Simon Pryce Arboriculture

Report

Client:	**Mr & Mrs Paul**
Site:	**6 Whidborne Street, London, WC1X 8EU**
Subject:	**Tree survey, protection plan and arboricultural method statement**
Inspection date:	**9 May 2013**
Report date:	**12 May 2013**
Reference:	**13/014**
Author:	**Simon Pryce, B.Sc., F.Arbor.A, C.Biol, MSB, MICFor** **Arboricultural Association Registered Consultant**

CP House, Otterspool Way, Watford, Herts, WD25 8HP
tel. 01923 467600
www.simonpryce.co.uk
info@simonpryce.co.uk

Arboricultural Association
REGISTERED CONSULTANT

1 Introduction

1.1 This report has been prepared on the instructions of Moxey Associates, who are acting for Mr & Mrs Paul in respect of the proposal for building work at 6 Whidborne Street, London, WC1H 8EU.

1.2 I have been asked to inspect trees growing on and near the site and to prepare a report on them, including a tree protection plan and arboricultural method statement as set out in British Standard 5837: 2012, Trees in relation to design, demolition and construction.

1.3 The site was visited and the trees inspected on 9 May 2013. They are all growing in the grounds of Argyle School and were inspected from there by arrangement with the school staff.

1.4 The trees were measured, their maturity, health and structural condition assessed and each was assigned to one of the four retention categories [A,B,C,U] specified by BS5837. The individual description and other relevant information are contained in the attached schedule and it is shown on the site plans, based on originals prepared by Moxey Associates.

2 Background

The site

2.1 No.6 is a three storey detached house with a single storey section at the rear and was built originally as a terrace, the rest of which was lost in the Blitz. It is now surrounded by the grounds of Argyle School, with a tarmac surfaced area to the left (west) and garden to the rear and (east).

Proposal

2.2 This is shown on the drawings produced by Moxey Associates and involves some major building work, mainly extending the existing rear extension and its basement out to the same width as the main front part of the house.

2.3 In order to carry out the external work the entire house will need to be scaffolded and this will have to stand in the school grounds. The only access from the street is via the front doors to the inside of the house, so access for external work will need to be through the school grounds. Two options have been considered for this: 1) take down the boundary wall immediately to the right of the house or 2) use the existing gate from Argyle Road into the school garden. Of these the second is the preferred option as it avoids dismantling the wall and having to take out a raised pond.

3 Trees

3.1 The trees are all growing in the school grounds, most of them in the garden to the east of the house. The most significant is a flowering cherry, there is also a recently crown reduced sycamore in the south east corner of the garden, some small fruit trees and a rowan near the eastern side north of the entrance from the street. Next to the west wall of the house is an evergreen magnolia that has been reduced recently.

3.2 The local planning authority is the London Borough of Camden and the site is within Bloomsbury Conservation Area. There are no tree preservation orders [TPOs] on any of the trees, which all belong to the council's education department.

4 Appraisal and discussion

General comments

4.1 The two main functions of tree roots are 1) physical support and 2) the supply of water and nutrients from the soil. Roots will grow wherever conditions are favourable i.e. there is a suitable supply of air and water, so most tend to be in about the upper 600mm of the soil and even shallow excavation or minor level changes can be harmful. Construction near trees can also be harmful in less direct ways, such as soil compaction caused by heavy machinery and spillage of toxic materials such as diesel oil and cement.

4.2 British Standard 5837: 2012, Tree in relation to design, demolition and construction – Recommendations, specifies measures to avoid or minimise damage to trees that are retained on or near construction sites. One of the more important recommendations is that root protection areas [RPAs] are established round retained trees and that no ground work takes place within them without suitable protective measures.

4.3 The size of the RPA is based on the size of the tree concerned. The starting point is that for a single trunked tree it has an area equivalent to a circle with a radius 12 times the trunk diameter at 1.5m. The shape and layout of the RPA can be modified, if this is deemed appropriate, particularly where there is evidence that root spread is uneven.

Implications for this case

Root protection areas

4.4 In this case the RPAs have been shown as circles in order to illustrate the areas concerned. The cherry (tree 1) and trees 4 and 5 are growing in an open garden well away from any walls or buildings so the root systems are likely to be more or less circular. The buddleia and sycamore, trees 2 and 3 are near the boundary wall, which will restrict root spread to some degree, so a greater proportion of the root system will be within the garden. The practical implication of this is that significant numbers of roots will be present under most of the garden east of the house, so protective measures will be needed if it is used for access and storage. The roots of the magnolia, tree 6, will be restricted by the foundation of the house, which has a basement. Therefore nearly all the roots will be under the tarmac and will be protected by it and it makes little difference what shape the RPA is drawn.

Direct effects

4.5 Although some major work is done to the extension the new one is only slightly wider than the existing one and is well away from any RPAs, even allowing for some of them being irregular in shape. Nearly all the other work takes place within the footprint of the house, so the trees are not unduly vulnerable to direct damage from any of the work. The main threat is indirect damage, discussed below, and the measures to protect the trees against that will be more than adequate to safeguard them against any direct effects.

Indirect effects

4.6 This is a small scale project with no access for heavy plant or vehicles into the rooting areas of the trees, but the area available for access and storage is small and most of it is within RPAs. Fencing them off to prevent any access would restrict the work severely, so the alternative here is to protect the ground against compaction or contamination and to protect the trunks against any accidental impacts. The raised pond will be partly under the scaffolding and susceptible to contamination by anything that might fall into it, but it can be covered to prevent that. In order to include all the RPAs and areas likely to have root growth this would involve covering most of the ground to the side of the house, leaving a narrow strip next to the side of the house, so in practice it might be simpler to cover the entire garden.

Tree work

4.7 Some branch ends of the cherry will need to be trimmed lightly or tied back to clear the scaffolding, but the work concerned is minimal and will not harm the tree if done to a good standard. The magnolia to the west of the house will need to have the scaffolding worked round it, though it is not a very large specimen and could be removed and a replacement planted once work is complete.

4.8 Any pruning or tree removal would need the agreement of the trees' owners. The site is in a conservation area, but the owners are the planning authority, so they can carry it out without going through the normal six week notification procedure. Also any work immediately required to implement a proposal with full planning permission is covered by the consent for the building work.

4.9 The method statement on the following pages and the tree protection plan (TPP) specify and show the measures in more detail.

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Tree protection method statement - 6 Whidborne Street, London, WC1H 8EU

This document is to be read in conjunction with the survey report and tree protection plan [TPP] showing the fence layout. Any queries are to be referred to the arboriculturist.

Preliminaries

1. Before any demolition or building starts the contractor and arboriculturist are to agree all work affecting trees, particularly protective fencing, access routes and storage areas.

2. The existing wooden fence is to be dismantled and the site safety and tree protection fence is to be erected as shown on the drawing, if it is more practical or convenient distances from the trees may be increased, but they must not be reduced without the agreement of the arboriculturist.

3. Fencing is to be at least 2m high and sectional welded mesh fencing [e.g. Heras], or plywood, on a scaffolding framework.

4. Trunks of trees 1 - 3 are to be protected by boxing in up to 2m or the lowest branches with heavy duty plywood on a scaffold or timber frame, which can be supported by the trunk with suitable padding, but not attached to it with nails or other fasteners. The cherry is already partly protected by a seat round the base, but should be boxed in up to the first branches, this can be supported by the seat.

5. Ground protection is to be laid in the shaded area on the TPP. Options for this are:

    - for pedestrian use and light storage only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;

    - for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a Terram or similar geotextile membrane

6. No fencing or other tree protection is to be moved or dismantled without the agreement of the arboriculturist.

Work methods

7. No work is to take place within protected areas without the prior agreement of the arboriculturist and without suitable alternative protective measures.

8. Outside RPAs there are no arboricultural constraints on working methods.

9. Any roots found outside protected areas are unlikely to be significant, but any over 25mm diameter found within them and not obviously from recently felled trees should be covered to prevent them drying out and the arboriculturist notified. Smaller roots can be cut cleanly.

10. Cement and concrete mixing must take place as far as possible from protected areas, over a suitable hard surface to prevent soil contamination from spillage or washing out into rooting zones.

Storage

11. No materials are to be stored within RPAs except on existing impermeable hard surfaces or protected ground and where there is no risk of soil contamination.

12. Potential contaminants such as diesel oil, cement and bitumen must be stored as far from RPAs as practical, with provision made for any spillage or run off to be contained away from rooting areas.

Completion

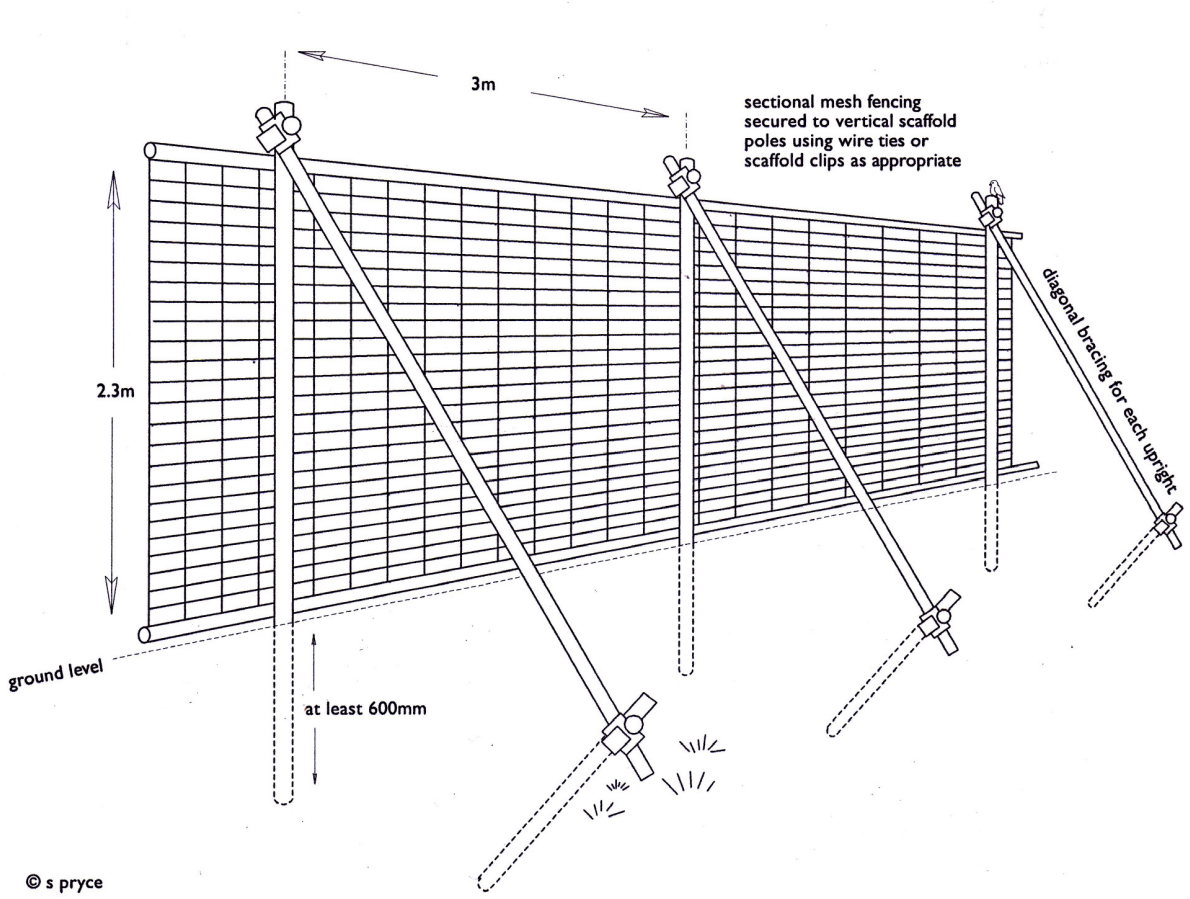
13. Protective measures are to remain in place until all demolition, construction and hard landscaping are complete.

14. Once site work is complete the trees are to be reinspected and any necessary final pruning or other work are to be carried out.

Contact details

Position	Name	Phone	Mobile	e mail
Arboriculturist	Simon Pryce	01923 467600	07710 224906	info@simonpryce.co.uk
Architect	Moxey Associates		07771 755570	simonmoxey@moxeyassociates.com
Owner	Mr & Mrs Paul			johannes@omlet.co.uk
Main contractor	TBA			
Site manager	TBA			

Figure 1 - Protective fence details - after BS5837 2012



Site: **Land near 6 Whidborne Street, London, WC1 8EU**

Inspection date: **10 May 2013 by Simon Pryce**

Tree no.	Species	Age / vigour	Ht. m	Spread				Dia. mm	RPA rad m	RPA area m^2	Crwn ht. m	Comments and recommendations	Cat
				N	S	E	W						
1	Flowering cherry *Prunus serrulata* cv	MA/N	6	6	4	5.5	5	260	3.4	71	1.5	Healthy, relatively young tree, has some minor wounds near the base of the trunk but they are being occluded rapidly. • *No work needed.*	B 1
2	Buddleia *Buddleia davidii* cv	MA/N	4	1	3	3	3	190	2.3	16	2	Slightly one sided due to growing near the cherry, otherwise healthy and in good conditions. • *No work needed.*	C 1
3	Sycamore *Acer pseudoplatanus*	MA/N	6	2.5	2.5	2.5	2.5	220 240	3.9	48	4	Twin trunked from near ground level but the fork is well formed, with no ingrown bark. Has recently been reduced and reshaped, new foliage is healthy looking. • *No work needed at present but new growth will need trimming periodically.*	C 1
4	Assorted small trees	Y/N	2 - 3	0.5 - 1				50 max.	0.6	1.1	0.5 av.	Small young birch and some fruit trees, still on planting stakes, sound and healthy looking. • *No work needed.*	C 2
5	Rowan *Sorbus aucuparia*	Y/L	4	1.5	1.5	1.5	1.5	140	1.7	9.3	1.5	Slightly sparse but reasonably sound and healthy. • *No work needed - small enough to transplant without undue difficulty.*	C 1
6	Evergreen magnolia *Magnolia grandiflora*	Y/N	5	1.5	1.5	0.5	1.5	100	1.2	4.4	1.5	Rooted next to the house wall, recently reduced. • *No work needed at present.*	C 1

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Notes

Observations are made from ground level unless stated otherwise.
Trunk diameters are measured in millimetres at 1.5m above ground or at the narrowest point between the root buttresses and branch flare in multiple trunked trees; in such cases this is indicated by [c].
Crown spreads are taken from the trunk centre to the end of the longest live branches in the directions indicated [usually the four cardinal compass points]
Crown height is the clearance under the lowest significant branches.

Tree ages are estimated as below, based on the normal life expectancy of a tree of the species concerned on the site:

Immature.	[IM]	Newly planted or self-set tree.
Young	[Y]	Young tree that is established but has not yet attained the size or form of a fully developed example of its type.
Middle aged	[MA]	Between one third and two thirds of its estimated lifespan.
Mature	[M]	Over two thirds of it's estimated life span.
Over mature	[OM]	Declining and/or approaching the end of it's natural lifespan.
Dying/Dead	[D]	Dead/dying or so badly decayed that it should be removed without delay if a potential threat.

Vigour is assessed on the basis of what is normal for that the species concerned as:

High	[H]
Normal	[N]
Low	[L]
Dead / dying	[D]

Root protection areas [RPAs] - BS5837:2012

For single trunked trees these are calculated as an area equivalent to a circle with a radius 12 times the trunk diameter at 1.5m. For multiple trunked trees it is based on the diameter of a single trunk that would have the same cross sectional area at 1.5m.

Any deviation from a circular plot should take into account the following factors whilst still providing adequate protection for the roots.

- The shape and disposition of the root system when known to be influenced by past or existing site conditions, such as the presence of roads, structures and underground services.
- Topography and drainage.
- The soil type and structure.
- The likely tolerance of the tree to root disturbance based on factors such as species, age and past management.

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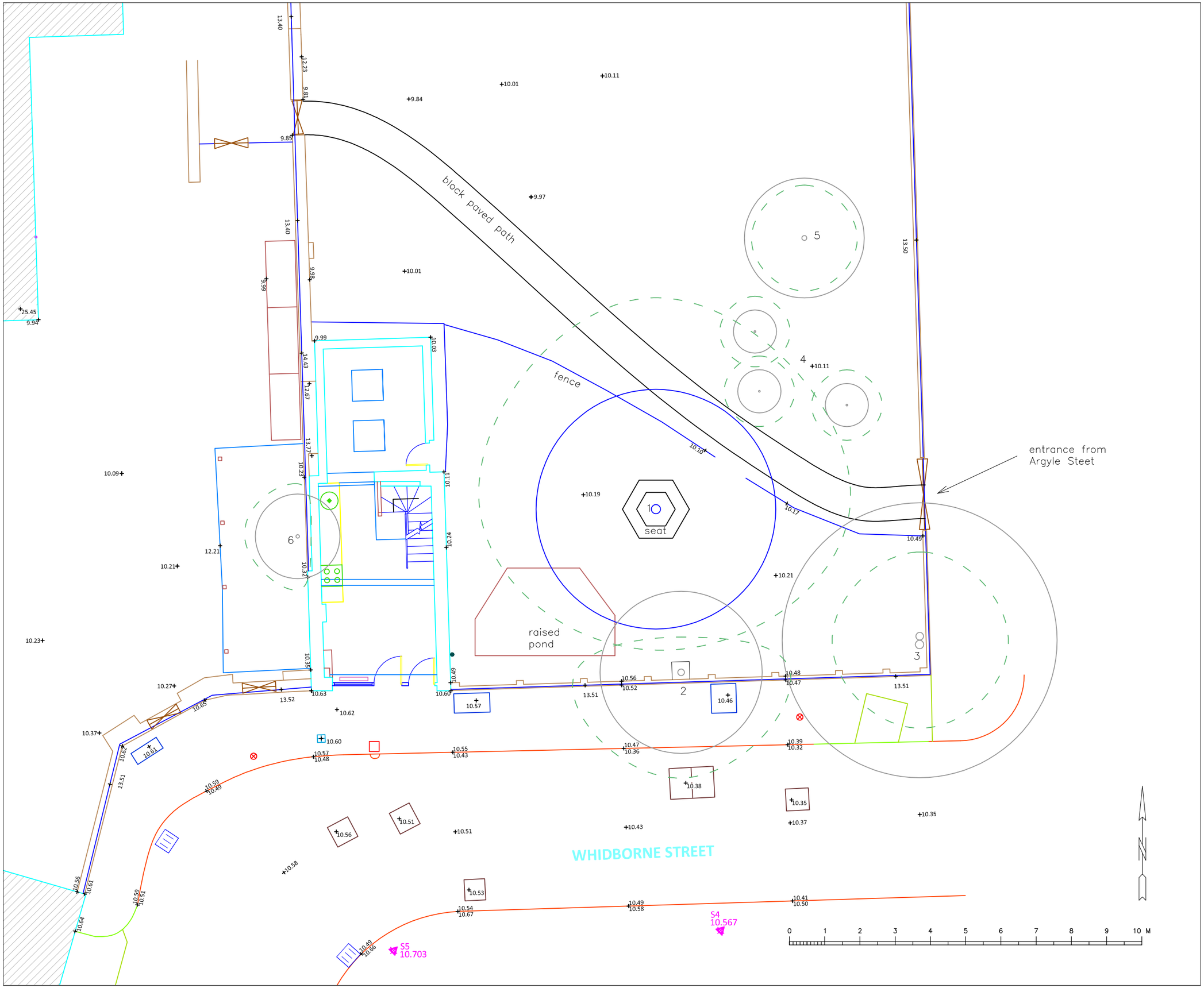
Tree categories – based on BS5837: 2012, Trees in relation to design, demolition and construction - Recommendations

Trees for removal				
Category and definition				**Identification on plan**
Category U				Dark Red
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 in the foreseeable future, including any that will become unviable after the removal of other U category trees. (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning. • Trees that are dead or showing signs of significant immediate and irreversible decline. • Trees infected with pathogens significant to the health and/or safety of other trees nearby, or very low quality trees suppressing better ones nearby. *NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve.*			
Trees for retention				
Category and definition	**Criteria – sub categories**			**Identification on plan**
	1 – mainly arboricultural values	**2 – mainly landscape values**	**3 – mainly cultural / conservation values**	
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 historical, commemorative or conservation value. (e.g. veteran trees or wood -pasture)	Light green
Category B				
Trees of moderate quality with an estimated remaining life expectancy 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 benefits.	Mid blue
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 benefit.	Grey



Simon Pryce Arboriculture

Client:
Mr & Mrs Paul

Site:
6 Whidborne Street, London, WC1H 8EU

Title:
Tree survey - existing site

Date: 9 May 2013

Ref: 13/014 Rev: a

Scale: 1:100 at A3

CP House,
Otterspool Way,
Watford,
WD25 8HP
tel 01923 467600
info@simonpryce.co.uk
www.simonpryce.co.uk

Original drawing:
Moxey Associates, London, N1

Root protection areas [RPAs] are colour coded according to retention category from BS5837:2012, Trees in relation to demolition, design and construction:

A = green
B = blue
C = grey
U = red - dashed - also used to denote dead trees with no RPA
Tree protection fencing = mid blue
Crown spreads = mid green

tree protection and site safety fence

existing path protects roots

scaffolding

footprint increased slightly at the rear

ground protection within rooting areas (can extend farther towards house)

minor pruning or tying back of branch tips needed to clear scaffolding

entrance from Argyle Steet

trunks protected as per method statement

tree 6 either removed or scaffolding worked round it with branches tied back if necessary

tarmac protects roots

cover over raised pond

seat

5

4

3

2

6

10

WHIDBORNE STREET

S4
10.567

S5
10.703

0 1 2 3 4 5 6 7 8 9 10 M

N

Simon Pryce Arboriculture

Client:
Mr & Mrs Paul

Site:
6 Whidborne Street, London, WC1H 8EU

Title:
Tree protection plan

Date: 9 May 2013

Ref: 13/014 Rev: a

Scale: 1:100 at A3

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