BATSON

Landscape & Tree Care Ltd.

Arboricultural Impact Assessment
Tree Report
Former 'Be Modern' Site
Western Approach, South Shields

Client: Travis Perkins
Date: 3rd August 2015
Our ref: 0007697

Unit 1, Inkerman Road, Tow Law, Bishop Auckland, DL13 4QB. Tel: 01388 730257
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1.0 General

1.1 The former 'Be Modern Ltd.' property is now under ownership of the 'Travis Perkins plc' retail company. It is proposed to create a 'Small Trade Park', which will include the demolition of some existing structures.

1.2 There are trees growing within the property, and it has been requested that an Arboricultural Tree Report and Constraints Plan be prepared. The report will outline the effects the proposals may have upon the trees, together with recommendations for tree protection.

2.0 Location

2.1 The former 'Be Modern Ltd' property is located at the northern end of Western Approach, and southwest of the roundabout, between Station Road and Crossgate (Grid Ref. X: 436187 – Y: 566521).

Google

3.0 Purpose & Use of Report

3.1 The purpose of the 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:

3.3.1 Assess the health, condition, retention value and other attributes of trees.

3.3.2 Assess the visual amenity and landscape value of the trees.

3.3.3 Assess existing constraints which may affect the trees' future health and condition.

3.3.4 Indicate the Root Protection Area of individual trees.

4.0 Site Survey

4.1 The site was visited on the 14th July 2015, and revisited on the 27th July 2015. At the time of the inspection, weather conditions were wet and overcast. Visibility however, was not impaired.

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 Site Observations

5.1 The former 'Be Modern' site is located within a high density, urban area within the town of South Shields, South Tyneside.

5.2 The property is comprised of warehouse type buildings, access paths and roads, car-park, tree and shrub borders, and an area of dense, overgrown scrubland.

5.3 The warehouse type buildings are located towards the centre of the property.

5.4 Public Footpaths are located adjacent to the northern and southern elevations of the main building.

5.4.1 There is evidence of cracks and undulations within the Public Footpath, east of the property.

5.5 There is a vehicular access road, which runs adjacent to the west and south-eastern elevation of the main building.

5.6 There are 2 small parking areas, located immediately adjacent to the eastern elevation of the main building.

5.7 A grass border, comprising of mixed species and age class trees, lies immediately west of the Public Footpath.

5.8 An open, grass space is located towards the north of the grass border, and comprises of mixed species and age class trees.

5.9 An area of unmaintained scrubland, consisting of poor quality, self sown trees, shrubs and understory vegetation is located at the northeast end of the property.

5.10 Public Highways, Western Approach and Tudor Road, run immediately adjacent to the eastern and southern boundaries of the property.

5.11 Vehicular access into the property is via the southern elevation of the building, off Tudor Road.

5.12 The general topography of the site is level.

5.13 It is the trees growing within the property 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 There was no evidence of bat activity at the time of inspection, or readily visible hollows, break-out cavities etc. which may act as Bat Roosts.

6.3 Due to the nature, character and location of the site, it is highly probable that there may be a presence of small mammals.

7.0 Tree Survey

7.1 For the purpose of this Report, individual specimen trees within the site will be referenced with a '**T**' prefix and number (e.g. **T1**).

7.2 The position of individual trees are encircled in black is on Plan Dwg. No. **0007697/P1.**

8.0 Tree Schedule

Tree ID : T0127 **Tag :** 0127 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Black Cherry **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No
Prunus serotina **Next Insp :** Not Required
1st Branch: 2 N

	Stems			Health						RP				Clearance (m)				Spread (m)			
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
7.5	1	445	Mature	Fair	Fair	Fair	Fair	B.1	10 to 20 yrs	89.6	5.34	Pre Construction	6 Months	1.5	3	1.5	2	4.5	4	5	5

Tree Comment : Relatively healthy in appearance.
Clear stem up to 2.5m HGL where branching system forms.
Minor bark wounds on main stem.
Dense canopy with evidence of poor pruning works.
Minor deadwood and snags within canopy.
Tight unions within canopy.

Survey Comment : Root containment by footpath to east and access road to west.

Work Category	Action
Remove	Minor dead wood
Remove	Stubs

Tree T0127 – Viewed from northeast

Tree ID : T0128 **Tag :** 0128 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Black Cherry **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No
Prunus serotina **Next Insp :** Not Required
1st Branch: 2.2 NW

	Stems			Health						RP				Clearance (m)				Spread (m)			
H (m)	No	Eq Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
7.8	2	340	Mature	Fair	Poor	Fair	Fair	C.1	<10 yrs	52.3	4.08	Pre Construction	6 Months	1	2	3	2	5	6	4.5	4.5

Tree Comment : Reasonably healthy in appearance, with well formed buttress roots.
Poor quality, distorted stem.
Well developed epicormic shoot at 0.5m HGL, with tight union on SW side.
Codominant stems form at approx. 1.5m HGL.
Sparse branching system.
Poor pruning works within canopy, with remaining snags.
Minor wounds and lesions on stem and branches.

Survey Comment : Root containment by footpath to east and access road to west.

Work Category	Action
Remove	Stubs
Monitor	Overall Health & Condition

Tree T0128 – Viewed from northeast

Unit 1, Inkerman Road, Tow Law, Bishop Auckland, DL13 4QB. Tel: 01388 730257
Fax: 01388 731332. Email: RDodds@batsonltd.co.uk

Tree ID : T0129 **Tag :** 0129 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Mountain Ash **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No
Sorbus aucuparia **Next Insp :** Not Required
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 (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
6	1	273	Mature	Fair	Fair	Fair	Fair	B.1	10 to 20 yrs	33.7	3.27	Pre Construction	6 Months	1.7	1.7	1.7	1.7	3.5	3.5	3	3

Tree Comment : Relatively healthy in appearance.
2 stems form at 1.3m HGL with very tight union.
Relatively well balanced canopy.
Multiple stems form at 2.2m HGL.
Evidence of previous pruning on stem and within canopy.
Area of deadwood within canopy.

Survey Comment : Root containment by footpath to east and access road to west.

Work Category **Action**
Remove Minor dead wood

Tree T0129 – Viewed from northeast

Tree ID : T0130 **Tag :** 0130 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Mountain Ash **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No
Sorbus aucuparia **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 (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
6	1	213	Mature	Fair	Fair	Good	Fair	B.1	<10 yrs	20.5	2.55	Pre Construction	6 Months	2	2.1	2.1	1.7	3	3.5	3.5	3

Tree Comment : Relatively healthy in appearance.
Branching system forms at 2.2m HGL with tight unions.
Evidence of previous pruning within canopy.
Deadwood and snags evident within canopy.
Canopy towards east overhangs adjacent path.

Survey Comment : Root containment by footpath to east and access road to west.

Work Category **Action**
Remove Deadwood and snags

Tree T0130 – Viewed from northeast

Unit 1, Inkerman Road, Tow Law, Bishop Auckland, DL13 4QB. Tel: 01388 730257
Fax: 01388 731332. Email: RDodds@batsonltd.co.uk

Tree ID : T0131 **Tag :** 0131 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Mountain Ash **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No
Sorbus aucuparia **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 (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
5.5	1	203	Mature	Fair	Good	Fair	Fair	B.1	<10 yrs	18.6	2.43	Pre Construction	6 Months	2	2	1.8	2	3.5	3.5	3	3.5

Tree Comment : Relatively healthy in appearance.
Codominant stem forms at 2.1m HGL with tight union.
Minor epicormic growths at base of stem on western side.
Relatively well balanced canopy with minor deadwood and snags.
Evidence of previous pruning on codominant stems and within canopy.

Survey Comment : Root containment by footpath to east and access road to west.

Work Category	Action
Remove	Deadwood and snags
Remove	Epicormic growths

Tree T0131 – Viewed from northeast

Tree ID : T0132 **Tag :** 0132 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Grey Poplar **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No
Populus canescens **Next Insp :** Not Required
1st Branch: 8 N

Stems				Health						RP				Clearance (m)				Spread (m)			
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
20	1	945	Mature	Good	Good	Fair	Good	B.1	10 to 20 yrs	404	11.34	Pre Construction	6 Months	5.5	2.5	4.5	2.5	7	8	10	7.5

Tree Comment : Dominant specimen, relatively healthy in appearance.
5 codominant stems form at 3m HGL with included bark at POU.
Relatively healthy canopy overhangs adjacent path and building.
Evidence of previous pruning within canopy.
Minor deadwood and snags within canopy.

Survey Comment : Root containment by footpath to east and access road to west.

Work Category	Action
Remove	Deadwood and snags
Prune	From buildings/structure/tree by 3.0m

Tree T0132 – Viewed from north

Unit 1, Inkerman Road, Tow Law, Bishop Auckland, DL13 4QB. Tel: 01388 730257
Fax: 01388 731332. Email: RDodds@batsonltd.co.uk

Tree ID : T0133 **Tag :** 0133 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Norway Maple **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No
Acer platanoides **Next Insp :** Not Required
1st Branch: 2 S

Stems				Health						RP				Clearance (m)				Spread (m)			
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
8	1	197	Semi-mature	Fair	Good	Good	Good	B.1	20 to 40 yrs	17.6	2.36	Pre Construction	6 Months	2.5	3	4	4	4	4.5	3.5	3

Tree Comment : Relatively healthy in appearance.
Clear stem up to 2m HGL where codominant stems form (included bark at POU).
Canopy, healthy in appearance with dense foliage.
Canopy towards east overhangs adjacent path and in contact with road sign.

Survey Comment : Root containment by footpath to east and access road to west.

Work Category	Action
Cut back growth	From Road Sign

Tree T0133 – Viewed from west

Tree ID : T0134 **Tag :** 0134 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Common Ash **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No
Fraxinus excelsior **Next Insp :** Not Required
1st Branch: 8 SW

Stems				Health						RP				Clearance (m)				Spread (m)			
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
16	1	426	Mature	Fair	Good	Good	Fair	B.1	>40 yrs	82.1	5.11	Pre Construction	6 Months	10	1	1	8	4	8	6	6

Tree Comment : Relatively healthy in appearance.
Poor shape form and character for species.
Well formed buttress roots.
Clear stem up to 2.5m HGL where codominant stem forms.
Low hanging canopy towards SE.
Canopy to west overhangs building.
Dense branching system with minor deadwood and snags.
Evidence of previous pruning within canopy.

Survey Comment : Root containment by building to west and hard surfacing to south.

Work Category	Action
Prune	From buildings/structure/tree by 2.0m
Remove	Deadwood and snags
Raise low canopy	To 2.5m

Tree T0134 – Viewed from south

Unit 1, Inkerman Road, Tow Law, Bishop Auckland, DL13 4QB. Tel: 01388 730257
Fax: 01388 731332. Email: RDodds@batsonltd.co.uk

Tree ID : T0135 **Tag :** 0135 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Common Ash **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No
Fraxinus excelsior **Next Insp :** Not Required
1st Branch: 4.5 SE

Stems				Health						RP				Clearance (m)				Spread (m)			
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
14.5	1	318	Mature	Poor	Good	Good	Fair	C.1	20 to 40 yrs	45.8	3.81	Pre Construction	6 Months	8	12	8	9	5	4	4	4

Tree Comment : Poor quality specimen.
Clear stem to 4.5m HGL where co-dominant stems form.
Relatively sparse branching system.
Minor deadwood and snags within canopy.
Evidence of previous pruning.
Canopy to west overhangs adjacent building.

Survey Comment : Root containment by building to west.

Work Category	Action
Remove	Deadwood and snags

Tree T0135 – Viewed from east

Tree ID : T0136 **Tag :** 0136 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Common Ash **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No
Fraxinus excelsior **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 (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
15	1	509	Mature	Poor	Good	Good	Poor	C.1	20 to 40 yrs	117.2	6.1	Pre Construction	6 Months	8	5	2	7	5	6	8	6

Tree Comment : Poor quality specimen.
Poor shape form and character for species.
Stem leans marginally towards southeast.
Co-dominant stems form at 4m HGL.
Majority of canopy leans towards southeast, with low hanging branches.
Major deadwood and snags within canopy towards north and east.
Evidence of previous pruning.

Survey Comment : Root containment by building to west.

Work Category	Action
Remove	Deadwood and snags
Raise low canopy	To 2.5m

Tree T0136 – Viewed from east

Unit 1, Inkerman Road, Tow Law, Bishop Auckland, DL13 4QB. Tel: 01388 730257
Fax: 01388 731332. Email: RDodds@batsonltd.co.uk

Tree ID : T0137 **Tag :** 0137 **Assessor :** Ryan Dodds **Bats :** Unknown

Species : Norway Maple *Acer platanoides* **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No

Next Insp : Not Required

1st Branch: 3 SE

Stems				Health						RP				Clearance (m)				Spread (m)			
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
14	1	240	Mature	Good	Fair	Good	Good	B.1	20 to 40 yrs	26.1	2.88	Pre Construction	6 Months	3.5	4	3.5	4	5	6.5	6	3

Tree Comment : Relatively healthy in appearance.
Minor splits and wounds on main stem.
Clear stem to 3m HGL where branching system forms.
2 No. branches to south, growing tightly together.
Minor deadwood and snags.
Canopy overhangs adjacent path.

Survey Comment : Root containment by footpath to east.

Work Category **Action**
Remove Deadwood and snags

Tree T0137 – Viewed from east

Tree ID : T0138 **Tag :** 0138 **Assessor :** Ryan Dodds **Bats :** Unknown

Species : Common Ash *Fraxinus excelsior* **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No

Next Insp : Not Required

1st Branch: 3 NE

Stems				Health						RP				Clearance (m)				Spread (m)			
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
15	1	397	Mature	Fair	Good	Good	Fair	C.1	20 to 40 yrs	71.3	4.76	Pre Construction	N/A	2	5	4	6	8	7	6	7

Tree Comment : Relatively healthy in appearance.
Clear stem up to 3m HGL where branching system forms.
Relatively well balanced canopy.
Canopy overhangs adjacent building.
Evidence of fully oduded pruning wounds within canopy and upper stem.

Survey Comment : Root containment by building to west.

Work Category **Action**
No action No action

Tree T0138 – Viewed from east

Unit 1, Inkerman Road, Tow Law, Bishop Auckland, DL13 4QB. Tel: 01388 730257
Fax: 01388 731332. Email: RDodds@batsonltd.co.uk

Tree ID : T0139 **Tag :** 0139 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Wild Cherry **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No
Prunus avium **Next Insp :** Not Required
1st Branch: 2.5 N

Stems				Health						RP				Clearance (m)				Spread (m)			
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
13.6	1	700	Over Mature	Poor	Fair	Fair	Decline	U	n/a	221.7	8.4	Pre Construction	3 Months	4	4	4	3	6	6	5	5

Tree Comment : Large, poor quality specimen in early stages of decline.
Relatively healthy stem.
Co-dominant stems form at 2.5m HGL with tight unions and included bark at POU.
Approx 10% foliage.
Major deadwood and bark necrosis.
Evidence of previous pruning.
Large dead branch overhangs adjacent path.

Survey Comment : Root containment by footpath to east.

Work Category	Action
Fell and replacement plant	In agreement with the LPA
	Remove tree in the interests of Health & Safety.

Tree T0139 – Viewed from southeast

Tree ID : T0140 **Tag :** 0140 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Black Cherry **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No
Prunus serotina **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 (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
10.3	1	296	Mature	Good	Poor	Fair	Poor	C.1	<10 yrs	39.6	3.55	Pre Construction	3 Months	2	2	2	3.5	4.5	5	4	3.5

Tree Comment : Reasonably healthy in appearance.
Large wound on east side of stem at 0.5m HGL, with evidence of decay.
Branching system forms at 2m HGL with tight unions.
Evidence of previous pruning.
Snags within canopy.
Canopy overhangs adjacent path.

Survey Comment : Root containment by footpath to east.

Work Category	Action
Fell and replacement plant	In agreement with the LPA
	In the interests of Health & Safety.

Stem damage on Tree T0140 – Viewed from east

Tree T0140 – Viewed from southeast

Unit 1, Inkerman Road, Tow Law, Bishop Auckland, DL13 4QB. Tel: 01388 730257
Fax: 01388 731332. Email: RDodds@batsonltd.co.uk

Tree ID : T0141 **Tag :** 0141 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Grey Poplar **TPO :** **Inspected :** 14 July 2015 **Cons Area :** No
Populus canescens **Next Insp :** Not Required
1st Branch: 4.5 W

Stems				Health						RP				Clearance (m)				Spread (m)			
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
26.4	1	986	Mature	Good	Good	Good	Good	B.1	10 to 20 yrs	439.9	11.83	Pre Construction	6 Months	8	8	6	6	8	9	8	9

Tree Comment : Large dominant specimen, relatively healthy in appearance.
Co-dominant stems form at 4.5m HGL.
Major deadwood and snags within canopy.
Canopy overhangs adjacent path and building.

Survey Comment : Root containment by building to west and hard surfacing towards north and east.

Work Category **Action**
Remove Deadwood and snags

Tree T0141 – Viewed from north

Tree ID : T0142 **Tag :** 0142 **Assessor :** Ryan Dodds **Bats :** No
Species : Swedish Whitebeam **TPO :** **Inspected :** 27 July 2015 **Cons Area :** No
Sorbus intermedia **Next Insp :** Not Required
Estimated Measurements **1st Branch:**

Stems				Health						RP				Clearance (m)				Spread (m)			
H (m)	No	Eq Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
4	10	285	Mature	Fair	Fair	Fair	Fair	C.1	10 to 20 yrs	36.6	3.41	Pre Construction	N/A	0.5	0.5	0.5	0.5	3	3	3	3

Tree Comment : Relatively healthy in appearance, multi stemmed from base.
Dense canopy, healthy in growth.
Relatively well balanced canopy.
Dense, intertwining branching system.

Survey Comment : Root containment by surrounding hard surfaces.
Surrounded by dense understorey vegetation.

Work Category **Action**
No action No action

Tree T0142 – Viewed from southeast

Unit 1, Inkerman Road, Tow Law, Bishop Auckland, DL13 4QB. Tel: 01388 730257
Fax: 01388 731332. Email: RDodds@batsonltd.co.uk

Tree ID : T0143 **Tag :** 0143 **Assessor :** Ryan Dodds **Bats :** No

Species : Swedish Whitebeam **TPO :** **Inspected :** 27 July 2015 **Cons Area :** No

Sorbus intermedia **Next Insp :** Not Required

1st Branch: 0.7 SE

Estimated Measurements

Stems				Health						RP				Clearance (m)				Spread (m)			
H (m)	No	Eq Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
6	4	236	Mature	Good	Fair	Poor	Fair	C.1	10 to 20 yrs	25.2	2.83	Pre Construction	6 Months	2	2	2	2	3.5	3.5	3.5	3.5

Tree Comment : Relatively healthy in appearance.
Multi stemmed from base with tight unions.
Evidence of previous pruning on main stem.
Minor snags and deadwood within canopy.

Survey Comment : Dense, understorey vegetation surrounding base of tree.

Work Category	Action
Remove	Deadwood and snags

Tree T0143 – Viewed from north

Tree ID : T0144 **Tag :** 0144 **Assessor :** Ryan Dodds **Bats :** Unknown

Species : Whitebeam **TPO :** **Inspected :** 27 July 2015 **Cons Area :** No

Sorbus aria **Next Insp :** Not Required

1st Branch: 1e

Estimated Measurements

Stems				Health						RP				Clearance (m)				Spread (m)			
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
6	1	400	Mature	Fair	Fair	Fair	Fair	C.1.2	10 to 20 yrs	72.4	4.8	Pre Construction	N/A	1.5	1.5	1.5	1.5	4	3	4.5	3

Tree Comment : Reasonable health and condition.
Tree forms part of group.
Tight unions where branching system forms.
Deadwood and snags within canopy.
Surrounded by dense understorey vegetation.

Survey Comment : Minor root containment by hard surfacing to northeast.
Dense, understorey vegetation surrounding base of tree.

Work Category	Action
No action	No action

Combined canopies of trees T0144, T0145 & T0146 – Viewed from east

Unit 1, Inkerman Road, Tow Law, Bishop Auckland, DL13 4QB. Tel: 01388 730257
Fax: 01388 731332. Email: RDodds@batsonltd.co.uk

Tree ID : T0145 **Tag :** 0145 **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Whitebeam **TPO :** **Inspected :** 27 July 2015 **Cons Area :** No
Sorbus aria **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 (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
6	1	350	Mature	Fair	Fair	Fair	Fair	B.1.2	10 to 20 yrs	55.4	4.19	Pre Construction	6 Months	1.5	1.5	1.5	1.5	4	3	3	3

Tree Comment : Reasonable health and condition.
Tree forms part of group.
Surrounded by dense understorey vegetation.
Deadwood and snags within canopy.

Survey Comment : Dense, understorey vegetation surrounding base of tree.

Work Category **Action**
Remove Deadwood and snags

Combined canopies of trees T0144, T0145 & T0146 – Viewed from east

Tree ID : T0146 **Tag :** **Assessor :** Ryan Dodds **Bats :** Unknown
Species : Whitebeam **TPO :** **Inspected :** 27 July 2015 **Cons Area :** No
Sorbus aria **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 (m²)	R (m)	Site Status	Priority	N	E	S	W	N	E	S	W
6	1	400	Mature	Fair	Fair	Fair	Fair	B.1.2	10 to 20 yrs	72.4	4.8	Pre Construction	6 Months	1.5	1.5	1.5	1.5	4	3	3	3

Tree Comment : Reasonable health and condition.
Tree forms part of group.
Surrounded by dense understorey vegetation.
Deadwood and snags within canopy.

Survey Comment : Dense, understorey vegetation surrounding base of tree.

Work Category **Action**
Remove Deadwood and snags

Combined canopies of trees T0144, T0145 & T0146 – Viewed from east

Unit 1, Inkerman Road, Tow Law, Bishop Auckland, DL13 4QB. Tel: 01388 730257
Fax: 01388 731332. Email: RDodds@batsonltd.co.uk

Tree ID : T0148 **Tag :** 0148 **Assessor :** Ryan Dodds **Bats :** Unknown

Species : Wild Cherry **TPO :** **Inspected :** 27 July 2015 **Cons Area :** No

Prunus avium

Next Insp : Not Required

Estimated Measurements **1st Branch:**

Stems			Health					RP		Site Status	Priority	Clearance (m)				Spread (m)			
H (m)	No	Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)			N	E	S	W	N	E	S	W
6	1	300	Mature	Poor	Poor	Poor	Decline	C.1	<10 yrs	40.7	3.59	Pre Construction	6 Months	1.5	1.5	1.5	1.5	3	1	3	3

Tree Comment : Poor quality specimen in serious decline.
Evidence of topping and severe pruning works.
Relatively sparse foliage.

Survey Comment : Root containment by hard surfacing towards east.
Dense, understorey vegetation surrounding base of tree.

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

Tree T0148 – Viewed from west

Tree ID : T0149 **Tag :** 0149 **Assessor :** Ryan Dodds **Bats :** No

Species : Swedish Whitebeam **TPO :** **Inspected :** 27 July 2015 **Cons Area :** No

Sorbus intermedia

Next Insp : Not Required

1st Branch: 0.5 SE

Stems				Health					RP		Site Status	Priority	Clearance (m)				Spread (m)			
H (m)	No	Eq Ø (mm)	Maturity	Crown	Stem	Basal	Phy Con	Cat	ERC	A (m²)	R (m)			N	E	S	W	N	E	S	W
6	6	490	Mature	Good	Fair	Fair	Fair	C.1	10 to 20 yrs	108.6	5.87	Pre Construction	6 Months	1.7	1.7	1.7	1.7	4	3.5	3.5	4

Tree Comment : Relatively healthy in appearance.
Multi stemmed from base with tight unions.
Evidence of previous pruning on main stem.
Minor snags and deadwood within canopy.

Survey Comment : Dense, understorey vegetation surrounding base of tree.

Work Category	Action
Remove	Deadwood and snags

Tree T0149 – Viewed from north

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Tree Root Protection Areas (RPA's)

8.1 All trees that are being retained on site should be protected by barriers, in accordance with Appendix 1, before construction or demolition work commences.

8.2 Where construction of the proposed development requires access 'over' the RPA of trees, appropriate 'Approved' protection measures must be taken, to prevent damage to their rooting systems.

8.3 'Root Protection Area' as indicated on Plan Dwg. No. **0007697/P1**, by a red coloured, solid line circle.

8.4 Table No.1 shows the trees' 'Root Protection Areas', in accordance with, BS 5837:2012.

Table 1

Tree No.	Species	DBH (mm)	RPA (sq m)	R (m)
T0127	Cherry	445	89.6	5.34
T0128	Cherry	340	52.3	4.08
T0129	Rowan	273	33.7	3.27
T0130	Rowan	213	20.5	2.55
T0131	Rowan	203	18.6	2.43
T0132	Poplar	945	404	11.34
T0133	Norway Maple	197	17.6	2.36
T0134	Ash	426	82.1	5.11
T0135	Ash	318	45.8	3.81
T0136	Ash	509	117.2	6.1
T0137	Norway Maple	240	26.1	2.88
T0138	Ash	397	71.3	4.76
T0139	Cherry	700	221.7	8.4
T0140	Cherry	296	39.6	3.55
T0141	Poplar	986	439.9	11.83
T0142	S. Whitebeam	285	36.6	3.41
T0143	S. Whitebeam	236	25.2	2.83
T0144	Whitebeam	400	72.4	4.8
T0145	Whitebeam	350	55.4	4.19
T0146	Whitebeam	400	72.4	4.8
T0148	Cherry	300	40.7	3.59
T0149	S. Whitebeam	490	108.6	5.87

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9.0 Analysis Introduction

9.1 *The 'Tree Schedule' (paragraph 8.0) outlines detailed information on the physical attributes of individual specimens, together with recommended actions.*

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 property are considered as having 'visual amenity and landscape value'. The 'amenity value' is dependent upon the current Health and Condition of the trees, whether they are viewed from within, or outside of the property, or from the surrounding environment.

10.2 Good specimen trees which are growing adjacent to a Public Highway, become 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', retention of tree cover will be considered by the Local Planning Authority, as being of 'high' importance. The visual amenity and landscape value of trees will therefore, be an important consideration.

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 6-16**,** outlines the attributes of individual trees. Where trees are found to have a relative short remaining life expectancy, consideration may be given to their 'phased' or 'selective' removal and replacement planting. This will enable 'continuity' of the visual amenity and landscape value, by retaining the remaining trees, while replacement trees establish and grow to maturity.

11.0 Tree Analysis – Specific

11.1 It is seen from Tree Constraints Plan, Ref. **0007697/P1** that the majority of trees are growing adjacent to the eastern elevation of the main building, and readily visible from the Public Highway. These trees, which are viewed by the Public at large, create a softening effect between the Public Highway and the adjacent building. The trees therefore, may be classed as being of 'high' visual amenity and landscape value.

11.1.1 Close inspection shows that, the trees growing adjacent to the eastern elevation of the main building have been subject to past management, and appear to be in reasonable Health & Condition. However, inspection shows that several trees (**T0135, T0136, T0139 & T0140**) are of poorer quality. The visual amenity and landscape value, and life expectancy of these trees therefore, may be reduced.

11.1.2 As trees **T0139** & **T0140** are growing adjacent to the Public Highway Footpath, there is risk of injury to people or damage to property in the event of tree failure. Consideration therefore, should be given to removal of the trees, and replacement planting be carried out in agreement with the Local Planning Authority (LPA).

11.2 Trees **T0127** – **T0141**, are seen to be growing within a contained environment, formed by building foundations, road kerbs and hard surfacing. These structures form physical barriers, which create a restrictive growth environment. Within this environment, the trees will be competing for canopy and root growth space, ground moisture and nutrients.

11.2.1 The larger, more dominant species e.g. **T0132** & **T0141** (Poplars), which are 'high' moisture demanders, will be growing at the expense of the smaller, less dominant specimens. All trees however, are competing with each other within this 'hostile' growing environment. The growth and development of the trees therefore, will exhibit less vigour and health than if growing in an optimum growing environment. The life expectancy of the trees will be reduced, and potentially, become more susceptible to pathogenic invasions.

11.3 The trees growing within the 'unmaintained scrub' area, within the northwest corner of the site, are not readily viewed by the Public at large, and therefore, may be classed as being of 'local' visual amenity and landscape value. They do however provide a visual softening effect between adjacent properties.

11.3.1 Close inspection provides evidence to show that this area appears not to have been subject to past management or maintenance. The area is covered with self-sown, poor quality trees and understory scrub, and seen to be in a semi-derelict state.

11.3.2 Consideration may be given to removal of these poor quality trees, and replacement planting be undertaken as part of an Approved Landscaping Scheme.

9.0 Conclusion

9.1 It is proposed, that the former 'Be Modern' industrial premises, on Western Approach, South Shields, is to be subject to redevelopment. There are trees growing within the property, and an Arboricultural Tree Report and Constraints Plan have been requested.

10.0 Environmental Impact of Recommendations

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

10.1.1 The retained trees will:-

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

10.1.2 Trees considered for removal will:-

- Be replaced in agreement with the LPA, or as part of an Approved Landscaping Scheme.
- Eliminate risk of injury to people or damage to property, respectively.
- Increase growth space, ground moisture and nutrients for surrounding trees.

11.0 Arboricultural Method Statement

11.1 Trees and RPA's should be protected by 'Approved' barriers and/or ground protection. Tree protection measures should be implemented prior to materials or machinery being brought onto site, and before stripping of soil, excavations, demolition, or development commences.

11.2 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.

11.3 Where use of 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 or Demolition 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.)

Ryan J. Dodds Dip. Arb.
Arboricultural Consultant

For and on behalf of
Batson Landscape & Tree Care Ltd

APPENDIX CONTENTS

Appendix I

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

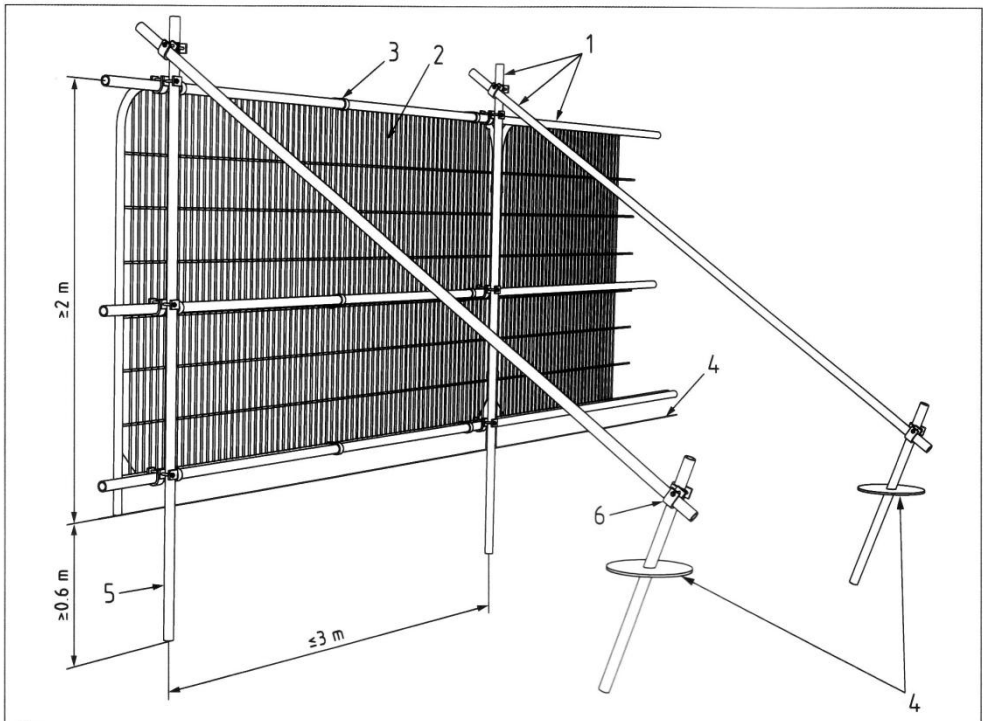
All trees to be retained on site should be protected by barriers or ground protection. The barriers should be erected before any materials or machinery are brought on site and should not be removed or altered without prior consent by a qualified Arborist.

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.

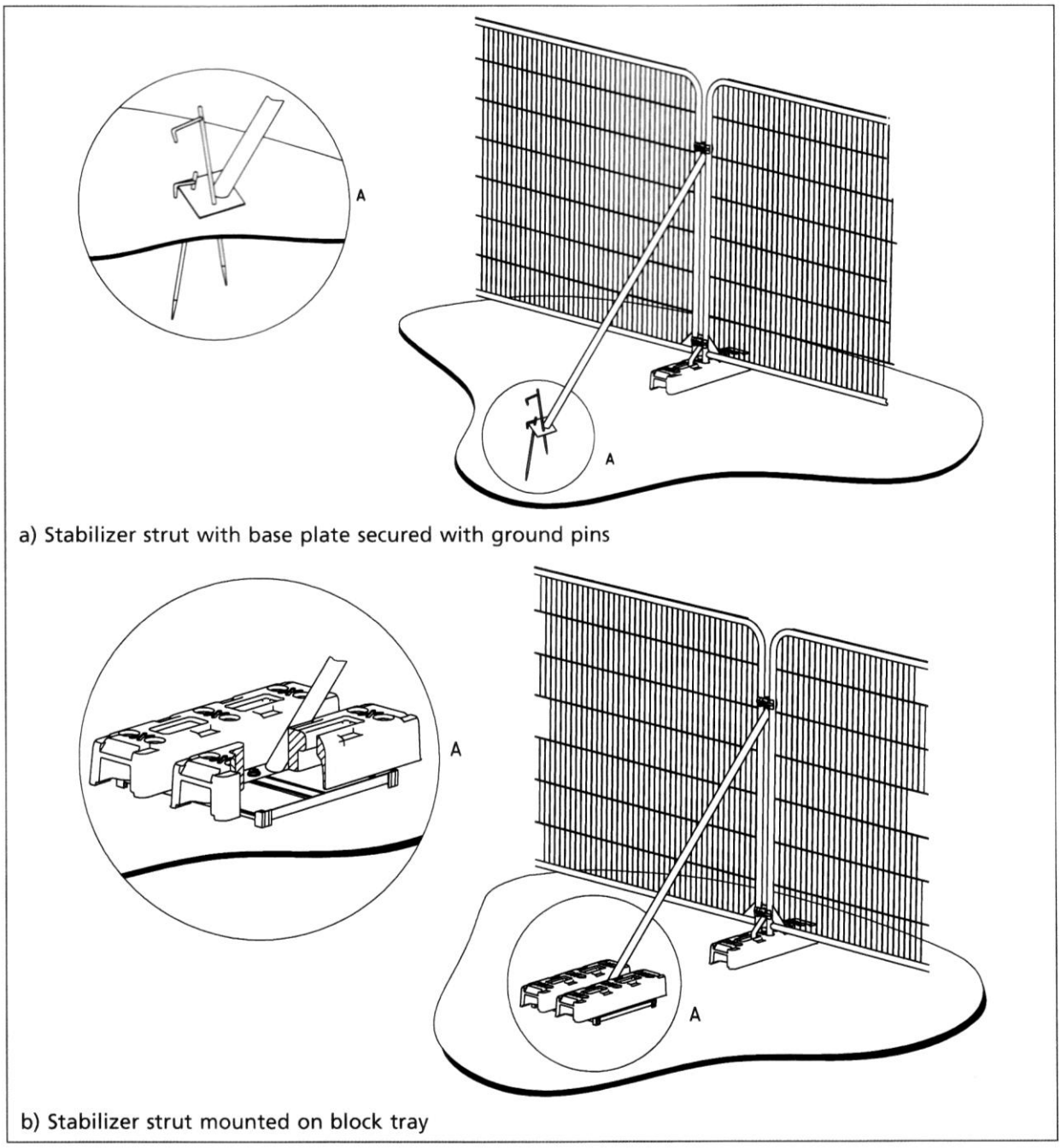
Figure 2 **Default specification for protective barrier**



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

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 trees' root protection areas 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, particularly 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 trenchlesss 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, these T numbers are specific to this report only.

1.1 Tree species:

Full botanical name (genus and species) and common name has been 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 starting to break up and 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 height was estimated.

1.4 Crown spread:

The crown spread of the tree was measured in metres from the centre of the tree in north, south, east and westerly directions.

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 health and form were noted based on site observations. The trees were then placed in one of the following categories:

a) Good – full healthy canopy but possibly including some suppressed branches or minor physical damage.

b) Reasonable – slightly reduced leaf cover, minor deadwood or isolated areas of more extensive deadwood.

c) Poor – overall sparse leafing or extensive dead wood.

d) In decline – large areas of the crown dead.

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, 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) 20+
d) 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 *et al* (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.
Delamination	separation of one layer from another.
Flush-cut	a pruning cut close to the parent stem which removes part of the branch bark ridge or collar.
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.
HGL	Height above ground level

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	premature death of specific areas of living tissue, owing to some adverse factor. Often characterised by a change in colour to brown or black.
Occlusion	the overgrowth of a wound with (callus) tissue produced subsequently (verb occlude).
POU	Point of Union – point in which branches or co-dominant stems are formed.
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.