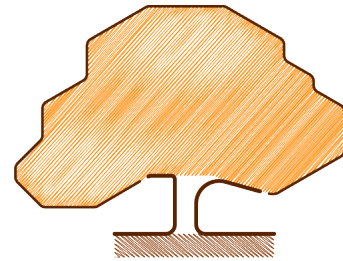


S909-J1-IA-2

REPORT

regarding the impact on trees of proposals for development at
land to the rear of Lynton Grange,
Fortis Green, London N2 9EU



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View of tree 1, adjacent to the site, from the south-east

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1 Instructions

I am instructed by MJP Planning on behalf of clients to make an assessment of tree amenity value and condition of trees at land to the rear of Lynton Grange, Fortis Green, London N2 9EU and of the impact of a proposal for development (demolition of existing garages and redevelopment of the site to provide five residential units with associated parking, cycle parking and refuse stores) on such trees, and to supply an arboricultural methods statement and tree protection plan for use in supporting an application for local planning authority (LPA below) consent. The design and access statement / design summary submitted by Downen Farmer Architects describes the scheme.

2 Executive summary

The impact on public amenity connected to how trees will be affected by the scheme is found to be negligible.

The scheme will require one tree of low quality to be removed. A replacement is proposed.

All retained trees will be easily protected from harm during the project.

3 Introduction

3.1 The environmental role of Local Planning Authorities

LPAs play an important part in the almost continual balancing act that is part and parcel of contemporary democratic government. They regulate development in the interests of the community. Increasingly, the environment plays a role in our lives, and strongly affects our health, both mental and physical. This is typically recognised in planning policy determined by LPAs, and the formal planning guidance published by them. LPAs process planning applications in line with this policy and guidance.

3.2 British Standards

These continue to play a significant role in the quality of our lives in the UK, by defining minimum standards for many products, and making recommendations where precise, exhaustive specifications are not absolutely possible, for example with services.

3.3 British Standard 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'

BS 5837:2012 (the Standard, below) is the fourth version in a series, the first being in 1980. This Standard provides a framework for the valuation, in ornamental terms, of trees, and gives recommendations for their protection on building sites.

3.4 How the Standard is used by an arboriculturist

It is used as a tool by an arboriculturist, who for the purposes of this type of professional activity, is someone who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction. This is the profession which is concerned, in a wider sense, with the care and cultivation of trees for amenity (all the benefits). An arboriculturist, then, uses the Standard:

- a) to assess the value, in terms of amenity, of the trees on and adjoining a particular site, whether such trees are formally protected or not, for example by reason of being in a

Conservation Area or because they are scheduled within a Tree Preservation Order. (Both of these provisions are part of the Town and Country Planning Act 1990, part VIII.);

- b) secondly, to help assess the impact upon the trees of the proposal for development;
- c) lastly, to give ways of protecting retained trees during construction, should the proposal receive planning consent.

3.5 How the arboriculturist prepares tree protection methods

In practice, as advances in materials and techniques are rapid, the arboriculturist does not necessarily specify a precise commercial product, but defines the essential components of methods of demolition and construction which often make use of specialized materials. These may be termed 'tree-friendly' methods, meaning that they have as their focus the well-being of the tree. These appear on the tree protection plan(s) appended, typically titled: 'Tree Retention and Tree Protection Measures', and within the text below.

3.6 Classification of trees

The Standard recommends a way of classifying trees when assessing their potential value in relation to proposed development. Value means (mainly) *visual* value to the general public. It also allows for other values to be considered such as historic or conservation value. Some surveys may not find any trees of one or more categories.

Table 1 describes, as: 'U', a low-value tree; denoted by a **dark red** outline on plans, the shape of the edge of the tree's crown typically more or less concentric to the trunk position.

It also shows 'A', 'B' and 'C', in descending merit:

- 'A' category, **green** crown outline, are trees of high vitality or good form, or of particular visual importance.
- 'B' category, **blue** crown outline, are good trees but may be of slightly poorer form or be not sited as importantly as 'A' category trees.
- 'C' category, **grey** crown outline are trees of no particular merit, but in adequate condition for retention.

A minimum expected safe useful life is also assessed. Please note that a low value tree may have a very long life expectancy. The two factors are only linked in that, for example, a very high value tree cannot also have a very low life expectancy.

3.7 Root protection area

'RPA' below. The RPA is a zone around the trunk of the tree, in which protective measures must be used in order to prevent significant damage to trees.

3.8 Use of appended plans

The appended plans have different applications:

- Plan reference no. S909-J1-P1, shows the spread of the crowns (the upper, leaf-bearing part of trees), and is intended to indicate the relationship of any neighbouring trees to each other. This plan gives a quick reference assessment of value as per section 4, table 1, page 9 of the Standard.
- S909-J1-P2 is the 'tree protection plan' referred to in the Standard (section 3.11). It is colour-coded to indicate where tree-friendly methods are proposed during the overall construction process, which may involve demolition, main construction and landscaping phases.

4 Observations

4.1 Site visit

I visited the property on 21 September 2022 in order to carry out an inspection. Weather conditions were good; they permitted adequate inspection.

4.2 Survey method

I used a tree mallet, spade, diameter tape, laser rangefinder, pocket retractable tape, binoculars, scaling pole, tree data recording software, pen, pencil and paper. No trees were climbed: inspection was from ground level.

4.3 Appraisal identification

My appraisals of observations, discussions and other data are italicised below, in each relevant section and paragraph. This emphasises the clear separation between data and opinion.

4.4 / Screening by trees and shrubs

Some trees listed are visible from Fortis Green to the south of the site. other adjoining public viewpoints.

Certain trees listed are of some significant general public amenity value. Some of these and perimeter vegetation are of strictly local amenity value to owners / users of the site, and to those of adjoining properties. (See cover photo / photos below).

4.5 Statutory constraints

The site is in the administrative area of London Borough Haringey.

The site stands within the Fortis Green Conservation Area.

There are Tree Preservation Orders on / adjoining the site. No information on TPOs is available on the local authority website.

4.6 Soil assessment

The British Geological Survey (BGS) information for the area indicates that the underlying sub-soil is diamicton, formerly known as boulder clay.

Topsoil within the site appears to derive from the underlying subsoil. I saw no evidence of soil-stripping, trenching, or level-alteration in the recent past, nor did I observe any apparent compaction or drainage problems.

4.7 Measurements on site

Tree heights estimated by scaling pole.

Tree diameters measured as per the Standard, Annex C.

Tree spreads on the plans below are approximately to scale, determined on site, typically by laser rangefinder, direct measurement, pacing, sighting in relation to site features and architect-supplied plan data.

4.8 Tree data table

This is the core of the report in terms of site observations. In all cases, in the absence of negative comment below on health/vitality and structure of trees, normal physiological

condition (health) and structural condition applies. Unless stated otherwise, 'tap tests' for the sonority typically associated with decay in trees were found to be normal. Unless stated otherwise, no signs of protected species were noted; for example, potential bat roost features (PRFs below). Where no height to lowest branch figure is given, the information appears completely irrelevant to planning determination. The matter of clearance above ground level is discussed under the individual tree entries if this is relevant to planning determination. (For information on other data in the columns, see section 3 above.)

Tree number	Tree type	Height (m)	Height to lowest branch (m)	Stem diameters (mm)	Radius of RPA if circle (mm)	RPA (m ²)	Comments	Life expectancy (years)	Assessed BS5837 value category
1	sycamore	10		300, 200, 200	4947	76.9	Of some screening value between the residential garden to the north and the site.	40+	B1
2	Lawson cypress	10		200	2400	18.1	Of some screening value between residential garden to the north and the site. Likely to be vulnerable to <i>Phytophthora lateralis</i> .	10+	C1
3	Lawson cypress	10		200	2400	18.1	Dead, likely from <i>P. lateralis</i>	<10	U
4	Lawson cypress	10		200	2400	18.1	Of some screening value between residential garden and site. Likely to be vulnerable to <i>P. lateralis</i>	10+	C1
5	common hornbeam	9		650	7800	191.1	No access; trunk diameter notional but appears to be substantial. Screening value	40+	B1
6	English oak	14	8.0	750	9000	254.5	No access. Estimated trunk diameter. Considerable screening value although few lower branches. The lowest branch over the site is about 8m +GL (above ground level).	40+	B1
7	Douglas fir	7	4.0	220	2640	21.9	Dominated by tree 6	20+	C1
8	Douglas fir	3	4.0	120	1440	6.5	Dominated by tree 6	20+	C1
9	holm oak	6		190, 140	2832	25.2	Poorly sited for growth to maturity, sandwiched between slab retaining wall and base of boundary fence. Poor form	40+	C1

Tree number	Tree type	Height (m)	Height to lowest branch (m)	Stem diameters (mm)	Radius of RPA if circle (mm)	RPA (m ²)	Comments	Life expectancy (years)	Assessed BS5837 value category
10	common beech	9		350	4200	55.4	A little screening value: crown barely overhangs the site	20+	C1
11	common lime	20		600, 550	9767	299.7	Pollarded, last perhaps in 2019	20+	C1
12	sycamore	14		480	5760	104.2	Not prominent, but some local screening value	20+	C1
13	silver lime	15		470	5640	99.9	Makes some contribution to the street-scene	20+	B1
14	common beech	12		665	7980	200.1	Make some contribution to the street-scene although somewhat degraded by pruning	20+	B1
15	laburnum	7		395	4740	70.6	Rather insignificant in the landscape	10+	C1
16	silver birch	10		250	3000	28.3	Very unthrifty. Likely badly damaged by drought.	<10	U
17	holm oak	12		1200	14400	651.4	<i>Ganoderma</i> fungal fruiting bracket noted at base but this is typically inconsequential on holm oak trees. Rather heavily reduced, 2022.	40+	B1
18	lime	14		780	9360	275.2	Growing within the hedge; trunk diameter estimated. Significant contribution to the street scene	20+	B1

4.9 Photos

Note on photo labelling- the numeral colour matches the colour used for the four BS 5837:2012 value categories (see 3.6 above)







Trunk of 16 - bark exudations noted



Tree 17, a substantial tree adjoining the site access to the south

5 Arboricultural impact assessment (AIA)

5.1 RPAs – modifications to shape

I carried out an assessment as per the Standard (section 4.6.2) in connection with the plotting of the RPAs of all trees. This section requires that site conditions such as location of various structures, the internal support mechanisms of various trees, etc., are taken into account in determining the likely position of roots. Adjoining structures have been noted in this respect. Where applicable, the modified-shape RPA, of equivalent area, has been plotted on the plans appended (shown as shapes bounded by an orange line). The subsoil is likely to be clay, a shrinkable medium.

Adjoining structures have likely affected the RPAs to some degree, dependent on tree characteristics, as indicated on plans. This factor is of relevance in connection with this site. The shapes of the root systems of trees have probably not been affected by subsoil type. These factors have some significance in connection with proposed tree protection, which is straightforward.

5.2 Roots and the design

It is usual for discussions between the arboriculturist and architect to take place at an early stage following the arboriculturist's site survey. Modifications, minor or major, to the proposals as first received are typically discussed, with a view to promoting tree retention and health. I discussed with the architect certain features of the scheme in this case. The outcome of these discussions (modifications to layout) is incorporated in the proposal considered here.

5.3 The static root plate (SRP) compared with RPA

SRP is an abbreviation for static root plate, (Mattheck, 1991, etc.) and means the structurally significant roots nearest the trunk: the principal roots that hold the tree upright. This is derived from a radial dimension based on trunk diameter near ground level. The RPA is a guide to where physiologically significant roots, those necessary for, primarily, water uptake, are likely to be located. No encroachment on the SRP of any retained tree is entailed.

5.4 Assessment of SRP/RPA encroachment

No encroachment on the SRP of any retained tree by proposed dwellings is entailed. Minor encroachment on the RPA of one retained tree is entailed, as analysed in the table below:

Tree no.	Tree	RPA area (m ²)	Area affected (m ²)	% affected	Notes
6	English oak	254.47	11.95	4.70%	proposed structure

In view of the above I conclude that no special footings are needed from the arboricultural perspective. In this case all trees to be retained can be adequately protected by exclusion fencing and tree-friendly methods as proposed below to reduce impacts on root systems of retained trees.

5.5 Hard surfacing

The Standard (section 7.4.2.3) restricts permanent hard surfacing of any existing unsurfaced ground within the RPA of trees to be retained to 20% of the unsurfaced portion of the RPA. Some surface change to the RPA around various trees is proposed. However, this is not in the form of loss of soft landscape areas but rather the replacement of existing superstructures and foundations with new. I propose these RPAs are managed during demolition and construction and any changes controlled by methods proposed below. New materials and

methods have been developed and continue to be developed that assist in promoting the successful retention of trees in association with constructed features. It should be noted that the Standard (section 7.4.2) supports 'up and over' methods of construction where appropriate. The principle and practice of this method is outlined in 'The Use of Cellular Confinement Systems Near Trees: A Guide To Good Practice', Arboricultural Association Guidance Note 12 (September 2020). I have developed and used similar methods for many years within my company, engaging with the manufacturers and designers of the materials as these became available. This has facilitated the retention of mature trees very close to construction activities.

As the changes to hard surfacing do not involve root cutting, and porous material allowing roots to respire is specified in methods below, I see no basis to conclude that the trees will suffer harm, if these methods are followed carefully.

5.6 Perception of trees by building users

The majority of the significantly-sized retained trees are located mainly to the north of the proposed dwellings. This is an essentially favourable orientation: it means that the dwellings will typically be well lit by both direct sunlight and sky factor during all of the year. Part only of the north-eastern unit's garden will be shaded from both direct sunlight and experience reduced sky factor (the light that emanates from the sky) during all or much of the year; the western part of the garden will not be. It is typical for internal layouts to be designed to minimise shading inconvenience. Gardens that are part-shaded by trees provide typically welcome flexibility through the seasons in terms of use. Shade is by no means a negative factor, but viewed reasonably, an asset.

The existing structure's position in relation to the existing trees has not generated any obvious or reported requirement to prune trees inappropriately. In view of the above I conclude that shading by and perception of trees has been considered (as the Standard (sections 5.3.4 and 5.6.2.6) recommends) and appear not to be negative factors.

5.7 Superstructure and tree appraisal – tree pruning

In accordance with the Standard, section 4.4.2.5 (f), I note from the drawings supplied that no significant encroachment by the superstructure on the crowns of retained trees will occur. I noted that the form of the trees is such that only minor and/or low branches require pruning. If this is in accordance with the schedule, it will have no significant effect on the form or public amenity value of the trees.

The pruning required can easily be addressed by tree surgery in accordance with the Standard (section 5.3.4 (c) NOTE 2, section 7.7.3, etc.), and is within the bounds of good arboricultural practice.

(See British Standard 3998:2010 'Tree work – Recommendations'.) A schedule for the use of a contractor appears within the AMS below.

5.8 Access clearance

I note from my site visit and the plans received that no retained tree conflicts with pedestrians, construction traffic, nor end-user vehicles.

5.9 Tree removal considerations in the Standard

In conserving trees on development sites, expected best practice is as in the Standard (section 5.1.1):

“Certain trees are of such importance and sensitivity as to be major constraints on development or to justify its substantial modification: attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal.”

Thus, implicit in the process are decisions about tree removal. This is often perfectly reasonable and provides space for new trees. One tree is proposed removed.

The above advice appears to have been considered in formulating proposals for development in this case.

5.10 Replacement planting – mitigation for proposed tree loss

Please see tree data table above for comments on the individual tree (9) proposed for removal.

See plan S909-J1-P2 v1 for the locations of proposed new trees:

A = *Malus* ‘Evereste’, 16-18cm girth

B = *Phillyrea latifolia*, 12-14cm girth, 65L pot

It is typical for landscaping to be a reserved matter consequent to any grant of consent and for a full landscaping scheme to detail tree, shrub and herbaceous planting etc. I note that a full landscaping scheme has been prepared by others.

In this case it is proposed that the strategic tree planting in terms of precise species and cultivar is adopted in any such scheme.

The soil type indicated by BGS data and soil condition as appraised places no significant constraint on species selection for tree and other planting. Overall, appropriate replacement tree planting will play some minor role in providing for future local amenity.

5.11 Policy compliance

The LPA website was searched for relevant policy documents and supplementary planning documents (SPDs). I am aware of

- [The London Plan](#)
- [Strategic Policies](#)
- [Development Management Policies](#)
- [Sustainable Design & Construction SPD](#)
- (Fortis Green does not have a current adopted appraisal.)

It is ultimately for planners to determine compliance with planning policy.

One tree is proposed removed. I submit that the proposals in this report if observed, and the tree protection methods, will, if implemented, facilitate fair compliance with any such relevant policies.

Tree protection in accordance with the principles of British Standard 5837:2012 are proposed. I submit that the proposals in this report if observed, the tree protection methods, and the proposed planting, will, if implemented, facilitate fair compliance with any such relevant policies.

6 Conclusion

6.1 Summary

I conclude that the impact on trees of the scheme proposed, subject to implementation of the arboricultural method statement's contents, will, overall be negligible.

6.2 Note to LPA

I invite the LPA to consider, if it is minded to grant consent, the incorporation of the specific *order of implementation* of the **Arboricultural method statement** below into any Conditions applied. Such measures are likely to maximise tree protection. Finalised details of tree-handling on site during construction is typically a matter requiring the input of a main contractor within CDM regulations, and these matters in practice almost always follow planning consent, as it is typical for no contractor to have been appointed prior. The writer is willing to prepare a Construction Issue version of the AMS in due course.

7 Sources and relevant documents used

- Ground-level inspection
- Supplied plans:
 - ASES Ltd. drg. ref.: A1256-T
 - Downen Farmer Architects drg. ref.: 1073-1073-LYG-PR-GA-00
 - John Davies Landscape drg. ref.: JDL-Lynton_Grange-100L-Landscape Plan

8 Copyright

Copyright of the report above is retained by the writer. It is a report for the sole use of the client(s) named above. It and associated plans may be copied and used by the client and the LPA in connection with the above instruction only. Its reproduction or use in whole or in part by anyone else without the written consent of the writer is expressly forbidden. The AMS below, including schedule of tree work and the plan or plans, may be reproduced to contractors for the purpose of tendering, and for setting out and maintaining tree protection measures on site.

9 Arboricultural method statement (AMS)

9.1 Overview

The methods required involve not only physical arrangements on site but effective administration prior to implementation. Trees that have been the recipients of careful handling during construction add considerably to the appeal and value of the finished development. If conflicts between any part of a tree and the building(s) arise in the course of building works these can often be resolved quickly and at little cost if an arboriculturist is consulted promptly. Lack of such care is often apparent quickly and decline and death of such trees can wreck design aims. It can of course also affect saleability, and reflects poorly on the construction and design personnel involved.

I propose that arboricultural administration takes place as outlined below. Needless to state the MC must fully comply with these proposals for them to be effective. This involves proper initial contact with the retained arboricultural consultant, followed by persisting contact, throughout the contract, until at least late landscaping stage.

9.2 Administration

A. Identification of key personnel in order of responsibility for tree protection on site

Role	Name	Company	E-mail	Mobile	Landline
site manager	TBC	TBC	TBC	TBC	TBC
main contractor	TBC	TBC	TBC	TBC	TBC
architect	Zoe Ingram	Dowen Farmer	zoe@dowenfarmer.com	TBC	020 8058 7997
arboriculturist	John Cromar	John Cromar's Arboricultural Co. Ltd.	johncromar@treescan.co.uk	07860 453072	01582 808020

B. Induction and personnel awareness of arboricultural matters

Prior to commencement a meeting will be held on site between the arboriculturist and the site manager (who will be required to sign the awareness document 9.4 below) and during which meeting all the tree protection methods, materials, order and integration with the build programme will be considered. This document, confirming awareness on the part of personnel of the various items, will be retained for the LPA.

C. Inspection of and supervision schedule for tree protection measures, frequency and methods of site visiting and record keeping

At site possession, the tree protection measures applicable to the works, as detailed in this report will be inspected by the arboriculturist and signed off if compliant. An initial inspection will take place; a monthly inspection will take place routinely; unannounced site inspection may also be carried out. Additionally, the arboriculturist shall attend site as required by architect, or site agent, or the LPA. *All reports on site visits to be copied to the LPA within 5 days of site visit.* These reports to be compiled, and an end of project summary produced, together with any recommendations for future action.

D. Procedures for dealing with variations and incidents

As C above. Additionally, the architect shall inform the arboriculturist of any design variations or variation intention of tree protection; also, the site manager shall inform the arboriculturist if he intends to vary or deviate from the agreed tree protection methods or timing. Action in response to incidents will be commensurate with and appropriate to the nature of any such incident.

E. The order of work on the site, including demolition, clearance and building

As per tree protection methods below

F. How problems will be reported and solved

Any breaches of tree protection measures shall constitute a Tree-Related Incident ('TRI'), a report on which will be copied to architect, client and LPA. A remedial action notice will be served by the arboriculturist, copied to all parties and timescales for remediation completion monitored. *All reports on site visits will be copied to the LPA within 5 days of site visit.* Action in response to incidents will be commensurate with

and appropriate to the nature of any such incident. Any breach of the stipulated timescale for remediation will trigger a further TRI report.

G. How accidents and emergencies involving trees will be dealt with

Dependent on nature of incident; as above; an e-mail with photographic inclusion will be sent by the site agent. The arboriculturist or staff will attend site to appraise the situation and determine remedial action. A TRI report will be issued, as above.

9.3 Implementation on site

It is proposed that the methods specified below are followed in their entirety. Please note that the methods are referenced by various colours, lines and hatches on the tree protection plans appended. The scale of the plans is dependent on the paper size on which any hardcopy is produced.

It is highly important to tree health and vitality that construction activities are carried out strictly in accordance with the tree-friendly construction methods below. It is widely not understood outside the arboricultural profession, for example, that a single traverse of a root protection area by a mechanical excavator can cause significant and permanent damage to trees, even if this is not visible immediately afterward.

N.b. The methods below are intended to be read not only by the instructing client, but also by all others concerned with processing and determining of the application. Following planning approval, the methods are finally intended for full implementation on site by the main contractor or in some cases by a DIY builder. A degree of familiarity with the language of basic building techniques is assumed. I will of course explain any unfamiliar term – see contact details on cover page, and at the end of the report.

9.4 Tree-friendly construction methods and awareness document

Section 9.4 including all the methods below should be printed out; the plans to full scale, and kept readily to hand on site. (To be read and duly completed:) I the undersigned builder / site agent / main contractor have been given a copy of the tree protection measures reproduced below and the plans S909-J1-P1 v1, S909-J1-P2 v1, with which they are to be read. I have studied these tree protection measures on site with the arboriculturist. I have asked questions if I have been unsure about the practicability or safety of any measure. Any queries arising have been resolved. I see no reason why the tree protection should not be implemented as outlined below and undertake to take all reasonable steps within my remit to promote their installation and retention for the duration required, as outlined below.

There are 9no. methods in this set, to be implemented in the order given unless stated otherwise.

PREPARATION / DEMOLITION

Please read with tree protection plan reference S909-J1-P2, appended.

Method 1: SCHEDULE OF TREE WORK

Tree work shall be in accordance with the schedule below, and to BS 3998:2010 'Tree Work - Recommendations', and in accord with spread line marked on plan. Heights are in metres; diameters are in millimetres.

Tree number	Tree type	Height (m)	Stem diameters (mm)	Comments
1	sycamore	10	300, 200, 200	Prune to reduce overhang above the site according to the proposed spread indicated on the plan.
2	Lawson cypress	10	200	
3	Lawson cypress	10	200	
4	Lawson cypress	10	200	
6	English oak	14	750	Crown clean in crown sector overhanging the site. Prune to clear 9m above ground level. (The lowest branch over the site is about 8m +GL).
7	Douglas fir	7	220	Prune to reduce overhang above the site according to the proposed spread indicated on the plan.
8	Douglas fir	3	120	
9	holm oak	6	190, 140	Remove.

NOTES:

- In Conservation Areas, in accordance with TCP Act 1990 Section 211, a formal notification to the LPA is required of intention to prune or remove any trees, the removal of which is not strictly required for the construction proposed to take place. 42 days after formal notification should be allowed before proceeding with the notified work, during which time (and after) the LPA may place a Tree Preservation Order (TPO) on the tree, thus requiring a formal application for any works to living wood.
- If a tree is the subject of a TPO a formal application must be made to the LPA for consent for any work to the living wood of trees, if that work is not strictly required for the construction proposed to take place.
- All tree work should be carried out to BS 3998:2010 'Tree Work - Recommendations'.
- The Wildlife and Countryside Act 1981 protects with certain exceptions all birds and their nests. It is an offence to destroy such nests or take or injure such birds in the course of tree works operations.
- If a tree is a bat-roost, a licence to work on the tree must first be obtained from the relevant Statutory Nature Conservation Organization (in England: Natural England 0845 601 4523.) Acting without a licence is likely to be justifiable only in acute emergencies threatening human life and where all other legally available option such as footpath diversion, fencing and warning signs cannot be applied.
- 'Crown cleaning' – an umbrella term now covered by several separate sections in BS3998:2010 – should be understood to mean: removal of foreign objects (section 7.13); removal of ivy to the extent needed to facilitate inspection (section 7.12), typically trimming back (e.g. with a hedge cutter or secateurs) to near the line of the trunk or branches; and/or removing selected stems so that the structure of the tree can be seen sufficiently. Dead wood can be an important ecological feature. Treatment of dead wood under 'crown cleaning' shall mean (section 7.3.2) shorten and retain if safe to do so, thus retaining some resource for invertebrates, etc.

Arisings shall be chipped and removed from site, or stockpiled outside RPAs for possible later use as mulch at landscape phase. No vehicles shall stand or operate in any of the RPAs of retained trees. Any traversing of RPAs shall be preceded by laying of temporary trackway, such as TuffTrak® Euromat ground guards or similar appropriate temporary trackway sections. The temporary trackways shall be fixed together with manufacturers' approved fixings. This protective layer shall stay in place throughout arboricultural site preparation phase.

Method 2: TREE PROTECTION FENCING

Tree protection fencing shall be erected, consisting of 'Heras' type fencing (weld-mesh panels), each section securely attached to uprights driven at least 0.6m into ground, as per the layout as shown on the plan (pink lines). No ground levels reduction or excavation shall take place within (=the tree side of) the fence lines. The standard rubber supports ('elephant's feet') shall if used, be as per BS 5837:2012 section 6.2.2, figure 3, below; that is, pinned to the substrate with re-bar.

Where required to infill odd sections, tree protection fencing may be varied to >1.8m high hoarding of >11mm thick manufactured board and timber uprights >50mm x 100mm, no part of any of which is to be attached to any tree.

No fires shall be made on any part of the site, or within 20m of any tree to be retained. No storage of materials shall be made within the protective fences. No breaching or moving of the protective fences shall take place without the approval of an arboriculturist.

Method 3: GROUND SURFACE HANDLING and PROTECTION

This method shall apply in the zones hatched blue on plan. NO levels reduction shall take place. This includes no 'scraping up' with a mechanical excavator or otherwise. Any existing hard surfacing, any existing surface debris, light vegetation, etc., that lies within the zone shall be removed using hand tools only. A 2D geotextile membrane, such as 'Ekotex' shall be laid; 100mm of green-source woodchip; continuously abutted scaffold boards or manufactured boards so as to completely cover this area. This area shall be used for pedestrian access only.

OR - where narrow access for POPs, e.g. powered wheelbarrows is to take place-

To handle loads imposed by pedestrian-operated plant up to 1 tonne gross weight, a 2D geotextile membrane, such as 'Ekotex' shall be laid, and in sequence; 100mm of green-source woodchip; continuously abutted scaffold boards and a layer of manufactured board at least 25mm thick screwed to the underlying scaffold boards.

Figure 3 Examples of above-ground stabilizing systems

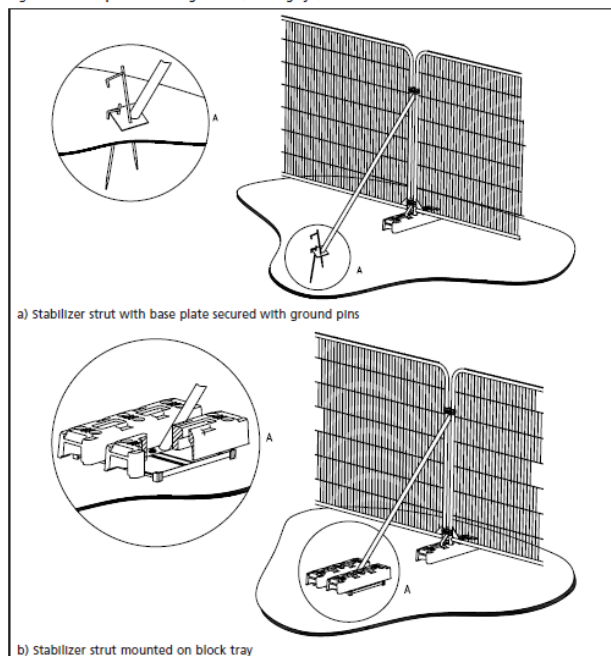


Figure 1 BS 5837:2012 section 6, figure 3

OR - where other heavier vehicles will have access-

NO levels reduction shall take place. This includes no 'scraping up' with a mechanical excavator or otherwise. To handle loads exceeding 2 tonnes the ground surface shall be covered (in sequence) by a 2D geotextile membrane, such as 'Ekotex'; 100mm of green-source woodchip; TuffTrak® Euromat ground guards or similar appropriate temporary trackway sections. The temporary trackways shall be fixed together with manufacturers' approved fixings. On completion of build phase the ground guards shall be lifted by hand or by plant standing outside the zone.

Any scaffold erection shall take its bearing directly off the ground surface via spreader plates/scaffold boards.

Method 4: SITE ACCOMMODATION

This method shall apply in any RPA. Timber baulks such as railway sleepers shall be laid to support temporary modular structures. Any craneage shall be from outside RPAs. No below-ground service connections shall be made, e.g. to toilets: all such piping / ducting / cables shall lie above ground.

Method 5: DEMOLITION

This method shall apply generally. Demolition, which shall be by 'top down, sides in' method, shall be carried out with hand tools or hand-held power tools only. Arisings shall be removed for disposal off site. None shall be spread in root protection areas (orange shapes/circles).

CONSTRUCTION

Method 6: SERVICE TRENCHES

N.b. This applies to ALL services: Electricity, gas, water, etc. Existing services shall be utilised wherever possible.

These methods shall apply generally within any RPA (orange shapes/circles).

- 1) The trench shall be opened with an air-spade to required depth. Roots 20mm or more in diameter unearthed shall be temporarily protected with bubble-wrap and insulating or gaffer tape while rest of trench is dug. Services shall be worked under/over/around/between roots so as not to cut or damage any larger than 20mm diameter.
OR
- 2) The trench shall be dug with hand tools only. Probes such as screwdrivers or steel rod <10mm diameter to determine root presence ahead of digging shall be used. The work shall proceed cautiously. No roots over 20mm diameter shall be cut. Roots 20mm or more in diameter unearthed shall be temporarily protected with bubble-wrap and insulating or gaffer tape while rest of trench is dug. Services shall be worked under/over/around/between roots so as not to cut or damage any larger than 20mm diameter.
OR
- 3) Services shall be thrust-bored using trenchless techniques (compressed air-driven 'mole') at a depth of 700mm or more below ground level, entailing no surface excavation. Starter pits for rams shall be outside any RPA, or reception/starter pits shall be opened according to 1) or 2) above.

Method 7: ROOT PRUNING

This method shall apply within only the RPAs (orange shape/circle) of tree no.6. The excavation shall be made with hand tools only. Any roots encountered shall be trimmed to the edge of excavation using a sharp edge tool such as handsaw or secateurs; the cuts shall be made at right angles to the long axis of the root, and in accordance with BS3998:2010, 8.6. An HDPE membrane shall be placed between any root-bearing soil and any wet concrete to be poured. Impermeable sheeting (to exclude wet concrete) shall be laid and secured locally by temporary weighting / taping as required. Concrete casting shall take place without disturbing this protective layer.

LATE CONSTRUCTION and LANDSCAPING PHASE

Method 8: PERMANENT END-USER FENCING

Where such fencing is proposed within root protection areas (orange shapes/circles), post holes shall be dug with hand tools only. Probes such as screwdrivers or steel rod <10mm diameter to determine root presence ahead of digging shall be used. The work shall proceed cautiously. Roots 20mm or more in diameter unearthed shall be temporarily protected with bubble-wrap and insulating or gaffer tape while rest of hole is dug. It should be borne in mind that the presence of large numbers of roots >20mm in diameter may effectively prevent completion of post hole, and this would be sufficient reason to terminate the operation and move post hole to a different location. If a root >20mm is inadvertently damaged, it shall be retained *in situ* for appraisal by the arboriculturist.

Method 9: TREE PLANTING AREAS

This method shall apply after completion of main build only. Ground preparation for tree planting areas shall entail removal of hard surfacing using hand tools or hand-held power tools only, the removal of degraded or compacted or contaminated soil to a depth of at least 0.45m below finished surrounding ground level. The base and sides of the pit shall be forked over to at least one hand fork's spit in depth. Screened topsoil (to BS3882: 2015 topsoil) with biochar (such as <https://www.soilfixer.co.uk/biochar-article>) - 5% of the topsoil volume shall be used as planting medium. This equates to about 20 kgs of product per cubic metre of topsoil (to BS3882: 2015 topsoil) to a maximum depth of 0.45m within 1.3m of the trunk location of each tree to be planted. Soil handling of any kind shall take place only after a minimum of 3 days after heavy rain, and shall where possible be carried out 7 days or more after such rainfall. Tree planting shall be in accordance with British Standard 8545:2014 'Trees: from nursery to independence in the landscape - Recommendations'. This enshrines good arboricultural practice: the tree shall be planted so that the root collar lies at finished ground level, shall be short-staked and tied with proprietary tree tie. Any whips shall similarly be planted so that the root collar lies at finished ground level, and shall be protected with proprietary growing tube (staked). The ground surface shall be mulched within 0.75m of the trunk location to a depth of 100mm with composted organic material or proprietary mulch mat.

(All design subject to engineering approval, but used on other sites and known to be practicable and reliable).

Name [print]:

For construction company:

Date:

Signature.....

S909-J1-IA-2

End of section 9.4 document

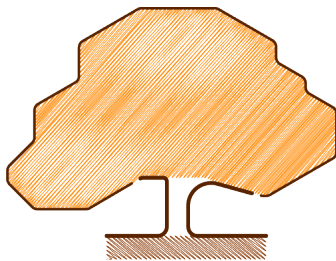
End of main body of report – plans appended.

Dated: 10th November 2022



John Cromar

Dip. Arb. (RFS), FArborA



JOHN CROMAR'S
ARBORICULTURAL
COMPANY LTD

www.treescan.co.uk
admin@treescan.co.uk

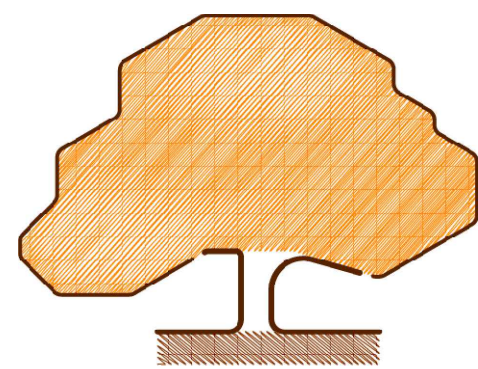
01582 808020
07860453072

10 Plans

N.b. The scale of the plans is dependent on the paper size on which any hard copy is produced.

S909-J1-P1 v1

S909-J1-P2 v1



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KEY TO COLOURS /
LINETYPES USED IN
RELATION TO TREES

GREEN - High Value (A)
BLUE - Moderate Value (B)
BLACK - Low Value (C)
RED - Very short life
expectancy (U)
ORANGE SHAPES: Root
Protection Areas

Spread and trunk colours
correspond directly to
those used in British
Standard 5837:2012,
Table 2.

TOOTHED LINE: Tree spread line



DRG. NAME
**TREE VALUE
ASSESSMENT
(AS PER BS
5837:2012) &
ROOT
PROTECTION
AREAS**

NOTES
Do not use for setting out purposes.
All dimensions to be checked on site.

Any scale referenced below applies **ONLY** when plan
printed at ISO A1 size.

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

TEXT
FOR FULL DETAILS OF TREE VALUE
PLEASE SEE REPORT

BASED ON
ASES LTD. DRG. NO.: A1256-T
SUPPLIED

SITE ADDRESS
Land to the rear of Lynton Grange,
Fortis Green, London, N2 9EU

DRG. REF. REV. NO.
S909-J1-P1 v1
SCALE & SIZE DATE
1:250 @ A1 18-Oct-22
0 5 10

The methods below typically each have a unique colour code and hatch or other reference to the plan, for example, pink lines indicate where fences to protect trees should be positioned.

PREPARATION / DEMOLITION

Method 1: SCHEDULE OF TREE WORK
Tree work shall be in accordance with the schedule within report S909-J1-IA-2 and to BS 3998:2010 'Tree Work - Recommendations', and in accord with spread line(s) marked on plan.

Method 2: TREE PROTECTION FENCING
Tree protection fencing shall be erected, consisting of 'Heras' type fencing (weld-mesh panels), each section securely attached to uprights driven at least 0.6m into ground, as per the layout as shown on the plan (pink lines). No ground levels reduction or excavation shall take place within (=the tree side of) the fence lines. The standard rubber supports ('elephant's feet') shall if used, be as per BS 5837:2012 section 6.2.2, figure 3; that is, pinned to the substrate with re-bar.
Where required to infill odd sections, tree protection fencing may be varied to >1.8m high hoarding of >11mm thick manufactured board and timber uprights >50mm x 100mm, no part of any of which is to be attached to any tree.

No fires shall be made on any part of the site, or within 20m of any tree to be retained. No storage of materials shall be made within the protective fences. No breaching or moving of the protective fences shall take place without the approval of an arboriculturist.

Method 3: GROUND SURFACE HANDLING and PROTECTION
This method shall apply in the zones hatched blue on plan. NO levels reduction shall take place. This includes no 'scraping up' with a mechanical excavator or otherwise. Any existing hard surfacing, any existing surface debris, light vegetation, etc., that lies within the zone shall be removed using hand tools only. A 2D geotextile membrane, such as 'Ekotex' shall be laid; 100mm of green-source woodchip; continuously abutted scaffold boards or manufactured boards so as to completely cover this area. This area shall be used for pedestrian access only.

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To handle loads imposed by pedestrian-operated plant up to 1 tonne gross weight, a 2D geotextile membrane, such as 'Ekotex' shall be laid, and in sequence; 100mm of green-source woodchip; continuously abutted scaffold boards and a layer of manufactured board at least 25mm thick screwed to the underlying scaffold boards.

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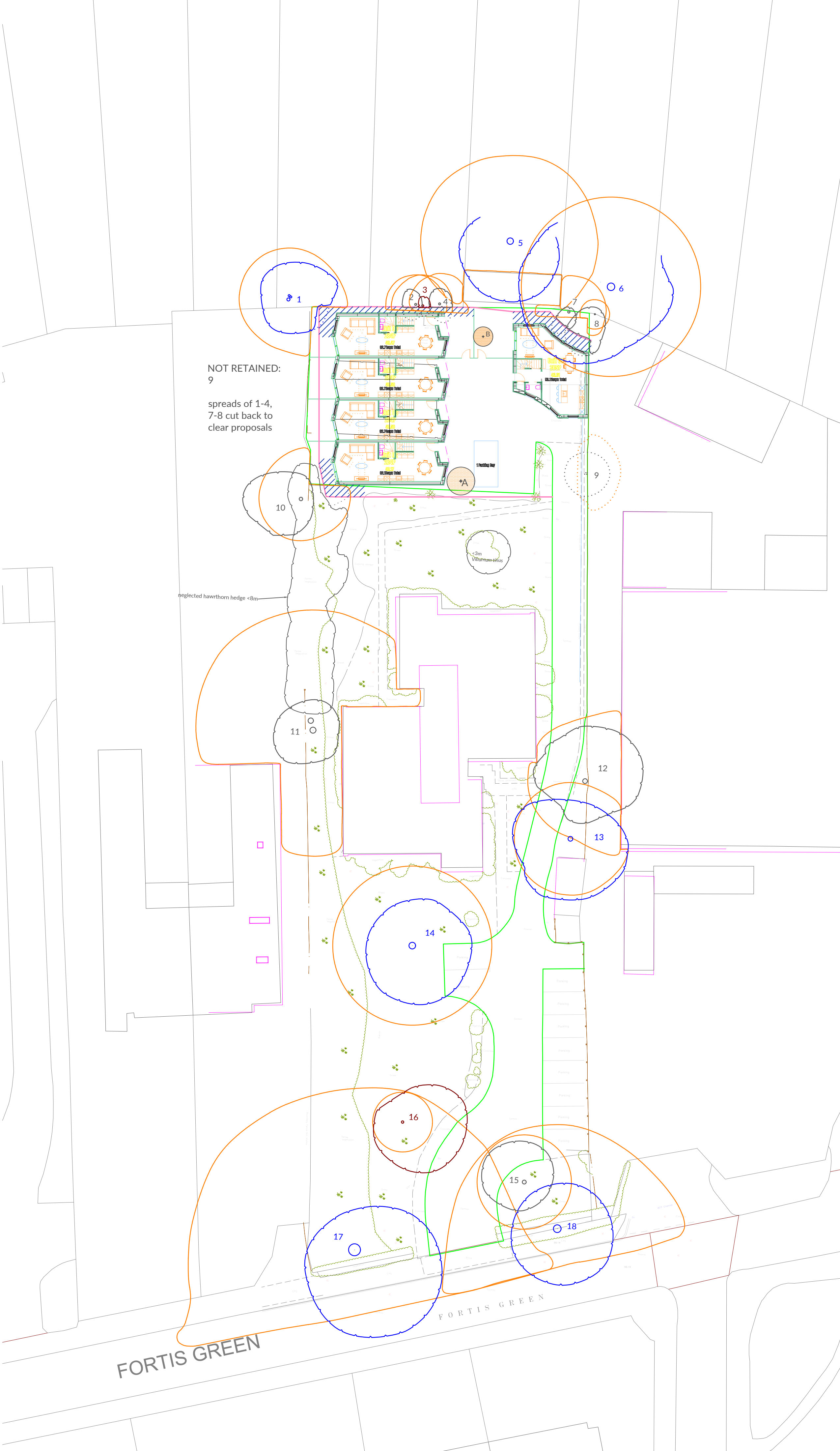
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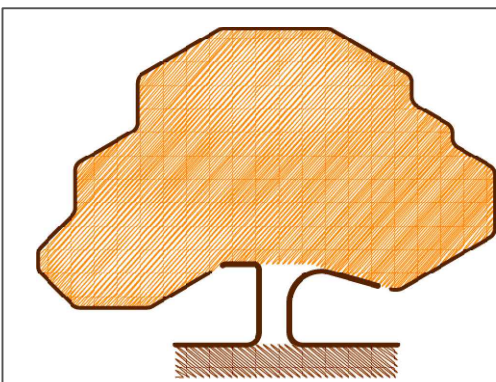
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expectancy (U)
ORANGE SHAPES: Root
Protection Areas

**Spread and trunk colours
correspond directly to
those used in British
Standard 5837:2012,
Table 2.**

**For planting key please
see report.**

DRG. NAME
**TREE RETENTION
& TREE
PROTECTION
MEASURES**

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TEXT
FOR FULL METHOD DETAILS
PLEASE SEE REPORT

BASED ON
DOWEN FARMER ARCHITECTS DRG.
REF.: 1073-1073-LYG-PR-GA-00
SUPPLIED

SITE ADDRESS
Land to the rear of Lynton Grange,
Fortis Green, London, N2 9EU

DRG. REF. S909-J1-P2	REV. NO. v1
SCALE & SIZE 1:250 @ A1	DATE 10-Nov-22
0	5 10

