Arboricultural Survey & Report for the purposes of a Mortgage Application.

Norway Maple tree outside XXX

Prepared for xxx

3rd August 2013

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Contents:

1.0 Summary

- Following an instruction from xxx, I have surveyed a single Norway maple tree (T1) outside xxx for the purposes of a mortgage application.
- The subsidence and heave risk factors associated with this tree are **LOW**.
- A number of service inspection chambers were noted. You should determine whether responsibility for upkeep of any of these reside with the property owner and inspect their current condition as required.
- The potential for seasonal nuisance arising from T1 is considered acceptable.
- T1 should be maintained with regular crown reduction back to previous pruning points. This should be carried out in the next 12 -24 months and then again every 5 years.
- Tree work should be carried out by competent, trained and insured arboriculturists in accordance with BS3998:2010.
- Work to T1 may not proceed without the express permission of its owner, Stevenage Borough Council.

2.0 Background

2.1 Instruction:

- I have been instructed by xxx to conduct an arboricultural survey and report for the purposes of a mortgage application on a single Norway maple tree outside xxx.
- The initial enquiry was received in person on July 19th, 2013, with an instruction to proceed received by phone on July 29th.
- Inspection took place on August 3rd, 2013, at 09:15.

2.2 Techniques used:

- Visual Tree Assessment (VTA; Lonsdale, 1999).
- Desk-based enquiries: TPO / CA status, geological survey, mapping.

2.3 Limitations:

- The contents are intended for the sole use of the client and her mortgage lender only. No liability is accepted for their use by any other parties to advance an argument or claim (including legal or financial) without prior consent.
- No liability is accepted for defects hidden from view by vegetation or other obstacles to access.
- Formal assessment of topography, drainage, service conduits, soil conditions and the like are outside the scope of this report.
- Other specialist arboricultural surveys (e.g. root collar examination or sonic tomography) have not been made and are beyond the scope of this report.
- Specific laboratory investigations of soil properties (plasticity index, moisture content, suction pressure) have not been made and are beyond the scope of this report
- Specific information relating to the foundation construction and any history of subsidence (and its remediation) was not available. Since specific information relating to the building and its subsidence history has not been made available, all comments are based on the assumption that no subsidence or damage consistent with soil movement has occurred to date. This report will be deemed to be invalid if a history of such damage has not been made known to the surveyor.
- It is understood that any risks associated with these limitations are accepted by the clients.

2.4 Weather conditions:

Sunny, wind force 2-4.

2.5 Access conditions:

Access was unhindered.

2.6 Validity:

- Plants are biological organisms and change with time. As such, no tree can be declared absolutely safe. Above ground risk assessment remains valid for twelve months from the date of inspection, or until a major storm is experienced, after which time a new inspection is required.

- Subsidence risk assessment is valid for a period of five years provided that no significant changes to vegetation, hard surfaces, buildings, drainage and garden topography are made. This report shall be deemed invalid should there be any changes of this type.

2.7 Background information:

- The tree stands on land owned by Stevenage Borough Council who are therefore considered to be the owners of the tree. Work to the tree may therefore only be carried out with the express permission of the owner.
- No Tree Preservation Order or Conservation Area status is in force at the time of writing.

3.0 Results:

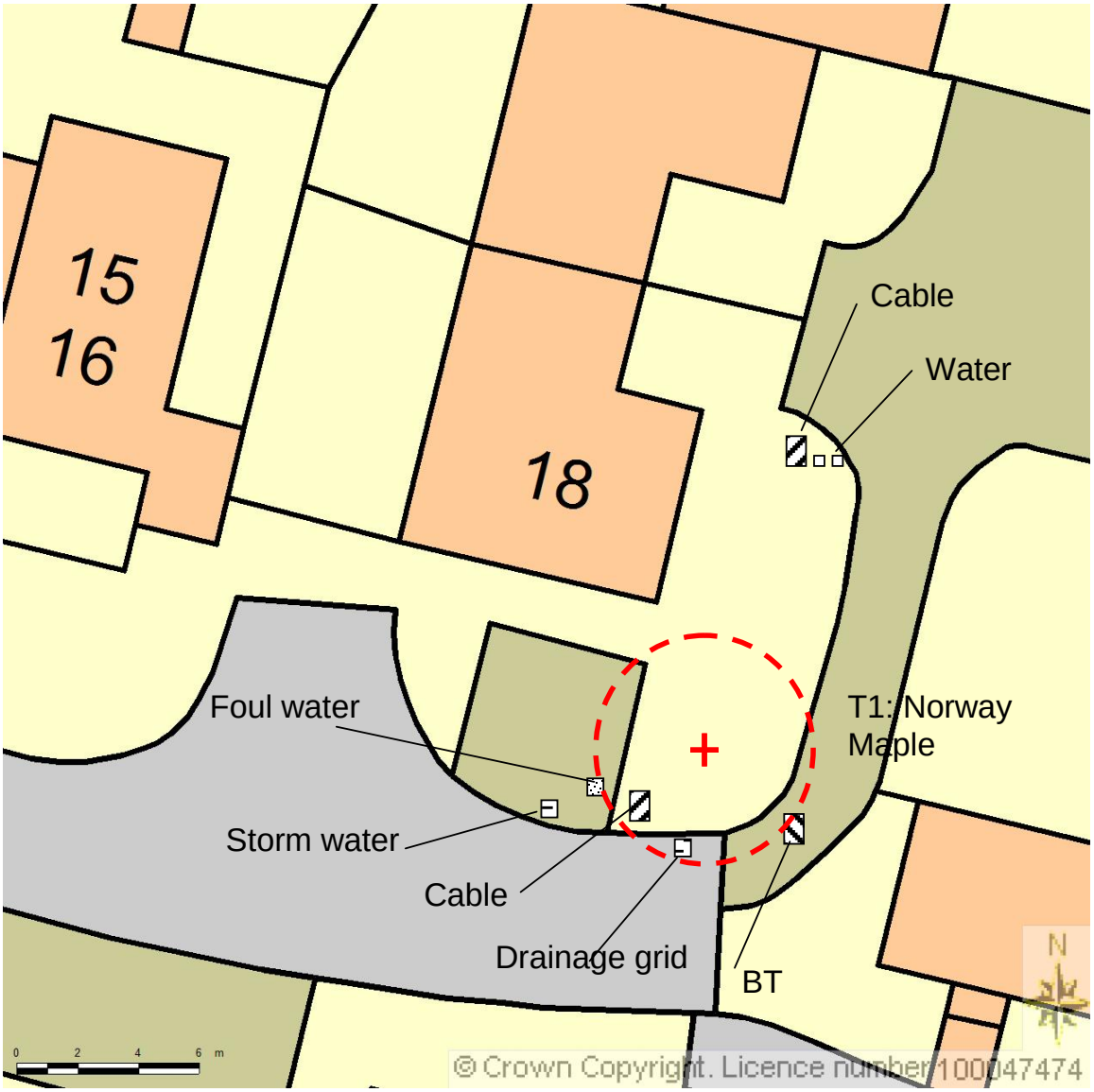
3.1 Situation:

Building description: Brick under tile constructed early 1970's.
Garage: Adjoining house.
Building orientation: frontage faces east.
Garden orientation: rear garden extends to the west.
Foundation type: unknown. Assumed to be concrete strip 1.5m deep.
No damage consistent with subsidence reported by current occupier.

Soil type: High fertility clay till with slightly impeded drainage (LANDIS).
Surface deposit: None: building founded directly onto chalk rock. Soil plasticity is taken to be low (Modified Plasticity Index <20%).
Underlying geology: Chalk rock (BGS Sheet 221).
Surface topography: Gently sloping site at the western extremity of Stevenage, adjacent to the A1(M) motorway. Ground slopes to the north such that the tree stands on ground approximately 1.2m higher than the house. A low summit (113m) approximately 200m to the south west provides some shelter from prevailing winds.
Elevation: 105m

Damage: None observed. Current occupier states none experienced during his tenure.

3.2 **Site plan:**



Plan showing location of surveyed tree at xxx.

3.3 Tree Assessment:

Vegetation survey

														Subsidence Risk Factor	
D1	distance to:	House	Age class:	Y	Young	Vigour:	L	Low	Growth potential:	Low		SRF	N: negligable		H: high
D2	distance to:			MA	Middle aged		M	Moderate		Moderate			S: slight		VH: very hi
D3	distance to:			M	Mature		G	Good		High			L: low		
D4	distance to:			OM	Over mature		VG	Very good		Very high			M: moderate		
				V	Veteran										

Tree or shrub number	Common name	Scientific name	Tree height	Crown height	D1	D2	D3	D4	Average crown spread	Age class	Estd. Life span	Vigour	Growth potential	Vitality	SRF	Other relevant threats
T1	Norway maple	Acer platanoides	13.5	8.5	5.1				5	M	20+	M	M	Good	L	None

All dimensions are given in metres (m).

Estimated life span categories are based on BS5837:2012 Clause 4.4 and are given in years.

3.4 Subsidence risk:

Water demand class: Moderate (NHBC 4.2) – moderate risk.

Zone of influence: 13.5m (NHBC 4.2) – moderate risk

Tree to building distance in 50% of subsidence cases involving Acer sp.: ≤ 6m (Mercer, Reeves & O'Callaghan 2011) – moderate risk.

Assumed house foundations are **sufficient.** (Recommended depth 1.3m, NHBC 4.2) – risk reduced.

Approximate age of tree: 40 years (non-native species, amenity planting similar to that elsewhere in town). Tree planted immediately after house construction. Tree may therefore abstract water sufficient to cause subsoil shrinkage past post-construction levels especially in particularly hot or dry years but unlikely given absence of damage – risk reduced.

No damage present – risk reduced.

House founded directly onto chalk rock – minimal risk.

Tree size has been managed by regular pruning and crown lifting such that the crown is small for tree age – risk reduced.

House subsidence risk factor: LOW

Heave risk factor if tree removed: LOW (type of movement: Recovery)

3.5 Other risks:

Direct damage to foundations:

Shallow rooting behaviour over chalk rock is expected; observed presence of large roots extending northwest is consistent with this expectation. Deciduous tree root distribution favours the 'uphill' side of a tree. In this case, the uphill side has been extensively hard surfaced such that rooting in this direction is likely to be discouraged. Roots can therefore be expected to exploit the unsurfaced area immediately adjacent to the house. Direct damage is usually associated with structural roots which end at a distance of half the crown diameter. In this case, the crown has been extensively managed, making this relationship difficult to assess but an 8m spread is common for mature maples which gives an expected structural root spread of 4m. This tree is already mature and with continuing crown management, further root spread is unlikely. There is therefore a low risk of direct damage to the building.

Damage to service conduits:

A large number of inspection chambers are present within the rooting area of T1: cable, phone, water, foul water and storm water covers were noted. The roots of T1 can be expected to exploit any moisture sources associated with these services which raises the possibility that they could become distorted, fractured or blocked by roots. It is unclear to me whether any are associated with the property but you should determine whether any responsibility towards their maintenance resides with the property owner. If so, they should be inspected to determine their current condition. Roots of this species are moderately tolerant of root pruning (Matheny & Clark, 1998) and so offending roots could be safely and effectively cut away under the supervision of an arboriculturist if the need arises.

Seasonal and other nuisance:

Leaf litter can be expected to gather in the gutters on the south side of the house which should be periodically removed to ensure free drainage.

Maples also create a relatively large number of seed 'keys' which fall throughout the summer and especially in the autumn. These are small and of little consequence.

Many Acer species trees shed droplets of sugary exudate in the spring (honeydew) which can make a sticky mess, particularly on cars parked under the tree. Provided the crown continues to be managed, it is unlikely that this will affect cars using the nearby parking spaces.

Minor deadwood is often shed as a normal physiological activity of all healthy trees. None was observed on the ground below T1, and none was observed in the crown suggesting that this is unlikely to be of significance.

Satellite and TV aerial reception can be affected by trees in close proximity to receiving equipment. Provided the crown is maintained with regular pruning this is unlikely to be of significance.

4.0 Conclusions & Recommendations:

4.1 Risks associated with T1

- The subsidence and heave risk factors associated with this tree are **LOW**.
- A number of service inspection chambers were noted. You should determine whether responsibility for upkeep of any of these reside with the property owner and inspect their current condition as required.
- The potential for seasonal nuisance arising from T1 is considered acceptable.

4.2 Non-urgent actions

- T1 should be maintained with regular crown reduction back to previous pruning points. This should be carried out in the next 12 - 24 months and then again every 5 years.

4.3 General points

- Tree work should be carried out by competent, trained and insured arboriculturists in accordance with BS3998:2010.
- Work to T1 may not proceed without the express permission of its owner, Stevenage Borough Council.

5.0 References

British Geological Survey (1995). Hitchin. England & Wales Sheet 221. Solid and Drift Geology 1:50,000. BGS, Keyworth, Nottingham.

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