



**Preliminary Tree Survey
and
Arboricultural Impact Assessment**

**Land off New Smithy Avenue
Thurlstone**

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Report Title:	Preliminary Tree Survey & AIA Land off New Smithy Avenue Thurlstone
Report Reference:	R-2736-02
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Summary

This survey assessed five individual trees and two groups of trees. Four of the trees surveyed are situated in adjacent private land, resulting in their inspection being limited.

One tree requires annual monitoring due to a small section of included bark at its union.

The trees on this site have a low impact on the local treescape.

The recommendations in this report are of a preliminary nature and are subject to comments enforced by Barnsley Borough Council, in line with the current planning application.

Introduction

Purpose of the Report

1. This report has been commissioned to provide professional independent, detailed arboricultural advice on all relevant trees present at Land south of New Smithy Avenue, Thurlstone. The Arboricultural Impact Assessment aims to offer professional advice and necessary recommendations with regards to proposed development design, evaluating the direct and indirect effect it will have on the existing tree cover.
2. The report has been undertaken in accordance with BS 5837:2012 'Trees in relation to construction – Recommendations'.
3. A topographical plan has been supplied by the client. A development masterplan has also been supplied by the MPJ Design Associates Ltd on the 10th January 2017.

Limitations

4. All findings and recommendations are based on visual observations conducted from ground level during the site visit only. No other diagnostic procedures were used to establish any extent of internal decay nor was a climbing inspection undertaken.
5. All measurements were obtained with the use of a clinometer and an electronic distometer. On occasion it is not viable to provide accurate measurements due to restricted access or other mitigating circumstances on site, and the data may be estimated.
6. Due to the large potential penalties for illegally carrying out work to protected trees, it is recommend that a check is carried out prior to any works being undertaken to ensure the trees on site are not protected by a Tree Preservation Order or are within a Conservation Area. We are happy to assist in establishing whether trees on this site are protected by a Tree Preservation Order or a Conservation Area by the Local Authority, if required.

Site Visit

Site Description

7. Land Use –The land is currently enclosed unused pasture land.

The site is located within the small village of Thurlstone. To the north, east and south of the site are residential properties with associated garden space. To the west of the site lies a large pasture with a large detached property.

8. Topography - The site is approximately level within the centre of the site.
9. Treescape - The area has a poor tree cover. Four of the trees surveyed in situated in adjacent private land, resulting in their inspection being limited.
10. The trees on this site have a low impact on the local treescape.
11. Species diversity – The species diversity on this site is poor. Species surveyed on site include; sycamore, hawthorn, goat willow, holly and ash.
12. Visual amenity value - The trees on site collectively provide a low visual amenity to the surrounding area.

Survey Conditions

13. The survey was carried out on 15th October 2016 by Victoria Black.
14. The weather conditions; bright, clear and cold.

Results

Tree descriptions and recommendations

15. The tree survey revealed a total of five individual trees and two groups of trees. All seven items of vegetation were identified as retention category 'C'. There was no retention category 'A', 'B' or 'U' trees identified. Please refer to Appendix 2 for retention category and definition criteria.
16. It has been recommended that tree T4 is monitored annually to assess if its condition is still acceptable. T4 has a small section of included bark at its union.

Conclusions

17. The trees surveyed were generally found to be in fair condition.
18. One tree (T4) requires annual monitoring. This is detailed at Appendix 1.
19. Any proposed development should be accompanied by an Arboricultural Method Statement detailing the protection measures necessary for each tree. This should specify fencing standard and positions, acceptable tree friendly construction techniques and necessary tree work.

Implications for future potential development

20. The proposed development consists of a mixture of 21 residential properties with associated road and footpath infrastructure, car park, garden space, and landscaping.

Tree Works

21. Prior to any development commencing on site the first operation will be to carry out the necessary tree works. All tree works should conform to BS 3998:2010 – Recommendations for tree works. All tree works should be formally approved by the Local Planning Authority before beginning.
22. Those trees which overhang the public footpaths or public highways, detailed at Appendix 1, shall require future maintenance to maintain clearance heights for vehicular or pedestrian traffic. These heights should be 5.6m above a road and 2.5m above a footpath.

Proposed tree removal to facilitate development

23. A small section of G3 will require removal to facilitate the proposed development. It is felt that the removal of this section of hedging could be mitigated by a good replacement planting scheme on site, introducing a more varied selection of tree species.

Implications for retained trees

24. The following procedures should be put in place to protect the retained trees.

Tree works

25. Prior to any development commencing on site the first operation will be to carry out the necessary tree works. All tree works should conform to BS 3998:2010 – Recommendations for tree works. All tree works should be formally approved from the Local Planning Authority before beginning.
26. Necessary tree works are detailed at Appendix 1.

Protection

27. Once the necessary tree works are complete, the protective barriers should be fully installed. No other work should commence until this happens – this includes movement of materials, supplies or machinery onto the site and any excavations or soil stripping. Once the barriers are properly erected in their correct positions, they should not be removed or altered in any way without prior approval from the Local Planning Authority.
28. All tree protection barriers should be constructed in accordance with BS 5837:2012. This fencing will create construction exclusion zones in order to protect the retained trees root protection areas. No pedestrians, vehicles, materials or equipment should be allowed within these fenced areas at any time.

29. On this site, it has not been possible to protect the entire root protection area of T2 with the use of protective barriers alone. As such, robust additional ground protection will be required within this area.

Construction

30. A proposed footpath will encroach slightly into the RPA of retained tree - T2. This encroachment is deemed substantial, and the construction of a hard surface required within the root protection area requires a "no dig" construction method. The various requirements for a hard surface within the RPA are often achieved using a load suspension layer incorporating a three dimensional cellular confinement system (other systems are also occasionally used). Traditional edge supports are not recommended due to their deep foundations, the use of alternative methods of edge supports, e.g. sleepers pinned in place. The finished surface must be porous in order to allow air and water to reach the tree roots, whilst at the same time being able to withstand the load applied.

Demolition

31. In this case, there is no demolition to take place on this site.

Drainage and Utilities

32. It is our understanding that any drainage and utilities will not be installed within the root protection area of any tree on this site.

Landscaping

33. It should be noted that no tree replacement and landscaping plans have been provided to comment on at present. Once these are available, the detailed landscaping plan should include areas designated for structural landscape, that need to be protected from construction operations in order to prevent the soil structure being damaged. It should include an assessment of the topsoil quality and amelioration, and details of landscape operations. All in line with British Standards BS 4428:1989 & BS 8545. Further to this should include species choice, stock size, protection methods and a regime of maintenance. The planting of trees would improve the aesthetic value of the surrounding area and may be conditioned in the usual way.
34. All new planting should be in line with British Standards BS 4428:1989 & BS 8545.
35. This AIA will require updating once this information is available.

Appendix 1: Tree Data

Tree/group number	Common name	Botanical name	Age class	Height (m)	Diameter (mm)	Canopy Spread				Crown clearance (m)	Physiological condition	Structural condition	Observations	Recommendations	Visual amenity value	Remaining contribution (years)	Retention category
						North	East	South	West								
1	Goat willow	Salix caprea	Young to semi mature	16	To 260	See plan	See plan	See plan	See plan	0+	Fair	Poor	Group growing close to boundary. All are slightly suppressed with a leaning form and high canopies. Major deadwood noted within canopy. Scrappy looking group. Over hanging boundary.	No actionrequired at present.	Low	10 to 20	C1
2	Sycamore	Acer pseudoplatanus	Early mature	12	320	3.5	1.6	4.6	4.4	3	Fair	Fair	Twin stemmed at 1.9m with an unbalanced canopy. Growing on stone rubble. No major defects evident. Very minor deadwood noted within canopy.	No actionrequired at present.	Low	20+	C1
3	Hawthorn	Crataegus monogyna	Young	2.5	To 100	See plan	See plan	See plan	See plan	0+	Fair	Fair	Old, unmanaged boundary hedge. No major defects evident.	No actionrequired at present.	Low	20+	C1
4	Sycamore	Acer pseudoplatanus	Early mature	11	Est 300 at base	3.5	3.5	3.48	Est 4.5	2.5	Fair	Fair	Twin stemmed at 0.5m with a balanced canopy. Tight union of stems. Limited inspection. Situated on adjacent land.	Monitor union	Low	10 to 20	C1
5	Ash	Fraxinus excelsior	Young to semi mature	8	Est 100, 150 & 130	2.8	4.14	5	Est 5	1.9	Fair	Fair	Group of three tres. Located on adjacent land. No major defects evident. . Slightly over hanging boundary.	No actionrequired at present.	Low	10 to 20	C1
6	Sycamore	Acer pseudoplatanus	Semi mature	6	60	1.1	1.45	1.37	1.4	2	Fair	Fair	Single stemmed and vertical with an unbalanced canopy. Located on adjacent land - very limited inspection.	No actionrequired at present.	Low	10 to 20	C1
7	Ash	Fraxinus excelsior	Semi mature	9	To 150	4.69	5.5	4.39	4.75	2	Fair	Fair	Multi stemmed and vertical with an unbalanced canopy. Located on adjacent land - very limited inspection.	No actionrequired at present.	Low	10 to 20	C1

Appendix 2: Explanation of Tree Descriptions

Measurements

Tree height is calculated in metres from ground level to the highest point of the tree.

Stem diameter is measured and rounded down to the nearest ten millimetres at 1.5m above ground level using a specialist measuring tape. Where a tree divides into multiple stems each stem will be measured.

Canopy spread is measured from the centre of the stem base to the tips of the branches in all four cardinal points using an electronic distometer.

Crown clearance is estimated in metres and is an indication of the lowest significant live branches of the crown.

Age Class is divided into young, semi-mature, early-mature, mature, over mature, and veteran.

Physiological condition is an assessment of the health and vigour of the tree.

Structural condition is an indication of the structural integrity of the tree. This is given as good, average or poor.

The observations column will include a brief description of each tree and provide further information as relevant.

The remaining contribution is a rough estimate of the number of years a tree is expected to survive in a structurally sound condition.

Retention Categories

Category ratings are allocated based on the current quality and value of a tree in its current surroundings assuming the recommendations of this report are carried out. No consideration is given to any specific development proposal when allocating category ratings.

Category A trees are those which are of high quality and value, are in good structural and physiological condition and are expected to contribute for at least another 40 years.

Category B trees are those which would be considered as category A trees but which are of lower quality and value, poorer structural condition, and which are expected to contribute for at least 20 years.

Category C trees are those which are of low quality and value, are in poor condition, and are expected to contribute for at least 10 years.

Category U trees are those which are expected to contribute for less than 10 years due to serious defects. As is common in risk management, where there is doubt, the precautionary principle may be applied.

Sub-categories

Sub- categories of 1, 2 or 3 are included in the tree data tables and are defined as follows:

Sub-category 1 trees are those with 'mainly arboricultural value'

Sub-category 2 trees are those with 'mainly landscape value'

Sub-category 3 trees are those with 'mainly cultural or conservation value'

Appendix 3: General Recommendations

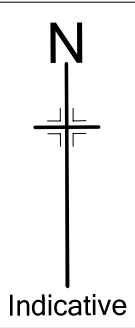
All work must be to BS 3998:1989 - '*Recommendations for tree work*'.

This report is based upon a visual inspection. The consultant shall not be responsible for events which happen after this time due to factors which were not apparent at the time, and the acceptance of this report constitutes an agreement with the guidelines and the terms listed in this report.

Any defects seen by a contractor or the employer that were not apparent to the consultant must be brought to the consultant's attention immediately.

It is advisable to have trees inspected by an arboricultural consultant regularly.

Appendix 4: Tree Constraints Plan



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APPENDIX 4 - TREE CONSTRAINTS PLAN

Site: Land adjacent New Smithy Avenue,
Thurlstone.

Paper Size: A2 Scale: 1:500

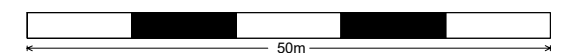
BS 5837: 2012 Retention Categories

	CATEGORY A
	CATEGORY B
	CATEGORY C
	CATEGORY U

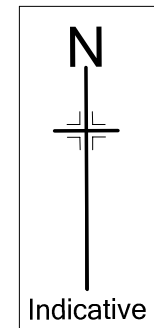
	ROOT PROTECTION AREA
	TREE STEM

Please note:
The plan is for guidance only
and should not be scaled from.

The original of this drawing was produced
in colour - a monochrome copy should not be
relied upon.



Appendix 5: Tree Protection Plan



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APPENDIX 5 - TREE PROTECTION PLAN

Site: Land adjacent New Smithy Avenue,
Thurstone.

Paper Size: A2 Scale: 1:500

BS 5837: 2012 Retention Categories

	RETAINED TREES
	TREES TO BE REMOVED
	RPA NOT PROTECTED BY BARRIER
	PROTECTIVE BARRIER

	ROOT PROTECTION AREA
	TREE STEM

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