

# Land at Shaw Lane, Barnsley

## Tree Survey Report

B029129

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Prepared on Behalf of Network Space Ltd

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## CONTENTS

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<b>1.0</b>	<b>SUMMARY .....</b>	<b>1</b>
<b>2.0</b>	<b>INTRODUCTION .....</b>	<b>2</b>
	2.1. Scope & Brief.....	2
	2.2. Report Limitations.....	2
<b>3.0</b>	<b>SITE DESCRIPTION .....</b>	<b>3</b>
	3.1. Site Location & Boundaries .....	3
	3.2. Land Use.....	3
	3.3. Topography, Geology & Soils .....	3
	3.4. Statutory Protection & Designation .....	4
<b>4.0</b>	<b>TREE SURVEY .....</b>	<b>5</b>
	4.1. Methodology .....	5
	4.2. Survey Results.....	5
<b>5.0</b>	<b>RECOMMENDATIONS .....</b>	<b>12</b>
	5.1. Tree Retention .....	12
	5.2. Construction Tree Protection .....	12
	5.3. Arboricultural Works .....	12
	<b>APPENDICES .....</b>	<b>1</b>
	<b>APPENDIX A – TREE SURVEY SCHEDULE.....</b>	<b>2</b>
	<b>APPENDIX B – SPECIES LIST &amp; POTENTIAL TREE HEIGHTS.....</b>	<b>3</b>
	<b>APPENDIX C – TREE QUALITY &amp; VALUE ASSESSMENT CATEGORIES.....</b>	<b>5</b>
	<b>APPENDIX D – TREE CONSTRAINTS PLAN.....</b>	<b>7</b>
	<b>APPENDIX E – REPORT CONDITIONS .....</b>	<b>8</b>



## 1.0 SUMMARY

- 1.1.1 Tetra Tech was commissioned to carry out a tree survey in accordance with BS5837:2012 on land at Shaw Lane, Barnsley. It is intended to develop the land for up to 215 dwellings and the survey is intended to assist the development design. The survey updated a previous survey carried out by WYG in 2019.
- 1.1.2 The site is an arable field. It is bounded by Shaw Lane to the south and the embankment of a disused railway to the east. The western and northern boundaries are formed by hedgerows, with farmland beyond.
- 1.1.3 The survey considered 19 individual trees and 20 groups of trees and hedges. All but two groups of trees are located on the boundary of the field, either as hedges, hedgerow trees or offsite trees on the adjacent railway embankment.
- 1.1.4 Ten individually surveyed trees and 11 groups of trees and hedges have been assigned to the moderate quality and value category (BS5837 B category). Eight individual trees and nine groups of trees and hedges have been assigned to the low quality and value category (BS5837 C category). One tree has been identified as unsuitable for retention (BS5837 U category).
- 1.1.5 None of the trees are subject to Tree Preservation Orders, and the site is not located in a Conservation Area.
- 1.1.6 Trees on the site represent a constraint that should be taken into account when designing future development. It is recommended that consideration is given to retaining all the trees of moderate quality during the development of the site, where practicable. This should be easy to achieve as these are all located on the site boundaries or adjoining land. It is recommended that trees are retained with sufficient space to protect their roots, as defined by the root protection areas, and that sufficient space is provided for future development without causing a nuisance.

## 2.0 INTRODUCTION

### 2.1. SCOPE & BRIEF

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- 2.1.1 Tetra Tech was commissioned to carry out a tree survey in accordance with BS5837:2012 on land at Shaw Lane, Barnsley. It is intended to develop the land and the survey is intended to assist the development design.
- 2.1.2 The scope of the work was to undertake a survey of the trees on and immediately adjacent to the site in accordance with BS5837:2012 'Trees in Relation to Design, Demolition and Construction –Recommendations'. This determined the size, condition and value of trees and hedges on and immediately adjacent to the site and provide recommendations for remedial work and root protective distances to ensure the future health and stability of retained trees.
- 2.1.3 The tree survey updates an earlier survey carried out by WYG in 2019<sup>1</sup>.
- 2.1.4 This report does not assess the impacts of a development proposal on the trees to determine the requirements for tree removal, or the impacts of the proposed redevelopment works on retained trees. These will be considered in an arboricultural impact assessment to be produced once development proposals have been finalised.
- 2.1.5 The survey was carried out by Guy Morrison DipArb (RFS) MICFor MArborA who is an arboricultural consultant and associate of WYG.

### 2.2. REPORT LIMITATIONS

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- 2.2.1 Trees were assessed visually from ground level. No climbed inspection, removal of ivy or detailed investigation of decay was made. Estimates of trees were made where, due to excessive vegetation or due to the high-risk nature of the site, it was not possible to access trees for direct measurement.
- 2.2.2 Tree condition can change significantly over a relatively short period of time, and therefore the results and recommendations of this survey can only be held to be valid for a period of 18 months following the survey date.

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<sup>1</sup> *Tree Survey Report – Land at Shaw Lane, Barnsley.* WYG report for Network Space. October 2019.

## 3.0 SITE DESCRIPTION

### 3.1. SITE LOCATION & BOUNDARIES

- 3.1.1 The land is located to the north of Shaw Lane, Carlton, near Barnsley.
- 3.1.2 The embankment of a disused railway forms the eastern boundary. The western and northern boundaries are formed by hedgerows, with farmland beyond.
- 3.1.3 The OS grid reference for the centre of the site is SE 37405 10323.
- 3.1.4 The extent and location of the sites are shown in the Tree Constraints Plans in Appendix D.

### 3.2. LAND USE

- 3.2.1 The site comprises an arable field, which had recently been harvested at the time of the survey.
- 3.2.2 There are no public rights of way over the land, although it can be viewed from Shaw Lane to the south, with partially obscured views from a public footpath running to the west.

### 3.3. TOPOGRAPHY, GEOLOGY & SOILS

- 3.3.1 The topography of the land is flat with very little relief over the whole of the survey area.
- 3.3.2 The British Geological Survey Geology of Britain viewer<sup>2</sup>. shows that the site is underlain by mudstone, siltstone and sandstone of the Pennine Middle Coal Measures Formation. Superficial deposits of till cover most of the site except the south-west corner where no superficial deposits are recorded.
- 3.3.3 The Cranfield Soil and Agrifood Institute Soilscales viewer<sup>3</sup> shows soils at the site to be freely draining slightly acid loamy soils.

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<sup>2</sup> <https://mapapps.bgs.ac.uk/geologyofbritain/home>

<sup>3</sup> <http://www.landis.org.uk/soilscales/>

## 3.4. STATUTORY PROTECTION & DESIGNATION

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### Tree Preservation Orders & Conservation Areas

- 3.4.1 The website of Barnsley Metropolitan Borough Council<sup>4</sup> shows that none of the trees included in the survey are subject to a Tree Preservation Order and the site does not lie within a Conservation Area.

### Felling Licences

- 3.4.2 Tree felling on non-residential land is also controlled by the need to obtain a tree Felling Licence from the Forestry Commission before felling more than five cubic metres in any calendar quarter (e.g. Jan to Mar, Apr to Jun, Jul to Sep and Oct to Dec), as long as no more than two cubic metres are sold, subject to various exemptions and variations<sup>5</sup>.

### Protected Species

- 3.4.3 Trees and scrub provide habitat for a wide range of species, some of which are protected. Most nesting birds and their nests are protected by the Wildlife and Countryside Act 1981 (as amended). All bats and their roosts are protected by the Wildlife and Countryside Act 1981 (as amended) and gain additional protection under the Conservation of Habitats and Species Regulations 2010 (as amended). Birds listed under Schedule 1 of the Wildlife and Countryside Act 1981 are also protected from disturbance when building a nest, nesting, or when dependent young are at or near the nest.

### Hedgerow Regulations

- 3.4.4 Hedgerows on agricultural land are protected under the Hedgerow Regulations 1997<sup>6</sup>. Hedgerows should not be removed without serving appropriate notice on the local planning authority, who can require the retention of hedgerows deemed 'important' under the Regulations.

### Veteran Trees

- 3.4.5 Veteran trees gain status in the National Planning Policy Framework 2019<sup>7</sup>. None of the trees on and adjacent to the site are recorded on the Woodland Trust's Ancient Tree Inventory<sup>8</sup>.

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<sup>4</sup> [www.barnsley.gov.uk/services/parks-and-open-spaces/tree-preservation-orders/](http://www.barnsley.gov.uk/services/parks-and-open-spaces/tree-preservation-orders/) [Viewed 04/09/2021]

<sup>5</sup> [www.gov.uk/guidance/tree-felling-licence-when-you-need-to-apply](http://www.gov.uk/guidance/tree-felling-licence-when-you-need-to-apply)

<sup>6</sup> [www.gov.uk/guidance/countryside-hedgerows-regulation-and-management](http://www.gov.uk/guidance/countryside-hedgerows-regulation-and-management)

<sup>7</sup> [www.gov.uk/government/collections/revised-national-planning-policy-framework](http://www.gov.uk/government/collections/revised-national-planning-policy-framework)

<sup>8</sup> <https://ati.woodlandtrust.org.uk/tree-search/> [Viewed 04/09/2021]



## 4.0 TREE SURVEY

### 4.1. METHODOLOGY

- 4.1.1 The site was visited during September 2021 to carry out an assessment in accordance with BS5837:2012.
- 4.1.2 The topographical survey of the site was used to identify tree positions on the ground.
- 4.1.3 The following information was collected for each tree: species, age class, height, stem diameter at 1.5m above ground level, crown spread in the four cardinal directions and height of the crown above the ground (excluding basal sprouts and epicormic branches). Tree age class categories are listed below:
- Young (Y) - <1/3 of life expectancy
  - Semi-mature (SM) - 1/3 – 1/2 of life expectancy
  - Early-mature (EM) – 1/2 - 2/3 of life expectancy
  - Mature (M) - >2/3 of life expectancy
  - Late-mature (LM) - >2/3 of life expectancy, and crown retracting due to age
- 4.1.4 An assessment was made of the trees' physiological and structural condition, noting any disorders or biomechanical features that present an obvious hazard to present or future users of the site or affect the trees' life expectancy.
- 4.1.5 Preliminary management works were proposed in order to either remove/reduce hazards or promote good future growth of the tree.
- 4.1.6 The trees' overall quality and value for retention was assessed in accordance with BS5837:2012 Table 1 (Appendix C). This was dependent on the trees' physiological and structural condition, safe useful life expectancy and arboricultural, landscape, cultural, ecological value and amenity value (as a function of size, prominence, attractiveness and screening).
- 4.1.7 The Tree Constraints Plan shows the RPA of trees of the individually surveyed trees. The distribution and shape of the RPA reflects the opportunities for rooting available to each tree. Irregularly shaped RPAs have been drawn where there are significant obstacles to rooting caused by buildings or major roads.

### 4.2. SURVEY RESULTS

- 4.2.1 The survey considered 19 individual trees and 20 groups of trees and hedges. All but two groups of trees are located on the boundary of the field, either as hedges, hedgerow trees or offsite trees and scrub on the adjacent railway embankment. The full survey results are given in the survey schedule in Appendix A and the trees are shown on the Tree Constraints Plan.

#### Tree Species

- 4.2.2 Figure 1 below illustrates the range of species recorded at the site, and the frequency of each species.

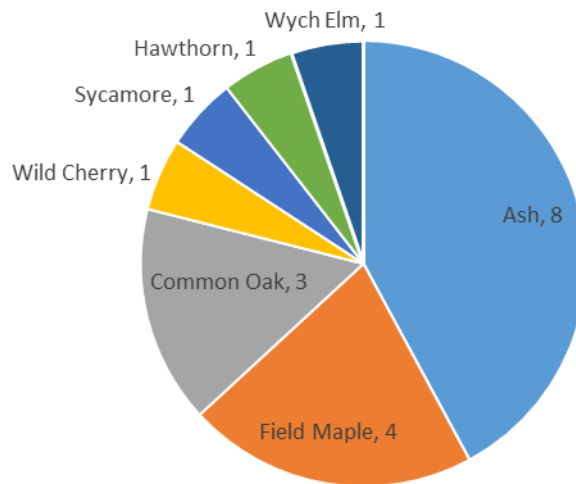


Figure 1: Showing the species mix of trees recorded as individuals in the survey

- 4.2.3 Ash (*Fraxinus excelsior*) is the most frequently recorded species, followed by field maple (*Acer campestre*) and common oak (*Quercus robur*). Wild cherry (*Prunus avium*), sycamore (*Acer pseudoplatanus*), hawthorn (*Crataegus monogyna*) and wych elm (*Ulmus glabra*) all occur as single trees.
- 4.2.4 The majority of the hedgerows in the survey are dominated by hawthorn. Other species present in the hedges include field maple, wych elm, blackthorn (*Prunus spinosa*), grey willow (*Salix cinerea*), elder (*Sambucus nigra*) and dog rose (*Rosa canina*).

## Tree Age

- 4.2.5 Figure 2 below illustrates the range of age categories recorded at the site, and the frequency of each age category.

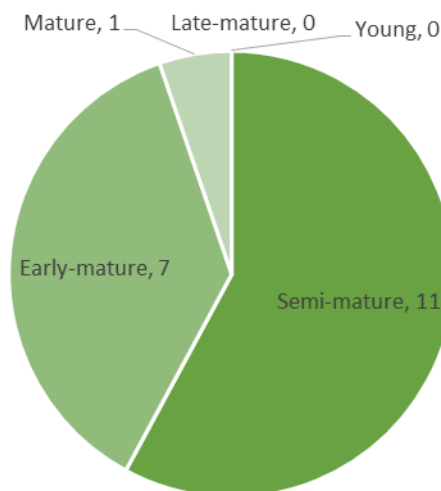


Figure 2: Showing the age spread of trees recorded as individuals in the survey.

- 4.2.6 The majority of trees recorded in the survey are semi-mature, with a smaller number of early-mature trees and a single mature tree.

### Quality & Value Categories

- 4.2.7 The individual trees and groups of trees were assigned to Categories A, B, C and U in accordance with BS5837 as summarised in Table 1 below.

Table 1. Number of trees and groups of trees and hedges assigned to BS5837 categories.

	No. of Trees	No. of Groups
A Category - High quality & value	0	0
B Category - Moderate quality & value	10	11
C Category - Low quality & value	8	9
U Category - Unsuitable for retention	1	0
<b>Total</b>	<b>19</b>	<b>20</b>

### **A Category**

- 4.2.8 No trees are considered to be of high quality and value (A category). Trees in this category would be expected to make a substantial contribution for a period of at least 40 years.

### **B Category**

- 4.2.9 Ten individually surveyed trees and 11 groups of trees and hedges have been assigned to the moderate quality and value category (B category). Moderate quality trees are likely to make a significant contribution over a period of at least twenty years, although many will have a life expectancy well in excess of this.
- 4.2.10 The trees assigned to the B category are three oak (T1-3), two ash (T5 and T9) and a cherry (T12), all located on the boundary or offsite on the railway embankment to the east of the site. There are four field maple (T13 and T16-18) in the hedge on the southern boundary of the site with Shaw Lane. All of these trees are of good form and vigour, good potential, and are likely to become trees of higher value if allowed to mature.
- 4.2.11 The groups of trees and hedges of moderate quality include the hedges G2, G3 and G5-7, which are all located offsite adjacent to Shaw Lane, and the hedges G9, G11, G15 and G16 on the site boundaries. All of these would contribute to the screening of the site if it is developed and its integration into the surrounding countryside. The groups also include the band of cherry and hawthorn trees located offsite on Shaw Lane (G1), and the strip of scrub and trees located offsite on the railway embankment adjacent to the site (G20).



*Image 1: Cluster of oak trees T1-3 (Category B) and hedge G17 (Category C) on the eastern boundary*



*Image 2: Ash tree T5 on the eastern boundary with hedge G18 and offsite scrub G20 (Category B).*



*Image 3: Hedgerow G2 on Shaw Lane to the west of the site (Category B).*



*Image 4: Field maple trees T17 and T18 in hedgerow G9 on the southern boundary (Category B).*

### **C Category**

- 4.2.12 Eight individual trees and nine groups of trees and hedges have been assigned to the low quality and value category (C category). Individual trees have generally been assigned to this category because of poor form, low vigour, defects, or because they lack maturity and could easily be replaced.
- 4.2.13 The semi-mature birch tree T4 on the eastern boundary has been removed since the previous WYG tree survey. An additional semi-mature ash tree T6a has been included in the current survey.
- 4.2.14 The groups of trees of low quality include two groups of grey willow and elder (G12 and G13) located beside a ditch in the centre of the site. Other groups are a length of garden hedge located offsite on Shaw Lane (G4) and three lengths of hedge (G8, G10 and G14) on the site boundary that are small or broken.
- 4.2.15 In the previous WYG survey, the hedges G17-19 on the eastern boundary were assigned to category B because of their screening value. These hedges have been downgraded to category C in the current survey because significant sections have been removed to erect a boundary fence at the base of the railway embankment.



*Image 5: Groups of grey willow G12 and G13 in the centre of the site (Category C).*

### **U Category**

- 4.2.16 One tree has been identified as unsuitable for retention (U category). This is the ash tree T11 beyond the eastern boundary. This multi-stemmed tree has suffered from severe dieback and the majority of the crown is dead.



*Image 6: Ash tree T11 beyond the eastern boundary (Category U).*

## 5.0 RECOMMENDATIONS

### 5.1. TREE RETENTION

- 5.1.1 Trees on the site represent a constraint that should be taken into account when designing for future development. It is recommended that serious consideration is given to retaining all the trees and groups of moderate quality and value (B category) during the development of the site where this is practicable. This should be easy to achieve as these are all located on the site boundaries or adjoining land.
- 5.1.2 Where possible, low quality and value (C category) trees should be retained, but their presence should not represent a significant constraint on the design. However, large-scale removal would cause a significant reduction of local tree cover, and this should be mitigated by new tree planting on the site if it is proposed to remove a large number of these trees to accommodate the scheme.
- 5.1.3 In order to allow for the long-term sustainable retention of trees, two requirements need to be met. The first is that there is no adverse physical impact on the trees. This can be met by ensuring that no adverse construction takes place within the RPA given in the survey schedule and shown on the Tree Constraints Plan.
- 5.1.4 In addition to reducing the physical impact on the tree, the second requirement is to allow the space for trees to grow and develop without causing significant nuisances such as severe loss of light to new buildings. Provisional maximum heights are given in the Appendix B and it is recommended that this information is taken account of during the design process.
- 5.1.5 An Arboricultural Impact Assessment will be carried out to identify the need for tree removal and the likely impact of development on retained trees once the development design is finalised.

### 5.2. CONSTRUCTION TREE PROTECTION

- 5.2.1 It is recommended that all retained trees on or immediately adjacent to the site should be protected by protective fencing during the site clearance and construction phases. This construction exclusion zone should protect the RPA and ensure that trees to be retained and their essential rooting zone is not damaged during the works.
- 5.2.2 A Tree Protection Plan and Arboricultural Method Statement will be produced once the design of the scheme has been finalised. These will show the location and detailing of protective fencing and other measures that are necessary to protect the trees during site clearance and construction works.

### 5.3. ARBORICULTURAL WORKS

- 5.3.1 Recommendations for tree works at this site have been made in the interest of maintaining a high quality tree stock. This schedule will be revised once the layout is finalised to include felling and pruning works necessary to accommodate the proposed development.



- 5.3.2 All works carried out should comply with BS3998:2010 'Tree Work - Recommendations'<sup>9</sup>.
- 5.3.3 It is recommended that wherever possible works are carried out between September and February in order to avoid impacting on nesting birds. It is recommended that an ecologist is consulted to advise on suitable precautions if it is necessary to carry out work during spring and summer.

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<sup>9</sup> *BS 3998:2010 Tree Work – Recommendations*, British Standards Institute, 2010



## APPENDICES

## **APPENDIX A – TREE SURVEY SCHEDULE**

Tree ID	Common Name	Latin Name	Maturity	Measurements Estimated	Height (m)	Height & Direction of 1st Significant Stem	Diameter (mm)	Spread - N (m)	Spread - E (m)	Spread - S (m)	Spread - W (m)	Crown Condition	Stem Condition	Basal Area Condition	Life Expectancy	Category	Physiological Condition	Comment	Work Recommendations	RPA Radius (m)	RPA Area (m <sup>2</sup> )
T1	Common Oak	<i>Quercus robur</i>	Early-mature	Yes	14.0	4	400 400 200	7.5	4.0	1.0	8.0	Fair	Good	Good	>40 yrs	B2	Good	Offsite on adjacent railway bank. Part of a cluster of 3 oak trees.	-	7.20	163
T2	Common Oak	<i>Quercus robur</i>	Early-mature	Yes	15.0	5	550	4.5	8.0	2.0	8.5	Good	Good	Good	>40 yrs	B2	Good	Offsite on adjacent railway bank. Part of a cluster of 3 oak trees.	-	6.60	137
T3	Common Oak	<i>Quercus robur</i>	Early-mature	Yes	15.0	4	480	4.0	7.0	8.0	8.0	Good	Good	Good	>40 yrs	B2	Good	Offsite on adjacent railway bank. Part of a cluster of 3 oak trees.	-	5.76	104
T4																		Birch tree felled since previous survey.	-		
T5	Common Ash	<i>Fraxinus excelsior</i>	Early-mature	Yes	13.0	3	520	6.5	6.0	7.5	7.5	Good	Good	Good	20 to 40 yrs	B2	Fair	Offsite tree. Some minor dieback and deadwood. No evidence of chalara. Minor root disturbance from fence erection.	-	6.24	122
T6	Common Ash	<i>Fraxinus excelsior</i>	Semi-mature	No	8.5	3	140 80	2.5	2.0	1.0	1.0	Good	Fair	Good	20 to 40 yrs	C2	Good	Tree within hedge section.	-	1.93	12
T6a	Common Ash	<i>Fraxinus excelsior</i>	Semi-mature	No	8.0	3	120	1.0	2.0	2.5	1.0	Good	Fair	Good	20 to 40 yrs	C2	Good		-	1.44	7
T7	Common Ash	<i>Fraxinus excelsior</i>	Semi-mature	No	8.5	2	180	2.5	2.5	2.5	2.5	Good	Fair	Good	20 to 40 yrs	C2	Good	Tree within hedge section.	-	2.16	15
T8	Common Ash	<i>Fraxinus excelsior</i>	Semi-mature	Yes	8.5	3	180	2.0	3.0	3.0	2.0	Good	Good	Good	20 to 40 yrs	C2	Good	Tree within hedge section.	-	2.16	15
T9	Common Ash	<i>Fraxinus excelsior</i>	Semi-mature	No	12.0	3	350	4.0	3.0	4.0	4.0	Good	Good	Good	20 to 40 yrs	B2	Fair	Crown density slightly thin but no evidence of chalara. Monitor tree condition.	-	4.20	55
T10	Common Ash	<i>Fraxinus excelsior</i>	Semi-mature	No	11.0	3	320	6.0	5.0	3.0	4.0	Fair	Fair	Good	10 to 20 yrs	C2	Poor	Chalara infection. Dieback of small branches. Monitor tree condition.	-	3.84	46

Tree ID	Common Name	Latin Name	Maturity	Measurements Estimated	Height (m)	Height & Direction of 1st Significant	Stem Diameter (mm)	Spread - N (m)	Spread - E (m)	Spread - S (m)	Spread - W (m)	Crown Condition	Stem Condition	Basal Area Condition	Life Expectancy	Category	Physiological Condition	Comment	Work Recommendations	RPA Radius (m)	RPA Area (m <sup>2</sup> )
T11	Common Ash	<i>Fraxinus excelsior</i>	Early-mature	Yes	13.5	4	400 350 300	5.0	5.0	8.0	6.0	Poor	Poor	Good	<10 yrs	U	Decline	Offsite tree beyond boundary. Two stems dead and chalara infection on live stem.	Recommend felling offsite tree.	7.32	169
T12	Wild Cherry	<i>Prunus avium</i>	Semi-mature	Yes	10.0	3	220	2.0	3.0	3.0	4.0	Good	Ivy	Good	20 to 40 yrs	B2	Fair	Offsite tree beyond boundary.	-	2.64	22
T13	Field Maple	<i>Acer campestre</i>	Semi-mature	Yes	9.5	1	210 140	2.0	3.5	3.5	3.0	Good	Good	Good	>40 yrs	B2	Good	Offsite tree beyond boundary.	-	3.03	29
T14	Sycamore	<i>Acer pseudoplatanus</i>	Semi-mature	Yes	9.0	1	120	1.0	1.0	2.5	2.0	Good	Good	Good	>40 yrs	C2	Good	Offsite tree beyond boundary.	-	1.44	7
T15	Common Hawthorn	<i>Crataegus monogyna</i>	Mature	Yes	9.0	3	300 120	2.0	3.0	4.0	2.0	Poor	Poor	Good	10 to 20 yrs	C2	Decline	Offsite tree beyond boundary. poor quality tree in decline. Dieback.	-	3.88	47
T16	Field Maple	<i>Acer campestre</i>	Early-mature	Yes	8.5	2	250 250 250	5.0	5.0	4.0	5.0	Good	Ivy	Good	20 to 40 yrs	B2	Good	Tree in hedge on road side with narrow verge. Limited access for survey.	-	6.00	113
T17	Field Maple	<i>Acer campestre</i>	Early-mature	Yes	10.0	1	350	4.0	4.0	4.0	4.0	Good	Good	Good	20 to 40 yrs	B2	Good	Tree in hedge on road side with narrow verge. Limited access for survey.	-	4.20	55
T18	Field Maple	<i>Acer campestre</i>	Semi-mature	Yes	10.5	0	200 200 150	5.0	5.0	4.0	5.0	Good	Good	Good	20 to 40 yrs	B2	Good	Tree in hedge on road side with narrow verge. Limited access for survey.	-	5.88	109
T19	Wych Elm	<i>Ulmus glabra</i>	Semi-mature	Yes	9.5	1	150 150 150 150	4.5	4.5	2.5	4.5	Good	Ivy	Good	10 to 20 yrs	C2	Fair	Tree in hedge on road side with narrow verge. Limited access for survey.	-	4.41	61

Tree ID	Common Name	Latin Name	Maturity	Measurements Estimated	Height (m)	Height & Direction of 1st Significant Stem	Diameter (mm)	Spread - N (m)	Spread - E (m)	Spread - S (m)	Spread - W (m)	Crown Condition	Stem Condition	Basal Area Condition	Life Expectancy	Category	Physiological Condition	Comment	Work Recommendations	RPA Radius (m)	RPA Area (m <sup>2</sup> )
G1	Wild Cherry, Hawthorn	<i>Prunus avium, Crataegus monogyna</i>	N/A	No	4-11	0	100-350	1-3				Good	Good	Good	20 to 40 yrs	B2	Good	Wild cherry and hawthorn on bank.		NA	Crown spread
G2	Hawthorn, Field Maple, Blackthorn	<i>Crataegus monogyna, Acer campestre, Prunus spinosa</i>	N/A	No	5-8	0	100-280	1-4				Good	Good	Good	20 to 40 yrs	B2	Good	Tall hawthorn hedge with some field maple. Side trimmed. Trimmed blackthorn section at E end. Gaps,		NA	Crown spread
G3	Hawthorn, Elder	<i>Crataegus monogyna, Sambucus nigra</i>	N/A	No	6-7	0	100-200	1-3				Good	Good	Good	20 to 40 yrs	B2	Good	Tall hawthorn hedge. Occasional elder. Trim clear of narrow path.		NA	Crown spread
G4	Mixed Species		N/A	Yes	7.0	0	N/A	2-3				Good	N/A	N/A	20 to 40 yrs	C2	Good	Overhanging Leyland cypress, privet, damson, hawthorn from garden hedges behind fence.		NA	Crown spread
G5	Hawthorn, Elder	<i>Crataegus monogyna, Sambucus nigra</i>	N/A	No	5-7	0	100-200	2-3				Good	Good	Good	20 to 40 yrs	B2	Good	Tall hawthorn hedge. Occasional elder. Trim clear of narrow path.		NA	Crown spread
G6	Hawthorn, Elder	<i>Crataegus monogyna, Sambucus nigra</i>	N/A	No	5-7	0	100-200	2-3				Good	Good	Good	20 to 40 yrs	B2	Good	Tall hawthorn hedge. Occasional elder. Trim clear of narrow path.		NA	Crown spread
G7	Hawthorn, Elder	<i>Crataegus monogyna, Sambucus nigra</i>	N/A	No	5-7	0	100-200	2-3				Good	Good	Good	20 to 40 yrs	B2	Good	Tall hawthorn hedge. Occasional elder. Trim clear of narrow path.		NA	Crown spread
G8	Hawthorn, Elder	<i>Crataegus monogyna, Sambucus nigra</i>	N/A	No	2-3	0	N/A	1.0				Fair	Good	Good	20 to 40 yrs	C2	Fair	Low trimmed hedge on site highway boundary.		NA	Crown spread
G9	Hawthorn, Mixed Species	<i>Crataegus monogyna</i>	N/A	No	4-10	0	100-200	2-4				Good	Good	Good	20 to 40 yrs	B2	Good	Tall hedge on site highway boundary. Hawthorn with some field maple, grey willow, wych elm and ash. Double hedge either side of ditch. Larger trees surveyed individually. Side trimmed. Lower at W end.		NA	Crown spread
G10	Hawthorn, Blackthorn	<i>Crataegus monogyna, Prunus spinosa</i>	N/A	No	2-3.5	0	N/A	1.0				Fair/Poor	Fair/Poor	Fair	10 to 20 yrs	C2	Fair/Poor	Broken gappy hedge on site boundary. Series of short trimmed sections, some dead. Hawthorn and blackthorn.		NA	Crown spread

Tree ID	Common Name	Latin Name	Maturity	Measurements Estimated	Height (m)	Height & Direction of 1st Significant	Stem Diameter (mm)	Spread - N (m)	Spread - E (m)	Spread - S (m)	Spread - W (m)	Crown Condition	Stem Condition	Basal Area Condition	Life Expectancy	Category	Physiological Condition	Comment	Work Recommendations	RPA Radius (m)	RPA Area (m <sup>2</sup> )
G11	Hawthorn, Elder	<i>Crataegus monogyna</i> , <i>Sambucus nigra</i>	N/A	No	5-7	0	100-200	2-3				Good	Good	Good	20 to 40 yrs	B2	Good	Tall hedge on site boundary. Hawthorn with some elder and dog rose. Side trimmed. Occasional gaps.		NA	Crown spread
G12	Grey Willow	<i>Salix cinerea</i>	N/A	No	2.5-5.5	0	100-200	2-4				Good	Good	Good	10 to 20 yrs	C2	Good	Grey willow scrub on wet ditch line in centre of site. Side trimmed.		NA	Crown spread
G13	Grey Willow, Elder	<i>Salix cinerea</i> , <i>Sambucus nigra</i>	N/A	No	5-8	0	100-200	2-4				Good	Good	Good	10 to 20 yrs	C2	Good	Grey willow scrub with elder on wet ditch line in centre of site. Side trimmed.		NA	Crown spread
G14	Blackthorn	<i>Prunus spinosa</i>	N/A	No	2.5	0	N/A	1.0				Fair	Good	Good	20 to 40 yrs	C2	Good	Small trimmed blackthorn hedge fragment on site boundary.		NA	Crown spread
G15	Hawthorn, Mixed Species	<i>Crataegus monogyna</i>	N/A	No	5-7	0	100-240	2-4				Good	Good	Good	20 to 40 yrs	B2	Good	Tall hawthorn hedge with occasional elder on site boundary. Section of blackthorn and dog rose to W. Single wild cherry to E. Several large gaps. Some dieback.		NA	Crown spread
G16	Hawthorn	<i>Crataegus monogyna</i>	N/A	No	3.5	0	N/A	1.0				Good	Good	Good	20 to 40 yrs	B2	Good	Trimmed hawthorn hedge section on site boundary.		NA	Crown spread
G17	Hawthorn, Common Oak	<i>Crataegus monogyna</i> , <i>Quercus robur</i>	N/A	No	5-6	0	100-180	2-3				Good	Good	Good	20 to 40 yrs	C2	Good	Tall hedge beyond site boundary with scrub behind. Hawthorn with dog rose and young oak. Partly removed to allow fence erection.		NA	Crown spread
G18	Hawthorn, Wild Cherry, Ash	<i>Crataegus monogyna</i> , <i>Prunus avium</i> , <i>Fraxinus excelsior</i>	N/A	No	2.5	0	N/A	1.0				Good	Good	Good	20 to 40 yrs	C2	Good	Trimmed hedge on site boundary with taller scrub behind. Hawthorn with some cherry and ash. Partly removed to allow fence erection.		NA	Crown spread
G19	Hawthorn, Ash, Elder	<i>Crataegus monogyna</i> , <i>Fraxinus excelsior</i> , <i>Sambucus nigra</i>	N/A	No	5-7	0	100-200	2-3				Good	Good	Good	20 to 40 yrs	C2	Good	Tall hedge on site boundary with scrub behind. Hawthorn with some ash and elder. Partly removed to allow fence erection.		NA	Crown spread



Tree ID	Common Name	Latin Name	Maturity	Measurements Estimated	Height (m)	Height & Direction of 1st Significant Stem	Diameter (mm)	Spread - N (m)	Spread - E (m)	Spread - S (m)	Spread - W (m)	Crown Condition	Stem Condition	Basal Area Condition	Life Expectancy	Category	Physiological Condition	Comment	Work Recommendations	RPA Radius (m)	RPA Area (m <sup>2</sup> )
G20	Mixed Species		Early-mature	Yes	4-14	0	100-400	2-6				Good/Fair/Poor	Good	Good	20 to 40 yrs	B2	Good/Fair/Poor	Scrub located offsite on former railway embankment. Hawthorn and goat willow, with some birch, ash, oak, elder, wild cherry, dog rose and buddleia. Bank includes some larger ash trees situated away from the boundary which were not inspected. Chalara present on some ash.	Recommend felling dying multi-stem ash adjacent to tree T11.	NA	Crown spread

## **APPENDIX B – SPECIES LIST & POTENTIAL TREE HEIGHTS**

## Species List & Potential Tree Heights

Species	Common name	Potential height (m)
<i>Acer campestre</i>	Field maple	12
<i>Acer pseudoplatanus</i>	Sycamore	22*
<i>Betula pendula</i>	Silver birch	14*
<i>Buddleja davidii</i>	Buddleia	5
<i>Crataegus monogyna</i>	Hawthorn	10*
<i>Fraxinus excelsior</i>	Ash	23*
<i>Prunus avium</i>	Wild cherry	17*
<i>Prunus spinosa</i>	Blackthorn	8*
<i>Quercus robur</i>	Common oak	20*
<i>Rosa canina</i>	Dog rose	5
<i>Salix caprea</i>	Goat willow	12
<i>Salix cinerea</i>	Grey willow	10
<i>Sambucus nigra</i>	Elder	10*
<i>Ulmus glabra</i>	Wych elm	18*

\* - Typical mature height given by NHBC Chapter 4.2<sup>10</sup>

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<sup>10</sup> [www.nhbc.co.uk/Builders/ProductsandServices/Standardsplus2019/#44](http://www.nhbc.co.uk/Builders/ProductsandServices/Standardsplus2019/#44)

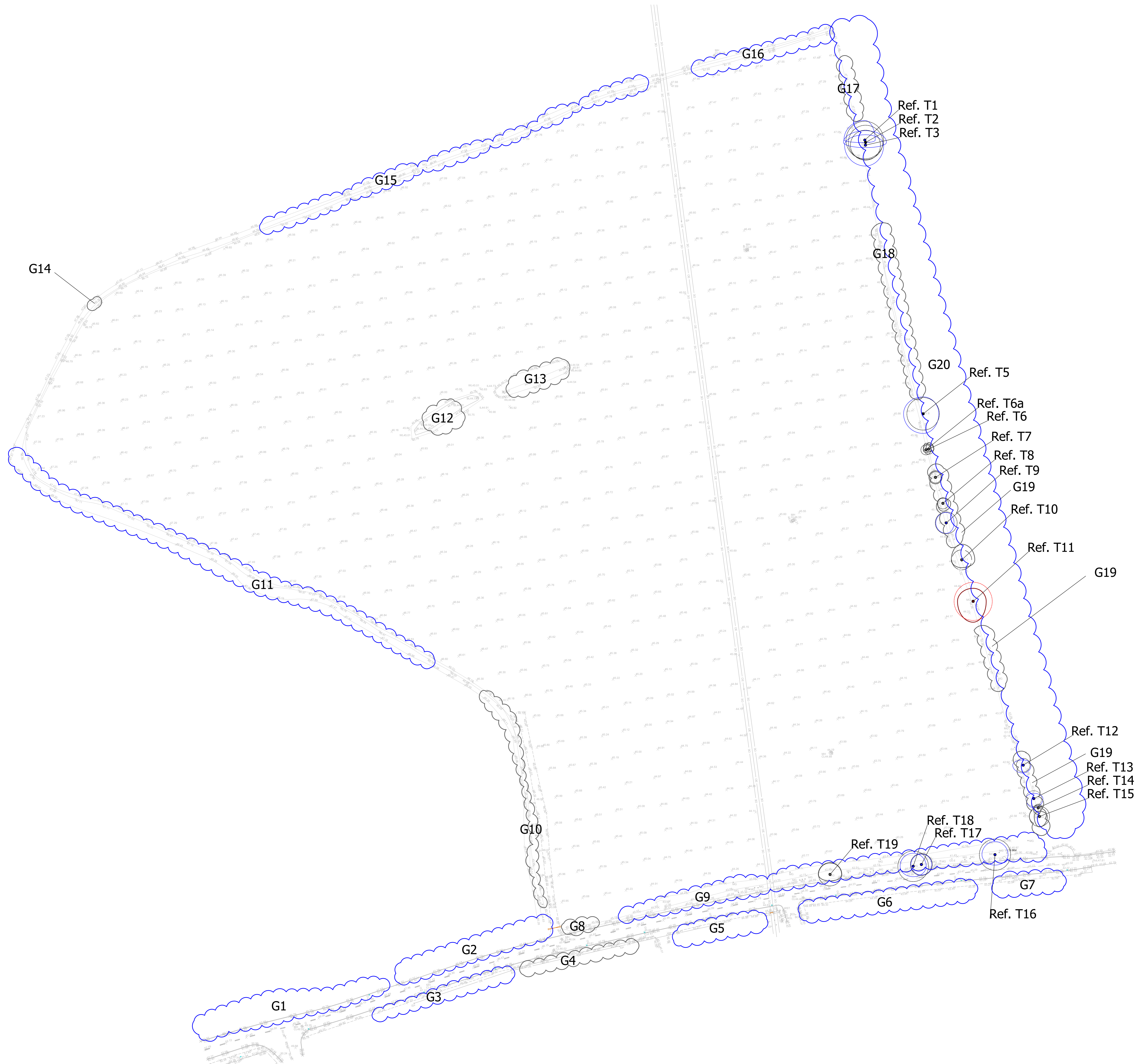
## **APPENDIX C – TREE QUALITY & VALUE ASSESSMENT CATEGORIES**

## Tree Quality & Value Categories

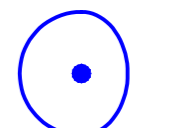

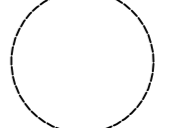


(from BS5837:2012, Table 1 – ‘Cascade chart for tree quality assessment’)

Category and definition	Criteria (including subcategories where appropriate)			Plan colour
<b>Trees unsuitable for retention</b>				
<b>Category U</b> 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	<ul style="list-style-type: none"> <li>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)</li> <li>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</li> <li>Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality</li> </ul> NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve			Dark red
<b>TREES TO BE CONSIDERED FOR RETENTION</b>				
	<b>1. Mainly arboricultural values</b>	<b>2. Mainly landscape values</b>	<b>3. Mainly cultural values, including conservation</b>	
<b>Category A</b> Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Light green
<b>Category B</b> Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	Mid blue
<b>Category C</b> Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	Grey

## **APPENDIX D – TREE CONSTRAINTS PLAN**



**KEY**

- Ref. T3 TREE REFERENCE
- Ref. G1 GROUP REFERENCE
- Ref. H1 HEDGE REFERENCE
-  CATEGORY B (BLUE) TREES  
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years
-  CATEGORY C (GREY) TREES  
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm
-  ROOT PROTECTION AREA (RPA)  
Minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority
-  CATEGORY B TREE GROUP OR HEDGE
-  CATEGORY C TREE GROUP OR HEDGE

**Notes:**

1. Tree Constraints Plan based on topographical survey by Survey Operations, dated August 2019, drawing no: 19G110, Revision 001.
2. Tree position uses topographical survey data and is scaled to fit the proposed site plan which is based on Ordnance Survey background mapping to determine arboricultural impact. Tree position should be verified on site before works are undertaken

**FOR INFORMATION ONLY**

Rev	Description	Date	DV	GM	EJ
1	FINAL ISSUE	17.09.21			

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Client  
**NETWORK SPACE LTD**

Project Name  
**LAND AT SHAW LANE**

Sheet Title  
**TREE CONSTRAINTS PLAN**

TTE Project Number	Drawn By	Date	Checked By	Date	Approved By	Date	Scale @ A1	Suitability
B029681	DV	22 Sept 2021	GM	22 Sept 2021	EJ	22 Sept 2021	1:500	S3
Client Project Number	Originator	Volume/System	Level/Location	Type/Code	Role	Number	Revision	
PRJ01	- TTE	- 00	- ZZ	- DR	- L	- TCP1	D01	

## **APPENDIX E – REPORT CONDITIONS**



### **Tree Survey Report – Land at Shaw Lane, Barnsley**

This report is produced solely for the benefit of Network Space Ltd, and no liability is accepted for any reliance placed on it by any other party unless specifically agreed by us in writing.

This report is prepared for the proposed uses stated in the report and should not be relied upon for other purposes unless specifically agreed by us in writing. In time technological advances, improved practices, fresh information or amended legislation may necessitate a re-assessment. Opinions and information provided in this report are on the basis of Tetra Tech using reasonable skill and care in the preparation of the report.

This report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times.

This report is limited to those aspects reported on, within the scope and limits agreed with the client under our appointment. It is necessarily restricted and no liability is accepted for any other aspect. It is based on the information sources indicated in the report. Some of the opinions are based on unconfirmed data and information and are presented accordingly within the scope for this report.

Reliance has been placed on the documents and information supplied to Tetra Tech by others, no independent verification of these has been made by Tetra Tech and no warranty is given on them. No liability is accepted or warranty given in relation to the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report.

Whilst reasonable skill and care have been used, no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal, budget and weather related conditions.

Although care is taken to select monitoring and survey periods that are typical of the environmental conditions being measured, within the overall reporting programme constraints, measured conditions may not be fully representative of the actual conditions. Any predictive or modelling work, undertaken as part of the commission will be subject to limitations including the representativeness of data used by the model and the assumptions inherent within the approach used. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions.

The potential influence of our assessment and report on other aspects of any development or future planning requires evaluation by other involved parties.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

September 2021

Tetra Tech Limited