kept to a minimum and new topsoil must not exceed 100mm in depth within 1m of the stem. Top soil and other materials will be transported by wheelbarrow on running boards when working near trees.

All other method statements will be developed post planning following consultation with the design team, structural and civil engineer and contractors.

Arboricultural site supervision

An initial site meeting:

Before works have started, but after the tree surgery and tree protection measures are in place. At this meeting the site manager, contractor, arboricultural consultant should discuss methodology and the tree protection measures will be examined. A '*What you need to know about working near trees at Branch Hill, London, NW3 7LT*' sheet will be issued which includes contact details.

After each site supervision, a short report will be sent to the contractor, client and local authority as a record of compliance within 5 days.

Appendix 7

Tree related legislation and National Policy

Tree preservation orders

The Town and Country Planning (Tree Preservation) (England) Regulations 2012.

No tree preservation orders affect the site as the order served in 2016 was allowed to lapse.

Conservation Area:

The site lies in Hampstead Conservation Area. This means that no work can take place to trees (over 75mm at 1.5m) unless 6 weeks' notice of intent to carry out work is sent to the Local Planning Authority (LPA). The LPA can either raise no objection, or if they consider that the proposed works are detrimental to the visual amenity of the area, they will serve a Tree Preservation Order. Works listed in this report do not require separate consent, provided that all the pre-commencement conditions have been discharged from a full planning approval relating to this report. The exception to this is works which are not required to facilitate planning consent. These are clearly identified within the tree surgery schedule and will need separate consent. In this case, all work is connected with planning consent as it includes the enhancements to the SINC.

Ecological considerations

The Wildlife and Countryside Act 1981, as amended, The Conservation of Habitats and Species Regulations 2010 and the Countryside and Rights of Way Act 2000, provide statutory protection to species of flora and fauna including birds, bats and other species that are associated with trees. Full details are found in the Ecological Impact Assessment by Hybrid Ecology.

Occupiers Liability Act 1957 and 1984

The Occupiers Liability Act (1957 and 1984) places a duty of care to ensure that no reasonably foreseeable harm takes place due to tree defects. Therefore, this report includes recommendations within the tree tables for work required for safety reasons. 'Common sense risk management of tree (National Tree Safety Group 2012)' states that *'The owner of the land on which a tree stands, together with any party who has control over the tree's management, owes a duty of care at Common Law to all people who might be injured by the tree. The duty of care is to take reasonable care to avoid acts or omissions that cause a reasonably foreseeable risk of injury to persons or property'.*

Common law enables pruning back to the boundary line providing the work is reasonable. Other restrictions, such as tree preservation orders/conservation areas still apply.
The owner of a tree is not obliged to trim their trees or hedges to prevent them from crossing over a boundary. Whilst the tree owner is not obliged to cut back the branches, the person whose property is overhung has the right to cut back the branches to the boundary providing there are no planning or legal restrictions on the trees such as Tree Protection Orders or if they are located in a church yard, in which case suitable consent must be obtained. Such pruning works must be undertaken to a suitable standard and must not cause damage to the tree.

The resulting debris remains the property of the tree owner, but you must not cause any damage to their property when returning it back to them and you do not have the right to trespass on the tree owner's property in carrying out the works. In the interests of good neighbourly relations, we would encourage neighbours to discuss their intentions with each other before carrying out such works, providing the work is reasonable and that the trees are not subject to TPO or Conservation Area protection.

The National Planning Policy Framework February 2019

Section 175 states that:

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons exists; and a suitable compensation strategy

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

There are no veteran trees on this site and the woodland is not Ancient Semi Natural

The Camden Local Plan (July 2017)

Policy A3
Trees and vegetation
The Council will protect, and seek to secure additional, trees and vegetation.
We will:
j. resist the loss of trees and vegetation of significant amenity, historic, cultural or ecological value including proposals which may threaten the

continued wellbeing of such trees and vegetation;
k. require trees and vegetation which are to be retained to be satisfactorily protected during the demolition and construction phase of development in line with BS5837:2012 'Trees in relation to Design, Demolition and Construction' and positively integrated as part of the site layout;
l. expect replacement trees or vegetation to be provided where the loss of significant trees or vegetation or harm to the wellbeing of these trees and vegetation has been justified in the context of the proposed development;
m. expect developments to incorporate additional trees and vegetation wherever possible

Appendix 8

Statement of methodology and reference material

Statement of methodology

Review of supplied plans and information

Tree survey carried out in June 2019.

Tree survey using Visual Tree Assessment carried out in accordance with BS 5837:2012 '*Trees in relation to design, demolition and construction – Recommendations*' (BS). All investigations were from ground level only and binoculars were used when necessary. All trees with a trunk diameter of 75mm or above were surveyed. Obvious hedges and shrub masses were identified where appropriate. Information collected is in accordance with recommendations in subsection 4.4.2.5 of BS and include species, height, diameter, branch spread, crown clearance, age class, physiological condition, structural condition and remaining contribution. Each tree was then allocated one of four categories (U, A, B or C).

Site meetings with Tom Little, Arboricultural Officer on 26 June 2018 and 18 December 2018.

Attendance of design team meetings.

Received material

1926-PLA-00-GF-DR-L-0001-Landscape General Arrangement, Sections - PDF-20191129T095520Z-001, 1926-03-ID-007-01 Landscape Pre-App presentation, 1926-PLA-00-GF-DR-L-0001-Landscape General Arrangement, BHH-Pre-Application Submission_25.10.2019, Ecological_Impact_Assessment_Branch_Hill_December-19 DRAFT, let.030.JB.AB Final Pre-application Covering Letter_25.10.19, SLHA_Heritage Note_Branch Hill House - Pre-App - 25th October 2019 (002) and topographical survey.

Reviewed text

BSI. BS 3998:2010 *Tree work-Recommendations.*

BSI. BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*

R.G.Strouts and T.G.Winter 'Diagnosis of ill-health in trees' TSO 1994

Camden Council website

C. Mattheck 'The body language of trees' 2015

Appendix 9

Caveats & Exclusions

Specific report caveats

1. At the time of writing this report, the protected tree status is correct. However, this can change. Therefore, I advise that a further check is made with Camden Council before any works to trees take place.
2. No internal diagnostic equipment was used other than a sounding mallet and probe and all inspections where from ground level only, with the aid of binoculars where necessary.
3. The survey is concerned solely with arboricultural issues.
4. Any changes in ground level, or excavations near to tree roots not discussed within this report may change the stability and condition of the trees and a further examination would be required.
5. As trees are a dynamic living organism this report is only valid for a period of 12 months, in respect to their health and condition.
6. Only the trees listed in this report have been examined.
7. The measure of offsite trees has been estimated, except any crown within the site overhang which is measured. Where the crown of an onsite tree overhangs the boundary, the crown spread in this direction is also estimated.
8. The base and trunk of the offsite trees could not be examined, and therefore a full assessment of the trees condition could not be made.
9. Dense ivy and undergrowth prevent a full condition survey being carried out. The vegetation may be hiding structural defects.
10. The tree information is from the time of the survey. Some pests, diseases and fungi only appear seasonally, therefore it is possible not all issues that may affect the health of the trees could be observed.

Appendix 10

My experience and qualifications

Sharon Hosegood
ASSOCIATES

Sharon Durdant-Hollamby

FICFor FArbor A BSc (Hons) Tech Cert Arbor A

CARDIFF UNIVERSITY LAW SCHOOL BOND SOLON CIVIL Expert Certificate

Institute of Chartered Foresters
Registered Consultant

Arboricultural ASSOCIATION
Fellow Member

Profile

Sharon is an Expert Witness, chartered arboriculturist and Director of Sharon Hosegood Associates Ltd. Sharon had eleven years' experience as a local government tree and landscape officer before joining DF Clark Contractors as a tree consultant in 2005. In 2007 she formed an environmental practice in Essex with the owner. As managing director, she built up the ecological and arboricultural consultancy to a team of 20. She is a regular presenter and an occasional trainer for Trevor Roberts Associates. She appeared on BBC1 in July 2015 and September 2015, in 'Britain Beneath Your Feet' demonstrating tree radar at the Burghley Country Park, Lincs, with Dallas Campbell, the consumer programme 'Rip Off Britain', and latterly, again with tree radar equipment, Springwatch, investigating the rooting of the Major Oak at Sherwood Forest in June 2018. Sharon was the technical coordinator and chair of the Institute of Chartered Foresters national study tour 2016 'The streets of London'. In November 2018 Sharon presented at the Annual International Arboricultural Summit in Hong Kong and is now on the Board of Advisors. She became Vice President of the Institute of Chartered Foresters in April 2019.

Specialties:	Trees in relation to development, including appeals and planning hearings
	Tree root investigations, including TreeRadar
	Tree hazard evaluation
	Tree preservation orders
	Trees and well-being with community engagement
Professional bodies:	Vice President of the Institute of Chartered Foresters Fellow of the Institute of Chartered Foresters (ICF) Assessor for the ICF examination board Fellow of the Arboricultural Association
Qualifications:	Cardiff University Law School Bond Solon Civil Expert Certificate Arboricultural Associations Technicians Certificate BSc (Hons) Geography and Landscape Studies Managing Safely IOSH (2017)
Awards:	Top student award for the Technician's certificate in 2005
	The Broomfield Hospital Woodland Management project she has managed since 2009 has won the following awards: The Essex Biodiversity Awards (nomination) The Excellent Community Engagement Award (NHS Forest) Green Flag and Green Apple Award Highly commended for the Health Sector Journal Award 2013

Appendix 11

Glossary

Arboriculture	Formerly all aspects of the culture of trees, especially for forestry. Latterly, the art and science of cultivating and managing trees as groups and individuals, primarily for amenity and other non-forestry purpose**.**
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.
Arboriculturist	Person who has, through relevant education, training and experience in the field of trees in relation to construction.
Architecture	In a tree, a term describing the pattern of branching of the crown or root system.
Biodiversity	The variability among all living organisms of an ecological complex.
Biomechanical	Pertaining to the mechanical functions and properties of living organisms, such as trees.
Body language	In trees, the outward display of growth responses and/or deformation in response to mechanical stresses.
Branch	A limb extending from the main stem or parent branch of a tree.
Branch bark ridge	The raised arc of bark tissues that forms the acute angle between a branch and its parent stem
Branch collar	The swelling or roughened bark often found at the base of a branch which should be left intact if the branch is to be pruned off.
Canopy	The topmost layer of twigs and foliage in a tree.
Co-dominant	In trees, a similarity between two or more stems or branches with regard to their size and their position within the canopy.
Column	In the wood or phloem of a tree, an axially elongated zone of tissue that is distinguished form the surrounding tissue; e.g. Live verses dead or decayed versus non-decayed.
Construction exclusion zone	An area based on the root protection area from which access is prohibited for the duration of the project.
Crown	In arboriculture, the main foliage-bearing portion of a tree.
Crown lifting	The removal of shortening of the branches that form the lower part of the crown of a tree.
Crown reduction	Pruning in order to reduce the size of the crown of a tree.
Crown thinning	Pruning inside the crown of a tree in order to reduce its density.
Defect	In relation to tree hazards, any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment.
Dieback	The death of part of a plant, usually starting from a distal point and often progressing proximally in stages.
Direct damage	Direct physical damage to a structure of surface from pressure exerted by the trunk or growing roots.
Ecosystem services	The benefits that a particular species or range of species bestow upon others (including humans) though ecological relationships. Such services can sometimes be estimated in a form that allows them to be included in financial accounting.
Epicormic	Pertaining to shoots or roots which are initiated on mature woody stems; shoots can form tin this way from dormant buds or they can be adventitious.

Failure	In connection with tree hazards, a partial or total fracture within woody tissues or loss of cohesion between roots and soil.
Flush cut	A pruning cut close to the parent stem which removes part of the branch bark ridge.
Foreseeable	In hazard assessment, pertaining to failure and associated injury of damage which are predictable on the basis of evidence from a tree and its surroundings.
Fungi	Organisms of several evolutionary origins, most of which are multicellular and grow as branched filamentous cells within dead organic matter or living organisms.
Hazard	A thing, a process or a potential event that has the potential to cause harm.
Heartwood	The dead or predominantly dead central wood of various tree species whose outer living wood, sapwood, has a finite and pre-determined lifespan.
Independent in the landscape	Point at which a newly planted tree is no longer reliant on excessive or abnormal management intervention in order to grow and flourish with realistic prospects of achieving its full potential contribute to the landscape.
Level arm	A mechanical term denoting the length of the lever represented by a structure that is free to move at one end, such as a tree or an individual branch.
Landscape character	A distinct, recognisably and consistent pattern of elements in the landscape that make one landscape different from another, rather than better or worse.
Mulch	Material laid down over the rooting area of a tree or other plant to help conserve moisture, suppress weeds and encourage a beneficial microflora.
Mycorrhizal	Pertaining to an intimate symbiotic association between plant roots and specialised fungi.
Pollard	A term for a pollarded tree
Pollarding	The complete or partial removal of the crown of a young tree so as to encourage the development of numerous branches; also, further cutting to maintaining this growth pattern.
Probability	A statistical measure of the chance that a particular event (e.g. a specific failure of a tree or specific kind of harm to persons or property) might occur.
Retrenchment	Progressive reduction in the size of the crown of an old tree, by means of the dieback of breakage of twigs and small branches, accompanied by the enhanced development of the lower or inner parts of the crown.
Risks	The likelihood of the potential harm from a particular hazard becoming actual harm.
Root protection area	A layout 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. BS 5837:2012 *'Trees in relation to design, demolition and construction – Recommendations'.*
Root flare	Thickened and expanded base of s tree stem at ground level form which buttress roots form.

Rootplate	The central part of the root system of a tree, consisting of the large-diameter main roots and a dense mass of smaller roots and soil.
Service	In construction, any above-or below-ground structure o apparatus for utility provision.
SULE	Safe useful life expectancy of a tree (Barrell)
Stag-headed	In a tree, a state of dieback in which dead branches protrude beyond the current living crown.
Stress	In plant physiology, a condition under which one or more physiological functions are not operation within their optimum range, for example owing to lack of water, inadequate nutrition or extremes of temperature.
Stub cut	A pruning cut which is made at some length distal to the branch bark ridge.
Target pruning	The pruning of a twig or branch so that tissues recognisably belonging to the parent stem or branch are retained and not damaged.
Targets	In tree hazard assessment, persons or property or other things of value which might be harmed by mechanical failure of the tree or by objects falling from it.
Tree Preservation Order	In Great Britain, an order made by a local authority, whereby the authority's consent is generally required for the cutting down, topping or lopping of specified trees.
Tree protection plan	Scale drawing, informed by descriptive text where necessary, based upon the finalized proposal, showing trees for retention and illustrating the tree and landscape protection measures.
Utility	An undertaker by statute that has a legal right to provide customer services (e.g. communication, electricity, gas and water).
Veteran tree	*'A tree that has passed beyond maturity and is old, or aged, in comparison with other trees of the same species'.* Ancient Tree Guide No. 4 (ATF, 2008).
Vigour	In tree assessment, an overall measure of the rate of shoot production, shoot extension or diameter growth.
Vitality	In tree assessment, an overall appraisal of physiological and biomechanical processes, in which high vitality equates with near-optimal function, in which high vitality equates with healthy function.
Visual Tree Assessment (VTA)	In addition to the literal meaning, a system expounded by Matteck and Breloer (1995) to aid the diagnosis of potential defects through visual signs and the application of mechanical criteria.
White-rot	Various kinds of wood decay in which lignin, usually together with cellulose and other wood constituents, is degraded.
Wound	Injury caused to a tree by a physical force.

Sharon Hosegood
ASSOCIATES

ARBORICULTURAL IMPACT ASSESSMENT REPORT
BS 5837:2012 'Trees in relation to design, demolition and construction. Recommendations'

SITE

Branch Hill,

London, NW3 7LT

CLIENT

Almax Group

DATE: 6 December 2019
OUR REF: SHA 681

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