



Hayes Campus

Tree Hazard Evaluation

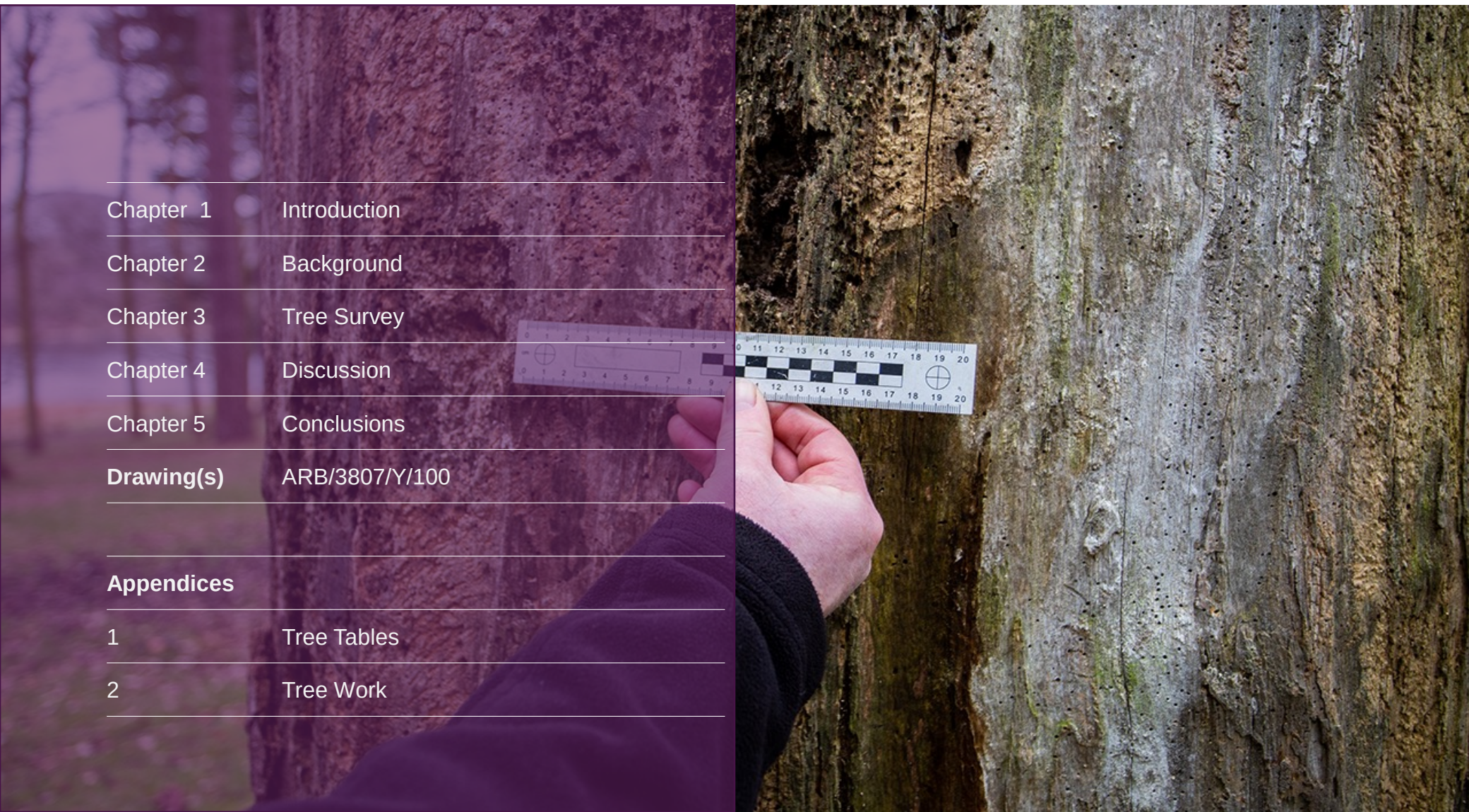
July 2018

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Drawing(s)	ARB/3807/Y/100

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Chapter 1 Introduction

1.01

ACS Consulting is instructed by Uxbridge College to undertake a Tree Hazard Evaluation as part of a site risk assessment and management plan at the Hayes Campus. The survey was undertaken by Ian Murat, a Registered Consultant of the Arboricultural Association.

1.02

The assessment undertaken identifies trees and discusses their suitability to be retained on the site.

The survey identifies:

- Trees that are undesirable to be retained because of age, structural or other defects.
- Trees that can be retained with an acceptable level of risk and the measures that are required to ensure their long-term retention.

1.03

The site was visited during June 2018 and a survey of the trees recording; species, height, stem diameter, age and condition was completed. The survey was undertaken in warm sunny conditions. The trees were in leaf which restricted a view of their upper canopies but gave a good indication of their physiological condition. The survey is a re-survey of the baseline survey that was undertaken in October 2015.

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Chapter 2 Background

2.01 The Site

The site is a college complex. It is located on a self-contained site just off Coldharbour Lane and contains a number of mature trees.

2.02 Statutory Protections

I have examined London Borough of Hillingdon's online resource. According to this document, the site is not located within a Conservation Area. I have no information currently on Tree Preservation Orders in force.

Chapter 3 Tree Survey

3.01

I have identified sixty-three individual trees. The survey was based on a topographical survey that was used for planning applications. There are a number of small errors and not all the trees were shown. It may not be accurate in respect of buildings. The trees have been tagged with a green plastic tag which corresponds to the entry in the spread sheets at Appendix 1.

3.02

The trees with a stem diameter >200 millimetres were surveyed for species type, age, height and condition. In view of the time of year, just the common name has been used. I undertook a non-destructive detailed examination of the trees at ground level. This methodology has essentially three stages:

1. Visual inspection for defects and vitality;
2. Examination of any defects identified by visual examination;
3. Measurement and analysis of these defects, which are considered critical.

3.03 General Observations

The trees' attributes have been recorded. These can be found in the spread sheet at Appendix 1. The trees were in leaf which restricted a view of their upper canopies but gave a good indication of their physiological condition.

Overall, there are very few notable defects of concern for the trees at the site. A small number of trees have deteriorated since the baseline survey and these are either discussed later in the chapter and/or noted in the spread sheet at Appendix 1.

The majority of trees appear to be free from defects that could be a cause for concern in respect of their stability. There is no evidence of root plate movement indicated by soil cracks. There is no evidence of any fruiting brackets within the immediate vicinity to indicate that the trees have been infested by known decay fungi.

In respect of the stems, many trees appear to have no features to indicate any defects. The trees are in good condition with well-formed branch structures, supporting canopies exhibiting good growth characteristics.

Chapter 3 Tree Survey

It is not uncommon for twigs and branch wood, less than 2 centimetres in diameter, to become dislodged in high winds, but this does not usually constitute a serious hazard, nor would it designate a tree as 'dangerous'. It could be alleviated by maintenance of the trees which would include crown cleaning, i.e. removal of any dead, diseased, broken or rubbing branches that were found.

Appropriate work has been detailed in the spread sheets and the Tree Work Specification at Appendix 3. Comments on more notable trees are provided below.

3.04 Ash – 717

The condition of this tree appears to have deteriorated over the past three years. It was noted there is a significant emergence of fruiting bodies of possibly *Perenniporia fraxinea* and *Ganoderma*. The tree has been topped with multiple attachment of re-growth. The tree requires felling, the decay around the topping points and the fungal infections are such that retention of the tree and continuation of the pruning regime is not considered economically viable.

3.06 Sycamore – 735

There is the emergence of *Ganoderma* on the lower stem at an old pruning wound. The tree and the emergence require monitoring.

3.07 Horse-chestnuts – 744, 750, 751, 753

The trees suffer extensively from *Pseudomonas*. The disease has affected a number of the trees' principal canopy branches with large wounds and exposed wood. There are a number of oozing pustules on the stems. Evidence from the leaves on the ground suggests the trees also suffer from Horse Chestnut Leaf Miner - *Cameraria ohridella* and *Guignardia* leaf blotch. None of these diseases affect the structural integrity of the trees. There is no evidence to suggest the trees are at risk of falling.

Despite the poor appearance of the horse-chestnut trees infested with *C. ohridella*, there is no evidence that damage by the moth leads to a decline in tree health, the development of dieback or, tree death. Trees survive repeated infestations and re-flush normally in the following year.

With regards to *Pseudomonas*, the general consensus is that unless there is an immediate concern about safety, trees with light to moderate bleeding and vigorous crowns can be left in place and monitored. Recovery may be possible and removal of trees which are still relatively vigorous (although diseased) may be premature.

Chapter 3 Tree Survey

One of the most common diseases is Guignardia leaf blotch (caused by the fungus *Guignardia aesculi*). The disease is recognisable by the reddish or dull brown, irregular blotches that are often concentrated at the tips and margins of infected leaflets. The blotches are often outlined by a conspicuous yellow band. Occasionally, horse-chestnuts are seen with leaflets that are browned around the edges but without the yellow margin. The agent that causes this condition, known as marginal leaf browning, is unknown but it has been suggested that 'xylem limited' bacteria may be involved.

3.08 Lombardy Poplars (General)

The comments that were made in respect of the poplars in the report of December 2012 are still relevant in this assessment.

3.09 Poplars 755, 761 and 767

These are prominent specimens located in the sports ground. They have extensive decay and fruiting bodies of *Ganoderma*. The condition of the trees is such that they should be removed.

Chapter 3 Tree Survey



Chapter 4 Management

4.01

The management of the trees has been divided into tree work that is required and long-term tree management strategy.

4.02 Tree Work

The works that have been identified have been placed into six categories according to its urgency. These are:

- 1 – Urgent: Immediate attention as detailed in the report to make tree safe;
- 2 – Very High: Works required in 30 days;
- 3 – High: Works required in 30 – 90 days;
- 4 – Moderate: Works required as a part of scheduled maintenance: Works required in 90 – 270 days;
- 5 – Low: Works required where budgets allow; 270 – 730 days;

A tree work specification at Appendix 2 details work required for tender.

4.03 Long-Term Management Strategy

The trees at the site are clearly principal components of the site enhancing and giving scale and maturity as landscape features. A long-term management strategy will be to undertake additional planting with broadleaved trees, to give some age diversity. This can be undertaken where it is considered appropriate without reducing amenity areas. The continued well-being of trees and site occupiers can be met through regular inspection dealing with issues as and when they arise.

4.04 Re-survey

This survey is a base line survey. It is recommended that the next base line survey is undertaken within three years due to the site's occupancy. Intermediate surveys may be undertaken especially following winds of Force 7/8.

Chapter 4 Management

4.05 Legislative Context

Legislation protects trees as well as individual species and their territories against harm as well as groups of animals during their breeding season. Some species of plants and animals are protected under the Wildlife and Countryside Act, 1981 Schedules 1 and 5, The Conservation of Habitats and Species Regulations 2010, the Countryside and Rights of Way Act 2000 and The Protection of Badgers Act, 1992. Protected species are covered by the requirements of National Planning Policy Framework. A full understanding of the extent of the wildlife present on site and the measures needed to overcome any potential detrimental impact during management is likely to be essential.

4.06

A number of habitats, species and trees and woodlands in the UK receive varying levels of statutory protection under several elements of legislation including:

- (i) Wildlife and Countryside Act 1981 (as amended);
- (ii) The Habitats Regulations 2010;
- (iii) The Countryside and Rights of Way Act 2000;
- (iv) The Protection of Badgers Act 1992;
- (v) The Hedgerow Regulations 1997.
- (vi) Town and Country Planning Act 1990 (in particular

sections 197-214 as amended)

(vii) The Planning and Compensation Act 1991 (section 23)

(viii) Forestry Act 1967 (as amended)

(ix) 2012 No. 605 Town and Country Planning, England. The Town and Country Planning (Tree Preservation)(England) Regulations 2012.

4.07

The Wildlife and Countryside Act (1981) and the Habitat Regulations 2010 gives wild birds, bats, mammals, some invertebrate species and plants statutory protection. It is important to ensure that this legislation is considered when carrying out any works to trees.

4.08

It is prudent to undertake a bat risk assessment prior to carrying out work on trees that may have suitable features for their roosting and to avoid work at times when birds may be nesting.

Chapter 5

Conclusions/Recommendations

5.01

Based on the assessment the following conclusions/recommendations are made:

1. The trees require surveying on a regular basis as noted in the spreadsheets. Leaf size, colour and overall canopy density are good indicators of tree health and give early indications of physiological problems that allow for appropriate management prescriptions. A detailed survey should be undertaken within two years with brief inspections being undertaken following winds in excess of Force 7/8.
2. The tree works specified to be undertaken if desired.
3. Tree works to be carried out within the time frame specified.
4. New planting is considered to ensure continuity of tree cover with broadleaved trees except sycamore.
5. Recommendations regarding monitoring to be undertaken to ensure a complete understanding of the trees' condition.

Appendix 1

Contents

Key

Tree Tables

KEY

Height	Height in metres.
Age	Y – Young: Out-planted trees that have not yet established; SM – Semi-mature: Established trees up to 2/6 of expected height and crown; EM – Early mature: Between 2/6 and 4/6 of expected height and crown; M – Mature: Between 4/6 and 6/6 full expected height and crown; FM – Fully mature: 6/6 Full expected height and crown; OM – Over mature: Crown beginning to break-up and decrease in size; V – Veteran: A tree with characteristics of a veteran specimen; S – Senescent: Crown in advanced stage of break-up, may be suitable to be a veteran or a bio-diversity feature.
Physiological Condition	Good – Very few defects, a reasonable long life expectancy depending on age class, typical example of what would be expected of the genus. Fair – Some defects giving the tree a shortened life expectancy. Poor – Limited life with major problems.
Structural Condition	Good – Very few defects of any significance to safety; Fair – Some defects, rectifiable with minor tree surgery; Poor – Significant defects rectifiable with major tree surgery or felling.
Work Urgency	1 – Urgent: Immediate attention as detailed in the report to make tree safe; 2 – Very High: Works required in 30 days; 3 – High: Works required in 30 – 90 days; 4 – Moderate: Works required as a part of scheduled maintenance: Works required in 90 – 270 days; 5 – Low: Works required where budgets allow; 270 – 730 days; 6 – None: No works required, no target exists or is excluded.
Inspection Frequency	1. – Urgent: Carry out detailed inspection – aerial inspection/decay detection as soon as possible; 2. – Very High: Six month inspection; 3. – High: Twelve month inspection; 4. – Moderate: Biennial inspection; 5. – Low: Three year inspection; 6. – Very low: Five year inspection; 7. – None: No target exists or is excluded.

Tree Ref No.	Species	Height (M)	Age	Physiological Condition	Structural Condition	Comments	Work	Priority	
								Work Urgency	Inspection Frequency
717	Ash	14	FM	Poor	Poor	Multi-stemmed at 4m. Recently topped. Number of cracks in the stem. Emergence of Perenniporia fraxinea and/or Ganoderma on the lower stem and root plate.	Fell.	3	-
718	Lombardy Poplar	14	FM	Good	Fair/Poor	Topped. Multiple attachment of re-growth. Profusion of epicormic growth to stem. Will require re-topping in another 2/3 years. Consider felling or re-topping.	Re-top or fell.	4	-
719	Lombardy Poplar	14	FM	Good	Fair/Poor	Topped. Multiple attachment of re-growth. Profusion of epicormic growth to stem. Will require re-topping in another 2/3 years. Consider felling or re-topping	Re-top or fell.	4	-
720	Lombardy Poplar	14	FM	Good	Fair/Poor	Topped. Multiple attachment of re-growth. Profusion of epicormic growth to stem. Will require re-topping in another 2/3 years. Large internal cavity with thin residual walls. Consider felling or re-topping	Re-top or fell.	4	-
721	Birch	15	M	Good	Good			6	5
722	Cypress	25	FM	Good	Fair	Burrowing in the root zone. No evidence of instability. Significant tree.		6	5
723	Norway Maple	15	M	Good	Good	Minor dead wood due to natural branch suppression up to 15mm in diameter. Located in a narrow landscaped strip in car park.		6	5
724	Ash	18	FM	Fair	Good	Significant specimen. Crown reduced.	Crown clean.	4	5

Tree Ref No.	Species	Height (M)	Age	Physiological Condition	Structural Condition	Comments	Work	Priority	
								Work Urgency	Inspection Frequency
725						Felled.			
726	Poplar	10	FM	Poor	Poor	Topped. Extensive internal decay. Unknown bat roosting potential. Consider felling or re-topping	Re-top or fell.	4	5
727	Poplar	10	FM	Poor	Poor	Topped. Extensive decay. Woodpecker holes. Unknown bat roosting potential. Very poor. Consider felling or re-topping	Re-top or fell.	4	5
728	Poplar	8	FM	Poor	Poor	Topped/pollarded as a stump. Consider felling or re-topping	Re-top or fell.	4	5
729	Poplar	10	FM	Poor	Poor	Topped. Decay. Of no particular merit. Consider felling or re-topping	Re-top or fell.	4	5
730									-
731	Ash	20	FM	Good	Good	Dead wood due to natural branch suppression up to 30mm in diameter.	Remove dead wood throughout canopy.	2	5
732									

Tree Ref No.	Species	Height (M)	Age	Physiological Condition	Structural Condition	Comments	Work	Priority	
								Work Urgency	Inspection Frequency
733	Poplar	10	FM	Poor	Poor	Topped. Decay. Of no particular merit.	Fell.	4	5
734	Poplar	10	FM	Poor	Poor	Topped. Decay. Of no particular merit. Consider felling or re-topping.	Re-top or fell.	4	5
735	Sycamore	18	FM	Fair	Good	Sparse inner canopy. Emergence of juvenile fruiting bodies on the stem – Ganoderma at an old wound. Dead wood in the distal parts of the canopy up to 10-15mm in diameter. Juvenile fruiting body in a pruning wound at 4-5m to the south west.	Monitor emergence of fruiting bodies. Remove dead wood in view of location.	4	5
736	Poplar	12	FM	Poor	Poor	Topped. Extensively decayed. Epicormic regeneration on stem. Consider felling or re-topping.	Re-top or fell.	4	5
737	Poplar	12	FM	Poor	Poor	Topped. Extensively decayed. Epicormic regeneration on stem. Consider felling or re-topping.	Re-top or fell.	4	5
738	Poplar	12	FM	Poor	Poor	Topped. Extensively decayed. Epicormic regeneration on stem. Consider felling or re-topping.	Re-top or fell.	4	4
739	Lime	20	FM	Good	Good	Significant specimen. Dead wood 80 mmØ	Remove dead wood.	3	5
740	Lombardy Poplar	10	FM	Good	Poor	Topped. Multiple attachment of re-growth with decay. Consider felling or re-topping	Re-top or fell.	4	5

Tree Ref No.	Species	Height (M)	Age	Physiological Condition	Structural Condition	Comments	Work	Priority	
								Work Urgency	Inspection Frequency
741	Lime	18	FM	Good	Good	Stem injury with excellent wound occlusion.	Remove epicormic growth to give clear stem of 3m.	4	5
742	Lombardy Poplar	12	FM	Dead	Dead	Dead.	Fell. Leave stump as close to the ground as possible.	3	-
743	Lombardy Poplar	15	FM	Poor	Poor	Topped. Consider felling or re-topping.	Re-top or fell.	4	5
744	Horse-chestnut	18	FM	Fair	Good	Evidence of Pseudomonas ooze on stem. Leaf blotch.		6	5
745	Beech	10	M	Good	Poor	Extensive cavity on main stem. Cavities and decay on main limb. Unknown bat roosting potential.		6	5
746	Beech	12	EM	Good	Good	Dead wood due to minor branch suppression up to 15mm in diameter.		6	5
747	Hornbeam	6	SM	Good	Good	Twin stemmed. Typical of species. Defective stem union.		6	5
748	Poplar	6	FM	Poor	Poor	Topped. Consider felling or re-topping.	Re-top or fell.	4	5
749						Felled.			

Tree Ref No.	Species	Height (M)	Age	Physiological Condition	Structural Condition	Comments	Work	Priority	
								Work Urgency	Inspection Frequency
750	Horse-chestnut	16	M	Fair	Fair	Leaf blotch. Historical root disturbance. Branch snapped on southern stem at 6m. Build-up of rubbish.	Remove rubbish.	6	5
751	Horse-chestnut	18	FM	Fair	Good	Leaf blotch, dysfunction on stem. Weeping ooze. Multi-stemmed at 3m with defective stem unions. Evidence of Pseudomonas ooze. Dead wood due to natural branch suppression. Ground disturbance from diggers.	Monitor.	6	5
752						Felled.			
753	Horse-chestnut	15	EM/M	Very Poor	Fair	Leaf blotch. Very poor. Crown asymmetry. Suffering extensively from Pseudomonas ooze. Cavity at 2m that extends up to 25cm. Monitor.		6	5
754	Lombardy Poplar	14	FM	Fair	Poor	Topped. Consider felling or re-topping.	Re-top or fell.	4	5
755	Poplar	11	FM	Poor	Poor	Ganoderma/decay.	Fell.	2	5
756	Ash	18	M	Good	Good	Stem injury on western stem with good wound occlusion. Dead wood due to natural branch suppression up to 30mm in diameter. Compaction to the south.	Crown clean	4	5
757	Lombardy Poplar	18	FM	Fair	Poor	Topped. Multiple attachment of re-growth.	Re-top or fell.	4	5

Tree Ref No.	Species	Height (M)	Age	Physiological Condition	Structural Condition	Comments	Work	Priority	
								Work Urgency	Inspection Frequency
758	Poplar	17	FM	Fair	Poor	Topped.	Re-top or fell.	4	5
759	Lombardy Poplar	17	FM	Fair	Poor	Topped.	Re-top or fell.	4	5
760	Lombardy Poplar	17	FM	Fair	Poor	Topped.	Re-top or fell.	4	5
761	Lombardy Poplar	17	FM	Fair	Poor	Topped. Cavity	Fell.	3	5
762	Lombardy Poplar	17	FM	Fair	Poor	Topped.	Re-top or fell.	4	4
763	Lombardy Poplar	17	FM	Fair	Poor	Topped. New garage within 3m to the north.	Re-top or fell.	4	5
764	Lombardy Poplar	17	FM	Fair	Poor	Topped. New garage within 3m to the north.	Re-top or fell.	4	5
765	Lombardy Poplar	17	FM	Fair	Poor	Topped.	Re-top or fell.	4	5
766	Lombardy Poplar	17	FM	Fair	Poor	Topped.	Re-top or fell.	4	5
767	Lombardy Poplar	17	FM	Fair	Poor	Topped. Ganoderma.	Fell.	3	5

Tree Ref No.	Species	Height (M)	Age	Physiological Condition	Structural Condition	Comments	Work	Priority	
								Work Urgency	Inspection Frequency
768	Lombardy Poplar	17	FM	Fair	Poor	Topped. Unknown bat roosting potential. Large pieces of dead wood.	Remove dead wood greater than 25mm in diameter. Re-top or fell.	4	5
769	Lombardy Poplar	17	FM	Fair	Poor	Topped. Unknown bat roosting potential.	Re-top or fell.	4	5
770	Lombardy Poplar	17	FM	Fair	Poor	Topped. Unknown bat roosting potential.	Re-top or fell.	4	5
771	Lombardy Poplar	17	FM	Fair	Poor	Topped. Unknown bat roosting potential.	Re-top or fell.	4	5
772	Sorbus	10	FM	Fair	Fair	Old putrefied remains of Ganoderma bracket. No other sprouting. Dead Wood	Remove dead wood	3	5
773	Lombardy Poplar	17	FM	Fair	Poor	Topped. Unknown bat roosting potential.	Re-top or fell.	4	5
774	Lombardy Poplar	17	FM	Fair	Poor	Topped. Unknown bat roosting potential.	Re-top or fell.	4	5
775	Lombardy Poplar	17	FM	Fair	Poor	Topped. Unknown bat roosting potential.	Re-top or fell.	4	5
776	Lombardy Poplar	17	FM	Fair	Poor	Topped. Unknown bat roosting potential.	Re-top or fell.	4	5

Tree Ref No.	Species	Height (M)	Age	Physiological Condition	Structural Condition	Comments	Work	Priority	
								Work Urgency	Inspection Frequency
777	Lime	20	M	Good	Good			6	5
778	Lombardy Poplar	17	FM	Fair	Poor	Topped. Unknown bat roosting potential.	Re-top or fell.	4	5
779	Lime	20	FM	Good	Good	Dead wood due to natural branch suppression. Remove dead wood over highway where vehicles park. Light ivy on stem.	Remove dead wood. Remove epicormic growth to give clear stem of 4m.	4	5

Appendix 2

Contents

Tree Work

Tree Work (High Priority)

Tag No.	Identity	Particular Schedule of Works Required
717	Ash	Fell leaving stump as close to the ground as possible
739	Lime	Remove epicormic growth to give clear stem of 3m.
742	Lombardy Poplar	Fell. Leave stump as close to the ground as possible.
755	Poplar	Fell. Leave stump as close to the ground as possible.
767	Lombardy Poplar	Fell. Leave stump as close to the ground as possible.
772	Sorbus	Remove dead wood greater than 25mm Ø.

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