



**Arboricultural Implications Assessment  
8 Lee Lane, Royston  
S71 4RT**

Report Reference: AIA-1354-1  
10<sup>th</sup> September 2020

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**Prepared For:**

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S71 4RT

# 1. Introduction

## 1.1. Instruction and Brief

1.1.1. Tree Care Consultancy was commissioned by Mr. R Paling to prepare an Arboricultural Survey to accompany a planning application for a proposed residential development within the grounds of 8 Lee Lane, Royston. The report produced includes the following information:

- A tree survey, undertaken in accordance with British Standard 5837:2012 'Trees in relation to design, demolition and construction' – Recommendations.
- A Tree Constraints Plan which highlights the potential development limitations the trees pose on site.
- An Arboricultural Implication Assessment which evaluates any potential impact the proposal may have on surrounding trees.

1.1.2. This report is based on site observations and information provided. Conclusions have been made in light of the surveyors experience and qualifications.

1.1.3. This report is only concerned with trees in relation to construction and makes no attempt to provide a full safety inspection of the trees surveyed. It should not be seen as an alternative for a Tree Hazard Assessment which is specific to minimising the risk and liability associated with trees.

1.1.4. Climatic conditions including storms, drought and temperature-related factors can cause damage and failure in apparently healthy trees. It should be remembered that all trees do pose a risk and whilst every effort has been made to detect any major defects in inspected trees, no guarantee can be given as to their safety. Although the risk should be managed to an acceptable level, no tree can be guaranteed as safe at all times.

1.1.5. This report is based on Visual Tree Assessment (VTA) methodology, as devised by Mattheck (1991). V.T.A is a ground level visual assessment of a tree, which is carried out to identify obvious mechanical defects, signs of ill health, potential mechanical failure and the suitability of a tree to a site. The survey is compiled in accordance with British Standard 5837:2012 'Trees in relation to design, demolition and construction' - Recommendations with Root Protection Areas (RPA's) based upon section 4.6 of the document.

## 1.2. Site Visit

- 1.2.1. The survey was undertaken by Mike Shackleton on 7<sup>th</sup> September 2020. Mike has over 19 years' experience within the Arboricultural Industry. He has a Higher National Diploma in Arboriculture, a City and Guilds Level 2 awarded in Arboriculture and is a Professional member of the Arboricultural Association. He has been involved in dealing with proposed/active development sites, advice on trees in relation to structures, health and safety appraisals, tree inventories and planning appeals. As part of his continuing professional development he regularly attends seminars and training events on issues relating to Arboriculture, particularly with trees in relation to construction.
- 1.2.2. The weather conditions were sunny and clear with no visibility constraints.
- 1.2.3. Measurements were calculated using necessary instruments or estimated where appropriate. No climbing inspections or decay detection analysis was undertaken.
- 1.2.4. Tree survey data was recorded and the trees were graded using table 1 of BS5837. This information has been included within the tree schedule at Appendix 1. An explanation of the tree schedule format is also included within the Appendix.
- 1.2.5. This survey should be read in conjunction with the Tree Constraint Plan (TCP) which have been prepared by overlaying tree survey data onto the scheme architects drawings and information provided by the applicant and site owner.

## 1.3. Site Description

- 1.3.1. The application site presently comprises a detached residential dwelling with a driveway running from the south to service a detached garage. The host property is also served by a second tarmac driveway that connects with Tanfield Close. A large well planted garden is situated to the north of the host property.

## 1.4. Tree Status

- 1.4.1. The trees included in the survey are not subject to either Tree Preservation Order or Conservation Area controls. In the case of trees that are subject of TPO, Conservation Area controls or planning application procedures it is essential the Local Authority's advice is sought and where necessary consent obtained prior to undertaking any tree removal or pruning operations.

## 1.5. Soil Assessment

- 1.5.1. No soil testing was undertaken and no soil information was provided for the author.
- 1.5.2. From studying the British Geological Survey 'Geology of Britain Viewer' the underlying geology is recorded as 'Pennine Lower Coal Measures Formation – Mudstone, Siltstone and Sandstone'. No information regarding the superficial layers of soil is available. The precise soil type could only be confirmed with further soil investigation/analysis but it can be assumed the soil will be free draining and unlikely to be of highly shrinkable nature.

## 2. Tree Quality Assessment

- 2.1.1. As highlighted in table 1 below, the tree survey included 14No. individual trees, and 3No. tree groups. Of these 1No. individual tree was identified as retention category 'B' material. 10No. individual trees and the 3No. tree groups were identified as retention category 'C' material. The remaining 3No. individual trees were identified as category 'U' items.

Table 1:

Category	Category Description	Tree Numbers
'A'	Trees of high quality, with life expectancy in excess of 40 years	None
'B'	Trees of moderate quality, with life expectancy in excess of 20 years	1No. individual tree
'C'	Trees of low quality with life expectancy in excess of 10 years or young trees	10No. individual trees & 3No. tree groups
'U'	Seriously defective trees that cannot be retained in present context for longer than 10 years	3No. individual trees
Total number of trees:		14No. individual trees & 3No. tree groups

- 2.1.2. Generally, the Local Planning Authority is likely to accept the removal of trees in a poor condition or those with a minimal, safe, useful life expectancy. This usually includes category 'U' and 'C' trees. This presumption is also viewed reasonable where it accords with competent arboricultural management.
- 2.1.3. A number of shrub masses are present on site. This vegetation has not been included within the assessment as it would not commonly be considered a constraint to development.

### 3. Arboricultural Implication Assessment

- 3.1.1. The following section evaluates the proposed layout in relation to trees on site. Any tree and design conflicts are highlighted and possible remedial action recommended. The assessment is based on the surveyor's findings and drawings provided by the scheme architect.
- 3.1.2. The scheme proposes to construct a detached dwelling positioned approximately central within the application site. Access would be gained from an existing tarmac driveway connected to Tanfield Close.
- 3.1.3. The building has been carefully sited to ensure there will be limited impact on existing tree cover. However, the proposal will marginally conflict with certain trees and the details are discussed in paragraphs 3.2 and 3.3 below.

#### 3.2. Tree Work Necessary to Facilitate the Proposed Development

- 3.2.1. As demonstrated in Table 2, the partial removal of G1 (Hawthorn hedge) will be required to accommodate an improved access. Furthermore, 3No. seriously defective category 'U' trees T4, T7 and T15 have been recommended for removal. Taking account of the location to neighbouring property and potential target areas, it is considered reasonable to accept these trees will require removal for reasons of public safety and to satisfy the owners duty of care. Such actions are considered necessary irrespective of the development proposal.

Table 2:

Tree categories A, B, C & U	Trees to be retained and protected	Trees to be removed for development	Trees to be removed for arboricultural management reasons
'A'	Nil	Nil	Nil
'B'	T6	Nil	Nil
'C'	G1 (partial), T1, T2, T3, G5, G8, T9, T10, T11, T12, T13, T14 & T16	G1 (partial)	Nil
'U'	Nil	Nil	T4, T7 & T15

#### 3.3. Below Ground Constraints

- 3.3.1. The area of roots that need to be protected around a tree to try to ensure it does not suffer damage during the construction process is called the Root Protection Area (RPA).

- 3.3.2. As recommended in BS5837 the RPAs (in magenta) have been plotted onto the Tree Constraints Plan (TCP) taking full account of the surrounding topographical factors, tree condition and likely root disposition.
- 3.3.3. The proposed dwelling will be accessed by an existing hard surfaced driveway, thus limiting potential impacts within the application site and host property.
- 3.3.4. It will be noted the RPA of T6 (moderate category 'B' Ash) suggests an incursion within the trees RPA. For a tree of such a size, species, vigor and vitality the extent of encroachment and potential root loss is unlikely to cause demonstrable lasting harm to the tree providing adequate tree protection measures are put in place during the construction phase.
- 3.3.5. Subject to the adoption of reasonable tree protection measures there are no further foreseeable conflicts between the proposed development footprint and the prescribed RPA's of retained trees.

### 3.4. Above Ground Constraints

- 3.4.1. Retained trees can be expected to achieve their overall dimensions. The expected future growth of the retained trees is not considered to cause any conflicts with the proposed future use of the site.
- 3.4.2. From viewing the TCP, the crown of T6 (Ash) appears to conflict with the proposed siting of the garage. However, the trees upper crown is elevated and would have ample clearance without appearing to cause conflict.
- 3.4.3. Any necessary pruning works should be carried out in accordance with BS3998:2010 – 'Recommendations for Tree Work'.

### 3.5. Tree Protection

- 3.5.1. A protective fence will be erected prior to the commencement of any site works e.g. before any materials are brought on site. The fence will have signs attached to it stating that this is a Construction Exclusion Zone (CEZ) and that **NO WORKS** are permitted within the CEZ. The protected fence may only be removed following completion of all construction works.
- 3.5.2. It is presumed the positioning and implementation of tree protection is a matter the Local Planning Authority would be agreeable to conditioning as part of a detailed planning permission.

### 3.6. Material Storage

- 3.6.1. No material storage or plant movement will be required within the Construction Exclusion Zones. There is adequate space present upon the existing driveway to the north of the dwelling.

### 3.7. Services

- 3.7.1. No new services or soak-a-ways are proposed to be sited or constructed within the RPA of any retained tree. However should it become necessary these must be installed using techniques and methods described at section 4.1 of the current edition of the National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees ([www.njug.org.uk](http://www.njug.org.uk)) or if this is not practicable, trenches are to be opened by compressed air excavation tools and not mechanically dug.

## 4. Conclusions

- 4.1.1. From the tree survey findings, comments and observations, it will be seen the proposed development will only require the removal of a small section of G1, ensuring the current treescape is not demonstrably harmed. Equally important the proposal provides an opportunity to carry out additional tree planting should it be desired that will serve to enhance visual amenity, biodiversity and the wider landscape for the enjoyment of future generations.
- 4.1.2. The protection of trees and their subsequent health and future potential is totally dependent upon all persons operating within the site. Communications are vitally important to ensure that all parties understand the reason for tree protection and its continued existence. Providing all necessary tree protection works are undertaken, retained trees and development alike will satisfactorily coexist.
- 4.1.3. It is hoped that this report and recommendations provides all necessary information, however, should there be any queries or should clarification of any points be required, please contact the report author.

## 5. Appendices

### Appendix 1 – Explanation of Survey Details

**Tree Id-** Each tree/group has been given a unique number, which coincides with the drawings located in appendix 3.

**Species & botanical name-** where identifiable the full botanical name has been given. Where a cultivar, variety or species cannot be accurately given the genus name only will be given.

**Height (m)-** measured approximately to the nearest 1m. If height issues are critical, measurements can be collected accurately using optical instruments.

**No of stems-** the number of separate stems each individual tree has.

**Stem Dia @1.5m (mm)-** the diameter of the given tree at 1.5m above soil level, (on sloping ground taken on the up-slope side of the tree base). Where the tree is multi-stemmed measurements will be record for each stem.

**Spread-** indicates the crown radius from the base of tree in four compass directions, recorded to the nearest metre.

**Crown height + direction (m)-** recorded as the first significant branch and direction of growth.

**Life stage-** described as young, semi-mature, early-mature, mature or over-mature.

**Physiological condition (P)-** an assessment of the trees health. Considers vitality, die back and the presence of disease. Described as Good = no significant health problems Fair = symptoms of ill health that can be remediated Poor = significant ill health.

**Structural condition (S)-** an assessment of the trees structural condition. Described as Good = no significant defects Fair = significant defects that can be remediated Poor = significant defects no remedy.

**Observations – negative and positive-** narrative comments on general condition, significant defects and overall appearance (e.g. the presence of any decay).

**Preliminary management recommendations-** e.g. requires pruning or further investigation of suspected defects is needed.

**Life expectancy-** preliminary management recommendations, e.g. requires pruning or further investigation of suspected defects is needed.

**Retention Category-** Each tree/group is identified with a retention category in accordance with BS5837 (an in depth explanation is provided on the following page)

**RPA radius (m)-** minimum area in metres which should be left undisturbed around each retained tree.

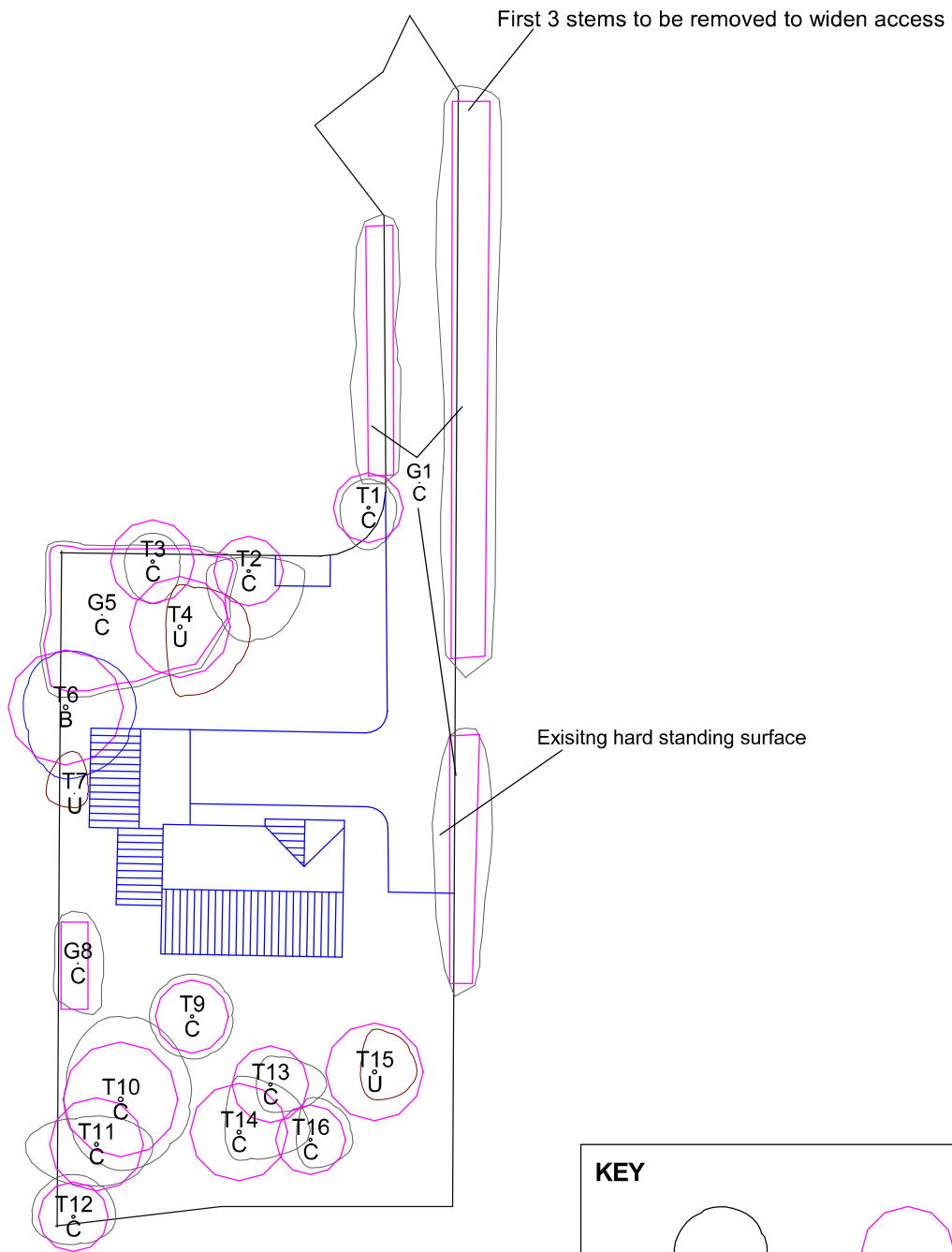
## Appendix 2 – Cascade Chart for Tree Quality Assessment (Extract BS5837)

Category and definition	Criteria (including subcategories where appropriate)	Identification on Plan
<p><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</p>	<p><b>Criteria (including subcategories where appropriate)</b></p> <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 infested with pathogens of significance to health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality</li> </ul> <p>NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve</p>	DARK RED
<b>TREES TO BE CONSIDERED FOR RETENTION</b>		
<p><b>Category and definition</b></p>	<p><b>Criteria – Subcategories</b></p>	<p><b>Identification on Plan</b></p>
<p><b>Category A</b> <b>Trees of a high quality</b> with an estimated remaining life expectancy of at least 40 years</p>	<p><b>1 Mainly arboricultural values</b></p> <p>Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)</p>	<p><b>3 Mainly cultural values, including conservation</b></p> <p>Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)</p>
<p><b>Category B</b> <b>Those of moderate quality</b> with and estimated remaining life expectancy of at least 20 years</p>	<p><b>2 Mainly landscape values</b></p> <p>Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features</p> <p>Trees present in numbers, usually as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality</p>	<p>LIGHT GREEN</p> <p>MID BLUE</p>

## Appendix 3- Tree Schedule

Tree ID	Species, Botanical Name	Height (m)	No of stems	Stem @ 1.5M (mm)	Spread - N,E,S,W	Crown height+ direction (m)	Life stage	Physiological (P) and Structural (S) condition. Observations- negative and positive	Recommendations	Life expectancy	Retention category	RPA Radius (m)
G1	Hawthorn, <i>Crataegus monogyna</i>	6	Multiple	up to 280	See plan	1	Mature	S=Fair, P=Normal. Old hedge along the eastern boundary of the site which has now developed into a line of small trees.	Remove first three items at access. Reduce in height and spread to return back to a formal hedge.	10-20	C2	3.4
T1	Lawsons Cypress, <i>Chamaecyparis lawsoniana</i>	10	1	200	2 3 2	2	Semi mature	S=Good, P=Good. Well formed tree growing in the garden of neighbouring property.	No action.	10-20	C2	2.4
T2	Apple, <i>Malus</i> spp	6	1	200	1 4 5 3	2	Mature	S=Fair, P=Good. Small item located next to northern boundary. Stem has significant weight biased towards south.	No action.	10-20	C2	2.4
T3	Lawsons Cypress, <i>Chamaecyparis lawsoniana</i>	10	1	240	2 3 2	4	Semi mature	S=Good, P=Good. Single stemmed tree forking at 3m. Tight union but not thought to be defective at this stage	No action.	10-20	C2	2.9
T4	Common Beech, <i>Fagus sylvatica</i>	10	2	200, 210	3 5 5 1 4	4	Semi mature	S=Poor, P=Fair. Twin stemmed tree with one stem dead and weight biased towards the east. Remaining stem appears healthy although dead mans fingers fungus present at base.	Remove regardless of development.	<10	U	3.5
G5	Cherry Laurel, <i>Prunus laurocerasus</i>	7	Multiple	up to 120	See plan	1	Mature	S=Good, P=Good. Old hedging that has been left and has subsequently spread, now occupying a large area.	Either reduce in height and spread to form a boundary screen or remove in its entirety.	<10	C2	1.4
T6	Common Ash, <i>Fraxinus excelsior</i>	12	1	330	4 5 5 3	5	Mature	S=Good, P=Fair. Well formed tree growing on western boundary, no significant defects.	No action.	20-40	B2	4
T7	Goat Willow, <i>Salix caprea</i>	8	3	200, 300	5 4 4 1 1	1	Dead	Dead windblown tree.	Remove regardless of development.	<10	U	4.9
G8	Hawthorn, <i>Crataegus monogyna</i> , Common Elder, <i>Sambucus nigra</i>	5	Multiple	up to 150	See plan	1	Mature	S=Fair, P=Good. Unmanaged boundary vegetation with small limb and stem breakages.	Reduce in height and spread to return back to a formal hedge.	10-20	C2	1.8
T9	Apple, <i>Malus</i> spp	7	1	210	3 3 3 3	2	Mature	S=Fair, P=Good. Small well formed tree with minor occluding wounds to stem.	No action.	10-20	C2	2.5
T10	Cherry, <i>Prunus avium</i>	9	1	330	6 5 5 4 4	4	Early mature	S=Good, P=Fair. Well formed tree with no visible defects.	No action.	10-20	C2	4
T11	Cherry, <i>Prunus avium</i>	6	2	180, 200	2 4 3 5 3	3	Early mature	S=Good, P=Good. Twin stemmed item with one stem topped at 5m.	No action.	10-20	C2	3.2
T12	Hawthorn, <i>Crataegus monogyna</i>	6	1	200	3 3 2 3	3	Mature	S=Fair, P=Good. Small well formed item, no visible defects.	No action.	10-20	C2	2.4

Tree ID	Species, Botanical Name	Height (m)	No of stems	Stem @ 1.5M (mm)	Spread - N,E,S,W	Crown height+ direction (m)	Life stage	Physiological (P) and Structural (S) condition. Observations - negative and positive	Recommendations	Life expectancy	Retention category	RPA Radius (m)
T13	Apple, <i>Malus</i> spp	5	1	220	2 4 2 1	0.5	Mature	S=Fair, P=Good. Healthy, but partly uprooted item with crown heavily biased towards the east.	No action.	10-20	C2	2.6
T14	Hawthorn, <i>Crataegus monogyna</i>	7	1	280	4 5 2 1	2	Mature	S=Good, P=Good. Well formed tree no visible defects.	No action.	10-20	C2	3.4
T15	Plum, <i>Prunus domestica</i>	6	1	280	3 3 2 1	3	Mature	S=Fair, P=Poor. Single stemmed item with decaying pruning wounds present on stem and in a state of decline.	Remove regardless of development.	<10	U	3.4
T16	Hawthorn, <i>Crataegus monogyna</i>	5	1	200	3 3 2 1	1	Early mature	S=Good, P=Good. Small well formed item.	No action.	10-20	C2	2.4



**KEY**

Crown Spread	Root Protection Area
Category 'A'	Category 'B'
Category 'C'	Category 'U'



**Tree Constraints Plan**  
8 Lee Lane, Royston

SCALE : 500@ A4	DATE : 10/09/2020	N 
MAP FILENAME : TCC-1354		

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