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Arboricultural Method Statement

- Tree Survey
- Tree Protection Plan
- Arboricultural Method Statement

For:-

Hard Landscape Works

At:-

14 Grove Terrace
London
NW5 1PD

On behalf of:-

Roberts and Treguer
29 Clerkenwell Green
London
EC1R 0DU

Prepared by:

Simon Stephens MA Oxon, Dip Arb(RFS), MArborA, C Env. MICFor
Email: simon@sjstephens.co.uk

Survey Date: 5th March 2024
Report Date: 8th March 2024
Project no: 2245

CONTENTS

1 BACKGROUND

1.1 This Arboricultural Method Statement is intended to satisfy a request from the Local Planning Authority to provide tree protection recommendations relating to landscape works in the rear garden of 14 Grove Terrace, which is a Grade II* listed property.

1.2 Tree details are shown in the Tree Schedule in Appendix B and on the Tree Protection Plan in Appendix A. This plan also includes tree protection measures, which are specified in the Arboricultural Method Statement in section 5 below. Arboricultural supervision required during construction is detailed in section 6.

1.3 The tree survey was undertaken, and this report has been prepared by Simon Stephens MA Oxon, Dip Arb (RFS), MArborA, C Env, MICFor a Registered Consultant with the Arboricultural Association, with over 20 years relevant experience.

1.4 This survey and report have been prepared in accordance with recommendations provided in BS 5837:2012, Trees in relation to design, demolition and construction - Recommendations.

1.5 Documentation supplied:

- Roberts and Treguer Existing & Proposed Garden Plan: drawing no 2124-05-05-099

2 SURVEY DETAILS AND SCOPE

2.1 The site survey included trees and shrubs, within and adjacent to the site, with a stem diameter over 75mm at 1.5m height, as shown located on the Tree Protection Plan, included as Appendix A.

2.2 Tree inspection took place from ground level with the use of binoculars, sounding hammer and metal probe using the Visual Tree Assessment method (Mattheck & Breloer 1994). The presence and condition of bark and stem wounds, cavities, decay, fungal fruiting bodies and any structural defects that could increase the risk of structural failure were noted.

2.3 Tree diameters were measured using a girthing tape and tree heights were measured using a hypsometer. Where use of a tape was restricted by site factors, diameters were estimated, with the diameter recorded in the tree schedule as eg “est 300”.

2.4 At the time of the survey, the weather was fine with no restrictions to visibility. Broadleaf trees were not in leaf. There were no limitations to access around the trees within the site. Trees in adjacent gardens were only inspected from the site.

2.5 Tree details are shown on the Tree Protection Plan included as Appendix A. Tree locations have been taken from the topographical survey provided. Where not included on the topographical survey, they have been determined by measuring distances from features shown on the plan, using a laser measuring device. The following information was recorded for each tree, and is shown in the Tree Schedule included as Appendix B:

- **Number:** an identity number for each tree, prefixed with a “T”, which cross references locations shown on the plan with the schedule in Appendix B. Where a number of trees are located close together and are similar in character and management requirements, they have been treated as a Group under a single number, prefixed with a “G”.
- **Species**: common name.
- **Tree height**: approximate height in metres.
- **Stem diameter**: diameter in millimetres, taken at 1.5m above ground. Where there are a number of stems, stem diameters are recorded in the condition column.
- **Branch spread**: approximate spread in metres to N,S,E and W of the trunk. The approximate branch spread is drawn on the plan.
- **Canopy clearance**: approximate height of the canopy above ground. Where a significant, low lateral branch is present, its height and direction of growth is included in the Condition column.
- **Age class**: Young, Semi-mature, Early mature, Mature, Over-mature, Veteran.
- **Condition**: features that affect the safe useful life expectancy and amenity of the tree, including the presence of decay or any physical defect.
- **Management Recommendations**: recommendations to ensure the health and safety of the tree, within the future development.
- **Estimated Remaining Contribution**: <10 years, 5-15 years, 10-20 years, 15-30 years, 20-40 years, >40 years.

- **Category grading**: tree classification taken from BS 5837:2012, Trees in relation to design, demolition and construction (see Appendix C for details), as follows:
    - Category U: Unsuitable for retention, trees with less than 10 years life expectancy, normally recommended for removal (Red)
    - Category A: high quality trees, able to make a substantial contribution for at least 40 years, normally retained unless there is an over-riding reason for removal and appropriate mitigation. (Green)
    - Category B: moderate quality trees, able to make a significant contribution for at least 20 years, normally retained. (Blue)
    - Category B/C: an intermediate category between categories B and C (not specifically described in BS5837). Trees, which should be retained wherever possible, providing retention does not unreasonably constrain the layout. (Blue)
    - Category C: low quality, in adequate condition to remain for at least 10 years, or young trees <150mm stem diameter. Trees which can be removed to allow the desired layout or new planting. (Grey)

  For category A, B and C trees, a subcategory has been allocated, providing information on the reasons for selection of a specific category, as follows:
    - Subcategory 1: mainly arboricultural values.
    - Subcategory 2: mainly landscape values.
    - Subcategory 3: mainly cultural values, including conservation.
- Trees have been classified irrespective of the possible proximity to future construction. The BS 5837 category is colour coded, as indicated above, on the plan included as Appendix A.
- **Protection Distance:** the protection distance in metres required to provide the Root Protection Area recommended in BS 5837, assuming a circular area centred on the tree.
- **Root Protection Area (RPA):** the area in m^2, as recommended in BS 5837, to provide sufficient rooting area to ensure tree survival and which, in most situations, should be fenced off to prevent root damage from construction activities.

3 SURVEY LIMITATIONS

3.1 No internal decay devices, or other invasive tools to assess tree condition, were used.

3.2 No soil excavation or root inspection was carried out.

3.3 This survey has not considered the effect that trees or vegetation may have on the structural integrity of future building through subsidence or heave.

3.4 The tree survey has been undertaken for planning purposes. Although any obvious structural defects have been noted, a Tree Hazard Assessment has not been carried out. Mature trees close to highly populated areas or public highways should normally be checked for safety annually by a suitably qualified person.

4 LEGAL PROTECTION OF TREES

4.1 The Camden Council website was viewed on 08-03-2024. Although this does not provide details of Tree Preservation Orders, it does show that the site falls within a Conservation Area. No tree work must therefore be undertaken without approval from the council.

4.2 However, if planning permission has been granted, provided the application clearly shows any trees to be removed or pruned, this overrides protection provided by Tree Preservation Orders or Conservation Areas, provided the work is necessary to implement the approved development. If not essential, a separate tree work application will need to be submitted for trees protected by a Tree Preservation Order. In this case, since only tree work essential to implement the approved scheme has been specified, no further approvals are required.

5 ARBORICULTURAL METHOD STATEMENT

5.1 Site Overview

5.1.1 Hard and soft landscape work is proposed to the rear garden. The existing and proposed site plans are included as Appendix E and, along with tree details, on the Tree Protection Plan attached as Appendix A.

5.1.2 The only trees within the site are young/semi-mature trees up to 6m in height which are of limited importance. However, there are five mature trees in adjacent gardens which are of high importance and so must be protected.

5.2 Construction Access and Site Set up

5.2.1 All construction materials and tools will be transported through the existing property which is currently being renovated.

5.2.2 If materials need to be stored they must be kept outside the Root Protection Areas or located on ground protection panels where shown cross hatched on the Tree Protection Plan.

5.2.3 Storage of cement, concrete, oil, fuel, bitumen, chemicals or materials – such as treated timber products - that could have toxic leachate must not be permitted within the Root Protection Area of any retained trees, nor in any position where the slope of the ground could lead to contamination of the Root Protection Area.

5.2.4 Site offices will not be required.

5.3 Tree Work

5.3.1 No tree work is proposed.

5.4 Root Protection Areas

5.4.1 Root Protection Areas are shown for all trees in the tree schedule included as Appendix B. They are also shown for all retained trees, as circular areas centred on the trunk, on the Tree Protection Plan included as Appendix A. Where there are physical obstructions to root growth the Root Protection Area should be shown as an equivalent area that is more likely to reflect actual root growth. The Root Protection Area shows the area around a tree in which all construction activity must normally be excluded, unless appropriate protection measures are implemented.

5.5 Tree Protection Fencing

5.5.1 Tree Protection Fencing must be erected where shown on the Tree Protection Plan, included as Appendix A. This will provide full protection of the Root Protection Areas of all retained trees, other than for:

- areas hatched in blue on the Tree Protection Plan, where No-Dig Construction must be used, as described in section 5.5 below, to protect underlying roots.

- areas hatched cyan on the Tree Protection Plan, indicating Ground Protection Areas, where roots must be protected, as described in section 5.6 below.

5.5.2 Tree Protection Fencing must be from weldmesh panels, at least 2m high, securely fixed, with wire or scaffold clamps, to a rigid framework. This framework must be constructed from scaffold tubes with vertical tubes, at a maximum interval of 3m and driven into the ground at least 0.6m. The structure must be well braced to resist impacts, constructed as per Figure 2 of BS5837:2012, which is reproduced in Appendix D. Alternatively, weldmesh panels can be supported on blocks, providing the blocks are pinned to the ground with road pins, or similar, and the panels are braced, as per Figure 3 of BS5837:2012, which is also reproduced in Appendix D.

5.5.3 Tree Protection Fencing must be maintained and retained for the duration of the works, or until such time as agreed in writing with the arboricultural consultant or the Local Planning Authority.

5.5.4 Weatherproof notices must be fixed to the Tree Protection Fencing, and maintained, stating:-

TREE PROTECTION AREA
KEEP OUT
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND CONSERVATION AREA STATUS
CONTRAVENTION MAY LEAD TO CRIMINAL PROSECUTION
THE FOLLOWING MUST BE OBSERVED BY ALL PERSONS:

- The Protection Fence must not be moved
- No person or machine must enter the area
- No materials or spoil must be deposited
- No excavation must be permitted

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

5.6 No-Dig Construction Areas

5.6.1 The No-Dig Construction areas, shown hatched blue on the Tree Protection Plan included as Appendix A, are shown where existing paving is to be lifted and either re-laid or replaced with new pavers. This must be constructed without excavation. Excavators, dumpers and other site traffic must not be allowed to track on the No-Dig areas until roots are protected by the No-Dig surfacing or ground protection.

5.6.2 Where existing hard surfacing within the No-Dig areas are to be replaced by new hard surfacing, no excavation must be permitted beneath the existing sub-base. If existing sub-base remains, it can be used as a base for the new build up. If the existing sub-base is removed, engineering details for the new build must avoid localised compaction, using both a two dimensional geogrid, and a three dimensional cellular confinement system as integral components of the sub-base. A typical section is shown on the Tree Protection Plan included as Appendix A. As well as being fit for purpose, the design and methodology must protect tree roots, by ensuring the following:-

- following leveling with soil or sand, a permeable, non-woven geotextile membrane, must be laid.
- a suitable two dimensional geogrid, such the TriAx Geogrid supplied by Tensar International (www.tensar.co.uk), or the Biaxial Geogrid supplied by Geosynthetics Ltd (www.geosyn.co.uk), must be laid over the entire area and underneath the edging.
- pressure treated timber edging boards, supported by driven stakes must be used.
- a suitable cellular confinement system must then be laid to manufacturers instructions on top of the geogrid. Products that might be considered include Geoweb, supplied by Greenfix (www.greenfix.co.uk) or Cellweb, supplied by Geosynthetics Ltd (www.geosyn.co.uk). The depth of the system must be adequate to take the maximum axle weight, as per manufacturers guidance.

- the cellular confinement system must be filled with clean (no fines), washed angular, 20/40mm, stone to provide load support, while allowing air and moisture to permeate to the root zone.
- a further permeable, non-woven geotextile membrane, such as TreetexT300, or an alternative approved product which has similar oil trapping qualities, must be laid over the cellular confinement system.
- a porous, surfacing material, free from contaminants, must then be laid. Either sand bedding and paving or gravel would be suitable.

5.6.3 Site traffic, including pedestrians, must not be allowed on the No-Dig areas until roots are protected by the No-Dig surfacing, or unless suitable ground protection has been laid. If access is required across No-Dig areas for plant, before the No-Dig surfacing is laid, ground protection panels must be laid. Either Trakmats (supplied by the Marwood Group, www.marwoodgroup.co.uk), Groundtrax panels (see www.groundtrax.com), Ground-Guards, as supplied by Greentek (www.greentek.org.uk), or a similar approved product, must be used, laid on top of a compressible layer of sand or woodchips, laid onto a geotextile. If access is required for pedestrians, 25mm plywood or side butting scaffold boards must be laid, on top of a compressible layer of sand or woodchips, laid onto a geotextile.

5.6.4 No-Dig construction will result in an increase in levels. This must be fully taken account of in all other aspects of the design.

5.7 Ground Protection Areas

5.7.1 The Ground Protection Areas, which are hatched cyan on the Tree Protection Plan, show existing areas of paving which are to be lifted and converted to soft landscape. This hard surfacing, which is protecting any underlying roots, must stay in place during the construction period until they are worked on or unless ground protection panels are laid.

5.7.2 An excavator must not be used for the removal of the existing hard surfacing within the Root Protection Areas. Instead, this must be carried out by hand, with any excavation going no deeper than the existing base course and ceasing immediately if roots are found. Once hard surfacing has been removed, the area must immediately be topsoiled using good quality topsoil supplied to BS3882:2015.

5.7.3 Mechanical cultivation eg. rotovating must not be used within the Root Protection Areas of trees. Instead, if required, areas can be dug over by hand, carefully working around any roots found.

5.7.4 Ground protection panels must be laid over the Ground Protection Area shown cross hatched cyan on the Tree Protection Plan, so that the area can be used for general site use and storage of materials. Trakmats, as supplied by either the Marwood Group, (www.marwoodgroup.co.uk) or Ground-Guards, (www.ground-guards.co.uk) or a similar approved product, must be used, laid on a compressible layer of sand or woodchips, laid onto a geotextile, with adjacent panels held together with connectors.

5.7.5 Ground protection must be laid before any construction or ground work starts on site and must be maintained in good condition until all construction operations have been completed. Ground protection must be fit for purpose and be replaced with an alternative product if panels start to move or any sign of ground compaction is seen.

5.8 Services

5.8.1 No new service runs or drainage are required.

5.9 General measures

5.9.1 No construction activity whatsoever, including routing of underground services or storage of materials, must be allowed within Root Protection Areas, other than that specifically described above.

5.9.2 Fires must not be lit.

5.9.3 If any tree shown for retention is removed, uprooted or destroyed, another tree must be planted in the same location, at a size and species to be agreed in writing with the Local Planning Authority.

5.9.4 A copy of this report and the Tree Protection Plan must be kept on site and must be fully understood by the Site Agent.

5.10 Arboricultural Supervision

5.10.1 A qualified Arboricultural Consultant must be retained during the period of construction to carry out the following:

- to liaise with the contractor, prior to construction or ground work starting on site, to ensure this Arboricultural Method Statement is fully understood and can be complied with in full. If any revisions are required, a revised Arboricultural Method Statement must be approved by the Local Planning Authority, prior to construction or demolition starting on site.

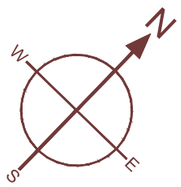
- as necessary, to advise on any issues at the request of the local planning authority, the developer, architect or contractor.

The details of any site visit must be recorded using a site visit proforma, with copies circulated to the contractor, developer and the local authority Tree Officer within 3 working days of the visit.

6 REFERENCES

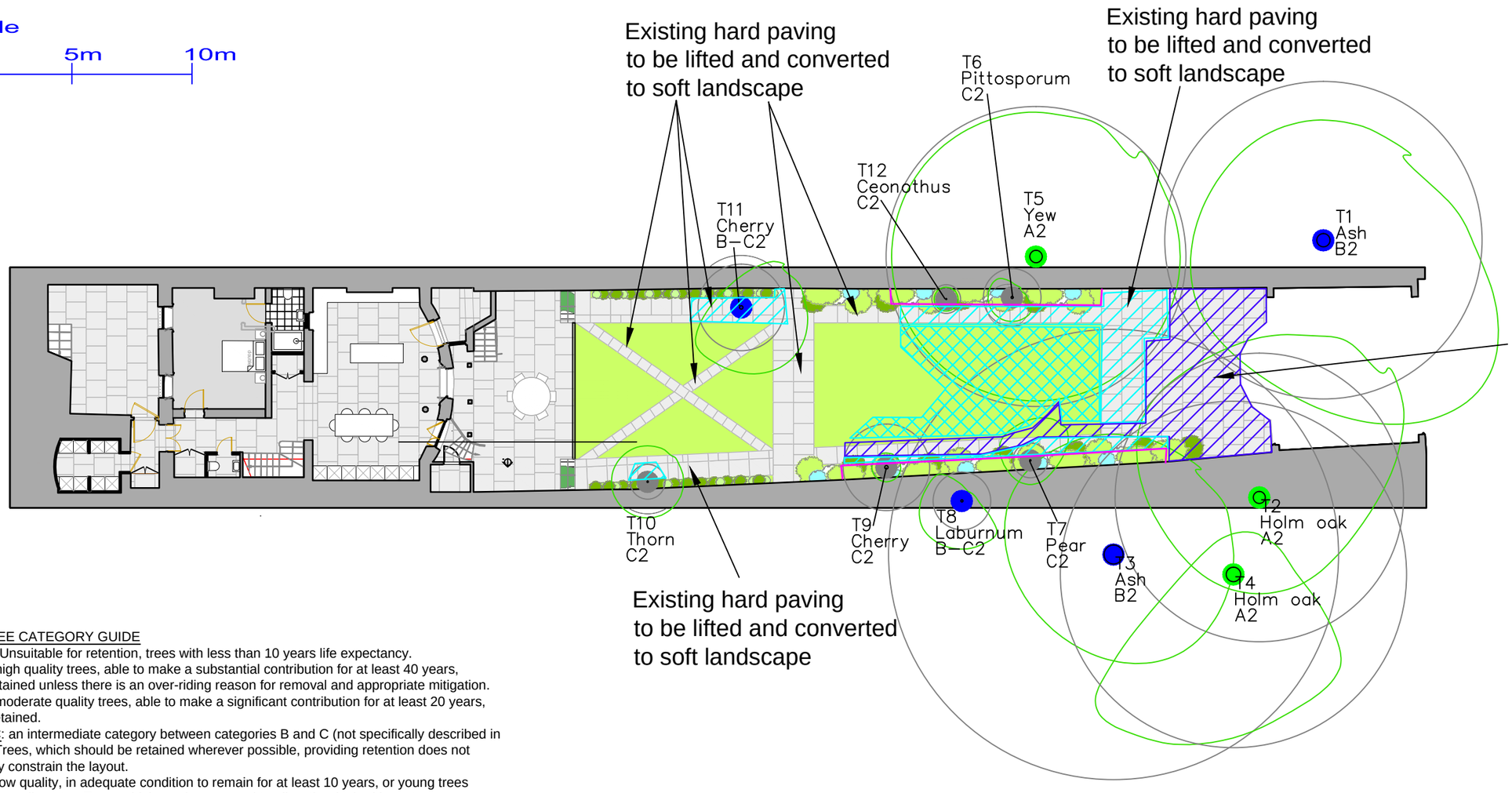
- *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.*
- *BS3998:2010 Tree Work. Recommendations.*
- *BS8545:2014 Trees: from nursery to independence in the landscape. Recommendations.*
- *Common sense risk management of trees (FCMS024). Published by the National Tree Safety Group (www.ntsgroup.org.uk)*
- *The use of Cellular Confinement systems near Trees: a guide to good practice Arboricultural Association Guidance Note 12*

APPENDIX A



Scale

0 5m 10m



Key

- Category U
- Category A
- Category B
- Category C
- Crown spread: retained trees
- Trees For Removal
- Root Protection Area
- Ground Protection Area -paving to be lifted
- Ground Protection Area -panels to be laid
- No-Dig Construction
- Tree Protection Fence

BS 5837: TREE CATEGORY GUIDE

Category U: Unsuitable for retention, trees with less than 10 years life expectancy.

Category A: high quality trees, able to make a substantial contribution for at least 40 years, normally retained unless there is an over-riding reason for removal and appropriate mitigation.

Category B: moderate quality trees, able to make a significant contribution for at least 20 years, normally retained.

Category B/C: an intermediate category between categories B and C (not specifically described in BS5837). Trees, which should be retained wherever possible, providing retention does not significantly constrain the layout.

Category C: low quality, in adequate condition to remain for at least 10 years, or young trees <150mm stem diameter. Trees which can be removed to allow the desired layout or new planting.

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JOB TITLE	14 GROVE TERRACE
DRAWING TITLE	TREE PROTECTION PLAN
DRAWING NUMBER	2245–01
REV	
REVISIONS	
SCALE	1:200 at A3
DATE	MAR 24
DRAWN BY	sjss

Appendix B
BS 5837: 2012 Tree Schedule

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Branch Spread (m)				Canopy Cleara -nce (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Protect -ion Distnce (m)	Root Protect. Area (m2)
				N	S	E	W								
T1	Ash	17	est550	5	6	9	5	6.0	Mature	Growing in adjacent garden the other side of 2.8m wall. Crown reduced in the past. Showing reasonable vigour.		15-30	B2	6.6	137
T2	Holm oak	17	est500	7.5	4	4	6	2.5	Early mature	Growing in adjacent garden the other side of 2.5m wall. No signs of rooots within site.		>40	A2	6.0	113
T3	Ash	15.5	est780	5	4	5	5	5.0	Mature	Growing in adjacent site, where the ground level is c0.4m lower than site. Base not inspected. Previously topped at 13.5m. Reasonable vigour, but susceptible to disease.		15-30	B2	9.4	275
T4	Holm oak	16.5	est600	2	8	6	1.5	3.5	Early mature	Growing in adjacent site. Base not inspected.		>40	A2	7.2	163
T5	Yew	13.5	est520	6	6	6	6	4	Mature	Growing in adjacent site the other side of 1.6m brick wall. Base not inspected. Bifurcates at 4m. Good crown shape and vigour.		>40	A2	6.2	122
T6	Pittosporum	3.5	100	0.5	1	1	1	0	Early mature	Four stems from base - average 50mm.		10-20	C2	1.2	5
T7	Pear	6	60	2	1	1	1.5	1.5	Semi Mature	Basal graft. Low branches removed. Showing good vigour.		>40	C2	0.7	2
T8	Laburnum	3.5	100	0.5	2	2	1.5	1.5	Semi Mature	Growing in adjacent site. Base not inspected.		15-30	B-C2	1.2	5
T9	Cherry	2.5	150	0.6	0.6	0.6	0.6	0.8	Early mature	Attractive small tree.		>40	C2	1.8	10
T10	Thorn	3.5	60	1.5	1.5	1.5	1.5	0.8	Young	Attractive small tree.		20-40	C2	0.7	2
T11	Cherry	3.5	150	2.5	2.5	3	1	1.6	Early mature	Bifurcates at 0.9m. Wound on western stem.Good vigour.		20-40	B-C2	1.8	10
T12	Ceonothus	2.5	50	0.5	0.5	0.5	0.5	0.2	Early mature	Three stems from base - av 25mm. Attractive shrub.		10-20	C2	0.6	1

BS 5837:2012, Table 1 Cascade chart for tree quality assessment

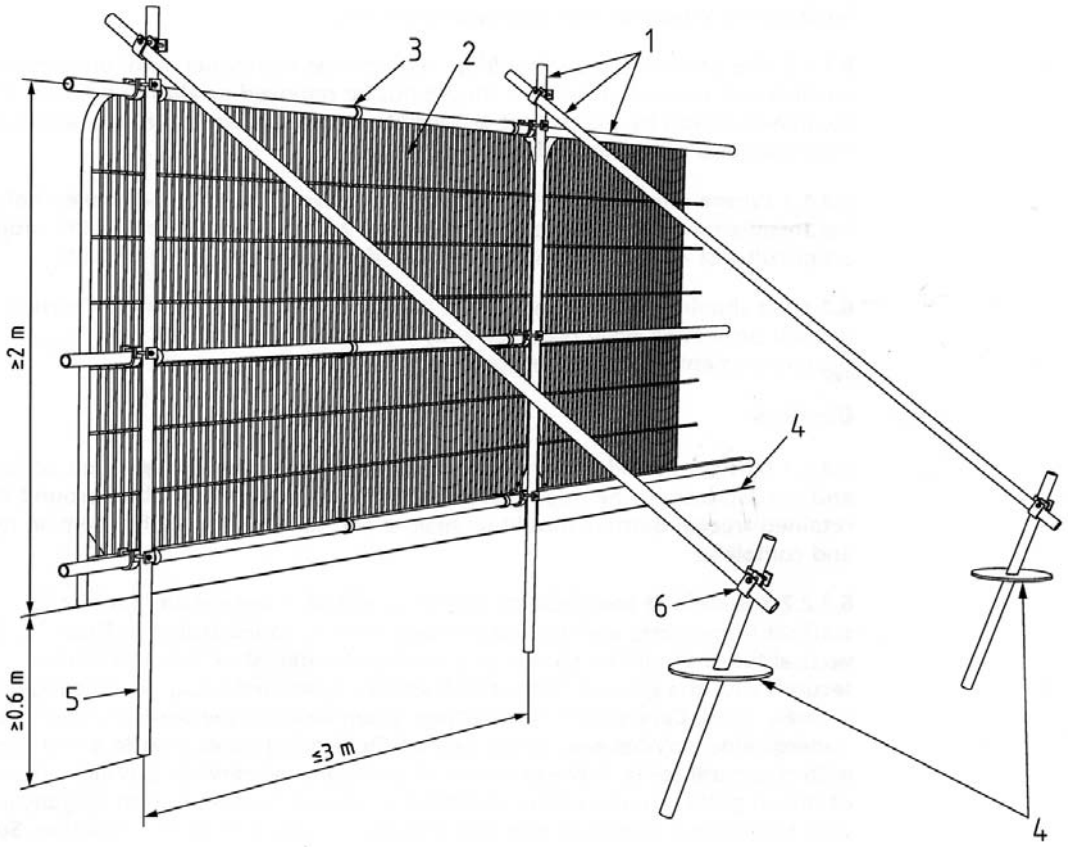
Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
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 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

Default specification for protective barrier

Figure 2

Key

1. Standard scaffold poles
2. Heavy gauge 2 m galvanised 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



Examples of above-ground stabilising systems

Figure 3a

Stabiliser strut with base plate secured with ground pins

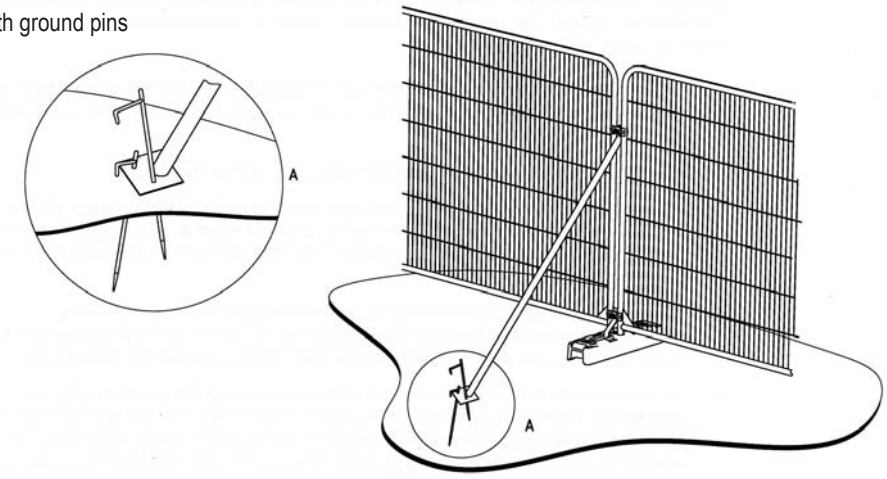
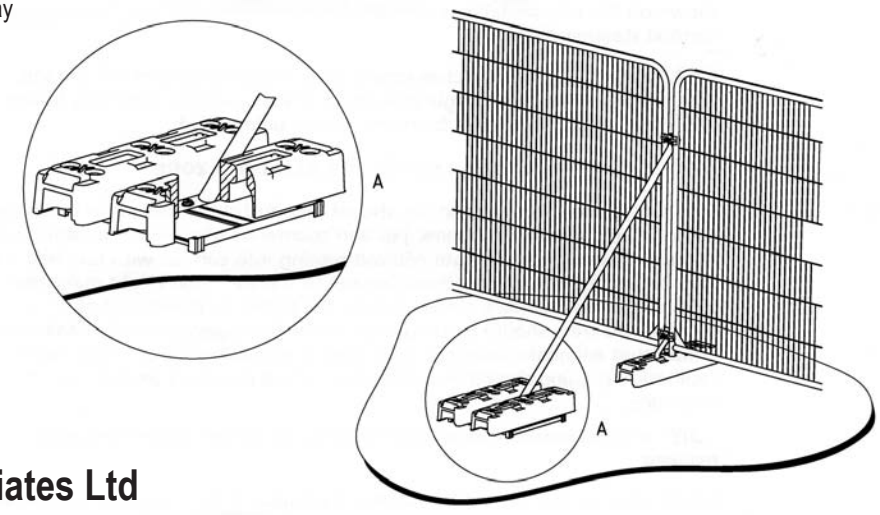
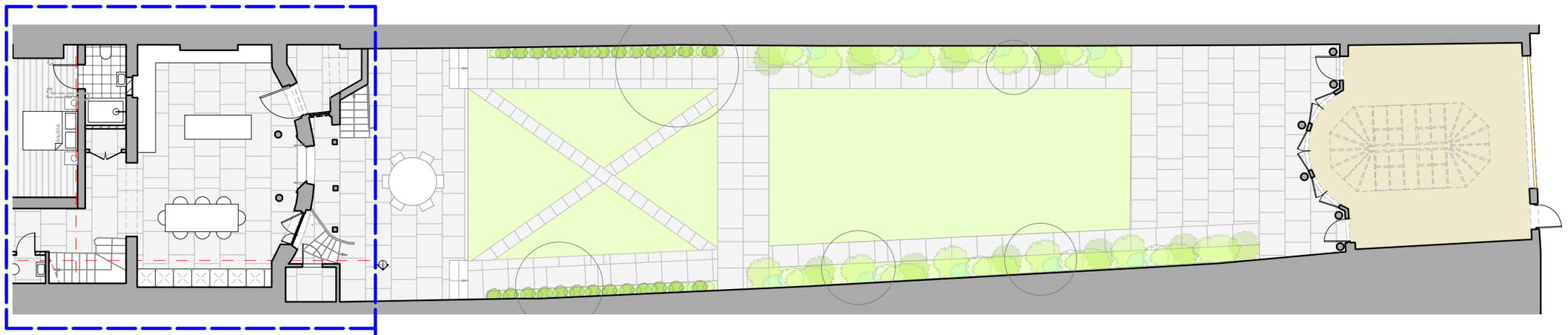


Figure 3b

Stabiliser strut mounted on block tray

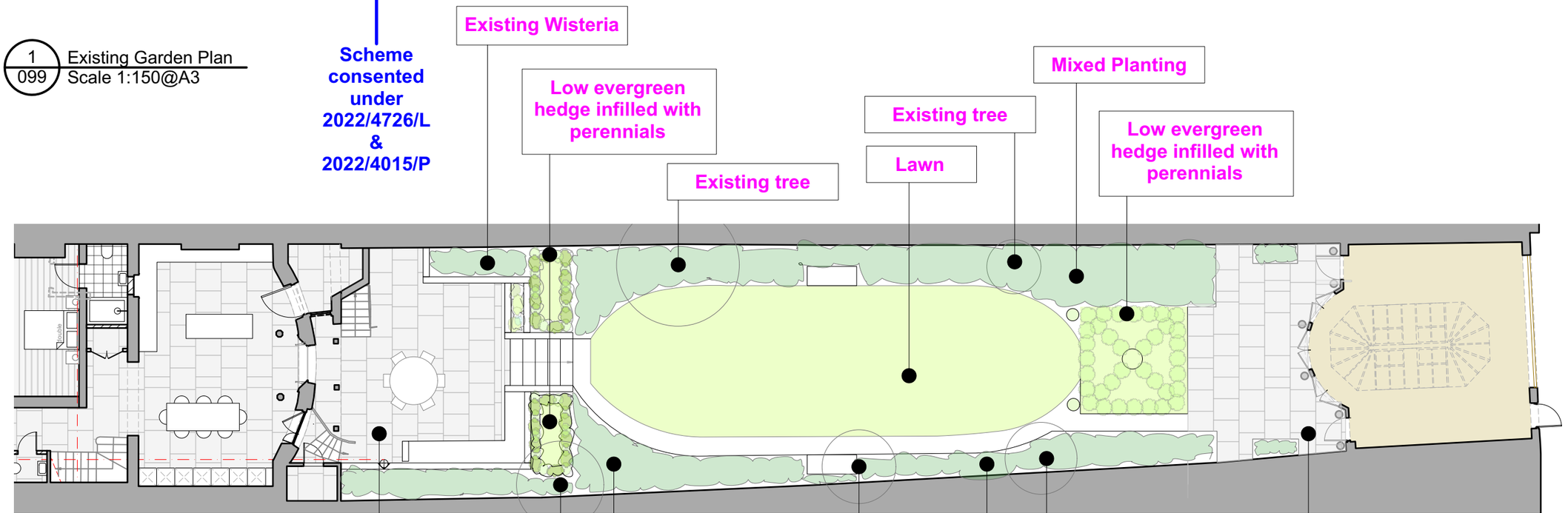


PROPOSED DRAWINGS
Plans



1 / 099 Existing Garden Plan
Scale 1:150@A3

Scheme consented under 2022/4726/L & 2022/4015/P



2 / 099 Proposed Garden Plan
Scale 1:150@A3

Less paved areas within new proposal

0 1 2 3 4 5

14 Grove Terrace

Description of Works

Date	Rev	Description
14.02.24	A	For Planning

Comments

Note
Although O.S. Coordinates may be shown on this plan the grid is to be treated as arbitrary. No scale factor has been applied to the survey therefore the any coordinates shown are not true O.S. Coordinates.
All dimensions to be checked on site

Key

Drawing No
2124--02-05-099

Title
Existing & Proposed Garden Plan

Scale
1:150@A3

Drawn by
FS

Checked by
GR

Roberts & Treguer

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