Simon Pryce Arboriculture

Report

Client:	**Mr & Mrs Eringer**
Site:	**91 Redington Road, Hampstead, London, NW3 7RR**
Subject:	**Trees and conversion of garage**
Inspection date:	**4 November 2019**
Report date:	**6 December 2019**
Reference:	**19/087**
Author:	**Simon Pryce, BSc, FArborA, RCArborA, CBiol, MICFor**

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1 Introduction

1.1 This report has been prepared on instructions from Derek Lofty Associates (DLA) on behalf of Mr & Mrs Eringer of 91 Redington Road, Hampstead, NW3 7RR in connection with the conversion of a garage at the side of the house into a recreation room.

1.2 I have been asked to inspect trees growing nearby and to prepare a report impact assessment and tree protection plan, as set out in British Standard 5837: 2012, Trees in relation to design, demolition and construction. This has been requested by Camden Council and is to be submitted with the application.

Survey method

1.3 This report is based on a site visit and inspection of the trees on 4 November 2019. The inspections were visual and made from ground level within no.91.

1.4 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 plans, based on the original supplied by DLA.

1.5 The attached plans show the site and trees as existing. The proposed layout shows tree protection measures and is the tree protection plan (TPP) specified by BS5837.

2 Background

The site

2.1 Number 91 is on the west side of Redington Road and is a detached house that appears to date from about the early 1900s and has a garage with a glazed roof over the front built onto the right hand (south) side. The garage appears to be a later addition, but is not recent. The site rises from front to the rear with the natural lie of the surrounding land, so the back of the garage is set into the ground and there is a set of steps between walls retaining the ground on side each up from the back door into the rear garden.

2.2 The retaining wall to the south of the steps (left as ascending) extends into the rear garden and forms the side wall of a planting bed next to the side boundary with no.89. The ground slopes, but the surface the bed is between about 1 and 1.5m above the garden. The wall is fairly recent and there are no signs of distortion or cracking, nor any evidence of roots extending beneath it.

2.3 Camden Council's web site shows that the site is in Redington and Frognal Conservation Area, although the trees concerned are a hedge

Proposal

2.4 This is shown on the plans produced by DLA and is to convert the garage into a recreation room. This involves alterations to the roof and the flank wall is rebuilt in brickwork to match the existing house, while the existing front door is retained. At the rear the part next to the house extends slightly farther than the existing garage to near the top of the steps. This part has a glazed roof and the existing steps into the garden are altered to turn right into the house, instead of into the garden.

2.5 This will involve a slight reduction in ground levels between the existing steps and the house, but the new side wall is built on top of the existing retaining wall, so none of the retained ground is disturbed.

Trees

2.6 These are all growing in the planting bed between the retaining wall and the boundary with no.89. They are all Leyland cypresses planted in a row to form a screen between the properties. The branch structures show that they have all been topped in the past and regrowth on the top and the side facing no.89 is trimmed periodically. They are generally in reasonable condition and are an effective screen, although tree 1, at the forward end, has a one sided crown where it has been shaded by the others and is leaning on the back wall of the garage. It would need to be removed in any event, but is too small and suppressed for that to affect the group as a whole.

2.7 Some also have brown patches of foliage caused by Coryneum canker, a fungal foliage disease that affects Leyland cypresses and related conifers. It is slow acting and trees can survive with it for years. There is no effective treatment, but removing dead foliage makes it less disfiguring and probably slows it.

3 Discussion

General comments

3.1 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.

Root protection areas

3.2 British Standard 5837: 2012, Tree in relation to design, demolition and construction – Recommendations, specifies measures to avoid or minimise construction damage to trees. One of these is that root protection areas (RPAs) are established round retained trees and fenced to exclude construction access. No ground work should take place within RPAs without suitable safeguards, such as protecting soft ground against compaction or contamination.

3.3 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. The 12x figure is not based on any research, but is intended to safeguard enough rooting space for the tree's current and future needs, in fact most root systems spread much farther, so the RPA is smaller than the root system as a whole. Where existing site conditions indicate that root spread is asymmetrical the RPA shape should be adjusted to reflect that.

Implications for this proposal

3.4 The RPAs have been shown as circles in order to illustrate the areas concerned, but in practice the brick wall will contain their roots within the planting bed. The only ground level changes within RPA circles are where the steps are altered within the rear of the building, but that is on the far side of the wall, where no roots will be present.

3.5 This is a small scale project and there is no access near the trees for heavy plant or vehicles, so they are not unduly vulnerable to incidental damage either. Although the planting bed is not altered some access will be needed in order to work on the wall. Tree 1 is touching the wall, so would need to be removed in any event, but the others can be safeguarded and work space allowed with some basic fencing and ground protection. The fence shown on the plan has been extended to the rear beyond the RPA circles in order to compensate for the retaining wall restricting spread in other directions.

3.6 Given the small scale of the operation this would not need to be the heavy duty sectional fencing and temporary road plates used on large sites. Pedestrian barrier fencing and heavy duty plywood protecting the ground and boxing in lower trunks would be sufficient here.

Tree protection

3.7 The plan showing the proposed layout illustrates suitable layouts for fencing and other measures and serves as the tree protection plan (TPP) recommended by BS5837:2012. Once the layout is finalised, these can be specified in more detail in an arboricultural method statement.

4 Summary and conclusions

4.1 The cypresses were planted to form a screen and have been topped in the past and the tops and far side have been trimmed periodically since then.

4.2 Some have a fungal foliage disease, but this is slow acting and most are in reasonable condition apart from tree 1, at the forward end, which is suppressed by the others and leaning on the garage wall. It would need to be removed in any event, but that would have little effect on the group as a whole.

4.3 The trees' RPAs have been shown as circles but in practice the retaining wall round the planting bed will restrict root growth, so none will be in the work area.

4.4 This is small scale project, with minimal ground disturbance, none in the trees' actual rooting zones, so they are not vulnerable to direct or indirect damage from the work and can be safeguarded with basic fencing and other measures.

4.5 The attached tree protection plan illustrates suitable protective measures, which can be specified in more detail in a method statement if required.

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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 are described in sequence from the front to the rear, as shown on the plan.													
1	Leyland cypress	Y/L	6	1	1	3	0	130	1.5	2.5	2.5	At the end of the line, severely suppressed by the others and leaning on the back wall of the garage. Would need to be removed whether or not any work was being done but is too small and suppressed for that to affect the rest of the group.	U
2	Leyland cypress	Y/N	10	1.5	2.5	3	0	220	2.7	22	2.5	Also one sided but not as severely suppressed as 1. Has some dead branches caused by Coryneum canker, a fungal disease that affects cypresses. There is no remedy, but it is slow acting and pruning out dead patches improves the appearance of affected trees.	C
3	Leyland cypress	Y/N	10	1.5	2.5	2	2	250	3.0	29	3	Reasonably healthy but slightly one sided.	C
4	Leyland cypress	Y/L	10	1.5	2.5	2	2	270	3.2	33	3	Has large areas of dead foliage.	C
5	Leyland cypress	Y/N	10	2.5	1.5	1.5	1	180	2.2	15	4	Slightly sparse foliage and has some canker but is in fair otherwise.	C
6	Leyland cypress	Y/N	10	2	2	1	3	170	2.1	14	5	One sided due to the large gap between it and the next tree. Top growth is sparse and unhealthy.	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.
Veteran	[V]	Old tree with characteristic features including hollow trunk, old wounds etc. that give high landscape, ecological and cultural value.
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**