

BS5837:2012 TREE SURVEY / Arboricultural Impact Assessment

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Site Address:
Ardwick Service Station
Chancellor Lane
Manchester M12 6JZ

Client:

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Site

Site: FS664 Ardwick Service Station, Chancellor Lane, Manchester M12 6JZ

Inspection date: 9th October 2021

Inspected by: Steve Launchbury

1.0 Terms of Reference

I am instructed by MBH Design Studio Ltd to carry out a BS5837:2012 survey at the above address.

This report contains survey information in accordance with BS 5837:2012 Trees in Relation to design, demolition and construction – Recommendations.

It details the quality and the value of the trees on site or immediately adjacent to the proposed development site.

Decisions can then be made whether to keep or remove trees or adjust the development to take advantage of the trees.

Remedial or other works may also be recommended.

A site visit was carried on 9th October 2021 to survey one tree against the rear of the sales building and provide an Arboricultural Impact Assessment, make recommendations and if required detail protection measures required during construction.

One young Ash tree was recorded against the south boundary fence, to the rear of the Sales Building.

Trees have been categorized as follows:

One Ash tree (young) has been Classified as BS5837:2012, Category C

Trees or groups of trees that are categorized A or B should be considered as constraints to development and every effort should be made to keep them within the design. Trees categorized C will not usually be seen as a constraint unless by virtue of for example grouping, they attain a higher categorization. Trees categorized U are rarely a constraint to development and may generally be felled.

A Category C tree in an inappropriate position for long term retention, which would normally in the near future removed to safeguard property (buildings, Installation etc), should not be elevated to protection status for its own sake as a result of a Planning Application.

Steve Launchbury of Alltree Consultancy Ltd trained at Kew Gardens in Horticulture in the early 80's and specialised in Arboriculture.

Since then he has worked in the industry for over 35 years, gaining further professional qualifications including passing the Professional Tree Inspection course by Lantra.

2.0 General Information

2.1 The Brief

Visit site, prepare a Tree Constraints Report. Conduct an Arboricultural Impact Assessment on a young tree in close proximity to the proposed extension to the Sales Building.

Technical Support Team, Manchester City Council Planning. Has requested the following.

1) On the basis of the location of the tree shown on the site location plan, tree roots would be likely to be affected by the proposed extension. Please can you provide information in relation to the age, condition and type of the tree, and the measures which would be taken in order to safeguard the tree during building works.

2.2 Scope of Report

This report is a preliminary report and as such did not entail an examination of the root system, did not ascend the tree or use internal decay detection equipment.

Further inspections may be required as a result of these preliminary findings.

2.3 References

The British Standard Institute publication BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' is the basis for this report.

2.4 List of relevant documents provided by the client:

ufm2.pdf, from Manchester City Council with the request as per above (2.1)

13859-P01 Existing Site Layout.pdf

13859-P03 Proposed Site Layout.pdf

2.5 Limitations

The information contained in this report is for the use of the client for whom it was prepared.

The contents are copyright and may not be used by third parties without written consent from Alltree Consultancy Ltd

This document is a report identifying trees, their locations and their condition in respect of planning.

It is not a tree health or safety report, it has not been prepared for use in a mortgage application or for insurance claims.

Detailed inspection, aerial access, drillings and soundings were not done for this report.

A tree owner is advised to have their trees regularly inspected, and again after strong winds or other severe weather.

This report is valid for one year.

2.6 Tree Preservation Orders

No TPO or Conservation Area for Ardwick Service Station was detailed on the Manchester City Council web site – see screenshot below (4.0a)

Even though the site is not covered by a TPO or Conservation Area, the tree shown in the Planning Application and detailed in this report is subject to Planning Controls during the Planning process. No works can be carried out until the Planning Process is completed.

2.7 Disclaimer

This report was prepared for the named client and the Local Authority Planning Department.

This report does not constitute advice to any third party not directly involved. No liability for any loss or damage will be accepted from any third party reliant on this report who is able to access the content by any means.

3.0 The Tree Survey

Methodology

Data is collected in accordance with BS5837 requirements.

All data is collected from ground level without climbing or other potentially invasive methods including digging to expose the root system.

Tools normally used are a diameter tape, laser measure and a handheld GPS data capture device.

Heights are also estimated using a surveyor's pole next to the tree.

Measurements

Where there is no access into the next door property, measurements are estimated where 'hands on' measuring is not possible.

Complete accurate tree data is therefore not possible for trees on adjoining properties unless there is access granted and no reliance should therefore be made on the limited data possible.

Parts of the tree obscured by ivy or other climbing plants or materials cannot be assessed accurately and no reliance must be made without further inspection.

Data is plotted using PT-Mapper Professional from Pear Technology.

Where tree canopies are symmetrical, one measurement is taken of the radius. Where the crown is asymmetrical, readings are taken at North, East and South. These will give a general idea of the shape as a representation.

Tree stems are measured at 1.5m above ground level.

A Root Protection Zone figure is derived from this reading with variations for multiple stems.

Rooting Zone

Ground features or obstructions may limit or encourage root spread into an asymmetrical area rather than the plotted area.

The plotted data will show the Root Protection Area as an idealized area and must be subject to confirmation or otherwise by hand dug trial pits if required.

For the Constraints survey the trees are recorded as at the present with no reference to any proposed plan or development.

For the Arboricultural Impact Assessment, the tree data is used where applicable in conjunction with the proposed construction layout to establish Tree Protection or Tree removal requirements.

The survey data will detail the recorded measurements.

4.0 Observations and Discussion

Category A and B trees should normally be retained and be a constraint to development. Category U trees can normally be removed as good Arboricultural practice. Any trees within neighbouring properties that affect or are affected by a proposed development may then be subject to negotiation.

Idealised Root Protection Areas (RPA) are derived from the stem diameter at 1.5m. Obstructions to rooting may be inferred and the likely RPA modified with compensatory area adjustment. The RPA is a Recommendation due to the difficulty of mapping the extent of the root system. Hand digging is recommended to locate the main roots if required.

Ideally any conflicts with trees (roots, canopies, and trunks) should be designed out with careful consideration of building location and size and special design arrangements where required. Trees that overhang or are close to a new building are often subject to excessive pruning over time or even removal.

Surgery may be required to trees adjacent to new structures, but this should be kept to a minimum due to the potential adverse long term health impact and retention of the tree. All surgery works must be agreed beforehand and must conform to BS3998:2010

In the case of trees being retained, and before any works (including demolition) commence on site, storage of materials, or changes of levels, a plan must be submitted to and approved by the Planning Authority.

Protective fencing that is required must be set up and remain operational and not repositioned without the advice of the Arboricultural Consultant.

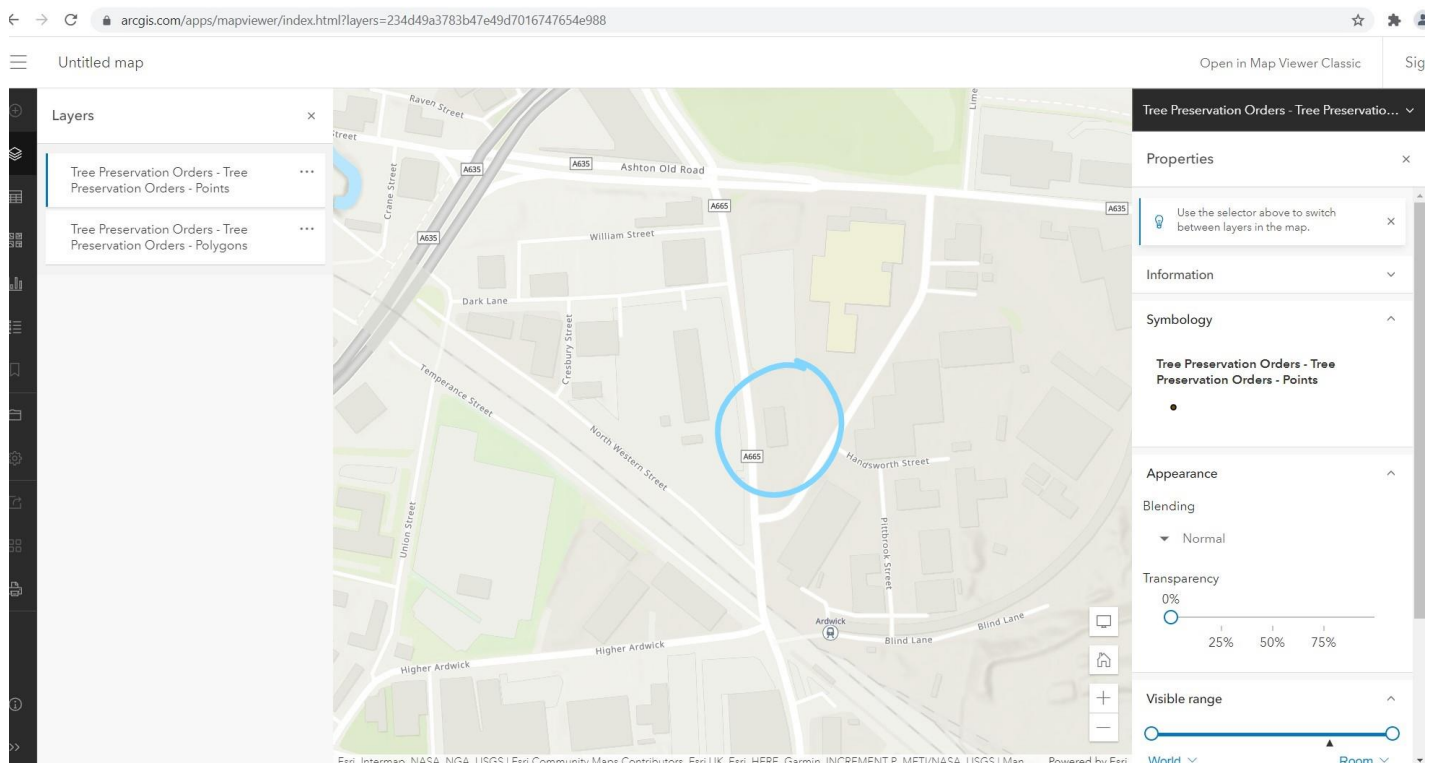
Consent for any works to protected trees (either Conservation Area, Tree Preservation Order or Planning Conditions) must be obtained prior to being carried out. If the trees are in adjoining properties under third party ownership, permission must be obtained in writing from the tree owner in addition.

4.0a Site Specific Observations

TPO / Conservation Area

Screenshot of the TPO map for Ardwick.

The Ardwick Service Station and surrounding area shown in the map is free of Tree Preservation Orders.



The relative TPO status implication of the area is that there are no TPOs on any large high visibility trees in the area, so would be inconsistent to protect a young Ash tree growing in an inappropriate location tightly between a boundary fence and rear of the Sales Building

Age of T1 Ash is estimated to be approx. 15 years.

Location of T1 Ash, is on the south border of the site, the base pressed against the metal high security fence and also touching a low brick wall that separates the edge of the site from an approx 1m wide concrete slab path. The slab path is an access path for maintenance to the rear of the Sales Building and touches both the low brick wall and the rear wall of the Building.

Tree Inspection: (see the Survey table below) T1 Ash is 8.5m tall, Crown radius of 3m, roughly even all round, trunk diameter at 1.5m of 200mm.

The first main branch is at 2m on the south, ie over the metal fence.

Crown height differs around the tree, with a low crown over the neighbouring (apparently) disused land that has been used to park cars. Against the rear guttering of the Sales Building and roof, the crown overshadows and impacts the building at just under 4m.

Condition of the tree is good. But the location and desirability of allowing the tree to grow to maturity is not good.

Normally, a tree of trunk diameter of 150mm or below is automatically classified as Category C.

Given the location of where it is growing between the fence and the brickwork of the building and maintenance path, the young age of the tree, the undesirability of allowing it to grow to maturity, (allowing a projected life of 10-20 years therefore, the tree has been classified as Category C.

A Google Earth map screenshot with the image date of 2nd June 2009 shows a very small tree (arrowed) in situ.



The Rooting Area is restricted to the north both by a well built low wall alongside the path and further restricted by the foundations of the Sales Building to the north and Outbuilding to the east. The significant root growth is therefore expected to be found predominantly to the south east round to the west.

Root Protection Area derived from the stem diameter after BS5837:2012 is stem diameter at 1.5m times 12 to give the protected radius. In this tree, the stem diameter of 200mm gives an RPA of 2.4m radius (18.15m³).

A Reshaped RPA of the same or more is shown in the Survey Maps below to take into account the likely significant root growth area. This is shown as the Compensated RPA,

The Current impact on the site is that the tree is about as big as it can get before damage occurs to the wall alongside the path and the boundary fence. The crown is already impacting directly on the roof and gutter of the Sales Building.

The future projected impact is that as the continues to grow at the current fairly rapid rate, the wall and path will be damaged and likely uplifted. The boundary fence will also be damaged. The primary damage however, is likely to be to the rear wall of the sales building, either by uplift if roots penetrate below the foundations, or depending on the exact nature of the superficial deposits (reported to be Devensian Till by the iGeology iOS App) which may contain unsorted layers of Clay, mudstone and sand leaving it potentially shrinkable.

Arboricultural Impact Assessment of the proposed development on the tree assuming that the tree was retained.

The above assessment of the tree has already identified that it will be prudent to remove the tree.

If the tree were to be retained against advice, it would still be possible to remove the Outbuilding and construct the new proposed extension with no Root Protection Area measures necessary.

It has already been demonstrated that the roots of the Ash tree will be located away from the foundations of the building.

The new extension will be further away in the 'Root Shadow' cast by the present foundations.

Protection Requirements if the tree were to be retained would only extend to a section of Heras fencing placed against the current west wall of the Outbuilding.

The protection requirements will not be required should the tree be felled.

Recommendation

Given the above assessment of the tree, its age, location and negative desirability for retention and Classification, the recommendation must be to Fell the tree and Poison the stump to prevent regrowth.

The Fell and Poison must only be carried out with Planning Approval. Under no circumstances must the works be carried out prematurely.

5.0 Tree Protection

Tree Protection will not be required.

T1 Ash is a young tree in an inappropriate location. The recommendation above is to Fell and Poison.

6.0 Special Measures for working within a Root Protection Area

No special measures are required. T1 is to be felled and the stump poisoned as per the Arboricultural Assessment above.

7.0 Arboricultural Method Statement

The Ash tree on the site must be assumed to be protected under planning conditions, it is essential that no tree removal is carried out until Planning Permission is agreed.

Tree Removal carried out by untrained operatives?

All tree work is to be carried out by a competent arborist correctly insured and in accordance with BS3998:2010.

Appendix

Contains

BS 5837:2012 Chart for Tree Quality Assessment

Photos

The survey data table

Survey maps

Table 1 (BS5837:2012) – Cascade Chart for Tree Quality Assessment.

Category & 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 (i.e. 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.				DARK RED
TREES TO BE CONSIDERED FOR RETENTION					
Category & Definition	Criteria — Subcategories				
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation		
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 essential components of groups, or of 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)	LIGHT GREEN	
Category B Trees of moderate quality With an estimated remaining life expectancy of at least 20 years	Trees that might be included in the high category, 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	MID BLUE	
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 150mm	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	GREY	

Photos



T1 Ash to the rear of the Sales Building impacting on the roof and gutter



T1 Ash trunk already pressed against the wall and security fence



Survey Data

Tree ID	Latin Name	Maturity	Likely Bat Habitat	Height (m)	Height and direction of first significant branch (m)	Number of Stems	Stem 1 (mm)	Spread N E S W (m)	CH – N E S W (m)	Crown	Stem	Basal Area	Category and Sub Category	Life Expectancy	Phys Condition	Comment
1	Fraxinus excelsior (common Ash)	Young	No	8.5	2 South	1	200	3 3 3 3	3.7 3.5 1.5 2	Good	Good	Fair	C1, 2	10 to 20 yrs Due to the inappropriate location and the high likelihood of Ash Dieback in the near future.	Good	Young Tree approx. 15 years old Self seeded, growing between the High Security metal palisade fence and a low brick wall separating the maintenance path and the security fence. The tree is growing vigorously. Crown is in contact with the Sales Building roof and gutter. No visible indication in the leaves or crown of Ash Dieback at present. Lower branches have been removed in previous years. The tight location pressed between the fence and rear of the sales building is inappropriate for long term retention. Future potential of the tree is limited by the damage that is likely to occur to the Sales Building if allowed to be retained.

CHANCELLOR LANE

Monitor

10.34

P5 P6

P7 P8

P1 P2

P3 P4

Monitor

10.34

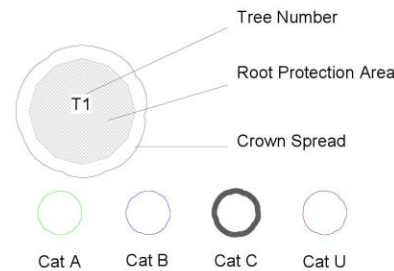
SALES BUILDING

Root Protection Area of 18.15m2 adjusted to maintain a likley root spread due to the Sales Building foundations likely to be preventing root access.

New timber / board fence has stone to be installed

2m New Chain and fence to be installed

New 2.7m high timber covered storage area to be installed



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FS664 ARDWICK SERVICE STATION
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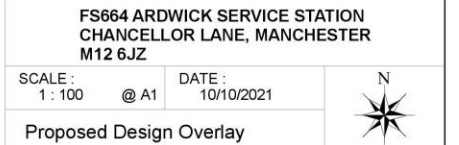
SCALE : 1 : 100 @ A1 DATE : 10/10/2021

Tree Constraints (compensated)

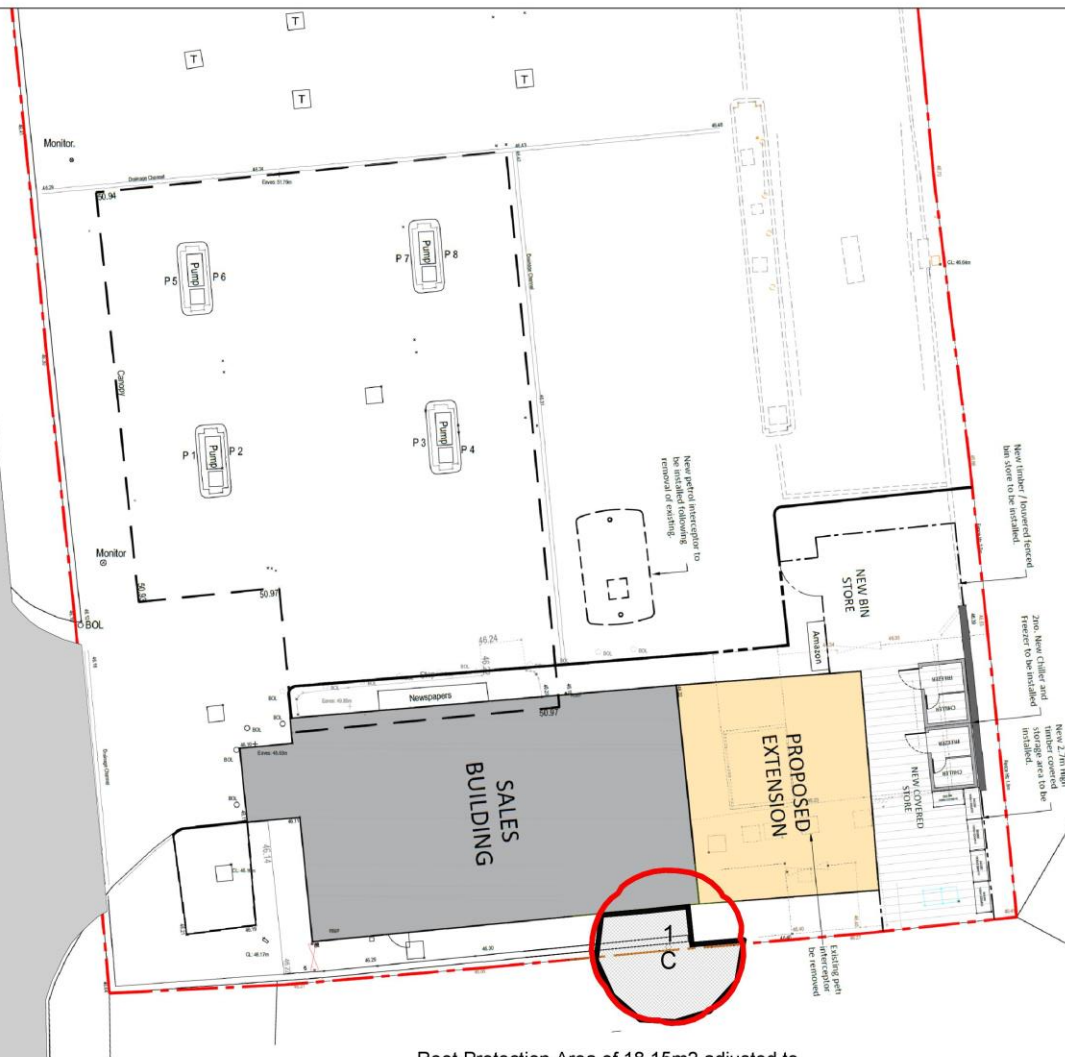
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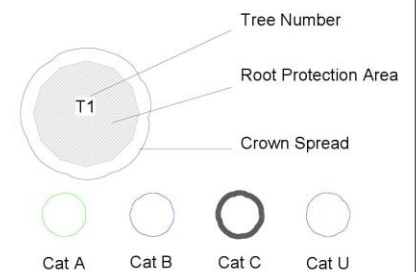
A circular cross-section of a pipe is shown. Inside the pipe, there is a rectangular blockage. The blockage is labeled with the number '1' and the letter 'C'.



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Prudent management will be to fell and poison the tree regardless of the proposed development



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SCALE: 1 : 100 @ A1	DATE: 10/10/2021
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Tree Removal



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 Tree to Fell