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**Arboricultural survey,
constraints, impact assessment
and tree protection**

**Eastcote and Northwood Hills
United Reform Church,
Joel Street,
Northwood HA6 1NL**

Client and Address:	Eastcote and Northwood Hills United Reform Church, c/o Theis and Khan, 11-13 Lonsdale Gardens, Tunbridge Wells, Kent
Inspector:	B.Larkham, Dip.Arb.(RFS), Tech.Cert.(Arbor.A), F.Arbor.A.
Date of Inspection:	9 th September 2020
Date of Report:	10 th September 2020+25 th November 2020
Reference no.:	tr-1543-20 AIA

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Introductions

Instructions

I was instructed by Theis and Khan 11-13 Lonsdale Gardens, Tunbridge Wells, Kent to provide arboricultural survey and constraints planning to trees at Eastcote and Northwood Hills United Reform Church, Joel Street, Northwood. To provide arboricultural survey, constraints planning and arboricultural impact assessment in respect of the “*Single storey side/front extensions, first floor side extension and erection of two x 2-bed dwelling with parking and amenity space.*”.

Purpose of report

To identify and survey those trees within and immediately adjacent to the subject site. The survey will assess current condition, grade the trees according to their size and vigour, and make recommendations for any pruning or remedial action that may be necessary. The report will provide comment on the implications to trees from the proposed development works associated with the application.

Documents Supplied

The survey uses the topographic survey drawing reference L9011 provided by Theis and Khan.

Site plans and sections prepared by Theis and Khan 11-13 Lonsdale Gardens, Tunbridge Wells, Kent. Drawing ‘Proposed ground floor plan reference 1132/110/Rev P10 has been used as the base plan to the plan at Appendix C – impact assessment.

1.0 Scope of survey

- 1.1 The survey is concerned with the arboricultural aspects of the site identifying those existing trees, assessing their current condition and their relationship to the redevelopment of this site, as detailed above.
- 1.2 The survey was conducted in accordance with the guidance contained within British Standard 5837: 2012 ‘Trees in relation to design, demolition and construction - recommendations’ [BS5837]. It should be understood that the standard provides recommendations and that there remains opportunity for discussion and negotiation between the professions involved to find the most appropriate balance between the existing trees, proposed development and new landscape planting.
- 1.3 The survey has included in detail those principle trees within, or just beyond the boundary, of the subject site. The dimensions of offsite trees have been estimated. A total of eleven trees have been recorded in respect of this application. The schedule of trees is provided at Appendix A.
- 1.4 Recommended pruning works will need to undertaken in accordance with British Standard 3998:2010 Tree Work and current best practice.
- 1.5 Detailed considerations relating to existing and proposed underground and over ground services do not form part of this report. Where appropriate existing services will be utilised with details of new services for the housing element being prepared in accordance with paragraph 7.25.

2.0 Survey method

- 2.1 The survey was conducted from ground level with the aid of binoculars.
- 2.2 Normal arboricultural measurement practices were followed.
- 2.3 No soil samples were taken from site.
- 2.4 The positions of the subject trees can be found at Appendix B. This plan utilises the topographic drawing as its base. Tree positions have not been verified. Tree numbers corresponding with the schedule of trees at Appendix A have been added and colour coded. Trees not identified on the topographic survey have been added in cyan colour. Their position is indicative and should not be scaled. All tree dimensions should be taken from the schedule at Appendix A.
- 2.5 Tree height has been estimated.

3.0 The Site

- 3.1 The subject site comprises the grounds and land at Eastcote and Northwood Hills United Reform Church, Joel Street, Northwood HA6 1NL.
- 3.2 The description of the existing property can be found within the application documents and design and access statement supporting the application as prepared by Theis and Khan.
- 3.3 The existing church building and onsite parking is accessed from Joel Street on the eastern boundary of the site. There is an existing 'in/out' drive onto Joel Street. The site frontage onto Joel Street is wider than the rear boundary onto Lichfield Road to the western end of the site.
- 3.3 The site is principally level with approximately 2.0 metres change in level from Joel Street across the site up to Lichfield Road. There is a small local embankment and steps to the western boundary leading up to the footpath on Lichfield Road.
- 3.4 The application proposes ***“Single storey side/front extensions, first floor side extension and erection of two x 2-bed dwelling with parking and amenity space.”***
- 3.6 The main body of the site is principally occupied with the church building, parking with small areas of existing landscaping to the boundaries. The existing landscape is generally under maintained and overgrown in appearance aside from the areas of maintained grass.

4.0 Subject trees

- 4.1 A schedule of the eleven schedule trees is included at Appendix A.
- 4.2 The application site is the subject of Tree Preservation Order TPO 578 – Northwood Hills Congregational Church dated 13/08/1996 as identified on the London Borough of Hillingdon online resource. The detail of this order has not been established although the planning suggests an area designation covering the whole of the church site along with the gardens of 39 and 41 Lichfield Road. Given the Tree Preservation Order status the consent of the Local Authority should be sought prior to undertaking any tree works recommended within the schedule. Any works proposed to offsite or highway trees will additionally require the permission of the respective owner or authority.

- 4.3 The trees have not been tagged as their respective positions are readily distinguished on site and from the plan at Appendix B.
- 4.4 Each of the trees, or groups of trees, surveyed has been given a lettered category in accordance with the recommendations of table 1: BS5837. These letters are also colour coded for plan purposes.
- 4.5 In brief the four categories are described within the standard as:
- A – High quality and value: trees whose retention is most desirable (green), a remaining contribution of more than 40 years is suggested.
 - B – Moderate quality and value: trees where retention is desirable (blue) a remaining contribution of a minimum of 20 years is suggested.
 - C – Low quality and value: trees of adequate condition which could be retained (grey)
Adequate condition to remain until new planting is established. A remaining contribution of a minimum of 10 years is suggested, or trees with a stem Ø below 150mm.
 - U – Fell category: trees for removal (dead, dying or dangerous) (red)

Further subcategories to grade A, B and C trees are provided as suffix 1, 2 or 3. The definitions of each are simply described as –

- 1 – Mainly arboricultural values
 - 2 – Mainly landscape value
 - 3 – Mainly cultural values - including conservation
- 4.6 Of the eleven schedule entry trees and groups of trees I have categorised one tree as A grade, three trees as B grade, six trees as C grade and one tree as U grade.
- 4.7 The grading of trees in this manner can be subjective and there will often be a degree of variance between an individuals allocation of category. The principle trees of size and local contribution are all offsite within the highway footpaths and to private garden land to the north of the site.

5.0 Potential impact from development – general considerations

- 5.1 Aside from direct removal the process of development can place a number of pressures on existing trees and these are recognised within BS5837. These can include damage from demolition, excavation, movement of site plant, construction methods, site storage and general operations.
- 5.2 The above problems can be overcome through the adequate protection of the canopies, stems and root zones of the subject trees. This protection can be achieved through the provision of a root protection area enclosed by appropriate protective fencing. The quality and construction of the protective fencing will depend upon site-specific characteristics. The details of the protective fencing recommended for this site are detailed at section 6.0 below.

- 5.3 The distance that the protective fencing, as given at table 2 of BS5837, should be erected from the subject trees is detailed as the Root Protection Area or RPA. This distance is converted to a radial measurement to be taken from the stem centre of each tree. The radius dimension is provided in the schedule at Appendix A. This gives a benchmark distance within which no construction should ideally occur, as well as other specified operations. Should construction be necessary within the protection area then further discussion would be required to establish acceptable points of compromise, including possible revision of constructional methods to minimise damage to the retained trees with consideration to temporary working access as defined within paragraph 6.2.3.3 of the standard.
- 5.4 Trees are living organisms and whilst often of significant longevity, they do have a finite lifespan. Tree loss can be mitigated by suitable new planting often providing greater opportunities to soften new development and provide future continuity.

6.0 Protective fencing – general considerations

- 6.1 The detail of protective fencing will depend upon the requirements of the Local Authority but should be erected prior to any site development and to meet the requirements of the standard should comprise a horizontal and vertical framework of scaffold poles securely clamped and internally braced. To this, panels of weldmesh at a minimum of 2.0 metres height should be securely fixed and tied on the inside face from within the protection area. The fencing should accord with the detail inset at Appendix C. Waterproof A3 signs are to be tied to the fencing providing details of its function. These signs are to remain tied and functional through the duration of the fencing being in place.
- 6.2 The fencing should be installed to encompass the protection radius from the centre of the stem of the tree, prescribed within the schedule at Appendix A. These protection areas have been indicated on the plan at Appendices B and C with an orange coloured line. The recommended position for the protective fencing is shown at Appendix C with a dark blue line.
- 6.3 The protective fencing should be erected at the earliest opportunity following the recommended tree works and prior to any other site works. It is recommended that the installation of the fencing and any special surfaces within the protection area should be overseen by a person competent in Arboriculture.
- 6.4 Awareness should be raised of the importance of the retained trees on and off site amongst the operatives undertaking the construction. They should have a full understanding of the purpose of the protective fencing and ideally a permanent member of site staff should be allocated specific responsibility for tree issues on site. They can then liaise directly with the Tree Officer, or Planning Officers, of the Local Authority and also any retained Arboricultural specialist should any problems arise.

7.0 Assessment of the proposed redevelopment of the subject site on existing trees

- 7.1 The redevelopment for this site proposes the '*Single storey side/front extensions, first floor side extension and erection of two x 2-bed dwelling with parking and amenity space*'.
- 7.2 The design of the proposal has developed to improve accessibility and functionality of the Church and has been prepared with consideration to its setting and existing tree cover.
- 7.3 Following the arboricultural survey two schedule entry trees are recommended for removal due to poor or dead condition, namely T4 - Cherry and T5 – Birch. These trees are omitted from the impact assessment plan at Appendix C.
- 7.4 Of the nine schedule entries remaining the application proposes construction within the root protection areas of four A+B grade trees, namely T2 - Oak, T8 - Purple Plum and Trees T10 and T11 - Birch. The construction detail within these areas of conflict varies between proposed excavation and over ground surfacing. The conflict to each tree will be discussed individually.
- 7.5 Tree T2 is situated to the back edge of the highway footpath to the front of the site. Responsibility for the tree is understood to rest with the highways authority. The application proposes the construction of a new ramped and stepped access, terrace, raised planter and new resin bound surfacing. The existing ground conditions include a partly failing low brick front boundary wall. The construction conflicts with approximately 26.5 metres² of the RPA of tree T2, or just under 10% of the overall RPA. This conflict has been indicated with red hatching on the plan at Appendix C. The new resin bound surfacing equates to an additional 26.0 metres² of the RPA of tree T2 and indicated with brown shading at Appendix C.
- 7.6 Given existing contours the construction of the steps and terrace to the front of the church, within the RPA of tree T2, can be undertaken off existing ground levels without requiring excavation into subgrade or impact on the root mass of tree T2.
- 7.7 The construction of the retaining wall to the terrace and steps will require excavation for foundations alongside the raised planter. This conflict equates to only 8.5 metres² or <3.5% of the overall RPA of tree T2. This level of impact is considered acceptable provided the excavation works are undertaken under the supervision of the retained arboricultural consultant.
- 7.8 The installation of the proposed surfacing for access between the front of the site and the car parking will require the removal of the existing grass verge and a concrete plinth. In addition the frontage wall is proposed for removal or part removal. Given the loss of the grass verge it is proposed that the new surfacing is built using a permeable form of construction – such as Cellweb with a resin bound permeable wearing course. It is suggested that the foundation to the front wall be retained and an edging structure formed off this foundation to provide lateral support to the installation of the new pedestrian access. Whilst the grass area will be lost the permeable gravel and cellular confinement will maintain viable conditions for the continued well being of the tree.

- 7.9 All preparatory works for the new surfacing within the RPA of tree T2 are also to be undertaken under the supervision of the retained arboricultural consultant. It is recommended that these surfacing works are undertaken as a final operation when a new top coat of Tarmacadam is applied to the main car parking. During all prior construction activities the tree will be protected with fencing to the limits indicated with a bold blue line at Appendix C. The existing areas of Tarmacadam outside of the protected area will provide adequate ground protection during construction works. If construction plant is likely to disturb the Tarmacadam then the protective fencing will be extended to the full limit of the RPA.
- 7.10 Tree T8 is also situated within a highway footpath on Lichfield Road to the west end of the site. The tree is mature and is multi-stemmed x3 from 0.8 metres from ground level. The canopy is asymmetric to the east. The highway foot path is of mixed surface comprising Tarmacadam and concrete paving with localised root disruption and evidence of repair.
- 7.11 Two new vehicle cross over's and driveways are proposed to serve the new pair of semi-detached houses. Each provides a conflict to the RPA of tree T8 from the installation of a drop kerb, adjustment to footway levels and the installation of the driveway.
- 7.12 To the north side of the tree all conflicts equate to 11.6 metres² or 12.6% of the overall RPA. To the south side of the tree the area of conflict is less than 4.0 metres² or 4.4% of the overall RPA.
- 7.13 The installation of the new drop kerb and surfacing may have potential to impact on the root mass of tree T8 over the areas defined. The installation of the sections of drive/hard standing could also impact, to a lesser extent.
- 7.14 The construction of the new drive to the south side of the tree will be within an area currently occupied with concrete steps and a cast concrete slab and its impact could therefore be ignored provided arboricultural supervision is provided to the removal of the existing concrete features and for the installation of the new formwork for the new cast reinforced concrete driveway.
- 7.15 Arboricultural supervision would also be provided for the removal of existing footway surfacing and kerbs and for the installation of the new drop kerbs and footpath re-surfacing to provide the approach to both drives.
- 7.16 The drive to the north side of the tree would also be formed cast reinforced concrete and follow existing ground contouring limiting the need for any excavation within the RPA. Protective fencing would be provided to the position shown at Appendix C and reduced to the dashed line to allow construction of the cast drive as a final operation.
- 7.17 It is considered likely that some root pruning will be required to the north side of the tree to facilitate footpath adjustments. All exploratory investigation and removal of surfacing would be overseen by the retained arboricultural consultant with decisions on the impact on the tree being made as works progress. The proposal seeks to retain the tree but if potential impact on root mass was considered unworkable then an alternative proposal to remove the tree and provide two replacements within the highway footpath could be considered. Tree T8 would be considered to be of limited future life given its species and this option for removal and replacement may be considered more favourably by LB Hillingdon to provide a longer term street scene contribution.

- 7.18 Given the change in level and limited access for construction further protection would be required to the canopy limits of the tree to ensure any craned deliveries did not impact on the above ground parts of the tree. Site storage and welfare would also require provision without impacting on the RPA's or canopy of the tree, if it is to be retained. On road storage may be required and static facilities could be provided beneath the canopy of the tree provided they did not require crane access or removal. All access for site work would be taken to the south side of the tree to the line of the proposed drive.
- 7.19 Trees T10 and T11 Birch are both also offsite situated within private garden beyond the north boundary of the site. Tree T11 is likely to be two individual trees but this has not been fully investigated given limits to access.
- 7.20 Proposed works to extend the existing building provide a small incursion of less than 1.5 metres² of the RPA of tree T10 and less than 1.8 metres² of the RPA of trees T11. This extent of incursion equates to less than 4% of the overall RPA's of these Birch. This level of incursion is considered so small as to be ignored in terms of potential impact.
- 7.21 A raised bed is proposed to enclose the garden area and provide support to security fencing which results in a minor conflict to the RPA of both trees T10 and T11. In respect of T10 the raised bed position results in potential impact over 3.0 metres² or approximately 6% of the overall RPA. A lesser conflict is proposed to tree T11 of 1.0 metre² or 2% of the overall RPA.
- 7.22 The proposed extent of conflict is considered minor and within an area which is currently paved. It is proposed that the excavations for the extension and raised bed are undertaken under the supervision of the retained arboricultural consultant to ensure sympathetic management of any encountered roots.
- 7.23 Additional ground protection will be provided to the existing grass area to limit compaction during construction works. This has been indicated with magenta hatching at Appendix C. The ground protection will be reduced as a final operation for the construction of the raised bed.

General considerations

- 7.24 As part of the build planning a construction management programme should be provided. In respect of trees this will identify areas of construction welfare, access and site storage. All construction planning is to avoid areas enclosed by protective fencing and canopy spread. All access arrangements to provide ground protection measures where areas of existing soil are allocated for future landscape planting.
- 7.25 I have not seen service drawings for this development. All services should be site away from the RPA's of trees to be retained. Should any works be necessary within the RPA of retained trees then these should be installed by hand in accordance with the National Joint Utilities Group Publication No: 10 [NJUG 10] - Guidelines for the planning, installation and maintenance of utility services in proximity to trees.

8.0 New landscaping

- 8.1 Opportunity exists as part of the proposal to provide new soft landscape planting around the site and this can be made the subject of planning condition on the issue of consent.
- 8.2 The scheme would provide details of retained vegetation and new hard and soft landscape proposals complimentary to the new built elements. The future design would focus on the use of native species and nectar rich shrub and perennial planting with all year round contribution. Bird box provision could also be made to the buildings and hibernacula created within the grounds.

9.0 Conclusions

- 9.1 The proposal provides conflict to the root protection areas of four of the existing trees. The conflict will be managed through arboricultural supervision during excavation and construction operations.
- 9.2 All site operations are to be the subject of protective fencing and ground protection measures.
- 9.3 Any impact on the RPA's should be balanced against the enhancement opportunity for the church and the additional housing provision.
- 9.4 Provided all measures to protect the retained trees identified within this report are implemented in full I consider this development to be acceptable in arboricultural terms. Options for removal and replacement planting of tree T8 would be reviewed further during operations.

10.0 Recommendations for tree works

- 10.1 Tree works are recommended within the schedule of trees at Appendix A regardless of the development ambition for this site.
- 10.2 The tree work should be carried out by a competent Arboricultural contractor in accordance with BS3998 2010 Tree Work - Recommendations and current best practice. The consent of the Local Authority should be sought before any tree pruning or removal can take place due to the Tree Preservation Order.

The details of this report are based upon the condition of the subject tree/s present on the date of the inspection. Responsibility cannot be held for the subsequent effects of extremes of weather, vandalism or damaging acts either negligent or wilful. Liability cannot be held for any subsequent physical undertaking to the canopy, stem or roots of the tree/s. This report is valid for a period of two years from the date of the survey unless the site conditions change or works unspecified in this report are undertaken.

No	Species	Hgt	Ø at 1.5m	Spread NSEW	Crown c/rance	Age	Condition and <u>Recommendations</u>	Erc	BS grade	RPA (rad)
T1	Birch	3.0	20	Ø4.0	1.0	Mat	Pendulous form. Reduced to northwest at 2.0 metres.	20-40	C1	2.4
T2	Oak	12.5	78	5.3,6.7, 5.0, 6.4	4.0(n) 2.3(s) 2.0(w)	Mat	Asymmetric to southeast. Adjacent boundary wall constructed in arc around stem. Significant movement cracks to wall from root influence. Main branch division from 4.8 metres. Within highway footpath – Tarmacadam and hard surfacing all round buttresses. Loss of apical growth to south side at 6.0 metres. Moderate deadwood, branch stubs and tears throughout. Reduced vigour to upper crown limits. <u>Remove deadwood and stubs where appropriate. Consider raising crown to south side as required for development access. Consider removal of surfacing between tree and boundary wall.</u>	40+	A1	9.3
T3	Holly	4.0	10+8	Ø2.2	1.4	Y	Bifurcated at 0.4 metres.	20-40	C1	1.5
T4	Cherry	3.0	7,3+3	Ø2.0	1.5	Y	Bifurcated at 0.4 metres. Resin/gum exudate at union. Reduced vigour. Limited future value. <u>Recommend removal.</u>	<10	C1	-
T5	Birch	-	-	-	-	-	Topped at 4.2 metres. Dead. <u>Remove.</u>	-	U	-

No	Species	Hgt	Ø at 1.5m	Spread NSEW	Crown c/rance	Age	Condition and <u>Recommendations</u>	Erc	BS grade	RPA (rad)
T6	Hawthorn	6.0	e.5x3cm	Ø3.0	2.0(e)	Med	Offsite - full inspection not possible. Multi-stemmed. Small Elder to west.	20-40	C1	1.5 adj
T7	Apple	3.0	e.8,6+4	2.0, 2.0, 1.5,1.5	2.3(e)	Y	Reduced back from church building. Offsite - full inspection not possible. Triple branched from 1.2 metres.	20-40	C1	1.5 adj
T8	Purple Plum	8.0	e.28, 23,20+18	Ø9.0	1.2	Mat	Triple stemmed at 0.8 metres. South stem bifurcated at 1.4 metres. Asymmetric to east. Within Tarmacadam and paved highway footpath. Tarmacadam to east side has been locally repaired. Currently uneven from disruption by root growth.	10-20	B1	5.4
T9	Purple Plum	9.0	31+26	4.0, 4.0, 3.0, 4.5	2.0	Mat	Significant decline. Asymmetric to west. More vigorous epicormic growth <2.5 metres. Within private garden - full inspection not possible. Limited future value. <u>Monitor condition. Recommend removal if condition deteriorates.</u>	<10	C1	4.8
T10	Birch	e.17.0	e.22, 20,11+11	4.0, 4.0, 2.0, 5.0	2.6(s)	Mat	Offsite - full inspection not possible. Four stems from ground level. Likely individual trees. Group asymmetry to west. RPA based on largest stem.	20-40	B2	4.0
T11	Birch	e.17.0	e.26+21	3.5,4.0, 4.5, 2.0	4.0(e)	Mat	Offsite - full inspection not possible. Two stems from ground level. Likely individual trees. Group Asymmetry to east. RPA based on largest stem.	20-40	B2	4.0

See adjoining pages for key to terms and general comments

Key and general comments

Hgt	Height (estimated)
Stem Ø	Trunk diameter in centimetres measured at 1.5 metres above ground level.
Spread	Crown radii in metres to compass points or crown diameter suffixed Ø
Crown c/rance	Height in meters of crown clearance above adjacent ground level
Life Stage	Age class (Y – young, Mid Age – middle aged, Mat – mature, OM – over mature, V – veteran)
Phys cond	Physiological condition – Good, Fair, Poor, Dead
Condition and <u>Recommendations</u>	Structural condition and record of defects together with any preliminary management recommendations as underlined.
RPA (rad)	Recommended protection area. Dimension in metres = radius of circle from the centre of stem. Adj may be suffixed where RPA is increased based upon crown spread or other changes at discretion of surveyor.
Erc	Estimated remaining contribution in years (less than 10, 10-20, 20-40, more than 40)
BS grade	U –Remove, A1-A3 :Category A High quality, B1-B3 :Category B Moderate quality, C1-C3 :Category C Low quality
Bifurcated	Main stem divides into two stems
Asy	Asymmetric canopy to compass direction
N S E W	Compass point direction, may also appear as NE
Vig	Vigour (N-normal, L-Low)
Mat	Maturity (OM-Over Mature, M-Mature, Med-Medium, Y-Young)
e.	Estimated dimension
g/l	Ground level
c/l	Centre line
m/s	Multi-stemmed
Remove deadwood	Remove deadwood, significantly diseased or decayed growth, crossing or torn branches. Branch stubs and tears to be cut clean. All work to be carried out in accordance with BS3998 and current best practice.

Key and comments continued.

The survey relates to trees to land at Eastcote and Northwood United Reform Church, Joel Street, Northwood HA6 1NL. The drawing uses as its base the topographic survey drawing supplied by Theis and Khan, 11-13 Londsedale Gardens, Tunbridge Wells, Kent. Tree positions have not been verified on site and the positions of all trees and features should be confirmed before marking out. Trees not on the topographic survey have been added in cyan colour, the position of these trees should be regarded as indicative and checked on site. The spread of tree canopy and representative crown asymmetry has not been adjusted on the constraints plan. Tree specific canopy dimensions should be taken from the survey schedule.

The site was surveyed on 9th September 2020. The weather at the time of the survey was fair.

The tree survey and constraints information has been prepared to support the application for part residential development of the site and extension and access improvements to the church. The survey has been undertaken in accordance with British Standard 5837:2012 only and it does not constitute in part or whole the requirements of a health and safety appraisal. No internal investigation of any trees was undertaken.

The site is the subject of Tree Preservation Order TPO 578 – Northwood Hills Congregational Church dated 13/08/1996 as identified on the London Borough of Hillingdon online resource. The consent of the local authority should be sought prior to undertaking any of the recommended tree works.

Birds and bats are protected by law and any works to trees recommended within this schedule should be undertaken with due consideration to current legislation and recommended timing for works. The assessment for the presence of bats should be undertaken by a qualified assessor.

A person professionally competent in Arboriculture should undertake all future tree inspections recommended within this schedule.

All tree surgery work should be undertaken in accordance with BS3998:2010 Tree work - Recommendations and current best practice.

The details of this survey are based upon the condition of the subject tree/s present on the date of the inspection. Responsibility cannot be held for the subsequent effects of extremes of weather, vandalism or damaging acts either negligent or wilful. Liability cannot be held for any subsequent physical undertaking to the canopy, stem or roots of the tree/s. This survey is valid for a period of two years from the date of the site inspection unless the site conditions change or works unspecified in this report are undertaken.

NOTES

- Do not scale from this drawing
- Report any discrepancies to the Architect
- Check dimensions on site prior to starting work

Appendix B

Key

- A grade trees - high quality and value
- B grade trees - moderate quality and value
- C grade trees - low quality and value
- U grade trees - recommended for removal
- BS5837:2012 recommended root protection area
- Estimated position of trees not on topographic drawing

Rev.	Date	Description
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Job Title:

Eastcote and Northwood URC
Joel Street
Northwood HA6 1NL



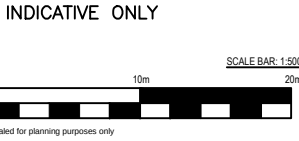
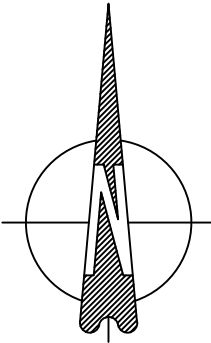
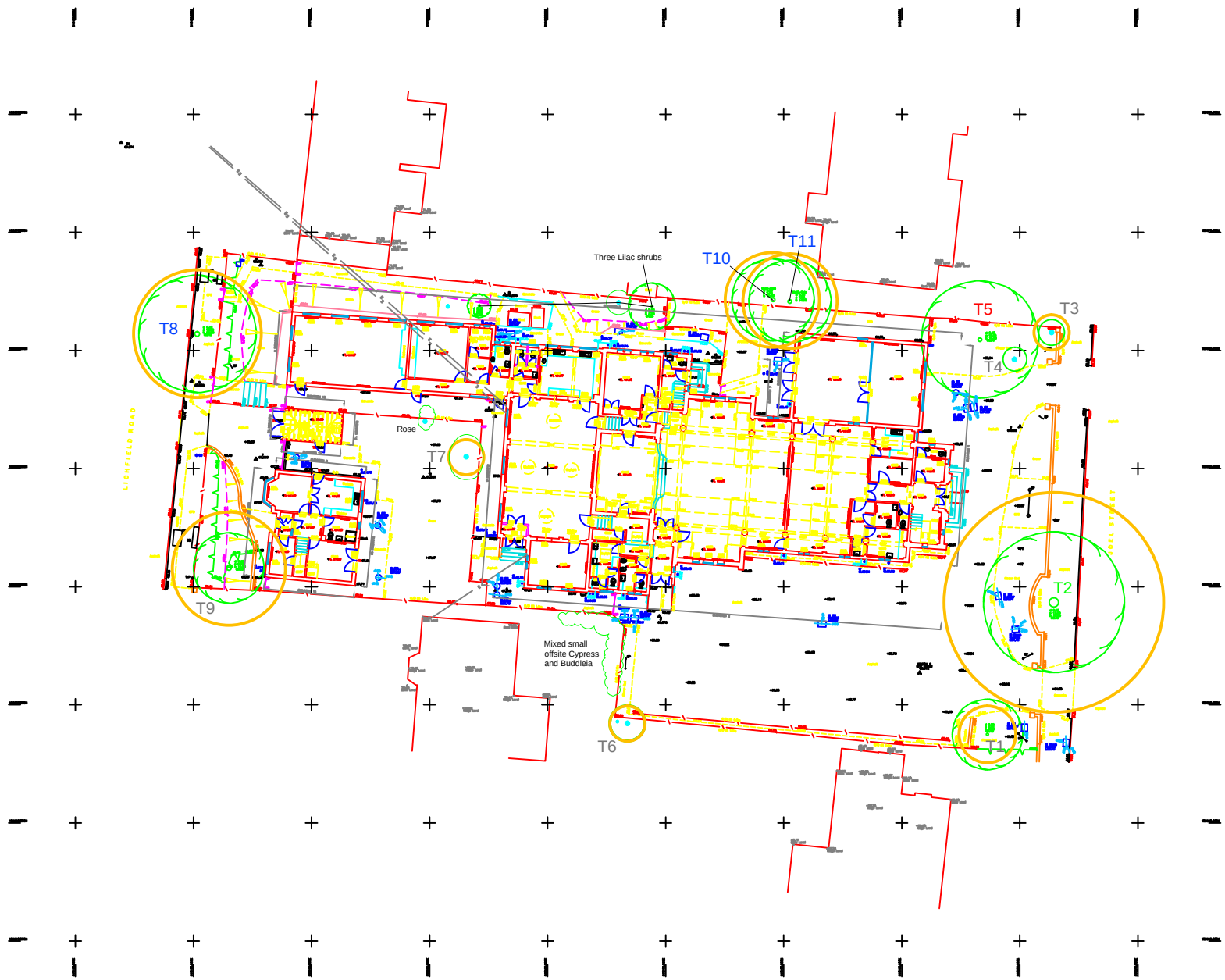
Ben Larkham Associates, 3 Princes Street,
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Drawing Title:

Arboricultural survey
and constraints

Scale: 1:500 at A3	Drawn By: BL	Date: Sept 2020
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Drawing Number: tr-1543-20 s+c	Rev.:
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NOTES

- Do not scale from this drawing
- Report any discrepancies to the Architect
- Check dimensions on site prior to starting work

Key

- A grade trees - high quality and value
- B grade trees - moderate quality and value
- C grade trees - low quality and value
- U grade trees - recommended for removal

BS5837:2012 recommended root protection area

Estimated position of trees not on topographic drawing

Protective fencing in accordance with Fig 2

Supervised excavation

Ground protection

Supervised ground preparation and installation of resin bound gravel

Appendix C

Rev.	Date	Description
Job Title:		
Eastcote and Northwood URC		
Joel Street		
Northwood HA6 1NL		
		
Ben Larkham Associates, 3 Princes Street, Tunbridge Wells, TN2 4SL TEL: 01892 684086 Email: office@benlarkham.co.uk		
Drawing Title:		
Arboricultural survey and constraints		
Scale:	Drawn By:	Date:
1:250 at A3	BL	Sept 2020
Drawing Number:		Rev.:
tr-1543-20 aia		

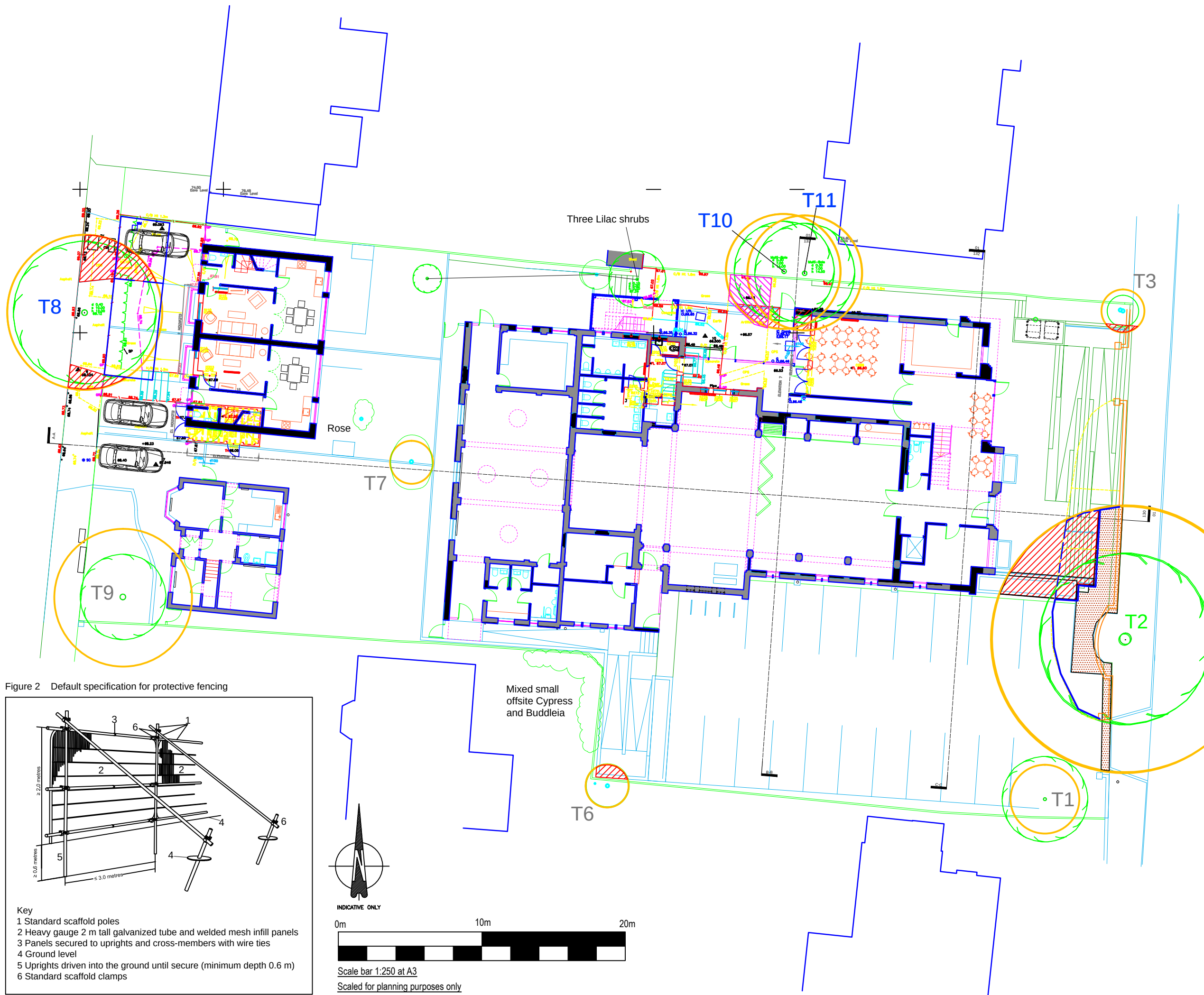
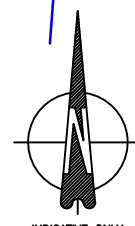
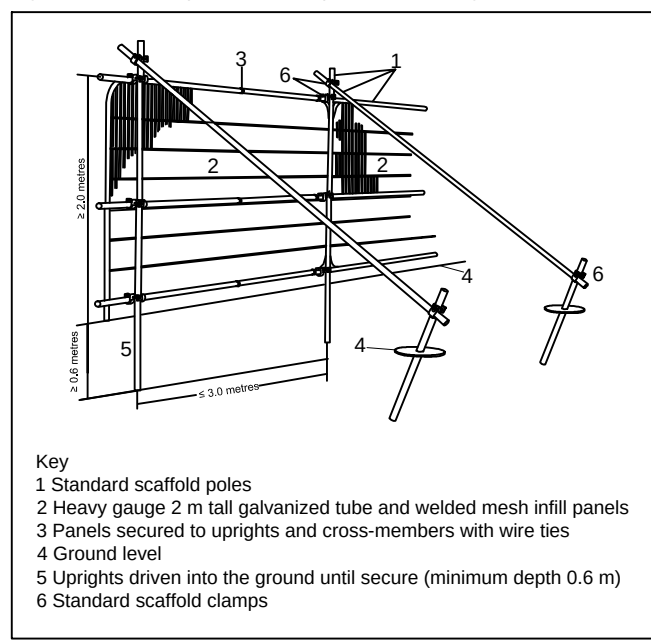
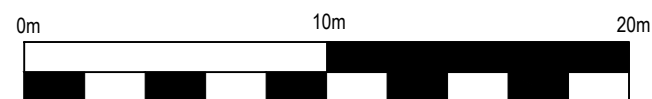


Figure 2 Default specification for protective fencing



INDICATIVE ONLY



Scale bar 1:250 at A3
Scaled for planning purposes only