



CALEDON
TREE SURVEYS

BS5837:2012 Tree Survey

Land at Crieff Road, Perth

January 2022



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Abstract

Site: Land at Crieff Road, Perth

Grid Reference: NO 09191 25017

Client: Rapleys LLP

Date: January 2021

Survey Reference: BS_080122

Document Reference: BS_080122-SR Revision 00



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Section A Report Overview

1 Structure of report

The report comprises the following sections:

This Overview: a guide to navigating the Report and a summary of the survey findings

Preliminaries: background information about our commission and how we approached the project

Tree Survey: the essential data about the trees and some more detailed interpretation of our findings; also a note of any works which might need done to make the trees safe

Appendices: Photographs, maps and keys to the survey terminology



Section B Preliminaries

2 Terms of Reference

2.1 Title

BS5837 Tree Survey: Land at Crieff Road, Perth.

2.2 Definition of survey area

2.2.1 As enclosed by red-line boundary on existing site plan within Feasibility Study document: Lidl Store, Perth: Feasibility Study by Yeoman McAllister, August 2020.

2.3 Authority

The survey was instructed on behalf of Lidl GB Ltd by Mr Daniel Wheelwright, Senior Associate, Town Planning, Rapleys LLP, [address to be confirmed].

Instruction issued 11 01 2022.

2.4 Survey team

David Gallacher, Graeme Millar.

David Gallacher is a Lantra qualified Professional Tree Surveyor and Inspector and is a professional member of The Consulting Arborists Society. Caledon Tree Consultants was established in 1995.

2.5 Date(s) of inspection

21 01 2022.

2.6 Purpose of survey

The objective of the survey is to provide an assessment of and report on the nature, condition and essential characteristics of the tree canopy on land which is being considered for development.

2.7 Scope of survey

The scope of the survey is defined as a Stage 1 Visual Tree Assessment (Mattheck & Breloer, 1995) and the report is compliant with British Standard Specification No 5837:2012. All comments on specimen condition are made with reference only to the status-quo position of the site. Unless specified, the survey excludes any reference to underground services.

2.8 Limitations

This report is the property of and for the sole use of the clients cited above and should under no circumstances be relied upon by third parties. The findings contained herein are strictly related to the condition of trees and the pattern of usage of surrounding land evident at the time of the inspection.

2.9 Note on hazard and risk in relation to trees

Trees are complex living organisms subject to biotic and abiotic influences and the unpredictable forces of nature. In addition, latent defects both above and below ground which may impinge on the health and structural stability of a tree can be present without physical evidence being available to the naked eye. As noted by the Hon Mr Justice Mackay in a recent landmark ruling relating to the issue of tree safety: "Both experts in the case agree...that there is no such thing as an entirely safe tree" ¹.

The issue of safety surrounding a tree comprises a balance between Hazard (defined as the potential to cause harm) and Risk (the level of likelihood that a hazardous tree will cause damage). It is part of the purpose of this document, within the specified limitations, to note defects and other conditions within and surrounding the trees which constitute a hazard.

Assessment of the level of risk associated with any recorded hazard has been made on the basis of current manifest evidence (eg proximity of roads, footpaths etc) but it is the responsibility of the client to take account of any alterations to surrounding conditions or pattern of land-use.

¹ Bowen (A Child) & Ors v The National Trust [2011] EWHC 1992 (QB) (27 July 2011)



3 Site Characteristics

3.1 Location

The study area comprises an area of land to the north of the A85 (Crieff Road) in the north-west sector of the city of Perth.

Recorded trees are located around the driveway entrance to, and surroundings of a former building on the site, now demolished.

3.2 Elevation

35m above sea level.

3.3 Topography

The survey area occupies is slightly inclined from North to South, and features a substantial north-east facing embankment.

3.4 Surrounding landscape

Generally inclined from north to south and from east to west.

3.5 Wind exposure

Moderate. The site derives significant protection from prevailing winds from land formations and the built environment to the south and west, but is locally open to the north and east.

3.6 Environment

Soil analysis was not carried out but soil quality is taken to provide an adequate growing medium for the trees.

Drainage as it affects the trees appears at the time of the survey to be generally effective, although the north east sector of the site, on which no trees are present, is notably water-retentive.

Notwithstanding the presence of Chalara Ash dieback on trees of that species (see s4.2, below), the physiological condition of the trees is generally good, reflecting a favourable biotic environment.

4 Survey Methodology

4.1 Inclusion criteria

In line with our briefing the assessed canopy features:

Trees No 5128-5143: Individually recorded specimens within the defined survey area

4.2 Chalara Ash Dieback

4.2.1 The canopy includes a proportion of European Ash, several of which are substantial mature specimens. A serious pathological condition (Chalara Ash Dieback) is having a widespread impact on trees of that species throughout the country, and the disease has been identified within the subject property.

4.2.2 The progression of this evolving condition can be uneven, and it should not be assumed that infected specimens will be killed in the short term.

4.2.3 However this consideration must be balanced by an assessment of the practical hazard presented by diseased trees, particularly since timbers affected by dieback can become structurally unstable.

4.2.4 It is significant in this context that the present study was undertaken in winter when evidence of foliar necrosis associated with Chalara Ash Dieback was not available. It is essential that a follow-up inspection is carried out in summer 2022 to more accurately record the progression of the disease and to define an appropriate response.

4.2.5 For the purpose of the present study specimens are assessed and categorised with reference to the likely impact of the disease on the anticipated lifespan of the individual tree.



5 Statutory Framework

5.1 Tree protections

Our briefing indicates that there are currently no statutory protections on trees within the survey area in terms of Tree Preservation Orders or designated Conservation Areas.

However development works are proposed at the time of the survey and it is likely that trees on site will be the subject of condition(s) on any planning consents issued by the local planning authority (LPA).

Under the terms of such conditions it may be prohibited to cause or permit interference, damage or destruction to any tree, group of trees or woodland specified in the condition without the express permission of the relevant local authority department.



Section C Tree Survey

6 Commentary

6.1 Overview

6.1.1 The survey records trees surrounding and on the approach to the remnants of a former building, now demolished, on what appears to have been a farm steading on the outskirts of Perth.

6.1.2 The canopy comprises a mix of substantial mature trees, younger landscape specimens and self generated minor trees and scrub.

6.1.3 The condition of the trees is generally adequate for the present circumstances, but the canopy includes specimens with substantial deadwoods oversailing the entrance driveway from the south. The access is currently secured, but deadwoods should be removed from these specimens in the event of the site becoming occupied.

6.1.4 There is also a history of rather unsympathetic canopy management throughout the site.

6.1.5 The canopy includes a number of European Ash specimens, with Chalara Ash Dieback being confirmed in a number of trees. In the case of several large mature trees, evidence of the disease was not available at the time of the survey due to the crown height and the absence (in winter) of symptoms of foliar necrosis. See s4.2, above in this connection.

6.2 Avenue specimens to W of entrance driveway from A85:
Trees No 5225-5234

6.2.1 Mature broadleaves of varying stature and condition, including a number of fine tall finely-structured trees, as well as a few less well-formed examples and one moribund specimen. There is also an evident history of coarse tree surgery. See Images No 01 & 02 at Appendix 1, below.

6.2.2 Within this group there is a current recommendation for the removal of one tree (Sycamore No 5230) and the removal of deadwoods from two others (Oak No 5229 & Sycamore No 5232).

The deadwoods, which oversail the entrance driveway, are detailed in the Survey Schedule, but we recommend that these trees are also crown-cleaned to remove further deadwoods within this programme of works.

6.2.3 BS5837 Retention Category classification of trees in this group varies from Category A for the healthier, more dominant specimens to Category U for the moribund tree.

6.3 Substantial mature specimens on or adjacent to a north-east-facing embankment: Trees No 5244-5256

6.3.1 Comprising a small copse of mature broadleaves, the condition of these trees is diverse, including some fine dominant mature trees as well as others with a range of structural defects, and one windthrown Beech. See Images No 03 & 04 at Appendix 1, below.

6.3.2 A number of Ash sps within this group are symptomatic of Chalara Ash Dieback, but the disease cannot be confirmed in all specimens, which were dormant at the time of inspection. See s4.2, above in this connection.

6.3.3 BS5837 Retention Category grading varies from Category A for the healthier, more dominant specimens to Category U for the windthrown tree.

6.4 Stand-alone trees, mainly around the site of demolished buildings:
Trees No 5235-5243, 5257 & 5258

6.4.1 Various individually recorded trees throughout the site of diverse species, age, stature and quality, including several which appear to have derived from the garden of the now-demolished property.

6.4.2 Nos 5225 & 5236 are large, reasonably well-formed Lawson's Cypress specimens to the east of the entrance avenue, to some extent reflecting the Avenue profile of the broadleaves to the West.



6.4.3 Others are relatively modest self-generated broadleaf specimens (and one small Yew within what appears to have been a formerly cultivated garden), within or adjacent to tree groups G2 & G3.

All are in adequate condition in the present circumstances, although the development of younger trees adjacent to the shelter/screening lines has become distorted due to light suppression.

6.4.4 The large individual Lawson's Cypress specimens are graded in the survey at Retention Category B, as are a few of the younger broadleaves with reasonably good development potential. Other specimens are Category C.

6.5 Tree groups G1, G2 & G4

6.5.1 Linear screening or outgrown hedging lines of Cypress, in generally adequate condition, but offering rather modest landscape, amenity and ecological value. All graded in the survey at Retention Category B.

6.5.2 Tree group G3

6.5.3 A curved linear group of Sitka Spruce on the SE edge of building remnants. Varying considerably in stature and condition, with tall, reasonably well-developed specimens towards the SW end, and a number of standing dead trees at the NE. See Image No 05 at Appendix 1, below.

6.5.4 The outer (SE) edge of this group features a sporadic undercanopy of young self-generated young broadleaves, mostly Ash, all of which are symptomatic of Chalara Ash Dieback. The Spruce are graded in the survey at Retention Category B. See s4.2, above in this connection.

6.6 Tree group G5

6.6.1 A sporadic undercanopy of minor self-generated broadleaves adjacent to the mature tree copse (Nos 5244-5258), in generally poor structural condition as a result of light suppression. All Ash sps within this group are symptomatic of Chalara Ash Dieback. Graded in the survey at Retention Category C.

6.7 Canopy area CA1

6.7.1 A substantial area in the eastern sector of the site is undeveloped and has become colonised by modest juvenile broadleaf trees, predominantly Goat Willow. See Image No 06 at Appendix 1, below. CA1 is graded in the survey at Retention Category B.

7 Summary of Recommendations

7.1 Safety Criteria

7.1.1 No interventions are currently recommended in order to meet the owner's or occupier's Duty of Care to users of the site.

7.1.2 However deadwoods should be removed from Trees No 5529 & 5532 in the event of the site becoming occupied.

7.2 General Canopy Management Recommendations

7.2.1 The canopy should be re-inspected in summer 2022 to assess the progression of Chalara Ash Dieback, and bring forward appropriate management recommendations.

7.2.2 We recommend that an appropriate Arboricultural Management Plan be produced to address emerging issues in the development and welfare of trees retained within the context of the proposed development on site.

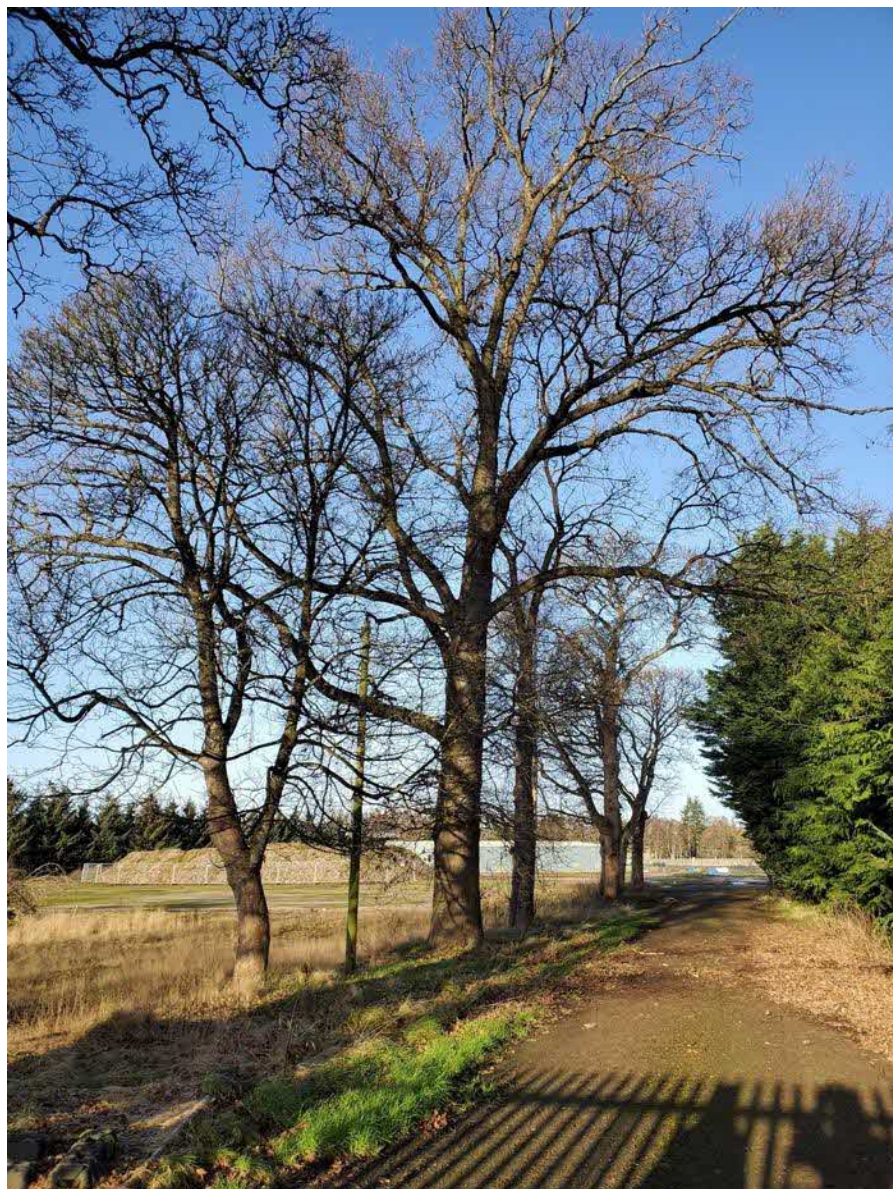
7.3 Re-Inspection of Canopy

7.3.1 Notwithstanding the specific recommendations in s7.2.1 above, the canopy should be re-inspected by a qualified arboricultural consultant and this report updated within a period of two years of the date of issue of this report.



Section D Tree Survey Appendices

Appendix 1. Site Photographs



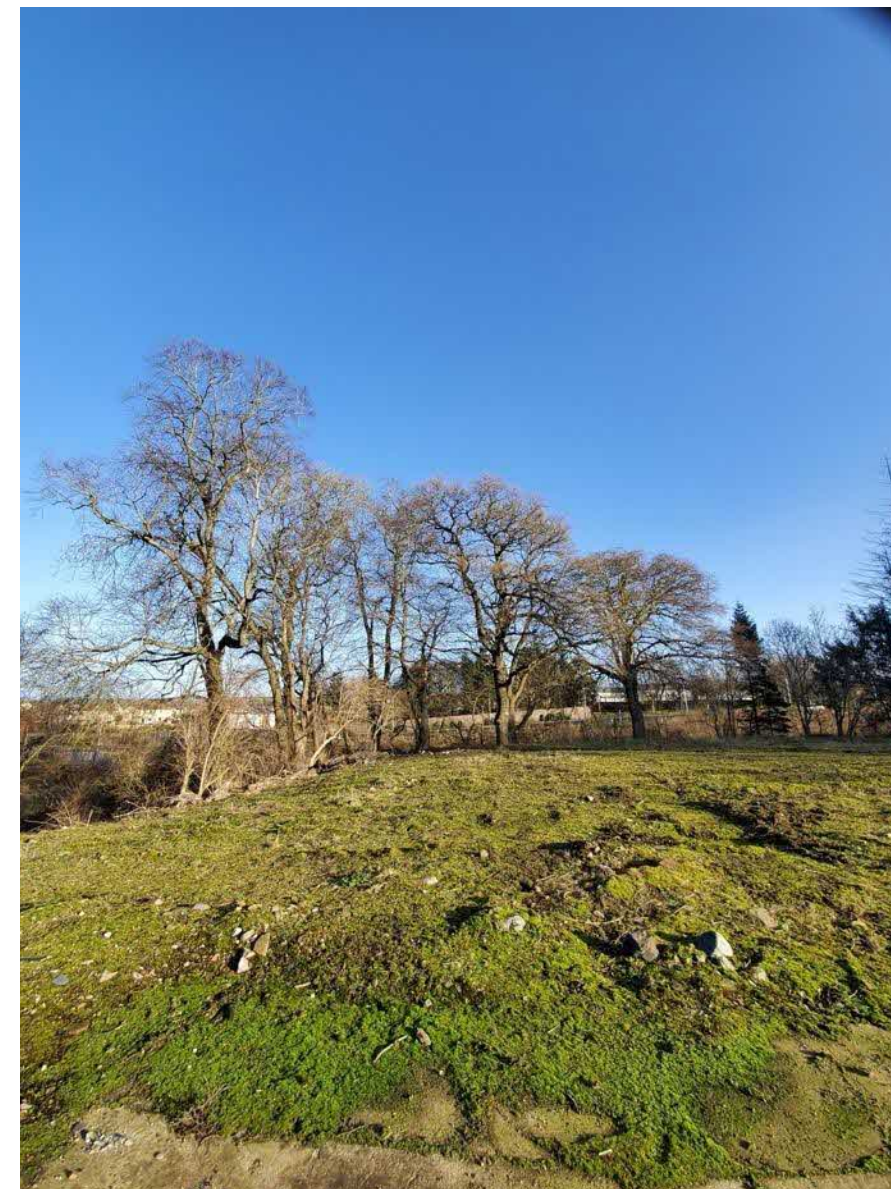
BS_080122 Land at Crieff Road, Perth Image No 01

Specimen trees to W of entrance avenue, featuring dominant Oak No 5229



BS_080122 Land at Crieff Road, Perth Image No 02

Moribund Sycamore No 5230 to W of entrance Avenue



BS_080122 Land at Crieff Road, Perth Image No 03

Mature broadleaf trees No 5244-5256 on NE-facing embankment





BS_080122 Land at Crieff Road, Perth Image No 04
Windthrown Beech No 5253 on NE-facing embankment



BS_080122 Land at Crieff Road, Perth Image No 05
Linear group of Sitka Spruce G3, showing standing dead specimens at NE end
and young self-generated specimens on outer (SE) edge




BS_080122 Land at Crieff Road, Perth Image No 06
Canopy area G1, featuring self-generated scrub and minor trees



Appendix 2. Mapping Figures

A2.1 Tree Survey Mapping







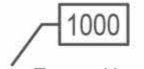

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BS5837:2012 Tree Survey:
 Crieff Road, Perth
 Trees No 5225 - 5258
 Tree Groups No G1 - G5
 Canopy Areas No CA1

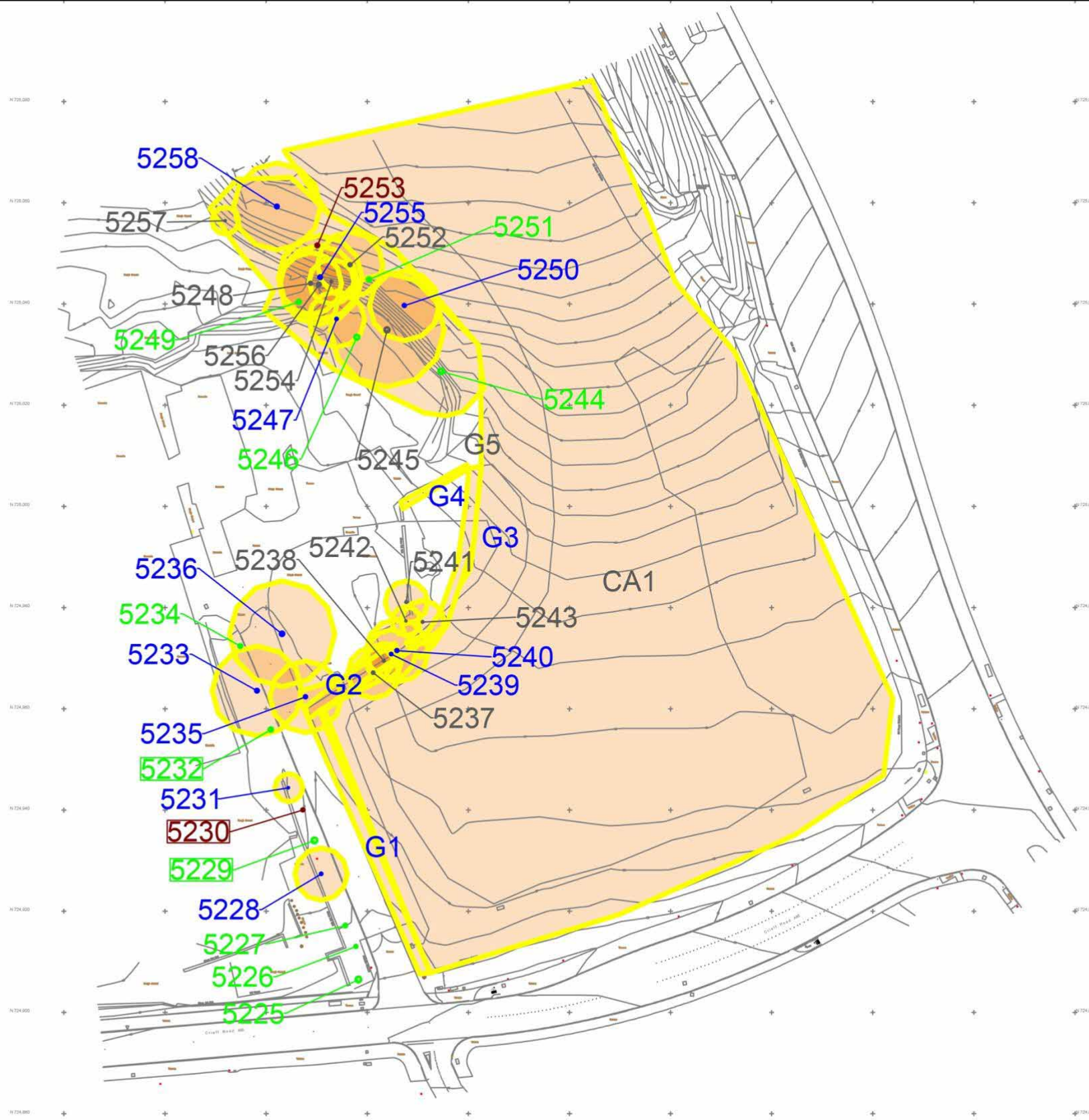
Scale: 1:1000 @ A3
 Date: 21/01/2022
 Survey Reference:
 BS_080122

Background Map Source:
 Client Supplied Map Data

Legend
 Category 'A'
 Category 'B'
 Category 'C'
 Category 'U'
 1000
 Trees with Recommended Works



A2.2 Tree Constraints Plan -Below Ground



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Scale: 1:1000 @ A3

Date: 21/01/2022
 Survey Reference:
 BS_080122



Background Map Source:
 Client Supplied Map Data

Legend



Root Protection
 Area



A2.3 Tree Constraints Plan -Above Ground



Appendix 3. Survey Schedule

Tree Reference Number	Grid Reference	Species, Taxa	Age Class	Height (m)	Stem Diameter (mm)	Constituent Stem Diameter of Multistem sps (mm)	Crown Spread (m)	Height (m) & Direction of Lowest Branch	Crown Clearance (m)	Root Protection Area	Physiological Condition	Structural Condition	Condition Notes	Preliminary Management Recommendations	Timeframe for Recommended Works	Estimated Remaining Contribution	BS5837 Retention Category	Photo Reference
5225	NO 09178.28 24906.48	Sycamore, Acer pseudoplatanus	Mature	20	1080	—	N:6 E:8 S:8 W:8	3.5, W	2.5	Radius: 13.0m. Area: 531 m ² .	Good	Fair to Good	Reasonably well structured mature avenue specimen 3 co-dominant stems from 2.0m via tension union Multiple pruning wounds from historic tree surgery to raise clear canopy height	—	—	40+ Years	A2	—
5226	NO 09177.73 24913.00	Sycamore, Acer pseudoplatanus	Mature	20	600	—	N:5 E:6 S:4 W:6	2.7, S	2	Radius: 7.2m. Area: 163 m ² .	Good	Fair to Good	Reasonably well structured mature avenue specimen Crown development slightly suppressed from N and S 2 co-dominant stems from 8.0m via compression union Multiple pruning wounds from historic tree surgery to raise clear canopy height Minor deadwoods	—	—	40+ Years	A2	—
5227	NO 09175.69 24917.17	Sycamore, Acer pseudoplatanus	Mature	20	640	—	N:5 E:5 S:4 W:7	4, S	2.5	Radius: 7.7m. Area: 186 m ² .	Good	Fair to Good	Good upright mature avenue specimen Crown development slightly suppressed from S 2 co-dominant stems from 10.0m via tension union Multiple pruning wounds from historic tree surgery to raise clear canopy height with minor decay cavities	—	—	40+ Years	A2	—
5228	NO 09170.88 24927.36	Sycamore, Acer pseudoplatanus	Mature	13	430	—	N:4 E:6 S:5 W:8	3, E	2	Radius: 5.2m. Area: 85 m ² .	Good	Fair	Subdominant specimen Crown development substantially suppressed from N 2 co-dominant stems from 2.2m via compression union Minor deadwoods	—	—	40+ Years	B2	Image No 01
5229	NO 09169.56 24934.01	Pedunculate Oak, Quercus robur	Mature	27	1040	—	N:6 E:10 S:7 W:12	2.5, W	1	Radius: 12.5m. Area: 491 m ² .	Good	Good	Fine dominant avenue specimen 2 co-dominant stems from 11.0m via compression union Substantial decaying branch stub at 6.0m SE Multiple snags and deadwoods Multiple deadwoods on limb arising at 6.0m E extending over access road	Prune out deadwoods on limb arising at 6.0m E extending over access road, and for crown cleaning	In the event of site becoming occupied	40+ Years	A2	Image No 01
5230	NO 09167.27 24939.99	Sycamore, Acer pseudoplatanus	Mature	19	530	—	N:4 E:5 S:3 W:5	8, S	8	N/A: Retention Category U	Poor	Poor	Moribund specimen, 90% dead	Remove to ground level	—	0 Years	U	Image No 02
5231	NO 09164.45 24944.42	Silver Birch, Betula pendula	Early Mature	13	230	—	N:2.5 E:2.5 S:2.5 W:2.5	2.7, SW	2.5	Radius: 2.8m. Area: 25 m ² .	Good	Fair to Good	Finely structured young tree emerging from decaying stump 2 co-dominant stems from 5.0m via compression union	—	—	20+ Years	B2	—
5232	NO 09160.93 24955.87	Sycamore, Acer pseudoplatanus	Mature	23	880	—	N:5 E:8 S:6 W:8	5, W	4.5	Radius: 10.6m. Area: 353 m ² .	Good	Fair	Reasonably well structured avenue specimen with history of coarse pruning 2 co-dominant stems from 3.0m via tension union Multiple pruning wounds from historic tree surgery to raise clear canopy height with some decaying stumps Substantial deadwoods at 12.0m E over internal road	Prune out deadwoods at 12.0m E over internal road, and for crown cleaning	In the event of site becoming occupied	20+ Years	A2	—
5233	NO 09158.22 24963.54	Sycamore, Acer pseudoplatanus	Mature	16	740	—	N:5 E:3 S:5 W:7	2.5, N	2	Radius: 8.9m. Area: 249 m ² .	Fair to Good	Fair	Substantial avenue specimen with history of coarse pruning 2 co-dominant stems from 3.0m via tension union E co-leader terminated at 4.5m with minimal regeneration on decaying stump and mechanical bark damage Multiple pruning wounds from historic tree surgery to raise clear canopy height with decaying stumps Minor deadwoods	—	—	20+ Years	B2	—
5234	NO 09154.91 24972.40	Sycamore, Acer pseudoplatanus	Mature	16	720	—	N:4 E:4 S:4 W:7	4, E	4	Radius: 8.6m. Area: 232 m ² .	Good	Fair to Good	Substantial mature avenue specimen 2 co-dominant stems from 3.5m via tension union Minor deadwoods Multiple pruning wounds from historic tree surgery to raise clear canopy height	—	—	40+ Years	A2	—



Tree Reference Number	Grid Reference	Species, Taxa	Age Class	Height (m)	Stem Diameter (mm)	Constituent Stem Diameter of Multistem sps (mm)	Crown Spread (m)	Height (m) & Direction of Lowest Branch	Crown Clearance (m)	Root Protection Area	Physiological Condition	Structural Condition	Condition Notes	Preliminary Management Recommendations	Timeframe for Recommended Works	Estimated Remaining Contribution	BS5837 Retention Category	Photo Reference
5235	NO 09167.82 24962.39	Lawson's Cypress, <i>Chamaecyparis lawsoniana</i>	Mature	23	590	—	N:5 E:4 S:5 W:4	1, N	0.5	Radius: 7.1m. Area: 158 m ² .	Good	Fair to Good	Reasonably well-structured dominant specimen on edge of coniferous group	—	—	20+ Years	B2	—
5236	NO 09163.15 24974.82	Lawson's Cypress, <i>Chamaecyparis lawsoniana</i>	Mature	22	870	—	N:4 E:4 S:3 W:2	4.5, SE	1	Radius: 10.4m. Area: 340 m ² .	Good	Fair to Good	2 co-dominant stems from 2.7m via compression union with adaptive rib developing Further compression unions throughout crown with no visible evidence of structural instability	—	—	40+ Years	B2	—
5237	NO 09181.18 24967.14	Wild Cherry, <i>Prunus avium</i>	Mature	8	420	—	N:7 E:6 S:4 W:4	2.5, S	1.5	Radius: 5.0m. Area: 79 m ² .	Fair to Good	Fair to Poor	2 co-dominant stems from 2.3m via compression union Becoming severely suppressed by conifer hedge to S	—	—	10+ Years	C2	—
5238	NO 09183.28 24969.46	Wild Cherry, <i>Prunus avium</i>	Mature	8	290	—	N:6 E:5 S:4 W:3	3.5, S	2.5	Radius: 3.5m. Area: 38 m ² .	Fair to Good	Fair to Poor	2 co-dominant stems from 3.7m via compression union Becoming severely suppressed by conifer hedge to S	—	—	10+ Years	C2	—
5239	NO 09184.74 24970.81	English Yew, <i>Taxus baccata</i>	Mature	7	400	—	N:5 E:4 S:3 W:4	2, N	1	Radius: 4.8m. Area: 72 m ² .	Good	Fair	Minor specimen becoming suppressed by adjacent dominant trees	—	—	40+ Years	B2	—
5240	NO 09185.91 24971.51	Sycamore, <i>Acer pseudoplatanus</i>	Early Mature	16	—	380, 350	N:5 E:3 S:7 W:4	2, W	1.5	Radius: 6.2m. Area: 121 m ² .	Good	Fair	2 co-dominant stems from 1.0m via compression union	—	—	20+ Years	B2	—
5241	NO 09187.75 24981.09	Sycamore, <i>Acer pseudoplatanus</i>	Early Mature	15	350	—	N:5 E:5 S:3 W:5	2.5, E	2	Radius: 4.2m. Area: 55 m ² .	Good	Fair	Lower stem swept to E Minor specimen growing out of remnants of stone wall	—	—	20+ Years	C2	—
5242	NO 09187.66 24977.36	Sycamore, <i>Acer pseudoplatanus</i>	Early Mature	15	240	—	N:4 E:3 S:2 W:4	3.5, N	3	Radius: 2.9m. Area: 26 m ² .	Good	Fair	2 co-dominant stems from 3.5m via tension union Minor specimen growing out of remnants of stone wall	—	—	10+ Years	C2	—
5243	NO 09190.98 24977.15	Sycamore, <i>Acer pseudoplatanus</i>	Early Mature	12	—	280, 220	N:6 E:4 S:1 W:4	2.2, N	1	Radius: 4.3m. Area: 58 m ² .	Good	Fair	Minor multistemmed specimen suppressed from S	—	—	20+ Years	C2	—
5244	NO 09194.68 25026.65	Common Beech, <i>Fagus sylvatica</i>	Mature	20	1080	—	N:11 E:14 S:10 W:9	4.5, N	1.5	Radius: 13.0m. Area: 531 m ² .	Good	Good	Major mature specimen on E-facing embankment 2 co-dominant stems from 3.0m via tension union with compression fork in E co-leader at 5.5m Minor deadwoods Multiple pruning wounds from historic tree surgery to raise clear canopy height with minor decay cavities	—	—	40+ Years	A2	—
5245	NO 09183.93 25034.90	European Ash, <i>Fraxinus excelsior</i>	Mature	19	940	—	N:7 E:8 S:10 W:6	1, S	1	Radius: 11.3m. Area: 401 m ² .	Poor	Fair to Poor	Crown development slightly suppressed from W Major stem cavity at 2.0m to 3.5m E with vigorous wound-wood developing over extensive decaying tissue Scaffold limb arising at 1.0m S fractured at 3.5m with decaying stump Specimen symptomatic of Chalara Ash Dieback	—	—	<10 Years	C2	—
5246	NO 09177.94 25033.43	Pedunculate Oak, <i>Quercus robur</i>	Mature	20	920	—	N:11 E:5 S:8 W:8	3.5, SW	3.5	Radius: 11.0m. Area: 380 m ² .	Fair to Good	Fair	Crown development slightly suppressed from E 2 co-dominant stems from 5.0m via tension union Extensive large deadwoods in lower crown with further minor deadwoods throughout Multiple pruning wounds from historic tree surgery to raise clear canopy height	—	—	20+ Years	A2	—



Tree Reference Number	Grid Reference	Species, Taxa	Age Class	Height (m)	Stem Diameter (mm)	Constituent Stem Diameter of Multistem sps (mm)	Crown Spread (m)	Height (m) & Direction of Lowest Branch	Crown Clearance (m)	Root Protection Area	Physiological Condition	Structural Condition	Condition Notes	Preliminary Management Recommendations	Timeframe for Recommended Works	Estimated Remaining Contribution	BS5837 Retention Category	Photo Reference
5247	NO 09173.93 25037.00	Sycamore, Acer pseudoplatanus	Mature	17	460	—	N:7 E:3 S:4 W:6	4, N	1	Radius: 5.5m. Area: 95 m ² .	Fair to Good	Fair	Crown development substantially suppressed from SE Substantial deadwoods in lower crown	—	—	20+ Years	B2	—
5248	NO 09168.81 25044.07	Sycamore, Acer pseudoplatanus	Mature	16	510	—	N:3 E:3 S:5 W:6	2.5, S	2.5	Radius: 6.1m. Area: 117 m ² .	Fair to Poor	Fair to Poor	Crown development suppressed from S 2 co-dominant stems from 2.0m via compression union Extensive history of fracture wounds, mechanical bark damage and coarse pruning with multiple decay sites on lower bole Multiple deadwoods	—	—	<10 Years	C2	—
5249	NO 09166.45 25040.40	Common Lime, Tilia x vulgaris	Mature	23	770	—	N:8 E:6 S:7 W:7	3, S	2	Radius: 9.2m. Area: 266 m ² .	Good	Fair to Good	Crown development suppressed from S with stem slightly inclined to N Multiple snags and deadwoods	—	—	40+ Years	A2	—
5250	NO 09187.33 25039.67	Common Lime, Tilia x vulgaris	Mature	13	—	400, 260, 240, 210	N:8 E:10 S:5 W:5	2, S	1	Radius: 6.9m. Area: 150 m ² .	Good	Fair	Multistemmed coppice regeneration on NE facing embankment	—	—	40+ Years	B2	—
5251	NO 09180.37 25044.81	Common Lime, Tilia x vulgaris	Mature	27	870	—	N:7 E:10 S:7 W:4	4, NE	4	Radius: 10.4m. Area: 340 m ² .	Good	Fair to Good	Crown development suppressed from W with stem slightly inclined to E Sited on E-facing embankment 2 co-dominant stems from 3.0m via tension union Substantial deadwoods in mid crown	—	—	40+ Years	A2	—
5252	NO 09176.59 25047.77	European Ash, Fraxinus excelsior	Mature	12	540	—	N:8 E:6 S:0 W:4	5, NE	5	Radius: 6.5m. Area: 133 m ² .	Fair	Fair	Crown development substantially suppressed from SW with stem inclined to NE Sited on NE facing embankment Major historic limb fracture 5.0m E with decaying stump Further significant deadwoods Specimen not currently symptomatic of Chalara Ash Dieback	—	—	10+ Years	C2	—
5253	NO 09170.12 25051.58	Common Beech, Fagus sylvatica	Mature	20	—	510, 490	N:0 E:0 S:0 W:0	0, N	0	N/A: Retention Category U	Fair	Poor	Specimen windthrown from S and lying prostrate	—	—	0 Years	U	Image No 04
5254	NO 09172.93 25044.45	Common Lime, Tilia x vulgaris	Mature	13	370	—	N:5 E:4 S:3 W:3	3.5, S	3.5	Radius: 4.4m. Area: 61 m ² .	Fair	Fair	Suppressed subdominant specimen on N facing embankment	—	—	10+ Years	C2	—
5255	NO 09170.71 25045.31	European Ash, Fraxinus excelsior	Mature	22	690	—	N:7 E:9 S:5 W:5	4.5, NW	3.5	Radius: 8.3m. Area: 216 m ² .	Fair	Fair	Crown development suppressed from S Substantial deadwoods in mid crown Specimen not currently symptomatic of Chalara Ash Dieback	—	—	20+ Years	B2	—
5256	NO 09170.43 25043.80	European Ash, Fraxinus excelsior	Mature	20	650	—	N:8 E:2 S:3 W:7	7, SE	6	Radius: 7.8m. Area: 191 m ² .	Poor	Fair	Crown development substantially suppressed from S with stem bowed to N Minor deadwoods Areas of mechanical bark damage on lower bole Specimen symptomatic of Chalara Ash Dieback	—	—	<10 Years	C2	—
5257	NO 09151.90 25056.49	Sycamore, Acer pseudoplatanus	Early Mature	8	220	—	N:5 E:4 S:3 W:3	1.8, E	2	Radius: 2.6m. Area: 21 m ² .	Fair	Fair	Minor specimen on NE facing embankment 3 co-dominant stems from 2.5m to 2.8m via compression union	—	—	20+ Years	C2	—
5258	NO 09162.16 25059.28	Common Lime, Tilia x vulgaris	Mature	15	—	680, 230	N:8 E:7 S:6 W:7	2, N	0.5	Radius: 8.6m. Area: 232 m ² .	Good	Fair to Good	Multistemmed from 0.2m via complex compression unions Sited on NE facing embankment	—	—	40+ Years	B2	—



Tree Reference Number	Grid Reference	Species, Taxa	Age Class	Height (m)	Stem Diameter (mm)	Constituent Stem Diameter of Multistem sps (mm)	Crown Spread (m)	Height (m) & Direction of Lowest Branch	Crown Clearance (m)	Root Protection Area	Physiological Condition	Structural Condition	Condition Notes	Preliminary Management Recommendations	Timeframe for Recommended Works	Estimated Remaining Contribution	BS5837 Retention Category	Photo Reference
Tree Groups																		
G1	NO 09179.78 24934.42	Lawson's Cypress, Chamaecyparis lawsoniana	Early Mature	<9	<280	—	—	—	—	—	Good	Fair to Good	Shelter/screening line of young conifers with occasional gaps populated by minor self generated broadleaves	—	—	20+ Years	B2	—
G2	NO 09177.13 24965.63	Leyland Cypress, X Cupressocyparis leylandii	Early Mature	<17	<440	—	—	—	—	—	Good	Fair	Minor shelter/screening line with occasional subdominant and failing specimens	—	—	20+ Years	B2	—
G3	NO 09201.97 24986.39	Sitka Spruce, Picea sitchensis Common Hawthorn, Crataegus monogyna European Ash, Fraxinus excelsior	Mature/ Early Mature	<21	<700	—	—	—	—	—	Fair	Fair	Curved linear group of varying stature, with larger specimens at SW end Remnants of ancient Hawthorn hedgerow in undercanopy 3 standing dead specimens at NE end of group Occasional young Ash on NE and E peripheries, all symptomatic of Chalara Ash Dieback	—	—	20+ Years	B2	Image No 05
G4	NO 09195.74 25002.70	Lawson's Cypress, Chamaecyparis lawsoniana	Early Mature	<9	<220	—	—	—	—	—	Good	Fair to Good	Shelter/screening line of young conifers with occasional gaps populated by minor self generated broadleaves	—	—	20+ Years	B2	—
G5	NO 09184.70 25039.56	Sycamore, Acer pseudoplatanus European Ash, Fraxinus excelsior Elder, Sambucus nigra Common Lime, Tilia x vulgaris	Early Mature	<8	<200	—	—	—	—	—	Good	Fair	Sporadic young broadleaves in understorey of mature tree copse, including some coppice regeneration General condition adequate with crown developments substantially suppressed from W & S All Ash specimens symptomatic of Chalara Ash Dieback	—	—	20+ Years	C2	—
Canopy Areas																		
CA1	NO 09227.41 24985.23	Goat Willow, Salix caprea European Ash, Fraxinus excelsior Sycamore, Acer pseudoplatanus	Juvenile	<6	<100	—	—	—	—	—	Fair to Good	Fair	Sporadic young colonising broadleaves on undeveloped land	—	—	10+ Years	C2	Image No 06



Appendix 4. BS5837:2012 Tree Retention Categories

Table 1 Cascade chart for tree quality assessment

Category and 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	<ul style="list-style-type: none"> 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 (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 <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p>			See Table 2
	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 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)	See Table 2
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 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	See Table 2
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 150 mm	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	See Table 2

BRITISH STANDARD

BS 5837:2012



Appendix 5. Key to Survey Spreadsheets

A5.1 Tree No

Represented on survey tags fixed to bole of tree at approximately 2.0m.

A5.2 Species

Both formal and common nomenclature is given, where appropriate. Where precise species identification is in doubt, genus is given, followed by suffix "spp".

Specimen Height, Crown Spread, Height of First Significant Branch and Height of Canopy

Given in metres. These are measured accurate to a tolerance of 0.5m for values up to 10m and of 1m for values over 10m.

A5.3 Crown Spread

Given on each of the North, East, South and West axes respectively, measured in metres.

A5.4 Stem Diameter

Measured at 1.5m above ground level. Where this is impractical the measurement is taken at the closest appropriate point in line with the guidance outlined in BS5837 (2012). This is taken to be the Effective Stem Diameter for the purpose of calculating the Root Protection Radius.

In instances where more than one stem is present at 1.5m these are recorded as Constituent Stem Diameters. In such cases the Effective Stem Diameter is calculated using the formulae provided by BS5837 (2012). Where accurate measurement of stem diameter is impractical (for example due to the presence of ivy or dense epicormic growths) the value is estimated and the figure recorded with the suffix e.

A5.5 RPA (Root protection Area)

BS 5837 (2012) provides for the identification of a Root Protection Area around trees to be maintained during and after construction works on site. This is calculated –principally as a function of the bole diameter of the specimen- and given in the survey schedule as the radius of a circle around each tree which should be secured and left undisturbed during site operations. The RPA may additionally be represented graphically on topographical drawings of the site, if available.

A5.6 Age Classification

J	Juvenile
SM	Semi-Mature
EM	Early maturity
M	Mature
OM	Overmature

A5.7 Physiological and Structural Condition

G	Good
F-G	Fair-Good
F	Fair
F-P	Fair-Poor
P	Poor

A5.8 Preliminary Management Recommendations

Action required in the short term in reflection of health and safety considerations, or on any specific criteria outlined in the Terms of Reference (see s1 above). Note that this section is not intended to give comprehensive guidance as to the appropriate long-term management of each specimen.

A5.9 Life Expectancy Classification (Estimated Remaining Contribution)

<10 years
10+ years
20+ years
40+ years

A5.10 British Standard 5837 (2012) Tree Retention Categories

See specification at Appendix 4 (Above)





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