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ARBORICULTURAL REPORT IN FULFILMENT OF PLANNING CONDITIONS
99a Frognal, Hampstead, London, NW3 6XR

A report in fulfilment of pre-commencement condition 7 of planning consent 2013/7195/P dated 23 October 2014 for the erection of a three-storey dwelling house with basement following demolition of existing dwelling.

Report by

Robert Toll
HND Urban Forestry, MArborA
and
Dr Martin Dobson
BSc (Hons) Biol, DPhil, FArborA, MEWI
Registered Consultant of the Arboricultural Association

On the instructions of STS Consulting Structural Engineers

17th November 2017

MDA reference H05

Contents

1. Introduction

1.1 Martin Dobson Associates Ltd were instructed by STS Consulting Structural Engineers on 19th July 2017 to prepare an arboricultural report in fulfilment of planning condition 7 of planning consent 2013/7195/P dated 23 October 2014 (**MD1**) for the erection of a three storey dwelling house with basement following demolition of the existing dwelling at 99a Frognal, Hampstead, NW3 6XR.

1.2 The planning application was supported by an Arboricultural Impact Assessment Report prepared by Landmark Trees on 20th September 2013. This report relies on the information provided in the Landmark Trees report (**MD2** tree survey schedule and **MD3** tree constraints plan) and a site visit carried out by Robert Toll on 10th August 2017.

1.3 Of the twenty four surveyed trees and one group recorded by Landmark Trees, two trees had been removed prior to my visit (T9 False acacia, T25 Elder). Of the remaining surveyed trees none were considered to be category A and of high quality, four trees and one group were considered to be category B and of moderate quality (T6 Norway Maple, G7, T10 Sycamore, T11 Hornbeam, T12 Beech) and the remainder were considered to be category C and of low value. The exception to this was one category U tree considered unsuitable for retention (T4 Apple).

1.4 One condition relating to trees was attached to the planning consent as follows:

Pre-Commencement Condition 7

Prior to the commencement of any works on site, details demonstrating how trees to be retained shall be protected during construction work shall be submitted to and approved by the Council in writing. Such details shall follow guidelines and standards set out in BS5837:2012 "Trees in Relation to Construction". All trees o the site, or parts of trees growing from adjoining sites, unless shown on the permitted drawings as being removed, shall be retained and protected from damage in accordance with the approved protection details. Any trees which, within a period of 5 years from the completion of the development, die, are removed or become seriously damaged or diseased, shall be replaced as soon as is reasonably possible and, in any case, by not later than the end of the following planting season, with others of similar size and species, unless the Council gives written consent to any variation.

1.5 This report has been prepared in fulfilment of Pre Commencement Condition 7 and conforms to the guidance contained in the British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations.*

1.6 To facilitate development it will not be possible to retain six trees (T1 Dawyck Beech, T2 Box Elder, T3 and T4 Crab Apple, T5 Bay Laurel and T24 Flowering Cherry).

1.7 Tree pruning will be required to facilitate the development. Crown lifting to circa 6m above ground level works will be required to the southern and eastern radial spreads of T6 Norway Maple to ensure there is adequate clearance for access during development.

1.8 Taking into account the current physiological and structural condition of T6 my professional opinion is that these works will pose a negligible risk to it long-term health. The location of T6 and the extent of the works will mean that there will be a minimal impact on this trees wider public amenity value.

1.9 Some of the canopies within G7 overhang low into the property and as such it is proposed to crown lift these to height of circa 5m above ground level.

1.10 The works will pose a minimal risk to the health of the trees within G7 as they will involve the removal of small diameter branches.

2. Arboricultural method statement and tree protection plan

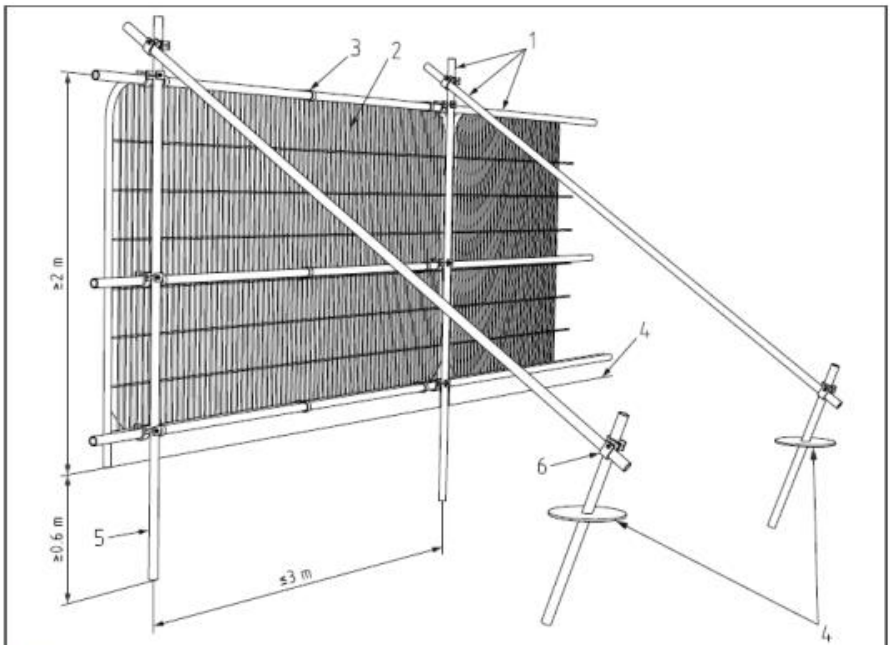
2.1 Trees can very easily be damaged during construction activities through their branches being broken by construction traffic passing close to the canopy or by root severance during the digging of foundation or service trenches. The majority of roots are to be found in the upper 600 mm of soil and so even relatively shallow trenches can sever a significant number of roots growing across the direction of the trench. Similarly, the diameter of tree roots tapers sharply within a few metres of the trunk of a tree, so that what might seem to an uninitiated site worker to be an insignificant root (perhaps only a few centimetres in diameter) may actually be highly important.

2.2 Tree roots can also be damaged indirectly, often inadvertently, through soil compaction, which disrupts soil structure and can lead to root death through the development of anaerobic soil conditions. Spillage of toxic materials (e.g. oil or diesel) can also result in root damage and ultimately the death of a tree. Protection of the soil around trees by means of a construction exclusion zone (CEZ) is therefore vitally important in order to preserve roots undamaged.

Fencing and ground protection

2.3 Tree protection will comprise of 2 m tall fencing installed in the positions shown at **MD4** before the building is stripped out or materials are delivered to site or construction commences. The fencing will consist of a scaffold framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3 m (Figure 1). Onto this, weld mesh panels or 2 m high shuttering board will be securely fixed with wire or scaffold clamps. Un-braced weld mesh panels on unsecured rubber or concrete feet will not be used as these are not resistant to impact and are too easily removed by site operatives. An alternative system of bracing which does not require a scaffold framework is shown in Figure 2.

Figure 1. Diagram to illustrate design of protective fencing with scaffolding anchored into the ground



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

Figure 2. Diagram to illustrate alternative design of protective fencing

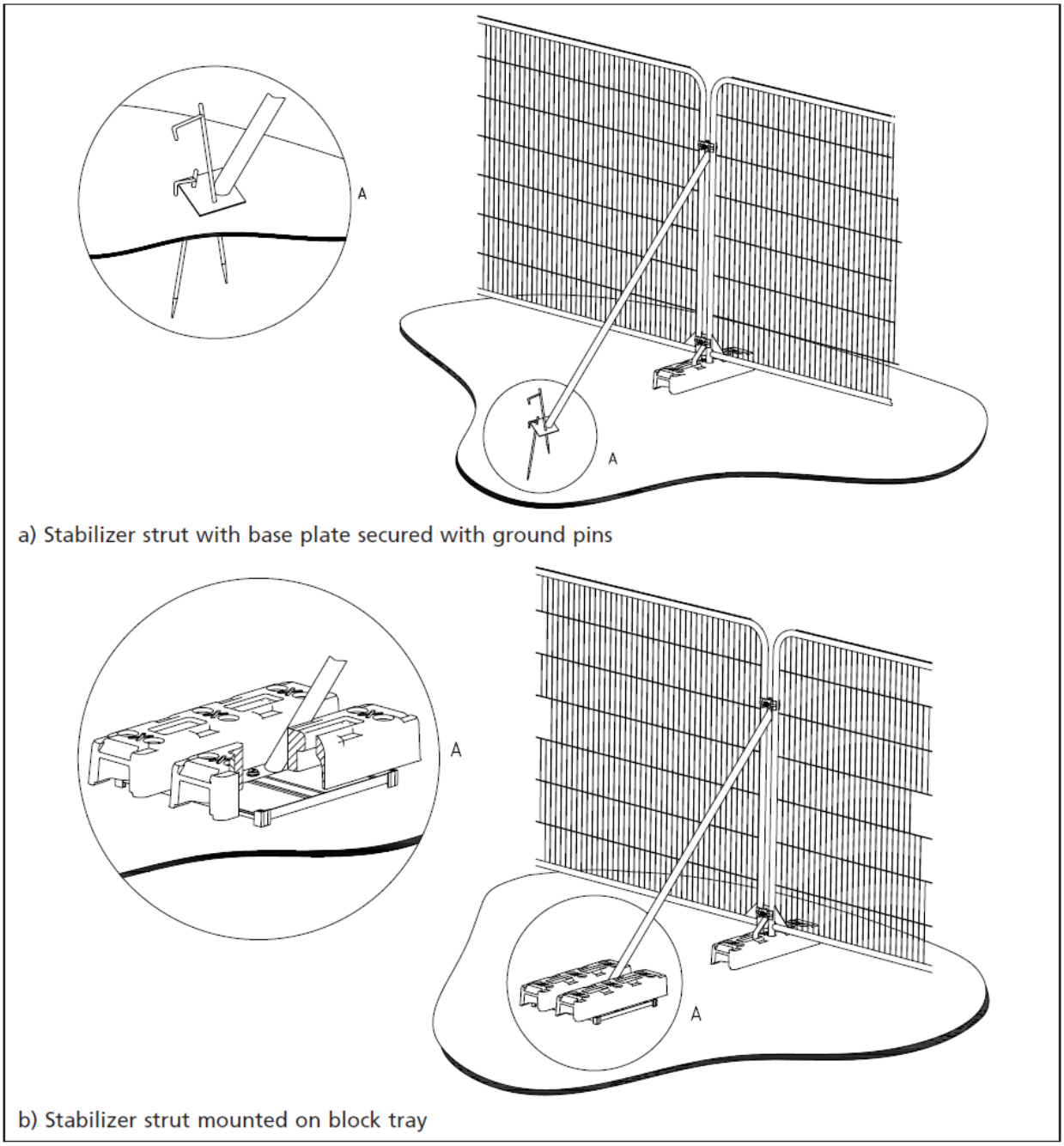


Figure 3. Photograph to illustrate installed protective fencing

2.4 High visibility all weather notices at a size no less than A3 will be securely attached to each panel of the barrier around the CEZ with wording as shown in Figure 4.

Figure 4. Wording to be included in high visibility all-weather sign attached to protective fencing

2.5 In order to allow access for construction workers around the development it is proposed that part of the RPA will be protected by ground protection. This area, hatched orange on the tree protection plan (**MD4**), will be covered by a permeable geotextile such as Terram. Onto this will be placed treated timber (100 mm x 80 mm) at spacings of no more than 1 m. The area between the timber bearers will be filled with a compressible material such as woodchips and will then be covered by 20 mm thick marine ply which will be screwed down onto the timber (Figures 5 and 6). The plywood may need to be coated with a non-slip paint.

Figure 5. Specification for ground protection

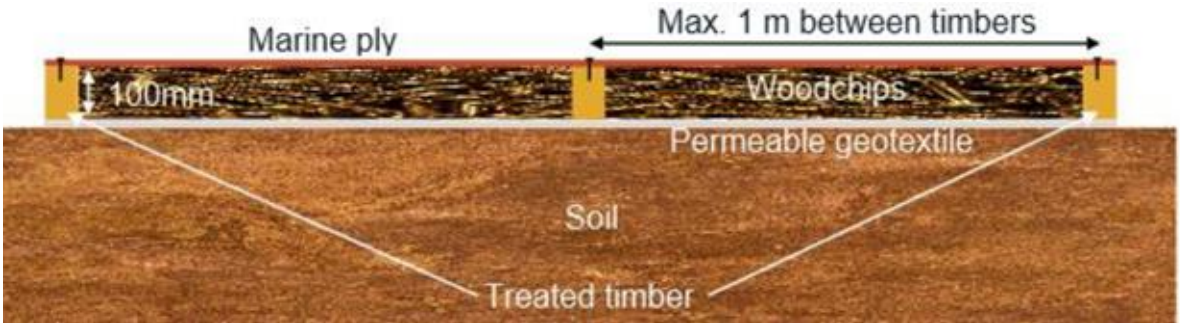


Figure 6. Plywood sheeting used as ground protection.

Above-ground no-dig footpath.

2.6 The sequence of events to be followed for installation of the above-ground no-dig footpath (hatched red at **MD4**) is as detailed below (and explained in detail at **MD5**) and will be installed as a preliminary to the main works so that it will form a ground protection layer:

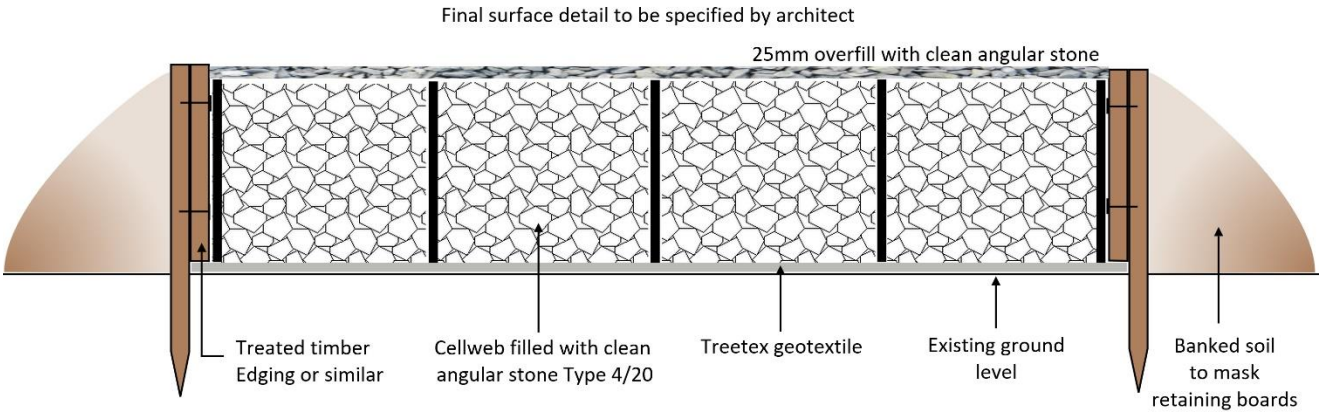
2.7 Stones, bricks and no more than 100 mm of topsoil will be removed from within the footpath area using hand tools and the area will be approximately levelled using hand tools only. Tracked or wheeled vehicles must not be used on unprotected ground.

2.8 Once soil has been levelled a layer of geotextile (e.g. Terram 2000 or Treetex) will be laid over the ground.

2.9 A cellular confinement system such as Geocell[1] or Geosythetics Cellweb[2] up to approximately 200 mm thick (specific thickness to be designed to support expected loads by engineer) will be laid out and pegged in place. Wooden or concrete edging laid above ground will be used and may be anchored by the use of wooden or metal pegs driven into the ground.

2.10 The cellular confinement system (Figures 7 and 8) will be filled with clean angular stone (20 - 40 mm to BSEN1342 or BSEN12620). The no fines material is to ensure high ratio void space which corresponds with ideal soil void ratios for tree root health. Crushed gravel is not permitted. Filling must take place working from outside the root protection area (i.e. from the road) inwards so that any machinery required works on filled rather than empty cells. Banked soil may be used outside the construction to mask retaining boards.

Figure 7. Schematic diagram illustrating cellular confinement system used to form an above-ground no-dig driveway



[1] http://www.terram.com/products/geocells/tree-root-protection-geocell.html
[2] http://www.geosyn.co.uk/products/cellweb-trees.asp?product_id=21

Figure 8. Photographs illustrating cellular confinement system used to form an above-ground no-dig driveway

2.11 A temporary wearing surface covering the cellular confinement system may be required for the duration of the works and this can comprise of plywood, metal or heavy duty plastic road plates.

2.12 Once construction works have been completed on the site the temporary wearing surface may be removed and can be replaced with a final surface of a porous material such as gravel or block paviours bedded on sharp sand above a geotextile.

Arboricultural supervision

2.13 It is recommended that a project arboricultural consultant is appointed to oversee tree protection for the duration of the construction/landscaping contract(s). Alternatively, a designated person (site foreman or site owner) should take on the responsibility of overseeing tree protection. If appointed, the project arboriculturists will be consulted on any issues that may arise concerning trees and will visit the site as often as necessary to ensure that trees are protected and/or at the following key stages:

- Prior to contractors commencing works on site in order to meet with the supervising architect and/or the contractor's nominated site manager to ensure that the principles of tree protection are understood and the procedure, timescale and materials for installation of tree protection are agreed;
- Following installation of tree protection (including no-dig pathway) but prior to any works commencing on site to confirm that it is fit for purpose;
- During removal of existing surfaces within RPA;
- At any time that there are potential conflicts with tree protection;
- At the completion of construction works to confirm that tree protection may be removed to enable final landscaping;

2.14 A pre-start meeting should be held on site with the project arboriculturist and the contractor's representative(s) so that the precise details of the schedule of works together with details of installation of tree protection can be agreed and personnel induction carried out. The site manager/foreman will be fully briefed on tree protection measures and procedures before any workers or sub-contractors are permitted onto the site. Following induction, a copy of the Induction Sheet (**MD6**) will be provided to and be signed by the site manager/foreman in recognition of acceptance of their role in enforcing day to day tree protection.

2.15 All contractors involved in the project have a duty to comply with all the specified tree protection measures and all workers will be provided with induction by the site manager/foreman and be required to sign an Induction Sheet confirming they have understood the protection measures. Signed sheets will be kept on site for inspection.

2.16 No enabling works will take place until after the meeting has been held and tree protection has been installed, inspected and approved as fit for purpose.

2.17 Fencing and ground protection will not be removed under any circumstances during construction unless with the express approval of the local authority. If in any doubt the site manager must contact the nominated arboricultural consultant.

Burning of waste

2.18 No fires will be lit on site within 3 m of root protection areas, including the area of the no-dig driveway, due to the danger of scorching of leaves and branches of overhanging trees.

Space for machinery, parking of vehicles, storage of materials and site huts

2.19 All machinery required on site will operate outside of root protection areas or from the ground protection or the driveway. Site accommodation, if required, will be located outside root protection areas.

2.20 Delivery vehicles will park in the drive or off site and storage of materials will be outside root protection areas.

Demolition of Structures within RPA or under canopies

2.21 The demolition of the existing walls will be undertaken using hand tools only and under the supervision of the project arboriculturalist.

2.22 Foundations will be left in situ if possible and covered over by the no-dig surface. If this is not possible, the concrete foundations will be broken up using hand tools only.

2.23 Following removal of the foundations, the holes will be reinstated with top soil which will be spread over the area but no compacted down.

Services

2.24 The proposed layout of incoming (water, gas and electricity) and outgoing (foul sewer) services is not yet established but they should be installed outside root protection areas. If it is necessary for a trench to be dug through an RPA a specific method statement will be required which will need to specify that the trench will be hand dug and that care will be taken to preserve all roots encountered which are larger than 25 mm diameter.

Tree works

2.25 Tree removals and pruning works will be undertaken as preliminary works. This will be carried out by suitably qualified arboriculturists to the standards set out in BS3998: 2010 *Tree works – recommendations*. Heavy machinery must not be used on unprotected ground.

Landscaping

2.26 Once construction has demonstrably finished (to the satisfaction of the project arboriculturist) fencing may be removed in order to allow final landscaping to be undertaken. Landscaping plans have been/will be prepared by others and will not/do not involve any changes in soil levels, digging of any trenches or construction of masonry or retaining walls within root protection areas

3. Conclusions

3.1 Twenty four trees and one group of trees were present within or adjacent to 99a Frognal, Hampstead at the time of Landmark Trees' survey. Two trees have been removed since that survey (T9 False Acacia, T25 Elder).

3.2 To facilitate development it will be necessary to remove a further six trees (T1 Dawyck Beech, T2 Box Elder, T3 and T4 Crab Apple, T5 Bay Laurel and T24 Flowering Cherry).

3.3 Methods for protecting the retained trees have been described which involve the erection of protective fencing, installation of ground protection, installation of a no-dig surfaces and hand excavation.

3.4 It is considered that the tree protection will ensure that no trees are harmed during construction.

APPENDIX MD1
Planning consent 2013/7195/P granted by the London Borough of Camden on 23 October 2014

Regeneration and Planning
Development Management
London Borough of Camden
Town Hall
Judd Street
London
WC1H 8ND

Tel 020 7974 4444
Textlink 020 7974 6866

planning@camden.gov.uk
www.camden.gov.uk/planning

David Whittington
Savills
33 Margaret Street
London
W1G 0JD

Application Ref: **2013/7195/P**
Please ask for: **Gavin Sexton**
Telephone: 020 7974 **3231**

23 October 2014

Dear Sir/Madam

DECISION

Town and Country Planning Act 1990 (as amended)

Full Planning Permission Granted Subject to a Section 106 Legal Agreement

Address:
99A Frognal
London
NW3 6XR

Proposal:
Erection of a three storey dwelling house (Class C3) with basement following demolition of existing dwelling.
Drawing Nos: Drawings:
Demolition: FROg dm100, dm300-301, dm302-303;
Existing: FROg ga 98, ex100, ex101, ex102, ex300-301, ex302-303;
Proposed: FROg ga : Basement 99C, Ground Floor 100A, 1st Floor 101A, 2nd Floor 102A, Roof 103C, SectionAA 200C, SectionCC 201C, Front/Rear Elevations 300C, Side Elevations 301C. Details through roof perimeter SK 36A.

Supporting documents:
Basement Impact Assessment Report ref J13053 May 2013 by GEA; Basement Impact Assessment Report ref J13053A Feb 2014 by GEA with 4 no. Appendices; Cover letter ref J13053A/HD/01 from Hannah Dashfield (GEA) re letter from Neil Millward dated 20th Jan 2014; Damage Assessment report of neighbouring structures by MNP ref 214073 dated March 2014; Assessment of Basement Accumulative Groundwater Effects by Chord Environmental dated 25th March 2014; Letter ref SP/lb/214071 from Stuart Pledge of MNP (dated 31st March 2014) re CGL letter, with enclosures Wallp calculations by Foundation

Piling and GEA extract of north wall props); Email from Cliff Willis (Harrison Varma) dated 15 May 2014 relating to Wallap runs; Updated Appendix 3 (Summary Sheets from retaining wall design calculations) by GEA; Arboricultural Impact Assessment Report by Landmark trees rev HVC/FRG/AIA/03 dated 20th Sept 2013; Lifetime Homes Statement 99a Frognal; Planning statement by Savills; Environmental noise assessment Oct 2013 by Acoustics Plus ref 102572.ph.Issue 1; Planning brief for the Mechanical and Electrical services by Harrison Varma 15/10/2013; Sustainability Statement by Metropolis Green Job ref 5215 dated 05/08/2013 including Pre-assessment estimate; Design and Access Statement by AD Design Concepts.

The Council has considered your application and decided to grant permission subject to the following condition(s):

Condition(s) and Reason(s):

1 The development hereby permitted must be begun not later than the end of three years from the date of this permission.

Reason: In order to comply with the provisions of Section 91 of the Town and Country Planning Act 1990 (as amended).

2 The development hereby permitted shall be carried out in accordance with the following approved plans:

Drawings:
Demolition: FROg dm100, dm300-301, dm302-303;
Existing: FROg ga 98, ex100, ex101, ex102, ex300-301, ex302-303;
Proposed: FROg ga : Basement 99C, Ground Floor 100A, 1st Floor 101A, 2nd Floor 102A, Roof 103C, SectionAA 200C, SectionCC 201C, Front/Rear Elevations 300C, Side Elevations 301C. Details through roof perimeter SK 36A.

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including Pre-assessment estimate; Design and Access Statement by AD Design Concepts.

The development hereby permitted shall be carried out in accordance with the approved plans listed in schedule [inset name or number of schedule of plans]

Reason:
For the avoidance of doubt and in the interest of proper planning.

3 No lights, meter boxes, flues, vents or pipes, and no telecommunications equipment, alarm boxes, television aerials or satellite dishes shall be fixed or installed on the external face of the buildings, without the prior approval in writing of the local planning authority.

Reason: To safeguard the appearance of the premises and the character of the immediate area in accordance with the requirements of policy CS14 of the London Borough of Camden Local Development Framework Core Strategy and policy DP24 and DP25 of the London Borough of Camden Local Development Framework Development Policies.

4 Detailed drawings, and/or samples of materials as appropriate, in respect of the following, shall be submitted to and approved in writing by the Council before the relevant part of the work is begun:

a) Typical plan, elevation and section drawings, including jambs, head and cill, of all new external windows, doors and roolights at a scale of 1:10 with typical glazing bar details at 1:1.

b) Typical details of new metal louvres and glazed balustrades at a scale of 1:10, including method of fixing.

c) Samples and manufacturer's details of all facing materials including natural stonework, windows and door frames, glazing, balustrades and roofing. A sample panel of all facing materials should be erected on-site and retained until the works have been completed.

The relevant part of the works shall then be carried in accordance with the approved details.

Reason: In order to ensure a satisfactory standard of development that safeguards the character and appearance of the area in accordance with the requirements of policy CS14 of the London Borough of Camden Local Development Framework Core Strategy and policies DP24 and DP25 of the London Borough of Camden Local Development Framework Development Policies.

5 No development shall take place until full details of hard and soft landscaping and means of enclosure of all un-built, open areas have been submitted to and approved by the local planning authority in writing. Such details shall include details of any proposed earthworks including grading, mounding and other changes in

ground levels. The relevant part of the works shall not be carried out otherwise than in accordance with the details thus approved.

Reason: To ensure that the development achieves a high quality of landscaping which contributes to the visual amenity and character of the area in accordance with the requirements of policy CS14, CS15 of the London Borough of Camden Local Development Framework Core Strategy and policy DP24 of the London Borough of Camden Local Development Framework Development Policies.

6 All hard and soft landscaping works shall be carried out to a reasonable standard in accordance with the approved landscape details, by not later than the end of the planting season prior to the occupation of the development or any phase of the development, whichever is the sooner. Any areas of planting which, within a period of 5 years from the completion of the development, die, are removed or become seriously damaged or diseased, shall be replaced as soon as is reasonably possible and, in any case, by not later than the end of the following planting season, with others of similar size and species, unless the Council gives written consent to any variation.

Reason: To ensure that the landscaping is carried out within a reasonable period and to maintain a high quality of visual amenity in the scheme in accordance with the requirements of policies CS14 and CS15 of the London Borough of Camden Local Development Framework Core Strategy and policy DP24 of the London Borough of Camden Local Development Framework Development Policies.

7 Prior to the commencement of any works on site, details demonstrating how trees to be retained shall be protected during construction work shall be submitted to and approved by the Council in writing. Such details shall follow guidelines and standards set out in BS5837:2012 "Trees in Relation to Construction". All trees on the site, or parts of trees growing from adjoining sites, unless shown on the permitted drawings as being removed, shall be retained and protected from damage in accordance with the approved protection details. Any trees which, within a period of 5 years from the completion of the development, die, are removed or become seriously damaged or diseased, shall be replaced as soon as is reasonably possible and, in any case, by not later than the end of the following planting season, with others of similar size and species, unless the Council gives written consent to any variation.

Reason: To ensure that the development will not have an adverse effect on existing trees and in order to maintain the character and amenity of the area in accordance with the requirements of policy CS15 of the London Borough of Camden Local Development Framework Core Strategy.

8 Before the use commences, the air-conditioning plant shall be provided with sound attenuation measures in accordance with the recommendations of the Environmental Noise Assessment hereby approved such that the noise from the plant shall not exceed 26dBA at 1m from the nearest noise sensitive facade outside of the site boundary. All such measures shall thereafter be retained and maintained in accordance with the manufacturers' recommendations for as long as

the plant remains in use.

Reason: To safeguard the amenities of the adjoining premises and the area generally in accordance with the requirements of policy CS5 of the London Borough of Camden Local Development Framework Core Strategy and policies DP26 and DP28 of the London Borough of Camden Local Development Framework Development Policies.

9 Notwithstanding the provisions of Article 3 of the Town and Country Planning (General Permitted Development) Order 1995 as amended by the (No. 2) (England) Order 2008 or any Order revoking and re-enacting that Order, no development within Part 1 (Classes A-H) [and Part 2 (Classes A-C)] of Schedule 2 of that Order shall be carried out without the grant of planning permission having first been obtained from the Council.

Reason: To safeguard the visual amenities of the area and to prevent over development of the site by controlling proposed extensions and alterations in order to ensure compliance with the requirements of policy CS5 of the London Borough of Camden Local Development Framework Core Strategy and policies DP26 and DP28 of the London Borough of Camden Local Development Framework Development Policies.

10 Prior to the commencement of use of the roof terrace the 1.7m high obscure glazed screen shall be installed on the North side of the 1st floor terrace as shown on the approved drawings. The screen shall be permanently retained thereafter.

Reason: In order to prevent unreasonable overlooking of neighbouring premises in accordance with the requirements of policy CS5 of the London Borough of Camden Local Development Framework Core Strategy and policy DP26 of the London Borough of Camden Local Development Framework Development Policies.

11 Prior to commencement of development details of a Sustainable Urban Drainage system (SUDs) shall be submitted to and approved in writing by the local planning authority. Such system shall be based on a 1:100 year event with 30% provision for climate change, demonstrating a reduction in existing runoff of at least 50%. The system shall be implemented as part of the development and thereafter retained and maintained.

Reason: To reduce the rate of surface water run-off from the buildings and limit the impact on the storm-water drainage system in accordance with policies CS13 and CS16 of the London Borough of Camden Local Development Framework Core Strategy and policies DP22, DP23 and DP32 of the London Borough of Camden Local Development Framework Development Policies.

12 The lifetime homes features and facilities, as indicated on the drawings and documents hereby approved shall be provided in their entirety prior to the first occupation of any of the new residential units.

Reason: To ensure that the internal layout of the building provides flexibility for the

accessibility of future occupiers and their changing needs over time, in accordance with the requirements of policy CS6 of the London Borough of Camden Local Development Framework Core Strategy and policy DP6 of the London Borough of Camden Local Development Framework Development Policies.

13 The development hereby approved shall not commence until such time as a suitably qualified chartered engineer with membership of the appropriate professional body has been appointed to inspect, approve and monitor the critical elements of both permanent and temporary basement construction works throughout their duration to ensure compliance with the design which has been checked and approved by a building control body. Details of the appointment and the appointee's responsibilities shall be submitted to and approved in writing by the local planning authority prior to the commencement of development. Any subsequent change or reappointment shall be confirmed forthwith for the duration of the construction works.

Reason: To safeguard the appearance and structural stability of neighbouring buildings and the character of the immediate area in accordance with the requirements of policy CS14 of the London Borough of Camden Local Development Framework Development Policies and policy DP27 (Basements and Lightwells) of the London Borough of Camden Local Development Framework Development Policies.

14 The basement structure shall be designed and constructed in accordance with the recommendations, methodologies, construction sequences, details and mitigation measures set out in the Basement Impact Assessment (and supporting documents) hereby approved. Any deviations from these methodologies, recommendations or mitigation measures shall be submitted to the local planning authority for approval in writing prior to the work commencing.

Reason: To safeguard the appearance and structural stability of neighbouring buildings and the character of the immediate area in accordance with the requirements of policy CS14 of the London Borough of Camden Local Development Framework Development Policies and policy DP27 (Basements and Lightwells) of the London Borough of Camden Local Development Framework Development Policies.

15 Full details in respect of the green roof, to include details of substrate and sections showing areas of localised mounding, planting species and a scheme of maintenance, for the area indicated on the approved roof plan shall be submitted to and approved by the local planning authority before the relevant part of the development commences. The buildings shall not be occupied until the approved details have been implemented and these works shall be permanently retained and maintained thereafter.

Reason: In order to ensure the development undertakes reasonable measures to take account of biodiversity and the water environment in accordance with policies CS13, CS15 and CS16 of the London Borough of Camden Local Development Framework Core Strategy and policies DP22, DP23 and DP32 of the London Borough of Camden Local Development Framework Development Policies.

Informative(s):

1 Your proposals may be subject to control under the Building Regulations and/or the London Buildings Acts which cover aspects including fire and emergency escape, access and facilities for people with disabilities and sound insulation between dwellings. You are advised to consult the Council's Building Control Service, Camden Town Hall, Argyle Street WC1H 8EQ, (tel: 020-7974 6941).

2 Noise from demolition and construction works is subject to control under the Control of Pollution Act 1974. You must carry out any building works that can be heard at the boundary of the site only between 08.00 and 18.00 hours Monday to Friday and 08.00 to 13.00 on Saturday and not at all on Sundays and Public Holidays. You are advised to consult the Council's Compliance and Enforcement team [Regulatory Services], Camden Town Hall, Argyle Street, WC1H 8EQ (Tel. No. 020 7974 4444 or on the website http://www.camden.gov.uk/ccm/content/contacts/council-contacts/environment/contact-the-environmental-health-team.en or seek prior approval under Section 61 of the Act if you anticipate any difficulty in carrying out construction other than within the hours stated above.

3 The Mayor of London introduced a Community Infrastructure Levy (CIL) to help pay for Crossrail on 1st April 2012. Any permission granted after this time which adds more than 100sqm of new floorspace or a new dwelling will need to pay this CIL. It will be collected by Camden on behalf of the Mayor of London. Camden will be sending out liability notices setting out how much CIL will need to be paid if an affected planning application is implemented and who will be liable.

The proposed charge in Camden will be £50 per sqm on all uses except affordable housing, education, healthcare, and development by charities for their charitable purposes. You will be expected to advise us when planning permissions are implemented. Please use the forms at the link below to advise who will be paying the CIL and when the development is to commence. You can also access forms to allow you to provide us with more information which can be taken into account in your CIL calculation and to apply for relief from CIL.

http://www.planningportal.gov.uk/planning/applications/howtoapply/whattosubmit/cil

We will then issue a CIL demand notice setting out what monies needs to paid when and how to pay. Failure to notify Camden of the commencement of development will result in a surcharge of £2500 or 20% being added to the CIL payment. Other surcharges may also apply for failure to assume liability and late payment. Payments will also be subject to indexation in line with the construction costs index.

Please send CIL related documents or correspondence to CIL@Camden.gov.uk

4 Your proposals may be subject to control under the Party Wall etc Act 1996 which covers party wall matters, boundary walls and excavations near neighbouring

buildings. You are advised to consult a suitably qualified and experienced Building Engineer.

5 Your attention is drawn to the fact that there is a separate legal agreement with the Council which relates to the development for which this permission is granted. Information/drawings relating to the discharge of matters covered by the Heads of Terms of the legal agreement should be marked for the attention of the Planning Obligations Officer, Sites Team, Camden Town Hall, Argyle Street, WC1H 8EQ.

6 Under Section 25 of the GLC (General Powers) Act 1983, the residential accommodation approved is not permitted for use as holiday lettings or any other form of temporary sleeping accommodation defined as being occupied by the same person(s) for a consecutive period of 90 nights or less. If any such use is intended, then a new planning application will be required which may not be approved.

In dealing with the application, the Council has sought to work with the applicant in a positive and proactive way in accordance with paragraphs 186 and 187 of the National Planning Policy Framework.

You can find advice about your rights of appeal at:

http://www.planningportal.gov.uk/planning/appeals/guidance/guidancecontent

Yours faithfully

Ed Watson
Director of Culture & Environment

APPENDIX MD2

Tree survey schedule (BS5837: 2012) for trees at 99a Frognal taken from Appendix 1 of Landmark Trees report. The radius of the root protection area in metres is shown in the ninth column (Protection Radius).

Landmark Trees Ltd
Tel: 020 7851 4544

BS5837 Tree Constraints Survey Schedule

Page

Site: 99a Frognal, Hampstead, London NW3 6XR

Surveyor(s): Adam Hollis

Date: 22nd May 2013

Ref: HVC/FRG/AIA/02

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Age Class	Stem Diameter	Protection Multiplier	Protection Radius	Growth Vitality	Structural Condition	Landscape Contribution	B.S. Cat	Sub Cat	Useful Life	Observations
1	Beech, Dawyck	13	3	2	Semi-mature	270	12	3.2	Normal	Good	Medium	B	1	>40	
2	Elder, Box	12	5544	5	Semi-mature	290	12	3.5	Poor	Fair	Low	U	1	<10	Topped/lopped A sparser than normal canopy Dying back in S crown
3	Apple, Crab	6	3214	2	Semi-mature	180	12	2.2	Moderate	Poor	Low	C	2	<10	Decay at trunk base
4	Apple, Crab	7	2.5	2	Early Mature	130	12	1.6	Moderate	Fair	Low	U		<10	Decay at trunk base
5	Laurel, Bay	10	3	2	Mature	400	12	4.8	Normal	Fair	Low	C	2	10-20	Multi stem weakness Lost southern stem, 1 of 3 2 stems of 320 & 240mm dm
6	Maple, Norway	15	5565	4	Mature	520	12	6.2	Normal	Fair	Medium	B	2	20-40	Graft incompatibility (minor) Co-dominant limbs Topped/lopped c. 5-10 yrs ago
G7	Ash, Common & Sycamore	15	5	5	Mature	350	12	4.2	Moderate	Fair	Medium	B	2	20-40	Ivy severed A sparser than normal canopy

Notes:

1. Height describes the approximate height of the tree measured in meters from ground level.
2. The Crown Spread refers to the crown radius in meters from the stem centre and is expressed as an average of NSEW aspect if symmetrical.
3. Ground Clearance is the height in meters of crown clearance above adjacent ground level.
4. Stem Diameter is the diameter of the stem measured in millimetres at 1.5m from ground level for single stemmed trees. BS 5837:2012 formula (Section 4.6) used to calculate diameter of multi-stemmed trees. Stem Diameter may be estimated where access is restricted.
5. Protection Multiplier is 12 and is the number used to calculate the tree's protection radius and area.
6. Protection Radius is a radial distance measured from the trunk centre.
7. Growth Vitality - Normal growth, Moderate (below normal), Poor (sparse/weak), Dead (dead or dying tree).
8. Structural Condition - Good (no or only minor defects), Fair (remediable defects), Poor - Major defects present.
9. Landscape Contribution - High (prominent landscape feature), Medium (visible in landscape), Low (secluded/among other trees).
10. B.S. Cat refers to (British Standard 5837:2012 Table 1) and refers to tree/group quality and value; 'A' - High, 'B' - Moderate, 'C' - Low, 'U' - Unsuitable for retention. .
11. Sub Cat refers to the retention criteria values where 1 is Arboricultural, 2 is Landscape and 3 is Cultural including Conservational, Historic and Commemorative.
12. Useful Life is the tree's estimated remaining contribution in years.

Landmark Trees Ltd
Tel: 020 7851 4544

BS5837 Tree Constraints Survey Schedule

Site: 99a Frognal, Hampstead, London NW3 6XR

Surveyor(s): Adam Hollis

Date: 22nd May 2013

Ref: HVC/FRG/AIA/02

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Age Class	Stem Diameter	Protection Multiplier	Protection Radius	Growth Vitality	Structural Condition	Landscape Contribution	B.S. Cat	Sub Cat	Useful Life	Observations
8	Sycamore	10	4632	2.5	Semi-mature	300	12	3.6	Moderate	Fair	Low	C	2	20-40	Ivy smothered
9	False Acacia	12	2213	5	Semi-mature	210	12	2.5	Dead	Hazardous	Low	U	0	<10	Dead Decay in trunk
10	Sycamore	16	6787	8	Mature	520	12	6.2	Moderate	Good	Medium	B	2	20-40	Constricted rooting Buttresses to N; flat to S Topped/lopped c. 5-10 yrs ago
11	Hornbeam	15	6565	6	Mature	450	12	5.4	Normal	Fair	Medium	B	2	20-40	Leaning (slightly) N Minor stem wound @3m S
12	Beech, Common	16	6	6	Mature	503	12	6.0	Normal	Fair	Medium	B	2	20-40	Multi stem weakness Missing S stem, 1 of 4 Topped in past 270, 290 & 310mm stem dm
13	Ironwood, Persian	8	6	2	Mature	404	12	4.8	Normal	Fair	Low	C	2	20-40	Multi stem weakness 130, 160, 180, 200, 220mm Topped in past
14	Magnolia (M. X soulangiana)	6	4.5	2	Semi-mature	270	12	3.2	Normal	Fair	Low	C	2	20-40	Multi stem weakness 110, 110, 140, 170mm

Notes:

1. Height describes the approximate height of the tree measured in meters from ground level.
2. The Crown Spread refers to the crown radius in meters from the stem centre and is expressed as an average of NSEW aspect if symmetrical.
3. Ground Clearance is the height in meters of crown clearance above adjacent ground level.
4. Stem Diameter is the diameter of the stem measured in millimetres at 1.5m from ground level for single stemmed trees. BS 5837:2012 formula (Section 4.6) used to calculate diameter of multi-stemmed trees. Stem Diameter may be estimated where access is restricted.
5. Protection Multiplier is 12 and is the number used to calculate the tree's protection radius and area.
6. Protection Radius is a radial distance measured from the trunk centre.
7. Growth Vitality - Normal growth, Moderate (below normal), Poor (sparse/weak), Dead (dead or dying tree).
8. Structural Condition - Good (no or only minor defects), Fair (remediable defects), Poor - Major defects present.
9. Landscape Contribution - High (prominent landscape feature), Medium (visible in landscape), Low (secluded/among other trees).
10. B.S. Cat refers to (British Standard 5837:2012 Table 1) and refers to tree/group quality and value; 'A' - High, 'B' - Moderate, 'C' - Low, 'U' - Unsuitable for retention. .
11. Sub Cat refers to the retention criteria values where 1 is Arboricultural, 2 is Landscape and 3 is Cultural including Conservational, Historic and Commemorative.
12. Useful Life is the tree's estimated remaining contribution in years.

Landmark Trees Ltd
Tel: 020 7851 4544

BS5837 Tree Constraints Survey Schedule

Site: 99a Frognal, Hampstead, London NW3 6XR

Surveyor(s): Adam Hollis

Date: 22nd May 2013

Ref: HVC/FRG/AIA/02

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Age Class	Stem Diameter	Protection Multiplier	Protection Radius	Growth Vitality	Structural Condition	Landscape Contribution	B.S. Cat	Sub Cat	Useful Life	Observations
15	Oak, Holm	7	1515	2	Semi-mature	250	12	3.0	Poor	Poor	Low	C/u	2	10-20	Poor specimen, low vitality kinked stem to E Bleeding canker on stem sparse canopy
16	Cypress, Leyland	15	3212	2	Semi-mature	380	12	4.6	Normal	Good	Low	C	2	20-40	
17	Cypress, Leyland	14	3111	2	Semi-mature	270	12	3.2	Normal	Good	Low	C	2	20-40	
18	Cypress, Leyland	7	3111	2	Semi-mature	140	12	1.7	Normal	Good	Low	C	2	20-40	In crown of T19
19	Sycamore, Purple	14	5553	2	Early Mature	360	12	4.3	Normal	Good	Low	C	2	20-40	Suppressed by nearby tree Co-dominant limbs
20	Holly	7	2222	2	Early Mature	200	12	2.4	Moderate	Fair	Low	C	2	20-40	Ivy smothered
21	Pear, Domestic	7	3314	2	Early Mature	310	12	3.7	Moderate	Fair	Low	C	2	10-20	Pruning cavities in upper stem

Notes:

1. Height describes the approximate height of the tree measured in meters from ground level.
2. The Crown Spread refers to the crown radius in meters from the stem centre and is expressed as an average of NSEW aspect if symmetrical.
3. Ground Clearance is the height in meters of crown clearance above adjacent ground level.
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11. Sub Cat refers to the retention criteria values where 1 is Arboricultural, 2 is Landscape and 3 is Cultural including Conservational, Historic and Commemorative.
12. Useful Life is the tree's estimated remaining contribution in years.

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Tel: 020 7851 4544

BS5837 Tree Constraints Survey Schedule

Site: 99a Frognal, Hampstead, London NW3 6XR

Surveyor(s): Adam Hollis

Date: 22nd May 2013

Ref: HVC/FRG/AIA/02

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Age Class	Stem Diameter	Protection Multiplier	Protection Radius	Growth Vitality	Structural Condition	Landscape Contribution	B.S. Cat	Sub Cat	Useful Life	Observations
22	Ironwood, Persian	7	4343	2	Early Mature	250	12	3.0	Normal	Fair	Low	C	2	20-40	Multi stem weakness
23	Eucalyptus	15	3333	2	Early Mature	450	12	5.4	Normal	Good	Low	C	2	20-40	
24	Cherry, Flowering	2.5	2.5	1	Young	100	12	1.2	Normal	Fair	Low	C	2	10-20	Decay at trunk base
25	Elder	6	5	3	Post-Mature	500	12	6.0	Poor	Hazardous	Low	U			Dying/ dead & overhangs fence

Notes:

1. Height describes the approximate height of the tree measured in meters from ground level.
2. The Crown Spread refers to the crown radius in meters from the stem centre and is expressed as an average of NSEW aspect if symmetrical.
3. Ground Clearance is the height in meters of crown clearance above adjacent ground level.
4. Stem Diameter is the diameter of the stem measured in millimetres at 1.5m from ground level for single stemmed trees. BS 5837:2012 formula (Section 4.6) used to calculate diameter of multi-stemmed trees. Stem Diameter may be estimated where access is restricted.
5. Protection Multiplier is 12 and is the number used to calculate the tree's protection radius and area.
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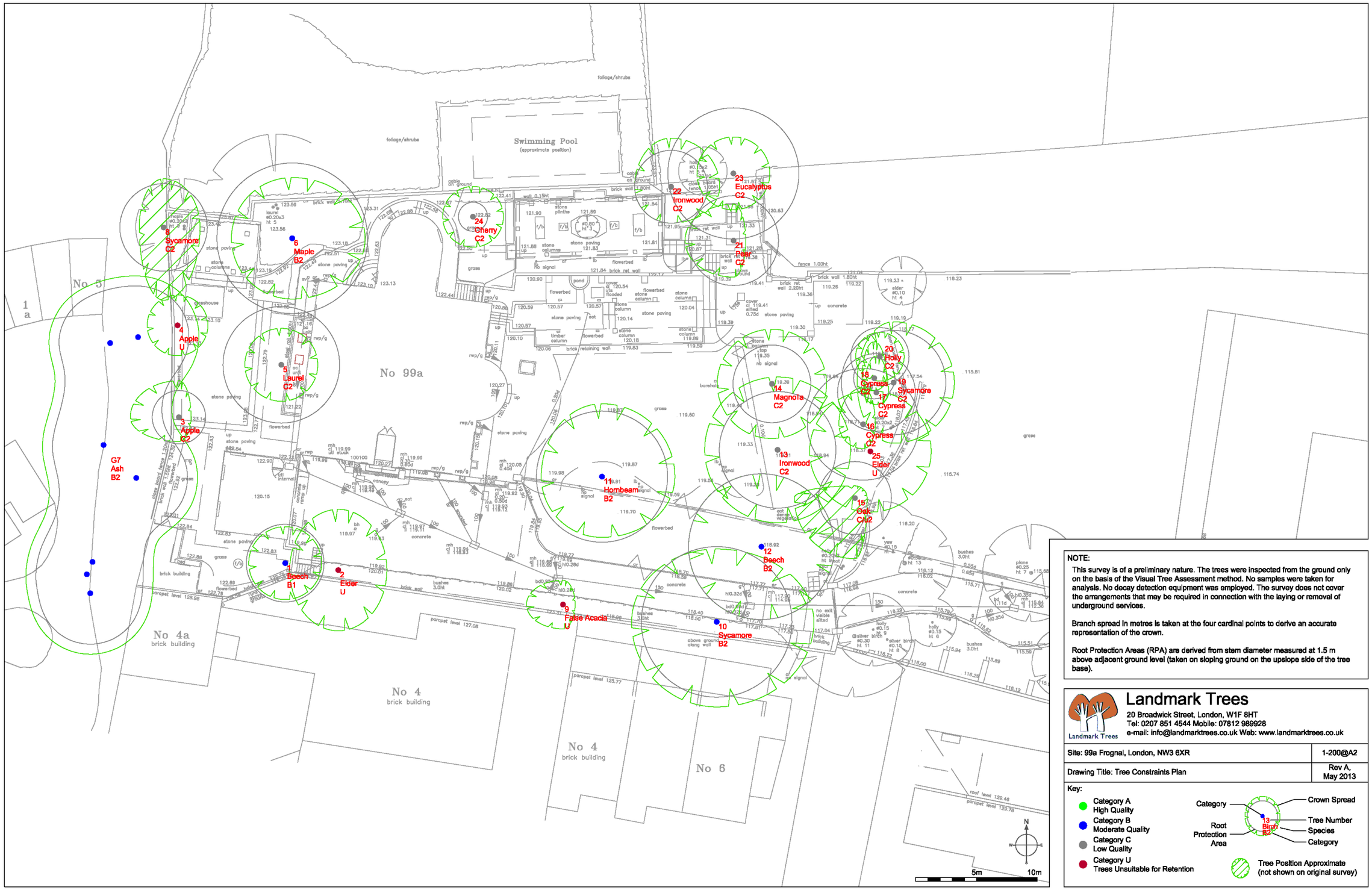
11. Sub Cat refers to the retention criteria values where 1 is Arboricultural, 2 is Landscape and 3 is Cultural including Conservational, Historic and Commemorative.
12. Useful Life is the tree's estimated remaining contribution in years.

APPENDIX MD3

Tree constraints plan (TCP) for trees at 99a Frognal taken from Appendix 5 of Landmark Trees report.



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: 99a Frognal, London, NW3 6XR	1-200@A2
Drawing Title: Tree Constraints Plan	Rev A, May 2013

Key:

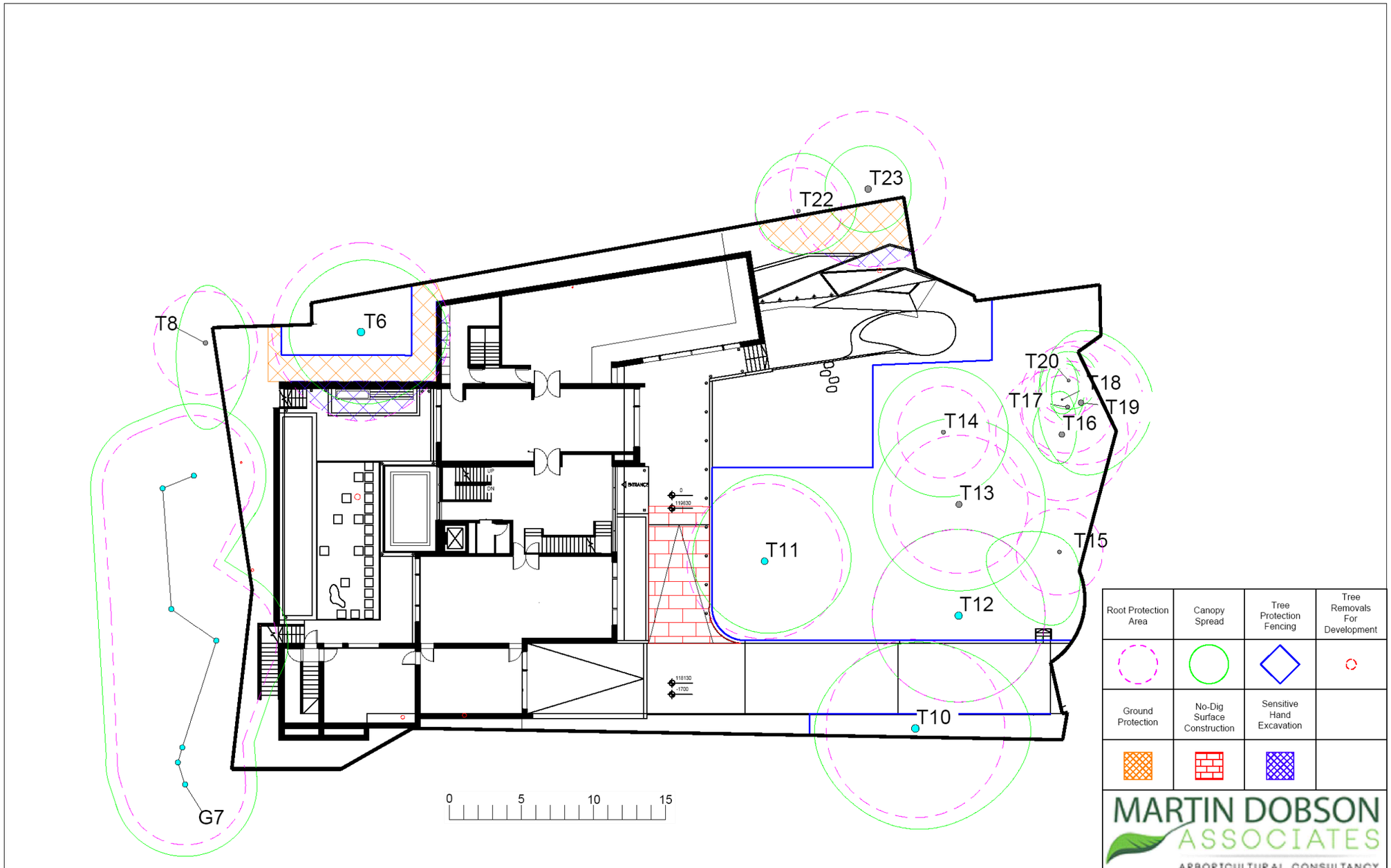
- Category A High Quality
- Category B Moderate Quality
- Category C Low Quality
- Category U Trees Unsuitable for Retention

Category — Crown Spread
Root Protection Area — Tree Number, Species, Category
(e.g. 13 Birch B2)

Tree Position Approximate (not shown on original survey)

APPENDIX MD3

Tree protection plan (TPP) showing retained trees, tree numbers and root protection areas (dashed circles). The location of protective fencing is shown as blue lines, ground protection as orange hatching, sensitive hand excavation as purple fill and no-dig surfacing as red hatching. The plan has been provided separately as a PDF at a scale of 1: 250.



Root Protection Area	Canopy Spread	Tree Protection Fencing	Tree Removals For Development
Ground Protection	No-Dig Surface Construction	Sensitive Hand Excavation	

MARTIN DOBSON ASSOCIATES
ARBORICULTURAL CONSULTANCY

Ivy House, 49 Liphook Road, Whitehill,
Bordon, Hants, GU35 9DA
Telephone: 01420 488342 • Mobile: 07787 530983
Email: info@martindobson.org.uk

Tree Protection Plan

Scale:	Date:	N
1:250 @ A3	17/11/17	
Map Filename: TPP - 99a Frognal		

APPENDIX MD5

Installation guide for above-ground no-dig driveway using Cellweb

PRODUCT DATA SHEET

Geosynthetics Limited Tel: 01455 617 139 Fax: 01455 617 140 Email: sales@geosyn.co.uk

Cellweb® TRP Installation Guide

Step 1: Prepare Surface

Step 2: Lay out Treetex™

Step 3: Lay out Cellweb® TRP

- Cellweb® TRP is a NO DIG tree root protection measure and it is recommended that no excavation be performed without prior approval and guidance from the Local Authority Arboricultural Officer.
- Soil compaction from vehicles, machinery and materials is to be strictly prohibited during construction within Root Protection Areas (RPAs).
- Approval must be obtained from the Local Authority that the design and the method of construction is acceptable.
- Further information is available from the following two documents;
  - British Standard BS5837: 'Trees in Relation to Design, Demolition and Construction' (2012).
  - Arboricultural Advisory and Information Service: Practice note 12 – 'Through the Trees to Development' (APN12).

Installation Method

1. Prepare the Surface

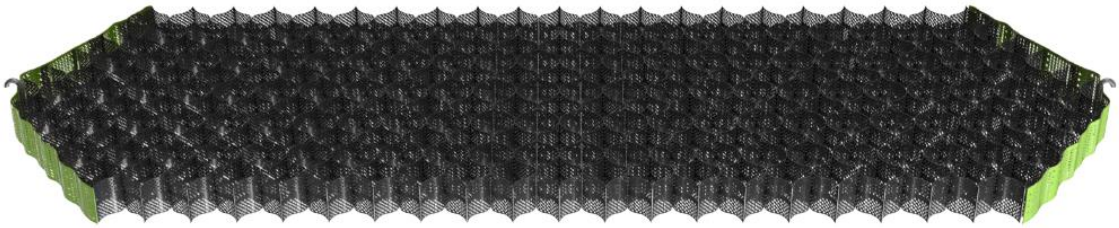
- Remove the surface vegetation using appropriate hand held tools or herbicide (see Note 1).
- Remove any surface rocks, debris and organic material.
- Create a level surface by filling any hollows with clean angular stone or sharp sand.
- Do not level off high spots or compact the soil through rolling.

2. Lay out the Treetex™ Non-Woven Geotextile

- Lay out the Treetex™ over the prepared area, overlaying the edges of the required area by 300mm.
- Overlap any joins by 300mm minimum or more, depending on soil structure (see Note 2).

3. Lay out the Cellweb® TRP Cellular Confinement System

- Lay out the collapsed Cellweb® TRP on-top of the Treetex™.
- Place one of the supplied J pins into the centre cell at the end of the panel and secure into the ground.

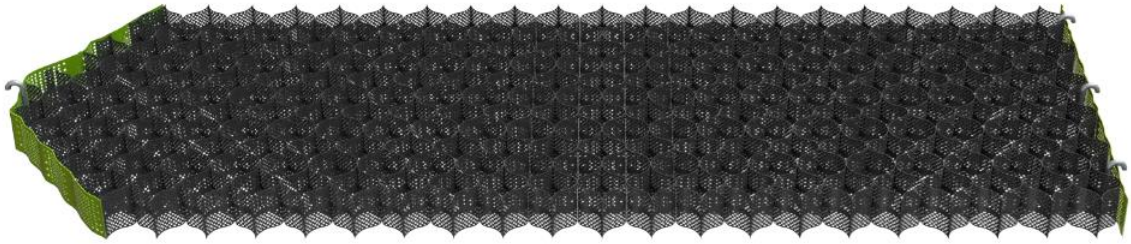


Cellweb® TRP - Installation Guide

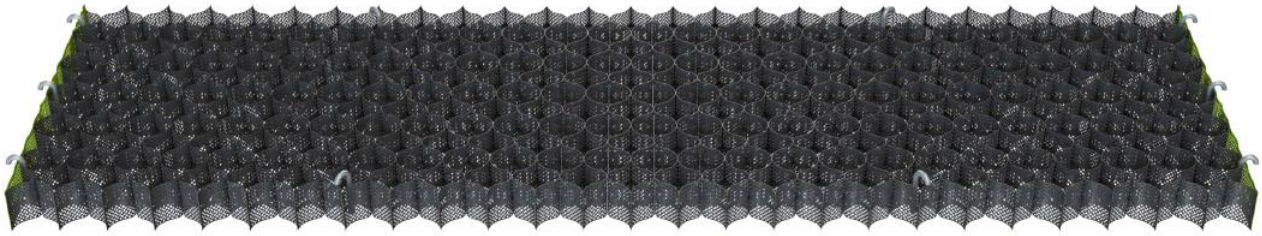
Step 3: Pinning Cellweb ® TRP

Step 3: Stapling Cellweb ® TRP

- Pull out the Cellweb® TRP to its full 8.1m length and secure its length with another J pin.



- Now measure its width to 2.56m and secure in each of the corners with the J pins.
- Use 10 pins per panel to create a panel measuring 8.1m x 2.56m.



- This will produce a cell size of 259mm x 224mm which is the required cell diameter. Each cell must be fully extended and under tension.
- Staple adjacent panels together at each cell (see Note 3).
- If a curved path or shape is required, this should be cut when the Cellweb® TRP panel is pinned out to 8.1 x 2.56m, ensuring complete cells remain. Do not try to curve or bend the Cellweb® TRP panels into place.
- All cells must be fully opened to the required diameter.

Cellweb® TRP - Installation Guide

Step 4: Clean Angular Stone

Step 5: Edge Restraints

Step 6: Surface Options

4. Infill the Clean Angular Stone

- The infill material must be a clean angular stone, Type 4/20mm or Type 20/40mm (see Note 4).
- Do not use M.O.T type 1 or crushed stone with fines for tree root protection.
- Infill the Cellweb® TRP cells with the clean angular stone, working towards the tree and using the infilled panels as a platform.
- Minimum 25mm overfill of clean angular stone when used in conjunction with a hard surface.
- No compaction is required of the infill. Do not use a whacker plate or other means of compaction.
- Encourage settlement of the stone with the use of a light roller or with 2-3 passes of the construction plant used for installation.
- If the clean angular stone is being used as the final surface; regular maintenance will be required to ensure a minimum overfill of 50mm.

5. Edge restraints

- Excavations for kerbs and edgings should be avoided within the RPAs.
- Where edging is required for footpath and light structures, a peg and treated timber board edging is acceptable
- Other options include wooden sleepers, kerb edging constructed on-top of the Cellweb® TRP system, plastic and metal edging etc.

6. Surface options

- All surfaces in Root Protection Areas must be porous. Surfaces can include block paving, asphalt, loose gravel, grass and gravel retention systems (e.g Golpla), resin bound gravel, concrete etc.

NOTES

1. **Herbicide:** According to BS5837:2012 "The use of herbicides in the vicinity of existing trees should be appropriate for the type of vegetation to be killed, and all instructions, warnings and other relevant information from the manufacturers should be strictly observed and followed. Care should be taken to avoid any damaging effects upon existing plants and trees to be retained, species to be introduced, and existing sensitive habitats, particularly those associated with aquatic or drainage features."
2. **Geotextile:** We recommend the installation of a Treetex™ under the Cellweb® TRP, or under the sub-base, if installed. The overlapping between adjacent rolls of Geotextile should be: CBR > 3%: 300mm minimum, CBR between 1% and 3%: 500mm minimum. CBR ≤ 1%: 750mm minimum.
3. **Staples:** Number of staples per join: 200mm: 5 staples. 150mm: 4 staples. 100mm: 3 staples. 75mm: 3 staples.
4. **Granular Fill:** Open graded sub-base, clean angular stone Type 4/20 or Type 20/40. Please refer to BS7533-13:2009 and to the Design Manual for Roads and Bridges (DMRB), Volume 4 Geotechnics and Drainage, Section 1 Earthworks, HA44/91, Volume 7 – IAN 73/06 Design Guidance for road pavement foundations and Manual of Contract Documents for Highway Works (MCHW), Volume 1 Specification for Highway Works for the construction and maintenance of the fill material.

APPENDIX MD6

TREE AWARENESS – SITE INDUCTION SHEET

SITE NAME: 99a Frognal, Hampstead, London, NW3 6XR

Trees are an important part of this development and all trees noted on the Tree Protection Plan are protected by planning conditions and by virtue of being in a Conservation Area. Trees must not be damaged in any way, including indirectly through compaction/contamination of soil, so that they can fully integrate into the finished project and stay healthy well into the future. All persons working on this site have a responsibility to be aware of trees and to abide by tree protection procedures.

How can trees can be damaged?

Above the ground – contacts and impacts with branches and trunk (for example by machine operations: piling rigs, high-sided vehicles, crane use, fixings to trunk, unauthorised cutting back of branches). Make sure there is adequate clearance under the tree canopy and don't stray close to the trunk. Damage to bark allows infections to enter the tree.

Below the ground – roots spread out from the trunk horizontally at shallow depth and are therefore easily damaged. Vehicle and pedestrian movements and storage of materials on unprotected ground causes compaction, especially in wet weather, and must be avoided. Soil stripping during site clearance or landscaping is prohibited in root protection areas. The effects of root damage may take some time to become obvious, but can result in disfiguring dieback of leaves and branches, or even death.

Tree protection procedures

Provided that the simple steps below are followed most tree protection is straightforward:

- Stay out of tree Construction Exclusion Zones (CEZs). These are the areas of ground surrounding retained trees that are protected by barriers and/or ground protection. If you need to go into a CEZ, you must first gain authorisation from the Site Manager.
- No construction activity of any description within CEZs, e.g. soil stripping, cement mixing, services installation, storage of materials etc.
- No fires within 20m of trunk of any retained tree.
- If authorised to work within a CEZ, for example, for installation of an above-ground no-dig driveway you must follow the procedures set out in the **Arboricultural Method Statement.**
- If damage occurs, you must inform the Site Manager who must, in turn, inform the project arboriculturist.

Planning Authority enforcement action needs to be avoided:

- 'Breach of Conditions' notices can prevent a site from being signed-off.
- 'Temporary Stop Notices' halt site operations and result in associated high costs.
- Wilful damage/destruction of TPO/Conservation Area trees can result in company and/or individual prosecutions - fines can me anything up to £20,000 (County Court fines are unlimited). Remember that fines may apply to the person committing the offence as well as the site owner and main contractors!

I have received site induction in tree awareness and tree protection procedures

PRINT NAME

SIGN

DATE

APPENDIX MD7

Qualifications and Experience

Dr Martin Dobson has been engaged in research and advisory work on trees since graduating in 1986 with a BSc (Hons) Degree in Biology. Subsequent postgraduate research led to the award of a Doctor of Philosophy (DPhil) Degree in Tree Physiology in 1990.

Postgraduate studies began in 1986 at the University of Ulster and continued in 1987 at the Forestry Commission's Research Station in Hampshire and focussed on the influence of air pollution on trees. Upon completion of this research in 1989 Dr Dobson was employed by the Forestry Commission and worked in both the Tree Pathology and Environmental Research Branches. During the next six years he was responsible for Department of Environment research contracts focussing on air pollution, climate change, de-icing salt damage to trees, woodland establishment on landfills and tree root research. He has authored two books: *De-icing Salt Damage to Trees and Shrubs* and *The Potential for Woodland Establishment on Landfill Sites.* He concluded his time at the Forestry Commission as Project Manager for research into the interaction between trees, roots and clay soils which included laboratory investigations, testing of root barriers and a three-year field-scale monitoring programme investigating the influence of woodland and grassland on the moisture status of clay soils.

In 1995 Martin joined the Arboricultural Advisory and Information Service as a senior Arboricultural Advisor. The AAIS advised the (then) Department of the Environment on matters concerning amenity trees and was the principal source of technical advice and information to the arboricultural profession as well as landscape architects, engineers, the horticultural industry and private individuals. A large proportion of advisory work focussed on issues relating to tree diseases and interactions between trees and buildings.

In 1997 Martin started an arboricultural consultancy practice specialising in subsidence and tree root claims, planning and development, tree safety and disease diagnosis. He was a local authority retained consultant providing expertise on tree protection practice and legislation from 1999 - 2006 and has dealt with several thousand Tree Preservation Order and Conservation Area applications.

He has extensive experience as an Expert Witness in the High Court, County Court and Magistrates Court. Notable recent cases he has been involved in include Robbins v London Borough of Bexley and Khan v London Borough of Harrow and Kane.

From 1995 to 2011 he was an examiner for the Professional Diploma in Arboriculture for the Royal Forestry Society/ABC Awards and he is currently an assessor for the Arboricultural Association Registered Consultant scheme. He has been a guest lecturer for the Middlesex University Countryside Management MSc course and for Portsmouth University. Together with Dr Giles Biddle he has devised and teaches introductory and advanced courses on trees and subsidence and co-presents seminars on trees and climate change with Professor Andy Moffat for the Arboricultural Association.

In addition to over 30 publications in scientific and technical journals he is the author of Arboriculture Research and Information Note 130/95/ARB *Tree Root Systems*, and leading author of:

Driveways Close to Trees. Arboricultural Practice Note 1. AAIS, Farnham.
Trees in Dispute. Arboricultural Practice Note 3. AAIS, Farnham.
Root Barriers and Building Subsidence. Arboricultural Practice Note 4. AAIS, Farnham.

He is a Fellow and Registered Consultant of the Arboricultural Association and is a Member by examination of the Expert Witness Institute.

Qualifications and Experience
Robert Toll

Robert Toll has been working with trees since 2004 when he completed his studies.

In 2000 he began his studies at Riseholme College, Lincoln where achieved a pass with merit in Foresty at National Diploma level. In 2002 he attended Moulton College in Northampton where he gained a Level Five Higher National Diploma in Urban Forestry with merit.

In 2004 Robert began work as a temporary tree inspector at Northampton Borough Council, undertaking inspections of trees in response to enquiries from the public. After 4 months Robert took up a permanent tree inspector role at Coventry City Council which predominantly involved undertaking safety inspections of trees on school sites.

In 2006 Robert moved to Warwick District Council to take up a temporary post of Tree Protection Officer which involved reviewing old area tree preservation orders and identifying those trees which were considered worthy of protection under new specific orders. He also streamlined the council procedure for making new tree preservations orders, cutting the time from making to serving from up to 2 weeks to within 2 hours.

In 2008 Robert moved to Hart District Council, Hampshire to take up the role of Tree Officer within the planning department. This role included determining works trees applications, commenting on planning proposals, liaising with the public and providing arboricultural advice to other departments within the Council.

Between 2013 and 2016 Robert took up the role of Tree Officer at Elmbridge Borough Council, Surrey, once again carrying out tasks such as determining works trees applications, commenting on planning proposals and liaising with the public. While at Elmbridge Borough Council he passed the Arboricultural Association's Professional Tree Inspection course.

Robert is a professional member of the Arboricultural Association.