

**Arboricultural method
statement**

Trees

at and adjacent to

**34 Ornan Road
London
NW3 4QB**

for

Mr A. de Mol van Otterloo

Skerratt

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

Tel: + 44 (0)1274 566539

Fax: + 44 (0)20 7767 4004

Email: raphaelskerratt@hotmail.co.uk

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1. Scope and status

1.1 Scope

- 1.1.1 This method statement sets out measures for the protection of 6 trees before, during and after permitted development has been completed.
- 1.1.2 The locations of the 6 trees are shown on the **Tree protection plan** in **Appendix a**. Their detailed dimensions are set out in tabular form in the **Pre-contract tree works schedule** in **Appendix b** of this method statement, together with recommended preparatory works where appropriate.
- 1.1.3 The works covered by this method statement include:
- External works, in particular re-modelling of the rear garden to create a stepped terraced garden, the lowest level of which will be at proposed (reduced) lower ground floor level, 150mm below the lowest existing garden level.
- 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 to retained trees are listed in the **Tree works schedule** in **Appendix b** and should be carried out prior to the start of external works.

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. 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 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*.

2.2.3 The British Standard recommends a scaffold framework with braced uprights at no more than 3m intervals. Subject to the agreement of the local authority, fencing using temporary steel mesh fencing panels (for example Heras Roundtop or equivalent - also sometimes referred to as GS7 or HSG 151 fencing) or 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 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. Unless otherwise specified in this method statement, 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 each **CEZ** clearly setting out the access restrictions set out above. An example is included at the end of this statement in **Appendix c**.

3. Works during development

3.1 Storage, handling and use of materials

3.1.1 Phytotoxic materials (diesel or cement for example) must not be stored or handled within 5m of any CEZ boundary shown on the **Tree protection plan** in **Appendix a**.

3.1.2 Within in any part of the working area outside this 5m exclusion zone, phytotoxic liquids (diesel for example) will be stored in a purpose-built banded container to prevent leakage.

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 of any retained tree. Where lifting and handling equipment is working *beneath* the crown spread of retained trees, a banksman will be employed to guide operations and minimise the risk of damage to branches and stems.

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 Construction Exclusion Zones (CEZ)

3.5.1 The following procedures will apply to approved works within **Construction Exclusion Zones**.

Notify Arboricultural Consultant

3.5.2 The Arboricultural Consultant must be notified in writing at least 48 hours before the start of works in any CEZ.

Access

3.5.3 Access to CEZs will be permitted for the following activities only:

- Reducing or increasing existing ground levels as specified on the approved drawings for the project.

3.5.4 Unless otherwise approved in writing by the Arboricultural Consultant, tracked or wheeled equipment used within CEZs will have a ground bearing pressure not exceeding 0.3kgf/cm²

Excavation to reduced levels

3.5.5 Excavations will be to the minimum depth necessary to achieve the approved reduced level.

3.5.6 Roots exposed in the course of the approved excavation will cut cleanly, flush with face of the excavation from which they enter the working area, with a sharp saw or loppers to minimise damage and promote recovery.

Raising existing levels

- 3.5.7 Where it is necessary to raise levels by more than 75mm, free-draining inert material with a void space of at least 30% and the lowest possible bulk density consistent with the proposed after-use will be used for the full extent of the increase in level minus 50mm (to allow for a surface layer of topsoil that is consistent with adjacent areas).
- 3.5.8 Elsewhere, good quality topsoil that is free of contaminants and foreign bodies may be used.
- 3.5.9 Topsoil must be well graded and friable to promote good growing conditions and perform as a suitable rooting medium. It must satisfy the requirements of multipurpose topsoil as described in BS3882:2007.
- 3.6 Removal of protective fencing**
- 3.6.1 Protective fencing may only be dismantled 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	Carry out pre-contract tree works: erect protective fencing: plan construction activities to avoid damage to overhead branches:	Sections: 3.1, 3.2 4.2-4.6 Tree protection plan	All
Damage from spillage of toxic materials	Phytotoxic materials to be stored in a bunded compound/ container	Section: 4.1	All
Damage to tree roots	Observe restrictions applying to CEZs	Sections: 3.2, 4.1-4.6 Tree protection plan	All

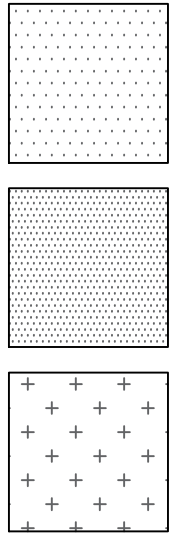
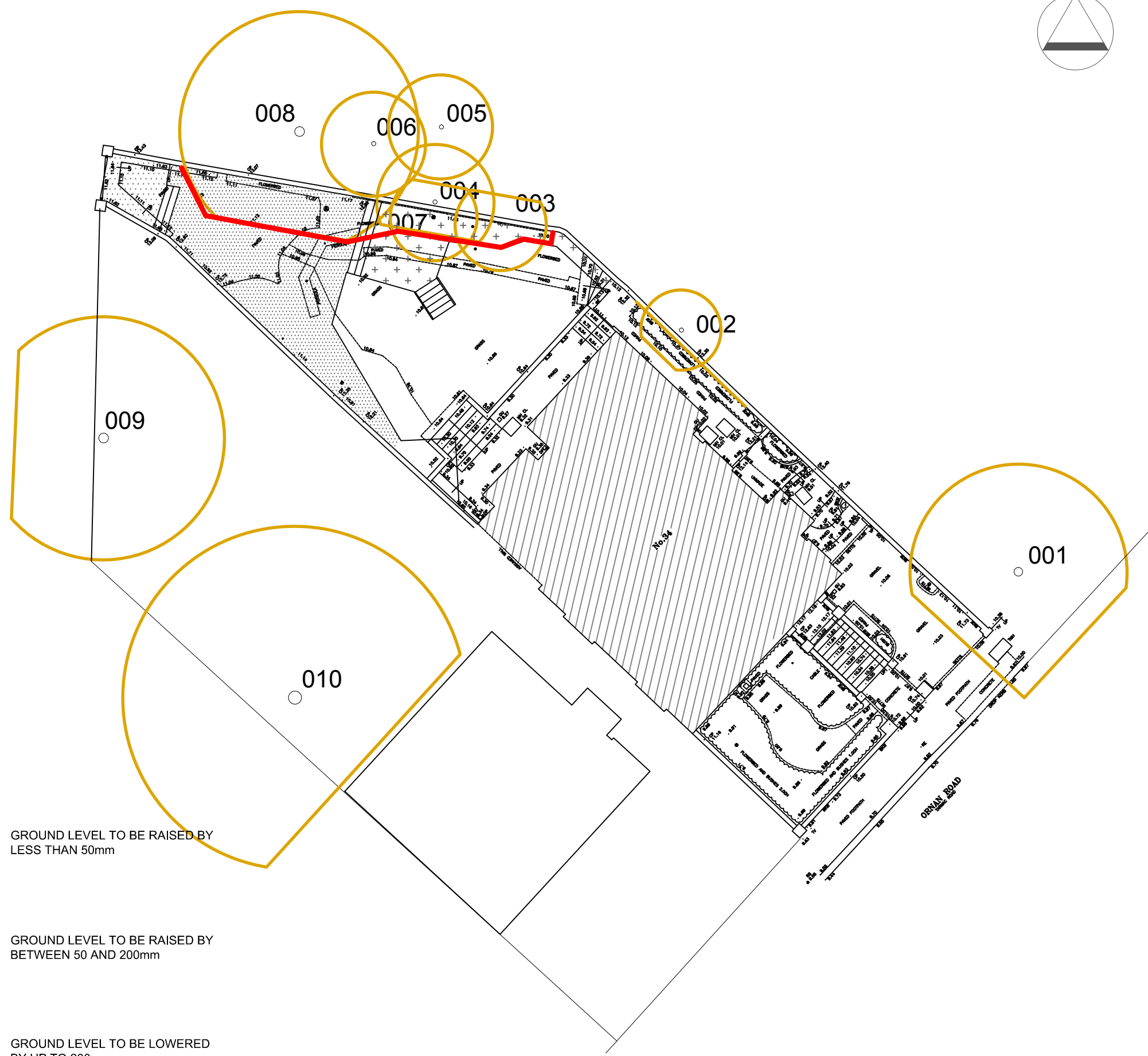
Table 1: Summary of Potential Damage Sources and Remedial Measures

5. Supervision and completion

- 5.1 If requested by the local planning authority, the Arboricultural Consultant will meet the Main Contractor's Site Manager and the local planning authority's representative on site prior to the start of, and on completion of, the works to review arboricultural protection measures before and during the contract and to authorise the removal of tree protection fencing.
- 5.2 The Main Contractor's Site Manager will have overall responsibility for the protection of retained trees from the start of works through to completion. No powers will be delegated to others in relation to this responsibility.
- 5.3 If post-contract remedial works are required they will be specified at the completion meeting and confirmed in writing.

Appendix a

Tree protection plan

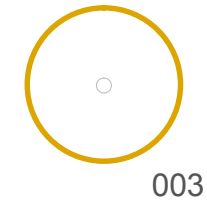


GROUND LEVEL TO BE RAISED BY LESS THAN 50mm

GROUND LEVEL TO BE RAISED BY BETWEEN 50 AND 200mm

GROUND LEVEL TO BE LOWERED BY UP TO 200mm

KEY



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



TREE PROTECTION FENCING

REVISION	CHKD	APPD	DATE
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Client:
MR A. DE MOL VAN OTTERLOO

Job Title:
34 ORNAN ROAD
LONDON
NW3 4QB

Drawing Title:
TREE PROTECTION PLAN

Drawing Number:
327.03.00

Scale:
1:200 (A3)

Date:
02.12.14

Drawn by:
RS

Skerratt
arboricultural advice

158 MALDEN ROAD, LONDON NW5 4BT
01274 566539

Appendix b

Pre-contract tree works schedule

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 secondary 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 exceed 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

Pre-contract tree works schedule

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Tree No.	Species	Height (m)	Diam (cm)	Crown Spread (m)				Crown Height (m)	Item
				N	E	S	W		
003	Fig (<i>Ficus carica</i>)	5	80/ 90/ 110	0	4.5	3	3.5	0/1	Reduce lateral spread within the site, back to the Construction Exclusion Zone fence
004	Hawthorn (<i>Crataegus monogyna</i>)	7	200 est	3.5	3.5	3.5	3.5	2/3	No action required
005	Hawthorn (<i>Crataegus monogyna</i>)	8	200 est	3	3	3	3	2/2	No action required
006	Hawthorn (<i>Crataegus monogyna</i>)	8	200 est	3	3	3	3	2/2	No action required
007	Holly (<i>Ilex aquifolium</i>)	7	160	2	2	2	2	1/1	No action required
008	Ash (<i>Fraxinus excelsior</i>)	17	450 est	5	6.5	7	6	5/5	No action required

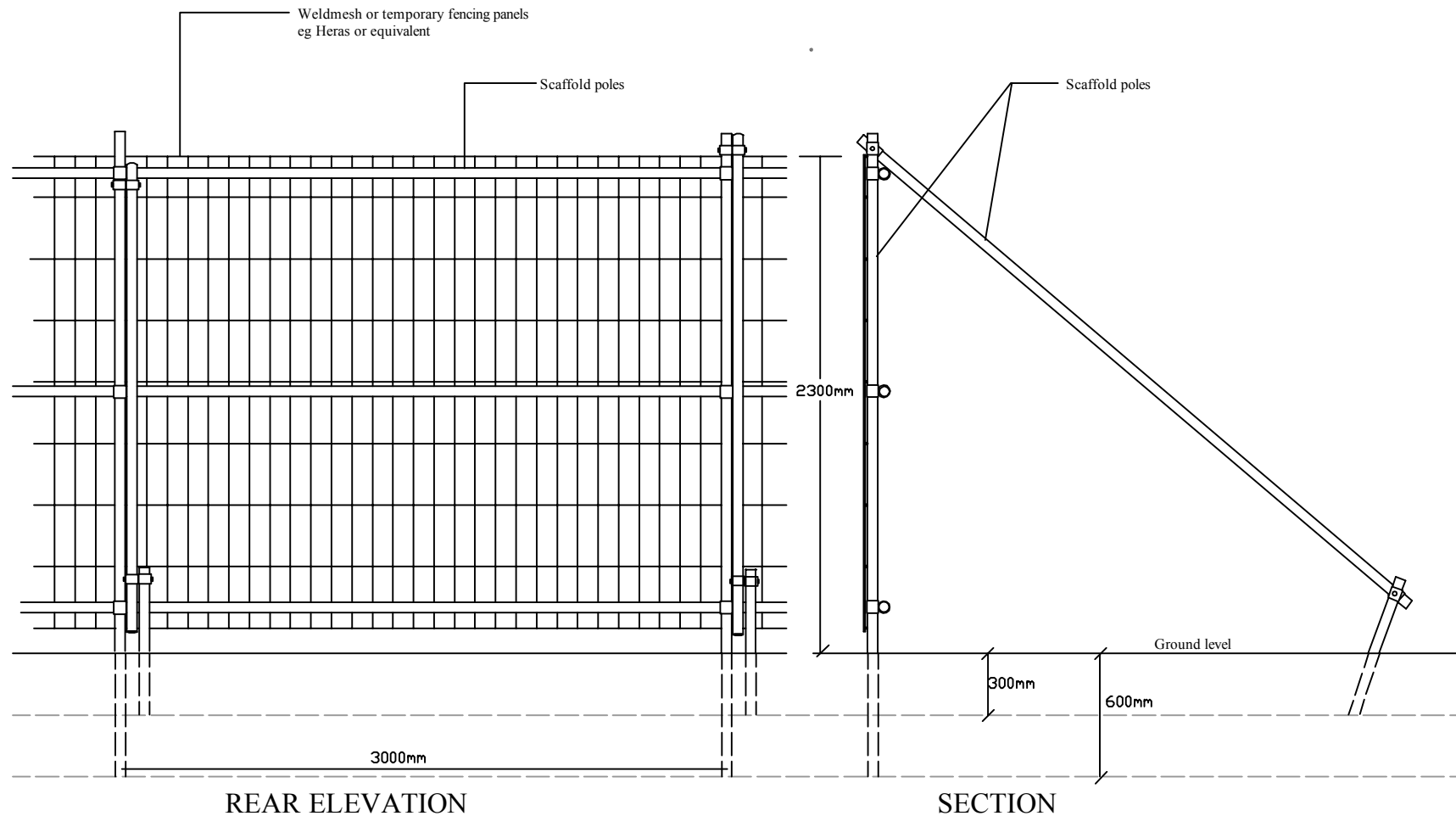
Client: Mr A de Mol van Otterloo
 Location: 34 Ornan Road, London NW3 4QB
 Date: 02.12.14
 Job No.: 327

Appendix c

Protective fencing detail

Tree protection notice

Tree protection notes



Excerpt from *BS5837:2005 Trees in relation to construction - Recommendations*

Barriers should consist of a scaffold framework comprising a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3m.

Onto this, weldmesh panels should be securely fixed using wire or scaffold clamps. Weldmesh panels on concrete or rubber feet are not resistant to impact and should not be used

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]

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 LONDON NW5 4BT
 01274 566539

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
VICINITY OF THIS ZONE

AVOID PHYSICAL DAMAGE TO TREES

REPORT DAMAGE TO TREES OR FENCING IMMEDIATELY

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