



Arboricultural Impact Assessment (and Tree Survey)

**Barugh Green
Barnsley**

Report reference: AR-4661-02 AIA
17.04.20

Report Title: Arboricultural Impact Assessment
Barugh Green
Barnsley

Report Reference: AR-4661-01 AIA

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Technical review: Victoria Black FdSc Arb
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Date 17.04.20



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Summary Statement

The Site consists of open pasture field, bordered in part by hedgerow. The Site is located within Barugh Green, a village on the north-western outskirts of Barnsley. It is bound to the south and west by pasture fields. To the north runs Barugh Green Road and to the east residential properties.

Beyond these immediate boundaries, a mix of arable and pastureland extends south before giving way to the M1 motorway and the village of Dodworth. The village of Higham lies west, along with the M1 and agricultural land beyond. To the south-east, residential development increases in density with proximity to Barnsley town centre. A mix of residential, industrial and agricultural land stretches north.

The tree survey revealed a total of nine individual trees and three groups of trees. Two trees require annual monitoring.

The trees on site are in a good to fair condition and provide a moderate to high amenity to the surrounding area.

This report should be read in conjunction with the attached Tree Protection Plan Ref: DR-4661-02, Tree Constraints Plan and issued Tree Report Ref: AR-4661-01 TS.

The proposals development consists of one hundred and twenty-three residential dwellings with a new access road, footpath network and landscaping.

Arboricultural impact assessment

1. The proposals development consists of one hundred and twenty-three residential dwellings with a new access road, footpath network and landscaping.

The following schedules identify the impact the proposals would incur on the trees surveyed;

Tree ref	Common name	Retention category	Proposal feature	Impact
T1	Ash	B1	N/A	Protect RPA with fencing in line with BS 5837:2012 Crown clean. Monitor condition.
T2	Ash	C1	N/A	No protection required due to location.
T3	Oak	B2	Dwelling, road and driveway.	Removal. Mitigation planting
T4	Ash	C1	N/A	Protect RPA with fencing in line with BS 5837:2012 Crown clean.
T5	Ash	C1	N/A	Protect RPA with fencing in line with BS 5837:2012 Crown clean.
T6	Apple	C1	N/A	Protect RPA with fencing in line with BS 5837:2012
T7	Hawthorn	C1	N/A	Protect RPA with fencing in line with BS 5837:2012 Crown clean
G8	Hawthorn, blackthorn and elder	C1	Access road and footpaths	Section of group requires removing. Rest protect RPA with fencing in line with BS 5837:2012. Some management required.

Tree ref	Common name	Retention category	Proposal feature	Impact
G9	Hawthorn, blackthorn and elder	C1	Dwelling, road and driveway.	Removal. Mitigation planting
G10	Privet	C1	N/A	Protect RPA with fencing in line with BS 5837:2012
T11	Silver Birch	C1	N/A	Requires no protective fencing
T12	Hawthorn	C1	N/A	Protect RPA with fencing in line with BS 5837:2012 on site side.

Tree Works

2. Prior to any development commencing on site the first operation will be to carry out the necessary tree works. All tree works should conform to BS 3998:2010 – Recommendations for tree works. All tree works should be formally approved from the local planning authority before beginning.
3. Those trees which overhang the public footpaths or public highways shall require future maintenance to maintain clearance heights for vehicular or pedestrian traffic. These heights should be 5.6m above a road and 2.5m above a footpath.
4. G8 would benefit from some management.

Proposed tree removal to facilitate development

5. T3, G9 and section of G9 will require to be removed to facilitate the development.

Implications for retained trees

6. The following procedures should be put in place to protect the retained trees.

Protection

7. Once the necessary tree works are complete, the protective barriers should be fully installed. No other work should commence until this happens – this includes movement of materials, supplies or machinery onto the site and any excavations or soil stripping. Once the barriers are properly erected in their correct positions, they should not be removed or altered in any way without prior approval from the Local Planning Authority.
8. All tree protection barriers should be constructed in accordance with BS 5837:2012. This fencing will create construction exclusion zones in order to protect the retained trees root protection areas. No pedestrians, vehicles, materials or equipment should be allowed within these fenced areas at any time.
9. T2 and T11 require no protective fencing due to their location.
10. Please see DR-4661-02 Tree Protection Plan for details.

Drainage and Utilities

11. It is our understanding that all drainage and utilities are location outside the RPA of any retained tree.

Tree Survey AR-4661-01



Tree Survey

**Barugh Green
Barnsley**

Report reference: AR-4661-01
March 2020

Report Title:	Tree Survey Barugh Green Barnsley
Report Reference:	AR-4661-01
Written by	Victoria Black FdSc Arb Principal Arboricultural Consultant
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Summary Statement

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Beyond these immediate boundaries, a mix of arable and pastureland extends south before giving way to the M1 motorway and the village of Dodworth. The village of Higham lies west, along with the M1 and agricultural land beyond. To the south-east, residential development increases in density with proximity to Barnsley town centre. A mix of residential, industrial and agricultural land stretches north.

The tree survey revealed a total of nine individual trees and three groups of trees.

Two trees require annual monitoring.

This report should be read in conjunction with the attached Tree Constraints Plan Ref: DR-4661-01.

Introduction

Purpose of the report

1. This report has been commissioned to provide professional independent, detailed arboricultural advice on all relevant trees present at land off Barugh Green, Barnsley.
2. This report has been undertaken in accordance with BS 5837:2012 Trees in relation to construction – Recommendations.
3. The client has provided a topographical plan.
4. All findings and recommendations are based on visual observations conducted from ground level during the Site visit only. No other diagnostic procedures were used to establish any extent of internal decay nor was a climbing inspection undertaken.
5. All measurements were obtained with the use of a clinometer and an electronic distometer. On occasion it is not viable to provide accurate measurements due to restricted access or other mitigating circumstances on site, and the data may be estimated.

Legal implications of work to trees

6. Due to the potentially large penalties for illegally carrying out work to protected trees, it is recommended that a check with the local planning authority is carried out prior to any tree works being undertaken and any required consents such as for work to trees with Tree Preservation Orders and/or Conservation Areas are obtained before work to trees on site. Additionally, work to trees at certain times of the year may contravene sections of the Wildlife and Countryside Act regarding nesting and roosting of protected species.
7. Every tree owner has a general duty of care to ensure their tree(s) does not pose an unacceptable risk to other people on or adjacent to their land. The landowner will only be liable for injury or damage caused by trees if they are found to be negligent.

8. There is no legal obligation for a tree owner to cut back growth from a neighbouring property. However, under Common law of tort of nuisance, an affected neighbour has the right to cut back roots or branches that encroach onto a neighbouring property back to the boundary of the land owned by the person abating the nuisance without the neighbour's consent (with the exception of TPO's or CA's). The person abating the nuisance has a duty to exercise reasonable care in carrying out work as a failure to do so may lead to liability in negligence (for example where removal of roots makes a tree unstable).

Site description

9. The Site consists of open pasture field, bordered in part by hedgerow. The Site is located within Barugh Green, a village on the north-western outskirts of Barnsley. It is bound to the south and west by pasture fields. To the north runs Barugh Green Road and to the east residential properties.
10. Beyond these immediate boundaries, a mix of arable and pastureland extends south before giving way to the M1 motorway and the village of Dodworth. The village of Higham lies west, along with the M1 and agricultural land beyond. To the south-east, residential development increases in density with proximity to Barnsley town centre. A mix of residential, industrial and agricultural land stretches north.
11. The trees were surveyed in cool, overcast conditions on 12th March 2020 allowing adequate survey.

Figure 1 The Site boundary - red line



Tree data abbreviations and survey methodology

T	Tree	GL	Ground level
G	Tree group	MS	Multi-stemmed
H	Hedge	AFP	Access facilitation pruning
OSB	Outside Site boundary	Ave	Average dimension
#/est	Estimated dimension	Typ	Typical dimension
N	North	E	South
S	South	W	West
Min	Minimum	Lwr	Lower
adj	Adjacent	Ht	Height

12. The trees were assessed visually from ground level. Where access to a tree is restricted this is noted in the schedule.

13. The tree reference numbers refer to the attached Tree Constraints Plan (TCP) references. The trees were not tagged for this survey.
14. The tree species is listed by common name in the schedules, with a key to scientific names below:

Common name	Botanical name	Common name	Botanical name
Alder (common)	<i>Alnus glutinosa</i>	Goat willow	<i>Salix caprea</i>
Alder (grey)	<i>Alnus incana</i>	Hawthorn	<i>Crataegus monogyna</i>
Apple	<i>Malus domestica</i>	Hazel	<i>Corylus avellana</i>
Aspen	<i>Populus tremula</i>	Holly	<i>Ilex aquifolium</i>
Ash	<i>Fraxinus excelsior</i>	Hornbeam	<i>Carpinus betulus</i>
Beech	<i>Fagus sylvatica</i>	Larch	<i>Larix decidua</i>
Birch (silver)	<i>Betula pendula</i>	Lime (common)	<i>Tilia x europaea</i>
Birch (downy)	<i>Betula pubescens</i>	Lime (small-leaved)	<i>Tilia cordata</i>
Chestnut (sweet)	<i>Castanea sativa</i>	Maple (field)	<i>Acer campestre</i>
Chestnut (horse)	<i>Aesculus hippocastanum</i>	Maple (Norway)	<i>Acer platanoides</i>
Cherry (wild)	<i>Prunus avium</i>	Poplar (black)	<i>Populus nigra</i>
Cherry (bird)	<i>Prunus padus</i>	Oak (sessile)	<i>Quercus petraea</i>
Cherry (Japanese)	<i>Prunus serrulata</i>	Oak (pendunculate)	<i>Quercus robur</i>
Leyland Cypress	<i>X Cupressocyparis leylandii</i>	Rowan/mountain ash	<i>Sorbus aucuparia</i>
Elm (English)	<i>Ulmus procera</i>	Sycamore	<i>Acer pseudoplatanus</i>
Elm (wych)	<i>Ulmus glabra</i>	Weeping willow	<i>Salix chrysocoma</i>
		Whitebeam (Swedish)	<i>Sorbus intermedia</i>

15. Measurement of the existing height above ground level of the first significant branch and the direction of growth and the height of the canopy. This informs ground clearance, crown/stem ratio and shading.
16. The stem/trunk diameter is measured with a diameter tape at 1.5m from ground level around the stem for single stem trees and for multi-stemmed trees and other variants in accordance with Annex C of the British Standard. Where access restricts measurement of the tree, an estimate has been made, denoted by '#'.

17. Canopy spread is measured with an electronic distometer. The close-spacing of some of the trees impeded measurements of canopy spread and height and estimates were made.
18. The age of the tree is based on the typical longevity of the particular tree species. The age classes are: young (Y), semi-mature (SM), early mature (EM), mature (M), over-mature (OM) and veteran (V).
19. The physiological condition of the tree is an assessment of its likely health, vigour and stress. The classes for physiological condition are: good, fair, poor and dead.
20. Structural condition includes tree form, visible defects, irregularities and influencing factors.
21. Preliminary management recommendations note work (with prior approval where necessary) to promote the health and longevity of the tree and/or improve safety and/or increase habitat potential.
22. The life expectancy (life exp.) is the estimated remaining contribution in years, (<10, 10+, 20+, 40+).
23. The retention category (ret cat) for each tree is assessed in accordance with BS 5837: 2012 Table 1, summarised as below:

Category A	Trees of high quality with an estimated remaining life expectancy (ERC) of at least 40 years. Green canopy outline on plan.
Category B	Trees of moderate quality with an estimated ERC of at least 20 years. Blue canopy outline on plan.
Category C	Trees of low quality with an ERC of at least 10 years, OR young trees with a stem diameter below 150mm. Grey canopy outline on plan.
Category U	Trees 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. Trees unsuitable for retention. Dark red canopy outline on plan.

24. Sub- categories of 1, 2 or 3 are included in the tree data tables and are defined as follows:

Sub-category 1 trees are those with 'mainly arboricultural value'

Sub-category 2 trees are those with 'mainly landscape value'

Sub-category 3 trees are those with 'mainly cultural or conservation value'.

25. The root protection area (RPA) in m² is for layout purposes and indicates the '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'. The RPA is calculated in accordance with BS 5837: 2012 Annex D. Where Site features are likely to have distorted the typical RPA, a polygon of the same area is estimated on plan to reflect a more realistic shape, in accordance with the British standard.

Tree data

26. The following schedule contains the tree data obtained on site:

Ref	Species	Life stage	Ht (m)	Can Ht (m)	Stem diam (mm)	Canopy spread (m)	Physio logical	Structural condition	Recommendations	Life exp. (yrs)	Ret cat
T1	Ash	M	19	2.5	900#	N 6# E 9# S 6# W 6#	Good	Fair. Situated on adjacent land. Very limited inspection. Twin stemmed at 3m with a balanced canopy. Section of included bark noted at union. Major Deadwood and stubs evident with canopy. Cavities and branch tears. Bark wounds throughout. Possible dieback at the tips of the canopy.	Monitor for signs of Ash Dieback. Crown clean.	20+	B1
T2	Ash	EM	8	2	280# & 140#	N 3# E 3# S 3# W 3#	Fair	Fair. Single-stemmed and vertical with a balanced stem. Situated on adjacent land. Large co-dom stem to east at base. Has been lightly pruned back from road. Overhanging footpath and road.	No action required	20-40	C1
T3	Oak	M	14	2	970	N 5.7 E 5.3 S 6 W 5.1	Fair	Overhanging footpath and road. Previously reduced at 3m (leaving large stub). Major bark wound to East, south and west – decay noted.	Monitor closely	10-20	B2
T4	Ash	SM	To 11	0+	To 150	N 3 E 3 S 3 W 3	Fair	Fair. Multi stemmed at ground level. Within boundary group. No defects. Scrappy.	No action required	20+	C1
T5	Ash	SM	To 11	0+	To 150	N 3 E 3 S 3 W 3	Fair	Fair. Multi stemmed at ground level. Within boundary group. No defects. Scrappy.	No action required	20+	C1

Ref	Species	Life stage	Ht (m)	Can Ht (m)	Stem diam (mm)	Canopy spread (m)	Physio logical	Structural condition	Recommendations	Life exp. (yrs)	Ret cat
T6	Ash	SM	To 11	0+	To 150	N 3 E 3 S 3 W 3	Fair	Fair. Multi stemmed at ground level. Within boundary group. No defects. Scrappy.	No action required	20+	C1
T7	Hawthorn	SM	To 11	0+	To 150	N 3 E 3 S 3 W 3	Fair	Fair. Multi stemmed at ground level. Within boundary group. No defects. Scrappy.	No action required	20+	C1
G8	Hawthorn, blackthorn & Elder	Y-EM	To 7	0+	To 100	See plan	Fair	Overgrown boundary group.	No action required.	20-40	C1
G9	Hawthorn, blackthorn, gelder rose, elder	Y-EM	To 3	0+	To 100	See plan	Fair	Maintained boundary hedge.	No action required.	20-40	C1
H10	Privet	EM	To 2.5	0+	To 70	See plan	Fair	Maintained boundary hedge.	No action required.	20-40	C1
T11	Silver Birch	SM	8	2	200#	N 3 E 3 S 3 W 3	Fair	Situated within neighbouring garden. Very limited inspection. Single stemmed and vertical with a balanced canopy.	No action required	20-40	C1
T12	Hawthorn	SM	6	1	150#	N 3 E 3 S 3 W 3	Fair	Situated within neighbouring garden. Very limited inspection. Single stemmed and vertical with An unbalanced canopy. Rowan at base.	No action required	20-40	C1

Findings

Tree descriptions and recommendations

27. The Site consists of open pasture field, bordered in part by hedgerow. The Site is located within Barugh Green, a village on the north-western outskirts of Barnsley. It is bound to the south and west by pasture fields. To the north runs Barugh Green Road and to the east residential properties.
28. Beyond these immediate boundaries, a mix of arable and pastureland extends south before giving way to the M1 motorway and the village of Dodworth. The village of Higham lies west, along with the M1 and agricultural land beyond. To the south-east, residential development increases in density with proximity to Barnsley town centre. A mix of residential, industrial and agricultural land stretches north.
29. The tree survey revealed a total of nine individual trees and three groups of trees. Of these, two trees were identified as retention category 'B' and eleven trees/groups were identified as retention category 'C'. There were no retention category 'A' or 'U' trees identified. Please refer above for retention category and definition criteria.
30. It has been recommended that trees T1 and T3 are monitored annually to assess if their condition is still acceptable. T3 has major bark wounds to the east, south and west of its stem. T1 is possibly showing signs of being infected by Ash dieback and should be monitored closely.
31. Many tree species are affected by pests and diseases at some point in their lifespan. Usually the tree has defence strategies to counteract or slow decay. However, certain pests and diseases, such as Dutch Elm Disease, pose a more serious threat to life and should be monitored for symptoms. Ash dieback, *Hymenoscyphus fraxineus*, is currently reducing the lifespan of many ash trees across the country and symptoms are best monitored during spring and late summer when leaf production, fall and health can be seen. See www.forestry.gov.uk for more information. Older, mature ash trees may be less susceptible to the disease. Notwithstanding ash dieback, ash trees are naturally prone to shedding the end of branches during stormy weather.
32. Those trees which overhang the public footpaths or public highways, shall require future maintenance to maintain clearance heights for vehicular or pedestrian traffic. These heights should be 5.6m above a road and 2.5m above a footpath.

33. Potential development should avoid disturbance to the below ground root protection area (RPA) of a tree as well as the above ground stem and canopy. The effects of shading by new buildings can have a detrimental effect on tree health. Drainage, sewerage, attenuation tanks and utility trenches should also avoid RPA's.
34. Higher quality trees (retention categories A and B), particularly, should be retained within a development, though retaining as many trees as possible has many benefits including wellbeing, visual amenity, contributing to sustainable drainage, help in preventing soil erosion and providing wildlife habitats.



Figure 1

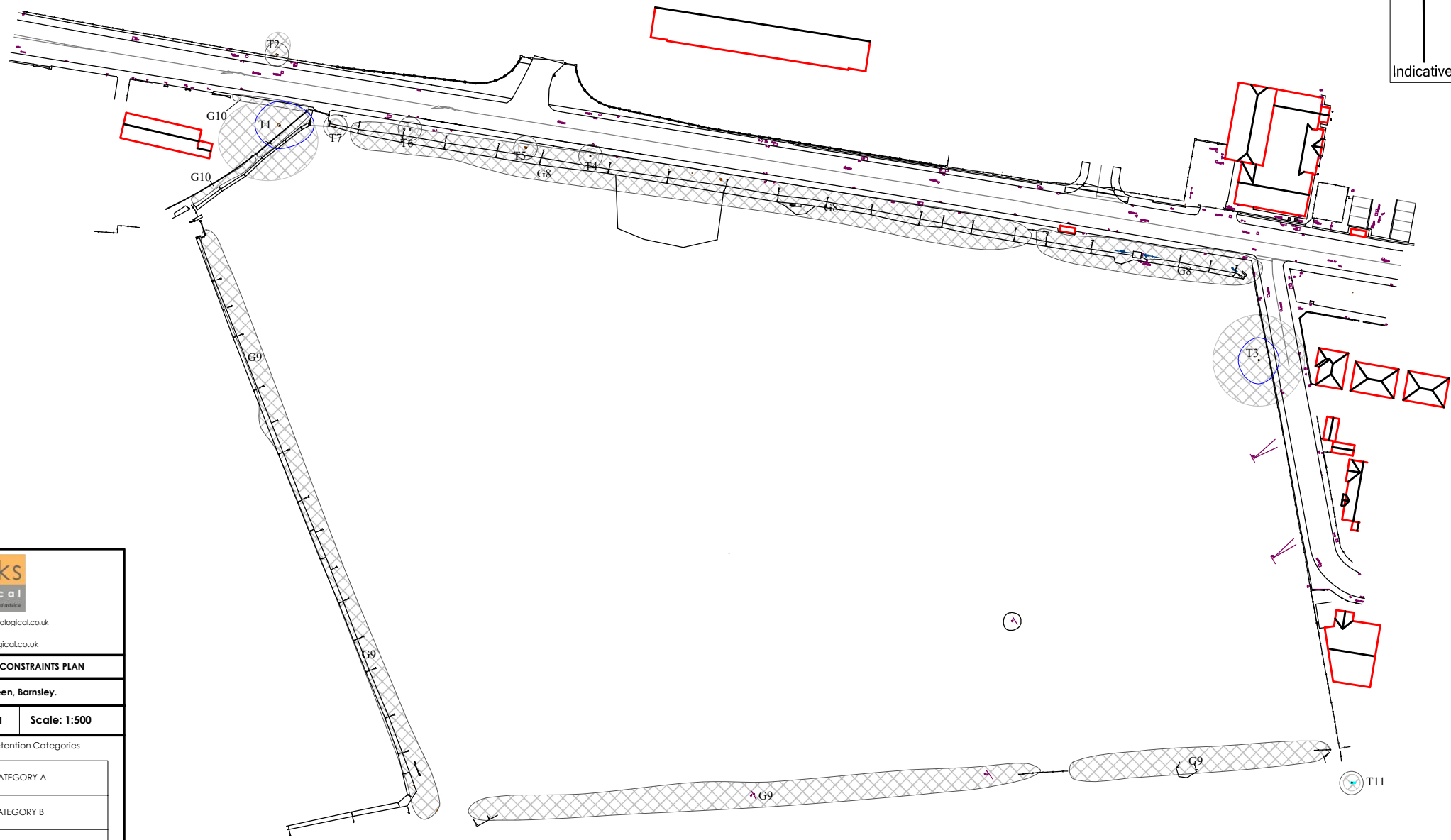
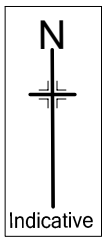
Southern boundary of the Site looking at G8, T4 & T5.



Figure 2

Looking north at T3. Note the major bark wounds to stem.

DR-4661-01 Tree Constraints Plan





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Groundwater advice

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DR-4661-01 TREE CONSTRAINTS PLAN

Site: Barugh Green, Barnsley.

Paper Size: A1	Scale: 1:500
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BS 5837: 2012 Retention Categories

	CATEGORY A
	CATEGORY B
	CATEGORY C
	CATEGORY U

	ROOT PROTECTION AREA
	TREE STEM

Please note:
The plan is for guidance only
and should not be scaled from.

The original of this drawing was produced
in colour - a monochrome copy should not be
relied upon.

DR-4661-02 Tree Protection Plan

