Simon Pryce Arboriculture

Report

Client:	**Mr & Mrs Saleh**
Site:	**17 East Heath Road, Hampstead, London, NW3 1AL**
Subject:	**Tree survey in connection with proposed building work.**
Inspection date:	**31 May 2016**
Report date:	**8 June 2016**
Reference:	**16/016**
Author:	**Simon Pryce, B.Sc., F.Arbor.A, C.Biol, M.I.Biol, MICFor Arboricultural Association Registered Consultant**

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1 Introduction

1.1 This report has been prepared on the instructions of Home Concepts, the architects acting for Mr & Mrs Saleh in respect of proposed building work at 17 east Heath Road, Hampstead, NW3 1AL.

1.2 I have been asked to inspect trees growing in the garden and to prepare a report on them, 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 31 May 2016. The inspections were visual and made from ground level, with no climbing or test boring, although a decaying pruning cut in the birch to the front was probed.

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 descriptions and other relevant information are contained in the attached schedule and they are shown on the attached plan.

2 Background

The site

2.1 Number 17 is on the south side of East Heath Road, which is in Hampstead Conservation Area. The plot is about 25m deep by 9m across the front narrowing to about 6m at the rear. The house occupies most of the plot width and is set back about 6m from the road edge, with the front garden paved for parking with planting beds round the edges and across part of the front. Heritage matters are dealt with in more detail by others, but it is a typical example of the houses in this part of the conservation area and is nationally listed Grade 11.

2.2 The front boundary wall was built at the same time, with decorative coping and other details that match the house, so it is included in the listing. It is about 1.8m high with the entrance at the western end. There are signs that it has been maintained and repaired over the years and, although the section next to the gate is cracked and leans out towards the road, due pressure from the trunk of the birch growing immediately behind it (see photos 2- 4).

Proposal

2.3 This is shown on the drawings produced by Home Concepts and involves various modifications including extending parts of the existing lower ground floor to the front and rear.

3 Trees

3.1 The only two significant trees are immediately behind the front boundary wall and are a birch that has evidently been cut down to a stump and regrown and a small plum tree that possibly originated as a sucker shoot from an older tree. The birch is in poor condition, with decay in a pruning cut where a branch was removed and the plum has died. There is also a young ornamental birch growing in a planting bed formed in the paving in the rear garden. These are all described in more detail in the schedule.

3.2 The local planning authority is the London Borough of Camden. The site is in Hampstead Conservation Area, but the recent search when the house was bought showed that there are no tree preservation orders (TPOs) affecting the site.

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 construction damage to trees. One if these is that root protection areas (RPAs) are established round retained trees and that no ground work takes place within them unless suitable alternative measures are taken. RPAs are normally fenced to exclude construction access.

Root protection areas

4.3 The starting point is that a single trunked tree's RPA has an area equivalent to a circle with a radius 12 times the trunk diameter measured at 1.5m above ground. With multiple trunked trees it is based on the diameter of a single trunk that would have the same cross sectional area. Where existing site conditions or other factors indicate that root spread is asymmetrical, the RPA shape should be adjusted to a polygon of the same area, provided this reflects a sound assessment of likely root distribution.

Implications for this case

4.4 The RPAs have been shown on the plan as circles in order to indicate the areas concerned, although root spreads will have been influenced by their surroundings and the plum is dead, so it has no functional roots to protect. The proposal involves some work in the front garden near the birch and plum and the listed front wall and gate post need repairing for safety and as normal maintenance. Neither of those things could be done without removing the birch. It still provides some greenery but is a poor, declining specimen with structural decay in the trunk and the plum is dead and decaying, so both trees need to be removed without delay for purely arboricultural reasons, regardless of any proposed building or repair work.

4.5 Young trees adapt to local ground conditions as they establish and grow, so the removed trees could be replaced with new ones after any building work is complete. Given the relatively small area of the front and rear gardens that would need to be with species that are small to medium sized at maturity and which do not create heavy shade. The problems with the existing birch are due to its proximity to the wall and past management, so there is particular reason why another would not be suitable. There are numerous others that could make a comparable or better contribution to the area. The list on p.5 is not exhaustive but includes species that would be suitable in the front or rear gardens.

4.6 The birch in the rear garden is healthy but is a small young specimen so removing it would have no appreciable effect from outside the garden.

Restrictions

4.7 The listing of the house does not impose any restrictions on tree work, in fact the need to repair the front wall, which is included in the listing, strengthens the case for removing the birch and plum trees.

4.8 None of the trees are protected by TPOs but the house is in Hampstead Conservation area so Camden Council must normally be given six weeks notice of any proposed felling or pruning of trees over 75mm diameter at 1.5m. They can allow that either by confirming in writing that they do not object or by letting the six weeks elapse without making a TPO, which is the only way they can prevent work of which they do not approve. The birch at the front (1) is not an immediate major danger, but its condition is so poor that it would be impossible to justify TPO protection. The plum (2) is dead, so is exempt and can be removed after giving the council five days notice.

4.9 Where councils allow trees in conservation areas to be removed under the six week notice procedure there is no duty to plant a replacement. However where they are removed under the exception for dead trees there is a duty to plant a new tree of an appropriate size and species at the same place unless the council agree otherwise.

4.10 Alternatively it would be possible to include the removals and new planting in the application for the building work.

4.11 The birch to the rear (3) is a bushy specimen that is under the conservation area size limit, so is not protected and there would therefore be no requirement to plant a replacement.

5 Conclusions

5.1 The birch is so close to the listed front boundary wall that it is damaging it and being damaged by it. It would have to be removed to repair the wall, which is necessary for safety. The plum next to it is dead.

5.2 Both trees need to be removed for purely arboricultural reasons regardless of any proposed building work.

5.3 Young trees adapt to local conditions as they establish, so suitable new trees could mature to provide a comparable or better contribution to the locality.

5.4 The listing of the house does not protect the trees and there are no TPOs, but they are in a conservation area. The plum is dead, which makes it exempt and the birch is too poor a specimen to warrant protecting with a TPO. The young birch to the rear is below the conservation area size limit.

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Photographs

1) Birch (L) and plum (R) seen from in front of the house. The plum is dead, the dead twig ends are visible at the top and right, what appears to be its foliage is actually that of the birch and the clematis that has grown from the top of the wall into it.

Decaying pruning cut

2) Birch and front wall seen looking across the entrance. Note severe distortion and crack in the wall level with the kink in the tree's trunk.
(photo Mrs Saleh)

3) and 4) closer views of the cracking visible in photo 2.

Suitable replacement trees for this site

1. Birch (*Betula)* - small to medium sized, relatively slender and lightly branched
2. Rowan / mountain ash (*Sorbus*) - most are small to medium sized, denser than birches but more compact. Decorative flowers and small berries, some give good autumn colour.
3. Honey locust (*Gleditisia*) - Variety 'Sunburst' is medium sized, light green / gold foliage. Avoid the common form which is large growing and very thorny.
4. Magnolia (*Magnolia*) - Numerous varieties available most small to medium and all of them flower.
5. Juneberry (*Amelanchier*) - Small flowering tree, good autumn colour.
6. As the rear garden is enclosed it would also be possible to train fruit trees on the walls.

Site: **17 East Heath Road, Hampstead, London, NW3 1AL**

Inspection date:

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						
The trees' locations are shown on the site plan.													
front													
1	Silver birch *Betula pendula*	M/L	10	4.5	3	3	3.5	270	3.2	33	4	Rooted next to the wall by the left hand (east) gate post and is so close that it must have self seeded. It has pushed the lower part of the wall out and grown round the gate post, so the lower trunk is distorted and there is a kink where it was cut down to a high stump in the past. It grew back, but the trunk leans out and is being damaged where it hits the top of the wall as the tree moves in the wind. There is decay at least 80mm deep in a pruning cut at about 2.5m on the trunk and there is storm damage in the crown. It is declining rapidly, beyond any remedial work and would have to be removed to rebuild the wall, which is becoming a hazard to the road. • *Remove.*	U
2	Plum *Prunus* species	D	6	2.5	3	0	2	500	-	-	2	One sided due to growing under the birch. Was evidently suppressed and is now dead with a clematis growing through it. Will decay and collapse if left. • *Remove.*	U
rear													
3	Himalayan birch *Betula jaquemontii*	Y/N	5	3	3	2	3	30 40 40	0.8	1.9	2	Young tree, probably purpose grown in the nursery as a multiple trunked bushy specimen. Removed as part of the work but makes a minimal contribution outside the garden and can be replaced easily. • *To be removed.*	C

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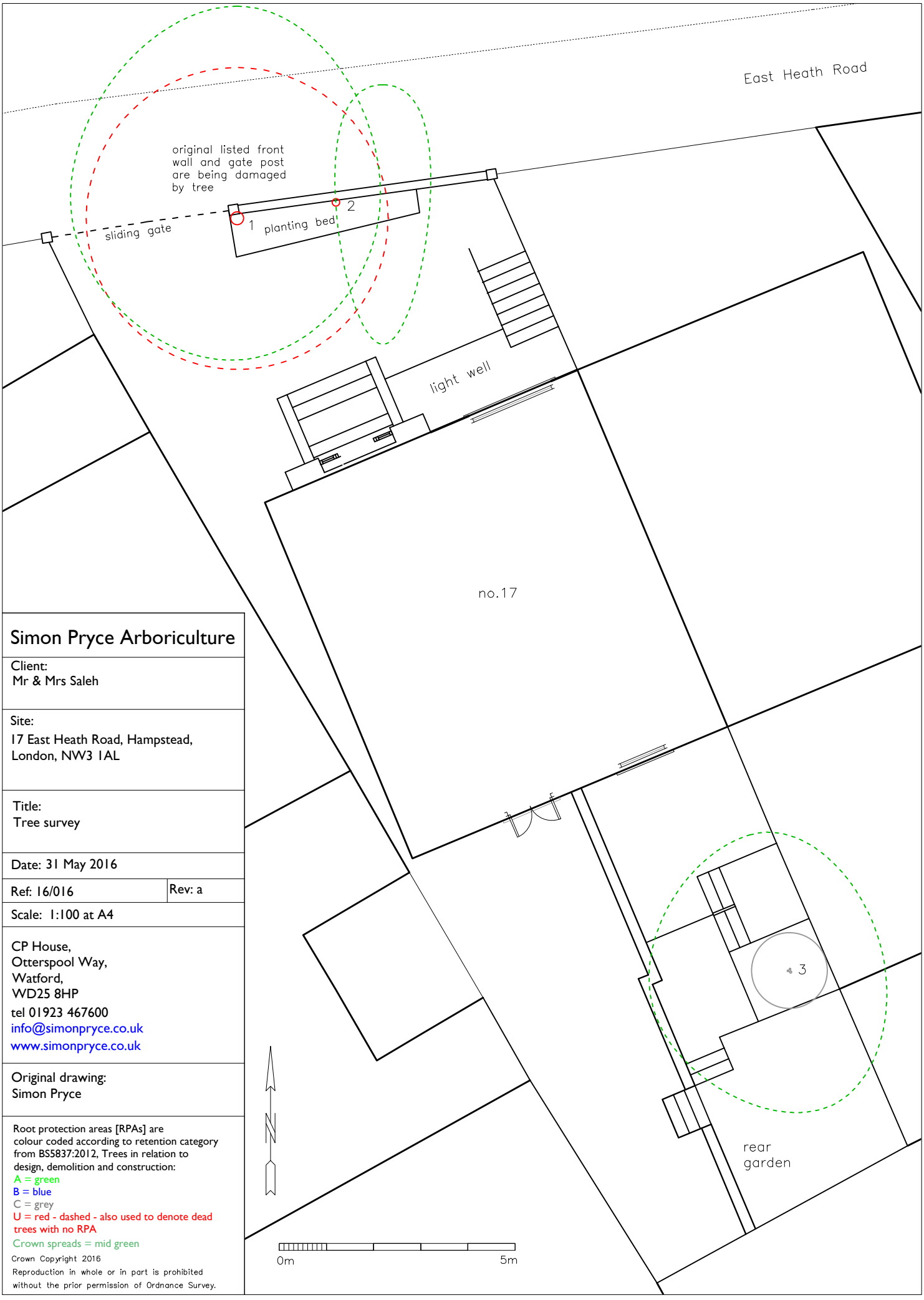
Tree categories – based on BS5837: 2012, Trees in relation to design, demolition and construction - Recommendations

Trees for removal				
Category and definition				**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**



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Title:
Tree survey

Date: 31 May 2016

Ref: 16/016 | Rev: a

Scale: 1:100 at A4

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Original drawing:
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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
Crown spreads = mid green