Arboricultural Method Statement

Land at Redhills, Exeter, Devon

10 September 2024

Ecology
Arboriculture
Land Management

Quality Assurance

Report Title	Arboricultural Method Statement
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Revision Record

Revision	Date	Author	Checked By	Approver	Summary of Changes
Final	29 April 2024	Matt Underwood BSc MArborA	Adam Earl BSc MArborA MCIEEM	Adam Earl BSc MArborA MCIEEM	N/A
1	10 September 2024	Matt Underwood BSc MArborA	Adam Earl BSc MArborA MCIEEM	Adam Earl BSc MArborA MCIEEM	Updated to reflect P23-1581_DE_14K Site Layout

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Site Details

Site Name and Location	Land at Redhills, Exeter, Devon
Central OS Grid Reference	SX 897 931
Client	Tilia Homes

Boundary

Contents

Appendices

1 Introduction

This Arboricultural Method Statement (AMS) for Land at Redhills, Exeter, Devon provides a methodology on how retained arboricultural features (and their rooting medium) will be protected during the construction process. The Method Statement was commissioned by Tilia Homes.

This method statement has been informed by an arboricultural survey undertaken by Matt Underwood BSc MArborA on the 14th February 2024. Details of those trees surveyed can be found in **Appendix 1**. The survey and method statement has been prepared in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations' based on information available at the time of writing.

The Method Statement includes the production of a Tree Protection Plan which can be found in **Appendix 2**.

This document should be retained on site as a reference document for the duration of the demolition and construction works. Failure to abide by this method statement could be considered a breach of planning and may result in enforcement action being taken by the local planning authority.

2 Arboricultural Method Statement

Section	Work Phase	Relevant Arboricultural Feature(s)	Protection Measure/Methodology	Responsibility
1	Enabling	See **Appendix 3**	**Initial Tree Works – Removals and Pruning** All works to be carried out in accordance with the works specified in **Appendix 3** and following BS3998:2010 'Tree Works – Recommendations'. No bonfires are permitted within 5m of the canopy of any retained tree. Ground level vegetation and tree stumps should be removed using powered hand tools e.g. brush cutter and stump grinder if it is to be undertaken in the root protection areas of retained trees. Stump grinding should not penetrate further than 100mm below ground level and plant machinery should not be used to scrape vegetation or remove stumps in the root protection areas of retained trees.	Contractor/ Arborist
2	Enabling	All retained trees and hedgerow	**Tree Protection Fencing (TPF)** All TPF should be installed in the locations as shown on the Tree Protection Plan in **Appendix 2** following completion of the initial tree works prior to the commencement of any groundworks, demolition or construction works on site. The specification for the TPF can be found in **Appendix 4**. Adequate signage denoting the importance of TPF should be affixed to the fencing. Example signage can be found in **Appendix 5**. The TPF will denote and form the boundary to the Construction Exclusion Zone (CEZ). Fencing to remain in place for duration of construction.	Contractor with sign off from project arboriculturalist.
3	Enabling	T3, T5, T8, G14, G15	**Temporary Ground Protection in Root Protection Areas (RPA)** Where the encroachment into the RPA will occur on unmade ground, temporary ground protection is required to prevent compaction of the rooting medium. The structural integrity of the ground protection is dependent on the likely loading requirements.	Contractor with sign off from project arboriculturalist.

			- *For pedestrian use* - a single thickness scaffold board placed either on top of a driven scaffold frame (forming a suspended walkway) or on top of a compression-resistant layer (100mm depth of woodchip) laid onto a geotextile membrane; - *For plant up to 2 tonnes* – proprietary inter-linked ground protection boards placed on top of compression resistant layer (150mm depth of woodchip) laid onto a geotextile membrane; - *For plant over 2 tonnes* – proprietary ground protection system or cast concrete slab that is able to accommodate likely loading requirements, as specified by the engineer with advice from the project arboriculturalist.	
4	Enabling	All retained trees and hedgerow	**Temporary Site Buildings and Materials Storage** - All buildings and materials shall be located outside of the CEZ as denoted by the TPF. - Harmful chemicals/materials should be stored on an impermeable membrane and at a sufficient distance from the CEZ so that any potential spillages will not enter the root protection areas of retained trees. - The location of site cabins and materials store should be agreed with the project arboriculturalist during the pre-commencement meeting.	Contractor with sign off from project arboriculturalist.
5	Construction	T1, T3	**Excavation in Root Protection Areas** - All excavation works within the RPAs should be undertaken under the supervision of the project arboriculturalist. - Where possible, excavation should be undertaken by hand. The project arboriculturalist may provide guidance on the use of light plant machinery where feasible to do so. - The project arboriculturalist will undertake root pruning and advise on any remedial measures if deemed necessary. All pruning shall be undertaken perpendicular to the root using sharp secateurs so to provide a clean cut and minimal wound area.	Contractor with supervision from project arboriculturalist.
6	Construction	H17	**Translocation of Retained Hedgerows** - Translocation must only occur during the winter months (October to March) when the trees are in their dormancy phase.	Contractor with supervision from project arboriculturalist.

			• The indicative transplant location is shown on the TPP, however the final location will be agreed on site with project arboriculturalist before works commence. • A planting trench shall be excavated before hedgerow is lifted. The project arboriculturalist will first assess the trees and specify the required width and depth. • The hedgerow will be pruned, either by mechanical flail or using hand tools, prior to translocation to ensure easier movement. • Translocation will be carried out in short sections. • Translocation of each section will be carried out as one continuous operation, ensuring the hedgerow is lifted and replanted in the shortest possible period of time to avoid root desiccation. • The hedgerow roots will be excavated to a depth greater than 60cm to minimise root damage. • The project arboriculturalist will undertake root pruning and advise on any remedial measures if deemed necessary. All pruning shall be undertaken perpendicular to the root using sharp secateurs so to provide a clean cut and minimal wound area. • Hedgerow will moved and replanted following BS8545:2014 'Tree: from nursery to independence in the landscape – Recommendations'. • Once translocated, the hedgerow will to be watered daily during the growing season for one year after transplanting, and then watered weekly during the growing season for a futher year. Further watering may be required during periods of drought.	
7	Construction	T3	**Installation of Services within Root Protection Areas** • The proposed scheme requires the installation of a drainage pipe within the root protection area of tree T3. • All services should be installed in accordance with NJUG Volume 4 'Guidelines for the planning, installation and maintenance of utilities in proximity to trees' and BS5837:2012. • Where possible, the services will be installed using trenchless techniques. The launch and reception pits will be located outside of the root protection areas. In order to avoid damage to roots by percussive boring techniques it is recommended that the depth of run should be below 600mm. • Where the span of the service route is minimal within the root protection area, the services could be installed by an open trench, dug either by hand or using an air	Contractor with supervision from project arboriculturalist.

			displacement system. This will allow for the retention of all major roots (those >25mm in diameter or forming a fibrous root mat). Any exposed roots should be wrapped in hessian cloth for protection and should not be left exposed out of the soil for more than 24 hours. Care should be taken when back filling, not to heavily compact the soil around the roots. • Excavation within the RPA of T3 will be carried out in accordance with **Section 5**.	
8	Construction	T1, T8, G14	**Construction of Pedestrian Walkways in Root Protection Areas** • No construction vehicles should be allowed passage into the unprotected portion of the root protection areas. • If construction vehicles require access into the root protection area, this should only occur on areas of temporary ground protection (as specified above). • The new permanent surface should be constructed above ground level. The existing surface vegetation should be removed using hand-held tools. Plant machinery must not be used to scrape the soil surface. • All large rocks/debris should be removed and any hollows filled with inert material e.g. angular stone or sharp sand. High spots should not be levelled through scraping or rolling as this can cause root severance or compaction of the rooting medium. • A non-woven geotextile membrane (Treetex or similar) should be laid out over the prepared area, overlaying edges and overlapping joins by a minimum of 300mm. • Traditional edging that requires excavation must be avoided. Non-invasive edge treatments e.g. pinned wooden sleepers, gabions or plastic/metal edging should be used. • The fill material should be laid within the edging as specified by a structural engineer. • Where the proposed surface level has to tie in with the existing, this shall occur outside of the root protection area as a level of excavation will be required. • Where the edges of the cellular confinement system are to be banked to meet existing levels, this should be done so using clean screened topsoil with a gradient no less than 1:3 to reduce the area of level change in the RPA. Imported top soil should not be piled around the stem or buttress of the tree.	Contractor with supervision from project arboriculturalist.
9	Landscape	All retained trees and hedgerow	**Fencing within Root Protection Areas**	Contractor

			• To be undertaken as final phase of development and will require access into the construction exclusion zone. • Fencing should be of a post and rail design with gravel boards installed above ground level. Fencing where trenching is required is prohibited. • The post holes shall be dug by hand and repositioned to accommodate any significant roots should they be encountered during excavation. • If concrete is required to set the posts, then the holes should be sleeved with an impermeable material to prevent chemical damage to roots from uncured cement. • Scaffold boards should be used to transport fencing materials across the RPA to prevent compaction of the rooting medium.	
10	Landscape	All retained trees and hedgerow	**Landscaping within Root Protection Areas** • To be undertaken as final phase of development. • The soft landscape proposals have not been finalised at the time of writing but is likely to include turfing and plant/shrub planting. • Where soil preparation is required, this should be done so by raking or light tilling. Use of rotavators is prohibited. • Where top soil is imported it should not increase the ground level by 100mm to prevent root suffocation. • Scaffold boards should be used to transport planting materials across the RPA to prevent compaction of the rooting medium. • All planting pits should be dug by hand to accommodate the root and prevent their damage/severance.	Contractor
11	All	All retained trees and hedgerow	**Unpredictable Tree Impacts** • If, during demolition and/or construction damage is inadvertently caused to the retained trees, the project arboriculturalist should be contacted immediately. The arboriculturalist will be able to assess the impact of the damage and prescribe remedial measures where necessary. • Inadvertent damage includes significant root severance (roots in excess of 25mm diameter or densely matted fibrous roots), direct strikes to tree stem/limb, chemical spillages in RPA and fire damage.	Contractor

12	All	All retained trees and hedgerow	**Site Monitoring**
			
			- The project arboriculturalist will undertake regular site visits during the construction phases of development to ensure that the arboricultural features on site are protected in accordance with this arboricultural method statement.
			- The visits should include but not be limited to:
			  - A pre-commencement meeting to discuss the tree protection methodology, the phasing of works and the location of contractor facilities and materials storage areas.
			  - A further pre-commencement meeting to certify the location and specification of the tree protection fencing (and other tree protection measures, if required).
			  - To supervise excavation in root protection area of T1 and T3.
			  - To supervise installation of drainage in root protection area of T3.
			  - To supervise installation of new surfacing in root protection area of T1, T8, and G14
			- In addition to the above, a monitoring regime should also be established by the project arboriculturalist with the frequency of visits discussed during the pre-commencement meeting and agreed with the local authority arboricultural officer. A fully auditable site monitoring log should be prepared following each visit, a copy of which should be retained on site and provided to the local authority arboricultural officer on request.
				Project arboriculturalist following appointment by contractor.

Appendix 1 – Tree Survey Schedule

Client: Tilia Homes
Site: Land at Redhills, Exeter

Tree Survey Schedule

Survey Date: 14.02.24
Surveyor: Matt Underwood BSc MArborA

Feature Number	Species	Height (m)	Stem Ø (mm)	Crown Spread (m)				Height above ground (m)		Life Stage	Physiological Condition	Structural Condition	Root Protection Area (m²)	Root Protection Radius (m)	Category	Suitable Useful Life Expectancy
				N	E	S	W	Crown	1st Sig. Branch							
T1	Pedunculate oak	14	850	7	7	7	7	3 Av	3 Av	Mature	Good	Good	326.7	10.2	A 1	40+
Comments	Open grown form.										**Management**	None at the time of survey.				
T2	Turkey oak	3.5	650 670	0.5	0.5	0.5	0.5	N/A	N/A	Mature	Fair	Good	452.2	12.0	C 1	10+
Comments	Crown removed. Reduced to 3.5m.										**Management**	None at the time of survey.				
T3	Pedunculate oak	13	1230	4	9	9	12	2.5 E	2.5 E	Late mature	Good	Fair	684.1	14.8	A 3	40+
Comments	High ecological value.										**Management**	None at the time of survey.				
T4	Turkey oak	3.5	880	0.5	0.5	0.5	0.5	N/A	N/A	Mature	Fair	Good	350.2	10.6	C 1	10+
Comments	Crown removed. Reduced to 3.5m.										**Management**	None at the time of survey.				
T5	Pedunculate oak	18	1200	9	11	11	11	3 Av	3 Av	Mature	Good	Good	651.1	14.4	A 1	40+
Comments	Open grown form.										**Management**	None at the time of survey.				
T6	Ash	10	350	4	4	4	4	2.5 Av	2.5 Av	Semi-mature	Good	Fair	55.4	4.2	C 1	30+
Comments	Multi-stemmed from base.										**Management**	None at the time of survey.				
T7	Pedunculate oak	11	800	6	4.5	4	4	3 Av	3 Av	Mature	Poor	Fair	289.4	9.6	U	<10
Comments	Crown predominantly dead.										**Management**	Reduce to 6m and retain as monolith.				
T8	Pedunculate oak	20	1100	10	10	10	10	2.5 Av	2.5 Av	Mature	Good	Good	547.1	13.2	A 3	40+
Comments	Open grown form.										**Management**	None at the time of survey.				
T9	Pedunculate oak	19	1100	9	6	9	6	2.5 Av	2.5 Av	Mature	Good	Good	547.1	13.2	A 2	40+
Comments	High ecological value.										**Management**	None at the time of survey.				
T10	Pedunculate oak	19	1100	9	6	9	6	2.5 Av	2.5 Av	Mature	Good	Good	547.1	13.2	A 2	40+
Comments	High ecological value.										**Management**	None at the time of survey.				
G11	Pedunculate oak	14	550 Av	7	7	7	7	0 W	1 W	Early mature to mature	Good	Good	136.8	6.6	B 2	40+
Comments	Linear tree group on field boundary.										**Management**	None at the time of survey.				
G12	Pedunculate oak	18	750 Av	9	9	9	9	0 W	1 W	Early mature to mature	Good	Good	254.3	9.0	B 2	40+
Comments	Linear tree group on field boundary.										**Management**	None at the time of survey.				

Key
T: Tree G: Group H: Hedgerow W: Woodland Av: Average
Est: Estimated Dimension Comb: Combined Stem Diameter

Feature Number	Species	Height (m)	Stem Ø (mm)	Crown Spread (m)				Height above ground (m)		Life Stage	Physiological Condition	Structural Condition	Root Protection Area (m²)	Root Protection Radius (m)	Category	Suitable Useful Life Expectancy
				N	E	S	W	Crown	1st Sig. Branch							
G13	Ash, Hawthorn, Pedunculate oak	Up to 13	Up to 500	6	6	6	6	0 N	1 N	Early mature	Good	Fair	113.0	6.0	B 2	40+
Comments	Linear tree group on field boundary.										**Management**	None at the time of survey.				
G14	Pedunculate oak, Holly, Hawthorn, Hazel, Blackthorn	Up to 14	Up to 500	5	5	5	5	0 S	1 S	Semi-mature to early mature	Good	Fair	113.0	6.0	B 2	40+
Comments	Linear tree group on field boundary.										**Management**	None at the time of survey.				
G15	Pedunculate oak, Holly, Hawthorn, Hazel, Blackthorn	Up to 14	Up to 500	5	5	5	5	0 S	1 S	Semi-mature to early mature	Good	Fair	113.0	6.0	B 2	40+
Comments	Linear tree group on field boundary.										**Management**	None at the time of survey.				
T16	Pedunculate oak	14	500	5	5	5	5	2 S	2 S	Mature	Poor	Fair	113.0	6.0	U	<10
Comments	Crown predominantly dead.										**Management**	Reduce to 6m and retain as monolith.				
H17	Holly, Hawthorn, Hazel, Field maple, Blackthorn	3	100 Av	1	1	1	1	0 Av	N/A	Mature	Good	Good	4.5	1.2	C 2	40+
Comments	Flail managed hedgerow.										**Management**	None at the time of survey.				
H18	Holly, Hawthorn, Hazel, Field maple, Blackthorn	3	100 Av	1	1	1	1	0 Av	N/A	Mature	Good	Good	4.5	1.2	C 2	40+
Comments	Flail managed hedgerow.										**Management**	None at the time of survey.				
H19	Holly, Hawthorn, Hazel, Field maple, Blackthorn	3	100 Av	1	1	1	1	0 Av	N/A	Mature	Good	Good	4.5	1.2	C 2	40+
Comments	Flail managed hedgerow.										**Management**	None at the time of survey.				
W20	Beech, Oak, Hawthorn, Hazel, Holly	Up to 21	Up to 600	7	7	7	7	0 N	1 N	Semi-mature to mature	Good	Good	162.8	7.2	B 2/3	40+
Comments	Mixed woodland. Canopy overhanging site.										**Management**	None at the time of survey.				
T21	Pedunculate oak	14	600	5	5	5	5	5 E	5 E	Early mature	Good	Good	162.8	7.2	B 1	40+

Key
T: Tree G: Group H: Hedgerow W: Woodland Av: Average
Est: Estimated Dimension Comb: Combined Stem Diameter

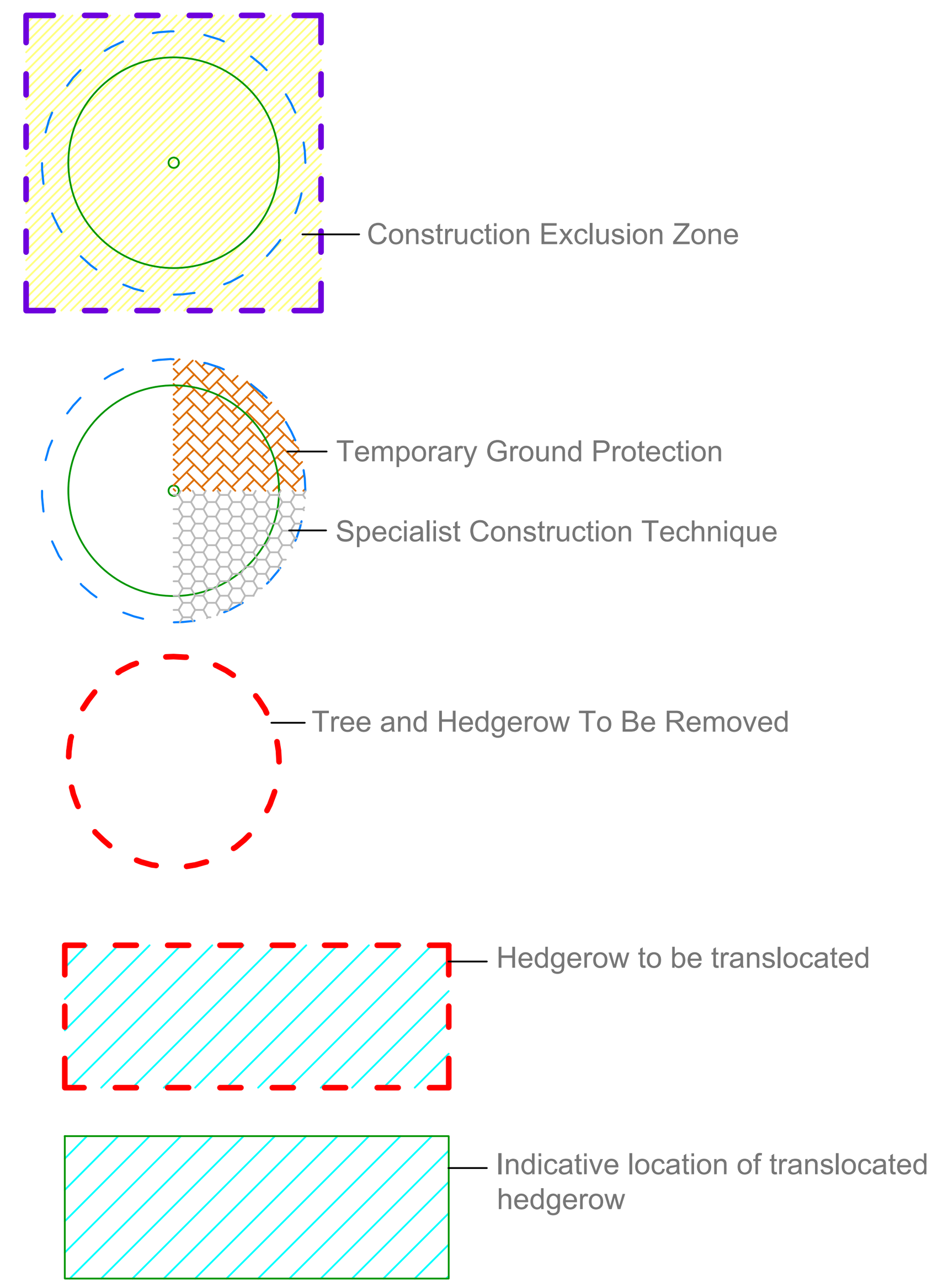
Tree Survey Schedule

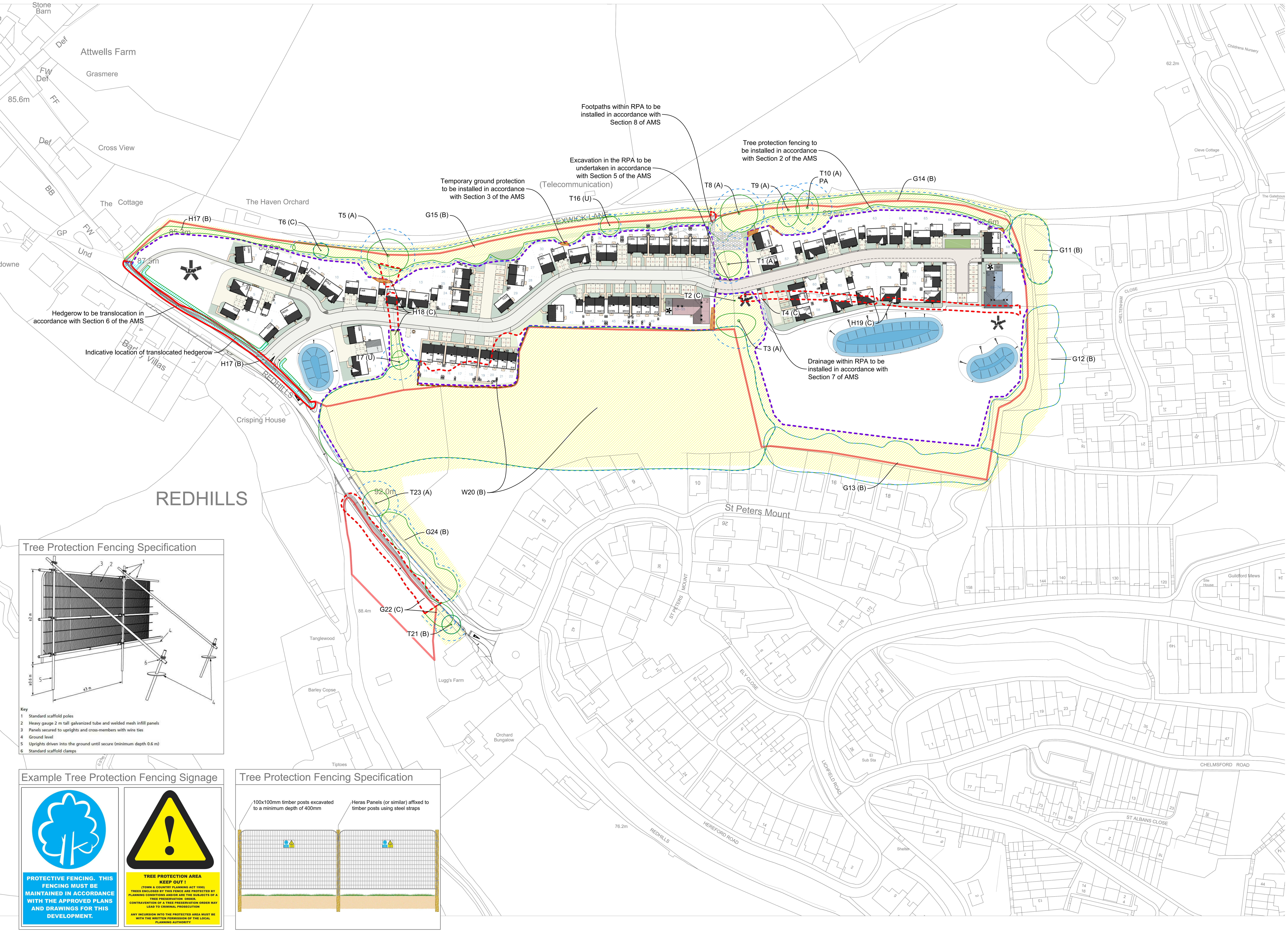
Feature Number	Species	Height (m)	Stem Ø (mm)	Crown Spread (m)				Height above ground (m)		Life Stage	Physiological Condition	Structural Condition	Root Protection Area (m²)	Root Protection Radius (m)	Category	Suitable Useful Life Expectancy
				N	E	S	W	Crown	1st Sig. Branch							
Comments	On road side bank. RPA restricted by level changes to east. Dimension estimated.										**Management**	None at the time of survey.				
G22	Ash, Sycamore, Pedunculate oak	15	400 Av	4	4	4	4	5 E	5 E	Semi-mature to early mature	Fair	Fair	72.3	4.8	C 2	30+
Comments	Linear group on road side bank. RPA restricted by level changes to east. Dimension estimated.										**Management**	None at the time of survey.				
T23	Pedunculate oak	15	800	7	7	7	7	5 W	5 W	Mature	Good	Good	289.4	9.6	A 1	40+
Comments	On road side bank. RPA restricted by level changes to west. Dimension estimated.										**Management**	None at the time of survey.				
G24	Pedunculate oak	14	500 Av	5.5	5.5	5.5	5.5	5 W	5 W	Early mature	Good	Good	113.0	6.0	B 2	40+
Comments	Linear group on road side bank. RPA restricted by level changes to west. Dimension estimated.										**Management**	None at the time of survey.				

Key
T: Tree G: Group H: Hedgerow W: Woodland Av: Average
Est: Estimated Dimension Comb: Combined Stem Diameter

Appendix 2 – Tree Protection Plan

Key:





Stone Barn
Attwells Farm
Grasmere
85.6m
Cross View
The Cottage
The Haven Orchard
Footpaths within RPA to be installed in accordance with Section 8 of AMS
Tree protection fencing to be installed in accordance with Section 2 of the AMS
Excavation in the RPA to be undertaken in accordance with Section 5 of the AMS
Temporary ground protection to be installed in accordance with Section 3 of the AMS
(Telecommunication)
EXWICK LANE
T16 (U)
T8 (A)
T9 (A)
T10 (A) PA
G14 (B)
G15 (B)
T5 (A)
T6 (C)
H17 (B)
G11 (B)
T1 (A)
T2 (C)
T4 (C)
H18 (C)
H19 (C)
T3 (A)
T7 (U)
G12 (B)
Drainage within RPA to be installed in accordance with Section 7 of AMS
Hedgerow to be translocation in accordance with Section 6 of the AMS
Indicative location of translocated hedgerow
H17 (B)
Barley Villas
REDHILLS
Crisping House
92.0m
T23 (A)
W20 (B)
G13 (B)
St Peters Mount
G24 (B)
G22 (C)
T21 (B)
88.4m
Tanglewood
Barley Copse
Lugg's Farm
Orchard Bungalow
Tiptoes
ELY CLOSE
LICHFIELD ROAD
HEREFORD ROAD
CHELMSFORD ROAD
ST ALBANS CLOSE
76.2m
62.2m
Tree Protection Fencing Specification
Key
1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps
Example Tree Protection Fencing Signage
PROTECTIVE FENCING. THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.
TREE PROTECTION AREA
KEEP OUT!
Tree Protection Fencing Specification
100x100mm timber posts excavated to a minimum depth of 400mm
Heras Panels (or similar) affixed to timber posts using steel straps

0 20m 40m 60m 80m 100m

Scale @ A1: 1:1000

Drawing should be viewed in colour.

Location of trees suffixed with PA (position approximate) have been estimated on site.

Drawing Title:
Tree Protection Plan

Project:
Land at Redhills, Exeter

Client:
Tilia Homes

Date: 10/09/2024	**Drawn:** MU
Drawing Number: 1231-TPP-MU	**Revision:** 1

N

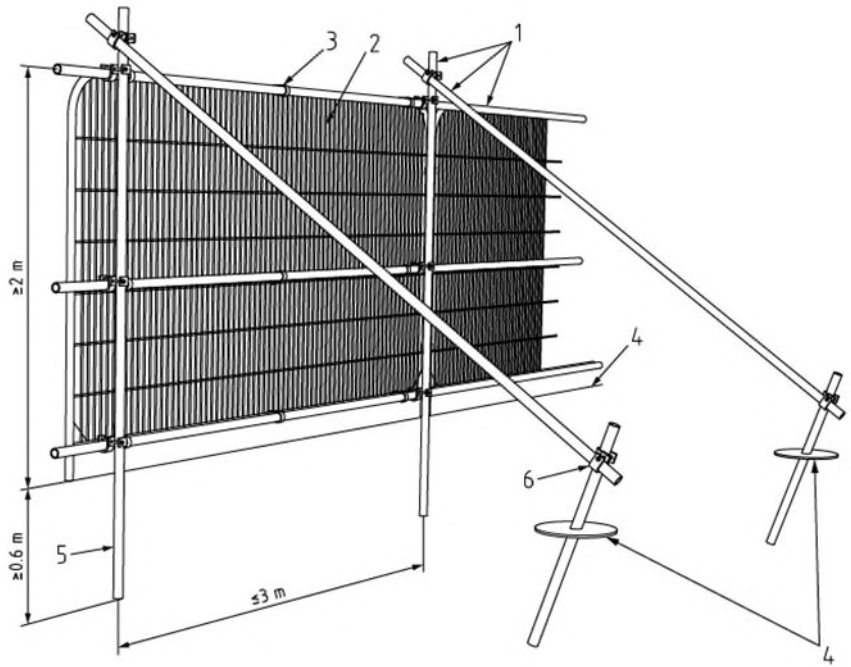
Appendix 3 – Tree Works Specification

Arboricultural Feature	Species	Works Required
T2	Turkey oak	Fell
T4	Turkey oak	Fell
T7	Pedunculate oak	Reduce to 6m and retain as monolith
G14	Pedunculate oak, Holly, Hawthorn, Hazel, Blackthorn	Fell one section as shown on TPP
		Reduce lateral growth by 1-2m south adjacent to Plots 66
G15	Pedunculate oak, Holly, Hawthorn, Hazel, Blackthorn	Reduce lateral growth by 1-2m south adjacent to Plots 32-41
H17	Holly, Hawthorn, Hazel, Field maple, Blackthorn	Fell one section as shown on TPP
H18	Holly, Hawthorn, Hazel, Field maple, Blackthorn	Fell two sections as shown on TPP
H19	Holly, Hawthorn, Hazel, Field maple, Blackthorn	Fell
W20	Beech, Oak, Hawthorn, Hazel, Holly	Fell one section as shown on TPP
G22	Ash, Sycamore, Pedunculate oak	Fell one section as shown on TPP

All works to be carried out in accordance with BS3988:2010 'Tree Work – Recommendations'

All trees should be checked for protected species e.g. roosting bats and nesting birds prior to any works being undertaken.

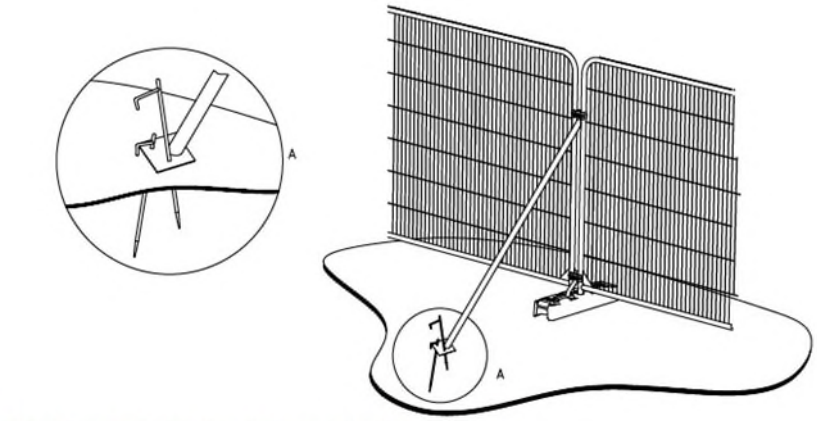
Appendix 4 – Tree Protection Fencing Specification



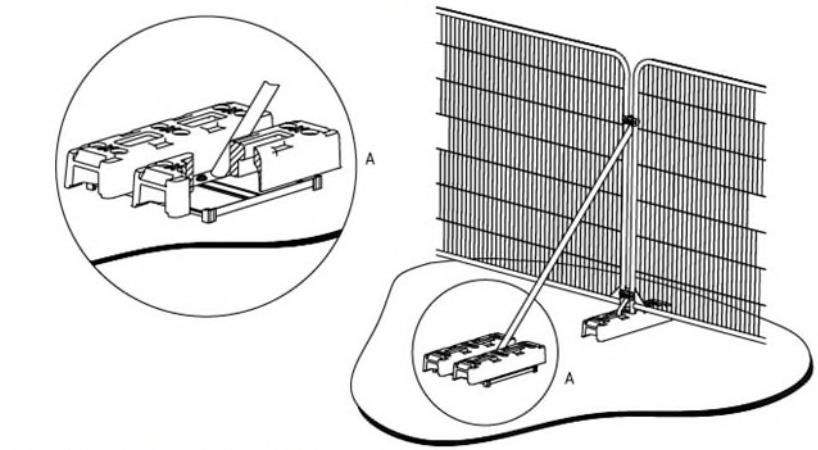
Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Default Specification



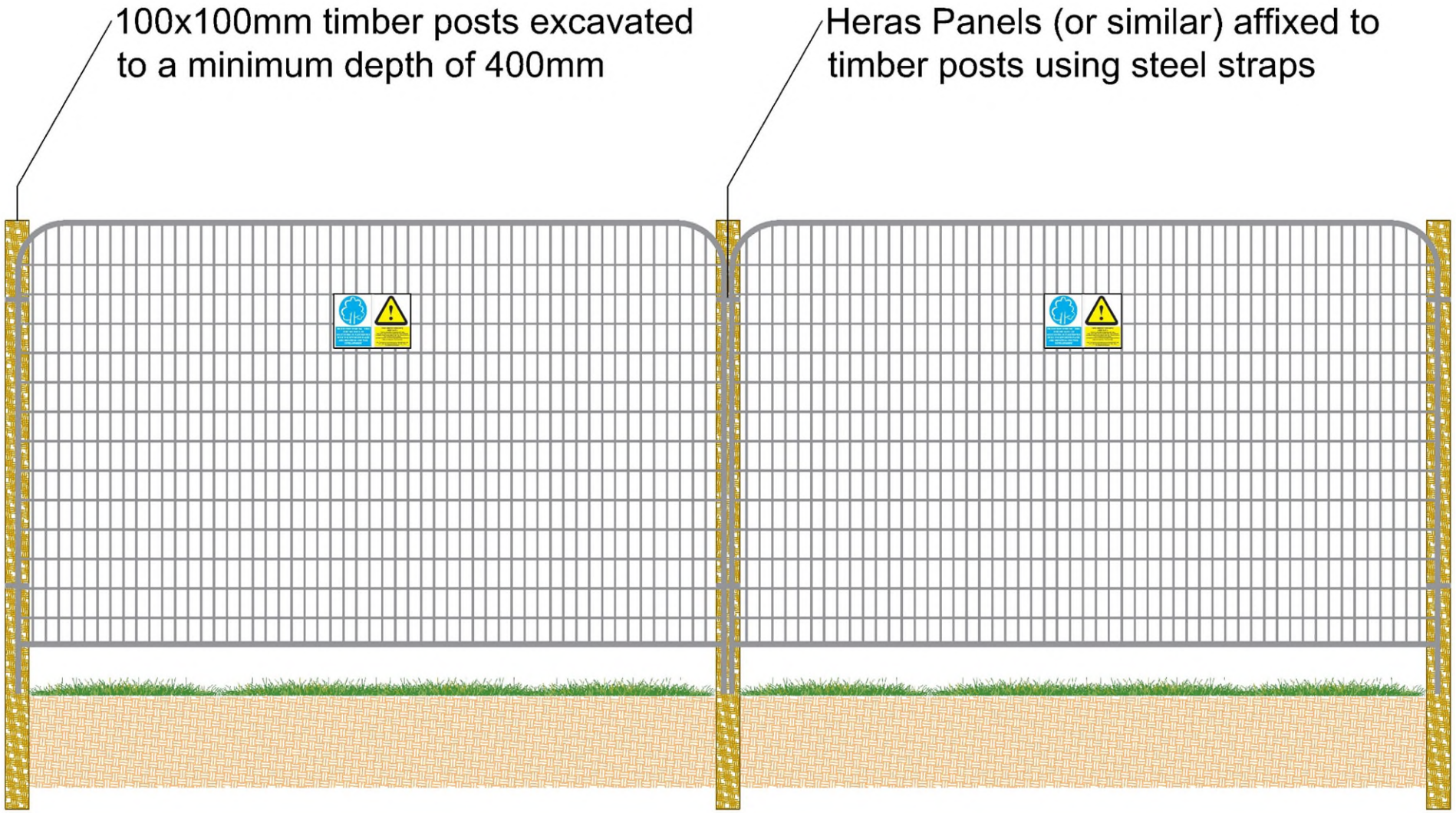
a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Above-ground Stabilising System

(Images extracted from BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations')



Alternative Tree Protection Fencing Specification

Appendix 5 – Example Tree Protection Fencing Signage

Website: www.ge-consulting.co.uk
Phone: 01647 253652
Email: info@ge-consulting.co.uk

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