Treestyle
CONSULTANCY

Tree Condition Report with a Recommended Works Schedule

Date of Assessment
10th December 2020

Sites
Stenner Lane
Didsbury
Manchester

Instructed by
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Executive Summary

Treestyle Consultancy was commissioned to complete a condition appraisal of a tree on Stenner Lane, Didsbury, Manchester in December 2020. This is Treestyle Consultancy's initial tree condition and recommendations report which assessed a lime tree potentially damaging a brick wall lining Stenner Lane, Didsbury. The highlighted tree was assessed at a level two arboricultural survey that involved a full VTA (Visual Tree Assessment) from the ground. This tree was recorded and mapped in accordance with BS 5837 (2012) Trees in relation to design, demolition and construction - Recommendations.

The tree in question resides within the grounds of the Parsonage Gardens. It is one of a group of trees which provide an excellent green infrastructure, they can be experienced from within and appreciated by the wider public domain. They produce a variety of benefits from creating a wonderful area for relaxing and creating screening and privacy from neighbouring businesses.

The tree and its proximity to the wall create two potential issues, Firstly the wall is currently displaying vertical cracking and secondly there is the possibility of entire tree failure, both due to the below ground constraints. The boundary wall lines the public footpath and generally speaking this area could be considered to have low occupancy. However, entire tree failure, because of the below ground constraints, cannot be ruled out. If this occurs it is of greater concern because of the considerably higher occupancy rates caused by the proximity of Didsbury Inn.

N.B. Target areas are places where a tree or tree part could fall and land on a building, structure or a person causing damage or injury. This report makes recommendations, however, it is the responsibility of the landowner to make the management decisions concerning the tree.

The contrast between the topography of Stenner Lane and Parsonage Gardens is approximately 1.5m of which the wall in question divides these two areas. T1 lime has a height of 25m and a Diameter at Breast Height (DBH) of 445mm, whilst this is a mature tree it still potential to expand its girth. The trees greatest restriction with its life potential is its below ground constraints with the wall preventing its natural lateral spread. A tree with a DBH of 445mm has a minimal rooting distance from the trunk of 5.5m with 92m^2 rooting mass. Lime, generally as a species has a heart root morphology with a typical root depth of 1.3m (Tree Roots in the Built Environment) which may prevent roots being present beneath the hard none permeable surface of Stenner Lane.

The second issue with the trees longevity is with its below ground constraints which can be seen with two vertical cracks in the wall, this is undoubtably due to the trees restricted root potential, not only with T1 but with all the other limes seen along this boundary wall. In addition the trunk of the tree is touching the wall and restricting its natural expansion, which again is only currently a fraction of its potential size. This is the trees greatest constraint restricting its life potential.

The height of the tree and its dominance on the landscape may have contributed to the cracking of the wall. In strong winds the tree will dissipate this energy down from its crown, then its stem and ultimately into the rooting area which is potentially moving due to the prevention of its spreading roots. A crown reduction would prevent the tree from moving in strong winds, however, all of the vegetation lining the boundary is causing an issue.

The wall was noted to still have a vertical element to it around where the crack is located. Whereas further along the wall near to the entrance to the Gardens a slight lean can be seen between two separate wall, this also appears on Google Maps 2014 with minimal difference. It was noted that the public footpath beneath the tree had room to be widened, if the wall could be reconstructed one brick out, then lined with a root direction membrane then this would allow all the trees to remain and would address the trees natural expansion issue.

Generally the lime trees located along the boundary wall are of good quality, however, their below ground constraint greatly reduce their life potential. This species of tree would normally be categorised as high (category A) quality and value due to their size, species type and potential lifespan of 40 years plus. Unfortunately, due to their restricted environment they have between 10 to 20 years life potential and are highlighted as medium B quality because of this.

T1 lime has been categorised and mapped in Appendix B - Tree Numbering and Categorisation. Trees requiring work have been documented and categorised in accordance with BS 5837 (2012) - Trees in relation to design, demolition and construction - Recommendations.

These timescales are guidelines to help management ascertain the importance, the urgency and to prioritise the work as stated in Appendix B - Tree Schedule. Only one tree was recorded with its time scales, identification, observations and recommendations can be found in Appendix B - Tree Schedule and their locations in Appendix A - Tree Numbering and Categorisation.

Type / Frequency	Immediate	28 Days	6 Months	Planned
Individual Trees	-	-	T1	-

It is important that the caveats and limitations are understood, they can be read in section 4.0 of this report.

1.0 Introductions

1.1 Treestyle Consultancy's principle assessor is Andrew McLoughlin, the Managing Director of Treestyle Consultancy since 2001. I have a National Certificate in Arboriculture and a Higher National Diploma in Arboriculture. Qualified Arboriculturalist since 1998. I am also a qualified teacher and a LANTRA instructor and assessor. ISA Tree Risk Assessment Qualification, Quantified Tree Risk Assessor. Ancient and Veteran Tree Expert. Up to date Curriculum Vitae (which include records of up to date Continued Professional Development - CPD) can be provided upon request.

1.2 The task of an Arboricultural Consultant is to consider all aspects of tree safety with regards to a trees biological and mechanical issues, however, it should be noted that no tree can be deemed as risk free. The ever changing natural environment and the effects of global warming all put trees under stress. Unpredictable forces such as extreme weather, the tidal wave of none native pathogens and mans influence with constant development around trees can all greatly reduce a trees longevity. Other essential areas for consideration are trees potential longevity, their amenity, landscape, ecological and conservational value, social and recreation contributions. The aim of the Arboricultural Consultant is to produce recommendations with the aim to retain green infrastructure where possible. However, recommendations are put forward to reduce the level of work as low as reasonably practical, given the owners acceptance of the level of risk and the perception of its value to the environment.

2.0 The Report

2.1 Survey Brief

A request for a survey and written report was received following an email from Sam Whittle from Helmrig Ltd. Communication between F Parkinson Ltd and myself helped the decision making process and the levels of assessment to quantify the required tree works within the grounds. Health and safety was deemed paramount, in addition upholding the grounds visual amenity value and ensuring a continuous green infrastructure for the future. A suitable management plan with recommendations would be made in accordance with current Arboricultural best practice and tree health care techniques. Ultimately this report will inform/update the landowner who can then make the management decisions best suited to his/her requirements.

All trees highlighted for inspection have been mapped and where possible trees were grouped. All trees and tree groups requiring attention have been listed in Appendix B – Tree Schedule. Appendix A - Tree Numbering and Categorisation highlights these trees. Their relevant recommendations can be read in the latter part of this report. It should be noted that Treestyle Consultancy has no association with any company/ organisation who could be involved in carrying out any tree work that is recommended in this report.

The International Society of Arboriculture (ISA) Best Management Practice (BMP) was used with the guiding principles of a Level 1 and Level 2 inspection.

The normal Level 2 “basic” assessment which involves a full 360 degree view of a tree crown, stem and potential rooting area could not always be carried out. This is because a percentage of the tree population is located on third party land were access could not be gained. These areas were inspected at a Level 1 “limited visuals”. This is deemed ample for their inspection due to the low occupancy of the areas beneath.

Levels of Tree Assessment

Level 1 Limited Visual Assessment; A visual assessment of an individual tree or a population of trees near a specified target, conducted from a specific perspective, in order to identify certain obvious defects or specified conditions. Observations are made from ground level or via a drone.

Level 2 Basic Assessment; A detailed visual inspection and assessment of a tree and the surrounding site, commonly found to possess a hazard. The basic assessment requires the tree risk assessor to complete a 360 degree view of the tree observing crown, stem and potential rooting area. Tree dimensions are recorded using hand tools and the trees in question mapped and listed on a schedule.

Level 3 Advance Assessment; An advanced assessment is performed to provide detailed information about specific tree parts, defects, targets or site conditions. Methods of advanced assessment can include climbing, decay detection and/or root excavations.

Objectives and scope of the report are:

- Assess the condition of the trees and categorise them in accordance with British Standards BS 5837, Trees in relation to design, demolition and construction – Recommendation 2012.
- Present an understanding of a trees requirements and to recommend best practice systems that may allow trees, people and wildlife within the grounds to coexist for longterm benefit.

2.2 Background

This is Treestyle Consultancy's initial tree survey within the grounds of Parsonage Gardens where the tree was highlighted for inspection. This type of tree survey is normally recommended to be carried out every 15 months by a suitably experienced and qualified Tree Consultant. This allows the assessor to observe the trees in all four seasons. However, the trees removal obviously supersedes this reassessment.

2.3 **References**

- British Standards 3998 Tree Work Recommendations 2010
- British Standards BS 5837, Trees in relation to design, demolition and construction – Recommendation 2012
- British Standards 42020 Biodiversity - Code of Practice for Planning and Development 2013
- British Standards 8545 Trees: from nursery to independence in the landscape - Recommendations 2014
- International Society of Arboriculture Best Management Practice Tree Risk Assessment 2013

3.0 Tree Preservation Order and Conservation Area Protection

3.1 Town & Country Planning Act (TCPA) Tree Preservation, England, Regulations 2012 and the TCPA 1990 (as amended) provide legislative protection for trees within England. Any tree work normally requires permission from the local authority which can be sort by going through government website planning portal.

https://www.planningportal.co.uk

4.0 Caveats and Limitations

4.1 This survey was carried out from ground level. No aerial inspection was undertaken and, as such, this report can only identify defects clearly visible from the ground. A VTA (Visual Tree Assessment) is a level two arboricultural tree survey. This normally involves a full 360 degree visual of the buttress, stem and crown of the tree. While every attempt has been made to provide a realistic and accurate assessment of the trees' condition at the time of inspection, it may have not been appropriate, or possible, to view all parts or all sides of every tree to fulfil the assessment criteria of a risk assessment.

4.2 No tree is entirely safe given the possibility that exceptionally strong winds could damage or uproot even a mechanically 'perfect' specimen. It is therefore usually accepted that hazards are only recognisable from distinct defects or from other failure-prone characteristics of the tree or the site.

4.3 Underground services were not confirmed around any of the trees surveyed. The potential influences of trees upon building or other structures resulting from the effects of trees upon shrinkable load-bearing soils or the effect of incremental root growth are specifically excluded from this report.

4.4 The report reflects the tree stock as found on the day surveyed. Change of ground levels, soil conditions, surrounding tree cover or land use, or any ground works within the root zone of any tree may invalidate the content of this report. No root zone excavation was undertaken.

4.5 Change of circumstance as a result of unusual weather conditions may invalidate the content of this report. It is recommended that trees should be reassessed after strong gale, 39 – 46 mph wind Beaufort scale 8.

4.6 The content of this report is valid for 12 months from the cover date. Any works recommended for beyond this time period are based on expectations rather than in response to currently identified defects. Trees should have their condition re-inspected by a qualified arboricultural consultant within three years of this report being written.

5.0 Site Details

5.1 Weather Conditions at time of survey

The weather at the time of the survey was overcast and cool with a mild westerly wind. The conditions were still sufficient to allow for the level of survey required.

5.2 Site Location

Didsbury Parsonage Trust comprises of an old house with its associated gardens. Set on the edge of a busy residential area with two public houses, a church and the old building all within reach of Stenner Lane, this has resulted in an area with high occupancy target.

5.3 Topography

The topography of the grounds is relevant due to the location of the tree in question being on a slightly higher profile than that of Stenner Lane. This discrepancy is approximately 1.5m from the footpath to the soil profile of the tree.

5.4 Underlying Soils

The soils parent material within the grounds is glaciofluvial deposits. The soil texture is sand to sandy loam with a deep soil depth.

Ref; British Geological Survey materials NERC(2015)

Assessment of Ecology and its Potential Constraints

5.6 Within the grounds are trees that are home to varied species of wildlife as well as birds, mammals and bats which benefit from the presence of these trees. This is primarily because after they were reduced, decaying fungi allow hollowing of the trunks which in turn allow wildlife to thrive. These issues could impose significant constraints of the use, management and development of these trees, as well as the timing for trees works.

6.0 Biological or Mechanical Issues

6.1 The trees greatest mechanical issue can be seen with its below ground constraints resulting in virtually no tree roots to the west. This combined with the height of the tree may have contributed to the movement of its root plate resulting in a vertical crack in the wall.

7.0 Species Composition

7.1 Lime *(Tilia cordata)* species generally have good longevity characteristics and can be found throughout the local area. They provide great visual aesthetics and contribute to the local ecology.

8.0 General Overview and Discussion

8.1 These trees as a group provide good visual amenity value for local residents and visitors to the gardens. Health and safety is fundamental, however, tree retention is vitally import, especially as these trees are an important feature of the landscape. The rooting area of the tree will be greatly off set into the gardens to the east due to there being nearly 50% of its roots missing on the westerly side and because of the wall. This instability allows the root system to move, which in turn has caused the wall to crack. However, the wall appears not to be failing but does have a vertical crack caused by the expansion and movement of the trees rooting area. A hard crown reduction may reduce its wind throw potential and slow the trees expansion of its girth. Whilst this is a tree condition survey and I have no mechanical engineering experience with stone walls it appears to be relative stable and should be monitored for further movement whilst the tree is reduced in height. This will allow for some green infrastructure to remain whilst the boundaries are replanted, the tree regularly assessed and the wall repaired.

8.2 If the wall is to be repaired then the installation of a root directing membrane needs to be installed inside of the newly constructed wall. This can help prevent damage to the wall and direct the roots downwards.

8.3 It is imperative that tree planting be carried out as soon as possible so as to ensure a continuous green infrastructure for future generations to come. Tree planting can be a relatively inexpensive operation especially when grants are available, see the links below. The greatest cost can be man power, this is in abundance with the local community where the children are nearly always keen to plant trees. This is an excellent opportunity to get children involved in tree planting which is happening across the UK. Getting the children to plant trees can be an educational tool as well as giving them a sense of ownership and responsibility. Advice on tree planting can be sort from Treestyle Consultancy, additionally, links to the current guidance can be found in the latter part of this document.

8.4 Both individual and groups of trees have been highlighted in Appendix B - Tree Schedule. Generally speaking the chances of either a tree or tree part failing are considered to be low by the next inspection, however, the consequences would be significant should failure occur.

Responsibilities

TREE RISK MANAGER (tree owner, property manager or controlling authority)	**TREE RISK ASSESSOR** (as defined in scope of works)	**TREE WORKER** (as defined in scope of works)
Consider the duty of care Define and communicate tree risk management policies Determine the need to inspect the trees in question Identify the geographical limits of the tree inspection Explain target zone use Specify the desired level of assessment Establish the budget Decide the level of acceptable risk Establish the inspection frequency Determine the scope of the work Prioritise work Choose among risk mitigation options Provide required information to the risk assessor	Identify tree and site conditions to inspect Evaluate and classify the likelihood of a tree failure impacting a risk target Estimate the potential consequences of a tree failure Record and explain finding to the client Determine and recommend advanced assessments, if needed Determine tree risk Provide option for treatment to mitigate risk Estimate residual risks after treatment Recommend inspection frequency Develop a report Provide specification for selected treatments	Provide requested services; • Tree work safety review • Pruning • Removal • Support systems • Lightning protection • Tree health treatments • Transplanting • Tree replacement Identify the need for follow up treatments

A Summarised 10 year Management Plan for Newly Planted Trees

10 years	3-5 years	1 year	6 months
Review tree planting strategy	Remove and replace dead or dying trees Formative pruning Remove or lower tree ties	Check tightness of tie straps	Replace tree wood chippings Water trees in the dry periods of the summer months

Useful web links

Tree Planting Manual https://www.forestresearch.gov.uk/tools-and-resources/urban-tree-manual/

Tree Species Selection Guide http://www.tdag.org.uk/uploads/4/2/8/0/4280686/tdag_treespeciesguidev1.3.pdf

Tree Species Selection Guide to Informed Decision Making https://www.barchampro.co.uk/wp-content/uploads/2019/05/Species-Selection-FINAL.pdf

Grey squirrels https://www.woodlandtrust.org.uk/mediafile/100263520/ps-wt-2014-grey-squirrel-management-ps.pdf?cb=3819311e674241c0924fedcb48a432f9

Common Sense Risk Management of Trees http://ntsgroup.org.uk/wp-content/uploads/2016/06/FCMS025.pdf

Trees and the Law https://www.trees.org.uk/Trees.org.uk/media/Trees-org.uk/Documents/GuideToTreesAndTheLaw-Web.pdf

Funding for Tree Planting

https://www.woodlandtrust.org.uk/plant-trees/schools-and-communities/

https://treecouncil.org.uk/take-action/grants-for-trees/