

## ARBORICULTURAL ASSESSMENT REPORT

<b>For:</b>	<b>Client:</b>	Richard F Gill & Associates
	<b>Insurer:</b>	Richard F Gill & Associates
<b>Site:</b>	<b>Policyholder:</b>	[REDACTED]
	<b>Risk Address:</b>	12 Akenside Road, London, NW3 5BT
<b>Refs:</b>	<b>OCA Ref:</b>	70365
	<b>Client Ref:</b>	16108
	<b>Insurer Ref:</b>	

<b>Arborist Name:</b>	Tom Peppiatt	<b>Date:</b>	06/11/2017
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**OCA Insurance Services**



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## 1.0 INTRODUCTION & BRIEF

- 1.1 OCA Insurance Ltd has been instructed by Richard F Gill & Associates on behalf of the building insurers of 12 Akenside Road. 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 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:



## 4.0 EVIDENTIAL REVIEW AND MATERIAL CONSIDERATIONS

### 4.1 Engineering Summary

Engineering report dated 23<sup>rd</sup> of September 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.

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

Monitoring has been instructed.

### 4.2 Foundations, geotechnical, and root identification

Site investigation report dated 12<sup>th</sup> of April 2017:

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 1200mm (TP1) & 1080mm (TP2), 1650mm (TP3), 1080mm (TP4) and 1670mm (TP5) 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 30% to 44% in TP1, 20% to 44% in TP3, 20% to 51% in TP4 and 23% to 46% in TP5.

Roots have been recovered from the trial pits and subjected to laboratory analysis and the results confirm:

TP1 USF	Platanus spp.
TP1 USF	Buddleia spp.
TP1 1500mm to 2300mm depth	Platanus spp.
TP3 USF depth	Platanus spp.
TP4 USF depth	Platanus spp.
TP5 USF to 2000mm depth	Tilia spp.

## 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	Plane (London)	Fell and treat stump.
T3	Cherry	Fell and treat stump.
T4	Lime	Fell and treat stump.
S1	Forsythia	Fell and treat stump.

## 6.0 STATUTORY CONTROLS

London Borough of Camden has confirmed that the London Plane (T1) is covered by Tree Preservation Order C128/1. All of the implicated vegetation is within the Conservation Area 6JN.

## 7.0 APPENDIX 1: TREE TABLES

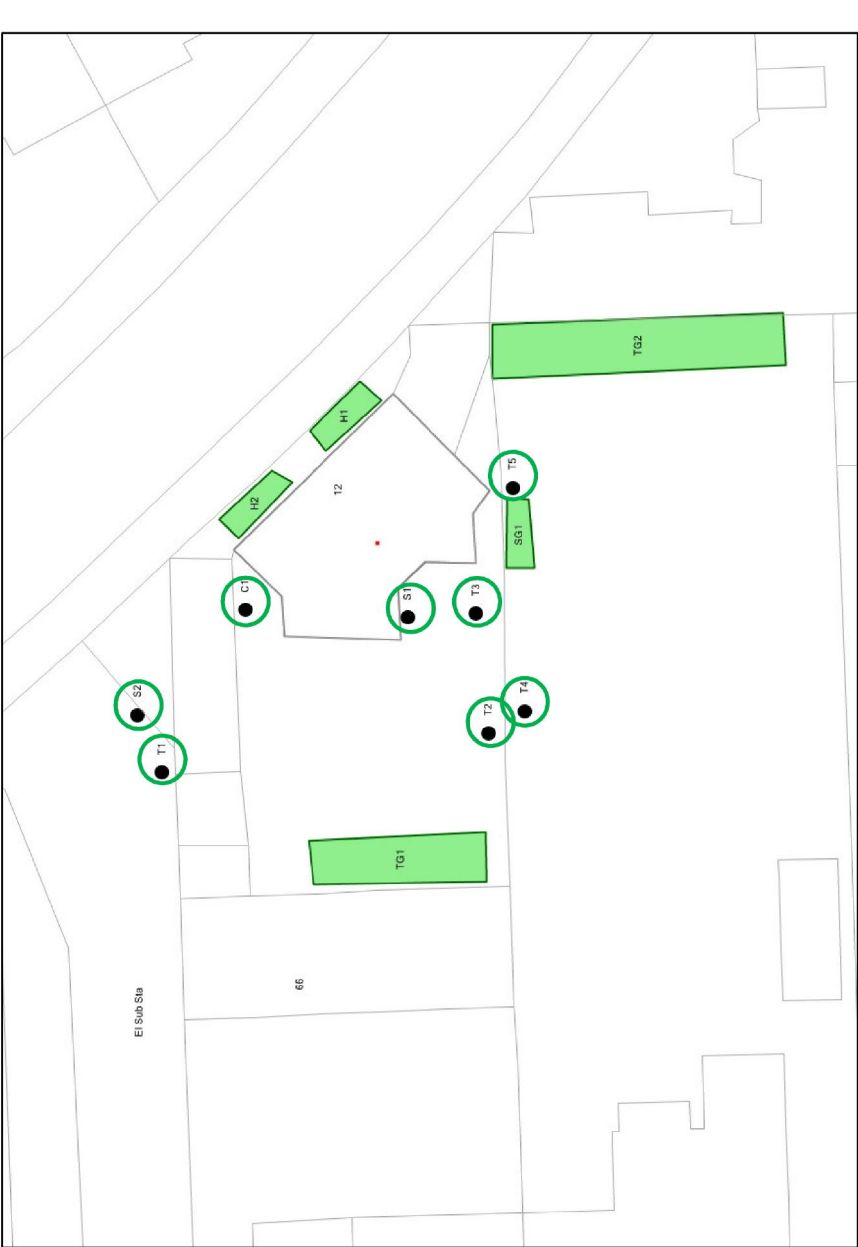


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Tree No	Common Name	Age Class	Condition	Height (m)	Crown Spread (m)	Stem diam. (mm)	Dist. to bldg. (m)	Pruning history	Recommendation	Tree work constraints	Notes	Owner address	Owner
T1	Plane (London)	Mature	Fair	20	20	1000	2	No significant recent management.	Fell and treat stump.				3P
TG1	Mixed species group	Mature	Fair	8	4	150	11	No significant recent management.	No work required.		x1 Camellia x1 Magnolia		PH
T2	Magnolia	Mature	Fair	5.5	3.0	120	6.5	No significant recent management.	No work required.				PH
T3	Cherry	Mature	Fair	5	1.50	150	1.7	No significant recent management.	Fell and treat stump.				PH
T4	Lime	Mature	Fair	16	12	600	6	No significant recent management.	Fell and treat stump.				3P
S1	Forsythia	Mature	Fair	1.5	1.0	60	0	Managed as a shrub.	Fell and treat stump.				PH
SG1	Mixed species group	Mature	Good	2.5	1.50	60	0.8	Managed as a shrub group.	No work required.		Including Laurel and Pyracantha.		3P


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
T5	Cypress	Semi-Mature	Fair	4	2	120	1.5	No significant recent management.	No work required.				3P
TG2	Mixed species group	Mature	Fair	18	16	700	3.5	No significant recent management.	No work required.		x5 Maple x1 Silver birch		3P
S2	Privet	Mature	Fair	6	6	80	3	No significant recent management.	No work required.				3P
H1	Laurel	Mature	Fair	1.6	1.0	80	0.3	Managed as a hedge.	No work required.				PH
H2	Laurel	Mature	Fair	1.5	1.0	80	0.3	Managed as a hedge group.	No work required.				PH
C1	Hydrangea	Mature	Fair	4	6	100	0	No significant recent management.	No work required.				PH



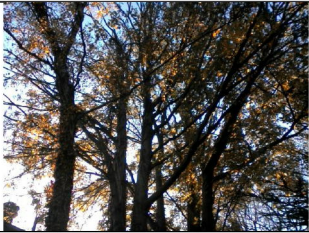
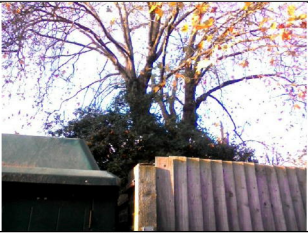


## 8.0 APPENDIX 2: SITE PLAN



Location:	12 Akenside Road, London, NW3 5BT
Job Ref:	70365
Survey Date:	6 <sup>th</sup> of November - NTS
By OCA Insurance Limited	
Crown copyright 2016. License number 100043594	

## 9.0 APPENDIX 3: SITE PHOTOGRAPHS

	
T1 - Plane (London)	T1 - Plane (London)
	
TG1 - Mixed species group	T2 → Magnolia
	
T3 - Cherry	T2 - Magnolia
	
T4 - Lime	T4 - Lime
	
S1 - Forsythia	SG1 - Mixed species group

	
T5 - Cypress	TG2 - Mixed species group
	
TG2 - Mixed species group	S2 - Privet
	
H1 - Laurel	H2 - Laurel



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