TREE PROJECTS

PROFESSIONAL &
TECHNICAL ARBORICULTURE

REPORT ON TREES AT

13 St Augustines Road
London
NW1 9RL

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SUMMARY

This report addresses proposals for the refurbishment of 13 St Augustines Road NW1 complete with formation of a basement beneath the footprint of the premises.

This terraced house is organised as two dwellings and is situated within the Camden Square Conservation Area. I am advised that the Ash tree to the front garden is protected by Tree Preservation Order.

The property is in a poor state of repair with obvious signs of movement. Deepening footings by basement formation will stabilise the situation and dramatically reduce if not eliminate the potential for tree root related subsidence.

One young self seeded Ash tree to the rear needs to be removed for arboricultural reasons. The tree has barely no amenity value is too close to rear elevations and drains (nearby inspection cover) of both the subject and adjacent property. It will ultimately become too large for the position in which it stands and through the planning process there is scope to bring about replacement planting of an alternate species of tree elsewhere within the rear garden.

Protective measures will be required to safeguard the Ash tree to the front from mechanical damage and from degradation of soil in which it is rooted. This is a matter usually controlled by planning condition however appended to this report an indicative tree protection and site set-up plan that outlines the approach that would be taken. A recommendation is made, should the measures proposed be acceptable to tree officers and the planning authority, that this report and the protection measures are directly referenced in a positive decision notice. In this way tree protection can be provided at the earliest opportunity prior to commencement of work.

With timely installation of tree protection and post construction landscaping the proposal will not harm, and is likely to be of benefit to Conservation Area amenities

1 INTRODUCTION

1.1 **Instruction:** I am instructed by Five Arches Design and Planning on behalf of mutual clients to provide arboricultural advice and guidance to development proposals at 13 St Augustines Road, Camden.

St Augustine's Road is a wide street within the London Borough of Camden. A slightly fragmented avenue of pollard/ crown reduced London Plane trees line the road and within the front garden of No 13 stands an Ash tree that has also been managed by crown reduction. My understanding is that the area is underlain with London Clay and that trees are managed by crown reduction to control subsidence risks.

When viewed from the street the property shows distinct signs of movement and also of neglect with buddlia rooting in upper parts of masonry. Internally, the property is in as poor a state of repair as the exterior indicates.

I have been asked to comment on proposals encompassing timely refurbishment and modernisation of this house together with the formation of a small rear extension and a basement beneath the extended footprint.

1.2 **Qualifications and experience:** I have based this report on my site observations and the information provided in the light of my professional knowledge. I have experience and qualifications in arboriculture, and include a summary in Appendix 1.

1.3 **Documents and information referred to:** Five Arches are project architects and have provided me with copies of the following documentation:

- Existing site drawings as CAD files from which we have prepared a tree schedule plan.
- Scheme Designs in CAD and PDF format: Job ref 5ADP566-02B sheets 1-7 Rev B dated 03/09/13.

1.4 **Scope and Limitation:** This report is only concerned with the single application described within the drawings outlined at 1.3 and is for the sole use of my instructing client and the appointed design team.

2 TREE CONSTRAINTS ASSESSMENT

2.1 **Identification and location of the trees:** Trees within the property are shown on the tree schedule plan and listed within the tree schedule, both at Appendix 2. For immediate context an extract of the plan is shown at Fig 1:

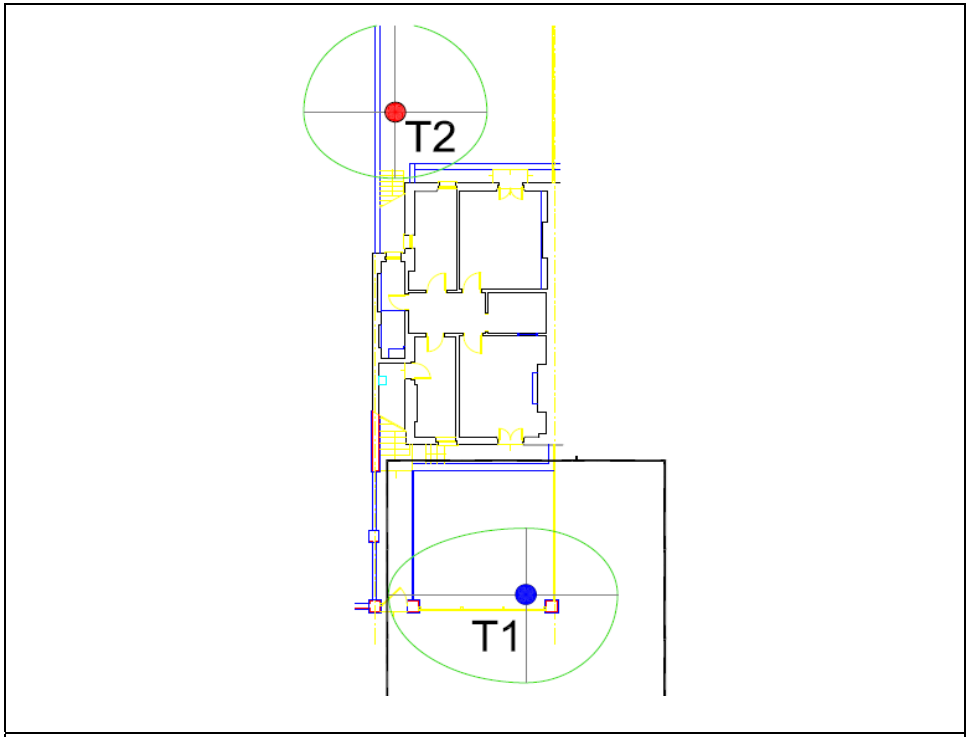


Figure 1: Extract of Tree Schedule Plan (See Appendix 2)

2.2 **Individual Tree Assessment and Assignment of Root Protection Area (RPA).** BS 5837 provides a basis for assessment of tree RPA which is a calculation based on a multiplication of tree stem diameter and which can be plotted in several ways. I have elected to plot RPA as a squares as opposed to circles as this correlates logically with any constraints to rooting by existing built form (here the footings of walls), to the form of proposed new construction and the installation of tree protection.

The British Standard also recommends trees are measured, and assessed in several ways which include (but not exclusively) contribution to amenity/ overall condition and life expectancy. A tree grading system is advocated, the details of which are outlined within the explanatory notes at Appendix 2.

2.2.1 **Tree T1: Ash, *Fraxinus excelsior, B2* grade tree with 20+ years safe useful life expectancy.** Mature crown reduced tree that contributes to the street scene and to visual amenities. My understanding is that the tree is protected by TPO: it is at least protected by the conservation area designation and in any event it is proposed for retention for the purposes of this application.

2.2.3 **Tree T2: Ash, *Fraxinus excelsior,* U grade tree with <10 years safe useful life expectancy.** Young and small self seeded tree that is inappropriately located to have a truly sustainable future as it is positioned too close to the rear elevation of no 13 and that of the neighbouring property. This tree has arisen no doubt as a consequence of neglect and as Ash is a tree of ultimately substantial proportions, I have no hesitation in stating that this individual should be removed before it becomes an excessive nuisance to property or to the drains that serve them.

3 ARBORICULTURAL IMPACTS AND SCHEME DESIGN.

3.1 Summary of proposal:

Re-model and completely refurbish the existing property to include basement formation beneath the existing footprint plus a modest rear extension and to include provision of a lightwell at the line of the existing front garden lower ground floor retaining wall.

3.2 Summary of Foreseen Construction Impacts and Remedies to principle retained trees,

RISK	PROPOSED REMEDY
	Front garden Ash T1
Damage to roots during strip-out and construction	On grant of planning permission and prior to stripping property, install scheme of protection comprising construction of a tree protective barrier forward of which lay fit for purpose ground protection comprising steel road plates over a damp proof membrane over 100mm thick compressible layer of wood chip. Carefully dismantle existing lower ground floor garden retaining wall, including footings to 1000mm depth by hand digging with power tool retaining all roots to be cut by arborist with sharp hand tools. Continue to form retaining wall by hand dug pins.
Damage to upper crown of trees	Install protective barrier at maximum distance from tree such that 2.4m wide ground protection can be provided adjacent to garden path to receive skips and 2.4m of working room allowed forward of front garden basement retaining wall.

Table 1

4. INDICATIVE TREE PROTECTION METHOD STATEMENT.

4.1 Tree protective measures are presented in indicative terms at Appendix 3 and in the event of a grant of planning permission, these can be directly referenced for immediate installation or else refined by application of pre-commencement planning conditions.

4.2 Tree protection can be defined as:

- Management and administrative elements
- Physical components and conduct of site operations

4.3 Management of Tree Protection:

4.3.1 The contract administrator will be responsible for ensuring the main contractor is informed of the requirements of protection and, that adequate resource (monies) are set aside to ensure compliance with this requirement.

4.3.2 The main contractor must install or cause to be installed through nominated sub contractors all tree protection prior to commencement of any substantive work, including soft strip and any demolitions.

4.3.3 The tree protection provided must be judged in context of the construction programme. Should any conflicts be foreseen (large deliveries etc), temporary adjustments to protection that may be required must be considered with the direct contribution of the project arboriculturist.

4.3.4 A project arboriculturist should be retained for the full duration of work on site, being available to the main contractor to assist in event of any adjustments required to tree protection plan, in event of any tree related emergencies and to supervise and direct ground works associated with re-forming the front garden wall.

4.4 Physical components and conduct of site operations:

4.4.1 An indicative Tree Protection Plan has been prepared and is presented at Appendix 3. Subject to any relevant planning conditions and input from the main contractor in terms of site management, the physical elements of tree protection described must be installed at first site set up and then maintained for the full duration of substantive works.

4.4.2 A Physical barrier is to be provided:

4.4.2.1 To protect the lower branches of Ash tree T1 from mechanical damage by skip movements. The barrier is to comprise a robust scaffold framework that is back-braced and clad with wire fixed herras panels. Panels to be cut or bent as necessary to wrap around line of barrier to form a continuous exclusion zone.

4.4.3 Ground protection is to be provided:

4.4.3.1 To protect RPA soil condition to Ash tree T1 whilst providing a realistic and practical working space to facilitate the construction process. Steel road plates are to be placed over a damp proof membrane with laps secured to tree protective barrier and garden walls to direct any liquid spills away from soil beneath. Damp proof membrane to be laid over 100mm layer of wood chip compressible layer to spread load and level ground for plates over.

4.4.4 Post substantive construction, tree protection is to be retained up until commencement of landscape works. Wood chip mulch can be dug (by hand) into earth as a soil improver and all cycle stands and bin store structures to be light weight and laid on 50mm paving slabs on 50mm bed of sharp sand.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 13 St Augustines is clearly in need of refurbishment. The works proposed will bring it into habitable order and with formation of a basement, the property will effectively be rendered 'subsidence proof' by deepening of the existing self evidently inadequate footings.

5.2 The removal of one small Ash to the rear is required for reasons of sound arboricultural management: this tree is simply inappropriate for its location with too large sixe potential and the risk it poses to property and drains. Replacement planting within the rear garden will mitigate its removal and is a matter that can be controlled by application of an appropriately worded planning condition.

5.3 The Ash tree within the front garden is to be retained and tree protection measures will be required.

5.4 Protection is required by construction of a robust barrier to force skips and deliveries away from low branches.

5.5 To facilitate work and site operations, I have judged that a reasonable area of working space is required however, this is over soil containing roots and would be within tree root protection area. Rather than propose an unrealistic extent of tree protective barrier forming a total exclusion area, ground protection is proposed which from experience will be fit for purpose and can be constructed of easily available materials.

5.6 Landscape works to the front garden can be envisaged and a water point is recommended to facilitate irrigation and establishment of new plants

5.7 Balanced by protective measures and new planting, the scheme as proposed will not harm conservation area amenities and will result in a sustainable co-existence of the front garden Ash without risk of harm to the refurbished property.

Nick Bentley
23rd September 2013

ARBORICULTURAL SUBMISSION
APPENDIX 1
13 St Augustines Road

Brief qualifications and experience of Nick Bentley

1. **Qualifications:** HNDH Landscape Design & Horticultural Technology, Credit, Askham Bryan College, York, 1989. RFS Cert Arb 1991 Credit. Professional Tree Inspection, 2006.

2. **Practical experience:** As gardener, arborist and arboriculturist. Royal Botanic Gardens Kew (Wakehurst Place) as climbing tree surgeon. 15 years experience Local Government as an Arboricultural Officer: Leicester City Council, Wycombe District Council and latterly 8 years at the Royal Borough of Kensington and Chelsea handling all aspects of pubic sector tree management and procedures relating to the Town and Country Planning Act 1990 i.e. Development Control, public inquiries and informal hearings, tree preservation procedures and all aspects of control and enforcement thereof. Following a brief spell of 18 months as contracts manager of Arboricultural Association tree surgery contracting company I have been self employed from 2004 as a specialist tree planting contractor and, consulting arboriculturist for public and private clients and now continue to trade as Tree Projects Ltd.

3. **Continuing professional development:** Member of the Arboricultural Association and Royal Forestry Society and Associate of the London Tree Officers Association. Seminars/ Workshops: 2009: Veteran Tree Management, ISA; Trees and Climate Change, EtaLog, 2008: The Underground Movement, Barcham/ Bartlett seminar; CAVAT in practice training seminar with Chris Neilan/ Tim Moya Assoc; 2007: the Business of Arboricultural Consultancy, Arb Association; Through the Trees to Development, AAIS; 2006; Introducing BS 5837: 2005, Arb Association; Report Writing, Arb Association; Elite Bio-Mechanics, Mattheck/ Symbiosis Consulting; The Future of Tree Risk Management,

4. **Commissions undertaken:**

    - Planning consultancy to British Standard 5837 Trees in Relation to Construction; tree surveys and design advice for new builds, underground and above ground extensions, including method statements and tree protection plans.
    - Tree condition surveys and recommendations including data handling through Ezytreev and Confirm.
    - Providing advice on tree preservation matters, tree work applications and sub-contracting tree surgery operations.
    - Tree supply and planting.
    - Tree root investigations by trench formation and pile spotting by use of non percussive air spade and air vacuum excavation techniques

ARBORICULTURAL SUBMISSION
To 13 St Augustines Road

APPENDIX 2

TREE SCHEDULE
TREE SCHEDULE PLAN
EXPLANATORY NOTES

No Pages: This plus 3

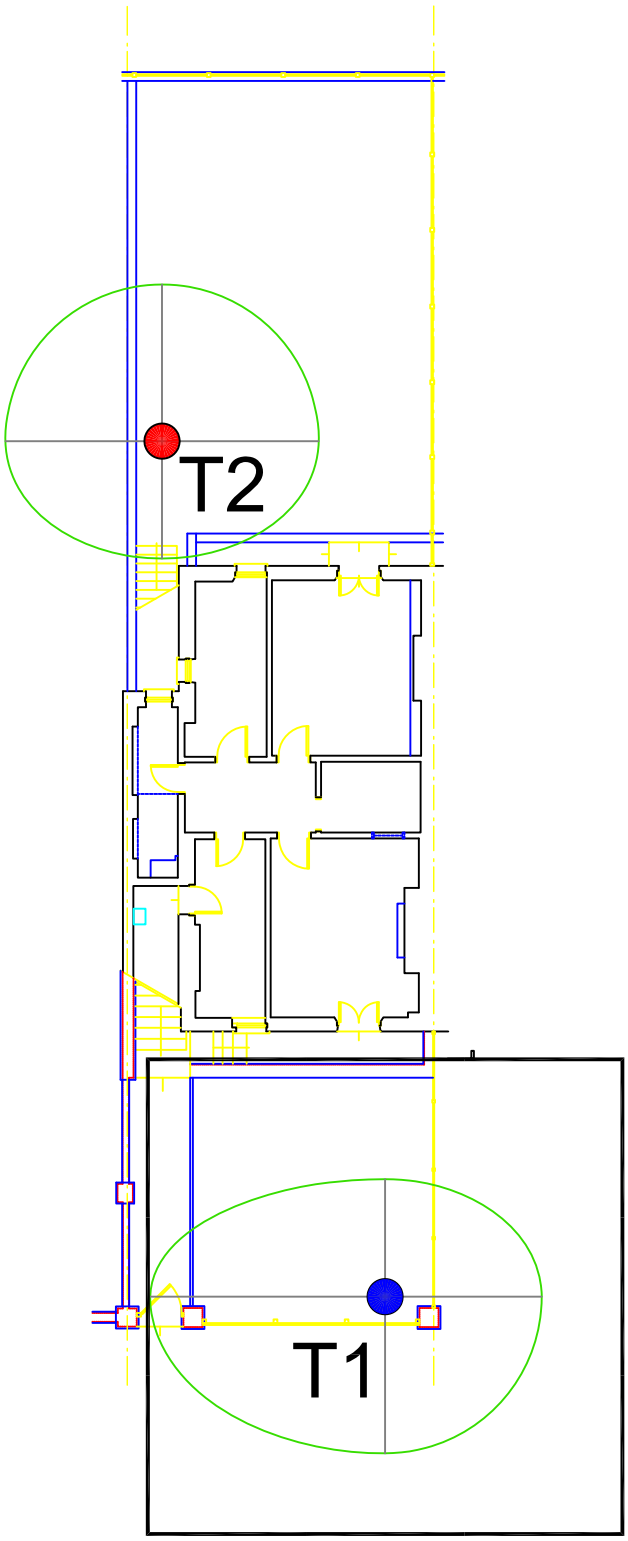
Tree Projects BS 5837 Survey 13 St Augustines Road

Date: 14th September 2013

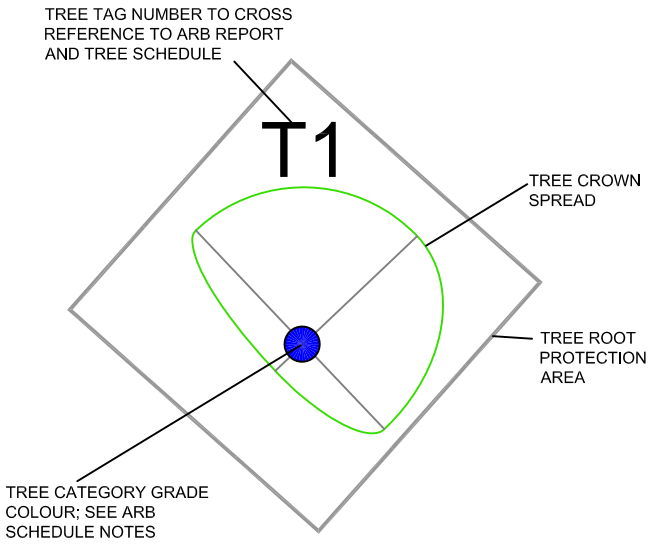
Weather: dull

last filter column

Tag	Common Name	Latin Name	DBH	Stem Cnt	Height	Low Crown	First Sig. Branch ht & bearing		Nth	East	Sth	West	Age	Life Exp	Condition	BS Cat.	Comments	Prelim. Mgt Recom.	RPA m2	RPA radius	RPA square
T1	Ash	Fraxinus excelsior	570	1	13	5	2.5	SE	3	4	4	6	M	10+	Fair	C2	Tree Previously crown reduced. Recently crown reduced. Front wall missing replaced with out of keeping 'picket fence'. Damage to low, front of elevation. garden retaining wall. Significant visual signs of building movement/ settlement. Existing impact damage visible on low primary branch.		147.0	6.8	12.1
T2	Ash	Fraxinus exceslior	200	1	10	2	2	W	4	4	3	4	Y	<10	Good	U	Young self seeded tree inappropriate for location due to potential size in proximity to property in subsidence risk area and, risk of damage to drains serving the premesis. Very low amenity value. Remove and replant with more appropriate secies of better scale and proportion to available space and at greater distance from property.	Fell and replace within scheme of landscaping	18.1	2.4	4.3



KEY TO TREE SYMBOLS



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TREE SCHEDULE PLAN

13 St AUGUSTINES ROAD, LONDON NW1

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TREE PROJECTS LIMITED,
THE MAISONETTE, 22 OLD PARK AVENUE
LONDON SW12 8TT

SEPT 2013- REV A

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BS 5837: 2012 - Explanatory Notes to tree survey schedule

- **Tree reference (tag) number:** Individual trees are referred to by a 'T' prefix to a number, i.e. T1, T2 etc. Collections or distinct groups of trees may be assigned a G prefix to denote presence of a 'group'. Prefixes and 'SB' (shrub) ST (Stump) and 'H' (Hedge) show further arboricultural features
- **Name/ Latin:** Species identification is based on visual observations and the common English name of what the tree appeared to be is listed first, with the botanical name after. The botanical name is followed by the abbreviation spp if only the genus is known or CV for Cultivar if assumed to be such and cultivar name not known.
- **Measurements/estimates:** Stem and Height dimensions are taken by tape or laser unless indicated. (DBH in mm/ Height in m)
- **Tree Stem DBH (Diameter Breast Height) is used to calculate Root Protection Area (RPA):** Measured at 1.5m above adjacent higher ground level using a specially calibrated 'diameter tape' and recorded in millimetres. Low branching trees are measured at the waist if lower than 1.5m. If two or more stems are present breaking from ground level, each stem is measured and relative locations described where possible using cardinal points. If taken lower than 1.5m for practical purposes the reading height is given.
- **Height:** Height given approximately to the nearest 0.5m, May be derived from compensating lines of sight.
- **Stem Cnt = Stem Count:** number of stems observed (informs calculation of RPA taking account of difference between single stem [SS] and multi-stemmed trees [MS])
- **Low crown Height:** the generalised height of the crown above ground level, usually branch ends.
- **First Significant Branch & Bearing:** Height of first significant branch and direction of growth.
- **Branch Spread:** Crown spread is measured and given to the nearest metre or half metre from the face of the trunk to the tips of the live lateral branches, measured towards the cardinal points. Usually measured by pacing. For trees managed by pollard regime crown may be to pollard extent: check tree schedule.
- **Age Class:** Y=young, SM= Semi Mature, EM=Early Mature, M=Mature, OM=Over Mature, V=Veteran. Age is estimated from visual indicators and experience and it should only be taken as a provisional guide. Age estimates often need to be modified based on further information such as historical records or local knowledge.
- **Life Expectancy:** the estimated remaining contribution (to amenity)/ safe useful life expectancy in years. (< 10, 10+, 20+, 40+) a tree with less than 10 years safe useful life will ordinarily need to be felled unless retained for habitat purposes within an excluded area.
- **Physiological condition:** An assessment of the general health of a tree considering vigour, extension growth, crown density and presence of pathogens. G=Good, F=Fair, P=Poor, D=Dead
- **Category Grading:** the grade of the tree utilising the cascade chart for tree assessment within BS 5837:2012 Trees in Relation to Design, Demolition & Construction. Trees are graded on arboricultural, landscape and cultural/ conservation qualities. The assessed quality of a tree is ascribed by this letter whilst numeric sub categories define where the quality lies without conferring additional value. Simplified definitions are:

    - **Category U, Unsuitable for Retention; 'Trees in such a condition that they cannot realistically be retained in the context of the current land use [or their condition] for longer than 10 years'. (Trees would probably be removed for reasons of sound arboricultural management in any event)**
    - Category A: 'Trees of high quality with an estimated remaining life expectancy of at least 10 years.'
    - **Category B: 'Trees of moderate quality with an estimated remaining life expectancy of at least 20 years'**
    - Category C: 'Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm'.
    - Sub categories 1, 2 or 3 assign respectively: 1; mainly arboricultural qualities, 2: mainly landscape qualities, 3; mainly cultural values including conservation. Note: for example an A1 tree has the same retention priority as an A2 tree. A Some trees may qualify under more than one criterion.

- **Comments:** observations that may supplement assessments of condition or otherwise be significant.
- **Preliminary Management Recommendation:** Advice regarding tree surgery etc. Key: NW = No work. RP= Reduce to Previous Reduction Points. CR% = Crown Reduce (by % or m). CL = Crown Lift (to specified height AGL). CT = Crown Thin (by %). **Priority** (where specified) Priority 1 = Urgent works ASAP and certainly within 1 Month. Priority 2 = Complete within 12 months. Priority 3 = Non critical works to complete within 2 to 3 years.
- **RPA m2:** The Root Protection Area in square metres required by BS 5837.
- **RPA radius:** the radius of a circle of size equivalent to the RPA m2. The radius is taken from the centre of the tree plot.
- **RPA square:** the length of sides of a square equivalent to the RPA m2. the centre of the trunk of the tree to be positioned in the centre of the square

ARBORICULTURAL SUBMISSION
To 13 St Augustines Road

APPENDIX 3

Illustration of Tree Protective Barrier

Indicative Tree Protection and Site Set-up plan

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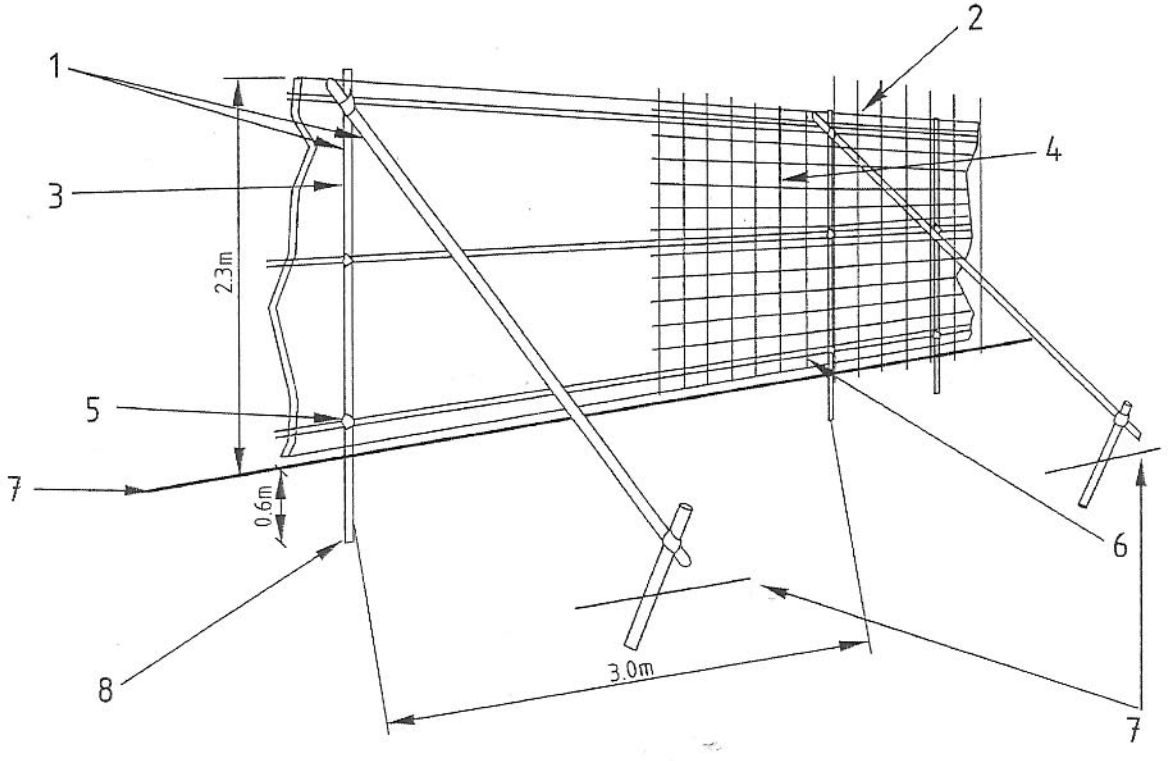


1 Standard scaffold poles

2 Uprights to be driven into the ground

3 Panels secured to uprights with wire ties and where necessary standard scaffold clamps

4 Weldmesh wired to the uprights and horizontals

5 Standard clamps

6 Wire twisted and secured on inside face of fencing to avoid easy dismantling

7 Ground level

8 Approx. 0.6 m driven into the ground

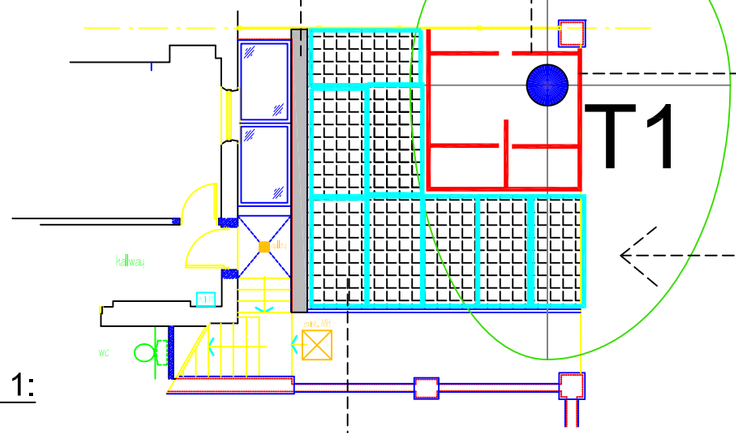
Figure 2 — Protective barrier

Existing basement retaining wall and footings to be removed by hand with hand power tools. Continue to excavate to 1000mm depth by hand digging retaining any roots encountered. Root revealed to be cut by arborist with sharp hand tools. Proceed to form retaining wall by hand dug cantilevered and reinforced pins cast against retained earth.

New front garden basement retaining wall

Back bracing stays

Tree RPA Protective barrer by herras panels fixed to back braced scaffold framework



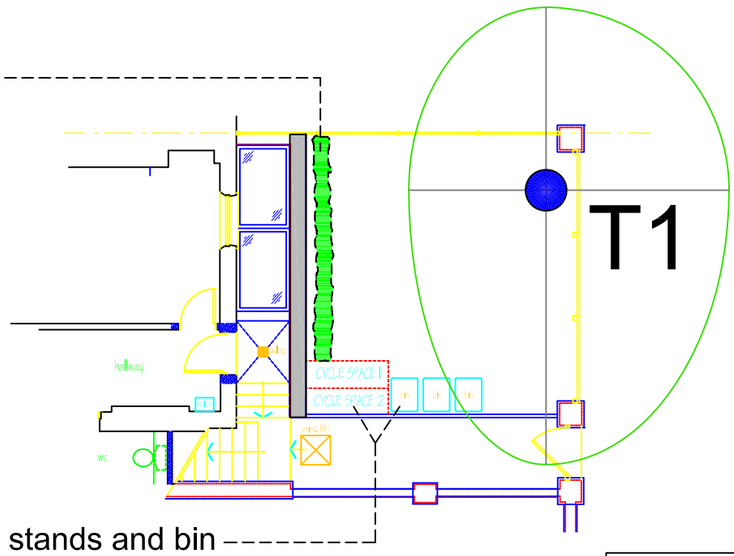
Skips and muck-away at distance from tree branches

TREE PROTECTION STAGE 1:

TO BE INSTALLED PRIOR TO COMMENCEMENT OF ALL WORK INCLUDING SOFT STRIP AND BEFORE BRINGING SKIPS OR MATERIALS TO SITE. RETAIN FOR DURATION OF ALL SUBSTANTIVE WORK TO BE REMOVED JUST PRIOR TO LANDSCAPING.

Ground protection by application of 100mm wood chip compressible layer overlain with 1000 guage damp proof membrane with 300mm upstand laps to protective barrier with steel road-plates over pinned to ground. Plates to be textured for grip or overlain with further layer of ply for that purpose.

Garden to be soft landscaped on completion: allow for tap for garden irrigation



Cycle stands and bin store to stand on paving slabs bedded on sharp sand.

TREE PROTECTION STAGE 2:

BARRIER AND GROUND PROTECTION TO BE REMOVED WITH WOOD CHIP DUG INTO GROUND AS SOIL IMPROVER.

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INDICATIVE TREE PROTECTION & SITE SET-UP PLAN

13 ST AUGUSTINES ROAD LONDON NW1

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