Arboricultural Method Statement

Plus Arboricultural Impact Assessment & Tree Survey

Duchy Homes

Land off Darton Lane
Mapplewell
S75 5AH

Report reference: AR-6517-03 AMS
May 2024

Report Title:	Arboricultural Method Statement Plus Arboricultural Impact Assessment (Including Tree Survey) Land off Darton Lane, Mapplewell, S75 5AH.
Report Reference:	AR-6517-03 AMS
Written by:	Victoria Black FdSc Arb Principal Arboricultural Consultant
QA review:	Victoria Black FdSc Arb Principal Arboricultural Consultant
Approved for issue:	Victoria Black FdSc Arb Principal Arboricultural Consultant
Date	01.05.2024

Contents

Executive summary

This Arboricultural Method Statement has been based upon information provided within an Arboricultural Impact Assessment that was carried out by Brooks Ecological Ltd, Ref: AR-6517-02 AIA, dated January 2023. The tree survey revealed a total of twenty-three individual trees and twelve groups of trees. Of these, three groups of trees were identified as retention category 'A', one individual tree and one group of trees were identified as retention category 'B', and twenty trees/groups were identified as retention category 'C'. There were no retention category 'U' trees identified. The Site is located on the southern edge of Mapplewell, bound by Darton Lane to the north, a dismantled railway line to the south which now supports young woodland, with housing to the west and east. The application site 'the Site' comprises a series of fields, formerly grazed but which seemingly has been left unmanaged. Past these immediate boundaries, the local landscape is characterised by relativity dense residential development to the north, north-west and north-east with 'green land' to the south- comprising large homogenous fields, former collieries and water courses including the River Dearne.

Slight revisions have been made to the layout in April 2024, and the new revised Tree Protection Plan Ref: DR-6517-03 reflects this.

This report should be read in conjunction with the attached Tree Constraints Plan Ref: DR-6517-01, Tree Survey AR-6517-01 and Tree Protection Plan DR-6517-03.

A plan has been provided by the client to enable an impact assessment of the proposed works on the existing relevant trees within the Site.

Five groups, G3, G18, G27, G28, G29, G30, one section of G1, plus seventeen trees, T4, T5, T6, T7, T9, T10, T12, T13, T14, T15, T16, T25, T31, T32, T33, T34 & T35, are expected to be removed to facilitate the development.

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

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 Darton Lane, Mapplewell, S75 5AH. This Arboricultural Method Statement has been based upon the information provided within the Arboricultural Impact Assessment carried out by Brooks Ecological Ltd, Ref: AR-6517-02 dated January 2023. This Arboricultural Method Statement aims to offer professional advice and necessary recommendations to ensure effective tree protection during the proposed development.

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

3. The recommendations outlined within this report are based on the plans provided by the client, as well as information on trees from Tree Survey & Arboricultural Impact Assessment.

4. A topographical plan has been supplied by the client.

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

Limitations

6. 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.

Impact Schedule

7. The following schedule identifies the individual tree and its retention category with the main feature(s) of the proposed works likely to cause an impact. The tree references are shown on the tree constraints plan and the tree protection plan. Any mitigation measures are noted.

8.

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
G1	Hawthorn	C2	Close to proposed access driveway Boundary feature (Knee rail) Bin storage Gabion retaining wall	Some minor root pruning may be required. Reduce back. Some section removal.	Tree protection fencing in accordance with BS 5837:2012 Arboricultural supervision required. Some very minor root pruning may be required. In order to minimise root damage to these trees, excavation must be kept to a minimum. A fence designs requiring intermittent posts will be acceptable and the post holes must not be excavated by mechanical means but may be either dug by hand (with any roots found cleanly severed) or the posts may be driven into the ground. Canopy requires a reduction. Care to be taken when removing the grass/hardstanding. Construction of retaining gabion wall should be carried out by hand

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
					tools only. No major root pruning should be required. Mitigation planting required on site.
G2	Mixed	A2	Boundary feature Gabion retaining wall	Some minor root pruning may be required. Reduce back.	Tree protection fencing in accordance with BS 5837:2012 Arboricultural supervision required. Some very minor root pruning may be required. In order to minimise root damage to these trees, excavation must be kept to a minimum. A fence designs requiring intermittent posts will be acceptable and the post holes must not be excavated by mechanical means but may be either dug by hand (with any roots found cleanly severed) or the posts may be driven into the ground. Canopy requires a reduction. Construction of retaining gabion wall should be carried out by hand tools only. No major root pruning should be required. Care to be taken when removing the grass/hardstanding

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
G3	Hawthorn And Blackthorn	C2	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T4	Ash	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T5	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T6	Birch	B1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T7	Cherry	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T8	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T9	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T10	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
G11	Mixed	A2	Boundary feature Gabion retaining wall	Some minor root pruning may be required. Reduce back.	Tree protection fencing in accordance with BS 5837:2012 Arboricultural supervision required. Some very minor root pruning may be required. In order to minimise root damage to these trees, excavation must be kept to a minimum. A fence designs requiring intermittent posts will be

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
					acceptable and the post holes must not be excavated by mechanical means but may be either dug by hand (with any roots found cleanly severed) or the posts may be driven into the ground. Canopy requires a reduction. Care to be taken when removing the grass/hardstanding Construction of retaining gabion wall should be carried out by hand tools only. No major root pruning should be required.
T12	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T13	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T14	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T15	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T16	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
T17	Hawthorn	C1	Proposed footpath	Some root loss	Tree protection fencing in accordance with BS 5837:2012 Arboricultural supervision required. Some minor root pruning may be required.
G18	Hawthorn & Elder	C2	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
G19	Mixed	A2	Boundary feature	Some minor root pruning may be required. Reduce back.	Tree protection fencing in accordance with BS 5837:2012 Arboricultural supervision required. Some very minor root pruning may be required. In order to minimise root damage to these trees, excavation must be kept to a minimum. A fence designs requiring intermittent posts will be acceptable and the post holes must not be excavated by mechanical means but may be either dug by hand (with any roots found cleanly severed) or the posts may be driven into the ground. Canopy requires a reduction. Care to be taken when removing the grass/hardstanding

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
T20	Hawthorn	C1	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
T21	Hawthorn	C1	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
T22	Hawthorn	C1	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
T23	Hawthorn	C1	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
G24	Lawson	C2	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
T25	Eucalyptus	C1	Remove to facilitate proposed development of footpath	Removal	Mitigation planting on site required.
G26	Lombardy Poplar	B2	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
G27	Hawthorn	C2	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
G28	Elder	C2	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
G29	Hawthorn & Elder	C2	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
G30	Hawthorn & Elder	C2	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T31	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
T32	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T33	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T34	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T35	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.

Site preparation prior to any construction commencing

9. Five groups, G3, G18, G27, G28, G29, G30, one section of G1, plus seventeen trees, T4, T5, T6, T7, T9, T10, T12, T13, T14, T15, T16, T25, T31, T32, T33, T34 & T35, are expected to be removed to facilitate the development.

Tree Works

10. 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.

11. 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.

12. There may be some very minor canopy lifting required to facilitate the new proposed boundary features. Care must be taken while working under any canopy.

13. It has been recommended that groups G2, G11 & G19 are subject to low level management along the boundary to ensure the health of the better specimens within the group.

14. Where pruning work is necessary and authorised to roots or branches of retained trees to enable facilitation works, it should be carried out by a competent contractor in accordance with BS 3998: 2010 Tree Works-Recommendations.

Tree protection barriers

15. 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.

16. *Tree protection barriers should be the default specification for protective barrier, Figure 2, BS 5837: 2012 Trees in relation to design, demolition and constructions – Recommendations. Where Site circumstances prevent the use of the default barrier, an alternative specification would be recommended by the project arboriculturist with agreement of the local planning authority. The recommended locations for tree protective barriers are shown in Tree Protection Plan.*

17. All tree protection barriers should be located as shown in on DR-6517-03 Tree Protection Plan.

18. 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.

19. 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.

20. 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'.

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

22. All tree protective fencing should remain intact until **ALL** works within the relevant area are completed.

Site inspection

23. 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.

24. Regular brief reports, including photos, should be submitted to the Local Council's Planning Officer and Landscape Team within 5 working days of any inspection.

Development phase

Ground level changes

25. It is our understanding that no ground level changes are required within the root protection area of any tree on this site.

Boundary features

26. Proposed boundary fencing is proposed within the RPA's of some of the retained trees on site. In order to minimise root damage to these trees, excavation must be kept to a minimum. A fence designs requiring intermittent posts will be acceptable and the post holes must not be excavated by mechanical means but may be either dug by hand (with any roots found cleanly severed) or the posts may be driven into the ground.

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

Demolition

28. Care must be taken when removing grass within the vicinity of any retained tree.

Root pruning

29. The proposed encroachment into the RPA of T17 with a footpath is considered acceptable and does not require any special construction technique. It is recommended that prior to any mechanical machinery entering this area, the roots (if found) are cut back using clean, straight cuts with sharp tools. This will minimise the extent of wounding and save unnecessary root ripping with heavy machinery.

30. These proposed works should be carried out with Arboricultural supervision to ensure no major roots are lost.

31. If required roots smaller than 25mm diameter may be pruned back where necessary, making a clean cut with a suitable sharp tool, except where they occur in clumps. Roots in clumps or larger than 25mm diameter should be severed only following consultation with an Arboriculturist, as such roots may be essential to the health and stability of the tree.

32. Great care must be taken when removing the grass or hard standing within this area. Hand tools only. This should be supervised by an Arboricultural Consultant.

Proposed retaining gabion wall

33. A retaining gabion wall has been proposed within the proximity of G1, G2 & G11. These proposed works should be carried out with Arboricultural supervision to ensure no major roots are lost.

34. If required roots smaller than 25mm diameter may be pruned back where necessary, making a clean cut with a suitable sharp tool, except where they occur in clumps. Roots in clumps or larger than 25mm diameter should be severed only following consultation with an Arboriculturist, as such roots may be essential to the health and stability of the tree.

35. Great care must be taken when removing the grass or hard standing within this area. Hand tools only. This should be supervised by an Arboricultural Consultant. Hand tools only are to be used.

Mitigation

36. There is opportunity within the scheme to plant trees and enhance wildlife potential. A comprehensive landscaping scheme has been commissioned.

37. A compound plan has to date not been provided but we can confirm the compound area is located away from the RPA of any retained tree on site.

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

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

40. Regular brief reports, including photos, should be submitted to the Local Council's Planning Officer and Landscape Team within 5 working days of any inspection.

Post development phase

Removal of protective barriers

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

Completion meeting

42. 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

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

44. 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.

45. No fires at all on site.

46. 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.

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

Timescale of Works

48. The timescale for arboricultural requirements are summarised below.

Timescale	Action
Stage 1	All requirements listed in the planning consent are approved by the Local Authority planning office.
Stage 2	Undertake the tree works
Stage 3	Install the protective barrier (default specification) around the trees as detailed on DR-6517-03 Tree Protection Plan.
Stage 4	Brooks Ecological to inspect the barrier prior to any on site activity. 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 the Local Council's Planning Officer and Landscape Team within 5 working days of any inspection.
Stage 5	Undertake the construction of proposals.
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	Post construction remedial tree works to be undertaken, if required, including tree planting and landscaping.

Relevant Contact Details

Contact Name	**Company**	**Contact Number**
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Arboricultural Impact Assessment

Plus Tree Survey

Duchy Homes

Land off Darton Lane
Mapplewell
S75 5AH

Report reference: AR-6517-02
February 2023

Report Title:	Arboricultural Impact Assessment Land off Darton Lane, Mapplewell, S75 5AH.
Report Reference:	AR-6517-02
Written by:	Victoria Black FdSc Arb Principal Arboricultural Consultant
Technical review:	Victoria Black FdSc Arb Principal Arboricultural Consultant
QA review:	Victoria Black FdSc Arb Principal Arboricultural Consultant
Approved for issue:	Victoria Black FdSc Arb Principal Arboricultural Consultant
Date:	28.01.2023

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Contents

Tree Survey including Tree Constraints Plan DR-6517-01 TCP
Tree Protection Plan DR-6517-02 TPP

Summary Statement

The Site is located on the southern edge of Mapplewell, bound by Darton Lane to the north, a dismantled railway line to the south which now supports young woodland, with housing to the west and east. The application site 'the Site' comprises a series of fields, formerly grazed but which seemingly has been left unmanaged.

Past these immediate boundaries, the local landscape is characterised by relativity dense residential development to the north, north-west and north-east with 'green land' to the south- comprising large homogenous fields, former collieries and water courses including the River Dearne.

The tree survey revealed a total of twenty-three individual trees and twelve groups of trees. Of these, three groups of trees were identified as retention category 'A', one individual tree and one group of trees were identified as retention category 'B', and twenty trees/groups were identified as retention category 'C'. There were no retention category 'U' trees identified.

This report should be read in conjunction with the attached Tree Constraints Plan Ref: DR-6517-01, Tree Protection Plan Ref: DR-6517-02 and Tree Survey AR-6517-01.

A plan has been provided by the client Ref: 2239-01 Rev S-Proposed Site Plan, to enable an impact assessment of the proposed works on the existing relevant trees within the Site.

Introduction

Purpose of the report

39. This report has been commissioned to provide professional independent, detailed arboricultural advice on relevant trees present at Land off Darton Lane, Mapplewell, S75 5AH.

40. Plans have been provided by the architect/client to enable an impact assessment of the proposed works on the existing relevant trees within the Site.

Impact Schedule

The following schedule identifies the individual tree and its retention category with the main feature(s) of the proposed works likely to cause an impact. The tree references are shown on the tree constraints plan and the tree protection plan. Any mitigation measures are noted.

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
G1	Hawthorn	C2	Close to proposed access driveway Boundary feature (Knee rail) Bin storage	Some minor root pruning may be required. Reduce back. Some section removal.	Tree protection fencing in accordance with BS 5837:2012 Arboricultural supervision required. Some very minor root pruning may be required.

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
					In order to minimise root damage to these trees, excavation must be kept to a minimum. A fence designs requiring intermittent posts will be acceptable and the post holes must not be excavated by mechanical means but may be either dug by hand (with any roots found cleanly severed) or the posts may be driven into the ground. Canopy requires a reduction. Care to be taken when removing the grass/hardstanding. Mitigation planting required on site.
G2	Mixed	A2	Boundary feature	Some minor root pruning may be required. Reduce back.	Tree protection fencing in accordance with BS 5837:2012 Arboricultural supervision required. Some very minor root pruning may be required. In order to minimise root damage to these trees, excavation must be kept to a minimum. A fence designs requiring intermittent posts will be acceptable and the post holes must not be excavated by mechanical means but may be either dug by hand (with any roots

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
					found cleanly severed) or the posts may be driven into the ground. Canopy requires a reduction. Care to be taken when removing the grass/hardstanding
G3	Hawthorn And Blackthorn	C2	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T4	Ash	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T5	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T6	Birch	B1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T7	Cherry	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T8	Hawthorn	C1	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
T9	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T10	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
G11	Mixed	A2	Boundary feature	Some minor root pruning may be required. Reduce back.	Tree protection fencing in accordance with BS 5837:2012 Arboricultural supervision required.

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
					Some very minor root pruning may be required. In order to minimise root damage to these trees, excavation must be kept to a minimum. A fence designs requiring intermittent posts will be acceptable and the post holes must not be excavated by mechanical means but may be either dug by hand (with any roots found cleanly severed) or the posts may be driven into the ground. Canopy requires a reduction. Care to be taken when removing the grass/hardstanding
T12	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T13	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T14	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T15	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T16	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
T17	Hawthorn	C1	Proposed footpath	Some root loss	Tree protection fencing in accordance with BS 5837:2012 Arboricultural supervision required. Some minor root pruning may be required.
G18	Hawthorn & Elder	C2	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
G19	Mixed	A2	Boundary feature	Some minor root pruning may be required. Reduce back.	Tree protection fencing in accordance with BS 5837:2012 Arboricultural supervision required. Some very minor root pruning may be required. In order to minimise root damage to these trees, excavation must be kept to a minimum. A fence designs requiring intermittent posts will be acceptable and the post holes must not be excavated by mechanical means but may be either dug by hand (with any roots found cleanly severed) or the posts may be driven into the ground. Canopy requires a reduction. Care to be taken when removing the grass/hardstanding

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
T20	Hawthorn	C1	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
T21	Hawthorn	C1	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
T22	Hawthorn	C1	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
T23	Hawthorn	C1	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
G24	Lawson	C2	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
T25	Eucalyptus	C1	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
G26	Lombardy Poplar	B2	None	None - retain	Tree protection fencing in accordance with BS 5837:2012
G27	Hawthorn	C2	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
G28	Elder	C2	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
G29	Hawthorn & Elder	C2	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
G30	Hawthorn & Elder	C2	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T31	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T32	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.

Tree ref.	Species	Retention category	Proposal feature	Impact	Mitigation
T33	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T34	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.
T35	Hawthorn	C1	Remove to facilitate proposed development	Removal	Mitigation planting on site required.

Implications for retained trees

Tree protection

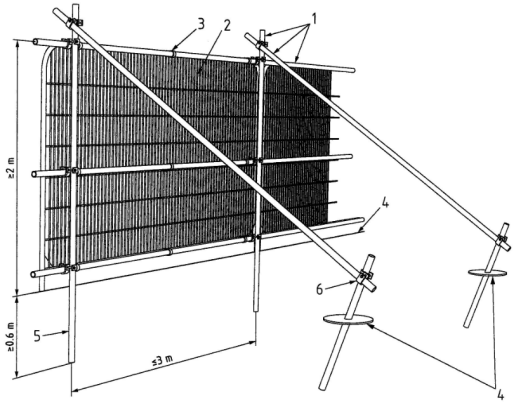
3. Trees and tree groups should be protected from unwanted damage during construction works with temporary tree protection barriers. The barriers should be erected to the outer edge of the tree canopy or the edge of the RPA, whichever is the furthest away from *the* tree, unless otherwise indicated on the Tree Protection Plan.

4. Tree protection barriers should be the default specification for protective barrier, Figure 2, BS 5837: 2012 Trees in relation to design, demolition and constructions – Recommendations. Where Site circumstances prevent the use of the default barrier, an alternative specification would be recommended by the project arboriculturist with agreement of the local planning authority. The recommended locations for tree protective barriers are shown in Tree Protection Plan.

5. All-weather notices should be attached to the barrier with words such as: "Construction exclusion zone – no access".

6. Where facilitation access is authorised within the RPA temporary ground protection should be installed prior to work starting on Site. The temporary ground protection should be capable of supporting the weight of any traffic/machinery using the Site without being distorted or causing compaction to the ground. It is recommended

that the ground of the possible Site compound/storage area is covered in temporary ground protection to minimise soil damage by compaction and conserve soil health through to post-construction planting in this area.



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 1

Tree work

7. Where pruning work is necessary and authorised to roots or branches of retained trees to enable facilitation works, it should be carried out by a competent contractor in accordance with BS 3998: 2010 Tree Works – Recommendations.

Drainage and utilities

8. Drainage and utilities are expected to be included within the proposed Site works and should not involve digging or trenching within RPA's.

Ground level changes

9. It is our understanding that no ground level changes are required within the root protection area of any tree on this site.

Boundary features

10. Proposed boundary fencing is proposed within the RPA's of some of the retained trees on site. In order to minimise root damage to these trees, excavation must be kept to a minimum. A fence designs requiring intermittent posts will be acceptable and the post holes must not be excavated by mechanical means but may be either dug by hand (with any roots found cleanly severed) or the posts may be driven into the ground.

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

Demolition

12. Care must be taken when removing grass within the vicinity of any retained tree.

Root pruning

13. The proposed encroachment into the RPA of T17 with a footpath is considered acceptable and does not require any special construction technique. It is recommended that prior to any mechanical machinery entering this area, the roots (if found) are cut back using clean, straight cuts with sharp tools. This will minimise the extent of wounding and save unnecessary root ripping with heavy machinery.

14. These proposed works should be carried out with Arboricultural supervision to ensure no major roots are lost.

15. If required roots smaller than 25mm diameter may be pruned back where necessary, making a clean cut with a suitable sharp tool, except where they occur in clumps. Roots in clumps or larger than 25mm diameter should be severed only following consultation with an Arboriculturist, as such roots may be essential to the health and stability of the tree.

16. Great care must be taken when removing the grass or hard standing within this area. Hand tools only. This should be supervised by an Arboricultural Consultant.

Trees to be removed

17. Six groups, G3, G18, G27, G28, G29, G30, one section of G1, plus sixteen trees, T4, T5, T6, T7, T9, T10, T12, T13, T14, T15, T16, T31, T32, T33, T34 & T35, are expected to be removed to facilitate the development.

Tree Survey

Tree Survey

Duchy Homes

Land off Darton Lane
Mapplewell
S75 5AH

Report reference: AR-6517-01
February 2023

Report Title:	Tree Survey Land off Darton Lane, Mapplewell.
Report Reference:	AR-6517-01
Written by:	Victoria Black FdSc Arb Principal Arboricultural Consultant
Technical review:	Victoria Black FdSc Arb Principal Arboricultural Consultant
QA review:	Victoria Black FdSc Arb Principal Arboricultural Consultant
Approved for issue:	Victoria Black FdSc Arb Principal Arboricultural Consultant
Date:	28.01.2023

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Contents

Summary Statement

The Site is located on the southern edge of Mapplewell, bound by Darton Lane to the north, a dismantled railway line to the south which now supports young woodland, with housing to the west and east. The application site 'the Site' comprises a series of fields, formerly grazed but which seemingly has been left unmanaged.

Past these immediate boundaries, the local landscape is characterised by relativity dense residential development to the north, north-west and north-east with 'green land' to the south- comprising large homogenous fields, former collieries and water courses including the River Dearne.

The tree survey revealed a total of twenty-three individual trees and twelve groups of trees. Of these, three groups of trees were identified as retention category 'A', one individual tree and one group of trees were identified as retention category 'B', and twenty trees/groups were identified as retention category 'C'. There were no retention category 'U' trees identified.

This report should be read in conjunction with the attached Tree Constraints Plan Ref: DR-6517-01.

Introduction

Purpose of the report

76. This report has been commissioned to provide professional independent, detailed arboricultural advice on all relevant trees present at Land off Darton Lane, Mapplewell, S75 5AH.

77. This report has been undertaken in accordance with BS 5837:2012 Trees in relation to construction – Recommendations.

78. The client has provided a topographical plan.

79. 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.

80. 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

81. 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.

82. 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.

83. 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

84. The Site is located on the southern edge of Mapplewell, bound by Darton Lane to the north, a dismantled railway line to the south which now supports young woodland, with housing to the west and east. The application site 'the Site' comprises a series of fields, formerly grazed but which seemingly has been left unmanaged.

85. Past these immediate boundaries, the local landscape is characterised by relativity dense residential development to the north, north-west and north-east with 'green land' to the south- comprising large homogenous fields, former collieries and water courses including the River Dearne.


Site red line boundary

Survey conditions

86. The trees were surveyed in cool, alternately overcast and bright conditions on 13th January 2023.

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

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

88. The tree reference numbers refer to the attached Tree Constraints Plan (TCP) references. The trees were not tagged for this survey.

89. 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)	Alnus glutinosa	Goat willow	Salix caprea
Alder (grey)	Alnus incana	Hawthorn	Crataegus monogyna
Apple	Malus domestica	Hazel	Corylus avellana
Aspen	Populus tremula	Holly	Ilex aquifolium
Ash	Fraxinus excelsior	Hornbeam	Carpinus betulus
Beech	Fagus sylvatica	Larch	Larix decidua
Birch (silver)	Betula pendula	Lime (common)	Tilia x europaea
Birch (downy)	Betula pubescens	Lime (small-leaved)	Tilia cordata
Chestnut (sweet)	Castanea sativa	Maple (field)	Acer campestre
Chestnut (horse)	Aesculus hippocastanum	Maple (Norway)	Acer platanoides

Cherry (wild)	Prunus avium	Poplar (black)	Populus nigra
Cherry (bird)	Prunus padus	Oak (sessile)	Quercus petraea
Cherry (Japanese)	Prunus serrulata	Oak (pendunculate)	Quercus robur
Leyland Cypress	X Cupressocyparis leylandii	Rowan/mountain ash	Sorbus aucuparia
Elm (English)	Ulmus procera	Sycamore	Acer pseudoplatanus
Elm (wych)	Ulmus glabra	Weeping willow	Salix chrysocoma
		Whitebeam (Swedish)	Sorbus intermedia

90. 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.

91. 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 '#'.

92. 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.

93. 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).

94. 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.

95. Structural condition includes tree form, visible defects, irregularities and influencing factors.

96. 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.

97. The life expectancy (life exp.) is the estimated remaining contribution in years, (<10, 10+, 20+, 40+).

98. 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.

99. 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'.

100. The root protection area (RPA) in $m^2$is for layout purposed 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

101. 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
G1	Hawthorn	Y-EM	To 8	0+	To 280	See plan	Fair	Overhanging boundary and footpath. Overgrown boundary group. Some located on adjacent land. Running down the boundary of the footpath. Minor Deadwood and stubs evident with canopy. Typical of species.	No action required	10+	C2
G2	Mixed	Y-M	To 17	0+	<100 to 450	See plan	Good	Situated on adjacent land. Overhanging boundary. Contains goat willow, sycamore, birch, lime, hawthorn, elder. Some poorer specimens. Deadwood and stubs evident with canopy. Birds nest noted.	Some management along boundary	20+	A2
G3	Hawthorn And Blackthorn	Y-SM	To 8	0+	To 200	See plan	Fair	Dense group. Typical of species. Minor bark wounds throughout. Low hanging canopy.	No action required	10+	C2
T4	Ash	SM	11	3	230	N 4 E 4 S 4 W 4	Fair	Single stemmed and vertical with a balanced canopy. Within G3, resulting in a limited inspection. Slight lean to the north.	No action required	10+	C1
T5	Hawthorn	SM	8	0+	To 100 x 10	N 3 E 3 S 3 W 3	Fair	Multiple stemmed at ground level with a balanced canopy. Low hanging canopy. Typical of species. Bramble at base. Minor bark wounds throughout.	No action required	10+	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	Birch	M	14	2	230 260 250	N 6 E 4 S 7 W 5	Good	Three stems from base with a balanced canopy. Minor Deadwood and stubs evident with canopy.	No action required	20+	B1
T7	Cherry	SM	7	1.8	280 AT BASE	N 3 E 3 S 3 W 3	Fair	Single stemmed and vertical with a balanced canopy. Minor bark wounds throughout.	No action required	10+	C1
T8	Hawthorn	EM	7	0+	To 250 x 4	N 4.5 E 4.5 S 4.5 W 4.5	Fair	Multiple stemmed at ground level with a balanced canopy. Included bark noted at union. Overhanging boundary.	No action required	10+	C1
T9	Hawthorn	SM	7	0.7	To 200 x 5	N 3.5 E 3.5 S 3.5 W 3.5	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C1
T10	Hawthorn	SM	7	0.8	To 150 x 8	N 4 E 4 S 4 W 4	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C1
G11	Mixed	Y-M	To 17	0+	<100 to 450	See plan	Good	Situated on adjacent land. Overhanging boundary. Contains goat willow, sycamore, birch, lime, hawthorn, elder. Some poorer specimens. Deadwood and stubs evident with canopy. Birds nest noted.	Some management along boundary	20+	A2

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
T12	Hawthorn	SM	7	0.6	To 100 x 6	N 2 E 2 S 2 W 2	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C1
T13	Hawthorn	SM	7	0.6	To 100 x 6	N 2 E 2 S 2 W 2	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C1
T14	Hawthorn	SM	7	0.6	To 100 x 6	N 2 E 2 S 2 W 2	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C1
T15	Hawthorn	SM	7	0.6	To 100 x 6	N 2 E 2 S 2 W 2	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C1
T16	Hawthorn	SM	7	0.6	To 100 x 6	N 2 E 2 S 2 W 2	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C1
T17	Hawthorn	SM	7	0.6	To 100 x 6	N 2 E 2 S 2 W 2	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	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
G18	Hawthorn & Elder	Y-EM	To 9	0+	To 200	See plan	Fair	Covered in ivy. Dense group. Typical of species.	No action required	10+	C2
G19	Mixed	Y-M	To 17	0+	<100 to 450	See plan	Good	Situated on adjacent land. Overhanging boundary. Contains goat willow, sycamore, birch, lime, hawthorn, elder. Some poorer specimens. Deadwood and stubs evident with canopy. Birds nest noted. On raised banking.	Some management along boundary	20+	A2
T20	Hawthorn	SM	7	0.7	To 200 x 5	N 3.5 E 3.5 S 3.5 W 3.5	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C1
T21	Hawthorn	SM	7	0.7	To 200 x 5	N 3.5 E 3.5 S 3.5 W 3.5	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C1
T22	Hawthorn	SM	7	0.7	To 200 x 5	N 3.5 E 3.5 S 3.5 W 3.5	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	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
T23	Hawthorn	SM	7	0.7	To 200 x 5	N 3.5 E 3.5 S 3.5 W 3.5	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C1
G24	Lawson	M	To 15	0+	#To 350	See plan	Fair	Good screening for property. Typical of species. Very limited inspection due to access.	No action required	10+	C2
T25	Eucalyptus	EM	14	0+	#400	# N 5 E 5 S 2 W 4	Fair	Good screening for property. Typical of species. Very limited inspection due to access. Low hanging canopy	No action required	20+	C1
G26	Lombardy Poplar	M	To 18	1+	#To 550	See plan	Good	Good screening for property. Typical of species. Very limited inspection due to access.	No action required	20+	B2
G27	Hawthorn	Y-SM	To 8	0+	To 200	See plan	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C2
G28	Elder	Y-SM	To 6	0+	To 100	See plan	Fair	Typical of species. Bark wounds noted throughout.	No action required	10+	C2

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
G29	Hawthorn & Elder	Y-EM	To 9	0+	To 200	See plan	Fair	Dense group. Typical of species. Minor bark wounds throughout. Low hanging canopy. Overhanging boundary.	No action required	10+	C2
G30	Hawthorn & Elder	Y-EM	To 9	0+	To 200	See plan	Fair	Dense group. Typical of species. Minor bark wounds throughout. Low hanging canopy. Overhanging boundary.	No action required	10+	C2
T31	Hawthorn	SM	7	0.7	To 200 x 5	N 3.5 E 3.5 S 3.5 W 3.5	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C1
T32	Hawthorn	SM	7	0.7	To 200 x 5	N 3.5 E 3.5 S 3.5 W 3.5	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C1
T33	Hawthorn	SM	7	0.7	To 200 x 5	N 3.5 E 3.5 S 3.5 W 3.5	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	C1
T34	Hawthorn	SM	7	0.7	To 200 x 5	N 3.5 E 3.5 S 3.5 W 3.5	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species.	No action required	10+	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
T35	Hawthorn	SM	7	0.7	To 200 x 5	N 3.5 E 3.5 S 3.5 W 3.5	Fair	Multiple stemmed at ground level with a balanced canopy. Minor bark wounds throughout. Typical of species. Overhanging boundary.	No action required	10+	C1

Findings

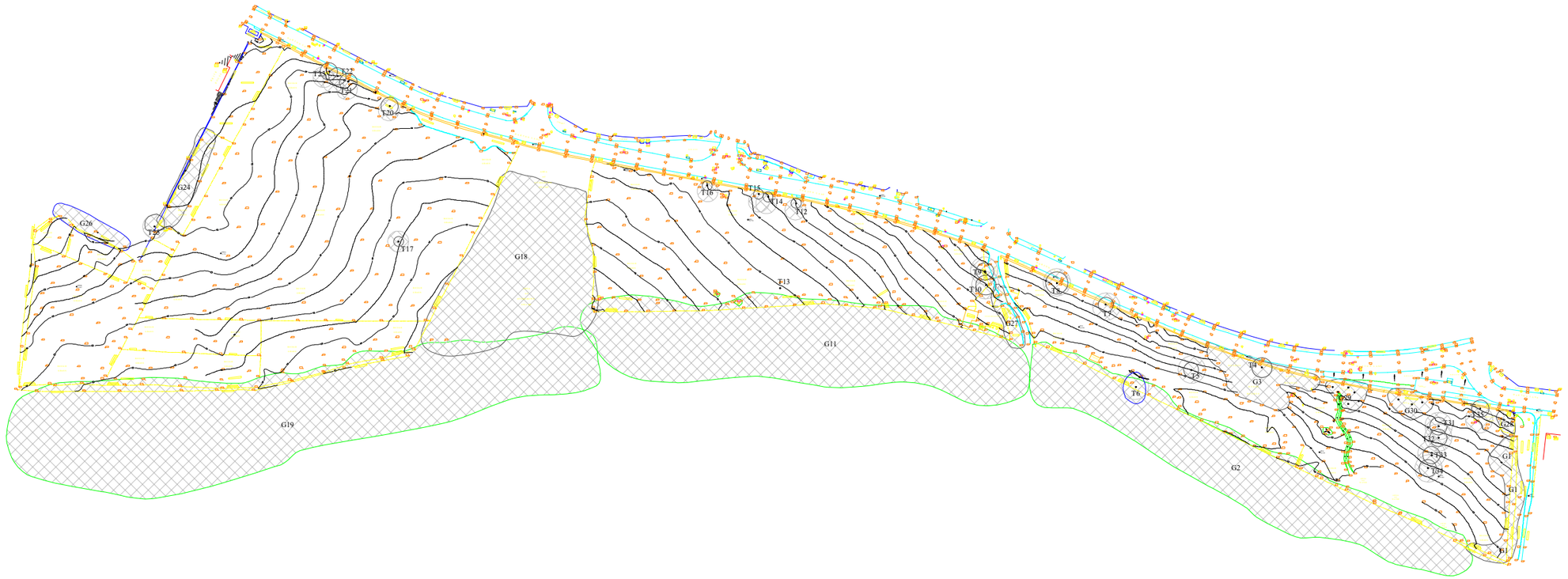
Tree descriptions and recommendations

102. The tree survey revealed a total of twenty-three individual trees and twelve groups of trees. Of these, three groups of trees were identified as retention category 'A', one individual tree and one group of trees were identified as retention category 'B', and twenty trees/groups were identified as retention category 'C'. There were no retention category 'U' trees identified. Please refer above for retention category and definition criteria.

103. It has been recommended that groups G2, G11 & G19 are subject to low level management along the boundary to ensure the health of the better specimens within the group.

104. 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.

DR-6517-01 Tree Constraints Plan



Brooks Ecological
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DR-6517-01 TREE CONSTRAINTS PLAN

Site: Land off Darton Lane, Mapplewell.

Paper Size: A1	**Scale: 1:1000**

BS 5837: 2012 Retention Categories

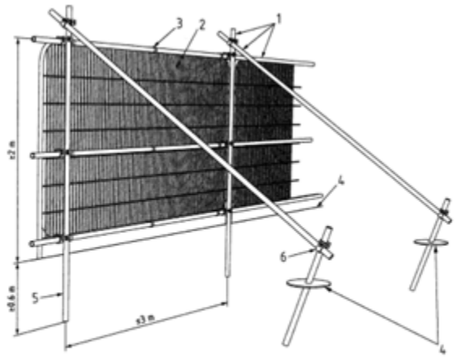
	CATEGORY A
	CATEGORY B
	CATEGORY C
	CATEGORY U

	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.

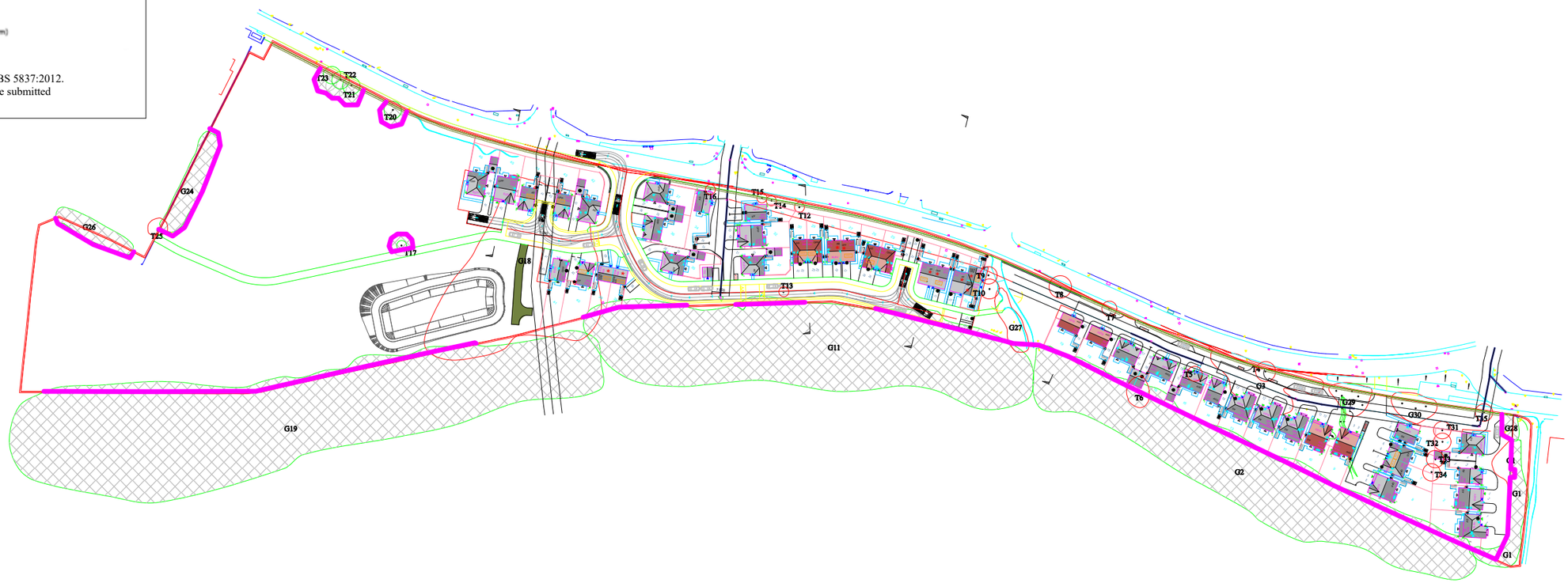
DR-6517-03 Tree Protection Plan



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

An example of tree protective fencing in accordance to BS 5837:2012.
For further details please refer to paragraphs 15-22 of the submitted AMS Ref: AR-6517-03.



N

Indicative

Duchy Homes

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DR-6517-03 TREE PROTECTION PLAN

Site: Land off Darton Lane, Mapplewell.

Paper Size: A1	**Scale: 1:1000**

	Tree to be retained
	Tree to be removed
	Protective fencing in line with BS 5837:2012
	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.

Proposed Gabion Wall Plans

Indicates area of dwelling requiring extra facing brickwork. Depth as indicated.

Indicates a fence and gravel board retainer. Retained height as indicated. Max retained 300mm.

Indicates a masonry retaining wall. Max retained height 1000mm

Indicates a Gabion Retaining Wall.

Indicates an embankment. Max gradient 1 in 2 but typically 1 in 3.

NOTE: Where retained height exceeds 600mm guardrails are to be provided to retaining wall. Guardrails to be minimum for 1100mm high from finished ground level.

NOTE: Heights indicated to retaining walls are the retained height not the total construction height.

Indicates steps. Steps assumed to have a 150mm riser and 300mm going in accordance with Part M requirements. Where flights of steps have three or more steps a suitable handrail is to be provided. Stairs must have a clear width of 900mm minimum. No flight to exceed 1800mm. Landings to have a minimum length of 900mm.

NOTE: The main approach route to each dwelling to have a minimum width of 900mm and a maximum cross fall of 1 in 40 in accordance with Part M.

Indicates minimum 1200mm long level landing adjacent principle access to property in accordance with Part M requirements. Maximum gradient 1 in 60.

NOTE: M4.3 House types to have a minimum 1500mm level landing adjacent principle access to property plus level access to the rear of the property.

NOTE: Ramped approaches to dwellings to comply with the following in accordance with Part M:

- For gradients up to 1:15 - not more than 10m long
- For gradients up to 1:12 - not more than 5m long
- Minimum clear width of 900mm
- Every ramp has a top and bottom landing
- Intermediate landings to be provided between ramps and at changes of direction
- Every landing to be a minimum of 1200mm long

Indicates the principle access to the property.

L Indicates a level access (1:60 or slacker)

G Indicates a gently sloping access (1:20 - 1:59)

R Indicates a ramped access (1:12 - 1:19)

S Indicates a stepped access

M4.2 Indicates M4 2 Properties

M4.3 Indicates M4 3 Properties

REV	DESCRIPTION	SIG	CHK	DATE
P14	Revised to suit clients comments.	RJ	GH	28.03.24
P13	Revised to suit clients comments. M4(2) plots levels access provided to rear. Plots 25 and 26 FFL amended.	RJ	GH	27.03.24
P12	Plot 40/41 boundary levels amended to suit latest drainage proposals	RJ	CH	15.03.24
P11	Revised to suit latest site layout and drainage proposals. External works and retaining wall heights amended to suit.	RJ	CH	07.03.24
P10	M4(2) and M4(3) plots confirmed. External works and retaining wall heights amended to suit.	RJ	CH	22.02.24
P09	Revised to suit client mark ups.	RJ	CH	07.02.24
P08	Revised to suit latest site layout.	RJ	CH	05.02.24
P07	Revised to suit latest site layout.	RJ	CH	21.12.23
P06	Revised to suit latest site layout.	RJ	CH	09.03.23
P05	Detention basin and access track added.	RJ	CH	01.03.23
P04	Revised to suit latest site layout.	RJ	CH	09.02.23
P03	Revised to suit latest site layout.	RJ	CH	08.02.23
P02	Revised to suit latest site layout and clients comments.	RJ	CH	07.02.23
P01	First Issue.	RJ	CH	06.02.23

DUCHY HOMES

DARTON LANE

EXTERNAL WORKS - SHEET 3

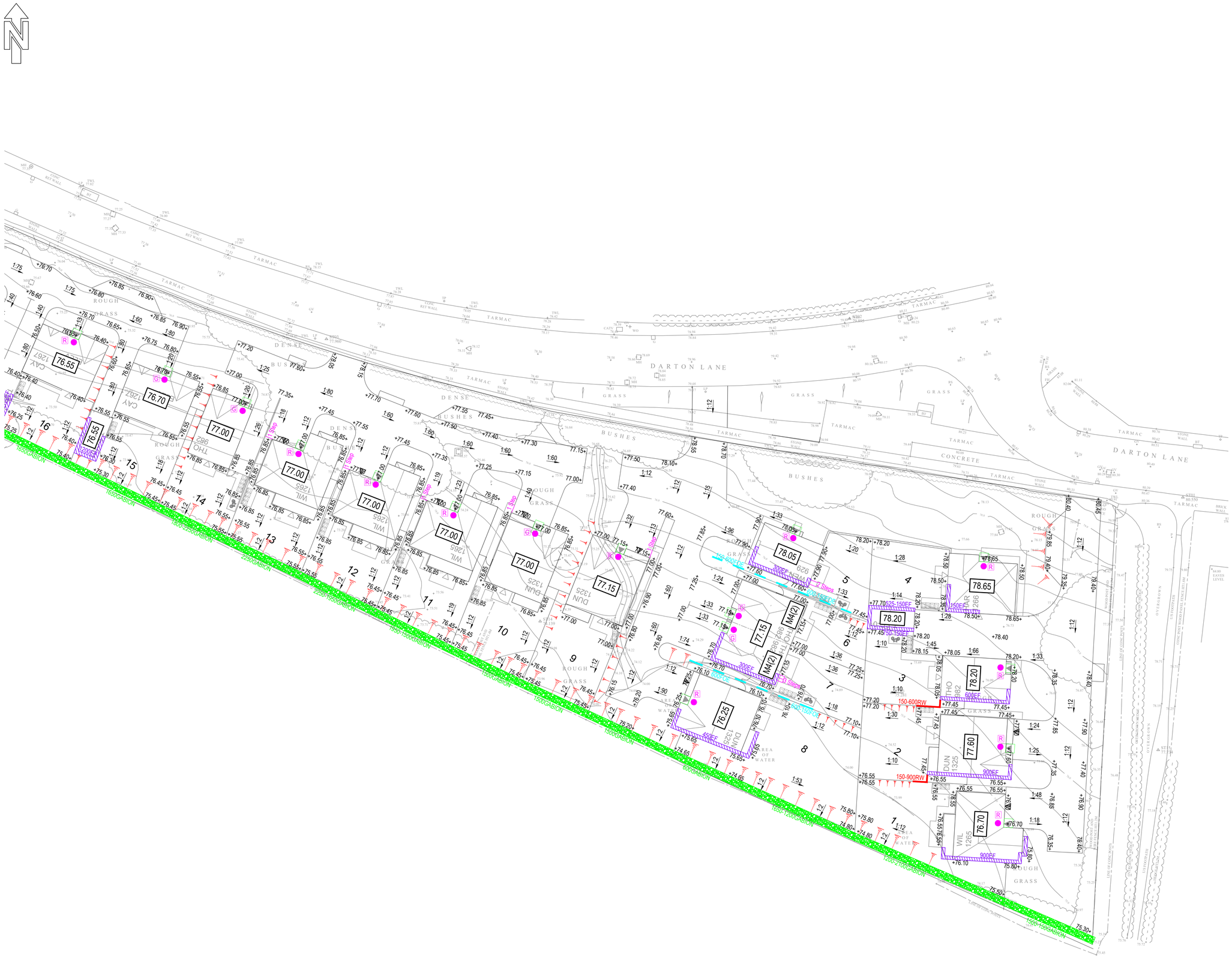
Eastwood
CONSULTING ENGINEERS
St Andrew's House
23 Kingfield Road
Sheffield, S11 9AS
T: 0114 255 4554
E: mail@eastwoodce.com
eastwoodce.com

ECE PROJECT No	SCALE AT A1	STATUS	SUITABLE FOR
47509	1:250	S0	Initial

DRAWING NUMBER

47509 - ECE - XX - XX - DR - C - 0012 P14

Project Originator Zone Level Type Role Number REV



Indicates area of dwelling requiring extra facing brickwork. Depth as indicated.

Indicates a fence and gravel board retainer. Retained height as indicated. Max retained 300mm.

Indicates a masonry retaining wall. Max retained height 1000mm

Indicates a Gabion Retaining Wall.

Indicates an embankment. Max gradient 1 in 2 but typically 1 in 3.

NOTE: Where retained height exceeds 600mm guardrails are to be provided to retaining wall. Guardrails to be minimum for 1100mm high from finished ground level.

NOTE: Heights indicated to retaining walls are the retained height not the total construction height.

Indicates steps. Steps assumed to have a 150mm riser and 300mm going in accordance with Part M requirements. Where flights of steps have three or more steps a suitable handrail is to be provided. Stairs must have a clear width of 900mm minimum. No flight to exceed 1800mm. Landings to have a minimum length of 900mm.

NOTE: The main approach route to each dwelling to have a minimum width of 900mm and a maximum cross fall of 1 in 40 in accordance with Part M.

Indicates minimum 1200mm long level landing adjacent principle access to property in accordance with Part M requirements. Maximum gradient 1 in 60.

NOTE: M4.3 House types to have a minimum 1500mm level landing adjacent principle access to property plus level access to the rear of the property.

NOTE: Ramped approaches to dwellings to comply with the following in accordance with Part M:

- For gradients up to 1:15 - not more than 10m long
- For gradients up to 1:12 - not more than 5m long
- Minimum clear width of 900mm
- Every ramp has a top and bottom landing
- Intermediate landings to be provided between ramps and at changes of direction
- Every landing to be a minimum of 1200mm long

Indicates the principle access to the property.

L Indicates a level access (1:60 or slacker)

G Indicates a gently sloping access (1:20 - 1:59)

R Indicates a ramped access (1:12 - 1:19)

S Indicates a stepped access

M4:2 Indicates M4 2 Properties

M4:3 Indicates M4 3 Properties

REV	DESCRIPTION	SIG	CHK	DATE
P13	Revised to suit clients comments.	RJ	GH	28.03.24
P12	Revised to suit clients comments. M4(2) plots levels access provided to rear. Plots 25 and 26 FFL amended.	RJ	GH	27.03.24
P11	Revised to suit latest site layout and drainage proposals. External works and retaining wall heights amended to suit.	RJ	CH	07.03.24
P10	M4(2) and M4(3) plots confirmed. External works and retaining wall heights amended to suit.	RJ	CH	22.02.24
P09	Revised to suit client mark ups.	RJ	CH	07.02.24
P08	Revised to suit latest site layout.	RJ	CH	05.02.24
P07	Revised to suit latest site layout.	RJ	CH	21.12.23
P06	Revised to suit latest site layout.	RJ	CH	22.02.23
P05	FFL's to Plots 9-19 amended. External works amended to suit	RJ	CH	22.02.23
P04	Revised to suit latest site layout.	RJ	CH	09.02.23
P03	Revised to suit latest site layout.	RJ	CH	08.02.23
P02	Revised to suit latest site layout and clients comments.	RJ	CH	07.02.23
P01	First Issue.	RJ	CH	06.02.23

DUCHY HOMES

DARTON LANE

EXTERNAL WORKS - SHEET 1

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ECE PROJECT No	SCALE AT A1	STATUS	SUITABLE FOR
47509	1:250	S0	Initial

DRAWING NUMBER

Project	Originator	Zone	Level	Type	Role	Number	REV
47509	- ECE - XX - XX - DR - C -					0010	P13

Indicates area of dwelling requiring extra facing brickwork. Depth as indicated.

Indicates a fence and gravel board retainer. Retained height as indicated. Max retained 300mm.

Indicates a masonry retaining wall. Max retained height 1000mm

Indicates a Gabion Retaining Wall.

Indicates an embankment. Max gradient 1 in 2 but typically 1 in 3.

NOTE: Where retained height exceeds 600mm guardrails are to be provided to retaining wall. Guardrails to be minimum for 1100mm high from finished ground level.

NOTE: Heights indicated to retaining walls are the retained height not the total construction height.

Indicates steps. Steps assumed to have a 150mm riser and 300mm going in accordance with Part M requirements. Where flights of steps have three or more steps a suitable handrail is to be provided. Stairs must have a clear width of 900mm minimum. No flight to exceed 1800mm. Landings to have a minimum length of 900mm.

NOTE: The main approach route to each dwelling to have a minimum width of 900mm and a maximum cross fall of 1 in 40 in accordance with Part M.

Indicates minimum 1200mm long level landing adjacent principle access to property in accordance with Part M requirements. Maximum gradient 1 in 60.

NOTE: M4.3 House types to have a minimum 1500mm level landing adjacent principle access to property plus level access to the rear of the property.

NOTE: Ramped approaches to dwellings to comply with the following in accordance with Part M:

- For gradients up to 1:15 - not more than 10m long
- For gradients up to 1:12 - not more than 5m long
- Minimum clear width of 900mm
- Every ramp has a top and bottom landing
- Intermediate landings to be provided between ramps and at changes of direction
- Every landing to be a minimum of 1200mm long

Indicates the principle access to the property.

L Indicates a level access (1:60 or slacker)

G Indicates a gently sloping access (1:20 - 1:59)

R Indicates a ramped access (1:12 - 1:19)

S Indicates a stepped access

M4:2 Indicates M4 2 Properties

M4:3 Indicates M4 3 Properties

REV	DESCRIPTION	SIG	CHK	DATE
P14	Revised to suit clients comments.	RJ	GH	28.03.24
P13	Revised to suit clients comments. M4(2) plots levels access provided to rear. Plots 25 and 26 FFL amended.	RJ	GH	27.03.24
P12	Revised to suit latest site layout and drainage proposals. External works and retaining wall heights amended to suit.	RJ	CH	07.03.24
P11	M4(2) and M4(3) plots confirmed. External works and retaining wall heights amended to suit.	RJ	CH	22.02.24
P10	Revised to suit client mark ups.	RJ	CH	07.02.24
P09	Revised to suit latest site layout.	RJ	CH	05.02.24
P08	Plot 21-28 rear garden levels amended.	RJ	CH	21.12.23
P07	Revised to suit latest site layout.	RJ	CH	21.12.23
P06	Revised to suit latest site layout.	RJ	CH	22.02.23
P05	FFL's to Plots 9-19 amended. External works amended to suit	RJ	CH	22.02.23
P04	Revised to suit latest site layout.	RJ	CH	09.02.23
P03	Revised to suit latest site layout.	RJ	CH	08.02.23
P02	Revised to suit latest site layout and clients comments.	RJ	CH	07.02.23
P01	First Issue.	RJ	CH	06.02.23

DUCHY HOMES

DARTON LANE

EXTERNAL WORKS - SHEET 2

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ECE PROJECT No	SCALE AT A1	STATUS	SUITABLE FOR
47509	1:250	S0	Initial

DRAWING NUMBER: 47509 (Project) - ECE (Originator) - XX (Zone) - XX (Level) - DR (Type) - C (Role) - 0011 (Number)

REV: P14