

Arboricultural Method Statement

SITE LOCATION

Woodland South of
Hollingworth Lake
-High Ropes

ISSUE DATE

10 March 2025

OUR REFERENCE

241219 1340 AMS V1

PREPARED FOR

Rochdale Council

PRINCIPAL AUTHOR

Becky Bristow
Arboricultural
Consultant



Arboricultural Method Statement

VERSION V1
DATE March 2025
REF NO 241219 1340 FINAL AMS V1.docx



Quality Assurance

Issue/revision	Issue 1	Revision 1	Revision 2
Remarks	V1		
Date	10 March 2025		
Prepared by	Becky Bristow, Arboricultural Consultant		
Signature			
Checked by	Peter Wharton		
Position	Principle Arboricultural Consultant		
Signature			
Authorised by	Peter Wharton		
Position	Director		
Signature			
Client number	1340		



Table of Contents

1. Introduction	4
1.1 Terms of instruction	4
Condition 6	4
'No development hereby approved (including all preparatory work) shall take place until a scheme for the protection of the retained trees, in accordance with BS 5837:2012, including a tree protection plan(s) (TPP) and an arboricultural method statement (AMS) has been submitted to and approved in writing by the Local Planning Authority'	
1.2 Aims of the Arboricultural Method Statement	4
1.3 Scope of this AMS	4
1.4 Implementation of the AMS	4
1.5 Limitations of the AMS	5
1.6 Author	5
2. Proposed/Approved Development	6
2.1 Development description	6
2.2 Previous Survey Findings	6
Method of data collection	6
2.3 Reference documents	6
2.4 Overview of Trees to be Retained	7
3. Statutory and Non-Statutory Constraints	7
3.1 Tree Preservation Orders and Conservation Areas	7
3.2 Relevant wildlife legislation	7
3.3 Felling Licence	8
4. General Tree Protection Guidance	9
4.2 General protection measures for retained trees	9
4.3 Ongoing arboricultural monitoring of retained trees	9
5. Anticipated Works Phasing	10
5.1 Sequence of operations	10
6. Site Clearance, Pre-Demolition and Construction Works	11
6.1 Appointment of Arboricultural Clerk of Works (ACoW)	11
6.2 Pre-commencement site meeting	11
6.3 Toolbox Talks	11
6.4 Key Stages of the Arboricultural Clerk of Works' Appointment, Supervision, and Monitoring	12
6.5 Wharton Project Arboricultural Consultant Contact Details	12
6.6 Reporting process	12
6.7 Progress sheet	12

Arboricultural Method Statement

VERSION V1
DATE March 2025
REF NO 241219 1340 FINAL AMS V1.docx



7. Specific Tree Protection Requirements13

7.1 Technical Guidance Notes13

8. Caveats and Limitations13

9. References14

- Appendix 1: Site Location Plan
- Appendix 2: Tree Schedule
- Appendix 3: Arboricultural Plans
- Appendix 4: Technical Guidance Notes



1. Introduction

1.1 Terms of instruction

- 1.1.1 This Arboricultural Method Statement (AMS) has been commissioned by Rochdale Borough Council (the 'Client'). It is prepared in relation to the Proposed Development at land south of Hollingworth Lake, Littleborough ('the Site') (see Site Location Plan at appendix 1).
- 1.1.2 Wharton Natural Infrastructure Consultants (hereafter 'Wharton') was instructed to produce an AMS to fulfil the requirements of BS5837:2012 and Rochdale Borough Council (the 'Local Planning Authority'), who require an Arboricultural Method Statement to make an informed decision on our client's full planning application.
- 1.1.3 The Local Planning Authority (LPA) require an AMS to discharge planning condition no.6 of the planning application reference: 23/01330/FUL.

Condition 6.

'No development hereby approved (including all preparatory work) shall take place until a scheme for the protection of the retained trees, in accordance with BS 5837:2012, including a tree protection plan(s) (TPP) and an arboricultural method statement (AMS) has been submitted to and approved in writing by the Local Planning Authority'.

1.2 Aims of the Arboricultural Method Statement

- 1.2.1 This AMS describes the arboricultural protection measures identified as necessary as part of the Proposed Development for the protection of retained trees. It outlines the arboricultural protection measures that will be implemented during demolition and construction. These protective measures may need to be revised to accommodate any design changes or known construction methodologies.
- 1.2.2 The document is intended as a reference point for all Site Operatives and a copy will remain with the Site Manager for the duration of the development. This document may be used as a point of reference if there were to be a dispute over compliance with related planning decisions.

1.3 Scope of this AMS

- 1.3.1 The scope of this AMS is as follows:
- Provide an AMS specifically in relation to the physical protection of trees, to reduce the impact on retained trees, and those located adjacent to the Site; and
 - Provide a detailed Tree Protection Plan.

1.4 Implementation of the AMS

- 1.4.1 The details and requirements of this AMS include commitments to complete the development's demolition and construction phase in a specific manner and will inform the production of all relevant tender documents and contractor instructions.
- 1.4.2 It is understood that the Client and their Principal Contractor are responsible for ensuring that the site works, and subsequent construction of the approved development follow the measures detailed within this AMS.
- 1.4.3 The Client and Principal Contractor have a responsibility to ensure that works at the Site comply with current legislation in respect of protected trees, as well as to ensure that works at the Site comply with planning obligations/conditions.
- 1.4.4 Failure to follow the correct sequence, manner, and timing of operations outlined in this AMS may result in irreversible tree damage and eventual death, of retained trees.



Retained trees are protected by planning law, and irresponsible tree damage or removal may result in a stop notice or prosecution by the Local Planning Authority.

- 1.4.5 This AMS, the accompanying Tree Protection Plans, and the Technical Guidance Notes should be printed in full colour and kept on file in the site office for reference.

1.5 Limitations of the AMS

- 1.5.1 This AMS is only concerned with arboricultural issues pertaining to the referenced location and referenced documentation outlined in Table 1.
- 1.5.2 Any changes in ground level or excavations near tree roots that are not specified in this AMS may have a negative impact on the stability and physical condition of the retained trees, necessitating additional assessments.
- 1.5.3 The timetables for the construction programme are not absolute. The timetables outlined in Table 2 of this AMS are subject to change and are based on all preliminary information available at the time of writing. As a result, the AMS processes may need to be reviewed and modified as needed.

1.6 Author

- 1.6.1 The Principal Author of this report is Becky Bristow, Arboricultural Consultant at Wharton.
- 1.6.2 The detail provided within this AMS is a true and accurate reflection of both the Site conditions at the time of survey, as well as the professional opinion of the Principal Author.



2. Proposed/Approved Development

2.1 Development description

- 2.1.1 The Approved Development planning reference 23/01330/FUL for the installation of a high net and lower ground activity course including, timber framed shelter, storage container and 2.4m high boundary fencing and gates (Resubmission of 22/00568/FUL).
- 2.1.2 The development would comprise an enclosed area accessed by two gates of 39.9m by 23.9m. Encompassing most of the enclosure, the high net's structure would have a maximum length of 26.09m and width of 18.09m and would comprise suspended nets and supporting structures that would have a maximum height of 7.64. The nets would be supported on tower 'pods' that would be set out in three rows of 4 and one row of 3. The towers would comprise a steel frame that would be clad in timber with a timber roof, and they would be set upon steel posts and supports that would be fixed to the ground. Each of the towers would be linked by various activities that would include swinging bridges, cableway bridges, net bridges, rope bridges, suspension bridges and zig zag bridges and there would also be a large bounce net suspended between four of the towers. Access to the towers would be via a steel and timber staircase.
- 2.1.3 The main site enclosure would also include a timber framed storage shelter that would measure 12.0m by 6.12m. Towards the east of the site there would be a climbing wall that would have a curved profile of two 5.0m lengths and a height of 4.0m. The application also includes the siting of picnic tables. At ground level a 100mm deep layer of gravel is proposed. Ground activities associated with the high nets course would also take place.
- 2.1.4 The proposals detailed above will be referred to throughout this report as the 'Approved Development'.

2.2 Previous Survey Findings

- 2.2.1 A walkover survey was undertaken on 21st September 2021 by Elva Preston and Jack Bernard, and the trees inspected from ground level.

Method of data collection

- 2.2.2 The trees on the Site were originally surveyed without reference to the Site layout as detailed in Clause 4.4.1.1 of BS5837:2012. However, for the purposes of this AMS, the Proposed Development for the Site has been considered.

2.3 Reference documents

- 2.3.1 As background information, the following documentation has been referenced in *Table 1* below.

Table 1 Document and Plans Provided

Document Description	Reference No.	Prepared By	Date
Tree Schedule	211125 1340 TS V1 High Ropes	Wharton	November 2021
Arboricultural Impact Assessment	220104 1340 AIA V1	Wharton	January 2022
Hollingworth Lake Climbing Structure	HCS0001A	Redwood Play Ltd	June 2022 – change in location November



2023 –
Change in
location
December
2024

Planning Decision
Notice

23/01330/FUL

Rochdale Borough
Council

12 March 2024

2.4 Overview of Trees to be Retained

- 2.4.1 A total of 26no. arboricultural features were surveyed as part of the Arboricultural Impact Assessment (AIA) (220104 1340 AIA V1). All detailed information on individual trees, groups and hedgerows can be found in the Tree Schedule provided as part of the Arboricultural Assessment [211125 1340 TS V1 High Ropes].
- 2.4.2 The High net course has been located to minimise tree loss, as far as practicable, and to remain in keeping with the current site setting.
- 2.4.3 The proposed development shall see the retention of 24no. features, with the partial removal of 2no. out of 24no.

3. Statutory and Non-Statutory Constraints

3.1 Tree Preservation Orders and Conservation Areas

- 3.1.1 Local authorities have the authority to issue Tree Preservation Orders (TPOs) to protect specific trees and woodlands in the interest of preserving the amenity value of a specific site or location. A TPO for bids cutting down, topping, lopping, uprooting, or wilful damage to trees covered by the TPO, and such actions, if carried out without the prior written consent of the acting LPA, may result in prosecution and an unlimited fine.
- 3.1.2 It has been confirmed by the Councils online interactive map on the 11 November 2019 that there are no TPO's across the Site, nor is located within a local Conservation Area. The statutory status of arboricultural features within the study area was checked using the Council's online register¹ on 04 January 2022. RBC do not have an online record of any trees subject to a TPO. To establish this information, the local authority will need to be contacted via email. At the time of writing the Arboricultural Impact assessment, the presence of any TPOs had not been confirmed.

3.2 Relevant wildlife legislation

- 3.2.1 The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Species and Habitat Regulations 2017 (as amended) provide statutory protection of birds, bats and other species that can inhabit trees. The Natural Environment and Rural Communities Act 2006 (Section 41 England and Section 42 Wales) also places a duty on Local Planning Authorities to consider biodiversity when carrying out their duties. The Conservation of Habitats and Species Regulations 2017 specifically provides safeguards for European Protected Sites and Species (as listed in the Habitats Directive). This has recently been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 which continue the same provision for European protected species, licensing requirements, and protected areas now that the UK has left the European Union.
- 3.2.2 Great care is required to avoid an offence under the above legislation, and consideration should

¹ Rochdale Borough Council, 2021. Conservation Areas in the Borough of Rochdale [Online]. Available at: < <http://www.rochdale.gov.uk/planning-and-building/heritage-and-conservation/Pages/conservation-areas.aspx> > [Last Accessed. 24 December 2024]



be given to the potential presence of protected species within a tree subject to future works. Where the presence of protected species is suspected, the project ecologist or Natural England should be contacted for advice before works proceed.

3.3 Felling Licence

- 3.3.1 Tree felling is also restricted under the Forestry Act 1967. Under this act, there is an exemption from the need for a felling licence for "*Felling trees immediately required for the purpose of carrying out development authorised by planning permission (granted under the Town and Country Planning Act 1990) ...*"
- 3.3.2 If full planning permission is granted, then any trees which require felling to implement the approved plans are exempt from this statutory protection. Outline planning permission does not provide an exemption to the regulations that control tree felling in the Forestry Act 1967.



4. General Tree Protection Guidance

- 4.1.1 This section outlines general precautionary measures that should be always taken.
- 4.1.2 Other than those specified in this method statement, no trees will be removed or pruned during demolition and/or construction. Any proposed deviation from the tree removal and retention guidelines outlined in this AMS must be discussed with the appointed Arboricultural Clerk of Works (ACoW) before being implemented.
- 4.1.3 Arboricultural features that will be removed in accordance with this report and the Proposed Development must be felled prior to the installation of protective barriers.
- 4.1.4 All tree works will be undertaken to British Standard 3998:2010 'Tree Work - Recommendations'.

4.2 General protection measures for retained trees

- 4.2.1 During demolition and construction, retained trees must be adequately protected. Most of the time, this protection will include the installation of mandatory tree protection barriers at the extent of the calculated Root Protection Areas (RPAs) to create construction exclusion zones (CEZ).
- 4.2.2 The tree-protection measures should adhere to the recommendations in BS5837:2012. The purpose of these measures should be understood and well-considered from the start, as they protect trees to be retained within and adjacent to the Site while allowing adequate access for the implementation of the Proposed Development.
- 4.2.3 Barriers will be erected prior to the start of any demolition and/or construction work unless they already exist. When barriers are installed, the area is designated as a CEZ. Protective barriers will not be removed or altered unless the appointed Project Arboriculturist has been consulted and the acting local authority has agreed.
- 4.2.4 Site compounds, Portakabins, Containers, and other temporary structures may be used in root protection areas in some cases if prior consent is obtained from the acting local planning authority. Prior to installation, the method for installing the buildings and an assessment of whether temporary ground protection is required must be agreed upon and specified with the project Arboriculturist.
- 4.2.5 Loads that are wide or tall should not encounter retained trees. Oil, bitumen, cement, or any other potentially hazardous material to trees should not be stacked or discharged within 10 metres of a tree stem. Concrete should not be mixed within 10 metres of a tree.
- 4.2.6 No fires will be lit where flames are expected to extend to within 5m of tree foliage, branches, or trunk, taking wind direction and fire size into account. Any part of a retained tree should not have notice boards, telephone cables, or other services attached to it.

4.3 Ongoing arboricultural monitoring of retained trees

- 4.3.1 Any trees that are to be retained and have the potential to be impacted by development demolition or construction should be routinely monitored both during and after construction.
- 4.3.2 The goal of arboricultural monitoring is to ensure that all tree protection measures are fit for purpose, that they are implemented in accordance with any approved details, and that any previously unforeseen arboricultural issues are quickly identified and appropriately addressed. This is particularly relevant where there is public access, as recommended in section 8.8.3 of BS5837:2012 - *Post Development Management of Existing Trees*, to satisfy the landowner's duty of care.



5. Anticipated Works Phasing

5.1 Sequence of operations

- 5.1.1 This AMS sets out several working methodologies which are to be enforced across the Site at the various phases of the demolition and construction works. For convenience, these have been listed in Table 2 below, along with reference to all relevant sections and appendices.
- 5.1.2 To ensure the successful retention of trees across the Site and post development, it is imperative that all these working methodologies and any recommendations are carried out in a similar order to the tabulated form below.
- 5.1.3 The timing of these phases may be altered in accordance with any future changes to the construction programme. The AMS will need to be updated accordingly.

Table 2 Works Phasing Programme

Phase / Timing	Recommendation	Section & TGN Reference	Planning Condition addressed
Pre-Development	Appoint Arboricultural Clerk of Works (ACoW) to oversee all arboricultural issues on-site for planning condition reference 23/01330/FUL relating to:		
	• TGN 01: Tree Works - Tree Works and Tree Surgery		
	• TGN 02: Tree Protective Fencing		
	• TGN 03: Installation of Temporary Ground Protection		
	• TGN 04: Installation of No-dig Construction Cellular Confinement System		
	• TGN 06: Excavation and Trenching within the RPA	TGN1, TGN2, TGN3, TGN4, TGN6	6
	Initial / pre-commencement meeting		
	Erect tree protection fencing to BS5837:2012 specifications as appropriate		
	Implement reporting process for all unforeseen arboricultural incidents		
	Implement use of progress sheet to build up evidence base of good practice on-site		
During Development	Monitoring site visits by ACoW to ensure continued compliance		6
	Demolition within the root protection areas (RPAs)		
	Construction within the root protection areas		



(RPAs)

Post development inspection to identify any required remedial works

6

Post-Development General maintenance / remedial tree works

Annual tree inspection

6. Site Clearance, Pre-Demolition and Construction Works

6.1 Appointment of Arboricultural Clerk of Works (ACoW)

- 6.1.1 It is recommended that the Principal Contractor appoint a suitably qualified arboriculturist to act as an ACoW. The ACoW will be responsible for all arboricultural matters on Site and will be appointed to monitor and oversee the implementation of the works required in this AMS.
- 6.1.2 The role of the ACoW is a relatively formal one and their involvement should be limited to several Site visits where decisions can be made relatively quickly.
- 6.1.3 The ACoW must:
- Be present on Site whenever work is being carried out near retained trees, within the RPA, or within an exclusion zone as specified in this AMS.
 - Be responsible for ensuring that all site operatives are aware of their responsibilities toward retained trees and the consequences of any failure to comply.
 - Have the authority to stop any work that is causing, or has the potential to cause, harm to any retained tree.
 - In the event of any tree-related problems, whether actual or potential, make immediate contact with the local authority and/or the project arboriculturist.
- 6.1.4 The ACoW will also be the first point of contact for arboricultural advice on any issues that arise that are not covered in this AMS, such as additional tree work, work required within the RPA of the trees on-site, damage to any of the retained/unmanaged trees, or a breach of the tree protection measures on-site.

6.2 Pre-commencement site meeting

- 6.2.1 It is recommended that a pre-commencement site meeting be undertaken. The Principal Contractor, the acting local authority Tree Officer, and the appointed ACoW will meet prior to the start of the project. The goal of this meeting is to ensure that all aspects of the tree protection measures are clear and understood, as well as to agree on any future sequencing and supervisory arrangements. The minutes of this meeting will be recorded and distributed in writing to all parties concerned.
- 6.2.2 Following the Site meeting, the ACoW will conduct regular Site visits to ensure that protective measures remain in place; file notes on the progress of the works will be prepared and filed. The ACoW can "sign off" on the progress sheet once the tree protection measures have been confirmed as acceptable. It is recommended that the Site be visited monthly throughout the course of development for the purposes of the proposed development.

6.3 Toolbox Talks

- 6.3.1 Following the pre-commencement meeting, the Site Manager will be responsible for providing a



toolbox talk to any on-site operatives. The goal of this toolbox talk is to educate operatives on how to protect all retained trees. When new external trades / Contractors begin work on site, the Site Manager will review the toolbox talk.

6.3.2 The toolbox talk shall focus on informing Contractors on the following topics:

- How trees can be harmed on development sites.
- How the trees on this site will be protected by tree protection fencing and ground protection.
- Discussion on methods of working near the trees as outlined in this AMS.
- How to report an issue before it becomes a problem.
- The protection of trees is a requirement of planning approval and failure to comply could result in stop notices being applied or fines.

6.4 Key Stages of the Arboricultural Clerk of Works' Appointment, Supervision, and Monitoring

6.4.1 The ACoW shall be required at the following stages:

- Pre-commencement Site Meeting
- Marking trees to be removed and pruned in collaboration with the appointed tree contractor, where applicable.
- Monitoring Tree Protection Measures
- Auditing of Site visits (ongoing).

6.5 Wharton Project Arboricultural Consultant Contact Details

Name: Peter Wharton | Becky Bristow

Role: Principal Arboricultural Consultant | Arboricultural Consultant

Email: peter@wnic.co.uk | becky@wnic.co.uk

Contact number: 07888728295 | 07946086345

6.6 Reporting process

6.6.1 If any damage is sustained to either the retained trees or the RPAs during construction, it should be reported to the Site Manager as soon as possible. The Site Manager should notify the ACoW as soon as possible, and the ACoW will conduct a site visit to assess the impact on the trees and make recommendations for any necessary work.

6.6.2 Damage to the trees or RPAs could occur as a result of site vehicle collision damage to the crowns of retained trees; excavation within the root protection area; dumping of soil / materials within the root protection area; chemical / cement spillage into the root protection area; or fire damage to the crown / stem of the tree.

6.7 Progress sheet

6.7.1 During the various stages of the development a record of the completion of the various tree protection works will be kept by the ACoW. This will provide the Council with sufficient evidence that all practicable steps have been taken to prevent damage to the trees, thereby ensuring compliance to any Planning Conditions.

6.7.2 A separate progress sheet will be filled in for each completed operation. The original will be kept with the copy of this document that will be retained by the Site Manager in the Site Office. Once



completed a copy will be sent to the ACoW and the Councils Tree Officer.

7. Specific Tree Protection Requirements

7.1 Technical Guidance Notes

- 7.1.1 Technical Guidance Notes (TGN's) outlining specific tree protection measures and requirements to be employed across the Site have been provided at Appendix 4. These TGN's have been provided in chronological order and as 'pull out' documents to be kept on file in the Site Office and handed out to the appropriate contractors during site inductions.
- 7.1.2 For ease of identification, the TGN's accompanying this AMS have been provided as separate titled documents. The following TGN's have been included:
- TGN 01: Tree Works - Tree Works and Tree Surgery
 - TGN 02: Tree Protective Fencing
 - TGN 03: Installation of Temporary Ground Protection
 - TGN 04: Installation of No-dig Construction Cellular Confinement System
 - TGN 06: Excavation and Trenching within the RPA

8. Caveats and Limitations

- 8.1.1 The AMS is for the sole use of the Client and its reproduction or use by anyone else is forbidden unless written consent is given by the author.
- 8.1.2 This is an AMS and as such no reliance should be given to comments relating to buildings, engineering, or soil.
- 8.1.3 This is not an arboricultural health and safety survey, a more detailed survey of internal decay detection etc. can be supplied but would be subject to a further fee.
- 8.1.4 Trees are growing dynamic structures. Whilst reasonable effort has been made to identify defects within the trees inspected, no guarantee can be given as to the absolute safety or otherwise of any individual tree. No tree is ever safe due to the unpredictable laws and forces of nature. As a result of this, natural failure of intact trees will occur; extreme climatic conditions can cause damage to even apparently healthy trees.
- 8.1.5 Trees are living organisms whose health, condition and structure can change quickly and without warning. Therefore, the contents of this report are valid for a period of one year from the date of this survey.
- 8.1.6 On undertaking the recommended works, the arborist/tree surgeon must without delay report any defects that become apparent while climbing or working on the tree/s in question. Those defects must be reported immediately to the relevant project manager, landowner and/or the author of this report to enable the appropriate remedial action.



9. References

British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction - Recommendation'

British Standard 3998:2010 'Tree work – Recommendations'

National Joint Utilities Group 'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees' (NJUG 10, Volume 4, 2007)

National Planning Policy Framework (NPPF) December 2024

Local planning policy (Rochdale District Council)

The Forestry Act 1967

The Town and Country Planning Act 1990

The Town and Country Planning (Tree Preservation) Regulations 2012

Arboricultural Method Statement

VERSION V1
DATE March 2025
REF NO 241219 1340 FINAL AMS V1.docx



Appendix 1: Site Location Plan

Arboricultural Method Statement

VERSION: V1 DATE: March 2025
REF NO: 241219 1340 FINAL AMS V1.docx



Arboricultural Method Statement

VERSION: V1 **DATE:** March 2025

REF NO: 241219 1340 FINAL AMS V1.docx



Appendix 2: BS5837:2012 Tree Schedule

Arboricultural Method Statement

VERSION: V1 **DATE:** March 2025

REF NO: 241219 1340 FINAL AMS V1.docx



Appendix 3: Arboricultural Plans

Tree Retention and Removal Plan

Tree Protection Plan

- Trees to be **retained** for development
- Trees to be **removed** for development
- Canopy Spread (m)
- Tree Stem
- Root Protection Area (RPA)

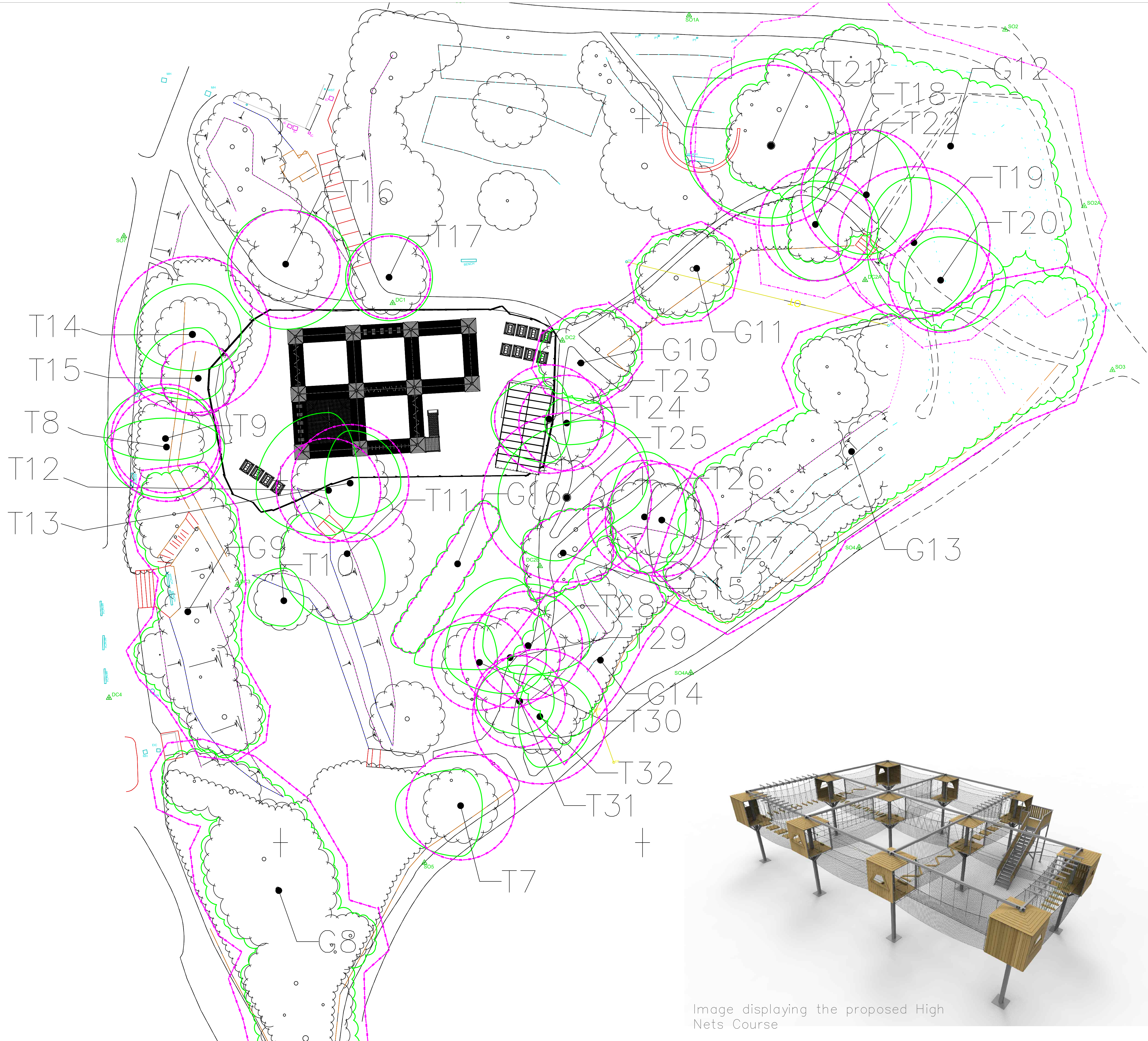


Image displaying the proposed High Nets Course

Date: December 2024

Client: Rochdale Borough Council

Project: Hollingworth Lake High Ropes

Title: Tree Retention and Removals Plan

Map file reference	DWG No
241219 1340 TRRP V1	

WHARTON
LAND | TREES | ECOLOGY

6 Chestnut Court | Jill Lane | Sarncliffe | B96 6EW
E.hello@wnic.co.uk T.+44 (0)1789 459458
www.wnic.co.uk

A Category Trees /
High Retention Value

B Category Trees /
Moderate Retention Value

C Category Trees /
Low Retention Value

U Category Trees /
Remove

Canopy Spread (m)
Tree Stem
Root Protection Area (RPA)

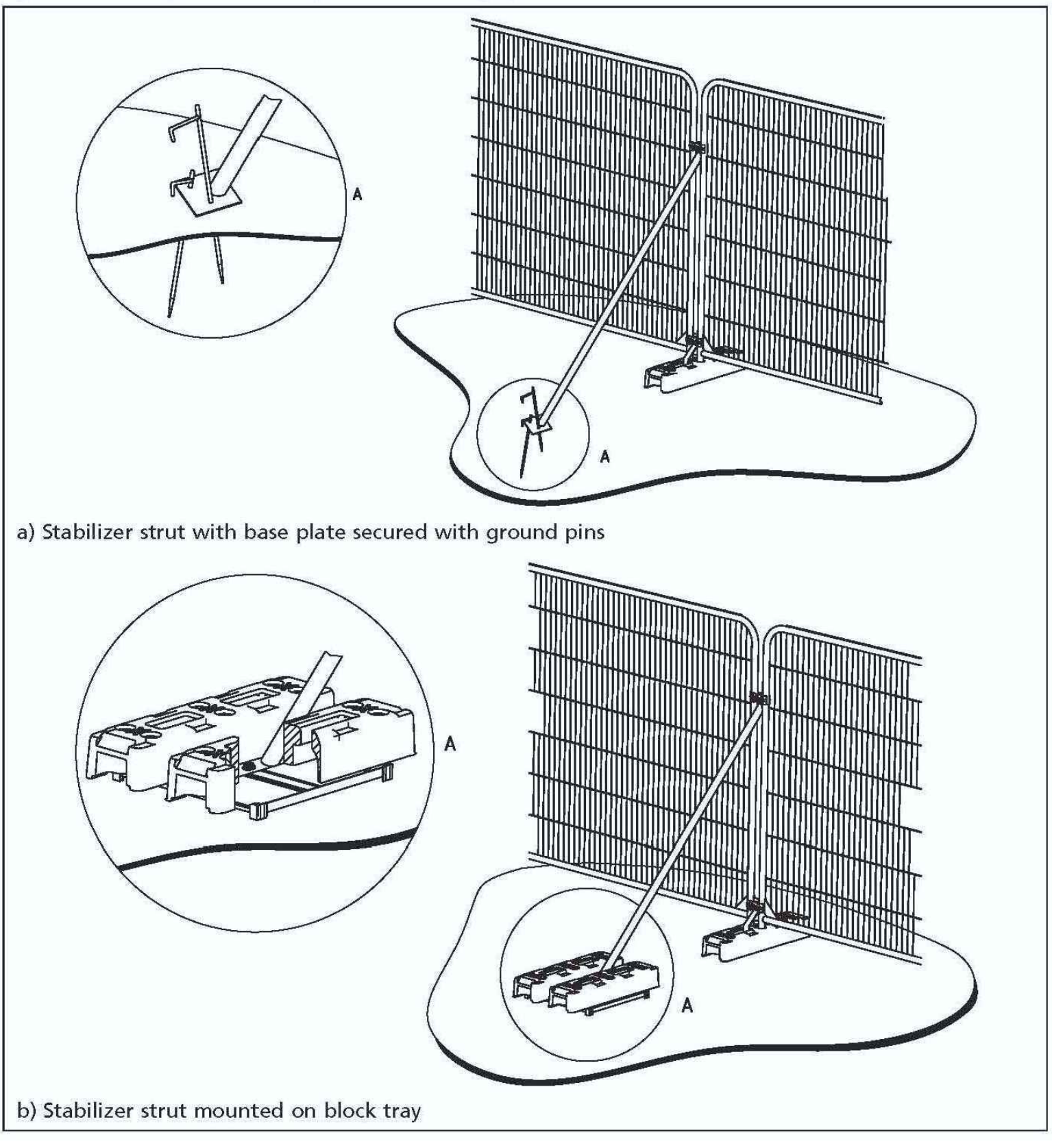
Construction Exclusion Zone (CEZ)

Tree Protection Fencing

Ground Guards



Figure 3 Examples of above-ground stabilizing systems



Date: December 2024

Client: Rochdale Borough Council

Project: Hollingworth Lake High Ropes

Title: Tree Protection Plan

Map file reference

DWG No

241219 1340 TPP V1

WHARTON
Natural
Infrastructure
Consultants

MINERVA MILQ STATION ROAD ALCESTER B49 5ET

E.info@wnic.co.uk

T.+44 (0)1789 459458

www.wnic.co.uk

Arboricultural Method Statement

VERSION: V1 **DATE:** March 2025

REF NO: 241219 1340 FINAL AMS V1.docx



Appendix 4: Technical Guidance Notes

WHARTON

TECHNICAL GUIDANCE NOTE

01

Tree Work and Tree Surgery



Email

hello@wnic.co.uk



Telephone

01789 459458



Website

www.wnic.co.uk

Technical Guidance Note 01

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 01 - Tree Works and Tree Surgery.docx



1. Introduction

1.1 Terms of instruction

1.1.1 This Technical Guidance Note (TGN) has been prepared by Wharton Natural Infrastructure Consultants (hereafter 'Wharton'). It is prepared in relation to the Proposed Development at land south of Hollingworth Lake, Littleborough ('the Site') (see Site Location Plan included at Appendix 1 of the AMS). The proposed development includes the installation of a high net structure supported by metal posts on individual footings, as well as a lower ground activity course featuring a bouldering wall. This development will also feature a timber-framed shelter, a storage container, and 2.4m high boundary fencing with gates.

1.2 Purpose of the TGN

1.2.1 The purpose of this TGN is to provide a working methodology specifically relating to general tree works, including site clearance, tree felling and vegetation management, as well Tree Surgery and translocation of trees.

1.2.2 This TGN should be read in conjunction with the AMS for the Proposed Development; however, it may be appropriate for those concerned with specific aspects of the scheme to read only those TGN's relevant to their work with the specific elements of tree protection measures across the wider development reserved for those with overarching responsibilities (the Site Manager).

1.2.3 The toolbox talk provided to all contractors as part of site inductions should provide an overview of the tree protection measures outlined in the AMS.

1.2.4 The TGN is intended as a reference point for all Site Operatives and a copy will remain with the Site Manager for the duration of the development. This document may be used as a point of reference if there were to be a dispute over compliance with related planning decisions.

1.3 Implementation of the TGN

1.3.1 Any tree work mentioned in this TGN, which applies to all trees, including those to be removed, cannot begin until all pre-commencement conditions have been met.

1.3.2 The Site Manager and appointed Tree Surgery contractor must ensure that all necessary permissions have been obtained from the local authority and that no protected species are harmed during site clearance or tree surgery work. If there is any doubt over this, the appointed Arboricultural Clerk of Works (ACoW) should be consulted.

1.4 Reference Documents

1.4.1 The documentation outlined in *Table 1* below should be referred to as a minimum.

Table 1 Document and Plans to be referenced

Document Description	Reference No.	Prepared By	Date
Arboricultural Method Statement (AMS)	241219 1340 AMS V1	Wharton	December 2024
Tree Protection Plan	241219 1340 TPP V1	Wharton	December 2024

Technical Guidance Note 01

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 01 - Tree Works and Tree Surgery.docx



1.5 Limitations of the TGN

- 1.5.1 This TGN is only concerned with issues pertaining to tree works and tree surgery in relation to the referenced location and referenced documentation outlined in Table 1 above.
- 1.5.2 Any amendments to the tree work outlined in this TGN past the date of issue cannot be accounted for and the TGN may need to be reviewed and modified, as needed.
- 1.5.3 The timetables for the construction programme within the AMS referenced in Table 1 above, are not absolute. The timetables outlined in the AMS are subject to change and are based on all preliminary information available at the time of writing.

Technical Guidance Note 01

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 01 - Tree Works and Tree Surgery.docx



2. Pre-commencement of Tree Works

2.1 Role of the ACoW

- 2.1.1 The ACoW is not responsible for appointing a suitably qualified and competent arborist (also referred to as a 'tree surgeon'). This is the responsibility of the Project or Site Manager.
- 2.1.2 The Arboricultural Association has an Arb Approved Contractor programme which is the only comprehensive accreditation scheme for Tree Surgery businesses in the UK. This free, online resource (<https://www.trees.org.uk/ARB-Approved-Contractor-Directory>) can be used to find a list of reputable contractors.
- 2.1.3 Further, it is not the role of the appointed ACoW to ensure that any necessary consent has been received from the local authority and that no protected species are harmed whilst carrying out site clearance or tree surgery works. This is the responsibility of the Site Manager and tree surgery contractor.
- 2.1.4 The ACoW will identify and mark up the trees to be removed to facilitate the Approved Development during the pre-commencement site meeting and, if necessary, with the Tree Surgery contractor present. To aid in identification, highly visible fluorescent paint will be used.
- 2.1.5 Prior to any tree work, the identified trees and their surroundings should be assessed for the presence of any protected species, and the timing of works should be optimised to avoid any negative impact on wildlife. An appointed Ecological Clerk of Works (ECoW) may be required to attend the pre-commencement meeting to check for the presence of nesting birds and other protected species.
- 2.1.6 The tree work will not start until the project ECoW is satisfied that there are no ecological constraints.



3. Tree Work Considerations and Recommendations

3.1 Industry Standards and Guidance

- 3.1.1 All works must comply with *BS 3998:2010 'Tree work. Recommendations'*. Any competent arboriculturist will be aware of this publication and will be able to complete the necessary work. As a result, using a qualified and competent tree surgery contractor is required to comply.

3.2 General Considerations

- 3.2.1 All tree work will be carried out prior to commencement of construction activities and prior to the erection of the tree protection measures.
- 3.2.2 Minor pruning can be performed at any time of year, but it is recommended that it be avoided when deciduous trees, particularly maples, limes, and birches, are in leaf (Spring). Pruning should also be avoided during the autumn months, when the trees' ability to seal wounds is reduced, making them more vulnerable to pathogenic decay fungi. Autumn pruning also depletes valuable energy reserves. This is especially important if heavy pruning or work on older trees is required.
- 3.2.3 Pruning should also be avoided during or immediately following a drought.
- 3.2.4 Prior to beginning any tree work operations, the method of disposal, utilisation, or retention of arisings should be agreed upon. Unless other disposal options are impracticable or, as in the case of Ash Dieback, the material is infected by a disease or pest for which industry sanitation guidance is required, arising should not be burned.

Technical Guidance Note 01

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 01 - Tree Works and Tree Surgery.docx



4. Tree Work Specification

4.1 Arboricultural features (trees) to be Removed

4.1.1 The trees to be removed are depicted as red circles hatched with red crisscrossing lines on the Tree Retention Plans (referenced in Table 1 above).

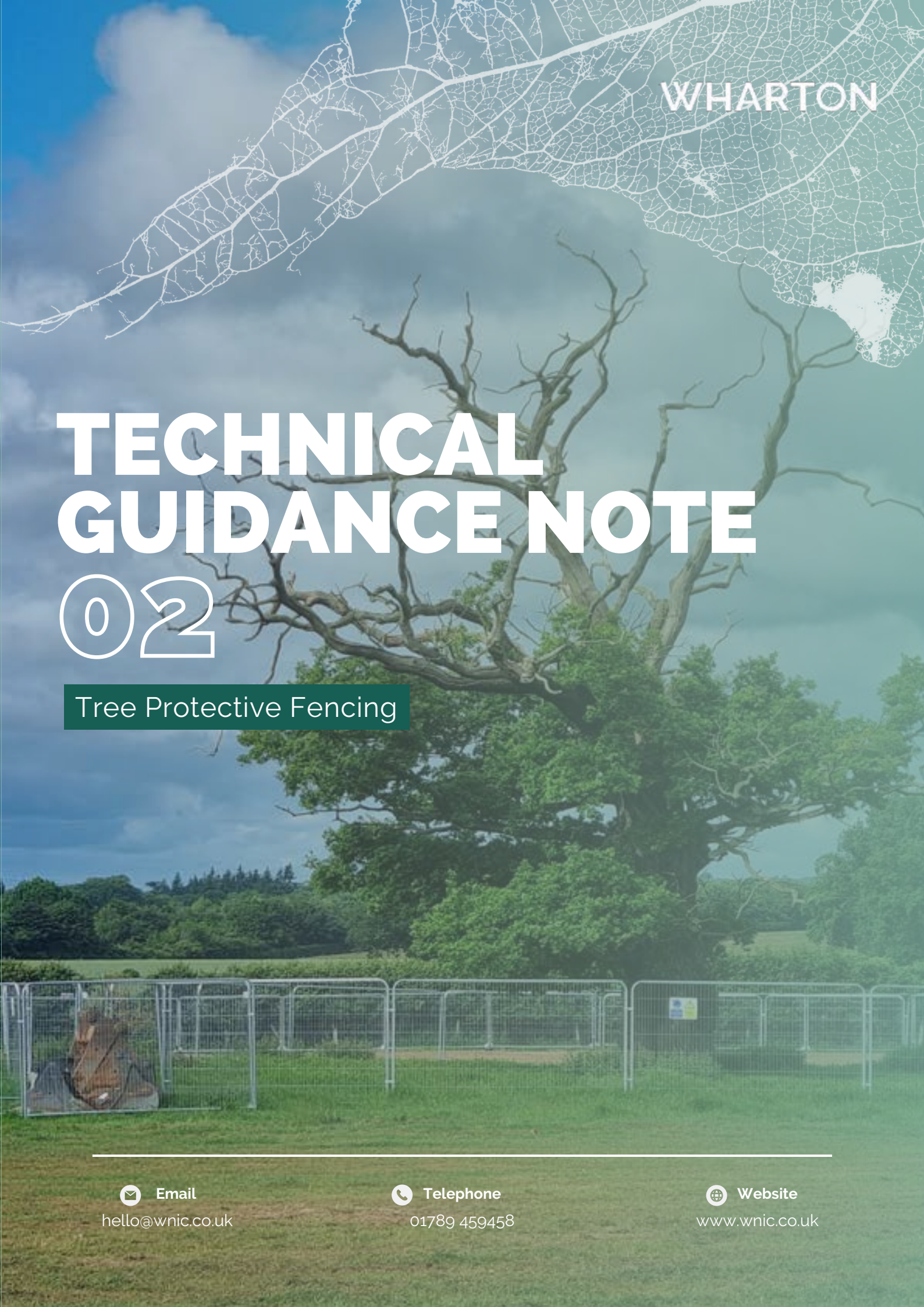
4.1.2 These trees should be removed prior to commencement of works.

4.2 Arboricultural features to be Pruned

4.2.1 The features to be pruned to facilitate the Approved Development have been outlined in Table 2, below.

Table 2 Tree Work Specification

Recommendation	Specification	Feature Number/s
Crown lifting/raising	Pruning will involve a crown lift of lateral branches only to the extent necessary for the implementation of the specified structures on Site. This process will be supervised by the Arboricultural Clerk of Works (AcoW) on Site.	
	1) Zebex Z3 steel fence proposed 2.4m high boundary fencing and gates	T8-9, T12-T17, T23-25, G10
	2) Climbing wall that would have a curved profile of two 5.0m lengths and a height of 4.0m	T14-15
	3) High nets structure which will have a maximum height of 7.64m	T12-13
	4) Timber framed storage shelter that would measure 12.0m	T23-25
	5) Installation of temporary ground protection to facilitate plant movement into site extending beneath the canopy of T16.	T16
	and working room for the construction process and to reduce the likelihood of injurious contact between any of the retained trees and the structures in future.	



WHARTON

TECHNICAL GUIDANCE NOTE 02

Tree Protective Fencing



Email

hello@wnic.co.uk



Telephone

01789 459458



Website

www.wnic.co.uk

Technical Guidance Note 02

VERSION: V1 DATE: January 2025
REF NO: Technical Guidance Note 02 - Tree Protective Fencing.docx



1. Introduction

1.1 Terms of instruction

1.1.1 This Technical Guidance Note (TGN) has been prepared by Wharton Natural Infrastructure Consultants (hereafter 'Wharton'). It is prepared in relation to the Proposed Development at land south of Hollingworth Lake, Littleborough ('the Site') (see Site Location Plan included at Appendix 1 of the AMS). The proposed development includes the installation of a high net structure supported by metal posts on individual footings, as well as a lower ground activity course featuring a bouldering wall. This development will also feature a timber-framed shelter, a storage container, and 2.4m high boundary fencing with gates.

1.2 Purpose of the TGN

- 1.2.1 The purpose of this TGN is to provide a working methodology and technical guidance specifically relating to Tree Protective Fencing.
- 1.2.2 This TGN should be read in conjunction with the AMS (as referenced in Table 1, below) for the Proposed Development; however, it may be appropriate for those concerned with specific aspects of the scheme to read only those TGN's relevant to their work with the specific elements of tree protection measures across the wider development reserved for those with overarching responsibilities (the Site Manager).
- 1.2.3 The toolbox talk provided to all contractors as part of site inductions should provide an overview of the tree protection measures outlined in the AMS.
- 1.2.4 The TGN is intended as a reference point for all Site Operatives and a copy will remain with the Site Manager for the duration of the development. This document may be used as a point of reference if there were to be a dispute over compliance with related planning decisions.

1.3 Implementation of the TGN

- 1.3.1 Any Tree Protection Fencing and protective measures mentioned in this TGN, which applies to all trees, including those to be removed, cannot begin until all pre-commencement conditions have been met. If there is any doubt over this, the appointed Arboricultural Clerk of Works (ACoW) should be consulted.
- 1.3.2 The Tree Protection Fencing (TPF) is to be installed as illustrated with as an orange, dashed-line on the Tree Protection Plan included within the accompanying AMS and as referenced in Appendix 3. 241219 1340 TPP V1 below.

1.4 Reference Documents

- 1.4.1 The documentation outlined in Table 1 below should be referred to as a minimum.

Table 1 Document and Plans to be referenced

Document Description	Reference No.	Prepared By	Date
Arboricultural Method Statement (AMS)	241219 1340 AMS V1	Wharton	December 2024
Tree Protection Plan	241219 1340 TPP V1	Wharton	December 2024

Technical Guidance Note 02

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 02 - Tree Protective Fencing.docx



1.5 Limitations of the TGN

- 1.5.1 This TGN is only concerned with issues pertaining to Tree Protection Fencing and related protective measures in relation to the referenced location and referenced documentation outlined in Table 1 above.
- 1.5.2 Any amendments to the Tree Protection Fencing outlined in this TGN past the TGN's date of issue cannot be accounted for and the TGN may need to be reviewed and modified, as needed.
- 1.5.3 The timetables for the construction programme within the AMS referenced in Table 1 above, are not absolute. The timetables outlined in the AMS are subject to change and are based on all preliminary information available at the time of writing.

Technical Guidance Note 02

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 02 - Tree Protective Fencing.docx



2. Pre-commencement Meeting and Toolbox Talk

2.1 Role of the ACoW

2.1.1 As outlined in the AMS, an appointed ACoW will be Peter Wharton or Becky Bristow, Arboricultural Consultant.

2.1.2 The Tree Protection Fencing has been specified by the Project Arboriculturist, as set out in the AMS referenced in Table 1, above. One of the primary roles of the appointed ACoW to ensure that the specification is adhered to throughout the duration of the demolition and construction phases.

2.1.3 Further, the ACoW's role in relation to Tree Protection Fencing will be to assist with the positioning/setting out of the Tree Protection Fencing, with assistance from the Site Manager or appointed contractor assigned responsibility for this task as needed. To aid in identification, the ACoW will use highly visible, fluorescent paint as well as marker pegs and stakes.

2.1.4 It is not the responsibility of the ACoW to appoint a suitably qualified and competent contractor to assist with these works. This is the responsibility of the Project Manager or Site Manager.

Technical Guidance Note 02

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 02 - Tree Protective Fencing.docx



3. Tree Protection Fencing

3.1 Purpose of Tree Protection Fencing

- 3.1.1 The purpose of Tree Protective Fencing should be understood and well-considered from the start. The primary objective of Tree Protection Fencing is to protect retained arboricultural features (trees, groups of trees, woodlands, and hedges), including stems, crowns, perceived rooting areas (denoted as the RPAs), and the soil in which they grow.
- 3.1.2 Tree Protection Fencing is also used to protect features to be retained that may be adjacent to or off-site, within third-party land, while allowing adequate access for the Proposed Development's implementation.

3.2 Timing of Tree Protection Fencing

- 3.2.1 Tree Protection Fencing will be erected prior to any works onsite, including site clearance, groundwork or the importation of plant and materials, commence.
- 3.2.2 Once erected, the Tree Protection Fencing will remain in-situ until all construction activities are complete, unless otherwise stated in the AMS and as reiterated in this TGN.

3.3 General Considerations

- 3.3.1 Most of the time, protection will include the installation of mandatory Tree Protection Fencing positioned at the extent of the calculated Root Protection Areas (RPAs) to create construction exclusion zones (CEZ) (see Section 4.0). Unless they already exist, Tree Protective Fencing will be erected prior to the start of any demolition and/or construction work.
- 3.3.2 The following specifications will be strictly followed in all instances:
- The area encircled or guarded by the Tree Protection Fencing shall be considered to form a Construction Exclusion Zone (CEZ).
 - No construction activities, storage of materials or pedestrian or vehicular access shall take place within this area.
- 3.3.3 The use and specification of Tree Protection Fencing should adhere to the guidance and recommendations provided in *Trees in Relation to Design, Demolition and Construction to Construction - Recommendations (BS 5837) (2012)*, hereafter referred to as 'BS5837:2012'. A detailed A1 laminated Tree Protection Plan will be located within the site office throughout the course of development. This will include details of the fencing specification and location for which the fence will be erected.
- 3.3.4 The Tree Protection Fencing will be checked prior to the commencement of all works by the ACoW. Tree Protective Fencing will not be removed or altered unless the appointed ACoW and the acting local authority have been consulted and agree.

3.4 Default Specification of Tree Protection Fencing

- 3.4.1 Tree Protection Fencing should be strong enough to prevent breaches from the type of construction activity taking place on Site, as well as appropriate for the extent and proximity of works to retained trees. Fencing to be installed must be inspected on a regular basis to ensure that it is fit for purpose and, if necessary, maintained or improved throughout the demolition and construction activities on Site.
- 3.4.2 Typically, Tree Protection Fencing should encompass a rigid wire mesh, metal fencing panel (Heras™ HSG151). These panels should be attached to scaffold poles driven vertically into the ground in most cases.

Technical Guidance Note 02

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 02 - Tree Protective Fencing.docx



- 3.4.3 Supporting struts that act as a brace should be provided to provide additional resistance against impacts where construction activity is expected to be more intense or concentrated in the immediate vicinity. The default Tree Protection Fencing specification is shown on Figure 1.
- 3.4.4 Tree Protection Fencing and the CEZ is to be clearly marked using appropriate signage, an example of which has been included at the end of this TGN. These signs shall be laminated to ensure they last the duration of the construction works and shall be fixed to the fencing panels every 10 metres along its length.
- 3.4.5 The signage will state the following:
"Tree Protection Fencing - Construction Exclusion Zone - No Access"
- 3.4.6 The area will be regarded as sacrosanct by everyone. This will be checked prior to the commencement of work by the ACoW and Tree Officer initially, and by the ACoW throughout the course of development.

Tree Protection Fencing – "Non-Standard"

- 3.4.7 The area will be regarded as sacrosanct by everyone. This will be checked prior to the commencement of work by the ACoW and Tree Officer initially, and by the ACoW throughout the course of development.
- 3.4.8 This approach involves a non-standard use of (Heras™ HSG151) fencing, featuring weighted feet that can be adjusted based on the specific requirements of the development. It is particularly well-suited for sites with limited working space and offers a less invasive alternative to traditional methods.



Technical Guidance Note 02

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 02 - Tree Protective Fencing.docx



Figure 1. Non-standard protective fencing recommendations

- i. Standard scaffold poles
- ii. Heavy gauge 2m tall, galvanised tube and welded mesh infill panels
- iii. Panels secured to uprights and cross-members with wire ties
- iv. Ground level
- v. Weighted feet

3.5 Removing the Tree Protection Fencing

- 3.5.1 Following the completion of construction works and in accordance with the ACoW, the Tree Protection Fencing will be carefully removed to avoid causing root disturbance or leaving any lengths of scaffold framework in place.
- 3.5.2 This operation can be carried out prior to soft landscaping works such as new tree and shrub planting, mulching and grass sowing.

Technical Guidance Note 02

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 02 - Tree Protective Fencing.docx



4. Construction Exclusion Zone (CEZ)

4.1 Establishing a CEZ

- 4.1.1 The primary preventive measure for the Site's retained trees (above and below ground) and associated soils is the CEZ. The CEZ will be protected throughout development; no access to this area will be permitted except for operations specified in this AMS document or later agreed upon with the LPA. The CEZ is defined as any area of ground protected by the measures set out on the Tree Protection Plan at Appendix 3.
- 4.1.2 Tree protection measures and the CEZ must be in place prior to any vegetation clearance, on-site earthworks, or construction. The ACoW will inspect these before the commencement of the development.

4.2 Ensuring the integrity of the construction exclusion zone

- 4.2.1 To ensure the CEZ's protection of retained trees and soils, the following must be carefully followed when planning site operations:
- The protective tree fencing shall be maintained throughout the development phases.
 - No materials, machinery, temporary structures, chemicals, or fuel shall be stored within the CEZ.
 - Excavations or increases in soil level are not permitted within the CEZ without prior written approval from the ACoW and acting LPA.
 - It is critical to avoid injurious contact with retained trees with wide or tall loads or plants equipped with booms, jibs, and counterweights. Any plant transit or traverse near trees should be supervised by a banksman or similar, to ensure adequate clearance from trees is always maintained.
 - Concrete mixing, diesel oil, and vehicle washing are examples of materials that should not be discharged within 10 metres of tree stems. The ACoW must be notified in the event of an accident or spillage.
 - Fires must not be lit in such a way that their flames can reach within 5m of foliage, branches, or a trunk/stem. Consideration should be given to the size of the fire and the direction of the wind.
- 4.2.2 Any landscaping within the CEZ must avoid disturbing the soil. As a result, re-grading and rotavators are prohibited. Any agreed-upon soil re-profiling to facilitate final agreed-upon levels must be done by hand using topsoil.

Technical Guidance Note 02

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 02 - Tree Protective Fencing.docx



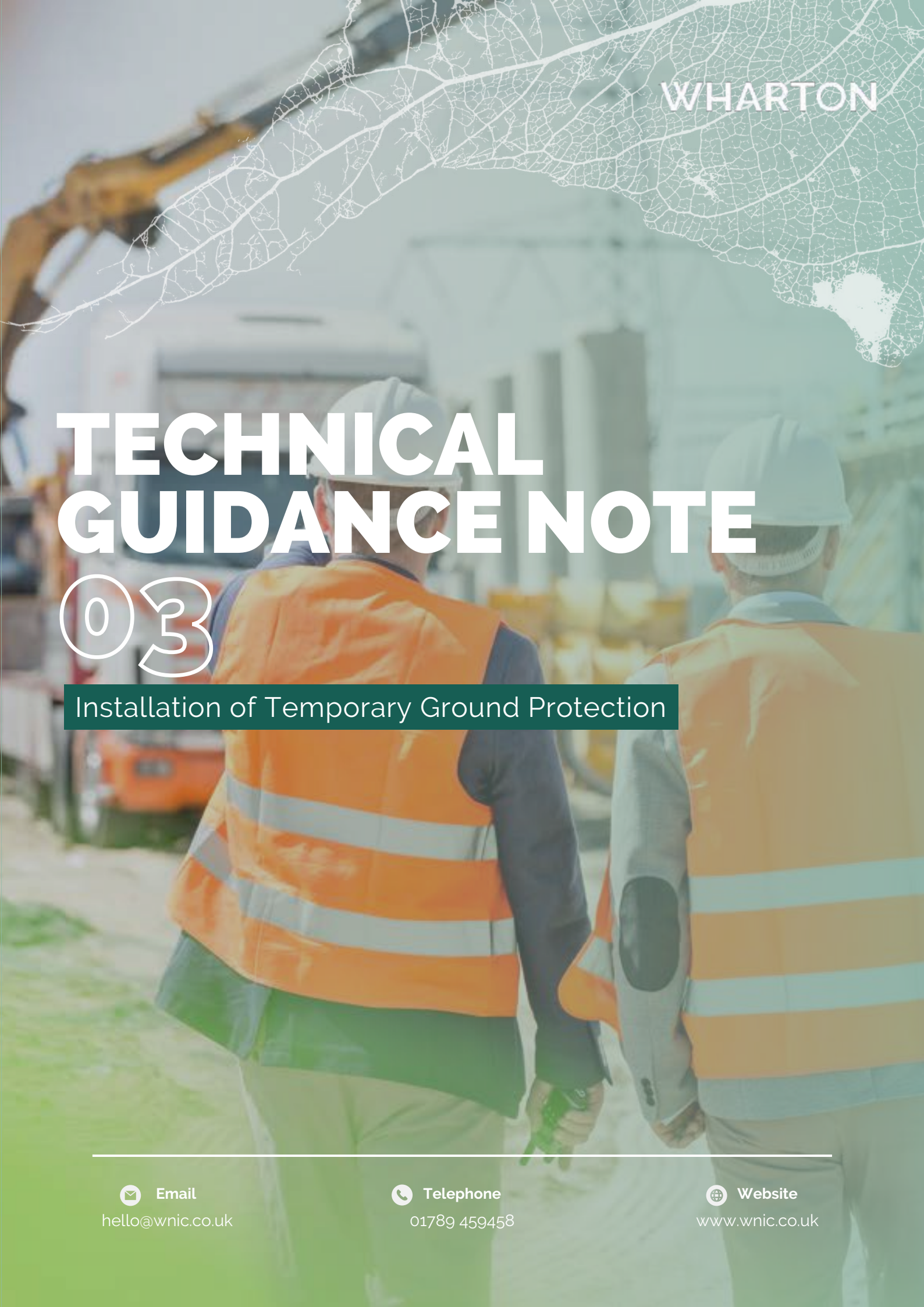
TREE PROTECTION AREA KEEP OUT !

(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL
PLANNING AUTHORITY



**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



WHARTON

TECHNICAL GUIDANCE NOTE

03

Installation of Temporary Ground Protection



Email

hello@wnic.co.uk



Telephone

01789 459458



Website

www.wnic.co.uk



1. Introduction

1.1 Terms of instruction

1.1.1 This Technical Guidance Note (TGN) has been prepared by Wharton Natural Infrastructure Consultants (hereafter 'Wharton'). It is prepared in relation to the Proposed Development at land south of Hollingworth Lake, Littleborough ('the Site') (see Site Location Plan included at Appendix 1 of the AMS). The proposed development includes the installation of a high net structure supported by metal posts on individual footings, as well as a lower ground activity course featuring a bouldering wall. This development will also feature a timber-framed shelter, a storage container, and 2.4m high boundary fencing with gates.

1.2 Purpose of the TGN

- 1.2.1 The purpose of this TGN is to provide a working methodology for the installation of temporary ground protection to avoid unnecessary damage to the Root Protection Areas (RPAs) during the construction phase of the Proposed Development.
- 1.2.2 This TGN should be read in conjunction with the AMS for the Proposed Development; however, it may be appropriate for those concerned with specific aspects of the scheme to read only those TGN's relevant to their work with the specific elements of tree protection measures across the wider development reserved for those with overarching responsibilities (i.e., the Site Manager).
- 1.2.3 The toolbox talk provided to all contractors as part of site inductions should provide an overview of the tree protection measures outlined in the AMS (241219 1340 AMS V1).
- 1.2.4 The TGN is intended as a reference point for all site operatives and a copy will remain with the Site Manager for the duration of the development. This document may be used as a point of reference if there were to be a dispute over compliance with related planning decisions.

1.3 Implementation of the TGN

- 1.3.1 Any temporary ground protection measures outlined in this TGN cannot be installed until all pre-commencement conditions have been met.
- 1.3.2 Appropriate ground guards are to be installed as illustrated with amber hatched markings on the Tree Protection Plan in the accompanying AMS and as referenced in Appendix 3. 241219 1340 TPP V1 below. The location of the temporary ground protection must be agreed with the local planning authority before the construction phase begins.
- 1.3.3 Temporary ground protection will remain in place around those trees specified until there is no potential risk from all development works. The location of the temporary ground protection will not be altered or removed without prior consultation with an appointed Arboricultural Clerk of Works (ACoW).
- 1.3.4 The condition of the ground protection will be regularly monitored to ensure it remains fit for purpose throughout the development, to protect the RPAs of the retained trees.

1.4 Reference Documents

1.4.1 The documentation outlined in *Table 1* below should be referred to as a minimum.

Table 1 Document and Plans to be referenced

Document Description	Reference No.	Prepared By	Date
Arboricultural Method Statement	241219 1340 AMS V1	Wharton	December 2024

Technical Guidance Note 03

VERSION: V1 DATE: December 2024
REF NO: Technical Guidance Note 03 - Installation of Temporary Ground Protection.docx



Document Description	Reference No.	Prepared By	Date
(AMS) Tree Protection Plan	241219 1340 TPP V1	Wharton	December 2024

1.5 Limitations of the TGN

- 1.5.1 This TGN is only concerned with issues pertaining to temporary ground protection measures in relation to the referenced location and referenced documentation outlined in Table 1 above.
- 1.5.2 Any amendments to the temporary ground protection outlined in this TGN past the date of issue cannot be accounted for and the TGN may need to be reviewed and modified, as needed.
- 1.5.3 The timetables for the construction programme within the AMS referenced in Table 1 above, are not absolute. The timetables outlined in the AMS are subject to change and are based on all preliminary information available at the time of writing.

Technical Guidance Note 03

VERSION: V1 DATE: December 2024

REF NO: Technical Guidance Note 03 - Installation of Temporary Ground Protection.docx



2. Use and General Considerations

2.1 Purpose of Temporary Ground Protection

- 2.1.1 When temporary access is required within the root protection area during construction, the intended position of protective fencing may need to be moved to allow for temporary ground protection installation. Throughout the development, temporary ground protection is an effective means of preventing adverse effects to the root protection area/s (RPA) of retained trees. It safeguards the tree roots as well as the soil volume surrounding the rooting environment.
- 2.1.2 In practice, there are a few different approaches that can be used to minimise root damage and ground compaction. These comprise principally of:
- Retaining any existing hard surfacing that already protects the soil.
 - Installing new temporary ground protection of an appropriate specification.
 - A combination of both approaches.
- 2.1.3 Whatever option best protects the retained trees on the Site is to be used so ensure that the underlying soil (rooting environment) will remain undisturbed and capable of supporting existing and new roots.

2.2 General Considerations

- 2.2.1 The location for temporary ground protection is shown on the Tree Protection Plan, as referenced in Table 1 and clearly annotated for ease of reference.
- 2.2.2 Site operatives will be briefed on entering RPAs by the appointed ACoW before work commences. Site activities within the RPAs of retained trees will be monitored by the Principal Contractor and preferably, the ACoW, to ensure unnecessary damage does not occur.
- 2.2.3 The temporary ground protection measures will be fit for purpose, to ensure no damage occurs to the underlying soil and roots within the RPAs.
- 2.2.4 Where possible, existing hard standing will be retained to act as ground protection for as long as feasible.
- 2.2.5 Once the temporary ground protection has been installed, the Principal Contractor responsible for tree protection on Site should seek written confirmation from the project arboricultural consultant or appointed ACoW that it has been installed in the correct position and is to the required standard.
- 2.2.6 Ground protection will not be removed at the end of construction without prior approval of the ACoW.

Technical Guidance Note 03

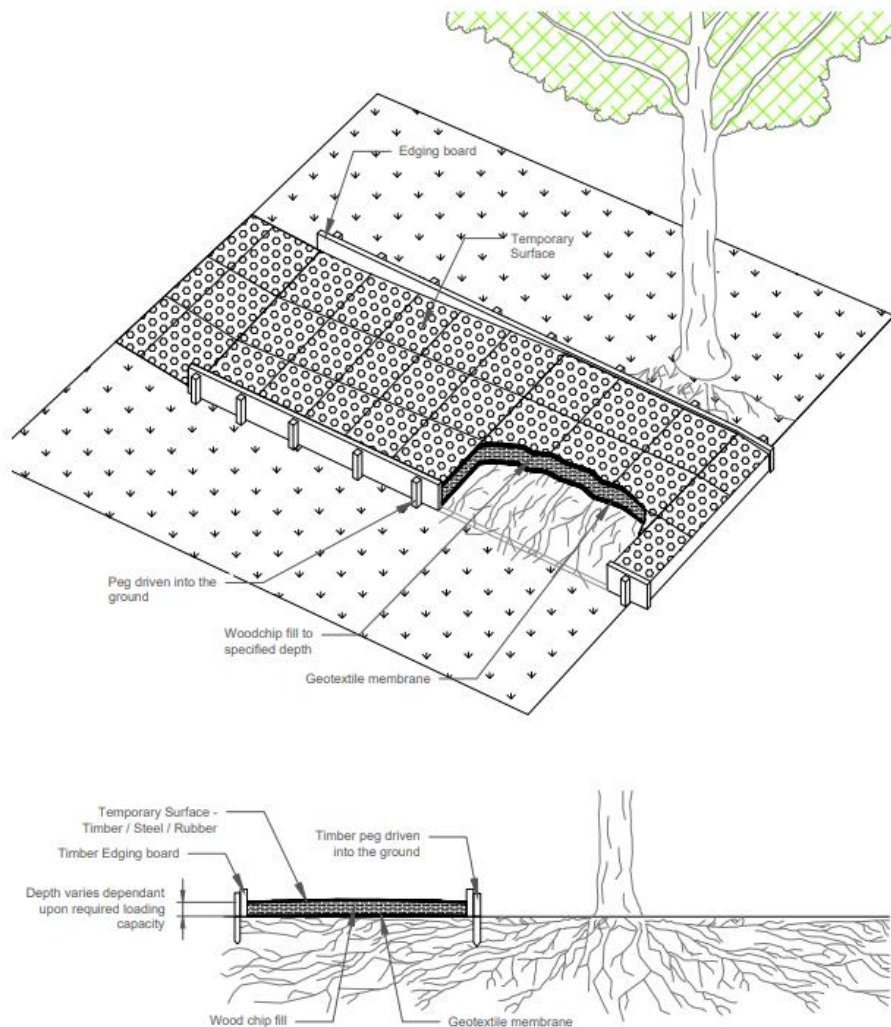
VERSION: V1 DATE: December 2024

REF NO: Technical Guidance Note 03 - Installation of Temporary Ground Protection.docx



3. Installation of the Temporary Ground Protection – Ground Guards

- 3.1.1 As detailed within Section 6.4.3 of the *British Standard Trees in Relation to Design, Demolition and Construction to Construction - Recommendations (BS 5837) (2012)*, hereafter referred to as 'BS5837:2012', to implement the Proposed Development there will be a requirement to utilise temporary ground protection within the RPA of T16 and the associated group.



3.2 Operated plant up to a gross weight of 2 tonnes

- 3.2.1 There will be a need to install temporary ground protection within the RPA of T16 and the associated group, to facilitate the movement of small, operated plant/machinery during demolition and construction.
- 3.2.2 Temporary ground protection in this instance will comprise proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (150mm depth of woodchip), laid onto a geotextile membrane.

3.3 Wheeled or tracked construction traffic exceeding 2 tonnes gross weight

- 3.3.1 An alternative system comprising proprietary systems or pre-cast reinforced ground protection boards, placed on top of a compression-resistant layer (150mm depth of woodchip), laid onto a geotextile membrane, will be utilised.

Technical Guidance Note 03

VERSION: V1 DATE: December 2024

REF NO: Technical Guidance Note 03 - Installation of Temporary Ground Protection.docx



Installation Methodology:

- i. Edge rails of sawn timber should be installed where the track way will pass over exposed retained tree RPA's. These should be installed on either side of the track way using 50x50x500mm timber stakes at 1.5m spacings.
- ii. A layer of geotextile membrane should then be laid over the area of ground to have the track way installed upon it.
- iii. A base layer of Ground Guards should be laid over the top of the geotextile membrane.
- iv. A minimum layer of at least 150mm deep coarse, preferably green wood chippings should be laid as a compressible layer over the top of the Ground Guards.
- v. The surface Ground Guard track way can then be laid over the top of the wood chippings.

3.4 Scaffolding within the RPA

- 3.4.1 It is considered likely that there may be a requirement for scaffolding during the construction phase of the development.
- 3.4.2 If this is required, construction scaffolding within the RPAs will be installed with ground protection as detailed in BS5837:2012 Clause 6.2.3.3 Note a. This will be set out as per the notes within the BS5837:2012 Clause 6.2.3.3 Note a. It will comprise of either a suspended wooden walkway beneath the scaffolding or 100mm of woodchip laid onto a geotextile base overlaid with wooden boards. This will significantly reduce the likelihood of ground compaction.



WHARTON

TECHNICAL GUIDANCE NOTE

04

Installation of No-dig Construction Cellular Confinement System



Email
hello@wnic.co.uk



Telephone
01789 459458



Website
www.wnic.co.uk

Technical Guidance Note 04

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 04 - Installation of No-dig Construction Cellular Confinement System.docx



1. Introduction

1.1 Terms of instruction

- 1.1.1 This Technical Guidance Note (TGN) has been prepared by Wharton Natural Infrastructure Consultants (hereafter 'Wharton'). It is prepared in relation to the Proposed Development at land south of Hollingworth Lake, Littleborough ('the Site') (see Site Location Plan included at Appendix 1 of the AMS). The proposed development includes the installation of a high net structure supported by metal posts on individual footings, as well as a lower ground activity course featuring a bouldering wall. This development will also feature a timber-framed shelter, a storage container, and 2.4m high boundary fencing with gates.

1.2 Purpose of the TGN

- 1.2.1 The purpose of this TGN is to provide a working methodology for the installation of a no-dig construction, cellular confinement system (hereafter 'no-dig'), to avoid unnecessary damage to the Root Protection Areas (RPAs) of retained trees during the construction phase of the Proposed Development. This specifically relates to arboricultural features affected by the proposed 12.0m timber-framed storage shelter, a no-dig, above-ground cellular confinement system will be necessary.
- 1.2.2 This TGN should be read in conjunction with the AMS for the Proposed Development; however, it may be appropriate for those concerned with specific aspects of the scheme to read only those TGN's relevant to their work with the specific elements of tree protection measures across the wider development reserved for those with overarching responsibilities (the Site Manager).
- 1.2.3 The toolbox talk provided to all contractors as part of site inductions should provide an overview of the tree protection measures outlined in the AMS.
- 1.2.4 The TGN is intended as a reference point for all Site Operatives and a copy will remain with the Site Manager for the duration of the development. This document may be used as a point of reference if there were to be a dispute over compliance with related planning decisions.

1.3

1.3.1 Implementation of the TGN

- 1.3.2 The installation of any of the no-dig construction methodologies referred to in this TGN cannot commence until all pre-commencement conditions have been met.
- 1.3.3 The no-dig system is to be installed as illustrated with a yellow honeycomb hatch on the Tree Protection Plan included within the accompanying AMS and as referenced in Table 1. The location of the no-dig system must be agreed with the local planning authority before the construction phase begins.
- 1.3.4 The location of the no-dig system will not be altered or removed without prior consultation with the project arboriculturist or appointed Arboricultural Clerk of Works (ACoW).
- During the installation of the no-dig system, the project arboriculturist or appointed ACoW will be present to ensure that no unnecessary damage occurs to the roots or soil volume of the retained trees.

1.4

1.4.1 Reference Documents

The documentation outlined in *Table 1* below should be referred to alongside this TGN, as a minimum.

Technical Guidance Note 04

VERSION: V1 DATE: January 2025
REF NO: Technical Guidance Note 04 - Installation of No-dig Construction Cellular Confinement System.docx



Table 1 Document and Plans to be referenced

Document Description	Reference No.	Prepared By	Date
Arboricultural Method Statement (AMS)	241219 1340 AMS V1	Wharton	December 2024
Tree Protection Plan	241219 1340 TPP V1	Wharton	December 2024

1.5 Limitations of the TGN

- 1.5.1 This TGN is only concerned with issues pertaining to the no-dig systems in relation to the referenced location and referenced documentation outlined in Table 1 above.
- 1.5.2 Any amendments to the no-dig system outlined in this TGN past the date of issue cannot be accounted for and the TGN may need to be reviewed and modified, as needed.
- 1.5.3 The timetables for the construction programme within the AMS referenced in Table 1 above, are not absolute. The timetables outlined in the AMS are subject to change and are based on all preliminary information available at the time of writing.

Technical Guidance Note 04

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 04 - Installation of No-dig Construction Cellular Confinement System.docx



2. General Guidance and Considerations

2.1.1 The principal rules to apply when constructing such a system as described above are as follows:

- Roots must not be severed, cut, or broken.
- Original ground levels must not be altered.
- Soils must not be compacted.
- Oxygen and water must be able to diffuse into the soil beneath the engineered surface.

2.2 What is Cellweb®TRP?

2.2.1 Cellweb® TRP¹ is a no-dig, cellular confinement system specifically designed for tree root protection. The system creates a stable, load bearing surface which ensures that the loads placed upon it is laterally dissipated rather than transferring to the soil and roots below. It has applications for traffic or footfall traffic, whilst eliminating damage to roots through compaction and desiccation.

2.2.2 The Cellweb® TRP system comprises of the three specific elements, Cellweb® TRP, Treetex™ pollution control geotextile and an infill of clean angular stone. The use of Geosynthetics Ltd Treetex™ pollution control geotextile, allows for drainage and separation whilst preventing contaminants from reaching the roots.

2.2.3 The walls of the cells are perforated and when combined with an infill of clean angular stone, this enables free movement of water and oxygen ensuring that supplies to the tree roots are maintained.

2.3 What depth of Cellweb® TRP is needed?¹

2.3.1 The Geosynthetics Engineering Department will provide Site-specific calculations to determine the depth required for the areas where this system is to be utilised. Table 2 provides an indicative guide as to which depth would be suitable based on the traffic loadings expected over the system.

Table 2 Table 2: What depth of Cellweb® TRP is needed?¹

Depth of Cellweb®	Unit	Gross Vehicle Weight (GVW)	Application
200 mm	Kg	< 60,000	HGV & Construction Traffic
150 mm	Kg	< 30,000	Emergency Access & Refuse Vehicles
100 mm	Kg	< 6,000	Cars up to a Transit Van
75 mm	Kg	< 1,000	Pedestrians & Cycleways

Note: This is a general guidance for the depth of Cellweb® TRP according to Gross Vehicle Weight for a firm and stable subgrade (CBR>3%). If the ground conditions are poor and/or unstable Geosynthetics Ltd will provide a site-specific design.¹

¹ Geosynthetics (2016). Cellweb® TRP Key Details. [Online] Available at: <https://www.geosyn.co.uk/downloads> [Accessed February 2022].

Technical Guidance Note 04

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 04 - Installation of No-dig Construction Cellular Confinement System.docx



3. Installation of the no-dig Cellweb® TRP system

3.1 General Guidance

- 3.1.1 Site operatives will be briefed on entering RPAs by the appointed ACoW before work commences.
- 3.1.2 Site activities within the RPAs of retained trees will be monitored by the ACoW to ensure unnecessary damage does not occur.
- 3.1.3 The no-dig system will be fit for purpose, to ensure no damage occurs to the underlying soil and roots within the RPAs.

3.2 General Installation Methodology

- 3.2.1 Within the RPA of arboricultural features affected by the proposed 12.0m timber-framed storage shelter, a no-dig, above-ground cellular confinement system will be necessary. The shelter's exact location should be considered flexible, with final positioning determined collaboratively by the ACoW and Site Manager to minimize RPA incursion.
- 3.2.2 The installation of no-dig, above-ground cellular confinement systems, the following methodology should be used as a guideline:
 - i. Under arboricultural supervision, remove the upper surface layer (vegetative layer e.g., turf). The depth of the excavation will be determined by the project arboriculturist or appointed ACoW. Any roots with a diameter greater than 25mm encountered, shall be left in situ.
 - ii. Any holes or depressions shall be filled with clean angular stone and sharp sand. Do not level off high spots or compact the soil through rolling.
 - iii. Immediately after an even ground level has been prepared, a geo-textile membrane will be laid. The geo-textile membrane sheets should overlap by a minimum of 300mm. The sub-base will be laid to a depth and specification prescribed by the Structural Engineer.
 - iv. Lay out the collapsed cellular confinement system on-top of the membrane. Use a J pin (usually supplied) into the centre cell at the end of the panel and secure into the ground.
 - v. Pull the cellular confinement sheet out to its full length and secure its length with another J pin. Measure its width to 2.56m and secure in each of the corners with the J pins. Use 10 pins per panel to create a panel measuring 8.1m x 2.56m. Each cell must be fully extended and under tension.
 - vi. Staple adjacent panels together at each cell (200mm: 5 staples. 150mm: 4 staples. 100mm: 3 staples. 75mm: 3 staples).
 - vii. If a curved path or shape is required, this should be cut when the cellular confinement panel is pinned out to 8.1 x 2.56m, ensuring complete cells remain. Do not try to curve or bend the panels into place.
 - viii. Infill the cells with clean angular stone as specified by Geosynthetics. The infill material must be a clean angular stone, Type 4/20mm or Type 20/40mm. Do not use M.O.T type 1 or crushed stone with fines for tree root protection.
 - ix. Infill the cells with the clean angular stone, working towards the tree and using the infilled panels as a platform – working from one end to the other. Minimum 25mm overfill of clean angular stone when used in conjunction with a hard surface.

Technical Guidance Note 04

VERSION: V1 DATE: January 2025

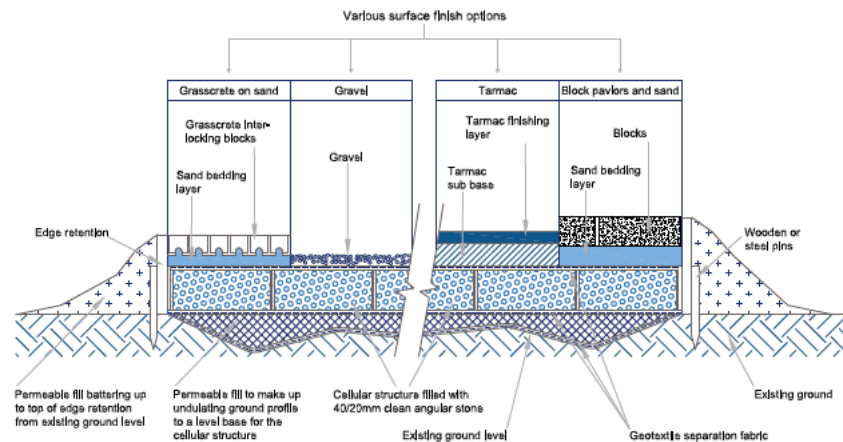
REF NO: Technical Guidance Note 04 - Installation of No-dig Construction Cellular Confinement System.docx



N.B. No compaction is required of the infill. Do not use a whacker plate or other means of compaction.

- x. Encourage settlement of the stone with the use of a light roller or with 2-3 passes of the construction plant used for installation.
- xi. Where edging is required for footpath and light structures, the edge will comprise treated timber boards pegged every 500mm with a wooden peg on the outside. The top of the peg will be flush with the top of the board.
- xii. All finishing surfaces in RPAs must be porous. Surfaces can include porous block paving, porous asphalt, loose gravel, grass, and gravel retention systems (e.g., Golpla), resin bound gravel, concrete and Astro turf.

Figure 1 Cross-section of cellular confinement system



Illustrative specification for no-dig cellular confinement surfacing with examples of finishing options.

Note: The final design must be site specific and detailed by an appropriate specialist.

3.3 General Installation Methodology Beneath Storage Shelter

- 3.3.1 A no-dig above-ground cellular confinement system will be necessary beneath the proposed 12m timber-framed storage shelter. This is to reduce the likelihood of compaction within the RPA of the retained trees.
- 3.3.2 The shelter will sit on the cellular confinement system, which will be installed at 200mm depth.

Technical Guidance Note 04

VERSION: V1 DATE: January 2025

REF NO: Technical Guidance Note 04 - Installation of No-dig Construction Cellular Confinement System.docx



3.4 Illustrative Pictures

Figure 2 The flat-packed three-dimensional cells are pulled apart, spread across the area to be surfaced, and pinned in place ready for the washed angular stone fill (with no fines).





WHARTON

TECHNICAL GUIDANCE NOTE

06

Excavation and Trenching within the RPA



Email

hello@wnic.co.uk



Telephone

01789 459458



Website

www.wnic.co.uk

Technical Guidance Note 06

VERSION: V1 DATE: December 2024

REF NO: Technical Guidance Note 06 - Excavation and Trenching within the RPA.docx



1. Introduction

1.1 Terms of instruction

- 1.1.1 This Technical Guidance Note (TGN) has been prepared by Wharton Natural Infrastructure Consultants (hereafter 'Wharton'). It is prepared in relation to the Proposed Development at land south of Hollingworth Lake, Littleborough ('the Site') (see Site Location Plan included at Appendix 1 of the AMS). The proposed development includes the installation of a high net structure supported by metal posts on individual footings, as well as a lower ground activity course featuring a bouldering wall. This development will also feature a timber-framed shelter, a storage container, and 2.4m high boundary fencing with gates.

1.2 Purpose of the TGN

- 1.2.1 The purpose of this TGN is to ensure that the rooting area of retained trees is protected from unnecessary damage, providing a working methodology excavation works and the uplift and removal of existing areas of hardstanding, kerbs, walls, and low structures within the Root Protection Areas (RPAs) of retained trees during the construction phase of the Proposed Development.
- 1.2.2 This TGN should be read in conjunction with the AMS for the Proposed Development; however, it may be appropriate for those concerned with specific aspects of the scheme to read only those TGN's relevant to their work with the specific elements of tree protection measures across the wider development reserved for those with overarching responsibilities (the Site Manager).
- 1.2.3 The toolbox talk provided to all contractors as part of site inductions should provide an overview of the tree protection measures outlined in the AMS.
- 1.2.4 The TGN is intended as a reference point for all Site Operatives and a copy will remain with the Site Manager for the duration of the development. This document may be used as a point of reference if there were to be a dispute over compliance with related planning decisions.

1.3 Implementation of the TGN

- 1.3.1 Any excavation works, including trenching, and uplift and removal of any existing areas of hardstanding, kerbs, walls, and low structures within the RPAs of retained trees, as referred to in this TGN, cannot commence until all pre-commencement conditions have been met.
- 1.3.2 The areas of the Proposed Development where this TGN applies are annotated on the Tree Protection Plan included at Appendix 3 within the accompanying AMS and as referenced in Table 1.
- 1.3.3 The project arboriculturist or appointed Arboricultural Clerk of Works (ACoW) will be present to ensure that no unnecessary damage occurs to the roots or soil volume of the retained trees, during all these works.

1.4 Reference Documents

- 1.4.1 The documentation outlined in *Table 1* below should be referred to alongside this TGN, as a minimum.

Technical Guidance Note 06

VERSION: V1 DATE: December 2024
REF NO: Technical Guidance Note 06 - Excavation and Trenching within the RPA.docx



Table 1 Document and Plans to be referenced

Document Description	Reference No.	Prepared By	Date
Arboricultural Method Statement (AMS)	241219 1340 AMS V1	Wharton	December 2024
Tree Protection Plan	241219 1340 TPP V1	Wharton	December 2024

1.5 Limitations of the TGN

- 1.5.1 This TGN is only concerned with issues pertaining to excavation works, including trenching, and uplift and removal of any existing areas of hardstanding, kerbs, walls, and low structures within the RPAs of retained trees, in relation to the referenced location and referenced documentation outlined in Table 1 above.
- 1.5.2 Any amendments to the excavation works, including trenching, and uplift and removal of any existing areas of hardstanding, kerbs, walls, and low structures within the RPAs of retained trees outlined in this TGN past the date of issue cannot be accounted for and the TGN may need to be reviewed and modified, as needed.
- 1.5.3 The timetables for the construction programme within the AMS referenced in Table 1 above, are not absolute. The timetables outlined in the AMS are subject to change and are based on all preliminary information available at the time of writing.

Technical Guidance Note 06

VERSION: V1 DATE: December 2024

REF NO: Technical Guidance Note 06 - Excavation and Trenching within the RPA.docx



2. General Guidance and Considerations

- 2.1.1 The removal of all existing hardstanding will be handled carefully and under the supervision of the appointed ACoW, following the methodology outlined in this TGN.
- 2.1.2 The removal of existing hardstanding, kerbs, and low structures from within the RPAs of retained trees may be harmful to the tree's root systems. As a result, extreme caution must be exercised during this procedure.
- 2.1.3 Only hand tools, including powered hand tools, will be used in these areas. To avoid any accidental root damage. At all stages, it will be necessary to apply appropriate damping-down to avoid dust from damaging long-term tree health.
- 2.1.4 Following removal of surfaces and structures, it may be necessary to perform ground decompaction to provide more aeration to the rooting environment. A decision on this intervention should be made following these works, with consideration given to the future use of the area surrounding the tree e.g., public open space including areas of soft landscaping.



2.2 Removal of existing Hardstanding, Kerbs, and Low Structures Methodology

2.3 General Guidance

- 2.3.1 During these works, it is possible that some roots will be cut. A decision on the cutting or severance of any roots discovered or identified during these works will be made by the ACoW. Roots will be pruned back by the ACoW as they become exposed.
- 2.3.2 The freshly pruned roots should be wrapped in hessian and kept damp until the area can be backfilled with topsoil. Roots will never be left exposed or allowed to dry out.

2.4 Working Methodology

- 2.4.1 The steps outlined in this methodology will be required within the RPA of T12, T13, T14, and T15. This will be specifically relating to any excavation to be done to implement the Climbing wall that would have a curved profile of two 5.0m lengths and a height of 4.0m and High Nets structure which will have a maximum height of 7.64m.
- 2.4.2 The following methodology should be used as a guideline and may need to be adapted as the demolition and construction phases progress.
 - i. Toolbox talk provided to all contractors by the ACoW as part of site inductions. This TGN is intended as a reference point for all Site Operatives and a copy will remain with the Site Manager for the duration of the development. This document may be used as a point of reference if there were to be a dispute over compliance with related planning decisions.
 - ii. Allow access to the protected RPA and Construction Exclusion Zone (CEZ) by dismantling any protection measures in place (typically, Tree Protective Fencing) and erect or install and temporary tree protection measures as outlined in the AMS. This should be done in the presence of the ACoW.
 - iii. Commence the installation of the Climbing wall that would have a curved profile of two 5.0m lengths and a height of 4.0m and High nets structure which will have a maximum height of 7.64m from one side only, working from the north for the high nets structure, and east for the climbing wall *(NB there will need to be a circa 2.5m working zone between the buildings and the branches of these trees. The smallest practical size of excavator is to be used)*.
 - iv. Once this has been undertaken, the next stage of breaking out of the subbase, floor/foundations (and any subterranean materials) will be subject to further arboricultural and engineer review, depending on the Site conditions identified.
 - v. The removal of the substantial (>30cm deep) structures, foundations or footings will be undertaken using the smallest practical size of excavator operating only from the specified side of the trees and will be uplifted with minimal excavation *(NB at all stages, it will be necessary to apply appropriate damping-down to reduce potentially harmful pollutants affecting nearby air quality and avoid dust from damaging long-term tree health)*. This should be done in the presence of the ACoW.
 - vi. Begin to gradually break up the areas of soil around the lower stem of T12, T13, T14 and T16. It will be necessary to remove as much of the material by hand. Any exposed roots shall be wrapped in Hessian which is to be kept damp until the excavated ground is backfilled or new topsoil is laid.

Technical Guidance Note 06

VERSION: V1 **DATE:** December 2024

REF NO: Technical Guidance Note 06 - Excavation and Trenching within the RPA.docx



- vii. Following the removal of all hardstanding, kerbs, foundations and low-lying structures, it may be necessary to undertake ground decompaction to provide the perceived rooting environment with greater aeration and to reduce the soil bulk density. Decisions surrounding the level of intervention and remediation required will be made on Site by the ACoW, with these works to be covered under a separate TGN provided by Wharton.
- viii. Once all works are complete, all mandated Tree Protective Fencing will be re-erected around the trees at the agreed distance, to safeguard the trees from damage for the remaining duration of construction works. All eventual protective fencing removal will be subject to monitoring by the appointed ACoW.

WHARTON

LAND | TREES | ECOLOGY

6 Chestnut Court,
Jill Lane,
Sambourne,
Warwickshire
B96 6EW

01789 459458
hello@wnic.co.uk
wnic.co.uk