



TREE PROTECTION SCHEME

CLIENT - Montague Jamieson
PROJECT - 49 High Street
DOC. REF - P2925-TPS01 V1
PLANNING REF - n/a
DATE OF ISSUE - 29/11/2022

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PURPOSE OF DOCUMENT

This document details the methodology behind the installation of any required tree protection measures, and any demolition and construction activities with the potential to cause harm to the site’s trees.

The methods outlined in this document must be implemented as per this document. Failure to do so may result in a breach of planning or significant fines.

ARBORICULTURAL DOCUMENT REGISTER

Planning Documents		Version Issued							
Document	Ref.	n/a	V1	V2	V3	V4	V5	V6	V7
Arb. Impact Assessment	P2925-AIA01		X						
Arb. Site Plan (Existing)	P2925-ASP01		X						
Arb. Site Plan (Proposed)	P2925-ASP02		X						

Technical Documents		Version Issued							
Document	Ref.	n/a	V1	V2	V3	V4	V5	V6	V7
Tree Protection Scheme	P2925-TPS01		X						
Tree Protection Plan	P2925-TPP01		X						

1. GENERAL INFORMATION

1.1. USE OF DOCUMENT

1.1.1. This document has been produced to assist key design and construction personnel in ensuring the satisfactory protection of all important trees present within the development site.

1.2. SITE

1.2.1. The site discussed within this report is located at:

49 high Street,
Lakenheath,
Brandon,
Suffolk,
IP27 9DS

2. ADMINISTRATIVE DETAILS

2.1. SCOPE OF DOCUMENT

2.1.1. This document consists of the following:

- Tree Protection Scheme

2.1.2. Appendices included with this report are:

- Tree Protection Plan (P2925-TPP01)
- CEZ Notice
- Schedule of Arboricultural Supervision

2.2. PROJECT CONTACTS

Role	Name	Telephone	Email
Arboricultural Surveyor	Ligna Consultancy Ltd	01284 598008	alistair@lignaconsultancy.co.uk
Client	Montague Jamieson	-	-

2.3. AUTHOR

2.3.1. Alistair Godfrey is a tree surveyor. He has worked in arboriculture for 6 years, initially working with tree surgery firms to carry out domestic tree work operations. He has worked at Cambridge University Botanic Gardens for 3 years on the Tree and Shrub team and has recently worked on a large-scale tree planting plan with the National Trust. He has a level 4 Certificate in arboriculture and LANTRA Professional Tree Inspection.

2.3.2. This report has been checked and edited by Benjamin Hallinan MArborA.

2.4. LIMITATIONS

2.4.1. Any engineering solutions presented within this document are recommendations for their suitability from an arboricultural viewpoint. The architect and structural engineers should make the final decision on the suitability of the methods advised.

2.4.2. Information provided by third parties, considered in the creation of this report, is assumed to be correct.

2.5. COPYRIGHT

2.5.1. This report was prepared for use by the Clients and their contractors for planning purposes. The report and its appendices may not be copied, modified, or distributed beyond the necessary parties without the written consent of Ligna Consultancy Ltd

3. RESPONSIBILITIES

3.1. DISTRIBUTION

3.1.1. It is important to ensure everyone involved in the planning and design of the proposed development is aware of this report and has access to a copy as soon as it is released.

3.2. RESPONSIBILITIES

3.2.1. Successful implementation of tree protection measures and long-term tree retention depends on coordination between the client and key personnel involved in the development.

3.2.2. The client and agent shall ensure that:

<ul style="list-style-type: none"> The site manager and all other personnel are provided with this document.
<ul style="list-style-type: none"> All planning conditions relating to underground works, services, trees, and landscaping are cleared before development commences.
<ul style="list-style-type: none"> All requirements of this Tree Protection Plan are adhered to.
<ul style="list-style-type: none"> The site manager is updated of any approved changes or variations to this document

3.2.3. The client and site manager shall ensure that:

<ul style="list-style-type: none"> A copy of this document with the plan is easily accessible for site personnel to refer to before and during the time construction activity is taking place.
<ul style="list-style-type: none"> All personnel working on the site are made aware of the tree protection plan and arboricultural method statements covering any activities they will undertake. This duty includes delegating the task of briefing personnel in the absence of the site manager.
<ul style="list-style-type: none"> The tree protection measures are left in place until the construction phase of development is completed, except with the written consent of the LPA.
<ul style="list-style-type: none"> Site personnel are updated of any approved changes or variations to the approved tree protection measures.
<ul style="list-style-type: none"> All personnel must work in accordance with this document at all times,

or in accordance with approved variation.

3.3. PROCEDURES FOR INCIDENTS

3.3.1. If any breach of the approved tree protection measures occurs the site manager must:

- The Local Planning Authority Tree officer or other Planning Officer and the Author of this report shall be notified.
- The site manager must be informed immediately.
- Swift action must be taken to halt the breach and prevent any further breach.
- Damage mitigation measures appropriate to the scale of the incident will be deployed where required.

3.4. PROHIBITED ACTIVITIES

3.4.1. The following must not be carried out under any circumstances:

- Cutting down, uprooting, damaging or otherwise destroying any retained tree.
- Lighting a fire within 10 metres of the canopy of any retained tree.
- Equipment, signage, fencing, tree protection barriers, materials, components, vehicles or structures shall not be attached to or supported by a retained tree.
- Mixing cement, chemical toilets and other use or storage of anything that would be harmful to trees shall not take place within, or close to a Root Protection Area (RPA). The distance away from the RPA must be sufficient, and the slope of the site must be such that contamination of soil in the RPA would not occur if there were spillage, seepage or displacement.
- No plant or equipment or vehicle with a hydraulic arm such as a mini digger shall be operated within striking distance of the stem and branches or the RPA of any retained tree unless otherwise specified in this report.

3.4.2. No alterations or variations shall be made to the approved tree protection measures without written approval from the LPA.

4. PHASING

4.1. PHASING OF DEVELOPMENT

4.1.1. The development should be carried out in the following order (see table 1) unless otherwise agreed in writing with the LPA. Each step should be completed before moving onto the next.

4.1.2. The general responsibilities described in section 3 of the report must be implemented for the entire time that the site is undergoing development related works. However, the additional precautions detailed in the following arboricultural guidance notes (AGN) must be implemented at the stage indicated below.

Stage	Arboricultural Guidance Note	Plan
Facilitative Tree Works	* Works should be undertaken by suitably qualified and insured arborists, in line with 'BS 3998:2010 Tree Work. Recommendations'	Arb Site Plan (Proposed) (P2925-ASP02 V1)
Pre-Commencement	AGN1 – Installation of Tree Protection Barriers AGN2 – Installation of Temporary Ground Protection AGN3 – Installation of No-Dig 3D Cellular Surfacing	Tree Protection Plan (P2925-TPP01 V1)
Site Clearance & Demolition	AGN4 – Demolition of Garden Wall Within RPA	Tree Protection Plan (P2925-TPP01 V1)
Groundworks & Installation of Foundations	AGN5 – Construction of New Garden Wall	Tree Protection Plan (P2925-TPP01 V1)
Construction		
Removal of Tree Protection Measures	* Tree protection measures may be removed	
Landscaping		

Table 1 – Timing and implementation of specific arboricultural measures

5. TREE WORKS

5.1. GENERAL MANAGEMENT RECOMMENDATIONS

5.1.1. The following tree works are in the interests of good arboricultural management. These should be undertaken following acceptance of planning permission. These works should be undertaken by suitably qualified and insured arborists.

5.1.2. Work specification:

Tree Ref.	Tree Works
T8	Remove

Table 3 – Recommended Tree Works (General Management)

6. ARBORICULTURAL GUIDANCE NOTES

AGN1 – INSTALLATION OF TREE PROTECTION BARRIERS

OUTLINE

Tree protection barriers must be installed so as to ensure that damage does not occur to the rooting areas, stems, and canopies of retained trees.

INSTALLATION METHODOLOGY

- i) The barriers shall be installed and removed in accordance with the timing of operations in section 4.1 and laid out in accordance with the appended Tree Protection Plan.
- ii) The "CEZ Notice" provided, should be used to create weather-proof notices that must be attached to the tree protection barriers at suitable intervals.
- iii) If any panel or support becomes damaged, immediate reinforcement must occur by adding panels in, compliant with the specification detailed below.
- iv) The default heavy-duty tree protection barrier specification is a vertical and horizontal scaffold framework, braced to resist impacts, as per *Figure 1*. The vertical tubes are spaced at a maximum interval of 3 metres and these are driven securely into the ground. Welded mesh panels are securely attached to the frame. During installation, it is important to consider the position of below ground services and structural roots, which must not be damaged. Where these constraints prevent the use of this specification, an alternative specification is given below.
- v) Alternative heavy-duty tree protection barrier design - 2-metre-tall welded mesh panels standing in rubber or concrete feet joined using a minimum of two anti-tamper couplers installed, so they can only be removed from inside the protected area. The fence couplers should be spaced at least 1 metre apart, but uniformly across the whole barrier. These panels must be supported within the protected area with struts attached to a base plate secured by ground pins as per *Figure 2a*.
- vi) Where the fencing is installed above retained hard surfacing and/or it is otherwise unfeasible to use ground pins (e.g. due to underlying services or structural roots), the struts can be mounted on a block tray as per *Figure 2b*.
- vii) Arboricultural Sign-off – Following the installation of the barriers, the project's arboricultural expert must confirm that they have been correctly laid out.

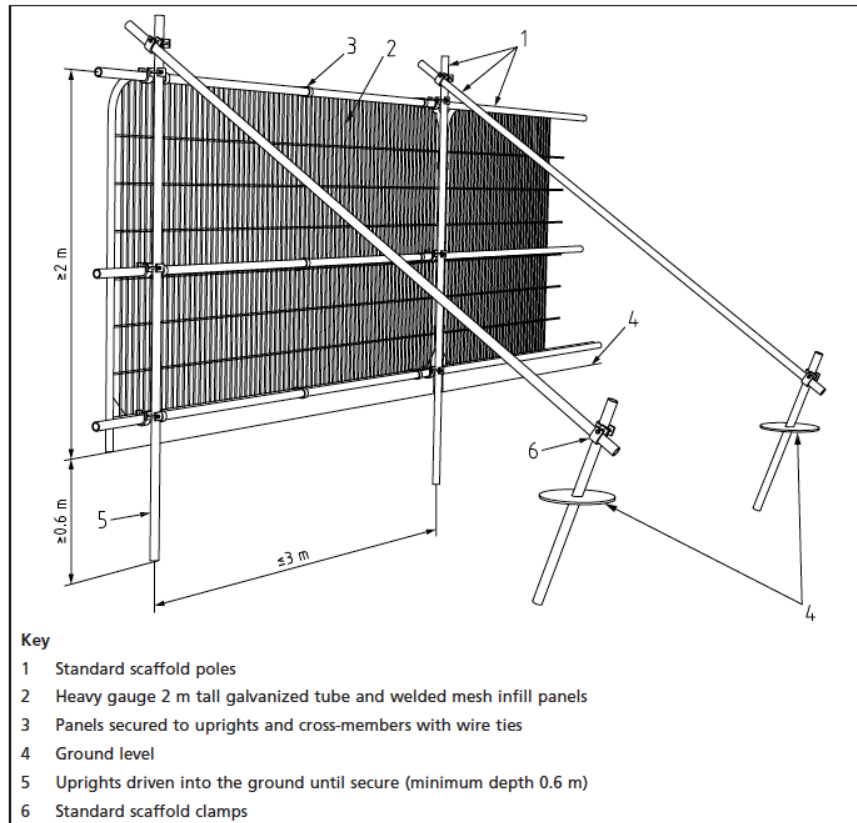


Figure 1 – Conventional tree protection barrier specification (source - BS 5837:2012 Section 6)

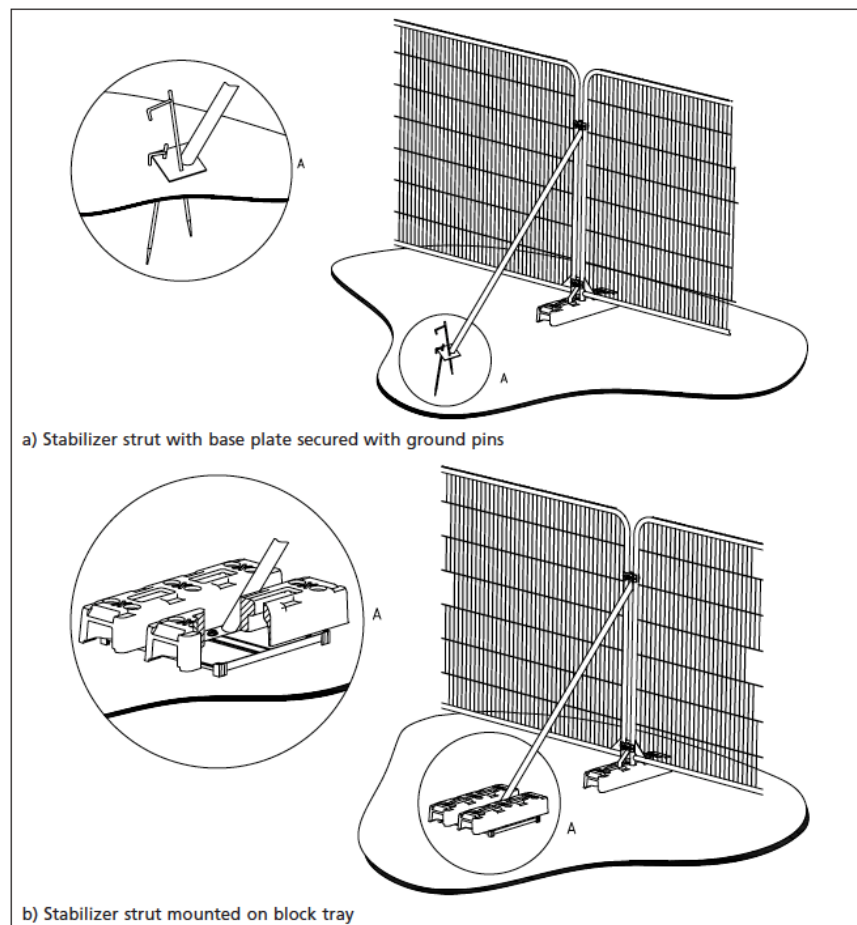


Figure 2 – Above ground stabilising systems (source - BS 5837:2012 Section 6)

AGN2 – INSTALLATION OF TEMPORARY GROUND PROTECTION

OUTLINE

Prior to the start of any demolition activities within the site, temporary ground protection measures must first be installed as per the associated Tree Protection Plan. This will prevent any construction traffic from causing compaction damage to tree roots during the demolition and construction process.

INSTALLATION METHODOLOGY

Ground Protection Boards

- i) A geotextile membrane must be laid over the area to be protected with temporary ground protection.
- ii) A compression layer of 100mm deep coarse building sand or woodchip must be spread over the geotextile membrane.
- iii) Interlocking ground protection matting or two overlapping layers of 12mm thick plywood must then be installed atop the compressive layer.
- iv) Once installed, this should be signed-off by the project's arboricultural consultant.

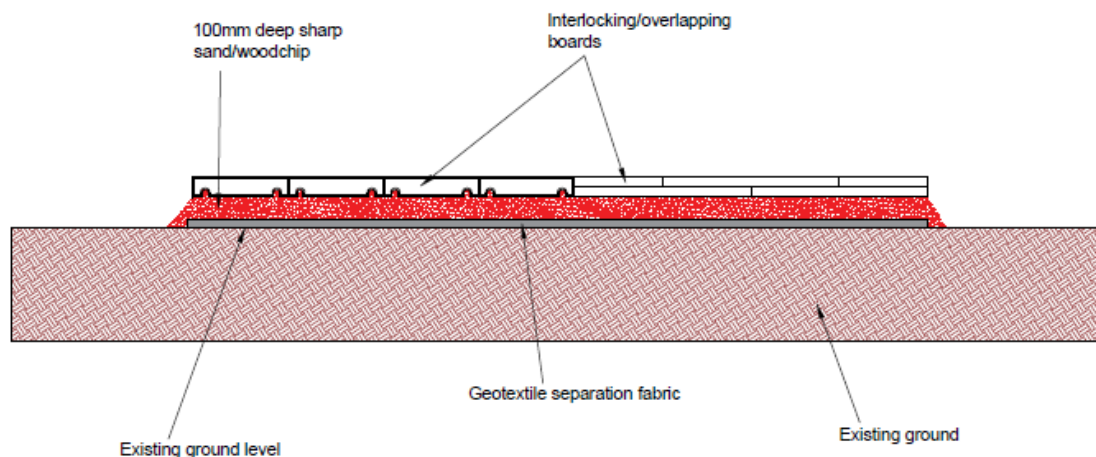


Figure 3 – Diagram of temporary ground protection setup.

OR

Sacrificial Cellweb TRP

- i) A geotextile membrane must be laid over the area to be protected (see manufacturer's recommendations).
- ii) A 100mm Cellweb TRP will be spread out and pinned into the ground.
- iii) The pinned down geocells must then be filled with a 20-40mm clean angular stone. This should be achieved with any machinery working forward onto the surface as it is constructed (known as "rolling out").

AGN3 – INSTALLATION OF NO-DIG 3D CELLULAR SURFACING

OUTLINE

New surfacing is to be installed upon virgin ground within the RPA of T2 and T4, specialist no-dig surfacing is to be used.

A no-dig 3D cellular system allows for robust surfacing to be installed within a root protection area without harming the roots and overall health of retained trees. These systems ensure that minimal soil compaction occurs during installation and use.

Owing to the nature of no-dig surfacing, the FSL of the driveway will be increased by >100mm (minimum cellular system depth). Owing to this, any areas of adjacent standard construction surfacing will need to be raised to match.

The selected system must be specified by the manufacturer and installed as per their instructions. The following guidance is intended as an outline only.

INSTALLATION METHODOLOGY

- i) Ground protection may be removed in the areas that are to be surfaced. Once removed, no machinery or vehicles may be present on the unprotected ground at any time.
- ii) A geotextile membrane will be laid over the area to be surfaced (see manufacturer's recommendations) (up to 50mm of the turf layer may be removed using manual excavation).
- iii) The cellular system (100mm Cellweb TRP) will be spread out and pinned into the ground. Wooden edge retention boards will then be pinned into place.
- iv) The pinned down geocells must then be filled with a 20-40 / 4-20mm clean crushed stone (confirm exact spec. with manufacturer). This will be achieved with any machinery working forward onto the surface as it is constructed (known as "rolling out").
- v) Once installed, an additional sacrificial layer of Cellweb TRP may need to be installed so as to protect the 'base' system from the heavier construction traffic. This should be confirmed with the manufacturer and where required, installed as per the above 3 points.
- vi) Once heavy construction activities (including skips and HGV deliveries) have concluded, the sacrificial layer of Cellweb may be removed.
- vii) The system may then have a porous finishing surface added above (indicative cross section below).

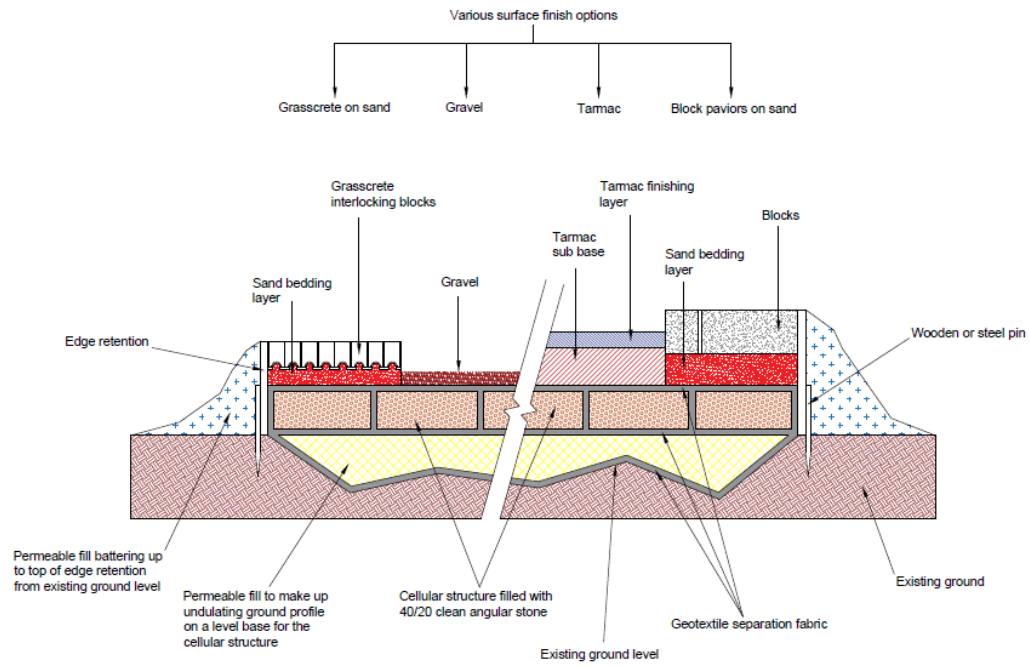


Figure 4 - Diagram showing the methodology behind the installation of three-dimensional cellular matting (Cellweb)

AGN4 – DEMOLITION OF GARDEN WALL WITHIN RPA

OUTLINE

To ensure that nearby trees are not damaged during the demolition of the garden wall, the following methodology must be used.

METHODOLOGY

- i) Any plant and vehicles engaged in demolition works must either operate from outside the RPA of all trees or from atop existing surfacing or temporary ground protection.
- ii) Should the retention of the existing foundations be unfeasible, their removal must be accomplished via excavation on the southern edge of the foundations. These excavations must not exceed the depth of the foundation, and should not extend more than 0.3m from the wall.

AGN5 – CONSTRUCTION OF NEW GARDEN WALL

OUTLINE

The proposed garden wall must be built using a pier and lintel foundation.

This method of construction minimises disruption to adjacent trees and allows the majority of underlying tree roots to span under the footprint of the wall.

INSTALLATION METHODOLOGY

- i) The wall (shown in purple hatching on the Tree Protection Plan) will be constructed using pier and lintel foundations.
- ii) The pier foundations may be constructed using brick or concrete and must be excavated manually.
- iii) Once the piers have been installed, the lintels can be installed atop them, and the wall built as per normal. The lintels must be at or above the existing ground level.

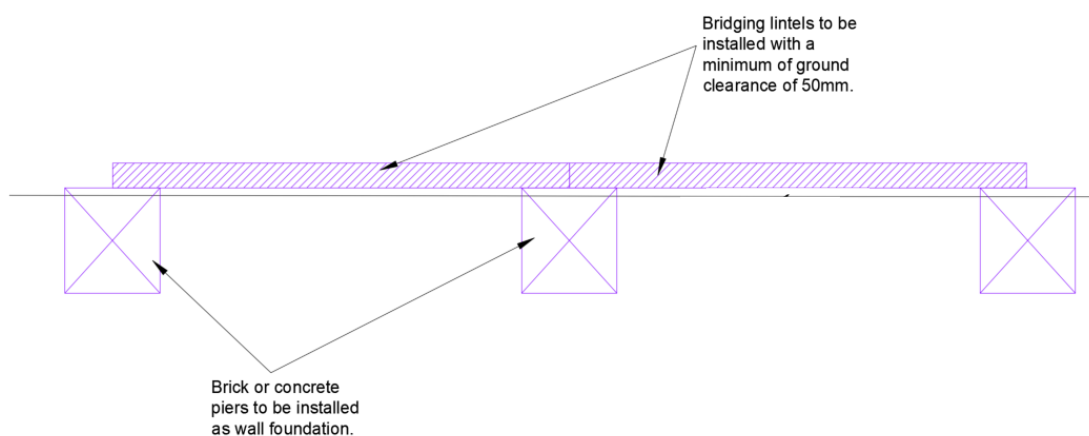


Figure 5 - Indicative cross-section of garden wall foundation.

7. APPENDICES

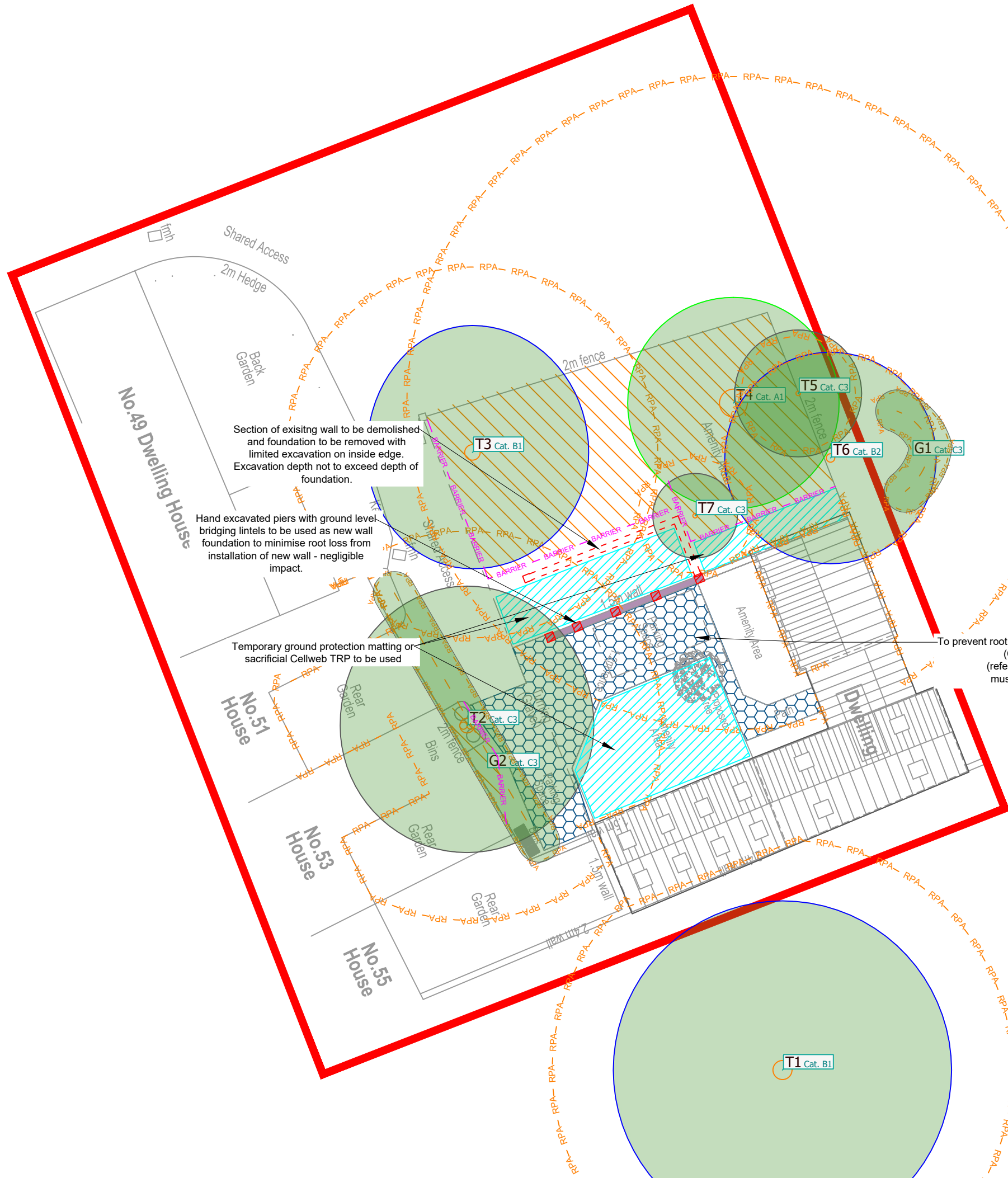
7.1. APPENDICES

7.1.1. The following appendices should be used in conjunction with this document:

Appendix	Document	Reference
1	Tree Protection Plan	P2925-TPP01 V1
2	CEZ Notice	n/a
3	Schedule of Arboricultural Supervision	n/a

APPENDIX 1

TREE PROTECTION PLAN



Section of existing wall to be demolished and foundation to be removed with limited excavation on inside edge. Excavation depth not to exceed depth of foundation.

Hand excavated piers with ground level bridging lintels to be used as new wall foundation to minimise root loss from installation of new wall - negligible impact.

Temporary ground protection matting or sacrificial Cellweb TRP to be used

To prevent root loss and disturbance, a specialist no-dig 3D cellular system (Cellweb TRP) with a depth of at least 100mm (refer to manufacturer's guidance on suitable loading) must be used as the subbase for the new surfacing.

Use of This Document

This document should be **viewed in conjunction with the relevant arboricultural method statement** and must be implemented as stated for the duration of the site's development. Failure to do so may result in a breach of planning, and damage to protected trees; potentially resulting in fines. Any queries regarding the trees on site should be addressed by Ligna Consultancy Ltd: 01284 598008 / info@lignaconsultancy.co.uk

Root Protection Areas

The enforcement of root protection areas (RPAs) is vital for the successful retention of a site's trees during the development process. RPAs that are not covered by ground protection must not be subjected to the following activities unless otherwise stated within the Tree Protection Plan or Arboricultural Method Statement:

- materials storage
- pedestrian / vehicular movement
- excavation or soil level increase
- installation of new surfacing
- car parking
- mixing of cement
- any other infringement

Should any issues arise from the enforcement of root protection areas restricting necessary site works, the site manager should be informed, and the project's arboriculturalist contacted.

Incursions within RPAs

Excavation	Arb. Sensitive Demolition / Removal

Specialist Foundations/Surfacing and Site Features

Specialist Foundations	Pile / Screw Pile	Cellweb TRP	Demolished Building

Tree Protection Measures (Refer to Technical Specification)

Barriers - Stake and Mesh	Barriers - Metal Fencing	Stem Protection	Temporary Ground Protection

CEZ



Project:	49 High Street		
Client:	Montague Jamieson		
Drawing:	Tree Protection Plan		
Drawing Ref:	Rev:	Date:	
P2925-TPP01	V1	23/11/2022	
Scale:	Drawn By:		
1:200 - A3	Alistair Godfrey		
Based on:	388_03_E Proposed Floor Plans.		

All dimensions should be checked on site. No dimensions to be scaled from this drawing. Please notify us of any discrepancies found. Ligna Consultancy Ltd. cannot be held responsible for inaccuracies in the base drawing in which this plan is based. This drawing is designed to reflect the principles of the layout or design only, and relates only to the protection of retained trees.

An architect or structural engineer should be contacted over any matters of construction, detailing or specification and for any standards or regulatory requirements relating to proposed structures, hard surfacing or underground services.

This drawing was produced in colour - a monochrome copy should not be relied upon.
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APPENDIX 2 CEZ NOTICE

NO ENTRY



CONSTRUCTION EXCLUSION ZONE

This area contains trees which must be protected as part of the planning permission. Additional legal protection may also apply e.g. a Tree Preservation Order.

Removing or damaging trees in this area may be a breach in planning permission. Damage to protected trees may lead to a criminal conviction and / or a fine.

Should any issues arrive regarding the tree protection or its layout, please contact Ligna Consultancy Ltd for advice:

info@lignaconsultancy.co.uk
01284 598008

APPENDIX 3

SCHEDULE OF SUPERVISION

APPENDIX 3 – SCHEDULE OF ARBORICULTURAL SUPERVISION

Date:

Planning Ref:

This statement is to confirm that of has undertaken the following supervision activities for the development at 49 High Street; ensuring that any deviation from the approved tree protection scheme is recorded and appropriate action is undertaken.

Liability for any failure of compliance will remain with the client.

Arboricultural Sign-Off

The correct installation of the approved tree protection measures must be confirmed by the project’s arboriculturalist in the table below. No further demolition or construction activities may occur until approval has been given by the project’s arboriculturalist.

Failure to abide by the following schedule may result in a breach of planning. Any deviation from the agreed upon protection measures must be reported to the project arboriculturalist immediately.

Activity	Date of Visit	Protection Measures Compliant	Remedial Action Required
Pre-commencement site meeting			
Sign-off of correct installation of tree protection measures (pre-construction)			



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