



THE ARBORICULTURAL
CONSULTANCY LTD

Arboricultural Method Statement

Hickman's Lane Pavilion, Lindfield

Reference Number: AMS.HLP.0839.V1
Version: One

Date: 05 September 2023

Site Address:
Hickman's Lane Pavilion
Hickman's Lane
Lindfield
West Sussex
RH16 2PX

The Arboricultural Consultancy LTD
3 Old Barn Way
Southwick
West Sussex
BN42 4NS

T: 01273 252162
E: ben@thearbconsultant.co.uk
www.thearboriculturalconsultancy.co.uk

Director- Benjamin Tidey. Company Registered in England and Wales.
Company Reg- 9562286

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Surveyors Details			
Author(s) Name	Company	Position	Contact information
Ben Tidey. FdSc arb, MArborA.	The Arboricultural Consultancy Ltd	Arboricultural Consultant	3 Old Barn Way Southwick West Sussex BN42 4NS Tel: 07736 385585 Email: ben@thearbconsultant.co.uk
Qualifications			
Foundation degree arboriculture (level 5), Lantra Professional tree inspection.			

Report Details

Purpose of the Report:

The report is designed to fulfil the recommended criteria for the provision of arboricultural information, with the primary objective being minimal impact to trees that are or maybe affected by the proposed installation.

Date: 05 September 2023

Report prepared by: Mr B Tidey FdSc (arb) of The Arboricultural Consultancy Ltd

Email: ben@thearbconsultant.co.uk

Address: 3 Old Barn Way, Southwick, West Sussex, BN42 4NS

Tel: 01273 252162/ 07736835585

Site Address:

Hickman’s Lane Pavilion
Hickman’s Lane
Lindfield
West Sussex
RH16 2PX

Use of Report:

This report is to give information on tree stock and is to be used in conjunction with;

Arboricultural Impact Assessment Hickman’s Lane Pavilion ref AIA.HLP.0839.V1

TREE CONSTRAINTS PLAN Hickman’s Lane Pavilion, Lindfield. TCP.HLP.0839.V1

Tree Protection Plan. Hickman’s Lane Pavilion, Lindfield. TPP.HLP.0839.V1

Proposal:

The proposal to the pavilion will add an extension to the southwestern end of the existing pavilion and relocate the nursery play area to the north flank.

Use of Report:

This report is to be used at the development and operational stage, not all the information is applicable to every reader. The summary highlights which areas are more applicable to specific users of the report to help target the relevant information to those implementing the necessary instruction.

Planning Consent Information:

Application number – DM/23/1909 Hickman’s Lane Pavilion.

Comments from Mid Sussex council tree officer, Irene Fletcher –

“I do not object to this application, however, we do require a method statement for incursions into RPAs and a tree protection plan.

I am also unsure as to the status of the phase 1 and phase 2 compounds. Do these form part of the application? The AIA makes reference to the extension and relocated play area only. Full details will be required within AMS of construction details, treatment of incursions into RPAs, materials etc.”

Report Outline Information

All tree inspections, unless specified, have been undertaken from ground level and using non-invasive techniques. Comments contained within the report on the condition and risk associated with any tree relate to the condition of the tree at the date and time of survey. Please note that the condition of trees is subject to change. This change may occur but is not limited to biological and non-biological factors as well as mechanical/ physical changes to conditions in the proximity of the tree. Trees should be inspected at intervals relative to identified site risks and in accordance with relevant HSE and Central Government guidance. The Arboricultural Consultancy can provide further information on this matter if required. Where tree surgery works have been identified these should only be undertaken after checks with the relevant authority have been made, it is necessary to ensure that works may lawfully be undertaken. Up to date checks should be made as to the possible protection status of trees/ vegetation or land they are located within, these checks should cover, but are not limited to; Tree Preservation Orders (TPOs), Conservation Area, planning conditions, Areas of Outstanding Natural Beauty (AONBs), Ramsar, Special Protection Areas (SPA), Special Areas of Conservation (SAC), Sites of Special Scientific Interest (SSSI). Locations of designation can be found at <http://magic.defra.gov.uk/MagicMap.aspx> and further advice on designations can be found at <http://jncc.defra.gov.uk> Further advice on TPOs, Conservation Areas or planning condition can be found with the local governing organisation. All works should be undertaken in accordance with the appropriate Duty of Care. This should include, for example, site specific risk assessments and due diligence inspections for the presence of protected species. Any comment relating to 3rd party trees has been made without full access to the tree(s). Should these trees have any impact on the site we would advise you to instruct us to contact the third party and undertake further inspection work.

This survey and report has been undertaken and produced by The Arboricultural Consultancy Ltd. All information within this report was correct at time of assessment.



Ben Tidey FdSc

Consultant Arboriculturist

Tuesday, 05 September 2023

Report Caveats:

The trees have been surveyed in accordance with the criteria set in the BS: 5837: Trees in Relation to Design, Demolition and Construction 2012. A full hazard assessment of the trees (including assessment of decay or their defects and their implications) has not been undertaken as this is considered beyond the scope of this report. Any obvious hazards and defects have been identified where relevant in the Tree Survey Schedule and appropriate relating works have been recommended. Where relevant, trees not located within the legal property of the owner have been included and any works would be subject (where relevant by law, Statute and Common) to the owner’s permission. Where appropriate further investigative works to be undertaken have been detailed and recommended. This may include climbing inspections, below ground exploratory investigations and the use of specialist decay detection equipment. Detailed ecological considerations are also beyond the scope of this report. UK and European Wildlife Legislation may affect the timing and even prohibit the enhancement of works and operations described in this report. Most of the information regarding wildlife can be found in the Wildlife and Countryside Act 1981 & updated 1994. This includes information of wild birds, bats, badgers and some insects. Bats in particular are afforded particular protection and a specialist is required to determine if bats are present or may be affected when carrying out tree works. Further information is available from Natural England.

This document has been produced before planning consent is issued and before specific site orientated logistics can be confirmed. It is accepted that this document may need to be updated and more detailed information added throughout the planning and development process. However this document will be the main documentation for reference in the event of disputes.

1.0 Introduction

- 1.1 The Arboricultural Consultancy have been appointed to provide advice on the arboricultural issues relating to the development at Hickman’s Lane Pavilion.
- 1.2 The site was inspected by Ben Tidey FdSc arb on Tuesday 11th July 2023, this tree survey included all trees that are within influencing distance of the area to be developed and areas that may be used for development operations.
- 1.3 Following preparation of our *Tree Schedule*, *Tree Constraints Plan* and *Arboricultural Impact Assessment* we received an amended copy of the layout drawing showing the development proposal for the site, these documents have been used to produce a method of works that;
 - Is appropriate to the scale of the works,
 - Has the minimal impact on the overall treescape,
 - Is practical and can be undertaken,
 - Is agreed by, and is suitable for all parties,
 - Is compliant where necessary with *BS5837:2012 ‘Trees in relation to design, demolition and construction – Recommendations’*.
- 1.4 The tree numbers used in this report refer to the tree numbers used in our Tree Condition Survey, Tree Constraints Plan (TCP), and Tree Protection Plan (TPP)

2.0 Executive Summary

- 2.1 The proposed development to the pavilion will add an extension to the southwestern end of the existing pavilion and relocate the nursery play area to the north flank.
- 2.2 The proposed extension will be of minimal impact to the local tree stock, with the only direct incursion of a Root Protection Area (RPA) being from the outside nursery play area.
- 2.4 The nursery play area required a permanent modified ground surface this shall be of a modified type that is permeable to allows for water and gas exchange within the soil, there is also a requirement for a no excavation install. Other than that for fence posts, the installation of these shall ensure there is no cement component leach into the soil and no direct damage to roots.
- 2.5 During the development phase of the project there is a potential for inadvertent tree damage, this will include damage to branching, trunks and roots/soil. There is a requirement for protective barrier fencing across the site, with a key area of protection being required for T8, T9 and T10 (all of A category).
- 2.6 To protect trees across the site, there is a requirement to install tree protective barrier fencing and implement construction exclusion zones, this full Arboricultural Method Statement (AMS) and accompanying Tree Protection Plan (TPP) shall document the type and location of tree protection.
- 2.10 With the implementation of protective barrier fencing, construction execution zones, ground protection, arboricultural supervision and modified surfacing the tree impact to trees from the project can be greatly reduced. This added to the planting and establishment of replacement trees offers the site an opportunity to enhance the local landscape.

3.0 The Arboricultural Protection Methods and Specifications

- 3.1 The below tables outline the criteria that is required to achieve suitable tree protection.
- 3.2 **Tree Protection Plan: details of protection locations**
- 3.2.1 The tree protection plan will outline the locations of all required protection.

3.2.2 Tree Protection Plan Specification

SCOPE OF WORKS	CRITERIA
Tree Protection Plan	- Includes details and location of the tree protection fencing of the Root Protection Areas (RPA) to define the Construction Exclusion Zones (CEZ) - To indicate areas of ‘hand-dig under supervision’ within RPAs - To show the location of temporary ground protection where required - To show what trees/hedging is to be removed - To indicate what trees will most likely need pruning - A copy of the tree protection specifications are indicated on the Tree Protection Plan.

3.2.2 This can be found within document. *Tree Protection Plan. Hickman’s Lane Pavilion, Lindfield. TPP.HLP.0839.V1* This will provide a plan with locations of specific protection requirements.

3.3 Tree Protective Fencing

3.3.1 Tree protection fencing will stop access to trees and their RPA and reduce the likelihood of inadvertent tree damage.

3.3.2 Protective Fencing Specification

SCOPE OF WORKS	CRITERIA
Protective fencing	- Location of fencing shall be as detailed in the Tree Protection Plan <i>Tree Protection Plan. Hickman’s Lane Pavilion, Lindfield. TPP.HLP.0839.V1</i> - The warning signs (as detailed within this report, Appendix 3) should be fixed at 6m intervals to raise awareness of the fencing and its desired function - Protective fencing must be in place prior to any site activities, it is recommended that this fencing is installed at the time site hoarding is erected - To be effective the tree protective fencing must remain in place for the duration of the development - Full specification for fencing to be found in Appendix 3.

3.3.2 Tree protection shall fully protect the tree crowns and RPA of retained trees, if any development operations are not possible because of tree protection then the project arboriculturalist shall be contacted and a suitable solution found.

3.3.3 The fencing type is the default specification consisting of a vertical and horizontal scaffold framework that is well braced to resist impacts from vehicles and construction site operations.

3.3.3 The barrier fencing may be formed of the site hoarding, if this is the case the specification for this must be the same as for the protective barrier fencing or better.

3.3.4 Barrier fencing for the area of the proposed play area will require it to be pushed back to allow this area of development within the RPA. The fencing shall protect this area until the area is to be developed then this area shall be surrounded by fencing to stop access to RPA.

3.3.5 Extract from BS 5837:2012 (further information in appendix 3)

BS 5837:2012

BRITISH STANDARD

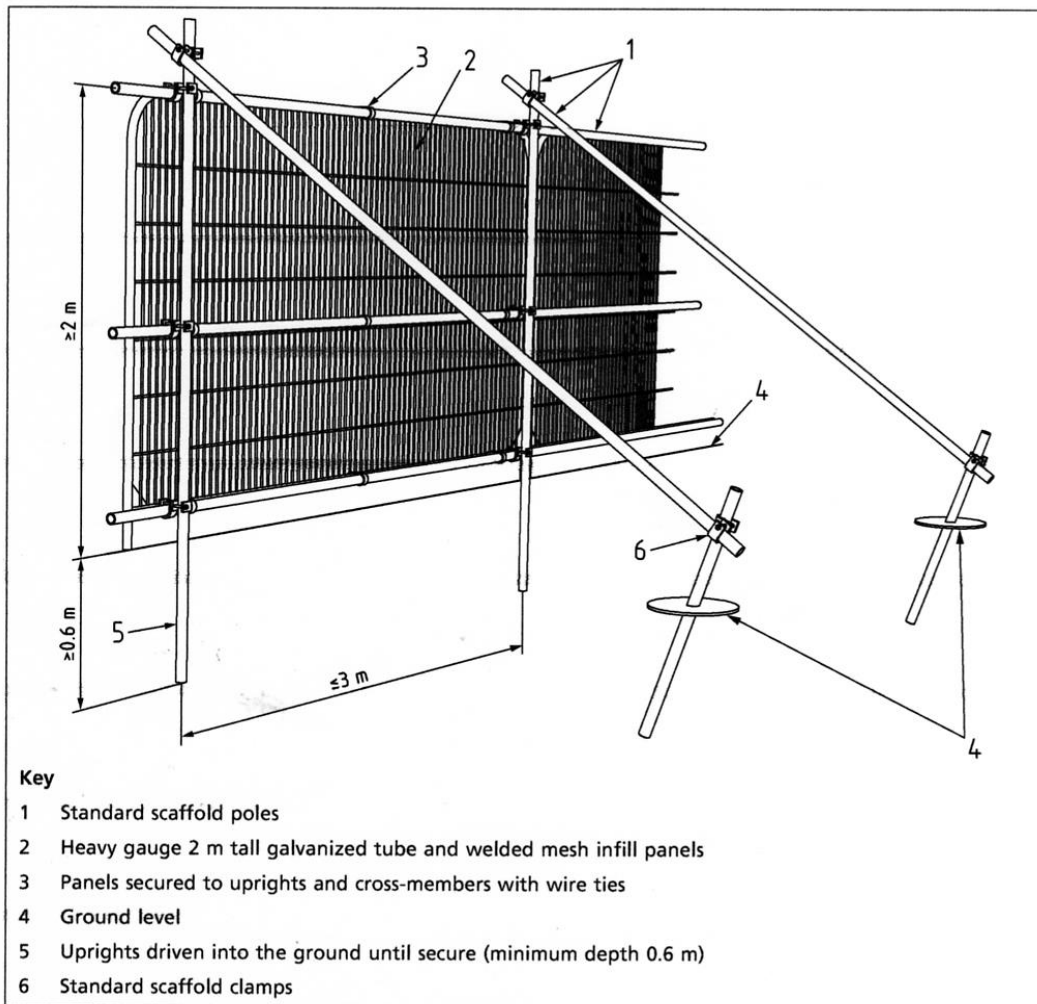
on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts should be mounted on a block tray (Figure 3b).

NOTE 1 Examples of configurations for steel mesh perimeter fencing systems are given in BS 1722-18.

NOTE 2 It might be feasible on some sites to use temporary site office buildings as components of the tree protection barriers, provided these can be installed and removed without damaging the retained trees or their rooting environment.

6.2.2.4 All-weather notices should be attached to the barrier with words such as: "CONSTRUCTION EXCLUSION ZONE – NO ACCESS".

Figure 2 Default specification for protective barrier



3.3.4 Tree Protection: Retained Tree Warning Sign



**TREE PROTECTION AREA
KEEP OUT
(TOWN & COUNTRY PLANNING ACT 1990)**

**THE VEGETATION PROTECTED BY THIS FENCE IS PROTECTED BY PLANNING CONDITIONS AND/OR IS
THE SUBJECT OF A TREE PRESERVATION ORDER.**

IF YOU REQUIRE ACCESS INTO THIS AREA PLEASE CONTACT

3.4 Site inspection, Monitoring and Supervision:

3.4.1 Criteria

SCOPE OF WORKS	CRITERIA
Site Inspections and Supervision	• Arrange details of communication between the inspecting arboriculturist, and client / client appointed ground worker, demolition contractor etc. • Details, instructions and authority for inspections should be provided and retained on site at all times. • To ensure that the construction process is undertaken with minimal disturbance to the retained tree stock, we recommend that the experienced arboricultural consultant from The Arboricultural Consultancy Ltd is appointed to undertake regular inspections of the site according to a site inspection / supervision schedule below. • During the site visit any changes to the proposed works will be discussed, their impact assessed and recommendations for best practice will be outlined. After the visit a copy of a report should be sent to the Site Manager, Local Authority Tree Officer and Client. • Any damage or incidents regarding the retained trees should be reported to the consultant arboriculturist at The Arboricultural Consultancy Ltd. Any incidents requiring a planning variation will only be completed after prior approval and consultation with the LPA. • Where excavations are necessary within RPAs then this should be under the supervision of an arboricultural watching brief/ supervision. • Full list of proposed supervision/ inspections to be found in Appendix 6.

3.4.2 A pre-commencement meeting between the project arboriculturalist, project manager and client will be held after the installation of tree protective barriers and before any works commence. This will provide an opportunity to ensure the correct location of tree protection and to discuss any potential issues with site logistics.

3.4.3 Arboricultural supervision shall be present where any operations are required within the RPA or under tree crowns; this includes operations within the RPA of T10 for the play area.

3.4.4 At completion of the project the site shall have a final arboricultural inspection to report any damage and provide any required remediation advice.

3.4.5 Reports from site inspections/ supervisions will be provided, these should be shared with the LPA tree officer and kept on file.

3.4.3 Site Inspection / Supervision Schedule

Construction Constraint Description	Site Supervision required	Visit Sequence	Date / Visit stage	Status
Tree works operations	Optional	N/A	Prior to construction	TBC
Pre-commencement meeting between relevant parties informing Council of development start date	Yes	Visit 1	Prior to site clearance	TBC
Establishment & Protection of Root Protection Areas (RPA) within Construction Exclusion Zones (CEZ) for retained trees by installation of secured and signed tree protection fencing	Yes	Visit 1	Prior to site clearance	TBC
Changes in soil levels in close proximity to retained trees (outside of RPAs)	Yes	Visit 2	During site clearance phase	TBC
Location of new / temporary access route or ‘Haul Road’ through / adjacent to retained trees for construction vehicles and avoidance of compaction to the RPA of retained trees	Yes	Visit 3	Pre-construction phase	TBC
Protection and prevention of damage to retained tree canopies during construction	Yes	Visit 3	Pre-construction phase	TBC
Generic construction site constraints: 1 Site office / welfare unit location 2 Temporary toilets 3 Siting of bonfires 4 Location of contaminant storage and washout areas 5 Location of stripped topsoil 6 Location for mortar silo 7 Location for waste storage / skips	Yes	Visit 3	Pre-construction phase	TBC
Site audits to ensure ongoing implementation of protection for trees, and compliance with this AMS document	Yes	Every 6 weeks for duration of project	Throughout	TBC
Supervision of any works within unprotected areas of RPA	Yes	Ad hoc basis	Throughout	TBC
Installation of ‘No-Dig’ surfacing for driveway close to or within retained tree RPA’s	Yes	As appropriate	During construction phase	TBC
Site ‘sign off’, removal of protection fencing, remedial recommendations that may be required and inspection of replacement tree planting	Yes	At project completion	Post construction	TBC

3.5 Excavation within RPA of retained trees, further information can be found in Appendix 4

3.5.1 Criteria

SCOPE OF WORKS	CRITERIA
Excavation if within the retained tree RPAs	- Excavations with the trees’ Root Protection Area will likely require the severing/pruning of roots. - If necessary a full specification on remove existing hard surfacing is found in Appendix 4. - If roots with a diameter of less than 25mm are found, then they are to be pruned to a side root, or suitable point, with secateurs. - If a major root with a diameter of over 25mm, clusters, or masses of fibrous roots are discovered then where possible they are to be protected, they shall be wrapped in hessian and hand dug around the roots and tunnel underneath (this may cause a confined space for which a Risk Assessment will need to be undertaken).

3.5.1 The installation of the play area shall not require any excavation other than the removal of the upper vegetation layer not exceeding 50mm, to be undertaken by hand using hand tools only.

3.5.2 There shall be no access to any RPA including the area for the play area for any equipment or plant.

3.5.2 Where there is to be the erection of the fencing within RPA, this shall be done by hand digging only the fence post holes, having an ability to be dynamic with post locations to avoid tree roots should they be discovered. The posts shall be stabilised in such a way as to stop cement components from leaching and contaminating the soil. This may be achieved by using an expanding foam resin such as *Postsaver Proset Rapid Post-Fix Resin*, or a the pit/hole shall be lined with a non-damaged and non-perforated plastic ‘rubble’ sack of at least 400 gauge material, then concrete poured into this.

3.6 Installation of ‘No-dig’ special surfacing within or close to the RPA of retained trees

3.6.1 Criteria

SCOPE OF WORKS	CRITERIA
Ground protection	- Ground protection is necessary where construction access is available over any part of any tree RPA - The ground protection is to reduce soil compaction that results in dysfunctional roots and a reduction of tree health - The ground protection shall be suitable for the machinery and/or plant that it is proposed to enter the area - It shall be installed before any access to the area, with areas being made in a progressive manner, only accessing over the protected parts as the ground cover lengthens - Full ground protection specification to be found in appendix 5.

- 3.6.3 The area to become the play area falls within the RPA of high quality trees, the required surfacing will sit on the current soil level with only the upper vegetative layer being removed to level the surface max 50mm, no deeper excavation is to be undertaken.
- 3.6.4 The proposed play area is located within RPA therefore a modified surfacing shall be used to reduce soil compaction. Soil compaction is a major contributing factor in post development tree loss and shall be mitigated.
- 3.6.5 The no-dig surface is a tree root protection system combination of; a 3-dimensional cellular confinement system, separation and filter geotextiles and a specific grade of granular material. This document should be used in conjunction with the appropriate section drawing for the specified system, to ensure the correct installation is achieved. See CORE Landscape Products for tree related systems and installation guides.
- 3.6.5 The finished surface shall be the Rubber Surfacing product by Abacus Wet Pour Playground Sub Base. There shall be no excavation for the installation of edging or curbs within RPAs, all surfacing is to be permeable for moisture and gaseous exchange with the soil.
- 3.6.6 There may be a requirement to fill and grade around the structure to elevate the height change, this shall be kept to a minimum, forming banked edges, this shall be undertaken by hand using hand tools and there shall be no excavation into the existing soil level, or soil compaction of any type.
- 3.6.7 All operations within RPA to be under direct arboricultural supervision.

3.7 Tree Pruning

3.7.1 Criteria

SCOPE OF WORKS	CRITERIA
Tree Pruning	- Tree work shall be undertaken to BS3998:2010 'Tree work – Recommendations' - Work shall be undertaken by a qualified, competent, insured company - All waste arising to be removed from site - UK and European Wildlife Legislation may affect the timing and even prohibit the enhancement of works and operations described in this report. Most of the information regarding wildlife can be found in the Wildlife and Countryside Act 1981 & updated 1994. This includes information of wild birds, bats, badgers and some insects.

- 3.7.2 There is a likely requirement to prune T1 and T2 that overhang the access drive, this may be required if taller vehicles are to enter the car park. This pruning shall provide a suitable clearance, there also may be a requirement to prune back branching of T5 should there be a possible conflict with vehicles or plant.

3.8 Tree removal and replacement tree planting

3.8.2 There is no proposed tree removal for this project however, a strong robust tree planting plan to increase the number of trees across the site will benefit the local area and help the new building to blend with the existing landscape.

3.9 Site compound and material storage location

3.9.1 Criteria

SCOPE OF WORKS	CRITERIA
Site compound and material storage location	- Compounds shall be outside of unmade or unprotected RPA - There shall be adequate overhead clearance from trees for laydown sites - There shall be no fires, or storage of products that may cause soil contamination, this includes cement products, there is no be no dumping of contaminated fluids including when cleaning equipment - There shall be no connecting of anything to trees, this includes, cables, signage or supports.

3.9.2 There are to be two compounds for this project they will both be located on the northwestern edge of the existing carpark; the two compounds will be for the external phase of the project and for the internal phase of the project.

3.9.3 There is to be a waste skip next to compound 2, this skip shall in no allow any discharge of waste/ fluids that may cause soil contamination, if there is a potential for inadvertent discharge the skip shall be placed on a non-permeable edged surface to contain any discharge.

3.10 Responsibilities and delegated powers

3.10.1 The project management will be responsible for contacting the local planning authority or project arboriculturalist should any issue be raised relating to the trees effected by the pipeline installation.

3.10.2 It will be the responsibility of the project manager to ensure that all planning conditions attached to the planning consent are adhered to and that an auditable regime in regards to tree protection is adopted on site.

3.10.3 The contracts manger will be responsible to the project arboriculturalist on all tree related matters, in the first instance where construction is halted for tree protection. Should there be no line of communication then the Local Authority tree officer will be contacted. In the absence of any advice or supervision, all work must cease until relevant permissions are gained.

3.10.4 If further pruning works are required at any time then the contracts manager will request permission from the Local Planning Authority through their project arboriculturalist and all works must be carried out to the relevant specification.

3.10.5 The contracts manger will ensure the project is sequenced is appropriately to ensure that no damage occurs to trees during any phase of the project, all protection measures will remain in position until completion of all construction work.

3.10.6 All tree protection measures will remain in position and will have regular monitoring by a responsible and designated person on site. An auditable system of management of tree protection measures must be made available for scrutiny by the Local Planning Authority should they request it.

3.11 Services

3.11.1 All services are to connect to those existing.

4.0 Terms of Reference

4.1 Reference Documents:

- BS5837:2012 ‘Trees in relation to design, demolition and construction – Recommendations’
- BS3998:2010 ‘Tree work – Recommendations’

4.2 Document supplied by the client:

1 HL - PL001 -PL002 - Site and Location Plan.dxf
Hickman's Lane - 3D
Hickmans Lane Pav - PL005
HL - PL001 -PL002 - Site and Location Plan
HL - T002
PL001 - Site Location Plan
PL002 - Site Plan
PSC019492
T002

5.0 Statutory Protection

5.1 A check for any statutory protection for trees included within this report has not been undertaken therefore the absence of any protection such as Tree Preservation Orders or Conservation Areas shall be confirmed before any works is undertaken that will affect any part of any tree.

6.0 Conclusion

- 6.1 Tree protection measures in this **Arboricultural Method Statement** and the accompanying **Tree Protection Plans** are deemed appropriate and will offer the best solution with minimal arboricultural impact.
- 6.3 The recommended protection and working methods should be adhered to by all persons at all times and if there is need to deviate from this specification then advice from the project arboriculturalist shall be sought and an amended method statement may need to be issued.
- 6.4 If all the above measures are undertaken then the necessary work at will have the minimal effect on the retained local treescape, and with the proposed tree planting there will be an enhanced tree cover as trees mature.



APPENDIX



Appendix 1: Tree Schedule and Arboricultural Protection Schedule

Tree Schedule

Tree ID	Common Name/ Latin Name	Category/ Subcategory	Life Expectancy	Maturity	Height (m)	Stem(s) diameter (DBH)	Root Protection Area (m²) / Circle Radius (m)	Spread (m) N,E,S,W	Height and Direction of first significant branch (m)	Crown Height (m) N,E,S,W	Physiological Condition	Physical Condition	General Observations	Management Recommendations
T1	Hornbeam/ <i>Carpinus betulus</i>	A / 2 Mainly landscape qualities	>40	Mature	17	550	136.9/6.6	6,5,6,6	S 2	2,2,2,2	Fair	Fair	2m crown height over car park entrance	Crown lift to required height on northeast
T2	Common Beech/ <i>Fagus sylvatica</i>	B / 2 Mainly landscape qualities,	>40	Mature	17	500	113.1/6	6,6,7,6	S 2	2,2,1.5, 1.5	Fair	Fair	Low crown over driveway, major damage to lower trunk with early occlusion	Crown lift to required height
T3	Common Oak/ <i>Quercus robur</i>	A / 2 Mainly landscape qualities	>40	Mature	17	610	168.4/7.3	7,7,6,7	S 2.5	2,2,2,2	Fair	Fair	Deadwood throughout crown	No works
T4	Common Oak/ <i>Quercus robur</i>	A / 2 Mainly landscape qualities	>40	Early Mature	15	420	79.8/5	7,6,7,6	N 2.5	2,3,2,3	Fair	Fair	Low crown over car park, deadwood in crown	No works
T5	Common Beech/ <i>Fagus sylvatica</i>	A / 2 Mainly landscape qualities	>40	Early Mature	11	410	76.1/4.9	5,5,5,4	N 2	1.5,2,1, 1.5	Fair	Fair	No comment	No works
T6	Cherry/ <i>Prunus .sp</i>	B / 2 Mainly landscape qualities,	>40	Mature	6	240	26.1/2.9	4,4,4,4	N 7.5	3,2,2,2	Fair	Fair	Minor deadwood in crown	No works
T7	Cockspear Thorn/ <i>Crataegus crus- galli</i>	B / 2 Mainly landscape qualities,	>40	Mature	6	300	40.7/3.6	3,3,3,2	S 2	2,2,2,2	Fair	Fair	Major Ivy on trunk and into crown	No works

Tree ID	Common Name/ Latin Name	Category/ Subcategory	Life Expectancy	Maturity	Height (m)	Stem(s) diameter (DBH)	Root Protection Area (m ²) / Circle Radius (m)	Spread (m) N;E;S;W	Height and Direction of first significant branch (m)	Crown Height (m) N;E;S;W	Physiological Condition	Physical Condition	General Observations	Management Recommendations
T8	Common Oak/ <i>Quercus robur</i>	A / 1 Mainly arboricultural values, 2 Mainly landscape qualities	>40	Mature	20	1020	470.7/12.2	8,6,6,6	N 4.5	4,3,3,3	Fair	Fair	No comment	No works
T9	Common Oak/ <i>Quercus robur</i>	A / 1 Mainly arboricultural values, 2 Mainly landscape qualities	>40	Mature	20	710	228.1/8.5	9,3,8,5	S 4	3,5,5,5	Fair	Fair	No comment	No works
T10	Common Oak/ <i>Quercus robur</i>	A / 1 Mainly arboricultural values, 2 Mainly landscape qualities	>40	Mature	22	1090	537.6/13.1	10,6,8,1.1	W 5	3,3,5,2	Fair	Fair	No comment	No works
T11	Common Oak/ <i>Quercus robur</i>	A / 1 Mainly arboricultural values, 2 Mainly landscape qualities	>40	Mature	17	950	408.3/11.4	9,9,9,4	N 4.5	3,2,2,4	Fair	Fair	No comment	No works
T12	Common Oak/ <i>Quercus robur</i>	A / 1 Mainly arboricultural values, 2 Mainly landscape qualities	>40	Mature	18	1190	640.7/14.3	10,7,10,8	N 4.5	4,3,2,3	Fair	Fair	Major deadwood in crown	No works

Tree ID	Common Name/ Latin Name	Category/ Subcategory	Life Expectancy	Maturity	Height (m)	Stem(s) diameter (DBH)	Root Protection Area (m ²) / Circle Radius (m)	Spread (m) N;E;S;W	Height and Direction of first significant branch (m)	Crown Height (m) N;E;S;W	Physiological Condition	Physical Condition	General Observations	Management Recommendations
T13	Common Lime/ <i>Tilia x europaea</i>	A / 1 Mainly arboricultural values, 2 Mainly landscape qualities	>40	Mature	17	520	122.3/6.2	4,4,4,4	E 2.5	1,1,1,1	Fair	Fair	No comment	No works

= Dimensions estimated

T = Tree

TG = Tree Group/ Hedgerow

Tree Protection schedule

Tree ID	Common Name/ Latin Name	Category/ Subcategory	Impact from the development	Mitigation required
T1	Hornbeam/ <i>Carpinus betulus</i>	A / 2 Mainly landscape qualities	- Potential crown conflicts on carpark/ site access - Potential RPA incursion from operations	- Prune crown to lift clearance over driveway to 5m to driveway edge - Implementation of Construction Exclusion Zone (CEZ) - Protection from development operations with barrier fencing
T2	Common Beech/ <i>Fagus sylvatica</i>	B / 2 Mainly landscape qualities,	- Potential crown conflicts on carpark/ site access - Potential RPA incursion from operations	- Prune crown to lift clearance over driveway to 5m to driveway edge - Implementation of Construction Exclusion Zone (CEZ) - Protection from development operations with barrier fencing
T3	Common Oak/ <i>Quercus robur</i>	A / 2 Mainly landscape qualities	Tree outside of operations area	Implementation of Construction Exclusion Zone (CEZ)
T4	Common Oak/ <i>Quercus robur</i>	A / 2 Mainly landscape qualities	- Potential crown conflicts on carpark/ site access - Potential RPA incursion from operations	- Implementation of Construction Exclusion Zone (CEZ) - Protection from development operations with barrier fencing
T5	Common Beech/ <i>Fagus sylvatica</i>	A / 2 Mainly landscape qualities	- Potential crown conflicts on site compound - Potential RPA incursion from operations/ storage	- Implementation of Construction Exclusion Zone (CEZ) - Protection from development operations with barrier fencing - Prune crown to lift clearance over carpark to 5m to carpark edge

Tree ID	Common Name/ Latin Name	Category/ Subcategory	Impact from the development	Mitigation required
T6	Cherry/ <i>Prunus .sp</i>	B / 2 Mainly landscape qualities,	Tree outside of operations area	Implementation of Construction Exclusion Zone (CEZ)
#T7	Cockspear Thorn/ <i>Crataegus crus-galli</i>	B / 2 Mainly landscape qualities,	- Potential crown conflicts on site compounds - Potential RPA incursion from operations/ storage	- Implementation of Construction Exclusion Zone (CEZ) - Protection from development operations with barrier fencing
T8	Common Oak/ <i>Quercus robur</i>	A / 1 Mainly arboricultural values, 2 Mainly landscape qualities	- Tree adjacent to operations area - Potential RPA incursion from operations	- Implementation of Construction Exclusion Zone (CEZ) - Protection from development operations with barrier fencing
T9	Common Oak/ <i>Quercus robur</i>	A / 1 Mainly arboricultural values, 2 Mainly landscape qualities	- Tree adjacent to operations area - Potential RPA incursion from operations - Play area within RPA	- Implementation of Construction Exclusion Zone (CEZ) - Protection from development operations with barrier fencing - Modified building method for play area surfacing - Hand dug post holes for fencing - All operations within RPA under arboricultural supervision
T10	Common Oak/ <i>Quercus robur</i>	A / 1 Mainly arboricultural values, 2 Mainly landscape qualities	- Tree adjacent to operations area - Potential RPA incursion from operations - Play area within RPA - Fence post to be erected within RPA	- Implementation of Construction Exclusion Zone (CEZ) - Protection from development operations with barrier fencing - Modified building method for play area surfacing - Hand dig post holes for fencing - Fence post to use a system to stop cement elements leaching into soil - All operations within RPA under arboricultural supervision
T11	Common Oak/ <i>Quercus robur</i>	A / 1 Mainly arboricultural values, 2 Mainly landscape qualities	Tree in proximity to operations area	Implementation of Construction Exclusion Zone (CEZ)
T12	Common Oak/ <i>Quercus robur</i>	A / 1 Mainly arboricultural values, 2 Mainly landscape qualities	Tree in proximity to operations area	Implementation of Construction Exclusion Zone (CEZ)

Tree ID	Common Name/ Latin Name	Category/ Subcategory	Impact from the development	Mitigation required
T13	Common Lime/ <i>Tilia × europaea</i>	A / 1 Mainly arboricultural values, 2 Mainly landscape qualities	Tree in proximity to operations area	Implementation of Construction Exclusion Zone (CEZ)

= Dimensions estimated

T = Tree

TG = Tree Group/ Hedgerow



Appendix 2: Key Terms and Abbreviations

Arboricultural Implication Assessment (AIA):

An assessment of the arboricultural impact of a development.

Arboricultural Method Statement (AMS):

Contains references to tree protection information.

Arboriculturalist:

Person who has relevant education and training, gained expertise in the field of trees.

British Standard 5837: 2012 Trees in Relation to Design, Demolition, and Construction - Recommendations (BS 5837):

British Standard document outlining best practice and guidelines for the impact of arboriculture on the construction industry.

British Standard 3998 2012 Tree Work Recommendations (BS 3998):

British Standard document outlining best practice for Tree Works.

Competent Person:

Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached.

Construction:

Site Based operations with the potential to affect existing trees.

Construction Exclusion Zone:

Area based on the root protection area from which access is prohibited for the extent of the project.

Root Protection Area (RPA):

Layout design tool indicating the minimum area around a tree deemed sufficient to protect roots in order to maintain the trees health and viability.

Service(s):

Any above or belowground structure or apparatus required for utility provision e.g. drainage, gas supply, water, ground source heat pumps, soak-a-ways, CCTV, telecommunications.

Stem:

Principle above ground structural component(s) of a tree that supports the branches/crown.

Tree Protection Plan:

Scale drawing, informed by descriptive text where necessary, based upon the finalised proposals, showing the trees for retention and illustrating the tree and landscape protection measures.

Appendix 3: Tree Protection

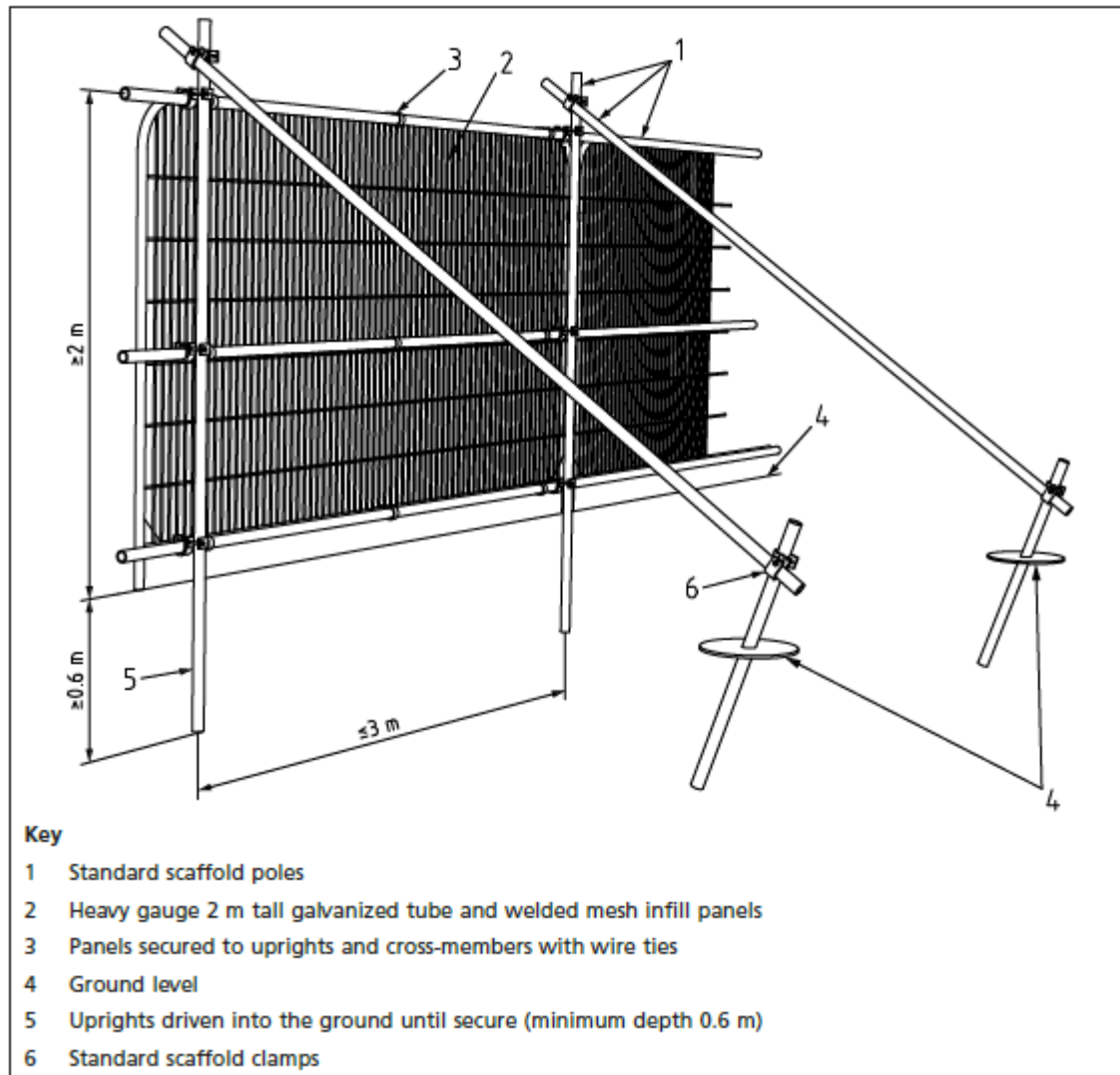
BARRIERS/FENCING

All barriers/fencing agreed for the development must be installed prior to any works starting on site and ideally in conjunction with the erection of the site security measures. All barriers/fencing must stay in place until the all works on site are finished or as agreed by the consultant arboriculturalist and/or planning authority.

Default Specification:

The default specification consists of a vertical and horizontal scaffold framework that is well braced to resist impacts from vehicles and construction site operations. The specification recommended in the current BS 5837 states the vertical tube should be spaced at maximum intervals of 3m and should be driven securely into the ground. Once in place weld mesh or similar (Heras panels) will need to be securely fixed to the scaffold framework.

Figure 2 Default specification for protective barrier

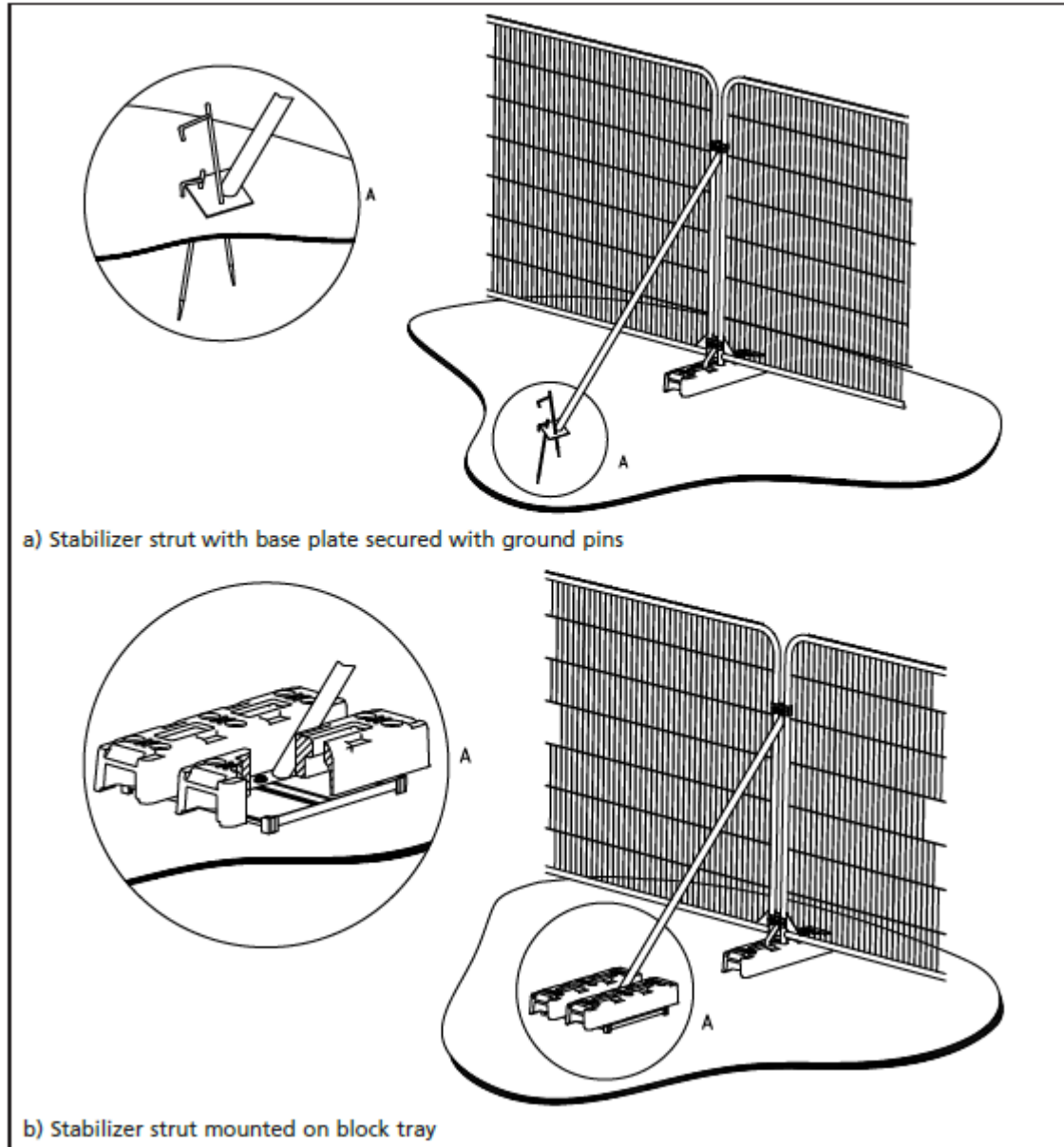


Alternative Specification:

Where the site circumstances and associated risk of damaging incursion into the RPA do not necessitate the default level of protection, an alternative specification should be prepared by the project arboriculturalist and, where relevant, agreed with the local planning authority. For example, 2 m tall welded mesh panels on rubber or concrete feet might provide an adequate level of protection from cars, vans, pedestrians and manually operated

plant. In such cases, the fence panels should be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers should be at least 1 m and should be uniform throughout the fence. The panels should be supported on the inner side by stabilizer struts, which should normally be attached to a base plate secured with ground pins (Figure 3a). Where the fencing is to be erected on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts should be mounted on a block tray (Figure 3b).

Figure 3 Examples of above-ground stabilizing systems



Signage:

All tree protection fencing is required to have signs attached at 4-6m intervals. Below are examples of the required signage to be attached to the tree protection barrier.



Above: Three examples of tree protection fencing signage ranging from a simple sign (*left*) attached with zip ties to more in-depth signs (*middle & right*) explaining the limitations and legal protection status of the trees being protected.

Ground Protection

Ground protection is required during the development process to protect the retained trees, Root Protection Areas from construction operations. This can be where permanent working space is needed or temporary access is justified within the RPA, which would involve setting back the tree protection barrier. Where possible existing hard surfaces within RPAs need to be utilised or retained for ground protection rather than being removed during demolition operations. Where tree protection barriers are set back from the perimeter of the RPA exclusion zone exposing unmade ground to construction damage, new temporary ground protection will be installed prior to construction starting. Below are some general specifications for ground protection based on the type and weight of traffic.

Pedestrian Access

For pedestrian traffic **ONLY** a single thickness of scaffold board (40mm) or wooden boarding is to be laid on a minimum of 100mm deep woodchip, which is laid upon a geotextile membrane.

Small Plant Up To 2 Tonne (2000kg)

For small plant machinery with a gross weight of up to 2 tonne (2000kg), interlinking polyethylene or aluminium track way needs to be laid on a minimum of 150mm deep woodchip which is laid upon a geotextile membrane.

Regular Traffic and Plant Up To 3.5 Tonne (3500kg)

Where heavy traffic is expected from pedestrian to vehicular with a gross weight of up to 3.5tonne, interlinking aluminium or metal track way must be used over a minimum layer of 200mm deep woodchip, which is laid upon a geotextile membrane.

Appendix 4: Working in Root Protection Areas

Prevention of detrimental impact to RPAs: In most instances the RPA will need to be completely isolated from construction and development operations using tree protection barriers and ground protection. This is the most reliable way to ensure the preservation of the RPA and retain it completely undisturbed. The RPAs of the trees to be retained have been shown diagrammatically on the Tree Protection Plan along with accurate location of any tree protection measures.

However some operations will require specific works to be carried out in the RPA and anyone entering the RPA must follow the guidelines below to ensure the minimal amount of disturbance is afforded at all times. Any operations in the RPA needs to accord to the principle that the tree and soil structure takes priority. This will help retain and preserve healthy, valuable trees in the landscape and development but also prevent costly and potentially dangerous situations from occurring during and after the works has been completed.

The two main instances where these guidelines for entering and working must be followed are:

1. **Removal of existing surfaces/structures and replacing those with new surfaces, structures, landscaping.**
2. **Preparation and installation of new surfacing, structures, landscapes.**

Most of the other operations can utilise some form of ground protection to prevent or reduce the impact on the RPA.

Excavations within the RPA and root retention: Any excavations carried out within the RPA must be done so by hand using spades, forks and trowels, taking care to limit the amount of damage caused to the outer bark and woody structure of the roots. The fork should be used to loosen the soil in the excavation area and help locate any substantial roots (25mm- 100mm diameter). A trowel can then be used to remove the soil from around the roots taking care as to not damage the bark.

Once the roots have been exposed, those that are to be removed (any roots up to 25mm in diameter) can be done using sharp secateurs or a handsaw. Any roots above 25mm in diameter, where possible, need to be retained and protected from drying out and temperature extremes by wrapping or covering them in a suitable material e.g. hessian, spare membrane material, plastic. This wrapping needs to be removed before any back filling takes place. Some roots over larger areas of excavation can be displaced where possible to bend round any new structures or pipework whilst remaining intact. Roots with a diameter of 25-100mm should only be cut in exceptional circumstances and after consultation. Roots above 100mm should only be cut after consultation with the appointed arboriculturalist. Alternatively using compressed to displace the soil is always preferable and more affective especially over larger areas or to remove soil quicker while keeping roots intact. This may be part of the specification and would be included within the Arboricultural Method Statement.

Arboricultural Supervision: All works being carried out within the RPA must be carried out with great care and be supervised by a qualified arboriculturalist to ensure that the contractors understand the need to minimize any detrimental impact on the retained root system. This is done through properly briefing before the work commences along with regular site inspections and signing the work off when completed.

Removal and Demolition of Structures and Surfaces: As with all operations carried out within the RPA exceptional care must be taken to ensure any detrimental impact on the roots and soil structure is kept to an absolute minimum. Where any structure is being demolished (above or below ground) within the RPA additional barriers is recommended to protect the remaining RPA, above ground stem and branch structures. Where there are no hard surfaces or they are due to be removed from within the RPA, plant machinery should operate from outside the RPA providing there is a long enough reach. Where this is unfeasible ground protection must be used to prevent soil compaction from plant machinery conducting the demolition operations. Where possible any suitable load bearing hard surface already existing within the RPA should be retained during demolition. This prevents any additional damage to the underlying soil structure by allowing the surface to support the plant machinery and falling material. Where the hard surface in the RPA is due to be removed, where possible it should remain in-situ for as long as possible. Before any demolition process takes place it should be determined whether any access facilitation pruning is required to provide clearance and prevent physical damage between the plant machinery and tree structures. In some situations working space can be provided by temporarily tying back tree branches. Both tying and pruning need to be specified by a qualified arboriculturalist and ideally follow the guidelines set out in BS 3998 2012 Tree Work Recommendations.

Debris to be removed from within the RPA must be done so across existing hard surface or temporary ground protection so as to prevent compaction of the soil structure. If possible the material can also be lifted out of the RPA using suitable machinery preferable with a long reach. Where trees are standing adjacent to structures that need to be removed, the demolition should be undertaken inwards within the footprint of the existing building, often referred to as **‘top down, pull back’**. Where underground structures are present within RPAs and will become redundant it is preferable to leave the structures in situ rather than remove them, which could cause considerable root damage. Where hard surface is schedule for removal within RPAs care must be taken to not disturb the root structure that could be present underneath. Hand held tools or carefully

supervised machine work could be utilised to remove the surface. This should be working backwards away from the retained trees and not moving over the newly exposed ground.

New Structure Guidelines: All new structures being proposed in the RPA have the potential to cause damage to root structures and alter the ground conditions. The age and maturity of the trees will affect the viability and type of incursion into the RPA available. Younger trees are more robust and adaptable to changes in their environment where as mature and Veteran trees tolerate very little disturbance to their soil and root structures. When constructing inside RPAs the goal is to minimise the amount of soil disturbance/compaction and retain a good level of gaseous and water exchange.

Constructing above ground using pile and beam construction limits the amount of disturbance to the soil and root structure which reduces the adverse effect on physiological processes. Most solutions need to be well thought out and are a combined effort and communication of ideas between the engineer, architect and arboriculturalist.

Light Weight Structures e.g. Sheds, Small Storage: Small structures with relatively small foundations that spread load bearing can be constructed straight onto the surface without the need for any excavations. A certain amount of ground levelling is permitted but only to the top 50mm of the soil to fill in any undulations and provide a level surface. Anything above the 50mm will need to be raised up above the existing ground level to achieve the desired surface. Any ground works required must be carried out with great care so as not to damage retained tree roots. Small roots below 25mm can be severed with a sharp saw or secateurs. A membrane will be required between the ground and the bottom of the foundation to prevent leeching of potentially harmful chemicals materials e.g. cement into the soil. Frames can be constructed and fixed onto the ground using stakes from which the foundation can be produced. But there are recommendations for the amount of RPA that can be covered.

New permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA.

Fencing, Posts, and Small Piers: Generally, the construction of fencing that doesn’t require a strip or wall foundation can be installed with having very little impact on the soil and root structure. It is acceptable to dig small holes up to 300mm x 300mm for the installations of posts or piers so long as the digging is carried out carefully and by hand as directed in Appendix. 5.4 Or preferably by compressed air. Any roots up to 25mm in diameter may be severed using a sharp saw or secateurs, if possible the hole being dug could be widened or moved to enable retaining the root(s) whole. Any roots 25mm+ should be retained where possible but may be severed after consulting the appointed arborist; further guidelines have been explained above. Ideally holes should be dug as far away from the main stem as possible where larger diameter roots are less likely to be encountered and less damage will occur. When installing posts or piers in the RPA the smallest feasible hole possible must be used when excavating for the foundations of the posts to reduce the impact to the RPA.

Buildings, Walls, Bridges on New Foundations: Most conventional foundations are done by producing a strip of concrete dug into a trench in the ground. This is not acceptable practice in RPA’s with the potential to cause large amounts of damage to root systems causing decline in the trees health, making the tree structurally unsound. Small diameter piles supporting beams or cast flooring are permitted within the RPA’s as they will reduce the potential damage to root structure. But before any piling is carried out suitable ground protection must be put down to prevent soil compaction from the piling rig leaving gaps in the ground protection for the pile locations. Hand excavations need to be carried out in the location for each pile down to a depth of 700mm to establish whether there are any substantial roots in the pile location. If substantial roots are discovered (25mm+) the appointed arborist will make a decision whether the root can be severed or if the pile location has to be moved. The supporting beams connecting to the piles cannot be lower than the existing ground level resulting in the need for further excavations. The beams should be constructed off site allowing them to be lowered in to position without the need to be casted in the RPA.

Services: New services and service runs should where possible be sited outside the RPA of retained trees to prevent unnecessary damage to root structures. Sometimes there is the need to upgrade existing services, which requires excavation, this can cause extensive damage and render the trees structurally unsound. This should be a last resort and all decisions need to be in conjunction with the consulting arborist.

New Surfaces Guidelines: The installation of new surfaces within the RPA can be very damaging to the root structure and soil conditions. Excavations required for the laying of new sub bases and level grading could both cause extensive root damage to retained trees. Excessive soil level alterations and new surfaces can change the condition of the soil and the environment the roots survive in, altering moisture content and the ability for gaseous exchange. Ideally any new surface needs to be permeable to allow moisture transfer and allow the continuation of gaseous exchange, be constructed above existing ground levels and load bearing where the load is spread evenly over the surface to help prevent compaction of the soil. Having these qualities helps enable structures and surfaces to be constructed in RPA while having continued successful retention of valuable trees. Younger trees are more adaptable to changes and construction of new surfaces within the RPA. They are able to cope with the pressures whereas mature, and veteran trees often severely decline. Mature and veteran trees should not have any new surfaces installed in their RPAs, as their ability to cope with the change is poor.

Providing Sufficient Grading for New Surfaces: Determining the depth of roots within any soil and RPA is difficult and can only be achieved by careful excavation of the topsoil. All surfaces proposed inside the RPA need to ideally be of a no dig construction which prohibits excavation, but this is often unfeasible as the ground is usually undulating. Limited ground movement and excavations are permitted if they are carried out with care to prevent any damage to the retained root systems. Ideally the ground should be raised up to provide a suitable level surface using a granular aggregate like angular stone or sharp sand. If done under supervision it is acceptable to allow the removal of the topsoil and turf to a depth of no more than 50mm, which normally doesn’t, damage the roots. However if there are a large number of surface roots already showing prior to any soil removal there can be no excavation and the ground level must alternatively be raised. If during the grading of the soil roots at a diameter greater than 25mm are encountered the consultant arborist will need to make an evaluation as to whether the damage is preventable and or acceptable before proceeding. At no point can the graded surface be compacted to provide a finish as this will disrupt the soil structure and cause a damaging effect of the roots within it. The final level of the proposed surface must also be considered and discussed prior to starting any works to establish whether the proposal is practical and useable once completed.

Installing Base and Top Layers: Once a suitably level base has been created without damaging the retained roots, a load spreading construction is required to prevent the compaction of the soil structure beneath. Normally this can be achieved by installing a cellular confinement system that is filled with an angular no fines aggregate to help support and distribute the calculated load over a wider area and limiting soil compaction. This enables a finishing layer of permeable tarmac, block pavers, grasscrete, or gravel to be laid on top depending on the desired usage of the surface. Alternative options are to use preformed concrete slabs that can be laid directly onto the surface but they cannot be laid on top of any form of strip foundation which has a high potential for root damage.

Retention of Existing Surfaces: Where possible it is preferable to install new surfaces over those already existing, limiting the potential damage to any underlying root system. This can provide a suitable sub base without the need for excavation and without the need for special supervision and precautions. Care will only be needed if roots are lifting or protruding through the existing surface.

Appendix 5: Temporary Ground Protection

5.1 Temporary Ground Protection Method and Specification

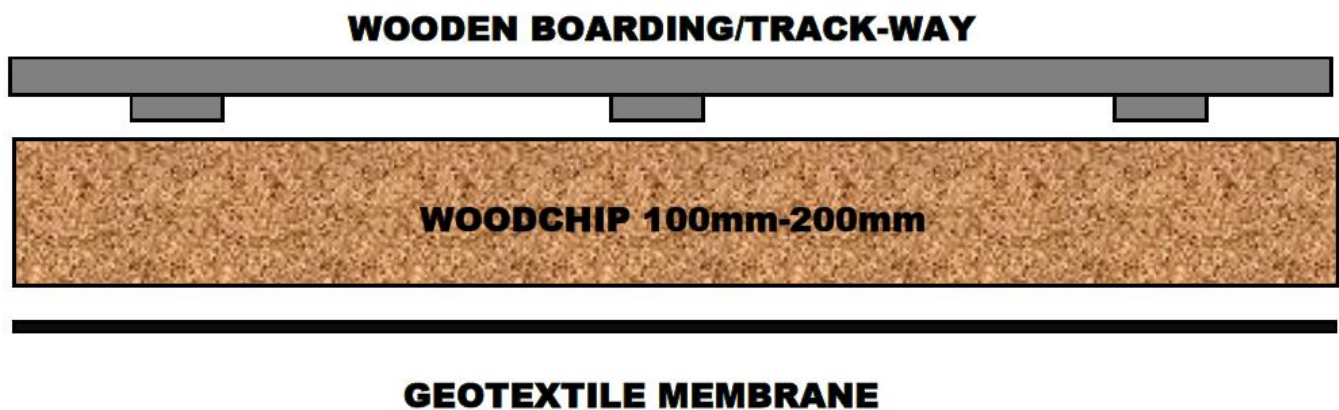
BS5837 recognizes that incursions in to the construction inclusion zones will be required at times during some developments.

The objective is to minimize soil compaction

Example 1 - *for pedestrian movements only, a single thickness of scaffold boards places either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g.) 100mm depth of woodchip), laid on to a geotextile membrane.*

Example 2 - *For pedestrian-operated plant up to a gross weight of 2 t, proprietary inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150mm depth of woodchip), laid onto a geotextile membrane;*

Example 3 - *For wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.*



The Ground Guards temporary road system can be used on construction sites to protect virgin ground from erosion and damage by construction vehicles. Ground-Guards are usually installed as a construction 'haul' roadway consisting of a parallel track of 2.4m x 1.2m panels with a 1.2m space in between. Where a temporary 'haul' roadway must pass near to trees, the following extra precautions must be taken in order to spread the loading applied to the track way. If Ground Guards are unavailable then a twin overlapping surface of 12mm plyboard may be used instead, this will be needed for both layers within the make up.

1. Edge rails of 200 x 50mm sawn timber or un-treated sleepers 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 either 50x50x500mm timber stakes or 500mm steel pins at 1.5m spacings.
2. A layer of geotextile membrane should then be laid over the area of ground to have the track way installed upon it.
3. A base layer of Ground Guards/twin sheets of 12mm ply should be laid over the top of the geotextile membrane at least three boards wide between the installed timber edging.
4. 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.

5. The second layer of Ground Guard/twin sheets of 12mm ply track way can then be laid over the top of the wood chippings.



Cellular confinement system for temporary site access (preferred method)- Use of Core TRP System (Core Tree Root Protection System).

The use of a product such as Core TRP System is used for areas that require temporary ground protection and then later may be used as a subbase for a porous wearing course. This reduces the likelihood of soil damage during removal and reinstallation. The temporary ground solution "provides guaranteed protection for the roots of mature trees from pedestrian and vehicular traffic". Further information available at - <https://www.corelp.co.uk/core-tree-root-protection/>

The system shall be installed in accordance with the manufacturers guidelines.

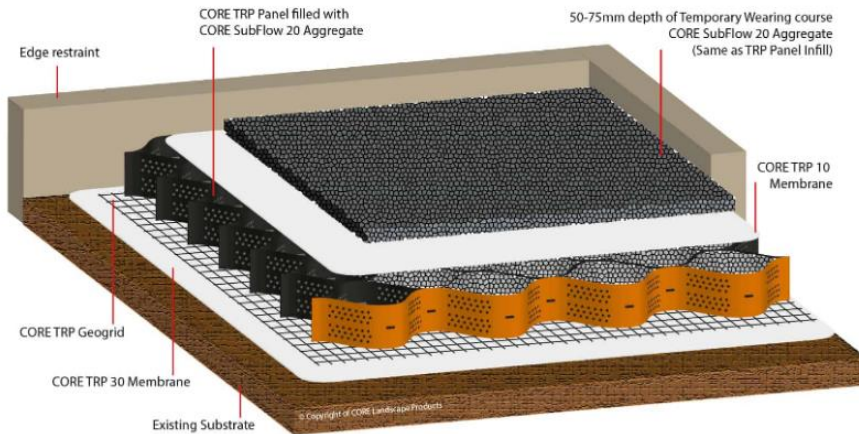
The installation of this ground covering shall use a method that ensures that no plant or equipment comes in direct contact with the soil of RPA. This shall be undertaken by installing the trackway starting at the front of the property and laying small sections advancing along the completed ground covering as it is installed. This method will ensure that no operations need to be undertaken within unprotected RPAs, the trackway will go no closer than 500mm from any trunk buttress root.

The system shall be installed as per the manufacturers recommendations, and as outlined below and installed as per section *Installation of 'no-dig' special surfacing within or close to the RPA of retained trees* of this report but with a sacrificial temporary wearing course that will on completion of the project be removed and the final top surfacing installed.

CORE TREE ROOT PROTECTION

APN12 Compliant Tree Root Protection Construction

TEMPORARY SITE ACCESS



Appendix 6: Installation of permanent ‘no-dig’ special surfacing

Installation of ‘No-dig’ special surfacing within or close to the RPA of retained trees

Where the proposed drive/path way is located within RPA then a modified surfacing shall be used to reduce soil compaction. Soil compaction is A major contributing factor in post development tree loss and shall be mitigated.

The no-dig surface is a tree root protection system combination of; a 3-dimensional cellular confinement system, separation and filter geotextiles and a specific grade of granular material. This document should be read in conjunction with the appropriate section drawing for the specified system to ensure the correct installation is achieved. See CORE Landscape Products at <https://www.corelp.co.uk/core-tree-root-protection/>. for tree related systems and installation guides.

A full specification and installation guidance shall be sought prior to development; the requirements for the drive/pathway should be suitable for the usage type or greater. The final surfacing shall be suitable and as recommended by the 3-dimensional cellular confinement system manufacturer. If the temporary ground protection has been formed of a cellular confinement system see - *Cellular confinement system for temporary site access Appendix 5*, then the permanent hard surfacing should be installed as per the manufactures guidance. This typically involves the remove of the sacrificial layer and then installation of the final surface this surfacing type shall be in accordance with the manufacturers guidelines and shall be porous. Typical porous surfacing is; gravel grid / porous paver, grass reenrolment grid, porous block paving and porous asphalt/ macadam. Further advice can be found at <https://www.corelp.co.uk/core-tree-root-protection>.

End of report