

EDMANSONS CLOSE
ALMSHOUSES
BRUCE GROVE
TOTTENHAM
LONDON

ARBORICULTURAL
IMPACT
ASSESSMENT &
METHOD
STATEMENT

for

THE DRAPERS
ALMSHOUSE CHARITY



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Checked By:	T Grayshaw
Date:	17/02/2020
Revision:	A:14/072022
Ref:	PRI20989aia_amsA

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1. Executive Summary

- 1.1. This report has been revised January 2023 to address comments from the LPA tree officer. This includes an area of additional trees and scope of foundation design.
- 1.2. For the Arboricultural Method Statement see section 4.
- 1.3. This impact assessment is intended to evaluate the direct and indirect effects of the proposed design on the trees on site, and where necessary recommends mitigation.
- 1.4. The development proposals are in accordance with BS5837:2012 'Trees in relation to design, demolition, and construction – Recommendations'. Adequate protection can be provided to ensure all retained trees are protected throughout development in the form of barriers and/or ground protection.
- 1.5. The site comprises an almshouses estate, associated gardens, and roadway infrastructure. Tree cover is found across the site and is varied in both age and species. Trees are predominately found on the large estate gardens on the frontage with Bruce Grove, with the remaining trees mostly situated on the rear boundary with the Magistrates Court. It is proposed to return the almshouses to their former use as self-contained family homes, with some combined to form larger units. The poor quality 1970's extension block, and the laundry block will both be demolished to allow a new apartment building (comprising 16 flats) and a new single detached almshouse to be built. In addition, two corner pavilions will be constructed in the corners formed by the terraces of almshouses and each will contain two flats.
- 1.6. Apart from a single category 'B' individual all the trees proposed for removal are in the lower two categories, 'C' and 'U', and are not of a quality that should represent any constraint to development. The remaining surveyed trees recorded as 'A' and 'B' category trees are to be retained. Adequate tree protection has been proposed to protect them throughout the demolition and development phases
- 1.7. Number of trees to be removed as a direct result of the current design (see section 4 for details):

BS Category	Number of individual trees	Tree Groups
U	1	~
A	~	~
B	1	~
C	5	~

- 1.8. The relationship between the buildings and retained trees is sustainable and does not result in any situations which may result in unreasonable pressure to prune requests from future occupants.
- 1.9. The Arboricultural Method Statement (AIA_AMS) has been compiled in conjunction with the Tree Protection Plan (TPP) for the purpose of feasibility and planning, as per Figure 1 of BS5837:2012. These detail any mitigation which will be necessary to ensure the protection of retained trees throughout the development.

2. Introduction

- 2.1. ACD Environmental was instructed in February 2020 to prepare the following Arboricultural Impact Assessment and Method Statement by The Drapers Almshouse Charity. Reference should be made to the appended Tree Protection Plan (PRI20989-03).
- 2.2. This Method Statement is to be made available to all operatives on site during the construction process, so that they understand the scope and importance of the measures set out for tree protection. Implementation of the protection methods and other details within this report are integral to ensuring protection for the retained trees.
- 2.3. For details of trees to be retained, and locations and types of special protection methods, reference should be made to the latest revision of Tree Protection Plan (ref: PRI20989-03), which should be displayed prominently on site for all staff to see.
- 2.4. To ensure accuracy and avoid future costly adjustments, the Tree Protection Fence must be set out by a surveyor/engineer with all node points being marked clearly on site for the fencing contractor to work to. The AutoCAD version of the Tree Protection Plan is available on request.
- 2.5. This report is based on the recommendations given in BS5837:2012 'Trees in relation to design, demolition, and construction – Recommendations'.
- 2.6. The site falls within the London Borough of Haringey Bruce Castle conservation area. A single Ash tree on-site is subject to a tree preservation order. This individual is not found within the original survey area.

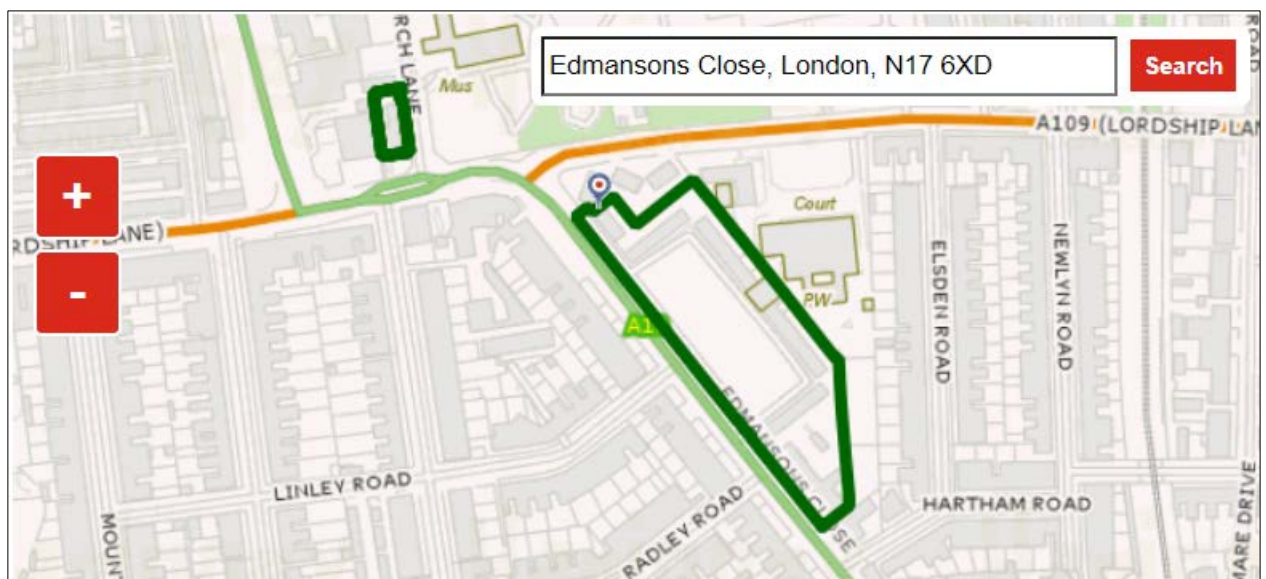


Image 1: Bruce Castle Conservation Area outlined in green.

- 2.7. The controlling authority is London Borough of Haringey, who can be contacted at:
Level 6 River Park House, 225 High Road, London, N22 8HQ. (0208) 489 5504
- 2.8. Any questions relating to the content of this report should be directed in the first instance to: ACD Environmental, Courtyard House, Mill Lane, Godalming, Surrey GU7 1EY, 01483 425 714/07796 832 490, quoting the site address and report reference number.
- 2.9. The following abbreviations have been used throughout this document:
- Root Protection Area – RPA
 - Construction Exclusion Zone- CEZ
 - Tree Protection Plan – TPP
 - Tree Protection Fencing – TPF

3. Arboricultural Impact Assessment

- 3.1 It is proposed to return the almshouses to their former use as self-contained family homes, with some combined to form larger units. The poor quality 1970's extension block, and the laundry block will both be demolished to allow a new apartment building (comprising 16 flats) and a new single detached almshouse to be built. In addition, two corner pavilions will be constructed in the corners formed by the terraces of almshouses and each will contain two flats.
- 3.2 This impact assessment is intended to evaluate the direct and indirect impacts on the trees on the site in relation to the proposed development. Any potential tree impacts are identified as per BS5837:2012 section 5.4, and details are given of proposed mitigation.
- 3.3 Any potentially damaging activities proposed in the vicinity of retained trees are identified, such that mitigation to significantly reduce or avoid this impact can be detailed in the Arboricultural Method Statement and Tree Protection Plan as recommended in BS5837:2012 section 5.4.2.
- 3.4 The development proposals are in accordance with BS5837:2012 'Trees in relation to design, demolition, and construction – Recommendations'. Adequate protection can be provided to ensure all retained trees are protected throughout the development.
- 3.5 The tree survey for the site is at Appendix 2 of the Tree Report for the site ACD reference PRI20989tr.
- 3.6 This assessment is based upon the d & b Studios supplied layout drawing.

3.7 Evaluation of impact of proposed tree losses

Table 1: Trees to be removed as a direct consequence of development

BS Category	Number of individual trees	Tree Groups
U	1	~
A	~	~
B	1	~
C	5	~

- 3.7.1 Those trees which are to be removed are shown with a red dashed canopy outline, and a dashed emblem around the trunk on the Tree Protection Plan ACD reference PRI20989-03.
- 3.7.2 Tree no. T21 is surveyed and recorded as a category 'B' tree. There is a secondary category 'B' individual sited to the north of this tree that will minimise the any impact to the wider landscape.

- 3.7.3 All the remaining listed trees nos. T5-T7, T13, T14 and T18 proposed for removal are in the two lower categories (C & U) and as such it is judged that they are not of a quality that should present any constraint to development of the site.
- 3.7.4 In terms of the effects of the tree loss required to implement the design, the majority of trees to be removed are all located within the interior of the site or are small individuals situated on the northern boundary, such that they can be replaced with tree planting as part of the landscape proposals, (or even future residents).
- 3.1.1. Whilst the removal of category 'B' trees is in the first instance should be avoided, it is reasoned that the removal of the Sycamore in the corner of the site will have a minimal impact to the local landscape being sited between existing built form. Together with the companion individual to the north providing a continued landscape screen. Replacement planting is proposed as part of the wider landscape proposals that will mitigate for the removal of both the tree and associated canopy cover.
- 3.7.5 It is therefore deemed acceptable to remove the listed trees and, as part of the detailed landscape design for the scheme, include suitable and sustainable replacements as and where appropriate.
- 3.7.6 Replacement trees will be proposed through landscape design and will more than mitigate for their removal by providing robust long term tree cover in keeping with the proposal and surrounding properties.
- 3.7.7 Within the site further tree removals are proposed as good arboricultural practice. These trees are all U category (listed in table 2) and have a very limited life expectancy. This work would be carried out as part of good property maintenance, regardless of any development on the site.

3.8 Trees to be pruned

- 3.8.1 At this time the following tree surgery works are proposed. These works fall well within the level of good arboricultural practice and will be undertaken in accordance with BS 3998:2010 Tree Work – Recommendations.

Tree number	Species	Operation
T4	<i>Pyrus sp.</i> (Pear)	Western part of crown to be side pruned by 2.0m to allow for scaffold installation.
T8	<i>Pyrus sp.</i> (Pear)	Western part of crown to be side pruned by 2.0m to allow for scaffold installation.

- 3.8.2 Should any additional surgery works be required; it should comply with BS3998:2010 Tree Work or more recently accepted arboricultural good practice and be approved by the Haringey Borough Council prior to any commencement.

3.9 Protection for retained trees

- 3.9.1 BS5837:2012 section 6.2.1. states: 'All trees that are being retained on site should be protected by barriers and/or ground protection (see 5.5) before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences. Where all activity can be excluded from the RPA, vertical barriers should be erected to create a construction exclusion zone. A specification for protective fencing is given on the Tree Protection Plan. This consists of interlocking weld-mesh panels (e.g., Heras) well braced by attachment to scaffold pole uprights driven firmly into the ground. Should any alternative method of barrier construction be proposed, should any alternative method of barrier construction be proposed, the design should be approved by the local planning authority.
- 3.9.2 BS5837:2012 figure 2 recommends a default specification for protective barrier. This is a weld mesh panel design, mounted upon a well braced scaffold framework. This is perfectly adequate for this site where there are to be areas of high intensity development. All tree protection fence should be erected before any works start on site whatsoever.

3.10 Demolition & Groundworks

- 3.10.1 To ensure damage does not occur to trees highlighted for retention, tree protection fencing must be erected prior to ANY plant machinery entering site whatsoever. No special demolition procedures need be observed on this site, other than respecting the tree protection fencing.

3.11 Construction footprint and permanent hard surfaces within RPAs

- 3.11.1 BS5837:2012 states at section 5.3.1: 'The default position should be that structures (see 3.10) are located outside the RPAs of trees to be retained. However, where there is an overriding justification for construction within the RPA, technical solutions might be available that prevent damage to the tree(s) (see Clause 7). If operations within the RPA are proposed, the project arboriculturist should:
- a) demonstrate that the tree(s) can remain viable, and that the area lost to encroachment can be compensated for elsewhere, contiguous with its RPA.
 - b) propose a series of mitigation measures to improve the soil environment that is used by the tree for growth.'
- 3.11.2 It is confirmed that there is no incursion by proposed construction footprint within the RPAs of trees identified for retention.
- 3.11.3 A 1.8m off-set has been allowed for scaffold working room between proposed units and trees nos. T4 and T8. Potential impact caused by foot traffic and associated works can be mitigated using ground protection as specified in BS5837:2012 section 6.2.3. To ensure the ongoing survival of the retained trees, this is detailed in the Arboricultural Method Statement and indicated on the Tree Protection Plan where required. This ground protection will be installed as part of the scaffold infrastructure.

3.12 Shade and future pressure to prune

- 3.12.1 The site layout has been assessed in terms of shading and future pressure to prune. Given the orientation of the site, and the relationship between the proposed buildings and the retained trees, the juxtaposition is viable for long-term tree retention, and it is considered that shading by trees is unlikely to be a concern to future residents. As a result, it is considered unlikely that there would be any undue pressure to remove trees, or excessively prune from any future occupants.

3.13 Services

- 3.13.1 It is fundamental to tree protection that infrastructure design is sensitively approached, as trenching close to trees may damage roots and affect tree health and stability. Detailed service design has not been provided at the time of writing. The Tree Protection Plan, showing the constraints posed by retained trees will be passed to the infrastructure engineers to inform their design, ensuring that all services avoid areas of potential conflict. As per BS5837:2012 Figure 1, once further details become available as part of the detailed/technical design for the site, the TPP and AMS will be revised to incorporate these details for services for inclusion in the Tender documentation.

3.14 Levels and Landscaping

- 3.14.1 Full details of any changes in ground levels on site remain to be finalised. Any alterations to levels close to trees may damage roots and affect tree health and stability. Unless no-dig methodology is proposed for installation of surfaces within RPAs the original levels in these areas must be noted, retained, and integrated into the engineering design of the site. Landscaping operations within the RPAs of retained trees must be carried out in a sensitive manner and be subject to a detailed method statement and arboricultural supervision.

3.15 Boundaries

- 3.15.1 All plot boundaries will need to be designed, positioned, and installed to avoid damage to retained trees. When within RPAs, this will include hand excavation of all post holes, and the lining of any post holes with a non-porous membrane to stop leachates from the concrete damaging tree roots.

4. Arboricultural Method Statement

**TO BE READ IN CONJUNCTION WITH THE APPENDED TREE PROTECTION
PLAN REFERENCE: PRI20989-03**

4.1. Phasing of operations for tree protection

4.1.1. Implementation of tree protection measures on the site must be carried out in the following order

- 1) Tree removals and tree surgery
- 2) Line of tree protection fence to be set out to node points by surveyor
- 3) Accurate erection of tree protection fence and ground protection
- 4) **Pre-commencement site meeting with Local Authority Tree Officer, site manager and groundworkers.**
- 5) Site accessible to construction/demolition traffic
- 6) Demolition/site clearance
- 7) Construction
- 8) Removal of tree protection fencing
- 9) Remedial tree surgery (if required)

4.1.2. The above phasing must not be changed without approval from the project arboriculturist and agreement with the Council.

4.2. Restrictions within tree protection areas

4.2.1. Inside the exclusion area of the fencing, the following shall apply:

- No mechanical excavation whatsoever
- No excavation by any other means without arboricultural site supervision
- No hand digging without a written method statement having first been approved by the project arboriculturist.
- No lowering of levels for any purpose (except removal of grass sward using hand tools)
- No storage of plant or materials
- No storage or handling of any chemical including cement washings
- No vehicular access
- No fire lighting

4.2.2. In addition to the above, further precautions are necessary adjacent to trees:

- No substances injurious to tree health, including fuels, oil, bitumen, cement (including cement washings), builders' sand, concrete mixing and other chemicals shall be stored or used within or directly adjacent to the protection area of retained trees
- No fire shall be lit such that flames come within 5m of tree foliage.

4.3. Avoiding damage to stems and branches

- 4.3.1. Care shall be taken when planning site operations in proximity of retained trees to ensure that wide or tall loads, or plant with booms, jibs, and counterweights, can operate without encountering retained trees. Such contact can result in serious injury to them and might make their safe retention impossible.
- 4.3.2. Consequently, any transit or traverse of plant in proximity of trees shall be conducted under the supervision of a banksman, to ensure that adequate clearance from trees is at all times maintained. In some circumstances, it may be impossible to achieve this without pruning works known as 'access facilitation pruning'.
- 4.3.3. Access facilitation pruning shall be kept to the barest minimum necessary to facilitate development and shall be carried out in strict accordance with the guidance below (Tree Surgery). Under no circumstances shall construction personnel undertake any tree pruning operations.

4.4. Tree protection fencing

- 4.4.1. The Tree Protection Plan (see the latest revision of: PRI20989-03) shows the alignment of Tree Protection Fencing (TPF) which is to be installed prior to any of the following taking place:
- Demolition
 - Plant and material delivery
 - Soil stripping
 - Utility installation
 - Construction works
 - Landscaping
- 4.4.2. Stages for installation of TPF:
- 1) Hand clearance of any vegetation to allow clear working access.
 - 2) Setting out of fencing points
 - 3) Fencing erected
 - 4) Site accessible to demolition/construction traffic
- 4.4.3. To ensure accuracy and avoid future costly adjustments, the Tree Protection Fence must be set out by a surveyor with all node points being marked clearly on site for the fencing contractor to work to.
- 4.4.4. Once erected, all TPF will be regarded as sacrosanct, and will not be removed or altered without prior recommendation by the project arboriculturist and approval of the local planning authority.
- 4.4.5. The typical TPF construction is suitable for areas of high intensity development, and shall comprise of interlocking weld-mesh panels, well braced to resist impacts by attachment to a scaffold framework that is set firmly into the ground. A detailed specification can be found on the TPP.

4.5. **Site storage, parking, welfare facilities**

- 4.5.1. The site will require provision for; site storage, contractor parking, welfare facilities, temporary services/drainage, material drop of points, etc.
- 4.5.2. No details of these provisions are available at the time of writing of this report.
- 4.5.3. None of the above provisions will be sited within RPAs of retained trees without the input or the project arboriculturist and the consent of the Local Authority.

4.6. **Ground Protection (pedestrian movement)**

- 4.6.1. The following methodology will be used to provide ground protection for pedestrian movement within RPAs in the areas indicated on the Tree Protection Plan.
- 4.6.2. Where directly adjacent to proposed buildings, an additional layer of scaffolding will be installed just above ground level to form a suspended walkway (specification given on Tree Protection Plan).
- 4.6.3. Stages for ground protection installation:

No plant machinery to be used around ground protection for whatever reason

- 1) Proposed buildings, and extents of ground protection to be set out to co-ordinates using wooden pegs/ground marking spray paint.
 - 2) **Either:** Where adjacent to buildings where scaffold is to be erected, install additional layer of scaffold at 150mm above existing ground level to form a suspended walkway.
 - 3) **Or:** Install an edging to the ground protection area using 100mm treated timber boards. Each edging board will be fixed in place with two 3-400mm treated wooden stakes driven firmly into the ground.
 - 4) Lay TreeTex T300 non-woven geotextile membrane (or equivalent) within edged ground protection area by hand
 - 5) Cover area with wood chip to a depth of 100mm.
 - 6) If over the course of the development the wood chip rotes or compresses below 50mm this will be refilled to 100mm in depth
 - 7) Area ready for pedestrian access
- 4.6.4. There is to be no-excavation within ground protection area whatsoever. This includes installation of services and associated utilities.

4.7. Tree surgery and removal

- 4.7.1. Trees to be removed to enable the proposed layout are shown with a red dashed canopy outline, and a dashed emblem around the trunk on the Tree Protection Plan ACD reference PRI20989-03.

Tree number	Species	Operation
T5	<i>Malus sp.</i> (Apple)	Remove to facilitate development
T6	<i>Prunus cerasifera</i> (Cherry Plum)	Remove to facilitate development
T7	<i>Cryptomeria japonica</i> (Japanese Red Cedar)	Remove to facilitate development

- 4.7.2. The following surgery works are to be carried out:

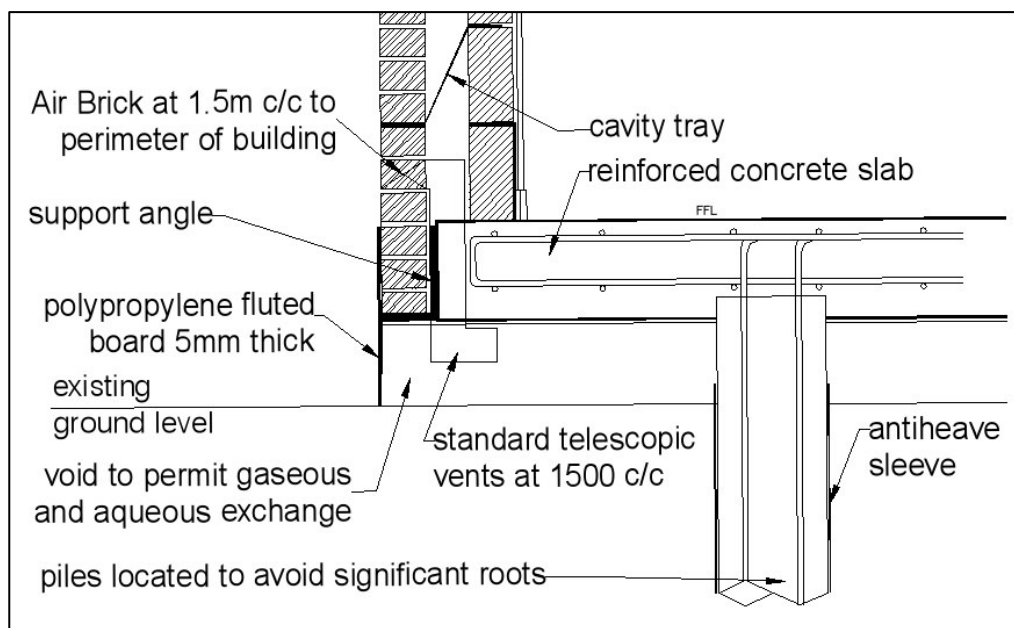
Tree number	Species	Operation
T4	<i>Pyrus sp.</i> (Pear)	Western part of crown to be side pruned by 2.0m to allow for scaffold installation.
T8	<i>Pyrus sp.</i> (Pear)	Western part of crown to be side pruned by 2.0m to allow for scaffold installation.

- 4.7.3. All trees to be removed are indicated on the Tree Protection Plan with a red dashed crown line and red dashed cross on trunk position.
- 4.7.4. If any further tree surgery works are required, a proposed specification will be submitted to, and approved by Haringey the Local Planning Authority before any works are carried out.
- 4.7.5. All work will be carried out in accordance with BS 3998:2010 Recommendations for Tree Work, industry best practice and in line with any works already agreed with the Council.
- 4.7.6. The tree surgery contractor is responsible for carrying out any relevant health and safety risk assessment, and insurance, prior to any work being carried out.

- 4.7.7. The statutory protection afforded by the Wildlife and Countryside Act and Countryside and Rights of Way Act will be adhered to. If further advice is required, particularly if bats are discovered during tree work, it will be obtained from Natural England or other competent persons and recommendations adhered to.
- 4.7.8. The stumps of any trees removed from within the Construction Exclusion Zone or the RPAs of retained trees will be either; cut flush to ground level and left in situ or ground out using a stump grinder. They will not be winched out.
- 4.7.9. All operations shall be carefully carried out to avoid damage to the trees being treated or neighbouring trees. No trees to be retained shall be used for anchorage or winching purposes.

5. 'No-dig' building construction

- 5.1.1. The following section has been added to address comments from the LPA tree officer.
- 5.1.2. Proposed structure to be installed as per engineers approved specification.



Indicative section of no-dig construction

- 5.1.3. Stages for construction:
- 1) Contact project arboriculturist to hold pre-start site meeting and 'toolbox' talk before starting work
 - 2) Dismantle TPF and re-erect in secondary location as shown on TPP
 - 3) TPF to be taken down only when commencement of work is imminent
 - 4) Grass sward to be removed as necessary using hand tools or low ground-pressure plant (e.g. Bobcat or similar).
 - 5) Excavation to establish root free sites for piles or pads. To be carried out by hand or with an air excavation tool.
 - 6) Piles installed using mini-rig with very low ground pressure: rig must be approved for use by project arboriculturist.

- 7) Void form material installed.
- 8) Slab base cast onto void form material.
- 9) Void form material removed to create void under slab
- 10) Remaining construction built on slab with no further excavation.
- 11) TPF to be re-erected in secondary position.

1.1.1. This specification must be designed to meet the following performance criteria:

- Construction will be above current ground (removal of grass sward/leaf litter by hand only).
- It will provide adequate resistance to applied loads, avoiding compaction of the soil.
- Provision will also be made for resistance to or tolerance of deformation by tree roots
- Allowance will be made for oxygen diffusion according to seasonal demand
- Water throughput to meet seasonal demand will also be possible (can be achieved by redirection of captured rainwater into hand dug land drains)

1.1.2. Any supports (such as a pile and beam construction may require) will be sited around any significant root masses. Sensitive air excavation prior to design will identify ideal locations.

1.1.3. Such techniques, for example: pile and beam foundations, must be designed to cause minimal impact to the trees root system. This will include building above the current soil grade and using floating or cantilevered floors within the structure.

1.1.4. No plant machinery can be sited within the RPA. The use of back-acters or diggers to deposit construction materials within the area is acceptable, provided this can be achieved without causing damage to the trees canopy, and only under arboricultural supervision. The exception to this rule is when the use of piling rigs is required. In most cases it will not be possible to site a normal sized rig under the trees canopy and a 'mini rig' will be required. To facilitate use of such a rig within the RPA without causing soil compaction, ground protection must be used. This can be in the form of large metal plates or trackway placed on a substantial compressible layer (for example: woodchips).

1.1.5. Arboricultural supervision will be employed during all work within the RPA

1.1.6. Contamination of the soil by fuel and lubricant leaks must be avoided at all cost. If such a situation arises the project arboriculturist must be notified to assess the situation and prescribe remedial measures.

5.2. Soft landscaping within RPA

- 5.2.1. All landscaping and associated ground preparation within exclusion zones will be carried out sensitively to ensure root damage is mitigated as much as is practicable. At no time is any heavy plant to be used within any protected area. Removal of existing vegetation will be carried out by hand, turf may be removed using a mechanical turf stripper or by hand.

Turfing

- 5.2.2. Stages for turfing gardens and open spaces:

No plant machinery¹ to be used in the area for whatever reason

- 1) Remove TPF to allow access to area.
- 2) Do not reduce any high spots or excavate in any way.
- 3) Existing poor-quality turf may be removed with a turf stripper.
- 4) Use good quality topsoil to level any low-lying areas and hollows, and provide a fine tilth to lay turf on. This imported soil must not result in a level increase of more than 100mm in any area.
- 5) Import turves by hand in wheelbarrow
- 6) Lay turves

Planting

- 5.2.3. Should the soil be compacted or have a poor structure which may hinder the development of any new planting, soil decompaction techniques may be used upon consultation with the project arboriculturist.

- 5.2.4. Stages for planting within tree protection areas:

No plant machinery to be used in the area for whatever reason

- 1) Remove TPF to allow access to area.
 - 2) Remove existing vegetation by hand, turf may be removed using a mechanical turf stripper.
 - 3) Do not reduce any high spots or excavate in any way.
 - 4) Import good quality topsoil by hand (with wheelbarrow) into area.
 - 5) Level to a depth of no more than 100mm with hand tools
 - 6) Dig individual planting pits for each plant by hand (including hedging which must not be trench planted)
 - 7) Any mulch should also be imported and spread by hand.
- 5.2.5. No works will be carried out within any protected areas if the soil moisture is of a level likely to allow compaction to occur.

¹ Including rotovators

5.3. Installation of boundary fencing within protected areas

5.3.1. Stages for installing wooden fence posts:

No plant machinery to be used in the area for whatever reason

- 1) Contact project arboriculturist to hold pre-start site meeting and 'toolbox' talk before starting work.
- 2) Remove TPF to allow access to area.
- 3) Dig post holes using hand tools, avoiding damage to the protective bark covering larger roots. Roots smaller than 25mm diameter may be pruned back using either secateurs or a hand saw, leaving a clean cut.
- 4) Damage or severance of roots above 25mm diameter must be avoided. If roots of this size are discovered, the hole should be relocated. If there are a large number of such roots it may be necessary to relocate the hole by half a fence panels length and adjust the fence panels accordingly.
- 5) Line hole with non-porous lining, for example durable polythene bag.
- 6) Insert post and fill post hole with concrete to ground level.
- 7) Trim polythene to ground level

Andrew Bigg *CertArb (RFS)*
Arboriculturist
17 February 2020

Revised by CC 28/06/22: -

- Relocation of Tree Protection Fencing back to enable 2 m width for scaffold installation and ground protection in the enlarged footprint by T4.
- Recommendations for specialist foundations such as pile and beam in RPA of T4.
- Pruning to crowns of T4 and T8 due to enlarged footprint.

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APPENDIX 1: SUMMARY OF CATEGORIES BS5837:2012

BS5837:2012 Table 1 - Cascade chart for tree quality assessment			
Category and definition		Criteria (including subcategories where appropriate)	
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>	
	1 Mainly arboricultural quality	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
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years		Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g., veteran trees or wood-pasture)	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
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm		Trees with material conservation or other cultural value	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

SITE: Almshouses, Edmansons Close, Tottenham
 CLIENT: The Drapers Almshouse Charity
 DATE: January 2017

SURVEYOR: A Bigg

TAGGED? No

APPENDIX 2: TREE SCHEDULE

No.	Name	Ht (crown)	Dia (stems)	Canopy spread N E S W				Life stage	ERC	Comments & preliminary recommendations			BS Cat
T1	<i>Acer platanoides</i> (Norway Maple)	8(1)	150,150,150,100(4)	3	3	3	3	SM	20+	Tree of moderate quality but of reduced value due to small size.			C2
T2	<i>Taxus baccata</i> (Yew)	10(0.5)	450(1)	5	4.5	4.5	4.5	SM	40+	Tree of high quality and value.			A2
T3	<i>Quercus rubra</i> (Red Oak)	10(0.5)	230,310(2)	5	4	5	6.5	SM	10+	Twin-stemmed individual of reduced physiological condition. Dieback in upper canopy. Little branch growth in former season.			C2
T4	<i>Pyrus communis</i> (Common Pear)	12(1)	470(1)	6	5	5.5	5.5	SM	20+	Tree of moderate quality and value. Considerable build-up of garden waste around base of tree.			B2
T5	<i>Malus</i> (Apple)	7(1.5)	270,160(2)	6	6	6	6	SM	10+	Small domestic fruit tree. Tree of moderate quality but of reduced landscape value having views currently restricted to the Almshouses.			C2
T6	<i>Prunus cerasifera</i> (Cherry Plum)	7(1.5)	150(3)	2	2	2	2	SM	10+	Small tree of little quality or value.			C2
T7	<i>Cryptomeria japonica</i> (Japanese Red Cedar)	9(0.5)	350(1)	2	1.5	1.5	1.5	SM	40+	Fast growing non-native conifer			C2
T8	<i>Pyrus communis</i> (Common Pear)	12(1)	470(1)	6	5	5.5	5.5	SM	20+	Off-site tree inaccessible so dimensions estimated.			B2
G1	<i>Tilia X europaea</i> (Common Lime)	6(5)	350(1)	1	0.5	0.5	0.5	SM	20+	Diameter is estimated average. Pollarded individuals growing on plot boundaries. Trees have been pollarded at 5m with average regrowth height of 1m. Of some landscape value.			C2
T9	<i>X Cupressocyparis leylandii</i> (Leyland Cypress)	5(0)	540(1)					1, 1, 1, 1	SM	20+	Topped @ 3.		C2
T10	<i>Prunus avium</i> (Wild Cherry)	4.5(1.5)	180(1)					1.5, 1.5, 1.5, 1.5	Y	40+			C2

Notes: **Dia (stems):** trunk diameter in mm at 1.5m above ground level (number of stems) | **HT (crown):** Tree height (crown clearance) | **Life stage:** **Y:** Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)). **SM:** Semi mature (recently planted and yet to attain mature stature; up to 25% of attainable age.). **EM:** Early mature (almost full height, crown still developing and seed bearing; up to 50% of attainable age.). **M:** Mature (full height, crown spread, seed bearing; over 50% of attainable age.). **OM:** Over mature (full size, die-back, small leaf size, poor growth extension.). | **FSB:** First significant branch (& compass bearing) | **ERC:** Expected remaining contribution in years- <10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment.) | **BS Category:** Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed descriptions.

SITE: Almshouses, Edmansons Close, Tottenham
CLIENT: The Drapers Almshouse Charity
DATE: January 2017

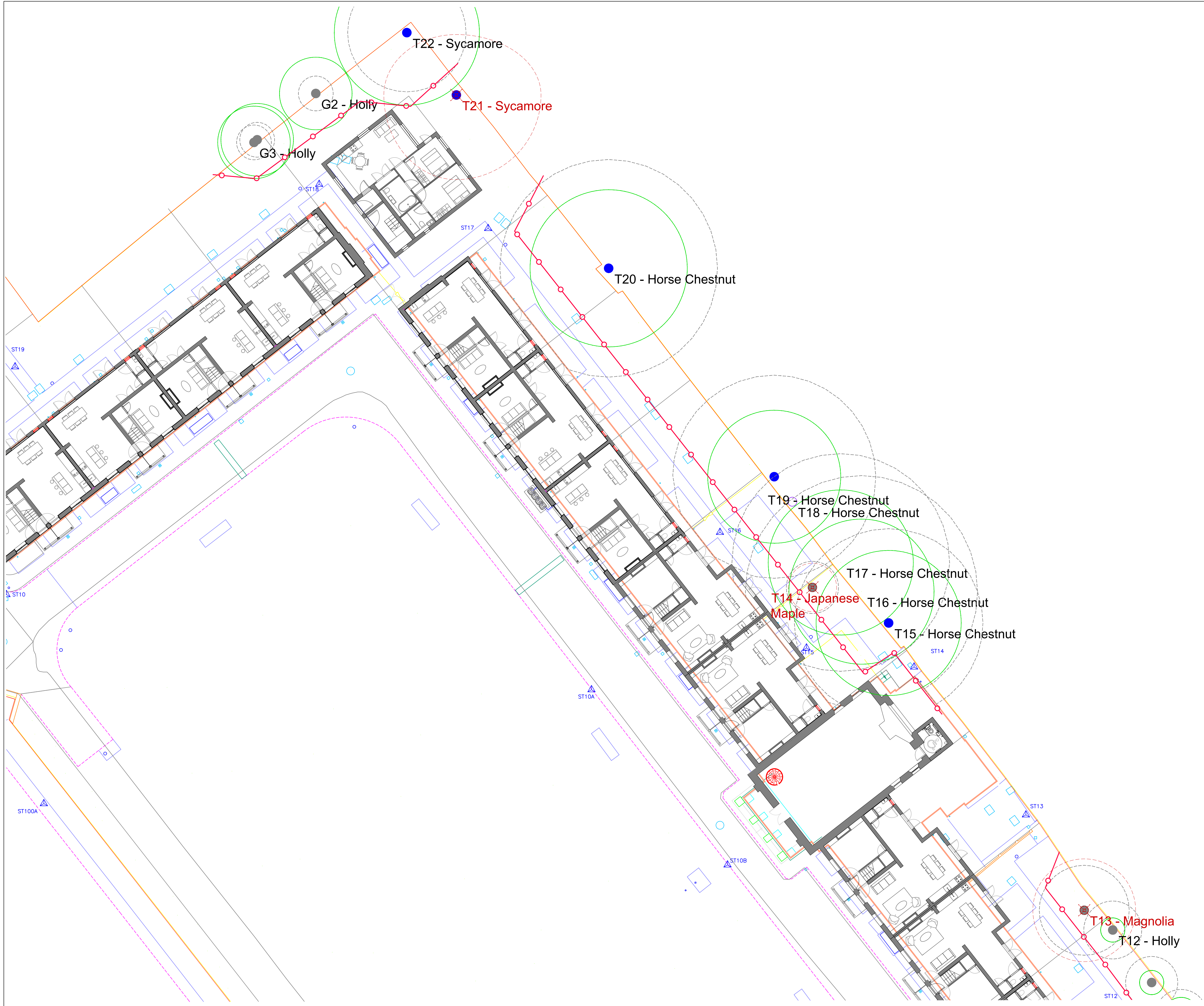
SURVEYOR: A Bigg

TAGGED? No

No.	Name	Ht (crown)	Dia (stems)	Canopy spread N E S W	Life stage	ERC	Comments & preliminary recommendations		BS Cat
T11	Ilex aquifolium (Holly)		4.5(0.5)	180(1)	1, 1, 1, 1	SM	40+		C2
T12	Ilex aquifolium (Holly)		3.5(1)	200(1)	1, 1, 1, 1	SM	40+		C2
T13	Magnolia (Magnolia)		4.5(1.5)	310(1)	4.25, 4.25, 4.25, 4.25	SM	40+		B2
T14	Acer palmatum (Japanese Maple)		6(2)	150,100(2)	2, 2, 2, 2	Y	40+		C2
T15	Aesculus hippocastanum (Horse Chestnut)		17(2)	650(1)	6, 6, 6, 6	M	20+	Diameter measured over ivy.	B2
T16	Aesculus hippocastanum (Horse Chestnut)		17(2)	800(1)	6, 6, 6, 6	M	20+	Diameter measured over ivy.	B2
T17	Aesculus hippocastanum (Horse Chestnut)		17(2)	750(1)	6, 6, 6, 6	M	20+	Diameter measured over ivy.	B2
T18	Aesculus hippocastanum (Horse Chestnut)		0	0	0	0	0	Dead. Nesting Parakeets.	0
T19	Aesculus hippocastanum (Horse Chestnut)		18(2)	700(1)	5.5, 5.5, 5.5, 5.5	M	20+	Diameter measured over ivy.	B2
T20	Aesculus hippocastanum (Horse Chestnut)		18(2)	750(1)	6.5, 6.5, 6.5, 6.5	M	20+	Diameter estimated.	B2
T21	Acer pseudoplatanus (Sycamore)		18(3)	420,350,300,430(4)	5, 7, 7, 6	M	20+	Tight compression forks at base. Included bark.	B2
T22	Acer pseudoplatanus (Sycamore)		18(5)	510(1)	6, 6, 6, 6	M	20+		B2
G2	Ilex aquifolium (Holly)		4(0.75)	120(1)	3, 3, 3, 3	Y	40+		C2
G3	Ilex aquifolium (Holly)		4(1)	120(1)	5, 5, 5, 5	Y	40+		C2

Notes: **Dia (stems):** trunk diameter in mm at 1.5m above ground level (number of stems) | **HT (crown):** Tree height (crown clearance) | **Life stage:** **Y:** Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)). **SM:** Semi mature (recently planted and yet to attain mature stature; up to 25% of attainable age.). **EM:** Early mature (almost full height, crown still developing and seed bearing; up to 50% of attainable age.). **M:** Mature (full height, crown spread, seed bearing; over 50% of attainable age.). **OM:** Over mature (full size, die-back, small leaf size, poor growth extension.). | **FSB:** First significant branch (& compass bearing) | **ERC:** Expected remaining contribution in years- <10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment.) | **BS Category:** Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed descriptions.

APPENDIX 3: TREE PROTECTION PLAN

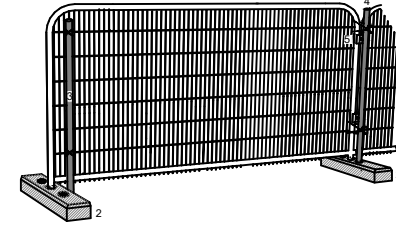


WHY TREE PROTECTION IS NEEDED
1) **Soil compaction kills roots**- caused by plant movement and storage of materials within protected areas.
2) **Trenching severs roots**- many small roots grow within the top 600mm of soil. Even the removal of the top 200mm can cause damage.
3) **Soil pollution kills roots**- Dripping fuel storage or cement washings can contaminate the soil resulting in root death.
4) **Raising & lowering levels kills roots**- the soil used to increase levels can compact the underlying soil (see point 1). Lowering levels will remove roots causing damage to the tree.
5) **Bark and branch damage**- bark removal and branch damage can allow disease and fungi into the tree.
The impact of any of the above can take years to show- trees can have huge reserves of food and water.

LEGEND

TREE PROTECTION FENCING & EXCLUSION ZONE
All fencing shall be installed prior to any plant activity on site whatsoever, including: demolition, utility installation, groundworks, and soil stripping

Once erected, all TPE will be regarded as sacrosanct, and will not be removed or altered without prior recommendation by the project arboriculturist and approval of the local planning authority. The TPE shall consist of interlocking weld-mesh panels (e.g. Heras), well braced by attachment to scaffold pole uprights driven firmly into the ground. Should any alternative method of barrier construction be proposed, consultation with the project arboriculturist will be obtained to clarify the efficacy of the revised design prior to informing the local planning authority and obtaining their consent. Once the exclusion zone has been protected by barriers and/or ground protection, construction work can commence. All weather notices may be erected on the barriers.



1: Weldmesh (e.g. Heras) Panels; 2: Concrete or rubber ground blocks
3: Scaffold pole uprights, driven firmly into ground, then secured to panel
4: Uprights driven into ground through future in ground block, then secured to panel. 5: Panels to be interlocked using scaffold clamps

TREE TO BE RETAINED



TREE TO BE REMOVED



A CATEGORY TREE
B CATEGORY TREE
C CATEGORY TREE
U CATEGORY TREE

ROOT PROTECTION AREA (RPA) FOR RETAINED TREES

INDICATIVE SERVICE ROUTE AVOIDING PROTECTION AREAS

SR

RESTRICTIONS WITHIN TREE PROTECTION AREAS

Inside the exclusion area of the fencing, the following shall apply:

- No mechanical excavation whatsoever
 - No excavation by any other means without arboricultural site supervision
 - No hand digging without a written method statement having first been approved by the project arboriculturist
 - No lowering of levels for any purpose (except removal of grass sward using hand tools)
 - No storage of plant or materials
 - No storage or handling of any chemical including cement washings
 - No vehicular access
 - No fire lighting
- In addition to the above, further precautions are necessary adjacent to trees:
- No substances injurious to tree health, including fuels, oil, bitumen, cement including cement washings, builders sand, concrete mixing and other chemicals shall be stored or used within or directly adjacent to the protection areas of retained trees
 - No fire shall be lit such that flames come within 5m of tree foliage

PHASING & MONITORING OF DEVELOPMENT

The arboricultural protection on this site must be carried out in the following order:

- Tree removal and access facilitation pruning
- Accurate erection of tree protection fencing
- Site accessible to construction/demolition traffic
- Demolition/demolition
- Construction
- Removal of tree protection fencing
- Remedial tree surgery

The above phasing must not be changed without approval from the project arboriculturist and agreement with the Council.

The original of this drawing was produced in colour- a monochrome copy should not be relied upon.

0 1 2 3 4 5 10m

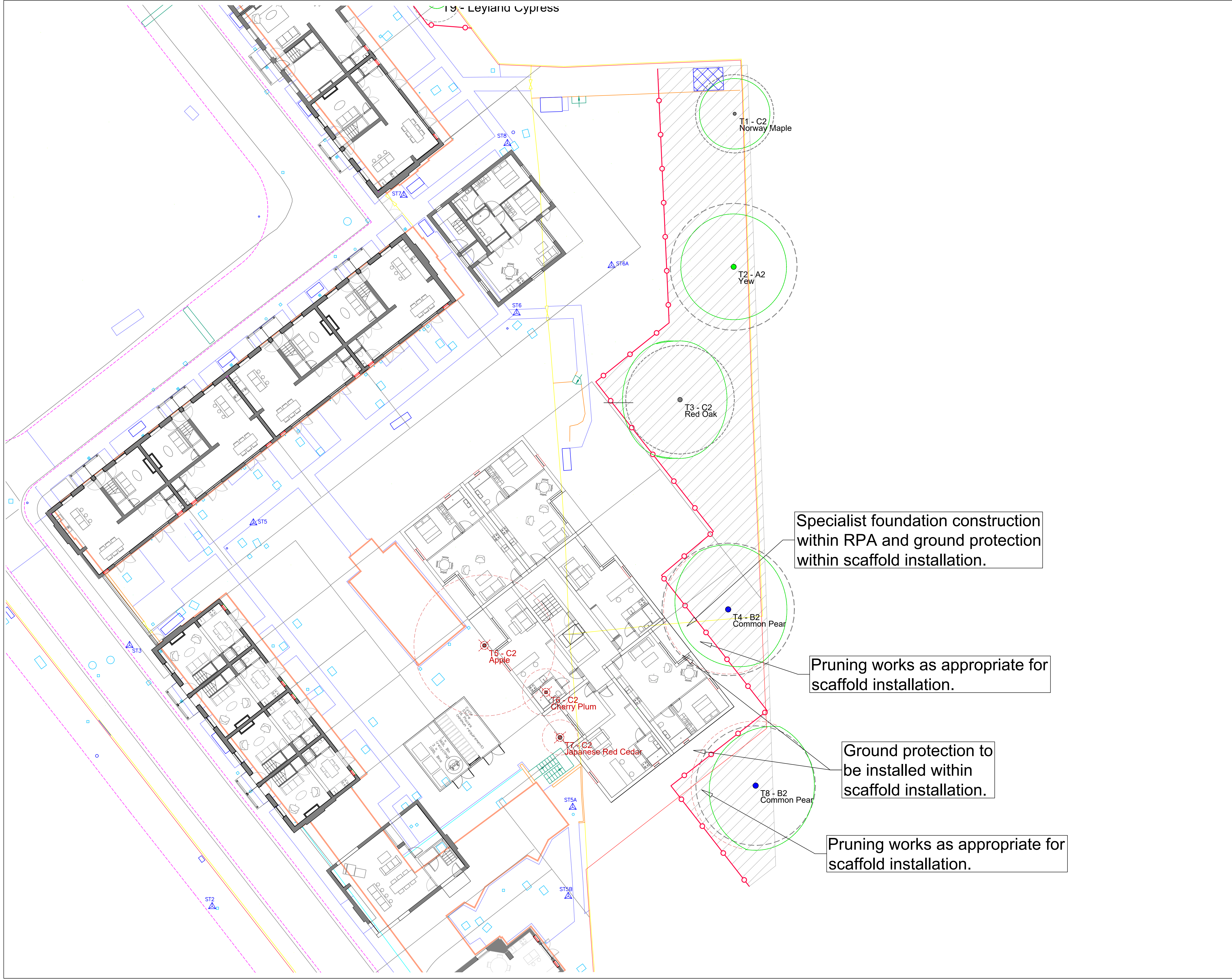
A 29.06.22 Revised layout CC

Rev Date Details Drawn

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scheme: Edmanson Close,
Almshouses, Tottenham
client: Drapers Almshouses
Charity
drawing: Tree Protection Plan
date: February 2020
scale: 1:200@A1 (North)
dwg no: PRI20989-03A
drawn: AJB checked: TRC



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TREE TO BE REMOVED

A CATEGORY TREE
B CATEGORY TREE
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INDICATIVE SERVICE ROUTE AVOIDING PROTECTION AREAS

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A	29.06.22	Revised layout	CC
Rev	Date	Details	Drawn

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scheme: Edmanson Close,
Almshouses, Tottenham
client: Drapers Almshouses
Charity

drawing: Tree Protection Plan
date: February 2020
scale: 1:200@A1 (South)
dwg no: PRI20989-03A
drawn: AJB checked: TRC

Specialist foundation construction within RPA and ground protection within scaffold installation.

Pruning works as appropriate for scaffold installation.

Ground protection to be installed within scaffold installation.

Pruning works as appropriate for scaffold installation.



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