BARNSLEY
Metropolitan Borough Council

Birkwood Primary School

Darfield Road, Cudworth, Barnsley, S72 8HG

Tree Condition Survey Report

February 2023

Contents

1 Introduction

1.1 Authority to carry out Inspection

1.1.1.1 Barnsley Metropolitan Borough Council (BMBC) are authorised to carry out a survey of all trees within the administrative boundaries of Birkwood Primary School, Darfield Road, Cudworth, Barnsley, S72 8HG.

1.1.1.2 Surveyor: James Stacey M.Arbor.A. FdSc Arboriculture

1.1.1.3 Survey Date: 3rd February 2023

1.2 Objectives and Scope of Survey

1.2.1.1 BMBC carried out a survey of the trees which are situated within the school boundaries in order to determine the condition of the trees and recommend any works to maintain their safety over public areas.

1.2.1.2 Appropriate work prescriptions have been provided to remove damaged/diseased and dying limbs/trees and provide proactive management of the trees to maintain their safety along the public access areas.

1.3 Limitations

1.3.1.1 The level of inspection was a visual inspection of the trees from ground level only utilising visual tree assessment (VTA) methods. Comments upon tree condition have been made on the evidence found from visual inspection. Detailed inspection of decay and structural integrity was not carried out and was outside the scope of this survey.

1.4 Validity

1.4.1.1 Trees are natural living organisms and are subject to environmental factors and conditions which can affect and change their condition. Therefore, no tree can be assessed as being completely safe. An assessment of the risk posed by the trees at the above stated location have been made on the findings on the day of the survey and remains valid for the inspection frequency detailed in Appendix 1.

2 Methodology

2.1 Survey Methods

2.1.1.1 Access to the trees was on foot only and a visual inspection of the tree using visual tree assessment (VTA) methods was used.

2.1.1.2 The following areas were inspected; root plate and base of the stem, The main stem/s, crown break and main structural unions, branch work, and outer crown and foliage cover.

2.1.1.3 Stems, stem bases and main structural unions were inspected for visual signs of decay, cavities and damage including fungal fruiting body production. Crown branching was inspected for failed and damaged limbs, deadwood and growth habit (ie. Long limbs with heavy foliage end loading). Crowns were inspected for level and quality of foliage and leaf/bud production to determine vascular health.

2.2 Tree Data Definitions

2.2.1 Age Class

2.2.1.1 Age class records the life stage of the tree. This can be used as an aid for identification of trees while carrying out prescriptive works. It is also a method of determining the age and longevity of canopy cover on site. The following age class definitions have been used in this survey

2.2.1.2 Young (Y): Trees categorised as young are those still establishing into their environment.

2.2.1.3 Early Mature (EM): Early Mature- trees that are established and exhibiting signs of reaching maturity, early flowering, showing signs of bark fissuring and decurrent growth forms.

2.2.1.4 Mature (M): Trees that have reached maturity and show signs of reproductive activity.

2.2.2 Life Expectancy

2.2.2.1 Life expectancy has been determined through age class of specimens and species knowledge. It has been included to aid future management of the tree stock.

2.2.2.2 The life expectancy has been determined through the minimum number of years of contribution the tree provides and is represented as follows: <10 (years) 10+, 20+, 30+.

2.2.3 Condition

2.2.3.1 The physical condition was visually inspected and placed into one of the following categories.

2.2.3.2 Good (G): Tree exhibits good condition, little to no deadwood, no signs of weakness in forks and little to no included unions

2.2.3.3 Fair (F): Some defects identified, considerable deadwood, included unions that are of concern

2.2.3.4 Poor (P): Many defects identified, portions of tree are dying or dead, included unions in the process of failure or having failed. Tree is in general decline.

2.2.3.5 Dead (D): Tree exhibits no signs of life.

2.3 Glossary of Terms

2.3.1.1 Coalesce – Separate decay entry points join to form a larger area of decay.

2.3.1.2 Cambium - Live vascular region beneath the bark which supports the life of the tree.

2.3.1.3 Compartmentalised - Decay has been sealed off and enclosed by the trees defence mechanism.

2.3.1.4 Hazard beam - A lateral split in the fibrous region of the timber without snapping the limb.

2.3.1.5 Inclusion – 2 stems or limbs growing against each other trapping bark between the join and causing a weak union.

2.3.1.6 Occlusion/Occluded - Old pruning wounds have been completed sealed with new wood/bark growth.

2.3.1.7 Pollard - Management method which removes all branch growth leaving either just the stem of scaffold limb form.

2.3.1.8 Reaction/Wound wood - New wood growth stimulated from damage or pruning to seal wounds or strengthen.

2.3.1.9 Union – The joint between 2 stems or where branches attach to the main stem.

2.3.1.10 Epicormic growth – Regenerative young growth from previously dormant bud, usually occur following pruning works to which allow light.

3 Results

3.1 Tree Identification and Numbering

3.1.1.1 Trees have been identified as either individual trees or as tree groups.

3.1.1.2 Individual trees are trees which are stand alone trees or which require specific works only appropriate to the individual tree. These are numbered chronologically with a prefix T (eg T1).

3.1.1.3 Tree groups are groups of trees that are growing densely together making subsequent location of individuals difficult or which are groups of trees which require the similar work. Tree groups are numbered chronologically with the prefix G (eg.G1).

3.1.1.4 A total of 37 individual trees and 3 tree groups have been listed/identified as part of the survey.

3.2 Statutory Designations

3.2.1.1 A check with BMBC records was made to determine if there were any Tree Preservation Order (TPO) designations within the areas surveyed. No TPO or Conservation Area designations were identified for the school.

3.3 Risk Assessment

3.3.1.1 A risk assessment was carried out on each tree or tree group surveyed to determine the level of risk posed by the tree and to determine the work priority where remedial works are identified.

3.3.1.2 The likelihood of a tree/tree part failing was assessed against the likelihood of the failed part hitting a target using Table 1 below to determine the likelihood of a failure striking a target.

Table 1: Likelihood of Failure Matrix

Likelihood of failure	**Likelihood of impact**			
	Very Low	**Low**	**Medium**	**High**
Imminent	*Unlikely*	*Somewhat likely*	*Likely*	*Very Likely*
Probable	*Unlikely*	*Unlikely*	*Somewhat likely*	*Likely*
Possible	*Unlikely*	*Unlikely*	*Unlikely*	*Somewhat likely*
Improbable	*Unlikely*	*Unlikely*	*Unlikely*	*Unlikely*

3.3.1.3 The resulting likelihood of failure striking the target was then assessed against the consequences of the failed part striking the target to achieve a risk rating using Table 2 below.

Table 2: Risk Matrix

Likelihood of failure & Impact	**Consequence of Failure**			
	Negligible	**Minor**	**Significant**	**Severe**
Very Likely	*Low*	*Moderate*	*High*	*Extreme*
Likely	*Low*	*Moderate*	*High*	*High*
Somewhat Likely	*Low*	*Low*	*Moderate*	*Moderate*
Unlikely	*Low*	*Low*	*Low*	*Low*

3.4 Work Priorities

3.4.1.1 Trees and the work prescriptions required have been prioritised according to the severity of the trees condition and potential for failure. Work priorities have been given to enable appropriate management of the work required.

3.4.2 Red

3.4.2.1 Red priority trees are those which have significant damage or decay evident and present a high risk of failure over public access areas such as roads and footpaths. Works with a Red priority will require work within 10 Working days of the date of inspection.

3.4.3 Amber

3.4.3.1 Amber priority trees are those with signs of damage or large amounts of deadwood over the public areas and which present a moderate risk. Works with an Amber priority will require work within 6 months of the date of inspection.

3.4.4 Green

3.4.4.1 Green priority trees are those which do not yet show signs of failure or damage and do not exhibit poor health. These are trees which present a low risk and include those with dense ivy colonisation or tree parts in contact with services and trees with minor deadwood within the crowns. Works with a Green priority will require work with 24 months of the date of inspection.

3.5 Mapping

3.5.1.1 All tree and tree group locations have been identified in the Tree Location Plan at Appendix 2.

Appendix 1: Tree Survey Schedule

Ref	Species	Height (m)	DBH (cm)	Crown Radius (m)	Life stage	Life expectancy	Condition	Risk Assessment			Survey Notes	Recommendations	Priority	Inspection frequency
								Likelihood	Consequence	Risk rating				
T1	Sycamore	8	20	3	EM	20+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified. Crown is low adjacent car parking bays.	Crown lift to 2.5m	Green	18 Months
T2	Sycamore	8	19	1.5	EM	<10	P	Somewhat likely	Significant	Moderate	Upper canopy has significant dieback and high proportion of deadwood, tree is suppressed and is in decline.	Fell to ground level.	Amber	N/A
T3	Sycamore	14	36	4.5	EM	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T4	Silver birch	12	23	1	EM	Dead	D	Somewhat likely	Significant	Moderate	Tree is dead.	Fell to ground level	Amber	N/A
T5	London plane	15	46	6	M	30+	G	Unlikely	Severe	Low	No obvious defects or signs of ill health identified. Crown is hanging low over parking areas.	Crown lift over car park.	Green	18 Months
T6	Sycamore	14	61	4.5	M	30+	G	Unlikely	Severe	Low	Minor small diameter deadwood in central crown, over grass and adjacent low use track. No other obvious defects identified.	No works required	N/A	18 Months
T7	Holly	8	23	2.5	M	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T8	Horse chestnut	13	30	4	EM	20+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T9	Sycamore	10	35	4.5	EM	20+	G	Unlikely	Significant	Low	Wound in lowest limb toward MUGA. Wound wood formed around wound, no significant weight in limb. No other significant defects identified.	No works required	N/A	18 Months

Ref	Species	Height (m)	DBH (cm)	Crown Radius (m)	Life stage	Life expectancy	Condition	Risk Assessment			Survey Notes	Recommendations	Priority	Inspection frequency
								Likelihood	Consequence	Risk rating				
T10	Sycamore	14	36	3	EM	20+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T11	Sycamore	12	35	3	EM	10+	F	Unlikely	Significant	Low	Old wound on stem at 1.5m, small saprophytic fungi on exposed wood, no indication of decay progression, sounding hammer does not indicate hollowing. No other obvious defects identified.	No works required	N/A	18 Months
T12	Sycamore	10	21	4.5	EM	20+	F	Unlikely	Minor	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T13	Sycamore	15	43	6	M	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified. Minor deadwood in central crown, small diameter and length	No works required	N/A	18 Months
T14	Sycamore	13	25	3	EM	20+	F	Unlikely	Minor	Low	Old wound on lowest limb, wound wood growth gives suitable strength, no other defects identified.	No works required	N/A	18 Months
T15	Sycamore	15	38	5.5	M	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified. Minor deadwood in central crown, small diameter and length.	No works required	N/A	18 Months
T16	Sycamore	11	20	3.5	EM	20+	G	Unlikely	Minor	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T17	Sycamore	11	26	4	EM	20+	G	Unlikely	Minor	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T18	Sycamore	13	29	4.5	EM	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified. Minor deadwood in central crown, small diameter and length	No works required	N/A	18 Months

Ref	Species	Height (m)	DBH (cm)	Crown Radius (m)	Life stage	Life expectancy	Condition	Risk Assessment			Survey Notes	Recommendations	Priority	Inspection frequency
								Likelihood	Consequence	Risk rating				
T19	Sycamore	16	47	6	M	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified. Minor deadwood in central crown, small diameter and length	No works required	N/A	18 Months
T20	Sycamore	16	36	4.5	M	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified. Minor deadwood in central crown, small diameter and length	No works required	N/A	18 Months
T21	Sycamore	14	30	5	EM	20+	F	Somewhat likely	Minor	Low	Deadwood over potting tables, no other obvious defects identified.	Remove deadwood in lower crown	Green	18 Months
T22	Sycamore	12	32	4	EM	20+	F	Somewhat likely	Minor	Low	Deadwood over potting tables, no other obvious defects identified.	Remove deadwood in lower crown.	Green	18 Months
T23	Sycamore	15	24	5	EM	20+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T24	Sycamore	15	39	6.5	EM	20+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T25	Sycamore	16	43	6	M	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T26	Sycamore	17	46	5	M	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T27	Sycamore	13	34	5	EM	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T28	Sycamore	17	64	8	M	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T29	Sycamore	15	31	3.5	EM	20+	F	Somewhat likely	Significant	Moderate	Large dead branch over small walkway bridge. Small wound on stem, occluding well. No other defects identified	Remove dead branch	Amber	18 Months

Ref	Species	Height (m)	DBH (cm)	Crown Radius (m)	Life stage	Life expectancy	Condition	Risk Assessment			Survey Notes	Recommendations	Priority	Inspection frequency
								Likelihood	Consequence	Risk rating				
T30	Sycamore	14	46	6	M	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T31	Silver birch	8	13	3	EM	10+	F	Unlikely	Minor	Low	Damage on stem, wound wood has formed, small tree with lightweight crown.	No works required	N/A	18 Months
T32	Sycamore	16	49	5.5	M	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T33	Field maple	12	31	4.5	M	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T34	Field maple	12	21	2.5	M	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
T35	Field maple	14	29	4	M	30+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
G1	Elder, holly, blackthorn.	8	avg 10	2	EM	10+	F	Unlikely	Minor	Low	Small group of small trees and shrubs No obvious defects or signs of ill health identified.	No works required	N/A	18 Months
G2	Cherry, birch, maple, plum	17	avg 40	5	M	20+	F	Somewhat likely	Significant	Moderate	Woodland group, generally in fair to good condition, deadwood throughout, mostly small diameter. Some bark damage to trees, but not affecting structural strength or overall health. (A) plum, decaying stems, (B) Dead fallen tree. adjacent boundary	(A) Fell to ground, (B) Remove dead tree. Remove dead wood >50mm throughout group	Amber	18 Months
G3	Maple, cherry, plum	15	avg 25	4	M	20+	F	Unlikely	Significant	Low	Small group of trees, adjacent woodland group, no significant defects of concern identified.	No works required	N/A	18 Months
T36	Sycamore	14	46	4.5	EM	20+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified.	No works required	N/A	18 Months

Ref	Species	Height (m)	DBH (cm)	Crown Radius (m)	Life stage	Life expectancy	Condition	Risk Assessment			Survey Notes	Recommendations	Priority	Inspection frequency
								Likelihood	Consequence	Risk rating				
T37	Ash	12	27	4.5	EM	10+	G	Unlikely	Significant	Low	No obvious defects or signs of ill health identified. Crown is low and in contact with building.	Crown lift to clear building roof.	Green	18 Months

Appendix 2: Tree Location Map