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**BS5837:2012 Tree Survey
Arboricultural Impact Assessment
Arboricultural Method Statement**

**77 Main Street
Killearn
G63 9LF**

February 2024

Abstract

Site: 77 Main Street, Killearn, G63 9LF

Grid Reference: NS 52730 85430

Client: Frances Cooper

Date: February 2024

Document Reference: 101009_BS



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Overview

1 Executive Summary

TREEPLANNER LTD was commissioned by Frances Cooper (the Client) to produce a BS5837:2012 Tree Survey Report, Arboricultural Impact Assessment and Arboricultural Method Statement relating to the design proposed for a site known as 77 Main Street, Killearn, G63 9LF.

The focus of the survey was to record and describe the tree stock on and directly adjacent to the site. This data allows the tree stock to be assessed in relation to the Client's development proposal and to predict its impact on the arboricultural interests of the site.

The desk study determined that the site falls within a Conservation Area and the assessed canopy is subject to the same restrictions as a Tree Preservation Order as set out by Stirling Council.

A total of eighteen individual trees within the site perimeter, two boundary hedges and a single tree group were recorded. In accordance with the requirements of BS5837:2012, fifteen external trees were also assessed.

The proposed design plan requires the removal of a 1.0m section of hedge group H1 and the removal of tree Nos 9951, 9959, 9960 and 9966. Additionally, the root protection areas of tree Nos 9953, 9954, 9955 and E1-E3 are infringed.

Detailed mitigation including compensatory planting and ground protection is provided in the Arboricultural Impact Assessment and Arboricultural Method Statement in this regard.

Preliminaries

2 Terms of Reference

2.1 Title

2.1.1 BS5837:2012 Tree Survey, Arboricultural Impact Assessment & Arboricultural Method Statement: 77 Main Street, Killearn, G63 9LF.

2.2 Definition of survey area

2.2.1 As depicted on *Proposed Site Plan*, drawing No. 08A by Karen Parry Architects (22/11/2023).

2.3 Instruction

2.3.1 The survey was instructed by Frances Cooper, 77 Main Street, Killearn, G63 9LF. Instruction issued via email on 7th February 2024.

2.4 Author

2.4.1 Graeme Millar.

2.4.2 Graeme Millar is a qualified arboricultural consultant with extensive experience advising clients in relation to trees and planning. He holds a Higher National Diploma in Arboriculture & Urban Forestry and is a Technician Member of the Arboricultural Association.

2.5 Date of survey

2.5.1 10th February 2024.

2.6 Aims and objectives of study

2.6.1 The objective of this study is to provide an assessment of and report on the nature, condition and characteristics of the tree canopy on and adjacent to a proposed development site.

2.6.2 Further, this study seeks to assess the impact of the proposed development on the arboricultural interests of the site and to provide mitigation as required.

2.6.3 The Arboricultural Method Statement aims to minimise predicted impacts as a result of the proposed development on retained trees on and adjacent to the site.

2.7 Scope of survey

2.7.1 The scope of the survey is defined as a *Stage 1 Visual Tree Assessment* and the report utilises tree data collected in accordance with *BS5837:2012*.

2.8 Disclaimers

2.8.1 This report was prepared exclusively for use by the client in accordance with the terms of the contract. It is not a substitute for a tree condition assessment. No responsibility is accepted for any actions taken by a third party arising from their interpretation of the information contained within this report.

2.8.2 This survey does not specifically address the health and safety risks posed by trees. Where potential hazards have been identified, an appropriate strategy for management is recommended. Regular arboricultural assessment of trees should be undertaken.

2.8.3 The survey conclusions relate solely to the conditions recorded at the time of inspection. Trees can be affected by environmental changes such as weather events, topographical alterations, or changes in hydrological regime; therefore, such changes may necessitate further survey.

2.8.4 The Tree Survey Schedule presented in this document may include preliminary management recommendations but is not a schedule of works and is not designed to be submitted to a contractor.

3 Site Characteristics

3.1 Location

3.1.1 The subject canopy lies on the southern sector of the Stirlingshire village of Killearn.

3.2 Topography

3.2.1 Site topography is generally level in relation to the surrounding landscape with a minor engineered west facing embankment.

3.3 Wind exposure

3.3.1 Slight-moderate. The assessed canopy derives a modest degree of wind protection from the surrounding mature tree canopy.

4 Survey Methodology

4.1 Basis of recording

4.1.1 The canopy is recorded and assessed as four distinct canopy areas:

- Individually recorded tree specimens: Nos 9951-9968
- Tree groups: No G1
- Hedge groups: Nos H1-H2
- External trees on adjoining properties: Nos E1-E15

4.2 Tree assessment

4.2.1 Trees were assessed in accordance with the requirements of BS5837:2012. Observations were made from ground level only without detailed or invasive investigations.

4.2.2 Trees were measured using diameter tape and a clinometer. Where this was not possible or practical, measurements have been estimated.

5 Desk Study

5.1 Killearn Conservation Area¹

5.1.1 Trees on site are protected by the Killearn Conservation Area legislation. It is an offence to carry out works to a healthy tree measuring over 75mm in diameter at a height of 1.5m above the ground without council permission.

5.2 Stirling Local Development Plan 2018²

5.2.1 Relevant Local Authority policy in relation to trees and development is found within Policy 10 and 10.1 of the Stirling Local Development Plan 2018.

5.2.2 Primary Policy 10: Forestry, Woodland and Trees:

(a) Stirling Council has prepared a Forestry and Woodland Strategy in partnership with Clackmannanshire Council and Forestry Commission Scotland. Within the context of the Strategy the Council will:

(i) Adopt a vision for protection, future expansion and restructuring of woodland to meet national objectives and local needs.

¹ Available at: <https://www.stirling.gov.uk/media/052a04uu/killearn.pdf> (Accessed 12/02/2024)

² Available at: <https://www.stirling.gov.uk/media/0zpdfkij/stirling-council-local-development-plan-2018.pdf> (Accessed 12/02/2024)

(ii) Encourage sustainable forestry that delivers a range of economic, social and environmental benefits, including the potential mitigation of climate change and ecological adaptation.

(iii) Set out the local circumstances and factors (including environmental factors related to soil, water, flood risk and waste) in the assessment of planting and felling proposals.

(iv) Support the contribution of the forestry sector to local sustainable economic growth and employment development.

(b) Additionally, the Council will, through the development management process:

(i) Promote Tree Preservation Orders (TPOs) to protect trees and groups of trees important for amenity, or because of their cultural or historic interest, or on account of their contribution to the character and appearance of Conservation Areas.

(ii) Protect existing woodland, especially woods with high natural, recreational and cultural heritage value. The criteria set out in the Scottish Government's policy on Control of Woodland Removal will be used to determine the acceptability of woodland removal.

(iii) Seek to expand woodland cover and, where practicable, secure establishment of new woodland in advance of development, particularly in association with:

- *Larger scale development proposals and / or developments on the edges of settlements as set out in the Key Site Requirements.*
- *Existing woodland or Green Corridors (see Policy 1.3).*
- *In areas of degraded landscape.*

5.2.3 Primary Policy 10.1: Development Impact of Trees and Hedgerows:

(a) Development proposals should provide protection from adverse impacts resulting from development to important individual trees, groups of trees or hedgerows that contribute to local amenity or have nature conservation or historic interest.

(b) During the construction phase ensure the protection and management of retained trees on development sites in accordance with BS 5837:2012 Trees in relation to design, demolition and construction (April 2012).

(c) All proposals on sites with existing trees or other significant vegetation features within or close to the site boundaries should:

(i) Include an appropriate tree survey and demonstrate how the findings of the tree survey and assessment have informed the development proposals.

(ii) Identify trees proposed for removal and retention, with details of how protection will be afforded.

(iii) Bring forward tree planting proposals to compensate for any removal and / or workable mitigation measures where development would impair connectivity between important woodland habitats.

(iv) Demonstrate suitable arrangements for the long-term management of retained trees and any compensatory planting (on or off-site as appropriate according to the nature and scale of the development). Developers should notify owners of any affected trees.

(v) Ensure the long-term retention of existing and proposed trees by positioning buildings an appropriate distance from them, taking into account the ultimate height of the trees.

(vi) Compensatory planting should take into consideration effects on flood risk. See the Natural Flood Management Handbook for further details.

Tree Survey

6 Survey Findings

6.1 Overview

6.1.1 This survey records and analyses the tree canopy and boundary hedging attributable to the well maintained gardens of a residential property. In accordance with the requirements of BS5837:2012, the survey also recorded a number of external trees sited within the adjoining property.

6.1.2 For the purpose of analysis, the subject canopy has been divided into four distinct canopy areas: individually recorded trees, tree groups, hedge groups and external trees.

6.1.3 The canopy is varied in character and comprises boundary hedging, minor ornamental and fruiting specimens as well as an occasional relatively substantial mature conifer.

6.1.4 The canopy is in generally good condition with occasional specimens performing poorly or having a history of unsympathetic management.

6.2 Individually recorded specimens within the garden area: Nos 9951-9968

6.2.1 Predominantly minor ornamental broadleaved trees sited on maintained lawns with occasional mature conifers.

6.2.2 Most specimens are in good or reasonably good physiological condition with the exception of tree No 9956 - a cherry nearing late maturity and presenting significant stress symptoms.

6.2.3 Instances of unsympathetic historic management to reduce canopy heights are found on trees No 9961-9963 - minor broadleaved specimens in the SE corner of the site and No 9964 - a mature Scots pine with its main stem terminated at 12.0m and extant crown heavily offset to the west.

6.2.4 Another Scots pine (No 9955) is of high-quality, locally dominant and in reasonably good physiological condition. The tree features occasional deadwoods and a fractured hanging branch oversailing an internal driveway to the southeast. This fractured branch is recommended for removal - see

preliminary management recommendations set out in the Tree Survey Schedule (Appendix. 3)

6.2.5 Tree No 9966 is a mature ornamental cypress of moderate quality with the eastern sector of its crown beginning to envelop a derelict outbuilding.

6.3 Hedge Groups on the east and west boundaries of the site: H1-H2

6.3.1 Boundary hedging on the east and west perimeters of the site is in early-maturity and is of mixed native broadleaf species composition. Maintained in a formal profile at 2.0m, they are well-structured with few gaps. H2 includes several outgrown trees with relevant examples recorded individually.

6.4 Tree Group G1

6.4.1 A linear group of minor fruiting specimens sited on a west facing embankment and running parallel to an internal driveway.

6.5 External trees on the eastern perimeter of the site: E1-E15

6.5.1 E1-E3 are three young ash trees with a recent history of coarse management. Extant branch extensions present symptoms consistent with ash dieback (*Hymenoscyphus fraxineus*) – a fungal borne pathogen expected to kill between 70% and 80% of ash trees in the UK.

6.5.2 A tightly planted screening line of Lawson cypress comprises tree Nos E4-E12. Sited on a raised level beyond a brick perimeter retaining wall, rooting zones are restricted to the adjoining property.

6.5.3 E13 is a standalone silver birch sited in the adjoining property. E14 & E15 comprise outgrown hedgerow specimens in adequate condition.

Arboricultural Impact Assessment

7 Canopy Loss

7.1 Proposed widening of entrance and laying of new driveway

7.1.1 Widening of the driveway entrance necessitates the removal of tree No 9951, a young goat willow recorded as Category C.

7.1.2 Additionally, the removal of approximately 1.0m of hedge H1 is also required. H1 is a relatively young mixed species boundary hedge of the same quality category.

7.1.3 Proposed laying of a new driveway would require the removal of tree Nos 9959 & 9960. These two early-mature broadleaves are in close proximity and are of low overall quality.

7.2 Demolition of existing derelict outbuilding and construction of new garage

7.2.1 The safe demolition of an existing derelict outbuilding and subsequent erection of a proposed new garage necessitates the removal of tree No 9966 - an exotic conifer of moderate quality.

8 Root Protection Area (RPA) Infringement

8.1 New driveway and parking area

8.1.1 The laying of a proposed new driveway and parking area requires the mitigated infringement into the calculated RPAs of tree Nos 9953, 9954, 9955, 9964 and external tree Nos E1-E3.

8.1.2 Details of proposed mitigation designed to allow these trees to be retained in the context of the development are found in Section 12.

8.2 Proposed new garage building

8.2.1 Soil excavation associated with the construction of a new garage building requires the mitigated infringement of a very small portion of the calculated RPAs of external tree Nos E3 and E14.

8.2.2 The extent of RPA infringement is negligible, however, detailed methodology for soil excavation within calculated RPAs is provided in Section 12.

9 Mitigation

9.1 Compensatory planting

9.1.1 To mitigate the impact of canopy loss on the ecological and amenity profile of the site, the design will encompass compensatory planting in the undeveloped north sector of the garden.

9.1.2 This planting scheme will utilise native and appropriate amenity trees, with correct establishment and maintenance techniques, to complement the existing green infrastructure.

9.2 Rooting zone protection

9.2.1 To ensure a suitable growing medium for trees impacted by RPA infringements as a consequence of the proposed new driveway and parking area, a load-bearing cellular confinement system will be installed. See Section 12 in this connection.

9.2.2 Mechanical excavation of soils within calculated RPAs is prohibited. Instead, soil excavation within RPAs will be carried out manually. See Section 12 in this connection.

9.2.3 Works within RPAs will be supervised by the project arboriculturist. See Section 13 in this connection.

10 Outcomes

10.1 Short-term

10.1.1 The removal of a section of boundary hedging and tree Nos 9951, 9959, 9960 and 9966 will have a negative short-term impact on the arboricultural interests of the site.

10.2 Medium-long-term

10.2.1 The proposed mitigation described in Section 9 above, coupled with regular arboricultural monitoring, will achieve a favourable outcome for green infrastructure in the subsequent medium – long-term period.

Arboricultural Method Statement

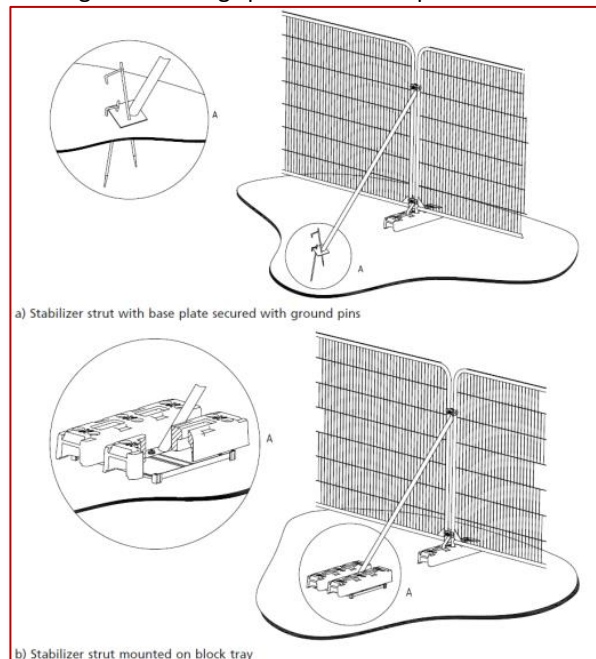
11 Pre-construction Activity

11.1 Tree protection barriers

11.1.1 Prior to any groundwork or construction activity, tree protection barriers will be erected in locations as depicted on the Tree Protection Plan (Appendix 2). These barriers will define the Construction Exclusion Zone and will ensure retained trees and hedge groups are protected from construction activity.

11.1.2 Tree protection barriers will consist of heras fencing 2.0m tall with individual panels held together securely with clamps and braced by backstays anchored by pins into the ground, or with block trays as depicted in Fig. 1 below.

11.1.3 Fig. 1 – Diagram showing specification for protective fencing



11.1.4 Highly visible all-weather notices will be securely attached to every second panel of the tree protection barriers detailing prohibitions related to the Construction Exclusion Zone. An example is shown in Fig. 2 below.

11.1.5 Fig. 2 – Example of all-weather sign to be attached to tree protection barriers detailing prohibitions



11.1.6 Tree protection barriers will not be tampered with or altered in any way and will remain in place until construction works are completed.

11.2 Prohibitions relating to the Construction Exclusion Zone

11.2.1 No materials, supplies, plant, machinery, spoil, changes in ground level or construction activities are permitted within the Construction Exclusion Zone.

11.2.2 No plant or equipment with a hydraulic arm shall be operated within striking distance of any stem or branches arising from trees protected by the Construction Exclusion Zone.

11.2.3 No fires are permitted in any position where flames could extend to within 5.0m of foliage, branches or trunks of trees protected by the Construction Exclusion Zone.

11.2.4 No cement mixing, chemical toilets, refueling or any activity which may cause harm to a tree is permitted to take place within 10.0m of the Construction Exclusion Zone.

12 Working Within Root Protection Areas

12.1 Excavation of soils

12.1.1 Mechanical excavation of soils within a calculated root protection area is prohibited.

12.1.2 The excavation of soils within the calculated root protection areas will be supervised by the project arboriculturist.

12.1.3 Soil will be loosened using hand-tools and will be cleared with the aid of an air-spade to prevent damage to roots.

12.1.4 Any roots found <25mm in diameter will be cleanly severed using suitable sharp secateurs by or under the supervision of the project arboriculturist.

12.1.5 Any roots found >25mm in diameter will be assessed by the project arboriculturist and, if feasible, severed cleanly using a suitable sharp tool such as handsaw or secateurs.

12.1.6 Exposed roots will be covered with hessian sack material to prevent desiccation. Immediately prior to backfilling, the hessian sack material will be removed.

12.2 Cellular confinement system

12.2.1 To provide a suitable growing medium and to mitigate the risk of soil compaction for the root system of retained trees No 9953-9955 and E1-E3, the installation of a load-bearing cellular confinement system is necessitated.

12.2.2 Designed in conjunction with the manufacturer, this will allow sufficient water ingress and gaseous diffusion that these trees can be retained in the context of the proposed development.

12.2.3 The location of where the cellular confinement system will be installed is indicated on the Tree Protection Plan (Appendix 2).

12.2.4 The system will be installed prior to any other construction works in order to protect root systems from soil compaction associated with construction traffic.

12.2.5 Guidance Note 12³ published by the Arboricultural Association in relation to the use of cellular confinement systems near trees will be followed.

13 Site Supervision

13.1 Arboricultural site visits

13.1.1 Works within the calculated root protection area of trees will be supervised by the project arboriculturist.

13.1.2 Monthly site visits will be undertaken by the project arboriculturist to ensure the continued satisfactory viability of tree protection measures. Any required adjustment of protection measures will be reported to the site manager and a record of site visits will be kept.

13.1.3 Further, the project arboriculturist will inspect protected trees for damage occurred as a result of construction activity.

13.2 Protection measure breaches

13.2.1 If any damage to trees, root protection areas or any other breach of tree protection measures occurs the project arboriculturist will be contacted immediately and will, if necessary, attend site.

13.2.2 Details of the incident in addition to proposed or implemented mitigation measures will be reported to the site manager and local planning authority.

14 Arboricultural Monitoring

14.1 Ongoing visual tree assessment

14.1.1 Retained trees and compensatory new planting stock will be inspected annually by a competent arboriculturist to assess their condition and management recommendations made where necessary.

³ Available at: https://www.trees.org.uk/Trees.org.uk/media/Trees-org.uk/Misc%20images/Bookshop/AA_GuidanceNote12_CellularConfinementSystems-Web.pdf

Tree Survey Appendices

Appendix 1. TREE SURVEY PHOTOGRAPHS



77 Main Street, Killearn, G63 9LF - Image No 01

Goat willow No 9951 located adjacent to site entrance



77 Main Street, Killearn, G63 9LF - Image No 02

Locally dominant Scots pine No 9955



77 Main Street, Killearn, G63 9LF - Image No 01

Poorly performing ornamental cherry No 9956



77 Main Street, Killearn, G63 9LF - Image No 02

Stretched birch specimen No 9960



77 Main Street, Killearn, G63 9LF - Image No 01

External ash specimens No E1-E3



77 Main Street, Killearn, G63 9LF - Image No 02

Linear group of external trees No E4-E12



77 Main Street, Killearn, G63 9LF - Image No 01

Brick perimeter retaining wall and stems of tree Nos E4-E12



77 Main Street, Killearn, G63 9LF - Image No 02

Lower crown of tree No 9966 enveloping a derelict outbuilding

Appendix 2. TREE SURVEY PLANS

252700

252725

685300

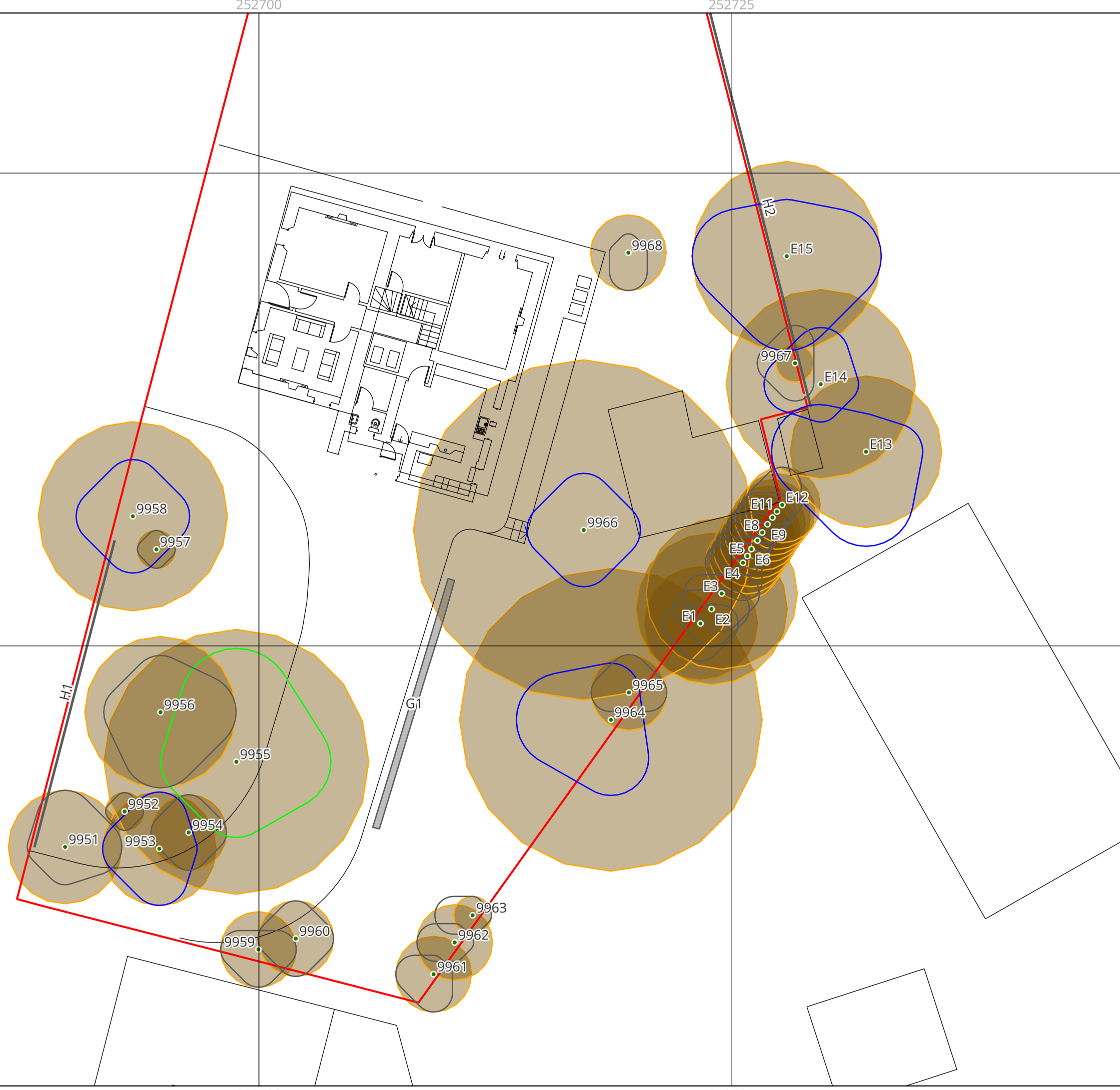
685300

685275

685275

252700

252725



Legend

- Site Boundary
- Existing Layout
- Tree Locations
- Root Protection Areas (RPAs)

Tree Crowns by Category

- A - High Quality
- B - Moderate Quality
- C - Low Quality

Tree Groups by Category

- C - Low Quality

Hedge Groups by Category

- C - Low Quality

Client:
Frances Cooper

Project:
77 Main Street, Killearn

Title:
Tree Survey Plan

Drawing no:
101009-TP01

Status:
FINAL

Scale:
1:200 @ A3

Drawn:
Graeme Millar

Date:
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252700

252725



685300

685300

685275

685275

252700

252725



Legend

- Site Boundary
- Proposed Design Layout

Tree Locations

- Retained
- RPA Infringement
- Incompatible with Design
- Root Protection Areas (RPAs)

Tree Crowns by Category

- A - High Quality
- B - Moderate Quality
- C - Low Quality
- Incompatible with Design

Tree Groups by Category

- C - Low Quality

Hedge Groups by Category

- C - Low Quality

Client:
Frances Cooper

Project:
77 Main Street, Killearn

Title:
Tree Constraints Plan

Drawing no:
101009-TP02

Status:
FINAL

Scale:
1:200 @ A3

Drawn:
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Date:
15th February 2023

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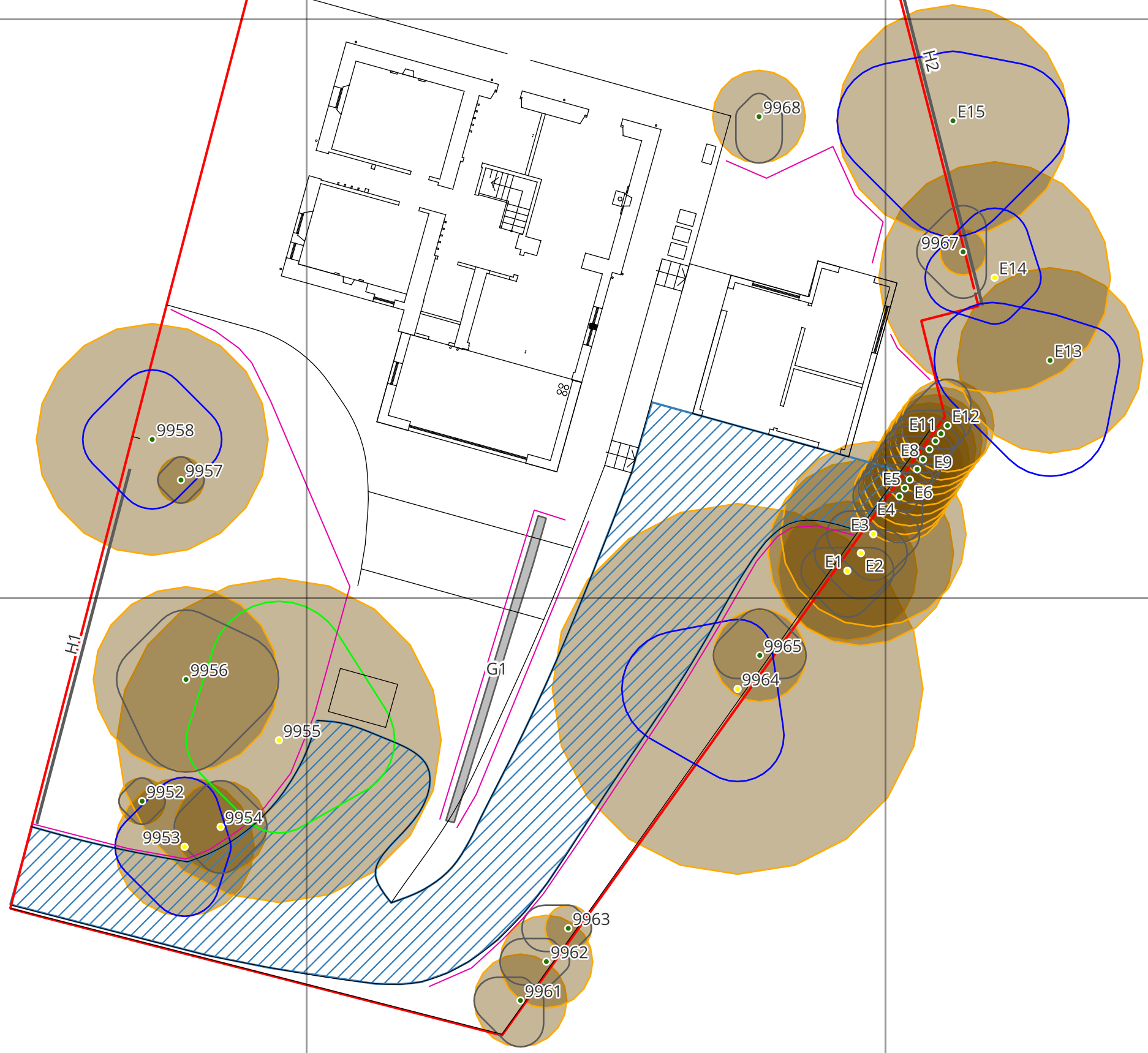


685300

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685275

685275



252700

252725

Legend

- Site Boundary
- Proposed Design Layout
- Tree Protection Barriers
- Cellular Confinement System

Tree Locations

- Retained
- RPA Infringement
- Root Protection Areas (RPAs)

Tree Crowns by Category

- A - High Quality
- B - Moderate Quality
- C - Low Quality

Tree Groups by Category

- C - Low Quality

Hedge Groups by Category

- C - Low Quality

Client:
Frances Cooper

Project:
77 Main Street, Killearn

Title:
Tree Protection Plan

Drawing no:
101009-TP03

Status:
FINAL

Scale:
1:200 @ A3

Drawn:
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Appendix 3. TREE SURVEY SCHEDULE

Tree ID	Species (Scientific name)	Height (m)	Diameter (mm)	Age Class	Crown Spread N	Crown Spread E	Crown Spread S	Crown Spread W	Height (m) and Direction of Lowest Branch	Crown Clearance (m)	Physiological Condition	Structural Condition	Notes	Preliminary Management Recommendations	Timeframe for Recommended Works	Estimated Remaining Contribution	BS5837 Category
Individually Recorded Trees																	
9951	Goat willow (<i>Salix caprea</i>)	7	220	EM	3	3	2	2	1.5 NE	2.5	Fair to Good	Fair to Good	Young specimen adjacent to site entranceway 2 codominant stems from 1.7m Ivy infesting stems	—	—	10+	C
9952	Weeping birch (<i>Betula pendula</i> 'Youngii')	3	100	EM	1	1	1	1	2 N	1.8	Fair to Good	Fair	Minor ornamental specimen sited on maintained lawn	—	—	10+	C
9953	Ornamental cherry (<i>Prunus sp.</i>)	6	280	M	3	2	3	3	2.5 SW	2.5	Fair to Good	Fair to Good	Mature ornamental specimen sited on maintained lawn adjacent to driveway 3 codominant stems from 1.7m History of minor tree surgery to raise clear canopy height with wound wood developing Extensive lichen population throughout crown	—	—	10+	B
9954	Common beech (<i>Fagus sylvatica</i>)	6	170	EM	2	2	2	2	0.5 S	0.5	Good	Good	Minor upright specimen sited on maintained lawn 2 codominant stems from 0.3m History of light pruning to maintain height and shape	—	—	10+	C
9955	Scots pine (<i>Pinus sylvestris</i>)	16	610	M	6	5	4	4	3 W	3	Fair to Good	Fair to Good	Locally dominant mature specimen sited on maintained lawn adjacent to driveway Occasional minor deadwoods and branch fracture points and fractured hanging branch including over sailing driveway to SE	Prune to remove deadwoods >50mm diameter & fractured branch over sailing driveway to SE	6 Months	40+	A
9956	Ornamental cherry (<i>Prunus sp.</i>)	5	340	M	3	4	4	3	2 SW	2	Poor	Fair to Poor	Mature ornamental specimen sited on maintained lawn 3 codominant stems from 1.0m Presenting acute stress symptoms including extensive apical dieback from branch extensions in upper crown	—	—	<10	C
9957	Sycamore (<i>Acer pseudoplatanus</i>)	4	110	EM	1	1	1	1	1.5 SE	2	Fair to Good	Fair to Good	Minor young specimen sited on maintained law History of light pruning to raise clear canopy height	—	—	10+	C
9958	Common yew (<i>Taxus baccata</i>)	5	450	M	3	3	3	3	0 N	0	Good	Fair to Good	Specimen sited at site perimeter fence Multiple codominant stems from ground level	—	—	20+	B
9959	Purple cherry plum (<i>Prunus cerasifera</i> 'Nigra')	6	160	EM	1	2	2	2	1 W	2	Fair to Good	Fair	Minor specimen emerging from congested shrub border 2 codominant stems from 0.4m History of light tree surgery to raise clear canopy height Somewhat congested crown structure	—	—	10+	C
9960	Silver birch (<i>Betula pendula</i>)	13	180	EM	2	2	2	2	6 N	6	Fair to Good	Fair	Somewhat stretched upright specimen adjacent to driveway Low crown – stem ratio History of light pruning to raise clear canopy height	—	—	10+	C
9961	Sycamore (<i>Acer pseudoplatanus</i>)	5	160	EM	1	1	2	2	0.5 W	0.5	Fair to Good	Poor	Minor specimen sited at base of perimeter fence History of unsympathetic management	—	—	10+	C

Tree ID	Species (Scientific name)	Height (m)	Diameter (mm)	Age Class	Crown Spread N	Crown Spread E	Crown Spread S	Crown Spread W	Height (m) and Direction of Lowest Branch	Crown Clearance (m)	Physiological Condition	Structural Condition	Notes	Preliminary Management Recommendations	Timeframe for Recommended Works	Estimated Remaining Contribution	BS5837 Category
9962	Common beech (<i>Fagus sylvatica</i>)	5	130	EM	1	1	1	2	1.8 W	1	Fair to Good	Fair to Poor	Minor specimen sited at base of perimeter fence History of unsympathetic management	—	—	10+	C
9963	Common beech (<i>Fagus sylvatica</i>)	5	110	EM	1	1	1	2	0.5 W	0.5	Fair to Good	Fair to Poor	Minor specimen sited at base of perimeter fence History of unsympathetic management	—	—	10+	C
9964	Scots pine (<i>Pinus sylvestris</i>)	13	660	M	3	0	4	5	7 SW	3.5	Fair to Good	Fair	Substantial specimen sited on maintained lawn adjacent to perimeter fence Leader historically terminated at 12.0m Crown distribution heavily offset to W	—	—	20+	B
9965	Common yew (<i>Taxus baccata</i>)	5	150	EM	2	2	1	2	0.5 W	0.5	Good	Fair to Good	Young specimen sited at base of perimeter fence	—	—	10+	C
9966	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	12	750	M	3	3	3	3	0.5 W	0.5	Good	Fair	Mature specimen adjacent to derelict outbuilding atop W facing embankment Multistemmed from 0.5m E sector of lower crown beginning to envelop outbuilding	—	—	20+	B
9967	Common beech (<i>Fagus sylvatica</i>)	7	110	EM	2	1	2	2	0.5 W	0.5	Fair to Good	Fair to Good	Young hedgerow specimen in linear grouping	—	—	10+	C
9968	Common beech (<i>Fagus sylvatica</i>)	4	140	EM	1	1	2	1	0.3 N	0.5	Fair to Good	Fair to Good	Minor ornamental specimen atop SW facing embankment	—	—	10+	C
Tree Groups																	
G1	Apple (<i>Malus sp.</i>), Common beech (<i>Fagus sylvatica</i>)	<4	<90	EM	—	—	—	—	—	—	Fair	Fair	Small linear grouping of minor fruit trees running parallel with driveway	—	—	10+	C
Hedge Groups																	
H1	Common beech (<i>Fagus sylvatica</i>), Common privet (<i>Ligustrum ovalifolium</i>), Common holly (<i>Ilex aquifolium</i>), Common hawthorn (<i>Crataegus monogyna</i>)	<2	<30	EM	—	—	—	—	—	—	Fair to Good	Fair to Good	Linear mixed species boundary hedge on W perimeter of site Maintained in formal profile at 2.0m	—	—	10+	C
H2	Common beech (<i>Fagus sylvatica</i>), Common privet (<i>Ligustrum ovalifolium</i>), Common holly (<i>Ilex aquifolium</i>)	<5	<50	EM	—	—	—	—	—	—	Fair to Good	Fair to Good	Linear mixed species boundary hedge on E perimeter of site Occasional gaps but largely well-structured Occasional hedgerow specimen emerging with relevant examples surveyed individually	—	—	10+	C
External Trees																	

Tree ID	Species (Scientific name)	Height (m)	Diameter (mm)	Age Class	Crown Spread N	Crown Spread E	Crown Spread S	Crown Spread W	Height (m) and Direction of Lowest Branch	Crown Clearance (m)	Physiological Condition	Structural Condition	Notes	Preliminary Management Recommendations	Timeframe for Recommended Works	Estimated Remaining Contribution	BS5837 Category
E1	Common ash (<i>Fraxinus excelsior</i>)	6	270	EM	1	2	2	2	2.5 W	2.5	Poor	Poor	Young ash tree beyond perimeter fence in adjacent residential property History of unsympathetic management Symptomatic of Ash Dieback at Stage 2	—	—	<10	C
E2	Common ash (<i>Fraxinus excelsior</i>)	6	310	EM	1	2	2	2	2.5 W	2.5	Poor	Poor	Young ash tree beyond perimeter fence in adjacent residential property History of unsympathetic management Symptomatic of Ash Dieback at Stage 2	—	—	<10	C
E3	Common ash (<i>Fraxinus excelsior</i>)	6	310	EM	1	2	2	2	2.5 W	2.5	Poor	Poor	Young ash tree beyond perimeter fence in adjacent residential property History of unsympathetic management Symptomatic of Ash Dieback at Stage 2	—	—	<10	C
E4	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	7	150	EM	1	1	2	2	1 S	1	Good	Fair to Good	Young specimen in linear grouping of similar trees sited within adjacent residential property beyond brick perimeter wall	—	—	10+	C
E5	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	7	200	EM	1	1	1	2	1 S	1	Good	Fair to Good	Young specimen in linear grouping of similar trees sited within adjacent residential property beyond brick perimeter wall	—	—	10+	C
E6	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	7	200	EM	1	1	1	2	1 S	1	Good	Fair to Good	Young specimen in linear grouping of similar trees sited within adjacent residential property beyond brick perimeter wall	—	—	10+	C
E7	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	7	190	EM	1	1	1	2	1 S	1	Good	Fair to Good	Young specimen in linear grouping of similar trees sited within adjacent residential property beyond brick perimeter wall	—	—	10+	C
E8	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	7	180	EM	1	1	1	2	1 S	1	Good	Fair to Good	Young specimen in linear grouping of similar trees sited within adjacent residential property beyond brick perimeter wall	—	—	10+	C
E9	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	7	200	EM	1	1	1	2	1 S	1	Good	Fair to Good	Young specimen in linear grouping of similar trees sited within adjacent residential property beyond brick perimeter wall	—	—	10+	C
E10	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	7	200	EM	1	1	1	2	1 S	1	Good	Fair to Good	Young specimen in linear grouping of similar trees sited within adjacent residential property beyond brick perimeter wall	—	—	10+	C
E11	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	7	200	EM	1	1	1	2	1 S	1	Good	Fair to Good	Young specimen in linear grouping of similar trees sited within adjacent residential property beyond brick perimeter wall	—	—	10+	C
E12	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	7	200	EM	2	1	1	2	1 S	1	Good	Fair to Good	Young specimen in linear grouping of similar trees sited within adjacent residential property beyond brick perimeter wall	—	—	10+	C
E13	Silver birch (<i>Betula pendula</i>)	14	300	M	2	3	5	5	2.5 W	2.5	Fair to Good	Fair	Specimen sited in adjacent property Basal area and lower bole obscured by outbuilding Minor deadwoods and branch fracture points	—	—	20+	B

Tree ID	Species (Scientific name)	Height (m)	Diameter (mm)	Age Class	Crown Spread N	Crown Spread E	Crown Spread S	Crown Spread W	Height (m) and Direction of Lowest Branch	Crown Clearance (m)	Physiological Condition	Structural Condition	Notes	Preliminary Management Recommendations	Timeframe for Recommended Works	Estimated Remaining Contribution	BS5837 Category
E14	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	14	450	M	3	2	2	3	1.5 NW	1.5	Fair to Good	Fair to Good	Specimen sited in adjacent residential garden approx. 1.5m from perimeter fence 2 codominant stems from 2.0m N co-leader presenting slightly depleted vigour	—	—	20+	B
E15	Common beech (<i>Fagus sylvatica</i>)	15	380	M	3	5	5	5	3 N	3	Fair to Good	Fair to Good	Locally dominant hedgerow specimen in dense hedge line 2 codominant stems from 1.5m	—	—	20+	B

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</i> Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</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

Appendix 5. KEY TO TREE SURVEY SCHEDULE

Tree ID

Tag number attached to the tree and presented on tree survey plans.

Species (Scientific name)

Common name and botanical name of tree species. Where precise species identification was not ascertained, genus is given.

Height (m)

Approximate height of the tree given in meters.

Stem Diameter (mm)

Diameter of the main stem(s) given in millimetres and taken 1.5m above ground level. Where trees have multiple stems, diameter is calculated using the formula stated within BS5837:2012.

Age Class

Juvenile, Early Mature, Mature, Veteran.

Crown Spread (m)

Directional branch spreads estimated in meters to provide a representative crown shape.

Height (m) and Direction of Lowest Branch

Height (recorded in metres) and direction of growth of the first significant branch.

Crown Clearance (m)

Crown clearance above ground estimated in metres.

Physiological Condition

An overall assessment of the trees physiological condition.

Structural Condition

An overall assessment of the trees structural condition.

Condition Notes

A brief description of the tree.

Recommended Works

Recommendations for arboricultural works.

Timeframe for Recommended Works

An indication as to when any recommended works should be carried out.

Estimated Remaining Contribution

An estimation on the safe / useful life expectancy of the tree.

Quality Category

The quality category given to a tree in line with BS5837:2012 tree quality assessment.

RPA (m)

The calculated Root Protection Area of the tree.