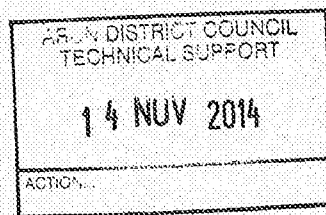


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Arboricultural Report
3 Balmoral Close, Aldwick, West Sussex PO21 4PP

Prepared by

Jonathan Rodwell NCH (Arb.)

September 2014

Beechdown ref: B/0097/14
3 Balmoral Close - TPO report - September 2014

CONTENTS

	Page No.
1.0 Introduction	1
2.0 Documents provided	1
3.0 Statutory controls	1
4.0 Survey format	1
5.0 Risk assessment and survey limitations	2
6.0 Tree locations	2
7.0 Tree descriptions	2
8.0 Appraisal	3
9.0 Conclusions	3
10.0 Recommendations	4
11.0 References	5
12.0 Details	5

Appendix 1 - tree assessment form

Appendix 2 - tree assessment form

Appendix 3 - tree age estimation

1.0 INTRODUCTION

1.1 I have received instruction from Mr Leatherdale to undertake an inspection of two trees at 3 Balmoral Close, Aldwick, West Sussex PO21 4PP.

1.2 The purpose of the instruction was to carry out a ground level inspection of one small-leaved lime and one ash and prepare a report to accompany a planning application.

1.3 Contents of the report are exclusively for the use of the client; liability does not extend to any third party without our written consent.

2.0 DOCUMENTS PROVIDED

2.1 No documents were provided.

3.0 STATUTORY CONTROLS

3.1 Consultation with the Local Planning Authority confirmed that the property is not within a designated Conservation Area, however; one lime and one English oak at the property are subject to either TPO/AW/193/10 or TPO/AW/194/10 and that all trees within the grounds that were present in 1958/59 are subject to TPO/BR/2/58 (order confirmed in 1959).

3.2 Under the Wildlife and Countryside Act (1981) as amended by the Countryside and Rights of Way Act (2000) all birds, their nests and eggs are protected as are bats and their roosts. Further specialist investigation may be required prior to undertaking works.

4.0 SURVEY FORMAT

4.1 The trees were inspected from the ground only, the upper crowns with binoculars; no climbing, excavation or specialised decay detection was undertaken. The trees' basic parameters were measured to include species, height, stem diameter at 1.5m, crown spread and age class.

4.2 A visual inspection of the trees was undertaken to assess the crowns for any weak structures, deadwood, cavities, poor branch unions or other defects that might affect their stability and safety. The base of

the trees was also visually inspected, together with tapping and probing to search for signs of decay, bark loss and root lifting.

- 4.3 The recommendations are based on good arboricultural practice and the risk the trees pose to individuals and property in the event of their structural failure i.e. total collapse or falling branches, NOT on the basis of perceived nuisance such as autumn leaf fall or disruption of light levels to buildings and gardens.

5.0 RISK ASSESSMENT AND SURVEY LIMITATIONS

- 5.1 Although the potential risk to someone passing beneath a tree when the tree, or part of it, fails is relatively remote the risk is present. The risk increases significantly in areas of regular or consistent use, such as gardens, footpaths and roads. Where static structures are present the risks become constant and assessment is made as to whether total or partial failure of a tree could lead to damage of such structures.
- 5.2 Within the scope of any tree survey it is a fact that not all crown or stem failure can be covered, particularly in relation to extreme weather conditions when even healthy trees can suffer structural failure. There is also the potential for mature trees to occasionally shed large branches for no discernible reason, even on calm days. Although a relatively rare occurrence this should be acknowledged as a risk that cannot be entirely mitigated.

6.0 TREE LOCATIONS

- 6.1 The subject trees are in the back garden of 3 Balmoral Close. The lime is just to the south-east of the dwelling while the ash is next to the boundary with 7 Lucerne Court.

7.0 TREE DESCRIPTIONS

- 7.1
- | | |
|----------------------|--|
| Tree number | T1 |
| Species | Small-leaved lime (<i>Tilia cordata</i>) |
| Height | 16m |
| Stem diameter | 770mm |
| Crown spread | N – 7m, S – 6m, E – 5m, W – 6m |
| Age class | Mature |

- 7.1.1 Single-stemmed to historic pollard point at 4.5m and then multi-stemmed.

7.2	Tree number	T2
	Species	Ash (<i>Fraxinus excelsior</i>)
	Height	18m
	Stem diameter	320mm & 320mm
	Crown spread	N – 2m, S – 5m, E – 6.5m, W – 2m
	Age class	Semi-mature (detailed at Appendix 3)

7.2.1 Twin-stemmed from 1m, subdividing again at 3.5m.

8.0 APPRAISAL

8.1 Assessment forms detailing the condition of the trees are shown at Appendix 1 and 2.

9.0 CONCLUSIONS

9.1 Small-leaved lime (*Tilia cordata*)

- The tree is subject to TPO/BR/2/58 and either TPO/AW/193/10 or TPO/AW/194/10.
- The tree is in a location where total or partial failure is likely to result in damage to property and possibly in injury.
- Historically pollarded - or heavily crown reduced- at 4.5m the pruning regime has now lapsed with stems of 11m-12m extending above the pollard point.
- The failure of the sub-dominant stem at 2m was due to a combination of storm force winds and a structurally weak, but not decayed, union.
- Loss of the sub-dominant stem has led to the increased exposure of the remaining crown.
- There was no evidence of soil cracking or movement; recent excavation; trenching or construction activity; cavities or fungal fruiting bodies and no evidence of decay or signs of bark loss/lifting that would indicate that the tree is at risk of windthrow or total stem failure at present.
- There were no signs of decay at the wound at 2m and the occluding tissue around the perimeter has developed since the stem failed.

9.2 Ash (*Fraxinus excelsior*)

- The tree is not subject to either TPO/AW/193/10 or TPO/AW/194/10.

- If the tree age estimation, detailed at Appendix 3, is accurate then the tree would not have been present in 1958/1959 when TPO/BR/2/58 was confirmed and is therefore not subject to it, however, I have **estimated** the age so the planting date should not be regarded as definite.
- The tree is in a location where total or partial failure is likely to result in damage to property and possibly in injury.
- Broken, hanging branches on the stem to the north were damaged when the sub-dominant stem on T1 failed.
- Loss of the sub-dominant stem from T1 has led to increased exposure to the prevailing winds.
- I do not consider the remains of the decaying stem, the pocket of basal decay or the bark loss and exposed dysfunctional sapwood to be an indicator of potential whole tree failure at present, however, combined with the tight union at 1m I consider it quite likely that the tree will suffer stem failure at this point in the future.
- There is the potential for stem failure at the tight fork at 3.5m on the southern stem.

9.3 Overall conclusions.

T1 - small-leaved lime

The loss of the sub-dominant stem, resulting in increased exposure, together with a lapse in cyclical pruning since the pollard was formed means there is a greater potential for stem and branch failure that could result in injury or damage to property.

T2 - ash

It is quite possible that the tree is not subject to statutory protection but if it is the potential for stem failure at 3.5m represents a current risk that could result in injury or damage to property; the ability of the species to attain huge dimensions, combined with the weak main union and the likelihood of more extensive decay in the future means that as the tree continues to grow and increase in size the likelihood of major stem failure that could result in injury or damage to property becomes greater.

10.0 RECOMMENDATIONS

10.1 Small-leaved lime (*Tilia cordata*)

Appendix 1 – tree assessment form

Twigs and Leaves	Typical minor deadwood throughout the crown; foliage extended to the branch tips and appear to be normal sized.

Conclusions	The failure of the sub-dominant stem at 2m was due to a combination of storm force winds and a structurally weak, but not decayed, union. The loss of the sub-dominant stem, resulting in increased exposure, together with a lapse in cyclical pruning since the pollard was formed means there is a greater potential for stem and branch failure that could result in injury or damage to property.
Recommendations	Cut stems back to original pollard point at 4.5m Remove over-extending branch at 2m

Surveyor	Jonathan Rodwell NCH (Arb)
Survey date	22.09.14

Appendix 1 – tree assessment form

Client		Site Address						
Mr Leatherdale		3 Balmoral Close, Aldwick, PO21 4PP						
Tree Number		T1	Tree Species		Small-leaved lime		Age	Mature
Height (m)	16	Stem Diameter (mm)	770	Crown Spread (m)	N	S	E	W
					7	6	5	6.5
Site description		Back garden of property; broadly level lawns and borders; subject trees plus English oak, eucalyptus and various shrubs; tree is 6m from house, 9m from garage, 7m from conservatory, 6.5m from shed and 8m from 7 Lucerne Court, Aldwick.						
Tree description		Single-stemmed to 4.5m where multiple stems divide at historic pollard point.						
History of failure		Loss of sub-dominant stem from 2m above ground level in gale force winds of October 2013; stem failure resulted in damage to the fence, garden wall and car belonging to Mr and Mrs Everett of 20 Lucerne Court, Aldwick.						
Exposure		Loss of the sub-dominant stem has led to the increased exposure of the remaining crown.						
Stem base & surrounding area		There was no evidence of soil cracking or movement, raising or lowering of the soil level, or recent excavation, trenching or construction activity within influence of the tree.						
Buttresses		There were no cavities or fungal fruiting bodies and no evidence of decay or signs of bark loss/lifting.						
Trunk		Wound to east of main stem as a result of stem failure; the wound extended up for 1m from 1.3m above ground level, it was 0.7m at the widest point; occluding tissue was noted around the margins of the wound.						
Main Union		Multi-stemmed from pollard point at 4.5m; there was no evidence of stem or branch failure at the union.						
Primary Ascending Stems		Four main stems, of around 250mm stem Ø, and multiple smaller stems ascend from the main union; minor deadwood, branch stubs and old pruning wounds were noted.						
Main Branches		At 2m on the main stem a kinked branch overextends the crown to the north-west.						

Beechdown ref: B/0097/14

3 Balmoral Close - TPO report - September 2014

Appendix 2 – tree assessment form

Client		Site Address						
Mr Leatherdale		3 Balmoral Close, Aldwick, PO21 4PP						
Tree Number		T2	Tree Species		Ash		Age	Semi-mature
Height (m)	18	Stem Diameter (mm)	330mm 320mm	Crown Spread (m)	N	S	E	W
					2	5	6.5	2
Site description		Back garden of property; broadly level lawns and borders; subject trees plus English oak, eucalyptus and various shrubs; tree is 1.5m from boundary wall and 2.5m from the dwelling at 7 Lucerne Court, Aldwick.						
Tree description		Twin-stemmed from 1m and subdivides again at 3.5m; crown development to the west had been suppressed by T1.						
History of failure		Minor broken and hanging branches damaged when the sub-dominant stem on T1 failed.						
Exposure		Loss of the sub-dominant stem from T1 has led to increased exposure to the prevailing winds.						
Stem base & surrounding area		There was no evidence of soil cracking or movement, raising or lowering of the soil level, or recent excavation, trenching or construction activity within influence of the tree.						
Buttresses		Remains of a decaying 400mm Ø stem cut down to just above ground level were noted; bark loss and exposed dysfunctional sapwood extended from south to west around the lower stem – layers of occluding tissue were present, some dysfunctional with live layers above; a further similar area was present on the buttress to the north-east; a decay pocket was present between the buttresses to the south; a probe pushed into the bottom of the pocket at 45° extended down for 150mm.						
Main Union		A tight union at 1m with a helical bark ridge running down the stem for 800mm.						
Primary Ascending Stems		Each stem subdivides at 3.5m, a very tight fork with included bark was noted on the southern stem; broken, hanging branches were present on the stem to the north.						
Main Branches		Minor deadwood was noted within the crown.						
Twigs and Leaves		Fairly sparse upper crown to the north-east.						

Appendix 3 - Tree age estimation

Forestry Commission information note 12

Tree age estimation from stem diameter measurement

Tree name: Ash Scientific name: *Fraxinus excelsior*

Location: 3 Balmoral Close, Aldwick PO21 4PP

Stem girth/cm:	Stem diameter/cm:	Stem radius(r)/cm:	Total basal area (BA)/cm:
104cm	33cm	16.5cm	855.298 (rxrx3.14159)

Core category (Table 1a of FCIN 12):
Average site, garden, parkland

Core age/years:	Core ring width/mm:
70 years	4mm

Core basal area (Table 2 of FCIN 12):	2463
Area (CAI) of outer core ring (Table 2 of FCIN 12):	69.9
BA excluding the core (Total BA minus core BA)/cm:	-1,607.702
Age of outer section of the stem/years: (above divided by CAI of outer core ring)	-23
Add core age/years:	70
Add years of decline/years:	0
Total of last 3 entries (= estimated age of tree/years):	47
Planting year (date measured minus estimated age):	1967

Date measured: 22.09.2014