



ARBORICULTURAL REPORT

Land to the side of St Johns Church
Chapel Lane
Letty Green
Herts

8th October 2021

Prepared by

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Scope

The purpose of this report is to provide Arboricultural advice in relation to identifying the constraints of trees that are present on site and in neighbouring land, in relation the proposal to construct a detached property with new drive and entrance. Advising on protection measures to be implemented for trees to be retained in accordance with BS3998:2012.

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1 INTRODUCTION

1.1 Brief:

This report has been prepared at the request of C Redondo the site owner, to identify the constraints and quality in amenity terms of the trees present on site and neighbouring land, to assist in the design of a development proposal for a residential property.

1.2 Qualifications and experience:

I have based this report on my site observations and the provided information, and I have come to conclusions in the light of my experience. I have experience and qualifications in arboriculture and list the details in **Appendix 1**.

1.3 Documents and information provided:

A plan of the proposed layout.

1.4 Relevant background information:

None.

1.5 Scope of this report:

This report is only concerned with trees on site or in adjacent land which could potential be affected by development of the site. The aim of this report is to identify the constraints and quality of the trees present, to assist in a development proposal of the land where trees are included and retained where possible.

2 APPRAISAL

2.1 Brief site description:

This site is an overgrown plot of land in the centre of two other third party sites, one being residential and the other a church yard. There is a substation in line with the front boundary. At the rear of the site on the other side of the boundary is a section of unclaimed land. Parts of the site are open and laid to lawn, whilst the remainder is covered in more dense scrubby vegetation.

2.2 Condition of the trees:

The trees appear to be generally in a healthy condition with no signs of pests or diseases normally associated with the species, with the exception of T10 which is dead, and some trees within the various groups. Some of the trees are on private land or surrounded with dense vegetation, so the inspection detail was limited.

A more detailed analysis of the trees can be found in **Appendix 3**.

2.3 Suitability of the trees for location and management requirements at present:

The trees currently could be considered as suitable for the location because I have not been informed that they were not causing any conflict with the usage of the site or adjacent usage of sites. It would be prudent to undertake some clearing of selected trees and groups to open the site do it is more usable, leaving trees that offer screening or that have potential to develop into notable specimens.

2.4 Impacts of development on the trees.

In order to develop this site, the following trees will need to be removed:

G3, Part of G4, part of G5 & T16. These are all low quality trees and the removal / partial removal will not detrimentally impact on the wider public amenity of the site or surrounds.

Where the drive cuts through G5, a traditional build will be feasible to complete because this surface will be outside of the RPA, or only marginally cross the RPA of trees to be retained. BS5837:2012 allows provision for such surfaces to cross the RPA using minimal excavation and a traditional build. If this is not permitted then a 'No Dig' solution can be used to achieve this. An example and methodology of such as system can be found in **Appendix 3**.

All other trees will be retained and suitably protected from construction pressures in accordance with BS5837:2012. The site has been designed to avoid conflict with trees in third party ownership where the RPA (Root Protection Area) extends onto site.

The tree protection plan provided in **Appendix 5** shows the locations where protective fencing will be placed to prevent construction activities impacting on the trees to be retained either directly or indirectly. The tree protection method statement in **Appendix 3**, outlines the protection measures to be implanted to ensure the trees are suitably protected during development of the site.

3 CONCLUSIONS

- The majority of the trees appear to be in a healthy condition as best could be inspected given the overgrown nature of the site and some being in third party ownership, apart from T10 which is dead. Some of the trees in the groups are in decline and would be best removed. Please refer to the tree survey in **Appendix 3** for management options.
- The trees are low quality and do not offer wider public amenity. Removal will not impact on the amenity of the surrounding landscape. Those to be removed will not impact on the amenity of the site or surrounds.
- The building has been placed to avoid conflict with trees where possible.
- The trees to be retained can suitably be protected from construction pressures by adhering to the method statement provided.

4 OTHER CONSIDERATIONS

4.1 Trees subject to statutory controls:

I have not been made aware of any trees that are the subject of tree preservation order or any other restrictions. I suggest that the local authority is contacted to confirm which ones are and kept updated with any proposed tree works so as to form a good working relationship and to prevent misunderstandings or contravention of protection measures. This statement is meant for readers of this report as an advisory, to make sure they make the relevant checks so as not contravene any protection status the trees may have.

*Andrew Day HND Arb
For Andrew Day Arboricultural Consultancy Ltd.*

Brief qualifications and experience of Andrew Day

I hold a Higher National Diploma in Arboriculture. I have been working in the field of arboriculture for approximately 10 years, spending time as a contracting arborist undertaking all aspects of practical arboriculture both in the UK and Europe. I have also worked within local government as a tree officer working for a variety of local authorities. I have a broad experience of both the practical and theoretical aspects of arboriculture having worked within the public and private sector.

1. Qualifications:

Higher National Diploma in Arboriculture (1996)





NPTC (National Proficiency Training Council) units 20, 21 and 22

Lantra professional tree inspection certificate

2. Practical experience:

Prior to establishing my company, I worked for a private Arboriculture company for three years undertaking many practical aspects of Arboriculture. I moved on from this to become a local authority tree officer for five years, my duties included consultation on planning matters with regard to trees, advice to the general public, managing the council's tree stock and liaising with other professionals on Arboricultural related issues. I was approached by an established tree contracting and consulting company in Essex to develop and run the consultancy department as their principle consultant which I did for three years.

SITE PHOTOGRAPHS

	
<p>Showing G1, G2 & T2</p>	<p>Showing T13, T14 & T15</p>
	
<p>Showing trees in G4</p>	<p>Showing G5</p>

SITE SPECIFIC INFORMATION

Explanatory Notes

Tree Survey

Tree Protection Method Statement and Protection Criteria

Hand Dig Method Statement

Example of a 'No Dig' surface construction

Informatives for protection fencing

Arboricultural Considerations notice for site hut and inducted personnel

Explanatory Notes

Measurements/estimates: All dimensions are estimates unless otherwise indicated. Measurements taken with a tape or clinometer are indicated with a '*'. Less reliable estimated dimensions are indicated with a '?'.

Species: The species identification is based on visual observations and the common English name of what the tree appeared to be is listed first, with the botanical name after in brackets. In some instances, it may be difficult to identify a particular tree quickly and accurately without further detailed investigations. Where there is some doubt of the precise species of tree, it is indicated with a '?' after the name in order to avoid delay in the production of the report. The botanical name is followed by the abbreviation sp if only the genus is known. The species listed for groups and hedges represent the main component and there may be other minor species not listed.

Height: Height is estimate height to the nearest metre.

Spread: The maximum crown spread is visually estimated to the nearest metre of the total crown spread diameter. It should be noted that the crown of some trees can be one side, however this usually indicated within the report.

Diameter: These figures relate to 1.5m above ground level and are recorded in centimetres. Estimate measurements are banded 0-10cm, 11-20, 21-30 etc. If appropriate, diameter is measure with a diameter tape. 'M' indicates trees or shrubs with multiple stems. 'AV' indicates average and is the average of two stems when dealing with twin stem trees.

Estimated Age: Age is assessed as **M** mature (last one third of life expectancy), **EM** early-mature (one third to two thirds life expectancy) and **Y** young (less than one third life expectancy).

FSB: First significant branch from ground level (direction shown on tree protection / constraints plan)

SULE: This is the estimated Safe Useful Life Expectancy of the tree. Trees can live longer than this value but can pose a risk to persons or property.

BS 5837 2012 - On the basis of this assessment, trees can be divided into one of the following categories:

- A** - Trees whose retention is most desirable, High category
- B** - Trees where is desirable, Moderate category
- C** - Trees which could be retained, or have no great visual prominence, Low category
- U** - Trees of such a condition that they cannot be retained; Fell category

Tag	Name	Age	Diameter	Height	Crown Hgt	FSB Hgt	Crown Spread (N S E W) (m)				Life Exp	Recommendations	Category	RPR	RPA
T1	Pyrus (Pear)	EM	100	6(1.5)	1.5	2	2	2	3	3	<10	This tree has cavities and rotting in its main stem and is significantly subsiding. Remove tree.	C3	1.2	4.52
T2	Crataegus monogyna (Hawthorn)	EM	200	6(2)	2	2	3	3	3	2	20+	No works required at present.	C3	2.4	18.1
T3	Crataegus monogyna (Hawthorn)	SM	100	4(0.5)	0.5	0.5	1.5	1.5	1.5	1.5	10+	Limited inspection due to ivy growth. Sever ivy to aid future inspection.	C3	1.2	4.52
T4	Quercus robur (Common Oak)	SM	150	5(1)	1	1	2	2	2	2	40+	No works required at present.	C1	1.8	10.18
T5	Populus canescens (Grey Poplar)	M	200	12(5)	5	4	3	3	2	2	10+	This tree is significantly subsiding. Monitor. Limited inspection due to surrounding overgrowth. Sever overgrowth to aid future inspection.	C3	2.4	18.1
T6	Populus canescens (Grey Poplar)	M	200	15(5)	5	4	3	3	2	2	10+	This tree is significantly subsiding. Monitor. Limited inspection due to surrounding overgrowth. Sever overgrowth to aid future inspection.	C3	2.4	18.1

Tag	Name	Age	Diameter	Height	Crown Hgt	FSB Hgt	Crown Spread (N S E W) (m)				Life Exp	Recommendations	Category	RPR	RPA
T7	Populus canescens (Grey Poplar)	M	200	13(5)	5	4	3	3	2	2	10+	This tree is significantly subsiding. Monitor. Limited inspection due to surrounding overgrowth. Sever overgrowth to aid future inspection.	C3	2.4	18.1
T8	Populus canescens (Grey Poplar)	M	200	13(5)	5	4	2	3	3	2	10+	This tree is significantly subsiding. Monitor. Limited inspection due to surrounding overgrowth. Sever overgrowth to aid future inspection.	C3	2.4	18.1
T9	Populus canescens (Grey Poplar)	M	200	13(5)	5	4	2	3	3	2	10+	This tree is in third party ownership. This tree is significantly subsiding. Monitor.	C3	2.4	18.1
T10	Populus canescens (Grey Poplar)	M	200	12(5)	5	4	0.5	0.5	0.5	0.5	<10	This tree is deceased. Remove tree.	U	2.4	18.1
T11	Populus canescens (Grey Poplar)	M	250	12(5)	5	4	4	1	1	1	<10	This tree has limb failure and is significantly subsiding. Remove tree.	C3	3	28.28
T12	Populus canescens (Grey Poplar)	M	250	13(5)	5	5	2	1	1	1	<10	This tree has limb failure and is significantly subsiding. Remove tree.	C3	3	28.28

Tag	Name	Age	Diameter	Height	Crown Hgt	FSB Hgt	Crown Spread (N S E W) (m)				Life Exp	Recommendations	Category	RPR	RPA
T13	Populus canescens (Grey Poplar)	M	250	13(12)	12	5	1	1	1	1	<10	This tree has limb failure and is significantly subsiding. Remove tree.	C3	3	28.28
T14	Quercus robur (Common Oak)	M	300	13(3)	3	5	2	3	3.5	2	20+	This tree is in third party ownership.	C2	3.6	40.72
T15	Quercus robur (Common Oak)	M	300	15(5)	5	5	3	3	3.5	3	20+	This tree is in third party ownership. This tree has deadwood. Remove deadwood.	C2	3.6	40.72
T16	Populus canescens (Grey Poplar)	EM	400	13(4)	4	4	2	2	2	2	<10	This tree has a fungal disease and is in decline. Consider removing.	C3	4.8	72.39
G1	Malus (Apple),Crataegus monogyna (Hawthorn),Pyrus (Pear)	SM	100	5(1)	1	1	1.5	1.5	1.5	1.5	10+	Group of low quality, unmaintained self-set trees.	C3	1.2	4.52
G2	Pyrus (Pear),Crataegus monogyna (Hawthorn),Quercus robur (Common Oak)	SM	100	5(1)	1	1	1.5	1.5	1.5	1.5	20+	Group of low quality, unmaintained self-set trees.	C3	1.2	4.52
G3	Populus canescens (Grey Poplar)	M	300	14(6)	6	6	1	1	1	1	<10	These trees have limb failure and in decline with some deceased. Consider removal	C3	3.6	40.72

Tag	Name	Age	Diameter	Height	Crown Hgt	FSB Hgt	Crown Spread (N S E W) (m)				Life Exp	Recommendations	Category	RPR	RPA
G4	Fraxinus excelsior (Ash), Quercus robur (Common Oak), Populus canescens (Grey Poplar)	SM	100	8(2)	2	2	1.5	1.5	1.5	1.5	10+	Group of low quality, unmaintained self-set trees.	C3	1.2	4.52
G5	Fraxinus excelsior (Ash)	SM	100	6(3)	3	2	2	2	1.5	2	10+	Group of semi mature, unmaintained self-set trees located along the roadside boundary.	C2	1.2	4.52

Method Statement for Tree Protection Measures

PROJECT: Land to the side of St Johns church, Chapel Lane, Letty Green, Herts

CLIENT: C Redondo

1.1 Brief

Provide protective measures specification for trees to be retained using the guidelines and principles prescribed in BS5837: 2012 'trees in relation to design, demolition and construction'.

1.2 Protective measures and Site Supervision

An important factor in providing protection for the trees during the construction works is the chronological order in which development tasks are undertaken. Before work continues on site, the following issues will be addressed and submitted to the council for approval.

- A suitably qualified arborist will be retained to oversee tree protection measures where required and liaise with the tree officer as required. The contact information of this arborist will be made available to the council tree officer prior to works starting on site.
- Any excavation work in the RPA will initially be started using hand tools, with the supervising arborist overseeing. If felt appropriate by the supervising arborist work can continue with a mechanical digger and toothless bucket.
- The foundation design for the building and hard surfaces will be suitable to address any potential influence that the trees may have on them. Location of services and details of their installation will have been provided, with any arboricultural protection measures or methodologies of working programmed in the works schedule and approved by the council.
- Where the drive cuts through G5 a traditional construction method will be used. If this is not permitted, a 'No Dig' surface design will be used. The details of this will be confirmed by the project engineer, with installation details. Prior to access over the RPA ground protection will be in place.
- A pre- commencement meeting with a suitably qualified arborist will take place with the site manager and other relevant site personnel, to debrief them on the importance of the protection measures and to assist in setting up of the ground protection etc. before work commences on site.

- A schedule of arboricultural site supervision will be formulated at the pre-commencement meeting and be provided to the council by the site manager once this plan of visits has been set. It is then the responsibility of the site manager to ensure the arboricultural supervision visits are booked in and undertaken at the relevant times.

1.2.1

A pre-commencement inspection by the supervising arborist will take place to ensure the protective measures are understood and a schedule of arboricultural site monitoring is formulated at the start of the project, this will consist of site visits on a monthly basis to ensure protection measures are being maintained and that supervision is present if works are required in the RPA. A log of these visits and any actions required will be available to the council on request and kept on site.

1.2.2

Protective fencing as shown in **diagram 1** or similar will be placed in the locations as shown on the tree protection plan in Appendix 5, prior to works commencing on site. Once erected the fencing will not be removed unless permission has been given by the tree officer or the works on site have been completed. If scaffolding is required to be erected within the confines of the RPA, it will be set up as shown in **diagram 2**. The informatives provided will be attached to the fencing to highlight its importance at a height of 1.5m and at 5m intervals along the line of fencing, or in locations that can demonstrate they are clearly visible to identify the purpose of the fencing in relation to the project.

1.2.3

The placing of tree protection measures works within the construction timescale will not be altered and it is re-emphasised that this is to take place prior to any other activities.

1.2.4

All personnel inducted on site will be made aware of the tree protection measures and will be responsible for their own actions in maintain these and ensuring that they do not cause any damage to the trees.

Diagram 1

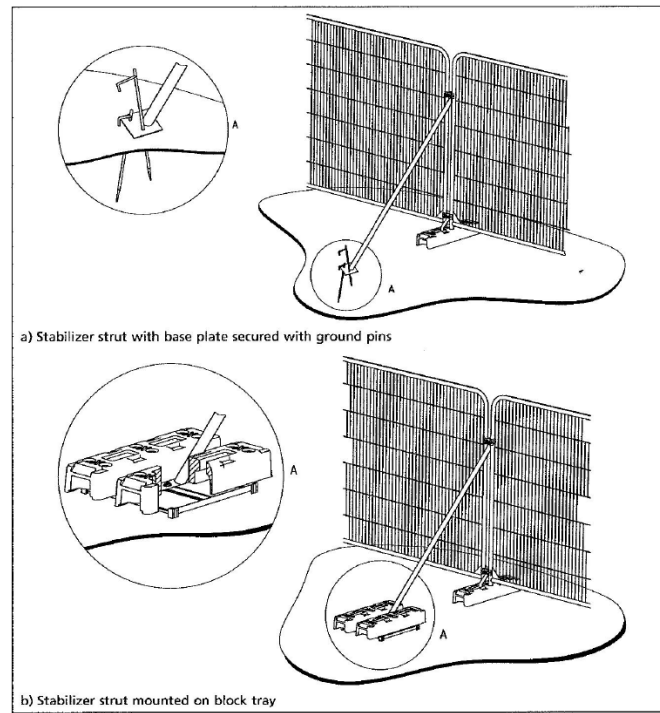
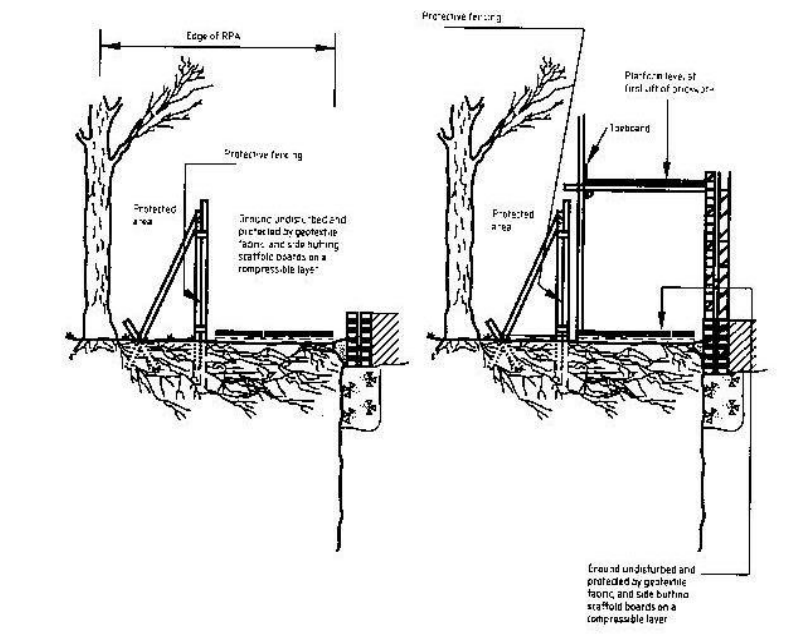


Diagram 2



1.3 Forbidden activities within RPA

1.3.1 Within the root protection area, the following activities will be prohibited, unless the local authority in writing grants specific permission:

No storage of chemicals or other substances likely to leach and cause harm to the trees to be stored.

No storage of heavy plant or materials likely to cause further soil compaction. The piling rig will sit outside the RPA at all times.

No ground disturbance works, apart from what has been approved by any planning permissions or specifically from the council.

No activities that could indirectly affect the trees such as bonfires etc.

1.3.2 No ground disturbance works apart from those granted in the planning permission is to be undertaken within the confines of the RPA without the written permission of the local authority.

The protected area is not to be breached at any time, unless the local authority has granted permission and a qualified arborist has been consulted and supervises any work activities that need to take place.

1.4 Storage of chemicals / mixing of materials

1.4.1 Storage of chemicals will be placed in a sealed bund / area, with no discharge allowed onto the ground or watercourses. The area containing these materials will have an impervious surface and stored **if possible** 10m away from the RPA. If accidental spillage of chemicals or other damage to the trees takes place the local authority is to be notified as soon as possible and a suitably qualified arborist is consulted as to the best actions to take to mitigate any damage that may have occurred as a result of the accident and these works to be undertaken to mitigate the situation as soon as possible.

1.5 Works in the RPA

- 1.5.1 No excavation / ground disturbance works will take place within the RPA unless permission is granted by the local authority to do so.
- 1.5.2 If light ground clearing is required in the RPA, it will be undertaken initially using hand tools and under the supervision of an arborist.
- 1.5.3 Where hard surfacing for the drive is shown to cross the RPA of G5, and a traditional construction method is not permitted, this will be facilitated using a 'No Dig' construction method. An example of this type of system can be found below in **Diagram 3. The project architect will ensure all levels tie in so that there is no conflict later, where the raised level of this type of surface causes problems.** Details of how this surface will be installed will be provided by the project architect / engineer.
- 1.5.4 The foundation design for the building will demonstrate how it is fit for purpose to ensure that the trees will not indirectly impact on the structure, resulting in pressures to remove the trees in the future.
- 1.5.5 Where access across the RPA is required before the new hard surfacing is in place to facilitate construction, or if access across it is required then suitable ground protection will be laid down as detailed in section 1.7 below.
- 1.5.6 All excavation works that are required in this protected area, will have the permission from the council approved for this type of operation, and the hand dig method statement provided strictly adhered to at all times.

1.7 Ground Protection

1.7.1 Where access across the RPA is required, the following ground protection measures will be implemented as needed.

For pedestrian traffic:

A single thickness of scaffold boards placed on top of a scaffold frame so as to form a suspended walkway (similar to diagram 2), or boards laid on to a geotextile membrane with a layer of wood chips 100mm in thickness.

For pedestrian operated plant, up to 2 tonnes:

Interlinked ground protection boards of plywood or similar at least 2.5cm thick, laid onto a geotextile membrane on a bed of wood chip 150mm in depth.

For wheeled or tracked traffic exceeding 2 tonnes gross weight:

Metal tracking designed and fit for purpose, pre-cast concrete slabs or similar, laid to an engineering specification on a compression resistant layer e.g., wood chips that will likely spread the weight of the load and prevent compression of the soil underneath.

1.7.2 **AT NO POINT WILL THE GROUND WITHIN THE RPA BE LEFT UNPROTECTED IF ACCESS IS REQUIRED IN THIS AREA.**

1.8 Completion

1.8.1 Once all the construction activities on the site have been completed and a suitably qualified arborist will assess the condition of the trees and liaise with the local authority accordingly if any works are considered necessary. Any proposed landscaping works will be discussed with the supervising arborist to ensure there could be no detrimental impact on the trees.

2 HAND DIG METHOD STATEMENT

PROJECT: Land to the side of St Johns church, Chapel Lane, Letty Green, Herts

- 2.1** The area to be excavated will be inspected by a professional arborist to assess the likely proximity of root activity and concentration prior to the commencement of any works. All relevant authorized personnel to be informed and required permissions gained before work commences.
- 2.2** If hand digging is not possible/practicable a method of excavation will be agreed and undertaken by a suitably qualified person for example air spading or a competent digger operator etc., in the presence of a qualified arborist.
- 2.3** During excavation great care will be taken to minimize damage to retained roots, including the bark around the roots.
- 2.4** All roots greater than 25mm diameter should be retained and worked around. Where clumps of smaller roots (including fibrous roots) are found these are to be retained.
- 2.5** Roots with a diameter in excess of 25mm must not be severed without permission from an Arborist.
- 2.6** If roots are encountered, the Arborist must conduct the root pruning and inform the relevant person to suggest mitigation works to the tree(s) if required. If severance is unavoidable roots must be cut back using a sharp tool, leaving the smallest wound possible.
- 2.7** If there is a possibility of infection being passed from one specimen to another, tools will be sterilized in an appropriate method to reduce the risk of cross contamination.
- 2.8** When backfilling an inert granular material mixed with topsoil or sharp sand (not builder's sand) is to be used around the retained roots. Unless an alternative backfill substrate has been agreed with in writing by the appropriate authorized personnel.
- 2.9** If roots are to be left exposed for a period of longer than 1 hour (dependent on weather conditions), then a covering of dampened Hessian or similar material is to be used to cover the exposed roots. Any changes to this practice are to be authorized by a qualified arborist.
- 2.10** All levels are to be returned to the original plane after any excavation unless specific design and relevant permission has been authorized.
- 2.11** A qualified Arborist is to be on site to supervise during any operations within the protection zone.

BODCELL™ Cellular Confinement

Bodcell™ Cellular Confinement System

Bodcell™ is a cellular confinement system for slope protection and stabilisation applications.

Manufactured from dark grey PE/PP, the material is permeable and allows water to flow between cells encouraging drainage and vegetation growth. The cell structure confines soil or aggregate material, greatly improving resistance to erosive forces such as rainwater run-off on steep or unstable slopes, or slopes exposed to severe hydraulic or mechanical stresses.

A variety of infills can be used depending on the application, providing a means of fully vegetating slope surfaces where this would not otherwise be possible. Seeded topsoil provides protection for less exposed areas, small shrubs offer improved protection, whilst granular infill offers the highest protection. The cellular system is normally suitable for slopes up to 45 deg (1:1 Slope).

Bodcell™ is supplied in flat panel form and expanded on site to the desired dimensions and shapes. The panels are flexible enough to go round trees and other obstacles. The cellular structure should be fixed on every single cell on the perimeter and at 1m centres throughout using fixing U-pins. Bodcell™ is also suitable for ground stabilisation and can be used as a tree root protection system.

U-Pins

Fixing U-pins can be used to fix the perimeter of cell and 1m centres throughout.

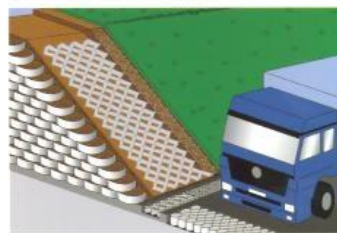
Technical Specifications

LENGTH	WIDTH	DIAMETER	MATERIAL	PACK SIZE	PART NO	LIST PRICE per pack £
550mm	100mm	8mm	Steel Rod	100	051038	80.00

Technical Specifications

PRODUCT REFERENCE	PANEL SIZE	CELL DIAMETER	CELL DEPTH	SLOPE APPLICATION MAXIMUM SLOPE ANGLE	GROUND REINFORCEMENT APPLICATION - LOAD CAPACITY	MATERIAL	PART NO	LIST PRICE per panel £
Bodcell 250/100	5m x 7m	250mm	100mm	1:1 Slope (45°)	Pedestrian Loads	PP/PE	051397	250.00
Bodcell 250/150	5m x 7m	250mm	150mm	1:1 Slope (45°)	Light Vehicles	PP/PE	051403	345.00
Bodcell 350/100	5m x 7m	350mm	100mm	1:2 Slope	N/A	PP/PE	051311	155.00
Bodcell 350/150	5m x 7m	350mm	150mm	1:2 Slope	N/A	PP/PE	051410	225.00
Bodcell 220/200	6m x 3m	220mm	200mm	N/A	Heavy Vehicles	PP/PE	051380	275.00

- Cell wall tensile strength: 20.7kN/m
- Cell wall permeability: 45 l/m.sec
- Material : 70% Polypropylene, 30% Polyethylene



Applications include slope protection and ground reinforcement.



EROSION CONTROL

METHOD STATEMENT FOR 'NO DIG' CONSTRUCTION

Incorporating the principles set out in Arboricultural Practice Note 12 for Hard Surfaces Within the Root Protection Area of Trees.

Prior to commencing any construction on site, erect protective fencing around trees to form an exclusion zone (see attached tree constraints plan). This will ensure that roots will not be severed during the construction work and the soil in the area of the exclusion zone will not be compacted, enabling oxygen to continue to diffuse into the soil beneath.

Construction of the surface should be undertaken in dry weather between May and October when the ground is driest and least prone to compaction.

- 3.1** Kill ground vegetation where hard surface is to be placed using a translocated herbicide such as glyphosate, ensuring that the selected herbicide does not damage the root of the tree/s below the new surface.
- 3.2** Remove the dead or organic material from the site and ensure that large stones and shrub stumps are removed from the proposed route.
- 3.3** Any stumps should be ground rather than excavated to minimise soil disturbance.
- 3.4** The resulting hollows and any other holes in the path should be filled with sharp sand.
- 3.5** Lay geotextile matting across the full width of the access. This will prevent the intrusion of roots into the sub-base whilst still allowing nutrients and gaseous exchange.
- 3.6** Lay a cellular confinement system suitable to support the loads needed by the surface. This can be cut on site to the length, width and profile of the surface required.
- 3.7** The surface is to be supported against the geo web matting by 150 x 20 mm tannalized softwood boarding and 200mm long tannalized soft wood pegs, driven into the ground at 1500 mm centres

- 3.8** Using hand shovels; carefully push 100 mm gravel chippings (no fines) into the Geo matting to form an aggregate sub-base.
- 3.9** The type 1 chippings should be placed at one end of the matting and pushed/spread across the matt to prevent compacting the soil, working on either side of the surface.
- 3.10** Carefully compact the subbase by hand to ensure binding with the geogrid and to minimise future rutting.
- 3.11** Lay second layer of a geotextile matting across the full width of the path. This will prevent the intrusion of fines (small pieces of gravel which can be compacted and restrict or close air pores) into the gravel chippings.
- 3.12** Add layer of 'no fines, sharp sand' and compact if using pavers as surface treatment. Again, care is to be taken when compacting takes place and by hand.
- 3.13** Place proposed surface treatment on top of the compacted sub-base to form the finished surface to the path and bank up the edging with topsoil, which is to be grass seeded in spring/autumn. This will form a gentle slope from the edging back onto the existing ground level.

ANDREW DAY
ARBORICULTURAL CONSULTANCY LTD

REDUCING COSTS BY DELIVERING PRACTICAL SOLUTIONS

TREE PROTECTION ZONE

**DO NOT CROSS WITHOUT
PERMISSION**

**BREACHING THIS BARRIER CAN
RESULT IN THE FOLLOWING:**

- **SHUT DOWN OF THE JOB**
- **FINANCIAL IMPLICATIONS**
- **CRIMINAL PROCEEDINGS**

ARBORICULTURAL SITE CONSIDERATIONS

THIS NOTICE IS TO BE DISPLAYED IN THE SITE OFFICE OR A SUITABLE LOCATION WHERE IT IS CLEARLY VISIBLE AND ISSUED TO ALL PERSONNEL INDUCTED ONTO SITE

The following site considerations must be observed at all times during the development process, from site preparations through to completion.

- ❖ The protected area of the RPA must be regarded as sacrosanct and not breached except where to implement the planning permission granted, without prior consultation with either the local planning authority or the supervising arborist.
- ❖ Ground protection must not be lifted or removed without prior consultation with either the local planning authority or the supervising arborist.
- ❖ Damage caused to ground protection must be reported to the site manager to ensure suitable repair or actions are taken.
- ❖ No materials, chemicals, machinery, or vehicles to be stored within the RPA (root protection area) as defined on the tree protection plan and on site by fencing and ground protection.
- ❖ No materials etc. must be rested against or machinery chained to trees.
- ❖ No pruning of trees may be undertaken by anyone other than a qualified arborist and approved by the supervising arborist and local authority tree officer.
- ❖ Any physical damage caused to a tree to be retained must be reported to the site manager immediately so that suitable remedial works can be commissioned without delay.
- ❖ Builder's sand (which contains high levels of salt) must not be used to back fill excavations within or in close proximity to tree roots, as it has a toxic effect and can cause root desiccation. Sharp sand must be used under such circumstances.
- ❖ Soil contaminants such as concrete mixings, diesel oil and vehicle washings must be kept suitably contained, preferably within bunded areas. Any spillages within 2m of a fenced area must be reported to the site manager and supervising arborist immediately so that suitable mitigation works can be commissioned.
- ❖ Fires must not be lit in positions where their flames can extend to within 5m of foliage, branches, or trunks. Wind direction and size of fires will impact on this.
- ❖ Notice boards, telephone cables or other services etc. must not be attached to any part of a tree.

Remember the tree officer can turn up at any time or neighbours may report any poor practice or threats to the trees.

Site Personnel Contact Information

As far as I am aware the only personnel associated with this site at the time of writing this report is the site owner and project architect. Table 1 shows the contact details of the project architect who is to be contacted if any enquires relating to this project need answering.

Table 1

Name	Relation to Site	Contact Details
Hertford Planning Service	Project Architect	01992 552173

**LIMITATIONS
AND
QUALIFICATIONS**

LIMITATIONS AND QUALIFICATIONS

Unless specifically mentioned the report will only be concerned with ground inspections. No below ground inspections will be carried out without prior confirmation from the client that such works should be undertaken. This report is for the purposes of identifying the constraints of trees in relation to development and not a health and safety assessment of the trees. A cursory assessment of the trees health and condition will be recorded, but this is not to be taken as a detailed assessment of its structural condition, health, and management recommendations in relation to this. A separate tree inspection regime focusing on these aspects will need to be undertaken if this is required.

The validity, accuracy and findings of this report will be directly related to the accuracy of the information made available during the inspection process. No checking of independent data will be undertaken, Andrew Day Arboricultural Consultancy will not be responsible for the recommendations within this report where essential data are not made available or are inaccurate.

This report will remain valid for one year from the date of inspection but will become invalid if any tree works not recommended within the report are undertaken, soil levels around the trees are altered in any way and if any building works which were not disclosed during the inspection are undertaken. If extreme weather changes occur such as heavy winds, snow etc., the trees will need to be re-inspected to ensure their condition has not been affected or has altered from the initial inspection details obtained.

If any of the above occurs, then it is strongly recommended that a new tree inspection is carried out.

It will be appreciated, and deemed to be accepted by the client that the formulation of the recommendations for the management of the trees will be guided by the following:

1. The need to avoid reasonable foreseeable damage
2. The arboricultural considerations – Tree safety, good Arboricultural practice and aesthetics.

The client is deemed to have accepted the limitation placed on the recommendations by the sources quoted in the attached report. Where time constraints or the client limits sources, this may lead to an incomplete quantification of the risk.

TREE PROTECTION PLAN

(Not to Scale. Please refer to separate A3 plan if scaling is required)

