



**2 Swinbourne Grove,
Manchester – BS5837:2012
Tree Survey, Arboricultural
Impact Assessment and
Arboricultural Method
Statement
Kava (NW) Limited**

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Arboricultural Impact Assessment and Arboricultural Method
Statement**

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Executive Summary

On behalf of Kava (NW) Ltd. (the Client), Ecus Limited (Ecus) has carried out a tree survey to BS 5837:2012 '*Trees in Relation to Design, Demolition and Construction- Recommendations*' in August 2018 at 437 Wilmslow Road, Withington. The survey has formed the basis of an assessment of the impact that new development proposals to the adjacent site at 2 Swinbourne Grove, Withington, may have on existing trees and any methodologies to be adopted to protect any retained trees.

The survey records all trees within the site and all those which may be affected by any development proposals within the site boundary, recording a number of parameters including species, crown spread and Root Protection Area (RPA).

The RPA of any given tree is the area of ground around that tree which should not be disturbed by excavation, compaction, changes in level or other construction/demolition operations. The extent of the RPA is calculated in accordance with BS 5837:2012, and is an important part of the methodologies described in this report.

This report follows a previous survey of the site, Ecus report *437 Wilmslow Road, Withington, Manchester – BS 5837 (2012) Tree Survey, Arboricultural Impact Assessment and Arboricultural Method Statement* ref 11823. The application boundary has been realigned since this report to include only the existing office building at 2 Swinbourne Grove and this survey report has been written to assess these new development proposals. The survey of the site as per the 2021 application red line boundary recorded three individual trees.

None of the trees are protected by Manchester City Council Tree Preservation Orders.

The site is located within the Withington Conservation Area 1983. This requires the Local Planning Authority to approve any works potentially affecting protected trees.

The Client proposes the remodelling of an office building to be converted into six self-contained residential properties. This will not require the removal of any trees, but may have an impact on above and below ground parts of retained trees unless adequate protection of these trees is provided.

This report details the arboricultural impact and offers a range of protection measures that should be put in place prior to works starting on site as well as construction methodologies which should be adopted. These measures as described in detail in Chapter 5 will prevent accidental damage and other adverse effects on the health of retained trees and cover:

- Access facilitation pruning;
- Protective fencing;
- Installation of utilities and services within RPA; and
- Level changes within RPA.

For ready reference, Figure 1.1 (Chapter 1) is a simplified version of the 'Design and Construction Process and Tree Care' table outlined in BS 5837:2012. The table clearly identifies processes and obligations expected at the various stages of the construction project. BS 5837:2012 is considered an iterative process, and as such the project arboriculturist's advice should be ongoing.

1. Introduction

1.1 Context of this document in the Planning System

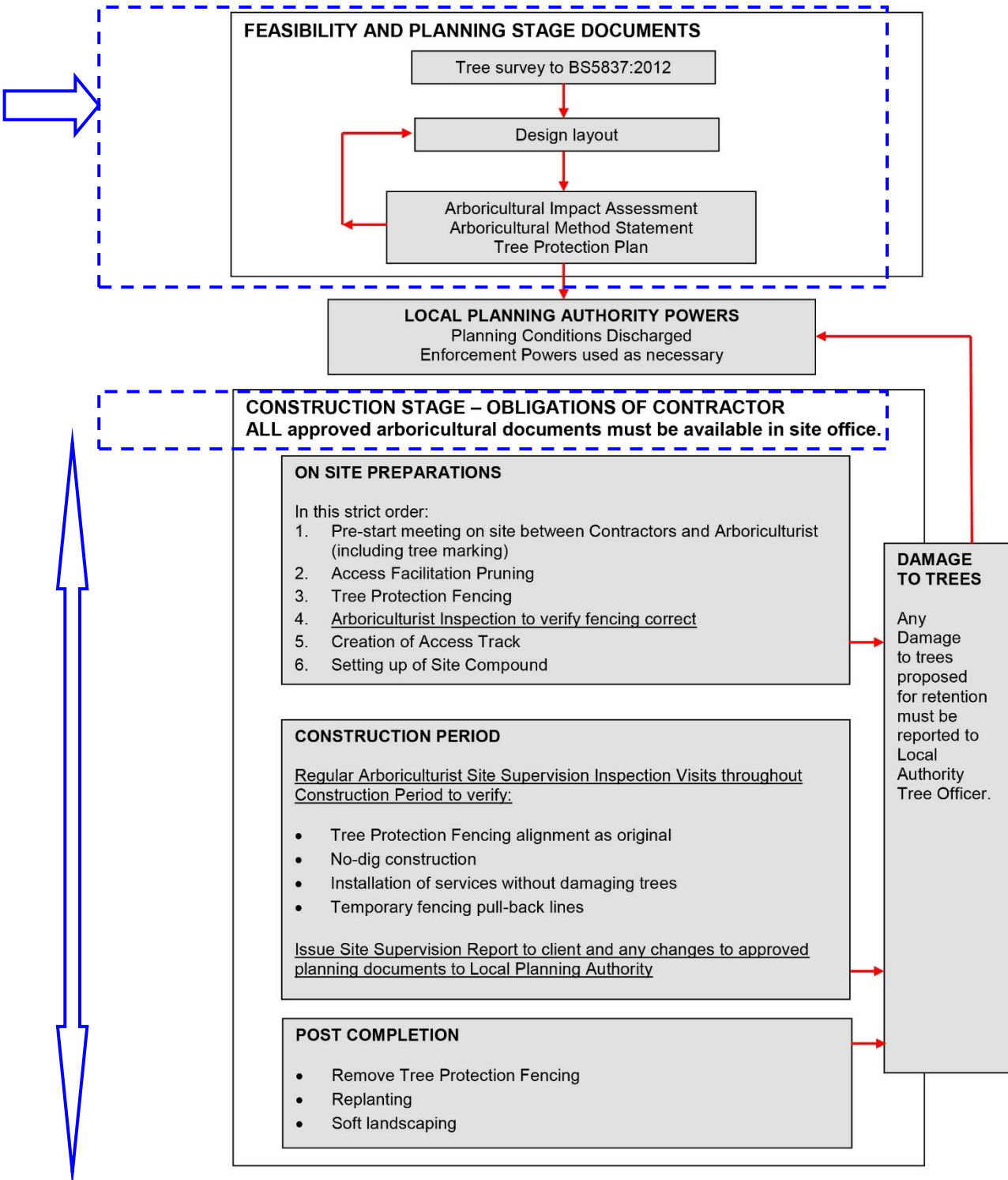


Figure 1.1 - The Design and Construction Process and Tree Care

1.1.1 This document has been prepared at the feasibility and planning stage of a project.

- 1.1.2 If it becomes an approved Planning Arboricultural Method Statement of tree protection measures and/or Tree Protection Plan, a copy should be to hand in the Site Office at all times during the Construction Stage.

1.2 Location

- 1.2.1 Ecus Limited (Ecus) was commissioned by Kava (NW) Ltd (the Client) to undertake a tree survey of the site at 437 Wilmslow Road, Withington, Manchester, M20 3BW, Grid Reference SJ 84991 93145 in August 2018. This report is based on this survey and describes the adjacent site located at 2 Swinbourne Grove, Withington, M20 4PP. The site location is shown on Figure 1.2.



Figure 1.2 – Location Plan
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- 1.2.2 The survey was carried out in accordance with BS 5837:2012 'Trees in Relation to Design, Demolition and Construction- Recommendations'. This report sets out the findings of the survey and recommendations have been made for preliminary tree work that may be required.

1.3 Tree Designations

- 1.3.1 The survey included identification of any existing designations affecting trees on site such as Tree Preservation Orders and Conservation Area status by consulting with Manchester City Council officers.
- 1.3.2 The Technical Support Team, Planning at Manchester City Council confirmed that there are no Tree Preservation Orders (TPO) on any of the trees surveyed.
- 1.3.3 The Technical Support Team, Planning at Manchester City Council confirmed that the site is located within the Withington Conservation Area 1983.

Trees located within a Conservation Area

- 1.3.4 Trees located within a Conservation Area are protected similarly to trees covered by Tree Preservation Orders. In order to be able to carry out any work to those trees, the Local Authority should be notified of the intention to carry out the work. The authority has then six weeks to respond. Objections to the works will lead to a Tree Preservation Order being placed on tree groups or individual trees. No response indicates no objections to the work.
- 1.3.5 Work will also be permitted if it is included in an Arboricultural Method Statement and Tree Protection Plan approved by the Local Planning Authority where development proposals for a site have been granted Planning Permission.

Felling Licence

- 1.3.6 The felling of trees is regulated in England by the Forestry Act 1967 (the Act). The Forestry Commission is the government regulator that enforces the provisions of the Act.
- 1.3.7 The felling of growing trees in England is restricted under section 9 of the Act. It requires that felling is either authorised by a felling licence issued by the FC or the felling activity is excepted from the need for a licence.
- 1.3.8 There are many exceptions to the need for a licence, based on the type of the tree, the location of the tree, the size of the tree, the nature and scope of the felling activity and the person responsible for the felling. These are primarily set out in section 9 of the Act as well as the Forestry (Exceptions from Restriction of Felling) Regulations 1979.
- 1.3.9 The most relevant exemption is;

'Section 9 - Requirement of licence for felling (1) A felling licence granted by the appropriate forestry authority shall be required for the felling of growing trees, except in a case where by or under the following provisions of this Part of this Act this subsection is expressed not to apply...

(d) is immediately required for the purpose of carrying out development authorised by planning permission granted or deemed to be granted under the Town and Country Planning Act 1990 or the enactments replaced by that Act, or under the Town and Country Planning (Scotland) Act 1997.

- 1.3.10 Advice from a suitably qualified arboriculturalist should be sought before any felling takes place onsite.
- 1.3.11 The granting of permission to remove trees covered by a TPO by the Local Planning Authority does not remove the need to obtain a felling licence from FC if more than 5 m³ of timber are to be felled in a calendar quarter and none of the exemptions apply.

2. Tree Survey Methodology

2.1 Site survey

2.1.1 Ecus carried out the tree survey in August 2018 when the trees were in leaf. The tree survey was a ground based visual inspection carried out by a suitably qualified arboriculturalist. The trees were not tagged as part of the survey.

2.1.2 The inspection of the trees, the site and the immediate surrounding area was carried out by Peter Simpson, MICFor, MArborA.

2.1.3 Weather on the day of the survey overcast and mild, with a light breeze. Conditions allowed for a thorough inspection of all the trees surveyed.

2.1.2 The following characteristics were recorded:

- Species
- Stem diameter at 1.5 m above ground level (mm).
- Estimated height (m)
- Approximate crown spread (m) as North, South, East and West measurements.
- An estimate of the number of years that the tree is likely to remain suitable for retention.
 - <10 = less than 10 years;
 - 10+ = 10 - 20 years;
 - 20+ = 20 - 40 years; or
 - 40+ = more than 40 years
- Age class
 - YNG = Young and recently established trees;
 - SM = Semi-mature trees age less than 1/3 life expectancy;
 - EM = Middle age trees 1/3 – 2/3 life expectancy;
 - M = Mature trees over 2/3 life expectancy; and
 - OM = Over mature – declining or moribund trees of low vigour.
- Condition category in accordance with BS 5837:2012 'Trees In Relation To Design, Demolition and Construction- Recommendations'. The categories listed are defined as per BS 5837:2012 and briefly are:
 - 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;
 - Category A = Those of high quality and value, best trees with a long expected safe life;
 - Category B = Those of moderate quality and value; and
 - Category C = Those of low quality and value and trees less than 15cm diameter.
- Value subcategories in accordance with BS 5837:2012. The subcategories listed are defined as per BS 5837:2012 and briefly are:
 - 1 = Mainly arboricultural values
 - 2 = Mainly landscape values
 - 3 = Mainly cultural values, including conservation
- General notes about physiological and structural condition and any management recommendations.

2.1.4 The survey recorded all trees on site with a stem diameter of 75 mm or more at 1.5 m height and

includes all trees outside the site boundary which may be affected by any future development of the site, either by their crown overhanging the site or their Root Protection Area (RPA) potentially extending into the site.

- 2.1.5 A full topographic survey of the site was provided; this was used as the basis for producing the tree survey plan. The topographic survey did not pick up all tree locations within or outside the development site and therefore one tree location was estimated. These trees are marked with a cross on Figure 4.
- 2.1.6 Estimated tree locations are plotted with the internal GPS of a handheld data collection device, and an accuracy of +/- 2 m should be assumed.
- 2.1.7 Where densely wooded areas are not expected to be affected by any development proposals (e.g. woods located outside the site boundary) the mapping of trees was limited to significant trees located along the woodland perimeter.
- 2.1.8 At the time of carrying out a site survey it is not always possible to know which trees will be in conflict with development proposals. Therefore, when proposals are confirmed, it may be that arrangements are made to check measurements on site, especially where development is proposed very close to existing trees.
- 2.1.9 Trees are living organisms that change over time. The condition of all trees described by this survey must be checked by a qualified arboriculturalist or tree surgeon before works commence, especially if there have been any storm events or 12 months or more have passed since the survey was carried out.

2.2 Calculation of Root Protection Area (RPA)

- 2.2.1 Below ground constraints to development are represented by the root plate around a tree which needs protecting in order for the tree to be incorporated into a proposed scheme, without adverse harm to the tree or structural integrity of any proposed foundation structures. This area is illustrated by the RPA and is calculated according to the formulae set out in BS 5837:2012 clause 4.6.1.
- 2.2.2 Any deviation in the RPA from the original circular plot should take account of physical site conditions that influence the disposition of tree roots, e.g. streams, building foundations and retaining walls.

3. Tree Survey Results

3.1 General Site Description

- 3.1.1 The site is currently a disused bank with a rear car park accessed from Swinbourne Grove.
- 3.1.2 The trees surveyed during the site visit are located within the rear car park of the site and along the frontage of the former bank on Swinbourne Grove.
- 3.1.3 The site is surrounded by urban development, with a Methodist Chapel immediately to the south, and a care home to the east forming the boundaries of the car park.
- 3.1.4 There is no public access to the car park on site. The trees are prominent in the street scene though it could be argued that a number along the southern boundary are too close to the Methodist Chapel and block views of this building, while also causing potential future maintenance issues.

3.2 Results of Tree Survey

- 3.2.1 The Tree Survey Schedule in Table 3.1 (Appendix 1) describes the results of the tree survey and includes preliminary management recommendations. The table should be read in conjunction with Figure 4 Tree Survey and Tree Constraints Plan (Appendix 3). This drawing illustrates the location of the trees surveyed, the extent of their canopies as well as the Root Protection Areas (RPA) of each tree and tree group.
- 3.2.2 Three individual trees have been recorded during the survey. A full survey to BS 5837 (2012) was carried out for those trees, including the recording of the stem diameter to determine the Root Protection Area (RPA) of the trees.
- 3.2.3 T1 and T2 are common holly *Ilex aquifolium* with T3 a silver birch *Betula pendula* growing from within small tree pits inside the hard surface front yard of the property, just behind a low retaining wall. These trees form an established visual screen between the property and Swinbourne Grove and are an important street feature that breaks up the urban landscape. The trees have not had any historical management and the lowest branches of the birch are drooping over the highway causing a minor obstruction to pedestrians.
- 3.2.4 Other trees were identified in the garden adjoining this property and these were included in the original survey carried out by Ecus and can be found in report *437 Wilmslow Road, Withington, Manchester – BS 5837 (2012) Tree Survey, Arboricultural Impact Assessment and Arboricultural Method Statement* ref 11823. However the current development proposals are limited to internal works within the existing office building and the site red line boundary does not include this garden area and as such the trees are not considered to be impacted by this development proposal.
- 3.2.5 The quality of trees on site is summarised in Table 4.2 below.

Table 4.2: Summary of tree survey findings.

Category A	Category B	Category C	Category U
None	T1, T2 - Holly	None	None
	T3 – Silver birch		
Total None	Total 3 Trees	Total None	Total None

4. Arboricultural Impact Assessment (AIA)

4.1 Introduction

- 4.1.1 A BS5837:2012 Arboricultural Impact Assessment (AIA) has been carried out for trees present across the Site. This methodology evaluates the direct and indirect effects of the Proposed Development and where necessary recommends mitigation. The British standard states, *"The assessment takes account of the effects of any tree loss required to implement the design, and any potentially damaging activities proposed in the vicinity of retained trees. Such activities might include the removal of existing structures and hard surfacing, the installation of new hard surfacing, the installation of services, and the location and dimensions of all proposed excavations or changes in ground level, including any that might arise from the implementation of the recommended mitigation measures. In addition to the impact of the permanent works, account has been taken of the buildability of the scheme in terms of access, adequate working space and provision for the storage of materials, including topsoil."*
- 4.1.2 As well as an evaluation of the extent of the impact on existing trees, the AIA assessment should include where necessary:
- a) the tree survey;
 - b) trees selected for retention, clearly identified and marked on a plan with a continuous outline; (16961-ARB-01)
 - c) trees to be removed, also clearly identified and marked on a plan with a dashed outline or similar; (N/A)
 - d) trees to be pruned, including any access facilitation pruning, also clearly identified and labelled or listed as appropriate; (Table 5.1)
 - e) areas designated for structural landscaping that need to be protected from construction operations in order to prevent the soil structure being damaged;
 - f) evaluation of impact of proposed tree losses;
 - g) evaluation of tree constraints and draft tree protection plan;
 - h) issues to be addressed by an arboricultural method statement, where necessary in conjunction with input from other specialists.
- 4.1.3 To ensure clarity and consistency Ecus has adopted a similar approach to evaluating impacts on the tree as would be used in undertaking an Environmental Impact Assessments (EIA). The methodology used assesses the sensitivity of the receptor and the magnitude of change to give a significance of any affect.

4.2 Development Proposals

- 4.2.1 An Arboricultural Impact Assessment of the proposed site plan has been undertaken to assess the likely impact of the development on existing trees and tree groups. This assessment is based on the development plans provided by the Client (ref: Dr. Ghassan Kamha & Partners Architects and Town Planners 08/2020 dated October 2020).
- 4.2.2 The client proposes the internal refurbishment and conversion of an existing office building into six self-contained residential properties.
- 4.2.3 The only proposed external works within the development proposals are the installation of additional windows.

4.3 Arboricultural Impact Assessment

Direct Impact from Construction Operations

- 4.3.1 In order to facilitate site access in the front yard of the existing property, T1, T2 and T3 will require access facilitation pruning as per table 5.1. These works will not have a negative impact on these trees as they should be pruned cyclically as part of regular management of trees beside a highway.

4.4 Recommendations

- 4.4.1 Chapter 5 Arboricultural Method Statement describes measures to protect the retained trees during the development, and operations within the RPA of retained trees including:
- Access Facilitation Pruning Works;
 - Protective fencing;
 - Installation of power supply services; and
 - Excavation for soft landscaping.

5. Arboricultural Method Statement (AMS)

5.1 Important Founding Principle of BS 5837:2012

- 5.1.1 The most important and effective process, in terms of preventing damage to trees on a construction site, is the timely erection of tree protection fencing. **This must be erected as the first operation on site**, for example, before access track construction, before Contractors site cabins, and before trenching for service runs.
- 5.1.2 The founding principle of BS 5837:2012 '*Trees in Relation to Design, Demolition and Construction-Recommendations*' is that the protective fencing is erected before any other operation. However, it is noted that the fencing provides an unnecessary and potentially dangerous restriction to essential tree works and therefore tree works can be carried out before fencing is erected.

5.2 General

- 5.2.1 The Arboricultural Method Statement should be read in conjunction with Figure 5.1 Tree Protection Plan in Appendix 4. The Arboricultural Method Statement (AMS) paragraphs below are written in the chronological sequence they are to be carried out

5.3 Pre-Commencement

- 5.3.1 It is advised that a Pre-Commencement Site Meeting is held with contractors who are responsible for operating machinery on site. The meeting will firstly highlight the potential for damage occurring to tree crowns, but thereafter ensure that extra care is applied when manoeuvring any machinery within close proximity of retained trees to prevent any contact with the tree and consequent damage to crown, stem or roots.
- 5.3.2 For clarity, prior to any construction or development work proceeding, the alignment of the protective fencing (Section 6.5) and the RPAs of any individual trees to be retained which are not able to be protected by fencing should be marked out using the distances provided in the table within the tree survey report. Marking out should be completed or approved by a person with arboricultural expertise as individual trees will have root zones that may be affected by local conditions and allowances will need to be made to accommodate this. This may be done prior to, or during, the Pre-Commencement Site Meeting.

5.4 Access facilitation pruning (T1, T2 and T3)

- 5.4.1 As it is expected necessary that materials and machinery will be required in the small front yard area of the property, and such equipment and materials could have potential to cause injurious contact with crown material i.e. low branches and limbs, of retained trees within, or without, the RPA fencing, it is best advised that appropriate, but limited tree surgery, be carried out beforehand to remove any obvious problem branches. This is classed as 'Facilitation Pruning' within BS 5837:2012.
- 5.4.2 The following trees require pruning to facilitate the development, including the use of outdoor spaces:

Table 5.1: Access facilitation pruning

Tree number	Tree work required	Reason
T1 – Common Holly	Crown raise to achieve a 3 m clearance from ground level.	Create required clearance within front yard and over

		footpath.
T2 – Common Holly	Crown raise to achieve a 3 m clearance from ground level.	Create required clearance within front yard and over footpath.
T3 – Silver Birch	Crown raise to achieve a 3 m clearance from ground level.	Create required clearance within front yard and over footpath.

- 5.4.3 All tree works should be carried out in accordance with BS 3998:2010 '*Tree Works-Recommendations*'.
- 5.4.4 Owing to the site being part of the Withington Conservation Area 1983, the Local Planning Authority has to be notified before any pruning and management work can be carried out on trees within the site need.
- 5.4.5 Tree management work can be carried out if
- The Local Planning Authority expresses no objection to the proposed works within 6 weeks of the notification being received.
 - No Tree Preservation Order is placed on any of the trees covered by the proposed works.
 - CA The tree management proposals are listed by the Local Planning Authority as an approved document on granting Planning Permission.
- 5.4.6 The Facilitation Pruning should be carried out on site by a suitably qualified and experienced tree surgeon before construction or demolition operations commence on site.
- 5.4.7 It is recommended that any trees that require removal or significant canopy works, should be checked in advance of works by an ecologist to ensure there is no possibility of any disturbance to nesting birds or roosting bats.

5.5 Protective Barrier/Tree Protection Fencing

- 5.5.1 All retained trees must be protected from all demolition and construction operations by a protective barrier (fencing to BS 5837:2012 which creates a sacrosanct Construction Exclusion Zone (CEZ) within any development. In principle, protective fencing should be erected before any construction or demolition operations start on site and should be removed only on completion of all construction and demolition works on site.
- 5.5.2 On this site it is not possible to erect the specified protective fencing due to the small size of the yard area that is available at the front of the property. Instead, it is suggested that temporary site-specific 'tree-boxes' will be constructed around existing trees to be retained with weather-proof signage to provide robust mechanical protection to the immediate tree pit, trunk and lower branches. The tree-box will remain in Situ until completion of all demolition and construction works. A tree box diagram is shown in figure 5.2.
- 5.5.3 This is good practice and tree boxes will be installed around the edges of the tree pit of T2 as protection from demolition and construction operations and retained to provide ongoing protection from the delivery van as it enters the temporary access. Any supporting posts should not be cemented into place within the tree RPA and it may be necessary to fix a batten to the footpath wearing course to support the framework.

- 5.5.4 In principle, this protective barrier should be erected before any work commences on site. Thereafter, no protective barrier should be removed until completion of all construction and demolition work.

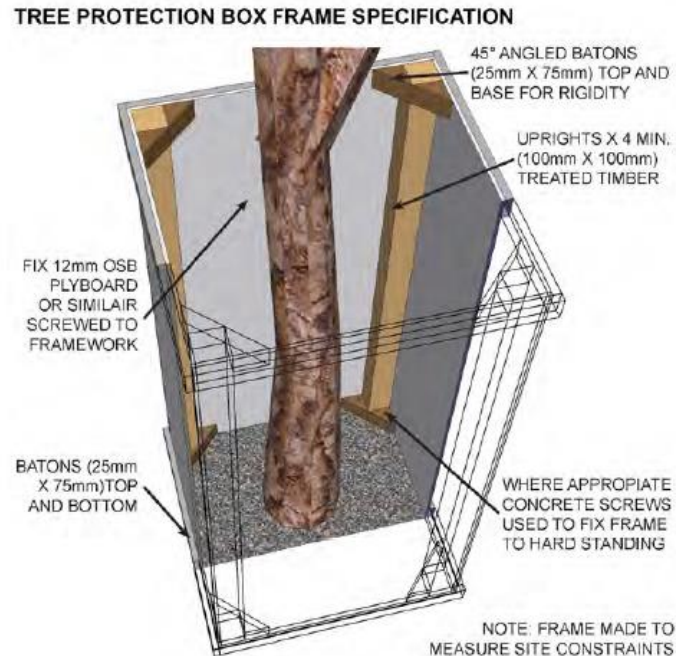


Figure 5.2: Tree box protective structure

- 5.5.5 All weather notices should be placed on fencing to indicate that operations are not permitted within the fenced area, for example “TREE PROTECTIVE BARRIER – DO NOT REMOVE” or similar.
- 5.5.6 Once set up barriers should not be removed or altered without prior consultation with the arboricultural advisor.

5.6 Installation of power supply and services

- 5.6.1 There are currently no proposals to route services or utilities through the RPA of any retained trees. If this changes at a later stage of the project, proposals should be submitted to the local planning authority Tree Officer for approval.
- 5.6.2 As guidance only, it is noted here that any underground power supply and services routed through the RPA should be installed in accordance with BS 5837:2012 clause 7.7.2 and National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.

5.7 Excavations for soft landscaping

- 5.7.1 Where soft landscaping is proposed within the RPA of retained trees, excavations should be kept to the minimum required to provide adequate conditions for the establishment of new shrubs and trees. Excavations should be carried out carefully and by hand, avoiding the severance of any roots larger than 25mm diameter.

Removal of Existing Hard Standing

- 5.7.2 Where soft landscaping is proposed within the RPA in existing hard surfaces, the wearing course and its sub-base should be carefully lifted using handheld tools. Should any roots be exposed in the process, they should be immediately wrapped or covered to prevent desiccation and to protect them from rapid temperature changes. Any wrapping should be removed prior to backfilling, which should take place as soon as possible.
- 5.7.3 Prior to backfilling, retained roots should be surrounded with topsoil or uncompacted sharp sand (other than builders' sand), or other loose inert granular fill, before soil or other suitable material is replaced.

Soil Improvements and Mulching

- 5.7.4 To compensate for root damage and stress caused by construction activities, retained trees onsite should be mulched. The materials that may be used for mulching include coarsely divided plant matter, such as wood chip, pulverized bark, or leaf mould, any of which may be combined with well-rotted animal manure. The mulched area should extend over as much of the root system as can be allowed by other site-usage requirements. The depth of an organic mulch should not be so much as to inhibit aeration of the root system or to cause overheating of uncomposted material (normally no more than 80 mm to 100 mm). The mulch should be periodically replenished as it decomposes, so that it does not become depleted.

6. Tree Management

- 6.1.1 The following section provides guidance as to how retained trees will best be protected during construction. More detailed guidelines for tree protection during construction are given in BS 5837:2012 'Trees In Relation To Design, Demolition And Construction- Recommendations'.
- 6.1.2 Any tree roots severed during site clearance works will be wrapped or covered with hessian sheets (wet in summer, dry in winter) as an immediate protection measure against desiccation and rapid temperature changes. This will be removed prior to backfilling which should be carried out as soon as possible. In addition the advice of an arboriculturalist, or the Tree Officer of the local planning authority, will be sought as soon as possible on the potential effect of the root damage on the tree's stability, vitality and legal implications.
- 6.1.3 All tree works will follow best practice procedures as set out in BS 3998:2010. All trees should be maintained in good condition on site and be inspected annually (where overall condition requires) or every 2 years and after any major storm events, with safety a priority.
- 6.1.4 The best practice principles have been broadly summarised below:
- Once areas around trees have been protected by fencing, any works on the remaining site area may be commenced providing activities do not impinge on protected areas;
 - Wide or tall loads etc. will not come into contact with retained trees. Banks-person will supervise transit of vehicles, jibs, booms etc. where this is in close proximity to retained trees;
 - Oil, bitumen, cement or other material that is potentially injurious to trees will not be stacked or discharged within 10 m of a tree bole. No concrete mixing will be done within 10 m of a tree. Allowance should be made for the slope of ground to prevent materials running towards the tree;
 - No fires will be lit where flames are anticipated to extend to within 5 m of tree foliage, branches or trunk, taking into consideration wind direction and size of fire;
 - Notice boards, telephone cables or other services should not be attached to any part of a retained tree; and
 - In the event of having caused any branch or limb damage to retained trees, the advice of an arboriculturalist will be sought on what tree surgery can be carried out, in accordance with BS 3998:2010, to correct the damage, and the best timescale for that tree surgery which will be determined by season, species, gravity of damage and legal status of the tree (Tree Preservation Order/ Conservation Area/nesting birds/roosting bats).
- 6.1.5 All of the above precautionary measures will be applied to minimise the effect of any damage to long-term tree health and safety.
- 6.1.6 It is recommended that any trees that require removal or significant canopy works should be checked in advance of works by an ecologist to ensure there is no possibility of any disturbance to nesting birds or roosting bats.

7. References

Books and Papers

BS 3998:2010 *Tree Work – Recommendations*. ISBN 978 0 580 53777 6

BS 5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*. ISBN 978 0 580 69917 7

BS 8545:2014 *Trees: From Nursery to Independence in the Landscape – Recommendations*.

Volume 4 National Joint Utilities Group (NJUG) *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity To Trees*, Volume 4: Issue 2: 16/11/2007, www.njug.org.uk

Appendix 1: Tables

Table 3.1 – BS 5837:2012 Tree Survey Schedule

Key:	Measurements	Age – Class	Overall Condition	BS 5837 2012 : Cascade Chart for Quality Assessment/Retention Category	Symbols:
	MS – Multi-stemmed	YNG – Young Mature	G – Good	A – High	< = less than
	Ht - Height in metres	SM – Semi-mature	F – Fair	B – Moderate	~ = approximately
	Stem – Stem Diameter at 1.5m in mm	EM – Early mature	P – Poor	C – Low	> = greater than
	Crown – Crown spread in metres	M – Mature	D - Dead	U – Unsuitable for retention	
	TD - Trunk division (height in metres)	OM – Over mature	ADB – Ash Die Back	Sub-categories: 1 = mainly arboricultural values 2 = mainly landscape values 3 = mainly cultural values.	
		Est Yrs – estimate of years remaining (40+ years; 20+ years; 10+ years, <10 years)	DED – Dutch Elm Disease		
RPA = Root protection area (equivalent to a circle with a radius 12 x the stem diameter of single stem trees or 12 x the notional stem diameter of multi stemmed trees as per BS 5837:2012 clause 4.6). This will be capped to 707m² for trees with a stem diameter larger than 1.25m.					

Tree No	Species	Ht (m)	Stem Diam @ 1.5 m (mm)	Canopy Spread (m) N- E- S- W				Height of Crown Clearance	Age Class	Est yrs	Overall Condition	Comments	Management Recommendations incl. Arboricultural Method Statement	BS 5837 Category	RPA Radius (m)	RPA (m ²)
T1	Holly, Common (<i>Ilex aquifolium</i>)	15	250	3	3	3	3	2	Mature	40+ Years	Fair	Growing within stone edged tree pit, lower branches partially obstructing footpath	No action required	B2	3	28
T2	Holly, Common (<i>Ilex aquifolium</i>)	15	200	2.5	2	2.5	2.5	1.5	Mature	40+ Years	Fair	Growing in a stone edged tree pit, lower branches partially obstructing footpath	No action required	B2	2.4	18
T3	Birch, Silver (<i>Betula pendula</i>)	18	340	5.5	5.5	5	5	2	Mature	20+ Years	Fair	Pendulous habit, crown quite sparse, with some minor deadwood, growing in stone edged tree pit	No action required	B2	4.08	53

Appendix 2 – Site Photographs

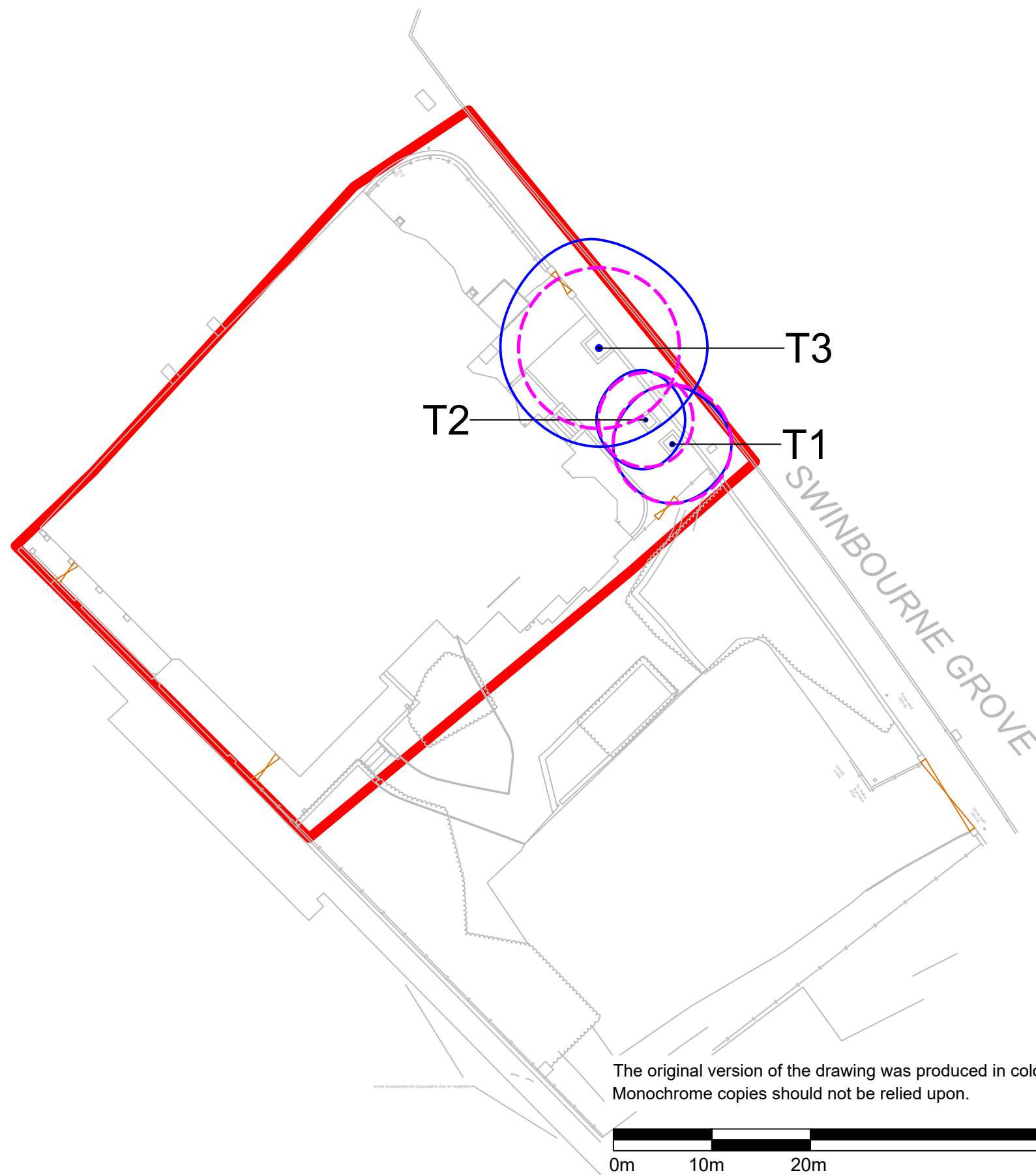


Plate 1: View south along Swinbourne Grove, birch T3 closest



Plate 2: View south along Swinbourne Grove. Holly T2 closest right.

Appendix 3 – Figures



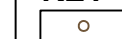
GENERAL NOTES - TREE SURVEY

- Drawing for Planning purposes only.
- Refer to arboricultural report produced by ECUS Ltd titled '16961 2 Swinbourne Grove, Manchester- BS5837:2012 Tree Survey, Arboricultural Impact Assessment and Arboricultural Method Statement'.
- Based on topographic survey provided by Site Surveying Services - A.M.I.C.E.S dated May 2018.
- Check all dimensions on site.
- Do not scale from this drawing.
- Report any discrepancies and omissions to Ecus Ltd.
- This drawing is Copyright.

3RD-PARTY INFORMATION

NB This drawing includes information provided by independent surveyors and / or consultants, to whom all queries shall be made. Ecus Ltd can accept no liability for its context or accuracy.

KEY

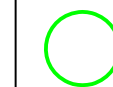


Trunk location from
topographic survey

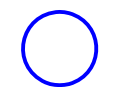


Trunk location
approximated by ECUS

Tree categories (BS 5837:2012)



Category
A Trees



Category
B Trees



Category
C Trees



Category
U Trees

Root Protection Area (RPA) of
category A, B and C trees

Site Red Line Boundary

A	14.04.21	TP	ecus	Preliminary
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REV	DATE	DRAWN BY	CHECKED BY	REVISION COMMENT
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DRAWING STATUS: For Planning



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Blackburn Road
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Tel. (0114) 2669292
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Job
2 SWINBOURNE GROVE, MANCHESTER

Title
**Figure 3.1
Tree Constraints Plan**

By TP	Date Apr 2021	Scale @ A3 1:250	Drg. no. 16961-ARB-01
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