



Arboricultural Impact Assessment

**of Proposed Havant Health & Wellbeing
Campus Development at**



**Land off River Way, Havant,
Hampshire, PO9 2EL**

Prepared by:

Bowland 
Tree Consultancy Ltd

March 2015

**ARBORICULTURAL IMPACT ASSESSMENT
LAND OFF RIVER WAY, HAVANT**

Control sheet

Project No.: BTC779

Site: Land off River Way, Havant (Former Oak Park School Site)

Client: Hampshire LivingSpace

Council: Havant Borough Council

Survey Date: 13 December 2014

Prepared by: Phill Harris MSc BSc(Hons) HND CEnv MArborA MICFor Chartered Arboriculturist

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DISCLAIMER

Survey Limitations: Unless otherwise stated all trees are surveyed from ground level using non-invasive techniques, in sufficient detail to gather data for and inform the design of the current project only. The disclosure of hidden crown and stem defects, in particular where they may be above a reachable height or where trees are ivy clad or located in areas of restrictive ground vegetation, cannot therefore be expected. Detailed tree safety appraisals are only carried out under specific written instructions. Comments upon evident tree safety relate to the condition of said tree at the time of the survey only. Unless otherwise stated all trees should be re-inspected annually in order to appraise their on-going mechanical integrity and physiological condition. It should, however, be recognised that tree condition is subject to change, for example due to the effects of disease, decay, high winds, development works, etc. Changes in land use or site conditions (e.g. development that increases access frequency) and the occurrence of severe weather incidents are also significant considerations with regard to tree structural integrity, and trees should therefore be re-assessed in the context of such changes and/or incidents and inspected at intervals relative to identified and varying site conditions and associated risks.

Where trees are located wholly or partially on neighbouring private third-party land then said land is not accessed and our inspection is therefore restricted to what can reasonably be seen from within the site. Stem diameters and other measurements of trees located on such land are estimated. Any subsequent comments and judgments made in respect of such trees are based on these restrictions and are our preliminary opinion only. Recommendations for works to neighbouring third-party trees are only made where a potential risk to persons and/or property has been identified during our survey or, if applicable, where permissible works are required to implement a proposed development. Where significant structural defects of third-party trees are identified and associated management works are considered essential to negate any risk of harm and/or damage then we will inform the relevant Council of the matter. Where a more detailed assessment is considered necessary then appropriate recommendations are set out in the Tree Survey Schedule.

Where tree stem locations are not included on the plan(s) provided then they are plotted by the arboriculturist at the time of the survey using, where appropriate and/or practicable, a combination of measurement triangulation and GPS co-ordination. Where this is not possible then locations are estimated. Restrictions in these respects are detailed in the report.

This document is intended as a guide to identify key tree related constraints to site development only, and the potential influence of trees upon existing or proposed buildings or other structures resulting from the effects of their roots abstracting water from shrinkable load-bearing soils is not considered herein. The tree survey information in its current form should not therefore be considered sufficient to determine appropriate foundation depths for new buildings. Accordingly, an updated survey, with reference to the current NHBC Standards Chapter 4.2 - Building Near Trees, must therefore be prepared for the specific purpose of informing suitable foundation depths subsequent to planning approval being granted. The advice of a structural engineer must also be sought with regard to appropriate foundation depths for new buildings.

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**ARBORICULTURAL IMPACT ASSESSMENT
LAND OFF RIVER WAY, HAVANT**

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1.0 INTRODUCTION

Terms of Reference

- 1.1 Bowland Tree Consultancy Ltd were instructed to:
- a) Survey, either as individuals or by group, all trees having reasonable potential to affect or to be adversely affected by development of the site under consideration;
 - b) Prepare a tabulated Tree Survey Schedule based on guidance specified BS5837:2012 - Trees in Relation to Design, Demolition and Construction – Recommendations;
 - c) Evaluate the potential tree related impacts and design conflicts of the proposals;
 - d) Advise on removal, retention and management options for the trees in the current context and in the context of the proposed development;
 - e) Advise on suitable tree protection measures required during development;
 - f) Annotate the existing site plan and the proposed site plan to produce a Tree Constraints Plan and a Tree Impact Plan, identifying tree retention categories, crown spreads, Root Protection Areas, projected tree related impacts, and other pertinent details; and
 - g) Produce an Arboricultural Impact Assessment report outlining the main tree related issues and reasonably foreseeable tree related impacts in relation to the proposed development and indicating suitable mitigation provisions and retained tree protection measures.

Scope and Purpose of Report

- 1.2 By detailing foreseeable tree related issues this report is intended to assist the Local Planning Authority (LPA) in their review of the proposed development and, as such, should be supplied to them in support of the planning application to which it pertains.
- 1.3 Essentially, the report provides an analysis of the impacts that the proposed development is projected to have on trees located both within the site and, where practicable, on land immediately adjacent to its boundaries. It also offers guidance on suitable retained tree management and mitigation for projected losses, along with advice on appropriate tree protection measures in the context of the proposed development in accordance with current guidance.

Site Visit, Data Collection and Tree Plans

- 1.4 Further to our instruction I confirm that I visited the site on 13 December 2014 and carried out a survey of trees within and immediately adjacent to the site boundaries. My survey was carried out in accordance with the preceding disclaimer, and all tree data collected on site is set out in the attached tabulated Tree Survey Schedule (TSS) at Appendix One which, for ease of interpretation, should be read alongside the associated BS5837:2012 Table 1 (as appended).
- 1.5 During my January survey I identified 12 individual trees (prefixed 'T'), four groups of trees (prefixed 'G'), and one hedge (prefixed 'H'), and have numbered them accordingly on the Tree Constraints Plan (TCP), and Tree Impact Plan (TIP) appended.
- 1.6 The TCP is based on a topographical site survey plan, and the TIP is based on a site proposal plan, both of which were provided in electronic format by Enzygo Ltd and, for the purpose of this report, I presume the provided plans' details to be accurate. The TCP details the existing site with the readily definable tree constraints, whilst the TIP also has an overlay of the development proposals with associated tree impacts and other pertinent information.

2.0 STATUTORY PROTECTION IN RESPECT OF TREES AND ASSOCIATED WILDLIFE

Tree Preservation Orders and Conservation Area Designations

- 2.1 The Town & Country Planning Act (1990) (the Act) and associated Regulations empower Local Planning Authorities (LPAs) to protect trees in the interests of amenity by making Tree Preservation Orders (TPOs). The Act also affords protection for trees of over 75mm diameter that stand within the curtilage of a Conservation Area (CA). Subject to certain exemptions, an application must be made to the LPA in question to carry out works upon or to remove trees that are subject to a TPO, whilst six weeks' notice of intention must be given to carry out works upon or to remove trees within a CA that are not protected by a TPO.
- 2.2 I have not been informed if the site stands within a CA or if any of the surveyed trees are the subjects of TPO protection. As such, it is therefore essential to contact the Planning Department of Havant Borough Council in order to check for the presence of any such statutory tree protection prior to carrying out any tree works that are not specifically related to the implementation of a detailed (i.e. full) planning consent granted under the Act (1990).

Protected Species

- 2.3 Nesting birds are afforded statutory protection under the Wildlife & Countryside Act (1981) (as amended) and their potential presence should therefore be considered when clipping hedges, removing climbing plants and pruning and removing trees. The breeding period for woodlands runs from March to August inclusive. Hedges provide valuable nesting sites for many birds and clipping should therefore be avoided during March to July. Trees, hedges and ivy should be inspected for nests prior to pruning or removal and any work likely to destroy or disturb active nests should be avoided until the young have fledged.
- 2.4 All bat species are protected under Schedule 5 of the Wildlife & Countryside Act (1981) (as amended) and under Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended). In this respect it should be noted that it is possible that unidentified bat habitat features may be located high up in tree crowns and all personnel carrying out tree works at the site should therefore be vigilant and mindful of the possibility that roosting bats may be present in trees with such features. If any bat roosts are identified then it is essential that works are halted immediately and that a suitably qualified and experienced ecologist investigates and advises on appropriate action(s) prior to works continuing.

Felling Licences

- 2.5 Subject to certain exemptions the Forestry Act (1967) requires that a 'Felling Licence' be obtained to remove growing trees amounting to more than five cubic metres of timber in a calendar quarter. Felling Licences are administered by the Forestry Commission and contravention of the associated controls can incur substantial penalties. A Felling Licence is, however, not required where tree removals are necessary to implement a full (i.e. detailed) planning permission.

3.0 THE SITE AND THE SURROUNDINGS

- 3.1 The site is brownfield and is located within a suburban area of Havant, Hampshire, less than one kilometre north of the town centre. It is bordered to the north by a grass verge along Crossland Drive, to the east by a stream, beyond which stands an area of public open space, to the south by Lavender Drive and a disused area of brownfield land, and to the west by the same disused area of brownfield land and a grass verge to Leigh Road. There is an existing vehicular access point to the east of the site via River Way.

- 3.2 I am of the understanding that the site previously housed a school, consisting of various buildings which have now been demolished. The site currently consists of a combination of areas of asphalt hard-surfacing to the south-east and north-west, and areas of earth with ground vegetation throughout much of the remainder. A mix of very young to mature trees stand close to the site's eastern and western site boundaries, and a hedge runs along its northern boundary.

4.0 THE TREE POPULATION

- 4.1 As noted previously, 12 individual trees, four groups of trees, and one hedge were surveyed for the purpose of this appraisal. The surveyed trees are mostly of deciduous broadleaf species, although there is also a single evergreen coniferous tree. Species present include Common Oak, Horse Chestnut and Lawson Cypress.
- 4.2 The trees range from very young to post-mature in age, with heights of up to 18 metres, maximum diametrical crown spreads of up to 23 metres and stem diameters of up to 1080 millimetres. Detailed tree dimensions and other pertinent information, such as structural defects and physiological deficiencies, are included in the TSS at Appendix One.
- 4.3 Of the surveyed vegetation, five of the trees (T4 and T9 to T12) and the hedge (H1) are located within neighbouring areas of publically accessible land, and it would therefore be reasonable to presume that they are under the ownership of the local Council or the highway authority.
- 4.4 In respect of the TSS it should be noted that tree quality is categorised within the existing context without taking any site development proposals into account. However, recommendations for works included in the TSS take both current site usage into consideration and the proposed site development where there are definable development related issues with regard to specific trees.
- 4.5 The TSS includes a column ('Cat. Grade') listing the trees' respective retention values, where they are rated either 'A', 'B', 'C' or 'U', as per BS5837:2012 Table 1 (Appendix One). 'A' category trees are those considered to be of 'high quality' and, accordingly, the most suitable for retention, whilst 'B' category trees are those considered to be of 'moderate quality'.
- 4.6 As detailed in Table A (below), five trees were categorised as high quality ('A') four trees, one group and the hedge were categorised as moderate quality ('B'), two trees and two groups were categorised as low quality ('C'), and one tree and one group were categorised as unsuitable for retention ('U').

Table A: BS5837-2012 Retention Categories of the Surveyed Trees

	Ret. Cats.	Tree/Group/Hedge Numbers	Totals
Those of a moderate or high quality that should be afforded appropriate consideration in the context of development	'A'	T4, T5, T7, T9, T12	5 Trees
	'B'	T2, T6, T10, T11, G4, H1	4 Trees 1 Group 1 Hedge
Those of a low quality that should not be considered a material constraint to development	'C'	T1, T3, G1, G2	2 Trees 2 Groups
Those that should be removed for sound management reasons regardless of site proposals	'U'	T8, G3	1 Tree 1 Group
			= 12 Trees, 4 Group, & 1 Hedge in Total

5.0 THE DEVELOPMENT PROPOSAL AND ITS PROJECTED ARBORICULTURAL IMPACTS

- 5.1 The application is for the construction of a residential care-home with associated car-parking and outdoor amenity space, and with a vehicular access from the existing point off River Way to the site's east (see TIP). Accordingly, I have been provided with a proposal plan to that effect, as prepared by Penoyre & Prasad LLP. In order to appraise the projected impacts that the development would potentially have on the trees the tree constraints were overlaid onto the site proposal plan, as detailed on the TIP.

Projected Arboricultural Losses Relating to the Proposal

- 5.2 As detailed in Table B, below, implementation of the proposed development as it stands is projected to require the removal of one moderate quality individual tree, two low quality individual trees, two low quality groups, part of a third low quality group, and a short length of a moderate quality hedge. With regard to the latter I would note that the hedge is located within a neighbouring grass verge and is therefore presumed to either under the ownership of either the local Council or the highway authority, and permission for the works will therefore need to be sought from the applicable landowner once they have been identified.

Table B: Arboricultural Impacts of Proposed Development & Other Tree Removal Proposals

	Ret. Cats.	Removals necessary to implement development	Removals suggested for non-development related reasons	Total no. of tree removals
Those of a high quality that should be afforded appropriate consideration in the context of development	'A'	-	-	-
Those of a moderate quality that should be afforded appropriate consideration in the context of development	'B'	T2, H1 (part)	-	1 Tree 1 part Hedge
Those of a low quality that should be afforded appropriate consideration in the context of development	'C'	T1, T3, G1 (part), G2, G3	-	2 Trees 2 Groups 1 part Group
Those that should be removed for sound management reasons regardless of plans	'U'	-	-	-
Totals		3 Trees 2 Groups 1 part Group 1 part Hedge	-	= 3 Trees, 2 Groups, 1 part Group & 1 part Hedge

- 5.3 Nonetheless, as most of these trees are located internal to the site, and the larger and better quality trees located in and around the site boundaries are proposed for retention, the loss of the trees in question is projected to have only as low impact on the visual amenity of the locality.

Mitigation for Projected Tree Losses as Part of Site Landscaping

- 5.4 The provision of extensive and widespread new tree planting, both along the boundaries and within various areas of the site, is proposed as part of the development's landscaping, as detailed on the site Landscape Plan, prepared by Enzygo Ltd. The proposals include the provision of individual native Oaks planted along boundaries, in accordance with the existing long established tree cover.
- 5.5 Overall, this new tree planting is projected to adequately mitigate for the necessary development related tree losses and, in turn, deliver a substantial long-term visual amenity in the local landscape. Accordingly, the provision of new tree planting as part of site landscaping can be conditioned to a planning approval.

6.0 RECOMMENDATIONS FOR SUCCESSFUL TREE RETENTION IN THE CONTEXT OF DEVELOPMENT

Root Protection Areas and Construction Exclusion Zones

- 6.1 Adequate protection of the Root Protection Areas (RPAs) of retained trees during construction is essential if their long-term viability is to be assured. RPAs, which are calculated through a method provided in BS5837:2012, are ground areas that should be protected by temporary protective fencing and, where applicable, ground protection measures, as Construction Exclusion Zones (CEZs) throughout the development process, thereby keeping the trees' root zones free from disturbance. Consequently, the RPA distances, as detailed in the TSS (see 6.2), and on the TIP denote the projected on-site below-ground constraints in respect of tree roots and, in turn, assist in planning for appropriate tree retention in relation to feasible development.
- 6.2 The TSS includes two columns listing the RPAs of the individually surveyed trees and, where applicable, the largest of the trees in any surveyed groups as overall areas in square metres and as radial distances. The radial RPAs are indicated as magenta coloured circles on the TIP. With regard to CEZs the design, materials and construction of the fencing should be appropriate for the intensity and type of site construction works, should conform to at least section 6.2 of BS5837:2012, and should be secured by the imposition of a suitably worded planning condition. A default Temporary Protective Fencing and Ground Protection Specification is included at Appendix Two.
- 6.3 As detailed on the TIP, there will be a requirement for the use of temporary ground protection measures within RPAs of trees T5, T6 and T7, which should be detailed in an Arboricultural Method Statement (AMS) and on a Tree Protection Plan (TPP) (see 6.8, overleaf).

Underground Utilities

- 6.4 The installation of underground utilities in close proximity to trees can cause serious damage to their roots. As such, it is essential that utilities be routed outside RPAs unless there is no other available option. Where RPAs cannot be avoided then guidelines set out in the National Joint Utilities Group publication 'Volume 4: NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2) – Operatives Handbook' should be followed (e.g. trenches of a very limited width to be hand dug or the use of directional drilling). Nonetheless, I am informed that all services are to be routed outside tree RPAs.

Special Materials and Working Methods for Proposed Hard Surfaces within RPAs

- 6.5 As detailed on the TIP, several proposed footpaths encroach into the calculated RPAs of various trees proposed for retention (see TIP). In this respect section I would note that 7.4 of BS5837:2012 recommends that, where the construction of hard surfaces cannot be avoided within RPAs, then a design that does not require excavation into the soil is used in order to avoid root loss and damage due to ground excavation and/or compaction. A suitable method for the construction of hard surfaces, including footpaths, within RPAs is a three dimensional cellular confinement system, and a manufacturer's brochure detailing the design and construction of a typical hard-surface system of this type is appended.
- 6.6 In respect of these matters the guidance recommends that site specific specialist advice to be sought from a structural engineer and the associated timing and working methods and procedures be detailed in an AMS and on a TPP (see 6.9, overleaf).

Remedial Operations within RPAs

- 6.7 In order to alleviate any past ground compaction resultant of previous site usage, and to improve the structure, nutrient value and rooting capacity of the soils around various large mature retained trees, as detailed in the TSS. In this respect it is recommended that remedial works (e.g. sub-soil aeration using compressed air, and the addition of suitable organic materials) be carried out within the RPAs of the trees identified in accordance with section 8.4 of BS5837:2012.
- 6.8 The works should be timed to coordinate with the special working methods details at 6.4 and 6.5 and the landscape works, and the timing, working methods and procedures in this respect should also be detailed in an AMS and on a TPP (see 6.9, below).

Arboricultural Method Statement and Tree Protection Plan

- 6.9 Government guidance recommends that, where considered expedient by the LPA, an Arboricultural Method Statement (AMS) and a Tree Protection Plan (TPP) be prepared detailing special mitigation construction. Essentially, the AMS and TPP describe and detail the procedures, working methods and protective measures, including special measures and remedial operations outlined in 6.5 to 6.8, to be used in relation to retained trees in order to ensure that they are adequately protected during the construction process. Production of and adherence to an AMS and TPP can be conditioned as part of a planning approval.

7.0 OTHER RECOMMENDATIONS

Non-Development Related Tree Works and Recommendations

- 7.1 Any general management pruning works for retained trees that are stated to be non-development related, as detailed in the TSS, are recommended in accordance with prudent arboricultural management and should therefore be carried out regardless of any site development proposals and potential changes in land usage. All tree works should be carried out in accordance with BS3998:2010 - Tree Work – Recommendations.

Tree Work Related Consents

- 7.2 No tree pruning or removal works should commence on site until necessary consents have been obtained from the LPA as part of a planning approval or in respect of any statutory tree protection (e.g. TPOs).

Arboricultural Contractors

- 7.3 All tree works should be carried out by suitably qualified and experienced arboricultural contractors carrying appropriate public liability insurance cover and be implemented to the minimum current CE and UK industry standards and in accordance with industry codes of practice. Only certificated personnel should, in accordance with The Control of Pesticides Regulations, apply any pesticides.

Contractors and Subsequently Identified Tree Defects

- 7.4 Tree contractors should be made aware that, should any significant tree defects become apparent during operations that would not have been immediately obvious to the surveyor, then such defects should be notified immediately to the client and subsequently confirmed to the consultant within five working days.

New Tree Planting

- 7.5 All tree planting at the site should be carried out in accordance with BS 8545:2014 Trees: from nursery to independence in the landscape – Recommendations, and timed in accordance with the landscape works.

Retained Tree Management

- 7.6 Any tree risk management appraisals and subsequent recommendations made in this report were based on observations and site circumstances at the time of my survey. Trees are dynamic living organisms whose structure is constantly changing and even those evidently in good condition can succumb to damage and/or stress.
- 7.7 In this respect I would note that, under the Occupiers' Liability Act (1957 & 1984), site occupants have a duty of care to take reasonable steps to prevent or minimise the risk of personal injury and/or damage to property from any tree located within the curtilage of the land they occupy. It is accepted that these steps should normally include commissioning a qualified and experienced arboriculturist to survey their trees in order to identify any risk of harm to persons or damage to property that they may present and, where unacceptable risks are identified, taking suitable remedial action to negate those risks.

8.0 SUMMARY AND CONCLUSIONS

- 8.1 The subject site is located within a suburban residential area of the town of Havant. Twelve individual trees, four groups of trees, and one hedge were surveyed in respect of a proposal to construct a residential care-home, with a vehicular access from an existing point to the east, at the subject site.
- 8.2 Five trees were allocated high retention value, four trees, one group and the hedge were allocated moderate retention values, two trees and two groups were allocated low retention values, and one tree and one group of trees were categorised as unsuitable for retention.
- 8.3 An evaluation of the proposed development in the context of the existing site has indicated that, other than the trees that are classed as unsuitable for retention, it will be necessary to remove one moderate quality individual tree, two low quality individual trees, two low quality groups, and part of a third low quality group, in order to implement the proposals as they stand.
- 8.4 However, the provision of extensive new tree planting is proposed as part of the development's landscaping, which is projected to adequately mitigate for the projected losses and, in turn, improve the overall quality of the site's tree cover thereby delivering a substantial long-term visual amenity in the local landscape.
- 8.5 The provision of new Oak trees in suitable locations close to the site boundaries, as part of the landscape plan, is also considered to be compliant with the historical tree cover of the site and the landscape character of the immediate local area.
- 8.6 In consideration of the above findings I therefore conclude that, from the details provided to date, the site in question can be developed as proposed whilst retaining the majority of the existing trees, in particular those that are of better quality.
- 8.7 However, in order to ensure successful existing tree preservation over the long-term, it is essential that the retained trees are protected in strict accordance with current Government guidance and the recommendations included herein.

- 8.8 In this respect several retained tree RPAs were identified to require specific consideration for supplementary protection and working methods, specifically the necessity to use temporary ground protection measures, the need to utilise a footpath design that does not require excavation into the soil, and our recommendations to carry out remedial ground improvement works.
- 8.9 Accordingly, in consideration of these matters, the provision of and adherence to a suitably detailed Arboricultural Method Statement and Tree Protection Plan should be conditioned to a planning permission in order to ensure correct the timing, working methods and procedures are followed.

REFERENCES

- BS8545:2014 - Trees: From Nursery to Independence in the Landscape – Recommendations. BSI British Standards, London.
- BS3998:2010 - Tree Work - Recommendations. BSI British Standards, London.
- BS5837:2012 - Trees in Relation to Design, Demolition and Construction – Recommendations. BSI, London.
- National House Building Council (2008). NHBC Standards Chapter 4.2 - Building Near Trees. NHBC, Amersham.
- National Joint Utilities Group (2007). Volume 4: NJUG Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees (Issue 2) – Operatives Handbook.

APPENDICES



TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT AND PROTECTION APPRAISAL

Site: Land off River Way, Havant, Hampshire, PO9 2EL

Client: Hampshire LivingSpace

Surveyor: Phill Harris – Chartered Arboriculturist

Survey Date: 13 December 2014

Job Reference: BTC779

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No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
T1	Lawson Cypress	8.5	280	N E S W 2 2 2	3 2.5	SM	G	Stem bifurcates at a height of approximately 2.5m with a very tight fork and included bark union.	Remove in order to construct development as proposed.	10+	C1	35	3.36
T2	Weeping Willow	10.5	460	N E S W 6 6 6	2-E 1.5	SM	G	Ivy up stem. Minor stem lean west.	Remove in order to construct development as proposed.	40+	B1/2	96	5.52
T3	Crack Willow	11.5	3x310 1x290 1x250 (ms)	N E S W 5.5 5.5 5.5	N/A 2	SM	G	Stem divides into multiple sub-stems at a height of approximately 0.5m with very tight forks.	Remove in order to construct development as proposed.	10+	C1	197	7.91
T4	Common Oak	16	750	N E S W 5 8 8 9	3 3	M	G	On opposite side of stream to site within area of Public Open Space. Not inspected in detail.		40+	A1/2	254	9
T5	Common Oak	18	1100	N E S W 6.5 6.5 6.5 6.5	4-W 4	M	G	Has evidently sustained a moderately large diameter secondary branch failure in upper crown many years previously. Moderate amount of deadwood to approximately 100mm diameter.	Retain in context of proposed development. Ensure protection of RPA throughout development process (this will require temporary ground protection measures, such as those detailed in the appended Temporary Fencing & Ground Protection Specification). Carry out remedial ground works within RPA to improve soil structure. Construct proposed footpaths within RPA using a design that does not require excavation into the soil, in accordance with section 7.4 of BS5837:2012.	40+	A1/2	547	13.2

Headings and Abbreviations:

No. Allocated sequential reference number - Tree (T), Group (G), Woodland (W) or Hedge (H) reference number - refer to plan and to numbered tags where applicable
Species: Common name
Height: In metres, to nearest half metre - where possible approximately 80% are measured using an electronic clinometer and the remainder estimated against the measured trees. In the case of Groups and Woodlands the measurement listed is that of the highest tree
Stem Diam.: Stem diameter in millimetres, to nearest 10mm - measured and calculated as per Annex C of BS5837:2012. MS = multi-stemmed, TS = twin-stemmed
Branch Spread: Crown radius measured (or estimated where considered appropriate) from the four cardinal points (north, east, south and west) to give an accurate visual representation of the crown
Branch & Canopy Clearances: Existing height above ground level, in metres, of first significant branch and direction of growth (e.g. 2.5-N) and of canopy at lowest point - to inform on crown to height ratio, potential for shading, etc.
Life Stage: Estimated age class - Y = young, SM = semi-mature, EM = early-mature, M = mature, PM = post-mature
PC: Physiological Condition - a measure of the tree(s) overall vitality, i.e. D = Dead, MD = Moribund, P = Poor, M = Moderate, G = Good
General Observations and Comments: Comments relating to the tree(s) overall condition and any other pertinent factors including structural defects, current and potential direct structural damage, physiological decline, poor form, etc.
Management Recommendations: Either Preliminary or In Consideration of the Proposal - In the case of Arboricultural Constraints Surveys the recommended management works only take existing site and tree circumstances and conditions into account and not proposed developments. Arboricultural Impact Assessment and Method Statement related Surveys take the proposed development into consideration with recommendations made accordingly. More than one option may be given if considered appropriate
ERC: Estimated Remaining Contribution - in years as per BS5837:2012 (i.e. <10, 10+, 20+, 40+)
Cat. Grade: Category Grading - tree retention value listed as U, A, B or C - in accordance with BS5837:2012 Table 1
RPA m²: Root Protection Area in m² - calculated area around the tree that must be appropriately protected throughout the development process in order avoid root damage
RPA Radius (m): Root Protection Area Radius - in metres measured from the centre of the stem to the line of tree protection
(Estimated Dimensions): Where trees are located off-site, or are inaccessible for any other reason, and accurate measurements or other information cannot be taken then the information provided is estimated and is duly suffixed with a "§" symbol

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT AND PROTECTION APPRAISAL
Site: Land off River Way, Havant, Hampshire, PO9 2EL

Client: Hampshire LivingSpace

Surveyor: Phill Harris – Chartered Arboriculturist

Survey Date: 13 December 2014

Job Reference: BTC779

Page: 2 of 4

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m ²)	RPA Radius (m)
T6	Common Oak	15	1070	N E S W 6 6 6 6	4-S 5	PM	P	- Decayed fungal fruiting body to stem base - thought to be <i>Fistulina hepatica</i>, which causes a brown rot butt and root decay. - Sounding with nylon mallet indicated extensive decay/hollowing to north side of stem base, evidently extending below ground level. - Small cavity south side of stem. - Moderately large amount of deadwood to approximately 250mm diameter. - Crown showing signs of a substantial reduction in vitality. - Has evidently sustained substantial number of branch failures up to approximately 350mm diameter. - Root Protection Area (RPA) has been reduced by 30% in consideration of crown dieback and associated root:shoot ratio.	- Retain in context of proposed development. - Ensure protection of RPA throughout development process (this will require temporary ground protection measures, such as those detailed in the appended Temporary Fencing & Ground Protection Specification). - Carry out suitably planned crown retrenchment reduction works in accordance with specification to be provided by tree contractor with experience in veteran tree management. - Carry out remedial ground works within RPA to improve soil structure. - Construct proposed footpath within RPA using a design that does not require excavation into the soil, in accordance with section 7.4 of BS5837:2012.	20+	B3	518 (*363)	12.84 (*8.99)
T7	Common Oak	15	1x850 1x780 (ts)	N E S W 9 12 11 10	5-W 2.5	M	G	- Stem bifurcates at a height of approximately 0.7m. - Moderately large amount of deadwood to approximately 150mm diameter. - Ivy up stem to west.	- Retain in context of proposed development. - Ensure protection of RPA throughout development process (this will require temporary ground protection measures, such as those detailed in the appended Temporary Fencing & Ground Protection Specification). - Prune western side of crown back by a maximum of approximately 1.5m and prune underside of crown to obtain a 3.5m ground clearance. - Sever ivy at stem base. - Carry out remedial ground works within RPA to improve soil structure. - Construct proposed footpath within RPA using a design that does not require excavation into the soil, in accordance with section 7.4 of BS5837:2012.	40+	A1/2	602	13.84
T8	Field Maple	10	250	N E S W 5.5 5.5 5.5 5.5	N/A 3	PM	M/P	- Multi-stemmed from ground level. - Extensive decay evident to east side of stem base. - Sounding with nylon mallet indicated extensive decay to base. - Crown showing signs of a substantial reduction in vitality.	Coppice at a height of approximately 0.5m.	<10	U	170	7.35

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT AND PROTECTION APPRAISAL
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Survey Date: 13 December 2014

Job Reference: BTC779

Page: 3 of 4

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)	
T9	Common Oak	9.5	600	N E S W	6 6.5 6 6.5	4 2	SM	G	- Evidently located within neighbouring grass verge, and therefore likely to be under Council/Highways Authority ownership. - Dense ivy up stem.	- Ensure protection of RPA throughout development process. - Recommend owner to sever ivy at stem base. - Carry out remedial ground works within RPA to improve soil structure.	40+	A1/2	163	7.2
T10	Hawthorn	6.5	1x300 1x250 (ts)	N E S W	3 3.5 3.5 3.5	N/A 1.5	M	G	- Evidently located within neighbouring grass verge, and therefore likely to be under Council/Highways Authority ownership. - Dense ivy up stem. - Stem bifurcates at a height of approximately 1m.	- Ensure protection of RPA throughout development process. - Recommend owner to sever ivy at stem base.	40+	B1	69	4.69
T11	Horse Chestnut	18	1080	N E S W	10 12 6 11	4.5-E 2	M	G	- Evidently located within neighbouring grass verge, and therefore likely to be under Council/Highways Authority ownership. - Has evidently sustained several previous branch failures up to approximately 250mm diameter.	- Ensure protection of RPA throughout development process. - Carry out remedial ground works within RPA to improve soil structure. - Recommend owner to carry out detailed inspection of tree.	20+	B1	528	12.96
T12	Horse Chestnut	17.5	910	N E S W	5.5 9 8.5 10	2.5-E 2.5	M	G	- Evidently located within neighbouring grass verge, and therefore likely to be under Council/Highways Authority ownership. - Very dense ivy up stem into branches. - Stem divides into multiple primary branches at a height of 2.5m.	Recommend owner to sever ivy at base of stem and remove ivy from point where stem divides, and to re-inspect tree on ivy dieback.	40+	A1/2	375	10.92
G1	Hazel, Field Maple, Ash, Apple, Oak, Hawthorn, etc.	≤ 9	≤ 210	N E S W	≤ 3 ≤ 3 ≤ 3 ≤ 3	N/A ≥ 0	Y-SM	G	- Very closely spaced group. - Mainly made up of multi-stemmed Field Maple.	- Remove section of group to north-west in order to construct development as proposed. - Retain as much of group to south and east of pond as is practicable in context of proposed development. - Carry out appropriate silvicultural thinning and native tree planting works in order to establish a good quality and sustainable group.	40+	C1/2	≤ 20	≤ 2.52
G2	1no. Wild Cherry, 1no. Mock Orange	≤ 10	≤ 6x80 (ms)	N E S W	≤ 2 ≤ 2 ≤ 2 ≤ 2	N/A ≥ 0	Y-SM	G	- Very closely spaced group. - Mock Orange is multi-stemmed. - Cherry is young.	Remove in order to construct development as proposed.	10+	C1	≤ 17	≤ 2.35
G3	Myrobalan Plum	≤ 8.5	≤ 6x100 (ms)	N E S W	≤ 4 ≤ 4 ≤ 5 ≤ 2	N/A ≥ 0.5	EM	G	Very closely spaced group of approximately three multi-stemmed trees growing through chainlink fence, with associated cambial damage.	Remove in order to construct development as proposed.	<10	U	≤ 27	≤ 2.94

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT AND PROTECTION APPRAISAL
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Client: Hampshire LivingSpace

Surveyor: Phill Harris – Chartered Arboriculturist

Survey Date: 13 December 2014

Job Reference: BTC779

Page: 4 of 4

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m ²)	RPA Radius (m)
G4	approx. 3no. Field Maple	≤ 9.5	≤ 1x450 1x350 1x300 (ms)	N E S W ≤ 7 ≤ 5 ≤ 5 ≤ 7	N/A ≥ 1.5	M	G	Very closely spaced group on bank of stream.	- Retain in context of proposed development. - Ensure protection of RPA throughout development process.	20+	B1/2	≤ 188	≤ 7.73
H1	Hawthorn	≤ 7.5	≤ appr. 120	≤ 5 wide	N/A ≥ 0	SM	G	- Outgrown hedge along northern boundary. - Evidently located outside site boundary fenceline within neighbouring grass verge, and therefore likely to be under Council/Highways Authority ownership. - Formation of proposed pedestrian access through hedge will require permission from hedge owner. - Laying of hedge would be suitable management, which would significantly reduce its root:shoot ratio and any associated RPA.	- Identify ownership of hedge. - Agree removal of short length, with hedge owner, in order to form pedestrian access. - Agree to implement out suitable management works (e.g. laying) with hedge owner.	40+	B1	N/A	≤ appr. 1.4

BS5837:2012 Table 1 – 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 BS5837:2012 paragraph 4.5.7.</i>			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)	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	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

- TEMPORARY PROTECTIVE FENCING & GROUND PROTECTION SPECIFICATION -

Construction Exclusion Zones (CEZs), enclosed by **Temporary Protective Fencing**, as detailed below and to be agreed with the Local Planning Authority (LPA), shall:

1. be protected throughout the development process, as specified in the 'Temporary Protective Fencing Construction' section below and detailed in BS5837:2012 Figure 2 (overleaf) and, if applicable, as defined by area on the Tree Protection Plan (TPP);
2. be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project;
3. preclude any delivery of site accommodation and/or materials and/or plant machinery;
4. preclude all construction related activity, with the sole exception of specified arboricultural works and any other works to be carried out under supervision that have been agreed by all parties; and
5. preclude the storage of all development related materials and substances including fuels, oils, additives, cement and/or any other deleterious substance.

Any incursion into CEZs must be by prior arrangement, following consultation with the LPA.

Temporary Protective Fencing Construction

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall butt together and be securely fixed to a scaffold framework, as per 3 to 5 below.
3. The scaffold framework shall comprise of upright poles of at least 3.0 metres in length driven no less than 0.6 metres into the ground at maximum 3.0 metre centres with horizontal and diagonal poles fixed to the uprights, as per 4 to 5 below.
4. The two horizontal rail poles shall be attached to the uprights at heights of 0.6 and 1.8 metres with 3 no. clamps to each joint.
5. The diagonal scaffold pole struts be clamped to the top rail of the scaffold framework at a 45° angle and extend back into the CEZ and clamped to a 0.7 metre length of scaffold tube that shall be driven no less than 0.5m into the ground.
6. No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.
7. A 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1, overleaf) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist shall inspect the Temporary Protective Fencing.

Temporary Ground Protection

1. Any necessary Temporary Ground Protection shall conform to Figure 4 (see overleaf).
2. The Ground Protection Area shall be left undisturbed and covered by a semi-permeable geotextile membrane which shall, in turn, be covered by a compressible layer consisting of a material such as woodchip.
3. Side-butting scaffold boards shall then be fitted to cover the Ground Protection Area.
4. Prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Arboricultural Consultant shall inspect the Temporary Ground Protection.
5. The Temporary Ground Protection shall remain in place until completion of the project and only removed following receipt of written permission from the LPA.

– CONSTRUCTION EXCLUSION ZONE – KEEP OUT!

(TOWN & COUNTRY PLANNING ACT 1990)
THE TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR SUBJECTS OF A 'TREE
PRESERVATION ORDER', THE CONTRAVENTION OF WHICH MAY
LEAD TO CRIMINAL PROSECUTION

THE FOLLOWING **MUST** BE OBSERVED BY **ALL** PERSONNEL:

- THE PROTECTIVE FENCING MUST **NOT** BE MOVED
- NO PERSON SHALL ENTER THE CONSTRUCTION EXCLUSION ZONE
- NO MACHINE, PLANT OR VEHICLES SHALL ENTER THE EXCLUSION ZONE
- NO MATERIALS SHALL BE STORED IN THE EXCLUSION ZONE
- NO SPOIL SHALL BE DEPOSITED IN THE EXCLUSION ZONE
- NO EXCAVATION SHALL OCCUR IN THE EXCLUSION ZONE
- NO FIRES SHALL BE LIT IN THE EXCLUSION ZONE

ANY INCURSION INTO THE EXCLUSION ZONE MUST BE WITH THE
WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

Figure 1: CEZ Warning Sign

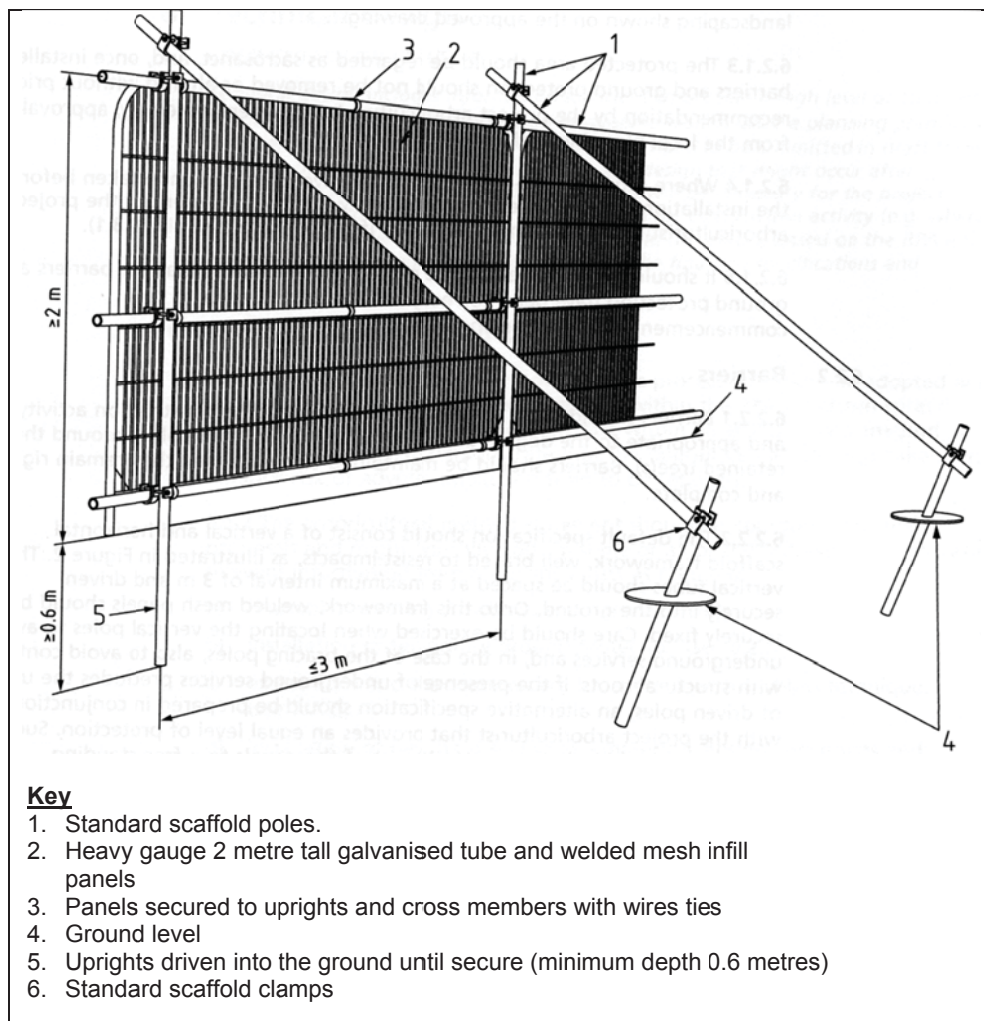


Figure 2: BS5837:2012 Default specification for protective barrier

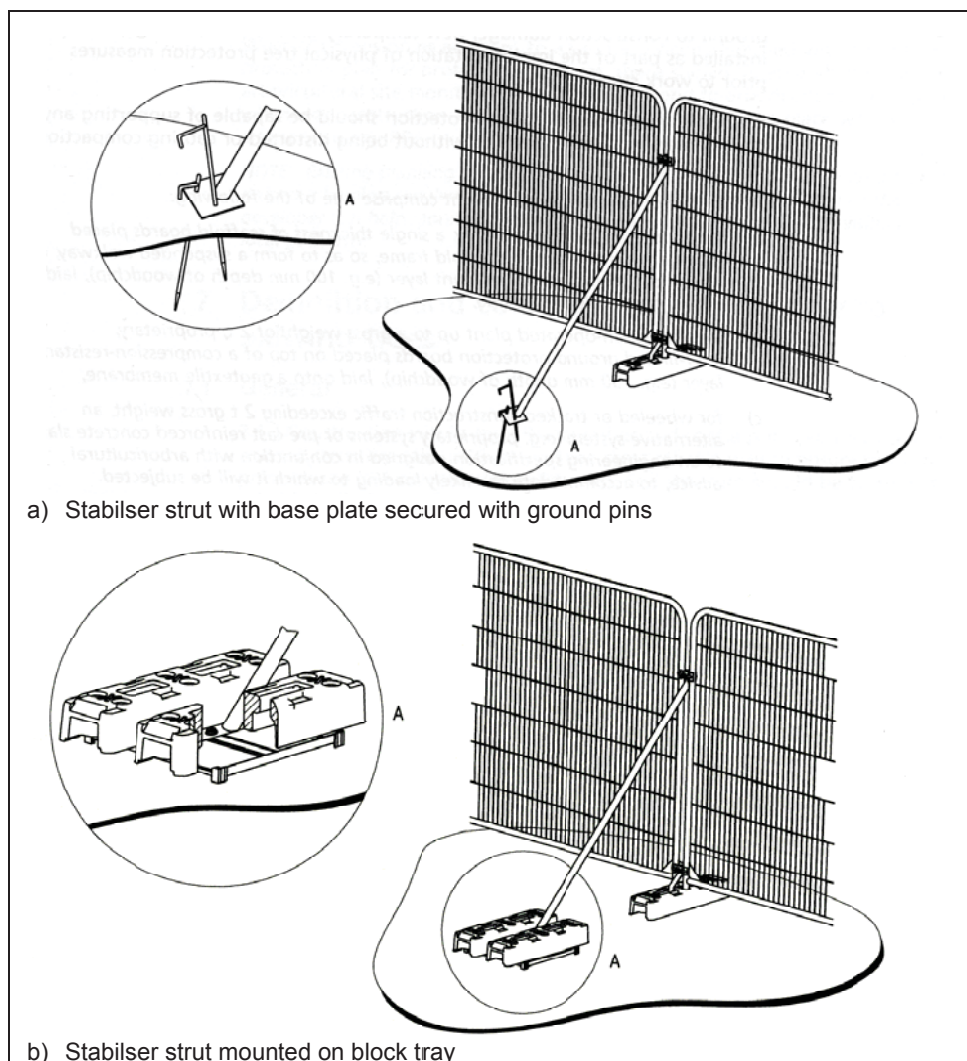


Figure 3: BS5837:2012 Examples of above-ground stabilising systems

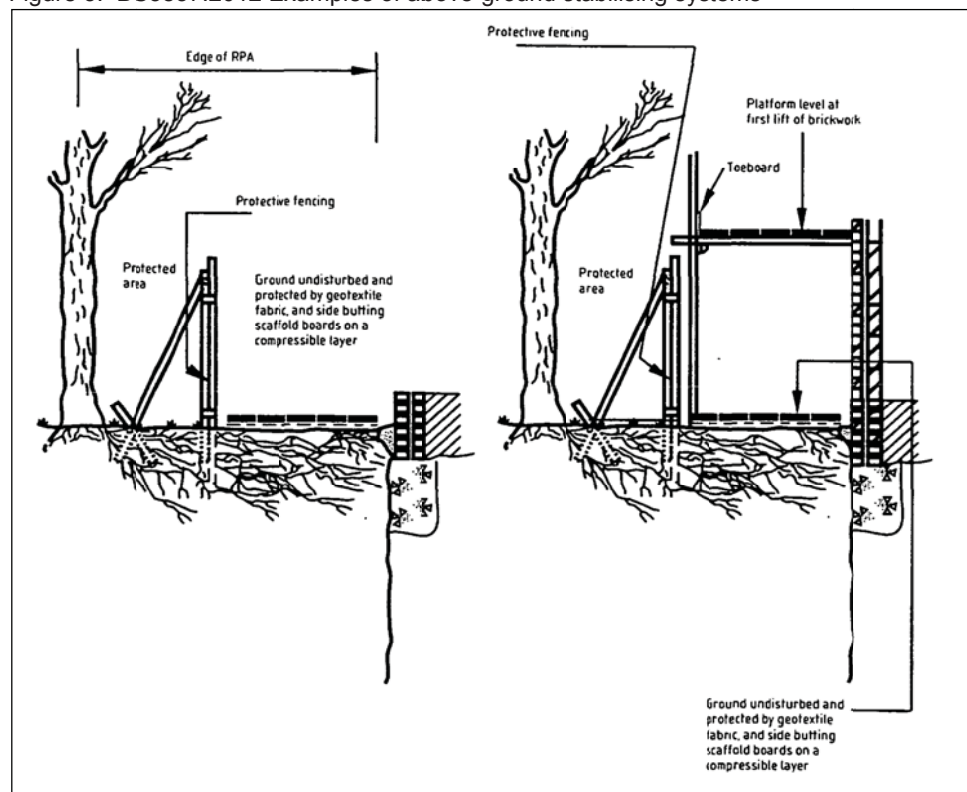
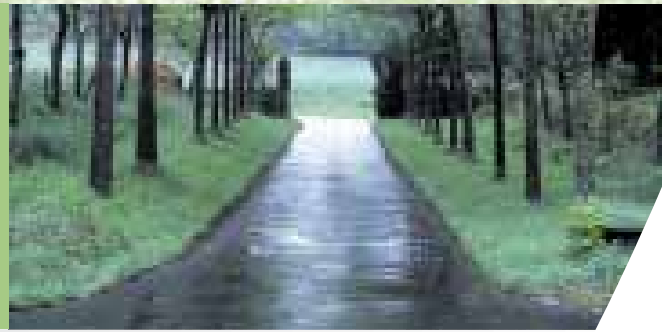


Figure 4: Temporary Ground Protection – Recommended Construction



CellWeb TRP®



Tree Root Protection Guaranteed



Geosynthetic

www.geosyn.co.uk

CellWeb TRP® System

Tree Root Protection System



The Consequences Of Tree Root Damage During Construction

It is an offence to cut down, lop, uproot, top, wilfully damage or destroy a protected tree without authorisation. Trees can be protected under the Town and Country Planning Act 1990 and the Town and Country Planning (Trees) Regulations 1999. Trees are protected when they are the subject of Tree Preservation Orders (T.P.O) or within Conservation Areas, subject to certain exemptions. Retention and protection of trees on development sites is also secured through the use of planning conditions.

On a construction site all trees with a Tree Preservation Orders need to be managed in accordance with BS5837 2005 (Trees in relation to construction); failure to comply with these orders can be a costly affair as many parties have discovered.



Fishponds, Ketton

There are two offences which apply equally to trees protected by Tree Preservation Orders and those within Conservation Areas:

- Firstly, anyone who cuts down, uproots or wilfully destroys a tree, or who lops, tops or wilfully damages it in a way that is likely to destroy it is liable, if convicted in the Magistrates Court, to pay a fine of up to £20,000. If the person is committed for trial in the Crown Court, they are liable on conviction to an unlimited fine. The Courts have held that it is not necessary for a tree to be obliterated for it to be “destroyed” for the purposes of the legislation. It is sufficient for the tree to have been rendered useless as an amenity.
- Secondly, anyone who carries out works on a tree that are not likely to destroy it is liable, if convicted in the Magistrates Court, to a fine of up to £2,500. In addition to directly carrying out unauthorised works on protected trees, it is an offence to cause or permit such works.

Developers and building contractors are often completely unaware that ‘compaction of soils within the Root Protection Area (RPA)’ constitutes wilful damage to the tree. When vehicular or pedestrian access within the RPA is necessary, either for the construction operation or final site access, the effects of this activity must be addressed and the ground must be protected. When tracked or wheeled traffic movements are involved, the ground protection system should be designed by an engineer and take into account the loading involved.



Shelton Road, Shewsbury

The Solution:

Geosynthetics CellWeb TRP® System



The Solution According to BS 5837:2012

“Appropriate sub-base options for new hard surfacing include three-dimensional cellular confinement systems

(BS 5837 2012 section 7.4.2 Note 1)

The CellWeb TRP® Solution

CellWeb TRP® is the market leader in the United Kingdom and Ireland for tree root protection. CellWeb TRP® cellular confinement system protects tree roots from the damaging effects of compaction and desiccation, while creating a stable, load bearing surface for vehicular traffic. CellWeb TRP® complies with BS 5837:2005 and APN 1. It provides a no-dig solution, is tried and tested having been used successfully since 1998. It is the only tree root protection system which has been independently tested and it is the only tree root protection system which is guaranteed for 20 years. See page 6 for the full terms and conditions of the guarantee.



Fishponds, Ketton

Field Trials

Geosynthetics Limited are the only company in the UK and Ireland to carry out live, completely independent field tests on the performance of a 3 dimensional cellular confinement system when used in a no-dig tree root protection system application. The results prove that CellWeb TRP® significantly reduces the compaction of sub-soils within the root growth limiting parameters established by K D Coder, 'Soil damage from compaction'. University of Georgia. July 2000. A copy of the report is available upon request.

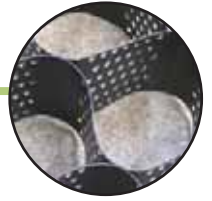
CellWeb TRP® Product Guarantee

Geosynthetics Limited prides itself on a providing a reliable, consistent service; including technical advice, on site support and installation guidance. Geosynthetics Limited provides a 20 year guarantee for the CellWeb TRP® tree root protection system. This guarantee gives the client, the tree officer and arboricultural consultant the confidence that the designed system will perform as intended without damaging the health of the tree.

See page 6 for the full terms and conditions of the guarantee.

CellWeb TRP® System

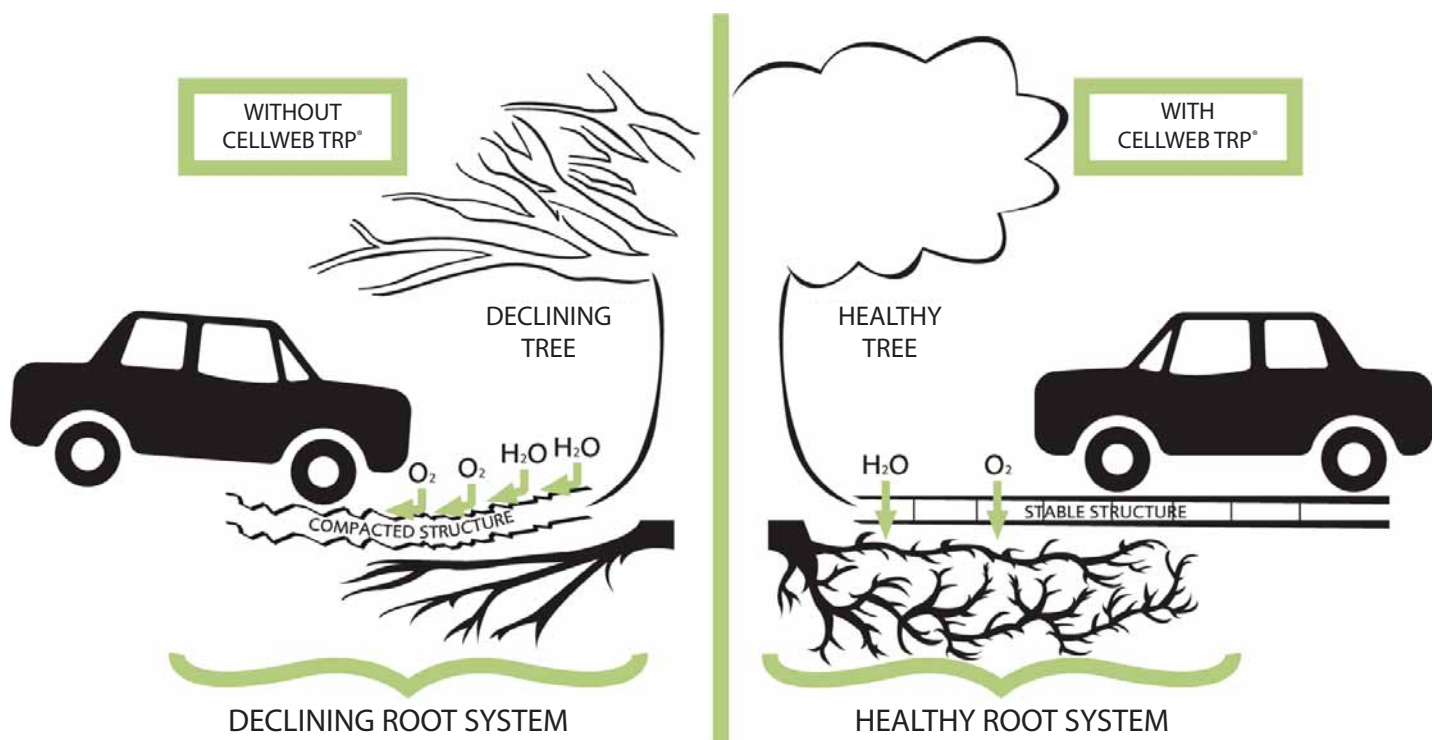
How the System Works



How CellWeb TRP® Works

CellWeb TRP® is a cellular confinement system that confines aggregate materials and makes them stronger, thus increasing the bearing capacity of the sub base materials. Research shows that CellWeb TRP® acts as a stiff raft to distribute wheel loads and reduce their magnitude at the base of the construction, thus maintaining the soil bulk density at levels that are suitable for tree root growth.

CellWeb TRP® is used around the world to provide cost effective hard surface construction over tree roots and is the system of choice for Tree Officers and Arboriculturists. For more information on this subject see CellWeb TRP® Fact Sheet No 1.



Water and Oxygen Transfer Through the CellWeb TRP® System

The CellWeb TRP® system is constructed using open aggregate infill and CellWeb TRP® has perforated cell walls. The pore spaces between the aggregate particles are greater than 0.1mm in diameter. This open structure is far more permeable than typical soils and allows the free movement of water and oxygen so that supplies to trees are maintained.

For more information on this subject see CellWeb TRP® Fact Sheet No 2.

CellWeb TRP® and Pollution

How CellWeb TRP® Deals With Catastrophic Oil Spills



How CellWeb TRP® Deals With Pollution

Where possible a permeable pavement system should always be constructed above the CellWeb TRP® system. The effective removal of pollution from runoff by permeable pavements is well known. Worldwide research has shown runoff that has passed through permeable pavements has low concentrations of pollutants.

Small spills of oil will be dealt with within the joints between the paving blocks and in the aggregate used within the system. However, large catastrophic spills are a different matter.

For more information on this subject see CellWeb TRP® Fact Sheet No 3.



Castle Gardens



Ambleside Lake District



Harcourt Aboretum

The Treetex® geotextile used in the CellWeb TRP® system has two functions. Treetex® separates the sub base aggregates from the soil beneath and it traps oil within its structure and allows it to degrade aerobically within the pavement construction. The structure, thickness and weight of Treetex® creates the perfect environment for this to happen. Most importantly tests prove that Treetex® will absorb 1.7 litres of oil per square metre, this is 4 times more effective than standard geotextiles.

Treetex® is an intrinsic part of the CellWeb TRP® system; and must be in conjunction with the CellWeb TRP® in order to guarantee the success of the system.

Please see page 6 for full details of the guarantee.

Geosynthetics CellWeb TRP® System:

A Proven No Dig Solution



Advice, Design and Product Selection

Geosynthetics Limited has been supplying the CellWeb TRP® system since 1998 and has vast experience in its application. No two contracts are the same and we understand the factors that need to be taken into account to specify the correct CellWeb TRP® product.

We provide a free consultation, design and advisory service to find the solution that is most cost effective and beneficial for your site. Our service includes product selection, engineering calculations, CAD drawings and full instructions to help you from project conception to completion.



*Fallbarrow Park, Windermere:
Prior to CellWeb TRP® Installation*



*Fallbarrow Park, Windermere:
CellWeb TRP® Installation*



*Fallbarrow Park, Windermere:
Completed CellWeb TRP® Installation*

Final Surfacing

The benefits of the CellWeb TRP® system can only be maintained if a suitably porous final surface is selected. An ideal surfacing is the Golpla grass reinforcement and gravel retention system, a visually attractive surface that has the advantage of being fully porous. Alternatives include block paviers, porous asphalts and loose or bonded gravel.

Always Use CellWeb TRP®

The CellWeb TRP® system is the only research backed system of its kind in the UK with a 100% success rate. CellWeb TRP® has been specifically developed for the Tree Root Protection market. The system is supported by 15 years of data and thousands of installations making it the system of choice for the majority of Tree Officers and Arboriculturists in the UK.

CellWeb TRP® is uniquely identifiable. It is manufactured with a bright green panel on each side. When installed the green panels are laid adjacent, creating a green band across the construction.



Woodcock Hall, Yorkshire

CellWeb TRP® Product Guarantee



We hereby guarantee CellWeb TRP® against the death of any tree caused by a failure of CellWeb TRP® which its installation was intended to protect for a period of 20 years starting from the date of this guarantee.

Conditions of Guarantee

1. The details set out below must be correct in all respects.
2. We can only guarantee CellWeb TRP® where its installation has been carried out to high standards. Therefore our guarantee will only be applicable where:
 - (a) we have provided the designs in relation to the installation,
 - (b) the installation has been carried out by suitably proficient contractors,
 - (c) the installation has been carried out strictly in accordance with the installation specification/method statement available at the time of the installation,
 - (d) CellWeb TRP® has been incorporated into the installation above (and where specified as necessary, below) a Treetex® T300 Geotextile (or such updated replacement product as we may recommend), and
 - (e) the installation has been carried out using pins and panel staplers purchased from us or using similar products which are of the same or a higher quality.
3. If you experience any problems with the installation, you must tell us immediately. You must allow us onto the site at all reasonable times so that we can inspect the site and the installation to determine whether the CellWeb TRP® has failed.
4. As we need to determine whether the CellWeb TRP® has failed or whether the tree has been killed or damaged by another cause, you must not allow anyone else to examine the installation before we have the opportunity to inspect it as damage could be caused to the installation by any other inspection. If you do let third parties onto the site or you or your agents interfere with the installation this guarantee will lapse.
5. Your use of the surface and the traffic flow over the installation must be (and at all times have been) in accordance with the information provided to us at the time of the design of the installation. We can only provide designs based on the information you give to us and will have recommended the relevant CellWeb TRP® product according to that information.
6. This guarantee is for the benefit of the landowner of the site from time to time provided that you give us notice of the new owner on any transfer of ownership. We suggest you provide a copy of this guarantee to your solicitor when transferring the property.
7. Where a tree which was intended to be protected by the installation dies and we conclude that this was caused by a failure of CellWeb TRP® then we shall:
 - replace the dead tree with a tree as close to the dead tree (as available generally in the marketplace) as possible subject to a maximum replacement cost of £10,000; and
 - replace the CellWeb TRP® which has failed (but not any other part of the installation where the CellWeb TRP® has not failed) subject to a maximum replacement cost of £50,000.
8. Our total liability to you under the terms of this guarantee shall be limited to our obligations set out above and our liability to you for any other losses you may suffer is excluded to the fullest extent permitted by law. For the avoidance of doubt, we shall have no liability to you whatsoever for any damage to trees or a CellWeb TRP® installation caused by anything reasonably beyond our control, including for instance pollution.

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LEGEND
• Tree to be retained
• Tree to be removed
• Tree to be planted
• Tree to be protected
• Tree to be preserved
• Tree to be replaced
• Tree to be transplanted
• Tree to be coppiced
• Tree to be pollarded
• Tree to be pruned
• Tree to be felled
• Tree to be cut down
• Tree to be cut back
• Tree to be cut over
• Tree to be cut out
• Tree to be cut off
• Tree to be cut up
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• Tree to be cut over
• Tree to be cut out
• Tree to be cut off
• Tree to be cut up
• Tree to be cut down
• Tree to be cut back
• Tree to be cut over
• Tree to be cut out
• Tree to be cut off
• Tree to be cut up

Project: LAND OFF BRICK WAY
Phase: PROPOSED
Client: LANDSPACE LANDSPACE
Title: TREE CONSTRAINTS PLAN
Scale: 1:500
Date: 10/10/2023
Author: [Signature]
Bowland
Bowland

