Simon Pryce Arboriculture

Report and arboricultural method statement

Client:	**Ms H Sinclair**
Site:	**32a Lowfield Road, London, NW6 2PR**
Subject:	**Trees and proposed building work**
Inspection date:	**12 August 2015**
Report date:	**15 August 2015**
Reference:	**15/053**
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

1 Introduction

1.1 This report has been prepared on the instructions of Ms H Sinclair, the owner of 32a Lowfield Road in connection with the proposal to build an extension onto the rear.

1.2 I have been asked to inspect a tree growing in the rear garden and to prepare a report including a constraints plan, impact assessment, tree protection plan and 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 tree inspected on 12 August 2015. The inspection was visual and made from ground level, with no climbing or test boring as these were not warranted.

1.4 The tree was measured, its maturity, health and structural condition assessed and it was assigned to category B 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 Extension Architecture.

2 Background

The site

2.1 No.32a is the lower ground floor flat in a terraced Victorian house with an extension on the left hand side of the rear elevation. The garden to the rear (east) of the house is level and about 5m wide by 13m long from the back of the existing extension. The section between the side of the extension and the south boundary is paved, while the rest is mainly lawn with shrubs along the sides and at the far end. The garden is completely surrounded by others of similar size.

Proposal

2.2 This is shown on the plans produced by extension architecture and is to build a single storey extension that extends about 3m back from the rear of the existing one and fills the existing space between the extension and right hand side boundary.

3 The tree

3.1 There are assorted shrubs in the garden and a sycamore sapling in the garden of no.30, but the only significant tree in the vicinity is a mature sycamore growing at the far end of the garden. It has been topped or pollarded when younger and grown on to develop a large natural looking crown, which has been reduced in the last few years and is growing on again.

3.2 Camden Council's web site shows that the house is not in a conservation area. It does not give individual details of tree preservation orders (TPOs), so an enquiry would need to be mad, although that is not relevant to this proposal, as it does not involve any work on the tree.

4 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. This recommends that root protection areas [RPAs] are established round retained trees and that no ground work takes place within them unless measures are taken to safeguard the trees. RPAs are normally enclosed by suitable fencing such as weld mesh sections supported by scaffold poles driven into the ground.

Root protection areas

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 of the RPA can be modified where there is evidence that root spread is uneven. However this tree is surrounded by similar gardens and the boundary fences or walls will not impede root spread significantly, so the circular RPA shown on the plan will be an accurate reflection of actual root spread.

Implications for this case

4.4 The rear of the new extension is about 1m beyond the edge of the RPA shown as a circle, so the foundation excavation and other building work will not affect the tree directly.

4.5 This is a small scale project with the only work access through the house and no practical way of using heavy machinery or vehicles, so the tree is not vulnerable to incidental damage from vehicle impacts or soil compaction. However work space will be needed at the back of the house, some of which will be within the RPA and it is important to prevent the tree being affected by potentially damaging activities such as cement mixing. Allowing a 3m work area, as shown on the plan, takes up 10.8m^2 within the RPA, or about 4.5% of 242m^2. That is minimal and well within what a healthy tree like this will tolerate, particularly with good growing conditions for some distance in every other direction. The tree can be safeguarded additionally by installing ground protection in the work area, as shown on the plan.

4.6 The site plan showing the proposed layout shows suitable layouts for fencing and ground protection and serves as the tree protection plan (TPP) recommended by BS5837:2012. The method statement on the following pages specifies and illustrates the fencing and ground protection measures referred to above.

5 Summary and conclusions

5.1 Rooting conditions here are uniform so it is appropriate to treat the RPA as a circle. The proposed extension is outside this so the tree would not be directly affected by the new building itself.

5.2 Work space will be needed within the RPA, but the tree is well away from any access routes and this is a small scale project with no access for vehicles or heavy machinery, so it is not unduly vulnerable to incidental damage.

5.3 It can be safeguarded with a length of fence across the rear garden and ground protection on the work area within the RPA, as shown on the tree protection plan and detailed in the method statement below.

[redacted]

Simon Pryce B.Sc, F.Arbor.A, C.Biol, MSB, MICFor
Arboricultural Association Registered Consultant

Tree protection method statement

This is to be read in conjunction with the report above and the tree protection plan [TPP]. Any queries are to be referred to the arboriculturist.

Preliminaries

1. Before any site work starts the contractor and arboriculturist are to agree all work affecting the tree, particularly protective fencing, access routes and storage areas.

2. The protective fence is to be erected across the garden as shown on the TPP. If it is more practical or convenient the distance from the tree may be increased, but 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 as in figure 1 below. Diagonal braces are to be anchored to scaffold poles driven into the ground or the proprietary concrete weighted base plates.

4. The fence is to have at least one warning sign, as shown in figure 2, or a suitable alternative giving the same information.

5. Options for ground protection within the work are:

    - for pedestrian movements only, a single thickness of scaffold boards or 18mm min plywood 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 Terram ® or similar geotextile membrane (fig 3);

    - proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. woodchip as above), laid onto a geotextile membrane. Figure 4 shows a typical system.

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

Work methods

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

8. Outside the RPA there are no arboricultural constraints on working methods.

9. Any roots found outside the RPA are unlikely to be significant, but any over 25mm diameter found within it and not obviously from recently felled trees or shrubs 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 the RPA, 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 the RPA except on existing impermeable hard surfaces 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 the RPA as practical, with provision made for any spillage or run off to be contained away from rooting areas.

Landscaping

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

14. Outside the RPA there are no arboricultural restrictions on hard landscaping.

15. Within the RPA only soft landscaping is to take place. No levels are to be changed beyond what is required for planting and any irrigation pipes are to be above ground or dug in by hand.

16. No persistent soil acting herbicides are to be used.

Contact details

Position	Name	Phone	Mobile	e mail
Arboriculturist	Simon Pryce	01923 467600	[redacted]	info@simonpryce.co.uk
Architect	Extension Architecture	0208 288 8950	[redacted]	info@extensionarchitecture.co.uk
Owner	Ms H Sinclair	[redacted]		[redacted]
Main contractor	TBA			
Site manager	TBA			

Figure 1 - Tree protection fence details - after BS5837 2012

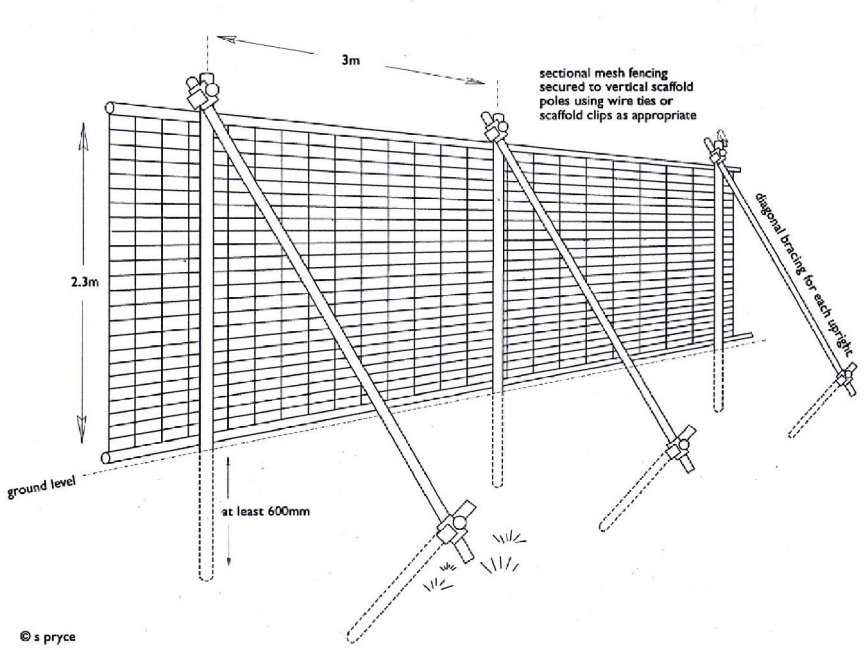


Figure 2 - Warning sign for tree protection fence

Figure 3 - Ground protection within the RPA [based on BS5837:2005]

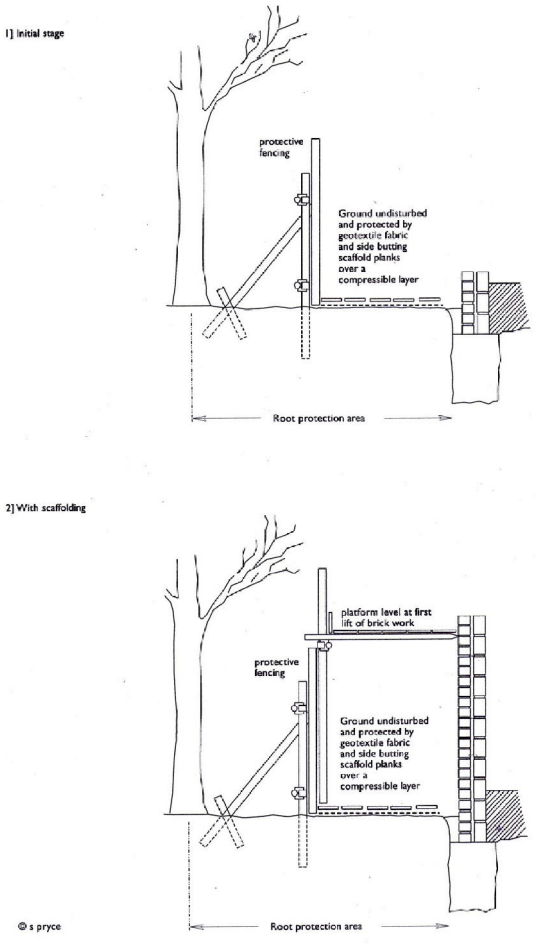
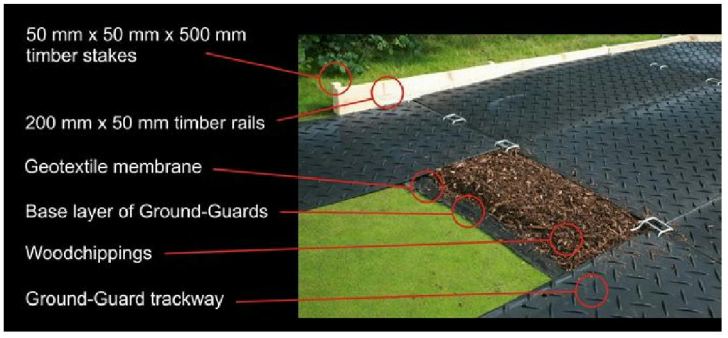


Figure 4 - Proprietary ground protection system



Site: **32a Lowfield Road, London, NW6**

Inspection date: **12 August 2015 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	Sycamore *Acer pseudoplatanus*	M/N	17	5	5	5	5	730	8.8	242	5	Mature tree that divides at about 3m into several main upright limbs as a result of being topped or pollarded in the past. It has been left to grow on, although there is a set of pruning points at about 11m where it was reduced more recently and is growing on again. There is some minor dead wood, but that is normal in mature trees and the foliage is dense and healthy. There is some ivy on the trunk, but no signs of decay or structural defects.	**B1**

[redacted]
Simon Pryce, B.Sc., F.Arbor.A, C.Biol, MSB, MICFor
Arboricultural Association Registered Consultant

Site: **32a Lowfield Road, London, NW6**

Inspection date: **12 August 2015 by Simon Pryce**

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.

Site: **32a Lowfield Road, London, NW6**

Inspection date: **12 August 2015 by Simon Pryce**

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

Trees for removal				
Category and definition				**Colour code**
Category U				**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**			**Colour code**
	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)	**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.	**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**

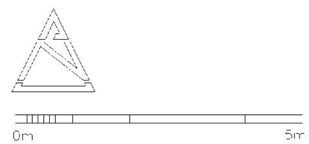
Simon Pryce Arboriculture

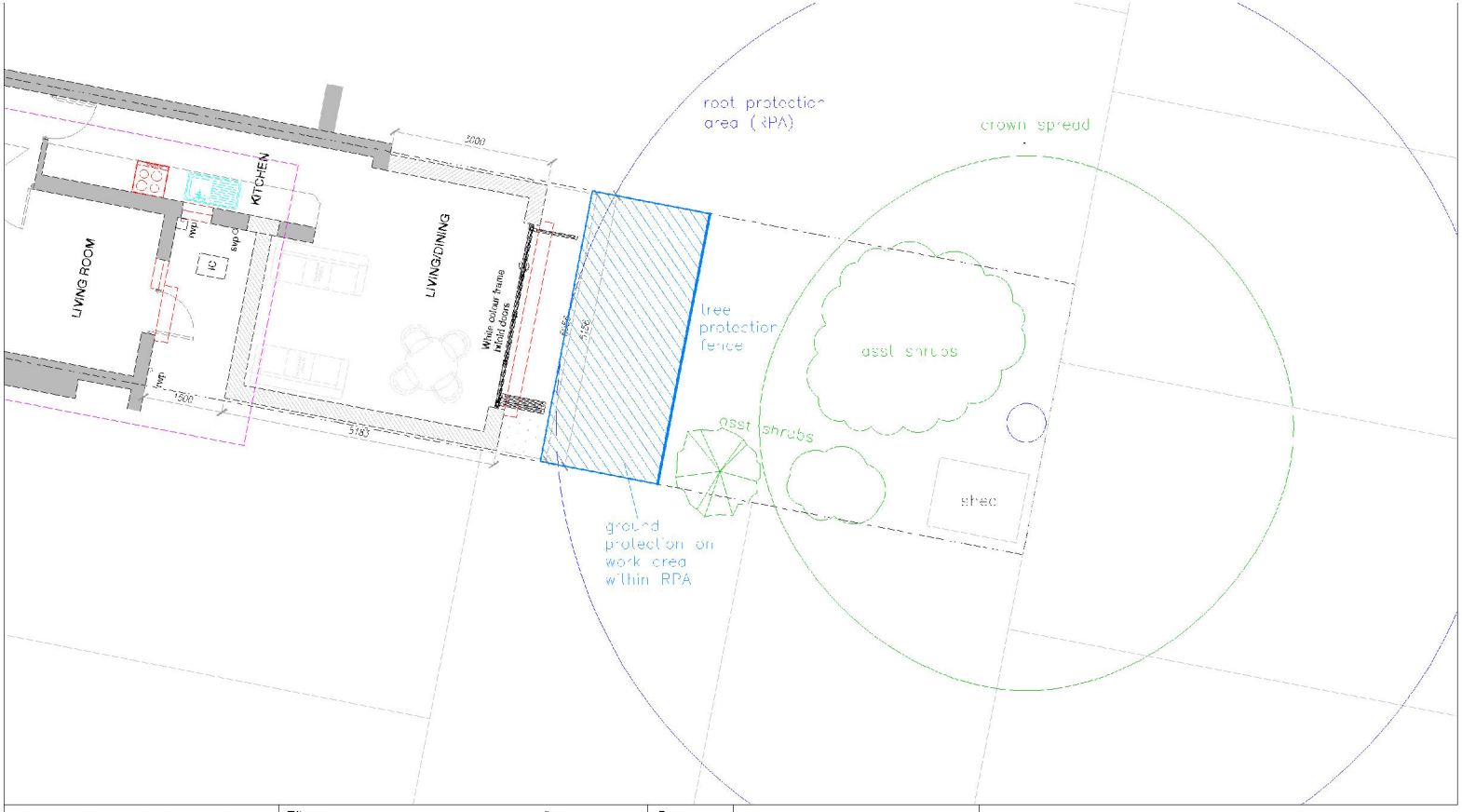
CP House,
Otterspool Way,
Watford,
WD25 8HP
tel 01923 467600
fax 01923 396557
www.simonpryce.co.uk

Client: Helen Sinclair	Ref: 15/053	Rev: a
Site: 32a Lowfield Road, London, NW6 2PR	Scale: 1:100 at A4	
Title: Tree and proposed extension Proposed site and tree protection plan	Original drawing: Extension Architecture	
Date: 12 August 2015		

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





Simon Pryce Arboriculture

CP House,
Otterspool Way,
Watford,
WD25 8HP
tel 01923 467600
fax 01923 396557
www.simonpryce.co.uk

Client: Helen Sinclair	Ref: 15/053	Rev: a
Site: 32a Lowfield Road, London, NW6 2PR	Scale: 1:100 at A4	
Title: Tree and proposed extension Proposed site and tree protection plan	Original drawing: Extension Architecture	
Date: 12 August 2015		

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

0m 5m