



BATSON

Landscape & Tree Care Ltd.

**Arboricultural Impact Assessment
Tree Survey
Barns Close, Monkton**



Client: David Leybourne

Date: 16th July 2015

Our Ref: 0007477

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Contents Page

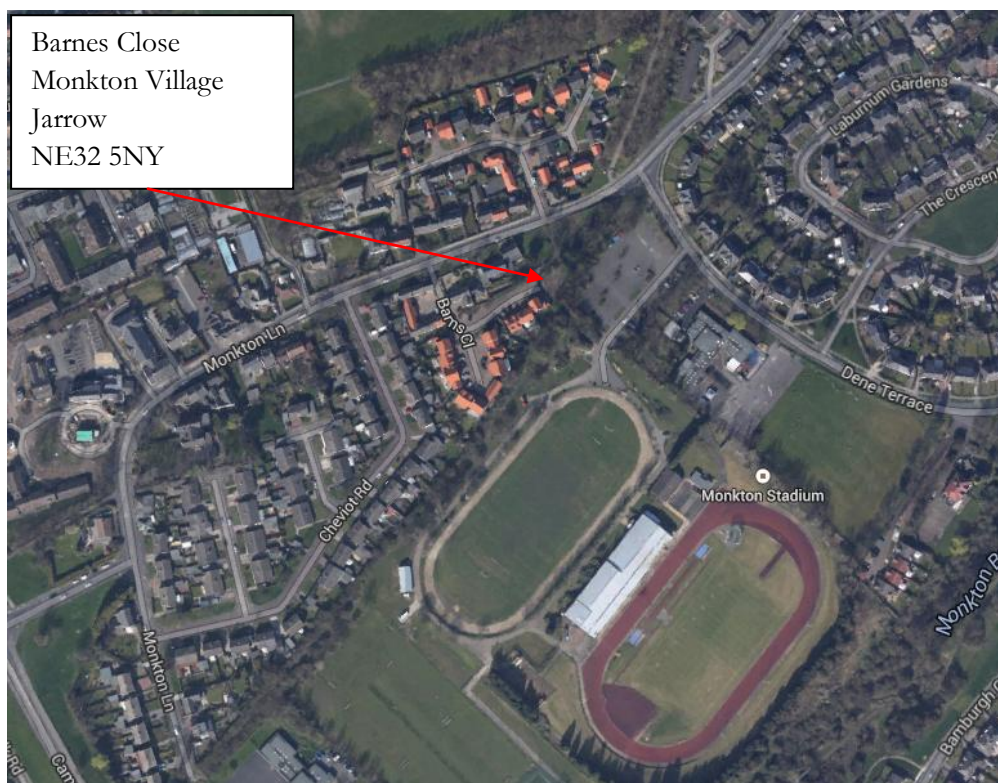
1	Synopsis.....	3
2	Location.....	3
3	Purpose & Use of Report.....	4
4	Site Survey.....	4
5	Observations.....	5
6	Wildlife Activity Within and Around the Trees.....	5
7	Tree Survey.....	5
8	Tree Schedule.....	6-24
9	Tree Root Protection Area.....	25
10	Analysis Introduction.....	26
11	Tree Analysis (General).....	26
12	Tree Analysis (Specific).....	27/28
13	Conclusion.....	28
14	Recommendations.....	28
15	Environmental Impact of Recommendations.....	29
16	Arboricultural Method Statement.....	29
17	Appendix.....	

1.0 Synopsis

- 1.1 A parcel of semi-derelict land, seen to be in an unmaintained and unmanaged condition, is currently awaiting Planning Approval for residential purposes.
- 1.2 There are a number of trees and understory vegetation growing within and around the site, and therefore, it is requested that an Arboricultural Impact Assessment Tree Report, in accordance with BS5837:2012, be prepared.

2.0 Location

- 2.1 The site is located approximately 60 metres, southwest of the junction, between Monkton Lane and Dean Terrace, Monkton Village, Jarrow, NE32, Tyne & Wear (X: 432204 – Y: 563726).



3.0 Purpose & Use of Report

- 3.1 The purpose of this Report is to assess the trees' current Health & Condition, together with the impact the proposed development may have upon them.
- 3.2 The report meets the requirements set out within BS 5837:2012, and may be used by the Client, Architect and Local Planning Authority, for guidance purposes, in determining the Application.
- 3.3 This Report will:-
- Assess the health, condition and retention value of relevant trees.
 - Assess the trees' visual amenity and landscape value.
 - Assess existing ground constraints which may affect the trees' future health and condition.
 - Consider the environmental impact of recommendations.
 - Indicate the Root Protection Area of individual trees.

4.0 Site Survey

- 4.1 The site was visited on 23rd June 2014. At the time of inspection, weather conditions were dry and warm, with clear visibility.
- 4.2 The Report has been prepared on the basis of observations made during inspection.
- 4.3 Appropriate tools and equipment were used to gather information from ground level.
- 4.4 No diagnostic tools were used during inspection.
- 4.5 It should be noted that, trees are dynamic organisms and as such, are subject to change. Details recorded during inspection, form the basis of the Tree Schedule (Para. 8.0).

5.0 Observations

- 5.1 The site currently, appears to be an unmaintained, unmanaged, semi-derelict parcel of land.
- 5.2 There is a fenced area within the site, which appears to be unmaintained, and overgrown with dense scrub and understory vegetation.
 - 5.2.1 The smaller area within the site is bounded by ‘close-board’ and wire type fencing, approximately 2 metres in height.
- 5.3 There is a well maintained Public Green, which lies northwest of the site.
 - 5.3.1 A ‘birds-mouth’ type fence, approximately 0.75 metres in height, forms the northern and eastern boundary of the Public Green.
- 5.4 There are trees and shrubs of mixed species and age class, growing within and around the site, that appear to be unmanaged and of poor quality.
- 5.5 It is the trees growing within and around the site which form the main subjects of this Report.

6.0 Wildlife Activity Within and Around the Trees

- 6.1 At the time of inspection, there was evidence of bird activity within and around the site.
- 6.2 Although there was no evidence of bat activity at the time of inspection, cavities within the trees may be being used as bat roosting sites.
- 6.3 Due to the nature and character of the site, with areas of tree cover and ‘low storey’ vegetation, it is likely that there will be a presence of small and larger mammals.

7.0 Tree Survey

- 7.0 It is the trees growing within and around the semi-derelict parcel of land, adjacent to Barns Close, Monkton, which form the main subjects of this report.
- 7.1 For the purpose of this report, individual specimen trees will be referenced with a ‘T’ prefix and number (e.g. **T1**).
- 7.2 Positions of the individual specimens are identified on Plan Dwg No. **0007477/P4a**

8.0 Tree Schedule

BS5837:2012 Assessment

Tree ID : T1	Tag :	Assessor : Ryan Dodds	Bats : Unknown
Species : Sycamore <i>Acer pseudoplatanus</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	
		1st Branch : 2 E	

— Stems —		— Health —				— RP —		— Clearance (m) —				— Spread (m) —									
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
14.5	1	550	Mature	Fair	Ivy	Poor	Fair	C.1	10 to 20 yrs	136.9	6.6	Pre Construction	1 Year	5	5	6	7	8	7	6	7

Tree Comment : Relatively healthy in appearance.
 Dense Ivy growth upon lower stem.
 Co-dominant stems form at 3m HGL.
 Relatively healthy branching system in appearance.
 Major deadwood within canopy.

Work Category	Action
Remove	Major dead wood
Remove	Ivy
	<i>Sever at base</i>

Survey Comment : Tree growing outside of site boundary.
 Root containment by Public highway to northwest, and access road to southwest.
 Competition for ground moisture and nutrients with surrounding, dense vegetation.
 Inspection limited due to dense Ivy growth.



Tree T1

BS5837:2012 Assessment

Tree ID : T2	Tag :	Assessor : Ryan Dodds	Bats : Unknown
Species : Sycamore <i>Acer pseudoplatanus</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	
		1st Branch : 1 W	

Stems			Health							RP		Clearance (m)				Spread (m)					
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
13	1	170	Semi-mature	Poor	Poor	Poor	Poor	C.1	<10 yrs	13.1	2.04	Pre Construction	N/A	5	5	5	7	8	3	3	7

Tree Comment : Poor quality, spindly specimen.
Buttress roots covered by dense vegetation.
Main stem leans to south approx. 20 degrees.
Evidence of previous pruning on south side of stem, with pruning stubs left.
Sparse, poorly formed canopy.

Work Category	Action
Fell and replacement plant	In agreement with the LPA

Survey Comment : Tree growing outside of site boundary.
Root contained by access road to south.
Competition for ground moisture and nutrients with dense vegetation to north.
Inspection limited due to dense Ivy growth.



Tree T2

BS5837:2012 Assessment

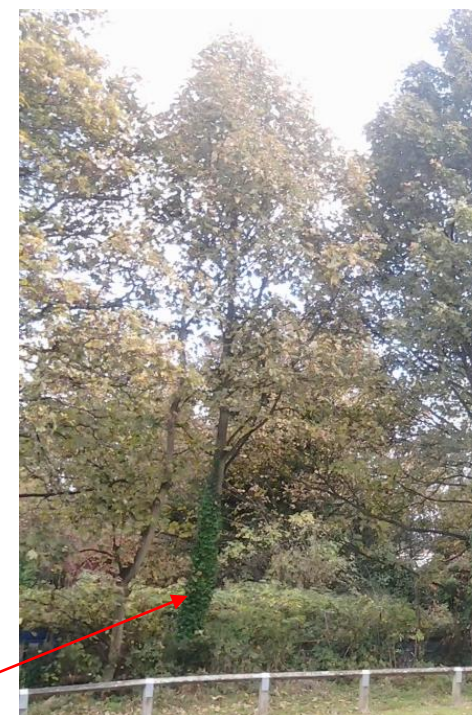
Tree ID : T3	Tag :	Assessor : Ryan Dodds	Bats : Unknown
Species : Sycamore <i>Acer pseudoplatanus</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	
		1st Branch : 4 E	

— Stems —		— Health —				— RP —		— Clearance (m) —				— Spread (m) —									
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
13.5	1	200	Semi-mature	Poor	Ivy	Fair	Fair	C.1	10 to 20 yrs	18.1	2.4	Pre Construction	1 Year	3	6	6	8	5	3	4	2

Tree Comment : Poor quality, spindery specimen.
 Dense Ivy growth surrounding buttress roots and main stem.
 Evidence of previous pruning on south side of stem, with pruning stubs left behind.
 Suppressed canopy and sparse branching system.

Work Category	Action
Remove	Ivy
	Sever at base
Remove	Stubs

Survey Comment : Tree growing outside of site boundary.
 Root contained by access road to southwest.
 Competition for ground moisture and nutrients with dense vegetation to north and east.
 Inspection limited due to dense Ivy growth.



Tree T3

BS5837:2012 Assessment

Tree ID : T4	Tag :	Assessor : Ryan Dodds	Bats : Unknown
Species : Sycamore <i>Acer pseudoplatanus</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	
		1st Branch : 1.5 W	

— Stems —			— Health —				— RP —		— Clearance (m) —				— Spread (m) —								
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
14.5	1	450	Mature	Fair	Ivy	Fair	Fair	B.1	10 to 20 yrs	91.6	5.39	Pre Construction	1 Year	3	6	4	4	3	3	4	5

Tree Comment: Relatively healthy in appearance.
 Ivy growth surrounding buttress roots and lower stem.
 Evidence of previous pruning on south side of stem.
 Asymmetric canopy towards south and west.
 Minor deadwood within canopy.

Work Category	Action
Remove	Minor dead wood
Remove	Ivy
	<i>Sever at base</i>

Survey Comment: Tree growing outside of site boundary.
 Minor root containment by compacted access road to southwest.
 Competition for ground moisture and nutrients with surrounding vegetation.
 Inspection limited due to dense Ivy growth.



Tree T4

BS5837:2012 Assessment

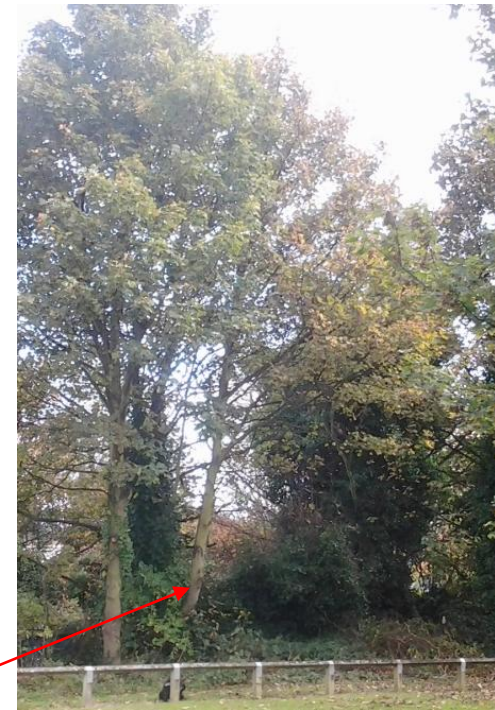
Tree ID : T5	Tag :	Assessor : Ryan Dodds	Bats : Unknown
Species : Sycamore <i>Acer pseudoplatanus</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	
		1st Branch : 2.5 W	

----- Stems -----			----- Health -----				----- RP -----		----- Clearance (m) -----				----- Spread (m) -----								
H (m)	No	Eq Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
14.5	3	492	Mature	Fair	Ivy	Poor	Fair	B.1	10 to 20 yrs	109.7	5.9	Pre Construction	N/A	4	4	6	5	6	4.5	5	5

Tree Comment: Poor quality specimen, multi stemmed from base.
 Dense vegetation surrounding base of tree.
 Dense Ivy growth surrounding buttress roots and main stems.
 Evidence of previous pruning towards south.
 Major deadwood on stem to east.

Work Category	Action
Remove	Major dead wood
Remove	Ivy
	<i>Sever at base</i>

Survey Comment: Tree growing outside of site boundary.
 Competition for nutrients and ground moisture with surrounding vegetation.
 Inspection limited due to dense Ivy growth.



Tree T5

BS5837:2012 Assessment

Tree ID : T6	Tag :	Assessor : Ryan Dodds	Bats : Yes
Species : Sycamore <i>Acer pseudoplatanus</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	

Estimated Measurements

----- Stems -----		----- Health -----				----- RP -----		----- Clearance (m) -----				----- Spread (m) -----									
H (m)	No	Eq Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
14.5	4	464	Mature	Fair	Ivy	Fair	Fair	B.1	10 to 20 yrs	97.3	5.56	Pre Construction	1 Year	5	4	5	5	6	6	6	5.5

1st Branch:

Tree Comment: Large, multi-stemmed from base specimen.
Dense Ivy growth surrounding base, stems and canopy.
Visual inspection limited.

Work Category **Action**
Remove Ivy
Sever Ivy at base

Survey Comment: Tree growing outside of site boundary.
Root contained by adjacent property to west.
Competition for ground moisture and nutrients with surrounding Ivy growth.
Limited inspection due to dense Ivy growth.



Tree T6

BS5837:2012 Assessment

Tree ID : T7	Tag :	Assessor : Ryan Dodds	Bats : Unknown
Species : Sycamore <i>Acer pseudoplatanus</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	

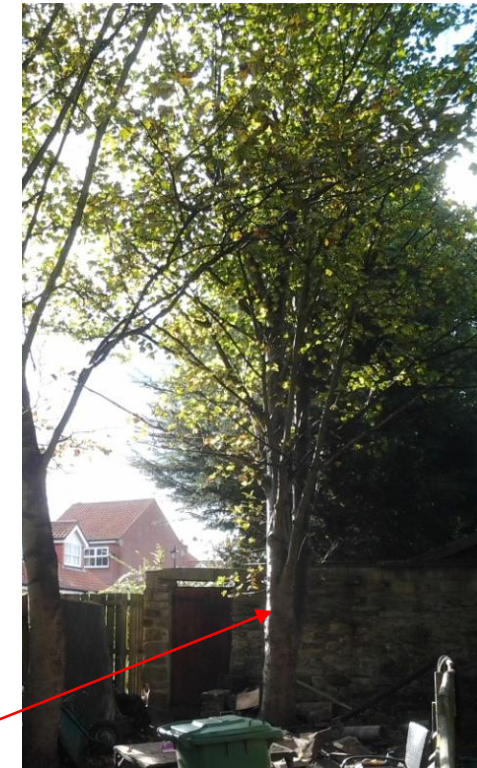
1st Branch:

Stems			Health				RP		Clearance (m)				Spread (m)								
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
13	1	400	Mature	Poor	Fair	Poor	Fair	C.1	10 to 20 yrs	72.4	4.8	Pre Construction	1 Year	5	4	5	5	2	3	3	2

Tree Comment : Poor quality specimen, growing within a restricted growth environment.
Well formed buttress roots.
Co-dominant stems form at 1.5m HGL with included bark at POU.
Minor wounds and cavities on main stem.
Evidence of previous pruning.
Sparse canopy and branching system.
Large amount of deadwood within canopy.

Survey Comment : Tree growing outside of site boundary.
Severe root containment by surrounding hard surfaces.
Rubble deposited around base of stem.

Work Category	Action
Remove	Major dead wood



Tree T7

BS5837:2012 Assessment

Tree ID : T8	Tag :	Assessor : Ryan Dodds	Bats : No
Species : Sycamore <i>Acer pseudoplatanus</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	

1st Branch:

----- Stems -----			----- Health -----					----- RP -----		----- Clearance (m) -----				----- Spread (m) -----							
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
13	1	400	Mature	Poor	Fair	Fair	Fair	C.1	10 to 20 yrs	72.4	4.8	Pre Construction	1 Year	5	4	5	5	2	2	4	2

Tree Comment : Poor quality specimen, growing within a restricted growth environment.
Well formed buttress roots towards northeast.
Sparse canopy and branching system.
Minor deadwood within canopy.

Survey Comment : Tree growing outside of site boundary.
Severe root containment by surrounding hard surfaces.
Competition for growth space, ground moisture and nutrients with adjacent trees.

Work Category	Action
Remove	Minor dead wood



Tree T8

BS5837:2012 Assessment

Tree ID : T9	Tag :	Assessor : Ryan Dodds	Bats : No
Species : Sycamore <i>Acer pseudoplatanus</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	

1st Branch:

Stems			Health						RP		Clearance (m)				Spread (m)						
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
13	1	300	Mature	Poor	Fair	Fair	Fair	C.1	10 to 20 yrs	40.7	3.59	Pre Construction	1 Year	5	4	5	5	1	3	4	1

Tree Comment: Poor quality specimen, growing within a restricted growth environment.
 Poor buttress root formation.
 Main stem leans marginally towards north.
 Sparse canopy and branching system.
 Minor deadwood within canopy.

Work Category	Action
Remove	Minor dead wood

Survey Comment: Tree growing outside of site boundary.
 Root containment by surrounding hard surfaces.
 Competition with adjacent trees for growth space, ground moisture and nutrients.



Tree T9

BS5837:2012 Assessment

Tree ID : T10	Tag :	Assessor : Ryan Dodds	Bats : Unknown
Species : Sycamore <i>Acer pseudoplatanus</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
Estimated Measurements		Next Insp : Not Required	
		1st Branch : 1.5 S	

— Stems —			— Health —				— RP —		— Clearance (m) —				— Spread (m) —								
H (m)	No	Eq Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
13	3	433	Mature	Poor	Ivy	Fair	Fair	C.1	10 to 20 yrs	84.8	5.19	Pre Construction	1 Year	4	3	6	5	4	4	4	4

Tree Comment : Poor quality specimen, multi-stemmed from 1m HGL.
 Dense Ivy growth surrounding stems.
 Sparse canopy and branching system.
 Minor deadwood within canopy.

Work Category	Action
Remove	Ivy
	<i>Sever at base</i>
Remove	Minor dead wood

Survey Comment : Tree growing outside of site boundary.
 Possible root containment by compacted access road to southeast.
 Inspection limited due to dense Ivy growth.



Tree T10

BS5837:2012 Assessment

Tree ID : T12	Tag :	Assessor : Ryan Dodds	Bats : Unknown
Species : Sycamore <i>Acer pseudoplatanus</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	

Estimated Measurements

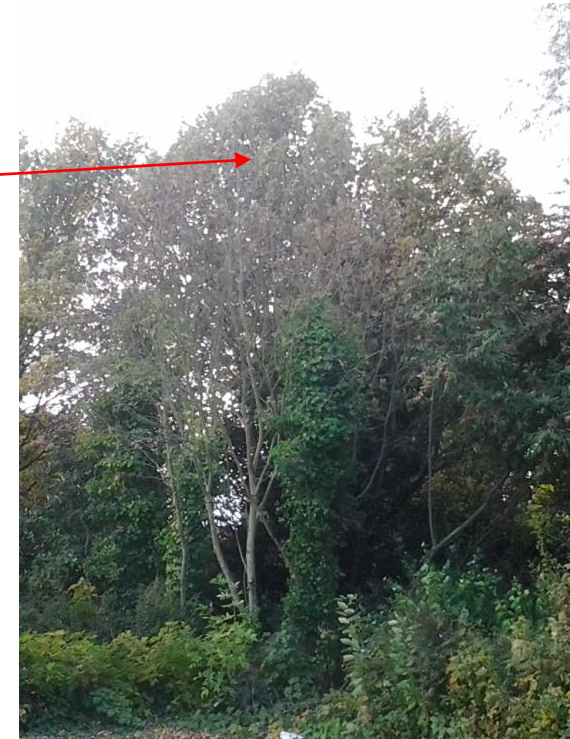
----- Stems -----			----- Health -----				----- RP -----		----- Clearance (m) -----				----- Spread (m) -----								
H (m)	No	Eq Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
10.3	6	980	Mature	Poor	Ivy	Poor	Fair	C.1	10 to 20 yrs	434.4	11.75	Pre Construction		4	3	6	5	6	5	5	5

Tree Comment : Poor quality specimen, multi-stemmed from base.
 Dense Ivy growth surrounding stems.
 Branching system relatively healthy in appearance.
 Dense understorey vegetation surrounding base of tree.

Work Category	Action
Remove	Ivy
	Sever at base

Survey Comment : Tree growing outside of site boundary.
 Competition for growth space, ground moisture and nutrients with surrounding, dense vegetation.
 Inspection limited due to dense Ivy growth.

Canopy of Tree T12



BS5837:2012 Assessment

Tree ID: T14	Tag:	Assessor: Ryan Dodds	Bats: Yes
Species: Sycamore <i>Acer pseudoplatanus</i>	TPO:	Inspected: 19 February 2015	Cons Area: Yes
		Next Insp: Not Required	
Estimated Measurements		1st Branch: 2 SE	

----- Stems -----		----- Health -----				----- RP -----		----- Clearance (m) -----				----- Spread (m) -----									
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
12	1	300	Mature	Poor	Ivy	Fair	Poor	C.1	10 to 20 yrs	40.7	3.59	Pre Construction	1 Year	4	6	5	7	4	4	4	3

Tree Comment: Poor quality specimen.
Dense Ivy growth surrounding main stem and lower branching system.
Sparse branching system and canopy, unhealthy in appearance.
Minor deadwood within canopy.

Work Category	Action
Remove	Ivy
	<i>Sever at base</i>
Remove	Minor dead wood

Survey Comment: Tree growing outside of site boundary.
Competition for growth space, ground moisture and nutrients with surrounding vegetation.
Inspection limited due to dense Ivy growth.

BS5837:2012 Assessment

Tree ID: T15	Tag:	Assessor: Ryan Dodds	Bats: Unknown
Species: Sycamore <i>Acer pseudoplatanus</i>	TPO:	Inspected: 19 February 2015	Cons Area: Yes
		Next Insp: Not Required	
		1st Branch: 2 SE	

— Stems —			— Health —					— RP —		— Clearance (m) —				— Spread (m) —							
H (m)	No	Eq Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
12	2	144	Semi-mature	Fair	Fair	Fair	Fair	C.1	10 to 20 yrs	9.4	1.72	Pre Construction	1 Year	4	2.5	2	4	3	4	3	2

Tree Comment: Poor shape, form and character for species.
 Poor buttress root formation.
 2 stems form at base, surrounded by Ivy growth.
 Asymmetric canopy growth towards east.
 Dense vegetation surrounding base of tree.

Work Category	Action
Remove	Ivy
	<i>Sever at base</i>

Survey Comment: Tree growing outside of site boundary.
 Root containment by car park to east.
 Competition with surrounding trees and vegetation for growth space, ground moisture and nutrients.
 Inspection limited due to dense Ivy growth.

BS5837:2012 Assessment

Tree ID : T16	Tag :	Assessor : Ryan Dodds	Bats : Unknown
Species : Swedish Whitebeam <i>Sorbus intermedia</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	
		1st Branch : 2 W	

----- Stems -----			----- Health -----				----- RP -----		----- Clearance (m) -----				----- Spread (m) -----								
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
10	1	210	Mature	Poor	Ivy	Fair	Poor	C.1	<10 yrs	20	2.52	Pre Construction	1 Year	5	2.5	4	3	3	4	2	4

Tree Comment : Poor quality specimen, unhealthy in appearance.
Main stem leans to west approx. 20 degrees.
Dense Ivy growth covering main stem.
Sparse branching system.
Asymmetric canopy towards west.

Survey Comment : Tree growing outside of site boundary.
Competition with surrounding trees and vegetation for growth space, ground moisture and nutrients.
Inspection limited due to dense Ivy growth.

Work Category	Action
Remove	Ivy



Tree T16

BS5837:2012 Assessment

Tree ID : T17	Tag :	Assessor : Ryan Dodds	Bats : Unknown
Species : Swedish Whitebeam <i>Sorbus intermedia</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	
		1st Branch : 2nw	

Stems		Health				RP		Clearance (m)				Spread (m)									
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
10	1	120	Mature	Poor	Ivy	Fair	Poor	C.1	<10 yrs	6.5	1.43	Pre Construction	1 Year	5	2.5	4	3	4	2	2	1

Tree Comment : Poor quality specimen, unhealthy in appearance.
 Dense Ivy growth surrounding main stem.
 Dense vegetation surrounding base of stem.
 Suppressed canopy, with sparse branching system.

Work Category **Action**
 Remove Ivy
 Sever at base

Survey Comment : Tree growing outside of site boundary.
 Competition with surrounding trees and vegetation for growth space, ground moisture and nutrients.
 Inspection limited due to dense Ivy growth.

Tree T17



BS5837:2012 Assessment

Tree ID : T18	Tag :	Assessor : Ryan Dodds	Bats : Unknown
Species : Swedish Whitebeam <i>Sorbus intermedia</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	

Estimated Measurements

----- Stems -----		----- Health -----				----- RP -----		----- Clearance (m) -----				----- Spread (m) -----									
H (m)	No	Eq Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
10	2	142	Mature	Poor	Ivy	Poor	Poor	C.1	<10 yrs	9.1	1.7	Pre Construction	1 Year	5	2.5	4	3	2	3	2	3

1st Branch:

Tree Comment : Poor quality specimen, spindly in appearance.
Co-dominant stems form at 0.5m HGL.
Dense Ivy growth surrounding main stem and lower canopy area.

Work Category **Action**
Remove Ivy
 Sever at base

Survey Comment : Tree growing outside of site boundary.
Competition with surrounding trees and vegetation for growth space, ground moisture and nutrients.
Inspection limited due to dense Ivy growth.



Tree T18

BS5837:2012 Assessment

Tree ID : T19	Tag :	Assessor : Ryan Dodds	Bats : Unknown
Species : Swedish Whitebeam <i>Sorbus intermedia</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	
		1st Branch : 2 SW	

Stems			Health				RP		Clearance (m)				Spread (m)								
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
10	1	150	Semi-mature	Poor	Ivy	Fair	Poor	C.1	<10 yrs	10.2	1.8	Pre Construction	1 Year	5	2.5	4	3	2	5	2	4

Tree Comment: Poor quality specimen, spindly in appearance.
Co-dominant stems form at 1.5m HGL, with included bark at POU.
Dense Ivy growth surrounding lower stem.
Evidence of minor pruning works.
Sparse branching system with minor deadwood.

Work Category **Action**
Remove Ivy
Sever at base

Survey Comment: Tree growing outside of site boundary.
Competition with surrounding trees and vegetation for growth space, ground moisture and nutrients.
Inspection limited due to dense Ivy growth.



Tree T19

BS5837:2012 Assessment

Tree ID : T20	Tag :	Assessor : Ryan Dodds	Bats : Unknown
Species : Swedish Whitebeam <i>Sorbus intermedia</i>	TPO :	Inspected : 19 February 2015	Cons Area : Yes
		Next Insp : Not Required	
		1st Branch : 1.5 E	

Stems			Health				RP		Clearance (m)				Spread (m)								
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
10	1	150	Mature	Poor	Ivy	Fair	Fair	C.1	10 to 20 yrs	10.2	1.8	Pre Construction	1 Year	5	2.5	4	3	3	4	2	4

Tree Comment : Poor quality specimen.
 Poor shape, form and character.
 Co-dominant stems form at 1.5m HGL.
 Dense Ivy growth surrounding main stems and lower canopy.
 Minor deadwood within branching system.

Work Category **Action**
 Remove Ivy
Sever at base

Survey Comment : Tree growing outside of site boundary.
 Competition with surrounding trees and vegetation for growth space, nutrients and ground moisture.
 Inspection limited due to dense Ivy growth.



Tree T20

BS5837:2012 Assessment

Tree ID: T21

Tag:

Assessor: Ryan Dodds

Bats: Unknown

Species: Sycamore
Acer pseudoplatanus

TPO:

Inspected: 19 February 2015

Cons Area: Yes

Next Insp: Not Required

Estimated Measurements

1st Branch: 2 S

Stems			Health					RP		Clearance (m)				Spread (m)							
H (m)	No	Eq Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m ²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
14.5	4	600	Mature	Fair	Ivy	Fair	Fair	B.1	20 to 40 yrs	162.9	7.2	Pre Construction	1 Year	5	5	4	4	6	3	5	5

Tree Comment: Relatively healthy in appearance - multi-stemmed from base.
Well formed buttress roots.
Dense Ivy growth surrounding stems and lower branching system.
Canopy, relatively healthy in appearance.
Minor deadwood within canopy.

Work Category	Action
Remove	Minor dead wood

Survey Comment: Tree growing outside of site boundary.
Competition with surrounding trees and vegetation,
for growth space, ground moisture and nutrients.
Inspection limited due to dense Ivy growth.

9.0 Tree Root Protection Areas (RPA's)

9.1 Where construction of the proposed development requires access over the RPA, appropriate measures must be taken to prevent damage to the trees' rooting system.

9.1.1 Tree protection measures, as indicated in **Appendix I**, and outlined on Plan Dwg. No. **0007477/P4a**

9.2 'Root Protection Area' as indicated on **Plan Dwg. No. 0007477/P4a**, by a red coloured, solid line circle.

9.3 **Table No.1** shows the trees' 'Root Protection Areas', in accordance with, BS5837:2012.

Table 1

Tree No.	Species	DBH (mm)	RPA (sq M)
T1	Sycamore	550	136.9
T2	Sycamore	170	13.1
T3	Sycamore	200	18.1
T4	Sycamore	450	91.6
T5	Sycamore	492	109.7
T6	Sycamore	464	97.3
T7	Sycamore	400	72.4
T8	Sycamore	400	72.4
T9	Sycamore	300	40.7
T10	Sycamore	433	84.8
T12	Sycamore	980	434.4
T14	Sycamore	300	40.7
T15	Sycamore	144	9.4
T16	S.Whitebeam	210	20
T17	S.Whitebeam	120	6.5
T18	S.Whitebeam	142	9.1
T19	S.Whitebeam	150	10.2
T20	S.Whitebeam	150	10.2

9.0 Analysis Introduction

- 9.1** *The 'Tree Schedule' (paragraph 8.0) outlines detailed information on the physical attributes of individual specimens, together with recommendations.*
- 9.2** *The 'Tree Analysis' examines the environment in which the trees are growing, together with other factors, which will impact upon, or influence the trees' current and future health and condition.*

10.0 Tree Analysis – General

- 10.1** Trees which are growing within and immediately surrounding a site are considered as having 'visual amenity and landscape value'. The 'amenity value' is dependent upon, trees being viewed from within, or from the surrounding environment, together with their current Health and Condition.
- 10.2** Good specimen trees which are growing adjacent to Public Highways, form part of the 'Street Scene' and are therefore, enjoyed by the Public at Large. These trees may be classified as being of 'high' visual amenity and landscape value.
- 10.3** Where trees are growing in a more 'sensitive' environment e.g. 'Conservation Areas', their visual amenity and landscape value will be an important consideration. Retention of tree cover therefore, will be considered by the Local Planning Authority, as being of 'high' importance.
- 10.4** Where specimens are growing within 'groups', their overall 'combined canopy effect', particularly when viewed from a greater distance, e.g. within open countryside, may show the group as being of 'high' visual amenity and landscape value.
- 10.4.1** The highly competitive environment in which 'groups' of trees grow, frequently results in their rooting and branching systems being contained and suppressed. This may not detract from the overall 'amenity' appearance of the group, but individual specimens may be unhealthy and of poor shape, form and character for the species. The visual amenity and landscape value of individual, poor quality trees will therefore, be reduced.
- 10.4.2** In order to maintain continuity of the 'visual amenity value' of a group, it may be desirable or necessary, to remove and replace the poorer quality specimens.
- 10.5** Trees, shrubs and hedges growing adjacent to property boundaries may be of great benefit, in that they will provide a visual 'softening' effect between properties. These trees, although may not be readily viewed by the public at large, may be classified as being of 'local' visual amenity and landscape value.
- 10.6** The Tree Schedule, Pages 6-24, outlines the attributes of individual or groups of trees. Where trees are found to have a relative short remaining life expectancy, consideration may be given to their 'phased' or 'selective' removal, together with recommendations for replacement planting. This will enable 'continuity' of the existing visual amenity and landscape value, by retaining the remaining trees, while replacement trees establish and grow to maturity.

11.0 Analysis – Specific

- 11.1** It may be seen from Tree Constraints Plan, Dwg. No. **0007477/P4d** that the majority of the trees, which may directly affected by the development proposals, are growing outside of the site boundary. Tree **T21** however, is growing within and adjacent to the northern boundary.
- 11.2** It is noted within Tree Schedule (Para. **8.0**) that the majority of the trees, which are the subjects of this Report, are growing outside of, but adjacent to the development site. It is also evident that the trees have not been subject to management or maintenance, which has resulted in them being of poor shape, form and character for the species.
- 11.3** Trees **T7**, **T8** & **T9** are seen to be growing closely together within a group. This closeness has resulted in all three trees showing evidence of minimal ‘main stem taper’, suppressed branch growth and asymmetric canopies. It should also be noted, that the consolidated ground surface is semi-permeable.
- 11.3.1** Tree **T7**, **T8** & **T9** are growing within a compacted soil area. The surface area within the southern quadrants of their RPA’s, is to be overlaid by permeable, block-paviors. The permeable surface will allow gaseous exchange within the underlying soil and therefore, the development proposals should have minimal, detrimental effect upon the future health and condition of the trees.
- 11.3.2** The poor quality environment in which the trees are growing will result in their life expectancy being considerably reduced. Should considerations be given to approval for removal and replacement planting of trees **T8** & **T9**, additional growth space, ground moisture and nutrients will be available to tree **T7**, and its life expectancy will be increased.
- 11.3.3** Tree **T7** is of local, visual importance and therefore, its retention will soften the visual impact between the proposed development and the surrounding properties.
- 11.4** Tree **T10**, is one of a group of trees, growing to the north of the north-western boundary. The tree’s canopy forms part of the overall canopy of the group, and the group as a whole forms a backdrop to the trees located to their east.
- 11.4.1** It is noted within the Tree Schedule (Para. **8.0**), that tree **T10** offers evidence to indicate that the tree is not a good specimen, with a relatively short life expectancy (10-20 years).
- 11.4.2** Removal of the tree will have no major, detrimental effect upon the overall appearance of the combined canopy. Replacement planting, in agreement with the LPA and property owner, will ensure longer term continuity of tree cover within the area.

11.5 The RPA of tree **T12** is marginally intruded by the footprint of the proposed development by approximately 2%. BS5837:2012 (Para. 7.4.2.3) states that new, permanent, hard surfacing should not be exceeded by 20%.

11.5.1 Where construction working space or temporary access is justified within the RPA, a set-back in the alignment of the Protective Fencing should be undertaken. Temporary ground protection should be implemented prior to work commencement. The suitability of surfacing should be evaluated by the project Arboriculturist or Engineer.

12.0 Conclusion

12.1 It is proposed that a residential dwelling and detached garage, be developed within a semi-derelict parcel of land, adjacent to Barnes Close, Monkton.

12.2 The majority of the trees are growing outside of, but adjacent to the development site boundaries. Considerations have been given to the effects of the proposed development upon the trees, and it has been concluded that, the development proposals will have minimal impact upon their future health and condition.

12.3 Trees which are considered for removal and replacement planting should be carried out in agreement with the LPA.

13.0 Recommendations

13.1 Based upon the findings of the report, it is recommended that:

13.1.1 This report, be used as a supporting document for Planning Application purposes.

13.1.2 Tree Protection, be in accordance with Appendix 1, and as indicated on Plan Dwg. No. **0007477/P4a**.

13.1.3 Tree works be carried out in accordance with BS3998:2010.

13.1.4 Removal and replacement planting of trees be carried, out in agreement with the Local Planning Authority.

14.0 Environmental Impact of Recommendations

14.1 The environmental impact of recommended works will result in the following:

- Ensures longer term continuity of tree cover within the area.
- Continuity of visual amenity and landscape value.
- Act as 'Carbon Sinks' by removing Carbon Dioxide from the air.
- Continue to provide and improve wildlife habitats.

10.0 Arboricultural Method Statement

10.1 Where operations or access are proposed within the trees' RPA (or crown spread where this is greater), precautionary measures must be adopted, in order to demonstrate that the operations can be undertaken with minimal risk of adverse impact upon the trees.

10.2 Where permanent hard surfacing is unavoidable, and to be constructed within the RPA, site specific and specialist Arboricultural and Construction design advice should be sought. This will help determine its achievability without significant, adverse impact upon retained trees.

Method Statements (site specific)

Site specific Method Statements, may be required (outlined below), how operations may be undertaken to prevent damage to trees during development works.

- Erect Protective Fencing
- Temporary ground protection (vehicular access, plant & machinery)
- Permanent ground protection within RPA's
- Excavations adjacent to RPA's
- 'No Dig' methods of construction
- Storage of excavated materials
- Storage of harmful materials away from trees (diesel, petrol, cement, etc.)

Prepared by

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For and on behalf of
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Appendix Contents Page

Appendix I	Protective Fencing
Appendix II	NJUG
Appendix III	Terminology
Appendix IV	BS Colour Categorisation
Appendix V	Tree Detail
Appendix VI	Glossary of Terms

Appendix I

Information Regarding Types of Protective Fencing and Barrier Types (BS: 5837: 2012 Part 6.2).

All trees to be retained on site should be protected by barriers or ground protection. The barriers should be erected before any materials or machinery are brought on site and should not be removed or altered without prior consent by a qualified Arborist.

Barriers should be fit for the purpose of excluding construction activity and appropriate to the level and proximity of work taken place around the trees. Barriers should remain rigid and complete.

In most cases, barriers should consist of scaffolding framework in accordance with Figure 2, below, which comprises of a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at maximum intervals of 3 metres.

Should the site circumstances and the associated risk of damaging incursion into the RPA do not necessitate the default level of protection, it may be possible, for the project Arboriculturist to design an alternative specification, and where relevant agreed with the Local Planning Authority. For example 2m tall welded mesh panels on rubber or concrete feet, secured with two couplers and supported with stabiliser struts. See Figure 3.

Figure 2 Default specification for protective barrier

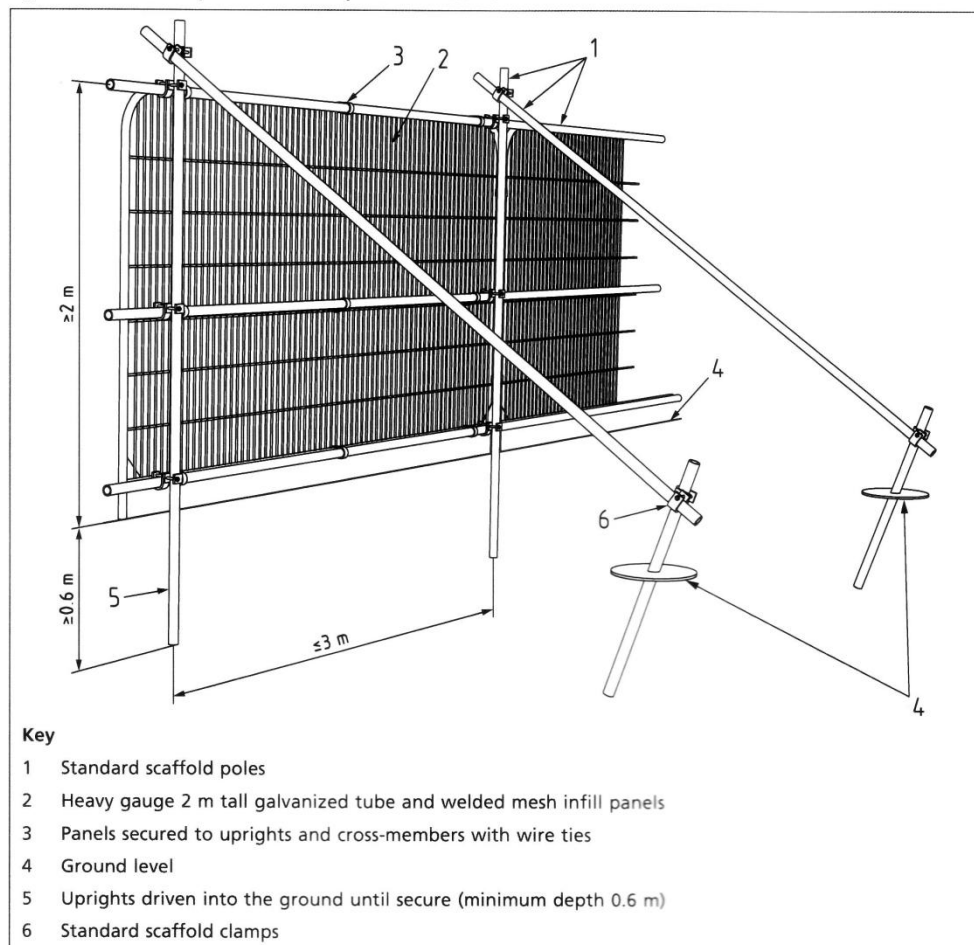
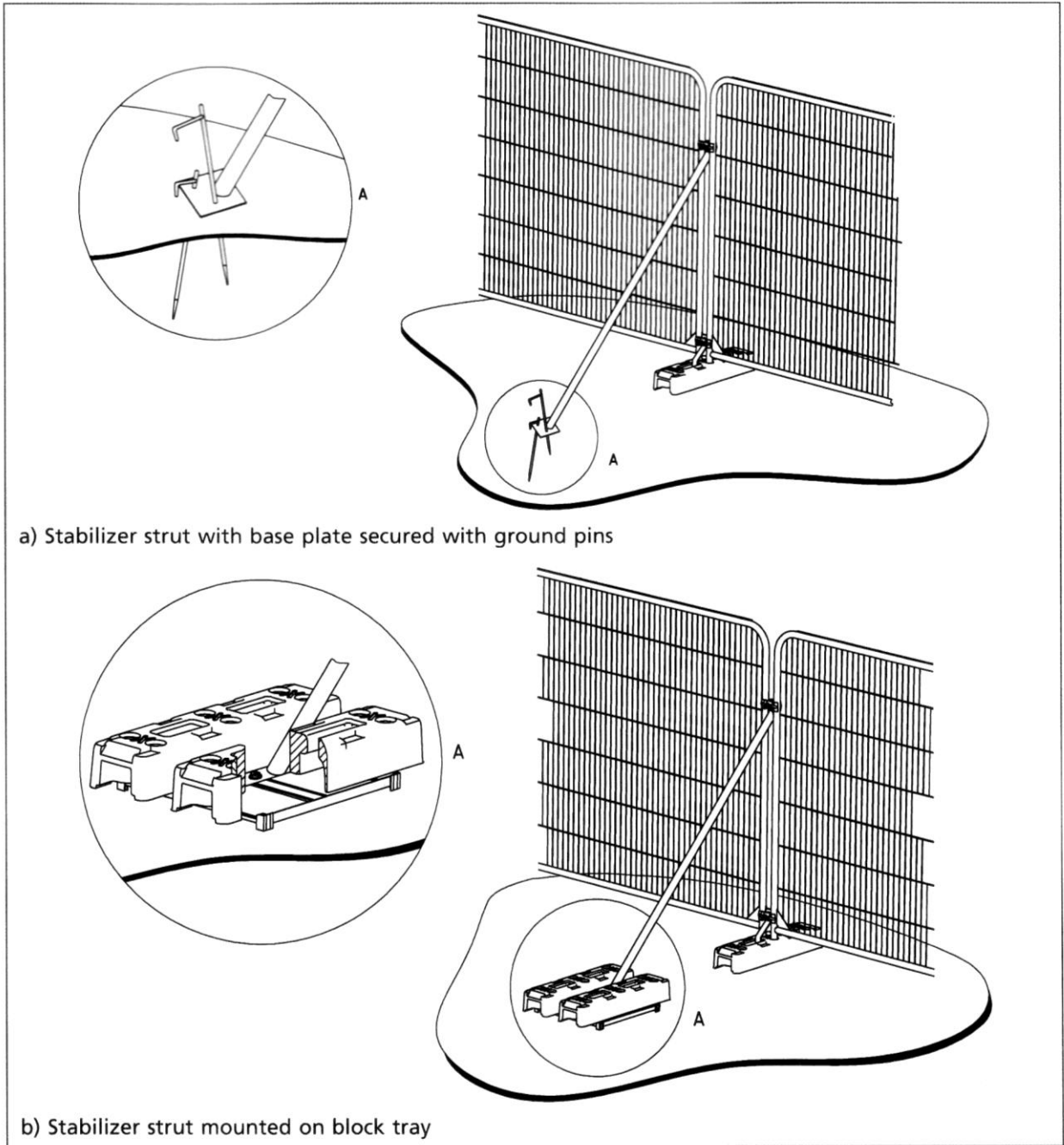


Figure 3 Examples of above-ground stabilizing systems



Appendix II

NJUG (National Joint Utilities Group)

'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees'

NJUG guidelines are applicable to all underground and overhead services and to trees in various locations. The guidelines should be considered when; a) services are to be maintained or managed and trees are to be managed, b) when new services are to be constructed adjacent to existing trees, and c) where new trees are to be planted adjacent to existing services.

Generally, the majority of the trees rooting system is in the first 600mm of the soil, and tends to extend in a radial direction with distances in excess of the trees height. Excavations within root protection area's of trees are likely to damage roots. Therefore, whenever trees are present, it is important to minimise damage to the trees' rooting system. Excavation of open trenches by machine is totally unacceptable within root protection areas.

As the extent of the trees rooting system is often unpredictable, careful control and supervision of any excavation, particular if it involves digging through the surface 600mm where the majority of roots develop.

Where possible, services should be diverted outside of root protection areas. However, where this is not possible, there are various techniques, which may be used to minimise damage to tree roots. The method for lying depends on the following:

- The scope of the works (i.e. are the works a one-off repair, or do they form part of an extensive operation?).
- Degree of urgency (for restoration of supplies)
- Knowledge of location of other services
- Soil conditions
- Amenity value of tree
- Cost

Acceptable techniques for the laying of services in order of preference are:

Trenchless - Wherever possible trenchless techniques should be used. Pit excavations for starting and receiving the machinery should be located outside the root protection area.

In order to avoid damage, the recommended depth of the run should be below 600mm. External lubrication of the mole with materials other than water should be avoided, unless precautions are taken to ensure no contamination of soil within 600mm of the surface within the root protection area.

Broken trench – Combines hand dug trench sections with trenchless techniques. If excavations are unavoidable it should be limited to practical access and installation around / below the roots. The trench must be excavated by hand. Open sections should only be long enough to allow access for linking to the next section. Lengths of sections will be determined by local conditions such as soil texture, cohesiveness as well as the practical need for access. In all cases open sections should be kept as short as possible.

Continuous trench – must be undertaken by hand as to retain as many roots as possible. Needs to be undertaken with great care, and therefore is likely to require close supervision, and undertaken by fully competent operatives.

After careful removal of the hard surface material, digging should be undertaken with hand tools. Clumps of smaller roots, including fibrous roots and roots greater than 25mm diameter, should be retained. Roots with a diameter greater than 25mm should not be cut without prior advice from a qualified arborist. If severance is unavoidable, roots must be cut back using a sharp tool, leaving the smallest wound.

Appendix III

Terminology

It should be noted that trees are dynamic organisms and as such are subject to change. The details recorded in this report only apply to those visibly apparent on the day of inspection.

No diagnostic tools were used in the assessment; the trees were only assessed visually from ground level. A DBH tape was used to measure the diameter at breast height of the trees. The height and crown spread was estimated.

It should be noted that the trees may be the subject of a Tree Preservation Order or may lie within a Conservation Area. Therefore, the Local Planning Authority must be contacted before any works are carried out upon the trees.

1.0 Tree number:

Each of the trees surveyed was allocated a unique **T** number. **T** numbers are specific to this report only.

1.1 Tree species:

Full botanical name (genus and species) and common name may be given.

1.2 Age class:

Tree age was estimated using the surveyor's professional experience and placed in one of the following categories:

- a) **Over mature** - crown showing evidence of degeneration and a decrease in size.
- b) **Mature** - more or less at full height but still increasing in girth rapidly. This category may be extended into the late maturity class, whereby the tree is more or less at full height and large girth but increasing only slowly.
- c) **Semi-mature** - between 1/3 and 2/3 of the expected height.
- d) **Young** - established tree up to 1/3 expected ultimate height.

1.3 Height:

Individual tree heights were measured using appropriate equipment or, estimated height (Est Ht)

1.4 Crown spread:

Canopy measurements from centre of tree, to four cardinal points (N, E, S, W)

1.5 D.B.H:

The diameter at breast height was measured at the standard 1.5 meters above soil level.

1.6 Condition:

A general arboricultural account of the tree's form, health and condition. Based upon the assessment, trees are placed in one of the following categories:

- a) **Good** – full healthy canopy, but possibly including suppressed branches or minor physical damage.
- b) **Reasonable** – Canopy may show slightly reduced leaf cover or minor deadwood, or isolated areas of more extensive deadwood.
- c) **Poor** – overall sparse foliage, or extensive dead wood in crown, branching systems or stem.
- d) **In decline** – Evidence of die-back in 'part' or in 'whole' of the crown.

Note – The assessment of overall condition also considers other factors including the appearance of the trunk and branches – splits and/ or breaks; potentially weak structural features such as forks, included bark at point of union, crossing branches, cavities, decay and physical damage to stem or branches.

Appendix IV

British Standard Tree Categorisation 2012

Category A Light Green: (RGB code 000-255-000)

Trees of high quality with an estimated remaining life expectancy of at least 40 years

1. Trees that are good example of their species, especially if rare or unusual; or those that are essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and / or principle trees within an avenue).
2. Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape
3. Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture).

Category B Mid Blue: (RGB code 000-000-255)

Those of moderate quality with an estimated remaining life expectancy of at least 20 years

1. Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remedial 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 special quality necessary to merit the category A designation
2. 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 contribution to the wider locality.
3. Trees with material conservation or other cultural value.

Category C Grey: (RGB code 091-091-091)

Trees of low quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter of below 150mm

1. Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.
2. Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offer low or only temporary /transient landscape benefits
3. Trees with no material conservation or other cultural value.

Category U Dark Red: Trees for removal (RGB code 127-000-000)

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.

1. 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)
2. Trees that are dead or are showing signs of significant immediate and irreversible overall decline.
3. 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 value.

Appendix V

Tree detail:

Where applicable, the surveyor may record specific problems/defects associated with a particular tree. This may include consideration of the root plate and the trunk/soil interface, cracking, mounding, presence of fungi as well as an examination of previous management practices such as pollarding, crown reduction/thinning, etc. In the majority of instances, the intensity/severity of the problem/defect will also be recorded individually.

Estimated remaining contribution in years:

- a) < 10
- b) 10+
- c) 40+

1.10 Recommendations:

All recommendations are based on the author's previous experience and knowledge.

All recommendations are valid for a period of one year, from the date of inspection.

The following terms may be used:

- (a) Crown clean – the removal of dead, dying, diseased and crossing branches.
- (b) Crown raise/lift – the removal of the lower branches to allow the unhindered passage of pedestrians/vehicles.
- (c) Crown thin – the removal of branches within the crown to permit the free flow of air, allow greater light penetration or to reduce crown/ branch weight.
- (d) Removal – the controlled dismantling or felling of a tree, usually to just above ground level.

The removal of stumps (usually by stump grinder) to below ground level removes trip hazards and can significantly reduce potential sources of infection.

Appendix VI

Glossary of Terms	Strouts <i>et al</i> (2000) & Lonsdale (1999)
Arboriculture	formally, the culture of trees.
Assessment	in relation to tree hazards, the process of estimating the risk which a tree or a group of trees pose to persons or property.
Aerial	above ground.
Bark	a term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex and periderm.
Blight	a loose term describing the extensive and rapid death and collapse of soft tissue.
Bole (trunk)	the main stem of a tree below its first major branch.
Bracket fungus	a fungus whose fruiting bodies resemble brackets shelves or hoofs.
Branch	a limb extending from the main stem or parent branch of a tree.
Branch bark ridge	the raised arch of bark tissue that forms within the acute angle between a branch and its parent stem.
Branch collar	a swelling at the base of a branch whose diameter growth has been disproportionally slow compared to that of the parent stem; a term also applied to the pattern in which the cells of the parent stem grows around the branch base, even if no swelling is thereby formed.
Brown-rot	a type of wood decaying in which cellulose is degraded, while lignin is only modified.
Butt	the basal end of the trunk.
Callus	a term with more than one botanical meaning, especially an undifferentiated mass of cells, for example forming on the upper sides of the junctions
Canker	a clearly defined patch of dead and sunken or malformed bark.
Canker-rot	a disease in which the causal fungus gives rise to both bark canker and underlying wood
Chlorosis	abnormal yellow or yellow-green coloration of normally green foliage.
Co-dominant	“A fork comprising co-dominant leaders is somewhat weaker than a junction between a main stem and a subsidiary branch. In the region where the branch merges with the parent stem, its wood is partially enveloped by the latter due to its smaller annual growth in diameter”. (Lonsdale. 1999).

Defect	in relation to tree hazards, any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment.
Dieback	often used to mean ‘death’. Here used to mean progressive death of a tree or branch from its extremities towards the roots.
Flush-cut	a pruning cut close to the parent stem which removes part of the branch bark ridge.
Fruit body	a general term for any kind of fungal, spore-bearing structure.
Gall	abnormal plant growth.
Hazard beam	in a tree, an upwardly curved part in which strong internal stresses may occur without the compensatory formation of extra wood.
Host (tree)	the tree on or which the parasite lives.
Included bark	(ingrown bark) bark of adjacent part of the tree (usually in forks acutely angled branches or basal flutes) which is in face-to-face contact so that there is weakness due to the lack of woody union.
Lignin	the hard, cement like constituent of wood cells.
Lion-tailing	a term applied to a branch of a tree that wholly or largely lacks side-branches, except near its tip, and may thus be liable to snap due to end loading.
Natural pruning	the shedding of a twig or branch that has died back naturally and has become decayed at or near its base (often due to the activation of wood-decaying endophytes).
Necrosis	death of plant tissue, usually characterised by a change in colour to brown or black.
Occlusion	the overgrowth of a wound with (callus) tissue produced subsequently (verb occlude).
Remedial action	in tree hazard management, action to remove or mitigate the risk of injury to persons or damage to property.
Stag-headed	describes the silhouette of a large tree whose crown has died back so that the ends of the dead branches protrude like spikes or antlers from the reduced live foliated crown.
Sucker	regenerated growth shoots / water shoots usually from the base and stem of trees. Many species cause galls.