Arboricultural Impact Analysis & Method Statement

TREES

at and adjaeent to

30a Thurlow Road
London
NW3 5PH

for

Square Feet Architects
(Daniel Leon)

Skerratt
R Skerratt BSc(For)
158 Malden Road
London
NW5 3HT

Tel: + 44 (0)1274 566539
Fax: + 44 (0)20 7767 4004
Email: raphaelskerratt@hotmail.co.uk

job no.: 190

document rev. no.:

date: 18.03.13

Section 1: arboricultural impact analysis

1 introduction

1.1 This report contains an appraisal of 5 trees standing within or immediately adjacent to the property boundary of 30a Thurlow Road, Hampstead, London NW3 5PH in relation to a proposed development comprising the following main elements:

- demolition of an existing single-storey dwelling and its replacement with a two storey dwelling with the lower storey below existing ground level
- associated external works

1.2 The report considers the health and safety of the trees under their current growing conditions and the likely impact of the proposed development, measured against the advice and guidance set out in *BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations,* and recommends mitigation measures where appropriate.

1.3 The site inspection for the survey on which this report is based took place on the afternoon of Tuesday 04 March 2013 in bright sunny conditions.

1.4 The report was commissioned by Daniel Leon of Square Feet Architects on behalf of the client

1.5 I have been provided with digital copies (in pdf or dwg format) of the information submitted with the planning application of which this report forms a part and in particular:

- Square Feet Architects: Design and Access Statement
- Square Feet Architects: Drawing No.1023-011 – Existing Ground Floor Plan
- Square Feet Architects: Drawing No. 1023-021 – Proposed Lower Ground Floor Plan
- Square Feet Architects: Drawing No. 1023-021 – Proposed Ground Floor Plan
- Square Feet Architects: Drawing Nos. 1023-030 & 031 – Proposed Sections AA and BB

1.6 The **tree survey** and **tree constraints plans (**see **appendix a**) included in this report are based on Square Feet Architects: Drawing No.1023-011 – Existing Ground Floor Plan together with on-site measurements

2 background information

2.1 layout, boundaries and topography

2.1.1 Although the 30a Thurlow Road plot is level, the general topography in which it is located slopes downwards to the north east (parallel to the longer axis of the site) and downwards to the south east (parallel the shorter site axis).

2.1.2 Along its south western boundary the roughly rectangular plot is at more or less the same level as the adjacent property (30 Thurlow Road) for most of the length of the rather decrepit brick boundary wall.

2.1.3 Along the south eastern edge of the plot – the common boundary with the rear garden of 39 Rosslyn Hill – the adjacent ground is about 800mm higher than the plot level immediately adjacent to its south east corner but about 500mm lower in the immediate vicinity of its north east corner. The differences in level are contained by an approximately 1500mm high brick boundary wall in good repair

2.1.4 Along the north eastern boundary, the level plot on which the existing dwelling stands drops down steeply beyond a timber garden boundary fence to the rear garden wall of 41 Rosslyn Hill. The steep bank is terraced with retaining walls at the base and mid-slope.

2.1.5 A brick boundary wall in good repair runs along the south western, Thurlow Road, boundary of the site. The road and the plot are at the same level as each other in the south west corner of the site.

2.1.3 The plans in **appendix a** both show the extent and current layout of the dwelling and its grounds.

2.2 geology and soils

2.2.1 The plot is located on Eocene Claygate Beds, very close to a boundary with the underlying London Clay.

2.2.2 The Claygate Beds which, together with Bagshot Sands, are the source of Hampstead Heath's distinct character, have a significantly lower clay component than London Clay and subsoils derived from Clagate Beds parent material are likely to be less shrinkable and more permeable than London Clay subsoils

2.2.3 No soil sampling was carried out on site

2.3 planning constraints

2.3.1 30a Thurlow Road is located within the London Borough of Camden Fitzjohns/Netherhall Conservation Area.

2.3.2 According to written pre-planning advice from London Borough of Camden dated 28/08/2012, a wild cherry in the garden of 30a Thurlow Road is covered by a Tree Preservation Order.

2.4 the trees

2.4. Detailed descriptions of the 5 trees referred to in this appraisal are listed in the **tree survey schedule** in **appendix a..** Their locations are shown on the **tree survey** and **tree constraints plans** in **appendix a.**

3 discussion

3.1 general

3.1.1 The detailed **tree survey schedule** in **appendix a** provides tree-by-tree information on the condition and status of each individual tree. and the **tree constraints plan,** also in **appendix a,** shows the proposed new building layout in relation to existing trees.

3.1.2 *BS5837:2012* provides guidance on the allocation of a Root Protection Area (RPA) of appropriate size to each retained tree. The RPA is a theoretical value based on the stem diameter of the tree in question and represents the minimum area deemed to contain sufficient roots and rooting volume to maintain the tree's viability

3.1.3 The default configuration for the RPA is a circle of appropriate size arranged symmetrically around the tree's main stem. However the British Standards makes provision for asymmetrical RPA configurations where, for example, there are known barriers to root spread.

3.1.4 In this case it is clear that the carriageway of Thurlow Road is a significant barrier to root spread and the RPAs of street trees 004 and 005 have been re-configured accordingly.

3.1.5 By the same token the south eastern boundary wall (abutting the rear garden of 39 Rosslyn Hill) and the foundations of the existing dwelling within the plot will both be barriers to the spread of roots from off-site garden trees 002 and 003

3.2 Tree to be removed: T001 (Wild cherry)

3.2.1 This tree which, it is understood, is covered by a Tree Preservation Order, is just over 3m distant from the north west corner of the existing dwelling. and about 1600mm from the nearest corner of the proposed new building.

3.2.2 If the proposal involved the simple replacement of a single story dwelling with another one of similar size 1400mm closer to T001 at its nearest point, it would be possible in the writer's opinion to retain the tree without unacceptable disruption. However, the new lower storey proposed here will involve significant earth moving to create a landform that allows light to reach its northerly elevation.

3.2.3 The earth moving - to create a sloping bank leading down to the north west elevation of the proposed new lower storey - will affect about 50% of the tree's RPA and will cause significant disruption.

3.2.4 It is clear that the TPO has been made in the interests of conserving the character of the gaps between large buildings that are a characteristic of the Fitzjohns/Netherhall Conservation Area.

3.2.5 However T001 has a rather narrow one sided crown and this, together with its very sharp main branch fork detract from its present contribution to public visual amenity and limit its future prospects.

3.2.6 Removal and replacement with a semi-mature tree of a species with a smaller ultimate size, a more compact crown shape and more shade tolerance (because of the overshadowing effect of Tree 004) would fully compensate for the loss of the existing tree within 10 years.

3.2.7 The replacement tree should also have more future potential than does the existing cherry.

3.3 Trees to be retained

Trees 002 &003

3.3.1 Trees 002 and 003, the two pear trees in the rear garden of 39 Rosslyn Hill, have been reduced in height within the last 5 years and have re-grown vigorously. It seems likely that this reduction has been carried out at regular intervals over some time

3.3.2 Bearing in mind that crown reduction tends to reduce root activity and taking into account the barrier to root growth presented by the boundary wall and the footings of the existing dwelling, the RPA configurations for these 2 trees shown on the **tree constraints plan** in **appendix a** are considered to be reasonable.

3.3.3 In practice it is entirely possible that roots from both trees will have spread into the volume of the proposed lower storey but these are unlikely to be of large diameter.

3.3.4 The RPAs as drawn indicate clearly too, that both trees have sufficient undisturbed ground available to them to meet the minimum viability test on which the RPA is based.

3.3.5 Considerable care will be need however, to ensure that the proposed excavation for the new lower storey does not extend beyond the proposed footprint limits and endanger the stability of the boundary wall

Trees 004 and 005

3.3.6 Limes 004 and 005 are both street trees growing in the pavement of Thurlow Road. In common with the other mature street trees in the same road, both trees have been pruned back to a main branch framework on a regular cycle.

3.3.7 Trees 004 and 005 were pruned in 2011-12

3.2.8 Periodic severe crown reduction will significantly reduce the rate and extent of root growth Taking this consideration into account and that of the barrier effect of the footings of the existing dwelling, the RPA configurations for these 2 trees shown on the **tree constraints plan** in **appendix a** are considered to be reasonable.

3.2.9 Both trees and their roots are effectively protected from direct development disruption by the existing brick boundary wall and existing hard surfacing

4 conclusions

4.1 The development described in the planning application of which this report forms a part can be achieved without unacceptable adverse impact upon off-site trees T002, 003, 004 and 005.

4.2 It will be necessary to remove Tree 001, a Wild Cherry covered by a Tree Preservation Order but this tree by virtue of its species, condition and physical characteristics (one sided crown and narrow angled main branch fork) has limited future potential.

4.3 The adverse consequences of the removal of this tree can be rapidly compensated for by the replanting of a semi-mature tree of smaller ultimate size, a more compact crown shape and better shade tolerance.

4.4 It is important that tree protection measures and appropriate working practices are set out in a simple **arboricultural method statement (AMS)** forming part of the construction contact documents.

appendix a

tree survey schedule
tree survey plan
tree constraints plan

explanatory notes

For general information on any entry in the detailed survey text, refer to the notes below which are organised on a column by column basis.

tree number
All trees have been numbered in the survey text to correspond to the location numbers shown on the accompanying Tree Survey Plan. No trees have been marked on site.

species
Common English names have been used wherever possible and Latin names are listed (in brackets in *italics*) in all cases.

dimensions

height - are recorded in m rounded up

stem diameter – recorded in mm at breast height (1.5m) wherever possible, using a stem diameter tape. Where measurement at 1.5m is not possible, one of the alternative methods set out in *Annex C of BS5837:2012* has been used.
If the diameter has been measured at a different height, this has been recorded, e.g. 600 @ 1m = 600mm diameter at 1m height.
Other abbreviations used:

av - average e/est - estimated
ms - multi-stemmed max – maximum gl - ground level

crown spread - radial crown spreads in metres have been recorded at four points on the circumference of the crown (north, east, south and west) using a laser distance measurer. All fractions of a metre have been rounde up to the nearest whole metre. The Tree Survey Plan enclosed shows approximate crown shapes based on these measurements

crown height - the height of the first major branch and the height of the lowest point of the crown are recorded in metres eg 3/3

age

IM	Immature	SM	Semi-mature
EM	Early mature	M	Mature
OM	Over-mature		

Where the precise age of a tree is known, it has been recorded in brackets adjacent to the general classification i.e. M(7).

condition

physiological condition
Gives a measure of biological vigour and of the presence or absence of disease, insect attack or other debilitating factors.

G	Good
F	Fair
P	Poor

structural condition
Gives a measure of each tree's physical form and mechanical stability.

G	Good
F	Fair
P	Poor

comments
See also **discussion** and **conclusions** in the accompanying report.

recommendations
Preliminary management recommendations under existing conditions

life expectancy
An approximate estimate for each tree's anticipated future safe life in the following ranges:

<10 years
10-20 years
20-40 years
40+ years

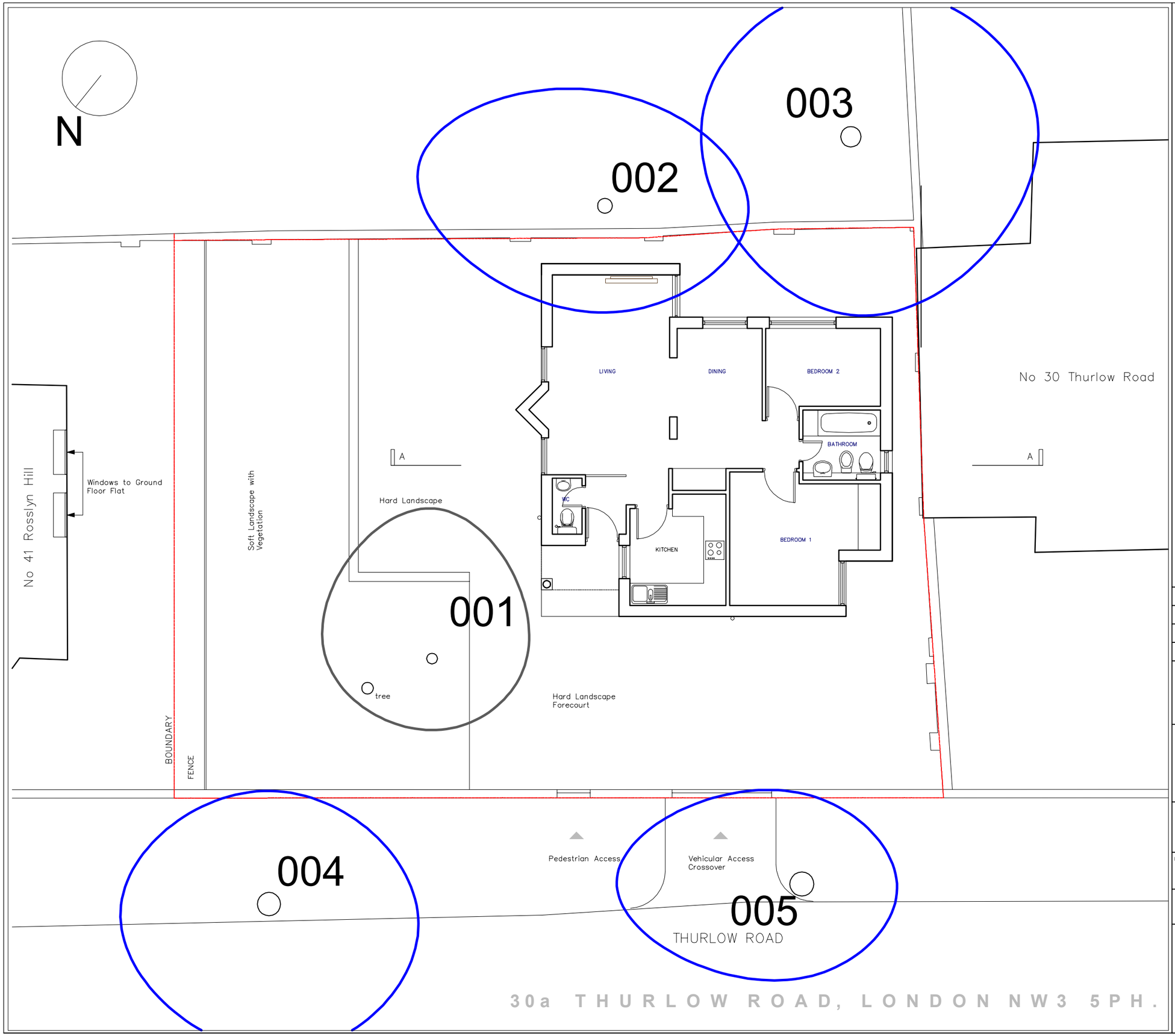
retention category
This grading is based on the recommendations set out in BS 5837:2012 *Trees in relation todesign, demolition and construction - Recommendations*. The categories are summarised in the standard as follows:

A Trees of high quality with an estimated remaining safe life of at least 40 years
B Trees of moderate quality with an estimated remaining safe life of at least 20 years
C Trees of low quality with an estimated remaining safe life of at least 10 years, or young trees with a stem diameter below 150mm
U Trees 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

In addition the British Standard requires one or more subcategories to be applied to the main Retention Category. In summary these are as follows:

1 Mainly arboricultural qulaities (that is individual aesthetic characteristics)
2. Mainly landscape qualities
3. Mainly cultural values, including conservation

Tree No.	Species	Height (m)	Diam (mm)	Crown Spread (m)				Crown Height (m)	Age	Physiological Condition	Structural Condition	Comments	Recommendations	Life Expectancy	Retention Category	Retention Sub-category
				N	E	S	W									
001	Wild Cherry (*Prunus avium*)	11	290	3	4	2.5	2	2/2	EM	F	F	Single slightly leaning stem forks at 2m into 2: rather one sided (to N): main branch fork is very sharp but appears to be stable; covered by a TPO	No action required	10-20	C	1
002	Pear (*Pyrus communis var.*)	11	460	5	3	4	3	2/3	M	G	G	Single upright stem forks at 2m into 2: quite well balanced spreading crown: an off-site tree standing in a neighbouring garden: ground level at the base of the main stem is 500mm below adjacent ground level within the site	No action required	20-40	B	1/2
003	Pear (*Pyrus communis var.*)	9	490	4	4e	5	5	3/3	M	G	G	Single upright stem: main branch fork at 3m: quite well balanced crown: an off-site tree standing in a neighbouring garden: ground level at the base of the main stem is approximately 800mm above adjacent ground level within the site	No action required	20-40	B	2
004	Lime (*Tilia x europaea*)	16	630	4	3	4	4	5/6	M	G	F	Single upright stem: main branch fork at 5m: a street tree standing outside the site boundary: in the distant past this tree was pollarded at about 6m and more recently it has been reduced at regular intervals to 15m (most recent remedial works in 2011/12); new growths are vigorous with normal bud size and frequency: many pruning wounds (all callusing normally): the reduced branch framework is well balanced	No action required	20-40	B	1/2
005	Lime (*Tilia x europaea*)	16	650	5	2.5	2.5	2.5	4/6	M	G	F	Single upright stem: main branch fork at 4m: a street tree standing outside the site boundary: in the distant past this tree was pollarded at about 6m and more recently it has been reduced at regular intervals to 15m (most recent remedial works in 2011/12); new growths are vigorous with normal bud size and frequency: many pruning wounds (all callusing normally): the reduced branch framework is rather one sided to the north	No action required	20-40	B	1/2



KEY

EXISTING TREE

T005

Trees are coloured on plan to correspond to the Retention Categories specified in: *BS5837:20 12 T rees in relation to design, demolition and construction - Recommendations* as follows:

Category A - GREEN
Category B - BLUE
Category C - GREY
Category U - RED

REVISION		CHCK'D	APP'D	DATE

Client:

SQUARE FEET ARCHITECTS

Job Title:

30a THURLOW ROAD
HAMPSTEAD
LONDON
NW3 5PH

Drawing Title:

TREE SURVEY PLAN

Drawing Number:	Scale:
190.01.00	1:100 (A3)
Date:	Drawn by:
18.03.13	RS

Skerratt
arboricultural advice

158 MALDEN ROAD, LONDON NW5 4BT
01274 566539

30a THURLOW ROAD, LONDON NW3 5PH.

N

B

002

003

001

004

005

Void

Bedroom 1

Study

Wooden Shutters openable to 45° for ventilation with Glass Juliet Balcony behind

Wooden Shutters with Glass Juliet Balcony and Windows behind, approximately in the same position as existing windows

Sunken Garden

Glass roof above

Bedroom 4

Bedroom 3

Hall

Entrance

A

A

B

B

Soft Landscape / Gravel

No 30 Thurlow Road

No 41 Rosslyn Hill

Windows to Ground Floor Flat

Soft Landscape with Vegetation

Planting

FENCE

Hard Landscape Forecourt as existing

Pedestrian Access

Vehicular Access Crossover

THURLOW ROAD

30a THURLOW ROAD, NW3 5PH.

KEY

T005

EXISTING TREE

Trees are coloured on plan to correspond to the Retention Categories specified in:
BS5837:20 12 T rees in relation to design, demolition and construction - Recommendations as follows:

Category A - GREEN
Category B - BLUE
Category C - GREY
Category U - RED

T005

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

REVISION	CHCK'D	APP'D	DATE

Client:

SQUARE FOOT ARCHITECTS

Job Title:

30a THURLOW ROAD
HAMPSTEAD
LONDON
NW3 5PH

Drawing Title:

TREE CONSTRAINTS PLAN

Drawing Number:	Scale:
190.02.00	1:100 (A3)
Date: 18.03.13	Drawn by: RS

Skerratt
arboricultural advice

158 MALDEN ROAD, LONDON NW5 4BT
01274 566539

Section 2: arboricultural method statement

1 introduction

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

1.2 The trees covered by this method statement are listed in the **pre-contract tree works schedule** in **appendix b** and their locations are shown on the **tree protection plans** in **appendix a.**

1.3 The proposed development comprises:

- demolition of an existing single-storey dwelling and its replacement with a two storey dwelling with the lower storey below existing ground level
- associated external works

1.4 The measures contained in the statement are based on the advice and guidance set out in *BS5837: 2012: Trees in relation todesign, demolition and construction – Recommendations.*

1.5 This method statement was commissioned by Square Feet Architects (Daniel Leon) on behalf of the client.

2 scope, phasing and status

2.1 Scope

2.1.1 This method statement covers the protection and retention of 4 trees,

2.1.2 The locations of the trees are shown on the **tree protection plans** in **appendix a.**

2.2 Status

2.2.1 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.

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

2.2.3 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**.

3 preparatory works prior to construction

3.1 Tree works

3.1.1 Preparatory tree works - the removal of Tree 001 (Wild Cherry) - should be carried out prior to the start of the main contract

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

3.1.3 All arisings are to be taken off-site to an approved tip.

3.2 Protective measures: fencing

3.2.1 The extent and location of protective fencing is illustrated on the **tree protection plans** in **appendix a**. Protective fencing must be erected before any demolition, soil stripping, breaking out of existing hard surfaces, re-grading or other excavation takes place.

3.2.2 Protective fencing will comply with the advice and guidance contained in BS 5837:2012 – *Trees in relation todesign, demolition and construction - Recommendations.*

3.2.3 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.**

3.2.4 Areas enclosed or separated from the main construction site by protective fencing are **construction exclusion zones (CEZ).**

3.2.5 **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**

3.2.6 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.**

3.3 Protective measures: ground protection areas

3.3.1 Where specified on the **tree protection plans** in **appendix a,** a ground protection layer of the appropriate strength will be installed at the same time as protective fencing (see 3.2 above).

3.3.2 Where the ground protection layer will have to carry **vehicular traffic**, it will consist of Eve K Trakpanel heavy duty interlocking aluminium temporary road sections (or equivalent) laid on an average 50mm deep layer of Type 1 fill to provide a level surface.

3.3.3 For **pedestrian traffic only**, ground protection may consist of side butted scaffold boards laid on a geo-textile membrane and a compressible layer (9mm Miothene or equivalent). . Where necessary, local irregularities in the ground surface will be made up with Type 1 fill prior to the installation of the ground protection layer. A typical detail is included in **appendix c**

3.3.4 Tracked or wheeled equipment used for installing ground protection layers will not exceed a ground bearing pressure of 0.3kgf/cm^2

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

3.4 Inspection prior to start of works

3.4.1 Protective fencing will be inspected prior to the start of works by the Project Manager and approval for its location and method and standard of construction will be obtained from the local authority.

4 works during development

4.1 Storage of materials

4.1.1 No phytotoxic materials will all be stored within 5m of any **CEZ**

4.2 Safe positioning of heavy lifting and handling equipment

4.2.1 Heavy lifting and handling equipment (eg excavators) must be located in such a way that, when in use, no part extends into the branch system of any retained tree.

4.3 Making good

4.3.1 Imported topsoil for backfilling must be of good quality and free of contaminants and foreign bodies, it must be well graded and friable to promote good growing conditions and perform as a suitable rooting medium. The topsoil to be used must satisfy the requirements of multipurpose topsoil as is described within BS3882:2007.

4.3.2 Any part of a retained tree RPA that becomes compacted through direct or indirect development activity will be de compacted using hand operated tools only (hand forking or hand held power tools eg a Terravent) to a minimum depth of 500 mm below the existing ground level, prior to handover.

4.4 Underground services

4.4.1 No new underground services will be routed through the Root Protection Areas (RPAs – see **tree protection plans** in **appendix** b) of retained trees.

4.5 No fires on site

4.5.1 No fires will be lit anywhere on site.

4.6 Removal of protective fencing

4.6.1 When construction works are completed and all construction equipment has been removed from site, the protective fencing may be dismantled.

5 replanting

5.1 1 root balled semi-mature (20-25cm girth) *Sorbus aucuparia 'Cardinal Royal'* or equivalent to be planted in the location shown on the **tree protection plans** in **appendix b.**

5.2 The tree will be supported with an underground guying system to BS4043:1989.

5.3 The receiving planting pit will be 25% larger in width than the dimensions of the tree's root ball or container and its sides will be roughened before backfilling to ensure free drainage. 25 litres of soil conditioner (Melcourt Industries Super Humus or equivalent) will be incorporated into the tree pit backfill.

5.4 After planting the tree will be mulched with a 3000mm diameter x 75mm deep layer of well rotted bark (Melcourt Industries Amenity Bark Mulch or equivalent).

5.5 In the first year after planting, provision will be made for watering up to 10 times during the growing season if required, each watering to consist of the application of 25 litres of water.

5.6 Competing weed growth will be removed by hand or treated with an approved herbicide to maintain weed-free conditions within a 3000mm diameter circle round the base of the tree for the first 3 years after planting.

5.7 The tree will be maintained and, if necessary, replaced until successful establishment (3years consecutive years of healthy growth).

6 supervision and completion

6.1 If requested, prior to the start of the works the nominated representative of the Local Authority will meet on site with the Project Manager and the Main Contractor's Site Manager to review arboricultural protection measures before and during the contract.

6.2 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.

6.4 Unscheduled incidents affecting retained trees will be reported immediately, by the Site Manager to the nominated representative of the Local Authority, verbally and in writing

6.5 If requested, on completion the Local Authority will meet on site with the Site Manager to sign-off on tree protection measures.

6.6 If post-contract remedial works are required they should be specified at the completion meeting and confirmed in writing.

6.7 After sign-off, protective fencing may be removed in its entirety.

appendix a
tree protection plans

N

003

002

001

004

005

B

A

Wooden Shutters operable to 45° for ventilation with Glass Juliet Balcony behind

Wooden Shutters with Glass Juliet Balcony and Windows behind, approximately in the same position as existing windows

Void

Bedroom 1

Study

Soft Landscape / Gravel

No 30 Thurlow Roa

Sunken Garden

Glass roof above

Bedroom 4

Bedroom 3

Hall

Entrance

Windows to Ground Floor Flat

No 41 Rosslyn Hill

Soft Landscape with Vegetation

Planting

FENCE

REPLACEMENT TREE LOCATION

Hard Landscape Forecourt as existing

Pedestrian Access

Vehicular Access Crossover

THURLOW ROAD

30a THURLOW ROAD, NW3 5PH.

KEY

EXISTING TREE

T005

Trees are coloured on plan to correspond to the Retention Categories specified in:
BS5837:20 12 T rees in relation to design, demolition and construction - Recommendations as follows:

Category A - GREEN
Category B - BLUE
Category C - GREY
Category U - RED

T005

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

TREE PROTECTION FENCING

GROUND PROTECTION

REVISION	CHCK'D	APP'D	DATE

Client:
SQUARE FOOT ARCHITECTS

Job Title:
30a THURLOW ROAD
HAMPSTEAD
LONDON
NW3 5PH

Drawing Title:
TREE PROTECTION PLAN (GROUNDWORKS)

Drawing Number:	Scale:
190.03.01	1:100 (A3)
Date: 18.03.13	Drawn by: RS

Skerratt
arboricultural advice
158 MALDEN ROAD, LONDON NW5 4BT
01274 566539

N

003

002

004

005

B

A

Void

Bedroom 1

Study

Bedroom 4

Bedroom 3

Hall

Entrance

Glass roof above

Wooden Shutters operable to 45° for ventilation with Glass Juliet Balcony behind

Wooden Shutters with Glass Juliet Balcony and Windows behind, approximately in the same position as existing windows

Soft Landscape / Gravel

Sunken Garden

Planting

Soft Landscape with Vegetation

Windows to Ground Floor Flat

No 41 Rosslyn Hill

No 30 Thurlow Roa

REPLACEMENT TREE LOCATION

Hard Landscape Forecourt as existing

FENCE

Pedestrian Access

Vehicular Access Crossover

THURLOW ROAD

30a THURLOW ROAD, NW3 5PH.

KEY

T005

EXISTING TREE

Trees are coloured on plan to correspond to the Retention Categories specified in:
BS5837:20 12 T rees in relation to design, demolition and construction - Recommendations as follows:

Category A - GREEN
Category B - BLUE
Category C - GREY
Category U - RED

T005

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

TREE PROTECTION FENCING

GROUND PROTECTION

REVISION	CHCK'D	APP'D	DATE

Client:
SQUARE FOOT ARCHITECTS

Job Title:
30a THURLOW ROAD
HAMPSTEAD
LONDON
NW3 5PH

Drawing Title:
TREE PROTECTION PLAN (CONSTRUCTION)

Drawing Number:	Scale:
190.03.02	1:100 (A3)
Date: 18.03.13	Drawn by: RS

Skerratt
arboricultural advice
158 MALDEN ROAD, LONDON NW5 4BT
01274 566539

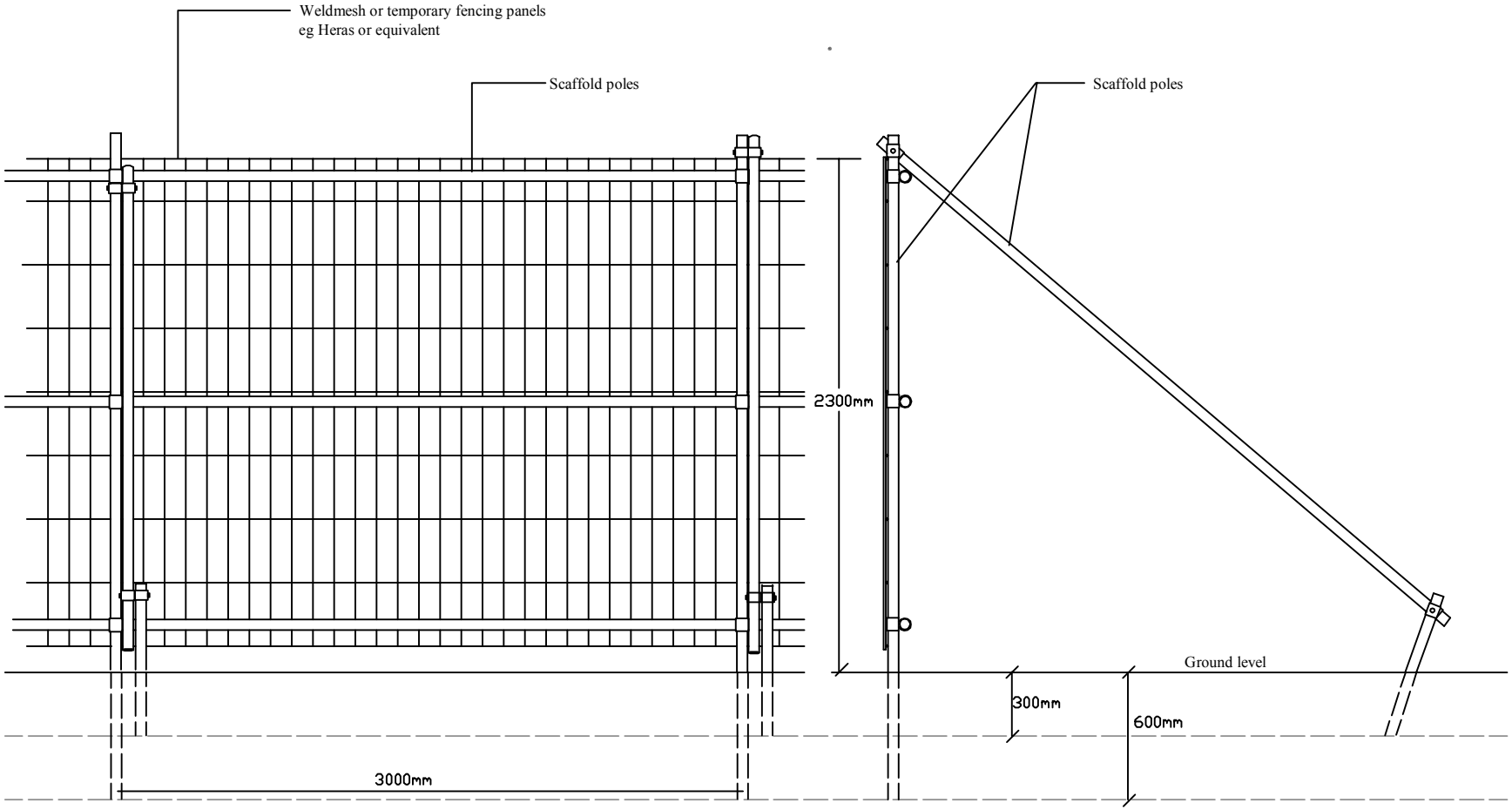
appendix b
pre-contract tree works schedule

Pre- Contract Tree Works Schedule

Tree No.	Species	Height (m)	Diam (cm)	Crown Spread (m)				Crown Height (m)	Item
				N	E	S	W		
001	Wild Cherry (*Prunus avium*)	11	290	3	4	3	2	2/2	Fell to near ground level: remove stump
002	Pear (*Pyrus communis var.*)	11	460	5	3	4	3	2/3	No action required
003	Pear (*Pyrus communis var.*)	9	490	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	3	3	3	4/6	No action required

appendix c

BS protective fence detail
BS ground protection 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.

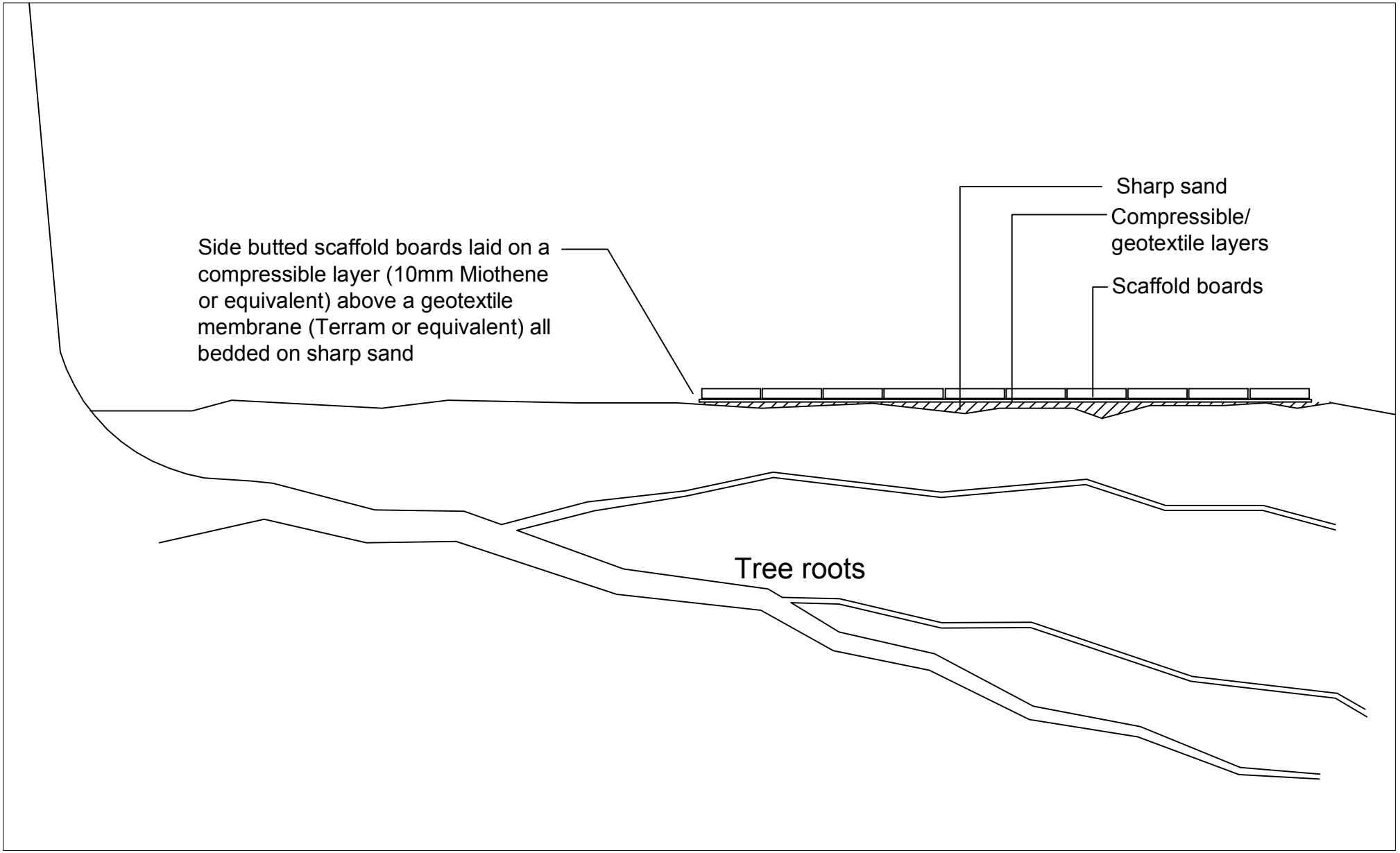
Onto this, weldmesh panels should be securely fixed using wire or scaffold clamps. Weldmesh panels on concrete or rubber feet are nor resistant to impact and should not be used

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

BS5837:2005 Protective Fencing Detail
Scale: 1:20 [A4]

Skerratt
arboricultural advice

GREENMOUNT 36 PRIESTTHORPE ROAD BINGLEY
WEST YORKSHIRE BD16 4LL 01274 566539



BS5837:2012 Ground Protection Layer (General arrangement)

Scale: 1:20 [A4]

Skerratt
arboricultural advice

GREENMOUNT 36 PRIESTTHORPE ROAD BINGLEY
WEST YORKSHIRE BD16 4LL 01274 566539

CONSTRUCTION EXCLUSION 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

CARE OF 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