# Arboricultural method statement

**Trees**

**at**

**195 Goldhurst Terrace**
**London**
**NW6 3ER**

**For**

**Mr and Mrs C Caudwell**

Skerratt
R Skerratt BSc(For) M. Arbor. A.
158 Malden Road.
London
NW5 4BT

Tel: + 44 (0)7768 398776
Fax: + 44 (0)20 7767 4004
Email: raphaelskerratt@gmail.com

job no.: 472

document rev. no.:

date: 15.06.16

# 1. Scope and status

## 1.1 Scope

1.1.1 This method statement sets out measures for the protection of 2 trees in relation to the proposed erection of a free-standing, single-storey, garden building.

1.1.2 The locations of the trees are shown on the **Tree protection plan** in **Appendix a.** Their species and dimensions are listed in the **Pre-contract tree works schedule** in **Appendix b.**

1.1.3 The measures contained in this method statement are based on the advice and guidance set out in *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.*

## 1.2 Status

1.2.1 This method statement forms a part of the building contract and its requirements are an integral part of the contract specification and schedule of works.

1.2.2 A copy of the method statement must be available for inspection on site at all times.

1.2.3 All persons working on site should be aware of the importance of avoiding damage to trees and should observe the necessary precautions. A guidance leaflet is included in this method statement in **Appendix c**.

# 2. Preparatory works prior to construction

## 2.1 Tree works

2.1.1 Preparatory tree works to retained trees are listed in the **Pre-contract tree works schedule** in **Appendix b** and should be carried out prior to the start of construction.

2.1.2 All works will be carried out in accordance with *BS3998:2010 Recommendations for Tree Work.*

## 2.2 Protective measures: tree protection fencing

2.2.1 The extent and location of tree protection fencing is shown on the **Tree protection plans** in **Appendix a**. Fencing must be erected before any site works take place. It is particularly important that no demolition, soil stripping, breaking out of existing hard surfaces, re-grading or other excavation takes place before protective fencing has been erected.

2.2.2 Tree protection fencing will comply with the advice and guidance contained in *BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations.*

2.2.3 In this case, fencing will be 2000mm high welded steel mesh panels (eg Heras round or square top panels or equivalent), mounted on compatible concrete or rubber feet, linked with 2 anti-tamper couplings and strutted at the ends. Struts will be attached at their lower ends to base plates secured with ground pins or to surface mounted concrete or rubber feet that are compatible with the strut size.

2.2.4 Areas separated from the construction site by protective barriers are **Construction Exclusion Zones (CEZ).**

2.2.5 **CEZs** are total exclusion areas. All of the following will be excluded:

- Animals
- Pedestrians
- Vehicles and construction equipment
- Materials and equipment storage
- Contamination from materials used outside the **CEZ** – (for example spillage of diesel or other toxic liquids)
- Surface water runoff from outside the **CEZ**

2.2.6 Clearly legible, weatherproof signs will be fixed to the perimeter fencing of the **CEZ** clearly setting out the access restrictions set out above. An example is included at the end of this statement in **Appendix c.**

## 2.3 Protective measures: ground protection

2.3.1 In the area marked **Special Construction Area** on the **Tree protection plans** in **Appendix a,** maintain a ground protection layer at all times throughout the construction programme except where its removal is required for the immediate purposes of carrying out approved works.

2.3.2 Existing hard surfacing is acceptable as a ground protection layer without reinforcement

2.3.3 Elsewhere, ground protection layers will consist of interlinked ground protection boards (12mm Portatrak or equivalent) laid on 100mm of wood chips or shredded bark above a geo-textile membrane.

2.3.4 Each successive section of ground protection will be laid by personnel working from an existing ground protection layer of from hard surfacing

# 3. Works during development

**3.1 Storage, handling and use of materials**

3.1.1 Phytotoxic materials (diesel or cement for example) must be stored off-site or in a bunded container outside the **Root Protection Areas (RPAs)** of the trees shown on the **Tree protection plan** in **Appendix a.**

**3.2 Safe positioning of lifting, handling and other construction equipment**

3.2.1 No wheeled or tracked construction equipment of any description will be permitted to work on or immediately adjacent to the site.

**3.3 No fires on site**

3.3.1 No fires will be lit anywhere on site.

**3.5 Special construction areas**

3.5.1 Follow the procedures specified in this section within the **Special construction area** shown on the **Tree protection plans** in **Appendix a.**

3.5.2 All construction operations will be carried out by personnel working from a ground protection layer (see 2.3 above).

*Excavation*

3.5.3 There will be no general excavation below existing ground level of any kind within the RPA of any retained tree.

3.5.4 Individual pad locations will be excavated by hand using hand-held, non-powered equipment.

3.5.5 Excavation will be carried out in 100mm layers and the ground surface will be probed before each layer is excavated to identify large (more than 20mm) diameter roots.

3.5.6 Where such roots are encountered, they will be retained undamaged. Excavation that has already been carried out in the particular location will be backfilled and the pad location will be moved laterally.

*Casting foundation pads*

3.5.7 If foundation pads are to be cast *in situ*, the receiving excavation will be lined beforehand with a membrane of suitable strength to prevent leachate from curing concrete entering the root zone of any retained tree. The membrane may be a geo-textile (Terram T1000 or equivalent) or a suitable equivalent (building paper complying with *BS1521* for example).

*Making good*

3.5.8 Making good round the base of each installed pad will be by hand using hand-held, hand-operated non-powered equipment only, and will be confined to the removal of loose debris and the backfilling of surface depressions round the immediate base of each pad.

3.5.9 If imported topsoil is used for the filling of surface depressions, it must be of good quality, be free of contaminants and foreign bodies and conform to the requirements for multi-purpose topsoil set out in *BS3882:2007*.

3.5.10 General levels within the **Special construction area** will not be raised.

**3.6 Removal of protective fencing and ground protection layers**

3.6.1 Protective fencing and remaining areas of ground protection may be dismantled only when construction works are completed and all construction equipment has been removed from site.

# 4. Summary of methods

## 4.1 Conflicts and remedial actions

4.1.1 The main potential sources of damage to trees are listed in **Table 1** below together with the remedial measures that should be adopted to minimise or avoid damage.

| **Source of damage** | **Remedial actions** | **See** | **Trees at risk** |
|---|---|---|---|
| Damage to tree stems and foliage | Erect protective fencing; plan construction activities to avoid damage to overhead branches: | Sections: 2.1, 2.2, 3.2, 3.3, 3.4 **Tree protection plan** | 001, 002 |
| Damage by surface compaction from site traffic/storage of materials | Maintain ground protection layers where indicated | Section: 2.3, 3.5 **Tree protection plan** | 001, 002 |
| Damage from spillage of toxic materials | Phytotoxic materials to be stored in a bunded compound/ container outside RPAs | Section: 3.1 | 001, 002 |
| Damage to tree roots | Observe working restrictions and exploratory investigation requirements | Sections: 3.5, 3.6 **Tree protection plan** | 001, 002 |

**Table 1: Summary of Potential Damage Sources and Remedial Measures**

# Appendix a

## Tree protection plan

001

002

KEY

ROOT PROTECTION AREA
as defined in *BS5837:2012*
*Trees in relation to design, demolition and construction - Recommendations*

002

FOOTPRINT OF PROPOSED STRUCTURE

SPECIAL CONSTRUCTION AREA

TREE PROTECTION FENCING

| | | | |
|---|---|---|---|
| Client: MR AND MRS C. CAULDWELL | Drawing Title: TREE PROTECTION PLAN | | Skerratt<br>**arboricultural advice** |
| Job Title: 195 GOLDHURST TERRACE<br>LONDON<br>NW6 3ER | Date: 15.06.16 | Scale: 1:100 ( A3) | 158 MALDEN ROAD, LONDON NW5 4BT<br>+44 (0)7768 398776 |
| | Drawing Number: 472.03.00 | Drawn by: RS | |

# Appendix b

## Pre-contract tree works schedule

# Pre-contract tree works schedule

Skerratt

| Tree No. | Species | Height (m) | Diam (cm) | Crown Spread (m) | | | | Crown Height (m) | Item |
|---|---|---|---|---|---|---|---|---|---|
| | | | | N | E | S | W | | |
| 001 | Sycamore (*Acer pseudoplatanus*) | 15 | 400 | 3 | 3 | 3 | 3 | 6/6 | No preliminary works required |
| 002 | Lime (*Tilia x europaea*) | 12 | 480 | 5 | 4 | 3 | 4e | 2/3 | Lift crown to 4m above ground level |

Client: Mr Mrs C Caudwell
Location: 195 Goldhurst Terrace, London NW6 3ER
Date: 15.06.16
Job No.: 472

**Specification**

**General**

All works must be carried out in accordance with the provisions of *BS3889:2010 Tree works*

**1. Felling**

1.1 Where necessary to avoid damage to neighbouring trees and vegetation, trees for removal will be dismantled in sections and lowered under controlled conditions

1.2 No retained tree will be used as an anchorage point for any tree removal operation

**2. Stump grinding**

2.1 Stump grinding will be to a sufficient depth to extend through the base of the central part of the stump

2.2 Chippings from stump grinding will be treated as arisings and removed from site to an approved disposal location

**3. Pruning: General**

***Active Target pruning***

3.1 Pruning cuts will be made close to the point of origin of the branch or branchlet to be removed (to avoid stubs which can inhibit wound occlusion)

3.2 Where there is a visible branch bark ridge and branch collar, pruning cuts will be made between the outer edge of the branch bark ridge and the outer edge of the branch collar

3.3 Where no branch collar is visible, cuts should be made from the outer edge of the branch ridge at right angles to the grain of the branch to be removed

***Size and location of pruning cuts***

3.4 The size and number of all pruning cuts will be kept to a minimum consistent with the specified management objective

3.5 Preference will be given to the removal of a larger number of seconday branches rather than the removal of larger primary branches (to minimise pruning wound diameter) to achieve the specified management objective

3.6 Pruning cuts will not exeeced 30% of the diameter of the parent branch or stem

**4. Remove dead wood (safety)**

4.1 Remove dead secondary branches and branchlets of 25mm diameter or greater at their point of origin following the principles of Active Target pruning

**5. Crown lift (to a specified height)**

5.1 Achieve the clearance specified between ground level and the lowest point of overhanging crown

5.2 Achieve the specified increase in headroom by removing secondary branches with the smallest possible diameter in accordance with the principles of Active Target pruning

5.3 Where necessary to avoid pruning wounds in excess of 30% of the diameter of the parent branch or stem, shorten rather than remove the limb to be pruned back to a healthy lateral with the largest possible diameter in relation to its parent branch. .

5.4 Shortening cuts will be made distal to the union with the lateral branch using Active Target pruning principles

# Appendix c

**BS protective fencing detail**
**Tree protection notice**
**Tree protection notes**

TREE PROTECTION ZONE

# KEEP OUT

NO DIGGING OR TRENCHING
NO STORAGE OF PLANT AND MATERIALS
NO VEHICULAR ACCESS
NO FIRES TO BE LIT
NO CHEMICALS TO BE STORED OR HANDLED IN THE VICINTY OF THIS ZONE
AVOID PHYSICAL DAMAGE TO TREES

REPORT DAMAGE TO TREES OR FENCING IMMEDIATELY

195 GOLDHURST TERRACE
LONDON
NW6 3ER

# CARING FOR TREES

# TREE PROTECTION NOTES

Trees are thin skinned and easily damaged

Their roots spread widely and run close to the ground surface.

All of the following can cause serious damage:

- Heavy traffic over and the storage of heavy materials above tree roots
- Direct damage to stems and branches from badly handled construction equipment,
- Root damage caused by unnecessary excavation
- Leakage of toxic liquids and powders above roots and close to tree stems.

Please keep the trees on site safe by following these simple rules carefully and in full.

There is a protective fence round each retained tree. These fenced-off areas are CONSTRUCTION EXCLUSION ZONES (CEZ). Don't enter any CEZ unless authorised to do so

**In Construction Exclusion Zones**

- Don't store any materials
- Don't use heavy machinery
- Don't handle toxic materials
- Stick to the planned work programme. Don't undertake unscheduled variations
- Don't light fires
- Report any damage to protective fencing to the Site Manager

**Work Planning**

Plan your work so that construction machinery does not come into contact with and cause damage to branches and stems of retained trees.

Appoint someone to supervise movement of machinery and equipment close to CEZs

Tell the Site Manager if tree pruning is needed to get machinery in, out or around the site. Don't do it yourself