

## Dike, Darlene

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**From:** Maurice Whitby [REDACTED]  
**Sent:** 20 February 2015 18:21  
**To:** Planning  
**Cc:** Remington, James  
**Subject:** Comment (objection) on planning application 2015/0131/T  
**Attachments:** pryce.pdf

This comment is an OBJECTION to planning application 2015/0131/T.

We wish to be notified of the date of the committee meeting. We wish to be able to speak.

Maurice and Sevin Whitby

13 Shirlock Road, NW3 2HR



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Although this is an application to fell a tree on our property (in a conservation area), it is (unusually?) not made by us but by agents for our neighbours. The intention is that we should be enabled to fell a tree claimed to be implicated in subsidence at their property. This is disputed.

I attach a report on the strawberry tree (*Arbutus unedo*) in question and the claim for subsidence damage, made by a very experienced arboricultural consultant, Richard Pryce, who serves on the panel advising the LTOA on their Risk Management Protocol. I shall leave to experts his very technical discussion of soil conditions 2.6-2.7, 4.1-4.4), which suggest less danger from soil shrinkage than claimed by the agents for no. 11. Among his conclusions (p.7) are: "None of the available evidence implicates the strawberry tree or indicates that it presents a risk sufficient to warrant major work," and "The tree has sufficient public amenity value to justify making a TPO."

The details of the damage are apparently not in any document supplied to the Planning Committee, but are given (very briefly) in one supplied to us by the neighbours' agents (Preliminary Specialist Investigation Report on Crack Damage'). This states (p.2) simply that it is category 2 in the BRE Digest 251 classification. No claim is made that it has been monitored over time to see if the damage is progressive. BRE Global Ltd, who own the scale (which goes from 0 to 5), give this guidance on their website: "Categories 0, 1 and 2 with crack widths up to 5 mm can be regarded as "aesthetic" issues that require only redecoration."

The case for implicating the arbutus is wholly contained in these words on p.2 of 'Tree Report' among the related documents supplied to the Planning Committee: "There is currently no positive root Identification to implicate T4 (Strawberry Tree), however based on our assessment on site we consider that the footings of the subject property fall within the anticipated rooting zone of this Vegetation." This is to ignore the specific nature of the *Arbutus unedo*, a lack of focus shown by the inclusion of shrubs like *cleagnus* and *hydrangea* as presenting a possible danger. Before planting this tree, more than twenty years ago, we took expert advice on trees which could be safely planted 2m from our front bay. The list included *Arbutus unedo*, *Albizia julibrissin* and *Halesia carolina*. It was explained to us that the *Arbutus* had very dense wood with little water requirement, and with maturity developed a deep taproot which stored water in the wet season to draw on in the dry season. This was good advice: it has given no trouble in all this time. (The bay at no.11 is some 5.5m distant.) Simon Pryce points out (4.8) that this tree [like, I believe others of the *Ericaceae* family] is not in any list of safe planting distances: it is safe to assume this is because it is irrelevant. He adds that in his very extensive case records there is no record of a strawberry tree implicated in subsidence.

The neighbours' agents ('Tree Report' p.2) answer their own question "Will implementation of the management recommendations [sc.to destroy the tree] result in significant amenity loss" with "No". This is a fine mature specimen of a beautiful and unusual tree, the only tree of significant merit in the street. Camden are rightly proud of the fine example in Waterlow Park. It produces decorative strawberry like fruit with the peculiarity that they are simultaneously present with the flowers: they nourish both birds and bees. It has a decorative bark. As a broadleaf evergreen it is particularly valuable in the winter. Being in the front garden it has a public value. Passers by often stop to admire it, and sometimes have even knocked at the door to ask what it is.

If permission is granted to fell it, it would be a dead letter, since for the reasons stated we have no intention of availing ourselves of such permission. However, to protect it for the future we follow Simon Pryce in suggesting that it be made subject to a TPO, as has been done for the silver birch in our back garden..

## **Simon Pryce Arboriculture**

### **Report**

**Client:** Mr & Mrs Whitby

**Site:** 11 and 13 Shirlock Road, London, NW3 2HR

**Subject:** Strawberry tree at no.13 and claim for subsidence damage at no.11

**Inspection date:** 9 February 105

**Report date:** 18 February 2015

**Reference:** 14/143

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

CP House, Otterspool Way, Watford, Herts, WD25 8HP



## **I Introduction**

- I.1 This report has been prepared on the instructions of Mr & Mrs Whitby of 13 Shirlock Road, London, NW3 2HR in connection with a claim that a strawberry tree (*Arbutus unedo*) growing in their front garden is implicated in subsidence in the front bay of no.11 Shirlock Road.
- I.2 I have been asked to review the technical evidence provided by the claims handlers, inspect the tree and provide my opinion on whether or not it is implicated and what, if any, measures might be necessary or appropriate.

### **Sources of information**

- I.3 This report is based on a site visit and inspection of the strawberry tree and some of the other vegetation concerned, made on the morning of 9 February 2015.
- I.4 I have also reviewed the technical evidence listed below, sent to Mr & Mrs Whitby by Innovation Group, the claim handlers acting for Hiscox Insurance, who provide buildings cover for no.11.
  - 1. Fastrack Geotechnical report dated October 2014, includes soil tests, root identification and drain survey.
  - 2. Preliminary report on damage dated 28 November 2014 by GAB Robins
  - 3. Innovation Group arboricultural report dated 24 December 2014, includes a site plan and schedule of vegetation and summarises the content of other technical reports.
  - 4. Letter from Innovation Group to Mr & Mrs Whitby, dated 29 December 2014 asking them to remove the strawberry tree in their front garden.
  - 5. Acknowledgement from Mr & Mrs Whitby, 4 January 2015 and more detailed response of 14 January 2015.
- I.5 I have also checked the online British Geological Survey (BGS) map of the area.
- I.6 This case is appraised and discussed below. Left and right are used as if facing the houses from the street in front, unless noted otherwise.

## **2 Background**

### **Site**

- 2.1 Number 13 Shirlock Road is a three storey late Victorian house with a two storey bay on the left hand side of the front elevation and a recessed porch to the right. Between the left hand flank wall and the side boundary with no.11 is a path leading to the rear garden. No.11 is to the left and is a mirror image of 13, having its bay on the right hand side. Both houses have basements under the front halls that were formerly coal cellars.
- 2.2 The 1:50,000 scale online British Geological Survey shows that the local subsoil is London clay and available records for the nearest bore holes, which are about 300m away to the east and west, confirm that this is at least 15m deep. This is the upper part of the London clay formation which gives way to a mix of sand and gravel on the higher ground to the north, much of which is under Hampstead Heath.

### Damage

- 2.3 The report for GAB Robins describes no.11 as dating from 1881 and notes the damage as cracking in the front bay. The damage is not described in any detail except that it is Category 2 in the BRE Digest 251 classification, which is used for cracks up to 2mm wide. The scale goes from 0 - 5 and the Digest comments that 0 - 2 are taken to represent 'aesthetic' damage, 3 - 4 'serviceability' damage, while category 5 is 'stability' damage.
- 2.4 This report mentions that Environmental Services have been appointed and that repairs can be carried out once the trees have been managed and the property is stable, but there is no mention of monitoring levels or crack widths.

### Foundations

- 2.5 Fastrack dug a single trial pit (TP) to the right of the front bay of no.11, revealing brick corbelled foundations. The details of the house and the bay foundations were different, but both had an overall depth of 430mm, which is typical of houses of this type and age.

### Soil conditions

- 2.6 There was made ground around the foundations, but the underlying subsoil is a mid brown clay described as being very stiff. A bore hole (BH) sunk from the base of the trial pit showed that this extends down to at least 1.4m, where it terminated on gravel, which could not be penetrated. Samples of the clay from 0.43m and 1m had plasticity indices of 27 and 23% respectively. This is in the lower part of the moderate shrinkage potential category defined by the NHBC (20 - 40%) and is low for London clay, which typically has plasticity indices over 40%.
- 2.7 Sample moisture contents were relatively low, although both samples contained significant amounts of granular material which is discussed in more detail below. The clay is described as very stiff and a note on the log for TPI refers to  $V=140+Kpa$ . This indicates that a sample tested on site with a shear vane, which measures shear strength i.e. stiffness, was off the scale of the instrument at 140kilopascals.

### Roots

- 2.8 The trial pit and bore hole logs do not mention roots, but samples found just under the footing at 0.43m and in the bore hole at 1m were identified as below.

depth [m]	species	dia.	starch
0.43m	Pomoideae family	<0.5mm	yes
1.0m	Pomoideae family	1.5mm	yes

- 2.9 The Pomoideae are a large botanical family that includes whitebeam, apple, pear, cotoneaster and pyracantha. The presence of starch indicates that the root was alive at the time or had been until shortly before being collected.

### Drains

- 2.10 The drains run from the rear of the house to exit under the front path; they were surveyed by CCTV and found to be sound with no significant defects.

### Arboricultural report

- 2.11 The arboricultural report prepared by Innovation Group lists the trees and shrubs near no.11 in a schedule and shows their locations on a site plan based on an Ordnance Survey base plan. I have not inspected all the vegetation concerned, but the descriptions and plan appear reasonably accurate. The report recommends removing a Camden Council owned whitebeam (listed as *Sorbus*, the scientific name) and the strawberry tree growing in front of no.13. These are the only items in a table headed Current Claim Requirements. Various works to the other vegetation are listed in a table headed Future Risk Recommendations and the advice with all of these is not to allow them to exceed their current dimensions.

### 3 Trees

#### Strawberry tree (*Arbutus unedo*)

- 3.1 This is a well-established specimen growing in the front garden of no.13 just behind the front wall near the front left hand corner. Measured with a laser rangefinder it is 4.2m from the front corner of no.11 and 5.4m from the bay. It is about 9m high and has a single trunk about 250mm diameter. The first main branches start at about 2.5m and the crown is rounded with radial spreads of 2 - 3m. It has been cut back in the past on the left hand side where it faces no.11, otherwise there are no signs of any pruning.
- 3.2 The foliage is of normal density and healthy looking. It is capable of some more growth, but is mature, so that will be slow.

#### Whitebeam (*Sorbus aria*)

- 3.3 This is a street tree growing almost directly in front of no.11, about 5.9m from the front wall and 5.7m from the bay. It is about 8m high with a single trunk 240mm diameter. It has an upright branched crown and has been reduced lightly at least once and regrown. The new growth forming the upper part of the crown is dense, indicating good vigour and vitality.

### 4 Discussion

#### Soil conditions

- 4.1 Tree roots grow with little force, but when active they can cause significant soil drying. Most clay soils shrink when dried and swell as they rehydrate, so the combination of this and the effects of roots can cause movement in nearby buildings if their foundations do not extend below the affected zone. The local subsoil here is London clay which creates a potential for subsidence, but samples contained gravel, probably due to being in the upper part of the formation. Sand and gravel will affect the behaviour of the clay by reducing the overall shrinkage potential and by making it more permeable and quicker to rehydrate.
- 4.2 The gravel content can be allowed for when testing by sieving out the material over 425µ (microns) across, so that only the clay fraction of the soil is tested, following which the results can be adjusted accordingly to give a picture of the properties of the soil as a whole. The Fastrack report does that for the moisture contents and shows the corrected figures as well as the initial test results. However it does not do it with the plasticity indices, which would be reduced to 23 and 16%, corresponding to low medium and low shrinkage potential respectively. This is shown in the table below.

Depth	Liquid limit	Plastic limit	%passing 425µ	Plasticity index (PI)	Modified PI	Moisture content (MC)	Modified MC	MC/LL	Liquidity index
0.43	52.0%	25.0%	85.5	27.0%	23.1%	21.1%	24.7%	0.41	-0.14
1.00	46.0%	23.0%	69.4	23.0%	16.0%	18.6%	26.8%	0.40	-0.19

- 4.3 Some of the tests indicate whether the soil is desiccated, i.e. drier than would be anticipated under normal equilibrium conditions, for instance if it has been dried by roots. One test is whether the moisture content is less than 40% of the liquid limit, i.e. the figure under MC/LL in the table above is less than 0.4. In both samples here that is marginal, but the test applies mainly to soils with high shrinkage potential so that alone is not reliable here. However the soil samples are described as very stiff, which is consistent with desiccation, as is the fact that liquidity indices of both samples are negative.
- 4.4 In summary these results shows that the subsoil is shrinkable, but the presence of gravel makes the shrinkage potential significantly lower than is typical for London clay. There is still a potential for subsidence caused by vegetation, but it is lower than might be expected from the geological survey.

#### **Damage**

- 4.5 Vegetation related subsidence usually starts during dry summers; last summer was not particularly dry, which does not necessarily preclude subsidence although it does make it less likely. It normally shows a seasonal cycle, with downward movement in summer followed by recovery over winter when the weather is cooler and wetter and the vegetation inactive. As a result monitoring cracks or level changes is a particularly useful diagnostic technique because a seasonal cycle of movement, with recovery in winter, tends to eliminate other possible causes. It appears from the GAB Robins preliminary report that the building is to be monitored, but that has not been confirmed. Therefore the available evidence is consistent with vegetation related subsidence in no.11, but is not conclusive.

#### **Effect of the trees concerned**

- 4.6 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. The most widely used category system is in the NHBC guide for building near trees, NHBC Standards, Chapter 4.2 <sup>(1)</sup>, which lists trees as high, medium or low water demanders.

#### ***Whitebeam***

- 4.7 Whitebeams are listed as moderate, but are regarded as being at the upper end of the category. Many are grafted onto root stocks of hawthorn, which is a high water demander, although it is not clear what effect that might have on the tree as a whole. However a more recent work by Dr P G Biddle <sup>(2)</sup> uses a numerical scale from 3 - 8 for water demand and lists whitebeams as 7, together with hawthorn, willow and elm, all of which are recognised high water demanding species.

#### ***Strawberry tree***

- 4.8 Strawberry trees are unusual, but not particularly rare in gardens. However they are not listed at all by the NHBC, neither are they mentioned in Dr Biddle's book or one of the other authoritative works on the subject, *Tree Roots and Buildings* by D Cutler and I Richardson <sup>(3)</sup>. I have been keeping records of my own cases since 1996, which now has over 2,500 entries, none of them for strawberry trees. Therefore there is no firm evidence about the soil drying effect of strawberry trees, but that in itself, indicates that they have a low soil drying effect, certainly far less than whitebeams.

#### **Tree work**

- 4.9 Removing trees eliminates any influence they might be having on nearby buildings and also removes any question of them affecting the buildings in the future. Pruning to reduce leaf area reduces water uptake, although most healthy trees respond by sprouting, so new growth needs to be recut in order to maintain any benefit. The small roots that absorb water die each winter, new ones develop in spring and grow according to the tree's needs so, provided the top growth is recut regularly to contain the crown, the extent and water uptake of the root system also reduces over the long term. This is the rationale behind the regular pruning of street trees adopted by Camden and some other councils.
- 4.10 The only identified roots here were from the whitebeam, which is the only member of the Pomoideae in the vicinity so, if the damage is due to soil shrinkage, it might have caused or contributed to it. As suggested above monitoring would give a more conclusive indication of whether the whitebeam roots have affected the house, but consideration of that and what the course of action with that should be is a matter for Camden.
- 4.11 No roots were identified as being from the strawberry tree at no.13 and none of the other evidence indicates that it has had any influence on no.11, or that it present a risk sufficient to warrant major work. Clearly felling it would eliminate any question of it causing problems, but would be disproportionate in the circumstances. Strawberry trees stand moderate pruning and trimming the upper and outer growth lightly would reduce the tree's water uptake to some degree, although there is no evidence of a compelling need for that.

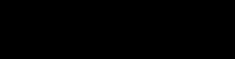
#### **Restrictions**

- 4.12 The houses are in Mansfield Conservation Area, so Camden must be given six weeks notice of any proposed tree work. They can allow that 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.
- 4.13 Where protected trees are alleged to be causing damage the conservation area notice or TPO application must be accompanied by technical evidence proving that the work is necessary in order to alleviate the problem. The evidence here does not implicate the strawberry tree and it is a healthy, prominent specimen that makes a significant contribution to the street scene and the character and amenity of the conservation area, particularly during the winter, so Camden would be justified in making a TPO on it.



## 5 Summary and conclusions

- 5.1 The local subsoil is London clay which creates a potential for subsidence, although the site investigation shows that it has a significant gravel content, which reduces its shrinkage potential and will aid rehydration.
- 5.2 The supplied technical evidence is consistent with the damage at no.2 being vegetation related subsidence but, in the absence of monitoring readings, it is not conclusive.
- 5.3 The only identified roots were from the whitebeam in the street, which is a species recognised as having a high water demand, giving it a much higher propensity to cause this kind of problem than the strawberry tree. The absence of published information about strawberry trees indicates that they are a low water demanding species.
- 5.4 None of the available evidence implicates the strawberry tree or indicates that it presents a risk sufficient to warrant major work. Felling would eliminate any question of it causing problems, but would be disproportionate. Light trimming would reduce its water uptake, but there is no evidence of a compelling need for that.
- 5.5 As the tree is in a conservation area Camden Council would need to be given six weeks notice of any proposed work supported by evidence that it is necessary in order to alleviate the problem. The current evidence does not do that and the tree has sufficient public amenity value to justify making a TPO.



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

## References

1. National House Building Council [2006] NHBC Standards Chapter 4.2, Building Near Trees
2. Biddle PG (1998) Tree root damage to buildings, Willowmead publishing ISBN 0 9533086 0 X
3. Cutler D and Richardson I [1989] Tree Roots and Buildings [Longman Scientific & Technical]

Extract from P.G.Biddle (ref 2 above)

Species factor					
8	7	6	5	4	3
<b>Broad-leaved genera</b> <i>Eucalyptus</i> <i>Populus</i> <i>Quercus</i>	<i>Crataegus</i> <i>Salix</i> <i>Sorbus aria</i> <i>Ulmus</i>	<i>Aesculus</i> <i>Fraxinus</i> <i>Platanus</i> <i>Tilia</i>	<i>Acer</i> <i>Castanea</i> <i>Fagus</i> <i>Malus</i> <i>Prunus</i> <i>Pyrus</i> <i>Robinia</i> <i>Sorbus aucuparia</i>	<i>Ailanthus</i> <i>Alnus</i> <i>Betula</i> <i>Carpinus</i> <i>Gledisia</i> <i>Ilex</i> <i>Juglans</i> <i>Laburnum</i>	<i>Catalpa</i> <i>Corylus</i> <i>Ficus</i> <i>Liquidambar</i> <i>Liriodendron</i> <i>Magnolia</i> <i>Morus</i> <i>Sambucus</i>
<b>Coniferous genera</b> <i>Cupressus</i>	<i>Chamaecyparis</i> <i>X Cupressocyparis</i>	<i>Sequoiadendron</i>	<i>Cedrus</i> <i>Thuja</i>	<i>Juniperus</i> <i>Taxus</i> <i>Tsuga</i>	<i>Abies</i> <i>Araucaria</i> <i>Ginkgo</i> <i>Larix</i> <i>Picea</i> <i>Pinus</i>
<b>Shrubs</b>			<i>Cotoneaster</i> <i>Pyracantha</i>	Other <i>Rosaceae</i>	All other shrubs

Figure 18.8

Allocation of scores for species factor.

Whitebeam is *Sorbus aria*, Strawberry tree (*Arbutus*) does not appear

**Dike, Darlene**

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**From:** Oliver Beardon [REDACTED]  
**Sent:** 21 February 2015 12:59  
**To:** Planning  
**Subject:** Planning Application 2015/0131/T

Dear Camden Planning Dept,

RE: Application to fell the strawberry tree in the front garden of 13 Shirlock Road

I am writing to express my concern about the above application to remove protection to a very fine tree in Shirlock Road. The strawberry tree is a very rare variety and this particularly fine example makes a significant contribution to the urban landscape of the Mansfield Conservation area. It is one of the very few mature trees in Shirlock Road and by far the handsomest tree in the street. It bears both attractive white flowers unusual for a tree, and pretty strawberry-like fruit in season. It is also a broad-leaved evergreen which is wonderful to have in a street where most of the surrounding trees are deciduous.

As a local resident who looks out onto this tree I would like to strongly object to any application to remove it or remove its protection. It is a healthy, valuable and rare asset.

Best regards,

Oliver Beardon  
Architect, ARB, MA (Cantab)

10 Shirlock Road,  
London  
NW3 2HS

**Dike, Darlene**

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**From:** Jonathan Posner [REDACTED]  
**Sent:** 22 February 2015 12:29  
**To:** Planning  
**Subject:** Planning Application 2015/0131/T (13 Shirlock Road)

Dear Sir/Madam

I'm a resident at No. 8 Shirlock Road and although I've recently been out of the country and seemingly missed the planning notice for the above, a neighbour has recently been kind enough to draw it to my attention.

I have to admit that on hearing about the proposal to remove protection to the strawberry tree at No. 13 Shirlock Road my first reaction was one of dismay. Apart from this tree being a rare specimen of its kind it is a 'landmark' in my street and to the best of my knowledge there isn't another one within the Mansfield Conservation area. Moreover, it appears to me to be perfectly healthy.

In fact, my own research has now shown that there are only ten others listed in Greater London, and while this may be because of insufficient data-gathering or other reasons, the mere fact that there is a dedicated website charting the locations of this attractive evergreen species is for me sufficient grounds of concern when one in now being proposed to have its protection removed. <http://strawberrytrees.co.uk/locations/>

The strawberry tree at No. 13 is an elegant example of its kind and its relative exoticness completely in keeping with Hampstead's proud arboreal traditions.

I therefore feel that I really must add my voice to the calls to prevent the removal of this specimen's protection and I ask that my views be taken into account.

Yours faithfully,

Jonathan Posner

Garden Flat,  
8 Shirlock Road,  
LONDON NW3 2HS

[Jonathan Posner](#)  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

