

An architectural rendering of modern buildings, featuring a mix of low-rise and high-rise structures with large windows and balconies. The entire image is overlaid with a semi-transparent blue filter. The sky is filled with soft, white clouds. In the foreground, there are silhouettes of trees and a few small figures of people, suggesting a public space or park area.

June 2023
Arboricultural Survey

Upper Brook Street Masterplan (McLaren / Kadans)

Arboricultural Survey to BS5837:2012

McLaren Property Ltd. And Kadans Science Partner

**53-57 Upper Brook Street,
Manchester,
Greater Manchester,
M13 9TD**

20 April 2023

Alan Smith TechArborA

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If this report has been released electronically the appendices referred to herein can be found in the annexed zip folder/s as .pdf files. If this report has been released in hard copy the appendices will be bound into the back of this report. Plans are annexed separately as A0, A1, A2 or A3 as appropriate.

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1. Introduction

Arbtech Consulting Limited (Arbtech) received written instruction on 13 March 2023 from McLaren Property Ltd. And Kadans Science Partner to attend 53-57 Upper Brook Street, Manchester, Greater Manchester, M13 9TD; grid reference, SJ 84863 96861 (site) to undertake an arboricultural survey a to BS5837:2012 guidance to assess trees, hedges and major shrub groups growing on and within influencing distance of the site and to produce a Schedule of Trees and Tree Constraints Plan.

I am Alan Smith, an arboricultural consultant at Arbtech Consulting Ltd. I undertook the tree survey on 22 March 2023 and subsequently have produced this summary of my findings.

I have 14No. years of experience in Arboriculture. I hold a BTEC Level 3 in Arboriculture and the LANTRA Professional Tree Inspector qualification.

The advice below and appended is underwritten by our Professional Indemnity insurance for the business practice of Arboricultural Consultancy in the sum of one million Pounds Sterling in each and every claim.

Table 1: Documents referred to.

Document	Reference No.
Survey base drawing	11766/ 001A/ 1
LPA pre-app comments	N/A
British Standard 5837:2012	“BS5837”
Tree Survey Schedule	Arbtech TS 01
Tree Constraints Plan	Arbtech TCP 01

2. Survey

Survey: An arboricultural survey to BS5837 of all trees within impacting distance of the site was undertaken by Alan Smith on 22 March 2023.

During the survey I categorised the trees using “Table 1 – Cascade chart for tree quality assessment” of the BS5837:2012 (see Appendix 1).

A total of 30No. individual trees and 3No. hedges were surveyed. Details for each of the trees surveyed are provided in the Schedule of Trees (see Appendix 2).

Multiple small trees and shrubs occupy the site, none of which meet the minimum diameter requirements to be considered for this survey.

Table 2: Documents upon which this tree survey has been based.

Document	Originator	Reference Number	Title
Survey base drawing	ND Oliver & Co	11766/ 001A/ 1	Topographical Survey

Limitations: The survey was made at ground level using visual observation only. Detailed examinations, such as climbing inspections and advanced decay detection equipment were not employed, though may form part of the survey's management recommendations. Measurements were taken using specialist tapes, laser, and GPS devices. Where this was not possible, measurements are estimated.

Scope: Pre-development tree surveys make arboricultural management recommendations based exclusively upon the individual tree or group of trees condition relative to their present context (*i.e. not in relation to the proposed development*).

Legal Status: No statutory protection check has been performed. BS5837 does not draw any distinction between trees subject to statutory protection, such as a Tree Preservation Order ("TPO"), and those trees without. This is principally because a detailed planning consent overrides any TPO protection. Consequently, we do not seek to offer any comparison between or infer any difference in the quality or importance of TPO trees and other trees.

* For more information on the surveyed trees please see Arbtech Consulting Ltd, Tree Survey Schedule (Appendix 1), Tree Survey Report and Tree Constraints Plan.

Site description

The Site extends to 1.084 hectares (ha) and is partially in use as a temporary paid car park. The paid car park is located on a section of the Site which was formerly in use as a Citroën car dealership and is accessed from both Upper Brook Street (UBS) to the west and Kincardine Road to the east. The remainder of the Site comprises the former Elizabeth Yarwood Court residential complex, which is accessed from Kincardine Road to the east of the Site.

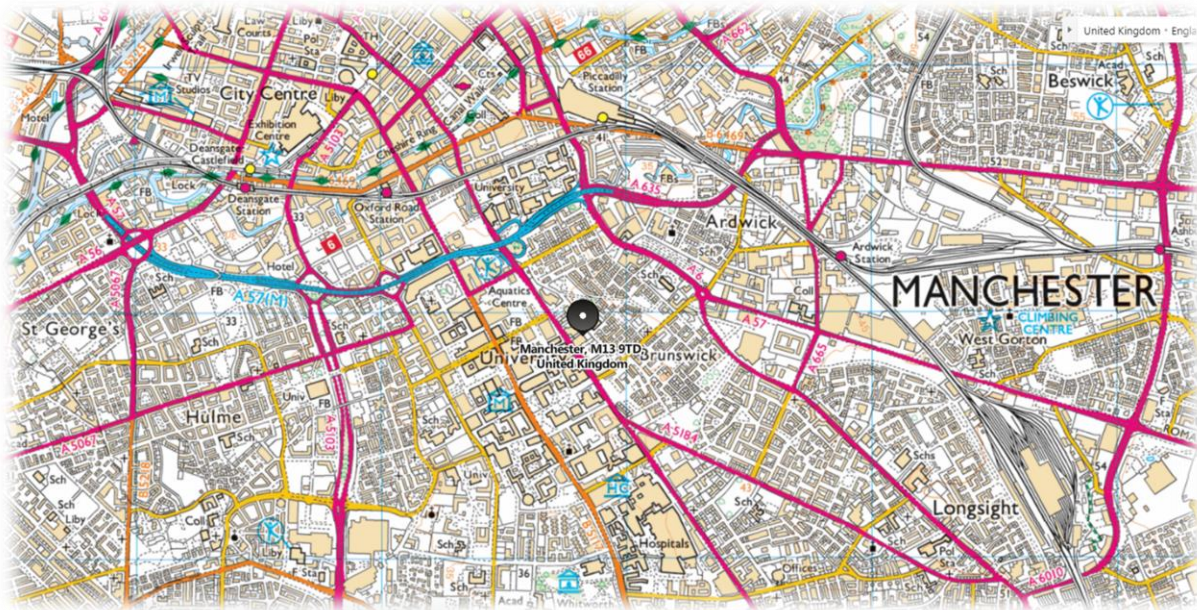


Figure 1: OS Map showing site location (Bing Maps)



Figure 2: Aerial Image of site with approximate red line boundary denoting area surveyed (Google Earth)

Proposed scheme

Full planning permission for the demolition of existing buildings and erection of a single 6 to 9 storey block for Sci-Tech use (Use Class E (g)(ii) and 267sqm of a café/bar (Use Class E (b), and a single 9 to 23 storey block to be used for Purpose Built Student Accommodation (Use Sui Generis), comprising 737 bedrooms in total and 293sqm of community use (Use Class F2 (b) and 80sqm of commercial floorspace (Use Class E) on Phase one of the Upper Brook Street Masterplan.



Figure 3: Proposed scheme. (Sheppard Robson)

It is likely that arboricultural impacts can be addressed with arboricultural methodology or minor amendments to the proposal.

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3. BS5837:2012 Scope

This standard recognises that there can be problems for development close to existing trees which are to be retained, and of planting trees close to existing structures. This standard sets out to assist those concerned with trees, in relation to construction, to form balanced judgements. It does not set out to put arguments for or against development, or for the removal or retention of trees. Where development, including demolition, is to occur, the standard provides guidance on how to decide which trees are appropriate for retention, on the means of protecting these trees during development, including demolition and construction work, and on the means of incorporating trees into the developed landscape.

4. Methodology

The methodology used to assess the trees was the British Standard 5837:2012 'Trees in Relation to Construction' tree survey method. The aim of the survey is to establish which trees are moderate and good quality; suitable for retention and justifying protection. And which trees are low or poor quality; either undesirable or unsuitable to retain and protect.

The tree survey includes all trees included in the land survey red line boundary plan, as well as any that may have been missed, and it should categorize trees or groups of trees, including woodlands for their quality and value within the existing context, in a transparent, understandable, and systematic way. Where the arboriculturist has deemed it appropriate, the trees have been tagged with small metal or plastic tags, placed as high as is convenient on the stem of each tree.

Whilst master plan proposals for the development of the site might be available, the trees have been surveyed without taking these into consideration. All detailed design work on site layout should take into consideration the results of the tree survey (and the TCP).

Trees forming groups and areas of woodland (including orchards, wood pasture and historic parkland) are identified and considered as groups where the arboriculturist has determined that this is appropriate, particularly where they contain a variety of species and age classes that could aid long-term management. It is often expedient to assess the quality and value of such groups of trees as a whole, rather than as individuals. However, an assessment of individuals within any group has been undertaken if they are open-grown or if there is a need to differentiate between them.

The quality and value of each tree or group of trees has been recorded by allocating it to one of the four categories: **A**, **B**, **C**, or **U** (highest to lowest quality respectively). The categories are differentiated on the tree survey plan by colour, or by suffixing the category adjacent to the tree identification number on the TCP.

The survey schedule lists all the trees or groups of trees. The following information is also provided:

- a) reference number (to be recorded on the tree survey plan);
- b) species (common or scientific names);
- c) height in meters (m);
- d) stem diameter in millimetres (mm) at 1.5m above adjacent ground level or immediately above the root flare for multi-stemmed trees;
- e) branch spread in meters taken at the four cardinal compass points;
- f) height of crown clearance above adjacent ground level in meters (m);
- g) age class (newly planted, young, semi-mature, early mature, mature, over mature);
- h) physiological condition (e.g. good, fair, poor, decline and dead);
- i) structural condition (e.g. good, fair, poor or not visible);
- j) comment about the tree, its location and preliminary management recommendations, including further investigation of suspected defects that require more detailed assessment and potential for wildlife habitat;
- k) The retention category referring to the quality and useful contribution in years; **U** = <10yrs; **A** = >40yrs; **B** = >20yrs; **C** = >10yrs. The retention subcategory referring to the type of amenity; 1 = Arboricultural; 2 = Landscape; 3 = Cultural including conservation (see Appendix 1 Cascade chart for tree quality assessment).

5. Definitions

Arboriculturist

An arboriculturist (or arboricultural consultant) is a person who has, through relevant education, training, and experience, gained recognized qualifications and expertise in the field of trees in relation to construction.

Tree Survey

A tree survey should be undertaken by an arboriculturist and should record information about the trees on a site independently of and prior to any specific design for development. As a subsequent task, and with reference to a design or potential design, the results of the survey should be included in the preparation of a tree constraints plan, which should be used to assist with site layout design.

Tree Constraints Plan

A TCP is plan, typically delivered as an AutoCAD drawing (.DWG file format), prepared by an arboriculturist for the purposes of layout design showing the root protection area and representing the effect that the mature height and spread of retained trees will have on layouts through shade, dominance, etc.

Root Protection Area

An RPA is a layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in m².

Construction Exclusion Zone (also termed Tree Protection Zone)

A construction exclusion or tree protection zone is an area based on the RPA (in m²), identified by an arboriculturist, to be protected during development, including demolition and construction work, by the use of barriers and/or ground protection fit for purpose to ensure the successful long-term retention of a tree.

Arboricultural Impact Assessment (AIA)

This is a study, undertaken by an arboriculturist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

Tree Protection Plan (TPP)

A TPP is plan, typically delivered as an AutoCAD drawing (.DWG file format), prepared by an arboriculturist showing the finalized layout proposals, tree retention and tree and landscape protection measures detailed within the arboricultural method statement, which can be shown graphically.

Arboricultural Method Statement (AMS)

This is a methodology for the implementation of any aspect of development that has the potential to result in loss of or damage to a tree. The AMS is likely to include details of an on-site tree protection monitoring regime.

6. Recommendations

With the benefit of making an assessment of your planning proposals, I make the following recommendation to ensure that there are no irrevocable issues to the proposed retained trees and so that no conditions relating to arboriculture are attached to any planning consent secured; obtain an arboricultural report to include:

- a) An arboricultural impact assessment (AIA).
- b) An arboricultural method statement (AMS).
- c) A tree protection plan drawing (TPP).

7. Limitations

Trees were inspected from using visual observation from ground level only. Trees were not climbed or inspected below ground level. Inaccessible trees will have best estimates made about the location, physical dimensions, and characteristics. Trees have been grouped where BS5837 guides us that it is expedient to do so. Trees have been excluded from the survey if they are found by us to be sufficiently far away from the proposed developable area or if they are outside of the red line boundary plan showing the expectations of our client for the extent of the survey. BS5837 does not draw any distinction between trees subject to statutory protection, such as a Tree Preservation Order (“TPO”), and those trees without. This is principally because a detailed planning consent overrides any TPO protection. Consequently, we do not seek to offer any comparison between or infer any difference in the quality or importance of TPO trees and other trees.

8. Appendices

The following documents were released to the Client as appendices to this report:

- Survey Schedule (.PDF)
- Tree Constraints Plan drawing (.DWG & .PDF)

If you require clarification of information contained herein, please do not hesitate to contact us via 01244 661170.

Yours Sincerely,



Alan Smith TechArborA
Arboriculturist and Ecologist

07706 323231
alansmith@arbtech.co.uk

Appendix 1: Table 1 Cascade chart for tree quality assessment

BS5837:2012 Trees in relation to design, demolition and construction – Recommendations

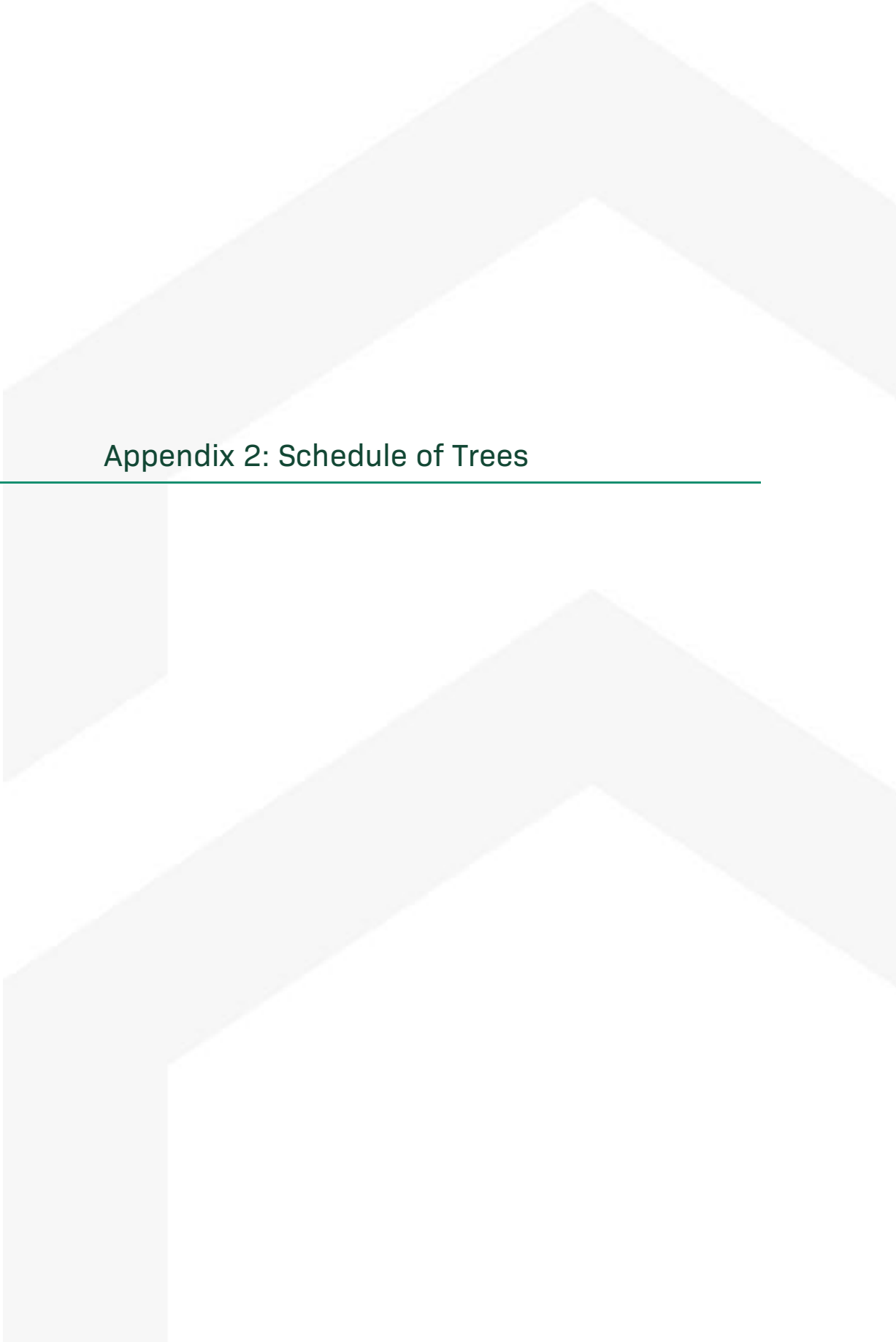
Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories when 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 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. <i>NOTE Category U trees can have existing or potential conservation value which might be desirable to preserve; see 4.5.7.</i>			Dark red
	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 dominate 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 category A, but are downgraded because of impaired condition (e.g. presence of significant though remedial defects, including unsympathetic management and storm damage), such that they are unlikely to be suitable for retention of 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 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 value.	Trees with no material conservation or other cultural value.	Grey

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Ecology – Protected Species - Licensing – Arboriculture – Biodiversity Net Gain – Land/Topographical Survey



Appendix 2: Schedule of Trees

BS5837:2012 Tree Survey

Arbtech Consulting Limited

Client: McLaren (UBS 1) Limited
 Project: 53-57 Upper Brook Strret, Manchester, M13 9TD
 Survey Date: 22/03/2023
 Surveyor: Alan Smith

Unit 3
 Well House Barns
 Chester
 Cheshire
 CH4 0DH
 Phone: 07706323231

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC	
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment			
H1												Estimated Measurements		
Various		4	1	90	N	1	0	SM	A: 3.7	Good	C: Good		C.2	
See comments for details					E	1	0		R: 1.08		S: Good	Boundary hedge; comprised of mixed shrub species inc. elder, mahonia and box honeysuckle; good overall condition; recorded measurements represent the largest within the group.	10+ yrs	
					S	1	0				B: Good			
					W	1	0							
H2												Estimated Measurements		
Various		2	1	90	N	0.5	0	SM	A: 3.7	Good	C: Good		C.2	
See comments for details					E	0.5	0		R: 1.08		S: Good	Well maintained boundary hedge, comprised of mixed shrub species inc. cherry laurel, and siberian dogwood; good overall condition; recorded measurements represent the largest within the group.	10+ yrs	
					S	0.5	0				B: Not visible			
					W	0.5	0							
H3												Estimated Measurements		
Various		4	1	90	N	1	0	SM	A: 3.7	Good	C: Good		C.2	
See comments for details					E	1	0		R: 1.08		S: Good	Boundary hedge, comprised of mixed shrub species inc. cotoneaster, elder, berberis, viburnum, dogwood and mahonia; group also contains self-seeded sycamore and ash species along the west site boundary; good overall condition; recorded measurements represent the largest within the group.	10+ yrs	
					S	1	0				B: Good			
					W	1	0							
T1												Estimated Measurements		
Cherry		12	1	530	N	4.5	3	M	A: 127.1	Fair	C: Fair		C.1	
Prunus sp.					E	4.5	2		R: 6.36		S: Fair	Tree growing in grassed soft landscaping; root suckers to south side of basal area; minor deadwood (<50mm) throughout crown; fair overall condition.	10+ yrs	
					S	4	3.5				B: Good			
					W	3.5	3.5							
Age Classifications:		N	Newly planted	EM	Early Mature		Condition:		C	Crown	Stems:		Ø	Diameter
		Y	Young	M	Mature				S	Stem			(Eq)	Equivalent stem diameter using BS5837:2012 definition
		SM	Semi-mature	OM	Over Mature				B	Basal area	ERC:		Estimated Remaining Contributio	

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations			Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment			
T2													
Norway Maple <i>Acer platanoides</i>	17	1	540	N	4.5	5	M	A: 131.9 R: 6.47	Good	C: Good S: Good B: Good	Tree growing in grassed soft landscaping; no notable features; good overall condition.	B.1 20+ yrs	
T3													Estimated Measurements
Bird Cherry <i>Prunus padus</i>	7	2	216 (Eq)	N	3	4	M	A: 21.2 R: 2.59	Good	C: Fair S: Fair B: Not visible	Twin-stemmed tree growing in soft landscaping, within boundary hedge; stem bifurcates at ground level; north side limb resting on adjacent wall; fair overall condition.	C.1 20+ yrs	
T4													
Sycamore <i>Acer pseudoplatanus</i>	15	1	520	N	5	5	M	A: 122.3 R: 6.23	Good	C: Good S: Good B: Good	Tree growing in grassed soft landscaping; no notable features; good overall condition.	B.1 20+ yrs	
T5													Estimated Measurements
River Birch <i>Betula nigra</i>	6	1	110	N	1.5	3	SM	A: 5.5 R: 1.32	Good	C: Good S: Good B: Good	Tree growing within boundary hedge; no notable features; good overall condition.	C.1 20+ yrs	
T6													
Mountain Ash <i>Sorbus aucuparia</i>	13	1	320	N	5	6	M	A: 46.3 R: 3.83	Fair	C: Fair S: Fair B: Fair	Tree growing in grassed soft landscaping; root sucker south/west of main stem; bark necrosis on south side of main stem; historic pruning wounds show good occlusion; fair overall condition.	C.1 10+ yrs	
T7													
Mountain Ash <i>Sorbus aucuparia</i>	10	1	200	N	2.5	5	EM	A: 18.1 R: 2.4	Decline	C: Fair S: Poor B: Poor	Tree growing in soft landscaping; bark necrosis over entirety of lower stem; minor deadwood (<50mm) throughout crown; tree appears to be in decline; limited remaining contribution to the site.	U <10 yrs	
Age Classifications:	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature			Condition:	C S B	Crown Stem Basal area		Stems: Ø Diameter (Eq) Equivalent stem diameter using BS5837:2012 definition	ERC: Estimated Remaining Contributio	

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T8												
Norway Maple <i>Acer platanoides</i>	15	1	480	N E S W	6.5 6.5 4.5 5.5	6 6 6 6	M	A: 104.2 R: 5.75	Good	C: Good S: Good B: Good	Tree growing in grassed soft landscaping; no notable features; good overall form and condition.	B.1 20+ yrs
T9												
Swedish Whitebeam <i>Sorbus intermedia</i>	12	1	460	N E S W	5 5 4 3.5	4 4 4 7	M	A: 95.7 R: 5.51	Good	C: Good S: Good B: Fair	Tree growing in soft landscaping; stem has a eastward lean of approx. 30 degrees; historic pruning wounds throughout crown show good occlusion; good overall condition.	B.1 20+ yrs
T10												
Cockspur Thorn <i>Crataegus crus-galli</i>	8	1	240	N E S W	4 4 3 4	3 2.5 2.5 2.5	EM	A: 26.1 R: 2.88	Good	C: Good S: Good B: Fair	Tree growing in soft landscaping; mower damage to exposed surface root on south side of basal area; good overall condition.	B.1 20+ yrs
T11												
Apple <i>Malus sp.</i>	4	1	75	N E S W	2.5 1 0.5 0.5	1 1.5 1.5 1.5	Y	A: 2.5 R: 0.89	Fair	C: Fair S: Fair B: Fair	Tree growing in grassed soft landscaping; stem has a slight lean to the north; fair overall condition.	C.1 10+ yrs
T12												
Apple <i>Malus sp.</i>	6	1	190	N E S W	2 3 3.5 2.5	2.5 2.5 2.5 2.5	EM	A: 16.3 R: 2.27	Good	C: Good S: Good B: Good	Tree growing in soft landscaping; no notable features; good overall condition.	C.1 10+ yrs
T13												
Apple <i>Malus sp.</i>	6	1	140	N E S W	4.5 4 2.5 2.5	2 1.5 175 1.5	EM	A: 8.9 R: 1.68	Good	C: Good S: Good B: Good	Tree growing in grassed soft landscaping; stem leans to the north; no other notable features; good overall condition.	C.1 10+ yrs
Age Classifications:	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature	Condition:		C S B	Crown Stem Basal area	Stems:	Ø Diameter (Eq) Equivalent stem diameter using BS5837:2012 definition	ERC:	Estimated Remaining Contributio

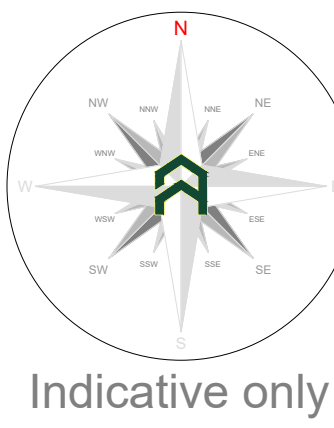
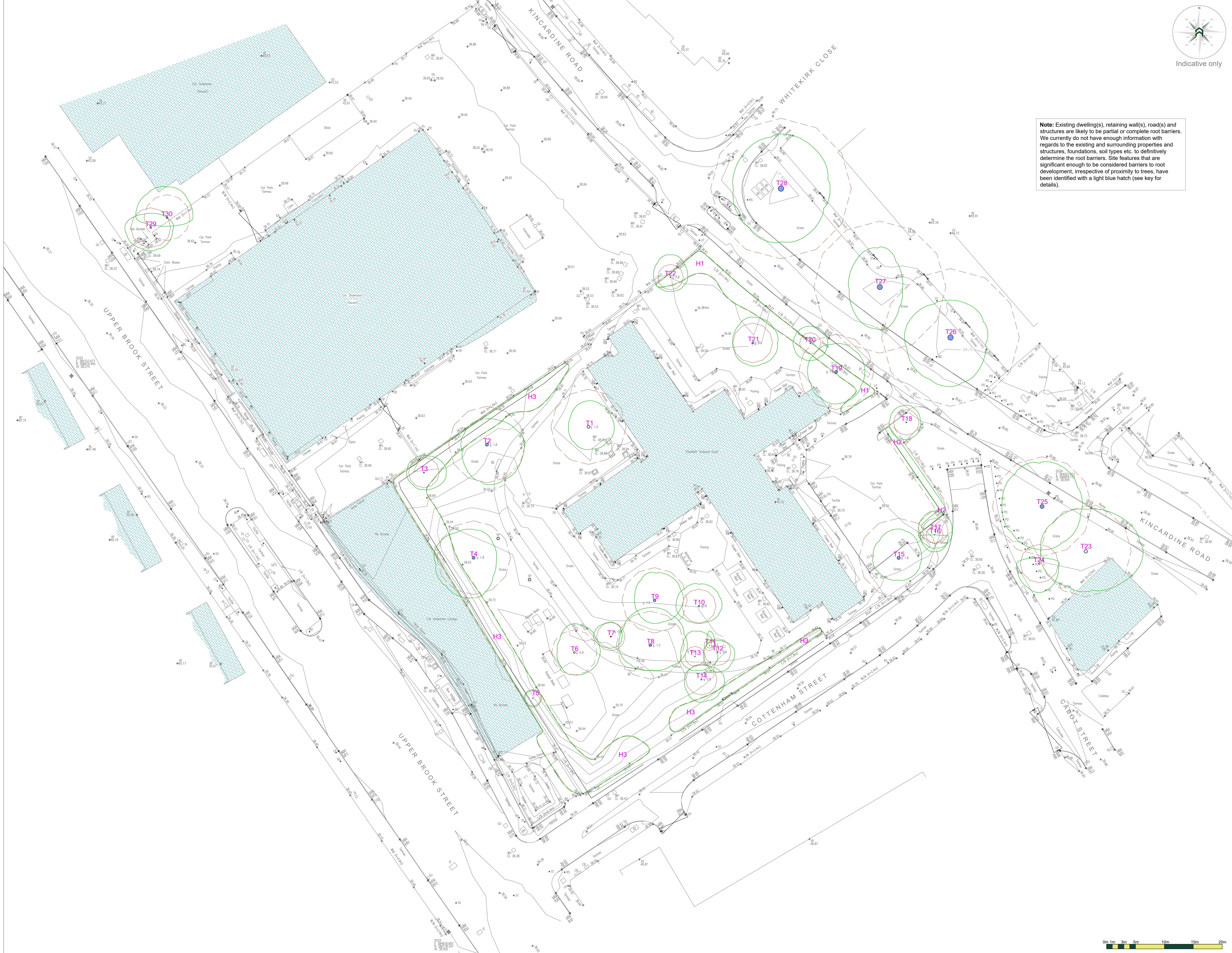
Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T14												
Apple <i>Malus sp.</i>	5	1	220	N E S W	2.5 4 4 3	3 2 1.5 2	EM A: 21.9 R: 2.64	Good	C: Good S: Good B: Good	Tree growing in grassed soft landscaping; stem leans to the east; branch stubs remain on east side of crown from previous pruning works; good overall condition.		C.1 10+ yrs
T15												
Swedish Whitebeam <i>Sorbus intermedia</i>	11	1	560	N E S W	5 4 4 4.5	2.5 3 2.5 2.5	M A: 141.9 R: 6.72	Good	C: Good S: Good B: Good	Tree growing in grassed soft landscaping; no notable features; good overall form and condition.		B.1 20+ yrs
T16											Estimated Measurements	
Common Horse Chestnut <i>Aesculus hippocastanum</i>	6	1	120	N E S W	0 2.5 3 2.5	0 3 3 3	Y A: 6.5 R: 1.43	Fair	C: Fair S: Fair B: Not visible	Tree growing within boundary hedge; crown is suppressed by neighbouring tree; fair condition.		C.1 10+ yrs
T17											Estimated Measurements	
Common Hawthorn <i>Crataegus monogyna</i>	5	1	180	N E S W	3.5 3 3 3	2.5 2.5 2.5 2.5	EM A: 14.7 R: 2.16	Good	C: Good S: Fair B: Not visible	Tree growing within boundary hedge; no notable features; good overall condition.		C.1 20+ yrs
T18												
Cherry <i>Prunus sp.</i>	5	1	180	N E S W	3 2.5 3 3	3 3 3 3	SM A: 14.7 R: 2.16	Good	C: Good S: Good B: Good	Tree growing in soft landscaping amongst boundary shrub bed, adjacent to site entrance; no notable features; good overall condition.		C.1 20+ yrs
T19												
Swedish Whitebeam <i>Sorbus intermedia</i>	12	1	530	N E S W	5 5 5.5 5	4 4 4 4	M A: 127.1 R: 6.36	Good	C: Good S: Good B: Good	Tree growing in soft landscaping; historic pruning wounds throughout crown show good occlusion; no other notable features; good overall form and condition.		B.1 20+ yrs
Age Classifications:	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature	Condition:		C S B	Crown Stem Basal area	Stems:	Ø Diameter (Eq) Equivalent stem diameter using BS5837:2012 definition	ERC:	Estimated Remaining Contributio

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations			Cat ERC	
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment				
T20											Estimated Measurements				
Goat Willow <i>Salix caprea</i>		7	1	150	N	3	3	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Not visible	Tree growing in soft landscaping; no noticeable features; good overall condition.		C.1 10+ yrs	
T21												Estimated Measurements			
Cockspur Thorn <i>Crataegus crus-galli</i>		7	1	280	N	4.5	2.5	M	A: 35.5 R: 3.36	Good	C: Good S: Good B: Good	Tree growing in soft landscaping; epicormic growth around base of stem; no other notable features; good overall condition.		B.1 20+ yrs	
T22												Estimated Measurements			
Jacquemont's Birch <i>Betula utilis var.jacquemontii</i>		11	1	180	N	4	3	SM	A: 14.7 R: 2.16	Good	C: Good S: Good B: Good	Tree growing in soft landscaping, close to boundary wall; no notable features; good overall condition.		B.1 20+ yrs	
T23												Estimated Measurements			
Common Ash <i>Fraxinus excelsior</i>		15	1	640	N	7.5	4	M	A: 185.3 R: 7.68	Fair	C: Fair S: Good B: Fair	Tree situated on amenity grassland; mower damage to exposed surface roots around entire circumference of basal area; historic poor pruning to lower branches of crown; minor to moderate deadwood (25-50mm) throughout; sparse foliage; fair overall condition.		C.1 10+ yrs	
T24												Estimated Measurements			
Cherry <i>Prunus sp.</i>		6	1	270	N	1	2.5	EM	A: 33 R: 3.24	Fair	C: Fair S: Fair B: Good	Tree situated on amenity grassland; stem has a pronounced eastward lean; stem bifurcates at approx. 2.5m; crown suppressed to the north by neighbouring ash tree; historic poor pruning to lower branches of crown; dead stubs and minor to moderate deadwood (25-50mm) throughout; fair overall condition.		C.1 10+ yrs	
Age Classifications:		N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature	Condition:		C S B	Crown Stem Basal area	Stems:		Ø (Eq)	Diameter Equivalent stem diameter using BS5837:2012 definition	ERC: Estimated Remaining Contributio	

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations			Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment			
T25													
Norway Maple <i>Acer platanoides</i>	15	1	700	N E S W	8 7 7.5 7	5 5 4 4	M A: 221.7 R: 8.4	Good	C: Good S: Good B: Good	Tree situated on amenity grassland; mower damage to exposed surface roots; minor deadwood (<25mm) throughout crown; good overall condition.			B.1 20+ yrs
T26												Estimated Measurements	
London Plane <i>Platanus x hispanica</i>	20	1	970	N E S W	6.5 6.5 8.5 8	6 3 5 5	M A: 425.7 R: 11.64	Good	C: Good S: Good B: Good	Off-site tree, situated on grassed verge to the north of the site; stem bifurcates at approx. 4m; crown has been historically raised on the north side, facing the adjacent properties; good overall condition.			B.1 20+ yrs
T27												Estimated Measurements	
London Plane <i>Platanus x hispanica</i>	20	1	930	N E S W	7 4 7.5 5.5	6 5 5 5	M A: 391.3 R: 11.16	Good	C: Good S: Good B: Good	Off-site tree, situated on grassed verge to the north of the site; stem bifurcates at approx. 3m; crown has been historically raised on the north side, facing the adjacent properties; good overall condition.			B.1 20+ yrs
T28												Estimated Measurements	
London Plane <i>Platanus x hispanica</i>	20	1	990	N E S W	9.5 8.5 9.5 8.5	6 5 5 5	M A: 443.4 R: 11.88	Good	C: Good S: Good B: Good	Off-site tree, situated on grassed verge to the north of the site; crown has been historically raised on the north side, facing the adjacent properties; good overall condition.			B.1 20+ yrs
T29													
Jacquemont's Birch <i>Betula utilis var.jacquemontii</i>	8	1	280	N E S W	2.5 4 4 4.5	3 2 3 2.5	SM A: 35.5 R: 3.36	Good	C: Good S: Good B: Fair	Off-site tree situated beyond the west site boundary wall; no notable features; good overall condition.			B.1 20+ yrs
T30													
Jacquemont's Birch <i>Betula utilis var.jacquemontii</i>	8	3	324 (Eq)	N E S W	5.5 4.5 1.5 5.5	3 2 3 3	SM A: 47.5 R: 3.88	Good	C: Good S: Good B: Fair	Off-site tree situated beyond the west site boundary wall; stem trifurcates at approx. 1m; crown contains a small amount of minor deadwood (<25mm) throughout; good overall condition.			B.1 20+ yrs
Age Classifications:	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature	Condition:		C S B	Crown Stem Basal area	Stems: ERC:	Ø Diameter (Eq) Equivalent stem diameter using BS5837:2012 definition Estimated Remaining Contributio			



Appendix 3: Tree Constraints Plan



Note: Existing dwelling(s), retaining wall(s), road(s) and structures are likely to be partial or complete root barriers. We currently do not have enough information with regards to the existing and surrounding properties and structures, foundations, soil types etc. to definitively determine the root barriers. Site features that are significant enough to be considered barriers to root development, irrespective of proximity to trees, have been identified with a light blue hatch (see key for details).

Tree Categories

Trees are categorised in accordance with the cascade chart in Table 1 of the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'

Category 'T': Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.

Category 'V': Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category 'M': Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

Category 'Y': Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 100mm.

Root Protection Area

In order to avoid damage to the roots or rooting environment of retained trees, the Root Protection Area (RPA) should be plotted around each of the category 'V' and 'M' trees. This is a minimum area in which should be left undisturbed around each retained tree.

The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

The calculated RPA is capped to 707m², which is the equivalent to a circle with a radius of 15m. Where there appears to be restrictions to root growth the root protection area is reshaped to more accurately reflect the likely distribution of the roots.

Tree Survey Report

Please refer to Arbtech Consulting Ltd. Tree Survey Report and Tree Schedule for full details on all surveyed trees, hedgerows and major shrub groups.

All trees were surveyed and categorised in accordance with the guidance as set out in the British Standard BS5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

We make the following recommendation to ensure that no conditions relating to arboriculture are attached to any planning consent sought:

a) An arboricultural impact assessment (AIA);
b) An arboricultural method statement (AMS); and
c) A tree protection plan (TPP).



Project:	53-57 Upper Brook Street, Manchester, Greater Manchester, M13 9TD	
Client:	McLaren (UBS) Limited	
Drawing:	Tree Constraints Plan	
Based on:	11766/ 001A/ 1	
Drawing No:	Arbtech TCP 01	
Date:	March 2023	Scale: 1:200 @ A0
Drawn:	AMS	
Key:		
Tree No.	T1	Tree Categories
RPAs	Category 'V' trees	Category 'M' trees
Category 'T' trees	Category 'Y' groups	Potential root barriers



9. Document Production Record

Document number	Editor	Signature	Position	Issue number	Date
Arbtech TSR 01	Alan Smith		Consultant	01	20/04/23

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