21st March 2013

Ref:ha/ms1/8pvw

Your Ref:

Mr R Parker
Kerr Parker Associates Ltd
The Granary
Coppid Hall
North Stifford
Essex
RM16 5UE

Dear Mr Parker

Tree Assessment and Protection in relation to Construction at:
Casina Lodge, 8 Park Village West, London, NW1

Further to my site visit of 14th January 2013 and subsequent correspondence, please find attached my arboricultural assessment and method statement as requested to assist with the planning application.

I hope that this is clear and helpful but if I can be of any further assistance, please do not hesitate to contact me.

Yours sincerely

Hal Appleyard
Dip. Arb. (RFS), F.Arbor.A, MICFor.
Arboricultural Association Registered Consultant

enc.

Arboricultural Assessment and Protection Method Statement

Site: Casina Lodge, 8 Park Village West, London, NW1

Date: 21st March 2013

Prepared by: Hal Appleyard Dip. Arb. (RFS), F.Arbor.A, MICFor.

Ref: ha/ms1/8pvw

Appendices:

1. Tree Survey Schedule (BS5837:2012)
2. Tree Protection Plan TPP1_PVW
3. Recommended example of tree protection fencing
4. Example of site monitoring record

1.0 Introduction and Scope

1.1 A planning application for the construction of refurbishment and a basement extension is to be submitted for consideration by the Local Planning Authority (LPA).

1.2 The proposed construction is to be undertaken in the vicinity of trees. The implications of the construction works upon the trees are set out here together with methods for tree protection and preservation

1.3 I have been appointed by the site owners as a competent and qualified arboricultural consultant to provide this report and to supervise any works that may have the potential to affect the protected trees.

1.4 I have assessed the trees in accordance with the guidance set out in BS 5837:2012 'Trees in relation to design, demolition and construction-Recommendations' (the BS) and an extract from that guidance is appended herewith.

2.0 The Site and Trees

2.1 The site comprises an existing, detached three storey dwelling with lower ground levels and separate garage buildings.

2.2 I have provided the BS details of the tree in the tree survey schedule at **Appendix 1** and its corresponding position is shown on the tree protection plan at included at **Appendix 2**.

2.3 The largest tree is a mature Lime (T2) growing at the western site boundary. It grows alongside some existing trees and shrubbery referred to in the schedule as G1. G1 is contained behind a low retaining wall and consequently its rooting spread is likely to be restricted somewhat from growing under the adjacent driveway. Roots from T2 are however expected to grow under the driveway surface but will be therefore protected from construction traffic by the hard surfacing above.

2.4 A row of pleached Lime trees has been planted against the wall of the southern boundary relatively recently. Two of the young trees will need to be re-located to enable the construction of the basement extension. This will go unnoticed in the landscape.

2.5 A number of Hornbeams and Ash grow along the eastern boundary but which will be protected from any construction works by the exclusion area set out in the tree protection plan. Access to the rear garden will not be available for construction purposes including storage.

2.7 The two Flowering Cherry trees and the Silver Birch, G9 and T10 respectively can be afforded effective protection by the erection of robust, BS-standard fencing (see Appendix 3)

2.6 I have inspected the trees and the proposals and I have consulted with the architect in respect of foundation design and the impact this may have upon the trees. Consequently, I consider that these proposals have taken full account of the trees and their safe keeping. I am confident that they will be preserved for the future with the implementation of the protection measures that I have set out below, coupled with the designs prepared by the architect.

Table 1 **Proposed Tree Works**

Tree Works (Spec.)	Tree Nos	Visual Landscape Impact of Works*	Available Replacement Planting(Y/N)	Comments
Re-locate	2 x trees in G8	None	Y	Young trees, readily re-plantable.
Crown clean (Sp3) and Crown thin by 20% (Sp5)	T2	None	-	General tree maintenance
Crown lift (Sp4) to 3m	G1, T2, G9, T10	None	-	Pruning to enable tree protection fencing
Total		None	2	Replanted specimens

*This is a preliminary visual appraisal based upon the opinion of the author having inspected the trees in the context of their current surroundings. – None (no change or beneficial impact) Negligible or indiscernible difference to treed landscape; Low – Noticeable but mitigated by retention of other landscape trees and features; Medium – Obvious but temporary alteration to the treed landscape; High – Obvious and permanent alteration to the landscape.

Visual receptors include the public or community at large, residents, visitors or other groups of viewers together with the visual amenity of potentially affected people.

Specifications for recommended tree works:

General

All work is to conform to BS 3998:2010 ‘Tree work – Recommendations’ and with current arboricultural best practice. Tree works are to be undertaken by a professional and specialist arboricultural contractor, who carries the appropriate experience and insurance cover, equipment and PPE. All works and processes are to comply with all relevant Planning, Wildlife, Environmental, Conservation and Health and Safety legislation.

Sp2.1 Any branch shortening work, (including as part of crown reduction work) will be conducted by pruning back to a suitable growing point, e.g. a shoot or smaller branch, which can continue to support branch growth.

Sp3. Crown Cleaning involves the removal of all dead wood small and large diameter, stubs and broken branches. Some small, densely arranged shoots (including epicormic shoots) will be thinned out or removed as recommended.

Sp4. Crown lifting includes the removal of the lowest lateral branches and shoots, (which would not result in irrevocable tree injury), to a specific height above ground level measured in metres.

Sp5. Crown thinning involves the removal of sub-lateral (secondary) branches to appropriate branch/shoot unions, removal of dead and damaged (crossing branches) with a view to reducing the crown density by a specified %, normally no higher than 30%.

Table 2 Summary of Implications of Construction on Trees*

Tree Ident.	Landscape Contribution	Implications/Impact	Mitigation measures	Impact Assessment**
G1, T2, G9 , T10	Medium	Construction traffic passing over roots and under canopy	1. Retain existing hard standing driveway surfaces 2. Erect BS grade tree protection fencing 3. Crown lift (remove lowest branches	Neutral
G8	Low	Re-locate 2 x trees to enable basement construction	1. Employ landscape company in advance of construction to professionally re-plant trees	Neutral

* Main trees selected for comment included above. Refer to previous notes on other trees.
** Negative – adverse impact upon trees and landscape; Neutral – no material impact (negative or positive); Positive – improvement (potential) to tree quality and landscape

3.0 Recommended Construction Precautions (trees)

3.1 In order to afford protection from general construction processes associated with the building of the basement extension, it will be necessary to erect a robust tree protection fence (normally wire mesh panels) in the position indicated on the Tree Protection Plan at **Appendix 2** (TPP1_PVW). A recommended example of the type BS grade tree protection fencing is included at **Appendix 3**.

3.2 Following erection of the tree protection fencing, the fenced-off area to the rear of the building is to be a construction exclusion area and no materials or storage of any type is to be deposited within this area.

NOTE: THE APPOINTED ARBORICULTURAL SUPERVISOR IS TO BE CONSULTED BEFORE ANY WORK, EITHER SCHEDULED OR UNSCHEDULED, IS UNDERTAKEN WITHIN THE EXCLUSION ZONE OR ROOT PROTECTION AREAS OF ANY RETAINED TREE. FAILURE TO DO SO MAY LEAD TO ENFORCEMENT ACTION.

3.4 In order to ensure that the tree protection measures are implemented effectively, a site monitoring exercise will be undertaken to confirm:

i) The quality and accuracy of the tree pruning work
ii) The efficacy and accuracy of the fencing and ground protection

An example of a site record (tree protection) is provided at **Appendix 4**. In this case, the form will be used as confirmation that all practical precautions have been undertaken in accordance with this method statement.

3.5 A copy of this method statement is to be retained on site for the duration of the build process together with a scaled, colour copy of the Tree Protection Plan.

3.6 Key times for site supervision include:

1. Completion of agreed/necessary tree works
2. Erection of tree protection fencing
3. Works within RPA's of retained trees
4. Landscaping

3.7 Site monitoring will be at regular intervals, (beyond that stated above) and at minimum three-week intervals (subject to development scale). Below is a recommended programme of arboricultural supervision. (This program may alter dependent upon site circumstances or by agreement.)

The two arrowed trees are to be re-located to provide working space for the construction

Table 3 Preliminary site supervision schedule

Stage	***Action***	***Arboricultural Supervisor (AS) (Required – Y/N)***	***Notes***
1	*Pre-commencement meeting*	*Y*	*Site Agent(SA) and ground works contractor to attend*
2	*Tree works*	*Y*	*Following completion of tree works*
3	*Installation of Tree protective fencing*	*Y*	*PRIOR to ground works*
4	*Construction phases*	*Y*	*AS to monitor tree protection at agreed intervals*
5	*Remove tree protective fencing/ground protection*	*N*	*SA to advise AS prior to landscaping work*
6	*Tree planting/landscaping*	*Y*	*Brief landscape company*

Contact List (to be completed **PRIOR** to commencement)

Interested Party	**Name**	**Company/LPA**	**Contact Number(s)**	**Comment**
Site Agent				TBA
Main Contractor				TBA
Arb. Supervisor	Hal Appleyard	ACS Consulting	020 8687 1214	Arb. Consultant
LPA Tree Officer	Mr A Hutson	L B Camden Council	020 7974 5939	
Site Engineers				TBA
Architects	Mr R Parker	Kerr Parker Assts Ltd	01375 377731	

TBA – to be advised

4.0 General site care (trees)

4.1 No fires will be lit on site.

4.2 No access will be permitted to within the fenced or otherwise protected areas (unless for site accommodation or Authorised agreement) at any stage during construction.

4.3 No materials, equipment or debris will be stored within the fenced areas unless agreed with the arboricultural supervisor.

4.4 Areas for mixing are to be located beyond RPAs of trees and contained to prevent leaching into the soil.

4.5 A copy of this report and the Tree Protection Plan is to remain on site at all times.

Liability Limitation

This report has been prepared for the sole use and benefit of the Client. ACS Consulting shall not extend its liability to any third party. No part of this report is to be reproduced without authorisation from ACS Consulting (London).

Hal Appleyard *Dip. Arb. (RFS), F.Arbor.A, MICFor.*
Chartered Arboriculturist & Arb. Assoc. Registered Consultant

21st March 2013

APPENDIX 1

ACS Consulting (London)
Tree Management Consultants
T: 020 8687 1214

ACS Consulting (London)
Tel: 020 8687 1214

Tree Survey Schedule

Site: 8 Park Village West, London

Surveyor:H. Appleyard

Date:14th January 2013

Ref:ts1/8pvw

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Age Class	Stem Diameter	Protection Multiplier	Protection Radius	Growth Vitality	Structural Condition	Landscape Contribution	B.S. Cat	Sub Cat	Useful Life	Observations
G1	False Acacia/Hawthorn/Euonymous	12	3 3 3 3	0	Middle Aged	250a	12	3.0	Normal	Good	Low	C	1,2	20-40	Boundary screen trees Root pattern affected by structures Low wall at base
T2	Lime, Common	25	5 4 4 4	3/W3	Mature	600e	12	7.2	Normal	Good	High	B	1,2	>40	Reduced in past Off-site tree Roots deflected south by structures
T3	Fig	6	2 4 3 5	.5/	Mature	300	12	3.6	Normal	Fair	Low	C	1,2	20-40	Garden ornamental Leaning (significantly) south
T3.1	Hornbeam	11	4 4 4 5	3/N3	Mature	350	12	4.2	Normal	Good	Low	B	1,2	>40	Squirrel damage Rubbing branches and wounds
T4	Hornbeam	11	4 3 4 3	3/N3	Mature	250	12	3.0	Normal	Good	Low	B	2	>40	Boundary screen tree Drawn habit
T5	Hornbeam	11	4 3 4 3	3/N3	Mature	250	12	3.0	Normal	Good	Low	B	2	>40	Boundary screen tree Drawn habit
T5.1	Hornbeam	11	4 6 4 4	3/N3	Mature	350	12	4.2	Normal	Good	Low	B	2	>40	Boundary screen tree Drawn habit

Notes:

1. Height describes the approximate height of the tree in meters from ground level.
2. The Crown Spread refers to the crown radius in meters from the stem centre and is shown above on each of the four compass points (i.e. N, E, S, W) clockwise.
3. Ground Clearance is the height in meters of crown clearance above adjacent ground level together with the height and direction of the lowest branch
4. Stem Diameter is the diameter of the stem measured in millimetres at 1.5m from ground level or just above ground level for multi stemmed trees. The diameter may be estimated (e), where access is restricted. An average (a) may be taken for tree groups. A full inspection is always recommended.
5. Protection Multiplier is 12 for single-stemmed trees; for multi-stemmed a cross-sectional area is calculated to derive the DBH, which in turn is multiplied by 12.
6. Protection Radius is a radial distance measured from the trunk centre and is used to calculate the BS RPA.
7. Growth Vitality - Normal growth, Moderate (below normal), Poor (sparse/weak), Dead (dead or dying tree).
8. Structural Condition - Good (no or only minor defects), Fair (remediable defects), Poor - Major defects present or suspected.
9. Landscape Contribution - High (prominent landscape feature), Medium (visible in landscape), Low (secluded/among other trees).
10. B.S. Cat. refers to British Standard 5837:2012 Table 1 category and refers to tree/group quality and value; 'A' - High, 'B' - Moderate, 'C' - Low, 'U' - Remove or very poor quality.
11. Sub Cat refers to the retention criteria values where 1 is Arboricultural, 2 is Landscape and 3 is Cultural including Conservation/ecological, historic and commemorative.
12. Useful Life is the tree's estimated remaining effective contribution in years.

ACS Consulting (London)
Tel: 020 8687 1214

Tree Survey Schedule

Site: 8 Park Village West, London

Surveyor:H. Appleyard

Date:14th January 2013

Ref:ts1/8pvw

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Age Class	Stem Diameter	Protection Multiplier	Protection Radius	Growth Vitality	Structural Condition	Landscape Contribution	B.S. Cat	Sub Cat	Useful Life	Observations
T6	Ash, Common	25	4 7 7 6	4/W3	Mature	520	12	6.2	Normal	Good	High	B	1,2	>40	Open crown form Root pattern affected by structures east One of a pair; heavy east lateral
T7	Ash, Common	25	1 8 2 9	5/S4	Mature	650	12	7.8	Normal	Fair	Medium	B	1,2	>40	Leaning (significantly) south Open crown form Minor dead wood; suppressed form
T7.1	Plum, Myrobalan	7	2 3 4 4	1.5/W2	Mature	300	12	3.6	Normal	Good	Low	C	1,2	20-40	Boundary screen tree Over hanging branches
G8	Lime x 6 (espalier)	7	1 1 1 1	2.5/N2	Young	150	12	1.8	Normal	Good	Medium	C	1,2	>40	Boundary screen tree group
G9	Cherry, Flowering x 2	8	3 2 3 3	2.5/E3	Mature	250	12	3.0	Moderate	Fair	Low	C	1,2	10-20	A sparser than normal canopy Garden ornamentals Part of boundary screening
T10	Birch, Silver	12	3 3 3 2	3/S3	Mature	340	12	4.1	Normal	Good	Medium	C	1,2	20-40	A tree with insignificant defects Root pattern affected by structures north/west Part of boundary vegetation

Notes:

1. Height describes the approximate height of the tree in meters from ground level.
2. The Crown Spread refers to the crown radius in meters from the stem centre and is shown above on each of the four compass points (i.e. N, E, S, W) clockwise.
3. Ground Clearance is the height in meters of crown clearance above adjacent ground level together with the height and direction of the lowest branch
4. Stem Diameter is the diameter of the stem measured in millimetres at 1.5m from ground level or just above ground level for multi stemmed trees. The diameter may be estimated (e), where access is restricted. An average (a) may be taken for tree groups. A full inspection is always recommended.
5. Protection Multiplier is 12 for single-stemmed trees; for multi-stemmed a cross-sectional area is calculated to derive the DBH, which in turn is multiplied by 12.
6. Protection Radius is a radial distance measured from the trunk centre and is used to calculate the BS RPA.
7. Growth Vitality - Normal growth, Moderate (below normal), Poor (sparse/weak), Dead (dead or dying tree).
8. Structural Condition - Good (no or only minor defects), Fair (remediable defects), Poor - Major defects present or suspected.
9. Landscape Contribution - High (prominent landscape feature), Medium (visible in landscape), Low (secluded/among other trees).
10. B.S. Cat. refers to British Standard 5837:2012 Table 1 category and refers to tree/group quality and value; 'A' - High, 'B' - Moderate, 'C' - Low, 'U' - Remove or very poor quality.
11. Sub Cat refers to the retention criteria values where 1 is Arboricultural, 2 is Landscape and 3 is Cultural including Conservation/ecological, historic and commemorative.
12. Useful Life is the tree's estimated remaining effective contribution in years.

Table 1 **Cascade chart for tree quality assessment**

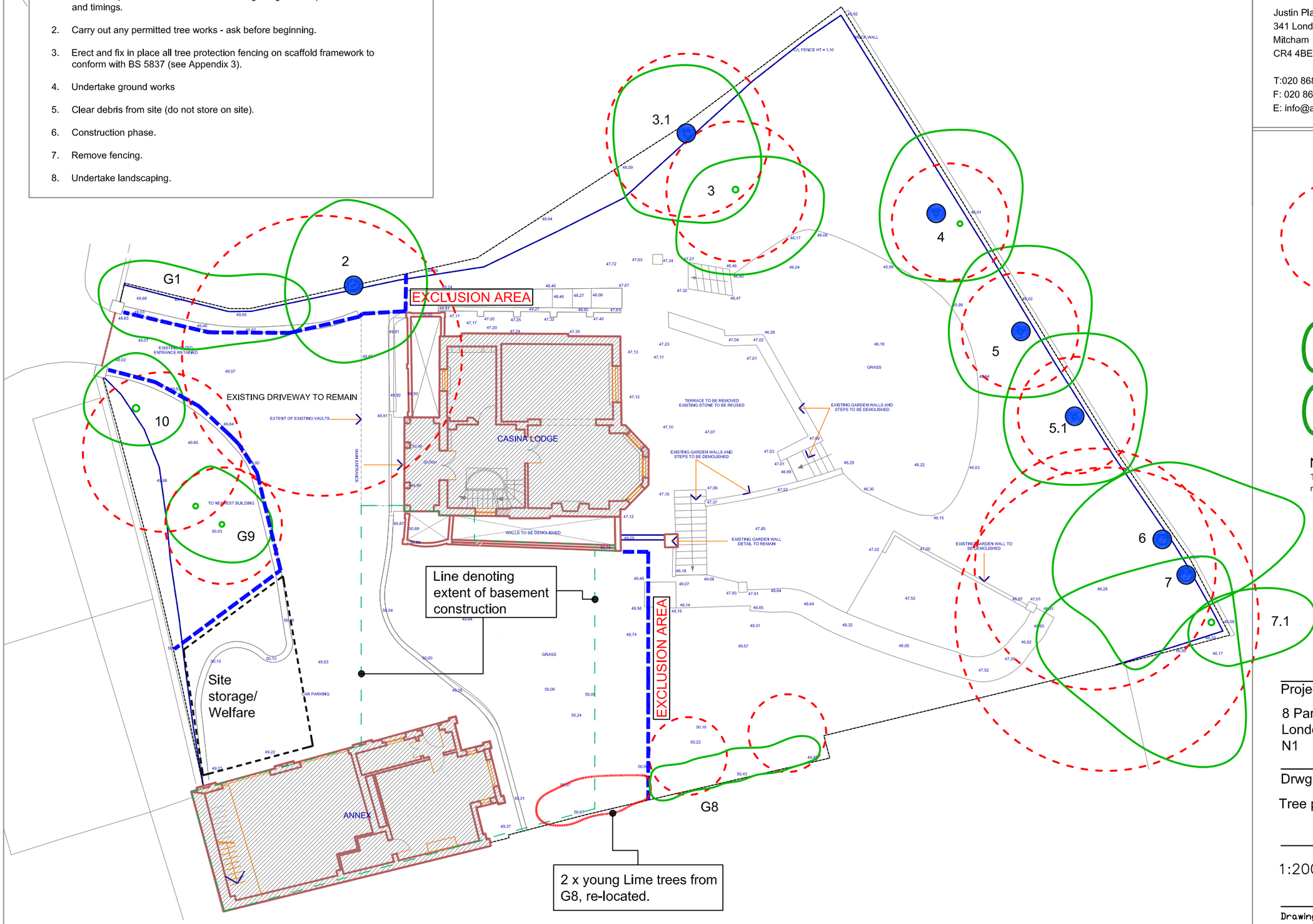
Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 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

APPENDIX 2

ACS Consulting (London)
Tree Management Consultants
T: 020 8687 1214

Tree Protection Methods to be adopted on site.

1. Undertake pre-commencement site meeting to agree tree protection methods and timings.
2. Carry out any permitted tree works - ask before beginning.
3. Erect and fix in place all tree protection fencing on scaffold framework to conform with BS 5837 (see Appendix 3).
4. Undertake ground works
5. Clear debris from site (do not store on site).
6. Construction phase.
7. Remove fencing.
8. Undertake landscaping.



ACS Consulting (London)

TREE MANAGEMENT CONSULTANTS

Justin Plaza 3
341 London Road
Mitcham
CR4 4BE

T:020 8687 1214
F: 020 8687 2456
E: info@acstrees.co.uk

Indicative

BS Root Protection Area, (RPA) shown uniform here but site features such as roadways, kerb and foundations, may modify root patterns and therefore the RPA shape

The BS rooting areas are to remain free from construction works which has the potential to damage or remove roots to an extent which may affect the condition of the tree.

A grade trees

B grade trees

C grade trees (clear)

U grade trees

NOTE:
Tree trunks plotted on site, not from topographical survey. Do not measure from this plan, verify measurements on site.

Recommended position for fixed tree protection fencing

Project:
8 Park Village West
London
N1

Drwg Title:
Tree protection plan

1:200@A.3

Date: Jan. 2013

Drawn By:HA

Drawing No:
TCP1_PVW

Rev:

APPENDIX 3

ACS Consulting (London)
Tree Management Consultants
T: 020 8687 1214

Tree Protection Fencing

Specifications (specifically identified by outline box)

2.4m Hoarding

3.0m 100 X 100mm square wooden posts
3 X 38 X 87mm wooden rails affixed to posts
2.4m X 1200 outside grade ply panels (12mm) affixed to rails.
50 X 100mm angled supporting struts affixed internally (quantity as required).

(Supporting posts fixed into position using concrete. All post holes to be hand excavated. Post holes to be no larger than 300 X 300mm.)

Heras Fencing

Heras fencing describes the 2.4m galvanised steel mesh panelled fencing normally supplied with pre-cast concrete bases. **Bases are to be replaced with a fixed frame to which panels are clamped/ firmly fixed.** For extra stability, scaffold poles/4x4 wooden posts are to be firmed into the ground as supporting posts and supporting struts are to be attached at a 45 degree angle on the 'tree-side' of the fencing and fixed into the ground. Supporting posts will be braced at the top and base for added support.

Example 1.

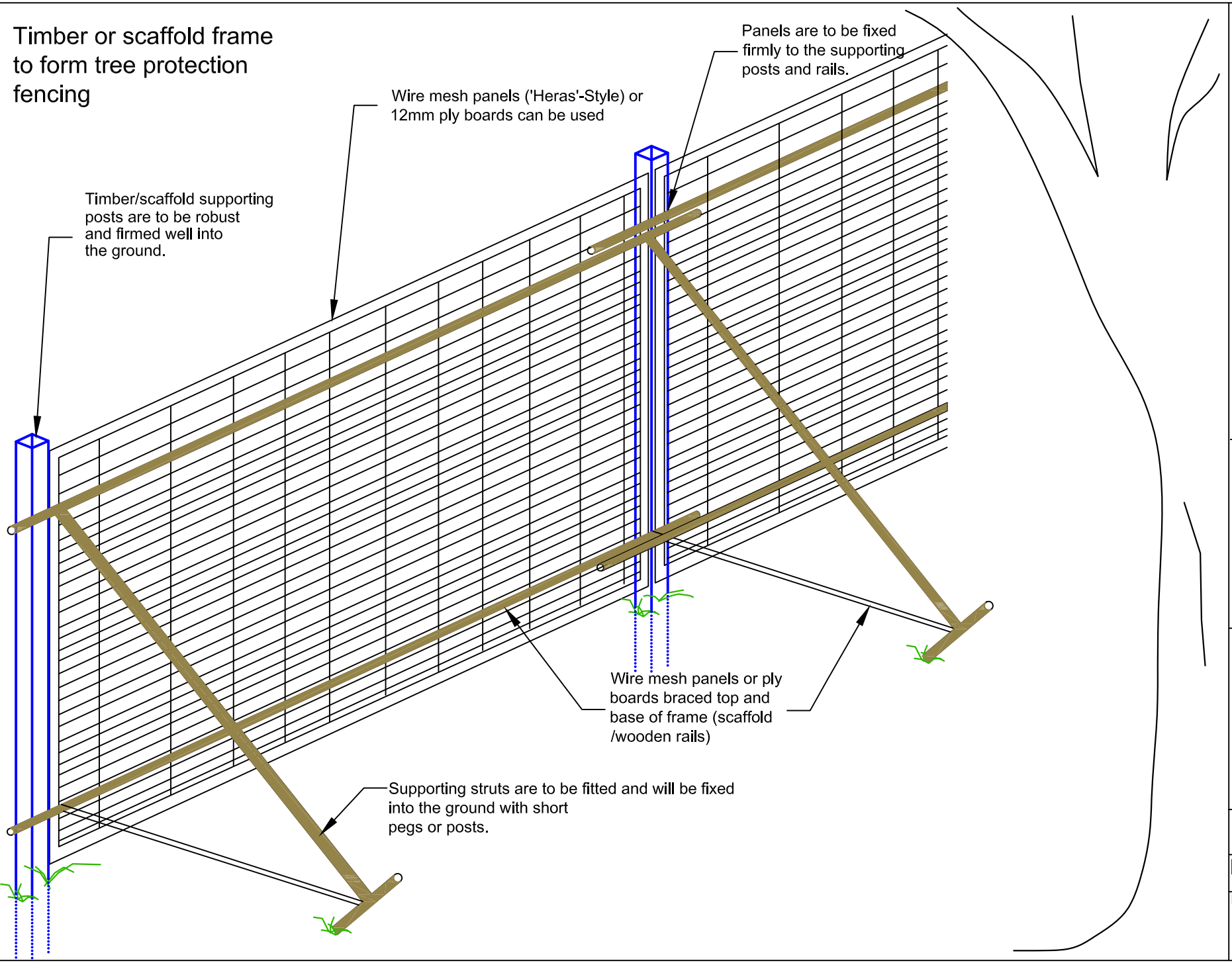
Heras Fencing with supporting by a scaffold framework fixed (tree side) for extra support.

Example 2.

Hoarding-style fencing with robust wooden posts with supports to ensure minimal movement.

Tree Management Consultants
T: 020 8687 1214
www.treebiz.co.uk

Timber or scaffold frame to form tree protection fencing



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Title:

Example of Tree Protection Fencing

Note:

Steel scaffold or timber can be used to support boards or wire mesh panels

Date: Jan. 07

Ref:

Note: Sketch Plan Only - Not to Scale

APPENDIX 4

ACS Consulting (London)
Tree Management Consultants
T: 020 8687 1214

ACS Consulting
T: 020 8687 1214

Arboricultural Site Supervision

ACS CONSULTING

Site: 1 Hyde Park, London
Inspected By: H .Appleyard
Client: RPC
Site Agent: Shaun Clark

Date of Inspection: 15/02/2007
Time of Inspection: 3:30pm

Tree Protective Fencing

Tree protection in correct location

Comments/Action
No action at this time

Effective fencing in position

Agreed Construction Exclusion Zone

No debris within construction exclusion zone

Comments/Action
No action at this time

Amendments to Documentation Required

No amendments required

Comments/Action
Building works outside scope of Method Statement

Fencing with signs

Remedial Works

General Comments

Tree protection and on-site supervsion effective and understood.