Arboricultural Report

Tree Condition Survey

Client: Mark Houshang

On behalf of K.White Arboriculture Ltd.

Site: 3 Oldfield Mews
Highgate N6 5XA

Author: Frank Parsons
RFS certificate in Arboriculture
AA Technicians certificate in Arboriculture
(Level 4 Diploma in Arboriculture)

1st June 2016

email: frankparsons@me.com
website: parsonstreecare.uk

mobile: 07791 652 889
flat 1, 22 cumberland park london W3 6SX

Background:

With regards to tree hazard assessment you have asked me to undertake a visual tree assessment of the tree that grows in the front driveway of 3 and 4 Oldfield Mews.

Scope:

To undertake a systematic visual tree assessment in correlation to the tree location and its surroundings and input results into a tree survey. The survey has been conducted in accordance with BS 5837:2012.

The Site:

Located off Hornsey Lane, Oldfield Mews is a private residential gated mews with driveways in front of 3 story mews houses. Located on high ground, prevailing winds will be from a southerly direction. T1 is the first prominent mature tree as one drives in to the mews. The tree has been previously reduced approximately 3-5 years ago. A Tarmac private road runs underneath the tree to the end of the mews with houses either side of the road. Houses have front driveways with car parking and rear gardens. T1 grows in between no.3 and no.4 front driveways in a slightly raised planting bed. Cars were parked either side of the stem base during the time of survey. The surrounding surfaces are concrete, tarmac, and paving. The weather at the time of survey was cloudy with wind.

The Survey:

Is supplied as a separate document which includes: Species, height, stem diameter, branch spread, crown clearance, age class, physiological condition, structural condition, general observations, estimated remaining contribution, category grading and recommended works. Notes to the survey are found at the end of the document outlining an explanation of each field.

email: frankparsons@me.com
website: parsonstreecare.uk
mobile: 07791 652 889
flat 1, 22 cumberland park london W3 6SX

PARSONS TREE CARE

email: frankparsons@me.com
website: parsonstreecare.uk

mobile: 07791 652 889
flat 1, 22 cumberland park london W3 6SX

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

Above: Table 1 – Cascade chat for tree quality assessment, which relates to category grading within the survey supplied.

General Observations:

T1 is a large mature Horse Chestnut at 18m in height located in the front driveways of no.3 and no.4 Oldfield Mews. Concerns were raised by the presence of fungus at the stem base of the tree and rot within a buttress root flare.



Photo 1: Taken looking west from private mews area. Illustrates height of tree in relation to surrounding buildings and location of tree stem within front driveway area.

email: frankparsons@me.com
website: parsonstreecare.uk
mobile: 07791 652 889
flat 1, 22 cumberland park london W3 6SX

Photo 2: Taken from driveway no3. Illustrating extent of decay within southeast buttress flare. Old fruiting bodies can be seen above the spade, and the modification of wood was soft and spongy with discolouration suggesting white rot or sapwood rot in the stem base and roots.



email: frankparsons@me.com
website: parsonstreecare.uk

mobile: 07791 652 889
flat 1, 22 cumberland park london W3 6SX

Photo 3: Shows old Armillaria mellea fruiting bodies present above the place of decay on the South East buttress flare.



Photo 4: Illustrates the extent of decay and the presence of black bootlace mycelium (rhizomorphs), thin black lines throughout the discoloured wood, are special feature suggesting colonization by Armillaria mellea



email: frankparsons@me.com
website: parsonstreecare.uk

mobile: 07791 652 889
flat 1, 22 cumberland park london W3 6SX

Photo 5: Illustrates a new driveway installed underneath the canopy of T1, which is most likely responsible for the dieback in the tips of the north stem directly above the affected rooting area.



Photo 6: Shooting west illustrates dieback from the tips on the north stem directly above the new driveway surface installed.



email: frankparsons@me.com
website: parsonstreecare.uk

mobile: 07791 652 889
flat 1, 22 cumberland park london W3 6SX

Photo 7: Shooting north illustrates the proximity of residences opposite T1. Dimensions will be set out in notes below this section.



Notes:

Dimensions and distances from tree to surrounding properties:

Stem to house No.4 – 6m
Stem to house No.18 – 13m

Canopy edge to house No.4 – 2m
Canopy edge to house No.18 – 9m

email: frankparsons@me.com
website: parsonstreecare.uk

mobile: 07791 652 889
flat 1, 22 cumberland park london W3 6SX

The Local authority is Haringey council. T1 prompted this tree condition survey and recommendations of a tree work schedule in relation to hazard assessment.

Photos 2,3 and clearly show the modification of wood in the buttress flare on the SE side of stem which has been caused by the white rot fungi Armillaria mellea more commonly known as honey fungus. Typically wood discolouration, wood softening and later loss of strength forming a cavity in the stem.

Photos 5 and 6 illustrate the ill health on the north stem of T1, whereby dieback can be seen from the top of the canopy, indicating root desiccation or compaction of soil underneath the relative side of the canopy.
The tree is situated in a residential area over hanging properties, cars and driveways with high usage and high pedestrian frequency.

Implications of heave must be taken into consideration with regards to the maintenance or potential removal of T1.

Notes on heave:
Heave is defined as the uplifting of a structure above the level it was originally built at through the re-wetting of clay that was desiccated at the time of construction. For heave to occur, a structure has to be founded in a clay soil that has a well-developed persistent soil moisture deficit, i.e. it is extremely dry, and therefore shrunk, with the capacity to significantly swell when it re-wets. Persistent soil moisture deficits are more likely to develop on impermeable soils, where the movement of water through the soil profile is very slow and re-wetting takes a long time, often many years.

Heave can only happen if the structure was built after the tree had the capacity to create a persistent moisture deficit, i.e. the building is younger than the tree. It takes a number of years for a persistent soil moisture deficit to develop and it usually takes a number of years for that deficit to reduce through natural re-wetting and for the soil to expand back to its original condition at field capacity (its maximum water content). For that reason, heave usually occurs over a number of years, it is progressive and, for all practical purposes, it is beyond control once it begins unless anti-heave precautions have been designed into the structure.

The Table below is an extract from Berkshire council ‘building near trees’ and illustrates the safe distance cedar trees should be away from any building.

Water Demand of Tree	Tree Species	Max (Mature) Height in metres (m)	Safe distance away from Trees for a 1.2m deep foundation (m)
Moderate	Horse Chestnut	20	13

email: frankparsons@me.com
website: parsonstreecare.uk
mobile: 07791 652 889
flat 1, 22 cumberland park london W3 6SX

Recommendations

Based on the general observations above from the visual tree assessment and survey carried out on the 1st June 2016, I suggest the following works schedule. Reasons and justification can be found within the conclusion.

Preliminary Work Schedule:

1. Check building foundation depths, inform building insurance company and a structural engineer to ascertain the extent of possible heave in relation to the housing design of surrounding properties to the removal of T1.
2. Fell to ground level via sectional takedown with a high priority

Priority of Works:

- High Priority (1) – Within 3 months of works recommended.
- Medium Priority (2) – Within 6 months of works recommended.
- Low Priority (3) –Within12 months of works recommended.

Conclusion:

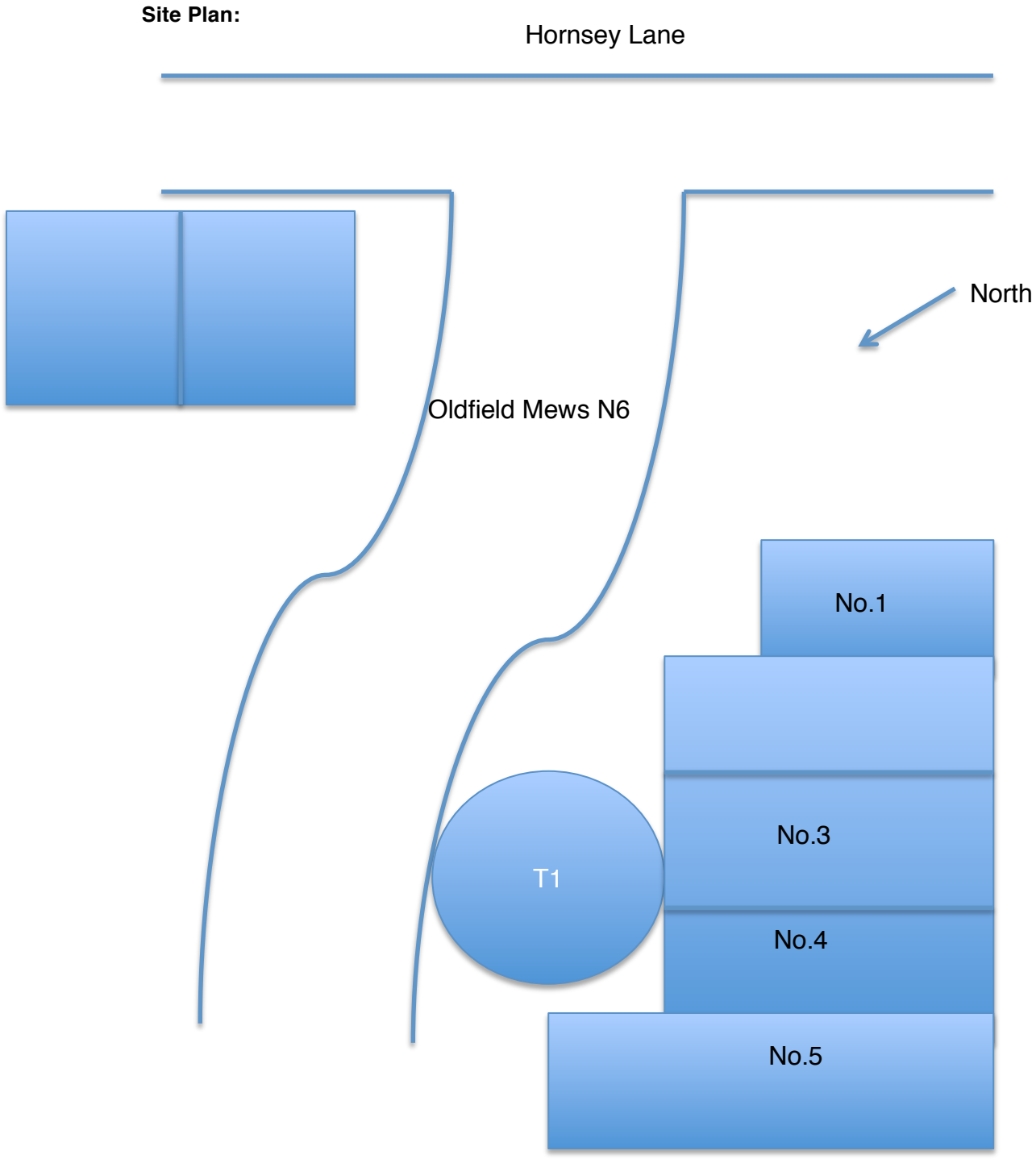
It is clear to me that T1 is physiologically and structurally compromised. Primarily the cause of Honey fungus colonization was the severing of roots historically to install a new driveway surface at no.3. This weakened the trees defence structure and spores enter through the mechanical wounds at the stem base. Degradation of the wood happens over a few years and the extent of decay will not be entirely accurate without internal investigation methods employed. However, the Honey fungus white rot will aggressively colonize live wood consistently from now onwards.
Secondly, the installation of a new driveway at no.4 has directly affected the rooting area of T1 and subsequently caused a decline in growth at the top of north canopy. Stripping of soil, severance of roots and compaction are all causes of root desiccation, which impact the health, and vigour of its canopy.
The combination of physiological and structural deficits justifies my recommendation to remove the mature horse chestnut growing in the front of 3 and 4 Oldfield Mews as the hazard posed by the ill health and poor structural condition of T1 is high in relation to its surroundings.

All work should be carried out in accordance with BS 3998:2010 Tree work Recommendations.

email: frankparsons@me.com
website: parsonstreecare.uk
mobile: 07791 652 889
flat 1, 22 cumberland park london W3 6SX

PARSONS TREE CARE

Site Plan:



email: frankparsons@me.com
website: parsonstreecare.uk

mobile: 07791 652 889
flat 1, 22 cumberland park london W3 6SX

References:

Barreltreecare.co.uk – Trees and structural damage. (01/06/16)

BS 3998:2010 Tree work Recommendations.

BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations

West Berkshire Council (westberks.gov.uk) – building control technical matters 9 - LABC. (01/06/16)

email: frankparsons@me.com
website: parsonstreecare.uk

mobile: 07791 652 889
flat 1, 22 cumberland park london W3 6SX