Simon Pryce Arboriculture

Report

Client:	**Kernahans Property Specialists, England Lane, London, NW3**
Site:	**Antrim mansions, Antrim Road, London, NW3**
Subject:	**Tree survey**
Inspection date:	**1 August 2012**
Report date:	**13 August 2012**
Reference:	**12/053**
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 fax 01923 396557
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 Kernahans Property Specialists, the managing agents of Antrim Mansions.

1.2 I have been asked to inspect trees growing in the grounds, assess their condition and specify any necessary or appropriate work. Main concerns are:

1. Possible effects on the buildings, mainly subsidence.
2. The health and structural safety of the trees concerned.

1.3 The site was visited and the trees inspected on 1 August 2012. The inspections were visual and made from ground level. Some trees are in adjacent gardens and were inspected as closely as reasonably possible either from within the site boundary or from the road.

1.4 This case is appraised and discussed below and a schedule of individual trees is appended, with recommendations for work where necessary or appropriate and a category system indicating the urgency. The trees are shown on the plan, those within the ground being colour coded according to urgency.

2 Background

Buildings

2.1 Antrim Mansions dates from about the early 20th Century and consists of thirteen three storey blocks, nine on the SW side of Antrim Road and four on the NE. The buildings are well maintained and there are no signs or reports of subsidence or related foundation problems, although one of the reasons for preparing this report is to assess any risk of it.

2.2 The foundation depths are unknown, but the blocks do not have basements so, in buildings of this age, they are unlikely to be very deep by current standards, probably under 1m.

Soil conditions

2.3 The online 1:50,000 scale British Geological Survey [BGS] shows the local subsoil as London clay. This typically has a high potential for shrinkage and swelling with changes in moisture content [Plasticity Indices of 40% or higher].

Restrictions

2.4 The local planning authority is the London Borough of Camden. The grounds are in a designated conservation area and the poplar is protected by a tree preservation order [TPOs].

3 Observations - trees

3.1 The site contains a mixture of trees, most of them mature, including a sycamore, black poplar and several horse chestnuts in the grounds on the SW side, with a mature sycamore, Leyland cypress and younger ash trees on the NE side. Most are in reasonable condition, although the poplar has some evidence of decay in the trunk and some of the chestnuts have decay cavities.

3.2 Some trees just beyond the boundaries in adjacent grounds have also been recorded. Apart from an ash in the garden of Epworth, on the NE side of the road, which is damaging the side boundary wall, most of these do not appear to be causing any major problems, although in a few places it would be advisable to cut back overhanging growth to clear outbuildings.

4 General comments

4.1 Tree roots grow with little force but can damage buildings and other heavy structures indirectly if the sub soil is a clay that shrinks as it is dried by the roots extracting water and the foundations do not extend below the zone affected. This form of damage is quite common in London and south east England but occurs only on shrinkable clay sub soils. However many factors are involved, including the weather, and there are many cases where trees do not damage buildings, despite shrinkable clay being present.

4.2 Actively growing trees can also cause a persistent moisture deficit at depth where the soil does not rehydrate fully in winter. If such trees die or are removed the consequent rehydration and swelling can lead to heave damage in buildings nearby, especially if they were built after the moisture deficit established. This movement can take a considerable time if the desiccation is deep and severe.

4.3 The size, age and vigour of an individual tree will all influence its drying effect on the soil, but there is also considerable variation between species. Poplars are naturally well adapted for growth on clay, having deep, wide spreading roots and a strong ability to extract water. As a result they are more commonly associated with subsidence than many other species. Most of the other species here are regarded as moderate water demanders but grow well in urban conditions and on clay sub soils so are quite commonly associated with subsidence in nearby buildings. Coniferous species normally have lower water demands than most broadleaved trees, but the root systems are typically more compact, so the drying effect at close range can be intense and cypresses are frequently associated with subsidence as they are common in gardens and are often allowed to grow large close to buildings. Large shrubs and climbing plants can also cause significant soil drying and are frequently planted near buildings.

4.4 Pruning will reduce water uptake, but most healthy trees respond by sprouting and their water demand increases in proportion with the new growth, which is often vigorous. This needs to be recut regularly in order to maintain control, which is not always effective with large vigorous trees close to buildings. In some species, such as poplars, the large wounds created by this kind of work decay and, as the new branches are vigorous but weakly attached, this creates an additional need to cut the tree back regularly for safety. Removing trees will eliminate any threat associated with them, provided there is not a potential for heave. It is sometimes possible to replace trees with other species that present a reduced risk without the need for intensive maintenance.

5 Discussion

Subsidence and other building damage

5.1 The local subsoil is London clay, which creates a potential for subsidence in buildings. There are no signs or reports of problems to date, although the man blocks are within possible or likely root range of some trees, particularly no.1, a sycamore and no.2 a black poplar. However both have been reduced, the sycamore probably to clear the nearest block and neighbouring building, the poplar possibly to lessen subsidence risk. In both cases the new growth needs to be recut and maintaining the trees in that way will lessen any subsidence risk. The other large trees, such as the horse chestnuts are generally farther from the main blocks and, although the possibility of them affecting these buildings cannot be dismissed entirely, the increased distance makes the risk much lower than with trees 1 and 2.

5.2 Some trees are very close to the single storey store buildings, most of which are near the rear boundaries on each side of the road. However there are no obvious signs of problems in any of these buildings and any movement here would be far less critical than in the residential blocks. Therefore major tree pruning or removal would be difficult to justify simply as a precaution, particularly where the trees belong to third parties, although some light pruning of low branch ends to clear the roofs is perfectly reasonable.

5.3 The potential for heave could be investigated further if required, but the buildings pre date all the trees, which indicates that any tree removals are unlikely to cause problems.

5.4 The ash in the garden of Epworth, tree 13, is pushing the boundary wall over, but is sound and healthy in itself. The wall will need to be rebuilt and there are options for doing that whilst retaining the tree, i.e. bridging foundations over the roots and leaving a gap to accommodate the trunk. The Leyland cypress, tree 20, has not caused any visible major movement to date, but would be harder to work round, as the boundary there is a retaining wall with the ground being about 1m lower on the far side.

Safety

5.5 The black poplar, tree 2, has evidence of decay in the lower trunk and it would be advisable to assess this further by test boring before any major work is done on it. It is also likely to have decay in the pollard points so, if it is retained it is important that it is recut regularly.

5.6 Most of the horse chestnuts have wounds or decay cavities and the trees on the edges of the groups have long, end weighted branches which, in this species, are susceptible to being shed. The cavity in tree 7 should be inspected by climbing to make a more detailed assessment. There is no evidence of any major immediate hazards with these trees but light to moderate crown reductions specified will reduce end loading on the longer limbs and the overall loads on the decayed areas.

5.7 Tree 19, an ash, has clearly visible decay in the trunk and one of the main roots and is beyond any practical remedial measures.

Tree work

5.8 Any treework should be carried out in accordance with BS 3998: 2010, Recommendations for Treework, and any other relevant standards. It is essential that the contractor doing the work has appropriate third party and public liability insurance. The Arboricultural Association has a list of approved contractors, published in the Tree Services section of their web site at www.trees.org.uk or they can be contacted on 01242 522152.

5.9 Where any trees or other woody plants are removed it is advisable to remove the stumps and main roots, if possible, in order to avoid colonisation by honey fungus [*Armillaria* sp.]. This can spread and infect other vegetation nearby, either killing plants or decaying structural roots and making them unstable.

Restrictions

5.10 As the site is in a Conservation Area, Camden Council must be given six weeks notice of any proposed felling or pruning of trees over 75mm diameter at 1.5m. They can allow this either by confirming in writing that they do not object or by letting the six weeks elapse without making a tree preservation order [TPO], which is the only way they can prevent work of which they do not approve. In this case or if trees are already protected, such as the poplar, it is necessary to make a formal application for the work. Hedges, shrubs and climbing plants are outside the scope of this legislation.

5.11 Most of the work recommended for third party trees is trimming overhanging growth and, provided it is not cut back beyond the boundary, the owners' agreement is not needed. This is not exempt from statutory planning restrictions, so consent would be needed for work on any trees.

Simon Pryce

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

Tree no.	Species	Distance	Height	Trunk dia.	Est. age	Comments and recommendations	Cat
The trees are described in order, starting behind Block 1 - 7 on the SW side of the road then gong round the grounds clockwise. Asterisks in the first column denote trees in other ownership, with house numbers in brackets or [c] denoting council owned trees. m/s = multiple stemmed.							
SW side							
1	Sycamore	3m	18m	700mm	90+	Root growth slightly distorted by the nearby walls but is sound and healthy looking. Has been reduced in the past and regrown vigorously. There are no signs or reports of subsidence, but it is starting to encroach on the nearest block and the adjacent building to the rear. • *Reduce back to former pruning points every 2 - 3 years.*	3
2	Black poplar	7m	15m	1.2m	90+	Has been pollarded and regrown vigorously and heavily covered in ivy. Higher subsidence threat than any other trees, although there are no signs of it nearby. There is likely to be decay in the pollard points and parts of the lower trunk sound hollow, consistent with decay there was well. Due to be repollarded, which would reduce any immediate failure risk, although it would be worth checking the condition of the lower trunk first. • *Test bore base to assess decay.* • *If base is sound check old pruning points for decay before repollarding. If this is not excessive and the tree can be retained repollard and repeat every 2 - 3 years. Cut ivy to facilitate inspection in future.*	1
3 *	Various	10 - 12m	4 - 7m	m/s	20+	In adjacent rear garden 10b Elizabeth Mews. Mixture of hazel with some sycamore and horse chestnut saplings. Not a significant threat to the main building but side growth is encroaching on the roof of the row of stores. • *Trim lower growth to clear roof.*	4
4	Black poplar stump	10m	2.5m	1.1m	90+	Recently felled due to decay. Not an imminent problem, but is sprouting vigorously. • *Cut back regrowth every 3 - 4 years.*	3
5	Ash	12m	15m	430mm	50+	Leans heavily towards the buildings, but this is evidently long standing and it is sound and healthy apart from some large dead lower branches. • *Remove dead branches*	3

Tree no.	Species	Distance	Height	Trunk dia.	Est. age	Comments and recommendations	Cat
The next six Horse chestnuts form two groups of three and might be remnants of a longer line. If so the others must be long gone, as the trees at the ends of each group have spread laterally and are one sided, although the groups as a whole are reasonably symmetrical. Some trees have cavities and other signs of decay. The end trees have developed long, end weighted side limbs that are susceptible to being shed. Moderate crown reduction, treating each group as a unit, will lessen the risk of failure. The subsidence risk to the main blocks is not high, but pruning will also reduce that. The trees have moderate infestations of leaf miner moth *Cameraria ohridella,* a relatively recent pest that originated in SE Europe. The brown blotches on the leaves are unsightly and they are often shed early, but healthy trees seem to tolerate it reasonably well so far. The moth spends the winter in the fallen leaves, so an effective way to control it is to collect and compost or burn them each autumn.							
6	Horse chestnut	13.5m	15m	640mm	90+	Has a scar on the lower trunk and has been topped at about 8m in the past, but has no signs of major decay. One sided due to growing at the end of the row and some of the limbs are heavily end weighted. • *Reduce crown spread by 3 - 4m, reshape and trim new growth every 2 - 3 years.*	2
7	Horse chestnut	15m	21m	860mm	90+	Taller due to growing between the other two, also topped in the past and grown on. Has a decay cavity at about 6m. • *Climb and check cavity. Unless that is very severely decayed reduce height by 3 - 4m, reshape and trim new growth every 2 - 3 years. If the decay is severe heavier reduction or felling might be warranted, together with heavier reduction of the two each side to allow for increased exposure.*	2
8	Horse chestnut	14m	16m	670mm	90+	Also topped in the past, one sided due to growing on the end of the row, like no.7 it also has some end weighted lateral branches. • *Reduce crown spread by 3 - 4m, reshape and trim new growth every 2 - 3 years.*	2
9	Horse chestnut	16m	19m	640mm	90+	On the edge of the group, although it is not quite as one sided as some of the others, has a minor decay cavity at about 1.8m. • *Reduce height and spread by 3 - 4m, reshape and trim new growth every 2 - 3 years.*	2
10	Horse chestnut	16m	19m	450mm	90+	Drawn up due to growing between the other two, has a cavity in the lower trunk, but decay does not seem extensive. • *Reduce crown height by 3 - 4m, reshape and trim new growth every 2 - 3 years.*	2
11	Horse chestnut	17m	19m	800mm	90+	Larger than the others and is the dominant member of the group. Has a wound on the lower trunk and some signs of root damage, but appears reasonably healthy. • *Reduce crown height and spread by 3 - 4m, reshape and trim new growth every 2 - 3 years.*	2

Tree no.	Species	Distance	Height	Trunk dia.	Est. age	Comments and recommendations	Cat
12	Purple Norway maple	9m	5m	100mm	10+	Healthy young tree, will grow larger, but is not a major subsidence threat. • *No work needed beyond normal maintenance.*	4
Just beyond the side boundary is a middle aged holly growing next to the wall. However the wall looks new and is a very robust structure with a large exposed concrete footing, so the likelihood of the tree causing problems is remote.							
NE side							
13 *	Ash	10m	15m	600mm	80+	In the rear garden of Epworth. Healthy and not in need of attention, but is severely damaging the boundary wall, which looks unstable. I gather that this is the subject of an insurance claim. • *Tree does not need attention, foundations of a new wall would need to be built round or over the roots.*	4
14	Ash	15m	10m	250mm	20+	Healthy young tree in good condition. Has a wood screw embedded in the trunk which is not harming the tree greatly, but could be a hazard. • *Remove screw or cut off flush.*	4
15 *	Various	18m	18m	450 - 600mm	80+	Row comprising a tree of heaven at the NW end and three limes. Not a threat to the main blocks, but low branches are starting to encroach on the store. • *Lightly trim lower branch ends on this side to clear the store.*	4
16	Sycamore	10m	17m	730mm	80+	Large healthy specimen, twin trunked from about 2.5m, but the junction between the limbs is sound looking. Dense crown creates some shade in this part of the garden, but it is a reasonable distance from the building. Shade could be reduced by suitable pruning, but that is not urgent. • *Remove lower branches to lift crown edge by about 2m and thin by 10 - 15% to admit more light.*	4
17	Hazel & elder	8 - 10m	4 - 5m	m/s	40+	Dense group of shrubs growing on a mound, possibly an old air raid shelter. Not a significant threat to the building or safety hazard, but will spread if left unattended. • *Trim edge growth to keep the group to about its current extent.*	4
18 *	4 no. London planes	17m	14 - 20m	500 - 800mm	90+	In the grounds of Waltham Court. Row of trees that have recently been topped to varying heights and are regrowing. Interplanted with younger deodar cedars, possibly to provide low screening. Close to one of the store buildings, but lower branches are well clear and not a significant threat to the main block at this distance. • *No work needed beyond normal maintenance.*	4

Tree no.	Species	Distance	Height	Trunk dia.	Est. age	Comments and recommendations	Cat
19	Ash	9.5m	15m	290mm	30+	Foliage has some insect damage, but is reasonably healthy, the trunk leans and has a very long deep wound with extensive decay which extends into a main root. Safe life is limited and the tree is beyond any practical remedy. • *Fell.*	1
20	Leyland cypress	4m	15m	420mm	20+	Healthy specimen. Does not appear to have caused any damage to date, but is close to the flank wall of the block, the trunk is touching the boundary wall and it will grow much larger if left. Would not tolerate more than very light pruning. • *Not an immediate threat, but not suitable for long term retention.*	3

Simon Pryce

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

Category [Cat.]

This is intended to give a general indication of the urgency with which trees need attention, but should be used with the more detailed observations and comments. Colours relate to drawings where applicable.

1	Trees needing urgent attention in the interests of safety [0 - 3 months].	Red.
2	Trees needing attention without undue delay [3 - 12 months].	Magenta.
3	Trees that can be retained safely with a moderate amount of work or reassessment in the near future [12 - 24 months].	Blue.
4	Trees needing little or no work in the foreseeable future to keep them safe [24 - 36 months].	Green.

Terms used in the survey relate to British Standard 3998: 2010, Recommendations for treework unless otherwise stated.

Observations are made from ground level unless stated otherwise.