ARBORICULTURAL ASSESSMENT REPORT

For:	**Client:**	Oriel Services Limited
	Insurer:	[redacted]
Site:	**Policyholder:**	[redacted]
	Risk Address:	70-72, Crediton Hill, London, NW6 1HR
Refs:	**OCA Ref:**	58265
	Client Ref:	7891572
	Insurer Ref:	[redacted]

Report By:	James Allnutt		
Title:	Arborist	**Date:**	10th March 2015

OCA UK Limited

Consulting Arboriculturists

4 The Courtyards, Phoenix Square, Severalls Park, Wyncolls Road, Colchester, Essex CO4 9PE
Tel.No: 01206 751626

Email: colchester@oca-arb.co.uk www.oca-arb.co.uk

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1.0 INTRODUCTION & BRIEF

1.1 OCA UK Limited has been instructed by Oriel Services Limited on behalf of the building insurers of 70-72, Crediton Hill, London, NW6 1HR (the insured property). We have been advised that the insured property has suffered differential movement and damage which is considered to have been caused by trees growing adjacent the property influencing soils beneath its foundations.

1.2 We have been instructed to undertake a survey of the vegetation growing adjacent the insured property, to provide our opinion as to whether, based on the available information any of this vegetation is likely to be influencing soil moisture levels beneath the foundations of the property and if so to provide recommendations as to what tree management could be implemented to effectively prevent damage continuing.

1.3 The vegetation growing adjacent the risk address has been surveyed from the ground. All distances are measured to the nearest point of the risk address unless otherwise stated

2.0 LIMITATIONS

2.1 Recommendations with respect to tree management are associated with the risk address as stated on the front cover of this report and following consultation with investigating engineers. The survey of trees and any other vegetation is associated with impacts on the risk address subject of this report. Matters of tree health, structural condition and/or of the safety of vegetation under third party control are specifically excluded. Third party land owners are strongly advised to seek their own professional advice as it relates to the health and stability of trees under their control.

2.2 Recommendations do not take account of any necessary permission (statutory or otherwise) that must be obtained before proceeding with any tree works.

2.3 Recommendations do not take account of any requirements for survey or mitigation relating to European or other protected species, e.g. bird nesting or bats. Land owners must obtain their own professional advice in respect of any protected species.

3.0 DISCUSSION AND ANALYSIS

3.1 Soils, soil water and vegetation

All vegetation requires water to live and this water is substantially accessed from the soil within which the plants roots grow.

If the soil is classified as a clay soil then it will hold very much more water than sands, gravels and loam soils. During the summer as plants abstract water from the clay soil then the soil volume will “shrink” and “swell” as water is first removed and then added by summer rainfall.

In years in which rainfall during the summer is less than the total amount of water taken from the soil by plants then shrinkage will occur. This shrinkage may remove support from building foundations leading to cracking in the fabric of the building.

3.2 Vegetation management

The control of trees, shrubs and climbers by removal or pruning as appropriate are proven techniques that can control total soil water loss thereby minimising soil shrinkage and allowing repairs to proceed.

If vegetation management works are carried out promptly then repairs can usually proceed very quickly and the duration and distress associated with the disruption that tree related subsidence brings can be minimised.

3.3 Third party liaison and statutory controls

Tree roots do not respect physical or property boundaries and can travel for many metres beyond the above ground “dripline” of the canopy of the vegetation.

The purpose of this report is to ascertain which vegetation is the most likely substantial and/or effective contributory cause of the damage witnessed to allow for liaison with third parties or with local administrative Councils as necessary.

You can learn more about tree related subsidence of low rise buildings by visiting:

www.oca-arb.co.uk/whatisSubsidence.htm

4.0 EVIDENTIAL REVIEW AND MATERIAL CONSIDERATIONS

4.1 Engineering Summary

Engineer Appraisal Report dated 26th January 2015

The engineer has described the damage to the property, its location and the likely mechanism of movement, and has concluded that the building failure is related to differential subsidence damage caused as a result of the action of vegetation.

This is a new subsidence claim and we are unaware of any previous history of subsidence at the property.

4.2 Foundations, geotechnical, and root identification

Site Investigation Report dated 7th January 2015

A factual geotechnical report has described the below ground foundation design, soil and geotechnical conditions, and any root identification where available.

Foundations are described as being 980mm below ground level.

Trial pit / borehole samples have been subject to laboratory analysis and the results of these tests indicate soils have a plasticity index ranging from 47% to 52%.

Roots have been recovered from the trial pit(s) and subjected to laboratory analysis and the results confirm:

TP/BH1: Salix (willow) or Populus (poplar), 3 roots. 6mm diameter
TP/BH1: Salix (willow) or Populus (poplar), 1 root. <0.5m diameter

4.3 Other information

The engineer has confirmed there is no significant risk of heave associated with tree removal and that monitoring is to be established.

The CCTV survey of the drains revealed no defects.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Results of the field survey and evidential review

We can confirm that vegetation exists on or near the insured property that is considered to be causing or contributing to the current subsidence damage.

With regard to the damage caused it is recommended that to best remediate the damage and any future potential for damage (which is high) that the following trees be removed; T1, T2, T3, T4 and T6. All these trees are within influencing distance of the affected area of the property. By removing these trees we consider that the risk to the insured's address will be removed. T1 relates to the Willow and considering roots discovered were belonging to either Salix or Populus, by removing the Willow (Salix) the immediate risk is dealt with. The tree T2 is the largest and most dominant of the vegetation present, and due to proximity and damage seen, it is felt that removing this tree will also aid preventing subsidence occurring, although further evidence of the trees involvement in the current damage is likely to be requested by the Local Authority.

In relation to T3, T4 and T6 these trees all pose a future risk due to their proximity to the affected area and high growth potentials, they are likely to contribute to the damage at some point, whether now or in the future as they are adjacent and very close to the area affected.

5.2 Recommendations

On the basis of our findings we have considered a practical vegetation management specification. This specification will assist in reducing the impact of the adjacent vegetation on soil moisture levels, thereby potentially stabilising foundations of the affected area of the building.
Where felling has been proposed, this will be on the basis that the vegetation in question would not respond well to a severe reduction in leaf area that would inevitably lead to decay, the development of potential hazards, and an annual or other on-going management commitment and cost. If pruning is recommended, the specification will be designed to allow continual ease of re-pruning with a reasonable prospect of a reduction in soil water use.

5.3 Recommended vegetation management to address the current subsidence:

Tree No:	Species	Works Required
T1	Willow	Fell and treat stump.
T2	Lime	Fell and grind stump (pending further evidence)

5.4 Recommended vegetation management to address risk of future subsidence:

Tree No:	Species	Works Required
T3	Ash	Fell and treat stump.
T4	Oak	Fell and treat stump.
T6	Sycamore	Fell and treat stump.

6.0 STATUTORY CONTROLS

We are currently waiting for confirmation from Camden Borough Council as to whether any of the implicated vegetation is subject to a Tree Preservation Order or Conservation Area controls.

7.0 APPENDIX 1: TREE TABLES

Age Class	**YO** – Young. **SM** – Semi-Mature.**EM** – Early Mature. **MA** – Mature. **FM** – Fully Mature. **OM** – Over Mature	Ownership	**PH** – Within boundary of risk address. **P3P** – Within boundary of third party properties. **LA** – Within land owned by a Local Authority. **C3P** – Commercial third party. **U** – Within land of indeterminable ownership.
Condition	**G** – Good. **F** – Fair. **P** – Poor. **D** – Dead, Dying or Dangerous		
Stem Diameter	**MS** – Multi-stemmed tree		

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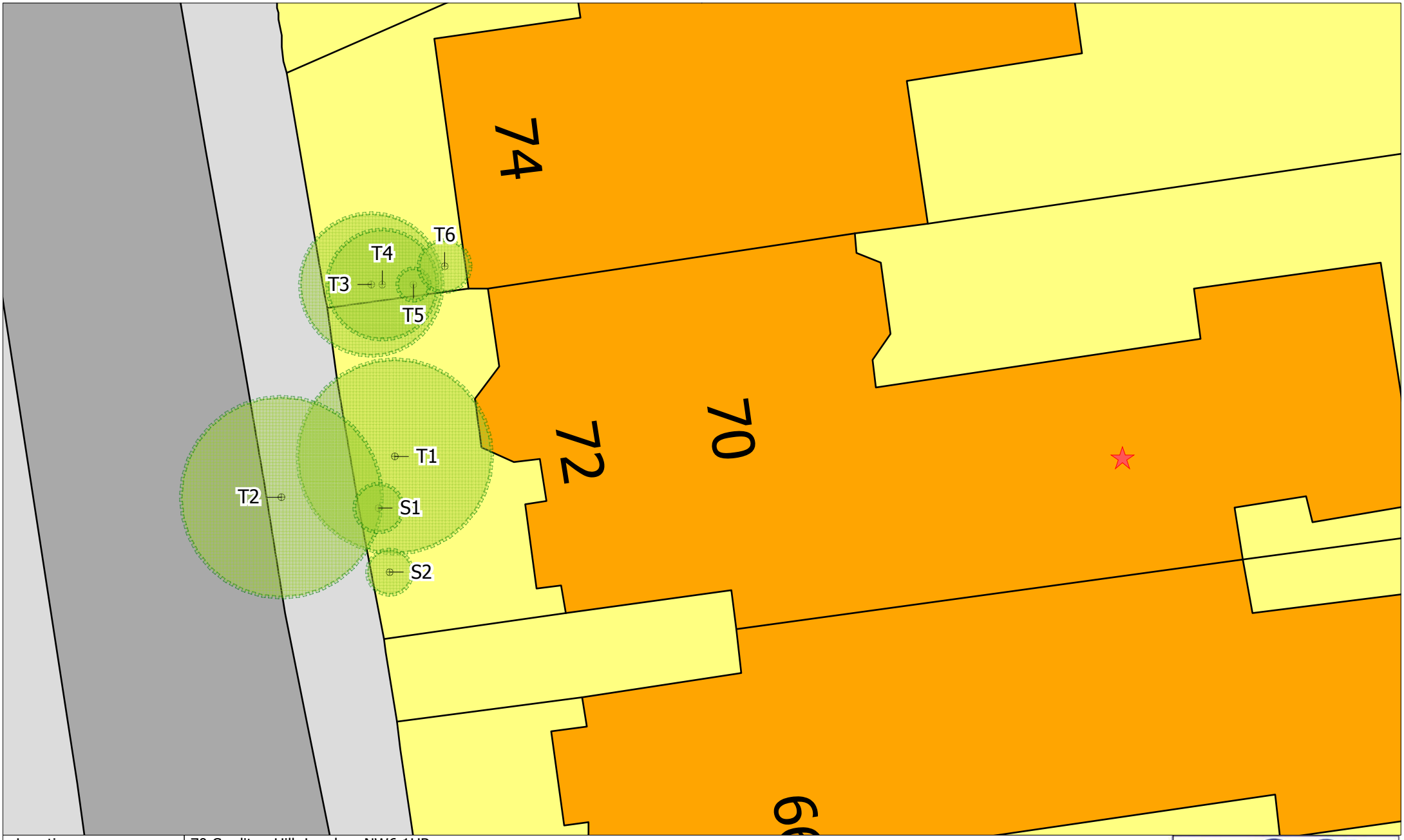
Tree No	Common Name	Age Class	Condition	Height (m)	Crown Spread (m)	Stem diam. (mm)	Dist to bldg (m)	Pruning history	Recommendation	Tree work constraints	Notes	Owner address	Owner
T1	Willow	EM	F	7.5	6	140	2.5	No significant past tree works	Fell and treat stump.	None		70 Crediton Hill, London, NW6 1HR	PH
T2	Lime	EM	F	7.6	6.2	370	4.8	Topped 2 years ago	Fell and grind stump (pending further evidence).	None	Arb workers were on street during survey, topping most street trees	Camden Borough Council	LA
T3	Ash	SM	F	5.1	4.4	90	2.5	No significant past tree works	Fell and treat stump.	None	In a raised bed	74 Crediton Hill, London, NW6 1HR	P3P
T4	English Oak	SM	F	5	3.4	80	1.8	No significant past tree works	Fell and treat stump.	None	In a raised bed	74 Crediton Hill, London, NW6 1HR	P3P
T5	Cordyline	EM	F	2	1	70	1	No significant past tree works	No work required.	N/A	In a raised bed	74 Crediton Hill, London, NW6 1HR	P3P
T6	Sycamore	SM	F	3	1.6	80	0.7	No significant past tree works	Fell and treat stump.	None	In a raised bed	74 Crediton Hill, London, NW6 1HR	P3P
S1	Cordyline	EM	F	1.5	1.5	0.01	3.5	No significant past tree works	No work required.	N/A		70 Crediton Hill, London, NW6 1HR	PH
S2	Spiraea	EM	F	1.7	1.4	10	4.8	No significant past tree works	No work required.	N/A		70 Crediton Hill, London, NW6 1HR	PH

8.0 APPENDIX 2: SITE PLAN



Location:	70 Crediton Hill, London, NW6 1HR
Job Ref.:	58265
Survey Date:	19/02/2015
Scale:	1:150 @ A4

4 The Courtyards
Phoenix Square
Severalls Park
Wyncolls Road
Colchester
CO4 9PE
T: 01206 751 626

OCA UK Limited

By OCA Limited

9.0 APPENDIX 3: SITE PHOTOGRAPHS

Site Photographs

1. T2 Lime

2. T1 Willow

3. T1 Willow, T2 Lime, T3 Ash, T4 English Oak, T5 Cordyline and T6 Sycamore

4. T1 Willow, T2 Lime, T3 Ash, T4 English Oak, T5 Cordyline and T6 Sycamore

5. T2 Lime with T1 Willow behind

6. T4 English Oak T5 Cordyline and T6 Sycamore

Landscape Planning Limited
4 The Courtyards
Phoenix Square
Wyncolls Road
Colchester
Essex CO4 9PE

01206 752539

colchester@oca-arb.co.uk

www.oca-arb.co.uk