

BUCKS PLANT CARE LTD

Arboricultural Impact
Assessment 3 (AIA3)
1 Wellington Close
Carpenders Park
Watford, WD19 5BF

2022



BUCKS PLANT CARE LTD

CONTENTS

- 1 Instructions & Terms of Reference
- 2 Introduction
- 3 Construction exclusion zones (CEZS)
- 4 Statutory Controls
- 5 Wildlife Habitats
- 6 Tree Report at 1 Wellington Close, Carpenders Park, Watford
- 7 Conclusions
- 8 Recommendations
- 9 Owners Liability Acts
- 10 References

APPENDICES

1. Tree Survey Schedules & Table 1 - Category Grading (Quality Assessment)
2. Appendix 2 - Arboricultural Impact Assessment plan
3. Appendix 3 – Tree Protection plan
4. Appendix 4 – Arboricultural Method Statement
5. Appendix 5 – Tree Protection specification
6. Appendix 6 - Monitoring form
7. Appendix 7 – Ground protection

Summary: The trees on this site were surveyed on the 2nd December 2022

1.0 INSTRUCTIONS & TERMS OF REFERENCE

1.1. Arboricultural Implication Assessment (AIA). We are instructed by Debkumar Mondal with respect to the subject property at 1 Wellington Close, Carpenders Park, Watford, WD19 5BF to:

- Survey from ground level, individually, or in groups, all on-site trees, identifying species, physiological condition and structural morphology, tree dimensions, preliminary management recommendations and BS: 5837 (2012) 'Retention Categories'. Estimate as far as possible off-site trees.
- Number all trees, either individually or in groups:
- Prepare a Tree Schedule.
- Work up an arboricultural impact assessment that will incorporate Root Protection Areas (RPA) for those trees worthy of retention.
- Produce a Tree Protection plan and an Arboricultural Method statement

1.2 PHASE 1, 2 & 3: ARBORICULTURAL IMPLICATION ASSESSMENTS (AIA) IN CONTEXT

1.2.1 Phase 1 (AIA1). The initial stage for trees within the development process is a survey of those trees that should be retained and those that may/should be removed. Retention trees are allocated Root Protection Areas (RPAs) that are then detailed on a Tree Constraints Plan (TCP). The RPAs provide for sufficient rooting (soil) volume to ensure that trees are successfully retained during and after the completed development. The TCP represents Phase 1 of an Arboricultural Implications Assessment (AIA1). It indicates a notional development footprint for any given site but moreover, it *may affect the value of land* earmarked for development. The AIA1 is *only* a baseline survey. It is not intended to represent, in isolation, the supporting information for an LPA* application: to obtain full planning permission.

* Local Planning Authority

1.2.2 **Phase 2 (AIA2).** The next stage is for 'site layout master planners' to factor the tree constraints into draft layout proposals. This draft is then referred to the consulting Arborist for further implication assessment, to arrive at a 'best fit' scheme, which achieves site proposal viability whilst allowing for the retention of appropriate trees. This layout review represents Phase 2 of an Arboricultural Implications Assessment (AIA2). Once it has been agreed, the consulting Arborist can then prepare a supporting report to accompany the planning application. This report should demonstrate that the trees have been properly considered such that the site layout is defensible in arboricultural terms, both at the application stage and also, if necessary, at Appeal. As the proposal develops, the AIA2 also involves the consulting Arborist working as part of the development team to secure discharge of any initial (frequently pre-commencement) tree related LPA planning conditions. These will need to be formally discharged to avoid any breach of Condition and/or enforcement action.

1.2.3 **Phase 3 (AIA3).** All the effort put into the pre-application phases (AIA1&2) to protect retention trees is likely to fail without effective site supervision. Arboricultural Implications Assessment (AIA3) covers the ***on-site project implementation***, including arranging (LPA) approved tree removal/ pruning, overseeing the installation of tree protection fencing, ground protection and any special engineering works through to periodic reporting on the retention of tree protection measures. Many if not all of the latter are usually specified as LPA planning conditions that need to be formally discharged. All personnel associated with the construction process must be familiar with the specified Tree Protection Plans (TPP) and Arboricultural Method Statements (AMS) that affect the site. The TPP and AMS should be retained on site at all times and they should be included in the site's Project Management Plan.

1.2.4 Phases 1–3 are in line with *BS 5837; 'Trees in relation to design, demolition and construction - Recommendations'* (2012).

1.3 **TREES & BUILDING SUBSIDENCE/HEAVE ISSUES**

Assessing the potential influence of trees upon load-bearing soils beneath existing and proposed structures, resulting from water abstraction by trees on shrinkable soils, was not included in the contract brief and is not, therefore, considered in any detail in this report. **Bucks Plant Care Ltd** cannot be held responsible for damage arising from soil shrinkage or heave issues related to the retention or removal of trees on site.

1.4 **TREE SAFETY MATTERS AND TREE RISK ASSESSMENT**

The BS:5837 tree survey is carried out in sufficient detail to gather data for and to inform the current project. Our appraisal of the structural integrity of trees on the site is of a preliminary nature and sufficient only to inform the current project. The tree assessment is carried out from ground level – as is appropriate for this type of survey - without invasive investigation. The disclosure of hidden tree defects cannot therefore be expected. Whilst the survey is not specifically commissioned to report on matters of tree safety, we report obvious visual defects that are significant in relation to the existing and proposed land use. Lastly and to further clarify, this BS:5837 survey does not constitute a full *Visual Tree Assessment* (= TRAM* Level 2 - *Basis Assessment*) that would ordinarily be carried out for Tree Risk Assessment reporting. In effect, this BS:5837 survey equates to a TRAM Level 1 *Limited Visual Assessment*.

* “Tree Risk Assessment Manual” Dunster, Julian A., E. Thomas Smiley, Nelda Matheny, and Sharon Lilly (2013) International Society of Arboriculture

1.5 **SITE OBSERVATIONS**

This report has been based on my site observations and in light of my experience. This along with my qualifications are summarised in Appendix 5.

1.6 CAVEATS

The author does not have formal qualifications in the areas of structural engineering or law. However, making comment on such matters from an arboricultural perspective is both within the normal scope of our instructions and also within the range of the author's experience. Notwithstanding this, specialist professional advice should be sought to clarify/confirm any observations on engineering or legal matters that this report may contain.

2.0 INTRODUCTION

2.1 THE ASSESSMENT METHODOLOGY

The British Standard BS:5837 '*Trees in relation to design, demolition, construction - Recommendations*' (2012) provides "guidance on the principles to be applied to achieve a satisfactory juxtaposition of trees...with structures". The Standard recommends that trees with categories A-C (where A is the highest quality) are a material consideration in the development process. Such trees may then become a constraint for a planning proposal. Category U trees are those that will not be expected to exist for long enough to justify their consideration in the planning process (i.e. no more than 10 years). Tree categories are used with the number 1, 2, or 3 to signify whether the category was made based on arboricultural, landscape or cultural (including conservation) values respectively. The tree categories are shown on plan by colour-coding:

- Category A (green colour-coded): Good examples of their species with an estimated life expectancy of at least 40 years.
 - Category B (blue colour-coded): Not suitable for an 'A' category due to impaired condition or a tree lacking special 'A' qualities: with an estimated life expectancy of at least 20 years.
-

- Category C (grey colour-coded): Unremarkable trees of very limited merit or with a significant impaired condition not warranting an 'A' or 'B' category: with an estimated life expectancy of at least 10 years. See young trees below.
- Category U (red colour-coded): 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.
- Reasonably young trees below 150mm stem diameter would normally be given a C category (if they satisfy the retention quality criteria). However, as they are small they could be replaced/transplanted and as such they should not be regarded as a significant constraint on a development.

2.2 ARBORICULTURAL IMPACT ASSESSMENT (AIA1)

As part of this AIA1 we have considered the following BS:5837 (2012) criteria:

1. Tree Categories (Quality Assessment).
2. Crown Spread measured to the four cardinal compass points for single specimens only.
3. Root Protection Areas (RPAs).
4. Tree Constraints.

N.B. Trees and shrubs are living organisms whose health and condition can change rapidly, for this reason the BS 5837 grades along with any conclusions or tree management recommendations remain valid for a period of 12 months.

The specific tree report is documented in Section 7 of this report.

3.0 GENERAL DATA

3.1 GENERAL

The three phases of an Arboricultural Implication Assessment were outlined in Section 1.1.1-1.1.4. In addition, during the development process for retention trees, there may be three and even four constraints to consider - Construction Exclusion Zone (CEZs):

CEZ 1: Root Protection Area (see 3.1.1).

CEZ 2: Tree Crown Protection (see 3.1.2).

CEZ 3: Tree Dominance (see 3.1.3).

CEZ 4: New Tree Planting Zone (see 3.1.4).

The above CEZ's are explained further below.

3.1.1 CEZ 1: ROOT PROTECTION AREA (RPA)

The RPA, calculated in m², should be protected before and during any demolition/construction works. This ensures the effective retention of trees by preventing physical damage to (a) roots and (b) their rooting environment (typical problems - soil compaction; soil level changes and soil capping that can impede gaseous exchange to living roots*). The RPA is based on a radial measure from the centre of the tree stem, which is calculated by multiplying the stem diameter by a factor of twelve (or by a factor of ten when measuring basal diameter immediately above the root flare for multi-stemmed trees). With the AIA1, the RPA is only shown indicatively on the preliminary Tree Constraints Plan (TCP), as its shape may be subject to amendment as the design progresses.

During the AIA2, the derived radial measure is converted by the consulting Arborist into the actual area to be protected, having due regard to prevailing site conditions and how these may have affected the tree(s).

The means of protecting the RPA will include the installation of Tree Protection Fencing prior to the start of any demolition or construction work on site, the prohibition of various harmful activities within the RPA (e.g. mechanical excavation, soil stripping & trenching, fire lighting, materials storage and creating excessive sealed surfacing), and may include the use of temporary ground protection and/or special engineering solutions where construction is proposed near to retention trees or within the RPA.

* Roots must have oxygen for survival, growth and effective functioning.

3.1.2 **CEZ 2: TREE CROWN PROTECTION ZONE**

This is the area above ground occupied by the tree crown (branches) and considers the required demolition/construction working space necessary for the development. The possibility of an acceptable quantum of pruning may be considered: subject to Council permission/consent (see Section 4.1.1).

Arising from the above, the means of protecting CEZ 2 is likely to include providing an adequate separation distance between retention trees and new buildings. This will relate to the CEZ 3: below.

3.1.3 **CEZ 3: TREE DOMINANCE ZONE**

This is the area above ground dominated by the tree in relation to issues of shading, seasonal debris and the safety apprehension by the site owner/occupier. This area is assessed by considering the height and spread of the tree (now and in the future) relative to the proposed buildings, cross-referenced with the intended end-use. As such, what is assessed is the likely psychological effect of the tree(s) on the end-user.

The purpose of identifying CEZ 3 is to protect trees from post-development pressure by the site's end-users, who may, if resentful of the trees, seek to procure excessive pruning treatments (i.e. the bad practice of topping & lopping)

or even to have them removed. This is a common LPA concern, which may lead to application withdrawals, refusals and/or dismissed Appeals.

The means of protecting CEZ 3 is likely to include optimising the site layout and room type (especially in relation to new residential dwellings), such that any adverse impacts of trees are reduced to an acceptable minimum. The key principle is to ensure adequate separation distances between trees and new buildings: notably with habitable space & primary windows.

3.1.4 CEZ 4: NEW PLANTING ZONE

In some cases, it may be appropriate to identify and protect areas intended for new landscape planting, which can fail to establish if the soil has been heavily compacted or contaminated during the demolition/construction process. The means of protecting CEZ 4 will either be by fencing prior to the start of construction/demolition works or by pre-planting soil remediation once construction has finished. Topsoil protection in areas destined for new planting is frequently an economic measure, saving on soil structure remediation and tree (failure) replacement costs.

4.0 STATUTORY CONTROLS

4.1 PLANNING LEGISLATION (TREES)

4.1.1 STATUTORY TREE PROTECTION

Trees can be protected in law – via Tree Preservation Orders (TPOs) or by virtue of them growing in a Conservation Area – by the Government’s Town & Country Planning Act 1990. (the Act). Trees may also be protected by Planning Conditions. If any of these apply, written LPA permission/consent is required

before protected trees can be pruned or felled*. Contravention of the Act may carry a fine of up to £20,000 and a criminal record.

* Exceptions include those trees that are dead/hazardous or those that are causing an actionable nuisance to a third-party. In any event, evidence must be provided to defend the removal of such trees.

The trees in the rear garden are protected by an Area TPO is **626/0221/1976**.

4.2 **WILDLIFE LEGISLATION**

The Wildlife and Countryside Act (1981) Chapter 69 forms the basis for the legal wildlife protection in Great Britain. Amongst other protected flora and fauna, nesting birds and all species of bat are afforded statutory protection. In brief, it is an offence to:

Intentionally kill, injure or take a bat.

Sell, hire, barter or exchange a bat, dead or alive.

Be in possession or control of a bat or anything derived from them.

Disturb a nesting bird.

It is recommended that the client and/or their agent review the Act - <http://www.jncc.gov.uk/page-3614> - for further information and guidance.

5.0 **WILDLIFE HABITATS**

A cursory assessment of wildlife habitat values of trees and hedgerows on the site was carried out during the survey. No protected or exceptional habitats were identified and details were not recorded. However, trees and hedgerows of most species provide valuable nesting sites for a wide range of birds and it is likely that nesting birds will be present on the site during the period March to

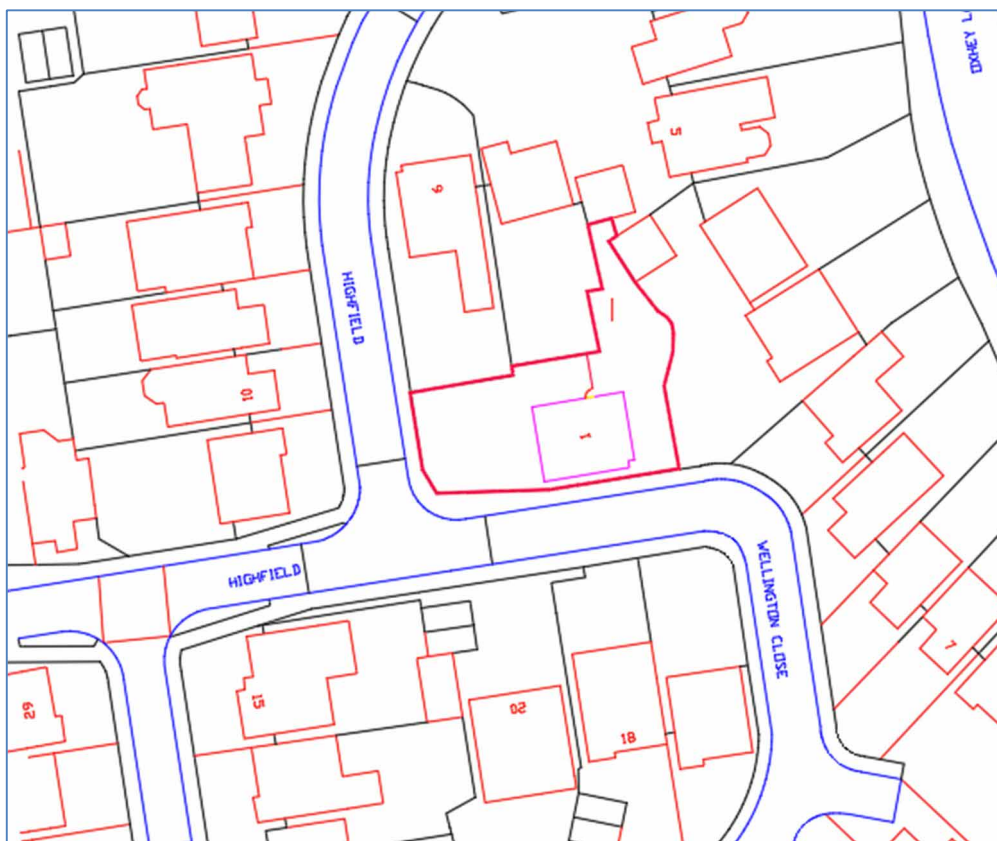
September. We have not been made aware of the presence of roosting bats and have not identified any obvious signs of roost sites. However, this does not mean that roost sites are absent.

**6.0 1 WELLINGTON CLOSE, CARPENDERS PARK, WATFORD, WD19 5BF:
TREE REPORT (to be read in conjunction with the appended Arboricultural
impact assessment and Tree Survey and NB II in section 1.1.)**

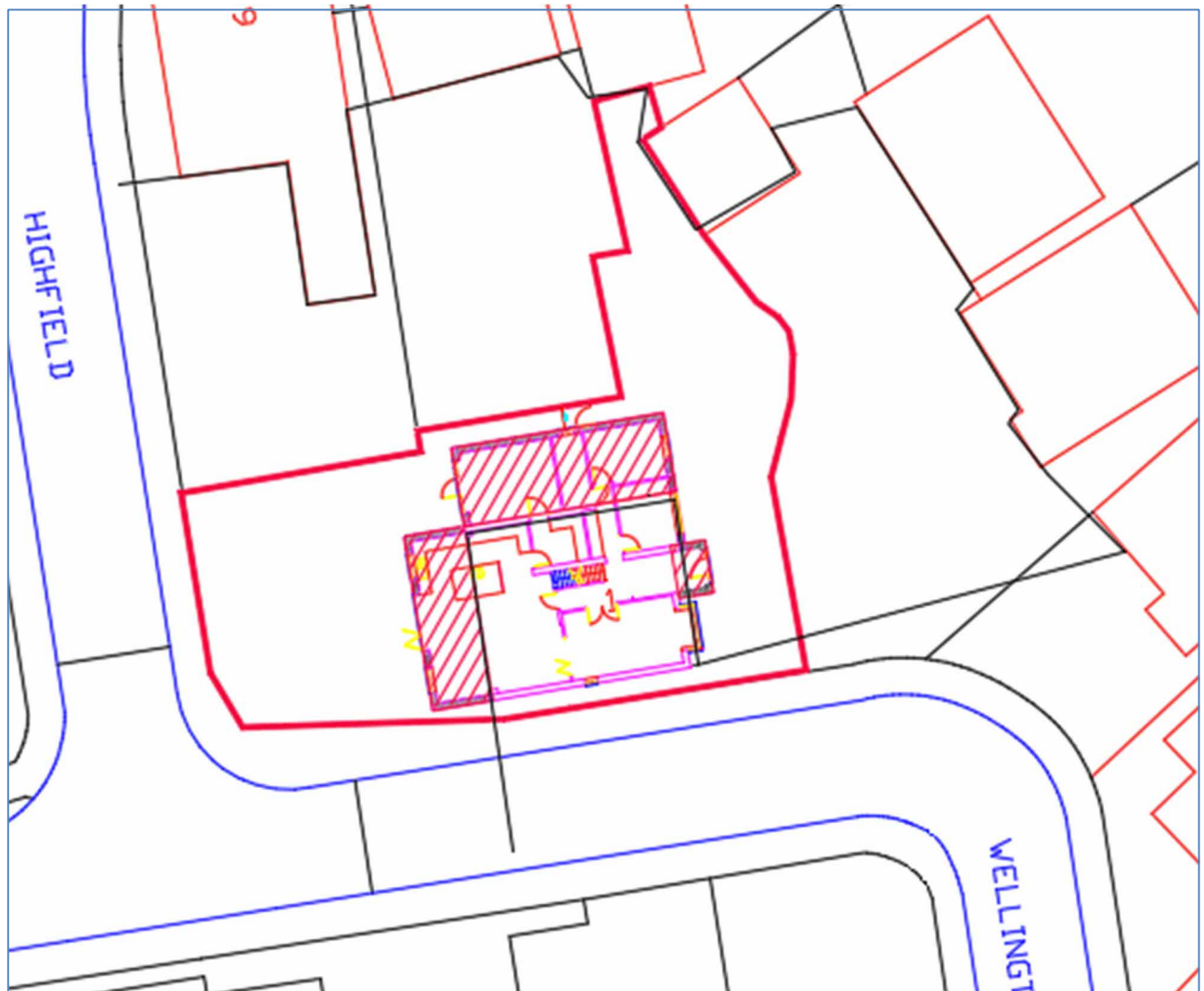
6.1 THE PROPERTY AND THE DEVELOPMENT PROPOSAL

6.1.1 Site description:

The site consists of a detached house in a close.



6.1.2 **The proposal:** It is proposed to extend the property to the rear and the side with a small porch in the front.



The location and detail of the proposed development and the positioning and numbering of the trees can be found plotted on the Arboricultural Impact Assessment Plan at Appendix 2 and separate document Ref : AIA/20848.

6.2 TREES ON-SITE

There is one on-site tree T01, which is a mature wellingtonia.



6.3 TREES OFF-SITE

There is one off site trees T02, which is a london plane.



6.4 IMPACT PROPOSAL ON TREES

6.4.1 Underground Utilities: Locations of proposed underground services were not identified on the provided plans, although these *must not* be sited within the Root Protection Area (RPA) of any retention tree without prior discussion and approval from the LPA and/or a Consulting Arborist. See section 6.5.

6.4.2 CEZ 1: Root Protection Areas (RPAs)

- a) The RPA of T01 has not been off-set by the surrounding buildings as it is unknown what measures were taken for their construction 20 odd years ago. The tree would have been the same size with the same RPA so the same impacts should have been considered.
- b) Either way the side extension would still be within it's RPA.
- c) The tree is located 1 meter higher that the property.



- d) The floor of the extension will be 300mm above existing ground levels.
 - e) It is proposed to mitigate the impact to the tree by building on a pile beam system. Due to the elevated floor there be little excavation within the area.
 - f) The impact to the RPA is only 6%.
-

6.4.3 CEZ 2: Tree Crown Protection Zones

There are no such issues with this development

6.4.4 CEZ 3: Tree Dominance Zones

There are no such issues with this development.

6.4.5 CEZ 4: New Tree Planting

There are no such issues with this development.

6.5 UNDERGROUND UTILITIES

Existing services will be utilised.

6.6 TREE PROTECTION DURING CONSTRUCTION

6.6.1 Tree Protection: The protection of retention trees is *paramount* to the granting of planning permission, the discharge of tree protection Planning Conditions, the design of the development and the future health, stability and success of the trees. It is widely recognised that mature trees add value to both land and property values.

6.6.2 The Root Protection Area (RPA): RPAs around retention trees should be maintained by the erection of a *temporary* tree protection barrier (TPB). The position and extent for the TPB will normally concur with the radius/squared area of the RPA. This staked-off area shall be known as the Construction Exclusion Zone (CEZ). The integrity of the TPB to protect CEZs should be maintained for the duration of the entire development works.

6.7 ARBORICULTURAL METHOD STATEMENT

6.7.1 Purpose & Use

In consideration of the above issues, we have included an Arboricultural Method Statement (AMS) at Appendix 4, which details working methods in relation to trees. This AMS lays down the methodology for any demolition and/or construction works that may have an effect upon trees on and adjacent to this site. It is essential within the scope of any contracts - related to this development - that this AMS is observed and adhered to. It is recommended that this document forms part of the work schedule and that specifications are issued to the building contractor(s) and these should be used to form part of their contract.

6.7.2 Site Supervision

An individual – ideally the Site Agent - must be nominated to be responsible for all arboricultural matters on site. This person must:

- be present on site for the majority of the time;
- be aware of (a) the Tree Protection Plan and (b) the tree protection measures to be installed and maintained throughout the build;
- have the authority to stop any work that is causing, or has the potential to cause, harm to any retention trees;
- be responsible for ensuring that all site operatives are aware of their responsibilities towards on/off site trees and the consequences of the failure to observe these responsibilities;
- make immediate contact with the designated Consulting Arborist (contact number listed on the appended AMS) in the event of any tree related problems occurring, whether actual or potential.

6.7.3 **AMS Adoption**

If conflicts between any part of a tree and the build arise in the course of the development these can – and should be – resolved quickly and at little costs if a qualified and experienced Consulting Arborist is contacted promptly. Lack of such care will likely lead to the decline and even death of affected trees: often with legal ramifications. The loss or damage to retention trees can spoil design, affect site sale ability and reflects badly on the construction and design personnel involved. Conversely, trees that have received careful handling during construction add considerably to the appeal and value of the finished development.

7.0 CONCLUSIONS

7.1 DEVELOPMENT PROPOSAL & POTENTIAL IMPACT ON TREES

- 7.1.1 It is proposed to extend the property to the rear and the side with a small porch in the front.
- 7.1.2 The proposed side extension will impact the on tree by 6%. It is proposed to mitigate this impact by using a pile and beam construction.
- 7.1.3 Adherence to the TPP and AMS will ensure the trees are not harmed.

8.0 RECOMMENDATIONS

8.1 EXECUTION OF CONTRACT

It is recommended that the Architect specifies in writing to the building contractor that tree care conditions apply to the execution of the contract. Lack of care frequently results in the damage, decline and eventual death of trees. This can

adversely affect design aims & site sale-ability, and reflects poorly on the contractors and design personnel involved. Trees that have been the recipients of careful handling during construction add considerably to the appeal and value of finished developments.

8.2 **PROPOSED REVISIONS TO THE SCHEME**

We advise that all proposed revisions in respect of external layout, orientation of primary windows, location of underground services, external surfacing and/or landscaping; having implications for retention trees should be referred to us for review.

9.0 **OCCUPIERS LIABILITY ACTS**

Attention is drawn to the provisions of the Occupiers liability Acts (England & Wales - 1957 & 1984), which place a responsibility upon landowners to ensure the safety of others entering their land whether by invitation or permission: inclusive of trespassers. There is a special responsibility to ensure the safety of children, who may be unaware of hazards. Annual inspections of trees by a competent person, or following storm events, together with implementation of any remedial tree work recommendations, should ensure compliance with the legislation regarding the above legislation.

10.0 **REFERENCES**





- *BS 5837; 2012 'Trees in relation to design, demolition and construction - Recommendations'* British Standards Institute, London
 - *BS 3998; 2010 'Tree Work Recommendations'* British Standards Institute, London
 - *Arboricultural Practice Note 12; 2007 – AAIS*
 - *'Availability of Sunshine'* BRE - 209 & CP 75/75
 - *'Tree Guide'* (2006) Collins Books Owen Johnson & David More
-

- *'Tree Roots in the Built Environment'* 2006 DCLG
- *'The Body Language of Trees'* (1994) DoE. HMSO. C Mattheck & H Broler
- *'Field Guide for Visual Tree Assessment'* (2007) C. Mattheck Forschungszentrum
Karlsruhe GmbH

APPENDIX 1 - Tree schedule

Ref.	Species	Measurements	General Observations	Retention Category	RPA	Physiological Cond	Structural Cond	Recommendations
T01	Wellingtonia (Sequoiadendron giganteum)	Height (m): 25 Stem Diam (mm): 1560 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 2 Life Stage: Mature Rem. Contrib.: 40+ Years	On site tree is a mature healthy specimen of its type	A	Radius: 15.0m. Area: 707 sq m.	Good	Good	No action
T02	Oriental Plane (Platanus orientalis)	Height (m): 18 Stem Diam (mm): 600 Spread (m): 3N, 3E, 3S, 3W Crown Clearance (m): 2 Life Stage: Mature Rem. Contrib.: 30+ Years	Off site tree which has been managed by reduction pruning in the past	B	Radius: 7.2m. Area: 163 sq m.	Good	Good	No action

BS5837:2012 Table 1 – Cascade chart for tree quality assessment

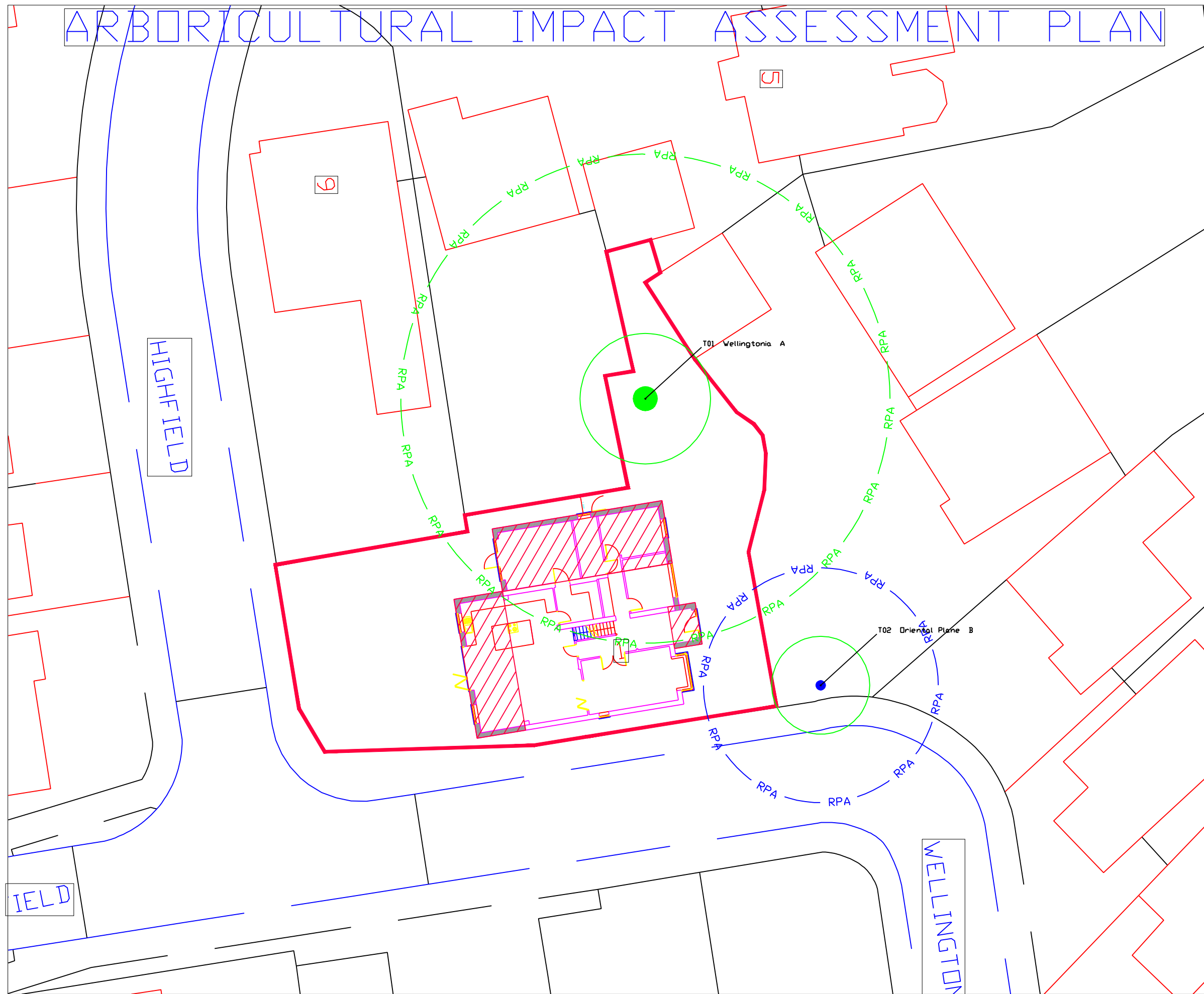
Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	<ul style="list-style-type: none"> 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] 4.5.7.</i>				
	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)	
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	
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	

Arboricultural Report for: 1 Wellington Close, Carpenders Park, Watford, WD19 5BF

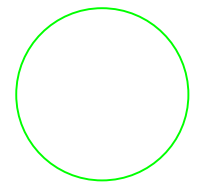
BPC Ref: 20848

APPENDIX 2 --
ARBORICULTURAL IMPACT ASSESSMENT PLAN

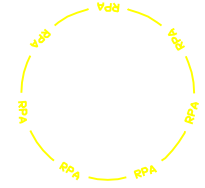
ARBORICULTURAL IMPACT ASSESSMENT PLAN



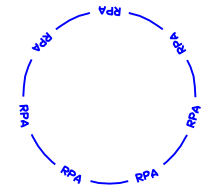
General Notes



Tree canopy



RPA Cat A



RPA Cat B



RPA Cat C

AIA plan

No.	Revision/Issue	Date

Firm Name and Address
 Bucks Plant Care Ltd
 Wylderne
 Bridge Street
 Great Kimble
 HP17 9TW

Project Name and Address
 1 Wellington Close
 Carpenders Park Watford
 WD19 5BF

Project BPC - 20848	Sheet 01
Date 07.12.2022	
Scale 1:200 in A3	

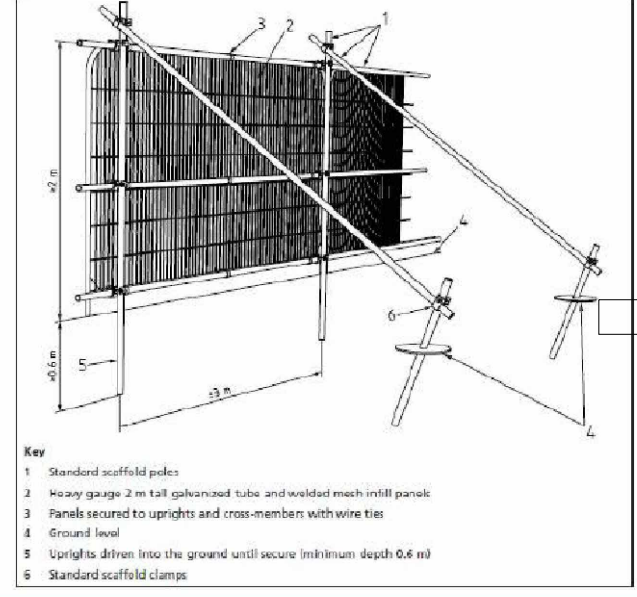
Arboricultural Report for: 1 Wellington Close, Carpenders Park, Watford, WD19 5BF

BPC Ref: 20848

APPENDIX 3 --

TREE PROTECTION PLAN

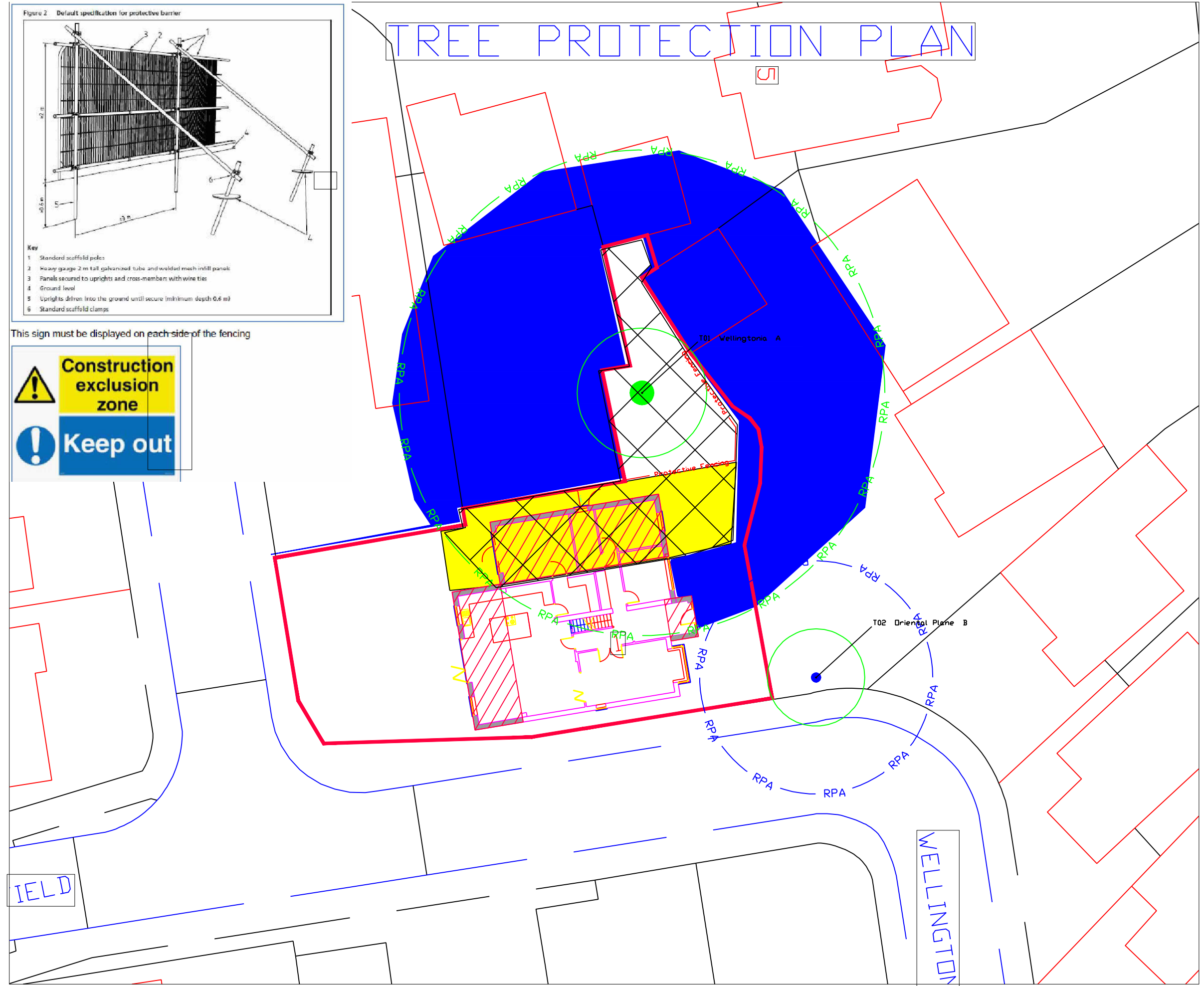
Figure 2 Default specification for protective barrier



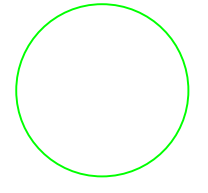
This sign must be displayed on each side of the fencing



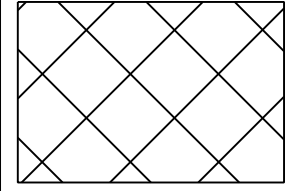
TREE PROTECTION PLAN



General Notes



Tree canopy



CEZ



Protected CEZ



Ground protection and work area within the CEZ

TPP plan		
No.	Revision/Issue	Date

Firm Name and Address
 Bucks Plant Care Ltd
 Wylderne
 Bridge Street
 Great Kimble
 HP17 9TW

Project Name and Address
 1 Wellington Close
 Carpenders Park Watford
 WD19 5BF

Project	BPC - 20848	Sheet	01
Date	07.12.2022		
Scale	1:200 in A3		

Appendix 4

ARBORICULTURAL METHOD STATEMENT (AMS)

Site: 1 Wellington Close, Carpenders Park, Watford, WD19 5BF

To be read in conjunction with the Tree Report sections 6-8 and Tree Protection Plan at Appendix 3. NB The original of this plan was produced in colour – a monochrome copy should not be relied upon.

This AMS lays down the methodology for any demolition and/or construction works that may have an effect upon trees on and adjacent to this site. It is essential within the scope of any contracts - related to this development - that this AMS is observed and adhered to. It is recommended that this document forms part of the work schedule and that specifications are issued to the building contractor(s) and these must be used to form part of their contract.

Consulting Arborist contact details:

Patrick Prendergast – mob. No. 07952 338564

SEQUENCE OF WORKS

From commencement of the subject development, the following methodology will be implemented in the manner and sequence described:

1. Pre-commencement site meeting.
2. Install tree protection barriers and ground protection measure.
3. Main construction works.
4. Remove barriers

1. **PRE- COMMENCEMENT SITE MEETING** To outline on-site working methods in relation to trees prior to any demolition and/or construction activity, a site meeting of the following shall take place:

• Client • Architect/Planning Consultant • Structural Engineer • Main Contractor • LPA Arboricultural Officer (optional) • Consulting Arborist • Site Agent

2. **ESTABLISH THE CONSTRUCTION EXCLUSION ZONE (CEZ):**

As per the tree protection plan (TPP), ref PBC 20848, the defined fencing and ground protection must be installed as per the detail on the plan.

As access will be required for a piling machine at the rear and side a piling mat will need to be laid down along the side of the house covering the area highlighted in yellow along with the extension site.

Once the area is cleared of fencing, plants, shed and paving trial holes will need to dug by hand under supervision to determine the best locations for the piles to ensure no roots are damaged.





Then the area will need to be protected by a piling mat using a ceb web system as per Appendix 7. The depth will be determined by the piling specification following approval.

The protective fencing will then be installed to protected the defined Construction Exclusion Zone.

The area highlighted in blue on the TPP plan is already a protected CEZ with garden fencing and hard surfaces. The rear garden will be used for storage.

After the pile and beams have been installed the internal pilke matting can be removed before the floor is laid.

4. MAIN CONSTRUCTION WORKS

1. Before commencing work on site, all operatives must be briefed by the Site Agent/Contract Manager on the importance of protecting on site trees. The basis of this briefing will be the protection measures as set out on the Tree Protection Plan (TPP) including the position of Construction Exclusion Zones. NB during the construction the Site Agent/Contract Manager will be responsible for all tree protection measures. Regular monitoring visits will be undertaken by the Consulting arborist. This will take place every 5 weeks during the demolition and build process.

2. There must be no:
 - (a) storage or disposal of any soil, building materials, rubble, machinery, fuel, chemicals, liquids waste residues or materials/debris of any other description
 - (b) preparation of noxious substances (e.g. cement)
 - (c) Parking/use of tracked or wheeled machinery or vehicles of any description.- except piling rig
 - (d) Siting of any temporary structures of any description including site office/sales buildings, temporary car parking facilities, porta-loos, storage compounds or hard standing areas of any other description
 - (e) Soil/turf stripping, raising/lowering of existing levels, excavation or alterations to the existing surfaces/ ground conditions of any other description
 - (f) Installation/siting of any underground services, temporary or otherwise including; drainage, water, gas, electricity, telephone, television, external lighting or any associated ducting.

in any area designated as the Construction Exclusion Zone (CEZ)

In addition to the protection measures specified above,

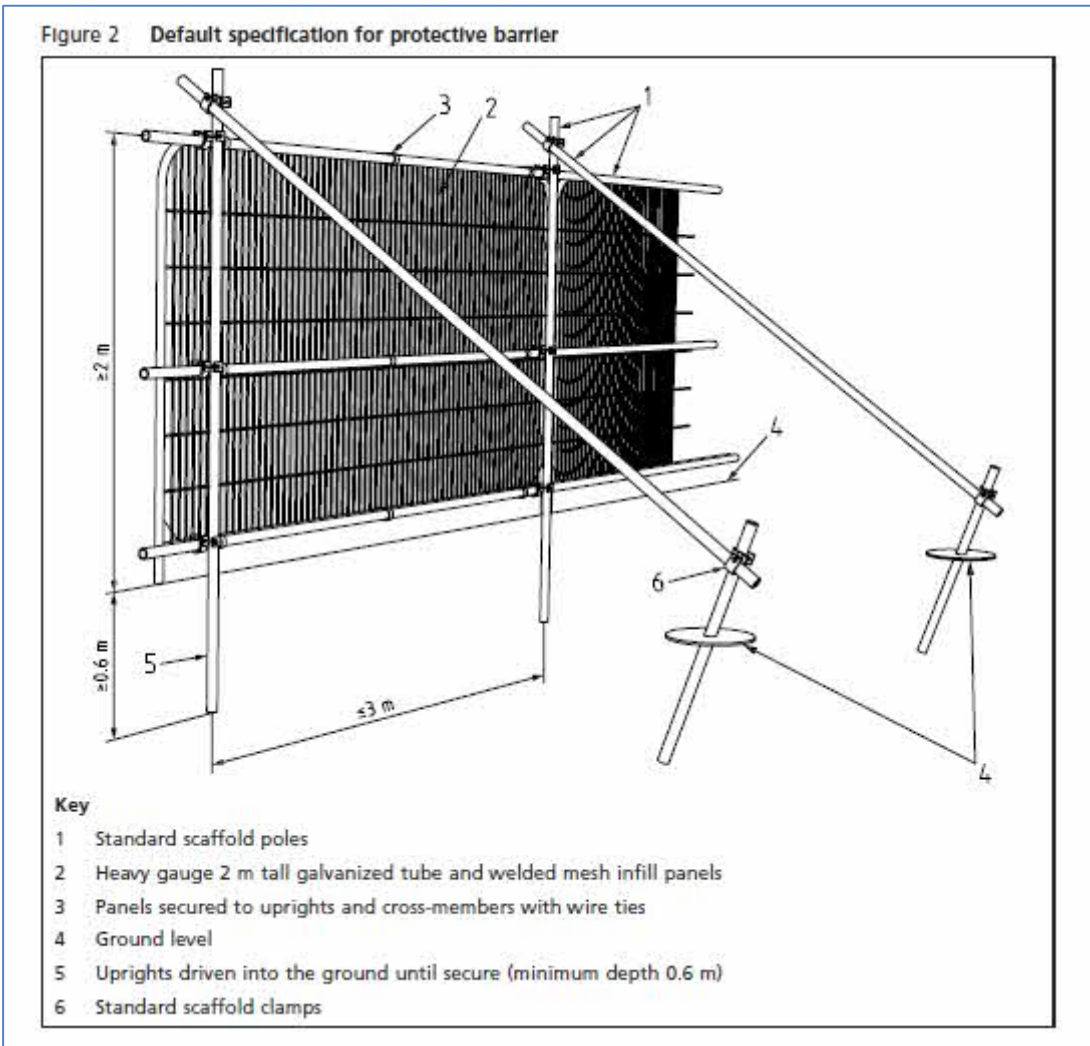
- a) No fires shall be lit within 20 metres of the trunks of the canopies any trees or the spread of any hedgerow shown to be retained.
- b) No signs, cables, fixtures or fittings of any other description shall be attached to any part of any retained tree.
- c) No chemicals, fuel, liquids/waste residues of any other description to be stored or disposed of within close proximity to or drained towards/ into protection areas.

Regular monitoring must take place every 5 weeks to ensure the AMS is being adhered to. The monitoring form will be filled out and submitted to the planning officer following each visit.

5. REMOVAL OF TEMPORARY TREE PROTECTION

Once all construction activity has been completed the protection barriers and ground protection can be removed.

Appendix 5- Tree protection fencing specification



This sign must be displayed on each side of the fencing



Appendix 6: Arboricultural Site Monitoring Form

Client contact details:

Site:

Ref:

LPA Tree Officer (if applicable):

Consultant:

Date of inspection:

Accompanied by site manager
Previous actions complied with

Site currently active

INSPECTION DETAILS:

Any signs/evidence within the RPA of:

Ground contamination
Excavations
Water run off
Unauthorised tree works

Changed soil levels
Material storage
Ground compaction

If yes to any of the above provide details:

CONDITION OF FENCING:

Erected according to approved details
Fencing in place/intact
Bracing & clamps in place

Protective signs present
Upright poles in ground
Any signs of breach

ADDITIONAL NOTES including action taken/required:

Date of next inspection:

Copied to Client Copied to Site manager Copied to LPA

Signed – Patrick Prendergast -----

Appendix 7
Ground protection



Geoweb® Tree Root Protection System Installation Guide

1. Preparation of the subgrade ready for Geoweb® tree root protection no dig solution. Whilst inside the tree rooting area, all actions must ensure no detrimental effect on the ground condition. The tree rooting area is the surface which is being protected.

Removal of surface vegetation using prior agreed methods with local authority. No methods of removal which will cause compaction to the subgrade can be used. This includes the use of plant, vehicles and machinery. Examples of appropriate methods include hand tools or herbicide.

When creating a level subgrade, do not grade off humps or level off through compaction, as these may contain tree roots. Rather infill hollows with a permeable material such as clean stone or sharp sand to create a level surface.

All external debris, such as rocks and waste, should be removed. When an existing hard surface is scheduled for removal, care should be taken not to disturb tree roots that may be present beneath. Hand held tools or appropriate machinery should be used to remove the existing surface, working backwards over the area so not trafficking the exposed area.

2. TRP4000 Non-woven Geotextile

Lay out the TRP4000 over the prepared area, overlapping joins by a minimum of 300mm, dependent on soil conditions. When overlapping the TRP4000, ensure the overlap is in the same direction as the Geoweb® will be extended. This will ensure the geotextile does not pull up when extending the Geoweb®.

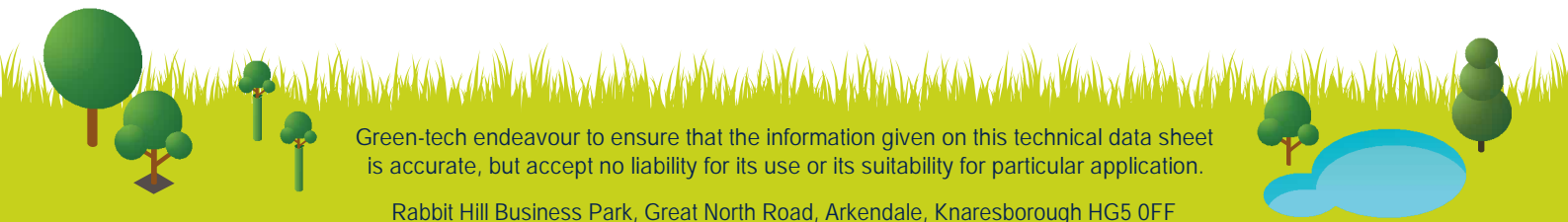
If a site specific solution has been provided by which includes a sub-base, this will require installation through non compaction methods.

3. Installation of the Geoweb® panels

- Lay out the collapsed Geoweb® on the TRP4000 and secure at one end in the middle of the width.
- Extend the panel to 6.6m length, and secure its length at the other end.
- Extend the width of the Geoweb® to 2.6m wide, and secure each corner.
- Ensure the panel is secured at 6.6m x 2.6m, as this will achieve the 259mm by 224mm cell diameter required.

4. Connection of the panels to create one single mattress

All panels must be adjoined to one another both side by side and end to end
Simply connect the Geoweb® with the supplied ATRA® keys, through the aligned slots.



Green-tech endeavour to ensure that the information given on this technical data sheet is accurate, but accept no liability for its use or its suitability for particular application.

Rabbit Hill Business Park, Great North Road, Arkendale, Knaresborough HG5 0FF

T: 01423 332100 E: sales@green-tech.co.uk W: www.green-tech.co.uk Facebook: @greentechuk Twitter: @greentechltd



1. Infill of the Geoweb® for tree root application

- Compacted, non-porous material, such as M.O.T. Type 1 / crushed stone with fines should not be used for tree root protection.

- Infill Geoweb® panel with 4-20mm clean angular stone, ensuring Geoweb® is not visible and is overfilled by a minimum 25mm. Plant and tracked vehicles should not drive on exposed Geoweb® as this will lead to tearing and damage.

- Infill towards the tree, using the filled Geoweb® cells as the working platform.

2. Compaction of the infilled material

- Compaction of the Geoweb® system is not required on generic site conditions, as the infill will secure its own level when trafficked over a short time.

- If on poor / site specific conditions, complete 4 passes of a non-vibrating, smooth wheeled roller over the 25mm overfill. Refill and roller as necessary to ensure a 25mm surcharge remains

3. Edging options

- Where edging is required for light structures, such as footpaths, above ground peg and treated timber edging may be acceptable. Where areas of hard surface require edge support, the use of pinned sleepers, gabions or non-invasive haunch kerbing can provide appropriate solutions.

4. Surface options available

- Geoweb acts as a sub-base to all available surfaces on the market, including asphalt, block-paving, resin bound, grass vegetation or gravel etc.

- For tree rooting areas, the surface must be porous unless approved otherwise by local authority.



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T: 01423 332100 E: sales@green-tech.co.uk W: www.green-tech.co.uk Facebook: @greentechuk Twitter: @greentechLtd

Author qualifications:

Patrick Prendergast, DHE, MArborA, MIHort, Tech Cert(ArborA)

Patrick has 40 years experience working in local authorities managing trees in the public realm and private sectors.

He is a professional member of relevant institutes, attends conferences and seminars to ensure that he keeps up to date with current industry developments.

- National Certificate in Commercial Horticulture, Kildalton, Co Kilkenny 1982
- Diploma in Horticulture from Royal Botanic Gardens Edinburgh 1987 –(D.H.E.)
- Technical Certificate in Arboriculture - Arboricultural Association 2003 - Tech Cert (ArborA)
- Profession Tree Inspection Certificate 2014

Professional membership

- Member of the Chartered Institute of Horticulture (MCIHort)
- Member of the Consulting Arborist Society
- Member of the Arboricultural Association (MArborA)
- Associate member of the Chartered Institute of Foresters

Bucks Plant Care Ltd

8th December 2022

www.bucksplantcare.co.uk

Mobile [REDACTED]

E-mail: [REDACTED]

