Site Tree Constraints Appraisal

North Manchester General Hospital, Delaunay's Road, Crumpsall M8 5RB

"BS 5837 2012: Trees in Relation to Design, Demolition and Construction – Recommendations"

ROWBOTTOM'S TREE SERVICES LTD

INDEPENDENT ARBORICULTURAL CONSULTANCY

Date: 14th May 2024

Ref: RTS/14052024-006

Revision: 006

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North Manchester General Hospital, Delaunay's Road, Crumpsall M8 5RB:

The following is a pre-development survey and appraisal of trees on and adjacent to the above site.

Its primary purpose being to categorize the trees according to BS 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations.

The report and associated plans have been produced for the sole purpose: - to advise on constraints that the existing trees pose, prior to proposed further developments on the site and eventual planning submissions.

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1. Introduction:

1.1 This tree survey has been commissioned by Manchester University NHS Foundation Trust.

1.2 I have undertaken this tree survey following the guidance and recommendations of; 'BS 5837: 2012 Trees in Relation to Design, Demolition and Construction-Recommendations'.

1.3 **Instruction:** I am instructed by Hive Projects Ltd to produce an updated assessment of the hospital trees. I have, therefore, re-inspect the significant trees in the hospital grounds that may be affected by further building developments. The resultant arboricultural report should be used to guide future design layouts on the site. The relevant tree information that has been noted and prepared is: -

- A schedule of the remaining significant trees in the grounds, to include basic data and an assessment of their condition, (see appendix 3).
- An appraisal of the impact that a proposed development may have on the trees and as a result, the visual amenity of the locale.

1.4 **Documents and information provided:** Hive Projects Ltd provided me with the following document:

- *230913_NMGH_Current Site Plan*

1.5 **Qualification and experience:** I have based this report on my site observations and I have come to conclusions in light of my experience. I have experience and qualifications in arboriculture and list the details in appendix 1.

1.6 **Report scope and limitations:** Construction work often exerts undesirable pressures on existing trees, as do changes in their environment following construction (see appendix 2). This report has been prepared to analyse the constraints that the remaining existing trees pose for further development works on the site and any impact that this may have on them. The primary purpose of the report is to provide sufficient tree information to allow the design team to review any tree issues associated with a development proposal.

1.6.1 It should be noted that this report takes no account of indirect structural damage that may arise to buildings as a result of tree induced soil volume changes. Such damage can occur to buildings built on shrinkable clay sub-soils and will be more prevalent during prolonged drought conditions. Also, buildings built on shrinkable soils following tree removal can suffer heave affects as the soil rehydrates. These issues should be addressed during the design of a proposed property development (*National House Building Council-NHBC 2011-part 4.2 building near trees).* Also, this report does not take into account damage to drains and underground services that may be due to tree root activity. If damaged, drains can allow roots to penetrate them. If, however, they are in good repair tree roots have little capacity to access them. A drainage expert could give more advice.

2. Site visit and observations:

2.1 Site visit: I carried out unaccompanied site visits on 2nd, 3rd and 14th May 2024. All my observations were from ground level without detailed investigations. All dimensions were measured using a diameter tape and laser measure, heights were measured using a clinometer. If access was restricted measurements were estimated. The weather at the time of inspections was dry and clear with good visibility. Trees within the north east area of the hospital grounds, noted as *Phase 2 Area* on Tree Constraints Plan *RTS/14052024/TCP 006* have been excluded from this tree constraints appraisal. They have been excluded due to a planning submission for a specific development having already been submitted for planning approval.

2.2 Brief site description: The central area of the hospital grounds are a mixture of original Victorian buildings and modern additional buildings that have been built over several decades. Central Drive runs across the middle of the hospital grounds, linking the numerus carparks and delivery areas. The buildings, roads and carpark areas are inter-planted with trees, shrubs and grassed areas.

2.2.1 Site Aspect and Topography:

- The hospital main entrance is off Delauneys Road along the north west boundary.
- The site has a gentle slope, rising up from the west end of Central Drive to the east end. A total rise of approximately 9.5 metres. There are no significantly raised features on the site.

2.2.2 Preliminary Geological Information:

Soil Texture:	Loamy and Clayey
Soil pH:	Acid
Drainage:	Impeded Drainage
Fertility:	Low
Carbon:	Medium
Drains to:	Stream Network

(Land Information Systems, 2024)

2.2.3: Tree Protection Status: I have been informed by Manchester LPA that the trees within the curtilage of the site are not subject to Tree Preservation Order (TPO) legislation and the hospital is not within a Conservation Area.

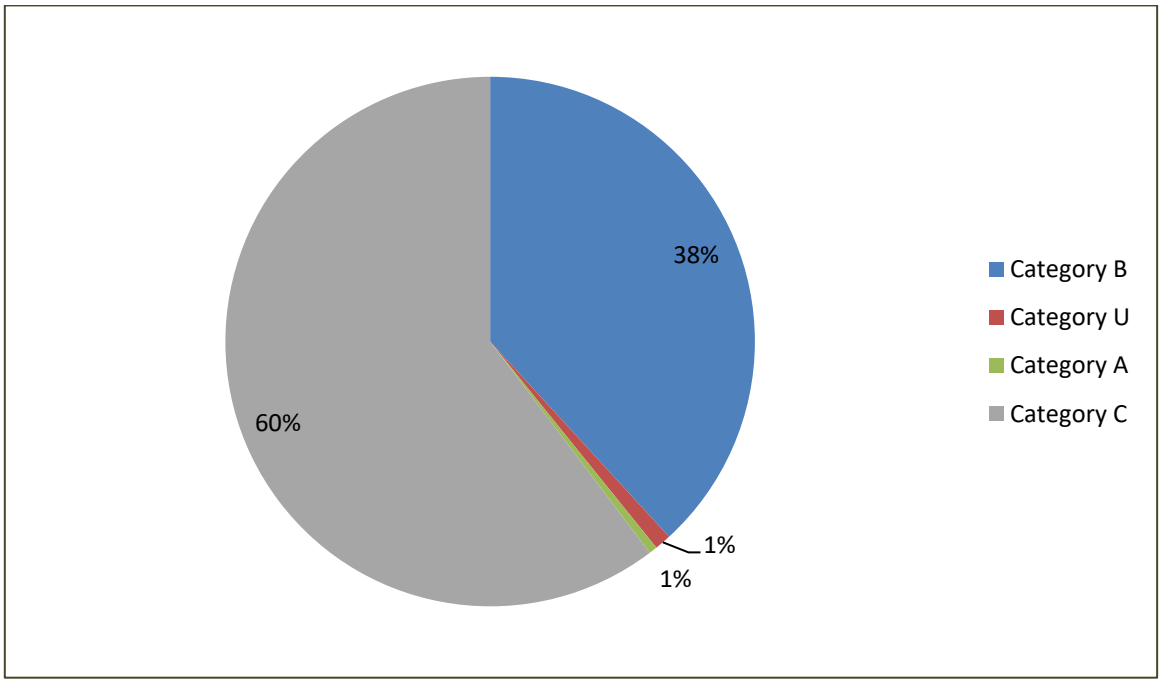
2.3 Identification and location of the trees: The locations of the significant trees are illustrated on the Tree Constraints Plans *RTS/14052024/ TCP 006, 007, 008, 009 & 010* included with this report. All the relevant information on the trees is contained within this report and the provided document listed in 1.4 above.

2.4 Tree observations: The trees were not climbed; I visually inspected the significant trees from ground level in accordance with visual tree assessment (VTA) techniques and recorded the information on the schedule included at appendix 5. The assessment has been to a level one of the TRAQ assessment criteria.

2.5 Overview of the trees and other vegetation:

154 individual trees and groups of trees, considered to be of significant size, were surveyed on the site. The overall general condition of these remaining significant trees in the hospital grounds were found to be of fair to good quality. There are also a small number of poor-quality trees and general ornamental shrub growth in the garden areas of the hospital.

Significant Trees; Percentage per Category.



3 APPRAISAL:

3.1 **Relevant references:** **‘**BS 5837:2012 Trees in Relation to Design, Demolition and Construction-Recommendations’.

3.2 **Arboricultural Constraints Assessment (ACA):** At this stage I have not been made aware of any exact detailed future design proposal for the site nor the need to alter or install new underground drains or other utility services. The constraints that are posed by the existing site trees should inform any future site layout, although it is recognized that the competing needs of a development may mean that the trees are only one factor requiring consideration. It should also be recognized however; that trees are important elements of the green infrastructure and where their retention can achieve a harmonious relationship with a proposed development this should be encouraged. Misplaced tree retention, however, should be avoided. Attempts to retain too many or unsuitable trees on the site can result in excessive pressure on the trees during construction work, or post-completion demands for their removal. Therefore, if the desire is to retain trees, then the footprint of a proposed development would have to avoid overlap of the trees’ calculated root protection areas (RPA), especially if ground excavation work is to be involved. The RPA is a minimum area around a tree trunk deemed to contain sufficient roots and rooting soil volume to maintain the trees viability, and where the protection of the roots and soil structure is treated as a priority. In addition to the proposed footprint of a development, account should be taken of the buildability of a new scheme in terms of access, adequate working space and provision for the storage of materials, including topsoil. These activities should also ideally avoid overlap of a tree RPA.

3.3 The trees on the site have been categorised according to BS 5837:2012 and they amount into *four* categories *A, B, C and U*. When determining a design layout in relation to the constraints posed by the trees, guidance from BS 5837:2012 implies; that category U trees are in such condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years and should not, therefore, restrict the development. Category C trees would usually not be retained where they would impose a significant restraint on the development. Category B trees are of moderate quality and should be retained where possible. Every effort should be made to retain a category A tree.

4 CONCLUSIONS:

4.1 Prior to determining a development layout the following points should be noted:

4.1.1 This tree survey has been undertaken to categorize the existing site trees for condition and their suitability for retention in association with any future proposed development. It is not a full risk assessment of the trees.

4.1.2 The RPAs have been highlighted around all the trees on the Tree Constraint Plans; RTS/14052024/TCP 006, TCP 007, TCP 008, TCP 009 & TCP 010.

4.2 **Other Considerations:** Trees by their very nature have structures that allow bats to shelter or roost in them, more so with moribund and decayed trees. All species of bats are protected by the Wildlife and Countryside Act 1981 (as amended), the Conservation (Natural Habitats) regulations 1994 and the Countryside Act and Rights of Way Act 2000. Also, it is an offence to disturb or destroy nesting birds. Appropriate ecological assessments should be undertaken to avoid contravention of the above.

5 BIBLIOGRAPHY

5.1 BS 5837:2012 Trees in Relation to Design, Demolition and Construction - Recommendations

Mr W. J. Rowbottom. HN Dip ARB M. Arbor. A

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Appendix 1

Brief qualifications and experience of Mr W. J. Rowbottom.

1. **Qualifications:**
   - Tree surgery craft certificate 1992
   - BTEC Higher National Diploma in Arboriculture 2000 (HN Dip Arb).

2. **International Society of Arboriculture (ISA):**
   - Tree Risk Assessment Qualification (TRAQ).
     This is a systematic qualification of risks that may be posed by trees within their existing site setting over a given time frame.

3. **Continuing professional development:** Professional member of the Arboricultural Association.
   M Arbor A. Professional member of the Consulting Arborist Society (CAS).

4. **Experience:** Managed an arboricultural contracting company for 20 years. Practiced arboricultural consultancy since 2010.

Appendix 2

Trees and Construction Sites – General Issues

Trees that have good health and stability are well adapted to their surroundings. Any demolition or construction activity which affects the adaptation of trees to the site could be detrimental to their health, future growth and safety. Trees tend to become less tolerant of change after they have reached maturity or have suffered previous damage or physiological stress. Site design and subsequent management, therefore, should aim to minimize the effect of change.

The part of a tree most susceptible to damage on a construction site is the root system, which, because it is not immediately visible, is frequently ignored. Within a short distance of the trunk, the roots become highly branched, so as to form a network of small diameter woody roots, which can extend radially for a distance much greater than the canopy spread of the tree, except where impeded by unfavourable soil conditions. The growth and development of all roots is influenced by the availability of water, nutrients, oxygen and the penetrability of the soil. Given favourable conditions, the tree's root system tends to develop sufficient volume to provide physical stability for the tree. Typically, however, around 80% of a tree root system is concentrated in the upper 600mm of the soil profile. Due to this relatively shallow depth, the threat to a tree root system on a development site can arise from:

- Root severance or fracture during excavation works
- Compaction of the soil structure, which restricts moisture percolation through the soil profile and gaseous exchange between the surface air and soil atmosphere. Soil compaction can occur as a result of driving heavy plant machinery over the soil surface, repetitive pedestrian footfall and storage of building materials.
- Water logging due to land grade changes
- Toxic contamination due to chemical runoff from construction activities.

Damage to the tree trunk and branches can also occur on development sites if appropriate distances between tree and construction work is not maintained. Such damage, however, is not usually sufficient to kill a tree directly, but can make it unsafe by affecting the dynamics and growth of the tree, or by initiating long term decay. Such damage can also be disfiguring. The attachment of notice boards and cables etc. can all damage trees, as can the use of tree trunks as a winch anchor.

Damage to a tree on a construction site may not at first be noticeably obvious, the full effect of such damage usually taking 3 or 4 years to become evident, at which time the tree may die and/or become unsafe. A tree that has taken decades to reach maturity can be damaged irreparably in a few minutes by actions that might be unwitting, negligent or wilful. The early provision of physical protection of the tree from damage is therefore critical.

Appendix 3

Tree Data (Explanations of):

The data collected and recorded on each tree reflects the recommendations provided in section 4.4.2 of BS 5837:2012 Trees in Relation to Design, Demolition and Construction-recommendations.

Tree number: T (individual tree), G (group of stems or several trees planted together or self-seeded), S (stump of a tree that has been cut at or close to ground level), SH (shrub masses).

Species: Common tree name; *specific name recorded in italics.*

Height: Approximate height of the tree to the nearest metre.

DBH: Stem diameter (recorded in millimetres) measured in accordance with Annex C of the BS 5837:2012.

Crown Spread: A record (to the nearest half metre) of the radial distances between the tree trunk and the end of the further most branches, in the direction of the four cardinal compass points.

Height to Lowest Branch: This parameter estimates the lowest point of the crown above the ground. Minor and dead branches are ignored.

Age: Estimated maturity of the tree; Moribund (at the point of death), Mature (last one third of life expectancy), Early mature (one third to two thirds life expectancy), Young (at less than one third of life expectancy).

Condition: An assessment of tree physiological condition. Good (high vigour and strong growth), fair (average vigour and growth), Poor (low vigour and declining growth).

Category Rating: An assessment to identify the quality and value (in non-fiscal terms) of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained in the event of a development occurring, (for categorisation criterion see appendix 6).

Observations and Comments: A preliminary observation of the tree's physiological condition, structural form and its suitability to the existing site setting. Basic tree management advice may be recommended.

Appendix 4

Explanatory notes

AIA:	Arboricultural Impact Assessment; an assessment that evaluates the effects that the proposed design may have on the existing site trees and any constraints that the trees pose to the design, and where necessary recommend mitigation measures.
AMS:	Arboricultural Method Statement.
CEZ:	Construction Exclusion Zone; a fenced off area around a tree or group of trees that should remain undisturbed and free from demolition and construction activity.
Crown:	The structural part of the tree above ground level that consists of branches, twigs and foliage.
Included Bark:	Bark that remains (trapped) between branch and trunk or co-dominant stems. Has potential to be a structurally weak union.
Measurements:	All dimensions are estimated unless otherwise indicated. Measurements taken with a tape or clinometer are indicated with a *. Less reliable estimated dimensions are indicated with a '?'.
R**PA:**	Root Protection Area; The minimum area around a tree deemed to contain sufficient roots and soil volume to maintain the tree's viability, and where the protection of roots and soil structure is treated as a priority. The RPA increases with tree size and is calculated from a measurement of the trunk diameter.
Species:	The tree species identification is based on visual identification. The common English name of what the tree appeared to be is listed first followed by the botanical name in *italics*. In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigation. Where there is some doubt as to the precise species of the tree, the genus is followed by the abbreviation spp; in order to avoid delay in the production of the report. The species listed for groups and hedges represent the main component and there may be other minor species not listed.
TRAQ:	Tree Risk Assessment Qualification. A tree risk qualification methodology; Level one; is a basic visual assessment of an individual tree or a population of trees near to targets of concern, conducted from a specified perspective, to identify obvious defects or specified conditions. Only defects visible from the perspective from which the assessment is made are expected to be identified.
VTA:	Visual Tree Assessment; a non-invasive method of examining the health and structural condition of individual trees, as advised by Mattheck (1993) and Hazard Evaluation by Matheny and Clark (1993). Guidance is also taken from Lonsdale (1999) Principles of Tree Hazard Assessment and Management.

Appendix 5

Tree Schedule

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T30 *338*	**Silver Birch** *Betula pendula*	14.0 2.0	485	N – 4.0 S – 3.0 E – 5.0 W – 6.0	2.0	Mature	Good	5.8	105	B1	Asymmetry; tree growing in the low recess at the side of the road
T31	**Silver Birch** *Betula pendula*	15.0 3.0	455	N – 3.0 S – 5.0 E – 5.0 W – 6.0	3.0	Mature	Good	5.4	91	B1	Asymmetry; tree growing in the low recess at the side of the road
T32	**Silver Birch** *Betula pendula*	14.0 3.0	355	N – 3.0 S – 4.0 E – 4.0 W – 4.0	4.0	Mature	Good	4.2	55	B1	Asymmetry; tree growing in the low recess at the side of the road
T33	**Plane** *Platanus x acerifolia*	12.5 3.0	445	N – 5.0 S – 5.0 E – 6.0 W – 5.0	3.0	Mature	Good	5.3	88	B1	Slight tree lean towards the east; recent soil works /excavation close to the west side of the trunk
T34	**Pine** *Pinus sylvestris*	7.5 2.0	390	N – 4.0 S – 4.0 E – 4.0 W – 5.0	1.8	Mature	Good	4.6	66	B1	Slight growth lean towards the east
T35	**Cotoneaster**	9.0 2.0	300	N – 3.0 S – 6.0 E – 3.0 W – 3.0	2.0	Mature	Fair	3.6	40	C1	Large shrub
T36	**Cotoneaster**	9.0 2.0	300	N – 4.0 S – 6.0 E – 4.0 W – 3.0	2.0	Mature	Fair	3.6	40	C1	Large shrub

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T65	**Sycamore** *Acer pseudoplatanus*	15.5 2.0	540	N – 6.0 S – 6.0 E – 5.0 W – 5.0	2.0	Mature	Good	6.4	128	B1	Minor dead branches in the crown
T67	**Norway Maple** *Acer platanoides 'Crimson King'*	12.0 2.0	415	N – 4.0 S – 4.0 E – 4.0 W – 3.0	2.0	Mature	Good	4.9	75	B1	Minor dead branches in the crown
T68	**Sycamore** *Acer pseudoplatanus*	15.0 3.0	380	N – 4.0 S – 2.0 E – 4.0 W – 4.0	2.0	Mature	Fair	4.5	63	C1	Minor dead branches in the crown; slight decline of tree vigour
T69	**Pine** *Pinus sylvestris*	15.0 2.0	573 comb	N – 3.0 S – 3.0 E – 4.0 W – 4.0	2.0	Mature	Fair	6.8	145	C1	Co-dominant stemmed tree

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T70	**Field Maple** *Acer campestre*	12.0 2.0	280	N – 2.0 S – 3.0 E – 2.0 W – 2.0	1.8	Early Mature	Fair	3.3	34	C1	Minor dead branches in the crown
T71	**Pine** *Pinus sylvestris*	14.0 2.5	548 comb	N – 5.0 S – 4.0 E – 4.0 W – 3.0	2.5	Mature	Good	6.5	132	B1	Minor dead branches in the crown; three stemmed tree
T72	**Norway Maple** *Acer platanoides*	10.0 3.0	380	N – 4.0 S – 5.0 E – 5.0 W – 4.0	2.5	Mature	Fair	4.5	63	C1	Stressed growth
T73	**Field Maple** *Acer campestre*	9.0 2.0	220	N – 3.0 S – 3.0 E – 2.0 W – 2.0	2.0	Early Mature	Fair	2.6	21	C1	Minor dead branches in the crown

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T91	**Sycamore** *Acer pseudoplatanus*	12.0 3.0	380	N – 3.0 S – 3.0 E – 3.0 W – 4.0	2.5	Early Mature	Good	4.5	63	B1	Minor dead branches in the crown
T92	**Sycamore** *Acer pseudoplatanus*	10.0 2.5	270	N – 3.5 S – 2.0 E – 3.0 W – 2.0	2.0	Early Mature	Good	3.2	32	B1	Minor dead branches in the crown
T93	**Holly** *Ilex aquifolium*	9.0 1.8	284 comb	N – 2.0 S – 3.0 E – 4.0 W – 3.0	1.8	Mature	Fair	3.4	36	C1	Multi-stemmed tree
T94	**Sycamore** *Acer pseudoplatanus*	14.0 2.0	561 comb	N – 4.0 S – 3.0 E – 5.0 W – 6.0	2.0	Mature	Good	6.7	141	B1	Minor dead branches in the crown
T95	**Sycamore** *Acer pseudoplatanus*	14.0 4.0	350	N – 3.0 S – 4.0 E – 5.0 W – 3.0	4.0	Mature	Good	4.2	55	C1	Minor dead branches in the crown; the trunk is in contact with the adjacent security fence, beginning to embed
T96	**Cherry** *Prunus avium*	14.0 2.0	450	N – 5.0 S – 2.0 E – 3.0 W – 4.0	2.0	Mature	Fair	5.4	91	C1	Small decay pockets; past stub cut pruning; ivy ascending the trunk

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T97	**Cherry** *Prunus avium*	14.0 2.0	450	N – 3.0 S – 4.0 E – 5.0 W – 6.0	2.0	Mature	Fair	5.4	91	C1	Small decay pockets; past stub cut pruning; ivy ascending the trunk
T98	**Holly** *Ilex aquifolium*	10.0 2.0	378 comb	N – 3.0 S – 4.0 E – 3.0 W – 3.0	2.0	Mature	Good	4.5	63	C1	Multi-stemmed tree in contact with adjacent security fence
T99	**Poplar** *Populus nigra hybrid*	18.0 8.0	500	N – 6.0 S – 5.0 E – 5.0 W – 4.0	8.0	Mature	Fair	6.0	113	C1	Minor dead branches in the crown; ivy ascending lower trunk section
T100	**Poplar** *Populus nigra hybrid*	18.0 8.0	400	N – 2.0 S – 5.0 E – 2.0 W – 3.0	8.0	Mature	Fair	4.8	72	C1	Tall slender structural form; minor dead branches in the crown; ivy ascending the trunk

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T103	**Poplar** *Populus nigra hybrid*	18.0 6.0	400	N – 4.0 S – 5.0 E – 2.0 W – 5.0	6.0	Mature	Fair	4.8	72	C1	Asymmetry; minor dead branches in the crown
T104	**Poplar** *Populus nigra hybrid*	18.0 9.0	340	N – 2.0 S – 3.0 E – 2.0 W – 3.0	9.0	Mature	Fair	4.0	50	C1	Tall slender structural form; asymmetry
T105	**Aspen** *Populus tremula*	18.0 6.0	480	N – 3.0 S – 3.0 E – 2.0 W – 5.0	6.0	Mature	Fair	5.7	102	C1	Slight crown die-back
T106	**Poplar** *Populus nigra hybrid*	18.0 4.0	400	N – 2.0 S – 4.0 E – 4.0 W – 5.0	4.0	Mature	Fair	4.8	72	C1	Tall slender structural form; minor dead branches in the crown
T108	**Alder** *Alnus glutinosa*	15.0 12.0	250	N – 2.0 S – 2.0 E – 2.0 W – 2.0	12.0	Mature	Fair	3.0	28	C1	Tall slender structural form

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T109	**Horse Chestnut** *Aesculus hippocastanum*	10.0 2.0	320 comb	N – 3.0 S – 4.0 E – 5.0 W – 3.0	2.0	Early Mature	Fair	3.8	45	C1	Rubbing branch contact with T108
T110	**Alder** *Alnus glutinosa*	10.0 6.0	180	N – 4.0 S – 1.0 E – 1.0 W – 1.0	6.0	Early Mature	Fair	2.1	13	C1	Asymmetrical lean towards the north
T111	**Ash** *Fraxinus excelsior*	15.0 6.0	220	N – 4.0 S – 1.0 E – 2.0 W – 3.0	6.0	Early Mature	Fair	2.6	21	C1	Minor dead branches in the crown
T112	**Ash** *Fraxinus excelsior*	15.0 6.0	280	N – 4.0 S – 2.0 E – 2.0 W – 2.0	6.0	Early Mature	Fair	3.3	34	C1	Minor dead branches in the crown
T113	**Ash** *Fraxinus excelsior*	15.0 6.0	250	N – 4.0 S – 2.0 E – 2.0 W – 3.0	6.0	Early Mature	Fair	3.0	28	C1	Minor dead branches in the crown
T114	**Ash** *Fraxinus excelsior*	10.0 3.0	300	N – 6.0 S – 2.0 E – 2.0 W – 6.0	3.0	Early Mature	Fair	3.6	40	C1	Asymmetrical lean towards the north west

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T115	**Ash** *Fraxinus excelsior*	12.0 6.0	250	N – 6.0 S – 1.0 E – 2.0 W – 2.0	6.0	Early Mature	Fair	3.0	28	C1	Asymmetrical lean over the car park
T116	**Alder** *Alnus glutinosa*	13.0 4.0	250	N – 3.0 S – 1.0 E – 1.0 W – 3.0	4.0	Early Mature	Fair	3.0	28	C1	Asymmetrical lean over the car park
T117	**White poplar** *Populus alba*	18.0 7.0	600	N – 8.0 S – 5.0 E – 8.0 W – 7.0	7.0	Mature	Fair	7.2	162	C1	Growth lean over the car park
T118	**Alder** *Alnus glutinosa*	14.0 5.0	400	N – 5.0 S – 1.0 E – 1.0 W – 3.0	5.0	Early Mature	Fair	4.8	72	C1	Included bark union between co-dominant stems
T119	**Beech** *Fagus sylvatica*	16.0 3.0	260	N – 3.0 S – 1.0 E – 1.0 W – 3.0	3.0	Early Mature	Good	3.1	30	C1	Asymmetry; close to adjacent security fence
T119A	**Ash** *Fraxinus excelsior*	17.0 10.0	260	N – 4.0 S – 3.0 E – 3.0 W – 4.0	10.0	Mature	Fair	3.1	30	C1	Tall slender structural form; ivy ascending the trunk

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T120	**Ash** *Fraxinus excelsior*	15.0 9.0	260	N – 3.0 S – 2.0 E – 2.0 W – 4.0	9.0	Early Mature	Fair	3.1	30	C1	Minor dead branches in the crown; ivy ascending the trunk
T121	**Ash** *Fraxinus excelsior*	15.0 6.0	200	N – 2.0 S – 1.0 E – 1.0 W – 3.0	6.0	Early Mature	Fair	2.4	18	C1	Minor dead branches in the crown; ivy ascending the trunk
T122	**Ash** *Fraxinus excelsior*	17.0 6.0	250	N – 3.0 S – 4.0 E – 3.0 W – 4.0	6.0	Early Mature	Fair	3.0	28	C1	Minor dead branches in the crown; ivy ascending the trunk
T123	**Lombardy poplar** *Populus nigra 'Italica'*	16.0 4.0	350	N – 2.0 S – 2.0 E – 2.0 W – 2.0	4.0	Mature	fair	4.2	55	C1	Sheltered tree
T124	**Horse Chestnut** *Aesculus hippocastanum*	14.0 3.0	460	N – 3.0 S – 5.0 E – 3.0 W – 4.0	3.0	Mature	Fair	5.5	95	C1	Close to adjacent security fence

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T125	**Lombardy poplar** *Populus nigra 'Italica'*	16.0 4.0	200	N – 2.0 S – 2.0 E – 2.0 W – 2.0	4.0	Mature	Fair	2.4	18	C1	Sheltered tree
T126	**Lombardy poplar** *Populus nigra 'Italica'*	16.0 4.0	350	N – 2.0 S – 2.0 E – 2.0 W – 2.0	4.0	Mature	fair	4.2	55	C1	Sheltered tree
T127	**Lombardy poplar** *Populus nigra 'Italica'*	16.0 4.0	250	N – 2.0 S – 2.0 E – 2.0 W – 2.0	4.0	Mature	fair	3.0	28	C1	Sheltered tree
T128	**Lombardy poplar** *Populus nigra 'Italica'*	16.0 4.0	250	N – 2.0 S – 2.0 E – 2.0 W – 2.0	4.0	Mature	fair	3.0	28	C1	Sheltered tree
T129	**Lombardy poplar** *Populus nigra 'Italica'*	16.0 4.0	250	N – 2.0 S – 2.0 E – 2.0 W – 2.0	4.0	Mature	fair	3.0	28	C1	Sheltered tree
T130	**White poplar** *Populus alba*	15.0 10.0	300	N – 0.0 S – 3.0 E – 15.0 W – 3.0	10.0	Mature	Fair	3.6	40	C1	Excessive lean over the lower car park area

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T131	**Lombardy poplar** *Populus nigra 'Italica'*	16.0 4.0	350	N – 2.0 S – 2.0 E – 2.0 W – 2.0	4.0	Mature	fair	4.2	55	C1	Sheltered tree
T132	**Lombardy poplar** *Populus nigra 'Italica'*	16.0 4.0	350	N – 2.0 S – 2.0 E – 2.0 W – 2.0	4.0	Mature	fair	4.2	55	C1	Sheltered tree
T133	**Lombardy poplar** *Populus nigra 'Italica'*	16.0 4.0	350	N – 2.0 S – 2.0 E – 2.0 W – 2.0	4.0	Mature	fair	4.2	55	C1	Sheltered tree

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
G147	**Cherry / Plum** *Prunus cerasifera 'Pissardii'* **Common Cherry** *Prunus avium*	6.5 1.0	180 max	Linear group Approx 2.0 m Radial spread	1.0	Mature	Fair	2.1 Per tree	13 Per tree	C2	Linear group of ornamental cherry trees interspersed with general shrub growth of low quality.
G148	**Silver Birch** *Betula pendula* **Goat Willow** *Salix caprea*	12.0 1.0	220 max	N – 5.0 S – 5.0 E – 9.0 W – 9.0 Crown spread of whole group	1.5	Early Mature	Good	2.6 Per tree	21 Per tree	B2	Ornamental group of approximately 16 silver birch trees and 1 goat willow.
T149	**Rowan** *Sorbus aucuparia*	5.5 2.0	175	N – 3.0 S – 2.0 E – 3.0 W – 2.5	1.5	Early Mature	Fair	2.1	13	C1	Sparse foliage; mechanical damage to the trunk bark at 0.3 metres above ground level (south side).

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T151	**Rowan** *Sorbus aucuparia*	6.0 2.0	200	N – 3.0 S – 2.0 E – 3.0 W – 3.5	1.8	Early Mature	Fair to Good	2.4	18	B1	Small included bark union between scaffold branches, however, natural branch bracing above the union.
G152	**Silver Birch** *Betula pendula*	15.0 2.0	450 max	N – 7.0 S – 3.0 E – 4.0 W – 6.0 Crown spread of whole group	3.0	Mature	Good	5.4 Per tree	91 Per tree	B2	A well-placed group of silver birch trees
G153	**Silver Birch** *Betula pendula* **Larch** *Larix decidua* **Scots Pine** *Pinus sylvestris*	15.0 1.6	270 max	Linear group Approx 4.0m Radial spread	1.6	Early mature	Good	3.2 Per tree	32 Per tree	B2	A linear group of good quality mixed tree species. Future management of the larch trees (removal) may be required to allow better establishment of the silver birch trees, as each will compete for limited space overtime.
T154	**Silver Birch** *Betula pendula*	10.0 0.5	190	N – 4.0 S – 4.0 E – 1.5 W – 1.5	0.5	Early Mature	Poor	N/A	N/A	U	A self-seeded tree of poor quality.
G155	**Sycamore** *Acer pseudoplatanus* **Cypress Conifer** *Chamaecyparis lawsoniana* **Goat willow** *Salix caprea*	11.0 2.0	300 max	N – 4.5 S – 5.0 E – 1.5 W – 1.5 Crown spread of whole group	2.0	Early Mature	Poor	N/A	N/A	U	A group of self-seeded trees of poor quality.

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
G161	**Silver Birch** *Betula pendula* **Ash** *Fraxinus excelsior* **Goat Willow** *Salix caprea* **Cherry laurel** *Prunus laurocerasus*	16.0 0.5	310 max	Crown spread of the group as noted on the Tree Constraints Plan	0.5	Early Mature	Fair	As noted on the Tree Constraints Plan	As noted on the Tree Constraints Plan	C2	A group of mixed species early mature trees. Some ash die-back disease evident. A small cluster of Japanese Knot Weed was noted adjacent to the building structures.
T162	**Ash** *Fraxinus excelsior*	14.0 3.0	431 comb	N – 4.0 S – 4.0 E – 5.0 W – 2.0	3.0	Mature	Poor	N/A	N/A	U	Ash die-back disease; tree in decline.
T163	**Pine** *Pinus nigra*	14.5 2.5	485	N – 6.0 S – 5.0 E – 6.0 W – 4.0	2.5	Mature	Good	5.8	105	B1	Corsican Pine close to the adjacent building structure.
T164	**Goat Willow** *Salix caprea*	13.0 2.0	657 comb	N – 6.0 S – 7.0 E – 4.0 W – 5.0	3.0	Mature	Fair	7.8	191	C1	Co-dominant stems; the tree is close to the adjacent building structure.
T165	**Goat Willow** *Salix caprea*	13.0 3.0	481 comb	N – 4.0 S – 5.0 E – 5.0 W – 4.0	3.0	Mature	Fair	5.7	102	C1	Co-dominant stems; the tree is close to the adjacent building structure.
T169	**Ash** *Fraxinus excelsior*	11.0 1.8	320	N – 5.0 S – 5.0 E – 4.0 W – 6.0	1.6	Early Mature	Fair	3.8	45	C1	Single tree growing within the hardstanding ground.

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T196	**Lombardy Poplar** *Populus nigra 'Italica'*	25.0 3.0	850	N – 1.0 S – 4.0 E – 5.0 W – 1.0	2.8	Mature	Fair	10.2	326	C1	Slight asymmetry; one of a linear row of trees
G196	**Mixed Cypress Conifer, Pine and Silver Birch**	12.0 2.0	220 Average	Linear row	2.0	Early mature	Good	2.6	21	B2	Linear row of mixed species trees.
T197	**Lombardy Poplar** *Populus nigra 'Italica'*	25.0 3.0	550	N – 2.0 S – 3.0 E – 3.0 W – 2.0	2.8	Mature	Fair	6.6	136	C1	Slight asymmetry; one of a linear row of trees
T198	**Horse Chestnut** *Aesculus hippocastanum*	14.0 2.0	485	N – 5.0 S – 4.0 E – 2.0 W – 5.0	3.0	Mature	Fair	5.8	105	C1	Slight asymmetry; small amount of bleeding canker (pseudomonas syringae) at the trunk base.
T199	**Lombardy Poplar** *Populus nigra 'Italica'*	25.0 3.0	850	N – 5.0 S – 5.0 E – 5.0 W – 4.0	2.5	Mature	Fair	10.2	326	C1	Ivy plant beginning to ascend the trunk, would advise that the ivy be removed from the tree.
G202	**Goat Willow** *Salix caprea* **Silver Birch** *Betula pendula* **Ash** *Fraxinus excelsior* **Cotoneaster Shrub**	12.0 0.5	400 max	Crown spread of the group as noted on the Tree Constraints Plan	1.0	Early mature	Fair	4.8	72	C2	A mixture of planted and self-seeded shrubs and young trees; some of the goat willows are structurally weak.

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T203	**Poplar** *Populus trichocarpa*	18.0 2.0	450	N – 4.0 S – 3.0 E – 4.0 W – 5.0	3.0	Mature	Good	5.4	91	B1	Low sucker growth around the base of the tree.
G204	**Pine** *Pinus nigra* **Poplar** *Populus trichocarpa* **Ash** *Fraxinus excelsior*	24.0 3.0	800 max	Crown spread of the group as noted on the Tree Constraints Plan	3.0	Mature	Good	9.6	289	B2	Low hanging branches over the adjacent roadway and car parking areas; there is one dead poplar trunk with decay evident close to the car park area, would recommend that the poplar trunk be felled to ground level.
T205	**Fir** *Abies spp*	5.0 0.8	150	N – 1.5 S – 1.5 E – 1.5 W – 1.0	0.5	Early Mature	Poor	1.8	10	C1	Sparse foliage; low vigour
G208	**Juniper** *Juniperus communis* **Lawsons Cypress** *Chamaecyparis lawsoniana* **Leyland Cypress** *X Cupressocyparis leylandii*	12.0 0.0	250 max	Crown spread of the group as noted on the Tree Constraints Plan	0.5	Mature	Fair	3.0	28	C2	Aesthetic feature as a group

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
G209	**Small Leaf lime** *Tilia cordata*	8.0 1.0	170	N – 3.0 S – 3.0 E – 3.0 W – 3.0	1.8	Early Mature	Good	2.0 each	12	B2	A linear row of 5 lime trees
G210	**Small Leaf lime** *Tilia cordata*	8.0 1.0	200	N – 3.5 S – 3.5 E – 3.5 W – 3.5	1.8	Early Mature	Good	2.4 each	18	B2	Group of 8 lime trees
G211	**Small Leaf lime** *Tilia cordata* **Rowan** *Sorbus aucuparia*	8.0 1.0	170	N – 3.5 S – 3.5 E – 3.5 W – 3.5	1.8	Early Mature	Good	2.0 each	12	B2	Group of 7 lime trees and 1 rowan tree
G212	**Field Maple** *Acer campestre*	5.0 2.0	110	N – 1.2 S – 1.2 E – 1.2 W – 1.2	2.0	Early Mature	Good	1.3 each	5	B2	A group of 3 trees in individual planting pits.
G213	**Small Leaf lime** *Tilia cordata* **Field Maple** *Acer campestre*	7.0 1.5	195	N – 3.0 S – 3.0 E – 3.0 W – 3.0	1.5	Early Mature	Good	2.3 each	16	B2	Small group of field maple and small leaf lime trees.
G214	**Small Leaf lime** *Tilia cordata*	7.0 0.5	160	N – 4.0 S – 4.0 E – 4.0 W – 4.0	1.8	Early Mature	Good	1.9 each	11	B2	Group of two small leaf lime trees
G215	**Small Leaf lime** *Tilia cordata*	8.0 0.8	185	N – 4.0 S – 4.0 E – 4.0 W – 4.0	1.8	Early Mature	Good	2.2 each	15	B2	Group of two small leaf lime trees

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
G218	*Mixed species*	2.0 0.6	Less than 75mm	Crown spread of the group as noted on the Tree Constraints Plan	1.0	Young	Poor	The whole shrub bed as noted on the Tree Constraints Plan	The whole shrub bed as noted on the Tree Constraints Plan	C2	Low vigour
T219	**Silver Birch** *Betula pendula*	13.0 1.8	450	N – 5.0 S – 8.0 E – 6.0 W – 5.0	2.0	Mature	Good	5.4	91	B1	Slight asymmetry; minor dead branches in the crown
T221	**Cherry** *Prunus avium*	6.0 1.5	230	N – 4.5 S – 4.0 E – 3.5 W – 4.0	2.0	Early Mature	Fair	2.7	22	C1	The branches are in contact with the adjacent building; ivy ascending the trunk; shot-hole fungus infection of the foliage

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T222	**Norway Maple** *Acer platanoides*	11.0 2.0	260	N – 5.0 S – 4.0 E – 5.0 W – 3.0	1.8	Early Mature	Good	3.1	30	B1	Minor dead branches in the crown
T223	**Ash** *Fraxinus excelsior*	12.0 2.0	355	N – 5.0 S – 6.0 E – 5.0 W – 6.0	1.8	Early Mature	Good	4.2	55	B1	Minor dead branches in the crown
T224	**Ash** *Fraxinus excelsior*	12.0 2.0	280	N – 5.5 S – 3.0 E – 5.0 W – 4.5	2.0	Early Mature	Good	3.3	34	B1	Minor dead branches in the crown
T225	**Ash** *Fraxinus excelsior*	6.0 2.0	160	N – 3.0 S – 1.5 E – 2.0 W – 1.5	2.0	Young	Good	1.9	11	C1	Good structural form; young tree
T226	**Whitebeam** *Sorbus aria*	7.0 3.0	180	N – 2.0 S – 4.0 E – 3.0 W – 3.0	2.0	Young	Fair	2.1	13	C1	Ivy climber plant ascending the trunk
T227	**Whitebeam** *Sorbus aria*	8.0 2.5	300	N – 5.0 S – 5.0 E – 3.0 W – 5.5	2.5	Early Mature	Good	3.6	40	B1	Slight asymmetry
T228	**Pine** *Pinus sylvestris*	10.0 1.6	300	N – 4.0 S – 3.0 E – 2.0 W – 3.0	2.0	Early Mature	Fair	3.6	40	C1	Climbing euonymus shrub ascending the trunk; minor dead branches in the crown

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T229	**Norway Maple** *Acer platanoides*	10.0 2.0	320	N – 6.0 S – 5.0 E – 6.0 W – 2.0	2.0	Early Mature	Good	3.8	45	B1	Slight asymmetry
T230	**Beech** *Fagus sylvatica*	12.0 2.5	390	N – 6.5 S – 4.0 E – 3.0 W – 5.5	3.0	Early Mature	Good	4.6	66	A1	Slight asymmetry
G231	**Mixed tree and shrub species**	15.0 1.8	400 max	Crown spread of the group as noted on the Tree Constraints Plan	1.8	Mature	Good	4.8 each	72	B2	A pleasant recreational area with mixed tree and shrub species: silver birch, oak, rowan, cherry, Indian bean tree and cotoneaster shrub. Ivy climber is beginning to ascend some of the trees.
G232	**Mixed tree species**	12.0 1.8	445 max	Crown spread of the group as noted on the Tree Constraints Plan	1.8	Mature	Good	5.3 each	88	B2	An area of mixed tree species: Norway maple, whitebeam, cherry and laburnum. There is one cherry tree labelled on the site as *060*. This tree has Ganoderma root decay fungus, tree failure is likely in the near future and the adjacent bench seating is a likely target. Removal of this cherry tree is strongly advised.
T233	**False Acacia** *Robinia pseudoacacia*	12.0 2.0	282 comb	N – 6.0 S – 5.0 E – 5.0 W – 4.0	2.0	Mature	Fair	3.3	34	C1	A twin stemmed tree.
T234	**Ash** *Fraxinus excelsior*	10.0 2.0	270	N – 2.0 S – 2.0 E – 4.0 W – 3.0	2.5	Early Mature	Fair	3.2	32	C1	Ivy climber plant is ascending the trunk

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T235	**Beech** *Fagus sylvatica*	10.0 1.8	200	N – 4.0 S – 1.0 E – 2.0 W – 3.0	2.5	Early Mature	Fair	2.4	18	C1	Suppressed growth form due to adjacent dominant trees
T236	**Cedar** *Cedrus atlantica*	12.0 2.0	400	N – 2.0 S – 4.0 E – 4.0 W – 4.0	2.0	Mature	Fair	4.8	72	C1	Dense crown; minor dead branches in the crown
T237	**False Acacia** *Robinia pseudoacacia*	11.0 3.0	300	N – 4.0 S – 4.0 E – 4.0 W – 3.0	2.0	Mature	Fair	3.6	40	C1	Dense ivy climber ascending the tree
T238	**Whitebeam** *Sorbus spp*	13.0 2.0	420	N – 6.0 S – 6.0 E – 3.0 W – 6.0	2.0	Mature	Good	5.0	78	B1	Some included bark unions between the scaffold branches.
T239	**Pine** *Pinus nigra*	14.0 1.8	430	N – 5.0 S – 3.0 E – 4.0 W – 4.0	2.0	Mature	Good	5.1	81	B1	Minor dead branches in the crown. Some lower branches are obscuring the adjacent street lamp.
T240	**Norway Maple** *Acer platanoides*	10.0 2.5	240	N – 4.0 S – 2.0 E – 4.0 W – 3.0	2.5	Early Mature	Fair	2.8	24	C1	The tree is very close to the adjacent building; girdling root at the kerb edge.
T241	**Ash** *Fraxinus excelsior*	9.0 3.0	200	N – 3.0 S – 3.5 E – 4.0 W – 3.0	3.0	Young	Fair	2.4	18	C1	Self-seeded tree.

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T242	**Alder** *Alnus glutinosa*	9.0 3.0	160	N – 1.0 S – 2.0 E – 2.0 W – 1.0	3.0	Young	Fair	1.9	11	C1	Self-seeded tree.
T243	**Maple** *Acer rubrum*	7.0 3.0	200	N – 4.0 S – 2.0 E – 5.0 W – 1.0	3.0	Early Mature	Fair	2.4	18	C1	Asymmetry; ivy ascending the trunk
T244	**Ash** *Fraxinus excelsior*	6.0 2.5	295 comb	N – 4.0 S – 2.0 E – 4.0 W – 3.0	2.5	Early Mature	Fair	3.5	38	C1	Multi stemmed tree; asymmetry; ivy ascending the trunk
T245	**Crab apple** *Malus spp*	5.0 1.8	260	N – 3.0 S – 4.0 E – 3.0 W – 2.5	1.5	Mature	Fair	3.1	30	C1	Previous poor stub cut pruning; heavy fruit fall onto the adjacent paths, possible slip / trip hazard.
T246	**Silver Maple** *Acer saccharinum*	12.0 1.0	320	N – 1.5 S – 5.0 E – 3.0 W – 6.0	2.0	Early Mature	Good	3.8	45	B1	Slight asymmetry
T247	**Silver Maple** *Acer saccharinum*	13.0 2.0	380	N – 2.5 S – 5.5 E – 4.0 W – 2.5	3.0	Early mature	Good	4.5	63	B1	Slight asymmetry
T248	**Silver Maple** *Acer saccharinum*	12.0 1.8	275	N – 4.0 S – 3.5 E – 3.0 W – 2.0	3.0	Early Mature	Good	3.3	34	B1	Slight asymmetry; minor dead branches in the crown

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T249	**Silver Maple** *Acer saccharinum*	13.5 1.8	335	N – 4.5 S – 2.5 E – 2.5 W – 6.0	2.0	Early Mature	Good	4.0	50	B1	Slight asymmetry; minor dead branches in the crown
T250	**Hawthorn** *Crataegus monogyna*	5.5 1.8	175	N – 3.0 S – 3.0 E – 3.5 W – 2.0	1.8	Early Mature	Good	2.1	13	B1	Asymmetry; low sucker growth shoots at the trunk base.
T251	**Hawthorn** *Crataegus monogyna*	5.5 1.8	180	N – 2.5 S – 2.5 E – 2.5 W – 2.0	1.8	Early Mature	Good	2.1	13	B1	Slight asymmetry
T252	**Norway Maple** *Acer platanoides*	8.0 1.8	245	N – 4.0 S – 2.5 E – 3.0 W – 3.5	2.0	Early Mature	Good	2.9	26	B1	Minor dead branches in the crown
T253	**Norway Maple** *Acer platanoides*	4.0 1.6	145	N – 3.0 S – 3.0 E – 3.5 W – 1.5	1.8	Young	Fair	1.7	9	C1	Asymmetry; suppressed growth form due to dominant adjacent trees
T254	**Cherry** *Prunus spp*	3.0 0.5	170	N – 2.0 S – 2.0 E – 2.5 W – 1.0	1.8	Young	Poor	2.0	12	C1	Suppressed growth form with dense ivy ascending the trunk
T255	**Pine** *Pinus sylvestris*	4.0 1.0	335	N – 3.0 S – 4.0 E – 7.0 W – 2.0	2.5	Early Mature	Fair	4.0	50	C1	Asymmetry

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T256	**Pine** *Pinus sylvestris*	9.5 1.8	350	N – 4.0 S – 7.0 E – 3.0 W – 5.5	2.0	Early Mature	Fair	4.2	55	C1	Asymmetry
G257	**Cherry** *Prunus spp* **Norway Maple** *Acer platanoides* **Hornbeam** *Carpinus betulus*	12.0 0.8	250 max	Crown spread of the group as noted on the Tree Constraints Plan	1.5	Early Mature	Fair	3.0 each	28	C2	Neglected shrub bed with ivy growth ascending the trunks
T258	**Pine** *Pinus sylvestris*	9.5 1.5	375	N – 4.0 S – 4.5 E – 4.5 W – 4.0	2.5	Early Mature	Good	4.5	63	B1	Minor dead branches in the crown
G259	**Silver Birch** *Betula pendula*	8.0 1.5	165 comb	N – 3.5 S – 2.0 E – 2.5 W – 3.0	2.0	Young	Good	1.9	11	C2	Two young trees, no issues at this stage
G260	**Silver Maple** *Acer saccharinum* **Hawthorn** *Crataegus monogyna* **Oak** *Quercus petraea*	12.5 3.0	315 max	Crown spread of the group as noted on the Tree Constraints Plan	2.5	Early Mature	Good	3.7 each	43	B2	Minor dead branches in the crowns
T261	**Hawthorn** *Crataegus monogyna*	3.0 2.0	150	N – 2.5 S – 2.0 E – 2.5 W – 3.0	1.8	Early mature	Fair	1.8	10	C1	Asymmetry

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
G262	**Silver Birch** *Betula pendula* **Pine** *Pinus sylvestris* **Juniper** *Juniperus communis*	19.0 1.8	445 max	Crown spread of the group as noted on the Tree Constraints Plan	2.0	Mature	Good	5.3 each	88	B2	Minor dead branches in the crowns; low branches overhanging the adjacent public pavement
T263	**Weeping Willow** *Salix 'Chrysocoma'*	12.0 1.5	700	N – 7.0 S – 7.5 E – 7.0 W – 3.0	2.0	Mature	Good	8.4	221	B1	Asymmetry; dense ivy growth ascending the trunk and lower crown, I would advise that the ivy be removed from the tree.
T264	**Silver Birch** *Betula pendula*	17.0 2.0	450	N – 4.0 S – 6.0 E – 7.0 W – 4.0	3.0	Mature	Good	5.4	91	B1	Neighbours tree close to the boundary fencing
T265	**Poplar** *Populus nigra hybrid*	25.0 3.0	950	N – 9.5 S – 12.0 E – 11.0 W – 8.0	5.0	Mature	Good	11.4	408	B1	Minor dead branches in the crown; no other issues at this stage.
T266	**Ash** *Fraxinus excelsior*	16.0 6.0	685	N – 5.0 S – 5.0 E – 6.0 W – 5.0	6.0	Mature	Poor	8.2	211	C1	Council street tree; low vigour; sizable dead branches in the crown; Recommend that the tree owners / managers assess the tree for risk hazard. Early-stage Ash Die-Back.
T267	**Ash** *Fraxinus excelsior*	15.0 2.0	840	N – 7.0 S – 5.0 E – 7.0 W – 5.0	4.0	Mature	Poor	10.0	314	C1	Council street tree; low vigour; sizable dead branches in the crown; Recommend that the tree owners / managers assess the tree for risk hazard. Early-stage Ash Die-Back.
T268	**Ash** *Fraxinus excelsior*	14.0 6.0	500	N – 6.0 S – 5.0 E – 5.0 W – 4.5	6.0	Mature	Poor	6.0	113	C1	Council street tree; low vigour; sizable dead branches in the crown; Recommend that the tree owners / managers assess the tree for risk hazard.

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T269	**Ash** *Fraxinus excelsior*	14.0 6.0	665	N – 6.0 S – 6.0 E – 5.0 W – 5.0	6.0	Mature	Poor	7.9	196	C1	Council street tree; low vigour; sizable dead branches in the crown; Recommend that the tree owners / managers assess the tree for risk hazard.
T270	**Ash** *Fraxinus excelsior*	14.0 6.0	600	N – 5.5 S – 6.5 E – 6.0 W – 6.0	6.0	Mature	Fair	7.2	162	C1	Council street tree with slightly low vigour; Polyporus squamosus fungus bracket at approximately 5 metres above ground level, it appears to only be associated with a pruning wound, however, recommend that the tree owners / managers assess the tree for risk hazard.
G271	**Ash** *Fraxinus excelsior*	9.0 2.0	200 max	Crown spread of the group as noted on the Tree Constraints Plan	2.0	Young	Fair	2.4 each	18	C2	Small group of young self-seeded ash trees. One of the ash trees is so close to the car park railings that the trunk is chafing on them, creating a weak spot in the trunk. I would recommend that this one tree be removed.
G272	**Ash** *Fraxinus excelsior*	9.0 2.0	200 max	Crown spread of the group as noted on the Tree Constraints Plan	2.0	Young	Fair	2.4 each	18	C2	Small group of young self-seeded ash trees.
T273	**Horse Chestnut** *Aesculus hippocastanum*	13.0 2.0	540	N – 7.0 S – 7.0 E – 7.5 W – 4.0	2.5	Early Mature	Fair	6.4	128	B1	Heavy infestation of leaf miner moth

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T275	**Willow Leaf pear** *Pyrus salicifolia*	4.0 1.5	180	N – 3.0 S – 2.5 E – 3.0 W – 2.0	1.8	Early Mature	Fair	2.1	13	C1	Ivy ascending the trunk
G276	**Weeping Beech** *Fagus sylvatica 'Pendula'*	6.0 1.5	280 max	N – 6.0 S – 7.0 E – 8.0 W – 7.0	2.0	Early mature	Good	3.0	34	B2	A group of 3 weeping beech trees forming one canopy
T281	**Sycamore** *Acer pseudoplatanus*	13.5 1.8	425	N – 5.0 S – 2.0 E – 5.0 W – 5.0	1.5	Early Mature	Good	5.1	81	B1	Slight asymmetry; low branch overhang of the adjacent car park area

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T292	**Sycamore** *Acer pseudoplatanus*	12.5 2.0	525	N – 6.0 S – 6.0 E – 7.0 W – 5.0	2.0	Mature	Good	6.3	124	B1	Minor dead branches in the crown; low branch overhang of the adjacent roadway
T293	**Sycamore** *Acer pseudoplatanus*	12.5 2.0	555	N – 6.5 S – 5.0 E – 4.0 W – 6.0	2.0	Mature	Good	6.6	136	B1	Minor dead branches in the crown
G294	**Weeping Silver Birch** *Betula pendula 'Youngii'*	5.0 0.0	185 max	N – 4.0 S – 4.0 E – 4.0 W – 3.0	2.0	Mature	Good	2.2	15	B2	Two weeping birch trees merged inti one canopy
T296	**Sycamore** *Acer pseudoplatanus*	13.0 2.0	550	N – 5.0 S – 6.0 E – 5.0 W – 6.0	3.0	Mature	Good	6.6	136	B1	Included bark unions at approximately 0.5 metres above ground level.
T297	**Sycamore** *Acer pseudoplatanus*	10.5 2.5	340	N – 4.0 S – 5.0 E – 5.0 W – 5.0	3.0	Mature	Good	4.0	50	B1	Minor dead branches in the crown

Tree No	Species	Tree Height (M) * Crown Height Above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M)	Age	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T303	**Hornbeam** *Carpinus betulus*	14.0 4.0	380	N – 6.0 S – 3.0 E – 5.0 W – 6.0	3.0	Mature	Fair	4.5	63	C1	No access to the compound, the trees were view from the public area to the west; Included bark unions between scaffold branches; the tree is close to the adjacent building structure
T304	**Sycamore** *Acer pseudoplatanus*	14.0 4.0	450	N – 2.0 S – 4.0 E – 3.0 W – 4.0	4.0	Mature	Fair	5.4	91	C1	No access to the compound, the trees were view from the public area to the west; the tree is close to the adjacent building structure
G305	**Sycamore** *Acer pseudoplatanus*	14.0 4.0	350 max	Crown spread of the group as noted on the Tree Constraints Plan	4.0	Mature	Fair	4.2 each	55	C2	No access to the compound, the trees were view from the public area to the west; group of three trees close to the adjacent building structure
G311	**Silver Birch** *Betula pendula*	13.0 2.5	360 max	Crown spread of the group as noted on the Tree Constraints Plan	3.5	Mature	Good	4.3	58	B2	Good aesthetic small group of trees

Appendix 6

Tree Quality Assessment and Categorization Criterion	**Identification on the plan**
Category U: Trees unsuitable for retention; Trees which are 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. These trees, however, can have existing or potential conservation value. They could, therefore, be up graded from a U category if issues concerning their safety can be appropriately managed.	**Dark Red**
Trees to be considered for retention; **Category A: trees of high quality** **Have an estimated remaining life expectancy of at least 40 years.**	**Light Green**
Category B: **Trees of moderate quality** **Have an estimated remaining life expectancy of at least 20 years.**	**Mid Blue**
Category C: Trees of low quality. **Have an estimated life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.**	**Grey**

For a tree to qualify under any given category, it should fall within the scope of that categories definition (U, A, B, C).
Trees in categories A to C should then qualify under one or more of three subcategories (1, 2, and 3). The subcategories 1, 2 and 3 are intended to reflect arboricultural and landscape qualities, and cultural values, respectively. These definitions are described below:

Arboricultural Qualities:
Sub-Category A1:
Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g., the dominant and / or principal trees within an avenue).
Sub-Category B1: Trees that might be included in category A, but have been 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 beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.
Sub-Category C1: Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.

Landscape Qualities:
Sub-Category A2: Trees, groups or woodlands of particular visual importance as arboricultural and / or landscape features.
Sub-Category B2: 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.
Sub-Category C2: 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 benefits.

Cultural Values:
Sub-Category A3: Trees or woodlands of significant conservation, historical, commercial or other value (e.g., veteran trees or woodland pasture).
Sub-Category B3: Trees with material conservation or other cultural value.
Sub-category C3: Trees with no material conservation or other cultural value.

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