



SJ Stephens Associates

ARBORICULTURAL, LANDSCAPE &
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Arboricultural Method Statement

- Tree Survey
- Tree Protection Plan
- Arboricultural Method Statement

At:-

Proposed Three Storey Ward Buildings
Hillingdon Hospital
Pield Heath Road
Uxbridge
UB8 3NN

On behalf of:-

Western
11 Mountjoy Road
Coalisland
County Tyrone
BT71 5DQ

Prepared by:

Simon Stephens MA Oxon, Dip
Arb(RFS), MArborA, C Env. MICFor
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Survey Date: 9th December 2019
Report Date: 6th November 2020
Project no: 654

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1 BACKGROUND

- 1.1** Planning Permission has been granted for additional ward accommodation at Hillingdon Hospital, subject to number of planning conditions. This Arboricultural Method Statement is intended to discharge Condition No 4, relating to tree protection. It develops the preliminary Arboricultural Impact Assessment, dated 05-03-2020, produced by SJ Stephens Associates, which supported the planning application.
- 1.2** Tree details are shown in the Tree Schedule in Appendix B and on the Tree Protection Plan in Appendix A. This plan also includes tree protection measures, which are specified in the Arboricultural Method Statement in section 5 below. Arboricultural supervision required during construction is detailed in section 6.
- 1.3** The tree survey was undertaken, and this report has been prepared by Simon Stephens MA Oxon, Dip Arb (RFS), MArborA, C Env, MICFor a Registered Consultant with the Arboricultural Association, with over 20 years relevant experience.
- 1.4** This survey and report have been prepared in accordance with recommendations provided in BS 5837:2012, Trees in relation to design, demolition and construction - Recommendations.

1.5 Documentation supplied:

- Topographical Survey
- SJ Stephens Associates, Arboricultural Impact Assessment, dated 05-03-2020
- Topographical Survey
- Proposed Demolition Plan: drawing no 50598-IBI-WS-XX-DR-A-100-2000 rev3
- Intelligence Buildings Infrastructure Proposed Site Plan: drawing no 50598-IBI-WS-XX-DR-A-100-1000 rev8
- Bailey Partnership: Proposed Site Plan: drawing no HIL-BPC-XX-XX-DR-A-90-01

2 SURVEY DETAILS AND SCOPE

- 2.1 The site survey included trees and shrubs, within and immediately adjacent to the red line boundary, with a stem diameter over 75mm at 1.5m height, as shown located on the Tree Protection Plan, included as Appendix A.
- 2.2 Tree inspection took place from ground level with the use of binoculars, sounding hammer and metal probe using the Visual Tree Assessment method (Mattheck & Breloer 1994). The presence and condition of bark and stem wounds, cavities, decay, fungal fruiting bodies and any structural defects that could increase the risk of structural failure were noted.
- 2.3 Tree diameters were measured using a girthing tape and tree heights were measured using a hypsometer. Where use of a tape was restricted by site factors, diameters were estimated, with the diameter recorded in the tree schedule as eg "est 300".
- 2.4 The suitability of trees for inclusion in the future development was considered, in particular considering the safe useful life expectancy, and sustainability, of trees on the site after development is completed.
- 2.5 Tree details are shown on the Tree Protection Plan included as Appendix A. Tree locations have been taken from the topographical survey provided. Where not included on the topographical survey, they have been determined by measuring distances from features shown on the plan, using a laser measuring device. The following information was recorded for each tree, and is shown in the Tree Schedule included as Appendix B:
- **Number:** an identity number for each tree, prefixed with a "T", which cross references locations shown on the plan with the schedule in Appendix B. Where a number of trees are located close together and are similar in character and

management requirements, they have been treated as a Group under a single number, prefixed with a "G".

- **Species:** common name.
- **Tree height:** approximate height in metres.
- **Stem diameter:** diameter in millimetres, taken at 1.5m above ground. Where there are a number of stems, stem diameters are recorded in the condition column.
- **Branch spread:** approximate spread in metres to N,S,E and W of the trunk. The approximate branch spread is drawn on the plan.
- **Canopy clearance:** approximate height of the canopy above ground. Where a significant, low lateral branch is present, its height and direction of growth is included in the Condition column.
- **Age class:** Young, Semi-mature, Early mature, Mature, Over-mature, Veteran.
- **Condition:** features that affect the safe useful life expectancy and amenity of the tree, including the presence of decay or any physical defect.
- **Management Recommendations:** recommendations to ensure the health and safety of the tree, within the future development.
- **Estimated Remaining Contribution:** <10 years, 5-15 years, 10-20 years, 15-30 years, 20-40 years, >40 years.
- **Category grading:** tree classification taken from BS 5837:2012, Trees in relation to design, demolition and construction (see Appendix C for details), as follows:
 - Category U: Unsuitable for retention, trees with less than 10 years life expectancy, normally recommended for removal (Red)
 - Category A: high quality trees, able to make a substantial contribution for at least 40 years, normally retained unless there is an over-riding reason for removal and appropriate mitigation. (Green)
 - Category B: moderate quality trees, able to make a significant contribution for at least 20 years, normally retained. (Blue)
 - Category B/C: an intermediate category between categories B and C (not specifically described in BS5837). Trees, which should be retained wherever possible, providing retention does not unreasonably constrain the layout. (Blue)
 - Category C: low quality, in adequate condition to remain for at least 10 years, or young trees <150mm stem diameter. Trees which can be removed to allow the desired layout or new planting. (Grey)

For category A, B and C trees, a subcategory has been allocated, providing information on the reasons for selection of a specific category, as follows:

- Subcategory 1: mainly arboricultural values.
- Subcategory 2: mainly landscape values.
- Subcategory 3: mainly cultural values, including conservation.
- Trees have been classified irrespective of the possible proximity to future construction. The BS 5837 category is colour coded, as indicated above, on the plan included as Appendix A.

- **Protection Distance:** the protection distance in metres required to provide the Root Protection Area recommended in BS 5837, assuming a circular area centred on the tree.
- **Root Protection Area (RPA):** the area in m², as recommended in BS 5837, to provide sufficient rooting area to ensure tree survival and which, in most situations, should be fenced off to prevent root damage from construction activities.

3 SURVEY LIMITATIONS

- 3.1 No internal decay devices, or other invasive tools to assess tree condition, were used.
- 3.2 No soil excavation or root inspection was carried out.
- 3.3 This survey has not considered the effect that trees or vegetation may have on the structural integrity of future building through subsidence or heave.
- 3.4 The tree survey has been undertaken for planning purposes. Although any obvious structural defects have been noted, a Tree Hazard Assessment has not been carried out. Mature trees close to highly populated areas or public highways should normally be checked for safety annually by a suitably qualified person.

4 LEGAL PROTECTION OF TREES

- 4.1 There is a Tree Preservation Order (ref 623) protecting trees to the south of the proposed ward block. A copy of the order is included as Appendix F which protects T5, T7, T8, T9, T10, G12, T13 and T14.
- 4.2 Once planning permission has been granted, provided the application clearly shows any tree work proposed, this overrides protection provided by Tree Preservation Orders or Conservation Areas.

5 ARBORICULTURAL METHOD STATEMENT

5.1 Site Overview

- 5.1.1 The proposal is for additional ward accommodation comprising Ward Building North, the approved Decant ward building and Ward Building South comprising the demolition of the main part of the existing pediatric building to allow construction of a new three storey ward block. The Pod extension to the south and buildings to the north-west are to be retained. In addition, a new three storey decant building will be constructed, the waste compound relocated and new parking spaces created. The proposed site plan for the whole site, including details of additional parking spaces, is included as Appendix G and the site plan for Ward Building South is included as Appendix H. The footprint of new buildings and hard surfacing have been added to the survey drawing, with tree details, to create the Tree Protection Plan attached as Appendix A.
- 5.1.2 There are some fine mature oak trees, shown in the photos in Appendix E, to the south and west of the new Ward Building South, which must be protected throughout the development.
- 5.1.3 There is dense ivy preventing detailed inspection of the bases of T1, T6 and T10. Removal of the ivy and re-inspection is recommended.
- 5.1.4 A site meeting was held on 03-11-2020 with the contractor and architect at which retention of the oak (T1) was discussed. As set out in section 6.3 of the Arboricultural Impact Assessment, since the corner of the new building is only approximately 2.5m from the edge of the tree stem, some root damage will be inevitable. The location for hand digging a trench along the building line was agreed. Providing major roots do not have to be severed which would risk making the tree unstable, the tree will be retained and will be protected as best possible. Even if the tree is damaged and dies back, it will still provide valuable habitat and so should be retained. This tree is not included in the Tree Preservation Order.

5.2 Construction Access and Site Set up

- 5.2.1 All construction traffic will enter the site from the south, where shown on the Tree Protection Plan. Ground protection will be provided where the construction access crosses the Root Protection Area of T7. No tree pruning is required to facilitate this access.
- 5.2.2 The area designated for material storage is to the west of the site, where indicated on the Tree Protection Plan.
- 5.2.3 Storage of cement, concrete, oil, fuel, bitumen, chemicals or materials – such as treated timber products - that could have toxic leachate must not be permitted within the Root Protection Area of any retained trees, nor in any position where the slope of the ground could lead to contamination of the Root Protection Area.

5.2.4 Site offices will be located in the site compound, as indicated on the Tree Protection Plan.

5.3 Tree Work

5.3.1 Seven trees and two tree groups are proposed for removal, as detailed in the tree schedule attached in Appendix B.

5.3.2 In addition, crown reduction of T1, T2 and T4 is proposed

5.3.3 These tree work proposals differ from the Arboricultural Impact Assessment dated 05-03-20 in the removal of the following trees:-

- T3 – a three stemmed category C ash, which has lost vigour since the original survey. Removal will help T2 to develop.
- T30, T31 and T32 – 3no Ash trees, shown in the photo in Appendix Eiii), which were not included in the original survey, but which are proposed for removal to allow construction of additional parking spaces.

5.3.4 All tree work must be undertaken to the standards set out in BS 3998:2010 Tree work – Recommendations.

5.4 Root Protection Areas

5.4.1 Root Protection Areas are shown for all trees in the tree schedule included as Appendix B. They are also shown for all retained trees, as circular areas centred on the trunk, on the Tree Protection Plan included as Appendix A. Where there are physical obstructions to root growth the Root Protection Area should be shown as an equivalent area that is more likely to reflect actual root growth. The Root Protection Area shows the area around a tree in which all construction activity must normally be excluded, unless appropriate protection measures are implemented.

5.5 Tree Protection Fencing

5.5.1 Tree Protection Fencing must be erected where shown on the Tree Protection Plan, included as Appendix A. This will provide full protection of the Root Protection Areas of all retained trees, other than for:

- areas hatched in blue on the Tree Protection Plan, where No-Dig Construction must be used, as described in section 5.5 below, to protect underlying roots.
- areas hatched cyan on the Tree Protection Plan, indicating Ground Protection Areas, where roots must be protected, as described in section 5.6 below.

- areas cross hatched red on the Tree Protection Plan, where there will be excavation at the edge of Root Protection Areas, but where hand excavation must be used, as described in section 5.7, to minimise potential root damage.

5.5.2 Tree works can be completed before Tree Protection Fencing is erected, however no contractors plant or vehicles must be allowed to track within the Root Protection Areas unless ground protection panels are laid.

5.5.3 Tree Protection Fencing must be from weldmesh panels, at least 2m high, securely fixed, with wire or scaffold clamps, to a rigid framework. This framework must be constructed from scaffold tubes with vertical tubes, at a maximum interval of 3m and driven into the ground at least 0.6m. The structure must be well braced to resist impacts, constructed as per Figure 2 of BS5837:2012, which is reproduced in Appendix D.

5.5.4 After erection of Tree Protection Fencing and installation of ground protection, 2 days notice must be given to the Local Planning Authority before demolition or construction, including any ground work, starts on site.

5.5.5 Tree Protection Fencing must be maintained and retained for the duration of the works, or until such time as agreed in writing with the arboricultural consultant or the Local Planning Authority.

5.5.6 Weatherproof notices must be fixed to the Tree Protection Fencing, and maintained, stating:-

TREE PROTECTION AREA

KEEP OUT

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS
AND A TREE PRESERVATION ORDER

CONTRAVENTION MAY LEAD TO CRIMINAL PROSECUTION

THE FOLLOWING MUST BE OBSERVED BY ALL PERSONS:

- The Protection Fence must not be moved
- No person or machine must enter the area
- No materials or spoil must be deposited
- No excavation must be permitted

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

5.6 No-Dig Construction Areas

- 5.6.1 The No-Dig Construction areas, shown hatched blue on the Tree Protection Plan included as Appendix A, must be constructed without excavation apart from the removal of turf/organic matter, which must be carried out by hand. Excavators, dumpers and other site traffic must not be allowed to track on the No-Dig areas until roots are protected by the No-Dig surfacing or ground protection.
- 5.6.2 Where hard surfacing is proposed for new parking areas and around the new building within the Root Protection Area of trees, No-Dig Construction areas are shown on the Tree Protection Plan. Engineering details must avoid localised compaction, using both a two dimensional geogrid, and a three dimensional cellular confinement system as integral components of the sub-base. A typical section is shown on the Tree Protection Plan included as Appendix A. As well as being fit for purpose, the design and methodology must protect tree roots, by ensuring the following:-
- topsoil/turf can be removed carefully by hand to a maximum of 75mm, but less if roots are found nearer the surface.
 - following leveling with soil or sand, a permeable, non-woven geotextile membrane, must be laid.
 - a suitable two dimensional geogrid, such the TriAx Geogrid supplied by Tensar International (www.tensar.co.uk), or the Biaxial Geogrid supplied by Geosynthetics Ltd (www.geosyn.co.uk), must be laid over the entire area and underneath the edging.
 - pressure treated timber edging boards, supported by driven stakes must be used.
 - a suitable cellular confinement system must then be laid to manufacturers instructions on top of the geogrid. Products that might be considered include Geoweb, supplied by Greenfix (www.greenfix.co.uk) or Cellweb, supplied by Geosynthetics Ltd (www.geosyn.co.uk). The depth of the system must be adequate to take the maximum axle weight, as per manufacturers guidance.
 - the cellular confinement system must be filled with clean (no fines), washed angular, 4/20mm, stone to provide load support, while allowing air and moisture to permeate to the root zone.
 - a further permeable, non-woven geotextile membrane, such as TreetexT300, or an alternative approved product which has similar oil trapping qualities, must be laid over the cellular confinement system.
 - a porous, surfacing material, free from contaminants, must then be laid. Either sand bedding and block paving, gravel or permeable tarmac would be suitable.
 - removed turf/topsoil can be used to grade surrounding ground levels.
- 5.6.3 No-Dig construction will result in an increase in levels. This must be fully taken account of in all other aspects of the design.
- 5.6.4 Until such time as the No-Dig surfacing is installed the No Dig areas must be protected from soil compaction by laying ground protection panels, as detailed in section 5.7 below.

5.7 Ground Protection Area

- 5.7.1 For the area Ground Protection Area shown on the Tree Protection Plan where there will be heavy duty vehicle access, either trackpanel, as supplied by Eve Trakway (www.livetrakway.com), Tufftrak, as supplied by The Grassform Group (www.grassform.co.uk) or a similar approved product, must be used, laid on a compressible layer of sand or woodchips, laid onto a geotextile, with adjacent panels held together with connectors.
- 5.7.2 Alternatively, the same build up as for No-Dig construction can be used for construction traffic providing an adequate depth of cellular confinement system is used for the loads anticipated. In this case, the same section detail shown on the Tree Protection Plan must be used but with the geotextile, sand and paving surface replaced with an additional depth of clean stone.

5.8 Hand Dig Areas

- 5.8.1 The Hand Dig trenches adjacent to T1 and T5, shown cross-hatched red on the Tree Protection Plan, must be dug to a depth of 1m by hand, neatly severing any roots found, using secateurs or a hand saw. Any further excavation required, either to a greater depth or outside the hand dug trenches, can be carried out with an excavator, since it is unlikely that significant live roots will be found.
- 5.8.2 Heavy-duty polythene must be used to line the side of the trench adjacent to the trees, before concrete is poured, to avoid the toxic affects of cement on tree roots.
- 5.8.3 On no account must use of an excavator be used in the top 1m of the Hand Dig areas, which would rip roots and cause unnecessary damage.
- 5.8.4 The Hand Dig area adjacent to T29, shown cross-hatched red on the Tree Protection Plan, must be dug to formation level by hand, neatly severing any roots found, using secateurs or a hand saw. The build up must then be as for No-Dig construction areas, as detailed in section 5.6.2 above.

5.9 Services

- 5.9.1 All drainage runs, attenuation areas and services have been kept outside the Root Protection Areas of trees.

5.10 Landscaping

- 5.10.1 Landscape works carried out within Root Protection Areas must be undertaken with great care so as not to damage shallow roots.

- 5.10.2 Mechanical cultivation eg. rotovating must not be used within the Root Protection Areas of trees. Instead, if required, areas can be dug over by hand, carefully working around any roots found. Although areas can then be seeded or planted with shrubs, this will inevitably lead to competition for moisture and nutrients. Spreading well composted bark mulch or wood chip within Root Protection Areas is preferable to provide the optimal environment for important or vulnerable trees.

5.11 General measures

- 5.11.1 No construction activity whatsoever, including routing of underground services, storage of materials or on-site parking, must be allowed within Root Protection Areas, other than that specifically described above.
- 5.11.2 Fires must not be lit in a position where their flames could extend to within 10m of foliage, branches or trunk.
- 5.11.3 If any tree shown for retention is removed, uprooted or destroyed, another tree must be planted in the same location, at a size and species to be agreed in writing with the Local Planning Authority.
- 5.11.4 A copy of this report and the Tree Protection Plan must be kept on site and must be fully understood by the Site Agent.

5.12 Bat roosts

- 5.12.1 The current legislation makes it a criminal offence to disturb, damage or destroy any bat roost or hibernation area. Contractors must be reminded of their responsibilities and should contact the relevant authorities if any signs of bats are found.

5.13 Birds

- 5.13.1 The current legislation makes it a criminal offence to disturb nesting birds. The nesting season is generally assumed to be from 1st March to 31st July, however this can vary depending on species and location. During these months a careful inspection must be made before work commences and works must be postponed if active nests are found.

6 ARBORICULTURAL SUPERVISION

6.1 Key personnel

- Contractor: Western – Contracts Director Shane Taggart : tel: 028 8774 0740
- Arboricultural Consultant: Simon Stephens [tel:07831 341 887](tel:07831341887), email: simon@sjstephens.co.uk
- Architect: Bailey Partnership, Dave Vickerstaff tel: 01752 229 259
- Client: NHS
- Tree Officer: TBC

6.2 Responsibilities

- 6.2.1 It must be the responsibility of the Site Agent to ensure that the Arboricultural Method Statement is adhered to at all times by site operatives, contractors and hauliers. Tree protection arrangements must form part of the site induction for all staff and sub-contractors.
- 6.2.2 If any problems arise, the Site Agent must inform the arboricultural consultant who must assess the situation and make recommendations accordingly. If the Arboricultural Method Statement requires revision, the Tree Officer must be informed and approval must be given.
- 6.2.3 A copy of the Arboricultural Method Statement must be kept on site and must be fully understood by the Site Agent.

6.3 Arboricultural Consultant Input: Pre-Commencement

- 6.3.1 This Arboricultural Method Statement has been prepared after a site meeting with the Arboricultural Consultant, architect and contractor on 03-11-2020 and has subsequently been agreed between them.
- 6.3.2 If any revisions are required to tree protection measures, a revised Arboricultural Method Statement must be approved by the Local Planning Authority, prior to construction or ground work starting on site.
- 6.3.3 The arboricultural consultant must inspect the Tree Protection Fencing and ground protection, prior to construction or ground work starting on site.

6.4 Arboricultural Consultant Input: Construction Phase

- 6.4.1 The arboricultural consultant must visit site during the construction period to check that tree protection measures are in place and to advise on any arboricultural issues. The exact timing of visits will coincide with specific operations on site, where possible.

6.5 Arboricultural Consultant Input: throughout the development

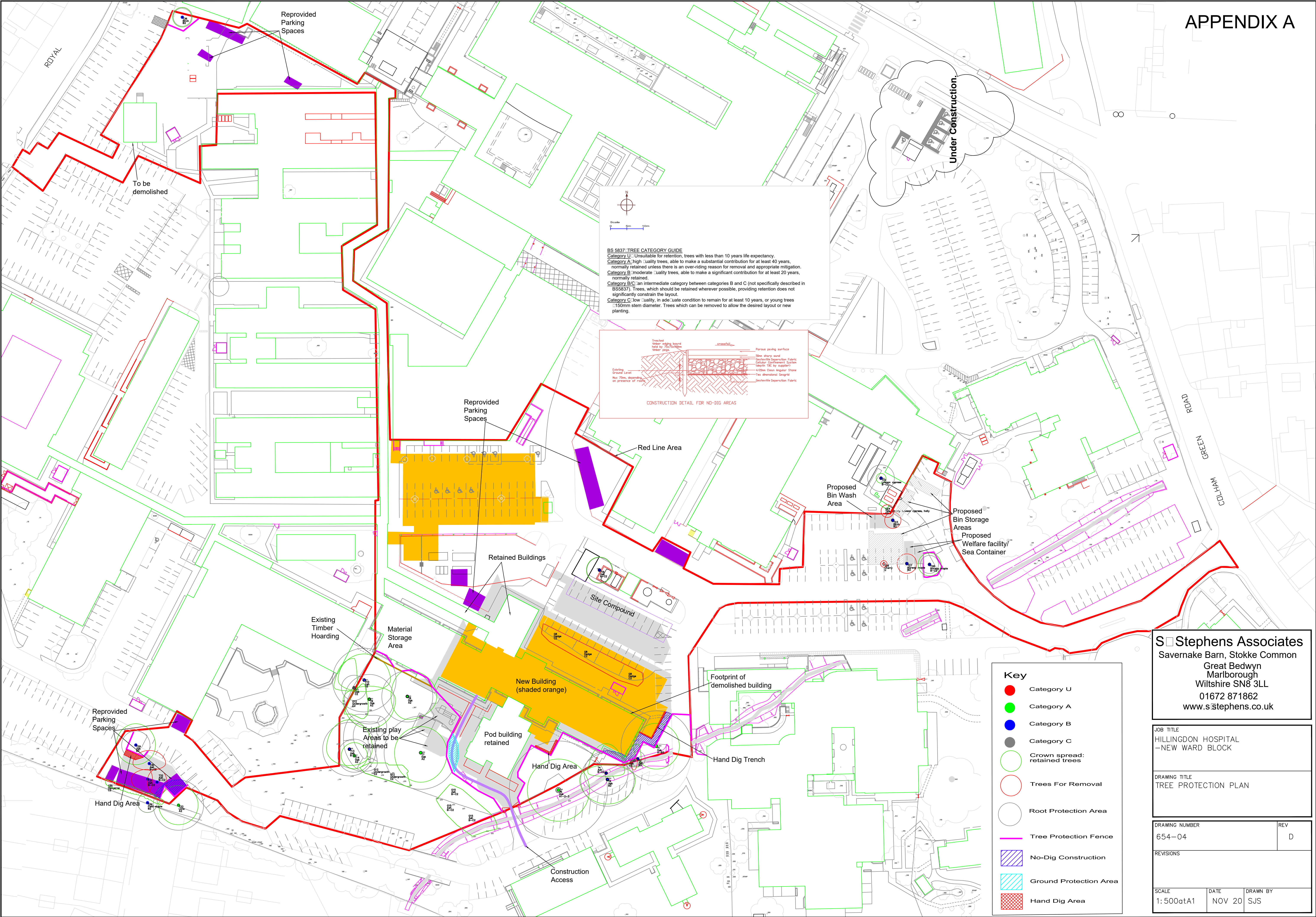
- 6.5.1 The arboricultural consultant must visit site and/or advise on any arboricultural issues at the request of the Local Planning Authority, client, architect or contractor.
- 6.5.2 The details of each site visit must be recorded using a site visit proforma, with copies circulated to the contractor, client, architect and the local authority Tree Officer, within 3 working days of the visit.

6.6 Variations and Incidents

- 6.6.1 Any changes to the proposed site plans, including changes to service runs or construction access, must be notified to the arboricultural consultant. If changes are within the Root Protection Areas, or if trees could be affected a revised Arboricultural Method Statement must be prepared and agreed by the Local Planning Authority before work starts.
- 6.6.2 Any unexpected incidents on site that could affect trees must be notified to the arboricultural consultant immediately. Such incidents include, for example, finding roots outside areas of Tree Protection Fencing, spillage of any contaminants or damage occurring to the stems or branches of trees.
- 6.6.3 If the arboricultural consultant considers that the incident could affect the future health of trees, the Local Planning Authority must immediately be informed. In any case, the arboricultural consultant must provide guidance to site staff and, if necessary, attend site. Details of all incidents, and any action taken in mitigation must be included in the next site visit report.

7 REFERENCES

- *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.*
- *BS3998:2010 Tree Work. Recommendations.*
- *NJUG 10: Guidelines for the planning, installation and maintenance of Utility Services in proximity to trees. (Published by the National Joint Utilities Group) Issue 2:16th November 2007.*
- *Common sense risk management of trees (FCMS024). Published by the National Tree Safety Group (www.ntsgroup.org.uk)*
- *The Body Language of Trees: A handbook for Failure Analysis. Mattheck & Breloer 1994.*



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JOB TITLE
HILLINGDON HOSPITAL
-NEW WARD BLOCK

DRAWING TITLE
TREE PROTECTION PLAN

DRAWING NUMBER
654-04

REV
D

REVISIONS

SCALE
1:500atA1

DATE
NOV 20

DRAWN BY
SJS

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Branch Spread (m)				Canopy Clearance (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Protect- ion Distance (m)	Root Protect. Area (m2)
				N	S	E	W								
T1	Oak	15	est 900	7	7	7	7	4	Mature	Dense bramble and ivy around base, prevents detailed basal inspection. Heavily reduced in the past, but reasonable vigour to fresh growth.	Remove a section of ivy from lowest metre of trunk to enable more detailed inspection. 20% crown reduction, providing 1.5m canopy clearance to the new building line.	>40	A-B2	10.8	366
T2	Ash	12.5	190	4.5	2.5	1	4	5	Semi-mature	Showing reasonable vigour at present, but susceptible to ash dieback disease.	Prune to provide 1.5m canopy clearance to the building line.	15-30	B2	2.3	16
T3	Ash	8.5	190	0.5	3	1	1	2.5	Semi-mature	Three stems from base- average 110mm.	Remove	10-20	C2	2.3	16
T4	Ash	16	est 560	9	1	5.5	5.5	8	Mature	Dense ivy around base prevents detailed inspection. Tight fork beneath ivy.	20% crown reduction. Remove ivy.	15-30	B-C2	6.7	142
T5	Oak	17.5	1600	9.5	9.5	9.5	9.5	4	Veteran	Fine tree. Major limb to north east removed at 2.5m. Occasional minor deadwood and cavities, but showing good overall vigour.		>40	A1-2-3	15.0	707
T6	Ash	16.5	680	4.5	7.5	8.5	8.5	3.5	Mature	Three stems from base- average est. 390mm. Dense ivy and bramble around base.	Remove a section of ivy from lowest metre of trunk to enable more detailed inspection.	15-30	B2	8.2	209
T7	Oak	18	930	8	9	8	8	3	Mature	Good quality tree.		>40	A2	11.2	391
G8	Hedge	3	25-75					0	Mature	Dense evergreen hedge, containing a mixture of shrub species with dense ivy. Previously trimmed to 2.2m	Remove to facilitate development	10-20	C2	0.9	3
T8	Oak	16	650	8	7	9	5	3.5	Mature	Low branches recently removed. Good vigour.		>40	A2	7.8	191
T9	Oak	16.5	630	4	9	8	8	4	Mature	Recently pruned. Showing reasonable vigour.		>40	A2	7.6	179
T10	Ash	19	810	8	3.5	8	8	3	Mature	Canopy previously pruned back from building and low branches removed. Dense ivy. Susceptible to ash dieback disease.	Remove section of ivy from around base. Re-inspect within 18 months.	15-30	B2	9.7	297
T11	Oak	8	320	9	1	1	6	3	Early mature	Poorly structured tree which doglegs over site boundary and with branch hitting adjacent building. Prune 3m clearance to adjacent building.		10-20	C2	3.8	46
G12	Undergrowth	4-9.5	50-180					0.5	Early mature	Low quality thorn, oak, elder- mostly engulfed in ivy- none of particular individual merit.		10-20	C2	2.2	15
T13	Ash	19.5	680	9	5	7	7	8	Mature	Main stem bifurcates at 1.8m. Major deadwood.	Remove major deadwood	15-30	B	8.2	209

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Branch Spread (m)				Canopy Clearance (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Protect ion Distance (m)	Root Protect. Area (m2)
				N	S	E	W								
T14	Oak	19.5	420	4	4	4	4	13	Early mature	Dense ivy to base. Major deadwood, but showing good vigour.	Remove major deadwood	>40	A2	5.0	80
G15	Ash	13-16	130-320					4	Early mature	Ash growing just outside site boundary, but leaning over site.		15-30	B-C2	3.8	46
T16	Ash	8	320	4	4	4	4	3.5	Early mature	Reduced vigour. Brick wall becoming embedded in trunk. Attractive crown shape.		10-20	B-C2	3.8	46
T22	Lawson cypress	12.5	340	1.5	1.5	1.5	1.5	1.4	Mature	Moderate vigour. Dense ivy.	Remove section of ivy from base.	15-3	B-C2	4.1	52
T23	Birch	7.5	150	2.5	2.5	2.5	2.5	1.5	Early mature	Attractive tree.	Remove to facilitate development	20-40	B2	1.8	10
G24	Yew, cherry, Lawson cypress, holly	3-7	10-150					0.8	Early mature	Dense thicket.	Remove to facilitate development	15-30	C2	1.8	10
T26	Cherry	3	50	1	1	1	1	1.7	Semi- mature	Low vigour.	Remove to facilitate development	<10	U	0.6	1
T27	Norway maple	7.5	180	3	3	3	3	1.5	Semi- mature	Reduced vigour because of inadequate tree pit, but still an attractive tree.	Remove to facilitate development	15-30	B2	2.2	15
T28	Norway maple	4.5	230	3.5	3.5	3.5	3.5	1.7	Semi- mature	Poor structure. Tree stakes embedded.	Remove stakes and ties as best possible.	15-30	B-C2	2.8	24
T29	Ash	11	360	6.5	6	6	6	1.8	Early mature	Major limb to north east from 0.9m. Occasional minor broken branches, but good overall vigour.	Remove secondary branch (80mm) over new parking entrance.	20-40	B2	4.3	59
T30	Ash	10	270	4	2	5	5	1.8	Early mature	Asymmetric canopy. Minor deadwood. Only moderate vigour.	Remove to create new parking area.	15-30	B-C2	3.2	33
T31	Ash	10	260	3	4	1.5	5	2	Early mature	Basal bark damage with underlying decay. Surface roots damaged. Reduced vigour.	Remove to create new parking area.	15-30	B-C2	3.1	31
T32	Ash	10.5	300	4	4	3	3	1.8	Early mature	Minor deadwood. Moderate vigour. Broken branches.	Remove to create new parking area.	15-30	B-C2	3.6	41
T33	Lime	17	640	6	6	6	6	2	Mature	Good quality tree.		>40	A2	7.7	185
T34	Field maple	8.5	est 250	3	3	3	3	2	Early mature	Growing outside site - base not inspected.		>40	B2	3.0	28
T35	Hedgerow	2-4.5	25-50	0	0	0	0	0.3	Early mature	Majority elder, with some field maple and pyracantha, growing outside site.	Cut back as necessary	10-20	C2	0.6	1
T36	Birch	9	230	3	3	3	3	0.6	Early mature	Attractive tree		20-40	B2	2.8	24

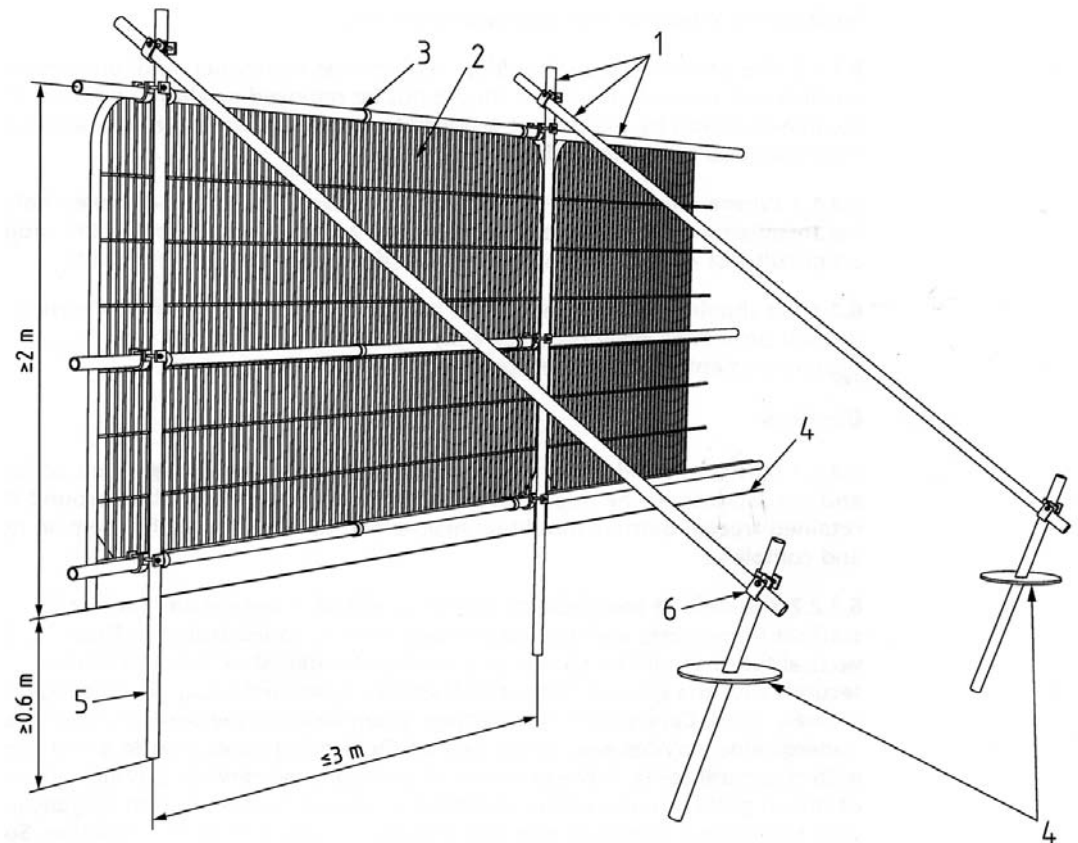
BS 5837:2012, Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>			Canopy coloured 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	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Canopy coloured 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	Canopy coloured 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	Canopy coloured grey

Figure 2

Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m galvanised 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



Examples of above-ground stabilising systems

Figure 3a

Stabiliser strut with base plate secured with ground pins

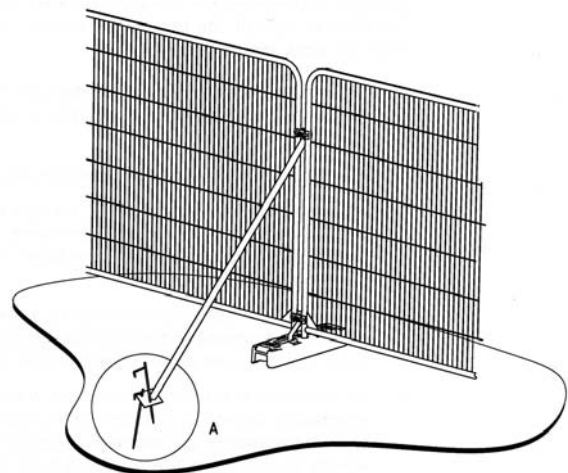
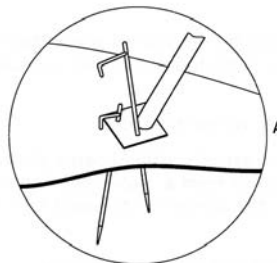
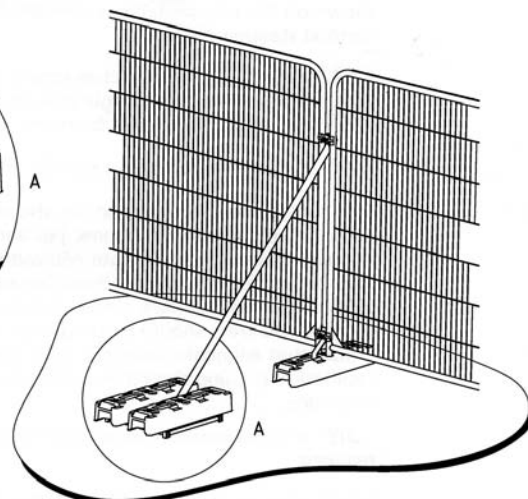
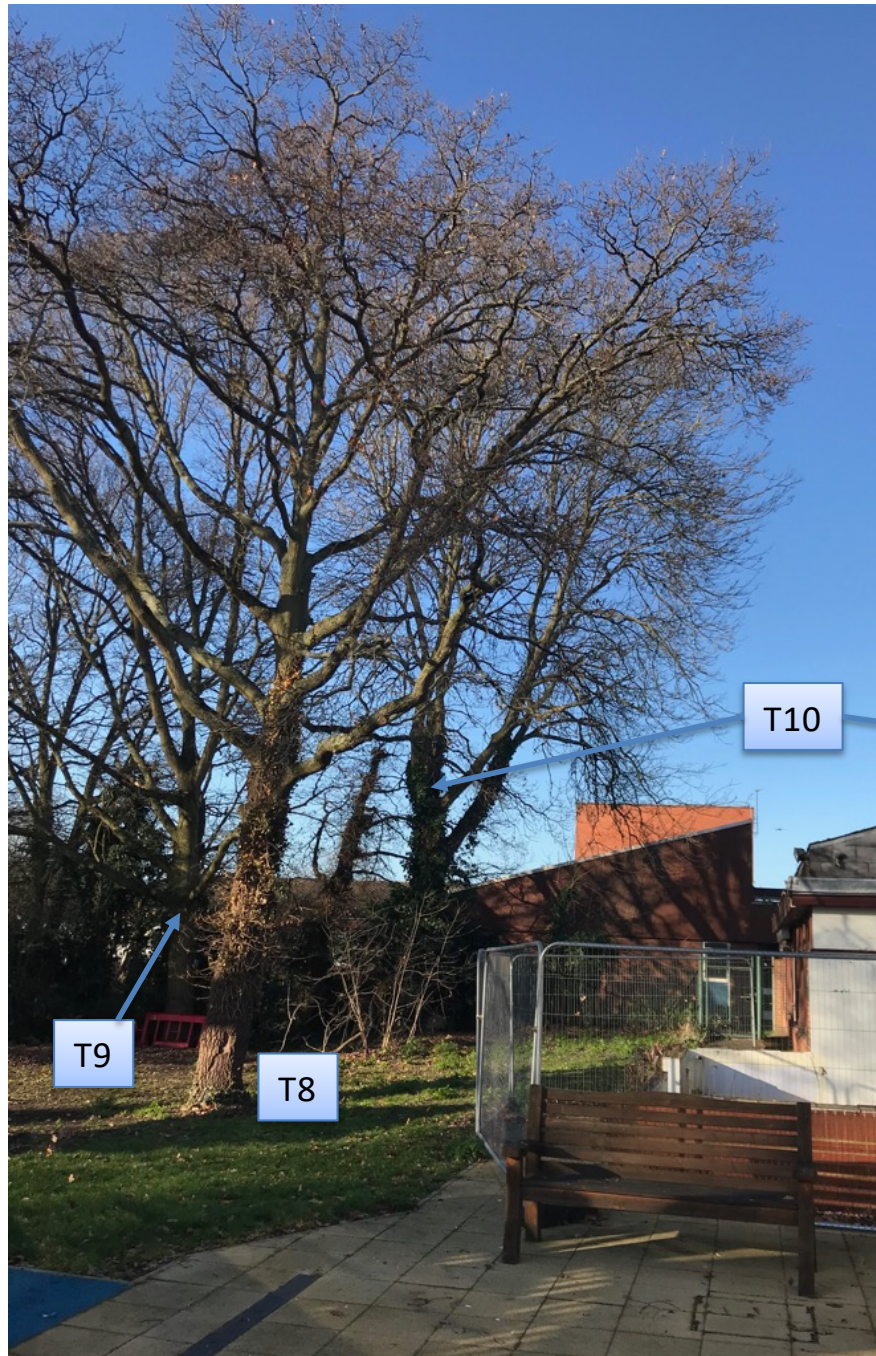


Figure 3b

Stabiliser strut mounted on block tray









1:1250



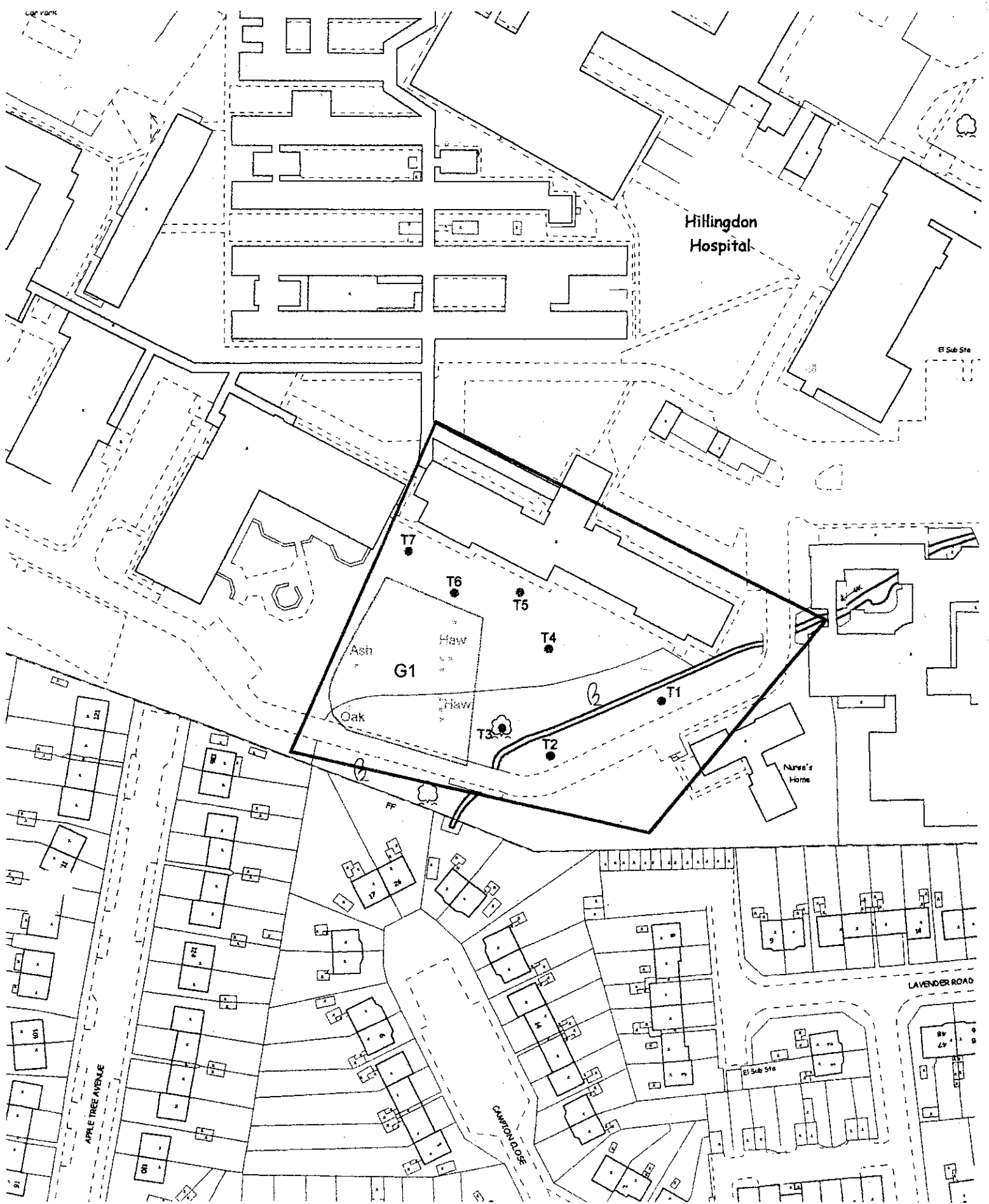
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- Unscheduled Trees
- Scheduled Trees
 - current
 - deleted/removed
 - replaced
- TPO Boundaries
 - ▭ area boundary
 - ▭ group boundary
 - ▭ t.p.o. boundary
 - ▭ woodland boundary

tpo 623

Hillingdon Hospital,
Pield Heath Road,
Hillingdon

Map Research 15/10/2001



SCHEDULE 1

SPECIFICATION OF TREES

Trees specified individually
(encircled in black on the map)

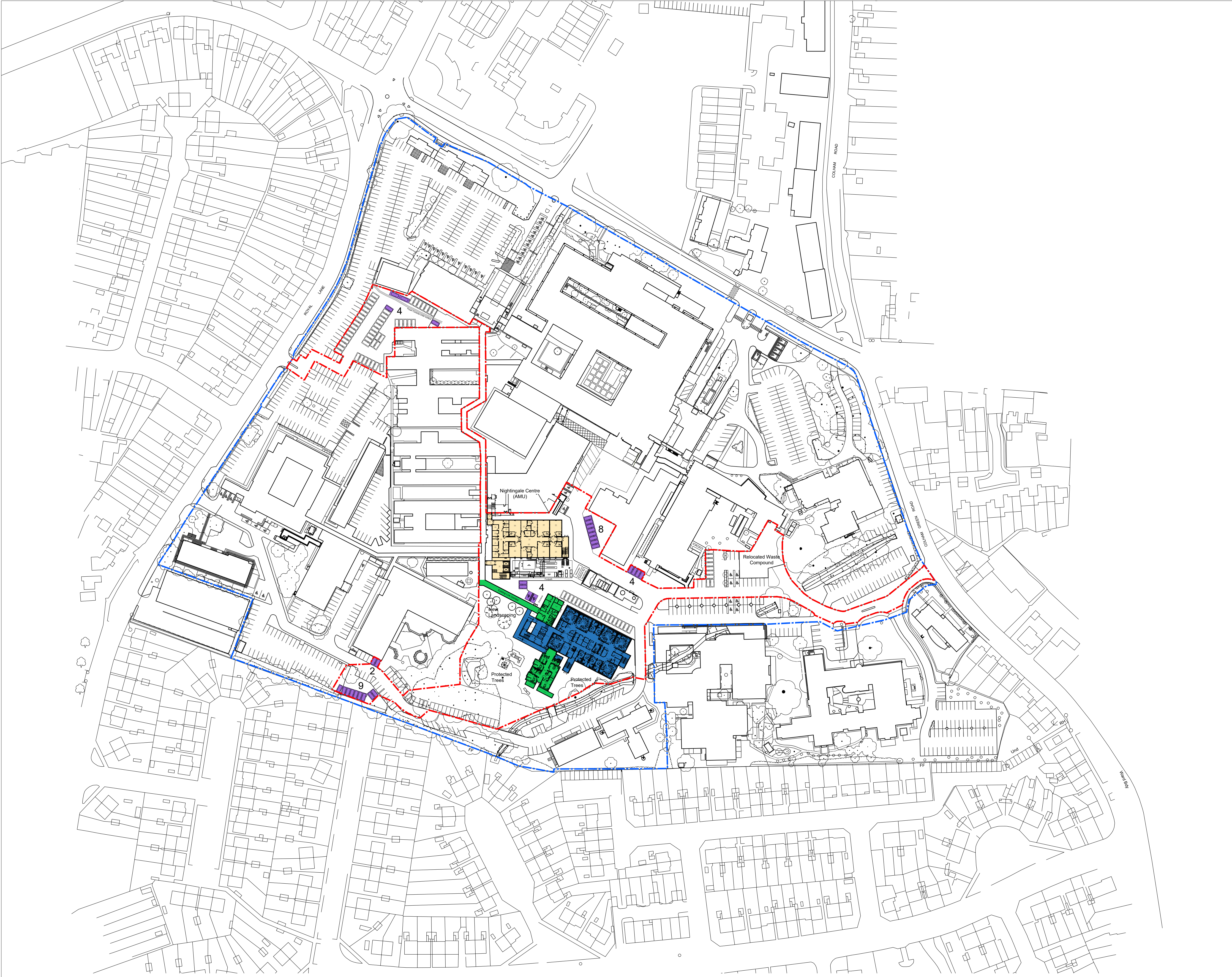
<u>Reference on Map</u>	<u>Description</u>	<u>Botanical name</u>	<u>Situation</u>
T1	English Oak	Quercus robur L.	Hillingdon Hospital
T2	English Oak	Quercus robur L.	Field Heath Road
T3	English Oak	Quercus robur L.	Hillingdon
T4	English Oak	Quercus robur L.	"
T5	English Oak	Quercus robur L.	"
T6	English Oak	Quercus robur L.	"
T7	Common Ash	Fraxinus excelsior L.	"

Groups of trees
(within a broken black line on the map)

G1	Group consisting of:		
	7 Hawthorn	Crataegus monogyna Jacq.	Hillingdon Hospital
	1 Common Ash	Fraxinus excelsior L.	Field Heath Road
and	1 English Oak	Quercus robur L.	Hillingdon

Areas
(none)

Woodlands
(none)



Notes:

- This drawing is copyright.
- Do not scale dimensions from this drawing.
- This drawing is to be read in conjunction with all other relevant drawings.
- All discrepancies on this drawing are to be reported to the architect.
- Do not modify any element of this drawing.
- Use drawing only for purposes(s) issued.

North Sign / Key Plan

The following external model files are included within this drawing:

- Application Boundary
- Land owned by the Hillingdon NHS Trust
- Proposed Building including the Decant Ward Building (North)
- Retained Buildings adjacent to the three storey Modular Building
- Proposed Modular Ward Building (South)
- Reprovided Replacement Parking

Rev	Date	Revision Notes	Client / Contractor	AB	NS
8	13.10.20	31no. car parking spaces re-provided. Ground floor plant room for modular ward building North added. Red line amended		AB	NS
7	13.10.20	31no. car parking spaces displaced post 4056/APV/2020/1003 application (refer to Rev.5 of this drawing)		AB	NS
7	22.09.20	Added GF plant room for modular ward North		AB	NS
6	26.02.20	Final amendments for Planning Submission		AB	AB
5	18.02.20	Car parking re-provision count updated Substation and water tank location updated Red line amended		AB	AB
4	13.02.20	Major updates for car parking re-provision and decant layout		AB	AB
3	21.01.20	Minor amendments for planning		AB	AB
2	13.01.20	Car parking layout amended. New substation added		AB	NS
1	18.12.19	Context added and proposed building line amended.	LC	NS	
Rev	Date	Revision Notes	Dm	Rv	

NHS

Intelligence Buildings Infrastructure

Project
Hillingdon Hospital - Additional Ward Buildings

www.ibigroup.com

Drawing Title PROPOSED SITE PLAN		
Job Number 50598 Scale@A1 1:1000	Drawing Originated Date 04/11/2019 Purpose FOR PLANNING	PAS 1192 Status Code -
Drawing Number 50598-IBI-WS-XX-DR-A-100-1000		Revision 8

