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BS5837:2012 Arboricultural Survey

**Site Address:
Harcombe House
Park Lane
Ropley
Alresford
SO24 0BE**

**Robert Toll
HND Urban Forestry - ND Forestry - MArborA
Ref: RMT936
Site inspection date: 11th December 2023
Date survey published: 8th January 2024
Prepared for Strategic Properties**



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1 Instructions

- 1.1 I was instructed on behalf of the client by the architect Leila Meraghni of Morse Webb Architects on the 8th December 2023 to undertake a survey of trees that are on or adjacent to Harcombe House, Park Lane, Ropley, Alresford, SO24 0BE in accordance with *British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations*.

2 Introduction

Site Description

- 2.1 The site is a large residential property consisting of open grounds with the residential, garages and facilities buildings located centrally within the site.
- 2.2 The area that has been surveyed consists to the east of the drive and to the south garage buildings a swimming pool building. To the east of the drive is a track which is routed north to south down the eastern side of the survey site. The area to the south of the garages is level and grassed, but with a retaining structure along the northern edge to the rear of garages. The western section of the surveyed site is to the rear of the swimming pool building and is a sunken paved area with a retaining wall around the southern and western edges.

Image 1 – The surveyed area at Harcombe House, Park Lane, Ropley, Alresford, SO24 0BE is shown by an indicative yellow line



Image courtesy of Google Map Data © 2023

Limitations

- 2.3 I carried out the survey from ground level with the aid of a Bosch GLM 120 C Professional Laser Measure to measure distances, a Nikon Forestry Pro height measurer and diameter tape.
- 2.4 Prior to visiting I was supplied with a topographical survey showing the growing locations of all trees on or immediately adjacent to the property.
- 2.5 I have indicatively shown the outline of the outbuilding in the south-eastern corner of the on the tree constraints plan shown at **Appendix 3** to the best of my ability.
- 2.6 All measurements taken to calculate root protection areas and canopy spreads have been measured wherever possible. Where it has not been possible to access certain areas, dimensions have been estimated.
- 2.7 This report does not constitute a safety survey of the trees included within it. It is advised that if there are concerns regarding the risk posed by trees to persons and property then a tree condition inspection should be commissioned.

Legal Restrictions

- 2.8 I have not contacted the local planning authority (LPA) directly to ascertain whether the trees on or adjacent to the site are protected by Tree Preservation Orders (TPO) or if they are within a Conservation Order.
- 2.9 On the 14th December 2023 I carried out a check on the East Hampshire District Council online protected tree maps and they indicate that there is no statutory protection on any of the surveyed trees or groups.
- 2.10 It is an offence under the Wildlife and Countryside Act 1981 and the Rights of Way Act 2000 to disturb nesting birds or roosting/breeding bats. When carrying out tree work care should be taken to avoid disturbance. If necessary, advice should be taken to avoid disturbance. If necessary, advice may need to be sought from a qualified Ecologist.

Tree survey

- 2.11 I visited the site on 11th December 2023 and surveyed a total of fifteen trees, three groups and one hedge. The surveyed hedge, trees and group have been categorised in accordance with British Standard 5837:2012 as shown at **Appendix 1** and the tree survey schedule can be seen at **Appendix 2**.
- 2.12 It was noted that there are other trees that are located on or adjacent to Harcombe House, Park Lane, Ropley, Alresford, SO24 0BE but they have not been included within this report. This is because it is deemed that they are:
 - far enough from the area proposed for development that they will not be affected;
 - they will be adequately protected by the tree protection measures afforded to the surveyed trees;
 - they are specimens of limited significance;

- 2.13 At the time of my survey, five trees and one group were considered to be category B and moderate value. The remaining hedge, trees and groups are considered to be category C and low value.

Table 1 – Tree categorisations as BS5837:2012

Category A	Category B	Category C	Category U
-	G1, T2, T3, T10, T17	T4, T5, T6, T7, T8, T9, T11, T12, T13, T14, G15, T16, G18, H19	-

Measurements

- 2.14 Wherever possible all diameter measurements have been measured using a diameter tape at a height of 1.5m. Where it has not been possible to access the stems at 1.5m above ground level due to such things as dense Ivy, trees being offsite or the tree being inaccessible, an estimated measurement has been taken. All estimated measurements include the word “estimated” or the abbreviation “est” in the tree survey schedule shown at **Appendix 2**.

Canopy spreads

- 2.15 The canopy spreads have been measured from ground level using a laser measure and visual assessment. The canopy spreads have been annotated on the tree constraints plan and tree protection plan at **Appendices 3 and 4**.

Root protection area (RPA) definition

- 2.16 The RPA is 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 are treated as a priority.
- 2.17 Section 4.6.2 of BS5837:2012 states the following:

The RPA of each tree should initially be plotted as a circle centred on the base of the stem. Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution.

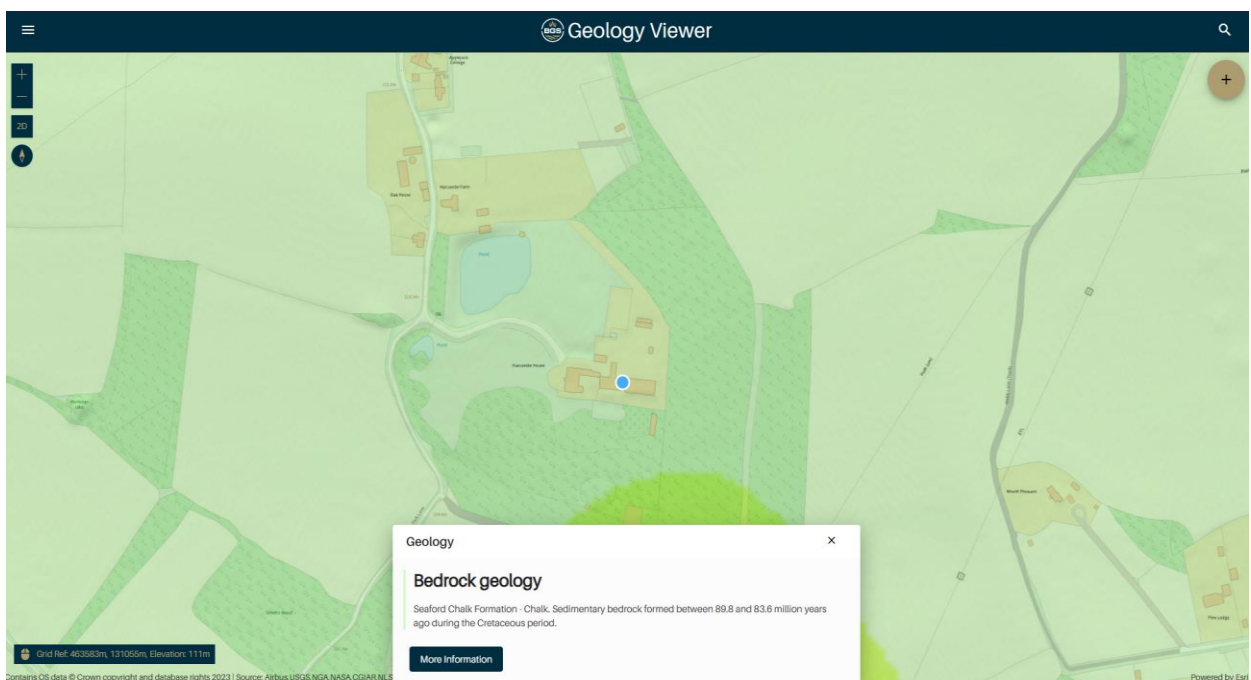
(British Standard 5837:2012 – Trees in relation to design, demolition and construction – Recommendations – The British Standard Institute 2012).

- 2.18 The RPAs of trees T4 and T10 has been offset to demonstrate more probable root morphologies as shown at **Appendix 3**. The RPAs of trees T4 and T10 are considered to have been influenced by the presence of the substantial retaining walls which have created a physical barrier to root development.

3 Soil Assessment

- 3.1 The soil assessment is necessary to establish whether the soil on the proposal site is shrinkable. Tree roots and those of other vegetation have the potential to extract moisture from shrinkable soils such as clay, making the soil expand and contract as the soil desiccates and re-hydrates. Where new structures are proposed on shrinkable soils and close to trees, foundations will need to be sufficiently deepened or able to withstand to minimise the risk of indirect damage to foundations.
- 3.2 No soil assessments have been undertaken however a check on the Geology of Britain Viewer gives the soil type as Seaford Chalk Formation - Chalk. This means that the underlying soil is potentially non-shrinkable and as such foundations should not need to be deepened because Seaford Chalk Formation – Chalk. If further assessments are undertaken that show that there is shrinkable clay, then foundations must be designed in accordance with the guidance within the National House Building Council's Standards Chapter 4.2 Building near trees or similar guidance.

Figure 1 – The Geology of Britain Viewer 1:50,000 scale indicates that the underlying geology at Harcombe House, Park Lane, Ropley, Alresford, SO24 0BE is potentially non-shrinkable Seaford Chalk Formation - Chalk.



Appendix 1 – British Standard 5837:2012 tree categorisation chart

TREES UNSUITABLE FOR RETENTION				
CATEGORY AND DEFINITIONS	CRITERIA			IDENTIFICATION ON PLAN
<p>Category U</p> <p>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>	<ul style="list-style-type: none"> 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). Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. 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. <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5 of BS5837:2012</i></p>			<p>RED █</p> <p>RGB 127.000.000</p>
TREES TO BE CONSIDERED FOR RETENTION				
CATEGORY AND DEFINITIONS	CRITERIA - SUBCATEGORIES			IDENTIFICATION ON PLAN
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	
<p>Category A</p> <p>Trees of high quality</p> <p>with an estimated remaining life expectancy of at least 40 years</p>	<p>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).</p>	<p>Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.</p>	<p>Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)</p>	<p>LIGHT GREEN █</p> <p>RGB 000.255.000</p>
<p>Category B</p> <p>Trees of moderate quality</p> <p>with an estimated remaining life expectancy of at least 20 years</p>	<p>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.</p>	<p>Trees present in numbers, usually growing 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>Trees with material conservation or other cultural value</p>	<p>MID BLUE █</p> <p>RGB 000.000.255</p>
<p>Category C</p> <p>Trees of low quality</p> <p>with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm</p>	<p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.</p>	<p>Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.</p>	<p>Trees with no material conservation or other cultural value.</p>	<p>GREY █</p> <p>RGB 091.091.091</p>

Appendix 2 - Tree survey schedule

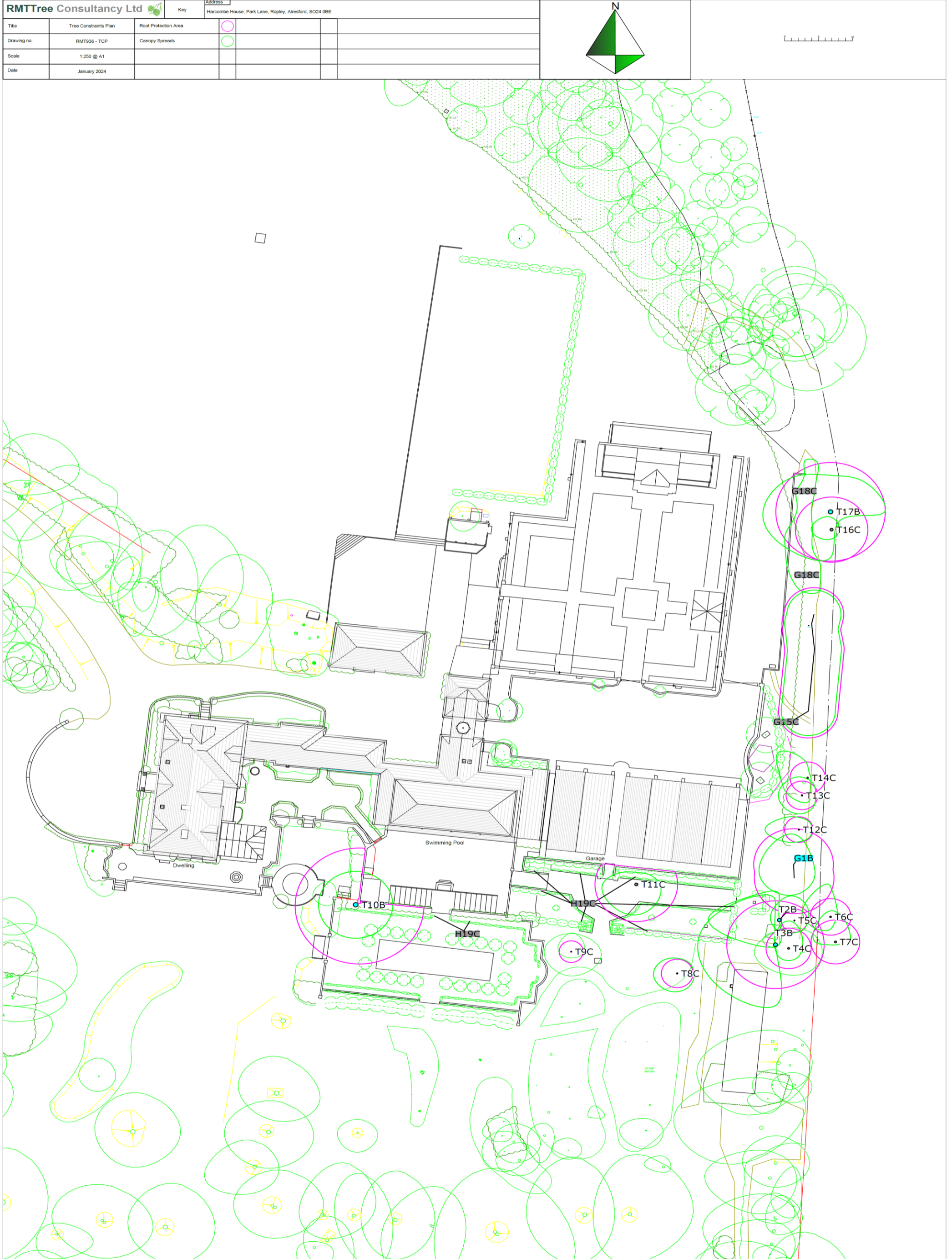
Tree No.	Species	Height (m)	Trunk dia. at 1.5m	Canopy Spread	Crown Height (m)	Age Class	Physiological Condition	Structural Condition	Comments/ Recommendations	Useful Life Expect	BS5837 grade	Root Protection Area	
												Radius	RPA Area
G1	Group of Scots Pine	20m	Max 490mm	N5m E3m S5m W5m	3m	Mature	Good	Good	Unremarkable tree; co-dominant form with adjacent trees.	20+	B	5.9m	108.6m ²
T2	Common Oak (<i>Quercus robur</i>)	13m	539mm	N4m E0m S4m W10.5m	5m	Mature	Good	Fair	Suppressed as overtopped by adjacent tree; co-dominant form with adjacent trees.	20+	B	6.5m	131.4m ²
T3	Common Oak (<i>Quercus robur</i>)	22m	601mm	N7m E0m S10m W11.5m	6m	Mature	Good	Fair	Multi-stemmed coppice.	20+	B	7.2m	163.4m ²
T4	Common Oak (<i>Quercus robur</i>)	13m	278mm	N4.5m E2m S2m W2m	2m	Early mature	Good	Fair	Medium sized deadwood 25mm to 100mm; main stem leans to north away from adjacent tree; suppressed as overtopped by previously removed tree.	10+	C	3.3m	35.0m ²
T5	Sycamore (<i>Acer pseudoplatanus</i>)	20m	160mm	N4m E2m S2m W3.5m	5m	Semi mature	Good	Fair	Unremarkable tree; multi-stemmed coppice.	10+	C	1.9m	11.6m ²
T6	Sycamore (<i>Acer pseudoplatanus</i>)	15m	251mm	N5m E1m S2m W4m	5m	Semi mature	Good	Fair	Unremarkable tree.	10+	C	3.0m	28.5m ²
T7	Common Oak (<i>Quercus robur</i>)		14mm 300mm est	N5m E2m S0.5m W3m	10m	Early mature	Good	Fair	Unremarkable tree; co-dominant form with adjacent trees; unable to view trunk due to ivy.	10+	C	3.6m	40.8m ²

Tree No.	Species	Height (m)	Trunk dia. at 1.5m	Canopy Spread	Crown Height (m)	Age Class	Physiological Condition	Structural Condition	Comments/ Recommendations	Useful Life Expect	BS5837 grade	Root Protection Area	
												Radius	RPA Area
T8	Apple (<i>Malus sp.</i>)		195mm	N2.5m E2.5m S3m W3.5m	2.5m	Early mature	Good	Good	Unremarkable tree.	10+	C	2.3m	17.2m ²
T9	Plum (<i>Prunus Domestica</i>)	5m	148mm	N2m E1.5m S1.5m W1.5m	2m	Early mature	Good	Good	Unremarkable tree.	10+	C	1.8m	9.9m ²
T10	Sycamore (<i>Acer pseudoplatanus</i>)	18m	700mm est	N5.5m E5.5m S5.5m W5.5m	4m	Mature	Good	Good	Vegetation impedes survey.	20+	B	8.4m	221.7m ²
T11	Apple (<i>Malus sp.</i>)	6m	457mm	N2m E3.5m S5m W5m	2m	Mature	Good	Fair	Crown has been previously heavily reduced with moderate decay in some pruning wounds.	10+	C	5.5m	94.5m ²
T12	Field Maple (<i>Acer campestre</i>)	8m	176mm	N2m E2m S2m W5m	3m	Semi mature	Good	Good		10+	C	2.1m	14.0m ²
T13	Common Yew (<i>Taxus baccata</i>)	5m	196mm est	N3m E2m S3m W3.5m	2m	Young	Good	Good	Unremarkable tree.	10+	C	2.4m	17.4m ²
T14	Sycamore (<i>Acer pseudoplatanus</i>)	8m	217mm	N2m E0.5m S4m W4m NW6m	7m	Early mature	Good	Fair	Suppressed form.	10+	C	2.6m	21.3m ²
G15	Group of Sycamore Scots Pine	18m	Max 370mm	N4m E4m S4m W4m	5m	Early mature	Good	Good	Unremarkable trees.	10+	C	4.4m	61.9m ²

Tree No.	Species	Height (m)	Trunk dia. at 1.5m	Canopy Spread	Crown Height (m)	Age Class	Physiological Condition	Structural Condition	Comments/ Recommendations	Useful Life Expect	BS5837 grade	Root Protection Area	
												Radius	RPA Area
T16	Scots Pine (<i>Pinus sylvestris</i>)	21m	447mm	N2m E1m S1.5m W3m	18m	Mature	Good	Fair	Unremarkable tree; etiolated specimen; bark wounds on southern main stem due to branches rubbing from adjacent tree.	10+	C	5.4m	90.4m ²
T17	Common Beech (<i>Fagus sylvatica</i>)	22m	675mm	N6m E8m SE2m S7.5m W10m	3m	Mature	Good	Fair	Co-dominant form with adjacent trees.	20+	B	8.1m	206.1m ²
G18	Group of Common Hazel	6m	Max 150mm est	N2m E2m S2m W2m	12m	Semi mature	Good	Fair	Multi-stemmed coppice.	10+	C	1.8m	10.2m ²
H19	Hedge consisting of Common Yew Privet	1.8m	2	-	-	Mature	Good	Good		10+	C	-	-

Appendix 3 – Tree Constraints Plan – RMT936 – TCP

Tree constraints plan (TCP) showing retained trees, tree numbers, root protection areas (magenta circles/polygons) and canopy spreads (green lines). The plan has been provided separately as a PDF at a scale of 1: 200 @ A1.



Appendix 4 – Qualifications and experience

Robert Toll has been working with trees since 2004 when he completed his studies.

In 2000 he began his studies at Riseholme College, Lincoln where achieved a pass with merit in Forestry at National Diploma level. In 2002 he attended Moulton College in Northampton where he gained a Level Five Higher National Diploma in Urban Forestry with merit.

In 2004 Robert began work as a temporary tree inspector at Northampton Borough Council, undertaking inspections of trees in response to enquiries from the public. After 4 months Robert took up a permanent tree inspector role at Coventry City Council which predominantly involved undertaking safety inspections of trees on school sites.

In 2006 Robert moved to Warwick District Council to take up a temporary post of Tree Protection Officer which involved reviewing old area tree preservation orders and identifying those trees which were considered worthy of protection under new specific orders. He also streamlined the council procedure for making new tree preservation orders, cutting the time from making to serving from up to 2 weeks to within 2 hours.

In 2008 Robert moved to Hart District Council, Hampshire to take up the role of Tree Officer within the planning department. This role included determining works trees applications, commenting on planning proposals, liaising with the public and providing arboricultural advice to other departments within the Council.

Between 2014 and 2016 Robert took up the role of Tree Officer at Elmbridge Borough Council, Surrey, once again carrying out tasks such as determining works trees applications, commenting on planning proposals and liaising with the public. While at Elmbridge Borough Council he passed the Arboricultural Association's Professional Tree Inspection course.

Robert is a professional member of the Arboricultural Association.