



ARBORICULTURAL  
CONSULTANTS



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# ARBORICULTURAL SURVEY, IMPACT ASSESSMENT AND PROTECTION PLAN

Relating to :

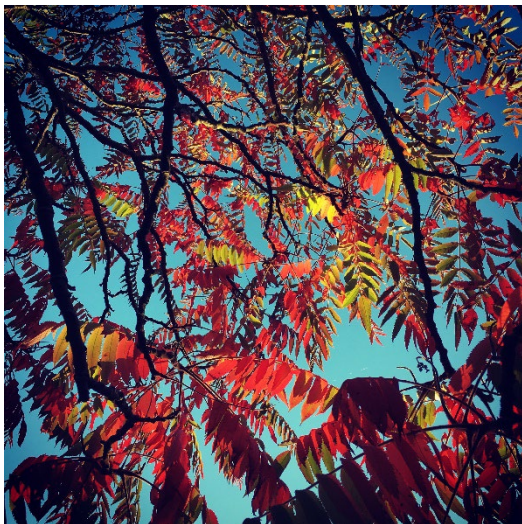
RENOVATIONS TO EXISTING COACH  
HOUSE

At:

DOWDESWELL COURT, LOWER  
DOWDESWELL, CHELTENHAM

Instructed by:

MR & MRS DUNKERTON



MHP ref: 22127 DOWDESWELL COURT COACH HOUSE,  
DOWDESWELL\_TS AIA TPP\_V1

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### Issue record

Date	Version	Notes	Quality check
02.05.2023	V1	Initial issue	MR 02.05.2023

## **1 INTRODUCTION**

### **1.1 Introduction**

1.1.1 My name is Matt Reid. I am a Chartered Arboriculturist and Registered Consultant of the Arboricultural Association and the Institute of Chartered Foresters. I hold the Level 6 Diploma in Arboriculture (ABC Awards) as well as other technical and trade level qualifications. I am also a Professional Member of the Arboricultural Association.

1.1.2 I have worked in the arboricultural industry since 1999. My initial trade and professional experience comprised six years as an arboricultural contractor and climbing arborist. Following this I spent seven years as a local government tree officer. Since 2012 I have worked in private practice as an arboricultural consultant specialising in planning related matters and tree risk management.

### **1.2 Background**

1.2.1 An application for planning permission is to be submitted for erection of a new store barn at Dowdeswell Court, Lower Dowdeswell, Cheltenham; hereafter referred to as 'the site'.

### **1.3 Site details**

1.3.1 For location purposes, the site can be located using:

- Grid reference: SP 00226 19718, or
- What3Words: tune.accented.jelly.

### **1.4 Instruction and scope**

1.4.1 I am instructed by Mr & Mrs Dunkerton to visit the site and to carry out an assessment of arboricultural features in accordance with British Standards (BS) 5837:2012 'Trees in Relation to Design Demolition and Construction – Recommendations'.

1.4.2 I am to prepare the following information in relation to the proposals:

- Tree survey in accordance with BS5837:2012
- Arboricultural Impacts Assessment
- Tree Protection Plan.

## 2 GENERAL

### 2.1 Statutory tree protection and other designations

2.1.1 I have carried out desk-based tree-related constraints checks in relation to the site.

These are outlined in *Table 1*.

Statutory tree protection and other designations		
	General summary information	Relevant to site?
Conservation Area <sup>1</sup>	<ul style="list-style-type: none"> <li>All trees with a trunk diameter greater than 75mm at 1.5m height are protected in the same way as for TPO (see below).</li> <li>Six weeks' notice must be given to the Local Planning Authority (LPA) prior to carrying out any tree works so that possible requirement for TPO can be assessed.</li> </ul>	Yes
Tree Preservation Order (TPO) <sup>2</sup>	<ul style="list-style-type: none"> <li>It is an offence to cut down, uproot, top or lop, wilfully damage or wilfully destroy relevant trees or woodlands.</li> <li>Formal permission must be applied for (and granted) by the LPA before carrying out tree works.</li> <li>Penalties of up to £20K (Magistrates Court) or unlimited fine (Crown Court).</li> </ul>	No
Timber volume	<ul style="list-style-type: none"> <li>Forestry Act 1967 limits felling of volumes of timber in any calendar quarter to 5 cubic metres (m<sup>3</sup>) unless a Felling Licence has been issued by the Forestry Commission.</li> <li>Any felling beyond this threshold may result in prosecution and/or issue of a Restocking Notice</li> </ul>	Yes
Ancient woodland <sup>3</sup>	<ul style="list-style-type: none"> <li>Ancient Woodland is broadly defined as land that has been continuously wooded since 1600AD. It is irreplaceable habitat and is afforded a high level of protection by the National Planning Policy Framework (NPPF).</li> </ul>	No
Ancient/veteran trees <sup>4</sup>	<ul style="list-style-type: none"> <li>Broadly defined as trees that are old for their species that have biodiversity, cultural and heritage value.</li> <li>Like ancient woodland such trees are irreplaceable habitats and are afforded a high level of protection by the National Planning Policy Framework (NPPF).</li> </ul>	None recorded

*Table 1- statutory tree protection and other designations.*

### 2.2 Limitations

2.2.1 In some instances, I have been unable to access or clearly observe the trunks of trees.

Where this is the case, I have done my best to accurately estimate dimensions and tree condition.

2.2.2 Trees are living organisms and self-supporting dynamic structures. Their physiological

<sup>1</sup> [My Cotswold: Cotswold District Council a](#) Accessed 02.05.2023.

<sup>2</sup> [My Cotswold: Cotswold District Council a](#) Accessed 02.05.2023.

<sup>3</sup> <https://magic.defra.gov.uk/magicmap.aspx> Accessed 30.11.2022.

<sup>4</sup> <https://ati.woodlandtrust.org.uk/> Accessed 30.11.2022.

and structural condition can change rapidly in response to a wide range of biotic/abiotic factors. As such, the findings and recommendations of my tree survey are limited to 24 months from the date of my site visit.

- 2.2.1 Due to topographical survey limitations, the locations of some trees/tree groups are estimated.
- 2.2.2 It is beyond the scope of this report to assess the potential for woody vegetation to cause subsidence/heave-related and/or direct contact-type structural damage. This matter may need to be addressed separately by a suitably qualified structural engineer.

### **2.3 Wildlife informative**

- 2.3.1 Tree works should not be carried out until a reasonably detailed inspection of relevant trees has been carried out to determine if bat roosts and/or bird nests are present.
- 2.3.2 It is a criminal offence to intentionally damage/destroy the nest of any wild bird while it is in use or being built. Similarly it is an offence to intentionally/recklessly disturb roosting bats or to damage or destroy a bat roost.
- 2.3.3 The Arboricultural Association publishes useful advice in relation to trees and nesting birds<sup>5</sup>.
- 2.3.4 Helpful advice with regards to bats and tree work is published by the UK Government<sup>6</sup>, the Arboricultural Association<sup>7</sup> and The Bat Conservation Trust<sup>8</sup>.

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<sup>5</sup> <https://www.trees.org.uk/Help-Advice/Public/When-is-the-bird-nest-season>

<sup>6</sup> <https://www.gov.uk/guidance/bats-protection-surveys-and-licences>

<sup>7</sup> <https://www.trees.org.uk/Help-Advice/Public/Bats-and-trees-Who-does-what-where>

<sup>8</sup> <https://www.bats.org.uk/about-bats/where-do-bats-live/bat-roosts/roosts-in-trees>

### **3 ARBORICULTURAL SURVEY**

#### **3.1 Site visit**

3.1.1 I visited the site on 17<sup>th</sup> August 2022.

#### **3.2 Findings**

3.2.1 My findings are set out within the survey schedule at **Appendix 1**.

3.2.2 The subject trees were surveyed as part of a wider survey of the area. This has affected the numbering of the arboricultural features.

## 4 TREE CONSTRAINTS AND DESIGN ADVICE

### 4.1 Tree Quality Assessment

4.1.1 Surveyed trees are represented using colour coding to indicate their quality and thereby suitability for retention. The quality assessment is as follows:

Quality grade	Definition
A	Green: high quality with estimated remaining life expectancy of at least 40 years.
B	Blue: moderate quality with estimated remaining life expectancy of at least 20 years
C	Grey: low quality with estimated remaining life expectancy of at least 10 years
U	Red - unsuitable for retention. Cannot realistically be retained for longer than 10 years

### 4.2 Below Ground Constraints

4.2.1 In accordance with BS5837:2012, below ground constraints, or Root Protection Areas (RPAs), for the surveyed trees are plotted onto the Tree Survey and Constraints Plan. These are represented as a circle with a broken red line centred on the base of each tree stem with a radius of 12 times stem diameter (measured at 1.5m above ground level).

4.2.2 BS5837:2012, a root protection area (RPA) is defined as *"a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure should be treated as a priority". "The default position [when considering design layout in relation to RPAs] should be that structures are located outside the RPAs of trees to be retained"*.



#### 4.2.3 Root systems can be damaged in several ways:

- Root severance
- Soil compaction
- Contamination by spilled materials eg cement/diesel.

### 4.3 Above Ground Constraints

4.3.1 Above ground constraints posed by trees describe the capacity for trees to have an overbearing or dominating effect on new developments; usually post occupancy. Typical above ground constraints include a number or combination of inconveniences including shading, branch spread, perceived fear of tree failure during strong winds and so on. If not adequately considered, above ground constraints can lead to repeated future requests to fell or heavily prune retained and protected trees.

#### 4.3.2 The above ground parts of trees can be damaged in several ways:

- Impact damage through contact with construction site plant
- Inappropriate pruning
- Other factors, for example, heat damage caused by bonfires.

## **5 ARBORICULTURAL IMPACT ASSESSMENT (AIA) & TREE PROTECTION PLAN (TPP)**

### **5.1 Arboricultural Impact Assessment**

- 5.1.1 A combined AIA and TPP is included at **Appendix 2**.
- 5.1.2 The plan shows the tree survey and constraints information in relation to the proposed layout (which will effectively occupy the same footprint as the existing structure) and confirms that no tree removals will be required.
- 5.1.3 Woodland W1 is situated to the north-east of the Coach House. It is a high-quality landscape feature consisting most obviously of mature beech trees on a steep valley slope that rises to the public road that links Upper and Lower Dowdeswell. However, perhaps because of historic concerns about tree safety and subsequent tree removal, there are no large trees near to the Coach House. Instead the tree cover in the area consists of medium-sized hazel coppice and small wych elm.
- 5.1.4 I understand that no excavations will be needed in relation to the rising bank behind the coach house and that further retention/stabilisation is unlikely to be necessary. However, if after further investigation the need for further retention of the bank is required, I am advised that this can be achieved by sheet piling. Sheet piling will obviate the need for further excavation back into W1 and will therefore not result in harm.
- 5.1.5 Notwithstanding the above, tree protection measures (barriers) will be required to contain construction activity and to prevent encroachment into the woodland.
- 5.1.6 Provided that the tree protection measures are put in place, I consider that the proposals are viable from an arboricultural perspective.

### **5.2 Tree Protection Plan**

- 5.2.1 The Tree Protection element of the plan demonstrates how retained trees can be effectively retained as part of the construction of the proposals.
- 5.2.2 Locations and specifications of tree protection barriers and ground protection are provided.
- 5.2.3 Tree protection barriers must be put in place before any other work is carried out on

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site and remain in place for the duration of construction works.

## **6 CONCLUSION**

### **6.1 Conclusion**

6.1.1 I conclude that the development proposals are feasible from an arboricultural perspective for the following key reasons:

- No significant trees shall be removed to enable the construction of the proposals.
- Tree protection measures can be put in place to ensure that construction works do not result in damage to the retained trees.

## **APPENDIX 1 – TREE SURVEY SCHEDULE**

TREES

Ref	Common name	Height (m)	Est	Stem dia (mm)	Est	N	Est	E	Est	S	Est	W	Est	Life stage	Special status	General observations & management recommendations	Struct. cond.	Phys. cond.	ULE	Quality grading	RPA radius (m)	RPA area (m2)	TPO
T18	Ornamental cherry	7	#	250	#	2.5	#	3	#	2.5	#	3	#	EM	None	Attractive ornamentals framing steps to coach house.	Good	Good	20+	B1	3	28	Conservation Area
T19	Ornamental cherry	7	#	250	#	3.5	#	2.5	#	3.5	#	3	#	EM	None	Attractive ornamentals framing steps to coach house.	Good	Good	20+	B1	3	28	Conservation Area
T20	Catalpa	9	#	420	#	5	#	5.5	#	6.5	#	5	#	EM	None	Attractive feature tree especially in context of the coach house	Good	Good	40+	A2	5	80	Conservation Area

WOODLANDS

Ref	Common names of woody species present	Estimated average trunk diameter at 1.5m (mm)	Estimated minimum & maximum heights (m)	Estimated average height (m)	Estimated average canopy height (m)	Life stage	Special status	General observations & management recommendations	Struct. cond.	Phys. cond.	ULE	Quality grading	RPA radius from canopy edge (m)	TPO
W1	Beech sycamore ash	700	22-18	20	3	M	None	Prominent well-established woodland on rising bank. Moderate amounts of ash dieback. Recommend remove all ash in proximity to high and medium usage land.	Good	Good	40+	A2	As shown on plan	Conservation Area

HEDGEROWS

Ref	Common names of woody species present	Estimated minimum & maximum heights (m)	Estimated average height (m)	Estimated average trunk diameter (mm)	Estimated average lateral spread (m)	Estimated average canopy height (m)	Life stage	Special status	General observations & management recommendations	Struct. cond.	Phys. cond.	ULE	Quality grading	RPA radius from canopy edge (m)
H1	Beech	4	4	80	1.5	0	EM	None	Well maintained domestic hedge.	Good	Good	20+	B2	As shown on plan

KEY

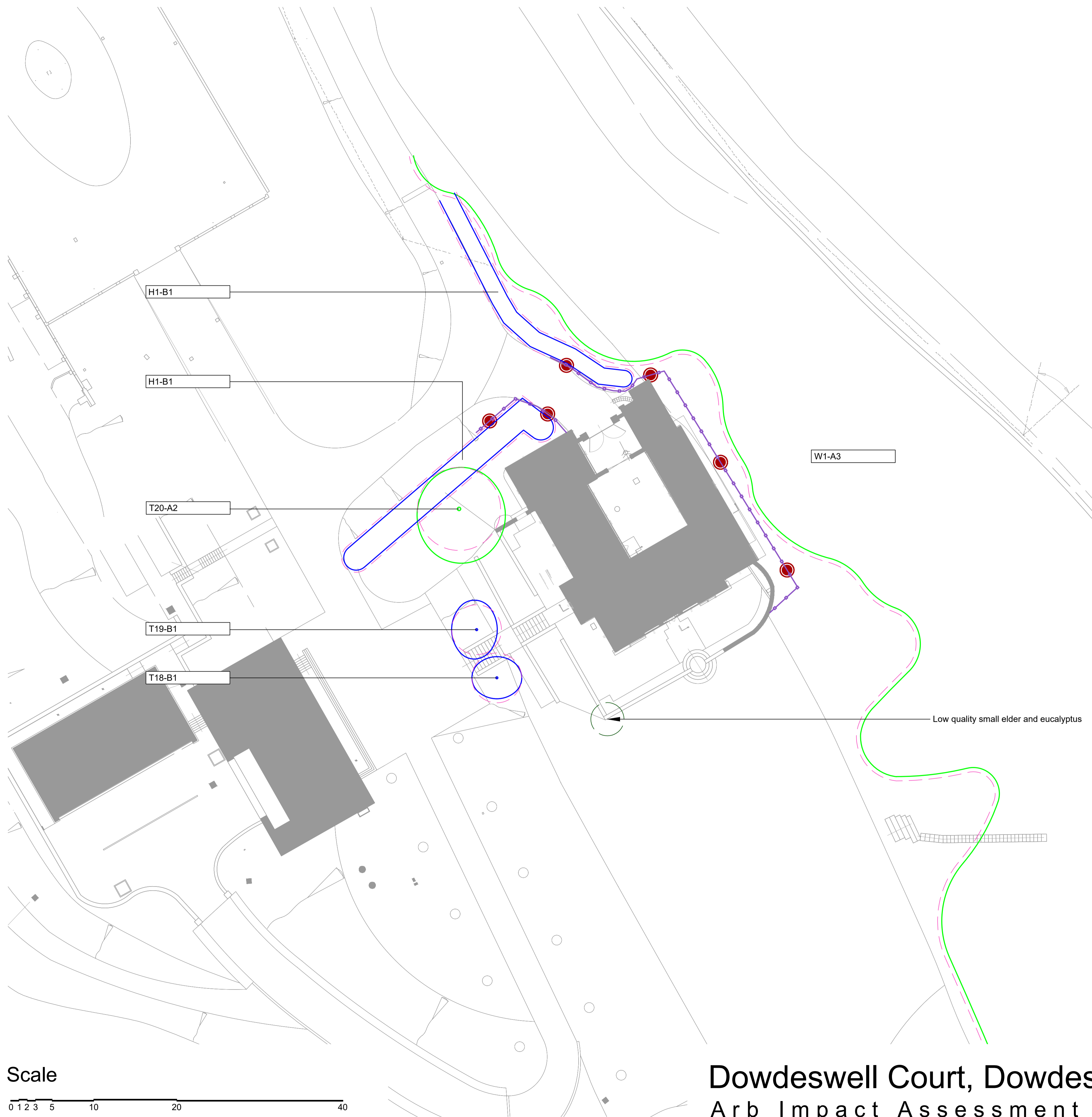
Assessment criteria	Description
Reference number on plan	T: Tree, G: Group, W: Woodland, H: Hedgerow. This reference is recorded on the Tree Survey and Constraints Plan against the relevant survey item.
Common name (Scientific name)	Common names: normal type. Scientific names where required: italic type in brackets
Heights	Unit: metres (m). Recorded to the nearest half metre for heights upto 10m and to the nearest whole metre for heights above 10m.
Stem diameter	Unit: millimetres (mm). Rounded to the nearest 10mm. Single and multi-stemmed trees are measured at 1.5m above highest ground level or otherwise as in accordance with Annex C, BS5837:2012.
Estimates	Measured tree dimensions are identified by an '-' in the adjacent 'Estimate' column. Where dimensions have been estimated (offsite, or otherwise inaccessible survey items) this is clearly identified by a '#' in the adjacent 'Estimate' column.
Crown spread	Unit: metres (m). Directions refer to the four compass points (north, east, south, west). Dimensions are rounded-up to the nearest half metre for heights up to 10m and to the nearest whole metre for heights above 10m.
Estimated average lateral spread	Unit: metres (m). For hedgerows only. An estimate of the average width between branch tips.
Crown clearance height	Unit: metres (m). The existing height above ground level of: <ul style="list-style-type: none"> <li>• First significant branch and the compass direction of its growth: North (N), North-east (NE), East (E) , South-east (SE) etc.</li> <li>• Canopy (height between branch tips and ground level).</li> </ul>
Life stage	Y – young (stake dependent), SM - Semi-Mature (still capable of being transplanted without preparation, up to 30cm girth and not yet sexually mature), EM – Early Mature (not yet having reached 75% of expected mature size), M – Mature (anything else up to normal life expectancy for the species), OM – Over Mature (anything beyond mature and in natural decline), V – Veteran, A - Ancient (any tree displaying characteristics described by the Ancient Tree Forum and referenced by Natural England).
Special status	<ul style="list-style-type: none"> <li>• None</li> <li>• Veteran: any tree judged to meet criteria as defined by the Ancient Tree Forum</li> <li>• Ancient: any tree judged to meet criteria as defined by the Ancient Tree Forum <sup>1</sup></li> </ul>
General observations and preliminary management recommendations	General observations are recorded in relation to a survey item's structural and/or physiological condition (eg the presence of any decay and physical defect) and /or any preliminary management recommendations that may be appropriate.
Structural condition	<ul style="list-style-type: none"> <li>• Good: without any observable significant biomechanical structural weaknesses</li> <li>• Fair: with minor biomechanical structural flaws. Some remedial action may be required</li> <li>• Poor: with significant biomechanical weaknesses requiring intervention particularly where risk management is required.</li> </ul>
Physiological condition	<ul style="list-style-type: none"> <li>• Good: no indications of impaired physiological function and in optimum condition for age and species</li> <li>• Fair: with indicators of reduced vitality. Some intervention may be required</li> <li>• Poor: with significantly impaired physiological function for age and species</li> </ul>
Remaining contribution	Useful life expectancy, or the length of time a tree's is estimated to be able to make a useful contribution, is expressed in years as: <10, 10+, 20+, 40+.
Quality grading	Assessed in accordance with Table 1, BS5837:2012. Colours relate to depiction on the Tree Constraints Plan. <ul style="list-style-type: none"> <li>• Category A (Green) Trees of high quality with an estimated remaining life expectancy of 40 years</li> <li>• Category B (Blue) Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.</li> <li>• Category C (Grey) Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.</li> <li>• Category U (Red) Unsuitable for retention. Trees in such a poor condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.</li> </ul> Note - A, B and C trees are also given a sub-category of 1, 2 or 3 which reflects their arboricultural, landscape or cultural and conservation values respectively. Each subcategory has an equal weight, for example an A1 tree has the same retention priority as an A3 tree. More than one sub-category may be applied to a survey item as appropriate.
RPA radius	Root Protection Area (RPA): a layout design tool. Unit: metres (m). Radial distance from tree centre to define a circle that indicates on the Tree Survey Plan the minimum rooting area required to maintain tree's viability. Calculated in accordance with Annex D, BS5837:2012
RPA area	Unit: square metres (m <sup>2</sup> ). The area of the RPA radius circle described above. Applies only to individual trees.

<sup>1</sup> LONSDALE, D. (Ed). Ancient and other veteran trees: further guidance on management. The Tree Council. London. 2013.

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## **APPENDIX 2 – ARBORICULTURAL IMPACT ASSESSMENT AND TREE PROTECTION PLAN**





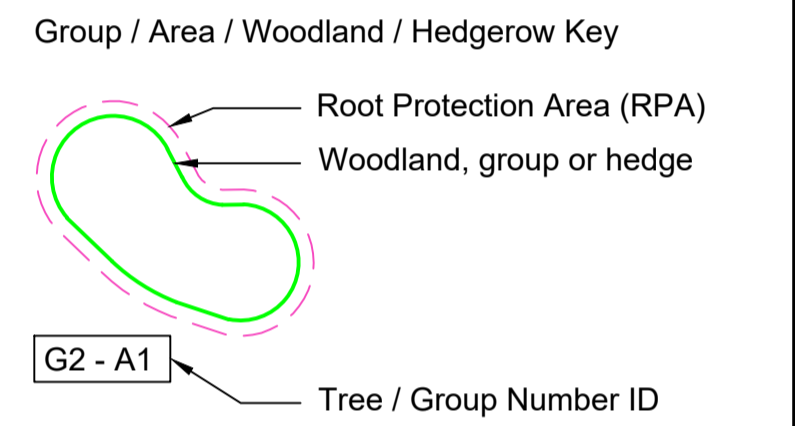
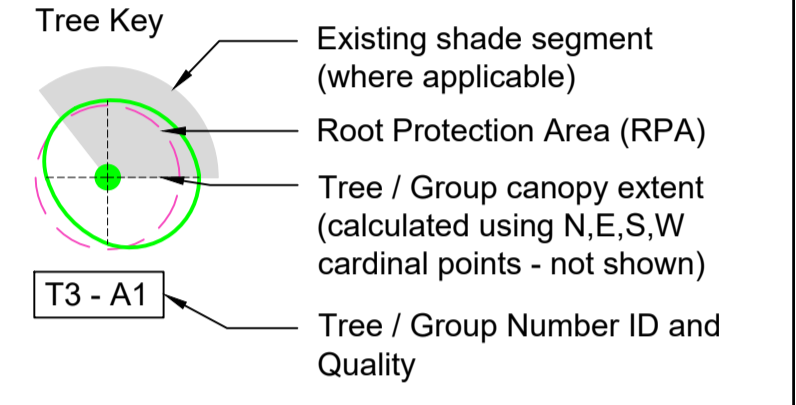
Tree survey summary				
Tree number on plan	Common name	Quality grading	RPA radius (m)	Protected status
T18	Ornamental cherry	B1	3	Conservation Area
T19	Ornamental cherry	B1	3	Conservation Area
T20	Catalpa	A2	5	Conservation Area
H1	Beech	B1	As shown on plan	None
W1	Beech sycamore ash	A3	As shown on plan	Conservation Area

### Quality and Suitability For Retention

- Category A - High quality and value (Highly desirable for retention)
- Category B - Moderate quality and value (Desirable for retention)
- Category C - Low quality and value (Optional for retention)
- Category U - Poor quality and value (Unsuitable for retention)

### Root Protection Areas (RPA)

Root Protection Areas (RPA) identified are in accordance with BS5837:2012. RPA's are shown as a pink dashed polyline

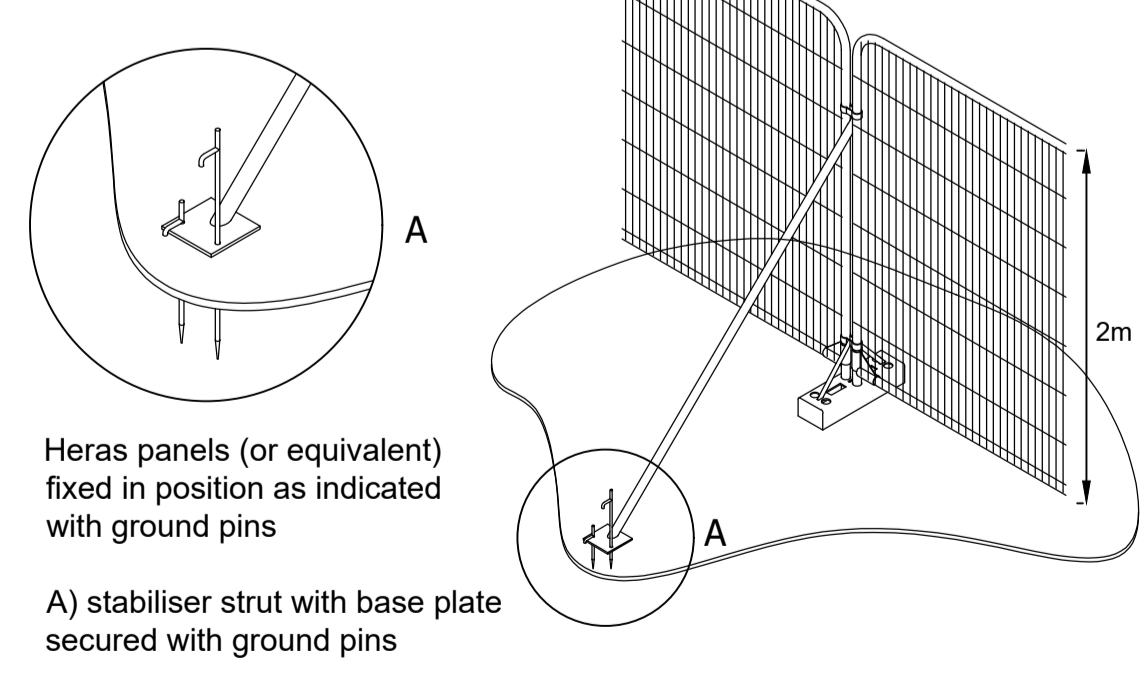


**Key**

T3 - A1 Tree location is approximated based on on-site observations

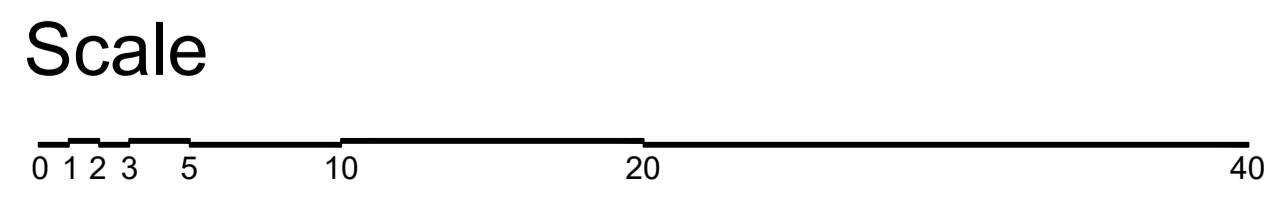
- Key**
- Tree protection fencing (see Protective Barrier detail)
  - Signage 'Construction exclusion zone - No Access'

### Protective Barrier



- Notes**
- 1) Survey Date 17th August 2022.
  - 2) This drawing has been produced to be printed in colour. If you have been given this drawing in monochrome please request a colour version.
  - 3) Do not scale directly from this drawing.
  - 4) This drawing is to be read in conjunction with all other relevant MHP drawings and information supplied by other consultants.

Revisions:	Date:	Drawn:	Checked:
Project: Dowdeswell Court, Dowdeswell Coach House			
Client: Julian & Jade Dunkerton			
Title: Arboricultural Impact Assessment and Tree Protection Plan			
Drawing number:	22127.603		Rev:
Status:	FOR INFORMATION		
Drawn By:	Checked By:	Date:	Scale @ A1:
GW	MR	02-05-23	1:250



# Dowdeswell Court, Dowdeswell - Coach House

## Arb Impact Assessment & Protection Plan

