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Arboricultural Method Statement

M T Baines and Sons.

New Farm Site, Ellistown Lane, Stanton Under Bardon

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REVISION HISTORY

Rev	Description of change	Date	Initials
1	Original report	10.02.2023	FM
2	Change in tree protective fencing type	20.03.2023	FM
3	Included reporting procedure following Tree Officer comments	05.06.2023	FM

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DISCLAIMER

While all reasonable efforts have been made to identify abnormalities in the subject trees, the statements made in this report do not take into account the effects of extreme weather events, vandalism or accidents, or changes to the site that may affect trees that have taken place since the date of the survey. Nicholsons does not accept any responsibility in connection with these factors.

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Attachments

Description	Reference	Version
Tree Schedule	18-3100	2
Tree Constraints Plan	19-1977	2
Tree Protection Plan	22-1892	1

PURPOSE OF DOCUMENT

This report has been commissioned to provide details on how the retained trees will be protected and managed during the development process at New Farm Site, Ellistown Lane, Stanton Under Bardon. This includes a Tree Protection Plan (TPP) that provides illustrative guidance on the tree protection measures that are required for the development of the site.

This document is prepared to assist in the discharge of planning conditions that have been attached to the consented application (Ref: 21/00531/HYB [APP/K2420/W/21/3279939]), and in particular, with condition 37 which states:

“Prior to commencement of development on the site, including site works of any description, a Tree Protection Plan (based on the draft Plan No 387/20/03/19-2000v2 which forms part of the Lockhart Garratt Arboricultural Impact Assessment dated March 2021 (Ref:19-2138)) shall be submitted to and approved in writing by the local planning authority. The Plan shall be prepared by a suitably qualified arboriculturist and shall include protective barriers to form a secure construction exclusion zone and root protection area around those trees in accordance with British Standard 5837:2012 Trees in relation to design. Any trenches for services that are required within the fenced-off areas shall be excavated and back-filled by hand and any tree roots or clumps of roots encountered with a diameter of 25cm or more shall be left un-severed. Development is to be carried out in accordance with the approved scheme”.

The following explanations relate specifically to this site and they should be read in conjunction with the TPP.

A copy of this report must be kept on site and be permanently available for the duration of the development. It can be:

- Included in the tender documents to identify and quantify the tree protection and management requirements;
- Used to plan the timing of site operations to minimise the impact of trees; and
- Reference on site for practical guidance on how to protect trees.

1. SCOPE OF WORKS

- 1.1 The approved development is for the erection of two replacement farm manager dwellings with the replacement of associated agricultural buildings and structures incorporating access, landscaping, drainage and other engineering works.
- 1.2 In order to discharge condition 37 the following arboricultural protection measures are required:
 - Arboricultural Clerk of Works (ACoW) supervision
 - Tree Protection Fencing (TPF)
- 1.3 A total of approximately 30m of hedgerow and 45m² of one group of trees will require removal.
- 1.4 There is no requirement for any of the following within Root Protection Areas (RPAs) of retained trees:
 - Demolition of existing buildings
 - Site gradient changes
 - Contractors parking
 - Storage of materials
 - Landscaping
 - Fires
 - Herbicide use

2. ARBORICULTURAL ACTIVITIES & SEQUENCE

Table 1: Arboricultural Activities & Sequence

It is recommended that this sheet is removed from this report, laminated and displayed within the main site office at a visible location to all site staff.

Arboricultural Requirements	Timing & Importance	Details	AMS Report Section	Appendix No.
ACoW Activities	Level of ACoW supervision will be determined at the pre-commencement meeting.	1. Pre-commencement meeting 2. Tree works 3. Install tree protective fencing 4. Development phase 5. Remove tree protective fencing 6. Completion meeting	3	N/A
Tree Removals	Pre-construction	G2 (approximately 45m ²), H12 (approximately 18m) and H16 (approximately 12m).	4	N/A
Tree Protective Fencing	Fencing MUST be erected and inspected by ACoW before site works can start.	Heras 151 for G1, G2, T3 and T4. Orange Barrier fencing for T10, T14, T15, T17, T18, T19, T20 and T21. Hazard Red & White Marking Tape for H8, G9, G11, H12, H13 and H16.	5	4 and 5

Key Responsibilities:

It is the responsibility of the main works contractor to ensure that tree protection measures are adhered to all at times.

It is the responsibility of the main works contractor to ensure that all site personnel fully understand the protection measures of the site.

It is the responsibility of the main works contractor to ensure that the project arboriculturist is contacted if there are any issues related to trees.

3. ARBORICULTURAL ACTIVITIES

3.1 An ACoW will be appointed by the main works contractor (MWC) to advise on the tree management for the site and to attend:

- The pre-commencement meeting before any works start;
- Regular inspection visits; and
- The completion meeting.

Sequencing and Timing

3.2 Effective tree protection relies upon following a local sequence of events and arboricultural inspection. **Table 2** provides an indication to the likely sequencing and inspection requirements of the retained ACoW.

Table 2: Sequencing and Inspection

Stage	Action	Arboricultural Input Required
1	Pre-commencement meeting	Attend
2	Tree works	Inspect
3	Install Tree protective fencing	Inspect
4	Development phase	Inspect
5	Remove tree protective fencing	Inspect
6	Completion meeting	Attend

3.3 The retained ACoW's initial role is to liaise with the MWC and Local Planning Authority (LPA) to ensure the tree protection measures are fit for purpose and in place before any works commence on site. Once the site is working that role will switch to monitoring compliance with arboricultural planning conditions and advising on any tree problems that arise or modifications that become necessary.

3.4 It is the MWC's responsibility to ensure that details of this Arboricultural Method Statement (AMS) and any agreed amendments are known and understood by all site personnel. An AMS Briefing Statement has been prepared and attached to this document, see **Appendix 1**. This document provides summarised details of the key protection measures contained within this document. A copy of this should be made available to all staff and used in any site inductions.

3.5 The final details of the frequency of inspection visits will be agreed at the pre-commencement meeting.

3.6 The ACoW will make a record of the visits and these will be attached to the site copy of the AMS for inspection. A further copy will be sent to the LPA. The purpose of these written records is firstly to provide proof of compliance that will allow the MWC to robustly demonstrate adherence to best practice in the event of any dispute. Secondly it will help the LPA efficiently discharge the relevant planning conditions.

Pre-commencement Meeting

- 3.7 A pre-commencement site meeting involving the land owner, representative of the development company, ACoW, contractors and engineers (as appropriate) and the relevant LPA officers will be held to ensure that all aspects of the tree protection processes are understood and agreed.
- 3.8 The meeting is where the details of the programme of tree protection will be agreed and finalised, which will then form the basis of any inspection arrangements between the ACoW and the MWC.
- 3.9 The ACoW will send a record of the meeting to all parties.
- 3.10 The ACoW will request that the contractor signs a Statement of Undertaking (SoU). This document confirms that the contractor fully understands the tree protection measures required throughout the construction process and accepts full responsibility for the protection of retained trees. A copy of the signed document will be kept onsite throughout the duration of the project. A copy will also be sent to the LPA officer for reference.
- 3.11 An example of this document can be found in **Appendix 2**.

Reporting Procedure

- 3.12 The ACoW will monitor site activities and report to the LPA directly via email.
- 3.13 A Site Visit File Note will be produced for each site visit including the pre-commencement meeting, regular inspection visits, the completion meeting and any additional site visits that may be required.
- 3.14 The Site Visit File Note will relay to the LPA whether or not the tree protection measures are being implemented effectively, which will include photos, and will provide recommendations for remedial actions where required.
- 3.15 Enforcement of planning regulations remains the responsibility of the LPA.

4. TREE REMOVAL & PRUNING

Tree Removals

- 4.1 Trees for removal have been noted on the TPP with a dashed red circle around each location. **Table 3** provides details of trees required for removal.

Table 3: Tree Removals

	Category A	Category B	Category C	Category U	Total
Trees	0	0	0	0	0
Hedges	0	0	H12 (18m) and H16 (12m).	0	30m
Groups	0	0	G2 (45m ²)	0	45m ²
Total	0	0	30m of hedgerow 45m ² of group	0	30m of hedgerow 45m ² of group

- 4.2 Great care should be taken during the tree removal process to ensure that retained trees are not adversely impacted. The following methodology should be adhered to at all times:

- Any machinery used during the tree removal process will track and be sited outside the root protection area (RPA) of retained trees.
- The felling of trees will be undertaken to avoid damaging retained trees.
- The removal of stumps of felled trees will be undertaken to ensure any retained trees in close proximity remain free from harm.
- All works will be conducted in accordance with BS3998:2010 *Tree Work – Recommendations*.

Tree Pruning

- 4.3 No obvious facilitation pruning has been identified, but if additional minor pruning becomes necessary to address unanticipated local problems with individual branches, any works will be assessed and authorised as necessary by the retained ACoW. Where necessary, the LPA tree officer will be notified of any additional pruning works.
- 4.4 All pruning works will be conducted in accordance with BS3998:2010 *Tree Works – Recommendations*.

5. BARRIERS AND GROUND PROTECTION

The Construction Exclusion Zone

- 5.1 The primary means of protecting the RPA of trees is through the use of barriers formed by protective fencing. The enclosed area is the Construction Exclusion Zone (CEZ).
- 5.2 The CEZs are to be afforded protection at all times and will be protected by fencing. The type of fencing is detailed below.
- 5.3 No works will be undertaken within any CEZ that causes compaction to the soil or severance of tree roots.

Tree Protection Fencing

- 5.4 A protective fence will be erected around the trees, prior to the commencement of any site works. This includes any materials or machinery brought onto site, development or the stripping of soil.
- 5.5 The fence is to be sited in accordance with the TPP enclosed with this method statement. This is shown as a black dashed line. Details of minimum distances for the barriers from the trees can be seen in **Appendix 3**. The figures are based on a perfect circle for the RPA around the tree.
- 5.6 The precise form of fencing can vary provided it is fit for purpose and prevents damaging activities within the CEZ. For a proposal of this nature, a reasonable approach would be a mix of fencing types as follows:
- Heras 151 for G1, G2, T3 and T4;
 - Orange Barrier fencing for T10, T14, T15, T17, T18, T19, T20 and T21; and
 - Hazard Red & White Marking Tape for H8, G9, G11, H12, H13 and H16.
- 5.7 All Heras fence panels will be joined using a coupling system such as the Heraslock Anti-tamper coupler, using a minimum of two clamps per panel side. Each panel will be fitted securely to a rubberised foot that will in turn be pinned to the ground using metal stakes driven a minimum of 500mm into the ground. If metal stakes cannot be used due to subterranean constraints, a suitable alternative would be step blocks¹.
- 5.8 All fencing and tape will have signs attached to them stating that it defines a CEZ and that no works are permitted within the area. No notice boards, cables or other services will be attached to any tree. An example of a fencing sign is provided in **Appendix 5**.
- 5.9 After the protective fencing has been erected, the retained ACoW will visit the site. The purpose of the visit will be to check that the fencing has been correctly installed so as to provide protection to the trees. The LPA tree officer may also be invited to inspect the tree protection measures prior to any works commencing.
- 5.10 The retained ACoW will provide a written report confirming satisfactory completion of this task. A copy of this report will be sent to the LPA.
- 5.11 The protective fencing may only be removed following completion of all construction works.

¹ <https://www.heras-mobile.co.uk/accessories/stabilisation>

6. CONSTRUCTION OF SPECIAL SURFACES

- 6.1 Where, due to site constraints, construction activity cannot be excluded through the use of fencing, appropriate ground protection must be installed to protect the rooting environment during the construction process.

Temporary Ground Protection

- 6.2 Where it is not practical to protect the RPA by use of fencing barriers, BS5837 allows for the fencing to be set back and the soil shielded by ground protection. A range of methods can be used including retaining existing hard surfaces or structures that already protect the soil, installing new materials, or a combination of both. Whatever the choice of method, the end result must be that the underlying soil (rooting environment) remains undisturbed and retains the capacity to support existing and new roots.
- 6.3 No trees on this site require temporary protective ground protection measures. However, if temporary access is required to a CEZ then access may only be gained after consultation with the LPA and following placement of materials that will spread the weight of any vehicular load and prevent compaction to the soil.

Additional precautions outside the exclusion zone

- 6.4 Any risk from activities outside RPAs but close enough to have an impact will be assessed during the day-to-day running of the site, and appropriate precautions put in place to reduce that risk.
- 6.5 It is a presumption of this report that all RPAs that have been identified for protection but which lie outside of the protective fencing, will be protected from soil degradation at all times during construction activity.
- 6.6 Further details for working within the RPA are also provided in **Appendix 6**.

7. SPECIFIC TREE PROTECTION MEASURES

- 7.1 No specific tree protection measures are required for any tree on this site other than those detailed in this AMS and defined on the TPP.

8. DEMOLITION

- 8.1 No demolition works will take place within the RPA of any retained tree on this site.

9. DEVELOPMENT

- 9.1 Once all tree works and protective fencing have been completed, the MWC can commence the on-site preparation works and construction can begin.

Site Storage, Cement Mixing and Washing Points

- 9.2 No storage of materials will take place within a CEZ.
- 9.3 No mixing or storage of materials will take place up a slope where they may leak into a CEZ. Where contours of the site create a risk of polluted water running into RPAs, precautionary measures of using heavy duty plastic sheeting and sandbags with the ability to contain accidental spillage will be put in place to prevent contamination.
- 9.4 Water will be kept readily available on site and will be used to flush spilt materials through the soil and avoid contamination of tree roots.
- 9.5 At the time of any spillage the main works contractor will contact the retained ACoW for advice.

Contractors Parking

- 9.6 Contractors parking will not be within or in close proximity to a CEZ.

Utility Services

- 9.7 There is no requirement for any service to be installed within a CEZ or RPA of any retained tree on this site.

Fires

- 9.8 No fires will be lit on this site.

Site Gradient

- 9.9 There will be no changes to any levels on this site within or in close proximity to the RPA of any retained tree on this site.

Use of Herbicides

- 9.10 There is no requirement of any herbicide to be used on this site.

10. POST DEVELOPMENT

Completion Meeting

- 10.1 Upon completion of all works specified above and all procedures detailed, the ACoW will visit the site and may invite the LPA tree officer to meet on site to discuss the process and agree any final remedial works which may be required.

11. RESPONSIBILITIES

- 11.1 It is the responsibility of the MWC to ensure that the planning conditions attached to planning consent area adhered to at all times and that a monitoring regime in regard to tree protection is adopted on site.
- 11.2 The MWC will be responsible for contacting the LPA at any time issues are raised related to the trees on site.
- 11.3 If at any time pruning works are required advice must be sought from the ACoW first, and if required permission obtained from the LPA and then carried out in accordance with BS3998:2010 Tree Works – Recommendations and industry best practice.
- 11.4 The MWC will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective fences will remain in position until completion of ALL construction works on the site.
- 11.5 The fencing and signs must be maintained in position at all times and checked on a regular basis by an on-site person designed that responsibility.
- 11.6 The MWC will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any tree on site.

12. CONTACTS

12.1 **Table 4** shows a list of all relevant contacts for this development. This table will be completed once the pre-commencement meeting has been undertaken.

Table 4: Development Contacts

Title	Name	Position	Contact
Main Works Contractor			
Agent/Architect			
LPA Tree Officer			
Site Manager/Foreman			
ACoW			
Tree Surgeon			

THIS AMS IS NOT A CONTRACT. THE RETENTION OF A QUALIFIED ARBORICULTURALIST FOR SUPERVISION AND MONITORING MUST BE AGREED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY.

13. APPENDICES

Appendix 1: AMS Briefing Statement**Arboricultural Method Statement – Briefing Statement****New Farm Site, Ellistown Lane, Stanton Under Bardon****Purpose**

The purpose of this briefing document is to ensure that all contractors, sub-contractors and any other personnel working on the New Farm Site, Ellistown Lane, Stanton Under Bardon project are fully aware of the purpose of the tree protection measures that have been implemented on site.

Key Messages

- The protection of the retained trees and hedges on site is a critical requirement of both the client and the Local Planning Authority.
- The site has been designed with key green features being retained and protected. Any breach of the protection measures has the potential to damage those features and therefore disrupt the overall vision for the site.
- A detailed Arboricultural Method Statement has been prepared. This details the requirements for ensuring that retained trees are protected. This document is available on site at the site office and should be read and understood by all personnel working on the site.
- A Tree Protection Plan has been prepared to provide graphical illustration as to the extent of tree protection measures.
- The approved Tree Protection Fencing is a combination of Heras panels, Orange Barrier Fencing and Hazard Red & White Marking Tape to protect areas that are being actively worked. All Tree Protection Fencing and tape will have a sign attached at regular intervals to state that it is Tree Protective Fencing. No Tree Protection Fencing can be moved, opened, or breached in any way without the prior written approval of the project Arboriculturist.
- The area within the Tree Protective Fencing is a Construction Exclusion Zone. This means that there must be no machinery, no materials, and no personnel within the area. Unauthorised access will be a breach of planning conditions and could lead to enforcement notices from the Local Planning Authority.
- No works to any tree or hedge can be undertaken by any person that has not been approved by the project Arboriculturist.
- Where additional tree works are required, there may be a requirement to obtain input and approval from: the client; the Local Planning Authority; the project Ecologist; and/or the project Landscape Consultant. If any additional works are required, as much notice as possible must be given to ensure that there are no delays to the works programme while the necessary approvals are obtained.

Project Arboriculturist:

Contact:

Appendix 2: Statement of Undertaking**STATEMENT OF UNDERTAKING**

I confirm that I have read and fully understood the tree protection measures that have been detailed in the Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) that have been provided for New Farm Site, Ellistown Lane, Stanton Under Bardon. These documents have been provided to ensure that retained trees on the site are protected at all times during the construction process, and to assist the MWC/construction company maintain compliance with the planning conditions.

I will ensure that tree protection measures are in accordance with the AMS and TPP throughout the construction process. I will also ensure that all site personnel are aware of the tree protection measures that are required throughout the site.

Where issues arise from tree related matters I will consult the retained Arboricultural Clerk of Works (ACoW) before undertaking any activities that may cause damage to the protected trees.

Position:

Name:

Signature:

Company:

Date:

Approved by:

Position:

Name:

Signature:

Company:

Date:

Enc: Arboricultural Method Statement: 22-1889

Tree Protection Plan: 22-1892

Appendix 3: Tree Constraints Data

Tree No	Species	Stem Diameter (mm)	Circle Radius (m)	RPA (m ²)	Length of sides of a square (m)	Minimum barrier distance (m)
G1	Ash (Group)	600	7.20	163	14.4	7.20
G2	Mixed Species	200	2.40	18	4.8	2.40
T3	Holly	250	3.00	28	6	3.00
T4	Hawthorn	200	2.40	18	4.8	2.40
G5	Ash (Group)	700	8.40	222	16.8	8.40
G6	Mixed Species	200	2.40	18	4.8	2.40
G7	Ash (Group)	700	8.40	222	16.8	8.40
H8	Hawthorn	220	2.70	23	5.4	2.70
G9	Ash (Group)	250	3.00	28	6	3.00
T10	Ash (Common)	560	6.60	137	13.2	6.60
G11	Mixed Species	200	2.40	18	4.8	2.40
H12	Mixed Species	200	2.40	18	4.8	2.40
H13	Mixed Species	200	2.40	18	4.8	2.40
T14	Ash (Common)	429	5.10	82	10.2	5.10
T15	Hawthorn	310	3.60	41	7.2	3.60
H16	Mixed Species	150	1.80	10	3.6	1.80
T17	Ash (Common)	640	7.80	191	15.6	7.80
T18	Ash (Common)	348	4.20	55	8.4	4.20
T19	Ash (Common)	670	8.10	206	16.2	8.10
T20	Ash (Common)	320	3.90	48	7.8	3.90
T21	Hawthorn	269	3.30	34	6.6	3.30

Appendix 4: Tree Protective Fencing

heras® 151 and 151steadfast system

round top panel with anti-climb mesh
high visibility orange blocks
steadfast strut
anti-tamper coupler
fully tested and certificated
health and safety compliant (HSG 151)

Having invented the original concept of temporary fencing back in the 80's, Heras is proud of its reputation as a true innovator.

Our latest solution for securing the perimeters and protecting the public has been phenomenally successful since its launch, and offers the ultimate market leading temporary fencing system.

Our safest, most stable and most secure system ever offers you total peace of mind, and unrivalled performance.

You can be sure that by installing the Heras® 151 Steadfast System (patent pending), you are conforming fully to the latest HSE Guidelines on "Protecting the Public" from the dangers of construction sites.

Heras has campaigned widely over recent years against falling product standards, and has consulted closely with senior figures across the construction industry to ensure our products meet and exceed your expectations. The latest innovative system means you should never again need to compromise on:

- Value for money
- Quality
- Performance
- Design
- Ease of installation.

All backed up with unbeatable service from our nationwide branch network – deal direct with Heras – your safety first fencing supplier.

Fully Tested and Certificated

- Extensive independent testing by Sheffield Hallam University has proved the performance of the system, resisting wind speeds well in excess of gale force.
- The HSE has confirmed that the system meets all of the guidelines in the HSG 151 Publication "Protecting the Public - 'four next move'".
- In turn, therefore, we can offer customers a certificate of compliance when they purchase this system from Heras.
- It is your responsibility to ensure the system is correctly installed and fixed. For help and advice, contact your nearest branch.

151 system

The key components of the Heras 151 system are as listed.

Round Top Panel with Anti-Climb Mesh

- The strongest panel on the market, with 3 sides formed from a continuous length of tube, eliminating the top corner weld, often the weakest point in traditional panel design.

High Visibility Orange Block

- Permanently coloured with a durable UV stabilised "hi-visibility" paint and filled with solid high density concrete.
- Effectively highlights any potential trip hazard.
- Beware of cheap imitations – painted coatings will chip and peel.

Heraslock® Anti-Tamper Coupler

- Providing additional security, these couplers can only be removed with the use of the specialist tool.

151 steadfast system

The Heras 151 steadfast system incorporates all the benefits of the 151 system, with the addition of the patented...

Heras® Steadfast Strut

- The unique design of this clever strut dramatically increases the stability of the fence.
- The strut fits neatly within the high visibility block allowing a neat and compact solution, and acts as an integrated anti-lift device.
- 3 additional fixing holes incorporated into the design allow for soil pins and handbooks, dependent on ground conditions.

Optional Extras

- Heras® Steadfast Safety Strips with reflective coating can be fitted in minutes to highlight site dangers.
- Front support brackets allow vastly improved performance on softer ground conditions and fit quickly and easily into the high visibility blocks.



1. Front stabiliser
2. High visibility footblocks
3. Round top panel
4. Anti-tamper coupler
5. Anti-climb mesh
6. Optional steadfast safety strips
7. Anti-lift round top panel with steadfast strut to increase stability



ROUND TOP PANEL WITH ANTI-CLIMB MESH

Our latest solution for securing site perimeters and protecting the public has been phenomenally successful since its launch, and offers the ultimate market leading temporary fencing system.

Appendix 5: Example of Protective Fencing Signage



(Nicholsons is able to provide useable, weather-proof copies of this sign if required, for attaching to the protective fencing. If required, please contact us for further details).

Appendix 6: Site Guidance for working in the RPA**a) What is the purpose of this guidance?**

This guidance sets out the general principle that must be followed when working in the RPA. Where more detail is required, it will be supplemented by illustrative specifications in other appendices to this document. Before work starts on site, the purpose of this guidance is to demonstrate to the LPA that tree protection issues have been properly considered and to provide a written record of how they will be implemented.

Once the site work has started, this guidance is specifically for the site personnel to help them understand what has been agreed and explain what is required to fully meet their obligations to protect trees. All personnel working in the RPA must be properly briefed about their responsibilities towards important trees based on this guidance.

b) What are the RPAs?

RPAs are the areas surrounding important trees where disturbance must be minimised if they are to be successfully retained. All RPAs close to the construction area are identified on the Tree Protection Plan attached to this report. Damage to roots re degradation of the soil through compaction and/or excavation within the RPA will damage the tree. Any work operations within the RPA must be carried out with great care if trees are to be successfully retained.

c) When should this guidance be followed?

Anyone entering a RPA must follow this guidance if the trees are to be retained unharmed. Anyone working in a RPA must take care to minimise excavation into existing soil levels and limit any fill or covering that may affect soil permeability. There are two main scenarios where this guidance must be followed when entering and working within a RPA:

- i. Removal of existing surfaces/structures and replacement with new surfaces, structures or landscaping.
- ii. Preparation and installation of new surfacing structures and/or landscaping.

d) Where does this guidance apply?

This guidance should always be read in conjunction with the site plans illustrating the areas where specific precautions are necessary. Each area where precautions are required is annotated on the plans as identified on their keys. All plans are illustrative and are intended to be interpreted in the context of the site conditions when the work commences. All protective measures should be installed according to the prevailing site conditions and agreed as satisfactory by the appropriate supervising officer before any demolition or construction works commence.

e) What references is this guidance based on?

This guidance is based in the assumption that the minimum general standards for development issues are those set out in BS5837 (2012): Trees in relation to design, demolition and construction – Recommendations, and the NJUG Vol.4 Issue 1: Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees.

f) Preventing adverse impact to the RPA beyond the immediate work area

Any part of the RPA beyond the agreed work area must be isolated from the work operations by protective barriers or ground protection to at least the minimum standard described in BS5837 for the duration of the work.

g) Excavation and dealing with roots

All excavation must be carried out carefully using spades, forks and trowels, taking care not to damage the bark and wood of any roots. Specialist tools for removing soil around roots using compressed air may be an appropriate alternative to hand digging, if available. All soil removal must be undertaken with care to minimise the disturbance of roots beyond the immediate area of excavation. Where possible, flexible clumps of small roots, including fibrous roots, should be retained if they can be displaced temporarily or permanently beyond the excavation without damage.

If digging by hand, a fork should be used to loosen the soil and help locate any substantial roots. Once the roots have been located the trowel should be used to clear the soil away from them without damaging the bark. Exposed roots that are to be removed should be cut cleanly with a sharp saw or secateurs 10-20cm behind the final face of the excavation.

Roots temporarily exposed must be protected from direct sunlight, drying out and extreme temperatures by appropriate covering. Roots 2.5-10cm in diameter should only be cut in exceptional circumstances. Roots greater than 10cm in diameter should only be cut after consultation with the appropriate supervisory officer.

h) Arboricultural supervision

Any work within the RPA requires a high level of care. Qualified arboricultural supervision is essential to minimise the risk of misunderstanding and misinterpretation. Site personnel must be properly briefed before any works commence.

Ongoing work must be inspected regularly, and on completion, the work must be signed off by the arboriculturist to confirm compliance by the contractor. In the context of this guidance, an appropriate supervising officer would be an arboriculturist.

Installation of new surfaces in RPAs**a) Basic Principles**

New surfacing is potentially damaging to trees because it may require changes to existing ground levels. This can result in damage to the soil structure affect the efficient exchange of water and gases in and out of the soil. Mature and over mature trees are much more likely to suffer as a result of these changes. These impacts can be minimised by reducing the extent of changes within the RPA. The most suitable surface will be one that is permeable (allowing the movement of water and gas), load bearing (to avoid compaction) and requires little or no excavation (to limit root damage). The actual specification is an engineering issue that needs to be addressed by a suitably qualified professional, and is beyond the scope of this report.

b) Establish the depth of excavation and surface gradient

The precise location and depth of roots within the soil is unpredictable and can only be established once digging has commenced. Ideally, all RPAs should be no-dig, but this is often not possible on undulating surfaces. New surfacing normally requires an evenly graded sub-base layer, which can be made up to high points with granular, permeable fills such as crushed stone or sharp sand. This sub-base must not be compacted. Some limited excavation may be required to achieve this, and this is not necessarily damaging to trees if it is done carefully and no large roots are cut. The top 5mm of soil on grass surfaces is unlikely to contain any tree roots and therefore the removal of this will not impact the tree. It may be possible to dig deeper than this depending on local conditions, but this would need to be assessed by the retained ACoW.

On undulating surfaces, finished gradients/levels must be planned with sufficient flexibility so as to allow changes to occur if the excavation of high points reveals unexpected large roots. If roots are less than 25mm in diameter, it would normally be acceptable to cut these. However, for roots over 25mm diameter, cutting them may cause damage to the tree and further excavation may not be possible. In this case, the surrounding levels must be adjusted to take account of these high points, by filling with suitable material. If this is not possible and it is necessary to cut larger roots, discussions should be held with the retained ACoW before any final decision is made.

c) Base and finish layer

Once the sub-base layer is finished, the load-spreading surface is installed on top, without compaction. Generally, the load-spreading surface will normally be cellular and filled with crushed stone – care must be taken as different products produce different results, and the detail must be confirmed prior to installation. Suitable finishes included washed gravel, permeable tarmac or permeable block paving. For lightly loaded surfaces such as pedestrian footpaths, preformed concrete slabs may be appropriate if the sub base is prepared as detailed above.

d) Edge Retention

Conventional kerb retention set in concrete trenches is likely to cause damage to the roots and should be avoided. Effective edge retention within the RPA must be custom designed to avoid significant excavation in to existing soil surfaces. Generally, the use of pre-formed edging secured by metal pins or wooden pegs will be sufficient to ensure minimal impact on the trees.

e) Installing new surfacing on top of existing surfacing

It may be possible/preferable in some instances to use existing surfaces as the base for a new surface. This will not normally result in any significant excavation that could damage the roots, so no special precautions are required. However, if large roots appear above the existing surface, then the precautions and procedures detailed above must be followed.

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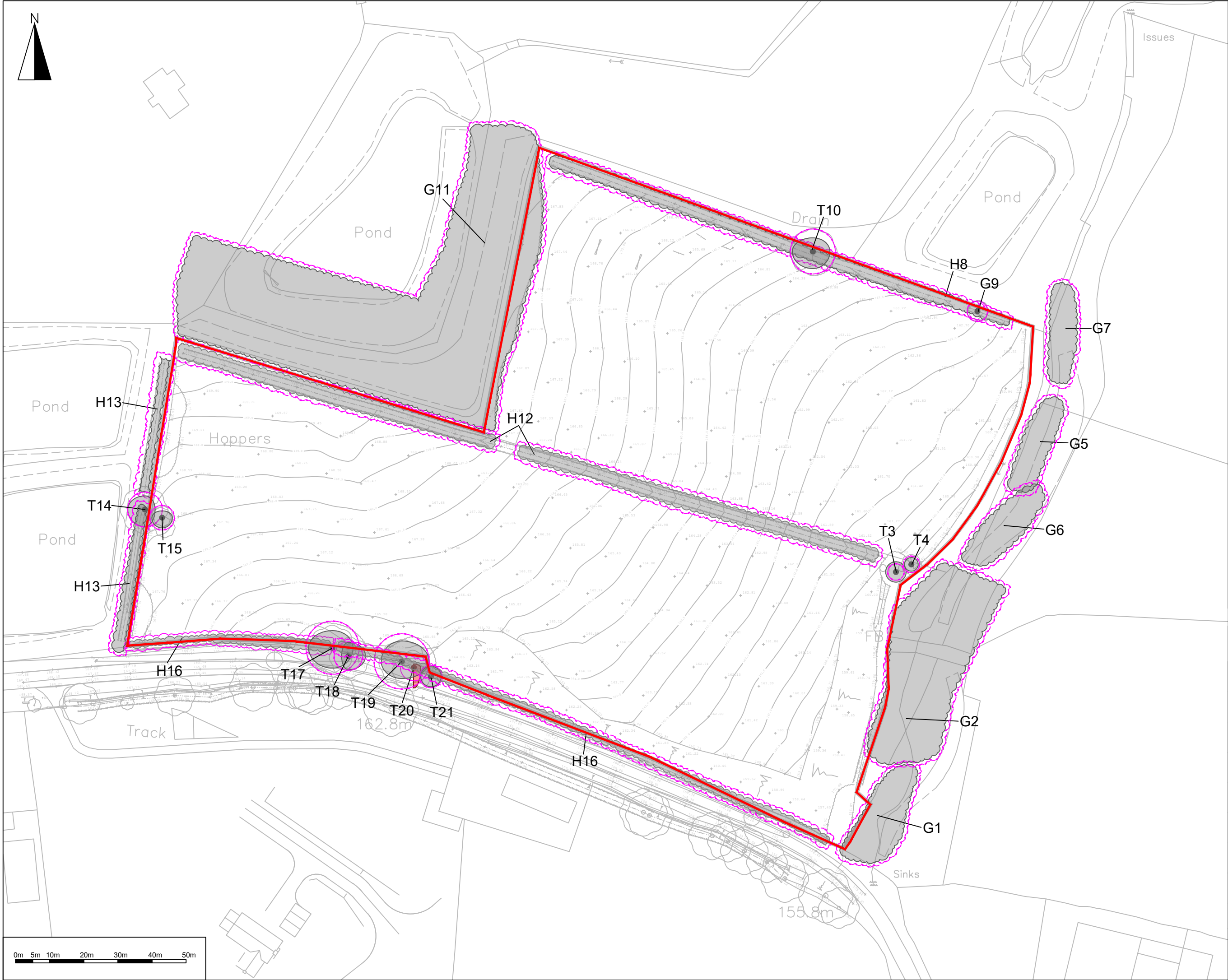


Client:	M T Baines and Sons														Reference:	18-3100															
Site:	New Farm Site, Ellistown Lane, Stanton Under Bardon								Surveyor:	Andy Poynter						Date of survey:	10.04.19														
Key to Notations																															
				Age Class				Definition				Category Grading																			
Stem Dia:				Stem diameter (mm) at 1.5m above ground level				Y				Young				Trees that have not yet reached 1/3 of their expected mature height				Category				ERC		Sub category					
C.C.				Height of crown clearance above ground level				EM				Early Mature				The stage in the life cycle of a tree between youth and maturity				A				High Quality & Value		40+		1		Mainly arboricultural value	
L.B.				Lowest branch height in meters				M				Mature				Close to full height and crown size				B				Moderate Quality & Value		20+		2		Mainly landscape value	
D.L.B.				Direction of Lowest Branch				OM				Over Mature				Close to full height and crown size while main-stem diameter increases more slowly				C				Low Quality & Value		10+		3		Mainly cultural value	
E.R.C				Estimated Remaining Contribution (in years)				V				Veteran				A tree that has survived the rigours of life and shows signs of ancientness				U				Unsuitable for retention		<10					
Physiological condition				Good				No significant health problems				Fair				Symptoms of health that can be remediated				Poor				Significant ill health							
Structural condition				Good				No significant abnormalities				Fair				Significant abnormalities that can be remediated				Poor				Significant abnormalities with no remedy							

Tree No.	Ref No	Species	Botanical Name	H (m)	Stem Dia.	No of Stems	Branch Spread (m)				CC (m)	LB (m)	DLB (m)	Age	PC	SC	Comments	Recommendations	ERC	Cat.	RPA (m2)	RPA Radial distance (m)	Direct Removal?
							N	E	S	W													
1	G1	Ash (Group)	<i>Fraxinus excelsior</i>	16	600	1	8	8	8	8	3	N/A	N/A	M	Fair	Fair	Group of larger trees growing just offsite adjacent to ditch in south-east corner.	Monitor condition, particularly of roadside trees, due to the high likelihood of being affected by ash dieback.	10+	C2	163	7.20	
2	G2	Mixed Species	<i>Mixed Species</i>	10	200	1	2	2	2	2	-	N/A	N/A	EM	Fair	Fair	Offsite group comprising predominantly hawthorn and ash saplings. Some bramble and ivy present. Limited past intervention due to ditchside location.	None.	10+	C2	18	2.40	
3	T3	Holly	<i>Ilex aquafolium</i>	7	250	1	3	3	3	3	-	N/A	N/A	EM	Good	Good	Immediately adjacent to eastern gate that connects to northern field.	None.	10+	C2	28	3.00	
4	T4	Hawthorn	<i>Crataegus monogyna</i>	8	200	1	2	2	2	2	-	N/A	N/A	M	Good	Fair	Insular specimen of limited merit.	None.	10+	C2	18	2.40	
5	G5	Ash (Group)	<i>Fraxinus excelsior</i>	18	700	1	8	8	8	8	2	N/A	N/A	M	Fair	Fair	Prominent group located offsite on far side of ditch.	Liable to succumb to ash dieback in due course so condition needs to be monitored.	10+	C2	222	8.40	
6	G6	Mixed Species	<i>Mixed Species</i>	5	200	1	2	2	2	2	-	N/A	N/A	EM	Fair	Fair	Offsite group comprising predominantly hawthorn and elder along with bramble and ivy. Limited past intervention due to ditchside location.	None.	10+	C2	18	2.40	
7	G7	Ash (Group)	<i>Fraxinus excelsior</i>	18	700	1	8	8	8	8	2	N/A	N/A	M	Fair	Fair	Prominent group located offsite on far side of ditch.	Liable to succumb to ash dieback in due course so condition needs to be monitored.	10+	C2	222	8.40	
8	H8	Hawthorn	<i>Crataegus monogyna</i>	5	220	1	3	3	3	3	-	N/A	N/A	EM	Good	Good	Boundary hedge in good overall condition. Has a natural and flowing outline due to limited cutting with flail. Provides good screening. Screening and habitat benefits currently outweighed by the need for maintenance.	None.	20+	C2	23	2.70	
9	G9	Ash (Group)	<i>Fraxinus excelsior</i>	8	250	1	3	3	3	3	2	2	N/A	M	Good	Good	Pair of self sown trees within hedgerow, currently in good condition	Liable to succumb to ash dieback in due course so condition needs to be monitored.	10+	C2	28	3.00	
10	T10	Ash (Common)	<i>Fraxinus excelsior</i>	12	560	1	4	5	5	6	2	2	West	EM	Good	Good	Low limb on western side that is predisposed to failure due to extended length and end weight.	Liable to succumb to ash dieback in due course so condition needs to be monitored.	10+	C1	137	6.60	
11	G11	Mixed Species	<i>Mixed Species</i>	6	200	1	3	3	3	3	-	N/A	N/A	EM	Good	Good	Hawthorn and blackthorn dominating the edge of a wider group of low level tree and scrub cover.	None.	20+	C2	18	2.40	
12	H12	Mixed Species	<i>Mixed Species</i>	5	200	1	2	2	2	2	-	N/A	N/A	EM	Good	Good	Less common mix of holly and hawthorn providing separation between the two subject fields and continuing westwards thereafter.	None.	20+	C2	18	2.40	
13	H13	Mixed Species	<i>Mixed Species</i>	7	200	1	2	2	2	2	-	N/A	N/A	EM	Good	Good	Predominantly comprising blackthorn, hawthorn and holly with occasional young ash.	None.	20+	C2	18	2.40	
14	T14	Ash (Common)	<i>Fraxinus excelsior</i>	9	429	4	3	5	5	3	2	2	North	Y	Good	Good	Multi stemmed specimen of no arboricultural merit.	Liable to succumb to ash dieback in due course so condition needs to be monitored.	10+	C2	82	5.10	
15	T15	Hawthorn	<i>Crataegus monogyna</i>	6	310	1	2	3	3	3	1	1	South	EM	Good	Good	Good overall condition and would benefit from the removal of the elder at its base to allow for the development of a full crown.	Remove elder at base.	20+	C2	41	3.60	
16	H16	Mixed Species	<i>Mixed Species</i>	1.5	150	1	1	1	1	1	-	-	N/A	EM	Good	Good	Regularly trimmed roadside hedge comprising mainly holly and hawthorn together with occasional self sown ash that have been incorporated within the hedge structure through trimming.	None.	20+	C2	10	1.80	

Key to Notations																
			Age Class			Definition			Category Grading							
Stem Dia:		Stem diameter (mm) at 1.5m above ground level		Y	Young	Trees that have not yet reached 1/3 of their expected mature height			Category			ERC		Sub category		
C.C.		Height of crown clearance above ground level		EM	Early Mature	The stage in the life cycle of a tree between youth and maturity			A	High Quality & Value		40+		1	Mainly arboricultural value	
L.B.		Lowest branch height in meters		M	Mature	Close to full height and crown size			B	Moderate Quality & Value		20+		2	Mainly landscape value	
D.L.B.		Direction of Lowest Branch		OM	Over Mature	Close to full height and crown size while main-stem diameter increases more slowly			C	Low Quality & Value		10+		3	Mainly cultural value	
E.R.C.		Estimated Remaining Contribution (in years)		V	Veteran	A tree that has survived the rigours of life and shows signs of ancientness			U	Unsuitable for retention		<10				
Physiological condition				Good	No significant health problems			Fair	Symptoms of health that can be remediated			Poor		Significant ill health		
Structural condition				Good	No significant abnormalities			Fair	Significant abnormalities that can be remediated			Poor		Significant abnormalities with no remedy		

Tree No.	Ref No	Species	Botanical Name	H (m)	Stem Dia.	No of Stems	Branch Spread (m)				CC (m)	LB (m)	DLB (m)	Age	PC	SC	Comments	Recommendations	ERC	Cat.	RPA (m2)	RPA Radial distance (m)	Direct Removal?
							N	E	S	W													
17	T17	Ash (Common)	Fraxinus excelsior	13	640	1	5	6	6	7	2	2	West	EM	Fair	Fair	Rodside tree in satisfactory condition.Heavy ivy cover on main stem prevents clear inspection.	None.	10+	C2	191	7.80	
18	T18	Ash (Common)	Fraxinus excelsior	13	348	2	4	5	4	2	3	3	North	Y	Fair	Fair	Twin stemmed tree from ground level on roadside embankment.	None.	10+	C2	55	4.20	
19	T19	Ash (Common)	Fraxinus excelsior	16	670	1	6	8	5	6	2	2	North	M	Fair	Fair	Heavy and extended limb on northern side and significant ivy cover up the main stem. Resonable condition.	None.	10+	C2	206	8.10	
20	T20	Ash (Common)	Fraxinus excelsior	10	320	1	2	6	3	-	2	2	North	Y	Fair	Fair	Poor arching form with heavy ivy cover up the main stem.	None.	<10	U	48	3.90	
21	T21	Hawthorn	Crataegus sp.	9	269	3	3	3	3	2	1	1	N/A	M	Good	Good	Multi stemmed specimen in good overall condition.	None.	20+	C2	34	3.30	



Legend:

- Site Boundary
- Category A Trees (Stem and Canopy Spread)
- Category B Trees (Stem and Canopy Spread)
- Category C Trees (Stem and Canopy Spread)
- Category U Trees (Stem and Canopy Spread)
- Root Protection Area
- Existing Layout

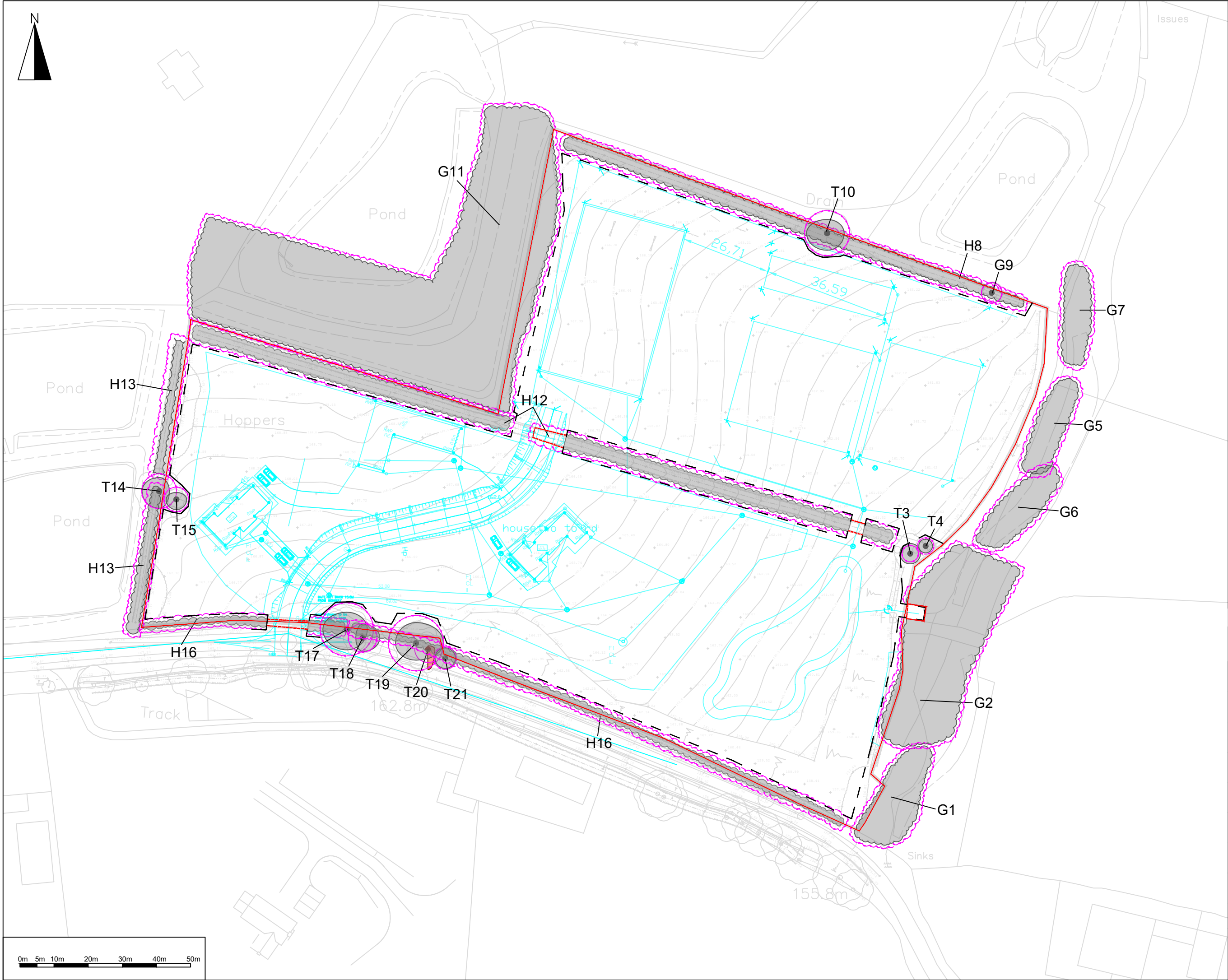
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TITLE: Tree Constraints Plan	
LAYOUT: Overview	
PROJECT/SITE: New Farm Site, Ellistown Lane, Stanton Under Bardon	
CLIENT: M T Baines and Sons	
MAP REF: 19-1977	
REVISION: v2	
DATE: 07.02.2023	SCALE: 1:1000@A3
APPROVED BY: FM	PRODUCED BY: SF

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Legend:

- Site Boundary
- Category A Trees (Stem and Canopy Spread)
- Category B Trees (Stem and Canopy Spread)
- Category C Trees (Stem and Canopy Spread)
- Category U Trees (Stem and Canopy Spread)
- Root Protection Area
- Trees to be Removed
- Tree Protection Fence
- Existing Layout
- Proposed Layout

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TITLE: Tree Protection Plan	
LAYOUT: Overview	
PROJECT/SITE: New Farm Site, Ellistown Lane, Stanton Under Barton	
CLIENT: M T Baines and Sons	
MAP REF: 22-1892	
REVISION: v1	
DATE: 10.02.2023	SCALE: 1:1000@A3
APPROVED BY: FM	PRODUCED BY: SF

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