Landmark Trees

ARBORICULTURAL METHOD STATEMENT

92 Fitzjohns Avenue

London

NW3 6NP

REPORT PREPARED FOR:

Ms Rachel Lord and Mr John Weston

92 Fitzjohn's Avenue

London

NW3 6NP

REPORT PREPARED BY:

Adam Hollis

MSc ARB MICFor FArbor A MRICS C Env

Ref: TSS/92FJA/AMS/01a

Date: 22nd February 2013

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1.0 Introduction

1.1 Purpose & Use of the Method Statement

1.1.1 This outline method statement has been prepared for Ms Rachel Lord and Mr John Weston, identifying the precautions that will be implemented to minimise the potential to damage the trees during the proposed development at 92 Fitzjohns Avenue, London NW3 6NP. The application for the proposals is to be submitted to the London Borough of Camden Council; this document is to be utilised to meet the requirements of the Council for tree protection. The tree replacement and landscape mitigation is dealt with in detail by the Design and Access Statement.

1.1.2 This document lays down the methodology for any proposed works that may have an effect upon the trees on and adjacent to the site. It is essential within the scope of any contracts related to the development proposals that this method statement is observed and adhered to. It is recommended that this document form part of the work schedule and specification issued to the building contractors and can be used to form part of the contract.

1.1.3 Copies of this document will be available for inspection on site. The developer will inform the local planning authority within twenty-four hours if the arboricultural consultant is replaced.

1.2 Terms of Reference

1.2.1 We (LT) are instructed by the client, Ms Rachel Lord and Mr John Weston to prepare a method statement for proposed development based on the above planning application with reference to BS 5837:2012 Trees in Relation to Design, Demolition and Construction.

1.2.2 For this purpose, the client has supplied us with a site lay-out plan (4170 -Topo) and the current proposals plan (A(P)2009 - 2011). Engineers, Fluid Structures, have supplied a Structural Strategy Report detailing the piling to be used for the proposed dwelling (Ref No: 23290). We are also reliant upon our own impact assessment report TSS/92FJA/AIA/01c and plan overlays of tree constraints contained therein.

1.3 Development Proposals & Potential Impacts

1.3.1 The principal proposals are for demolition of the existing dwelling, followed by the construction of a replacement dwelling with a robust landscaping strategy. The design proposes a predominantly single storey structure, which spans across the site maximising the ground level garden.

1.3.2 The principal primary impacts in the current proposals are the removal of 7 trees/shrubs of low quality/unsuitable for retention (T26, 35, 36, 40, 42, 43, 44) including elder and cypress; their removal will have little arboricultural impact. A further 10 trees/shrubs (T13 – T23) will be felled as part of an overall landscaping scheme; they are to be replaced with good quality trees, improving on the existing low quality (all ‘C’ Category).

1.3.3 The impacts on retained, moderate quality trees comprise building/path/fencing encroachments of the theoretical RPA's of T29, T30 and T37's by 20%, 10.5% and 15% area, respectively. Further resurfacing encroachments from the drive/parking are incurred within T12 RPA's by 10.5%.

1.3.4 In terms of mitigation, the LGF foundations will be sheet piled adjacent to T37 (the only tree impacted at this level) to avoid further battering through the RPA / closer to the tree. These piling encroachments will be pre-excavated and root-pruned by hand to 750mm depth under arboricultural supervision. The GF encroachments will employ low-invasive designs with cantilevered foundations for the utlity room within T29's RPA and the gym within T37's RPA. Remaining GF encroachments will use discontinuous piles with shallow beams at flexible locations determined by trial-excavations. The potential canopy impacts to 29 & 37 from above ground construction the will be reduced by design with sloping roof designs away from low branches, though minor crown lifts of <20% (c. 2.5m) are still recommended. The impact of the proposed fencing will be mitigated by using a low-invasive foundation design. The impact of the driveway/path on T12 will be mitigated by using porous paving / no-dig construction techniques. Careful demolition of existing structures (buildings and surfaces) and replacement with soft landscape or less invasive design will also reduce net impacts. Further cultural improvements to rooting conditions can be made in the protected zones during the landscape phase

1.4 Sequence of Works

1.4.1 The sequence of works will be as follows:

- initial tree works – felling, stump grinding and pruning for working clearances
- installation of Tree Protection Barrier (TPB) & ground protection
- demolition of existing building & landscaping
- installation of supplementary ground protection
- installation of underground services
- main construction
- removal of TPB
- soft landscaping

These works and their arboricultural implications are outlined in sequence below:

1.5 Site Supervision

1) Site supervision – an individual e.g. the Site Agent, must be nominated to be responsible for all arboricultural matters on site. An agent must be nominated for each phase of work, if demolition and construction contracts are to be awarded separately. The agent(s) must:

- be present on site for the majority of the time
- be aware of the arboricultural responsibilities - to this end, a site briefing / meeting between the agent and arboricultural consultant must be held before the commencement of each phase of works.
- have the authority to stop any work that is causing, or has the potential to cause harm to any tree
- be responsible for ensuring that all site operatives are aware of their responsibilities toward trees on site and the consequences of the failure to observe these responsibilities.
- Make immediate contact with the local authority and/or a retained arboriculturalist in the event of any tree related problems occurring, whether actual or potential
- Contact details for Landmark Trees are provided on the cover to this report.
- Contact details for the Local Authority Tree Officer are as follows:

Alex Hutson
Tree and Landscape Officer
London Borough of Camden Council
5th Floor Town Hall Extension
Argyle Street
London WC1H 8ND

E-mail: alex.hutson@camden.gov.uk

Telephone: 020 7974 5939

1.6 Site Monitoring

1.6.1 Landmark Trees are to be retained as Arboricultural Consultants responsible for site monitoring for the duration of the development. Key personnel are in the main Adam Hollis MSc (Arb) and occasionally James Bell Tech Cert, subject to any new staff intake. Site monitoring will be undertaken by a qualified and experienced arboriculturalist at pre-determined and agreed time intervals.

1.6.2 The arboriculturalist will arrive at the site, check in at the site office and be safely escorted around the site by the site agent, checking the maintenance of tree protection measures. Routine visits will generally be unannounced. However, the arboriculturalist will also visit subject to advance notification and agreement to supervise any agreed works within the RPA.

1.6.3 General site monitoring will take the form of regular inspections (of e.g. protection measures), ongoing liaison with all personnel involved in the site development and with the LA. Any defects

requiring rectifying must be notified to the Site Agent and the Client and copied to the LA by email. Emergencies will be notified to the LA by phone. Appropriate records will be kept and be made available to the LA if required to show evidence of site monitoring (Appendix 3).

1.6.4 Task specific site supervision will require the arboriculturalist to be present during the key operations to ensure detailed tasks are carried out as per the approved methodology and during any other unplanned incursions into the protection areas (subject to LPA agreement) for whatever reasons. This supervision will require the arboriculturalist to be present during the task, to ensure the arboricultural objectives are met. However, where are tasks are ongoing, provided the arboriculturalist is satisfied, and after an appropriate briefing, the supervision may be reduced to telephone and email contact between the site foreman/ contractor and arboriculturalist. Site supervision should include the landscape works (reconstruction of boundary wall, resurfacing and construction of cycle stores within the RPA).

1.6.5 The recommended frequency of visits is fortnightly for the first three months and monthly thereafter. In addition, a site logbook will be kept by the Site Agent to record all stages of the development from the installation of the fence protection, to daily checks of the fencing through to the completion of the project. This should be made available to the LA if required to show evidence of site monitoring. Site monitoring should include:

- Pre-Development Site Inspection (S.2.3)
- Construction Site Agent Briefing (S.1.5)
- Installation of site facilities (S.3.3)
- Demolition of hard surfaces / structures within RPA's (3.6)
- Construction of new of hard surfaces / structures within RPA's (3.7)
- Site completion meeting (S.5)

1.6.6 The LPA's Arboricultural Officer will have free access to the site and report on any problem areas directly to the developer's Project Arboriculturalist, who will then visit the site and make recommendations to the developer on how best to rectify the situation and ensure implementation. A final sign-off visit will be carried out at the end of the development and a formal letter sent to both the client and LPA indicating an end to the monitoring period.

1.6.7 N.B. Landmark Trees will only be responsible for providing monitoring in so far as they fully instructed to do so and regularly paid for such services by the client. In the absence of routine payment (as per our business terms), routine monitoring will cease (temporarily or permanently) and the LPA will be informed of the cessation of monitoring. The client will also reserve the right to dismiss Landmark Trees and replace with another arborist, but must inform the LPA.

1.7 Statement Adoption

1.7.1 It is recommended that, in due course, acceptance of the recommendations in this report is demonstrated by, for example, the architect specifying in writing to the building contractor that tree care conditions apply in execution of the contract, and by an estimate or written undertaking from the contractor to the architect demonstrating that the practical aspects of observation of such recommendations have been priced in. If conflicts between any part of a tree and the building(s) arise in the course of development these can often be resolved quickly and at little cost if a qualified arboriculturist is consulted promptly. Lack of such care is often apparent quickly and decline and death of such trees can spoil design aims and can of course affect saleability, and reflect poorly on the construction and design personnel involved. Trees that have been the recipients of careful handling during construction add considerably to the appeal and value of the finished development.

2.0 Pre- Development Site Preparation

2.1 Arboricultural Works

2.1.1 All works must be carried out by a competent arborist in accord with BS 3998: 2010 and any other prevailing good professional practice.

2.1.2 Specific works recommended to facilitate development are the removal of trees/shrubs T13-23, 26, 35, 36, 40, 42, 43, 44. Crown lifting of T3, T10 and T12 is likely to be required to facilitate access, with 37 crown-lifted to provide sufficient working clearance. A low quality willow, T31, which overhangs the site by 1-2m would also need to be cut back to the boundary to facilitate construction. These specific works to facilitate development and any other husbandry works are listed in Appendix 1.

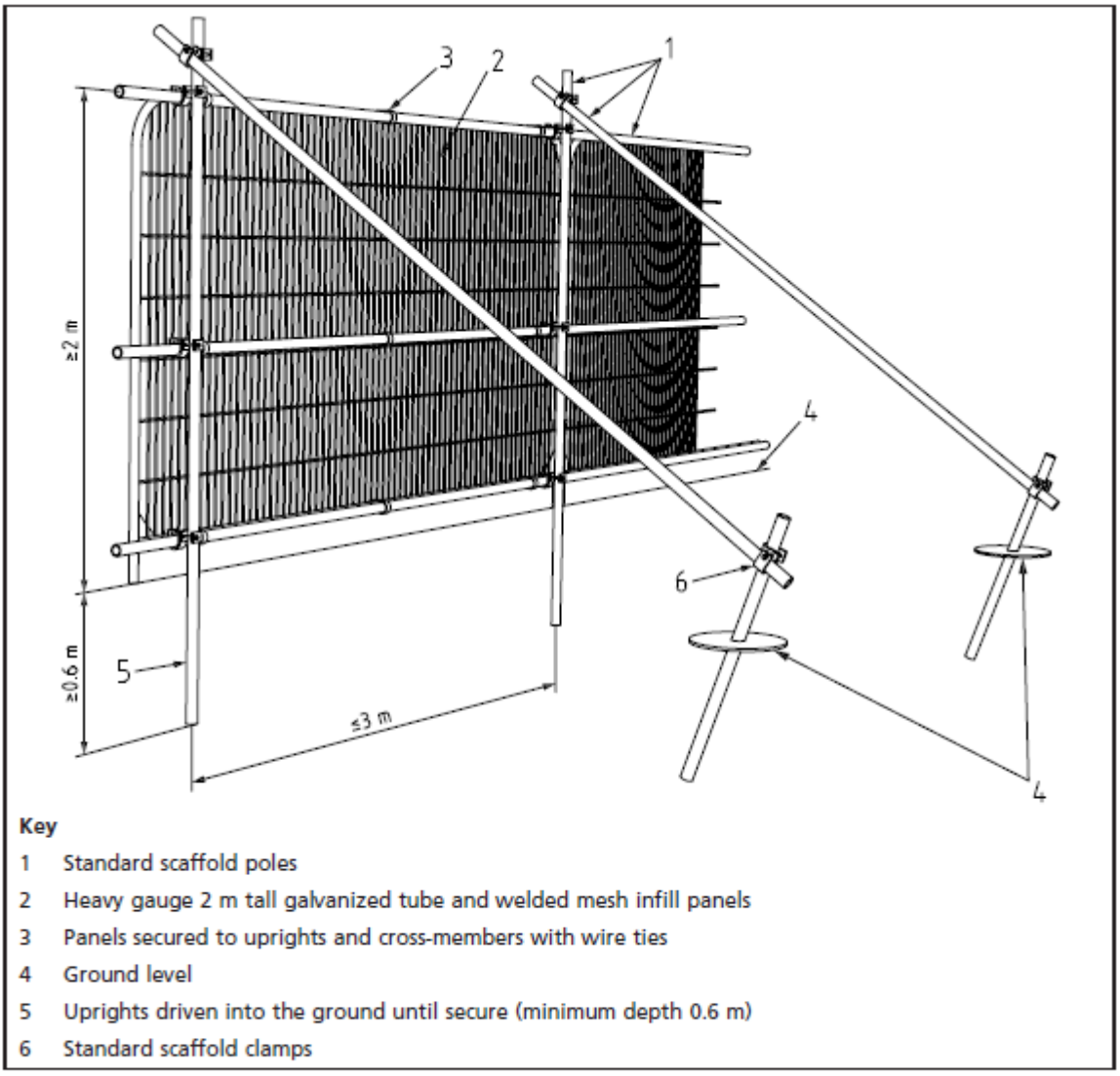
2.2 Installation of Tree Protection Barrier

2.2.1 A Tree Protection Barrier [TPB] comprising steel mesh panels of 2.4m in height ('Heras') should be erected to protect trees near buildings to be demolished on site. These panels will be mounted on a scaffolding frame as shown in Figure 1 below (this is also Figure 2 of BS5837: Trees in Relation to Design, Demolition and Construction in paragraph 6.2.2.2).

2.2.2 This TPB is to be erected before any work commences on site, is to remain 'in situ' undamaged for the duration of all work or each phase, and only to be removed once all work is completed. If any work is deemed necessary prior to the erection of fencing a Landmark Trees representative should be informed to enable their presence to oversee the work being carried out.

2.2.3 The only other exception is the completion of soft landscaping but if any excavations, however minor, are to be carried out as part of soft landscaping within RPAs, an arboricultural assessment must be carried out beforehand and any arboricultural protection measures incorporated. The TPB should carry waterproof warning notices denying access within the RPA.

2.2.4 The Tree Protection Plan in Appendix 5 illustrates where the protective fencing will be located to form the boundary of the Tree Protection Zone (TPZ). The TPZ is an exclusion zone and suitable steps will be taken to prevent access by pedestrians and vehicles and the storage of any works materials and equipment will be located outside of the TPZ.



Key

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

Fig. 1 Tree Protection Barrier Specification (Source: Figure 2 from BS5837 - Default specification for protective barrier)

2.3 Pre-Development Site Inspection

2.3.1 Upon completion of the tree works the LT representative will meet the relevant local authority member on site to check the standards of the work. If there are any amendments to either the tree works or additional protection measures, they will be agreed at this meeting and confirmed in writing.

3.0 Development Phase

3.1 The following general precautions will apply:

- No fires shall be made on any part of the site, or within 20m of any tree to be retained.
- No spilling of pouring of fuels, oils, solvents, tar shall be made on any part of the site.
- No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 metres of the trunk of a tree that is to be retained.
- No spillage or discharge of wet mortar or concrete shall be made on any part of the site.
- No storage of materials shall be made within the protective fences.
- No breaching or moving of the protective fences without the approval of an arboriculturist.
- Alterations in levels within the tree protection fence areas shall be avoided.

3.2 Root Protection Areas (RPA)

3.2.1 The Root Protection Area (RPA) is a desirable zone of protection around the trees' rooting system and these have been marked on the plan in Appendix 5. As much as possible, the RPA's will lie within the TPZ and therefore, be fully fenced off. However, this degree of protection is not entirely possible on the site: it is necessary to perform some works (in part) within the RPA i.e. demolition of existing building and hard landscaping, installation of services and construction of new building (including discontinuous piling) and terraces.

3.2.2 All involved parties will need to be made aware of the deficiencies. In these instances, careful and supervised working, as described in sections, S. 3.4 (routing of services) and S. 3.6 (demolition of surfaces) and S. 3.7 (construction) will be required.

3.2.3 Ground outside the TPZ must be protected from site traffic and not left exposed during construction. As far as practical, existing hard surfaces should be retained as initial ground protection (where fit for purpose for anticipated loading) until the landscaping phase and / or substituted / supplemented with appropriate materials (e.g. Cellweb, Ground Guards etc.), capable of withstanding anticipated loads. Existing tarmac will not be adequate ground protection for heavy plant use. To this end, a concrete crossover and intensive ground protection will be supplemented where necessary (see TPP in Appendix 5). Crossovers for HGVs should have 150mm concrete slabs temporarily installed to protect services and tree roots.

3.3 Site Access, Accommodation & Storage

3.3.1 Site access and accommodation will be as per the layout within our Tree Protection Plan (Appendix 5), making use of the existing access road with supplemented ground protection where necessary. Site accommodation and storage will be located in the garden area, away from the TPZ's.

3.3.2 Pedestrian access will run parallel, but separate to vehicular access.

3.3.3 Delivery lorries will be excluded from RPA's by tree protection fencing and ground protection. Adequate allowance has been made for vehicle heights and ground clearance, with proposed crown lifts where tree canopies overhang access routes (T3, T10 and T12). Construction clearance will be provided by lightly cutting back T31 and crown lifting T37 (as per Appendix 1). Any further pruning for working clearances must be discussed first with the arboriculturalist. Materials can be unloaded onto protected ground within RPA's, then stored in the designated area and throughout the interior of the site away from protected trees.

3.3.4 Many site activities are potentially damaging to trees e.g. material storage, parking, soil compaction and the use of plant machinery. In this latter example particular care is required to ensure that the operational arcs of excavation and lifting machinery, including their loads, do not physically damage trees in use.

3.4 Routing & Installation of Services

3.4.1 Final service routes and provision are to be determined. In general, where any underground service routes should enter an RPA, then the provisions of BS5837 and NJUG VOLUME 4 will be employed (e.g. radial trenching and /or mole trenching) under arboricultural supervision.

3.5 Changes in Grade

3.5.1 The upper layer of top soil contains the majority of a tree's roots and if this is disturbed by a reduction in ground level, serious damage can be caused. If such soil is to be disturbed within the TPZ / RPA, it will be done only with hand tools and the supervising arborist will be informed if roots are exposed.

3.5.2 If the ground level requires raising, this will be achieved using coarse, granular material such as pebbles.

3.5.3 If ground levels need to be marginally altered within the RPA of any tree, prior agreement must be sought and given by either a local authority tree officer or a LT Consultant.

3.6 Demolition Measures.

3.6.1 Access facilitation pruning will be undertaken to prevent injurious contact between demolition plant and the tree(s). Any such pruning will be undertaken in accordance with British Standard 3998: Recommendations for tree works (See Section 2.1 / Appendix 1).

3.6.2 Demolition of structures within what would otherwise be an RPA will proceed with due caution to avoid unnecessary damage to trees. Such measures apply in particular to T29, 30, 34 and 37.

3.6.3 All plant and vehicles engaged in demolition works (removals only) will either operate outside the RPA, or work from within the existing built structure and hard standing, near trees. Where trees stand adjacent to structures scheduled for demolition, it will be necessary to undertake demolition inwards within the footprint of the existing building (often referred to as "top down, pull back").

3.6.4 Specifically, the demolition of the main structure will be carried out by using a 360^0 excavator, fitted with a grapple/bucket and, where necessary, a hydraulic impact hammer.

3.6.5 The roof timbers will be lifted from the house using the grapple, and lowered to the ground where they will be further processed, prior to being loaded into roll on/off containers and removed from site to a suitable landfill facility.

3.6.6 Having completed the removal of all materials, the main structure i.e. brickwork/blockwork of the house will be demolished using a 360^0 excavator. The walls will be pulled over in small increments and allowed to free fall in to the confines of the building, where they will be gathered into a stockpile to await loading away from site to a suitable landfill facility.

3.6.7 Having taken the structure down and removed from site the ground floor slabs/foundations will be broken up by a 360^0 excavator equipped with, if necessary, the hydraulic impact hammer, but if the concrete is not too difficult to break, it will be done with the excavator bucket, the quieter option being preferred, the concrete will be broken into manageable size pieces. Where the foundations are alongside trees the break out will be carried out in small sections and the void backfilled and compacted prior to the next section being broken out.

3.6.8 Throughout all mechanical operations a banksman will be present at all times. Dust generated by the works will be suppressed using water sprays.

3.6.9 If the weather is “dry,” the site will be watered down to reduce dust travelling to adjacent properties. Where levels of dust build-up on trees occur, it may be necessary to seek the advice of Landmark Trees on remedial measures, e.g. hose down the tree(s) immediately following any significant accumulation of dust.

3.6.10 All spoil is to be loaded into trucks fitted with loading grabs.

3.6.11 Heavy plant used to remove imported materials and grade the surface will be deployed in one operation. This will be achieved by siting necessary machinery on top of the existing grade level and working systematically away from retained trees. **The aim is to ensure that spoil is removed away from RPAs but it is very important that their original soil levels are only lowered under consultant supervision as roots will be close to the surface and can be easily damaged**.

3.6.12 The hard standing within the tree’s RPA’s will be first broken up with manual power tools and then carefully removed with plant by a skilled machine operator. Soil beneath the structure will not be scraped away, but preserved in situ and protected with replacement ground protection (as per para 3.2.1) for post-development treatment (as per para 3.8.1).

3.6.13 Where replacement or supplementary ground protection is required following the removal of hard standing, it will be installed prior to the continuance of operations

3.7 Construction Measures

Detailed method statements and risk assessments will be obtained from all specialist subcontractors involved in the new build and these will be scrutinised by the site agent to ensure the AMS requirements have been considered therein.

3.7.1 The building encroachments will require the use of specialised foundation techniques; the LGF foundations will be sheet piled through the RPA of T37 below the raised canopy. Piling should not breach the 5m-ground clearance provided by the tree canopy (post tree surgery), where a mini-rig will be required. The limits of the LGF encroachment into the RPA will be pre-excavated and root-pruned by hand to 750mm depth under arboricultural supervision.

3.7.2 Roots smaller then 25mm diameter may be cut cleanly with a sharp pruning saw or secateurs back to a junction. Roots larger then 25mm diameter may only be cut in consultation with an arboriculturalist.

3.7.3 JCB to excavate to required depth. All spoil to be loaded into trucks outside the RPA's until ground protection is replaced and reinforced. Construction materials will generally be delivered on lorries with mechanical off load and unloaded outside RPA's.

3.7.4 Concrete will be delivered to site pre-mixed in 6m3 lorries and distributed by a static concrete pump located outside RPA's where possible.

3.7.5 The GF foundations will be similarly trial-excavated within the RPA. Flexibility of final pile position and beam depth has been built into the foundation design.

3.7.6 The ground protection in T29's RPA will still allow excavation of the pile and shallow beam locations under arboricultural supervision. The purpose of T29's ground protection is both to designate a precautionary area and to protect ground that is not affected by these excavation works. The piling mat for T29's RPA encroachment will be established on the ground protection, not excavated.

3.7.7 During the construction phase and throughout dry periods on site regular hosing down will be carried out to control dust pollution. In the event of dust build up on trees occurring arboricultural advice will be sort and if necessary remedial measures such as hosing down the trees will be taken.

3.7.8 Where scaffolding needs to be installed within the RPA the following ground protection should be followed / adapted to site needs:

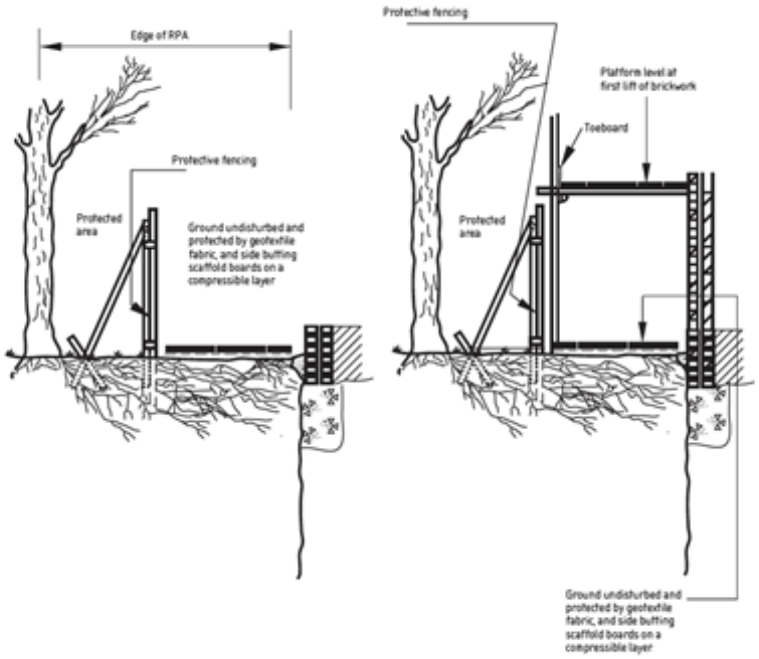


Figure 2 — Scaffolding within the RPA

3.7.13 The following is a sample specification for no dig drive construction by tree T12:

i. The Construction should ideally be undertaken between May and October when the ground is sufficiently dry to prevent compaction occurring. The sub-base should be flat, that it to say any small hollows should be filled to bring up to surrounding levels.
ii. Install F4M Geotextile Separation Fabric over levelled ground surface.
iii. The geotextile should be laid out and not trafficked across at any time.
iv. The Cell Web cellular confinement system (e.g. 1 x 100 mm 'Cellweb' Tree Root Protection System for residential car use only and 75mm for pedestrian use only) is laid on the membrane and adjacent panels are stapled together. Place staking pins to maintain 'Cellweb' cells open. The panels should be laid out and worked on sequentially as the contractor progresses across the length of the area. The panels are sequentially filled with the no fines aggregate, each serving as a platform for the next section.
v. There is no need at any time for the ground to be crossed by heavy traffic. The particles/gravel pieces are transported from the parking bay over the freshly-laid confinement system BY WHEELBARROW and installed BY HAND. There will be no trespass on to the RPA beyond the installation of the confinement system itself.
vi. Panels are backfilled with no-fines 20-40mm particle size stone (clean granular fill). The infill can then be rolled to compact the particles and create a tight interlock across the cells.
vii. The finished surface can then be laid on top. Again no fines material to be used, either gravel, dry-set block paving or porous tarmac is preferable; for a gravel finish (e.g. within picnic area) install further F4M Geotextile separation fabric over 'Cellweb' and place minimum of 50 mm of decorative gravel surcharge (retained with plastic Duobloc grids as necessary).
viii. Install treated timber edging boards as required, fixed to timber pegs at 900 mm centres

3.7.14 See cross-sectional diagram (Figure 4) below for further explanation. For technical data on the Geotextile membrane and the Cellweb cellular confinement system always refer to the manufactures guidelines for design and implementation. Further technical advice can be gained from the manufacturer:

'Cellweb' and 'Duobloc' is a trade name of Geosynthetics Ltd

Flemming Road
Harrowbrook Industrial Estate
Hinkley, Leics.
LE10 3DU
Tel. 01455 617139
www.geosyn.co.uk

3.8 Removal of Ground Protection & Post Construction Landscaping & Treatment

3.8.1 The tree protection may be removed upon completion of the construction phase and when all drainage and service runs have been installed and any site machinery has been removed from the RPA.

3.8.2 Following the developing phase, impacted trees within the site boundary, identified for such treatment, will receive remedial soil remediation treatment: deep root fertiliser / mycorrhizal injection and surface mulching

3.8.2 Any further landscaping works should avoid the changing of ground levels or deep digging. Mechanised cultivation such as tractor-mounted rotovation must not be used within the RPA's of existing trees.

3.8.3 Heavy machinery should not be used in the vicinity of any retained trees.

3.8.4 If herbicides are to be used they should be appropriate to their purpose and not in such a way as to damage any retained trees or vegetation.

3.8.5 Ideally, retained trees should be within a shrub area as this reduces the chances of compaction and disturbance of root systems.

3.8.6 Any new planting schemes adopted should consider aspects of the site such as current design, layout and future use. Consideration should also be given to the soil type, climate and overall character of the landscape.

4.0 Summary of Proposed Methods

4.1 Table of Impacts and Mitigation

4.1.1 The table below summarises the main areas where trees could become damaged by the proposed development and the methods that need to be adopted in order to prevent such damage:

Impact	Mitigation	Reference	Trees Affected
General site access, material storage etc.	Ground protection to acceptable standards.	Paras 2.2.1 & 3.3.3 Tree Protection Plan in Appendix 5	All retained trees
Demolition & construction within existing canopy	Tree surgery	Section 2.1	T3, 10, 12, 31 & 37
Demolition of existing build within RPA	Pull down / back technique within RPA	Section 3.6	T29, 30, 34 and 37
Damage to roots caused by building / retaining wall foundation excavation within RPA.	GF pile and beam and LGF pile and raft specification for building.	Section 3.7 & 8	T29, 30 and 37

5.0 Completion

5.1 Completion Meeting

5.1.1 Following completion of the works listed above, a Landmark Trees consultant will meet with a local authority representative and agree upon any remedial works deemed necessary.

5.1.2 A separate LT post-development tree inspection (with specific reference to trees identified in the Appendix 1 schedules) is recommended to facilitate a constructive meeting and to monitor the health of some of the more senescent trees on site.

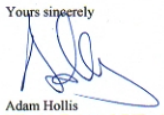
5.1.3 Any works agreed in the above meeting will be confirmed in writing and will be performed to BS 3998: 2010 Tree Works.

5.1.4 Landmark Trees recommend that any work proposed post development is checked to avoid penalty for performing illegal work on a protected tree.

5.1.5 If conflicts between any part of a tree and the building(s) arise in the course of development these can often be resolved quickly and at little cost if a qualified arboriculturist is consulted promptly. Lack of such care is often apparent quickly and decline and death of such trees can spoil design aims and can of course affect saleability, and reflect poorly on the construction and design personnel involved. Trees that have been the recipients of careful handling during construction add considerably to the appeal and value of the finished development.

Signed

Yours sincerely



Adam Hollis
MSc Arb FAborA MICFor HND Hort
Chatered Forester
Fellow & Registered Consultant of Arboricultural Association

.....

Adam Hollis MSc ARB MICFor FArbor A

22nd February 2013

For and on behalf of ***Landmark Trees***

Web: www.landmarktrees.co.uk
e-mail: info@landmarktrees.co.uk
Tel: 0207 851 4544

London Office: 20 Broadwick Street, London, W1F 8HT
Registered Office: Grange Cottage, All Cannings, Devizes, Wiltshire, SN10 3NR

Landmark Trees is the trading name of Landmark trees Ltd. Registered in Wales. Reg No. 3882076

Appendix 1: Arboricultural Works

Landmark Trees Ltd
Tel: 0207 851 4544

Recommended Tree Works To Facilitate Development

Hide irrelevant | Show All Trees

Site: 92 FitzJohn's Avenue, London NW3 6NP

Surveyor(s): James Bell

Date: 7th August 2012

Ref: TSS/92FJA/AMS/01a

Tree No.	English Name	Height	Stem Diameter	Crown Spread	Recommended Works	Comments/ Reasons
3	Maple, Norway	17	650e	6684	CL4m	Crown lift to facilitate access Recommended to permit development
10	Yew, Common	9	480	3	CL4m	Crown lift to facilitate access Offsite Recommended to permit development
12	Sycamore	17	590	6866	CL4m	Crown lift to facilitate access Ground protection with allowance for piling Forks at 1.5m;4/5m clearance over garden Recommended to permit development
13	Holly	4.5	164	1.5	Fell	Twin stem SD=100 & 130 Part of landscape improvement scheme
14	Cherry, Wild (Gean)	4.5	90	1.5/2.5/2.5/	Fell	Part of landscape improvement scheme
15	Rowan, variety	4	60	1	Fell	Part of landscape improvement scheme
16	Amelanchier spp	4	60	1.5	Fell	Part of landscape improvement scheme
17	Ceanothus	3	114	2	Fell	Multi stem 3 SD=80,70 & 40; shrub Part of landscape improvement scheme
18	Loquat	2.5	80	1.5	Fell	Garden ornamental Part of landscape improvement scheme

Notes:

CB - Cut Back to boundary/clear from structure.
CL# - Crown Lift to given height in meters.
CT#% - Crown Thinning by identified %.
CCL - Crown Clean (remove deadwood/crossing and hazardous branches and stubs).
CR#% - Crown Reduce by given maximum % (of outermost branch & twig length)
DWD - Remove deadwood.
Fell - Fell to ground level.
FInv - Further Investigation (generally with decay detection equipment).
Pol - Pollard or re-pollard.
Mon - Monitor ongoing condition (annually by staff / owners & every 2-3 yrs by consultant).
Svr Ivy / Clr Bs - Sever ivy / clear base and re-inspect base / stem for concealed defects.

Landmark Trees Ltd
Tel: 0207 851 4544

Recommended Tree Works To Facilitate Development

Hide irrelevant | Show All Trees

Site: 92 FitzJohn's Avenue, London NW3 6NP

Surveyor(s): James Bell

Date: 7th August 2012

Ref: TSS/92FJA/AMS/01a

Tree No.	English Name	Height	Stem Diameter	Crown Spread	Recommended Works	Comments/ Reasons
19/20	Privet	4	179	1.5	Fell	Multi stem - 5 SD av = 80; shaped Part of landscape improvement scheme
21	Cotoneaster	3	70	1	Fell	Part of landscape improvement scheme
22	Magnolia (M. grandiflora)	3	80	1	Fell	Part of landscape improvement scheme
23	Olive	3	160	1.5	Fell	Shaped Part of landscape improvement scheme
26	Cherry, Autumn Flowering	4	60	2.5	Fell	Sapling Recommended to permit development
31	Willow, Sallow	6	113	1323	CB1 -2	Cut back 1-2 metres to facilitate access Recommended to permit development
35	Cypress, Lawson variety	8	300	2.5	Fell	Garden ornamental Recommended to permit development
36	Cypress, Lawson variety	7	240	2.5	Fell	Garden ornamental Recommended to permit development
37	Sycamore	15	483	5546	CL5m	Ground protection with allowance for piling CL for working clearances/reduction in shading Recommended to permit development
40	Elder	7	241	2422	Fell	A sparser than normal canopy Recommended to permit development
42	Cedar (C. deodara)	4.5	100	1.5	Fell	Recommended to permit development

Notes:

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Recommended Tree Works To Facilitate Development

Hide irrelevant | Show All Trees

Site: 92 FitzJohn's Avenue, London NW3 6NP

Surveyor(s): James Bell

Date: 7th August 2012

Ref: TSS/92FJA/AMS/01a

Tree No.	English Name	Height	Stem Diameter	Crown Spread	Recommended Works	Comments/ Reasons
43	Elder	4	200	2	Fell	Ivy smothered Recommended to permit development
44	Cherry, Wild (Gean)	4.5	220	2322	Fell	Ivy smothered Bacterial canker Recommended to permit development

Notes:

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Svr Ivy / Clr Bs - Sever ivy / clear base and re-inspect base / stem for concealed defects.

Appendix 2: General Guidelines

3.1 All work must be to BS 3998:2010 - '*Recommendations for tree work'*.

3.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors, and will be covered by adequate public liability insurance.

3.3 Any defects seen by a contractor or the client that were not apparent to the consultant must be brought to the consultant's attention immediately.

3.4 No liability can be accepted by the consultant in respect of the trees unless the recommendations of this method statement are carried out under the supervision of a Landmark Trees consultant.

3.5 It is advisable to have trees inspected by a Landmark Trees consultant regularly. On this site it is recommended that these inspections are made every year.

Appendix 3: Sample Site Monitoring Sheet

Landmark Trees

Site Monitoring Report Sheet

Client:		**Planning Ref:**	
Local Authority:		**Date:**	
Site Address:			
Proposal:			

Visit Checklist	**Y/N**		**Y/N**
Tree protection barrier (TPB) in place		TPB as per approved	
Ground protection (GP) in place		GP as per approved	
TPB / GP breached		Trees damaged	
Site Agent briefed by LT			
LT briefed by Site Agent			
LPA informed			
Remedial action required			

Comments

Recommendations

Outcome		
1		
2		
3		
4		

Web: www.landmarktrees.co.uk
e-mail: info@landmarktrees.co.uk
Tel: 0207 851 4544

London Office: 20 Broadwick Street, W1F 8HT, London
Registered Office: Grange Cottage, All Cannings, Devizes, Wiltshire, SN10 3NR
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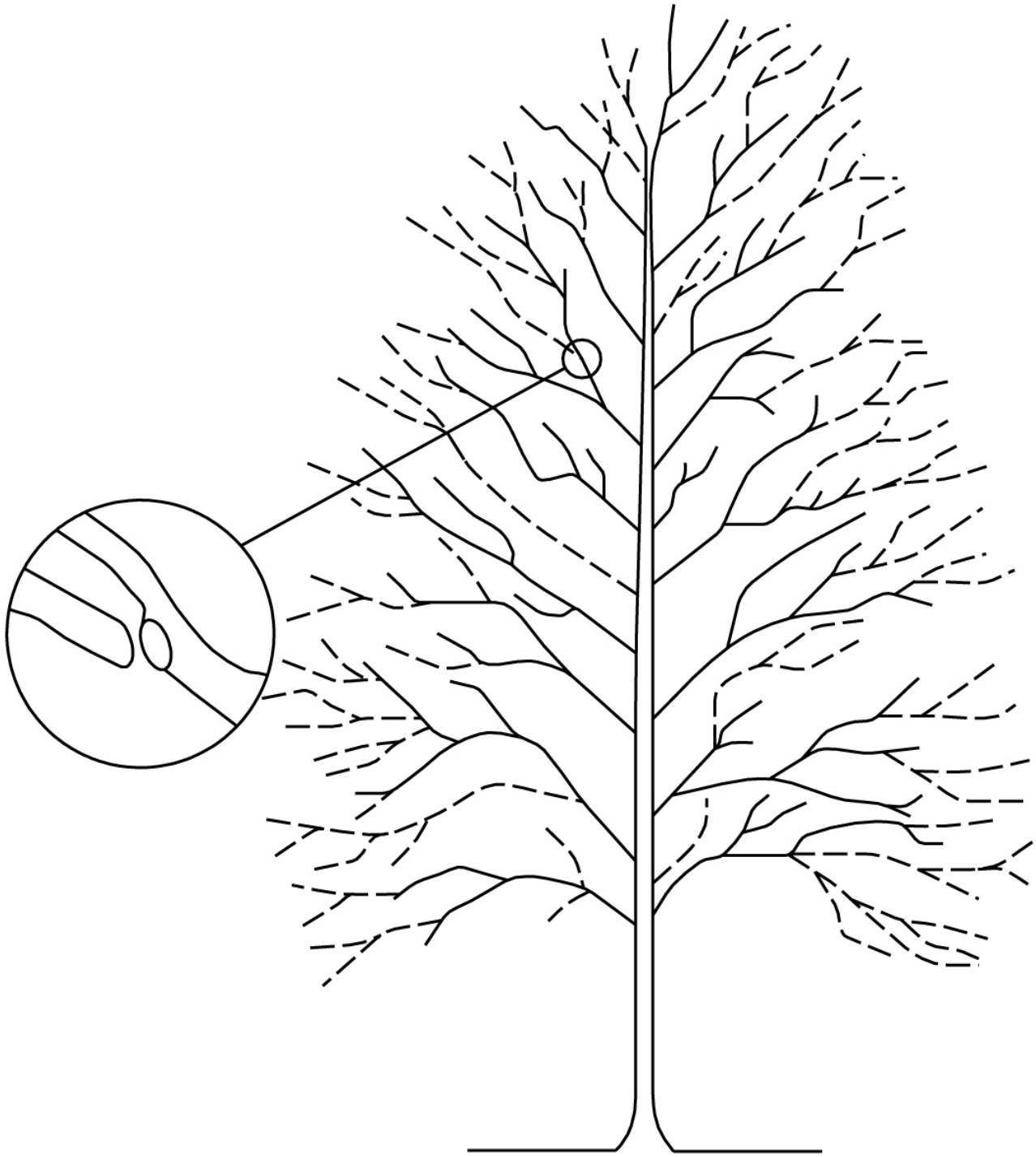
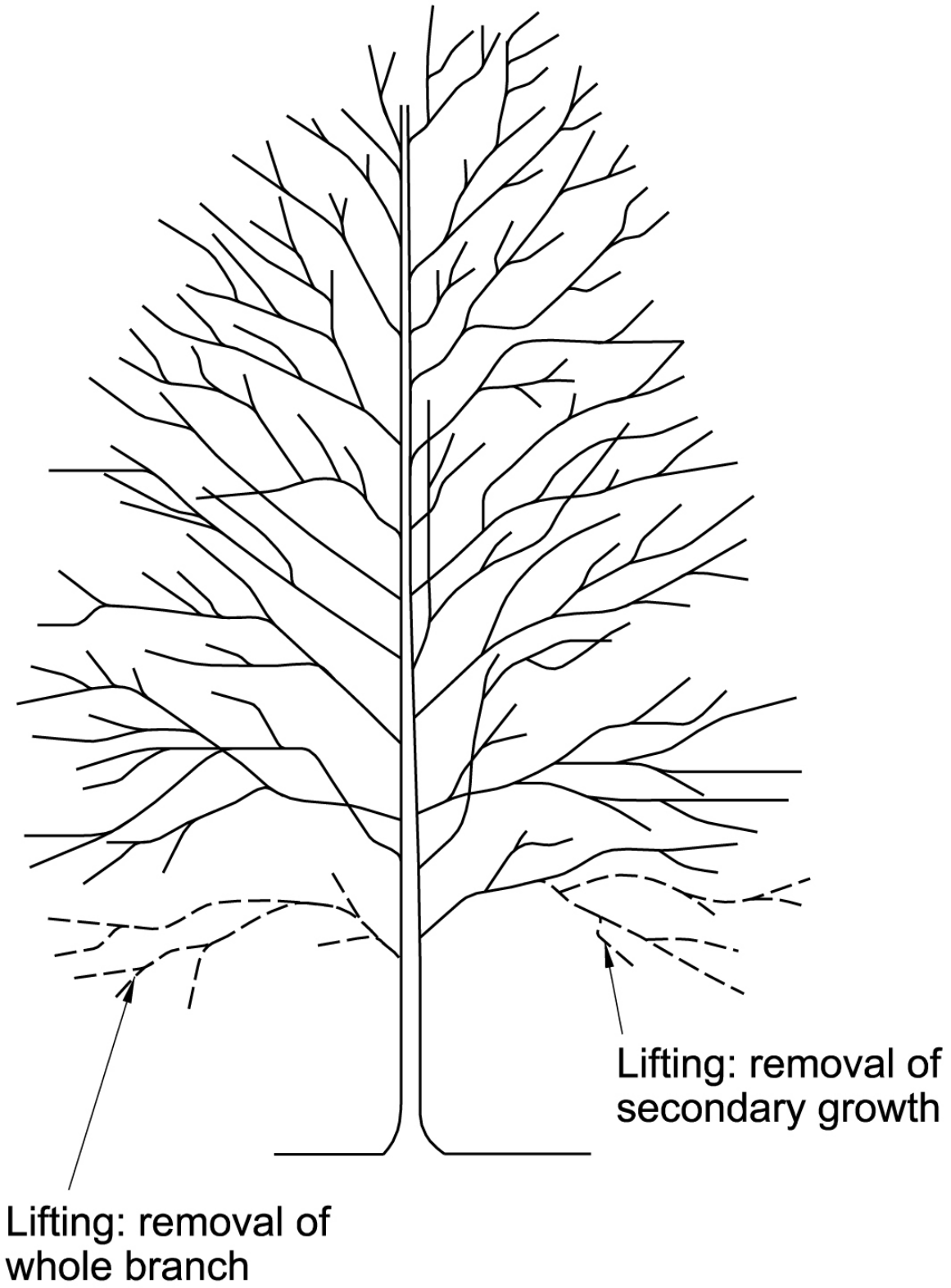
Appendix 4: Indicative Pruning Guidelines



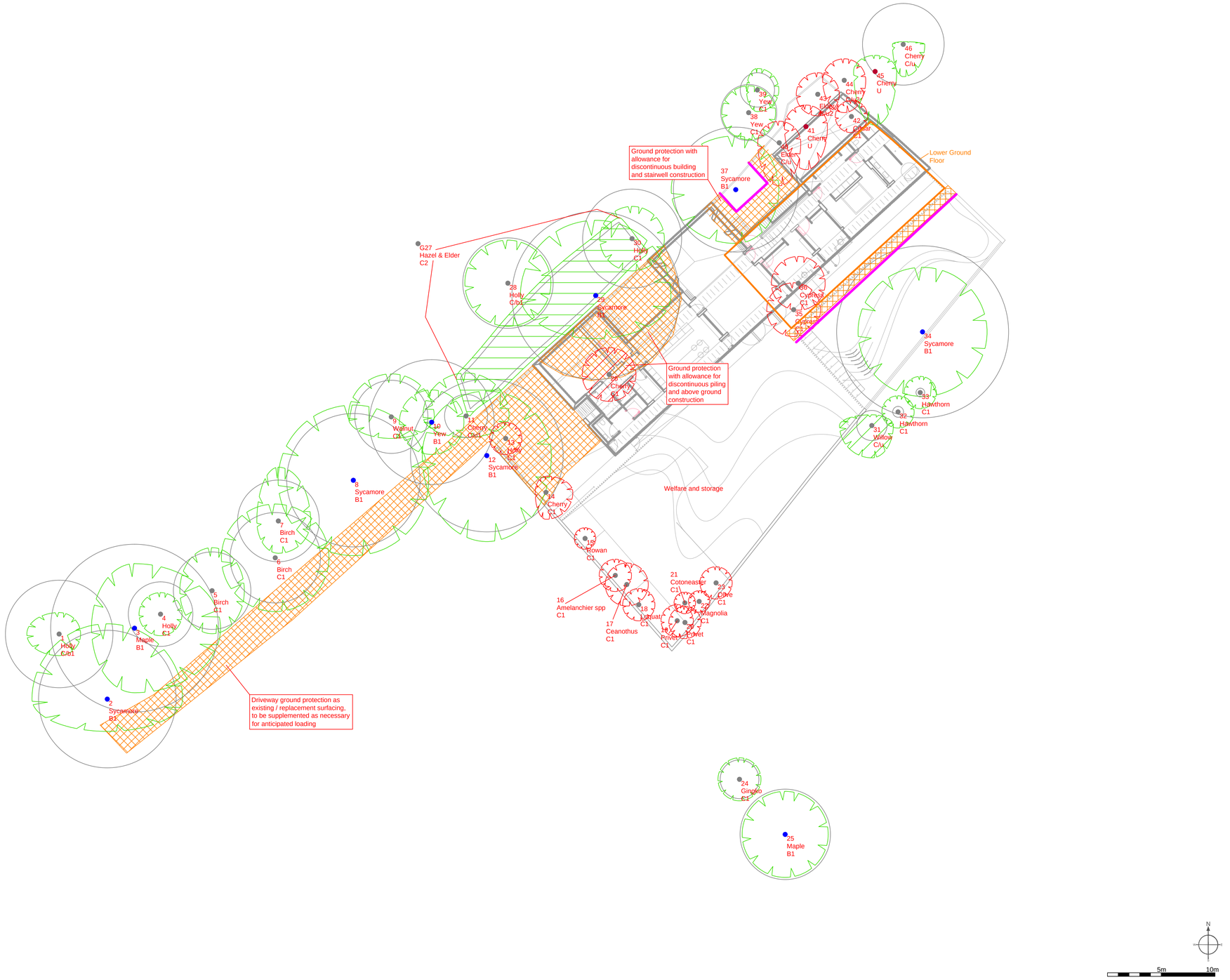
NOTE: Branches pruned back to suitable outward pointing bud or small branch.

REDUCING THE CROWN



CROWN LIFTING

Appendix 5: Tree Protection Plan



NOTE:

This survey is of a preliminary nature. The trees were inspected from the ground only on the basis of the Visual Tree Assessment method. No samples were taken for analysis. No decay detection equipment was employed. The survey does not cover the arrangements that may be required in connection with the laying or removal of underground services.

Branch spread in metres is taken at the four cardinal points to derive an accurate representation of the crown.

Root Protection Areas (RPA) are derived from stem diameter measured at 1.5 m above adjacent ground level (taken on sloping ground on the upslope side of the tree base).

Landmark Trees

20 Broadwick Street, London, W1F 8HT
Tel: 0207 851 4544 Mobile: 07812 989928
e-mail: info@landmarktrees.co.uk Web: www.landmarktrees.co.uk

Site: 92 Fitzjohns Avenue	1:200 @ A1
Drawing Title: Tree Protection Plan	Feb 2013 Rev A

Key:

- Category A High Quality
- Category B Moderate Quality
- Category C Low Quality
- Category U Trees Unsuitable for Retention

Category, Crown Spread, Tree Number, Species, Root Protection Area, Category

Tree Position Approximate (not shown on original survey)

Tree Protection Fencing

Ground Protection

Tree Proposed for Removal