

# BS 5837

# Arboricultural Report

Impact Assessment & Planting Scheme



at  
Parkton Grove  
Huddersfield  
HD4 7QU

Dated  
6<sup>th</sup> March 2026



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# 1. Introduction

## 1.1. Instruction

1.1.1. We are instructed by Studio G Architectural to:

- Undertake a Tree Survey to BS 5837 at Parkton Grove and assess all trees potentially within influencing distance of proposed development within the site.
- Plot the trees on a Tree Constraints Plan and record the data in a Tree Data Schedule.
- Provide preliminary management recommendations for the tree stock (independent of development proposals).
- Assess the potential impact of the development proposals and provide guidance as to appropriate mitigation measures.
- Produce an Arboricultural Impact Assessment for submission to the local authority.
- Produce a Planting Scheme specifying what trees and shrubs are proposed as mitigation for tree removal.

## 1.2. Purpose of this Report

1.2.1. This report is produced according to the guidance and recommendations within *BS 5837: 2012 - Trees in Relation to Design, Demolition, and Construction*. It is tailored to accompany a planning application. It assesses the impact of all proposed construction works on the tree population. Tree removal, canopy pruning, and the impact upon roots from various groundworks are all considered in detail. Best practice mitigation is specified wherever appropriate.

1.2.2. A planting schedule and maintenance program are also specified to ensure continued tree cover and improved biodiversity.

1.2.3. This document should not be used to inform management decisions relating to liability or risk management. Such decisions should be based on a more detailed inspection of the trees than was carried out for this report.

## 1.3. References

1.3.1. We have liaised with our client to attain an adequate understanding of the project to enable us to carry out an accurate assessment of the proposals.

## 1.4. Author

1.4.1. This report was compiled by Emma Hoyle FDS (Arboriculture), ED (Forestry & Arboriculture), M.ArborA. Emma's resumé can be found in Appendix 3.

## 2. The Survey

2.1.1. A visual ground-level assessment of all trees was undertaken on the 16<sup>th</sup> of September 2024 by Emma Hoyle. No climbed inspections or specialist decay detection were undertaken.

### 2.2. Methodology

2.2.1. Structural condition was assessed by inspecting the stem and scaffold branches, looking for weak branch junctions, symptoms of decay, or other structural defects. Any recommended works were made to ensure the trees are in acceptable structural condition. The position of the tree and its potential targets were considered.

2.2.2. Physiological condition was assessed by inspecting the stem, branches, and foliage for symptoms of disease. The vigour of the tree was also considered.

2.2.3. Key measurements were obtained using a diameter tape, clinometer, distometer and logger’s tape. Where this was not practical, measurements were estimated.

2.2.4. Some trees may be surveyed as groups where they form cohesive arboricultural features.

2.2.5. The tree locations shown on the accompanying drawings are based on a measured drawing of the site supplied to Crown Tree Consultancy. This drawing had the tree positions already plotted. Where applicable, additional trees have been plotted by us according to measurements taken on-site.

2.2.6. Finally, a Retention Category was allocated. The relevant BS5837 2012 cascade chart is duplicated below.

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)	Identification on plan
<b>Trees unsuitable for retention (see Note)</b>		
<b>Category U</b> 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"> <li>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)</li> <li>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</li> <li>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</li> </ul> <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p>	See Table 2
	<p><b>1 Mainly arboricultural qualities</b></p> <p><b>2 Mainly landscape qualities</b></p> <p><b>3 Mainly cultural values, including conservation</b></p>	
<b>Trees to be considered for retention</b>		
<b>Category A</b> <b>Trees of high quality</b> 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)	See Table 2
<b>Category B</b> <b>Trees of moderate quality</b> 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	See Table 2
<b>Category C</b> <b>Trees of low quality</b> 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	See Table 2

2.2.7. Further guidance on interpreting BS 5837 and our survey methodology is given in Appendix 1.

## 2.3. Survey Extent

2.3.1. The area indicated below<sup>1</sup> shows the approximate extent of the survey.



## 2.4. Summary of Observations

- 2.4.1. The survey area encompasses a plot of land to the west of Parkton Grove. An unmade vehicular access leads into the site from Hanging Stone Road, in the southwestern corner of the area outlined above. The ground levels vary across the site, the site is overgrown in some areas, and a significant retaining wall runs along the southern boundary.
- 2.4.2. Within the survey area, we identified a Retention Category A tree (T9), Retention Category B trees (T2, T4, G7, T10, T11, T12, T14 and T19) and twelve Retention Category C trees.
- 2.4.3. Tree species present predominantly include Sycamore and Elm, with occasional other specimens including Horse Chestnut, Beech, Hawthorn, Oak, Spruce Pine and Lime.
- 2.4.4. The Tree Constraints Plan and Tree Data Schedule (see Appendix 4) should be referred to for descriptions and locations of all trees.

<sup>1</sup> Image taken from Google Earth and may not be current

### 3. Vegetation Overview (independent of proposals)

This section summarises all the recommendations within the Tree Data Schedule regardless of whether trees are to be retained, felled or pruned to facilitate the proposed development. It does not specify works that may be required to facilitate the development proposals.

#### 3.1. Preliminary Management Recommendations

3.1.1. The following recommendations are made in order to maintain the trees in an acceptable condition:

- Trees which require remedial pruning to remove any dead, dying and/or defective branches include T1, T9, T10 and T11. These works should be prioritised as indicated on the Tree Data Schedule.
- It is also recommended that the condition of T10 be closely monitored and inspected on a regular basis. This tree has several dead branches throughout its canopy and has low vitality.
- T12 is a mature Horse Chestnut exhibiting advanced symptoms of Bleeding Canker of Horse Chestnut. Symptoms include major strips of cracked bark with decay to its stem and large lower limbs. It is recommended to undertake a decay detection investigation in order to accurately assess the extent of decay. Further management recommendations may be deemed necessary as a result of the findings.
- Some trees could not be fully inspected due to the presence of dense ivy. It is recommended that the ivy is removed so that the trees may be re-inspected. Trees included are T2, T3, T4, T14 and T18.

3.1.2. All other trees were deemed to be in satisfactory condition.

#### 3.2. Work Priority and Future Inspections

3.2.1. The table below suggests a schedule for completing the works recommended in the Tree Data Schedule based on the perceived risk. **Where funds permit, works should be undertaken sooner, though it is not recommended that the timescales below are extended.**

Work Priority	Definition	Tree Number
Urgent	As soon as possible	None
Very High	Within 1 Month	None
High	Within 3 Months	T12
Moderate	Within 1 year	T1, T2, T3, T4, T9, T10, T11, T14 and T18
Low	Within 3 years	None

3.2.2. The table below suggests a schedule of future inspections based on the condition and location of each tree:

Inspection Frequency (years)	Tree Number
0.5	None
1	T9, T10, T11 and T12
1.5	T1, T2, T3, T4, T14, T16, T17, T18 and T20
3	T5, T6, G7, T8, T13, G15 and T19

3.2.3. The trees should be inspected sooner if there is a noticeable decline in their condition or following extreme weather events.

## 4. Statutory Protection – TPOs and Conservation Area Status

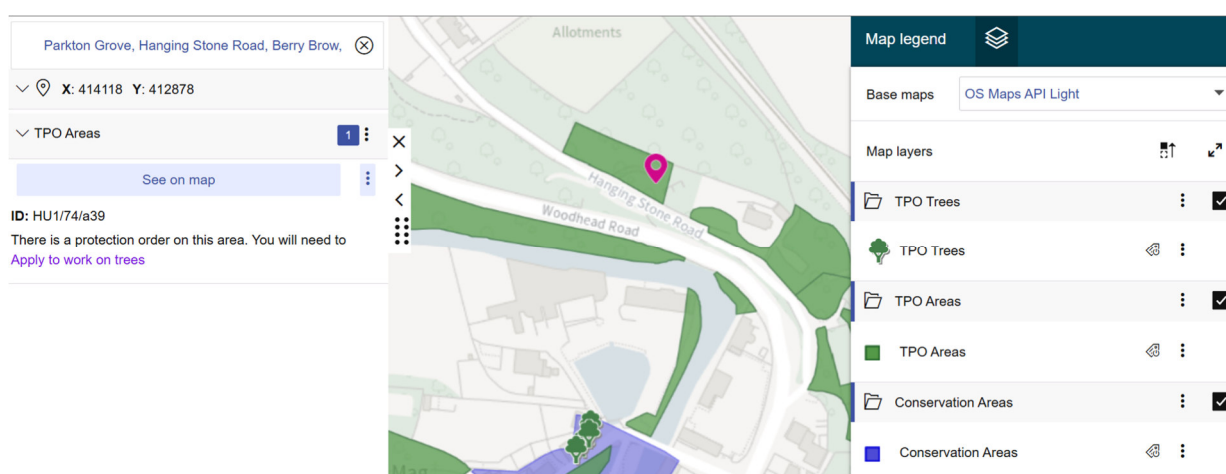
Before undertaking most works on trees protected by a tree preservation order<sup>2</sup>, consent needs to be formally obtained from the local authority. Where trees are in a conservation area (but not protected by a TPO), works are generally not permitted without first giving the local authority six weeks' notice of intention<sup>3</sup>. Unauthorised works to protected trees, or trees in a conservation area, may result in criminal prosecution and a fine. Where works are required to implement a fully approved development, no such consent or notice is required.

### 4.1. Desktop Research

4.1.1. On the 12<sup>th</sup> of February 2026, we visited the local authority website (Kirklees Council) which informed us that:

- The site is not within a conservation area.
- There is an Area Tree Preservation Order affecting trees within the survey area, TPO Ref: HU1/74/a39.

4.1.2. A screenshot is produced below:



### 4.2. Felling Licences

4.2.1. Felling licences issued by the Forestry Commission are sometimes required before removing trees. However, these licenses are aimed toward woodland and forestry management. Felling licences are NOT required for any of the following:

- Lopping, topping or pollarding.
- Removal of small trees (stem diameter less than 8cm) or fruit trees.
- Works to any trees growing within domestic gardens, orchards, or the Inner London boroughs.
- Operations involving less than five cubic meters of timber in any quarter year.
- Thinning and understorey clearing operations.
- Dangerous trees, nuisance trees, some diseased trees.
- Where removal is required to enable a fully approved development.

4.2.2. More detailed guidance can be found at <https://www.gov.uk/government/publications/tree-felling-getting-permission>

4.2.3. Hence, a felling licence will be required for the removal of more than five cubic metres of timber from within the site, unless any of the above exemptions apply.

<sup>2</sup> <https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas>

<sup>3</sup> During this time, the local authority may elect to create a tree preservation order or to inform the applicant that they have no objection to the proposed works. If the local authority does not respond within six weeks, then the intended work may be undertaken. Note: the local authority cannot refuse consent for works to trees within a conservation area; they may only create a tree preservation order if they wish to have further control over what works are undertaken.

### 4.3. Species Present – Additional Information

4.3.1. The table below contains general information about the tree species (rather than the actual tree specimens) included in the survey. Its purpose is to assist readers who are unfamiliar with the characteristics of the various species.

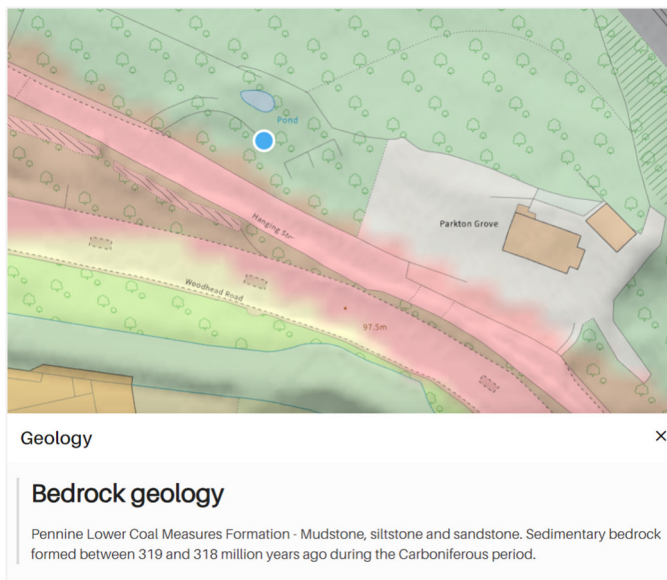
Species	Typical Height at Maturity (m)	Typical Canopy Spread at Maturity (m)	General Notes
Cherry	8	10	Many cultivars available, bred for their abundance of spring flowers, edible cherries or ornamental bark (e.g. Tibetan Cherry). Usually white or pink flowering, often in very early spring. Usually with a single bole to around 2.5m and multi-stemmed thereafter. Most varieties have excellent autumn colour.
Elm	25	14	Several species of elm may be found in the UK. The most common being Wych Elm, English Elm and the Narrow-Leafed Elm. Many specimens are likely to be a cross as they freely hybridise. Attractive golden varieties are occasionally seen. The English Elm was once a common feature of the British landscape but has been decimated by Dutch Elm Disease. Visit <a href="http://en.wikipedia.org/wiki/Elm">http://en.wikipedia.org/wiki/Elm</a> for more info.
Hawthorn	6	6	Arguably Britain's most common tree due to its abundance in field and roadside hedges. Deciduous, prickly and one of our most hardy trees, it will tolerate almost all conditions including drought, pollution and coastal winds. Also known as Mayflower because of its abundance of white flowers in May. Red 'haws' ripen from September to November and have only one pip (unlike Midland hawthorn which contains 2 pips). Visit <a href="http://www.pfaf.org/user/Plant.aspx?LatinName=Crataegus+monogyna">http://www.pfaf.org/user/Plant.aspx?LatinName=Crataegus+monogyna</a> for more info.
Horse Chestnut	25	18	Deciduous tree native to Albania and N Greece. Naturalised throughout the UK. Iconic landscape tree. Susceptible to attack by Bleeding Canker, as well as Leaf Miner and Leaf Blotch. Should be inspected regularly if located close to high public use areas. Visit <a href="http://www.pfaf.org/user/Plant.aspx?LatinName=Aesculus+hippocastanum">http://www.pfaf.org/user/Plant.aspx?LatinName=Aesculus+hippocastanum</a> for more info.
Lime	25	12	Very common street tree. Several species exist; the one most often found in woods is 'common lime' which produces a mass of suckers at the stem base, making it very cheap to propagate. Limes have non-symmetrical heart shaped leaves which are much loved by aphids (hence the sticky honeydew on cars parked beneath). Limes are tolerant of heavy pruning and are often managed as pollards. Old limes tend to support a lot of small dead branches. Visit <a href="http://www.pfaf.org/user/Plant.aspx?LatinName=Tilia+x+europaea">http://www.pfaf.org/user/Plant.aspx?LatinName=Tilia+x+europaea</a> for more info.
Oak	22	18	Deciduous, long-lived tree native and common throughout Europe with very durable timber. Excellent habitat tree - provides food and shelter for thousands of native species. Can be very attractive as a mature open grown specimen though not particularly ornamental, having no autumn colour or showy flowers. Responds well to pruning. Visit <a href="http://www.pfaf.org/user/Plant.aspx?LatinName=Quercus+robur">http://www.pfaf.org/user/Plant.aspx?LatinName=Quercus+robur</a> for more info.
Pine	25	12	Genus of evergreen conifers often grown for timber. Pine trees often shed their lower branches and develop a high, wide spreading crown at maturity.
Spruce	10	10	There are around 50 species of Spruces in the northern hemisphere. Their form is pleasingly conical with rough, scaly bark that does not form ridges, and their leaves are often spined. Cones are long and pendulous when ripening, and usually fall from the tree intact.
Sycamore	25	16	Deciduous tree native to S. Europe, widely naturalised in the UK. Often regarded as a weed species due to its invasive nature and ability to tolerate most conditions. Responds well to pruning. Not a good tree to park beneath in summer due to the sap secreted by aphids. Visit <a href="http://www.pfaf.org/user/Plant.aspx?LatinName=Acer+pseudoplatanus">http://www.pfaf.org/user/Plant.aspx?LatinName=Acer+pseudoplatanus</a> for more info.
Yew	14	12	Evergreen species native throughout Europe. Commonly planted in churchyards. Once revered by ancient Britons and thought to be the inspiration for our Christmas tree. Capable of remarkable regeneration and extreme longevity. Poisonous foliage and seeds. Slow growing. Visit <a href="http://www.pfaf.org/user/Plant.aspx?LatinName=Taxus+baccata">http://www.pfaf.org/user/Plant.aspx?LatinName=Taxus+baccata</a> for info.

The figures quoted regarding typical height and canopy spread should be treated as approximate. Actual heights and spreads vary according to several environmental factors such as soil conditions, climate, and the presence of competing vegetation. The figures quoted are not the maximum dimensions that the species may attain.

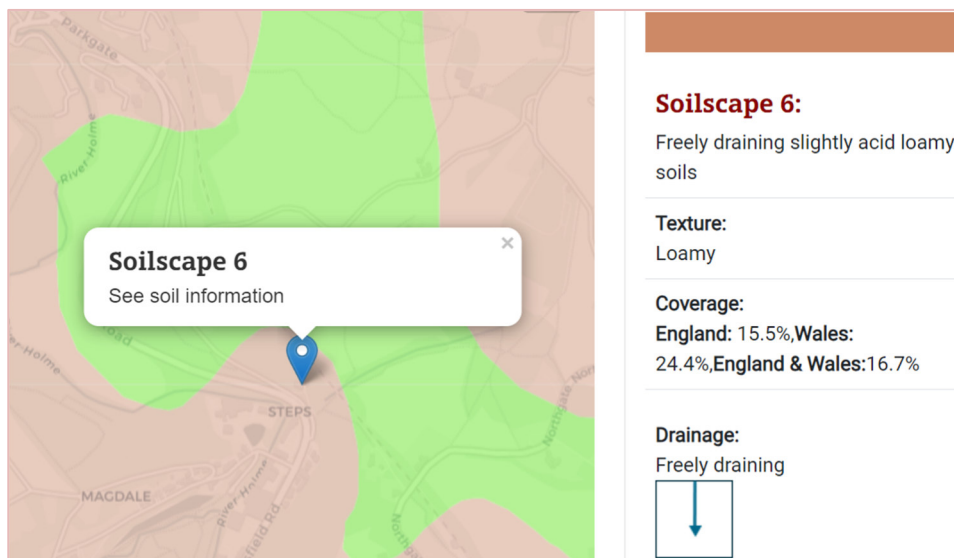
## 5. Local Geology and Soils

### 5.1. Desktop Research

5.1.1. Desktop research into local geology based on the postcode **HD4 7QU** obtained the following results:



Source: [https://geologyviewer.bgs.ac.uk/?\\_ga=2.100849601.17774785.1660229567-1737936254.1660229567](https://geologyviewer.bgs.ac.uk/?_ga=2.100849601.17774785.1660229567-1737936254.1660229567)



Source <http://www.landis.org.uk/soilscapes/>

### 5.2. Site Investigations

5.2.1. We are unaware of any specific investigations into soil properties at the site.

### 5.3. Conclusion and Relevance

5.3.1. Based on the information reproduced above, local soils are assumed to have a loamy texture.

5.3.2. Loamy soils contain a mixture of clay and sand. Soil compaction may occur due to vehicular activity on building sites, so ground protection is recommended wherever vehicles operate. Most tree species will grow well in loamy soils.

## 6. Arboricultural Impact Assessment

### 6.1. Overview

6.1.1. It is proposed to construct a new residential dwelling as indicated on the drawings in Appendix 4. The existing layout is indicated in black, and the footprint of the proposed layout is indicated in pink.

6.1.2. The table below summarises the potential impact on trees due to various activities.

Activity	Trees Potentially Affected
Tree Removal: Retention Category A	None
Tree Removal: Retention Category B	None
Tree Removal: Retention Category C	T1, T6, T13, G15, T17, T18, T20 and small shrubby specimens
Tree Removal: Retention Category U	None
Tree Pruning	T16
RPA: Building Foundations	G7, T12 and T14
RPA: Other Foundations	T2, T3, T4, T14 and T19
RPA: New Driveway	T2, T3, T4, T16 and T19
RPA: Underground Services	Unknown – To be confirmed
RPA: Change of Ground Levels	T2, T3, T4, T14 and T19
RPA: Soil Compaction	Trees adjacent the construction area (preventable by installing tree protection measures)

6.1.1. Other potentially damaging activities often associated with construction sites include demolition or the careless use of plant machinery, hazardous materials, or fires. All of the above potential impacts are considered in detail throughout this Section.

### 6.2. Tree Removal

6.2.1. To enable the development, it is proposed to remove eight Retention Category C trees and small shrubby vegetation and young specimens. The proposed for removal are listed in the table above.

6.2.2. A replacement tree planting scheme is proposed to mitigate their loss.

### 6.3. Mitigation Planting

6.3.1. To improve levels of amenity and biodiversity and mitigate the loss of trees required to facilitate the proposal, it is proposed to plant 16 new trees (replacement on a 2:1 basis).

6.3.2. The species have been selected to provide seasonal interest, screening (where appropriate) and high levels of visual amenity. All species are suitable for their setting. None are likely to outgrow their location or be perceived as a future nuisance. Therefore, the scheme accords with national and local policies regarding biodiversity and sustainability.

6.3.3. Please refer to Section 7 for the Proposed Tree Planting Scheme and Species Profiles. Planting locations are shown on the accompanying Proposed Planting Plan in Appendix 4.

## 6.4. Tree Pruning

6.4.1. Some light pruning works are proposed as part of the proposed development. The table below specifies the proposed pruning works:

Tree No	Recommendation	Reason
T16	Prune the northern eastern canopy back by a maximum of 1.5m.	To provide adequate clearance between the proposed dwelling and the tree canopy.

6.4.2. The proposed pruning shall not have a significant impact on T16’s health or amenity value.

6.4.3. No further pruning works are deemed necessary to facilitate the proposal.

## 6.5. Impact of Foundations

### Building Foundations

6.5.1. Small portions of the theoretical Root Protection Areas of G7, T12 and T14 shall be affected by the proposed building foundations. The table below details the proposed foundations, and the methodology proposed to ensure impact is kept to a minimum:

Tree No	Nature of Foundation	Proposed Mitigation
G7 T12 T14	Deep Strip (main dwelling and garage)	<p><u>Hand-Dig Method</u></p> <ul style="list-style-type: none"> <li>Excavation not to exceed 200mm beyond the build-line in the direction of trees.</li> <li>Hand tools to be used to a depth of 600mm.</li> <li>Plant machinery may be used beyond a depth of 600mm to achieve the required foundations depth.</li> <li>Excavation in the RPAs of T12 and T14 to be supervised by the project arborist.</li> <li>Exposed roots over 25mm diameter shall be retained and protected with damp hessian if practicable, otherwise neatly pruned by the arborist using clean, sharp tools.</li> </ul>
T12 T14	Shallow Raft (orangery)	<p><u>Shallow Raft Foundation</u></p> <ul style="list-style-type: none"> <li>Excavation not to exceed 200mm beyond the build-line in the direction of trees.</li> <li>Excavation depth for raft not to exceed 300mm.</li> <li>Hand tools to be used to excavate.</li> <li>Excavation to be supervised by the project arborist.</li> <li>Exposed roots over 25mm diameter shall be retained and protected with damp hessian if practicable, otherwise pruned by the arborist.</li> <li>Raft may be supported by narrow diameter piles (max 250mm diameter).</li> <li>Trial pits excavated using hand tools to determine pile locations.</li> <li>All roots over 25mm diameter to be retained intact and piles positioned to accommodate the roots retention.</li> </ul>

## Other Foundations

6.5.2. New walls are proposed within the theoretical RPAs of T2, T3, T4, T14 and T19, as indicated on the accompanying Impact Assessment Plan. The following restrictions are proposed:

Tree No	Nature of Foundation	Proposed Mitigation
T2 T3 T4 T14 T19	Garden / Retaining Walls	<ul style="list-style-type: none"> <li>Excavation limited to the footprint of the proposed walls.</li> <li>No excavation is to occur between the proposed walls and the trees.</li> <li>Hand tools to be used wherever possible.</li> <li>Small plant machinery may only be used if absolutely necessary and if supervised by the project arborist.</li> <li>Any tree roots encountered with a diameter over 25mm, should be retained wherever possible and bridged over using a beam.</li> <li>Any smaller roots (&lt;25mm diameter) may be neatly pruned using clean, sharp secateurs.</li> <li>Narrow diameter piles may be used, so long as they are positioned to avoid significant tree roots.</li> <li>If any backfilling is required between the wall and the existing ground level, a structural soil is recommended.</li> </ul>

## 6.6. Impact of Surfacing

6.6.1. The new driveway requires installation over the theoretical Root Protection Areas of T2, T3, T4, T16 and T19. The table below details the installation methodology proposed to keep impact to a minimum as best possible:

Tree No	Nature of Surfacing	Proposed Mitigation
T2 T3 T4 T16 and T19	New driveway surface over areas of unsurfaced and unmade ground	<p><u>No-Dig Technique</u></p> <ul style="list-style-type: none"> <li>Surface and sub-base to be installed above ground (loose topsoil or loose ground may be removed to a maximum depth of 100mm so long as no roots over 25mm are encountered).</li> <li>Existing site contours to be followed wherever possible.</li> <li>New surface to be highly porous.</li> <li>Sub-base to be porous (MOT type 3).</li> <li>3D Cellular system installed to retain the sub-base.</li> <li>Ground to be protected against compaction.</li> <li>Operation to be supervised by the project arborist.</li> </ul>

6.6.2. These measures accord with industry best-practice<sup>4</sup> and shall ensure minimal impact on roots.

## 6.7. Underground Services

6.7.1. The location of any underground services is yet to be determined. Wherever possible, these should be located outside of Root Protection Areas. Otherwise, the project arborist must be consulted, and approval obtained from the local authority.

## 6.8. Changes in Ground Levels

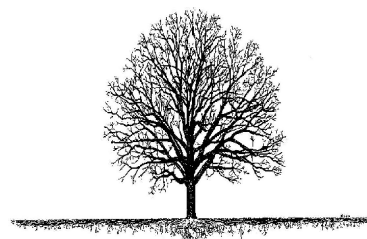
6.8.1. Due to the existing topography of the site, ground level alterations will be required in areas beneath the new driveway and in the vicinity of the proposed walls. Any materials used for raising ground levels over RPAs

<sup>4</sup> BS 5837(2012 section 7.4) and Arboricultural Association Guidance Note 12: The Use of Cellular Confinement Systems near Trees

should be permeable, such as structural soil and/or a no-fines sub-base, and alterations of ground levels should be kept to the minimum amount possible in order to avoid starving tree roots of oxygen and rainwater.

## 6.9. Soil Compaction

- 6.9.1. The majority of tree roots lie within the upper soil horizons. This is because the availability of oxygen decreases with depth, and roots need to breathe to stay alive. In addition, nutrients are more readily available in the form of organic matter close to the soil surface.
- 6.9.2. Healthy soils contain about 25% air space between solid particles. Increased loading of the soil caused by construction activity causes air to be squeezed out as the soil becomes compacted, preventing roots from breathing. Even an increase in pedestrian activity may cause some soil compaction.
- 6.9.3. It is important, therefore, that ground compaction and soil disturbance over Root Protection Areas should be avoided during the construction phase. Where access is required over Root Protection Areas, suitable ground protection measures must be installed.



## 6.10. Demolition Activities

- 6.10.1. No demolition is proposed close to trees.

## 6.11. Waste and Materials Storage

- 6.11.1. All hazardous materials (including cement and petrochemical products) will need to be controlled according to COSHH regulations in order to ensure there is no detrimental impact on tree health. Provision shall need to be made to ensure that cement spillage avoids all Root Protection Areas.
- 6.11.2. Areas designated for the storage of building materials and waste products will need to be approved by the local authority. Root Protection Areas should be avoided. Where this is not possible, suitable ground protection measures will need to be installed.

## 6.12. Cabins and Site Facilities

- 6.12.1. Any cabins and welfare facilities should be located outside of Root Protection Areas wherever possible. Otherwise, the project arborist should be consulted, and approval obtained from the local authority.

## 6.13. Boundary Treatments

- 6.13.1. Any additional proposals to amend boundary features close to trees that are not discussed in this report shall be agreed upon and approved by the local authority after consultation with the project arborist.

## 6.14. Impact of Retained Trees on the Development

- 6.14.1. Some occasional trimming of canopies may be required in the future to maintain an appropriate distance from the proposed building.
- 6.14.2. The foundations and any new surfaces should be designed to accommodate all potential impacts due to future tree-rooting activity. These include potential vegetation-related subsidence, vegetation-related heave, and lifting of surfaces / light structures due to direct root pressure.

## 6.15. Arboricultural Method Statement

- 6.15.1. BS 5837 recommends that a detailed methodology is agreed in the form of an Arboricultural Method Statement, which shall ensure that trees are well protected during the construction phase. This should detail all tree protection measures and limitations on construction activity. All of the issues raised within this Impact Assessment should be covered by the Method Statement.

## 7. Tree Planting Schedule

- 7.1.1. It is proposed to plant 16 new trees in the locations indicated on the accompanying Proposed Planting Plan. The species, quantity and sizes are specified below:

Ref No	Species		N <sup>o</sup>	Size	
N1	English Yew	Taxus baccata	4	Standard	8-10cm girth, 2.5-3m height
N2	Olive	Olea europaea	1	Standard	8-10cm girth, 2.5-3m height
N3	Snowy Mespil	Amelanchier lamarckii	3	Light Standard	6-8cm girth, 1.5-2.5m height
N4	Midland Hawthorn	Crataegus laevigata	6	Standard	8-10cm girth, 2.5-3m height
N5	Staghorn Sumach	Rhus typhina	1	Standard	8-10cm girth, 2.5-3m height
N6	Whitebeam	Sorbus aria	1	Standard	8-10cm girth, 2.5-3m height

### 7.2. Tree Planting Specification

- 7.2.1. **Timing:** Trees should be planted from late October to late March and copiously watered in immediately after planting.
- 7.2.2. **Preparation:** Any ground that has been compacted during construction shall be cultivated to a depth of at least 300mm. A minimum area of 1m x 1m shall be de-compacted for each tree.
- 7.2.3. If chemical contamination is suspected to have occurred, or where the soil is determined to be too shallow or infertile, an appropriate amount of soil is to be removed and replaced with quality topsoil compliant with BS 3882. A minimum volume of 2m x 2m x 0.5m deep will be replaced for each tree. Before backfilling with topsoil, bases and sides of all excavation should be de-compacted/loosened with a garden fork or spade.
- 7.2.4. **Planting:** A planting hole 1.5 to 2 times larger than the root ball/ root spread shall be excavated by hand. The edge of the planting hole shall be roughened with a spade, and the base dug over to a depth of 150mm to improve drainage. Trees shall be planted with stem base at ground level, and the planting hole shall be backfilled with the same (or slightly ameliorated) soil material and firmed to prevent air pockets.
- 7.2.5. **Soil Amelioration:** Compost or other organic matter may be added to aid establishment if the soils are relatively infertile. However, this should not be confined to the planting hole. The vast majority should be dug into the soils immediately adjacent to the planting hole, and the mix should always be at least 50% of the excavated site soil.
- 7.2.6. **Staking:** *Standard* trees (or smaller) shall be single staked at 30 - 50cm above ground level and attached with adjustable and flexible tree ties and spacers. *Heavy Standards* (or larger) shall be double staked at 80 - 120cm above ground level and attached with adjustable and flexible tree ties and spacers. Stakes shall be driven into the ground such that they avoid the root ball. Stakes shall be of tanalised timber with a minimum diameter of 75mm for *Standard* trees and 100mm for *Heavy Standards*.
- 7.2.7. **Protection:** Spiral rabbit guards (60cm x 50mm, clear recycled PVC) to be affixed around the base of any tree not protected by tree shelters. The use of strimmers shall be avoided due to the risk of bark stripping.
- 7.2.8. **Mulching:** Seasoned woodchip or medium-grade bark mulch to be installed to a depth of 10cm around each tree to deter weed competition. A 1m radial diameter of mulch should be installed around each stem and periodically topped up.
- 7.2.9. If any existing or newly planted trees become moribund, soils shall be aerated, and soil inoculants applied.

### 7.3. Long Term Management Plan

- 7.3.1. **Watering:** Trees shall be regularly watered during the first growing season and during prolonged dry spells for at least two further seasons, in accordance with British Standard 8545 (2014). The following is a guide to watering requirements, though in practice these are heavily dependent upon climatic conditions:
- All trees watered three times per month from April through to September inclusive. During October, November and March, the frequency may be reduced to twice per month. During December, January and February, the frequency may be reduced to once per month.
  - At each watering session, heavy standards should receive 20 gallons, standards should receive 15 gallons, and light standards should receive 10 gallons. This equates to approximately 10 minutes, 7.5 minutes and 5 minutes from a domestic hose at moderate pressure.
  - The entire area beneath the canopy should be watered.
  - After two years, the trees should only require watering during periods of extended dry weather.
- 7.3.2. **Ties and Stakes:** The tree ties and spacers shall be inspected and adjusted/loosened annually by an appointed arborist. The stakes shall be removed (or loosened) after three to five years, as is deemed fit by the appointed arborist.
- 7.3.3. **Formative Pruning:** Formative pruning of new trees should be undertaken where appropriate, including progressive crown lifting, leader selection and minimum / maximum heights of crown lifting. If any trees are to be pleached, pollarded or coppiced, this should be well planned and the timing/ regularity of pruning requirements specified.
- 7.3.4. **Two-year Inspection:** After two years from the planting date, the appointed arborist shall assess the condition of the trees and undertake any remedial/formative pruning required to encourage the trees to develop with good structure screening value.
- 7.3.5. **Five-year Inspection:** After five years from the date of planting, the appointed arborist shall assess the condition of the trees and undertake any remedial/formative pruning required to encourage the trees to develop with good structure screening value.
- 7.3.6. **Ten-year inspection:** After ten years from the date of planting, the appointed arborist shall assess the condition of the trees and undertake any remedial/formative pruning required to encourage the trees to develop with good structure screening value.
- 7.3.7. **Replacement:** Any trees that fail to become established shall be removed and replaced with a new tree of the same species and specification as the original. Planning conditions may apply.

## 7.4. Species Profiles

### N1 - Yew – *Taxus baccata*



#### Size

↑ **Ultimate height**  
Higher than 12 metres

🕒 **Time to ultimate height**  
20–50 years

↔ **Ultimate spread**  
Wider than 8 metres

#### Growing conditions

Loam
Chalk
Sand
Clay

**Moisture**  
Well-drained

**pH**  
Acid, Alkaline, Neutral

#### Colour & scent

	Stem	Flower	Foliage	Fruit
Spring		🌸	🌿	
Summer			🌿	
Autumn			🌿	🍒
Winter			🌿	

#### Position

☁ Full shade
☀ Full sun
☁☀ Partial shade

**Aspect**  
South-facing or North-facing or East-facing or West-facing

**Exposure**  
Exposed or Sheltered

**Hardiness** ⓘ  
H7

#### common yew

*T. baccata* is a medium-sized bushy evergreen tree with narrow, leathery, very dark green leaves arranged in two rows on the shoots, and insignificant flowers followed on female plants by fleshy red fruits

#### Botanical details

**Family**  
Taxaceae

**Native to the UK**  
Yes

**Foliage**  
Evergreen

**Habit**  
Bushy

**Potentially harmful**  
Toxic if eaten. Wear gloves and other protective equipment when handling

**Genus**  
Taxus are small evergreen trees or large shrubs of rounded habit, with dense, linear leaves, insignificant flowers and, on female plants, conspicuous fleshy red arils surrounding the solitary seeds

**Name status**  
Correct

**Plant range**  
Europe, W Asia, N Africa

Source <https://www.rhs.org.uk/plants>

## N2 - Olive – *Olea europaea*



### Size

↑ **Ultimate height**  
4–8 metres

🕒 **Time to ultimate height**  
20–50 years

↔ **Ultimate spread**  
1.5–2.5 metres

### Growing conditions

☐ Chalk
☐ Clay
☐ Loam
☐ Sand

**Moisture**  
Well-drained

**pH**  
Acid, Alkaline, Neutral

### Colour & scent

	Stem	Flower	Foliage	Fruit
Spring			🌿🌿🌿	
Summer		🌸	🌿🌿🌿	
Autumn			🌿🌿🌿	
Winter			🌿🌿🌿	

### Position

☀ Full sun

**Aspect**  
South-facing

**Exposure**  
Sheltered

**Hardiness** ⓘ  
H4

### common olive

Has a rugged, much-branched habit and slow growth, eventually 4.5–9m. Leaves are narrowly obovate or oval, to 7.5cm long, leathery, silvery beneath. Very small white flowers are borne in axillary racemes to 5cm long. Many cultivated varieties have been developed from this species, some of which may fruit in UK under favourable conditions.

### Botanical details

**Family**  
Oleaceae

**Native to GB / Ireland**  
No

**Foliage**  
Evergreen

**Habit**  
Bushy

#### Genus

Olea are small or medium sized evergreen trees with simple, opposite leathery leaves. Flowers are in terminal or axillary panicles, and are small, whitish and followed by an ovoid, oblong or globose drupe (fruit).

**Name status**  
Correct

Source <https://www.rhs.org.uk/plants>

### N3 - Snowy Mespilus – *Amelanchier lamarckii*



#### Size

↑ **Ultimate height**  
8–12 metres

🕒 **Time to ultimate height**  
10–20 years

↔ **Ultimate spread**  
4–8 metres

#### Growing conditions

🏠 Clay    🌑 Loam    🏠 Sand

**Moisture**  
Moist but well-drained, Well-drained

**pH**  
Acid, Neutral

#### Colour & scent

	Stem	Flower	Foliage	Fruit
Spring		🌸	🍃	
Summer			🍃	🍇
Autumn			🍂	
Winter				

#### Position

☀️ Full sun    ☀️🌑 Partial shade

**Aspect**  
North-facing or West-facing or South-facing or East-facing

**Exposure**  
Exposed or Sheltered

**Hardiness** ⓘ  
H7

snowy mespilus [2]

A large erect deciduous shrub or small tree of open habit, with bronze-tinged young leaves turning orange and red in autumn. White flowers in short lax racemes as the leaves unfurl. Fruit a red to dark purple-black berry, soon eaten by birds

#### Botanical details

**Family**  
Rosaceae

**Native to the UK**  
No

**Foliage**  
Deciduous

**Habit**  
Columnar upright

**Genus**  
Amelanchier are small deciduous trees or shrubs with showy white flowers in early spring, red to purple fruits and often good autumn colour

**Name status**  
Correct

**Plant range**  
E Canada

Source <https://www.rhs.org.uk/plants>

## N4 - Midland Hawthorn – *Crataegus laevigata*



### Size

↑ **Ultimate height**  
4-8 metres

🕒 **Time to ultimate height**  
20-50 years

↔ **Ultimate spread**  
4-8 metres

### Growing conditions

🏠 Chalk
🏠 Clay
🏠 Loam
🏠 Sand

**Moisture**  
Moist but well-drained, Well-drained

**pH**  
Acid, Alkaline, Neutral

### Colour & scent

	Stem	Flower	Foliage	Fruit
Spring		🌸	🌿	
Summer			🌿	
Autumn			🌿	🍓
Winter				

### Position

☀ Full sun ☁ Partial shade

**Aspect**  
West-facing or South-facing or North-facing or East-facing

**Exposure**  
Exposed or Sheltered

**Hardiness** ⓘ  
H7

### Midland hawthorn

A small thorny deciduous tree with glossy, pinnately lobed leaves, and corymbs of creamy-white flowers in late spring, followed by red fruit in early autumn

### Botanical details

**Family**  
Rosaceae

**Native to the UK**  
Yes

**Foliage**  
Deciduous

**Habit**  
Bushy

**Potentially harmful**  
Fruit may cause mild stomach upset if ingested. Wear gloves and wash hands after handling

**Genus**  
Crataegus are deciduous trees and shrubs, usually with spiny branches, lobed or toothed leaves, and clusters of creamy-white flowers followed by red or black fruits. Some have fine autumn colour

**Name status**  
Correct

**Plant range**  
NW & C Europe

<https://www.rhs.org.uk/plants/90132/crataegus-laevigata/details>

## N5 – Staghorn Sumach – *Rhus typhina*



### Size

↑ **Ultimate height**  
4-8 metres

🕒 **Time to ultimate height**  
10-20 years

↔️ **Ultimate spread**  
4-8 metres






### Growing conditions

 Chalk
  Clay
  Loam
  Sand

**Moisture**  
Moist but well-drained

**pH**  
Acid, Alkaline, Neutral

### Colour & scent

	Stem	Flower	Foliage	Fruit
Spring				
Summer				
Autumn				
Winter				

### Position

☀️ Full sun

**Aspect**  
South-facing or West-facing or East-facing

**Exposure**  
Exposed or Sheltered

**Hardiness** ⓘ  
H6

## stag's horn sumach

A large suckering deciduous shrub to 6m, the red-hairy stems with large pinnate leaves turning red and orange in autumn. Dioecious, with yellow-green flower clusters, followed on female plants by dense crimson fruiting heads

### Botanical details

**Family**  
Anacardiaceae

**Native to GB / Ireland**  
No

**Foliage**  
Deciduous

**Habit**  
Suckering

**Genus**  
Rhus can be deciduous or evergreen shrubs or trees with simple, pinnate or palmately-divided leaves often colouring brilliantly in autumn, and inconspicuous yellow flowers in spring or summer, followed by small, spherical red fruits in dense clusters

**Name status**  
Correct

**Plant range**  
Eastern North America

Source: <https://www.rhs.org.uk/plants/20902/rhus-typhina/details>

## N6 – Whitebeam – *Sorbus aria*



### Size

↑ **Ultimate height**  
8–12 metres

🕒 **Time to ultimate height**  
20–50 years

↔ **Ultimate spread**  
4–8 metres

### Growing conditions

☐ Chalk
☐ Clay
☐ Loam
☐ Sand

**Moisture**  
Moist but well-drained, Well-drained

**pH**  
Acid, Alkaline, Neutral

### Colour & scent

	Stem	Flower	Foliage	Fruit
Spring		🌸	🌿	
Summer			🌿	
Autumn			🌿🍂	🍒
Winter				

### Position

☀ Full sun ☁ Partial shade

**Aspect**  
South-facing or North-facing or West-facing or East-facing

**Exposure**  
Exposed or Sheltered

**Hardiness** ⓘ  
H6

## common whitebeam

A broadly columnar deciduous tree, rather upright when young, with broadly ovate dark green leaves, white-felted beneath, and clusters of white flowers in spring, followed by red berries in early autumn

### Botanical details

**Family**  
Rosaceae

**Native to GB / Ireland**  
Yes

**Foliage**  
Deciduous

**Habit**  
Bushy

**Genus**  
Sorbus can be deciduous trees or shrubs with simple or pinnate leaves and clusters of small white or pink flowers, followed by white, yellow, pink, red or brown berries; some have fine autumn colour

**Name status**  
Correct

Source: <https://www.rhs.org.uk/plants/17533/sorbus-aria/details>

## Appendix 1: BS 5837: 2012 – Interpretation Guide

This Standard prescribes the principles to be applied to achieve a satisfactory juxtaposition of trees and structures. It sets out to assist those concerned with planning applications to form balanced judgments.

### Stage 1: Survey Details and Notes

A ground-level visual survey is undertaken. Only trees with a stem diameter over 75mm, which lie within the site boundary or relatively close to it, are included.

Where applicable, trees with significant defects are highlighted and appropriate remedial works are recommended.

Wherever practicable dimensions are obtained using diameter tapes, logger's tapes, distometers and clinometers. Where obstacles prevent accurate measurement, dimensions are estimated. Trees on privately owned third-party land are surveyed from the best available vantage point and observations relating to the condition of these trees should be treated accordingly. All height measurements should be regarded as approximate.

Data is recorded for each tree and is presented in a Tree Data Schedule. Each tree is allocated a **Retention Category** according to its size, amenity value, condition, and safe useful life expectancy. The categories are allocated independently of development proposals. Our interpretation of the Retention Categories is explained below:

#### Retention Categories

**A Category:** Trees of high quality and amenity value. Usually, mature trees with a significant life expectancy which would enhance any development. Retention of these trees is strongly encouraged.

**B Category:** Trees of moderate quality and amenity value. Usually these are maturing trees or younger trees with exceptional form. Retention of these trees is desirable though the removal of occasional specimens may be acceptable.

**C Category:** Trees of low quality or small specimens with a relatively low amenity value. These trees are not considered to be a material planning constraint and their removal will generally be seen as acceptable in order to facilitate development.

**U Category:** Trees of such low quality that their removal is recommended regardless of development proposals.

Occasionally trees are borderline and do not fall neatly into one of these categories. In such cases we apply a superscript (+/-) such that:

**C+** Indicates borderline C/B, though Category C is deemed to be most appropriate.

**B-** Indicates borderline C/B, though Category B is deemed to be most appropriate.

The British Standard suggests that each of the A, B and C categories may be further subdivided (A1, A2, A3, B1, B2, B3 etc) such that subcategory 1 denotes mainly arboricultural values, subcategory 2 denotes mainly landscape values and subcategory 3 denotes mainly cultural values (including conservation). Multiple subcategories may be used.

Our experience suggests that these subdivisions lack clarity and can be confusing. Within this report subcategories are **not** denoted. Where appropriate, the use of phrases such as '*Part of a formal group*', or '*Has a high ecological value*', or '*Offers good screening to the site*' are incorporated into the observation section of the Tree Data Schedule. We believe this conveys all relevant landscape and cultural information without any confusion.

**Tree Constraints Plan (TCP).** This indicates the position, crown spread, Retention Category and Root Protection Area of each tree. It is used to inform where development may proceed without causing damage to trees.

**Root Protection Area (RPA).** This is the area around each tree likely to contain the majority of roots. It should ideally remain undisturbed to avoid a detrimental impact on tree health. For single stemmed trees It is calculated according to the formula "radius of RPA" = "12 x stem diameter". Where a tree has more than one stem, the equivalent-single-stem diameter is usually recorded. This is calculated by adding the squares of the stems and then finding the square root of this total. The radius of the Root Protection Area is then calculated by multiplying the equivalent-stem-diameter by 12.

### Stage 2: Arboricultural Impact Assessment

After the initial survey and the production of the Tree Constraints Plan, arborists and designers are encouraged to work together to establish a design proposal with minimal impact on the high-quality trees. An assessment should be made of all possible impacts including the impact that the trees may have on the proposal. The arborist may recommend mitigation strategies to minimise these impacts and help achieve a more harmonious juxtaposition between buildings and trees.

### Stage 3: Arboricultural Method Statement

This type of report specifies the measures necessary to protect trees against damage from construction activity. The Method Statement should be written in a manner that it may be conditioned and enforced by the local authority upon granting of planning permission. The site manager should be familiar with all aspects of the Method Statement and should ensure that all persons working on the site are aware of those aspects which appertain to their work. This includes service installation engineers and operators of plant machinery.

## Appendix 2: Glossary

This section explains the terms used in the **Tree Data Schedule** (see Section 3 and Appendix 4).

### A2.1 General Observations

<b>Numbering System:</b>	Each item of vegetation has its own unique number prefixed by a letter such that T1=Tree 1, G2=Group 2, H3=Hedge 3 and W4=Woodland 4, S5=Shrub 5.
<b>Age Categories:</b>	
<b>Young</b>	Usually less than 10 years old.
<b>Semi-Mature</b>	Significant future growth to be expected, both in height and crown spread (typically below 30% of life expectancy).
<b>Early-Mature</b>	Full height almost attained. Significant growth may be expected in terms of crown spread (typically 30-60% of life expectancy).
<b>Mature</b>	Full height attained. Crown spread will increase but growth increments will be slight (typically 60% or more of life expectancy).
<b>Veteran</b>	Notable tree with features associated with atypically advanced age (such as unusually large girth, crown retrenchment or significant stem decay). Veteran trees have a high habitat value and require a Buffer Zone / RPA with a radius of at least 15x stem diameter and extending at least 5m beyond the dripline. Any natural or semi-natural habitats within the buffer zone should be well protected and retained (or improved) as part of the development. Lawns and cultivated gardens should be discouraged. See <a href="https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions">https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions</a>
<b>Over Mature</b>	Tree with declining health but not worthy of veteran status.
<b>Species:</b>	Common names and Latin names are given.
<b>Height:</b>	Measured from ground level to the top of the crown.
<b>Stem Diameter:</b>	Taken at 1.5m above ground level where possible. On multi-stemmed trees this measurement may be taken at ground level, though usually an indication of the number of stems and average diameter is given, e.g. 3 x 30cm.
<b>Crown Height:</b>	Measured from ground level to the height at which the main crown begins. Where the crown is unbalanced it is measured on the side deemed to be most relevant. This is usually the side facing the area of anticipated development.
<b>Tree Diagram:</b>	This scaled drawing is computer generated based on measurements taken for stem diameter, crown height and spread, and overall height. It is designed to help the reader rapidly assess the data. It is not an accurate representation of the form of the tree.
<b>Crown Spread:</b>	Measured N, E, S & W, taken from the centre of the stem and usually rounded up to the nearest metre.
<b>Observations:</b>	If a tree's position is considered to be relevant it will be commented upon (e.g. overhanging a children's play area). Tree form and pruning history are also recorded along with an account of any significant defects. Defects and descriptive terms are dealt with in more detail at the end of this section.
<b>Recommendations:</b>	Usually based on any defects observed and intended to ensure that the tree is in an acceptable condition.
<b>Priority Scale:</b>	Depending upon the threat posed by the tree, and the likelihood of failure, recommendations should be carried out according to the following priority scale:
<b>Urgent</b>	To be carried out as soon as possible.
<b>Very High</b>	To be carried out within 1 month.
<b>High</b>	To be carried out within 3 months.
<b>Moderate</b>	To be carried out within 1 year.
<b>Low</b>	To be carried out within 3 years.
	Where funds permit, works should be undertaken sooner, though <b>it is not recommended that the timescales above are extended.</b>
<b>Inspection Frequency:</b>	An interval of 6 months, 1 year, 1.5 years or 3 years is allocated before the next inspection is due. Wherever practical, consideration should be given to seasonal changes so that deciduous trees are not always surveyed in winter when they have no leaves, or in summer when leaves may obscure branches within the upper crown.
<b>Vigour:</b>	An indication of growth rate and the tree's ability to cope with stresses:
<b>High</b>	Having above average vigour.
<b>Moderate</b>	Having average vigour.
<b>Low</b>	Having below average vigour.
<b>Very Low</b>	Tree is struggling to survive and may be dying.
<b>Physiological Condition:</b>	
<b>Good</b>	Healthy and with no symptoms of significant disease.
<b>Fair</b>	Disease present or vigour is impaired.
<b>Poor</b>	Significant disease present or vigour is extremely low.
<b>Very Poor</b>	Tree is dying.
<b>Structural Condition:</b>	
<b>Good</b>	Having no significant structural defects.
<b>Fair</b>	Some defects observed though no high priority works are required.
<b>Poor</b>	Significant defects found. Tree requires monitoring or remedial works.
<b>Very Poor</b>	Major defects which will usually require significant remedial works or tree removal.
<b>Amenity Value:</b>	
<b>Very High</b>	Exceptional specimen, observable by a large number of people.
<b>High</b>	Attractive specimen, observable by a significant number of people.
<b>Moderate</b>	One of the above factors is not applicable.
<b>Low</b>	Unattractive specimen or largely hidden from view.
<b>Life Expectancy:</b>	The estimated number of years before the tree may require removal. Classified as (<10), (10 – 20), (20 – 40), or (40+).
<b>Retention Category:</b>	These are explained in detail in Appendix 1.

### A2.2 Evaluation of Defects

Cavities, wounds, deadwood etc are all evaluated as follows:

<b>Major</b>	Such that structural integrity is, or will become, compromised and the tree is, or will inevitably become, hazardous.
<b>Significant</b>	A defect that may over time become a major defect, though not necessarily so. This will depend on the vigour of the tree and its ability to deal with decay etc.
<b>Minor</b>	A defect that is unlikely to develop into a major defect.

## General Glossary

A general glossary of arboricultural terms may be found on our website at

<https://www.crowntrees.co.uk/crown-tree-consultancy/glossary-tree-terms/>

## Appendix 3: Arborist's Qualifications

### Qualifications & Experience of Emma Hoyle FDS (Arboriculture), ED (Forestry & Arboriculture), M. Arbor. A.

Emma is a qualified Arboricultural Consultant educated to Level 5 in Arboriculture at Askham Bryan College, is a professional member of the Arboricultural Association and is a LANTRA-accredited *Professional Tree Inspector*. She has worked for Crown Consultants since 2015 and has since written numerous reports relating to all aspects of arboriculture including; planning and development, vegetation-related subsidence, tree preservation orders and tree risk assessment. Emma regularly attends seminars and events in order to keep abreast with current knowledge and best practice in Arboriculture.

Prior to becoming an arboricultural consultant, Emma worked for two reputable tree surgery firms from 2008 and became an NPTC Qualified tree surgeon after completing a Level 3 Extended Diploma in Forestry and Arboriculture at Askham Bryan College. Emma also has experience in other areas of arboriculture such as forest clearance, tree planting, tree maintenance and landscaping.

### Qualifications & Experience of Joe Taylor – M. Arbor. A, FdSc (Arboriculture)

Joe began his career in Arboriculture as a tree surgeon/climber. During his time as a tree surgeon, Joe has achieved City & Guilds NPTC qualifications in Chainsaw Maintenance and Cross Cutting, Tree Climbing and Rescue, Safe Use of Manually Fed Wood-chipper and Supporting Colleagues Undertaking Tree Related Operations.

Joe obtained a Foundation Degree in Arboriculture at Askham Bryan College in 2015 which he passed with merit. Joe is a professional member of the Arboricultural Association, the International Society of Arboriculture, and the Royal Forestry Society and regularly attends industry-related seminars in to keep abreast of industry best practices.

Studying at Askham Bryan College reinforced Joe's passion for trees and drove his enthusiasm to learn more. Learning how trees interact with their surrounding environment and their importance within our urban and rural landscapes highlighted an interest in pursuing a career in consultancy.

Since working for Crown Consultants Joe has undertaken numerous surveys and produced numerous reports for the purpose of planning (BS 5837), tree condition surveys, subsidence risk assessments, root surveys and decay detection investigations.

### Qualifications & Experience of Sarah Alway – M. Arbor. A, FdSc (Arboriculture).

Sarah obtained an FdSc in Arboriculture and Tree Management at the University of Central Lancashire in 2021 which she passed with distinction. She is a member of the Arboricultural Association and regularly attends seminars and events to keep abreast of developments in industry knowledge and current best practice in Arboriculture.

Sarah has been working closely alongside the principal consultant and managing director of Crown Consultants since the company was established in 2008. During that time, she has gained experience in all aspects of the business such as reporting, CAD, administration, accounting, and business management. Additionally, she has assisted consultants with numerous reports relating to all aspects of arboriculture including BS:5837 planning and development, vegetation-related subsidence, tree preservation orders, and tree risk assessment. She has also assisted with tree surveys for several years and since qualifying has been undertaking her own surveys.

In addition to working for Crown Tree Consultants Ltd producing reports, Sarah also likes to expand her knowledge of the wider Arboricultural industry by training in other areas of tree services and management. She has recently completed a training programme in tree-planting and volunteer management, including education in tree planting and natural dam building to help mitigate against the risks of heavy flooding (Natural Flood Management). Sarah also regularly volunteers with two local climate action groups who plant trees and build leaky dams.

As Sarah's career develops, she intends on focusing her attention on sustainable innovation in arboriculture and how green urban spaces could pave the way for the forests of the future.

### Qualifications & Experience of Carl Lothian – BSc (Hons) (Arboriculture).

Carl began his career undertaking a Level 3 extended diploma in arboriculture and forestry at Merrist Wood College in 2015. Upon completion of his diploma, Carl worked with several tree surgery firms completing a range of arboricultural works. In 2018 Carl began his BSc (Hons) in arboriculture and urban forestry, graduating with a first-class degree and attaining the Institute of Chartered Foresters student of the year award.

After graduating, Carl worked as a TreeRadar technician where he carried out tree root and decay surveys with specialist ground-penetrating radar equipment. During this time Carl was fortunate enough to work at prestigious sites, such as the Palace of Westminster and the National Maritime Museum.

Whilst working at Crown, Carl has undertaken a range of tree surveys and written reports relating to development, safety, subsidence, and decay detection. Carl is a professional member of the Consulting Arborist Society and an associate member of the Institute of Chartered Foresters.

### Qualifications & Experience of Jake Childs – Dip Arb L4 (ABC).

Jake began his career at Capel Manor College, where he achieved an NPTC Level 2 qualification in Arboriculture. He subsequently worked in the arboricultural industry for 13 years as a tree surgeon and freelance climber, undertaking work for a wide range of domestic, local authority, and international clients.









During this period, Jake obtained numerous City & Guilds NPTC qualifications, including chainsaw maintenance and cross-cutting, felling of trees up to 380mm, tree climbing and aerial rescue, aerial cutting and free-fall techniques, and aerial tree rigging.




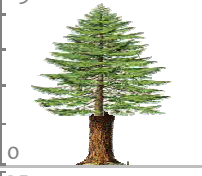




His extensive hands-on experience working with trees led to a desire to further his technical knowledge of trees and their surrounding environment. This motivated Jake to achieve a Level 4 Diploma in Arboriculture, supporting his progression into a professional arboricultural surveying role.








Jake is currently employed as a surveyor at Crown Tree Consultancy, where he has undertaken a variety of arboricultural surveys, including planning and development surveys in accordance with BS5837, subsidence investigations, and tree safety inspections.

## Appendix 4: Tree Data Schedule and Drawings

The Tree Data Schedule and any drawings accompanying this report follow this page.

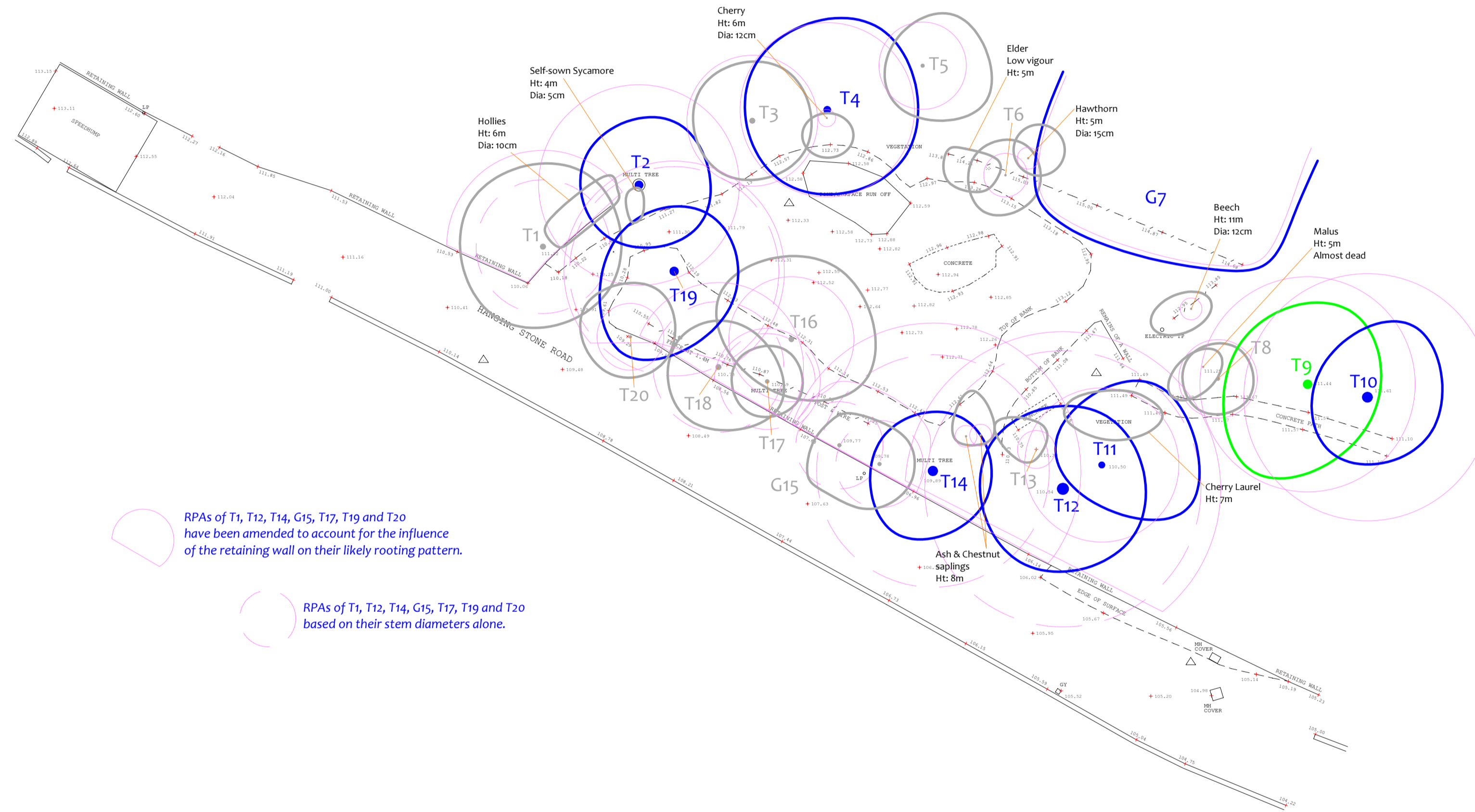
Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W S E	Scaled Tree Diagram (m) 	Notes	Recommendations (Independent of any development proposals)		Vigour	Amenity Value
								Priority	Inspect Freq (yrs)	Physiological Condition	Life Expectancy (yrs)
										Structural Condition	Retention Category
T1	Early-Mature <b>Elm</b>  Ulmus sp.	14	2	46	7 7 6.5 7		Position: Adjacent access. Form: Twin-stemmed at 4m with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: <b>Minor and significant deadwood throughout canopy and overhanging the road.</b> Other: Canopy overhanging the site entrance is c. 4.5m above ground level.	Remove deadwood.	Moderate Fair Good	Moderate 20-40 C +	
T2	Early-Mature <b>Sycamore</b>  Acer pseudoplatanus.	18	4	69	6 5 5		Position: Adjacent access. Form: Twin-stemmed at 0.5m with a balanced crown. History: No evidence of significant pruning. Defects: <b>Occasional dead branches throughout.</b> Other: Ivy prevented detailed inspection. Recorded stem diameter is equivalent for 2 stems (50cm, 48cm).	Remove ivy and inspect stem for defects.	Moderate Good Fair	Moderate 20-40 B	
T3	Semi-Mature <b>Sycamore</b>  Acer pseudoplatanus.	11	1.5	45	5 5 5		Position: Edge of embankment. Form: Single stemmed and vertical with a balanced crown. History: No evidence of significant pruning. Defects: <b>Minor deadwood to southwest. Ivy smothered.</b> Other: Ivy prevented detailed inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	Moderate Good Fair	Low 20-40 C	
T4	Mature <b>Sycamore</b>  Acer pseudoplatanus.	20	2	60	8 7 7		Position: Edge of embankment. Form: Single stemmed and vertical with a balanced crown. History: No evidence of significant pruning. Defects: <b>Occasional dead twigs throughout.</b> Other: Access and vegetation prevented detailed inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	Moderate Good Fair	Moderate 40+ B	
T5	Early-Mature <b>Cherry</b>  Prunus sp.	8	1.5	30	5 3 4		Position: On embankment. Form: Twin-stemmed at 1m with a slight lean. History: No evidence of significant pruning. Defects: <b>No significant defects observed.</b> Other: Access and vegetation prevented detailed inspection, dimensions estimated.	No action required.	Moderate Good Good	Low 40+ C	
T6	Early-Mature <b>Hawthorn</b>  Crataegus monogyna.	5-5	3	15	3 3 3.5		Position: On edge of embankment. Form: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. Defects: <b>No significant defects observed.</b>	No action required.	Moderate Good Good	Low 10-20 C	
G7	Early-Mature <b>Oak</b>  Quercus robur.	av 12	av 4	av 30	av 4 4 4 each		Position: Adjacent north boundary. Form: Wooded area with occasional Birch. History: No evidence of significant pruning. Defects: <b>No significant defects observed.</b> Other: Limited inspection, dimensions estimated. Stem diameter is average.	No action required.	High Good Good	High 40+ B	

Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W S E	Scaled Tree Diagram (m) 	Notes	Recommendations (Independent of any development proposals)		Vigour	Amenity Value
								Priority	Inspect Freq (yrs)	Physiological Condition	Life Expectancy (yrs)
										Structural Condition	Retention Category
T8	Semi-Mature <b>Spruce</b>  Picea sp.	17	2	27	3 3 3		Form: Single stemmed and vertical with a narrow, upright habit. History: No evidence of significant pruning. Defects: <b>No significant defects observed.</b>	No action required.		Moderate  Good  Good	Low  40+  C
	n/a							3			
T9	Mature <b>Lime</b>  Tilia sp.	25	4	74	6.5 7 8.5		Form: Single stemmed and vertical with a well-formed crown. History: Occasional pruning wounds due to crown lifting. Significant occluded pruning wound to east. Defects: <b>Occasional minor and significant deadwood throughout. Very top of canopy is lion-tailing.</b> Other: Grafted specimen.	Remedial prune.		Moderate  Fair  Good	High  40+  A-
	Moderate							1			
T10	Mature <b>Pine</b>  Pinus sp.	22	7	85	4.5 7 5.5		Form: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. Defects: <b>Significant deadwood throughout. Low vitality.</b>	Remedial prune & monitor.		Low  Fair  Fair	High  10-20  B
	Moderate							1			
T11	Early-Mature <b>Cut Leaf Beech</b>  Fagus sylvatica asplenifolia.	18	4.5	53	4.5 8 3		Form: Single stemmed and leaning with an unbalanced crown. History: No evidence of significant pruning. Defects: <b>Significant deadwood to lower crown.</b> Other: Build up of compost at the stem base.	Remove deadwood and compost.		Moderate  Fair  Fair	Moderate  20-40  B
	Moderate							1			
T12	Mature <b>Horse Chestnut</b>  Aesculus hippocastanum.	25	4	95	7 7 7		Form: Single stemmed and vertical with a well-formed crown. History: No evidence of significant pruning. Defects: <b>Advanced symptoms of Bleeding Canker of Horse Chestnut (major strips of cracked bark with early decay to stem and large limbs.)</b> Other: Infested with Leaf Miner.	Decay detection required.		Moderate  Fair  Fair	High  10-20  B
	High							1			
T13	Semi-Mature <b>Yew</b>  Taxus baccata.	4	0.5	13	4 2 1.5		Form: Single stemmed and leaning with an unbalanced crown (suppressed). History: No evidence of significant pruning. Defects: <b>Minor bark wound to lower stem.</b>	No action required.		Moderate  Good  Good	Low  40+  C
	n/a							3			
T14	Mature <b>Sycamore</b>  Acer pseudoplatanus.	22	6	80	5 5 6		Form: Twin-stemmed specimen. History: No evidence of significant pruning. Defects: <b>Small dead branches to inner canopy. Ivy smothered stem base.</b> Other: Ivy and access prevented detailed inspection, dimensions estimated.	Remove ivy and inspect stem for defects.		Moderate  Good  Fair	High  40+  B
	Moderate							1.5			

Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W S E	Scaled Tree Diagram (m) 	Notes	Recommendations (Independent of any development proposals)		Vigour	Amenity Value
								Priority	Inspect Freq (yrs)	Physiological Condition	Life Expectancy (yrs)
										Structural Condition	Retention Category
G15	Semi-Mature <b>Sycamore</b> Acer pseudoplatanus.	av 15	av 2	av 30	av 3 4 each		Position: On edge of retaining wall. Form: Ivy covered specimens. History: No evidence of significant pruning. Defects: <b>Minor deadwood to upper crown.</b> Other: Ivy and access prevented detailed inspection, dimensions estimated.	No action required.	Moderate  Good  Fair	Low  40+  C	
	n/a	3									
T16	Early-Mature <b>Elm</b> Ulmus sp.	16	3	43	7 4.5		Form: Twin-stemmed at ground level with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: <b>Small dead branches throughout. Sparse canopy. Tight union at stem base.</b> Other: Ivy prevented detailed inspection. Recorded stem diameter is equivalent for 2 stems (28cm, 33cm).	No action required.	Low  Poor  Fair	Low  <10  C -	
	n/a	1.5									
T17	Semi-Mature <b>Elm</b> Ulmus sp.	13	4	33	3 3		Position: On fenceline. Form: Multi-stemmed at ground level with a sparse crown. History: No evidence of significant pruning. Defects: <b>Sparse canopy.</b> Other: Access and ivy prevented detailed inspection. Recorded stem diameter is equivalent for 3 stems at (20cm, 24cm, 12cm).	No action required.	Low  Poor  Fair	Low  <10  C -	
	n/a	1.5									
T18	Early-Mature <b>Horse Chestnut</b> Aesculus hippocastanum.	14	1.5	45	4 5		Position: On fenceline. Form: Twin-stemmed with a slight lean. History: No evidence of significant pruning. Defects: <b>Ivy smothered and infested with leaf miner.</b> Other: Access and ivy prevented detailed inspection.	Remove ivy and inspect stem for defects.	Moderate  Fair  Fair	Moderate  20-40  C	
	Moderate	1.5									
T19	Mature <b>Sycamore</b> Acer pseudoplatanus.	24	5	72	5.5 8		Position: Adjacent entrance. Form: Single stemmed and vertical with a well-formed crown. History: No evidence of significant pruning. Defects: <b>Significant deadwood to upper crown and minor bark wounds to lower stem.</b> Other: Ivy at stem base. Ground level around stem base is very uneven.	No action required.	Moderate  Good  Fair	High  20-40  B	
	n/a	3									
T20	Semi-Mature <b>Elm</b> Ulmus sp.	7	1	23	4.5 3.5		Form: Multi-stemmed at ground level with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: <b>Minor deadwood to lower crown.</b> Other: Recorded stem diameter is equivalent for 2 stems (15cm, 18cm).	No action required.	Moderate  Fair  Good	Low  10-20  C	
	n/a	1.5									

# Tree Data Schedule

Reference G - Group H - Hedge T - Tree	Age & Species	Height (m)	Crown Ht (m)		Crown Spread (m)		Scaled Tree Diagram (m)	Notes	Recommendations (Development proposals)		Vigor	Overall Value	Life Expectancy (Yr)
			W	E	Priority	Inspect (yr)							
T1	Early-Mature Elm Ulmus sp.	14	2	46	7	6.5		Position: Adjacent access. Form: Twin-stemmed at 4m with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Minor and significant deadwood throughout canopy and overhanging the road. Other: Canopy overhanging the site entrance is c. 4.5m above ground level.	Remove deadwood.	1.5	Moderate	Fair	20-40
T2	Early-Mature Sycamore Acer pseudoplatanus.	18	4	69	5	6		Position: Adjacent access. Form: Twin-stemmed at 0.5m with a balanced crown. History: No evidence of significant pruning. Defects: Occasional dead branches throughout. Other: Ivy prevented detailed inspection. Recorded stem diameter is equivalent for 2 stems (50cm, 48cm).	Remove ivy and inspect stem for defects.	1.5	Moderate	Good	20-40
T3	Semi-Mature Sycamore Acer pseudoplatanus.	11	1.5	45	5	5		Position: Edge of embankment. Form: Single stemmed and vertical with a balanced crown. History: No evidence of significant pruning. Defects: Minor deadwood to southwest. Ivy smothered. Other: Ivy prevented detailed inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	1.5	Moderate	Good	20-40
T4	Mature Sycamore Acer pseudoplatanus.	20	2	60	7	7.5		Position: Edge of embankment. Form: Single stemmed and vertical with a balanced crown. History: No evidence of significant pruning. Defects: Occasional dead twigs throughout. Other: Access and vegetation prevented detailed inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	1.5	Moderate	Good	40+
T5	Early-Mature Cherry Prunus sp.	8	1.5	30	3	6		Position: On embankment. Form: Twin-stemmed at 1m with a slight lean. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Access and vegetation prevented detailed inspection, dimensions estimated.	No action required.	n/a	Moderate	Good	40+
T6	Early-Mature Hawthorn Crataegus monogyna.	5.5	3	15	3	3		Position: On edge of embankment. Form: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.	n/a	Moderate	Good	10-20
G7	Early-Mature Oak Quercus robur.	av	av	av	av	av		Position: Adjacent north boundary. Form: Wooded area with occasional Birch. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Limited inspection, dimensions estimated. Stem diameter is average.	No action required.	n/a	High	Good	40+
T8	Semi-Mature Spruce Picea sp.	17	2	27	3	3		Form: Single stemmed and vertical with a narrow, upright habit. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.	n/a	Moderate	Good	40+
T9	Mature Lime Tilia sp.	25	4	74	7	8.5		Form: Single stemmed and vertical with a well-formed crown. History: Occasional pruning wounds due to crown lifting. Significant occluded pruning wound to east. Defects: Occasional minor and significant deadwood throughout. Very top of canopy is lion-tailing. Other: Grafted specimen.	Remedial prune.	1	Moderate	Fair	40+
T10	Mature Pine Pinus sp.	22	7	85	4.5	6		Form: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Significant deadwood throughout. Low vitality.	Remedial prune & monitor.	1	Low	Fair	10-20
T11	Early-Mature Cut Leaf Beech Fagus sylvatica asplenifolia.	18	4.5	53	8	8		Form: Single stemmed and leaning with an unbalanced crown. History: No evidence of significant pruning. Defects: Significant deadwood to lower crown. Other: Build up of compost at the stem base.	Remove deadwood and compost.	1	Moderate	Fair	20-40
T12	Mature Horse Chestnut Aesculus hippocastanum.	25	4	95	7	7		Form: Single stemmed and vertical with a well-formed crown. History: No evidence of significant pruning. Defects: Advanced symptoms of Bleeding Canker of Horse Chestnut (major strips of cracked bark with early decay to stem and large limbs. Infested with Leaf Miner.	Decay detection required.	1	Moderate	Fair	10-20
T13	Semi-Mature Yew Taxus baccata.	4	0.5	13	4	1.5		Form: Single stemmed and leaning with an unbalanced crown (suppressed). History: No evidence of significant pruning. Defects: Minor bark wound to lower stem.	No action required.	n/a	Moderate	Good	40+
T14	Mature Sycamore Acer pseudoplatanus.	22	6	80	5	5		Form: Twin-stemmed specimen. History: No evidence of significant pruning. Defects: Small dead branches to lower canopy. Ivy smothered stem base. Other: Ivy and access prevented detailed inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	1.5	Moderate	Good	40+
G15	Semi-Mature Sycamore Acer pseudoplatanus.	av	av	av	av	av		Position: On edge of retaining wall. Form: Ivy covered specimens. History: No evidence of significant pruning. Defects: Minor deadwood to upper crown. Other: Ivy and access prevented detailed inspection, dimensions estimated.	No action required.	n/a	Moderate	Good	40+
T16	Early-Mature Elm Ulmus sp.	16	3	43	7	7		Form: Twin-stemmed at ground level with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Small dead branches throughout. Sparse canopy. Tight union at stem base. Other: Ivy prevented detailed inspection. Recorded stem diameter is equivalent for 2 stems (28cm, 33cm).	No action required.	1.5	Low	Fair	<10
T17	Semi-Mature Elm Ulmus sp.	13	4	33	3	3		Position: On fence line. Form: Multi-stemmed at ground level with a sparse crown. History: No evidence of significant pruning. Defects: Sparse canopy. Other: Access and ivy prevented detailed inspection. Recorded stem diameter is equivalent for 3 stems at (20cm, 24cm, 12cm).	No action required.	1.5	Low	Fair	<10
T18	Early-Mature Horse Chestnut Aesculus hippocastanum.	14	1.5	45	4	6		Position: On fence line. Form: Twin-stemmed with a slight lean. History: No evidence of significant pruning. Defects: Ivy smothered and infested with leaf miner. Other: Access and ivy prevented detailed inspection.	Remove ivy and inspect stem for defects.	1.5	Moderate	Fair	20-40
T19	Mature Sycamore Acer pseudoplatanus.	24	5	77	5.5	8		Position: Adjacent entrance. Form: Single stemmed and vertical with a well-formed crown. History: No evidence of significant pruning. Defects: Significant deadwood to upper crown and minor bark wounds to lower stem. Other: Ivy at stem base. Ground level around stem base is very uneven.	No action required.	3	Moderate	Good	20-40
T20	Semi-Mature Elm Ulmus sp.	7	1	33	4.5	3.5		Form: Multi-stemmed at ground level with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Minor deadwood to lower crown. Other: Recorded stem diameter is equivalent for 2 stems (5cm, 18cm).	No action required.	1.5	Moderate	Fair	10-20



Drawing No: CCL 12004 / TCP Rev 1  
 Title: Tree Constraints Plan (Existing Layout)  
 Site: Parkton Grove, Hangingstone Road, Huddersfield, HD4 7QU  
 Scale: 1:300 Paper Size: A1



Tree Retention Categories	Notes
Category A tree	Trees of high quality with an estimated life expectancy of 40+ years. Usually large trees with significant presence or smaller trees with excellent form. Retention of these trees is highly desirable.
Category B tree	Trees of moderate quality with a life expectancy of 10+ years. Usually mature trees with good form. Retention of these trees is desirable though less than Category A trees.
Category C tree	Unremarkable trees of low quality and merit. Individual specimens are not considered to be a material planning consideration.
Category U tree	Trees unsuitable for retention due to their very poor condition.

## Tree Constraints Plan

Status: Final

BS 5837 Root Protection Area (radius = 1xstem diameter)  
 Root Protection Area needing amendment due to site conditions, e.g. presence of existing road or building.  
 Root Protection Area having been amended to account for site conditions  
 T1 = Tree No 1 G2 = Group No 2 H3 = Hedge No 3

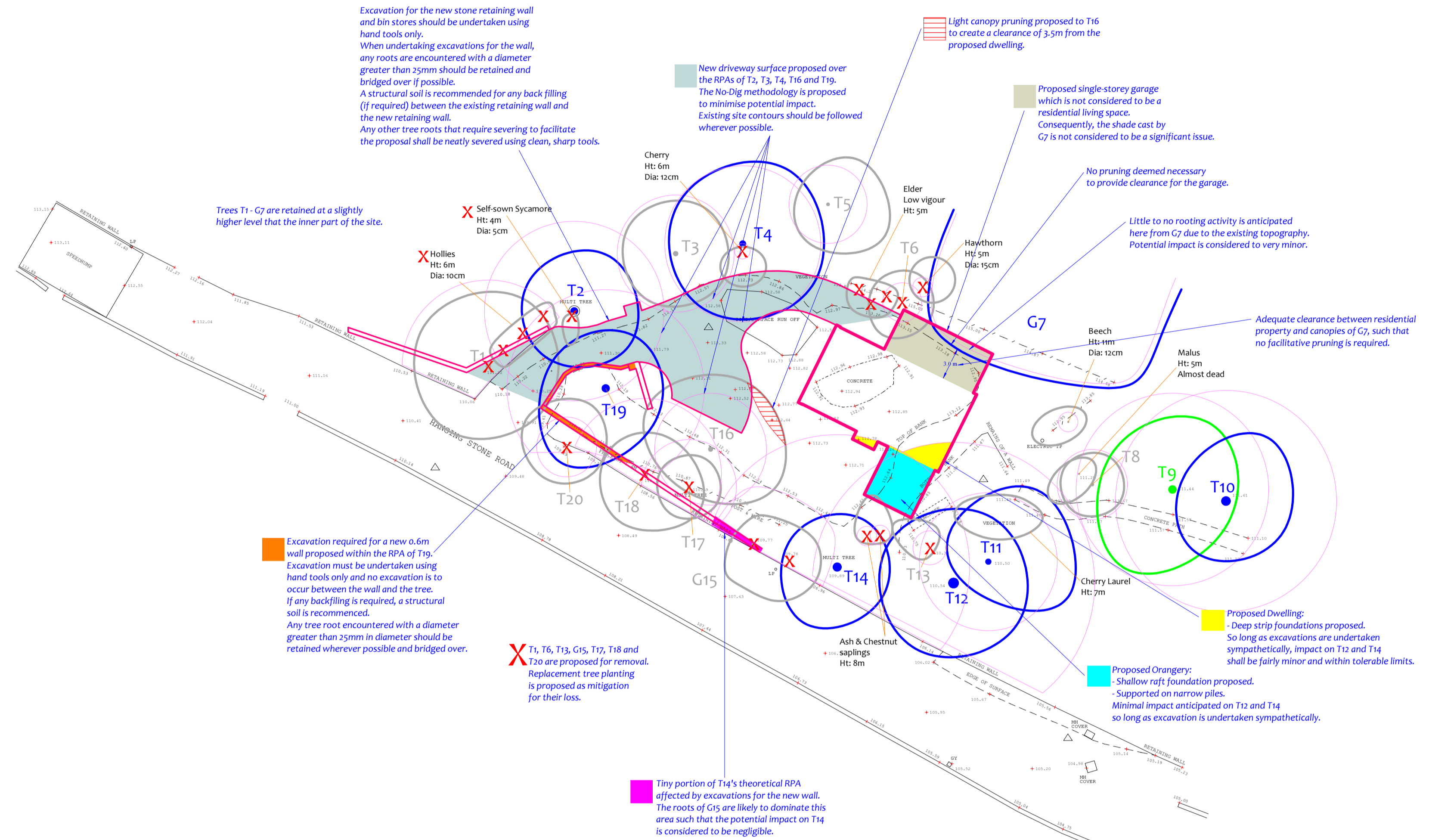
MN = Measured North  
 Canopy spreads are sometimes measured to an approximate N defined by site features. Often more accurate, especially where rows of trees are not aligned N/S or E/W.

Tree Ref.	Species	Height (m)	Radius (m)	Area (sqm)
T1	Elm	14	5.5	96
T2	Sycamore	18	8.3	215
T3	Sycamore	11	5.4	92
T4	Sycamore	20	7.2	163
T5	Cherry	8	3.6	41
T6	Hawthorn	5.5	1.8	10
T8	Spruce	17	3.2	33
T9	Lime	25	8.9	248
T10	Pine	22	10.2	327
T11	Cut Leaf Beech	18	6.4	127
T12	Horse Chestnut	25	11.4	408
T13	Yew	4	1.6	8
T14	Sycamore	22	9.6	290
G15	Sycamore	15	3.6	41
T16	Elm	16	5.2	84
T17	Elm	13	4.0	49
T18	Horse Chestnut	14	5.4	92
T19	Sycamore	24	8.6	235
T20	Elm	7	2.8	24

Tree Data Schedule

Reference Group	Age & Species	Height (m)	Crown HT (m)	Diameter (cm)	Crown Spread (m)	Scaled Tree Diagram (m)	Notes	Recommendations		Vulnerability	Overall Value	Life Expectancy (yrs)
								Priority	Inspect (yrs)			
T1	Early-Mature Elm	14	2	46	7	6.5	Position: Adjacent access. Form: Twin-stemmed at 4m with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Minor and significant deadwood throughout canopy and overhanging the road. Other: Canopy overhanging the site entrance is c. 4.5m above ground level.	Remove deadwood.	1.5	Moderate	Fair	20-40
T2	Early-Mature Sycamore	18	4	69	5	6	Position: Adjacent access. Form: Twin-stemmed at 0.5m with a balanced crown. History: No evidence of significant pruning. Defects: Occasional dead branches throughout. Other: Ivy prevented detailed inspection. Recorded stem diameter is equivalent for 2 stems (50cm, 48cm).	Remove ivy and inspect stem for defects.	1.5	Moderate	Good	20-40
T3	Semi-Mature Sycamore	11	1.5	45	5	5	Position: Edge of embankment. Form: Single stemmed and vertical with a balanced crown. History: No evidence of significant pruning. Defects: Minor deadwood to southwest. Ivy smothered. Other: Ivy prevented detailed inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	1.5	Moderate	Good	20-40
T4	Mature Sycamore	20	2	60	7	7.5	Position: Edge of embankment. Form: Single stemmed and vertical with a balanced crown. History: No evidence of significant pruning. Defects: Occasional dead twigs throughout. Other: Access and vegetation prevented detailed inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	1.5	Moderate	Good	40+
T5	Early-Mature Cherry	8	1.5	30	3	6	Position: On embankment. Form: Twin-stemmed at 1m with a slight lean. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Access and vegetation prevented detailed inspection, dimensions estimated.	No action required.	n/a	Moderate	Good	40+
T6	Early-Mature Hawthorn	5.5	3	15	3	3	Position: On edge of embankment. Form: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.	n/a	Moderate	Good	10-20
G7	Early-Mature Oak	av	av	av	av	av	Position: Adjacent north boundary. Form: Wooded area with occasional Birch. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Limited inspection, dimensions estimated. Stem diameter is average.	No action required.	n/a	High	Good	40+
T8	Semi-Mature Spruce	17	2	27	3	3	Form: Single stemmed and vertical with a narrow, upright habit. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.	n/a	Moderate	Good	40+
T9	Mature Lime	25	4	74	6.5	8.5	Form: Single stemmed and vertical with a well-formed crown. History: Occasional pruning wounds due to crown lifting. Significant occluded pruning wound to east. Defects: Occasional minor and significant deadwood throughout. Very top of canopy is lion-tailing. Other: Grafted specimen.	Remedial prune.	1	Moderate	Fair	40+
T10	Mature Pine	22	7	85	4.5	6	Form: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Significant deadwood throughout. Low vitality.	Remedial prune & monitor.	1	Low	Fair	10-20
T11	Early-Mature Cut Leaf Beech	18	4.5	53	4.5	8	Form: Single stemmed and leaning with an unbalanced crown. History: No evidence of significant pruning. Defects: Significant deadwood to lower crown. Other: Build up of compost at the stem base.	Remove deadwood and compost.	1	Moderate	Fair	20-40
T12	Mature Horse Chestnut	25	4	95	7	7	Form: Single stemmed and vertical with a well-formed crown. History: No evidence of significant pruning. Defects: Advanced symptoms of Bleeding Canker of Horse Chestnut (major strips of cracked bark with early decay to stem and large limbs. Infested with Leaf Miner. Other:	Decay detection required.	1	Moderate	Fair	10-20
T13	Semi-Mature Yew	4	0.5	13	4	0.5	Form: Single stemmed and leaning with an unbalanced crown (suppressed). History: No evidence of significant pruning. Defects: Minor bark wound to lower stem.	No action required.	n/a	Moderate	Good	40+
T14	Mature Sycamore	22	6	80	5	5	Form: Twin-stemmed specimen. History: No evidence of significant pruning. Defects: Small dead branches to lower canopy. Ivy smothered stem base. Other: Ivy and access prevented detailed inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	1.5	Moderate	Good	40+
G15	Semi-Mature Sycamore	av	av	av	av	av	Position: On edge of retaining wall. Form: Ivy covered specimen. History: No evidence of significant pruning. Defects: Minor deadwood to upper crown. Other: Ivy and access prevented detailed inspection, dimensions estimated.	No action required.	n/a	Moderate	Good	40+
T16	Early-Mature Elm	16	3	43	7	4.5	Form: Twin-stemmed at ground level with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Small dead branches throughout. Sparse canopy. Tight union at stem base. Other: Ivy prevented detailed inspection. Recorded stem diameter is equivalent for 2 stems (28cm, 33cm).	No action required.	1.5	Low	Poor	<10
T17	Semi-Mature Elm	13	4	33	3	3	Position: On fence line. Form: Multi-stemmed at ground level with a sparse crown. History: No evidence of significant pruning. Defects: Sparse canopy. Other: Access and ivy prevented detailed inspection. Recorded stem diameter is equivalent for 3 stems at (20cm, 24cm, 12cm).	No action required.	1.5	Low	Poor	<10
T18	Early-Mature Horse Chestnut	14	1.5	45	4	6	Position: On fence line. Form: Twin-stemmed with a slight lean. History: No evidence of significant pruning. Defects: Ivy smothered and infested with leaf miner. Other: Access and ivy prevented detailed inspection.	Remove ivy and inspect stem for defects.	1.5	Moderate	Fair	20-40
T19	Mature Sycamore	24	5	77	5.5	8	Position: Adjacent entrance. Form: Single stemmed and vertical with a well-formed crown. History: No evidence of significant pruning. Defects: Significant deadwood to upper crown and minor bark wounds to lower stem. Other: Ivy at stem base. Ground level around stem base is very uneven.	No action required.	3	Moderate	Good	20-40
T20	Semi-Mature Elm	7	1	33	4.5	3.5	Form: Multi-stemmed at ground level with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Minor deadwood to lower crown. Other: Recorded stem diameter is equivalent for 2 stems (5cm, 18cm).	No action required.	1.5	Moderate	Fair	10-20

Proposed Layout (Pink)



Drawing No: CCL 12004 / IAP Rev 1

Title: Impact Assessment Plan

Site: Parkton Grove, Hangingstone Road, Huddersfield, HD4 7QU

Scale: 1:300 Paper Size: A1



Tree Retention Categories	
	Category A tree
	Category B tree
	Category C tree
	Category U tree

Trees of high quality with an estimated life expectancy of 40+ years. Usually large trees with significant presence or smaller trees with excellent form. Retention of these trees is highly desirable.

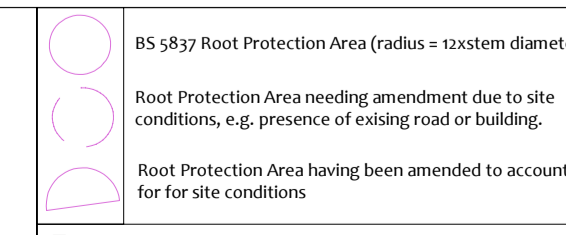
Trees of moderate quality with a life expectancy of 20+ years. Usually mature trees with good form. Retention of these trees is desirable though less than Category A trees.

Unremarkable trees of low quality and merit. Individual specimens are not considered to be a material planning consideration.

Trees unsuitable for retention due to their very poor condition.

Impact Assessment Plan

Status: Final - for submission



Tree to be removed to facilitate the proposal

Tree to be removed due to its low quality

Proposed pruning

MN = Measured North

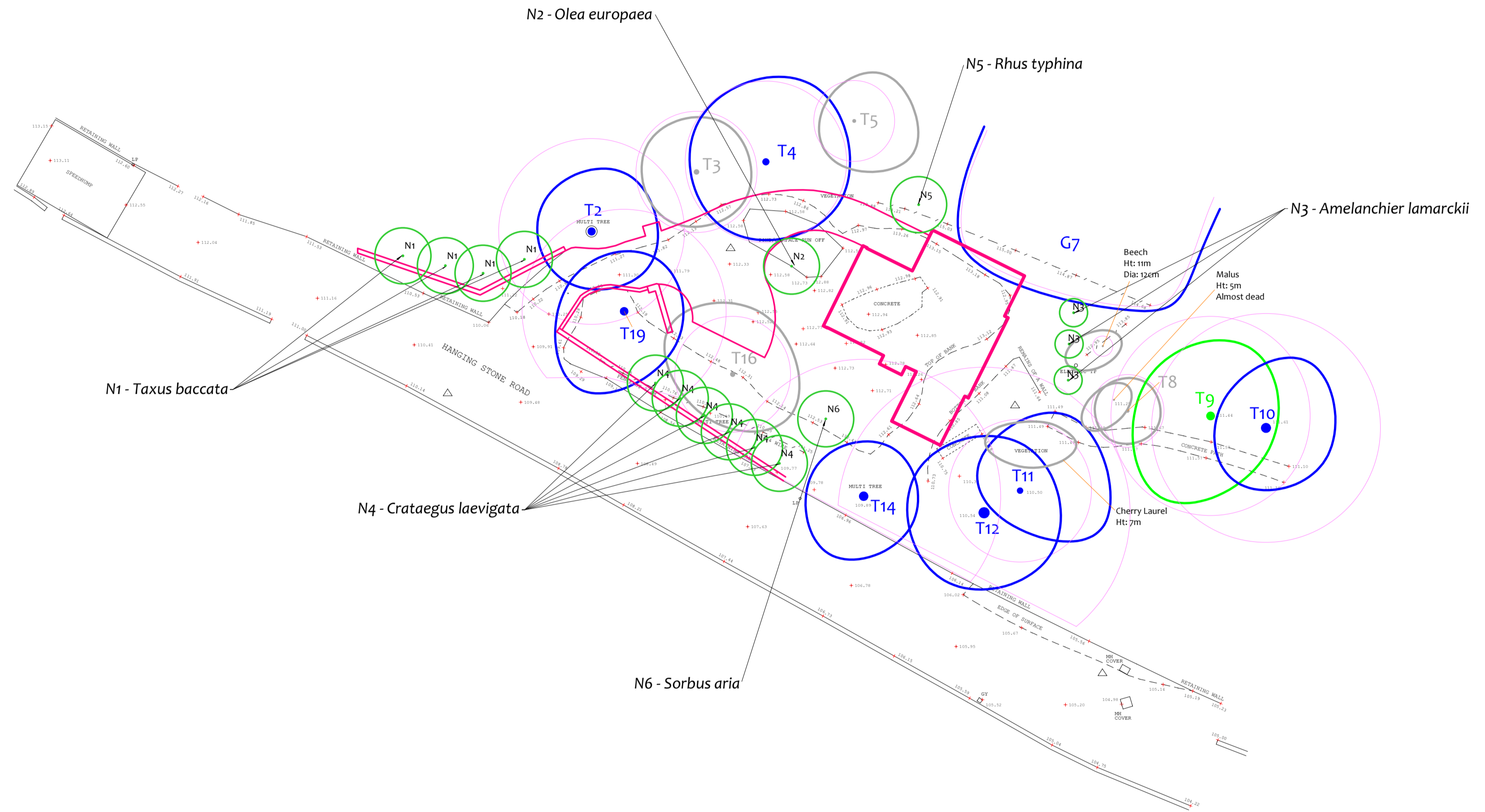
Canopy spreads are sometimes measured to an approximate N defined by site features. Often more accurate, especially where rows of trees are not aligned N/S or E/W.

Tree Ref.	Species	Height (m)	Root Protection Area Radius (m)	Area (Sq.m)
T1	Elm	14	6.5	96
T2	Sycamore	18	8.3	215
T3	Sycamore	11	5.4	92
T4	Sycamore	20	7.2	163
T5	Cherry	8	3.6	41
T6	Hawthorn	15	3.6	41
T7	Elm	16	5.2	84
T8	Spruce	17	3.2	33
T9	Lime	25	8.9	248
T10	Pine	22	10.2	327
T11	Cut Leaf Beech	18	6.4	127
T12	Horse Chestnut	25	11.4	408
T13	Yew	4	1.6	8
T14	Sycamore	22	9.6	290
G15	Sycamore	15	3.6	41
T16	Elm	16	5.2	84
T17	Elm	13	4.0	49
T18	Horse Chestnut	14	5.4	92
T19	Sycamore	24	8.6	235
T20	Elm	7	2.8	24

Tree Data Schedule

Reference Group	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m)	Scaled Tree Diagram (m)	Notes	Recommendations		Vulnerability	Overall Value	Life Expectancy (yrs)
								Priority	Inspect (yrs)			
T1	Early-Mature Elm Ulmus sp.	14	2	46	7	6.5	Position: Adjacent access. Form: Twin-stemmed at 4m with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Minor and significant deadwood throughout canopy and overhanging the road. Other: Canopy overhanging the site entrance is c. 4.5m above ground level.	Remove deadwood.	1.5	Moderate	Fair	20-40
T2	Early-Mature Sycamore Acer pseudoplatanus.	18	4	69	5	6	Position: Adjacent access. Form: Twin-stemmed at 0.5m with a balanced crown. History: No evidence of significant pruning. Defects: Occasional dead branches throughout. Other: Ivy prevented detailed inspection. Recorded stem diameter is equivalent for 2 stems (50cm, 48cm).	Remove ivy and inspect stem for defects.	1.5	Moderate	Good	20-40
T3	Semi-Mature Sycamore Acer pseudoplatanus.	11	1.5	45	5	5	Position: Edge of embankment. Form: Single stemmed and vertical with a balanced crown. History: No evidence of significant pruning. Defects: Minor deadwood to southwest. Ivy smothered. Other: Ivy prevented detailed inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	1.5	Moderate	Good	20-40
T4	Mature Sycamore Acer pseudoplatanus.	20	2	60	7	7.5	Position: Edge of embankment. Form: Single stemmed and vertical with a balanced crown. History: No evidence of significant pruning. Defects: Occasional dead twigs throughout. Other: Access and vegetation prevented detailed inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	1.5	Moderate	Good	40+
T5	Early-Mature Cherry Prunus sp.	8	1.5	30	3	6	Position: On embankment. Form: Twin-stemmed at 1m with a slight lean. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Access and vegetation prevented detailed inspection, dimensions estimated.	No action required.	n/a	Moderate	Good	40+
T6	Early-Mature Hawthorn Crataegus monogyna.	5.5	3	15	3	3	Position: On edge of embankment. Form: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.	n/a	Moderate	Good	10-20
G7	Early-Mature Oak Quercus robur.	av	av	av	av	av	Position: Adjacent north boundary. Form: Wooded area with occasional Birch. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Limited inspection, dimensions estimated. Stem diameter is average.	No action required.	n/a	High	Good	40+
T8	Semi-Mature Spruce Picea sp.	17	2	27	3	3	Form: Single stemmed and vertical with a narrow, upright habit. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.	n/a	Moderate	Good	40+
T9	Mature Lime Tilia sp.	25	4	74	6.5	8.5	Form: Single stemmed and vertical with a well-formed crown. History: Occasional pruning wounds due to crown lifting. Significant occluded pruning wound to east. Defects: Occasional minor and significant deadwood throughout. Very top of canopy is lion-tailing. Other: Grafted specimen.	Remedial prune.	1	Moderate	Fair	40+
T10	Mature Pine Pinus sp.	22	7	85	4.5	6	Form: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Significant deadwood throughout. Low vitality.	Remedial prune & monitor.	1	Low	Fair	10-20
T11	Early-Mature Cut Leaf Beech Fagus sylvatica asplenifolia.	18	4.5	53	4.5	8	Form: Single stemmed and leaning with an unbalanced crown. History: No evidence of significant pruning. Defects: Significant deadwood to lower crown. Other: Build up of compost at the stem base.	Remove deadwood and compost.	1	Moderate	Fair	20-40
T12	Mature Horse Chestnut Aesculus hippocastanum.	25	4	95	7	7	Form: Single stemmed and vertical with a well-formed crown. History: No evidence of significant pruning. Defects: Advanced symptoms of Bleeding Canker of Horse Chestnut (major strips of cracked bark with early decay to stem and large limbs. Infested with Leaf Miner. Other:	Decay detection required.	1	Moderate	Fair	10-20
T13	Semi-Mature Yew Taxus baccata.	4	0.5	13	2	0.5	Form: Single stemmed and leaning with an unbalanced crown (suppressed). History: No evidence of significant pruning. Defects: Minor bark wound to lower stem.	No action required.	n/a	Moderate	Good	40+
T14	Mature Sycamore Acer pseudoplatanus.	22	6	80	5	5	Form: Twin-stemmed specimen. History: No evidence of significant pruning. Defects: Small dead branches to lower canopy. Ivy smothered stem base. Other: Ivy and access prevented detailed inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	1.5	Moderate	Good	40+
G15	Semi-Mature Sycamore Acer pseudoplatanus.	av	av	av	av	av	Position: On edge of retaining wall. Form: Ivy covered specimens. History: No evidence of significant pruning. Defects: Minor deadwood to upper crown. Other: Ivy and access prevented detailed inspection, dimensions estimated.	No action required.	n/a	Moderate	Good	40+
T16	Early-Mature Elm Ulmus sp.	16	3	43	7	4.5	Form: Twin-stemmed at ground level with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Small dead branches throughout. Sparse canopy. Tight union at stem base. Other: Ivy prevented detailed inspection. Recorded stem diameter is equivalent for 2 stems (28cm, 33cm).	No action required.	n/a	Low	Poor	<10
T17	Semi-Mature Elm Ulmus sp.	13	4	33	3	3	Position: On fence line. Form: Multi-stemmed at ground level with a sparse crown. History: No evidence of significant pruning. Defects: Sparse canopy. Other: Access and ivy prevented detailed inspection. Recorded stem diameter is equivalent for 3 stems at (20cm, 24cm, 12cm).	No action required.	n/a	Low	Poor	<10
T18	Early-Mature Horse Chestnut Aesculus hippocastanum.	14	1.5	45	4	6	Position: On fence line. Form: Twin-stemmed with a slight lean. History: No evidence of significant pruning. Defects: Ivy smothered and infested with leaf miner. Other: Access and ivy prevented detailed inspection.	Remove ivy and inspect stem for defects.	1.5	Moderate	Fair	20-40
T19	Mature Sycamore Acer pseudoplatanus.	24	5	77	5.5	8	Position: Adjacent entrance. Form: Single stemmed and vertical with a well-formed crown. History: No evidence of significant pruning. Defects: Significant deadwood to upper crown and minor bark wounds to lower stem. Other: Ivy at stem base. Ground level around stem base is very uneven.	No action required.	n/a	Moderate	Good	20-40
T20	Semi-Mature Elm Ulmus sp.	7	1	33	4.5	3.5	Form: Multi-stemmed at ground level with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Minor deadwood to lower crown. Other: Recorded stem diameter is equivalent for 2 stems (5cm, 18cm).	No action required.	n/a	Moderate	Fair	10-20

Proposed Layout (Pink)



Proposed Planting Plan

Drawing No: CCL 12004 / PLP Rev: 1  
 Title: Proposed Tree Planting Plan (After Vegetation Removal)  
 Site: Parkton Grove, Hangingstone Road, Huddersfield, HD4 7QU  
 Scale: 1:300 Paper Size: A1



Tree Retention Categories	
	Category A tree
	Category B tree
	Category C tree
	Category U tree

Trees of high quality with an estimated life expectancy of 40+ years. Usually large trees with significant presence or smaller trees with excellent form. Retention of these trees is highly desirable.

Trees of moderate quality with a life expectancy of 20+ years. Usually mature trees, or younger trees with good form. Retention of these trees is desirable though less than Category A trees.

Unremarkable trees of low quality and merit. Individual specimens are not considered to be a material planning consideration.

Trees unsuitable for retention due to their very poor condition.

**Proposed Tree Planting**

Proposed new tree reference N1, showing future canopy at 2.5m (radius), Amelanchier canopies shown at 1.25m (radius).

**MN** = Measured North

Canopy spreads are sometimes measured to an approximate N defined by site features. Often more accurate, especially where rows of trees are not aligned N/S or E/W.

Tree Ref.	Species	Height (m)	Radius (m)	Area (sqm)
T1	Elm	14	5.5	96
T2	Sycamore	18	8.3	215
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