Arboricultural Impact Assessment and Method Statement

North Lodge
Park Lane
Upper Swanmore
Southampton
SO32 2QQ
Hampshire

On behalf of:
N&J Architecture and Planning
7 Hedley Gardens
Hedge End
Southampton
SO30 2WT

Prepared by:
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Report Reference: HBD2402IAMS
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1.0 INTRODUCTION

In accordance with your instruction, I visited North Lodge, Upper Swanmore on 15TH January 2024 and collected and prepared tree information relevant to the proposed development to the standard normally required by the Local Planning Authority in support of a planning application. The weather was sunny, clear and still with good visibility. This report is effectively an Arboricultural Impact Assessment (AIA) and Method Statement (MS) as recommended in paragraph 5.4 of BS 5837:2012 *Trees in relation to design, demolition and construction - Recommendations* and is written as a part of the formal submissions to the Local Planning Authority in support of the planning application, as instructed.

1.1 **Qualifications and experience:** I have based this report on my site observations, and I have come to conclusions in light of my experience and qualifications in arboriculture and forestry.

1.2 **Caveat:** It is not practicable or reasonable to take into account the potential effects of extreme weather, vandalism or accident. Helen Brown Treescapes cannot therefore accept any liability in connection with these factors. Helen Brown Treescapes cannot accept any liability where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this report ceases at any stated time limit within it, or if none stated after two years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the Report are carried out to, or affecting, the subject tree(s), whichever is sooner. This report is intended to highlight the potential impact of the proposals on the tree population on site and is not intended to provide a risk assessment of the trees in question.

2.0 THE PROPOSAL

2.1 **Development:** The proposal is to create a modest two storey extension to the south of the existing property. The layout is shown on the N & J Architecture Proposed Site Layout, dated 9/11/21 drawing number 2020.10.01/02 Revision A at a scale of 1:100. This drawing shows the relevant trees on and closely adjacent to the site and has been annotated with tree numbers and attached as plan HB1 at Appendix 4.

2.2 **Background:** North Lodge is located on the southern side of Park Lane, approximately 1.6 kilometres north of the village of Swanmore, and approximately 2.8 kilometers to the east of the town of Bishops Waltham. The property originally served as a gatehouse to Swanmore Park House, situated to the south. A long driveway of approximately 200 metres connects

the two properties. The local landscape is characterised by agricultural land with scattered houses and hamlets.

3.0 TREES

3.1 **Formal tree controls:** This site falls under the jurisdiction of The South Downs National Park which has not been approached to ascertain whether any of the trees on site are protected by a tree preservation order or conservation area. No tree work should commence on site without running such checks as there is a financial penalty for working on protected trees without consent.

3.2 **Trees of interest:** Located in open countryside, the site is surrounded by deciduous and coniferous trees typical of the South Downs landscape. Within the site, there are fruit trees in the rear garden and a privet hedge demarcating the boundary but neither are arboriculturally significant. Of most significance is the avenue of lime trees which line the driveway running from North Lodge to Swanmore Park House. These mature trees are significant in terms of arboricultural merit as they are approaching veteran status and likely to be in excess of 100 years old and also due to their historical value in the surrounding landscape. I therefore consider these trees to be B grade trees according to the assessment criteria recommended in BS5837:12. Details of all the significant trees are given in the tree schedule in accordance with the recommendations of BS 5837:12 and are attached at Appendix 1.

3.3 **Tree health and removals:** No tree work, including removals, will be necessary in order to realise this proposal. The tree crowns are already managed to accommodate bin lorries and such, so are sufficiently elevated to allow deliveries by high sided vehicles.

4.0 ISSUES RELEVANT TO THE TREES

4.1 **Building construction in relation to tree roots:** The proposed extension does not incur into the root protection areas of any of the retained trees on site.

4.2 **Building construction in relation to tree crowns:** It is important that sufficient growing space is allowed between the mature crown extent of each tree and the roof edge of the proposed structures. This is to reduce conflicts of interest in the future such as pressure to prune trees to keep them clear of roofs: In this instance there is a clearance in excess of five metres between the roofs and mature tree crowns.

4.3 **Tree root and canopy protection:** The RPA of retained trees should be protected during the development phase with heras fencing to ensure heavy machinery is not operated, or materials stored within the rooting area. This can be detrimental to the tree, causing soil compaction and root die back. The crowns of retained trees also require protection to avoid causing damage to branches. In this case, the trees are located well away from the proposal but have large diameter trunks which is reflected in the extent of the RPA. The trees are situated on the road verge where heras fencing will be erected to prevent vehicles parking on the soft grass verge. It would also be prudent to create a bunded area on the existing driveway or in the garden to the east, where materials should be stored and handled outside the RPA of retained trees.

4.4 **Special surfacing**: Where new surfacing is proposed within RPAs, the ground should be prepared using hand tools to avoid soil compaction caused by heavy machinery and to ensure that, should roots be exposed, they are seen and appropriately managed. The surfacing within RPAs should be load baring and permeable such that rainwater can still percolate to the roots while allowing gaseous exchange. The surfacing should also allow for a degree of movement as the roots increase in diameter annually. Further details are issued in the Method Statement.

4.5 **Materials delivery, storage and handling:** Materials should not be handled or stored within the RPAs of retained trees as the load exerted can result in soil compaction and leacheate from spills can be toxic to trees. Instead, materials will be stored in a bunded area on the driveway.

4.6 **Services, surface drains, soakaways and services:** It is important that services, surface drains and soakaways avoid the RPAs of retained trees as roots can be damaged during trench excavations. The location of services should therefore be agreed with the local planning authority prior to the development phase commencing. In this case, the services will link with those already serving the existing dwelling.

4.7 **Shading:** The shading affects of trees have been taken into consideration when locating fenestration. This is to avoid excessive shading by tress which could lead to requests to prune or fell the trees in the future.

5.0 ARBORICULTURAL METHOD STATEMENT

5.1 **Implementation and phasing of the proposed development:** Prior to any building work commencing on site, heras fencing and the storage area should be erected and checked by the consulting arborist. The arboricultural consultant will also oversee the installation of any special driveway surfacing. During the development phase, the arboricultural consultant will be notified and asked to supervise any excavations within the RPA of retained trees.

5.2 **Protective fencing:** Protective fencing will be erected prior to the commencement of any development activity and will be retained in the positions shown on the annotated site layout plan HB1 until the completion of development. The location of the fencing is shown on the plan by a broken red line and encompasses the root protection area or canopy spread, whichever is the greater, of the retained trees. The fencing will be to the BS 5837:2012 '*Trees in relation to design, demolition and construction – recommendations*' (section 6.2) i.e. preformed galvanised steel mesh panels ('Heras' or similar) facings on a driven braced scaffold pole framework. It will be retained at the locations shown until construction is completed. It may be moved or removed only with notice to and consent from the local planning authority

5.3 **Temporary protective surfacing:** Where development activity is unavoidable within the RPAs of retained trees, such as within the driveway, the heras fencing would normally be temporarily pushed back, and where appropriate, the exposed area augmented with alternative protection to ensure the ground is not compacted. In this case, the existing driveway and access road are already load baring and, as such, I do not consider additional temporary surfacing to be warranted.

5.4 **Storage and handling of materials:** Materials will be stored and handled in a mixing area outside the tree root protection areas, either on the driveway or in the garden to the east. The mixing area will be bunded with heavy duty plastic secured in place with scaffold boards to ensure any run-off does not percolate into the tree's rooting system. Also, there shall be no fires within 10m of the canopy of any retained tree, and no storage or mixing of harmful materials e.g. DERV fuel or concrete within 10m of the trunk of the retained tree.

5.5 **Surface drains, soakaways and services:** Services will link to those already serving the existing dwelling however, in the unlikely event that existing cables need to be unearthed within an RPA, the method for doing so will accord with the recommendations in the NJUG Publication: Volume 4: Issue 2: 16/11/2007: *Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees*. Trenches will be dug by hand and any roots

over 2.5cm in diameter will be retained undamaged. Smaller roots may be cut back to the proximal face with a clean, sharp pair of secateurs. The trench backfill around the roots shall be a granular material that can be compacted to the point where it can bear the new surfacing without subsiding but without abrasion of tree roots and without raising the soil bulk density to the point where root growth cannot take place. Should it be necessary, this operation will be overseen by the project arboriculturist.

5.6 **Installation of the new driveway surface:** Should it be necessary to create a new driveway surface within the RPA of retained trees, excavation will be limited to the removal of a nominal soil layer no deeper than 50mm, to be carried out by hand. There will be no further excavation. The levels allow these areas to be installed using a no-dig form of construction and will allow the use of a cellular confinement system e.g. 'Geoweb' or similar. Where new surfacing is proposed in these areas, a geotextile membrane will be installed over the existing ground level, where adjoining rolls of membrane meet, there will be an overlap of 300mm.
The cellular confinement system will then be laid over the membrane and infilled with a no-fines granular material. The final surface layer, which must be breathable - for example, **pea shingle, block paving, or breathable tarmac,** will then be laid over the filled cellular material and retained by an edging of wooden boards secured by driven wooden pegs. The restrictions on excavation and the use of a geotextile membrane and cellular confinement system in accordance with the guidelines in Section 11 of BS 5837:12 will limit the risk of damage to tree roots to an acceptable level. A specification for Cellweb is attached as Appendix 3.

5.7 **Supervision:** The project arborist will attend the site to inspect the heras fencing and ensure that it has been laid out as prescribed in the method statement and meets the requirements of BS5837:12. Any excavations within the RPA of retained trees will be overseen by the project arborist including the preparation and laying of the driveway's special surfacing. It is the responsibility of the site manager to inform the arboricultural consultant when inspections are required for example, when heras fencing is ready to be inspected.

5.8 **Tree works:** At the time of writing this report, no tree work was necessary. However, should it become necessary to carry out pruning in order to install the proposal, work shall be carried out in accordance with BS 3998:2010 *Tree Work - Recommendations*.

6.0 **CONCLUSIONS:** This proposal to create a modest extension will have little bearing on the neighbouring trees provided the method statement is adhered to. Tree crowns of retained trees do not overhang the proposal however, the neighbouring trees, T1 and T2 (lime) have large root protection areas (RPAs) which will need protection with heras fencing during the development phase to ensure vehicles are not parked within the RPA or materials stored and mixed there. Any excavations within the RPA must be overseen by the consulting arborist.

Please do call me if you would like to discuss any of these points further.

Yours sincerely

Helen Brown
MSc For. Tech Cert Arb

APPENDIX 1
Tree Schedule and Explanatory Notes

Tree No	Species	Height (m)	Trunk Diameter (cm)	Crown spread (m)		Crown height above ground (m)	Life stage	General observations	BS 5837 cat	Root protection area (m)
1	Lime	16	102	6 7	6 5	7	Mature/ veteran	Normal form and vitality Old pruning knuckles indicate the tree has been manged as a pollard in the past Basal epicormic has been removed – epicormic present higher up in crown Dead wood present exceeding 70mm diameter, accounting for approximately 10% of crown Component of an old avenue of limes leading to Swanmore Park House	B	12.0

APPENDIX 1
Tree Schedule and Explanatory Notes

Tree No	Species	Height (m)	Trunk Diameter (cm)	Crown spread (m)		Crown height above ground (m)	Life stage	General observations	BS 5837 cat	Root protection area (m)
2	Lime	18	130	6	6	7	Mature/ veteran	Normal form and vitality Basal epicormic has been removed – epicormic present higher up in crown Basal buttressing Dead wood present exceeding 70mm diameter, accounting for approximately 10% of crown Prolific growth points indicate pollarding in the past Bifurcated at 2 metres height with a secondary bifurcation of the most northerly stem at 4 metres Component of an old avenue of limes leading to Swanmore Park House	B	15.0
				7	5					

APPENDIX 1
Tree Schedule and Explanatory Notes

Abbreviations:

G	: Group
m	: Metre
>	: Greater than
<	: Less than

Botanical tree names:

Lime : *Tilia x europaea*

Presentation of data: The inspection details as identified in the brief are set out in the tree schedule at Appendix 1. Age classification has been presented as one of four categories, young, early-mature, mature and over mature, rather than age in years. This is because age in years cannot be accurately assessed without a more detailed investigation and because an age class gives a better picture of the age range of the tree population regardless of species. Age class is one of the criteria used in Table 1 of BS5837:2012 '*Trees in relation to design, demolition and construction – recommendations*' (section 6.2) for determining the protection area for trees. This is relevant for any potentially damaging operations near trees e.g. excavations for services.

- **Dimensions**: I have estimated all dimensions unless otherwise indicated.
- **Species:** Species identification is based on visual observations.
- **Height:** Height is estimated to the nearest metre.
- **Trunk diameter:** Trunk diameter for accessible trees has been measured with a diameter tape and recorded in centimetres.
- **Crown spread:** Crown spread for trees within the site is estimated at the four cardinal compass points. The distances given as appropriate correspond to crown spreads to the four cardinal compass points as shown in the grid below:

N	E
W	S

- **Crown height above ground:** The height of the crown clearance above the ground over the site is estimated to the nearest 0.5m. 'Minor branches' refers to those branches with a diameter of 70mm or less and 'major' refers to those with a diameter in excess of 70mm.

APPENDIX 1
Tree Schedule and Explanatory Notes

- **Life stage:** The life stage categories correspond to the classes given in BS 5837:2012, which are Young (Y), Semi-mature (SM), Early Mature (EM), Mature (M) and Over-mature (OM). There are no veteran trees included in the schedule.

- **Estimated contribution in years:** <10, >10, >20, >40, as advised in BS 5837:2012.

- **General observations:** These comment on the health and physiological and structural condition of the tree, with management recommendations where appropriate. Vitality is an indication of the health of the tree for use with Table 1 of BS 5837:20012. I asses the trees as N = normal vitality and L = low vitality in accordance with table 1.

- **Root protection area:** The area of root protection should be equivalent to the area of a circle centred on the tree with a radius of least 12 times the trunk diameter. This column gives the radius of such a circle; the distance may not be the same as the distance for protective fencing. In the case of T10 and T11, (*) refers to the combined stem diameter calculation as defined in BS5837:12 point 4.6, 4.6.1 (a).

- **Subjective assessment of the tree**: The BS 5837:2012 assessment is the recommended pre-planning site survey method, ideally for sites where development is proposed. There are four categories, which are summarised below. Please note that the trees were assessed, as instructed, for the purposes of the planning application. A detailed Visual Tree Inspection to assess the potential risk presented by the tree was therefore not carried out.

- **Category A:** Trees that appear to be in good health and condition and are of amenity value because of their form, quality and location. They can reasonably be retained.

- **Category B:** Trees that appear to be in reasonable health and condition and are of some amenity value because of their form, quality and location, although not in the first rank. They can reasonably be retained.

- **Category C:** Trees that appear to be in average or slightly below average health and condition and are of limited amenity value because of their form, quality and location. They can be retained, but require remedial works to improve their condition.

- **Category U:** Trees that appear to be in poor health and condition and are of no significant amenity value because of their form, quality and location. I have stated where these trees should be removed.

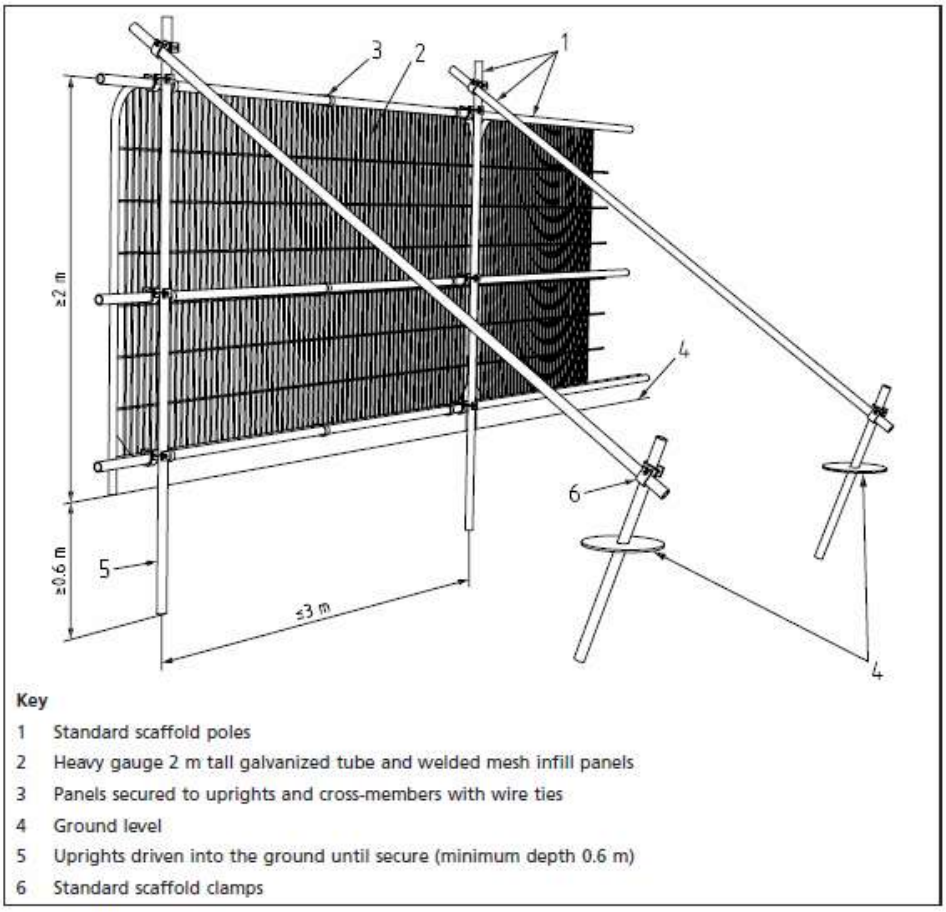
Appendix 2

Tree Protection Details

Protective fencing should be erected before any construction commences on site. It should also be in position to protect important trees prior to demolition.

Protective fencing should stay in position until all construction activity has finished.

'Fencing should be established at the minimum distance set out in British Standard 5837:2012 '*Trees in relation to design, demolition and construction - Recommendations*'.
Excavations should not encroach into the fence position and it is appropriate to keep at least 0.5m between the fence and any changes in level.



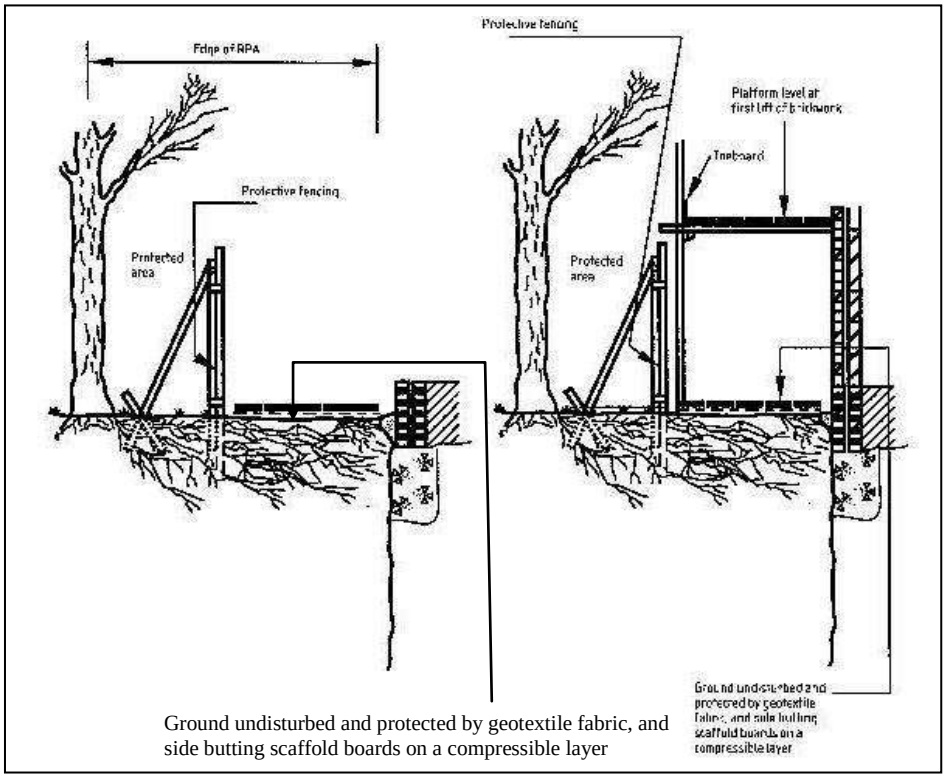
Key

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

Appendix 2
Tree Protection Details

Where ground protection measures are necessary they can be provided by laying a geotextile mat onto the existing ground level and adding to this compressible materials, such as bark mulch or sharp sand to form a safe, level surface. Onto this surface is laid scaffold boards which become the working surface for the duration of the construction phase.

Where scaffolding is proposed above the area requiring protection the footway can be suspended above ground level using the upright scaffold poles onto which horizontal supports can be attached and then boards used to form the footway surface. A geotextile mat should be laid on the ground beneath to prevent contamination from materials dropped through the footway.



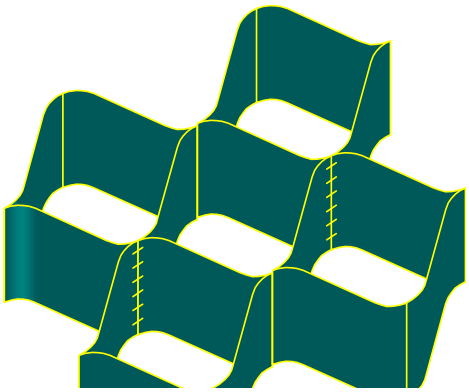
Ground undisturbed and protected by geotextile fabric, and side butting scaffold boards on a compressible layer

Appendix 3

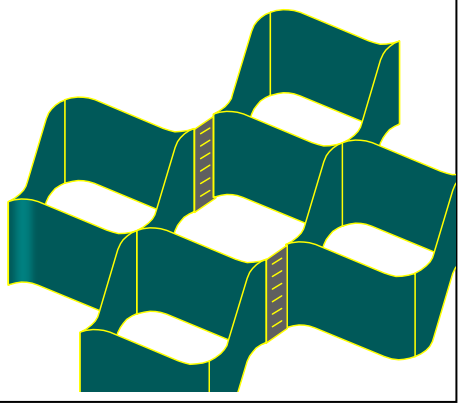
Cell Web Construction

Below are illustrations of the correct stapling procedure for joining both edges and ends of panels together:

Panel Edges:

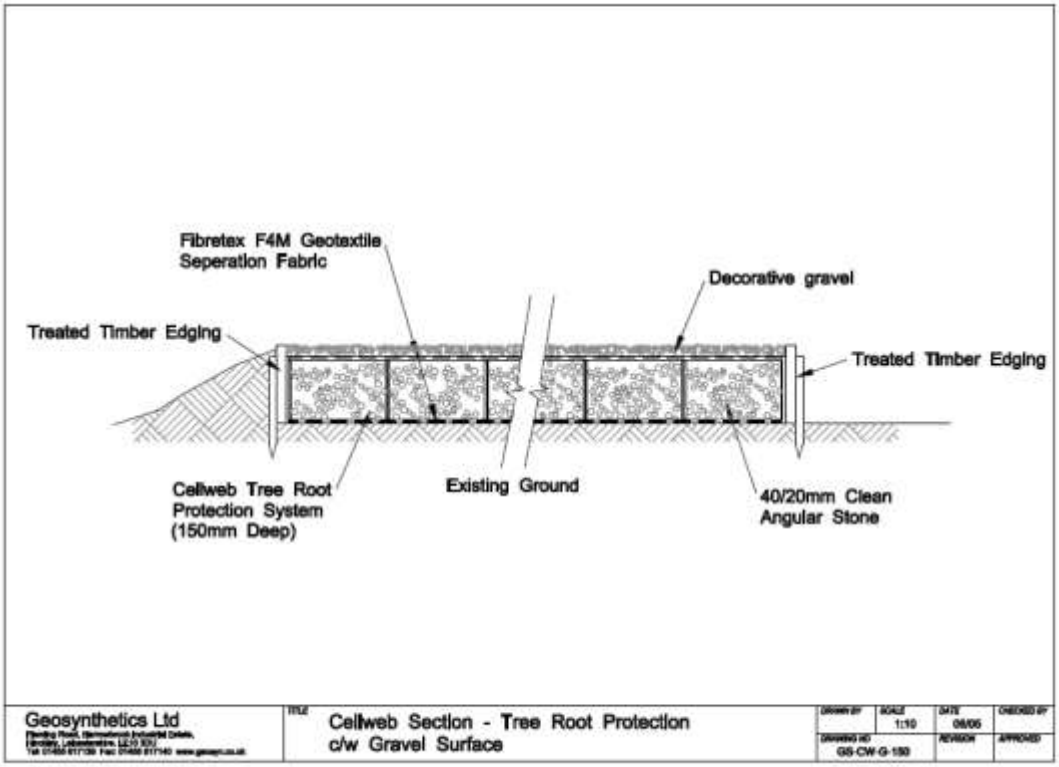


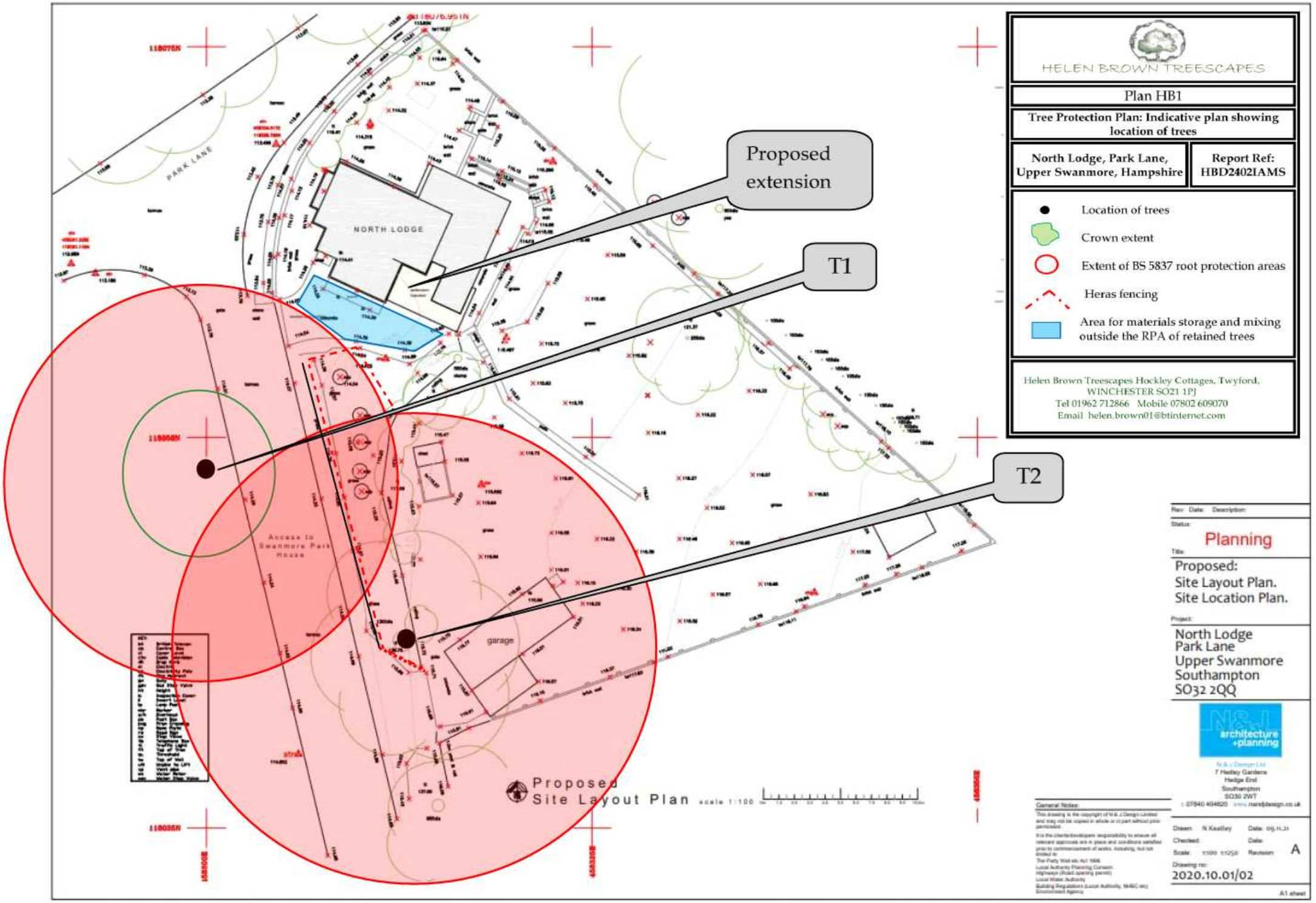
Panel Ends:



Cellweb Tree Root Protection System: Section diagram example

Appendix 3
Cell Web Construction





HELEN BROWN TREESCAPES

Plan HB1

Tree Protection Plan: Indicative plan showing location of trees

North Lodge, Park Lane, Upper Swanmore, Hampshire	Report Ref: HBD24021AMS

- Location of trees
- Crown extent
- Extent of BS 5837 root protection areas
- Heras fencing
- Area for materials storage and mixing outside the RPA of retained trees

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Rev: Date: Description:

Status: Planning

Title: Proposed: Site Layout Plan. Site Location Plan.

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Drawn: N Keatley Date: 05.11.21
Checked: Date:
Scale: 1:100 1:250 Revision: A
Drawing no: 2020.10.01/02

A1 sheet

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Tree Party Wall etc Act 1996
Local Authority Planning Consent
Highways (Road opening permit)
Local Water Authority
Building Regulations (Local Authority, NHBC etc)
Environment Agency