ARBORICULTURAL ASSESSMENT REPORT

For:	**Client:**	Oriel Services Limited
	Insurer:	[redacted]
Site:	**Policyholder:**	[redacted]
	Risk Address:	40 Elsworthy Road, London, NW3 3DL
Refs:	**OCA Ref:**	60189
	Client Ref:	7964115
	Insurer Ref:	[redacted]

Arborist Name:	Matthew Gardiner	**Date:**	16/02/2017
QC:	Margaret MacQueen	**Date:**	28/02/2017

OCA UK Limited

Consulting Arboriculturists

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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 40 Elsworthy Road, London, NW3 3DL. We have been advised that the insured property has suffered differential movement and damage that is considered to have been caused by trees growing adjacent to the property influencing soils beneath its foundations.

1.2 We have been instructed to undertake a survey of the vegetation growing adjacent to the insured property in order 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 to 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 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. As plants abstract water from the clay soil, the soil volume will "shrink" and "swell" during the summer 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, 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

Report dated January 2017:

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.

We have been informed by the engineer that the property has been the subject of a previous subsidence claim in 2015.

We have been informed by the engineer that there is not a heave risk to this property. Monitoring has been instructed. Drains have been investigated.

4.2 Foundations, geotechnical, and root identification

Report dated 3rd June 2015:

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

Foundations are described as being 1300mm (TP1) below ground level. Trial pit/borehole samples have been subject to laboratory analysis and the results of these tests indicate that soils have a plasticity index ranging from 35% to 48%.

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

TP1 (USF depth) 2.5-30mm Leguminosae spp. (6 roots)

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 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.

5.2 Recommended vegetation management to address the current subsidence:

Tree No:	Species	Works Required
T1	False Acacia	Fell and treat stump
T2	False Acacia	Fell and treat stump

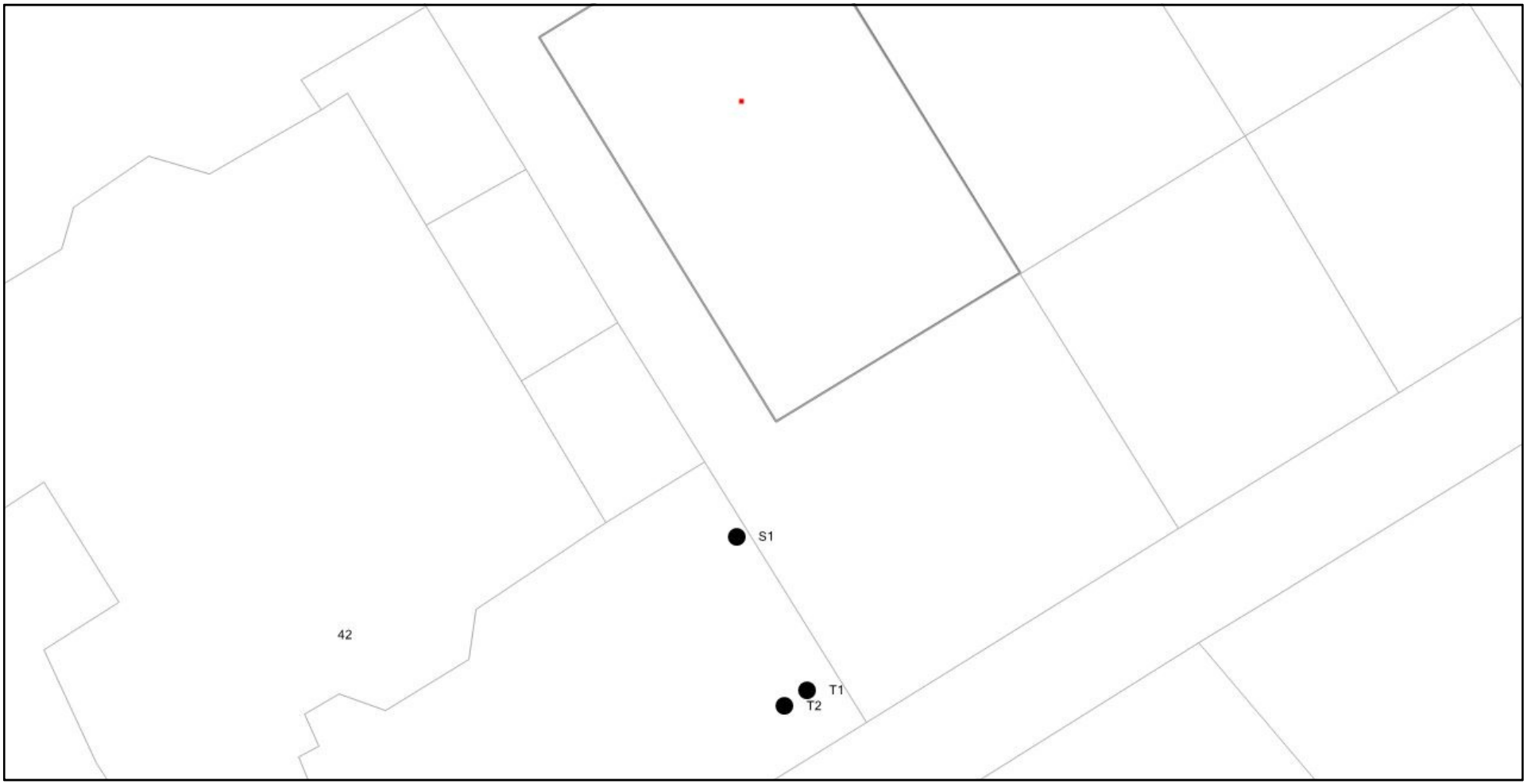
6.0 STATUTORY CONTROLS

London Borough of Camden has confirmed that the implicated vegetation is subject to a Tree Preservation Order.

7.0 APPENDIX 1: TREE TABLES

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	False Acacia	Mature	Fair	19	11.0	500	3	No significant past management	Fell and treat stump	Parking restrictions. Heavily parked.	Estimated stem diameter	42 Elsworthy Road, London, NW3 3DL	P3P
T2	False Acacia	Mature	Fair	19	11.0	490	4	No significant past management	Fell and treat stump	Parking restrictions. Heavily parked.	Estimated stem diameter	42 Elsworthy Road, London, NW3 3DL	P3P
S1	Spotted Laurel	Semi-Mature	Fair	2	2	40	2	No significant past management	No work required	Parking restrictions. Heavily parked.	Estimated stem diameter	42 Elsworthy Road, London, NW3 3DL	P3P

8.0 APPENDIX 2: SITE PLAN



Location:	40 Elsworthy Road, London, NW3 3DL
Job Ref:	60189
Survey Date:	10th February 2017 - NTS
By OCA Limited	
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9.0 APPENDIX 3: SITE PHOTOGRAPHS

	
T1 &T2 False Acacia	**T1 False Acacia & S1 Spotted Laurel**

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