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BS5837 Tree Survey **& Arboricultural Impact Assessment**

Site:

Polhill Garden Centre
London Road
Badgers Mount
Halstead
Kent
TN14 7AD

Continued use of two storage containers and an open sided canopy for use as a home delivery service ancillary to the garden centre, removal of hardstanding and associated landscaping.

Sevenoaks Council

Prepared for:

Polhill Garden Centre
c/o Mr Josh Novell

Prepared by:

Sam Bateson . M.Arbor.A & ISA, Tech.Cert. (Arbor. A.)

29th February 2024 CTC/PH/AR v.1.0 (for planning submission)

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1) Terms of Reference

- 1.1 Final instructions were received from Mr Neal Thompson by email on 18th December 2023 on behalf of the Client (Polhill) with regards to the proposed planning application Continued use of two storage containers and an open sided canopy for use as a home delivery service ancillary to the garden centre, removal of hardstanding and associated landscaping. The tree survey included within this report was undertaken on 15.01.2024 during an unaccompanied site visit.
- 1.2 I have been instructed to undertake a tree survey and produce an Arboricultural Impact Assessment (AIA) in accordance with **British Standard BS5837: 2012 'Trees in relation to design, demolition and construction - Recommendations'** to evaluate the direct and indirect effects of the proposed design on the adjacent trees and identify issues to be addressed in a detailed Arboricultural Method Statement (AMS) and illustrated on a Tree Protection Plan (TPP).
- 1.3 Attendance at site meetings, arboricultural supervision or any subsequent amendments to the approved plans requiring changes to either the AIA, AMS or TPP or as a result of subsequent planning conditions will be in addition to the current assignment.
- 1.4 The following information and drawings have been supplied by Malcom Scott Architects to assist with the production of this report:
- Post refusal advice issued by Sevenoaks Council 03.01.2024
 - Proposed site plans Malcom Scott Architects MSC1646-11B
 - Topographical Survey MSC/942/MSCL/1999/1
- 1.5 Qualifications held by me include:
- Arboricultural Association Technicians Certificate
 - LANTRA Professional Tree Inspection

I have over 23 years of practical arboricultural experience at craft level, private consultancy and as a local authority Arboricultural Officer. I am a Member of the Arboricultural Association (M.Arbor.A.) and a Member of the International Society of Arboriculture.

Signed:



29th February 2024

2) Scope of Report and Limitations

- 2.1** The tree data gathered is for the purposes of a development site survey in accordance with BS5837:2012 and is **not** a detailed tree safety inspection. As general guidance it is recommended that regular tree safety inspections are carried out by a competent person to ensure that the owner / controller of the land fulfils their duty of care to persons who may reasonably be affected.
- 2.2** A preliminary visual assessment of each tree was carried out from ground level noting external faults and features only. All measurements are estimated and tree locations on the attached plans are approximate.
- 2.3** This preliminary assessment did not include a detailed examination of tree root systems, aerial access, or the use of internal decay detection equipment. A tree with internal faults will often display associated external evidence of such faults; these would be noted in a visual tree inspection. However, such signs are not always apparent at all times of the year for example fungal fruiting bodies or leaf size and condition. The survey findings and recommendations have been drawn from the evidence present on the day of inspection.
- 2.4** Only trees identified by the Client have been surveyed as per instructions received i.e. those within or immediately adjacent to the proposal which could be affected either directly (proximal to the area of construction) or indirectly (e.g. during the construction phase). It is recommended that the owners of any trees adjacent to the site have them inspected by a qualified and competent arboriculturist.
- 2.5** This report does not constitute an assessment of the presence or absence of invasive plant species (including Japanese Knotweed) or a preliminary ecological appraisal of the development site. Should a more comprehensive survey be required then full access arrangements should be made and a further specialist survey be conducted.
- 2.6** This survey expressly excludes any liability for any direct or indirect structural damage that the trees may cause to property including any structural movement, subsidence and heave. Where necessary, appropriate specialists e.g., structural engineer, building surveyor or drainage expert should be consulted for specific advice including foundation design and anti-heave precautions where trees are to be retained or removed in proximity to existing or proposed structures. No reliance shall be placed on any comment(s) made in respect of the structural integrity / foundation design of any built structure or drainage system located on the premises to which this survey and report relates.

- 2.7** The Local Planning Authority (Sevenoaks Council) must be consulted prior to any works being carried out to establish whether any Tree Preservation Orders (TPO's) or Conservation Areas apply to the site. Failure to obtain written permission may result in a substantial fine and criminal conviction. No works to any neighbouring trees should be undertaken without the agreement and express permission (in writing) of the owner.
- 2.8** Full consideration must be given to current legislation by anyone proposing to carry out works to trees, particularly with regards to the presence of European Protected Species (including bats). Arboricultural ('tree surgery') contractors should be adequately trained, experienced and carry adequate insurance. All works should be carried out to the current edition of British Standard BS3998 'Recommendations for Tree Work', 2010.
- 2.9** This report supersedes all previous versions and should be considered valid for a period of **12 months** from date of original issue assuming that any recommendations are carried out. Additional inspection is recommended following exposure to extreme weather, significant wounding or damage (e.g. incursion into the rooting zone, impacts, etc.) or any other event giving cause for concern.
- 2.10** The information contained within this document is provided without prejudice and is based upon the author's knowledge, experience, qualifications and published research. The author cannot be held responsible for the consequences of a difference of opinion held by third parties, for example the Local Planning Authority or Planning Inspectorate.
- 2.11** **Third Party Disclaimer:** Any disclosure of this report to a third party is subject to this disclaimer. The report was prepared by Chartwell Tree Consultants Ltd at the instruction of, and for the sole use by Neal Thompson, GreenLink Ecology Ltd, Malcomb Scott the Client and the Local Planning Authority. This report does not in any way constitute advice to any third party who is able to access it by any means.

3) Arboricultural Impact Assessment (AIA)

3.1 General Description of the Site and Surroundings

The Northeast corner section of Polhill Garden Centre which was converted from scrub ground to hard surfacing, additional fencing and storage containers in 2020/21 for the use of a home delivery service during the COVID lockdown. The area is surrounded by mature trees and woodland. The woodland to the North is listed as Ancient Semi-Natural Woodland.

3.2 Planning History

A retrospective planning application (23/02285/FUL) was refused on the 13th October 2023. One of the reasons for refusal was in regards to the surrounding trees and woodland:

- The applicant has failed to demonstrate that the development would not result in the loss or deterioration of the adjacent Ancient Woodland. Wholly exceptional reasons and a suitable compensation strategy also have not been demonstrated. The proposal would therefore fail to comply with policy SP11 of the Sevenoaks Core Strategy and the National Planning Policy Framework.

3.3 Description of the Proposed Development

Continued use of two storage containers and an open sided canopy for use as a home delivery service ancillary to the garden centre, removal of hardstanding and associated landscaping.

3.4 Legal Constraints

The woodland to the North is an Ancient Semi-Natural Woodland which generally requires a minimum buffer zone of 15m from any proposed development. Preliminary investigations show the site is not within a Conservation Area and there are no Tree Preservation Orders (Sevenoaks Council website search 26.02.2024). In this case Kent County Council has provisionally agreed a 10m buffer zone.

3.5 Impact of the Proposed Development on the Amenity Value of the Trees

3.5.1 Direct Loss of Trees / Shrubs

No trees require removal to facilitate the continued usage at this stage.

3.5.2 Indirect Loss of Trees / Shrubs

Tree Reference	Species	BS5837 Retention Category	Comments
T10	Ash	U	Moderate deadwood. Hymenoscyphus fraxineus - Ash Dieback.

Removal of the Category 'U' trees (in such condition that it could not realistically be retained in the current context for more than 10 years – BS5837) would be justified as a matter of good arboricultural practice regardless of whether or not the development is undertaken.

The proposed tree removals can be mitigated by the planting of new native and non-native trees and shrubs with an appropriate size and stature (can be subject to a detailed planning condition) that will result in no net loss of canopy cover, provide biodiversity gain in the future and to ensure that there is no overall loss of wider amenity upon completion of the development.

Ash Dieback Disease (*Hymenoscyphus fraxineus*) has become established amongst the native Ash population and the most susceptible trees can rapidly deteriorate in condition. If affected trees are situated in high footfall areas or roadside margins, this can create health and safety risks to the public and to forestry operators (Forestry Commission 'Managing Ash Dieback in England' –

https://www.forestresearch.gov.uk/documents/7277/7894_New_FC_Chalara_leaflet_dft9.pdf

Container grown, native species should be sourced (Majestic Trees, Hilliers, Barchams for example) so that the rooting system is kept complete which aids establishment. Heavy standard trees with a girth of 12-14cm, 2-3m in height should be sourced as these will offer an immediate visual impact for the site. The above nurseries will offer a delivery, planting and care package service which is advisable.

Recommended species

Oak	Field Maple	Yew	Hornbeam
Beech	Hawthorn	Holly	Alder
Wild Service Tree	Scot's Pine	Sorbus	Silver Birch

3.5.3 Retained Trees

Providing that adequate tree protection is implemented, the amenity value of the trees on the site will be preserved. Retained trees will be protected from soil compaction and impact damage where necessary by protective barriers and / or systems and methods of ground protection. Protective barriers will be fit for purpose, complying with BS5837: 2012 unless otherwise agreed with the Local Planning Authority (LPA). Such alternatives may include the use of temporary buildings or existing hard surfaces as part of tree protection or alternative fencing specification for areas of lower risk e.g. areas for future planting.

Overall, retained trees are to be subject to the removal of the recent asphalt installation along with soil improvement measures, where necessary by protective barriers and additional ground protection which will be fit for purpose, complying with BS5837: 2012 unless otherwise agreed with the LPA / Tree Officer. A Tree Protection Plan (TPP) is included in section 4 of this report; compliance with detailed tree protection measures can readily be achieved through the use of conditions attached to any subsequent grant of planning consent.



Photos 1 & 2: Trees and woodland surrounding proposed site, existing hard surfacing to be lifted using hand tools only – AMS provided.

3.6 Above and Below Ground Constraints

3.6.1 Given the relative uniformity of the ground conditions, it is reasonable to assume that the majority of retained trees have *circular, unobstructed* Root Protection Areas (RPA's). Based on these assumptions, the previous installation of the hard surfacing has involved the following RPA incursions:

Tree # & Species	Reason	Approx. RPA Incursion % of Total	Estimated Impact	Mitigation
T1 & T9 Oak & Ash	Recent hard surfacing and fencing installation	40% ¹	Moderate	Removal of hard surfacing – relocation of fencing. Decompaction and soil improvement works. Arboricultural supervision and provision of Arboricultural Method Statement recommended. General precautions / tree protection fencing / temporary ground protection.
T5, T6, T7 & T8 Oak	Recent hard surfacing and fencing installation	30% ¹	Moderate	Removal of hard surfacing – relocation of fencing. Decompaction and soil improvement works. Arboricultural supervision and provision of Arboricultural Method Statement recommended. General precautions / tree protection fencing / temporary ground protection.
T2 & T4 Oak	Recent hard surfacing and fencing installation	10% ¹	Low	Removal of hard surfacing – relocation of fencing. Decompaction and soil improvement works. Arboricultural supervision and provision of Arboricultural Method Statement recommended. General precautions / tree protection fencing / temporary ground protection.

Table 1: Root Protection Area Historical Incursions

¹ The impact of this incursion is to be mitigated by the removal of the asphalt to create a 10m buffer zone along with soil decompaction, amelioration and replacement planting – please see specific details in the AMS attached.

The storage containers are not within the Root Protection Areas of the trees to be retained or the 15m Buffer zone of the Ancient Semi-Natural Woodland.

3.6.2 It is my professional opinion that the proposed continued usage will not result in the significant loss of rooting area and will not result in any significant root damage. This is based upon:

- Arboricultural supervision.
- Existing site topography will avoid the need for significant ground level changes within any RPA's.
- Supervised excavation and removal of the existing asphalt and fencing using hand tools or closely supervised small plant operating on temporary ground protection.
- Precautions (e.g. manual excavation) and site supervision to ensure that any roots encountered are dealt with appropriately. Roots over 2.5cm diameter are only to be severed after consultation with an arboriculturist.
- The design of any roofs should incorporate high-performance materials with a general ability to resist issues associated with lightweight tree debris. Issues arising from leaf and seed fall can reasonably be expected to be dealt with through periodic cleaning and maintenance or the use of proprietary gutter guard products. Overall, the future growth and maintenance requirements of the retained trees can be reasonably managed through occasional crown lifting and light lateral pruning and should not result in concerns over dominance or 'post-development tree resentment'.
- Shading areas are not a constraint to the proposal as it is not intended for residential purposes.
- Tree protection fencing during the duration of the development.
- Sufficient distances (in accordance with BS5837: 2012 Table A1) should be allowed between young trees / new planting and built structures to minimize the impact of future growth.
- It is important that the foundation design of the new buildings gives consideration where relevant to the underlying soil type, retained and removed trees (heave potential) and new planting. Further information can be obtained from NHBC Chapter 4.2 'Building Near Trees'.

3.6.3 The British Geological Survey Map Sheet 271 (Solid & Drift Edition) indicates the bedrock geology to be Lewes Nodular Chalk with superficial deposits of Clay with Flints. Although soils derived from this material are generally considered to have a higher volume change potential, due to the approximate nature of the geological mapping it is recommended that further site investigation is undertaken and specialist engineering advice obtained regarding foundations /

new surfacing design including whether special engineering methods and / or anti-heave precautions are required.

Clay soils are more susceptible to compaction and / or waterlogging which may adversely affect the distribution and functioning of tree and shrub roots. Care must still be taken to ensure that any construction activity does not result in damage occurring within the RPA's of any retained trees.

3.6.3 Issues arising from leaf and seed fall can reasonably be expected to be dealt with through periodic cleaning and maintenance or the use of proprietary gutter guard products. The distance of the trees from the containers is sufficient to not result in concerns over dominance or 'post-development tree resentment'.

3.6.4 The design of any new planting and landscape proposals should be based upon a soil analysis which considers the pH and any nutrient deficiencies or imbalances and accords with the distances set out in NHBC Chapter 4.2 and BS5837: 2012, Table A.1 to minimize the impact of future growth.

3.7 Construction of the Proposed Development

3.7.1 Demolition

Not required for this proposal.

3.7.2 Special Engineering Methods

Not required for this proposal.

3.7.3 Ground Level Changes

No significant ground level changes within the RPA's of any retained tree are anticipated as part of the site redesign.

3.7.4 Changes to Surfacing within the RPA and within 10m of Retained Trees

The impact of this previous incursion is to be mitigated by the removal of the asphalt to create a 10m buffer zone along with soil decompaction and amelioration and replacement planting – please see specific details in the AMS attached. Any subsequent changes to hard surfacing to the rear within any retained tree RPA as part of the Landscaping Scheme should be based upon further advice from the Project Arboriculturist.

3.7.5 Planning of Construction Operations

The proposed design layout makes allowance for the following:

- Phased work program with space for construction and landscaping operations
- Space for delivery, storage and removal of materials, welfare facilities and contractors' car parking
- A low intensity, low impact build programme.

3.7.6 End Use of Space

The proposed layout offers a reasonable degree of space for the intended use of the site. The retained trees should not result in any significant conflicts with the updated use of the site and so will avoid post development pressure to remove trees as well as providing adequate space for new tree planting.

3.7.7 Mitigation

A large amount of space is available for the planting of new trees and shrubs as part of a general landscaping scheme. Any landscape proposals should make particular reference to:

- Promoting the concept of biodiversity net gain and ensuring that there is no net loss of trees as part of the development
- The inclusion of native trees and shrubs where possible within a new scheme of landscaping using semi-mature tree stock where possible
- Provision for recovering any other areas that may have suffered (e.g., historical compaction, poor-quality soil or following construction operations).

3.7.8 Conclusions

- The expected pattern of use and occupation of the property should not result in any significant conflicts (dominance or shading) between the retained trees and built structures and avoid a situation of *'post-development tree resentment'*.
- Occasional light pruning will not be required.
- Compliance with an Arboricultural Method Statement and Tree Protection Plan, if conditioned as part of any subsequent grant of consent, should ensure there are no adverse effects on the overall health of the retained trees or their amenity value as the result of any site clearance, excavation or construction operations to support the role of productive landscapes by protecting trees and improving the qualities of habitats

Arboricultural Method Statement

An Arboricultural Method Statement (AMS) will be required where any construction operations, including access, are proposed within or adjacent to the RPA's and buffer zone of any retained trees. This applies to trees within the scope of this proposed development.

The intention of the method statement is to minimise the risk of any adverse impact on the trees to be retained (especially damage caused by excavation and soil compaction) and to clearly demonstrate how relevant operations will be undertaken. It should also specify appropriate tree and ground protection measures in accordance with BS5837:2012 which will be detailed on the Tree Protection Plan (TPP).

The following AMS is to be read in conjunction with the TPP.

4.1 Site Information

4.1.1 Site Address

Polhill Garden Centre
London Road
Badgers Mount
Halstead
Kent
TN14 7AD

4.1.2 Planning Information

Continued use of two storage containers and an open sided canopy for use as a home delivery service ancillary to the garden centre, removal of hardstanding and associated landscaping.

	Name	Contact Details
Client	Josh Novell	Polhill Garden Centre London Road Badgers Mount Halstead Kent TN14 7AD joshn@polhillcentre.co.uk
Architect	Malcom Scott Consultants	alexandragh@malcomscott.co.uk
Site Agent / Manager / Building Contractor	To be appointed	-

Local Planning Authority (LPA)	Sevenoaks Council	Council Offices Argyle Road Sevenoaks Kent TN13 1HG 01732 227000
Principal Planning Officer	Mr Richard Morris	Tel: 01732 227000
Principal Tree Officer	Mr Les Jones	Tel: 01732 227000
Biodiversity Officer Kent County Council	Emma England	Tel: 03000 419496 emma.england@kent.gov.uk

4.2 Introduction to be read in conjunction with the Tree Protection Plan (TPP)

4.2.1 Overview

This document outlines the methodology to be followed for any operation that may result in the loss or damage to trees in or adjacent to Polhill during the excavation and construction works (including the garden outbuilding) and associated landscaping works, in particular:

- How the retained trees will be protected
- How works close to the trees will be carried out
- Responsibilities, supervision and emergency procedures

Copies of this document should be made available on site for consultation by anyone carrying out operations in proximity to the tree. Reference will be made throughout to **BS5837:2012 ‘Trees in relation to design, demolition and construction - Recommendations’**.

4.2.2 Legal Considerations

The woodland to the North is an Ancient Semi-Natural Woodland which generally requires a minimum buffer zone of 15m from any proposed development. Preliminary investigations show the site is not within a Conservation Area and there are no Tree Preservation Orders (Sevenoaks Council website search 26.02.2024). In this case Kent County Council has provisionally agreed a 10m buffer zone.

No works should be carried out to any tree without first confirming with the LPA whether they are subject to any form of protection and that all relevant consents have been granted. **Unauthorised works to protected trees (including their roots), including those protected by a Tree Preservation Order or Conservation Area may result in a criminal conviction and substantial fine.**

4.2.3 Significance of Planning Conditions

The grant of any planning permission relating to this development may be subject to conditions specifically relating to tree protection measures. This may include the approval of and compliance with the tree protection measures detailed within this Arboricultural Method Statement and the accompanying Tree Protection Plan.

Any breaches of these or other conditions may result in the LPA carrying out an investigation of that breach. The Client / developer will be advised to adhere to the requirements of the planning condition(s) and if the breach continues to take place the LPA can use various planning enforcement tools such as a Temporary Stop Notice, Enforcement / Stop Notice or a Breach of Condition Notice.

4.2.4 Notifying the Local Planning Authority

It is the responsibility of the Client or their appointed Site Agent / Manager to ensure that appropriate notice as required by the LPA is given prior to the commencement of works.

4.2.5 Pre-Commencement Site Meeting

A pre-commencement site meeting is recommended and should be arranged by the Client or their appointed Site Agent / Manager including the main contractor and Project Arboriculturist (with the LA Tree Officer invited to attend) to discuss issues of tree protection and appropriate precautions to avoid damage to rooting systems.

4.3 Pre-Construction Schedule of Works to Trees

4.3.1 Trees to be Retained

No works required.

4.3.2 Trees to be Removed

Tree #	Species	Location	Pre-Development Tree Work
T10	Ash	In between security fencing	Remove

Note: It is presumed that approval of the Arboricultural Method Statement will represent deemed consent by the Local Planning Authority for all the listed pre-construction tree works without further reference to the Local Planning Authority.

4.3.3 Conditions Regarding Tree Work

Tree work is a potentially hazardous activity; anyone carrying out these operations must be appropriately trained, experienced and carry appropriate insurance. All works will be carried out in accordance with BS3998: 2010 'Recommendations for Tree Work' or current industry best practice. In particular:

- Full consideration must be given to all relevant legislation including the Health and Safety at Work Act 1974, the Management of Health and Safety at Work Regulations 1999, the Wildlife and Countryside Act 1981 (as amended), The Countryside and Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2017 (as amended) regarding European Protected Species such as bats.
- Tree works should be timed, where possible, to avoid the bird nesting season (March to September)
- Contractors to comply with the Work at Height Regulations 2005 particularly when making an assessment of a tree's condition before undertaking climbing operations
- Contractors to confirm protected status of any trees and obtain necessary permissions before work starts

4.4 Tree protection

4.4.1 Protective Fencing Specification (as indicated on the Tree Protection Plan)

In this instance the inner security fencing is to be relocated once the asphalt has been removed. Temporary tree protection notices to be added during soil amelioration and soft landscaping operations.

Tree protection fencing is not required for this site.

4.4.2 Ground Protection and Temporary Access

Not applicable

4.5 Development Operations

4.5.1 The nature of the development and restricted space should result in a low intensity build environment as overseen by the Site Agent / Manager. Details (subject to confirmation) include:

Site Access	Site access via secure rear access to the garden centre. Plant movements, deliveries and high sided vehicles to be overseen by banksman.
Build Sequence / Arboricultural Supervision & Monitoring	<ul style="list-style-type: none"> • Pre-commencement site meeting # • Repositioning of inner security fencing # • Removal of asphalt (see below method) # • Decompaction and soil improvement works • Soft landscaping operations <p style="text-align: center;"># Indicates Arboricultural Involvement / Supervision / Monitoring Recommended</p>
Service Installation including drainage	Not applicable
Contractors Car Parking	Sufficient space is available for contractor off street parking
Deliveries / Storage	No materials to be stored / no concrete mixed / re-fuelling within CEZ. Appropriate precautions in place e.g., fully banded trays / impermeable membranes to prevent contaminants reaching any RPA when handling or mixing on any slope
Site Huts / Welfare Facilities	As Contractors Parking

4.5.2 Removal of Existing Hard Surfaces

Any existing hard surfacing within an RPA should be retained for as long as practicable to provide temporary ground protection during the repositioning of the fence.

When these areas have to be removed, the surfaces must be carefully lifted using either using hand tools or plant (under supervision) working from the remaining hard surfacing. **Care must be taken to avoid damage to roots that may be present beneath the surface.**

Suggested Method: (further information available in section 7.4 of BS5837:2012, APN 12).

- Existing hard surfacing to be carefully removed using hand-held tools or appropriate machinery working backwards over the area so that the machinery is not working on the exposed ground.

- Any roots encountered should be treated in accordance with section 7.2 of BS5837:2012. In particular roots greater than 25mm in diameter should only be severed following consultation with an arboriculturist and the LPA. Exposed roots should be immediately wrapped or covered to avoid desiccation. (NO TRENCHING, HEAVY EXCAVATION OR TRACKING OVER THE UNMADE GROUND PERMITTED).
- Any new post holes or hard landscape foundations within the RPA should be carefully excavated using hand tools and should be positioned to avoid any damage to roots. Any roots encountered <25mm in diameter should be cleanly severed and treated in accordance with BS5837:2012 section 7.2. Roots >25mm should only be severed following advice from Chartwell Tree Consultants.
- Any in-situ poured concrete (e.g. new retaining walls / steps/ fencing) in close proximity to any retained trees must be separated from the existing soil by heavy duty impermeable membrane to prevent the potentially damaging effects on the rooting area.
- Landscaping operations should be carried out in accordance with BS4428:1989.
- No mixing or runoff is allowed within the CEZ.

4.5.3 New Drainage

Not applicable

4.5.4 Soil Improvement Measures

1) Air Tilling

- Due to the nature of the soil (Clay with Flints) air tilling is to be used to decompact the soil and incorporate new organic topsoil on the site.
- Areas to be air tilled shown in **BLUE** on the Soil Improvement Plan.
- An air-spade is to be used in circular patterns to move the soil in situ (so never exposing the roots for too long) down to around 20cm deep. PAS100 compost, imported soil meeting BS3882:2007 'Multipurpose' classification standards and beneficial Mycorrhizal fungi to be added to the soil during this process.
- Proprietary products such as Biochar, Zeolites and fertilisers can be added at this time – subject to contractor's specifications.

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2) Root Collar Mulching

- Areas to be mulched shown in **ORANGE** on the Tree Protection Plan.
- Composted wood chip to be applied to a depth of 100mm to a radius of 2m from the root collar of the newly planted trees (taking care not to bury the root collar) so as to prevent soil desiccation and aide tree establishment.

3) Irrigation

- Once the above has been completed the RPA's are to be irrigated every fortnight during dry periods. The soil should be kept moist to a depth of 15cm and avoid waterlogging. The areas to be irrigated if there has been no rain for a period of two weeks.

4.5.5 **Soft Landscaping** (Please refer to separate Landscape Scheme for planting details)

Site Preparation:

- All ground preparation and planting operations adjacent to existing retained trees, shrubs and hedges to be undertaken using hand tools only. No chemicals of any description are to be used
- Any changes in soil level +/- 300mm to be made using imported soil meeting BS3882:2007 'Multipurpose' classification standards
- Shrub planting areas are to be graded to be approximately 50mm below any adjacent surfaces prior to planting and mulching. Remaining landscape areas to be graded flush with existing/finished levels
- Landscaping operations should be carried out in accordance with the following British Standards:
 - BS4428:1989 'Code of practice for general landscape operations'
 - BS8545:2014 'Trees: from nursery to independence in the landscape – Recommendations'
 - BS5837:2012, 'Trees in relation to design, demolition and construction – Recommendations'
 - BS3996 'Nursery Stock' (all parts) and BS7370-4 'Recommendations for maintenance of soft landscape (other than turf)'
 - Reference to NHBC Chapter 4.2 Tables 4-6 for planting distances in relation to new foundation depths

Shrub Planting:

- All planting to be handled, stored, transported and planting in accordance with BS8545:2014 Trees: from nursery to independence in the landscape Recommendations
- All planting to be watered thoroughly (field capacity) prior to planting.
- Topsoil to all shrub planting areas to be improved with 50mm depth composted green waste to BSI PAS 100
- Planting holes / trenches to be cultivated to a minimum of 300mm depth incorporating composted soil improver (detailed above) and slow-release fertilizer to manufacturer's recommended rates

Tree Planting

- At time of planting compost and slow-release fertilizer to be incorporated into backfill material at manufacturer's recommended rates
- Trees to be double staked with crossbar using 75mm diameter x 1.65m tree stakes. Stakes to extend no more than 900mm above ground level. Tree to be tied to stakes using 75mm rubber tie and spacer block

Mulch, Weed Control and Watering

- All planting areas (shrub and hedge) to be mulched with medium grade bark mulch laid to depth of 75mm
- Areas of new planting to be hand weeded
- Shrubs to be watered as appropriate to ensure that the soil remains moist during the growing season (March-November)

4.5.6 Aftercare

Adequate soil moisture levels should be maintained around all new tree planting. Regular watering should be undertaken to ensure that the soil remains moist particularly during periods of hot weather and / or low rainfall (e.g. the application of 20L to 30L every 2 weeks during the Spring and Summer) and mulch reapplied as required. Trees should be inspected upon completion of the development and any post development works specified to BS3998:2010. Additional watering of the established trees is not considered necessary although water should be available to flush through any contamination.

4.5.7 Prohibited Activities / General Precautions

- All construction access via the secure rear access
- Tree protection fencing to be secured to prevent unauthorised access or movement
- No storage of materials (including excavated material) or mixing of concrete / mortar within the CEZ
- Any materials whose discharge may cause damage to a tree (concrete mixings, diesel, vehicle washings, etc.) must be handled well away from the outer edge of any RPA
- Consideration must be given to any slopes that may affect any run-off towards trees
- No fires to be lit on site
- Traffic Marshal ('Banksman') to oversee movements of high-sided vehicles, grab lorries, unloading, etc. in proximity to any trees on or adjacent to the site

4.5.8 Responsibilities

- Unless otherwise agreed in writing, it will be the responsibility of the Client or their appointed Site Agent / Manager to ensure that the content of this AMS is adhered to
- the Client or their appointed Site Agent / Manager to arrange the pre-commencement site meeting (section 4.2.5, above)
- The main contractor and any sub-contractors are to be briefed on the relevant sections of this prior to commencing any works particularly with regards to the Prohibited Activities. Copies of general information regarding the prevention of damage to trees are included in Appendix 4 to assist with the site induction
- The Client or their appointed Site Agent / Manager are responsible for contacting the LPA / arboriculturist at any time issues relating to the trees on site are raised or when specialist arboricultural advice is needed

4.5.9 Supervision & Emergency Procedures

- Day-to-day supervision will be the responsibility of the appointed Site Agent / Manager including checks on tree protection fencing
- Supervision and monitoring by the Project Arboriculturist at key stages of the development (as indicated at section 4.5.1, above) to be coordinated by the Client or their appointed Site Agent / Manager. An example of the Site Supervision / Site Visit Record template is included at Appendix 2
- Water to be readily available on site and to be used to flush spilt materials through the soil to minimise tree root contamination. Spill kits to be available at all times
- The Project Arboriculturist to be contacted for advice immediately following any unauthorised incursion / spillages within the RPA
- Copy of the approved Arboricultural Method Statement to be available on site at all times

CAUTION

PROTECTED TREES

NO ACCESS TO CONSTRUCTION SITE FROM THIS POINT OR STORAGE / MIXING OF MATERIALS IN THIS AREA.

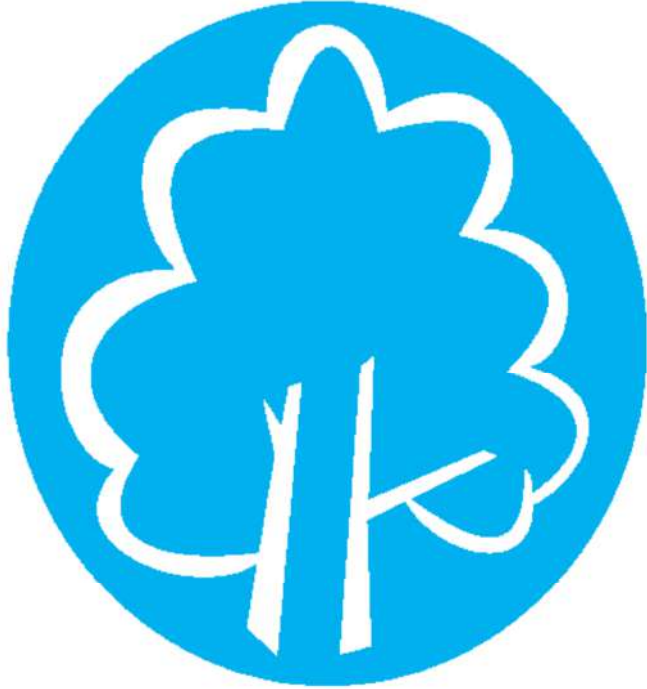
Tree Protective barriers are essential to protect tree roots from soil compaction, contamination, poisoning, etc.

Tree Protective Barriers **MUST NOT BE REMOVED or REPOSITIONED** unless permitted to do so by the Local Planning Authority (LPA).

The barriers **MUST** remain in place until completion of the development or such earlier time as agreed by the LPA.

PROSECUTION may result from a failure to adhere to these instructions.

The Tree Officer (Sevenoaks Council) can be contacted on
01732 227000.



**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



**TREE PROTECTION AREA
KEEP OUT !**

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

**ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL
PLANNING AUTHORITY**

Appendix 2 – Site Supervision / Site Visit Record

Arboricultural Consultant's Development Site Monitoring Form

Arboricultural Consultant's Details:	
Company name/address	
Consultant's name	
tel:	
fax:	
mob:	
Development site address:	Local Planning Authority (LPA):
LPA Case Officer:	LPA Tree Officer:
Developer's details:	
Company name/address	
Developer's name	
tel:	
fax:	
mob:	

Stage of

development (√): **Pre-development works** **Development works** **Post-development works**

- | | | |
|--------------------------------------------------|-----------------------------------------------|------------------------------------------------------------|
| Tree works <input type="checkbox"/> | Demolition <input type="checkbox"/> | Rectifying tree damage/pruning <input type="checkbox"/> |
| Protective fencing/tape <input type="checkbox"/> | Grading/muck away <input type="checkbox"/> | Hard landscaping/walls/drives <input type="checkbox"/> |
| Fencing signage <input type="checkbox"/> | Placing portacabin <input type="checkbox"/> | Removal of protective fencing etc <input type="checkbox"/> |
| Ground protection <input type="checkbox"/> | Excavations/services <input type="checkbox"/> | Soft landscaping <input type="checkbox"/> |
| Temporary haul road <input type="checkbox"/> | Construction works <input type="checkbox"/> | Special surfacing <input type="checkbox"/> |
| | | Tree planting <input type="checkbox"/> |

Findings:	
Action taken:	
Further action required/recommendations:	
Comments:	
Date of site visit:	Date of next site visit:

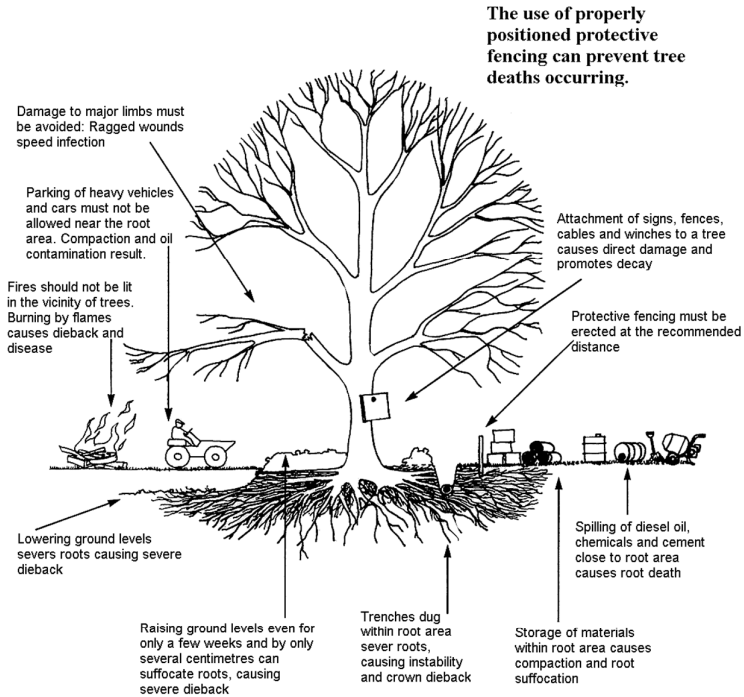
Date sent to Local Planning Authority Case Officer _____

Appendix 3 – Reference Material

- Arboricultural Association Guidance Note 14 ‘ The use of Cellular Confinement Systems Near Trees’ 2020
- British Standard 3936:1989 onwards ‘Nursery Stock’ (all parts)
- British Standard 3998:2010 ‘Recommendations for Tree Work’
- British Standard 4428:1989 ‘Code of Practice for General Landscape Operations (excluding hard surfaces)’
- British Standard 5837:2012 ‘Trees in relation to design, demolition and construction - Recommendations’
- British Standard 8545:2014 ‘Trees from nursery to independence in the landscape - Recommendations’
- DCLG Planning Practice Guidance –Tree Preservation Orders and trees in conservation areas
- NHBC Chapter 4.2 ‘Building Near Trees’ 2022
- National Joint Utilities Group NJUG Volume 4 ‘Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees (Issue 2)’ 2007
- Countryside and Rights of Way Act 2000
- Conservation of Habitats and Species Regulations 2017
- Health and Safety at Work Act 1974
- Management of Health and Safety at Work Regulations 1999
- The Town & Country Planning Act 1990, The Town and Country Planning (Trees)(England) Regulations 2012, The Planning (Listed Buildings & Conservation Areas) Act 1990
- Wildlife and Countryside Act 1981
- Construction (Design & Management) Regulations 2015

Appendix 4 – Key Messages for Site Induction (courtesy of Chris Skellern)

Common causes of Tree Death



Please use copies of this as an on-site poster for personnel



Construction and Trees



Why Is Fencing Erected Around Trees?

1. The major cause of damage to trees on construction sites is due to **soil compaction**.
2. Roots use the spaces between soil particles to obtain Oxygen, Water and Nutrients.
3. Heavy plant and machinery compresses (compacts) the soil, squashing out the air spaces and preventing root function.
4. A compacted soil structure will stay compacted.
5. Consequently the tree suffers and will show signs of branch die-back.
6. Symptoms such as die-back may take several years to appear.
7. Soil compaction over roots can be prevented by maintaining a fenced exclusion zone over the tree roots.
8. The exclusion zone distance is calculated using British Standard 5837.
9. Protective Fencing is installed at the calculated distance.
10. Protective Fencing is a condition of planning approval, if it is removed or repositioned the construction firm is in breach of a condition and may be subjected to legal action.

TREE SURVEY SCHEDULE

Client: Polhill Garden Centre
 Site: Polhill Garden Centre
 Date of Survey: 15.01.2024
 Arboricultural Consultant / Surveyor: S Bateson
 Weather: Clear
 Tagged: No

Notes:
 See attached KEY

Tree ID #	Species	Height (m)	Branch spread (m)				Diameter at breast height (mm)	Root Protection Area Radius (m)	Root Protection Area (m ²)	Age class	Physiological Condition	Structural Condition	Preliminary Management Recommendations	Remaining Contribution (Years)	Category Grading
			N	S	E	W									
T1	Quercus robur (Common Oak)	17	7	7	6	6	750,350,350,350	11.57	420.6	M	Good	No significant defects visible. Multiple stems at ground level. Co-dominant stems. Minor deadwood <2.5cm. Previously canopy raised with large pruning wounds.	No works required.	20+	A
T2	Quercus robur (Common Oak)	13	2	2	2	2	350	4.2	55.42	EM	Good	No significant defects visible. Moderate deadwood. Previously canopy raised with large pruning wounds.	No works required.	20+	A
T3	Fagus sylvatica (Beech)	21	7	7	7	7	400	4.8	72.4	EM	Good	No significant defects visible. Co-dominant stems. Included bark present in fork. Previously canopy raised with large pruning wounds.	No works required.	20+	A
T4	Quercus robur (Common Oak)	16	4	2	3	2	350	4.2	55.4	EM	Good	No significant defects visible. Moderate deadwood. Previously canopy raised with large pruning wounds.	No works required.	20+	A
T5	Quercus robur (Common Oak)	17	2	4	4	2	300,400	6	113	EM	Good	No significant defects visible. Moderate deadwood. Previously canopy raised with large pruning wounds.	No works required.	20+	A
T6	Quercus robur (Common Oak)	19	6	5	5	3	450	5.4	91.6	EM	Good	No significant defects visible. Minor deadwood <2.5cm. Previously canopy raised with large pruning wounds.	No works required.	20+	A
T7	Quercus robur (Common Oak)	19	6	4	5	5	500	6	113.1	EM	Good	No significant defects visible. Minor deadwood <2.5cm. Previously canopy raised with large pruning wounds.	No works required.	20+	A
T8	Quercus robur (Common Oak)	19	5	3	2	5	350	4.2	55.4	EM	Good	No significant defects visible. Minor deadwood <2.5cm. Previously canopy raised with large pruning wounds.	No works required.	20+	A
T9	Fraxinus excelsior (Ash)	21	6	4	6	6	350,350	5.94	110.9	EM	Good	No significant defects visible. Minor deadwood <2.5cm. Previously canopy raised with large pruning wounds. Early onset of Hymenoscyphus fraxineus - Ash Dieback.	Re-inspect in September 2024.	10+	C

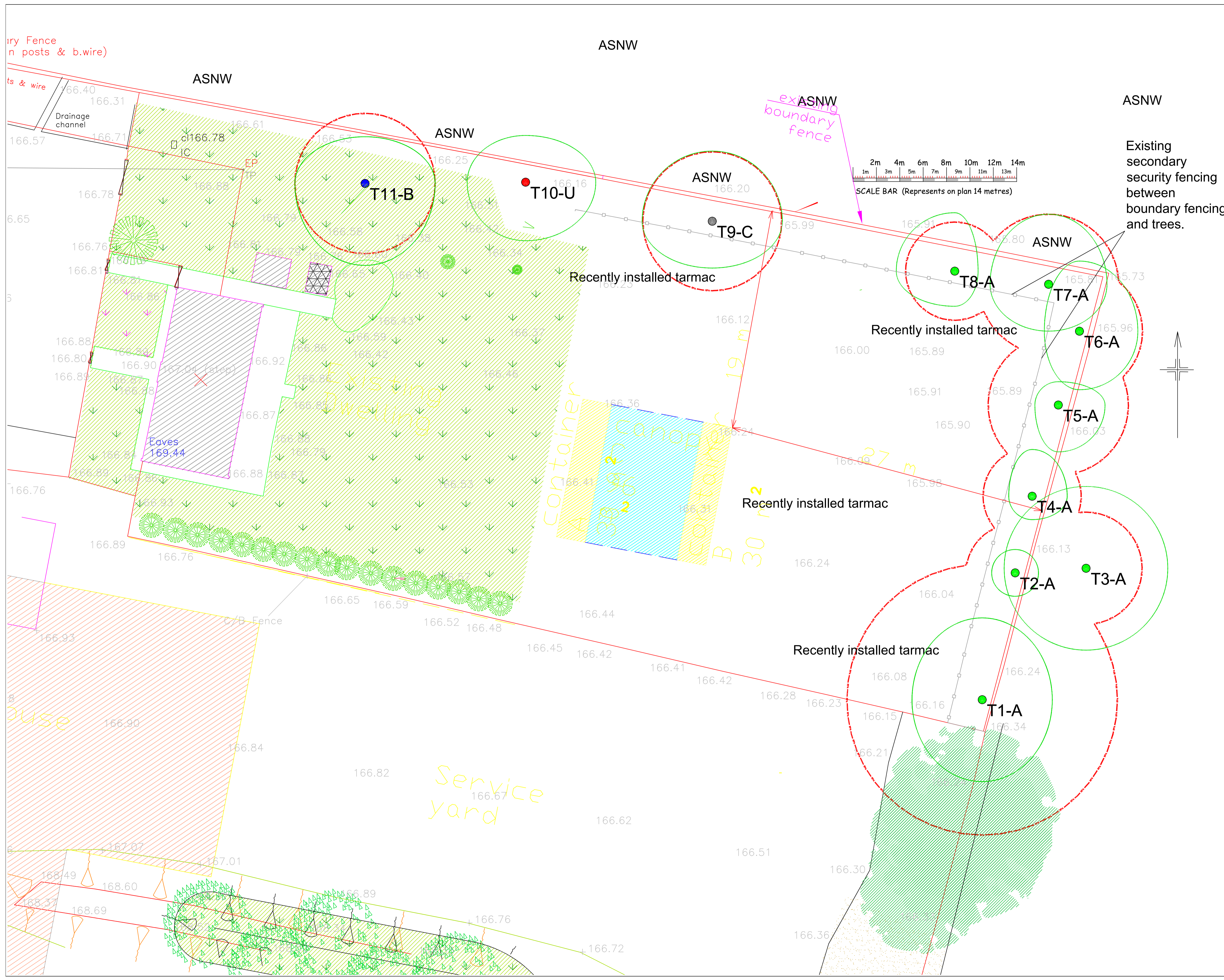
TREE SURVEY SCHEDULE

Client: Polhill Garden Centre
 Site: Polhill Garden Centre
 Date of Survey: 15.01.2024
 Arboricultural Consultant / Surveyor: S Bateson
 Weather: Clear
 Tagged: No

Notes:
 See attached KEY

Tree ID #	Species	Height (m)	Branch spread (m)				Diameter at breast height (mm)	Root Protection Area Radius (m)	Root Protection Area (m ²)	Age class	Physiological Condition	Structural Condition	Preliminary Management Recommendations	Remaining Contribution (Years)	Category Grading
			N	S	E	W									
T10	Fraxinus excelsior (Ash)	16	4	5	6	5	250,250,200	4.87	74.5	EM	Good	Multiple stems at ground level. Co-dominant stems. Hymenoscyphus fraxineus - Ash Dieback.	Removal recommended as soon as reasonably practical - not required to facilitate the proposal.	<10	U
T11	Cedrus libani (Cedar of Lebanon)	19	4	7	6	6	500	6	113.1	EM	Good	No significant defects visible. Previously canopy raised with large pruning wounds.	No works required.	20+	B

Notes:
Do not scale from this drawing
All dimensions to be checked on site



TREE SURVEY & CONSTRAINTS PLAN

- T1 Tree Number
- A Category (Green dot)
- B Category (Blue dot)
- C Category (Grey dot)
- U Category (Red dot)
- Root protection area (Red dashed circle)
- Branch spread (Green dashed circle)
- Shade arc - not applicable for this site (Orange arc)
- Boundary fencing (Red solid line)
- Recently installed secondary fencing (not to scale) (Grey dashed line)

Title **Tree Survey & Constraints Plan**

Job **Polhill Garden**

Scale **1:150 @ A1**

Date **27.02.2024**

Drn **SB**

Dwg No **001**



Chartwell Tree Consultants Ltd
2 Greencroft Cottage
Farley Lane
Westerham
Kent
TN16 1UB

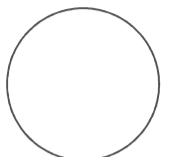

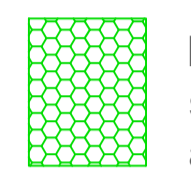
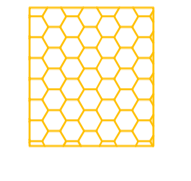
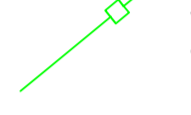
Tel: 07789 907861
sam@chartwelltreeconsultants.co.uk

Notes:
Do not scale from this drawing
All dimensions to be checked on site

dry Fence
on posts & b.wire



TREE PROTECTION PLAN

-  Tree to be retained
-  Tree to be removed
-  Decompaction and soil amelioration area
-  New trees to be mulched
-  Security fencing to be repositioned

The approved TPP shall be provided to the foreman prior to commencement of the development and ALL contractors to be made aware of tree protection measures.

Title **Tree Protection Plan**

Job **Polhill Garden**

Scale **1:150 @ A1**

Date **29.02.2024**

Drn **SB**

Dwg No **002**



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