

Sylva Consultancy
expert arboricultural advice

ARBORICULTURAL REPORT

Land at Little Bentley
Borde Hill Estate
Borde Hill Lane
Haywards Heath
West Sussex
RH16 1XP

December 2023

Ref: 23212

Prepared by Fiona Bradshaw MICFor; Dip.Arb (RFS); F. Arbor.A; Tech Arbor.A

Issued: 15th December 2023



Fiona Bradshaw
MicFor (Arb); Dip. Arb (RFS); F.Arbor A; Tech Arbor.A
Mobile: 07976 596517

Sylva Consultancy is a trading name of Sylva Trees Ltd.
Registered in England, Company No. 06787424.
Registered Office: The Oxford Boaters Box, Woodstock Road, Oxford, OX2 7AH.



**Institute of
Chartered Foresters**
Registered Consultant

PHONE 01865 872945
EMAIL mail@sylvaconsultancy.co.uk
WEBSITE www.sylvaconsultancy.co.uk

CONTENTS

1.	Introduction	3
2.	Tree Protection	3
3.	Arboricultural Survey	4
4.	Principle arboricultural Implications	5
5.	Summary	8

APPENDICES

1.	Site Location Plan	9
2.	Tree Survey Data	10
3.	Root Protection Area	11
4.	Tree Constraints Plan	12
5.	Arboricultural Impact Assessment Plan	13
6.	Example of Green Grid Root Bridge	14
7.	Example of a Cellular Confinement Design	15
8.	Photographs	16
9.	Qualifications	17

1. INTRODUCTION

1.1 Instructions

- 1.1.1 This Arboricultural Impact Assessment has been prepared to assess the likely impact and effect regarding the proposals to redevelop land at Borde Hill Estate, Haywards Heath (Site Location Plan Appendix 1).
- 1.1.2 This appraisal assesses the impact of the proposal in relation to the trees surveyed and discusses mitigation measures that may have to be adopted.

1.2 Arboricultural Survey

- 1.2.1 During November 2023 a tree survey was carried out in accordance with British Standard 5837:2012 'Trees in relation to Design, Demolition and Construction-Recommendations' and good arboricultural practice. This is a basic data collection exercise and a record of the trees condition at the time of surveying. The tree survey data can be viewed at Appendix 2, root protection area (RPA) data at Appendix 3 with the tree constraints plan provided at Appendix 4.

2. TREE PROTECTION

- 2.1 A desktop study of information posted on the Mid Sussex District Council's (MSDC) website details that the site is not located within a Conservation Area. In addition, the website reveals that no Tree Preservation Orders (TPO's) are present on trees within influencing distance of the survey area.
- 2.2 Before undertaking any work that may be recommended within this report, it is advisable to check directly with Mid Sussex District Council to confirm whether planning controls are in operation; written consent must be obtained for works on trees subject to a TPO and in the case of a Conservation Area six weeks' notice of intent must be forwarded before undertaking any such work.
- 2.3 Woodland to the east of the survey area, which forms part of the Great Bentley Plantation Woodland, is designated Ancient and Semi Natural Woodland and Ancient Replanted Woodland by Natural England (<https://magic.defra.gov.uk/MagicMap.aspx>).
- 2.4 In addition the site lies within the High Weald Area of Outstanding Natural Beauty (AONB).

3. ARBORICULTURAL SURVEY

3.1 Forty trees, two groups, two hedges and three woodland areas have been recorded within this assessment. The tree quality is assessed as follows:

U: Trees that are considered to be of such condition that any existing value would be lost within 10 years, and which should, in the current context, be removed for reasons of sound arboriculture management. However, if category 'U' trees are placed in an inaccessible location such that concerns over public safety are reduced to an acceptable level, it may be preferable or possible to defer this recommendation.

A: Trees of the highest quality and value and are considered to be of such a condition as to be able to make a substantial contribution (e.g., 40 years +).

B: Trees of moderate to high value and are considered to be of such a condition as to be able to make a significant contribution (e.g., 20 years +).

C: Trees of low quality with an estimated life expectancy of at least 10 years. Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories. Young trees with a stem diameter of less than 150mm should be considered for relocation or replacement through mitigation (e.g., 10 years).

Category A, B & C trees are further divided into sub-categories. These sub-categories carry equal weight and are selected for either arboricultural values, landscape values or cultural values, including conservation. Within the British Standard 5837:2012 it is recommended to record hedge and shrub masses, however in the context of the standard it is not necessary to assess the quality of these or to provide a category classification.

The numbers of trees falling under each classification within the arboricultural survey are as follows:

BS 5837 (2012) Category	No. of Trees	No. of Groups	No. of Hedges	No. of Woodlands	Tree Number
U	2	1	0	0	T13, T39, G1
A	14	0	3	3	T16, T19, T20, T24, T25, T26, T27, T29, T30, T31, T32, T34, T35, T36, W1, W2, W3
B	16	0	0	0	T8, T9, T10, T11, T12, T14, T15, T17, T18, T21, T22, T28, T33, T37, T38, T40
C	8	1	2	0	T1, T2, T3, T4, T5, T6, T7, T23, G2, H1, H2

4. PRINCIPLE ARBORICULTURAL IMPLICATIONS

4.1 Introduction

- 4.1.1 Consideration is given to the significance of the trees identified in the arboricultural tree survey, the constraints that they are likely to pose to any development that may occur, post development implications (if any) and work requirements to trees for reasons of sound arboricultural management in order to facilitate the development (BS5837:2012 Section 5.4).
- 4.1.2 This appraisal assesses the impact of the potential to re-develop the site in relation to the trees and discusses mitigation measures that may have to be adopted.
- 4.1.3 All tree numbers referred to in this document relate to the tree numbers annotated on the tree constraints plan and arboricultural impact assessment plan (Appendix 5).

4.2 Site Description

- 4.2.1 The survey area comprises of an area that has been felled as a result of ash dieback, with the area currently used for pheasant shooting. Access is via an existing track off Borde Hill Lane which is situated to the east. The survey area slopes gently downwards from south to north with an existing pond also present.

4.3 Trees

- 4.3.1 Only trees and woodlands that are considered within influencing distance of the proposal, including trees adjacent to the proposed new access have been identified within the arboricultural survey.
- 4.3.2 The Wildlife & Countryside Act 1981, as amended by the Countryside Rights of Way Act 2000, provides statutory protection to birds, bats and other species that inhabit trees. These have the potential to pose additional constraints on the use and timings of works that may occur to trees located at the site. Please refer to the ecology appraisal for further information regarding the ecological requirements

4.4 Overview

- 4.4.1 The appended arboricultural impact plan illustrates the proposals in relation to the tree stock. In addition to pre-development concerns, post development concerns such as debris and concerns of the trees' proximity and juxtaposition to the proposal have also been considered during the design process.
- 4.4.2 An assessment of the design on the tree stock reveal that two category 'C' trees, and the part removal of one category 'C' hedge will occur to implement the scheme.
- 4.4.3 The scheme has undergone a careful design process to ensure an efficient use of the site, whilst safeguarding the continued contribution to the greening of the immediate landscape. On the bases of the appraisal, it is considered that the arboricultural impact of the scheme on the tree stock will not result in an adverse impact on the character and appearance of the site or wider landscape.

4.4 Impact of the proposal on the tree stock

Overview

- 4.4.1 Trees T13 (ash), T39(Leyland cypress) and G1 (field maple) have landscape values of less than 10 years in accordance with BS5837:2012. Trees assessed as category 'U' trees are of such condition that any existing value would be lost within 10 years, and which should, in the current context, be removed for reasons of sound arboriculture management. However, if category 'U' trees are placed in an inaccessible location such that concerns over public safety are reduced to an acceptable level, it may be preferable or possible to defer this recommendation.
- 4.4.2 Category 'U' trees are not considered within this report as there is an expectation these trees would be removed under good arboricultural management regardless of development occurring.
- 4.4.3 Whilst trees in categories 'A', 'B' and 'C' are all a material consideration in the development process, the retention of category 'C' trees, being of low quality or of only limited or short-term potential, will not normally be considered necessary where they impose a significant constraint on development. Furthermore, BS 5837:2012 makes it clear that young trees, even those of good form and vitality, which have the potential to develop into quality specimens when mature "*need not necessarily be a significant constraint on the site's potential*".

4.6 Proposed Development

- 4.6.1 The scheme comprises of the construction of five short stay accommodation cabins, a reception building, a new access off Borde Hill Lane and associated post development landscaping. Four cabins will be located within the southern section of the survey area with a satellite cabin positioned in a field to the southwest.
- 4.6.2 The scheme has taken into consideration replanting of the site in accordance with the Forestry Commission's Felling License. Replanting has already commenced with the location of the cabins positioned to avoid conflict with the restocking requirements. To ensure the minimum impact to the surrounding ground it is proposed to construct the cabins using a screw pile foundation design.
- 4.6.3 Standing advice from Natural England and the Forestry Commission recommends the following:
For ancient or veteran trees (including those on the woodland boundary), the buffer zone should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5 metres from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter. This will create a minimum root protection area.'
- 4.6.4 The arboricultural impact assessment plan illustrates that the recommended buffer zone has been incorporated into the design with regard to the adjacent Ancient and Semi Natural Woodland and Ancient Replanted Woodland.
- 4.6.5 Two category 'C' trees (T2 & T3) will be removed to implement the scheme. In addition, the part removal of one category 'C' hedge will also occur to facilitate the new access. The British Standard 5837:2012 documents that category 'C' trees are assessed as being either of low quality, limited merit, low landscape benefits, no material cultural or conservation value, or only limited or short-term potential; or young trees with trunk diameter below 150mm; or a combination of these. As such these

trees should not be considered as a significant constraint to the development of the site.

- 4.6.6 An existing shed will be converted into a reception building with no impact occurring to trees to facilitate this element of the scheme. In addition, an area currently used for parking will be used for the main parking area for the cabins.
- 4.6.7 The existing track from Borde Hill Lane is to be retained. However, a new access off Borde Hill Lane and link track will be constructed as part of the development.
- 4.6.8 It is acknowledged that the new access will pass through the RPA's of trees T29 & T30. The arboricultural survey notes that the tree categories are provisional only as further internal decay investigations must be carried out to these trees due to several decay brackets being present around the basal area of the trees.
- 4.6.9 In the event these trees are retained, to ensure no adverse impact occurs the entrance will be constructed using 'The Green Grid Root Bridge System' (Appendix 6 <https://greengridsystems.com/>).
- 4.6.10 The access will be suspended above the trees RPA's by using an adaptable modular steel lattice construction which will be supported on foundation screws. The foundation screws will be carefully positioned between the main roots. The 'Green Grid Root Bridge System' allows for the undulating ground conditions to be taken into consideration so that soil grading works can be avoided. The remainder of the driveway will be constructed using a no dig design based on a cellular confinement system (Appendix 7).
- 4.6.11 The no dig design will also be adopted to ensure that the new path networks and vehicle drop off areas adjacent to the cabins will not adversely affect retained trees.

4.7 Proposed Landscaping

- 4.7.1 A comprehensive landscape plan has been developed which provides an enhanced environment and compliments the development of the site. Please refer to the landscaping plan for detailed information.

4.8 Construction

- 4.8.1 Careful consideration has been given regarding the buildability of the proposals. The arboricultural impact plan illustrates that sufficient room exists to locate the site compound and contractor parking outside the RPA's of the retained trees.
- 4.8.2 Fence protection is required for the retained trees. The fencing will comprise of Heras fencing and will be based on Figure 2 'Default Specification for Protective Barrier' as recommended within the British Standard 5837:2012. Where appropriate the fencing will be braced to withstand impacts.
- 4.8.3 Ground protection measures are also required to facilitate access for the works. It is recommended that the ground protection comprises of Duradek Mats or other similar product that is fit for purpose.
- 4.8.4 A tree pruning works schedule to facilitate the proposal has not yet been finalised, however it is not anticipated that tree pruning will not be required. In event pruning works to trees are required it is judged that trees can be pruned to acceptable standards in accordance with British Standard 3998:2010 'Tree Works - Recommendations'.

- 4.8.5 With regard to new services a foul sewage water and surface water assessment has been carried out. Please refer to this statement for further details regarding these services for the proposal.
- 4.8.6 Air source heat pumps and a mechanical heat recovery system (MHVR) also forms part of the new services that are required to provide heat and cooling to the cabins. Please refer to the Sustainable Construction & Energy Efficiency Statement for further details.
- 4.8.7 Where services fall unavoidable within the RPA's of retained trees all proposed service installations will be carried out in accordance with the guidelines set out in Section 7.7 of the British Standard 5837:2012 and in compliance with NJUG 10.

5. SUMMARY

5.1 Conclusions

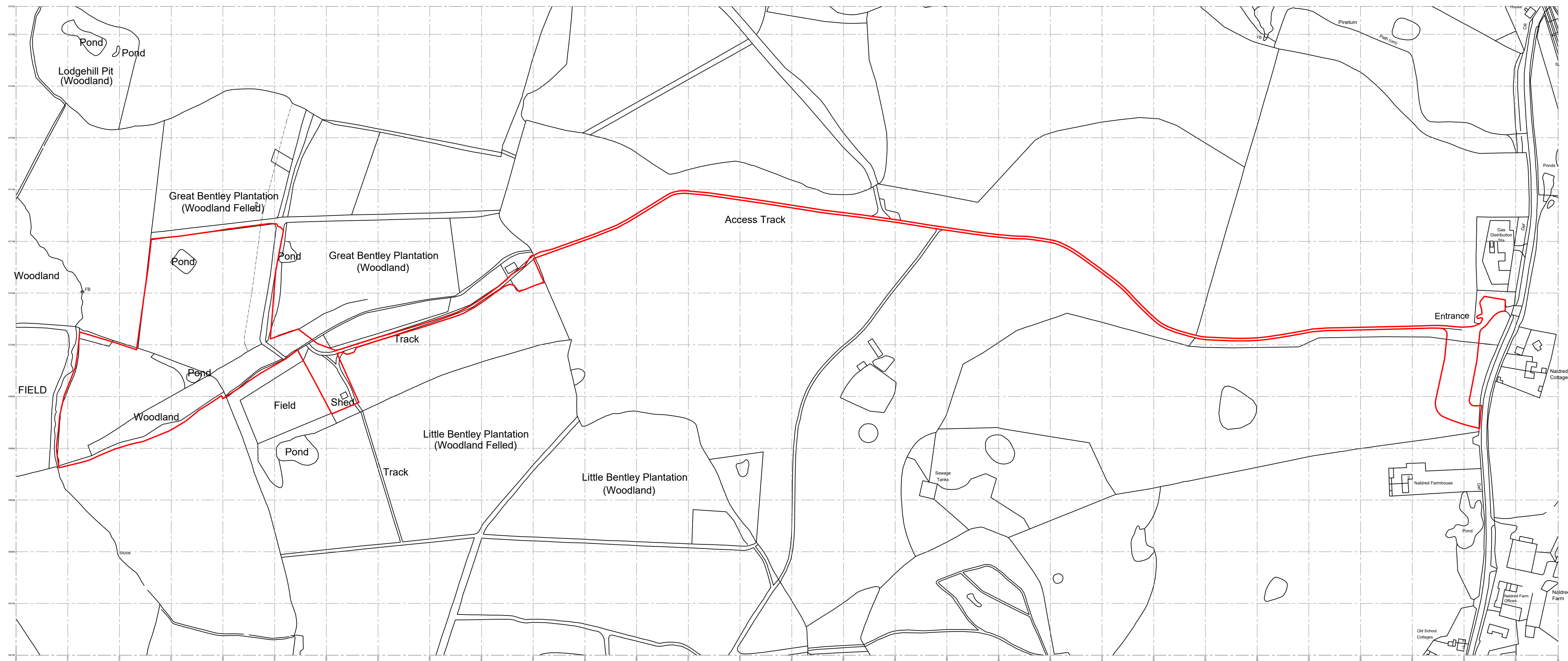
- 5.1.1 The British Standard 5837:2012 states that there is the need to avoid misplaced tree retention; for example, to attempt to retain too many unsuitable trees on a site may result in excessive pressure on the trees during the development work and subsequent demands for their removal post development. The scheme enables fourteen category 'A' trees, three category 'A' woodlands, sixteen category 'B' trees, six category 'C' trees, one category 'C' group and two category 'C' hedges to be retained.
- 5.1.2 Consideration for both the direct impact and indirect impact of a development with respect to retained trees needs to be assessed. With respect to the retained tree stock, it is considered that their successful integration into the layout can be achieved.
- 5.1.3 Careful planning of site operations must be carried out to avoid any adverse impact to the retained trees. To safeguard the trees through the development it is advised that a site-specific Arboricultural Method Statement is drawn up and implemented.

5.2 Post development tree management.

- 5.2.1 Section 8.8.2 of the British Standard 5837:2012 recommends post development aftercare of trees following the completion of development works. It is recommended the following is considered with regard to post development inspection of retained trees:
1. Trees that grow on a site prior to development may, if adversely affected, be in decline over a period of several years before they die. This varies due to age, species, condition prior to development, extent of damage during development, soil conditions and climate. It is recommended that regular inspections are undertaken.
 2. Where trees are protected by planning controls, it is recommended that the Local Planning Authority is informed, and necessary agreements obtained prior to any remedial works.
 3. Following completion of a development it is recommended that the arboricultural consultant inspects the trees for signs of intolerance to the change of conditions and the effect of the development. There may be a need for additional tree works to those originally specified.

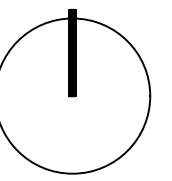
APPENDIX 1

SITE LOCATION PLAN



GENERAL NOTES:

THIS DRAWING IS THE COPYRIGHT OF TOM DUNN ARCHITECTS LTD AND SHOULD NOT BE COPIED OR REPRODUCED WITHOUT WRITTEN CONSENT. ALL DIMENSIONS MUST BE CHECKED ON SITE. DO NOT SCALE OFF THIS DRAWING EXCEPT FOR PLANNING PURPOSES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE SPECIFICATION OF WORKS. ALL WORKS MUST BE CARRIED OUT IN ACCORDANCE WITH THE STATUTORY AUTHORITIES.



REVISIONS:

G	14/12/23	Design Update		RR	TD
F	12/12/23	Design Update		RR	TD
E	11/12/23	Design Update		RR	TD
D	08/12/23	Design Update		RR	TD
C	16/10/23	Design Update		RR	TD
B	22/09/23	Design Update		RR	TD
A	02/11/22	Design Update		RR	TD
Rev	Date	Details		Rev By	Chkd

TOM DUNN ARCHITECTS LTD

A 14 Tysen Road,
London
N16 7NA
T +44 (0)207 887 2230
E tom@tomdunnarchitects.com
W www.tomdunnarchitects.com

JOB NUMBER: 00722

PROJECT NAME:
Outdoor Living at Borde Hill

CLIENT:
MARLEY HILL VENTURES

STATUS	SCALE	DATE
PLANNING	1:2500@A1	14/12/23

DRAWING NAME:
EXISTING SITE LOCATION PLAN

DRAWING NUMBER: 00722-P00-001	REV: G
----------------------------------	-----------

APPENDIX 2

TREE SURVEY DATA

KEY TO TREE SCHEDULE

Tree No: Relates to individual trees, groups, hedges and woodlands as identified within the Tree Survey Schedule and Tree Constraints Plan

'T' prefixes have been used to identify individual trees.
'G' prefixes have been used to identify groups of trees.
'H' prefixes have been used to identify hedgerows.
'W' prefixes have been used to identify woodlands.

Species: Common name

Height: Estimated height expressed in meters

ST: Stem diameter of the main trunk taken at 1.5m above ground level or in accordance with Annex C BS5837:2012.

Height in M of Canopy: Information of the first significant branch and direction of growth in order to inform on ground clearance.

Abbreviations: #: Estimated
Ave: Average
A.G.L: Above ground level
SULE: Safe Useful Life Expectancy

Branch Spread: Estimated crown radius expressed in meters, taken for each cardinal compass point.

Age Class: Y Young - Less than one third of natural life expectancy
MM Middle aged - One to two thirds of natural life expectancy
M Mature - More than two thirds of natural life expectancy
OM Over mature
NP Newly Planted

Physiological Condition: G Good
F Fair
P Poor
D Dead

Notes:

Root Protection Area: This is a layout tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority (detailed in paragraph 3.7 British Standard 5837:2012 'Trees in relation to Construction-Recommendations').

Young trees with a stem diameter of less than 150mm: Whilst the presence of young trees of good form and vitality is generally desirable (i.e those which have the potential to develop into quality mature specimens), they need not necessarily be a significant constraint on the site's potential (detailed in paragraph 4.5.10 British Standard 5837:2012 'Trees in relation to Construction-Recommendations').

CASCADE CHART FOR TREE QUALITY ASSESSMENT

Category and definition Criteria (including subcategories where appropriate) Identification on plan

Trees unsuitable for retention (see Note)

Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>	Dark Red
---	--	----------

1 Mainly arboricultural qualities

2 Mainly landscape qualities

3 Mainly cultural values, including conservation

Trees to be considered for retention

Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Light Green
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	Mid Blue
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	Grey

TREE NO.	SPECIES	Height in (M)	CALCULATED STEM DIA (MM)	BRANCH SPREAD				HEIGHT IN M OF CANOPY	AGE CLASS	PHYS. COND	COMMENTS	LIFE EXPECTANCY (EST YEARS)	BS5837:2012 CATEGORY GRADING
	(Latin)			N	E	S	W						
T1	Douglas Fir <i>Pseudotsuga menziesii</i>	25	550	2	2.5	2.2	2.5	5	M	F	Area has been recently cleared due to ash dieback. Scattered single Douglas Fir trees have been retain. Windfall has occurred. High likelihood this could still get occur. Downgraded as a result. Etiolated. Wounding in stem on east side 0.5-3m agl. No Work	10 to 20	C2
T2	Douglas Fir <i>Pseudotsuga menziesii</i>	30	825	2	5	6	3	5	M	F	Area has been recently cleared due to ash dieback. Scattered single Douglas Fir trees have been retain. Windfall has occurred. High likelihood this could still get occur. Downgraded as a result. Etiolated. No Work	10 to 20	C2
T3	Douglas Fir <i>Pseudotsuga menziesii</i>	32	610	2	2	2.5	2	5	M	F	Area has been recently cleared due to ash dieback. Scattered single Douglas Fir trees have been retain. Windfall has occurred. High likelihood this could still get occur. Downgraded as a result. Etiolated. No Work	10 to 20	C2
T4	Larch <i>Larix decidua</i>	18	420	2	4.5	1.5	1.5	5	MM	F	Area has been recently cleared due to ash dieback. Scattered single Douglas Fir trees have been retain. Windfall has occurred. High likelihood this could still get occur. Downgraded as a result. Etiolated. Sever Ivy	10 to 20	C2
T5	Douglas Fir <i>Pseudotsuga menziesii</i>	30	535	2	1.5	2	2	5	M	F	Area has been recently cleared due to ash dieback. Scattered single Douglas Fir trees have been retain. Windfall has occurred. High likelihood this could still get occur. Downgraded as a result. Etiolated. Remove deadwood if retained for planning.	10 to 20	C2
T6	Douglas Fir <i>Pseudotsuga menziesii</i>	28	420	1	3	1.5	2	5	M	F	Area has been recently cleared due to ash dieback. Scattered single Douglas Fir trees have been retain. Windfall has occurred. High likelihood this could still get occur. Downgraded as a result. Etiolated. No Work	10 to 20	C2
T7	Douglas Fir <i>Pseudotsuga menziesii</i>	16	430	0.5	5	2	0.5	5	MM	F	Area has been recently cleared due to ash dieback. Scattered single Douglas Fir trees have been retain. Windfall has occurred. High likelihood this could still get occur. Downgraded as a result. Etiolated. Younger than other Douglas fir. Damaged leader. Remove in favour of development.	10 to 20	C2
T8	Oak <i>Quercus robur</i>	24	640	3.5	3.5	2.5	5	5	M	F	Young mature specimen growing in felled area. No Work	20 to 40	B2
T9	Oak <i>Quercus robur</i>	19	520	3	3.5	2.5	3	GL	M	F	Young mature specimen growing in felled area. Adjacent to pond. No Work	20 to 40	B2
T10	Douglas Fir <i>Pseudotsuga menziesii</i>	33	900#	3.5	3	2.5	3	5	M	F	Area has been recently cleared due to ash dieback. Scattered single Douglas Fir trees have been retain. Windfall has occurred. High likelihood this could still get occur. Largest specimen. Located adjacent to pond. Etiolated. Stem estimated due to ivy and bramble. Sever Ivy	20 to 40	B2

TREE NO.	SPECIES	Height in (M)	CALCULATED STEM DIA (MM)	BRANCH SPREAD				HEIGHT IN M OF CANOPY	AGE CLASS	PHYS. COND	COMMENTS	LIFE EXPECTANCY (EST YEARS)	BS5837:2012 CATEGORY GRADING
	(Latin)			N	E	S	W						
											Preliminary Recommendations		
T11	Oak <i>Quercus robur</i>	19	590	5	3.5	3	3.5	2	M	F	Young mature specimen growing in felled area. Adjacent to pond. <i>No Work</i>	20 to 40	B2
T12	Oak <i>Quercus robur</i>	12	360	3.5	5	4	4.5	2.5	Y	F	Young specimen growing adjacent to an existing track to the north of the site. <i>No Work</i>	20 to 40	B2
T13	Ash <i>Fraxinus excelsior</i>	19	600	6.5	5	4	5	N/A	M	P	Growing at the northern end of H1. Dieback, early leaf fall. Suspected ash Dieback due to history of the site. Fell regardless of any development that may occur. <i>Fell</i>	<10	U
T14	Oak <i>Quercus robur</i>	21	555	4.5	4.5	4.5	6.5	3	M	F	Young mature specimen growing in felled area adjacent to western boundary. Potential to further develop. <i>No Work</i>	20 to 40	B2
T15	Oak <i>Quercus robur</i>	24	570	4	3	4.5	5	3	M	F	Young mature specimen growing in felled area adjacent to western boundary. Potential to further develop. <i>No Work</i>	20 to 40	B2
T16	Oak <i>Quercus robur</i>	22	740	4.5	4	6	4.5	5	M	G	Growing adjacent to the existing estate track. <i>No Work</i>	>40	A2
T17	Oak <i>Quercus robur</i>	18	435	3.5	3.5	2.5	2.8	5	MM	F	Growing adjacent to the existing estate track. Etiolated in form. <i>No Work</i>	20 to 40	B2
T18	Oak <i>Quercus robur</i>	20	555	3.5	5	4.5	1	5	M	F	Growing adjacent to the existing estate track. Biased canopy growth due to T19. Waterlogged ground adjacent to tree on survey day. <i>No Work</i>	20 to 40	B2
T19	Oak <i>Quercus robur</i>	24	1120	5.5	7	9	7	5	M	G	Growing adjacent to the existing estate track. Noteworthy feature. <i>No Work</i>	>40	A2
T20	Oak <i>Quercus robur</i>	20	750	4.5	5	7	3.5	5	M	G	Growing adjacent to the existing estate track. <i>No Work</i>	>40	A2
T21	Oak <i>Quercus robur</i>	24	610	1.5	4	10	4	5	M	G	Growing adjacent to the existing estate track and existing parking area. Growing on the edge of adjacent woodland. <i>No Work</i>	>40	B2
T22	Oak <i>Quercus robur</i>	17	660	3	3.5	3.5	4	5	M	F	Growing adjacent to the existing estate track and existing parking area. Young mature specimen. <i>No Work</i>	20 to 40	B2
T23	Oak <i>Quercus robur</i>	17	495	6	4	1.5	1	5	MM	F	Growing adjacent to the existing estate track and existing parking area. Suppressed by T24. <i>No Work</i>	10 to 20	C2
T24	Oak <i>Quercus robur</i>	20	775	6	11	2	10	5	M	F	Component of four oak trees growing adjacent to the existing estate track and existing parking area. <i>No Work</i>	>40	A2

TREE NO.	SPECIES	Height in (M)	CALCULATED STEM DIA (MM)	BRANCH SPREAD				HEIGHT IN M OF CANOPY	AGE CLASS	PHYS. COND	COMMENTS	LIFE EXPECTANCY (EST YEARS)	BS5837:2012 CATEGORY GRADING
	(Latin)			N	E	S	W						
											Preliminary Recommendations		
T25	Oak <i>Quercus robur</i>	20	850	3.5	2	9	9	5	M	F	Component of four oak trees growing adjacent to the existing estate track and existing parking area. No Work	>40	A2
T26	Oak <i>Quercus robur</i>	20	660	2	9	2	2	5	M	F	Component of four oak trees growing adjacent to the existing estate track and existing parking area. No Work	>40	A2
T27	Oak <i>Quercus robur</i>	20	780	2	8	8.5	5.5	5	M	F	Component of four oak trees growing adjacent to the existing estate track and existing parking area. No Work	>40	A2
T28	Oak <i>Quercus robur</i>	18	1250#	7	7	9	5.5	3.5s	M	F	Component of a group of trees growing adjacent to the existing road. New driveway, landscaping to south. Deadwood overhanging neighbouring property. Dieback in canopy. Stem estimated due to brambles. Inonotus dryedeus fungal bracket is present on north side. Preliminary category code assigned. Further internal decay detection recommended. Remove deadwood overhanging neighbouring property.	20 to 40	B2
T29	Oak <i>Quercus robur</i>	22	1250	7	10	10	7.5	2.5e	M	F	Component of a group of trees growing adjacent to the existing road. Inonotus dryedeus brackets on south east side. Preliminary category code assigned. Further internal decay detection recommended.	>40	A2
T30	Oak <i>Quercus robur</i>	18	1005	7.5	8	10	8	3.5e	M	F	Component of a group of trees growing adjacent to the existing road. Ganoderma brackets on west side of tree. Polyporus on old wound on south side at 2.25m agl. Preliminary category code assigned. Further internal decay detection recommended.	>40	A2
T31	London Plane <i>Platanus x hispanica</i>	18	910	5.5	8.5	9	8	3e	MM	G	Component of a group of trees growing adjacent to the existing road. One of 3 London plane trees. No Work	>40	A2
T32	London Plane <i>Platanus x hispanica</i>	18	970	7.5	8	7	8	5	MM	F	Component of a group of trees growing adjacent to the existing road. One of 3 London plane trees. No Work	>40	A2
T33	London Plane <i>Platanus x hispanica</i>	18	1000	7	7.5	7	7	5	MM	F	Component of a group of trees growing adjacent to the existing road. One of 3 London plane trees. No Work	20 to 40	B2
T34	Oak <i>Quercus robur</i>	20	1100	10.5	9	9	5	5	M	F	Component of a group of trees growing adjacent to the existing road. Remove deadwood over road.	>40	A2
T35	Oak <i>Quercus robur</i>	20	1000#	6	4	8	8	4s	M	F	Component of a group of trees growing adjacent to the existing road. Stem estimated due to bramble. No Work	>40	A2
T36	Oak <i>Quercus robur</i>	20	950	7.5	8	7	9.5	5	M	F	Component of a group of trees growing adjacent to the existing road. Remove deadwood over road.	>40	A2

TREE NO.	SPECIES	Height in (M)	CALCULATED STEM DIA (MM)	BRANCH SPREAD				HEIGHT IN M OF CANOPY	AGE CLASS	PHYS. COND	COMMENTS	LIFE EXPECTANCY (EST YEARS)	BS5837:2012 CATEGORY GRADING
	(Latin)			N	E	S	W						
											Preliminary Recommendations		
T37	Oak <i>Quercus robur</i>	17	820	10.5	8	10	6	5	M	F	Component of a group of trees growing adjacent to the existing road. Biased canopy growth south due to adjacent trees. <i>Sever/remove ivy</i>	20 to 40	B2
T38	Oak <i>Quercus robur</i>	17	1100	3.5	3.5	2.5	3.5	5	M	F	Component of a group of trees growing adjacent to the existing road. LV line going through canopy. Dense ivy. Stem estimated due to ivy stems. <i>Sever/remove ivy</i>	20 to 40	B2
T39	Leyland Cypress <i>Cupressus x leylandii</i>	17	686	4	4	4	4	N/A	MM	P	Growing near road. Not a constraint. Northern section has part failed and is dead. <i>Fell remainder of tree.</i>	<10	U
T40	Ash <i>Fraxinus excelsior</i>	17	650	4	6	6	3	N/A	MM	F	Set back from road. Early leaf fall. No obvious signs of ash dieback. Monitor. <i>No Work</i>	20 to 40	B2
G1	Field Maple <i>Acer campestre</i>	Ave 5	Ave 100	1.5	1.5	1.5	1.5	N/A	Y	F	Group of poorly formed young trees left over from felling. Deadwood and wounding. Not a constraint. Average dimensions recorded. <i>No Work</i>	<10	U
G2	Leyland Cypress <i>Cupressus x leylandii</i>	Ave 18	Ave 650	4	4	4	4	N/A	MM	F	Growing near road. Not a constraint. End tree of a row to the north. <i>NO Work</i>	10 to 20	C2
H1	Hawthorn <i>Crataegus monogyna</i>	Ave 3	Ave 50	0.8	0.8	0.8	0.8	GL	Y	F	Western boundary hedge. Average dimensions recorded. Not a constraint. <i>No Work</i>	10 to 20	C2
H2	Hawthorn <i>Crataegus monogyna</i>	Ave 3	Ave 50	0.8	0.8	0.8	0.8	GL	Y	F	Boundary hedge. Average dimensions recorded. Not a constraint. <i>No Work</i>	10 to 20	C2
W1	Oak <i>Quercus robur</i>	Ave 18	Ave 500	4	4	4	4	N/A	M	G	Oak standards with hazel coppice. Ancient woodland. Average dimensions recorded. <i>No Work</i>	>40	A2
W2	Oak <i>Quercus robur</i>	Ave 20	Ave 650	4	4	4	4	N/A	M	F	Narrow woodland belt between existing estate track and proposed developable area. Predominantly oak, occasional ash with hazel coppice. Average dimensions recorded. Fell ash with ash dieback. Oak canopies over track by second field extend up to 10m. <i>Fell ash trees</i>	>40	A2
W3	Oak <i>Quercus robur</i>	Ave 20	Ave 500	4	4	4	4	N/A	M	F	Narrow woodland belt between existing estate track and proposed developable area. Predominantly oak, occasional ash with hazel coppice. Average dimensions recorded. <i>Fell ash</i>	>40	A2

APPENDIX 3

ROOT PROTECTION AREA

ROOT PROTECTION AREA

TREE NO.	SPECIES	NO. OF STEMS	SINGLE STEM DIA (mm)	2-5 STEMS					> 5 STEMS	ROOT PROTECTION AREA - RPA (RADIUS IN M)	RPA (M ²)	LIFE EXPECTANCY (EST YEARS)	BS5837:2012 CATEGORY
				STEM 1 (mm)	STEM 2 (mm)	STEM 3 (mm)	STEM 4 (mm)	STEM 5 (mm)	MEAN STEM DIA (mm)				
T1	Douglas Fir	1	550							6.60	137	10 to 20	C2
T2	Douglas Fir	1	825							9.90	308	10 to 20	C2
T3	Douglas Fir	1	610							7.32	168	10 to 20	C2
T4	Larch	1	420							5.04	80	10 to 20	C2
T5	Douglas Fir	1	535							6.42	130	10 to 20	C2
T6	Douglas Fir	1	420							5.04	80	10 to 20	C2
T7	Douglas Fir	1	430							5.16	84	10 to 20	C2
T8	Oak	1	640							7.68	185	20 to 40	B2
T9	Oak	1	520							6.24	122	20 to 40	B2
T10	Douglas Fir	1	900							10.80	366	20 to 40	B2
T11	Oak	1	590							7.08	157	20 to 40	B2
T12	Oak	1	360							4.32	59	20 to 40	B2
T13	Ash	1	600							7.20	163	<10	U
T14	Oak	1	555							6.66	139	20 to 40	B2
T15	Oak	1	570							6.84	147	20 to 40	B2
T16	Oak	1	740							8.88	248	>40	A2
T17	Oak	1	435							5.22	86	20 to 40	B2
T18	Oak	1	555							6.66	139	20 to 40	B2
T19	Oak	1	1,120							13.44	568	>40	A2
T20	Oak	1	750							9.00	255	>40	A2
T21	Oak	1	610							7.32	168	>40	B2
T22	Oak	1	660							7.92	197	20 to 40	B2
T23	Oak	1	495							5.94	111	10 to 20	C2
T24	Oak	1	775							9.30	272	>40	A2
T25	Oak	1	850							10.20	327	>40	A2
T26	Oak	1	660							7.92	197	>40	A2
T27	Oak	1	780							9.36	275	>40	A2
T28	Oak	1	1,300							15.00	707	20 to 40	B2
T29	Oak	1	1,350							15.00	707	>40	A2
T30	Oak	1	1,005							12.06	457	>40	A2
T31	London Plane	1	910							10.92	375	>40	A2
T32	London Plane	1	970							11.64	426	>40	A2
T33	London Plane	1	1,000							12.00	452	20 to 40	B2
T34	Oak	1	1,100							13.20	547	>40	A2
T35	Oak	1	1,000							12.00	452	>40	A2
T36	Oak	1	950							11.40	408	>40	A2
T37	Oak	1	820							9.84	304	20 to 40	B2
T38	Oak	1	1,100							13.20	547	20 to 40	B2

ROOT PROTECTION AREA

TREE NO.	SPECIES	NO. OF STEMS	SINGLE STEM DIA (mm)	2-5 STEMS					> 5 STEMS	ROOT PROTECTION AREA - RPA (RADIUS IN M)	RPA (M ²)	LIFE EXPECTANCY (EST YEARS)	BS5837:2012 CATEGORY
				STEM 1 (mm)	STEM 2 (mm)	STEM 3 (mm)	STEM 4 (mm)	STEM 5 (mm)	MEAN STEM DIA (mm)				
T39	Leyland Cypress	6							280	8.23	213	<10	U
T40	Ash	1	650							7.80	191	20 to 40	B2
G1	Field Maple	1	100							1.20	5	<10	U
G2	Leyland Cypress	1	650							7.80	191	10 to 20	C2
H1	Hawthorn	1	50							0.60	1	10 to 20	C2
H2	Hawthorn	1	50							0.60	1	10 to 20	C2
W1	Oak	1	500							6.00	113	>40	A2
W2	Oak	1	650							7.80	191	>40	A2
W3	Oak	1	500							6.00	113	>40	A2

TREE CONSTRAINTS PLAN



Sylva Consultancy

Arboricultural Association
FES93

01865 872 945 Mobile: 07976 596 517
e-mail: mail@sylvaconsultancy.co.uk
The Oxford Boaters Box, Woodstock Road, Oxford, OX2 7AH

Site: Borde Hill

1:500 @ A1

Drawing Title: Tree Constraints Plan

November 2023

Key:

Category A

Category B

Category C

Category U

Category

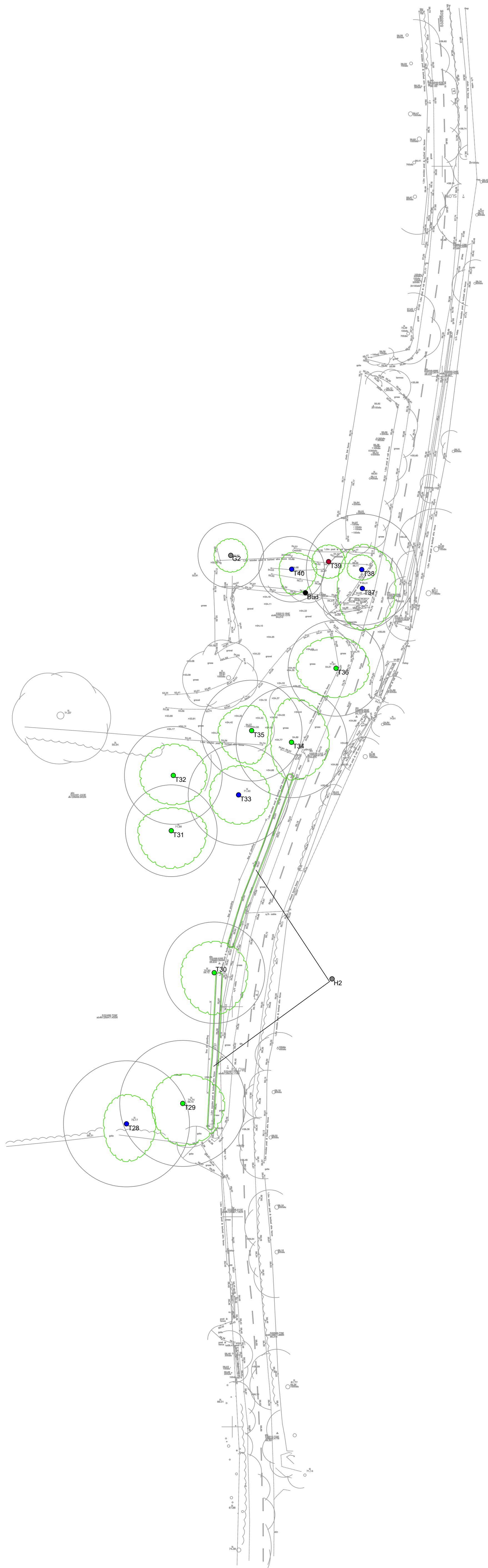
Root Protection Area

Crown Spread

Tree Number

NOTE: Tree/group numbers marked with an * have approximate locations.

NOTE: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.



SHEET 1

SHEET 2

Sylva Consultancy

Tel: 01865 872 945 Mobile: 07976 596 517
e-mail: mail@sylvaconsultancy.co.uk
The Oxford Boaters Box, Woodstock Road, Oxford, OX2 7AH

Arboricultural
Association
Fellow Member
FE593

Site: Borde Hill	1:500 @ A1
Drawing Title: Tree Constraints Plan	November 2023

Key:

● Category A

● Category B

● Category C

● Category U

Category

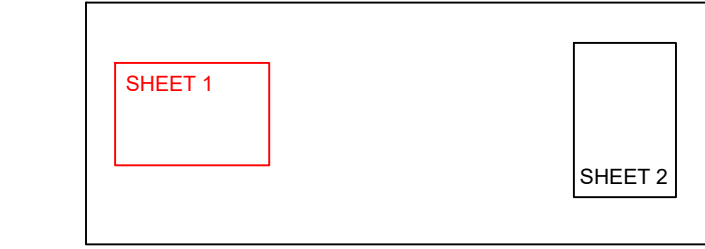
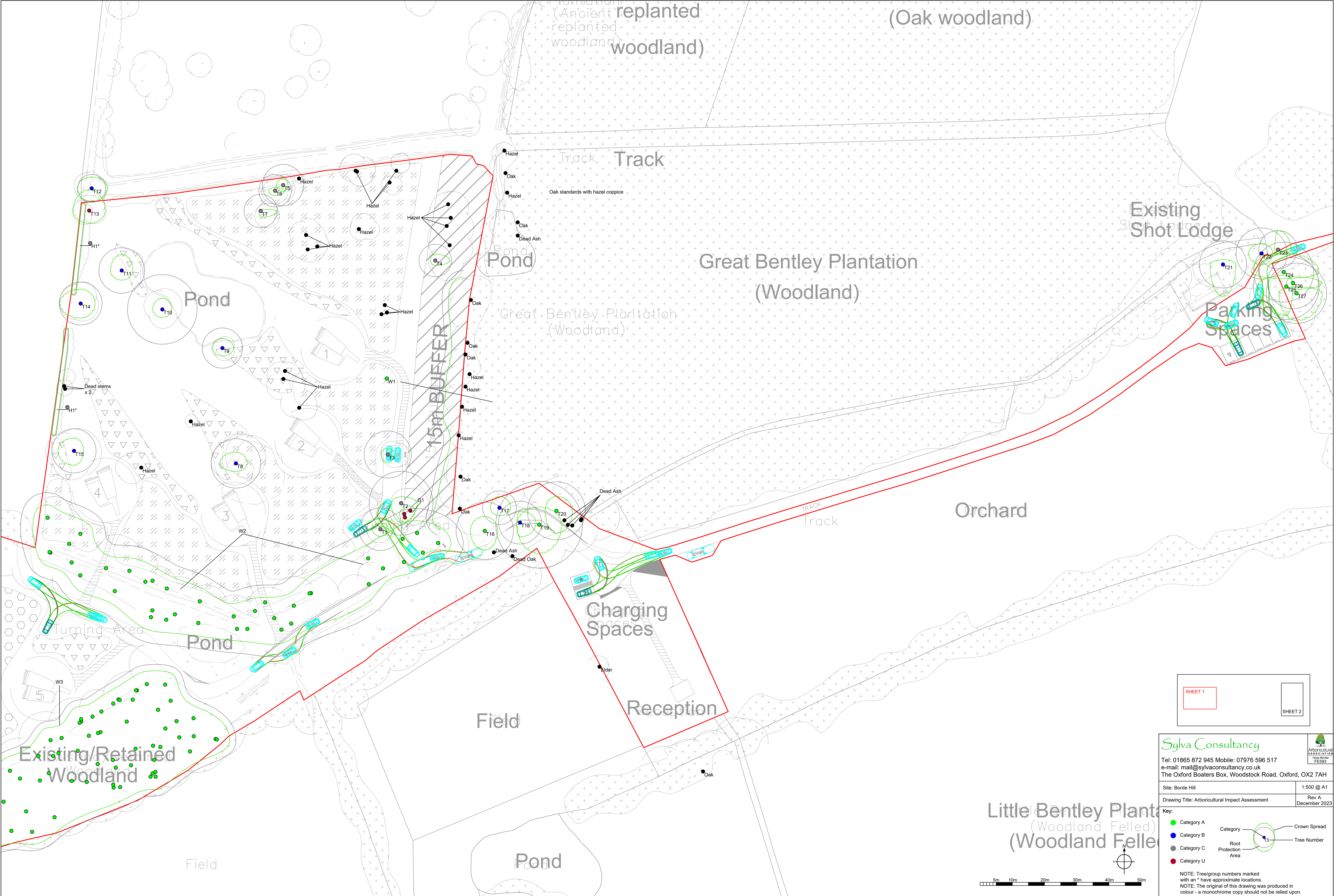
Root Protection Area

Crown Spread

Tree Number

NOTE: Tree/group numbers marked with an * have approximate locations.
NOTE: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

ARBORICULTURAL IMPACT ASSESSMENT PLAN



Sylva Consultancy
Tel: 01865 872 945 Mobile: 07976 596 517
e-mail: mail@sylvaconsultancy.co.uk
The Oxford Boaters Box, Woodstock Road, Oxford, OX2 7AH

Arboricultural Association
FES93

Site: Borde Hill	1:500 @ A1
Drawing Title: Arboricultural Impact Assessment	Rev A December 2023

Key:

- Category A
- Category B
- Category C
- Category U

Category 3

Crown Spread

Tree Number

Root Protection Area

NOTE: Tree/group numbers marked with an * have approximate locations.
NOTE: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.





Horticultural
SOCIETY
Fellow Member
FF593

Key:

- Category A
- Category B
- Category C
- Category U

The diagram shows a tree with a central point labeled '13' representing the 'Tree Number'. A dashed green circle around the tree is labeled 'Crown Spread'. A solid grey circle at the base is labeled 'Root Protection Area'. A label 'Category' points to the tree trunk.

NOTE: Tree/group numbers marked with an * have approximate locations.
NOTE: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

EXAMPLE OF GREEN GRID ROOT BRIDGE

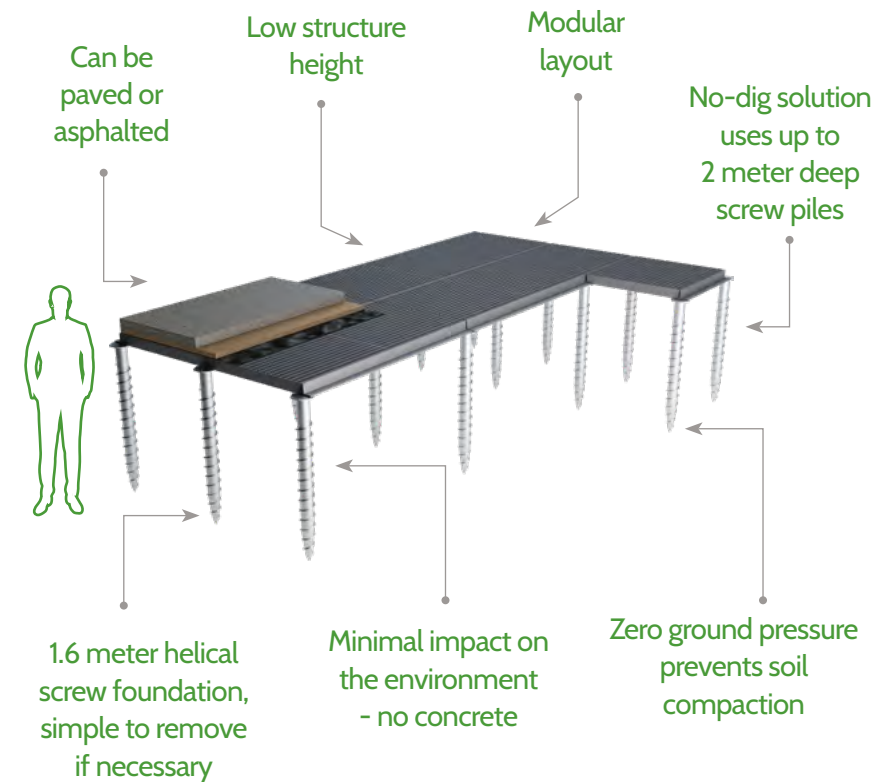


Enhance value and reduce liability

Green Grid Systems place tree preservation at the heart of responsible construction by providing a low impact, no dig solution, no concrete solution that prevents soil compaction.

Consisting of an adaptable modular steel lattice construction that is supported on robust foundation screws. A network of piles is typically fixed two meters into the substrate and carefully positioned between the main roots in the RPA.

With a low structure height, the system can be implemented with minimal impact. Subsequent loads of up to 57kN are then absorbed by the structure rather than the roots.



The innovative, load supporting system, RootBridge, delivers credible protection in urban developments where TPOs currently exist, helping move projects through planning.

Typical applications:

- Carparks
- Walkways
- Driveways
- Access roads
- Ramping onto a geocellular system

EXAMPLE OF A CELLULAR CONFINEMENT DESIGN



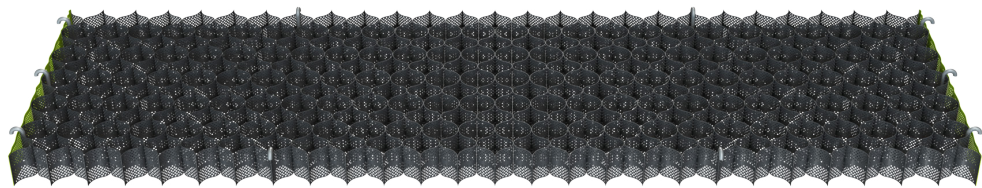
Cellweb®TRP

Why protect trees?

Trees provide a wealth of benefits within the urban environment including cleaning the air, prevention of flooding and moderation of the climate.

As a result, within the UK it is an offence to cut down, lop, uproot, top, wilfully damage or destroy a protected tree without authorisation. Fines, if the defendant is found guilty in a Crown Court, are unlimited.

To minimise the environmental impact and avoid legal proceedings, we offer the independently tested Cellweb®TRP system.



What is Cellweb®TRP?

Cellweb®TRP is a cellular confinement system specifically designed for tree root protection. The system creates a stable, load-bearing surface for traffic or footfall whilst eliminating damage to roots through compaction and desiccation.

The Cellweb®TRP system comprises of three specific elements, Cellweb®TRP, Treetex™ pollution control geotextile and an infill of clean angular stone. The system has been designed to create an unparalleled solution to tree root protection applications.

Cellweb®TRP is a no-dig solution that ensures that the load placed upon it is laterally dissipated rather than transferred to the soil and roots below. The use of Treetex™ pollution control geotextile allows for drainage and separation whilst preventing contaminants from reaching the roots.

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



Geosynthetic
Engineered Solutions

“Creating Innovative Solutions with Outstanding Products”



What makes Cellweb®TRP different?

With over 15 years of captured data and thousands of installations, the Cellweb®TRP system has developed a reputation for excellence.

We are so confident in our system, we offer a guarantee that covers the replacement of the trees and of the system itself. With Cellweb®TRP being quick to install and having a 100% success rate it is clear to see why the Cellweb®TRP is regularly specified by tree officers and arboriculturalists across the country.

From the drawing board to installation, we are here to help.

We have been supplying the Cellweb®TRP system since 1998 and our technical team have vast experience with tree root protection and the associated legislation.

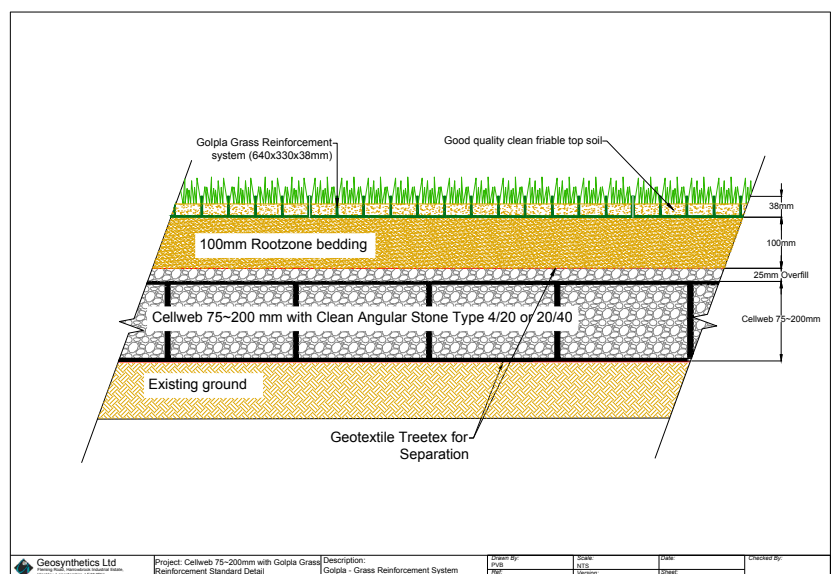
Delivering complete peace of mind to customers is our number one priority. As part of this customer care package we offer free on site consultations, technical recommendations and on site installation guidance on all projects.

Our in-house engineering team provide site specific recommendations to ensure the solution used is cost effective and environmentally sound.

For more information on Cellweb®TRP or Geosynthetics Limited please contact our sales office on 01455 617139 or visit www.geosyn.co.uk.



**INVESTORS
IN PEOPLE** | Bronze



APPENDIX 8

PHOTOGRAPHS



Photograph 1

View of the existing estate track that will be used for access to the cabins



Photograph 2

View of the shed which will be converted for use as a reception area.



Photograph 3

Location of x 4 cabins



Photograph 4

View of the existing access that will be replaced by a new access point off Borde Hill Lane

APPENDIX 9

QUALIFICATIONS

Fiona Bradshaw

MicFor; RFS Dip Arb; F. Arbor.A; Tech Cert (Arbor.A)

I have over 24 years' experience of arboriculture and I am the principal consultant at Sylva Consultancy. I hold the Royal Forestry Society's Professional Diploma in Arboriculture and the Arboricultural Associations Technicians Certificate. I am a Fellow member of the Arboricultural Association and a professional member of the Institute of Chartered Foresters, of which I am also a registered Consultant.

I have the benefit of both a local authority and private practice background and I am frequently instructed to provide advice and assistance relating to trees and the planning process. I am also experienced at compiling expert reports, providing evidence and also appearing as an expert witness at Public Inquiries.

I am committed to my continued professional development which is reflected in my regular attendance of seminars and workshops.