



MARK WELBY
CONSULTING ARBORISTS

Arboricultural Method Statement

124 Nightingale Road, Reading, RG5 3LZ

Reference: 124 Nightingale Road, Reading, RG5 3LZ

Client: Mr Jose Nihil

Date: 31 May 2023



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1. Instructions and Terms of Reference

1.1. In March 2023, I was instructed by Mr Jose Nihil to undertake a tree survey and subsequently, in May, to produce this report to address Wokingham Borough Council's planning consent ref 230531, condition 6:

6. Protection of trees etc

a) No development or other operation shall commence on site until an Arboricultural Method Statement and Scheme of Works

which provides for the retention and protection of trees, shrubs and hedges growing on or adjacent to the site in accordance with BS5837: 2012 has been submitted to and approved in writing by the local planning authority. No development or other operations shall take place except in complete accordance with the details as so- approved (hereinafter referred to as the Approved Scheme).

b) No operations shall commence on site in connection with development hereby approved (including any tree felling, tree pruning, demolition works, soil moving, temporary access construction and or widening or any other operation involving use of motorised vehicles or construction machinery) until the tree protection works required by the Approved Scheme are in place on site.

c) No excavations for services, storage of materials or

machinery, parking of vehicles, deposit or excavation of soil or rubble, lighting of fires or disposal of liquids shall take place within an area designated as being fenced off or otherwise protected in the Approved Scheme.

d) The fencing or other works which are part of the Approved

Scheme shall not be moved or removed, temporarily or otherwise, until all works including external works have been completed and all equipment, machinery and surplus materials removed from the site, unless the prior approval in writing of the local planning authority has first been sought and obtained. Following the recommendations of the British Standard¹, this report includes the necessary information to enable the local planning authority to meet the duty placed upon them by section 197 of the Town and Country Planning Act (as amended, 2021).

1.2. Correct implementation of the tree protection specified within this report is critical for ensuring the retained trees are successfully protected throughout the construction process.

Documents Supplied

- Planning consent: KPM14843.Pdf
- Approved plan: P1387-01A Location Plan (REV 180523).pdf

Statutory Legislation

1.3. According to Wokingham Borough Council's online service², both trees are covered by a tree preservation order.

¹BS5837:2012 Trees in relation to design, demolition and construction

² <https://wokingham.maps.arcgis.com/apps>

2. Tree Survey Scope & Methodology

- 2.1. Tree survey data can be found on the appended plan.
- 2.2. The tree survey has been carried out following the recommendations of The British Standard and the trees are assessed objectively and without reference to any site layout proposals. Categories are based on each tree's health and condition, together with an assessment of its life expectancy if its surroundings were to be unchanged.
- 2.3. The reference numbers of surveyed trees and groups of trees are shown on the tree reference plan, which is appended to this report and based on the supplied survey drawing. Stem locations within groups may be estimated, and indicative of canopy only.
- 2.4. The tree survey was carried out from ground level only, with the aid of binoculars as necessary, following the Visual Tree Assessment³ (VTA) method.
- 2.5. Where trees are located on neighbouring land, an estimated appraisal of their quality and dimensions has been made.
- 2.6. Where stems or branches are obscured by ivy or other materials a full assessment of those parts will not be possible.
- 2.7. Tree heights were measured with a clinometer or estimated in relation to those measured.
- 2.8. Trunk diameters are measured at 1.5m above ground level, where this is not possible, then Figure C.1 of the British Standard is followed.
- 2.9. Tree canopies were markedly asymmetrical, and were measured (or estimated by pacing) in four directions using a laser measure. Symmetrical canopies are measured in one direction only, with dimensions in the remaining directions assumed to be similar. For the canopies of groups of trees, the maximum radius for each compass point is measured (more complicated groups will have further notes taken and an accurate representation will be shown on the plan).
- 2.10. All estimated dimensions are noted in the data.

³ Mattheck, C. & Breloer, H., 1998. The Body Language of Trees: A Handbook for Failure Analysis. London: H.M.S.O.

3. Arboricultural Method Statement

- 3.1. The tree protection on this site is subject to implementation as detailed in the following sections.
- 3.2. The recommendations of the British Standard have been applied where viable. Where deviations from the preferred approach are required, the impact on any retained trees is minimised through a combination of supervision from an arboriculturist and adherence to the associated method statement.
- 3.3. The strategy must be followed to avoid not only impact upon the trees but to adhere to any planning conditions, once permission is granted.
- 3.4. The information within this section must be passed to the site foreman and cascaded to all relevant personnel involved in the project.
- 3.5. Any questions about the content or its implementation shall be directed to **Mark Welby Consulting Arborists at 01730 239492** before action is taken.
- 3.6. A tree protection plan showing the types of tree protection and their locations is appended. It includes the tree survey data, existing site features and the approved construction. The plan must be read in conjunction with this method statement.

Phasing

- 3.7. It is essential that the following phasing is followed if trees are to be effectively protected throughout construction.

1	Installation of protection barriers & ground protection
2	Confirmation that tree protection barriers are installed to be sent to LPA
3	Demolition / site clearance phase
4	Construction phase
5	Removal of tree protection barriers upon completion of work

Table 1: Timing of operations in relation to trees

- 3.9. Shall any of the protection measures prove incompatible with elements of the build program, contact the project arboriculturist to discuss options.

Pre-Start Confirmation

- 3.10. The most important step in the tree protection process is that confirmation the tree protection barriers are in place must be forwarded to the LPA before any external work starts. This may be a photographic record sent via email.

Construction Exclusion Zone (CEZ)

3.11. The CEZ is a root-sensitive area where construction activities are to be excluded. The default method of doing so is through the installation of tree protection barriers. If construction access is required in the CEZ then ground protection can be used to facilitate this.

3.12. It is the responsibility of everyone engaged in the construction process to respect the tree protection measures and observe the necessary precautions within and adjacent to them.

3.13. Inside the exclusion zone, the following shall apply:

- No mechanical excavation whatsoever;
- No excavation by any other means without arboricultural site supervision;
- No hand digging without a written method statement having first been approved by the project arboriculturist;
- No lowering of levels for any purpose (except removal of grass sward using hand tools);
- No storage of plant or materials;
- No storage or handling of any chemical including cement washings;
- No vehicular access (unless ground protection is installed);
- No fire lighting.

3.14. In addition to the above, further precautions are necessary adjacent to trees:

- No substances injurious to tree health, including fuels, oil, bitumen, cement (including cement washings), builder's sand, concrete mixing and other chemicals shall be stored or used within or directly adjacent to the protection area of retained trees;
- No fire shall be lit such that flames come within 5m of tree foliage.

3.15. Variations from the above may be specified in the following sections of this method statement.

This is only acceptable where detailed and will typically be subject to supervision by the arboriculturist.

Protection Barriers

3.16. Barriers must be fit to exclude construction activity and appropriate to the degree and proximity of work around the retained tree(s). Barriers shall be maintained to ensure that they remain rigid and complete.

3.17. See Appendix i for barrier specifications.

3.18. On this project, types TPF 2 or TPF 3 are to be used.

Ground Protection

- 3.19. First, the existing patio must be retained where possible. This is to protect the underlying ground from compaction and associated root damage.
- 3.20. Where there is no patio, ground protection is to be installed to provide construction access (in the area shown on the appended plan). The ground protection must be capable of supporting the expected loads and avoiding rutting, compaction and damage to the soil: as advised in section 6.2.3 of the British Standard.



GP1: Tree protection barriers and scaffold ground protection



GP2: Tree protection barriers & trackmat ground protection

3.21. Stages of ground protection installation:

1. If required, dismantle barriers and re-erect them to protect any newly exposed CEZ not to be covered by ground protection;
2. Any shrubs, saplings or trees to be removed, are to be cut or ground out to just below ground level rather than grubbed or winched out, which can damage the roots of retained trees;
3. Lay woven geotextile over the existing ground surface by hand;
4. Cover the area with a compressible layer (200mm of woodchip, for example), using hand tools only;
5. Cover compressible layer with side butting scaffold boards, plywood boards of proprietary trackway/trackmats;
6. Confirm surface is acceptable for use with the project arboriculturist;
7. Area ready for construction access;

8. Any scaffolding required within the area will be erected with the uprights placed on spreader boards;

9. The boarding will be left in place until the construction works are finished.

3.22. A single thickness of boarding laid on the soil surface will provide sufficient protection for pedestrian loads. However, for wheeled or tracked construction traffic movements within the RPA, ground protection will involve the use of temporary geocell/cellular confinement systems, reinforced concrete slabs or track-board systems details of which are to be specified by the project engineer and approved for use by the project arboriculturist and local authority before construction commences.

3.23. Track-boards can be sourced from Trakmats Europe Ltd, 0845 6435388, www.trakmatseurope.com, or groundguards.com

3.24. There is to be no excavation within the ground protection area whatsoever. This includes the installation of services and associated utilities, without prior approval.

Site Induction

3.25. All site staff are to be briefed on the tree protection strategy for the site as part of the general site induction procedure. This can be carried out by the site manager once he has been briefed by the project arboriculturist.

3.26. In general, this will include the following:

1. Explanation of the purpose of the tree protection barriers and any ground protection
2. Explanation of the demolition procedures near trees
3. Explanation of the sensitive/supervised excavation areas
4. What to do if access is needed within a protected area for any reason
5. What to do if damage occurs to any tree protection barriers and how to contact the project arboriculturist if necessary.

Tree Surgery

3.27. Tree surgery work is listed in the schedule on the appended plan, along with all trees to be removed.

3.28. At this stage, it only includes cutting back the northern spread of tree #01 to give the new first-storey extension adequate clearance.

3.29. All work will be carried out under BS3998⁴ industry best practice and in line with any works already agreed upon with the council.

⁴ BS3998:2010- *Recommendations for Tree Work*. London: British Standards Institute

- 3.30. The statutory protection^{5 6} will be adhered to. If further advice is required, particularly if bats are discovered during tree work, it will be obtained from Natural England or other competent persons and recommendations adhered to.
- 3.31. The stumps of any trees removed from within the Construction Exclusion Zone or the RPAs of retained trees will be either cut flush to ground level and left in situ or ground out using a stump grinder. They will not be winched out.
- 3.32. All operations shall be carefully carried out to avoid damage to the trees being treated or neighbouring trees. No trees to be retained shall be used for anchorage or winching purposes.

Installation of Underground Services

- 3.33. Mechanical trenching for the installation of underground apparatus and drainage severs any roots present and can change the local soil hydrology in a way that adversely affects the health of the tree. For this reason, particular care must be taken in the routeing and methods of installation of all underground apparatus. Wherever possible, apparatus must be routed outside RPAs. Where this is not possible, it is preferable to keep the apparatus together in common ducts. Inspection chambers shall be sited outside the RPA.
- 3.34. Where underground apparatus is to pass within the RPA, detailed plans showing the proposed routeing must be drawn up in conjunction with the project arboriculturist. In such cases, trenchless insertion methods shall be used: Microtunnelling, Surface-launched directional drilling, Pipe ramming or Impact moling (see BS5837:2012 Table 3), with entry and retrieval pits being sited outside the RPA. Provided that roots can be retained and protected, excavation using hand-held tools might be acceptable for shallow service runs. If this is the case, the following methodology must be followed:
- 3.35. Stages for installing services:
1. Contact project arboriculturist to hold pre-start site meeting and 'toolbox' talk before starting work.
 2. Remove just enough tree protection fencing to allow access to the area and facilitate trenching.
 3. Remove any surface vegetation or existing hard surfaces using hand tools.
 4. Using an air-pick excavate the trench, keeping to the minimum dimensions required.
 5. Roots occurring in clumps of 25 mm diameter and over are encountered they will be retained and kept damp by covering with hessian (re-wetted as required). If required, these shall be

⁵ *Wildlife and Countryside Act. (1981)* London: HMSO.

⁶ *Conservation of Habitats and Species Regulations (2017)* London: HMSO.

severed only following consultation with an arboriculturist; as such roots might be essential to the tree's health and stability.

6. Feed in services.

7. Backfill the trench with 200-300mm depth of excavated soil, or a mixture of excavated and imported topsoil to BS3882: 2015, firming down with heels.

8. Repeat step 7 until the trench is filled.

9. Re-erect tree protection fencing as per the approved plan.

3.36. The method of excavation above, for trenching within RPAs, is using air excavation. This tool utilises compressed air to remove soil from around tree roots causing minimal damage and can be run off a typical site compressor. I can provide details of contractors supplying air excavation services if required.

3.37. Alternatively, trenchless technology, such as thrust boring can be used in some instances and is particularly effective as it can pass directly under the tree, at a depth which is likely to avoid almost all impact on the roots of the subject tree. As no access/thrust pits will be located within the RPAs of the subject trees, the need for arboricultural supervision is limited.

3.38. Reference can be made to NJUG Vol 4⁷ for guidance, but any approach must be approved by the project arboriculturist and brought to the attention of the local authority tree officer.

4. Limitations of Use and Copyright.

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⁷ National Joint Utilities Group. (2010). Volume 4: NJUG Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees (Issue 2) - Operatives Handbook. NJUG.



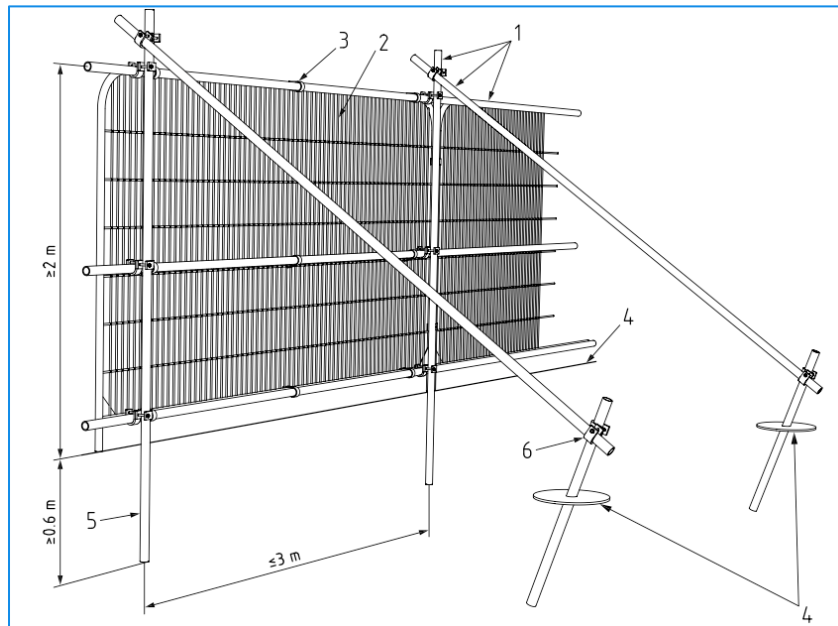
Appendices

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i.

Tree Protection Barriers



1 Standard scaffold poles

2 Heavy gauge 2 m tall galvanised tube and welded mesh infill panels

3 panels secured to up rights and cross members with wire-ties

4 ground level

5 uprights driven into the ground until secure (minimum depth 0.6 m)

6 Standard scaffold clamps

TPF1: Default specification for protective barrier (Fig 2 from BS5837:2012)



TPF 2: Alternative fencing option: scaffold uprights with backstay



TPF 3: Alternative fencing option: on boots with backstay



TPF 4: Plastic barrier for low intensity areas of construction



TPF 5: Chain-link for low intensity areas on large projects

ii.

Tree Categories Explained

BS5837:2012 Table 1 -Cascade chart for tree quality assessment			
Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see Note)			
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	*Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) *Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline *Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>		
	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 150mm	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



iii.

Protection Plan

Plan on following page

BS5837 Tree Survey: Trees & Groups to be Retained

Retained Trees / Groups

Ref	Species	Common Name	Height	Stem Diameter	Canopy NESW	Crown Clearance	Age Class	Observations	Tree Surgery	Est. Remaining Contribution	Date Surveyed	No.	BS Cat
01	Castanea sativa	Sweet Chestnut	16m	700#mm	6 N 6 E 6 S 6 W	3.5m	Mature	Fair overall physiological and structural condition. Slightly impoverished fine branch reiteration. Epicormic growth starting on most branches.		20 Years	27/3/2023	1	B1
02	Quercus robur	Pedunculate Oak	15m	800mm	5 N 7 E 8 S 5 W	3m	Mature	Good overall physiological and structural condition.		40 Years	27/3/2023	1	A1
03	Alnus sp.	Alder	14m	500mm	3.5 N 3.5 E 3.5 S 3.5 W	2m	Mature	Fair overall physiological and structural condition. Street tree		20 Years	27/3/2023	1	B2
Total :3													

Survey by Mark Welby DipArb(RFS), TechCert(ArborA), FArborA
Arboricultural Association Registered Consultant
www.mwelby.com

denotes estimated dimension. Typically due to the tree being inaccessible.
Where dimensions are not listed please refer to the plan graphics for an indicative representation (typically for groups).

Key

CEZ Construction Exclusion Zone (CEZ)

CEZ extent. To be protected with temporary protective barriers or ground protection to allow construction access. See insets and method statement for details.

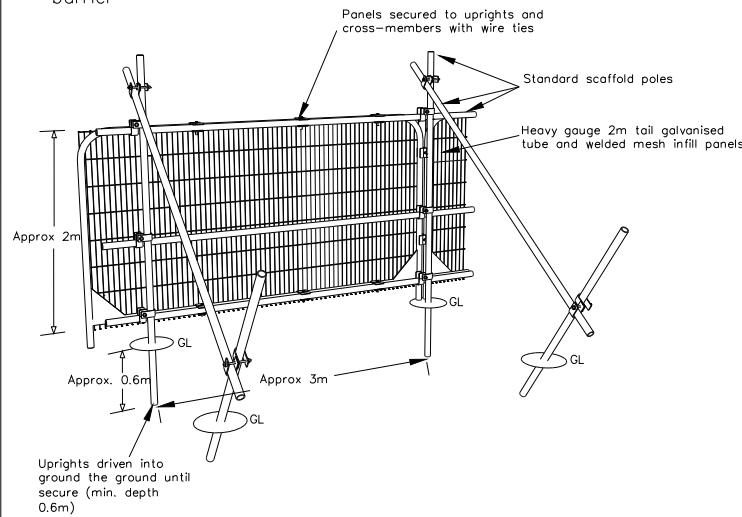
Retain paving where possible. Or use ground protection: see inset and method statement



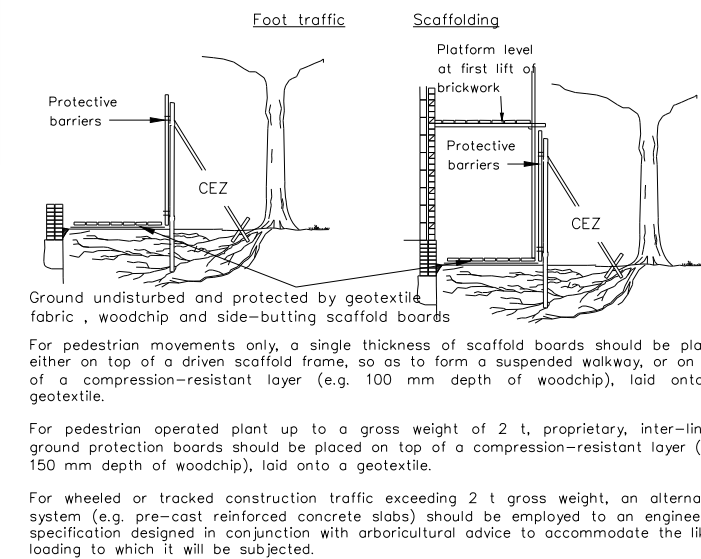
TREE PROTECTION AREA
KEEP OUT!

(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED
BY PLANNING CONDITIONS AND/OR ARE THE
SUBJECT OF A TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER,
MAY LEAD TO CRIMINAL PROSECUTION
THIS FENCING MUST NOT BE REMOVED WITHOUT
PERMISSION FROM THE LOCAL PLANNING AUTHORITY

Default specification for protective barrier



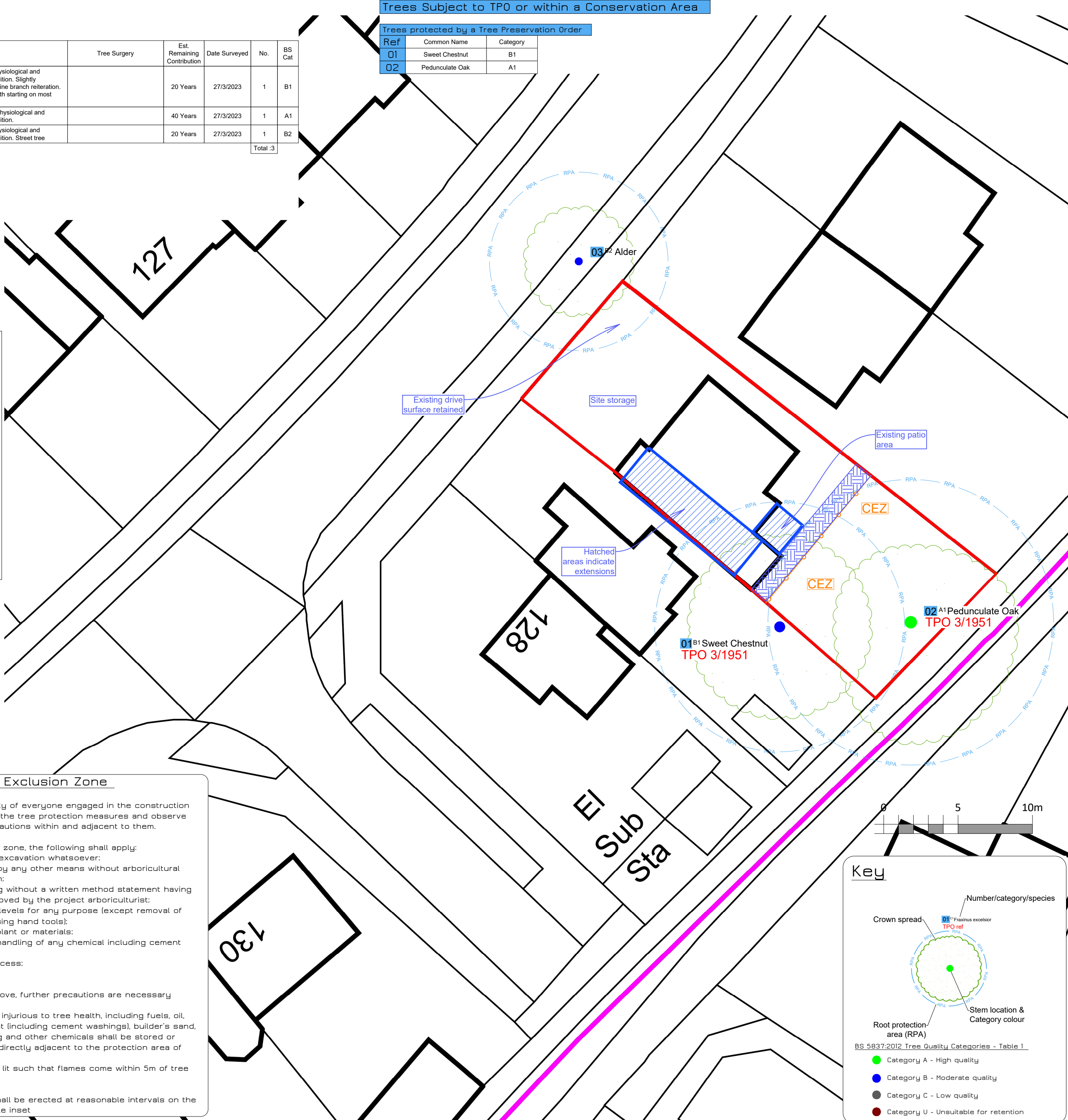
Ground Protection



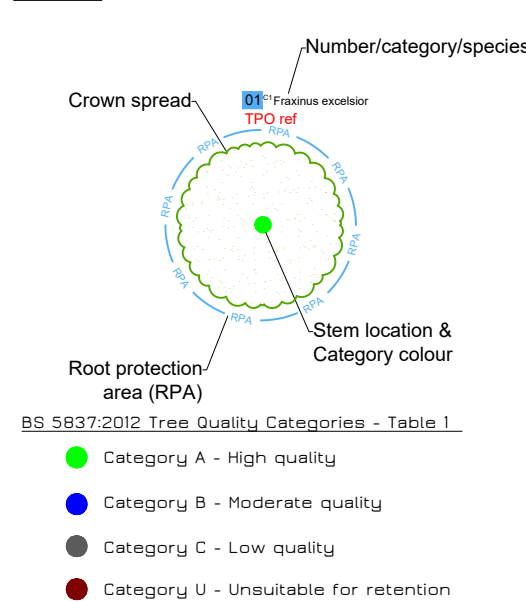
Trees Subject to TPO or within a Conservation Area

Trees protected by a Tree Preservation Order

Ref	Common Name	Category
01	Sweet Chestnut	B1
02	Pedunculate Oak	A1



Key



NOTES

This Tree Survey has been undertaken within the recommendations of British Standards 5837:2012 and current arboricultural best practice.

- The reference numbers of surveyed trees and groups of trees are shown. Stem locations within groups may be estimated, and indicative of canopy only
- The tree survey was carried out from ground level only, with the aid of binoculars as necessary, following the Visual Tree Assessment (VTA) method.
- Where trees are located on neighbouring land an estimated appraisal has been made of their quality and dimensions.
- Where stems or branches are obscured by ivy or other materials a full assessment of those parts will not be possible.
- Height dimensions are estimated and are given in metres.
- Trunk/stem diameters are measured in mm at 1.5 metres above ground level, unless otherwise stated. Where this is not possible, then Figure C.1 of the British Standard is followed.
- Tree canopies, where markedly asymmetrical, were measured (or estimated by pacing) in four directions using a laser measure. Symmetrical canopies are measured in one direction only, with dimensions in the remaining directions assumed to be similar. For the canopies of groups of trees, the maximum radius for each compass point is measured (more complicated groups will have further notes taken and an accurate representation will be shown on the plan).

Base plan/site survey reference:
21-058-01.pdf

Statutory Tree Protection
Tree Protection Orders: none found
with online LPA search

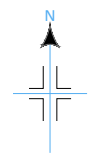
Conservation Area: N0

Felling licence: Garden areas are
exempt.

Guidance on the implementation
and use of this information, along
with its limitations and more can
be downloaded here:
<http://bit.ly/BSGuidance>

This plan has been drafted in
colour. A monochrome version
must not be relied upon

Date/Notes/Rev



Tree Protection

124 Nightingale Road
Woodley, Wokingham
RG5 3LZ

Date:
31/05/2023

Scale:
1:200 @A2

DWG Ref:
MW.2303.NRR.TPP

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Construction Exclusion Zone

It is the responsibility of everyone engaged in the construction process to respect the tree protection measures and observe the necessary precautions within and adjacent to them.

Inside the exclusion zone, the following shall apply:

- No mechanical excavation whatsoever;
- No excavation by any other means without arboricultural site supervision;
- No hand digging without a written method statement having first been approved by the project arboriculturist;
- No lowering of levels for any purpose (except removal of grass sward using hand tools);
- No storage of plant or materials;
- No storage or handling of any chemical including cement washings;
- No vehicular access;
- No fire lighting.

In addition to the above, further precautions are necessary adjacent to trees:

- No substances injurious to tree health, including fuels, oil, bitumen, cement (including cement washings), builder's sand, concrete mixing and other chemicals shall be stored or used within or directly adjacent to the protection area of retained trees;
- No fire shall be lit such that flames come within 5m of tree foliage.

All weather signs shall be erected at reasonable intervals on the barriers. See example inset