Arboricultural method statement (Draft)

Trees at and adjacent to

30a Thurlow Road
London
NW3 5PH

for

Mr M Davies

Skerratt
Raphael Skerrattt BSc(For) M Arbor A
158 Malden Road
London
NW5 4BT

tel: 07768 398776
fax: 020 7767 4004
email: raphaelskerratt@hotmail.co.uk

job no.: 382

document rev. no.

date: 15.08.15

1. Scope and status

1.1 Scope

1.1.1 This method statement sets to measures for the protection of 4 trees in relation to proposed residential development at 30a Thurlow Road, London NW3 5PH before, during and after permitted development has been completed.

1.1.2 The locations of the 4 trees and 1 other tree that is to be removed are shown on the **Tree protection and removal plan** in **Appendix a.**

1.1.3 The proposed development comprises:

- Demolition of an existing dwelling and its replacement with a new one, with three storeys – basement, lower ground and ground.
- Associated external works

1.1.4 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 should 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 are listed in the **Pre-contract tree works schedule** in **Appendix b** and should be carried out prior to the start of the main contract.

2.1.2 All works will be carried out in accordance with *BS3998:2010 Recommendations for Tree Work,* by an appropriately qualified tree work contractor.

2.1.3 Unless otherwise specified, all arisings are to be taken off-site to an approved tip.

2.2 Protective measures: tree protection fencing

2.2.1 The extent and location of tree protection fencing is shown on the **Tree protection and removal plan** 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*, **but the existing brick site boundary wall is an acceptable substitute for tree protection fencing where it is retained.**

2.2.3 The British Standard specifies 2000mm high panels with a galvanised tubular frame and welded mesh infill (eg Heras round or square top panels or equivalent), attached to a scaffold framework with braced uprights at no more than 3m intervals. Subject to the agreement of the local authority, plywood panels are also fit-for-purpose as long as the panels are attached to uprights driven or dug into the ground at no more than 3m spacings and braced as specified in the British Standard. A 1:20 detail of the current British Standard specification for protective fencing is included at the end of this statement in **Appendix c.**

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)

2.2.6 Clearly legible, weatherproof signs will be fixed to the perimeter fencing of each **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 Ground protection layers will be installed in the areas indicated on the **Tree protection plan** in **Appendix a,** at the same time as protective fencing is erected. It is particularly important that no demolition, soil stripping, breaking out of existing hard surfaces, re-grading or other excavation takes place before ground protection layers have been installed.

Ground protection

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

2.3.3 Elsewhere, ground protection will consist of interlinked ground protection boards (12mm Portatrak or equivalent) laid on 150mm of woodchip above a geo-textile membrane.

2.3.4 Each successive section of ground protection will be laid by personnel and machinery working from the immediately preceding section or from existing hard surfacing.

2.4 Approval prior to start of works

2.4.1 Approval for the location and method and standard of construction of tree protection fencing and ground protection layers will be obtained from the local authority prior to start of works.

3.Works during development

3.1 Storage, handling and use of materials

3.1.1 Phytotoxic liquids (diesel for example) must be stored outside the RPAs of retained trees as shown on the **Tree protection and removal plan** in **Appendix a**, in a purpose-built bunded container to prevent the risk of spillage

3.2 Safe positioning of heavy lifting and handling equipment

3.2.1 Heavy lifting and handling equipment (eg cranes and excavators) must be located in such a way that, when in use, no part extends into the crown spread of any tree. When lifting and handling equipment is working beneath or close to the crown spread of any retained tree, a banksman will be employed to guide operations and minimise the risk of damage to the tree's branch system.

3.3 No fires on site

3.3.1 No fires will be lit anywhere on site.

3.4 Demolition

3.4.1 Demolition of existing structures must be away from retained trees into the footprint of the to-be-demolished structure ('top down: pull back').

3.5 Excavation and backfilling

Excavation to reduced levels: basement void and associated sub-structure

3.5.1 Roots entering the excavation area will be cut cleanly, at their point of origin or flush with face the excavation from which they enter the working area, with a sharp saw or loppers to minimise damage and promote rapid recovery.

Backfilling and consolidation

3.5.2 Where it is within the RPA of any retained tree as shown on the **Tree protection plan** in **Appendix** a, lay a protective membrane over the vertical face of the basement void prior to retaining wall construction to prevent leachate from curing concrete entering the root zones of retained trees and causing damage.

3.5.3 Suitable membranes include a geotextile of appropriate thickness (Terram 1000 or equivalent) or building paper complying with BS1521.

3.6 Removal of protective fencing

3.6.1 Tree protection barriers of whatever kind may only be dismantled when all construction works including external 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: 2.2 3.2-3.4 **Tree protection plan**	T002, 003, 004 and 005
Damage by surface compaction from site traffic/storage of materials	Lay ground protection as specified	Sections: 2.3 3.2-3.4	T002, 003, 004 and 005
Damage from spillage of toxic materials	Phytotoxic materials to be stored in a bunded compound/ container	Section: 3.1	T002, 003, 004 and 005
Damage to tree roots	Observe restrictions applying to CEZs	Section: 3.5 **Tree protection plan**	T002, 003, 004 and 005

Table 1: Summary of Potential Damage Sources and Remedial Measures

Appendix a

Tree protection and removal plan

KEY

003

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

001

TREE TO BE REMOVED FOR DEVELOPMENT PURPOSES

GROUND PROTECTION LAYER

TREE PROTECTION FENCING

PROPOSED STEPS TO LOWER GROUND FLOOR LEVEL

EXISTING FOOTPRINT

REVISION		CHCK'D	APP'D	DATE

Client:

MR M DAVIES

Job Title:

30A THURLOW ROAD
LONDON
NW3 5PH

Drawing Title:

TREE PROTECTION PLAN

Drawing Number:	Scale:
382.03.01	1:100 (A3)
Date: 14.08.15	Drawn by: RS

Skerratt
arboricultural advice

158 MALDEN ROAD, LONDON NW5 4BT
01274 566539

Appendix b

Pre-contract tree works schedule

Pre-contract tree works schedule

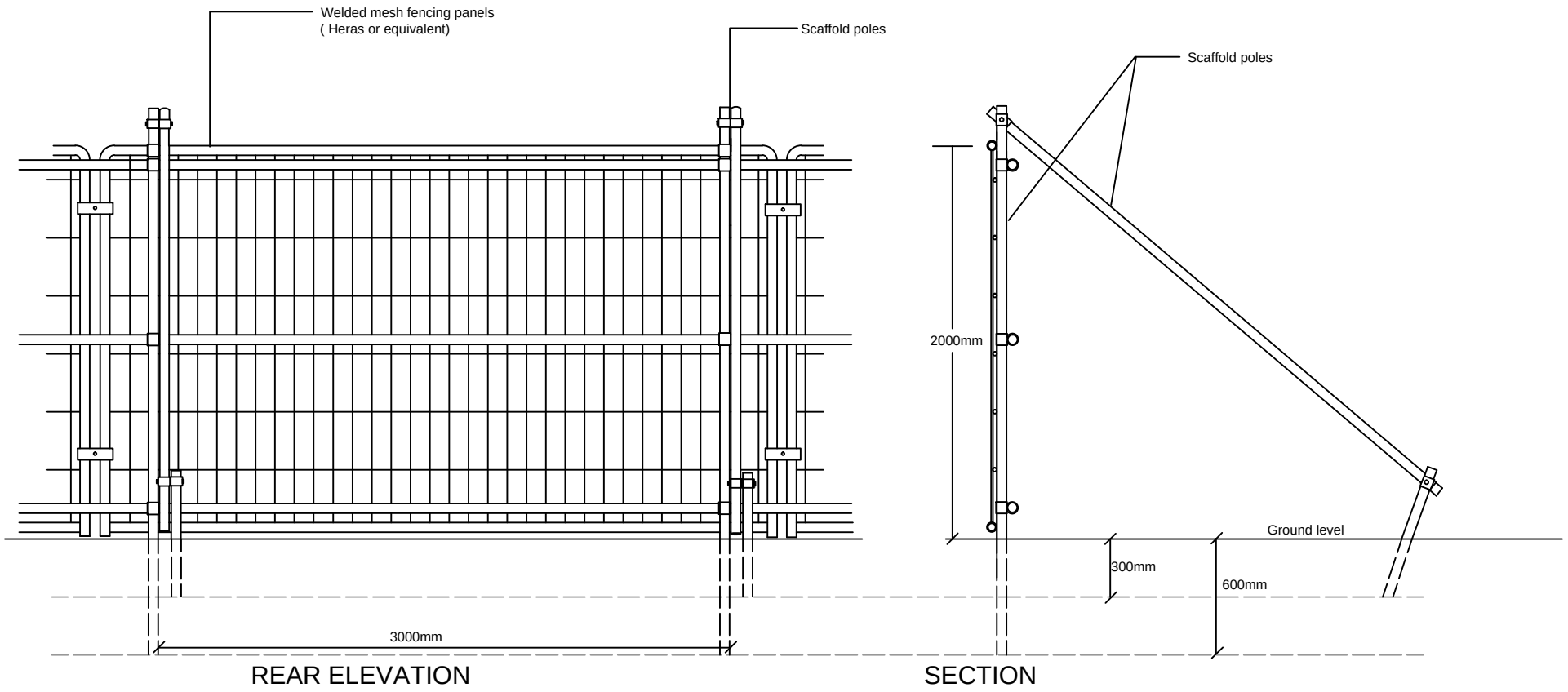
Skerratt

Tree No.	Species	Height (m)	Diam (cm)	Crown Spread (m)				Crown Height (m)	Item
				N	E	S	W		
001	Wild Cherry (*Prunus avium*)	11.5	290	3	4	3.5	2.5	2/2	Fell to near ground level Remove stump
002	Pear (*Pyrus communis var.*)	12	460	5	4	3	4	2/3	No action required
003	Pear (*Pyrus communis var.*)	11	530	4	4e	5	5	3/3	No action required
004	Lime (*Tilia x europaea*)	16	630	4	3	4	4	5/6	No action required
005	Lime (*Tilia x europaea*)	16	650	5	2.5	2.5	2.5	4/6	No action required

Client: Mr M Davies
Location: 30a Thurlow Road, London NW3 5PH
Date: 03.07.15
Job No.: 382

Appendix c

BS protective fencing detail
Tree protection notice
Tree protection notes



Excerpts from *BS5837:2012 Trees in relation to design, demolition and construction - Recommendations*

(*For barriers*) the default specification should consist of a vertical and horizontal scaffold framework comprising a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3m and driven securely into the ground.
Onto this framework, welded mesh panels should be securely fixed. using wire or scaffold clamps.
Care should be exercised when locating the vertical poles to avoid underground services and, in the case of bracing poles, also to avoid contact with o structural roots

NOTE: The above is preferred because it is readily available, resistant to impact, can be re-used and enables inspection of the protected area

BS5837:2012 Protective Fencing Detail
Scale: 1:20 [A4]

Skerratt
arboricultural advice

158 MALDEN ROAD
LONDON NW5 4BT
07768 398776

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

30a THURLOW ROAD
LONDON
NW3 5PH

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