Preliminary Tree Survey
and
Arboricultural Impact Assessment

Former Goldthorpe Colliery
Barnsley

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Report Title:	Preliminary Tree Survey & AIA Former Goldthorpe Colliery
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Executive summary

This survey included seven groups of trees and two individual trees.

No urgent work has been recommended to any of the trees.

The trees on site have a moderate to low impact on the local treescape.

Introduction

Purpose of the Report

1. This report has been commissioned to provide professional, independent, detailed arboricultural advice on all relevant trees present at the former Goldthorpe Colliery, Barnsley. This Arboricultural Impact Assessment aims to offer professional advice and necessary recommendations with regards to proposed development design, evaluating the direct and indirect effect it will have on the existing tree cover.

2. The report has been undertaken in accordance with BS 5837:2012 'Trees in relation to construction – Recommendations'.

Limitations

3. 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.

4. 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.

5. Due to the large potential penalties for illegally carrying out work to protected trees, it is recommend that a check is carried out prior to any works being undertaken to ensure the trees on site are not protected by a Tree Preservation Order or are within a Conservation Area. We are happy to assist in establishing whether trees on this site are protected by a Tree Preservation Order or a Conservation Area by the Local Authority, if required.

Site Visit

Site Description

6. Land Use – The site is located in Goldthorpe on an open area of land which has been left unmanaged and therefore colonized by pioneer tree species. An allotment and garages are located directly to the north of the site. Kingsmark way road runs along the eastern site boundary leading to a new residential area. A green corridor runs along the southern edge of the site with more allotments and housing beyond this. The western edge of the site comprises of some industrial buildings and terraced housing.

7. Topography - The site slopes very gently from north to south.

8. Treescape - The area on a whole has reasonable tree cover except for a notable absent amongst the terraced streets of Goldthorpe and the open farmland fields surrounding. Reasonable sized pockets of woodland exist in the area as do some small green corridors.

9. The trees on this site have a moderate to low impact on the local treescape.

10. Species diversity – The species diversity on this site is average for an urban setting. Species surveyed include; Birch, Elder, Alder, Hawthorn, Cherry, Willow, Sycamore, Oak, Ash and Rowan.

11. Visual amenity value - The trees on site collectively provide a low visual amenity to the surrounding area, save for Group 1 which has the most significant public visibility.

Survey Conditions

12. The survey was carried out on 13th June 2017.

13. The weather conditions; bright and clear.

Results

Tree descriptions and recommendations

14. The tree survey revealed a total of seven groups of trees and two individual trees. Of these, one group was identified as retention category 'B', five groups and two individual trees were identified as retention category 'C' and one group was identified as retention category 'U'. Please refer to Appendix 2 for retention category and definition criteria.

15. It has been recommended that G1 is selectively thinned to remove lesser trees and allow individual specimens to flourish. G3 has been recommended for remove due to its proximity to the garages and low future potential.

16. Those trees which overhang the public footpaths or public highways, detailed at Appendix 1, 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.

Conclusions

17. The trees surveyed were generally found to be in fair condition.

18. No urgent work has been recommended to the trees.

19. Some works have been recommended for reasons of good Arboricultural practice and to ensure the long term health of the trees. These are detailed at Appendix 1 – Tree Data.

20. Any proposed development should be accompanied by an Arboricultural Method Statement detailing the protection measures necessary for each tree. This should specify fencing standard and positions, acceptable tree friendly construction techniques and necessary tree work.

Implications for future potential development

21. The proposed residential development consists of approximately 121 dwelling with a range of house types, with associated garden space. A new main access road, footpaths, and public space and landscaping is also proposed. An internal link road structure will provide access to the proposed units.

Tree Works

22. 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.

23. Those trees which overhang the public footpaths or public highways, detailed at Appendix 1, 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.

Proposed tree removal to facilitate development

24. G1, G2, T4, G5, G6, G7 and G9 require removal to facilitate the development.

Implications for retained trees

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

Protection

26. 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.

27. 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.

Drainage and Utilities

28. It is our understanding that any drainage and utilities will not be installed within the root protection area of any tree on this site.

Landscaping

29. It should be noted that no tree replacement and landscaping plans have been provided to comment on at present. Once these are available, the detailed landscaping plan should include areas designated for structural landscape that need to be protected from construction operations to prevent the soil structure being damaged. This should also include an assessment of the topsoil quality and amelioration, and details of landscape operations. All in line with British Standards BS 4428:1989 & BS 8545. Further to this should include species choice, stock size, protection methods and a regime of maintenance. The planting of trees would improve the aesthetic value of the surrounding area and may be conditioned in the usual way.

30. This AIA will require updating once this information is available.

Appendix 1: Tree Data

Tree/group number	Common name	Botanical name	Age class	Height (m)	Diameter (mm)	Canopy Spread				Crown clearance (m)	Physiological condition	Structural condition	Observations	Recommendations	Visual amenity value	Remaining contribution (years)	Retention category
						North	East	South	West								
G1	Mixed	Mixed	Early mature	To 12	To 250	See plan	See plan	See plan	See plan	0+	Good	Good	Group consisitng of Birch, Ash, Sycamore, Oak, Hawthorn and Sorbus growing on the eastern site boundary. Trees prominent along Kingsmark Way. Trees are densely planted but in good health.	Selective thin to remove poorer formed and suppressed specimens.	Mod	**20 to 40**	**B2**
G2	Mixed	Mixed	Early mature	To 9	To 200	See plan	See plan	See plan	See plan	0+	Fair	Fair	Area of early mature self seeded trees. Mainly consisting of Birch, Willow and Hawthorn. Low visibility from the wider landscape. No major visible defects.	No action required at present	Low	10 to 20	C1
G3	Elder	Sambucus nigra	Early mature	To 7	To 280	See plan	See plan	See plan	See plan	0+	Poor	Fair	Boundary trees growing amongst fence line. Limited remaining life expectancy.	Possibly fell to avoid boundary conflicts.	Low	to 10	U
T4	Silver Birch	Betula pendula	Early Mature	10	340 + 250	3.4	3.75	3.2	3.2	1 N	Fair	Poor	Twin stemmed from ground level. Some included bark. Bark wound at 1 metre-appears ok. Tree visible from backs of houses and backstreet of Beever Street.	No action required at present	Low	10 to 20	C2
G5	2 x Silver Birch	Betula pendula	Early mature	to 10	to 150	See plan	See plan	See plan	See plan	0+	Fair	Fair	Group of two single stemmed Birch with balanced canopies. Trees growing relatively close together. Slight lean at base but self righting. No major visible defects. Trees visible from backs of houses and backstreet of Beever Street.	No action required at present	Low	to 20	C2
G6	Mixed	Mixed	Semi mature	to 5	to 100	See plan	See plan	See plan	See plan	0+	Fair	Fair	Area of semi mature trees of limited significance or stature. Mainly consisting of Hawthorn, Elder and Cherry.	No action required at present	Low	To 20	C1

G7	2X Willow	Salix sp.	Early mature	To 12	To 100 MS	See plan	See plan	See plan	See plan	0+	Fair	Fair	2 multi stemmed willows from ground level. Growing on western boundary. Limited public visibility. No major visible defects.	No action required at present	Low	10 to 20	C1
T8	Sycamore	Acer pseudoplatanus	Early mature	12	To 150	5*	5*	5*	5*	2 W	Good	Fair	Multi stemmed Sycamore overhanging the boundary from off site. Inspection limited. No major visible defects noted.	No action required at present	Low	To 20	C1
G9	Mixed	Mixed	Semi mature	To 8	To 250	See plan	See plan	See plan	See plan	0+	Fair	Fair	Mixed group of Birch, Alder, Willow and Hawthorn. Trees of limited significance or stature.	No action required at present	Low	To 20	C1

Appendix 2: Explanation of Tree Descriptions

Measurements

Tree height is calculated in metres from ground level to the highest point of the tree.

Stem diameter is measured and rounded down to the nearest ten millimetres at 1.5m above ground level using a specialist measuring tape. Where a tree divides into multiple stems each stem will be measured.

Canopy spread is measured from the centre of the stem base to the tips of the branches in all four cardinal points using an electronic distometer.

Crown clearance is estimated in metres and is an indication of the lowest significant live branches of the crown.

Age Class is divided into young, semi-mature, early-mature, mature, over mature, and veteran.

Physiological condition is an assessment of the health and vigour of the tree.

Structural condition is an indication of the structural integrity of the tree. This is given as good, average or poor.

The observations column will include a brief description of each tree and provide further information as relevant.

The remaining contribution is a rough estimate of the number of years a tree is expected to survive in a structurally sound condition.

Retention Categories

Category ratings are allocated based on the current quality and value of a tree in its current surroundings assuming the recommendations of this report are carried out. No consideration is given to any specific development proposal when allocating category ratings.

Category A trees are those which are of high quality and value, are in good structural and physiological condition and are expected to contribute for at least another 40 years.

Category B trees are those which would be considered as category A trees but which are of lower quality and value, poorer structural condition, and which are expected to contribute for at least 20 years.

Category C trees are those which are of low quality and value, are in poor condition, and are expected to contribute for at least 10 years.

Category U trees are those which are expected to contribute for less than 10 years due to serious defects. As is common in risk management, where there is doubt, the precautionary principle may be applied.

Sub-categories

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'

Appendix 3: General Recommendations

All work must be to BS 3998:1989 - '*Recommendations for tree work'*.

This report is based upon a visual inspection. The consultant shall not be responsible for events which happen after this time due to factors which were not apparent at the time, and the acceptance of this report constitutes an agreement with the guidelines and the terms listed in this report.

Any defects seen by a contractor or the employer that were not apparent to the consultant must be brought to the consultant's attention immediately.

It is advisable to have trees inspected by an arboricultural consultant regularly.

Appendix 4: Tree Constraints Plan



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APPENDIX 4 - TREE CONSTRAINTS PLAN

Site: Former Goldthorpe Colliery, Barnsley.

Paper Size: A2	**Scale: 1:1000**

BS 5837: 2012 Retention Categories

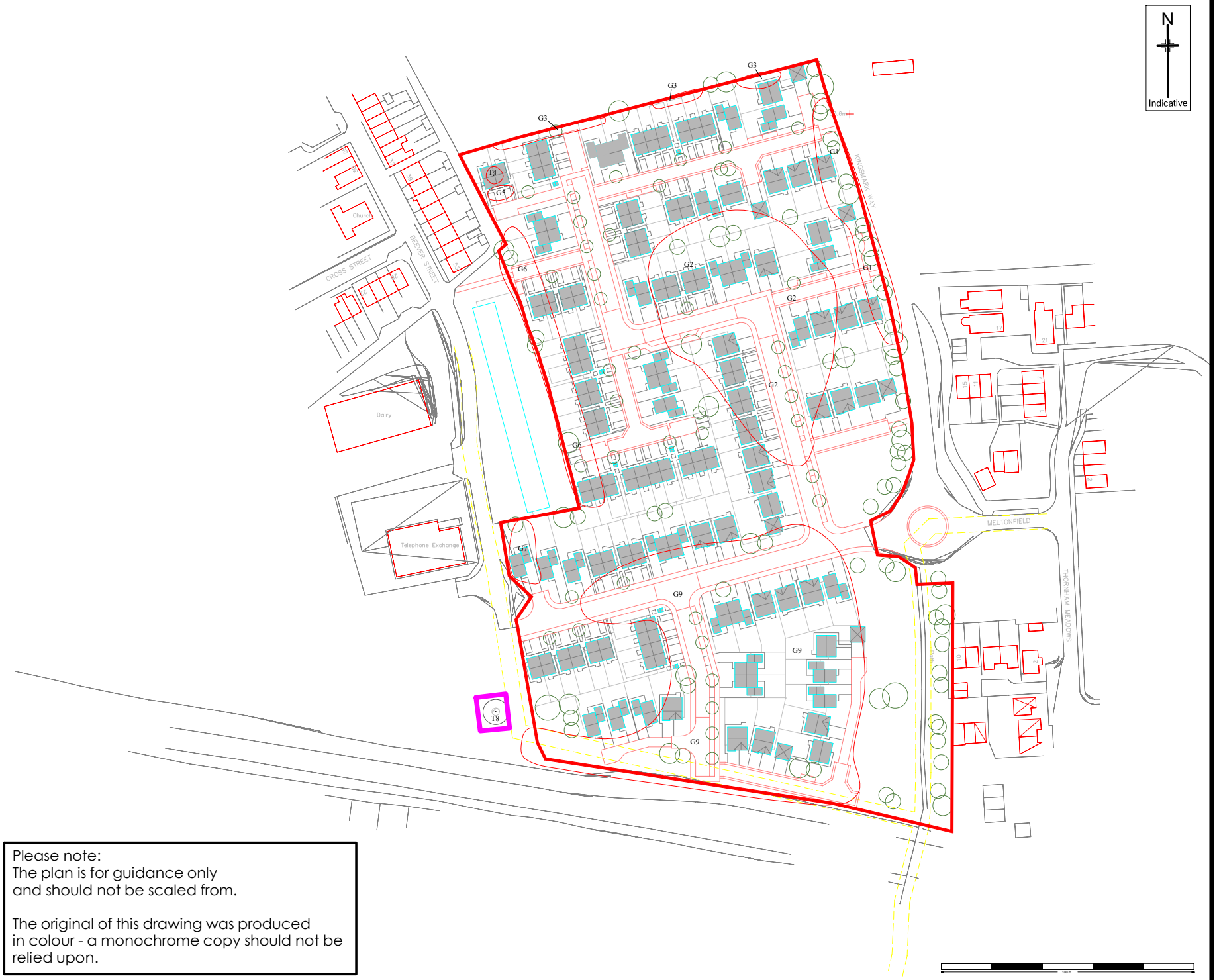
	CATEGORY A
	CATEGORY B
	CATEGORY C
	CATEGORY U

	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.

Appendix 5: Tree Protection Plan



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Grounded advice

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APPENDIX 5 - TREE PROTECTION PLAN

Site: Former Goldthorpe Colliery, Barnsley.

Paper Size: A2	**Scale: 1:1000**

BS 5837: 2012 Retention Categories

	RETAINED TREE
	TREE TO BE REMOVED
	PROTECTIVE FENCING TO BS 5837:2012

	ROOT PROTECTION AREA
	TREE STEM

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