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British Standard 5837: 2012 – Trees in Relation to Design, Demolition and Construction – Stage Three:

Arboricultural Method Statement

& Tree Protection Plan

November 2020

Taxal Edge,
Macclesfield Road,
Whaley Bridge,
Derbyshire,
SK23 7DR

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APPENDIX

1. INTRODUCTION

1.1 Terms of Instruction

1.1.1 Thompson Tree Services were commissioned by Mr Gary Cullen of Treville Properties Ltd., to undertake a tree survey and report in accordance with BS5837: 2012 guidelines.

1.1.2 Stage one and stage two arboricultural reports have been produced by Thompson Tree Services (November 2020). These reports include components as identified below (1.1.4). It is essential that these reports are read in conjunction with one another.

1.1.3 This series of reports have been compiled as an aid to inform the planning process for the proposed development on the site of Taxal Edge, Whaley Bridge, Derbyshire.

1.1.4 The instruction is to fulfil the requirements of High Peak Borough Council who require the following arboricultural components in order to validate the planning application:

a. **Tree Schedule (TS)** to present data from the survey. Included in stage one report.

b. **Tree Constraints Plan (TCP)** for the proposed development, including tree retention categories, root protection areas and canopy spreads. Included in stage one report.

c. **Arboricultural Impact Assessment (AIA)** to assess the impact the proposed development will have on the trees on site. Included in stage two report.

d. **Tree Protection Plan (TPP)** in order that the retained trees are adequately protected and that any detrimental impacts are minimised. Included in this report.

e. **Arboricultural Method Statement (AMS)** to detail methods and construction design within the RPA and the crown extents of retained trees in order that impacts on the retained trees within the grounds are minimised, and that no unacceptable damage is caused.

1.1.5 It is recognised that additional arboricultural input may be required following a review of the planning application and depending on the finalised layout and design of the proposed development.

1.2 Key Points from Stage One and Two Reports

1.3.1 The proposed development involves the demolition of building known as 'Taxal Edge' and adjacent garage, and the construction of seven dwellings and two garages for residential use.

1.3.2 There are many fine trees on site which are to be retained and protected in order to enhance the proposed development

1.3.3 It is understood that the trees on the site have statutory protection in the form of an area TPO from Derbyshire County Council and High Peak Borough Council (although not confirmed). As such an application must be made to the LPA prior to any works taking place unless they are deemed necessary to implement a development that has received full planning permission.

1.3.4 Due to constraints of the site there remains a requirement to encroach into the RPA and crown extents of several trees. This area of conflict is shown on the Initial Tree Constraints Plan & Tree Retention and Removal Plan (stage one and two report) and the Tree Protection Plan (appendix 2 of this report).

1.3.5 I consider the incursion to the RPA of retained trees to be reasonable, and with careful consideration of the methods and engineering solutions employed, likely to have little long-term impact on the condition of the trees.

1.3.6 I recommend that a project arboriculturist is appointed to oversee the development.

2. LIMITATIONS & SCOPE OF REPORT

2.1 The information, opinions and recommendations contained within this report are based on my site observations and provided information, interpreted in the context of my arboricultural knowledge & experience (as detailed in 10).

2.2 This report is one of a series of two produced by Thompson Tree Services regarding the proposed development at Taxal Edge. It is not intended to be read as a stand-alone document. Previous arboricultural reports produced by Thompson Tree Services must be referred to for all other components of an Arboricultural Report to BS5837(2012).

2.3 This Arboricultural Method Statement is designed to reflect the principles of the proposed development relating to the protection of the retained trees and should not be read as a definitive engineering or construction method statement for this development. A Construction Method Statement should be produced by the design & build contractors, describing the construction methods to be used.

3. SEQUENCE OF WORKS

3.1 Unless otherwise agreed with the Local Planning Authority (LPA) the following actions are to be carried out in the following sequence of works (Table 1).

3.2 Prior to commencement of any works, a site meeting will be held. This should be attended by the developer's site manager, the construction contractor, and the arboricultural consultant. The Local Authority Tree Officer should also be invited to attend.

3.3 All contractors on site must be briefed regarding the specifics of the TPP and AMS. A copy of this method statement should be available to all site personnel and must be supplied to all site personnel who have control over works of any nature within RPAs or within crown extents.

Order	Works	Reference Section	Arboricultural Input
1	Pre-commencement Site Meeting	3	Yes
2	Tree Work Operations	4	Yes
3	Tree Protection Measures Installed & Approved	5	Yes
4	Demolition and Construction phase. To include arboricultural supervision as identified	6	Yes
5	Clearance of Materials & Plant from site	6	No
6	Removal of Tree Protection Measures	4	No
7	Planting Operations	7	Yes

Table 1: Sequence of works

4. TREE WORK OPERATIONS

4.1 It is recommended that all identified tree work (Tree Schedule appendix 1) and any additional facilitation tree work is completed prior to any demolition or construction taking place, to avoid any conflict of interest on site.

4.2 Additional requirements for pruning to facilitate the proposed development should be also be assessed during the pre-commencement site meeting. This is to be agreed with the project arboriculturist and Local Authority Tree Officer.

4.3 Given the statutory protection offered to the trees on site by the Tree Preservation Order, an application to the LPA is required prior to any tree work taking place that has not been approved through planning permission.

4.4 The tree work contractors should provide a Risk Assessment and Method Statement (RAMS) that should be approved by the project arboriculturist and site manager prior to work commencing.

4.5 Prior to any tree work taking place, a wildlife assessment should be carried out and findings used to inform how and when any works are to be carried out. This remains the responsibility of the tree work contractor.

4.6 Any tree work must be carried out in line with British Standard 3998:2010 Tree Work – Recommendations.

4.7 It is strongly recommended that an Arboricultural Association Approved Contractor is used to carry out any tree work. A list of these is available from the Arboricultural Association.

5. TREE PROTECTION

5.1 The Tree Protection Plan (TPP) consists of a scale drawing showing retained trees and the location of protection required to minimise impact on their below and above ground structures. The TPP can be found in the appendix (appendix 2).

5.2 The tree protection measures consist of:

Area	**Protection Measures**
Construction Exclusion Zone (CEZ)	Tree Protection Fencing
Any area of conflict within RPA that lies outside of CEZ	Ground Protection or Arboricultural Supervision
Any area of conflict within crown extents that lies outside of CEZ	Above Ground Protection or Arboricultural Supervision

5.3 A series of Site Guidance Notes (SGNs - Barrell Tree Consultancy) have been produced which give information on the specification and management of tree protection measures. These notes may be of use in conjunction with this report. They aim to clarify what is required on site in order to protect retained trees and are available for download at:

https://www.barrelltreecare.co.uk/resources/technical-guidance/

Site Guidance Note 1 – Monitoring protection
Site Guidance Note 2 – Fencing protected trees
Site Guidance Note 3 – Ground protection
Site Guidance Note 4 – Pollution control
Site Guidance Note 5 – Site cranes & piling rigs
Site Guidance Note 6 – Height restrictions
Site Guidance Note 7 – Excavation in RPAs
Site Guidance Note 8 – Removing surfacing in RPAs
Site Guidance Note 9 – Installing / upgrading surfacing in RPAs
Site Guidance Note 10 – Installing structures in RPAs
Site Guidance Note 11 – Installing services in RPAs

5.4 The tree protection measures will be approved and ‘signed off’ by the project arboriculturist prior to any on-site works commencing, including material delivery or plant arriving on site, demolition, construction etc.

5.5 The importance of the tree protection must be communicated to all contractors on site through site inductions.

5.6 The condition of the site must be monitored throughout the construction process by the construction contractors. This is to ensure the tree protection measures remain in place and that no unauthorised incursion is made into the CEZ. Weekly records must be kept.

5.7 The tree protection measures must remain in situ until the completion of the development, and risk of damage to the retained trees and their respective RPAs has passed i.e. construction has been completed and all vehicles, plant and materials has been removed. They will only be removed with the consent of the Local Planning Authority to permit completion of the development.

5.8 Construction Exclusion Zone (CEZ)

5.8.1 The Construction Exclusion Zone (CEZ) is any area adjacent retained trees to which it is not absolutely essential to access in the construction process. This is to be fenced off with tree protection fencing.

5.8.2 I suggest that the specification of protective fencing may be lighter than the default fencing described in BS5837 due to the nature of the site. For example, weldmesh fencing panel ('Heras' or similar) fixed to each other with clamps and secured to proprietary plastic bases.

5.8.3 Clear signage stating the purpose of the protection must be affixed to the fence and repeated at 5m intervals.

5.8.4 The barriers must not be moved or re-located without the prior approval of the project arboriculturist.

5.8.5 No activity is to take place within the CEZ. Existing vegetation and topsoil will be left undisturbed.

5.8.6 Only in exceptional circumstances should ingress occur into the protected area, for example chemical spillage, collision etc. If this occurs the project arboriculturist must be consulted to assess the damage, and their recommendations followed.

5.8.7 Due to the potential for contaminated dust and runoff to impact on beech T13 and the group of trees to the north of the site, additional protection measures shall be implemented during demolition to ensure that run-off is directed away from the RPA and that hoarding is installed to reduce the impact of dust.

5.8.8 The location of the tree protection fencing is shown on the Tree Protection Plan (appendix 2).

5.9 Ground Protection

5.9.1 Areas where it is anticipated that there is a requirement to encroach on the RPA of retained trees, temporary ground protection shall be installed until phased groundworks are to be undertaken with appropriate arboricultural supervision.

5.9.2 Two forms of ground protection are to be used, depending on specific location, uses, and anticipated loading. These are 3D cellular confinement systems, and ground protection boards, as described below (5.9.5 & 5.9.6).

5.9.3 Areas which have existing hard surfacing that is adequate to bear the weight of vehicles and plant used in the development need not be further protected. This includes the main driveway through the site.

5.9.4 The location of the required ground protection is shown on the Tree Protection Plan (appendix 2).

5.9.5 3D Cellular Confinement System

For vehicles and plant exceeding 2 tonnes, ground protection is to be of a 3D cellular confinement system, and to be designed by a structural engineer. This is to ensure suitability for site specific conditions, and to ensure that it is capable of supporting proposed loadings without being distorted or causing compaction of the underlying soil. The 3D cellular confinement system is to be used for the access tracks marked in red on the TPP. General principles are described:

i. This is to be of 3D cellular confinement type (such as 'Cellweb') suitable for the loads anticipated.

ii. A cellular confinement system of 150mm is described in the construction Method Statement (produced by Blue Forest). In order to establish the suitability of this for the site and conditions, technical guidance must be sought from a structural engineer.

iii. No excavation must be undertaken in order to install this protection level. The existing ground cover and vegetation present will be carefully stripped or strimmed using hand tools.

iv. An appropriate geotextile membrane (for example 'Treetex') must be used to minimise the impact of accidental spillage.

v. A clean angular stone infill of 4-20mm will be applied to the cellular confinement system.

vi. Any plant used to assist in the construction of the ground protection must be restricted to areas in which the ground protection is already in place (i.e. Must not work from unprotected areas).

vii. The ground protection is to be held in place with fixing pins.

viii. Final use surfacing may be applied once the construction is nearing completion. This will be a permeable layer appropriate for the site, such as woodchip or soil surfacing.

Geosynthetics (Geosynthetics.co,uk) supply Cellweb and offer extensive technical support and downloads of method statements and contractors guides.

5.9.6 Ground Protection Boards

For pedestrian or lightweight plant (up to 2 tonne) a ground protection mat (such as 'TuffTrak') is recommended. The locations for ground protection boards are marked in blue on the TPP. The boards may need to be moved as required for the construction of foundations etc. Any such activity should be undertaken with arboricultural supervision. The ground protection boards are to be installed as described:

i. No excavation must be undertaken in order to install this protection level. The existing ground cover and vegetation present will be carefully stripped or strimmed using hand tools.

ii. The exposed soil will be covered with a permeable geotextile membrane (such as 'Treetex').

iii. A 200mm deep layer of woodchip will be placed over the geotextile membrane.

iv. The edges of the woodchip filled area shall be retained by timber boards held in place with stakes or pins.

v. The track mat system will then be installed on top of the woodchip layer.

vi. Manufacturers specifications and recommendations must be consulted.

TuffTrak (www.tufftrak-safety.com) supply a range of ground protection measures and offer technical advice.

5.10 Above Ground Protection

5.10.1 Height restrictions may be appropriate in certain areas of the site.

5.10.2 Protection measures shall be put in place to avoid damage to the main stems of trees as required. Stem protection may take the form of tree boxes, or a lighter form of protection. Protective wrappings will consist of at least three thicknesses of hessian around each stem, outside of which chestnut paling fencing or vertically arranged battens arranged must be fitted. The wrappings should extend from ground level to a minimum of 2m, to include protection of buttress roots.

5.10.3 The final extent of the above ground protection will be fully assessed by the project arboriculturist once size and reach of machinery are confirmed.

6. DEMOLITION & CONSTRUCTION PROCESS

6.1 Arboricultural Monitoring & Supervision

6.1.1 Arboricultural supervision shall be implemented for all operations requiring excavation within the RPAs of retained trees. This is to be undertaken by the project arboriculturist.

6.1.2 Banksmen will be present during all movements of plant and materials throughout the site. This is to include transit and lifting operations.

6.1.3 Height restrictions may be considered appropriate. Impact is most likely during operation of hi-ab machinery.

6.1.4 A schedule of site monitoring will be drawn up once a schedule of work is produced, and to be at regular intervals throughout the period of construction.

6.1.5 All supervision and monitoring must be recorded and fully auditable.

6.1.6 All contractors on site must be briefed regarding the specifics of the TPP and AMS during site inductions. A copy of these documents must be available to all site personnel and must be supplied to all site personnel who have control over works of any nature within the RPAs or crown driplines of retained trees.

6.2 Access Details

6.2.1 Access for all vehicles, plant and materials is to be from the hard-surfaced main driveway that runs to the east of the site.

6.2.2 Movement and parking of construction vehicles are to be restricted to the temporary site compound which shall be identified during the pre-commencement site meeting.

6.2.3 Once construction has been completed a final surfacing will be applied to the cellular confinement system that has served as ground protection. This will be a permeable layer appropriate for the site.

6.3 Storage of Materials

6.3.1 All storage of materials and substances with potential to damage retained trees must be within a designated area outside of the RPAs and crown driplines of retained trees and shall be bunded at all times.

6.4 Demolition Phase

6.4.1 Demolition of the existing garage adjacent beech T13 shall be undertaken inwards within the footprint of the existing building. All plant shall operate from outside the Construction Exclusion Zone (CEZ). Details of demolition operations are to be set out in the Construction Method Statement.

6.4.2 Additional protection measures shall be implemented during demolition to ensure that run-off is directed away from the RPA of beech T13 and the group of retained trees to the north.

6.5 Services

6.5.1 It is not anticipated that any sections of service runs are required within the RPA of retained trees. If such service runs are required, they must be carefully excavated by hand-held tools and preferably by compressed air soil displacement (such as Airspade).

6.5.2 If any roots over 50mm diameter are found at any time during excavation or construction, arboricultural advice must be sought. If roots under 25mm diameter are found, they must be cut back with a clean blade to minimise exposed surface.

6.6 Foundations

6.6.1 Construction of foundations is to be as described in the Construction Method Statement.

6.6.2 The foundations of the garage and study to the west of beech T27 are to be supported on piles. The location of the piles is to be determined by site investigation through trial excavations carried out with hand-held tools, to a depth of 600mm. Pile type shall avoid direct ground contact of uncured concrete (such as sleeved bored pile or screw pile). Beams are to be laid at or above ground level.

6.6.3 The location of the piles is to be determined by site investigation through trial excavations carried out with hand-held tools, to a depth of 600mm. Any excavation within RPAs shall be undertaken carefully, using hand-held tools and preferably by compressed air soil displacement (such as Airspade).

6.6.4 The foundations of the dwelling to be built on plot 1 shall utilise the existing footings if practicable. If removal and replacement is required, then this shall be undertaken under arboricultural supervision.

6.6.5 If any roots over 25mm diameter are found at any time during excavation or construction, arboricultural advice must be sought. If roots under 25mm diameter are found, they will be cut back with a clean blade to minimise exposed surface.

6.7 Upgrading of Surfacing

6.7.1 Upgrading of all surfacing within the RPA of retained trees shall use a cellular confinement system wherever the final use of the surface is to experience vehicular traffic. This should be finished with a permeable surface where possible, with a suitable geotextile below. This is anticipated to be a requirement for the driveway / parking area adjacent the garage and study to the west of beech T27.

6.7.2 If the main drive is to be upgraded then the existing sub-base shall be retained if practicable, to avoid disturbance to roots which may be underneath. If there is a requirement to remove this all works shall be undertaken with hand-held tools and under arboricultural supervision.

6.7.3 Any areas in which are not to be surfaced or shall be soft landscaped should include application of good quality mulch in order to improve the conditions of the rooting environment.

6.8 Plant

6.8.1 The specific requirements for plant are to be discussed at the pre-commencement site meeting.

6.8.2 Banksmen will be present during all movements of plant throughout the site. This is to include transit and lifting operations.

6.8.3 Vehicles and plant must not deviate from areas protected by ground protection measures, or with existing hard surfacing adequate to bear its weight. This is to include outriggers for any plant, which must be placed on outrigger pads.

6.9 Responsibilities

6.9.1 It will be the responsibility of the main construction contractor to ensure the method statements are adhered to at all times and that any further arboricultural advice is sought as required.

7. NEW PLANTING & WOODLAND MANAGEMENT

7.1 A comprehensive landscape and planting plan has been produced by The Plant Room (May 2020). All planting shall be undertaken in accordance with this plan. A schedule for aftercare should also be developed.

7.2 It is understood that a woodland management plan is being developed by NLG Ecological, but is not yet available for review. This plan should provide a comprehensive schedule of works for a minimum of ten years.

7.3 It is recognised that details of these mitigation measures may be finalised in reserved matters / planning conditions / planning agreements.

7.4 New planting and aftercare must be carried out in line with British Standard 8545:2014 'Trees: from nursery to independence in the landscape – Recommendations'

7.5 It is strongly recommended that an Arboricultural Association Approved Contractor is used to carry out any tree work and tree planting operations. A list of these is available from the Arboricultural Association.

8. CONTACTS

8.1 Landowner

Name	Contact
Mr Gary Cullen	Gary.cullen29@gmail.com

8.2 Project Manager

Name	Contact

8.3 Construction Contractors

Name	Contact

8.4 Arboricultural Contractors & Consultants

Name	Contact
Thompson Tree Services (Midlands) Ltd.	Ashleigh House, Wirksworth, Derbyshire, DE4 4FR www.thompson-treeservices.co.uk accounts@thompson-treeservices.co.uk 01629 824 079

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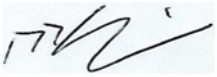

2nd November 2020

Mike Kiss **Date**

10. QUALIFICATIONS & EXPERIENCE

10.1 Experience

- 2008 – 2020 Twelve years' experience in the Arboricultural industry as a climbing arborist and team leader, all of which have been for Arboricultural Association Approved Contractors.
- 2011 – 2020 Nine years' (occasional) experience carrying out a range of tree surveys for both Arboricultural Association Approved Contractors and Bristol City Council.
- 2011 – 2013 Two years' experience as an Arboricultural Officer (Parks) for Bristol City Council.

10.2 Qualifications

- 2010 Professional Tree Inspection – Lantra / Arboricultural Association
- 2009 Technicians Certificate – Tree Life Training
- 2001 BSc (Hons) Geography – The University of Sheffield

10.3 Continuing Professional Development

- 2019 Further study undertaken with Tree Life Training with the intention of qualifying with Level 6 Award in Arboriculture in 2021
- 2019 Valuing and Managing Veteran Trees – an Advanced Course – Ancient Tree Forum / VETree
- 2018 Quantified Tree Risk Assessment (QTRA)
- 2017 Professional Tree Inspection refresher – Arboricultural Association

10.4 Memberships

- The Arboricultural Association – Technician Member
- The Arboricultural Association – Approved Contractor

11. BIBLIOGRAPHY & REFERENCES

- Arboricultural Association – www.trees.org.uk
- Barrell tree consultancy *'Site Guidance Notes'* www.barrelltreecare.co.uk/resources/technical-guidance
- British Standard 3998:2010 '*Tree Work – Recommendations*'
- British Standard 5837:2012 '*Trees in Relation to Construction: A Recommendation*'
- British Standard 8545:2014 *'Trees: from nursery to independence in the landscape – Recommendations'*
- Department of the environment, Transport and the Regions (DETR): (2000) *'Tree Preservation Orders – a guide to the law and good practice'*
- Geosynthetics - www.geosyn.co.uk
- National House Building Corporation (NHBC): (2003) *'Chapter 4.2 – Building near trees'*
- National Joint Utilities Group '*Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees*' (NJUG 10, Volume 4, 2007)

12. GLOSSARY OF TERMS

Access facilitation pruning - One off tree pruning operation, the nature and effects of which are without significant adverse impact on tree physiology or amenity value, which is directly necessary to provide access for operations on site

Age class

- **Newly Planted**
- **Young** – a tree in the first third of its life expectancy
- **Early Mature** – a tree in the second third of life expectancy
- **Mature** – a tree in the final third of its life expectancy
- **Over Mature** – a tree exceeding its usual life expectancy

Arboricultural Method Statement - Methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained

Arboriculturist - Person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction

Arisings - parts of the tree that has been removed for disposal, branches, leaves, roots etc.

Bark - A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex and periderm; occasionally applied only to the periderm or the phellem

Condition – either structural or physiological;

- **Good** – containing no apparent significant defects or pathogens.
- **Fair** – containing defects or pathogens that have potential to have an impact on the function of the tree, or component of the tree.
- **Poor** – containing defects or pathogens that cause dysfunction to the tree, or component of the tree.

Construction - Site based operations with the potential to affect existing trees

Construction exclusion zone - Area based on the Root Protection Area from which access is prohibited for the duration of the project

Engineer-designed hard surfacing - Hard surfacing constructed within the 'Root protection area' of a tree, which will be designed by a structural or geotechnical; engineer in collaboration with an arboriculturist as set out in clause 7.4 of British Standard BS5837:2012. The purpose being to minimise the effects of the construction on the health of the tree.

Mulch – partially decomposed woodchip. Mulch has the potential to supress weeds, reduce soil moisture loss, increase recycling, improve soil biology, fertility, aeration, and structure.

Primary root zone - The soil volume most likely to contain roots that are critical to the health and stability of the tree and normally defined by reference BS5837 (2012) Trees in Relation to design, demolition and construction

Priority - Priority of work

Pruning - The removal or cutting back of twigs or branches, sometimes applied to twigs or small branches only, but often used to describe most activities involving the cutting of trees or shrubs

Root protection area (RPA) - Layout design tool indicating a national minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority

Root zone - Area of soils containing absorptive roots of the tree/s described. The **Primary** root zone is that which we consider of primary importance to the physiological well-being of the tree

Silvicultural thinning - Removal of selected trees to favour the development of retained specimens to achieve a management objective

Tree Protection Plan - Scale drawing, informed by descriptive text where necessary, based upon the finalised proposals, showing trees for retention and illustrating the tree and landscape protection measures

BS5837:2012 Tree Survey

TTS (Midlands) Ltd
Ashleigh House
Cromford Road
Wirksworth
Derbyshire
DE44FR
Phone: 01629824079

Client: Cullen, G
Project: Taxal Edge BS5837 v2
Survey Date: 23/10/2020
Surveyor: Mike Kiss

Tree and Tag No / Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations / Survey Comment	Cat ERC
G3											
A Group - -	0	1					A: 0 R: 0	Fair	C: S: B:	See Comment :: Unspecified Vaguely linear, fragmented, mixed species group of young trees located on both sides of boundary wall to the east of the site. Species comprise beech, holly, rowan, birch, alder, ash and sycamore, with undergrowth of mostly bramble. Several trees have been previously 'topped' at 4m to 6m. Ash trees are exhibiting advanced infection of Chalara ash dieback (Hymenoscyphus fraxineus). Recommend remove stems within the site boundary and replace with linear planting of trees with the intention of managing as a hedge. See Arboricultural Impact Assessment.	C.2 10 to 20 yrs
G5											
A Group - -	0	1					A: 0 R: 0	Good	C: S: B:	No action :: Unspecified Linear group of young holly located along north eastern boundary of the site. Previously 'topped' at 2m, top of regrowth currently approximatley 4m. Forms effective screening between properties.	B.2 20 to 40 yrs

Age Classifications:
N Newly planted
Y Young
SM Semi-mature
EM Early Mature
M Mature
OM Over Mature

Condition:
C Crown
S Stem
B Basal area

Stems:
Ø Diameter
(Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
G22											
A Group - -	0	1					A: 0 R: 0	Fair	C: S: B:	No action :: Unspecified Mixed species group of young to semi-mature trees to the north of the existing detached dwelling. Species comprise sycamore, hornbeam, beech and ash. Several of the trees have previously been 'topped' at 6m to 8m. In my opinion, this group is likely inappropriate for retention in the context of the proposed development. Removal of this group would also increase visibility of fine mature trees to the north of this group. See Arboricultural Impact Assessment.	C.2 20 to 40 yrs
G25											
A Group - -	0	1					A: 0 R: 0	Good	C: S: B:	No action :: Unspecified Mixed species group of semi-mature trees to the west of the existing detached dwelling. Species comprise beech and hornbeam. The majority of the trees are of etiolated form and with a slight lean to the south east. RPAs protected within the RPA of adjacent mature beech.	B.2 20 to 40 yrs
T1											
Sycamore *Acer pseudoplatanus*	14	4	600 (Eq)	N E S W	4 5 5 3	3 3 6 5	SM	A: 163.1 R: 7.2	Good	C: Good S: Fair B: Fair	No action :: Unspecified Located immediately east of entrance to driveway, to the north east of site. Located on raised bank between drive and footpath with associated constraints to rooting area. Multiple historic pruning wounds back to main stem. Partially suppressed by adjacent trees - asymmetric crown. Minor deadwood throughout crown. Minor leaf infection by tar spot (Rhytisma acerinum).	C.2 20 to 40 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T2											
Sycamore *Acer pseudoplatanus*	16	1	680	N 4 E 5 S 6 W 5	6 4 4 7	M	A: 209.2 R: 8.16	Good	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located immediately east of entrance to driveway, to the north east of site. Located on shallow raised bank between drive and footpath with associated constraints to rooting area. Minor root girdling. Multiple historic pruning wounds back to main stem, mostly well occluded. Bificates at 2m with tight fork between co-dominant stems and early onset of included bark to the east. Squirrel damage evident in crown but not fully assessed from ground level. Minor deadwood throughout crown. Minor leaf infection by tar spot (Rhytisma acerinum). Recommend crown lift to clear 5m over drive and 4m elsewhere.	C.2 20 to 40 yrs
T4											
Common Beech *Fagus sylvatica*	24	1	930	N 7 E 6 S 5 W 6	2 5 5 2	M	A: 391.3 R: 11.16	Fair	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located immediately west of entrance to driveway, to the north east of the site. Fine mature tree. Retaining wall within 3m of main stem. Historic construction of driveway within rooting area. Annual fungal fruiting body at base of main stem, to the north east. Fruiting body in poor condition, heavily discoloured and degraded making accurate identification not possible (see photos). Possibly Armillaria species, but unlikely Armillaira mellea due to lack of ring on stipe. Main stem bificates at 8m, with open union. Minor deadwood throughout crown. Some apparent reduction in physiological condition, minor crooking of shoot tips. Recommend annual formal inspection and regular informal checks regarding condition and presence of fresh fungal fruiting bodies. Recommend clear surronding vegetaion within 1m of main stem to facilitate future inspections of base of main stem.	A.1.2 20 to 40 yrs
T6											
Sycamore *Acer pseudoplatanus*	14	2	439 (Eq)	N 3 E 3 S 3 W 3	6 6 6 6	SM	A: 87.1 R: 5.26	Fair	C: Poor S: Fair B: Fair	No action :: Unspecified Located immediately west of boundary wall to the north of site. Twin-stemmed with tight fork and early onset included bark between co-dominant stems. Multiple historic pruning wounds back to main stem resulted in high crown. Minor deadwood throughout crown. Minor leaf infection by tar spot (Rhytisma acerinum).	C.2 10 to 20 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T7											
Sycamore *Acer pseudoplatanus*	14	2	492 (Eq)	N 3 E 3 S 3 W 3	5 4 5 5	SM	A: 109.5 R: 5.9	Fair	C: Poor S: Fair B: Fair	No action :: Unspecified Located immediately west of boundary wall to the north of site. Twin-stemmed with tight fork between co-dominant stems. Minor deadwood throughout crown. Minor leaf infection by tar spot (Rhytisma acerinum). Extensive squirrel damage throughout crown.	C.2 10 to 20 yrs
T8											
Sycamore *Acer pseudoplatanus*	16	3	645 (Eq)	N 5 E 5 S 6 W 6	5 5 5 5	M	A: 188.4 R: 7.74	Good	C: Fair S: Fair B: Fair	No action :: Unspecified Located immediately west of boundary wall to the north of site. Triple-stemmed with tight forks between co-dominant stems. Minor deadwood throughout crown. Minor leaf infection by tar spot (Rhytisma acerinum).	B.2 20 to 40 yrs
T9											
Sycamore *Acer pseudoplatanus*	12	1	240	N 3 E 3 S 3 W 3	4 4 4 4	Y	A: 26.1 R: 2.88	Good	C: Good S: Good B: Fair	No action :: Unspecified Located immediately east of boundary wall to the north of site. Minor deadwood throughout crown. Minor leaf infection by tar spot (Rhytisma acerinum).	C.2 20 to 40 yrs
T10											
Sycamore *Acer pseudoplatanus*	14	1	370	N 4 E 4 S 4 W 4	4 4 4 4	SM	A: 61.9 R: 4.43	Fair	C: Poor S: Fair B: Fair	No action :: Unspecified Located within treed area to north east of existing garage. Extensive squirrel damage throughout. Major and minor deadwood throughout crown.	C.2 10 to 20 yrs
T11											
Common Holly *Ilex aquifolium*	12	2	336 (Eq)	N 2 E 2 S 2 W 2	2 2 2 2	SM	A: 51.1 R: 4.03	Fair	C: Good S: Fair B: Fair	No action :: Unspecified Located immediately west of entrance to driveway, to the north east of site. Retaining wall within 1m of main stem. Twin-stemmed tree with tight fork and inlcuded bark.	C.2 20 to 40 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T12											
Sycamore *Acer pseudoplatanus*	14	1	270	N 3 5 E 2 5 S 2 5 W 3 5		Y	A: 33 R: 3.24	Fair	C: Poor S: Fair B: Fair	No action :: Unspecified Located within treed area to north east of existing garage. Heavily supressed by adjacent beech. Extensive squirrel damage throughout. Minor deadwood throughout crown.	C.2 10 to 20 yrs
T13											
Common Beech *Fagus sylvatica*	25	1	1070	N 6 6 E 6 3 S 8 3 W 8 3		M	A: 518 R: 12.84	Fair	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located within treed area to north east of existing garage and immediately west of driveway. Fine mature tree. Retaining wall within 3m of main stem. Historic construction of driveway within rooting area. Main stem trificates at 8m. Main stem slight lean to the west. Minor deadwood throughout crown. Apparent reduction in physiological condition, crooking of shoot tips of upper crown. Lower and inner crown, however, appears full and with good vitality. Past inspections include sounding with nylon mallet and use of a microdrill which suggets minor and localised decay of butress roots. No fungal fruiting bodies were present at any of my site visits. Recommend annual formal inspection and regular informal checks regarding condition and presence of fungal fruiting bodies. Recommend to crown lift to clear 5m over drive. Climber to report any defects which may not be visible from ground level inspection.	A.1.2 20 to 40 yrs
T14											
Sycamore *Acer pseudoplatanus*	15	1	520	N 4 4 E 4 4 S 4 4 W 4 4		SM	A: 122.3 R: 6.23	Fair	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located to the south of existing garage, adjacent driveway. Situated in an 'island'. Retaining walls with 1m drop within 2m of the main stem. Main stem bificates at 6m, with tight union. Minor deadwood throughout crown. Minor leaf infection by tar spot (Rhytisma acerinum). In my opinion, this tree is likely inappropriate for retention in the context of the proposed development. See Arboricultural Impact Assessment.	C.2 10 to 20 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

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Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T15											
Sycamore *Acer pseudoplatanus*	15	1	410	N 4 E 4 S 3 W 3	6 5 5 5	SM	A: 76.1 R: 4.92	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Located immediately north west of existing garage. Grown on boundary wall with comprimised rooting area. LV power line within 1m of main stem, tree previously heavily pruned to provide clearance, resulting in asymmetric crown which is also within 0.5m of roof of existing garage. Minor deadwood throughout crown. Minor leaf infection by tar spot (Rhytisma acerinum). In my opinion, this tree is likely inappropriate for retention in the context of the proposed development. See Arboricultural Impact Assessment.	C.2 10 to 20 yrs
T16											
Sycamore *Acer pseudoplatanus*	15	1	410	N 3 E 5 S 6 W 4	6 4 4 4	SM	A: 76.1 R: 4.92	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Located to the west of existing garage. Immediately west of and contacting boundary wall. LV power line within 1m of main stem, tree previously heavily pruned to provide clearance, resulting in asymmetric crown. Minor deadwood throughout crown. Minor leaf infection by tar spot (Rhytisma acerinum). In my opinion, this tree is likely inappropriate for retention in the context of the proposed development. See Arboricultural Impact Assessment.	C.2 10 to 20 yrs
T17											
Sycamore *Acer pseudoplatanus*	16	2	496 (Eq)	N 4 E 4 S 5 W 4	4 4 4 4	SM	A: 111.2 R: 5.94	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Located to the north east of existing school buildings. Immediately north of boundary wall. Telecom line running through crown. LV power line within 2m of main stem. Asymmetric crown which is within 0.5m of existing building. Minor deadwood throughout crown. Minor leaf infection by tar spot (Rhytisma acerinum). In my opinion, this tree is likely inappropriate for retention in the context of the proposed development.	C.2 10 to 20 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

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ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T18											
Sessile Oak *Quercus petraea*	24	1	800	N 7 E 8 S 10 W 7		M	A: 289.6 R: 9.6	Good	C: S: B:	See Comment :: Unspecified Located outside of site boundary, to the north west. Access not gained to make full assessment of tree. Measurements estimated. Fine mature tree. Appears to be grown on edge of quarry and has dense vegetation around base. Crown extends to the south and overhangs existing building, contacting roof. Recommend remove low lateral branch to the south back to parent stem at approximately 4m and directly above boundary fence.	A.1.2 >40 yrs
T19											
Goat Willow *Salix caprea*	12	1	360	N 2 E 4 S 3 W 3	4 4 4 4	SM	A: 58.6 R: 4.31	Fair	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located immediately to the west of access track to the north west of the site. Historic pruning wound back to the main stem at 2m with associated partial decay. Crown extends to the south and contacts roof of existing building. Recommend reduce lateral branches to the south by approximately 2m.	C.2 10 to 20 yrs
T20											
Sycamore *Acer pseudoplatanus*	16	1	590	N 6 E 4 S 3 W 5	4 6 6 6	M	A: 157.5 R: 7.08	Poor	C: Poor S: Poor B: Fair	No action :: Unspecified Located immediately to the west of access track to the west of the site. Bificates at 2m with tight fork and included bark between co-dominant stems. Multiple historic pruning wounds back to the main stem, resulting in high and asymmetric crown. Also apparently the removal of a natural brace at 4m.	C.2 10 to 20 yrs
T21											
Common Ash *Fraxinus excelsior*	16	1	640	N 5 E 5 S 5 W 5	5 5 5 5	M	A: 185.3 R: 7.68	Poor	C: Poor S: Fair B: Fair	See Comment :: Unspecified Located immediately to the south east of the access track to the west of the site. Bificates at 2m with tight fork and included bark. Evidence of Chalara ash dieback (Hymenoscyphus fraxineus) on epicormic shoot on main stem. Tree not in leaf at time of survey so full assessement of physiological condition not possible. Likely limited remaining contribution. In my opinion, this tree is likely inappropriate for retention in the context of the proposed development. See Arboricultural Impact Assessment.	C.2 <10 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

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Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T23											
Common Beech *Fagus sylvatica*	24	1	1020	N 10 E 10 S 10 W 8	3 3 6 3	M	A: 470.7 R: 12.24	Good	C: Good S: Fair B: Good	No action :: Unspecified Located to the north west of access track to the west of the site. Fine mature tree. Bificates at 0.5m. Stem diameter measured just above root flare. Tight fork between co-dominant stems. Multiple historic pruning wounds back to scaffolds, occluding well. Minor deadwood througout crown. Crown extends over wall to the south east of access track, this is not anticipated to be problematic in relation to proposed development.	A.1.2 >40 yrs
T24											
Common Beech *Fagus sylvatica*	22	1	660	N 4 E 7 S 6 W 4	6 2 6 6	M	A: 197.1 R: 7.92	Good	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located immediately to the south east of boundary wall to the west of the site and to the north west of the existing detached dwelling. Erosion of ground to the south east has exposed void in the rock below the main stem, visible to a depth of 1m below ground level. This appears to have heavily compromised the root development on this side. Tight fork at 3m with extensive included bark. Extended limb from this union extends to the south. Removal of adjacent trees likely results in increased and unacustomed wind loading experienced by this tree. Crown also extends beyond that of adjacent trees. Recommend reduce entire crown by approximatley 2m.	B.2 20 to 40 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

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ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m2) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T26											
Common Beech *Fagus sylvatica*	26	1	1160	N 10 E 10 S 9 W 8	6 6 6 6	M	A: 608.8 R: 13.92	Fair	C: Good S: Fair B: Fair	See Comment :: Unspecified Located to the south west of the existing detached dwelling, forms group with adjacent mature beech to the west. Fine mature tree. Annual fungal fruiting body at base of main stem, between butresses to the north. Likely shaggy scaly cap (Pholiota squarrosa), although not confirmed. Area of minor bark dysfunction on the main stem, to the west, mostly covered by calous growth. Single straight stem to crown break. Dominant tree of the group, and closest to the existing detached dwelling. Minor deadwood throughout crown. Some apparent reduction in physiological condition, minor crooking of shoot tips. Recommend annual formal inspection and regular informal checks regarding condition and presence of fungal fruiting bodies. Recommend prune to reduce heavy lateral branches extending to the north through to the north east by approximately 2m.	A.1.2 20 to 40 yrs
T27											
Common Beech *Fagus sylvatica*	24	1	1040	N 8 E 7 S 7 W 8	4 4 4 6	M	A: 489.4 R: 12.48	Fair	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located to the south east of the existing detached dwelling. Fine mature tree. Pronounced butresses and deep fluting to base of main stem. Minor bark dysfunction on main stem to east at 1.3m, just below historic pruning wound. Single straight stem to 10m, trificates. Two lower sub-dominant stems with tight unions & included bark, both are naturally braced within crown. Minor deadwood throughout crown. Some apparent reduction in physiological condition, minor crooking of shoot tips. No fungal fruiting bodies were present at any of my site visits. Removal of adjacent mature beech likely results in increased and unacustomed wind loading experienced by this tree. Recommend reduce height of crown by approximately 3m and lateral reduction of approximatley 1.5m. Recommend clear surronding vegetation within 1m of main stem to facilitate future inspections of base of main stem. Also recommend annual formal inspection and regular informal checks regarding condition and presence of fungal fruiting bodies.	A.1.2 20 to 40 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

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Taxal Edge - BS5837 Tree Protection Plan

SCALE : 1 : 800 @ A4

DATE : 01/11/2020

MAP FILENAME : [Filename]

N

Legend

Crown Spread

Root Protection Area (Default)

Category 'A' Category 'B' Category 'C' Category 'U'

0 50m

Legend

Area of Conflict within RPA of Retained Trees

Proposed Site Layout

Construction Exclusion Zone (Fence Location)