Arboricultural Method Statement

Land east of Cote Lane, Thurgoland

Report reference: AR-4099-06.01 AMS
September 2019

Report Title:	Arboricultural Method Statement Land easy of Cote Lane Thurgoland
Report Reference:	AR-4099-06.01 AMS
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Executive summary

1. This Arboricultural Method Statement has been based upon the tree survey carried out by Brooks Ecological dated April 2016. It included ten individual trees and six group of trees. Two trees have been recommended for removal.

2. The trees on this site have a low to mod impact on the local treescape.

3. It is proposed to develop the Site as a residential housing scheme with associated garden space and car parking. Development will also include a new proposed new access road with an interlink of footpaths, Yorkshire Water easement and Attenuation Storage tank plus 1.4m stone retention walls.

4. To facilitate the proposed development, low-quality trees T9, G10, G11, T12, T13, T14, T15 and a small section of G16 would require removal for the underground services, Yorkshire Water easement and Attenuation Storage tank. We are advised this cannot be removed from the proposed location.

5. It is proposed that a series of mitigation measures should be set in place to improve the soil environment that is used by T7 and T8 for growth.

6. The recommendations in this Arboricultural Method Statement are of a preliminary nature and are subject to comments enforced by Barnsley Council, in line with the current planning application.

Introduction

Purpose of the Report

7. This report has been commissioned to provide professional independent, detailed arboricultural advice on all relevant trees at present at Land east of Cote Lane, Thurgoland. This Arboricultural Method Statement aims to offer professional advice and necessary recommendations to ensure effective tree protection during the proposed development.

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

9. The recommendations outlined within this report are based on the plans provided by the client, as well as information on trees from Tree Survey dated April 2016.

10. It should be noted that due to further site visits and measurements taken on site, it was obvious the positioning of T8 on the supplied topographical plan was wrong. This has been amended on the Tree Protection Plan Ref: DR-4099-07 TPP.

11. A development masterplan has been supplied by the client.

12. This Method Statement should be included as part of any specifications and schedules of works supplied to all construction contractors.

Limitations

13. 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.

14. 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.

Site preparation prior to any development commencing

15. It is proposed to develop the Site as a residential housing scheme with associated garden space and car parking. Development will also include a new proposed new access road with an interlink of footpaths, Yorkshire Water easement and Attenuation Storage tank plus stone retention walls.

Proposed tree removal to facilitate development

16. To facilitate the proposed development, low-quality trees T9, G10, G11, T12, T13, T14, T15 and a small section of G16 would require removal for the underground services, Yorkshire Water easement and Attenuation Storage tank. We are advised this cannot be removed from the proposed location.

Tree Works

17. 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.

18. 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.

19. Necessary tree works are detailed with the original Tree Survey.

20. It is recommended that all tree works are supervised by Brooks Ecological.

Tree protection barriers

21. 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.

22. All tree protection barriers within the site should be constructed in accordance with BS 5837:2012 default specification fencing (example shown at Appendix 1) and should be located as shown on the DR-4099-07 Tree Protection Plan - Appendix 2.

23. The default specification should consist of a vertical and horizontal scaffold framework, well braced to resist impacts. The vertical tubes should be spaced at a maximum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed.

24. Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, also to avoid contact with structural roots.

25. If the presence of underground services precludes the use of driven poles, an alternative specification should be prepared. Details any existing underground services should be provided by the client and this AMS revised.

26. 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.

27. Clear notices are to be fixed on the outside of the barriers with wording such as: 'NO ACCESS PROTECTED AREA – NO STORAGE OR WORK WITHIN THIS AREA'.

28. All construction and other relevant personnel are to be informed at site induction of the role of the exclusion barriers and their importance.

29. All tree protective fencing should remain intact until **ALL** works within site are completed.

Site inspection

30. Once the necessary tree works have been carried out and the protection barriers are fully installed, it is recommended that no work should commence until the local planning authority and/or Brooks Ecological are invited to carry out a site visit to ensure that it meets all requirements.

31. Regular brief reports, including photos, should be submitted to Barnsley Council's tree officer.

Development phase

Ground level changes

32. It is our understanding that ground levels are to be raised along the southern section of the site, within areas of the RPA's of retained T7 & T8**. It should be noted that no ground level changes are to occur between the red line boundary and the most southern proposed retaining wall. The area in which the ground level changes have been proposed are highlighted in hatched cyan on the attached DR-4099-07 Tree Protection Plan. No RPA should be lost**.

33. The ground is to be raised within this area by 1 in 3 gradient with retainment between 1-2m. This should be carried out with the use of granular material (with no lime fillings), which constantly remains gas and water permeable. A free porous
34. material will be used to build up the levels up to approximately 1.4m

35. A load suspension layer incorporating a three dimensional cellular confinement system (other systems are also occasionally used) should be used within these areas.

36. The finished surface must be porous in order to allow air and water to reach the tree roots, whilst at the same time being able to withstand the load applied.

Retaining gabion wall

37. Proposed gabion retaining wall, will encroach into the RPA's of retained trees T7 & T8. Because of the shallow foundations required, this encroachment is deemed acceptable and no special construction techniques are required.

38. Approximately 300mm of digging in the RPA's to allow for the shallow foundations of the gabion retaining walls.

39. Only hand-held tools can be used within this area. No heavy machinery.

40. All construction works within RPA's should supervised by Brooks Ecological.

41. Regular brief reports, including photos, should be submitted to Barnsley Council's tree officer.

42. All tree protective fencing should remain intact until ALL works are completed.

Drainage and Utilities

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

Post development phase

Removal of protective barriers

44. Once every aspect of the construction is complete within the specific zone and all machinery and materials are off site, the protective barriers can be dismantled.

Mitigation measures

45. It is proposed that a series of mitigation measures should be set in place to improve the soil environment that is used by T7 and T8 for growth.

46. Sub-soil aeration using compressed air should be carried out with the addition of an organic bulky biochar to help prove the soils health and structure. A treatment of mycorrhizal fungi every two years is also recommended.

47. Any cultivation operations within these RPA's should be undertaken carefully by hand with the use of no heavy mechanical machinery.

48. All works within RPA's should supervised by Brooks Ecological.

Post development landscaping

49. The landscaping works must be carried out in such a way as to avoid ground level changes or deep digging. Mechanised cultivation methods must be avoided within the root protection areas.

50. Any herbicides used must be appropriate for their purpose and must not be used in such a way as will damage trees to be retained.

51. There must be no vehicles, materials, equipment or machinery allowed within the root protection areas of retained trees at any time.

Completion meeting

52. Upon completion of all the works specified, it is recommended that the local planning authority are invited to meet on site to check that all works are completed satisfactorily and to discuss any remedial works as required.

General principles for tree protection

53. A copy of this Arboricultural Method Statement and appendices should be retained on site at all times.

54. If 360 degree excavators are to be used on this site during construction, at no time should the excavating arm encroach over the position of the protective barriers.

55. No fires at all on site.

56. A designated storage area should be created away from the root protection areas of any retained tree on site. All materials should be stored within this compound.

57. Care must be taken to avoid leakage of any noxious materials on to the soil.

Timescale of Works

The timescale for arboricultural requirements are summarised below:

Timescale	Action
Stage 1	Approval for works is obtained via Barnsley Council.
Stage 2	Undertake the tree works
Stage 3	Install the protective barrier around the trees (as detailed at Appendix 1 and as shown on the Tree Protection Plan at Appendix 2).
Stage 4	Brooks Ecological to inspect the barrier prior to any on site construction. Once inspected, the protective barrier must not to be moved or breached until **ALL** works have been completed. Regular brief reports, including photos, should be submitted to Barnsley Council's tree officer.
Stage 5	Undertake the construction. All construction works within or adjacent to RPA's should be supervised by Brooks Ecological. Regular brief reports, including photos, should be submitted to Barnsley Council's tree officer.
Stage 6	Following the completion of the construction phase and when all site traffic and machinery has left, the protective barrier and can be removed.
Stage 7	Mitigation measures to be carried out. All construction works within or adjacent to RPA's should be supervised by Brooks Ecological.

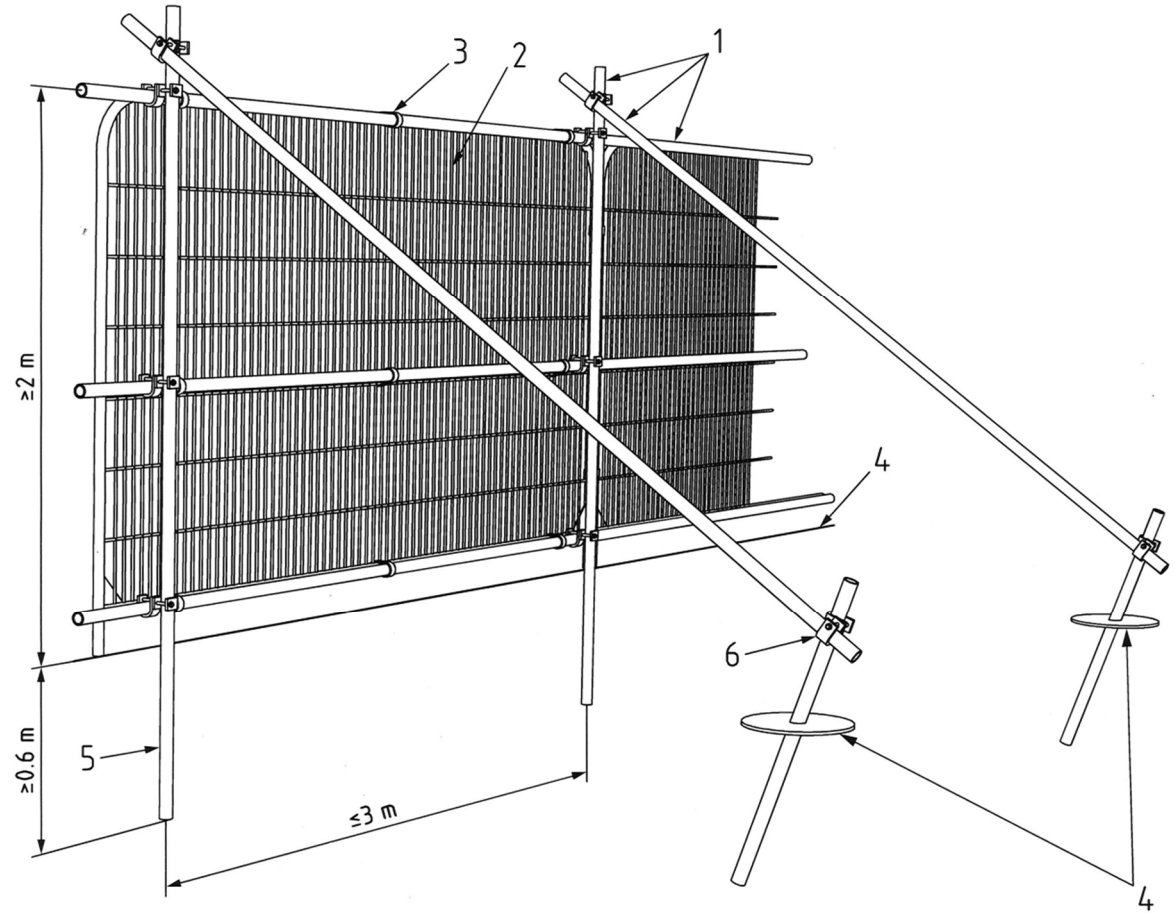
Stage 8	Post construction remedial tree works to be undertaken, if required.
Stage 9	Undertake the Tree Planting Scheme.

Relevant Contact Details

Contact Name	**Company**	**Contact Number**
Victoria Black - Arboricultural Consultant	Brooks Ecological	01943 884451
Barnsley Council Tree Officer	Barnsley Council	01226 770770

Appendix 1: Tree Protection Barriers

Protective Barrier to BS 5837:2012



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

Appendix 2: Tree Protection Plan

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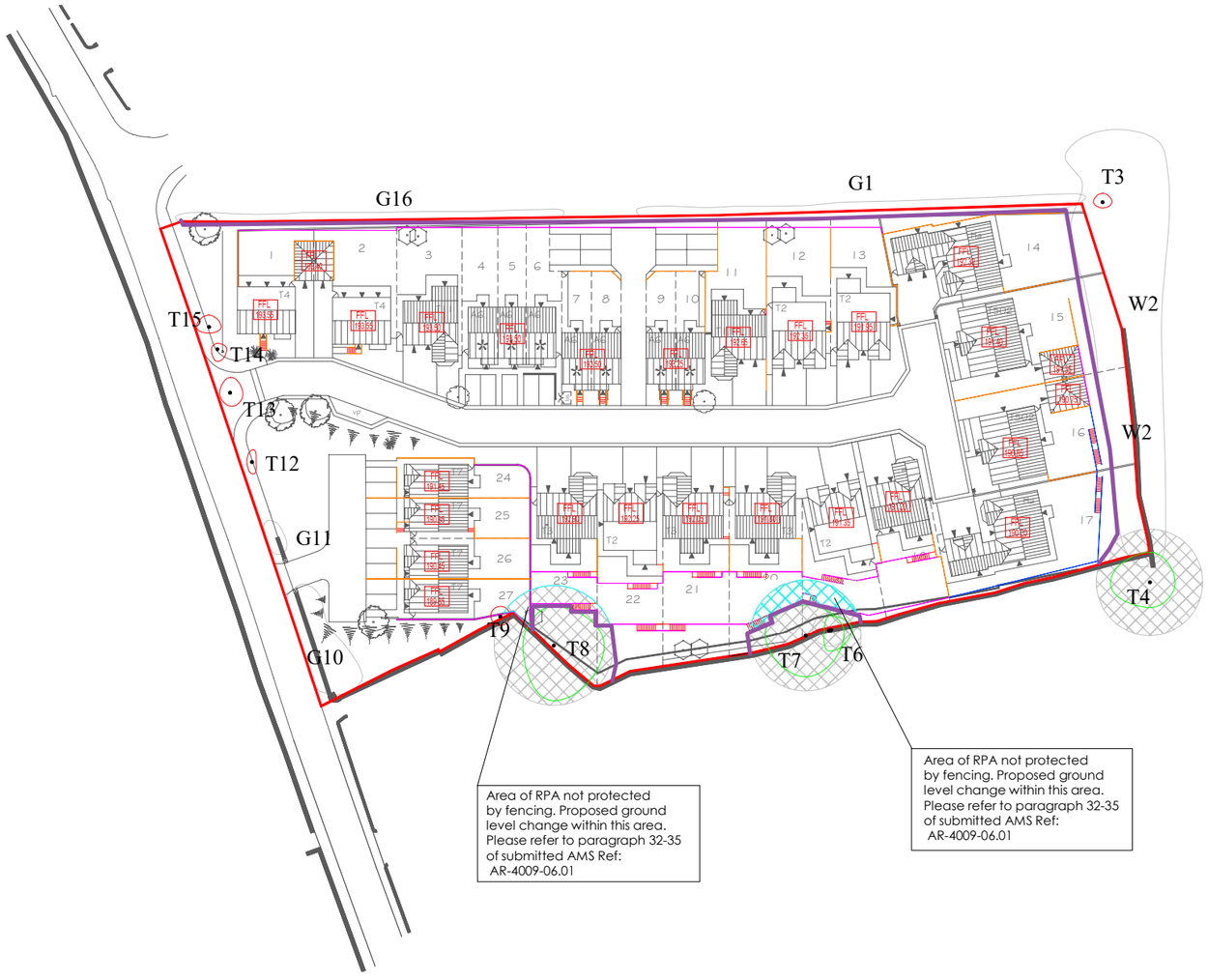
Indicative



Brooks Ecological
Ground-level advice

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DR-4099-07 TPP

Site: Thurgoland

Paper Size: A3	**Scale: 1:1000**

BS 5837: 2012 Retention Categories

	Tree to be retained
	Tree to be removed
	Protective fencing in line with BS 5837:2012
	Area of RPA not protected by fencing. Proposed ground level change within this area. Please refer to paragraph 32-35 of submitted AMS Ref: AR-4009-06.01
	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.

100 m