



MARK WELBY
CONSULTING ARBORISTS

Arboricultural Impact Assessment

Land west of Honey Hill, Wokingham, Berkshire, RG40

Reference: MW.2404.HHW.AIA

Client: Martin Kemball

Date: 7 August 2024



Mark Welby DipArb(RFS), TechCert(ArborA), FArborA
01730 239 492 | mark@mwelby.com | www.mwelby.com
M Welby Ltd, trading as Mark Welby Consulting Arborists
Hampshire, UK



Executive Summary

Trees are a consideration in this planning application for a new dwelling. Therefore, this report has been drafted to provide the information required 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).

Included are a BS5837:2012 compliant tree survey, arboricultural impact assessment, and tree protection strategy that includes a method statement and tree protection plan.

Ten low-quality trees are to be removed to facilitate the proposals. These are all internal to the site and thus have very limited wider value.

The new drive partially uses an existing access but will be constructed above ground using a 'no-dig' surface to minimise impact on underlying roots.

Trees are set back from Honey Hill sufficiently that visibility splays should be achievable.

The new dwelling is situated outside the root protection areas of all retained trees.

Drainage will be on site, telecoms are above ground, water, gas, and electricity will all come off Honey Hill using trenchless installation techniques.

Tree protection commitments include erecting barriers, a pre-start audit/meeting, and supervision of the 'no-dig' drive installation.

Provided the protection strategy is implemented as outlined, this application has a low arboricultural impact and is thus acceptable.



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1. Instructions and Terms of Reference

- 1.1. In April 2024, I was instructed by Martin Kemball to undertake a tree survey and subsequently, in July, to produce this report to accompany a planning application for a new dwelling on the land west of Honey Hill, Wokingham, Berkshire, RG40 at grid reference SU 83078 65693.
- 1.2. 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).
- 1.3. It demonstrates that the proposal's impact, both direct and indirect, has been assessed, and mitigation, compensation, and tree protection have been proposed where appropriate.
- 1.4. Correct implementation of the tree protection specified in this report is critical for ensuring the retained trees are successfully protected throughout construction.
- 1.5. The assessment considers the proposal's impact on the constraint presented by trees retained within the site and those on adjacent land. Such impact can be caused directly through construction damage and indirectly from post-development resentment and pressure to detrimentally prune or remove the trees. The latter is often due to a poor juxtaposition between the proposal and the trees.
- 1.6. A tree's root protection area (RPA) represents a minimum area in m² that shall be left undisturbed around it. This is initially represented by a circle but is fundamentally an area of rooting volume. It is often adjusted to account for constraints to root growth within the site (primarily highways and buildings). The British Standard provides recommendations regarding the protection of existing trees during the construction process. This is achieved by ensuring a tree protection strategy is implemented before any demolition or construction on site.

Documents Supplied

- Proposed: Site layout 1 Rev B.dwg
- Site survey: Honey Hill Topographical Drawing.dwg

Statutory Legislation

- 1.7. According to Wokingham Borough Council's online service², tree preservation order ref: 092A-1976 covers all trees present at that time in the areas shown.
- 1.8. The site is not within a Conservation Area.

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

² <https://experience.arcgis.com/experience/c0ad4ce95f8e46cfb28bb8cb126eae0>

TREES SPECIFIED BY REFERENCE TO AN AREA*			
(within a dotted black line on the map)			
and coloured purple			
No. on Map		Description	Situation
A1	-	An area of trees of whatever species within an area measuring 60' south east of Land Parcels Nos. 8679 and 9267, 60' west of the western side of Honey Hill and 60' north of the north side of Hatch Ride Wokingham Without, exclusive of certain areas shown on the map hereto.	

Fig 1: TPO-092A-1976 Schedule

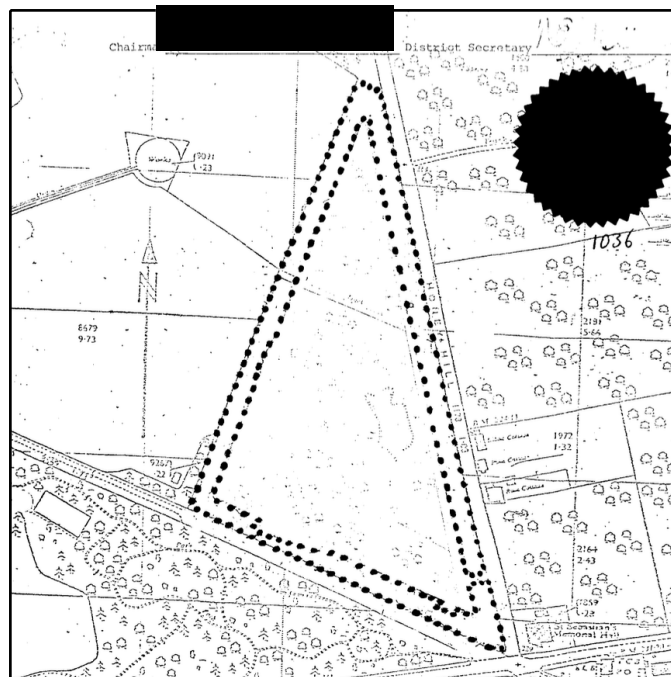


Fig 2: TPO-092A-1976 Plan (copied onto appended plan)

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 Impact Assessment

Proposal

- 3.1. It is proposed to build a single dwelling on the land, the layout of which can be seen on the appended plan.

Tree Removals

- 3.2. Ten low-quality trees are to be removed to facilitate the proposals. These are all internal to the site and thus have very limited wider value.
- 3.3. They are all listed and shown on the appended plan.
- 3.4. All tree subject to the tree preservation order are to be retained.

Tree Surgery

- 3.5. There are no plans for any tree surgery work at this stage.

Construction Impact

- 3.6. The new drive partially uses an existing access but will be constructed above ground using a 'no-dig' surface to minimise impact on underlying roots.
- 3.7. The dwelling and all associated construction will occur outside the RPAs of retained trees.
- 3.8. Trees are set back from Honey Hill sufficiently that visibility splays should be achievable.

Supervision & Monitoring

- 3.9. Some sites require more arboricultural involvement during the construction process than others. This is typically commensurate with the pressure on retained trees and the complexity of the tree protection strategy.
- 3.10. For this project, a pre-start meeting/tree protection audit before demolition starts is proposed. Supervision will also be required for during the installation of the 'no-dig' drive.
- 3.11. It is my opinion that regular monitoring visits would not be necessary for this project.

Barrier Type

- 3.12. As the proposed construction work is comparatively 'low impact', the default British Standard tree protection specification seems somewhat onerous. Therefore, it is my opinion that an adequate level of protection can be provided with a lesser specification.
- 3.13. Alternative specifications can be found in Appendix i. TPF 2 or TPF 3 are proposed.

Service & Utility Provisions

3.14. Drainage will be on-site; telecoms are above ground; water, gas, and electricity will all come off Honey Hill using trenchless installation techniques. Thus, all retained trees can be adequately protected during their installation.

Future Pressure

3.15. It can be seen from the appended plan that there is sufficient offset from the trees to provide some open space around the dwelling and allow construction without impact.

3.16. I have worked with the design team to achieve the subject layout and am confident that the proposed dwelling locations maximise the available space whilst not resulting in situations where excessive shade might bring forth requests to heavily prune or remove the retained trees.

Summary

3.17. Provided the tree protection strategy is implemented as outlined in the following method statement, this application has a low arboricultural impact and is thus acceptable.

3.18. Should the council wish to see more onerous tree protection methods, this can be ensured via an appropriately worded planning condition and should not be the basis for a reason for refusal.

4. Arboricultural Method Statement

- 4.1. The tree protection on this site is subject to implementation as detailed in the following sections.
- 4.2. 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.
- 4.3. Once permission is granted, the strategy must be followed to avoid impacting the trees and adhere to any planning conditions.
- 4.4. The information within this section must be passed to the site foreman and cascaded to all relevant personnel involved in the project.
- 4.5. Any questions about the content or its implementation shall be directed to **Mark Welby Consulting Arborists at 01730 239492** before action is taken.
- 4.6. 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

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

1	Tree removals
2	Installation of protection barriers
3	Confirmation that tree protection barriers are installed to be sent to LPA
4	Installation of 'no-dig' style drive surface: under arboricultural supervision
5	Site clearance & construction starts
6	Services installed using trenchless techniques
7	Removal of tree protection barriers upon completion of work

Table 1: Timing of operations in relation to trees

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

Pre-start Confirmation

4.10. The most important step in the tree protection process: confirmation that 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)

4.11. 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.

4.12. Everyone engaged in the construction process is responsible for respecting the tree protection measures and observing the necessary precautions within and adjacent to them.

4.13. 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.

4.14. 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.

4.15. 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

4.16. 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.

4.17. See Appendix i for barrier specifications.

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

Ground Protection

4.19. If required to facilitate access within the CEZ (or as shown on the appended tree protection plan), ground protection is to be installed. If not already included on the tree protection plan, it must be approved in writing by the local planning authority before implementation. 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

4.20. 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 or 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.

4.21. 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.

4.22. Track-boards can be sourced from Trakmats, 0800 622 6838, www.trakmats.co.uk, or GroundGuards, 0113 209 3685, www.ground-guards.co.uk.

4.23. 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

4.24. 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.

4.25. 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

4.26. Should any pruning work be required, the following must be adhered to once any requisite permissions are obtained.

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

4.28. 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.

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

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

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

- 4.29. 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.
- 4.30. 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

- 4.31. 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.
- 4.32. 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.
- 4.33. 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.

Fencepost/Hoarding Installation in RPA

- 4.34. Stages for installing wooden posts:

No plant machinery is to be used in the area for whatever reason

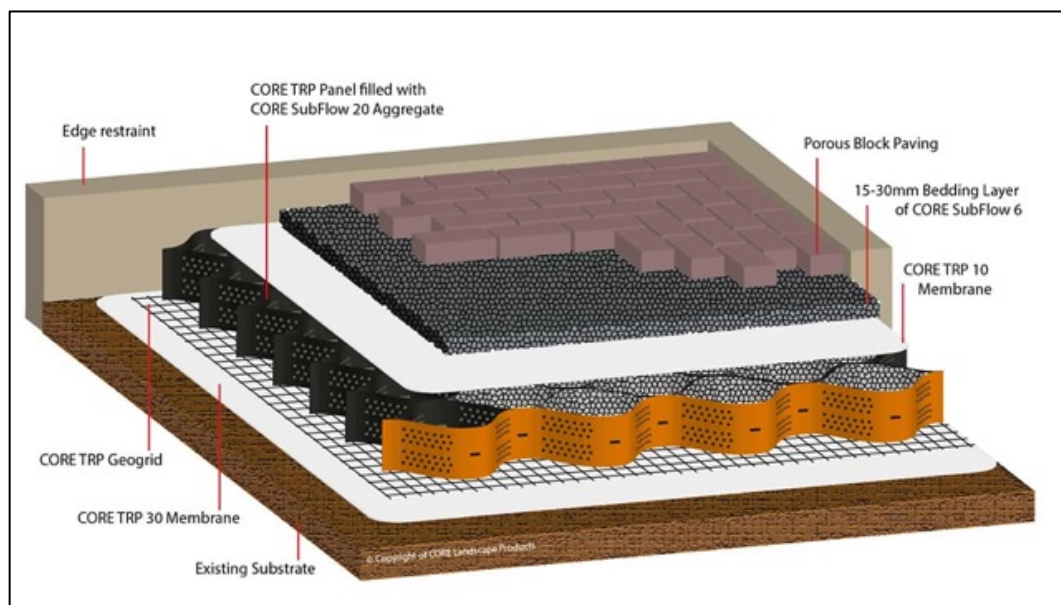
1. Remove TPF to allow access to the area. If working inside the tree's RPA, ground protection boarding must be used to avoid compaction and contamination of the root zone.
2. Dig postholes using hand tools, avoiding damage to the protective bark covering larger roots. Roots smaller than 25mm in diameter may be pruned back using either secateurs or a hand saw, leaving a clean cut.
3. Damage or severance of roots above 25mm diameter must be avoided. If roots of this size are discovered, the hole shall be relocated. If there are a large number of such roots it may be necessary to relocate the hole by half a fence panels length and adjust the fence panels accordingly.
4. Line holes with non-porous lining, for example, a durable polyethene bag.

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.

5. Insert post and fill post-hole with concrete to just below ground level.
6. Trim polyethene to ground level and fill with clean topsoil.
7. Reinstall TPF as approved.

Installation of 'No-Dig' Geocell Drive

4.35. To ensure that tree roots, within the ground under this proposed surface, continue to survive during and after construction, a geocell/cellular confinement system (CCS) is proposed. The following is a guide to installation, not an engineering specification. It is critical that an engineer design this surface to ensure long-term durability.



ND1: CORE Tree Root Protection © Porous block paving



ND2: Example of no-dig surface installation

4.36. Stages for Installation of the cellular confinement surface:

1. Contact project arboriculturist to hold pre-start site meeting, a 'toolbox' talk before starting work and provide supervision throughout the process;
2. Remove existing grass sward to 50mm with hand tools or turf stripper only;
3. Agreed removal of shrubs, saplings or trees, within the protected areas of retained trees 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;
4. Retain all original ground levels after vegetation removal. No further excavation whatsoever within RPAs;
5. Remove any existing hard surfaces (paving, tarmac etc.) Hand tools shall be used if possible. If machinery is required for this operation, it must be used only on existing surfaces or outside the protected areas and tree canopies (approval from the project arboriculturist must be sought before using machinery). The sub-base of existing surfaces or foundations shall be left in situ where possible to avoid unnecessary root disturbance and provide a base for the new surface;
6. Install a non-woven geotextile (such as Root-tex 30) directly over soil grade level (levelled where necessary, by non-compacted washed sand) and fix in place;
7. Lay the cellular system over the geotextile, which is secured open under tension during the infill process with steel staples or wooden pegs;
8. Install kerbs and edgings directly on top of the existing soil grade level. For light structures, a treated peg and board may be acceptable. For more substantial structures, railway sleepers, haunched concrete with road pins, drilled kerbstones, gabions or cast in situ kerbs will be appropriate;
9. Fill the cellular system ensuring any machinery works only on already filled areas. Typical infill consists of no fines angular granular material 20-40mm, which will remain uncompacted;
10. If required, cover with a non-woven geotextile (Root-tex 30 or similar).
11. Install porous wearing surface.

4.37. Any variation to the above specification must meet the following design criteria for low-invasive surfaces to provide the conditions for continued tree survival and growth:

- Maintain oxygen diffusion through the new surface to the rooting area (5-12% by volume)
- Maintain sufficient passage of water to the rooting area (12-40% by volume)
- Avoid compaction by maintaining a soil structure sufficient to sustain root growth (soil bulk density below 1.4g/cc).

- 4.38. Site analysis of the soil type and its structural characteristics will be required before determining the specific depth of products to be adopted, for example, footpaths normally require a depth of 75mm and, 100mm to 200mm depths are used for residential driveways, while greater depths may be required for the passage of heavier traffic such as for construction access and delivery vehicles.
- 4.39. If ground levels are to be raised more than 150mm this shall be achieved by the use of a granular material, which does not inhibit vertical gaseous diffusion. For example, no-fines gravel, washed aggregate, structural soil (min. 20% sand content) or cobbles.
- 4.40. See <https://www.corelp.co.uk/core-tree-root-protection/> and <https://www.geosyn.co.uk/product/cellweb-tree-root-protection> for more information.

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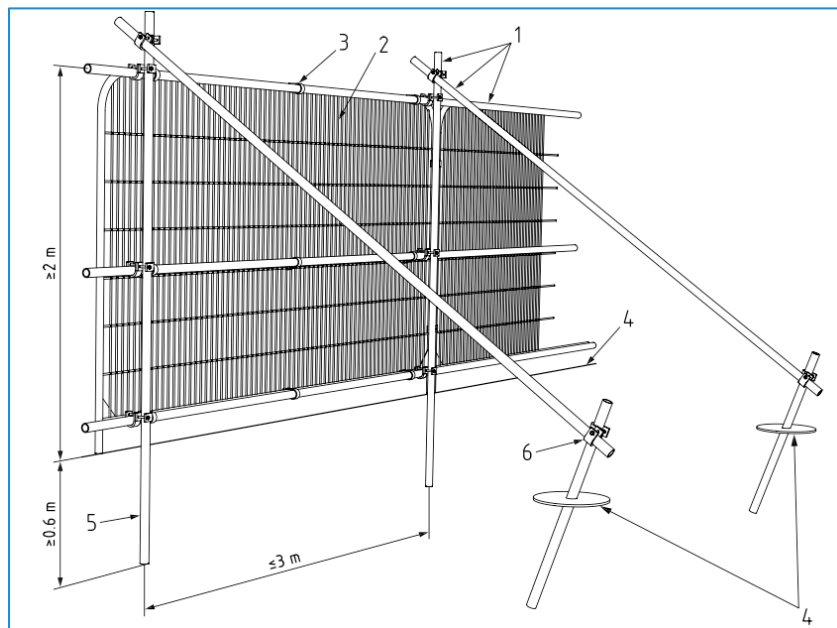


Appendix



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 NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.		
	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

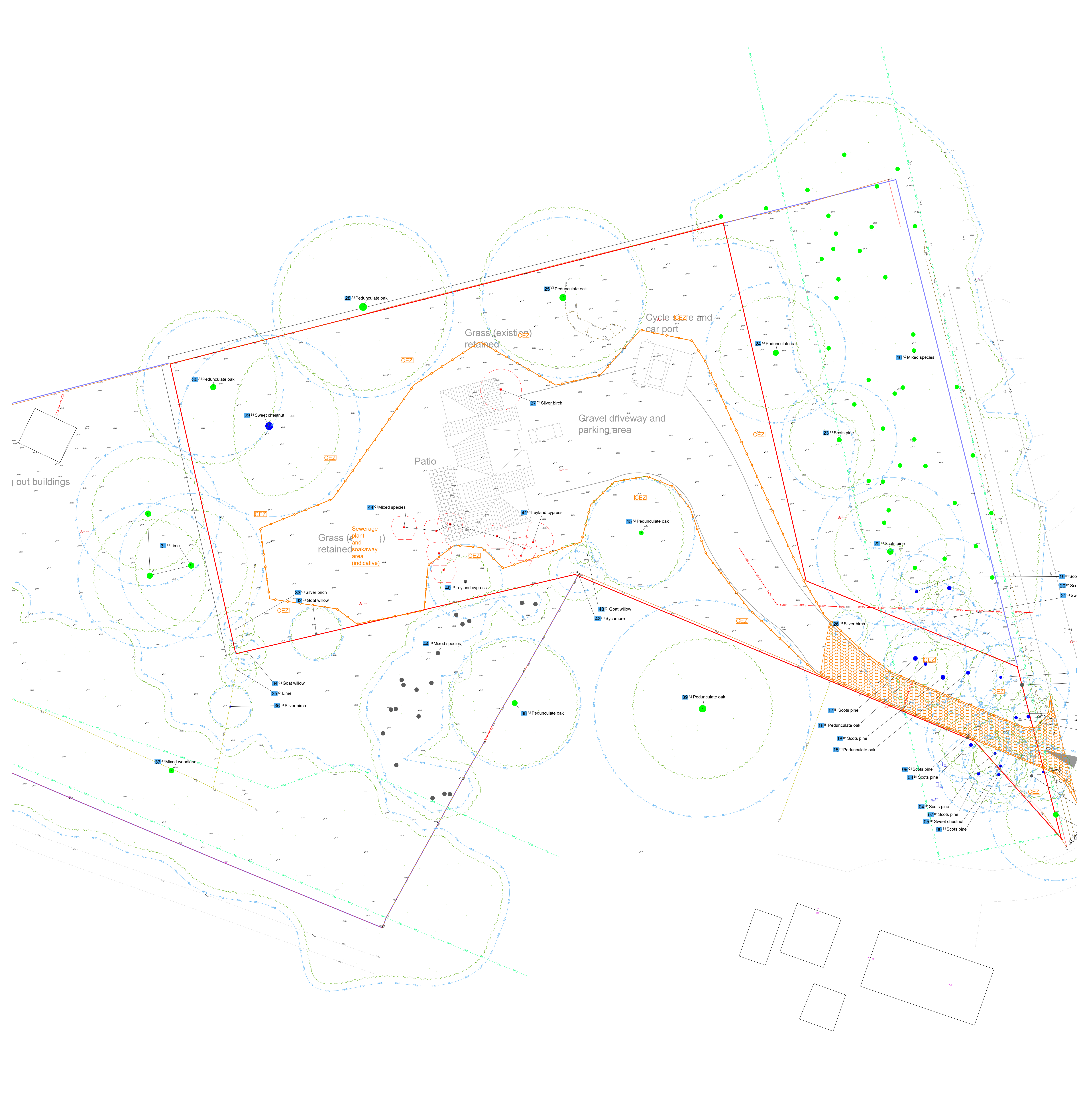


iii.

Protection Plan



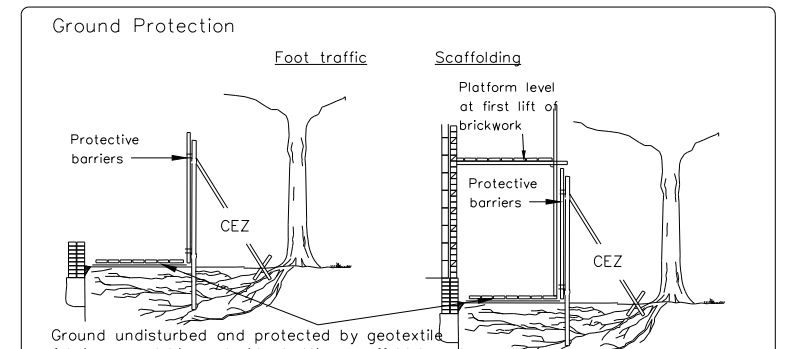
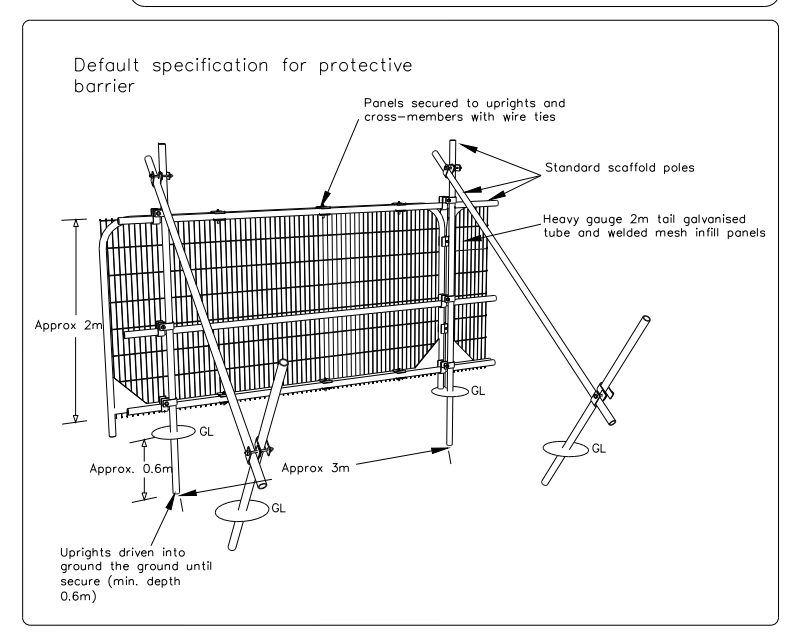
See the following page



SSB537 Tree Survey: Trees & Shrubs to be Retained												
Access Trees / Groups												
ID	Species	Common Name	Height	Stem Diameter	Cavity MEWS	Over- crown	Age Class	Observations	Tree Surgery	Est Retention	Date Surveyed	HS Code
01	Pinus sylvestris	European larch	20m	80mm	7.0/5.7/5.7	0m	Minor	Good overall physiological and structural condition	40 Years	22/03/2024	1	A1
02	Pinus sylvestris	Common larch	15m	30mm	4.0/4.0/4.0	0m	Minor	Fair overall physiological and structural condition	30 Years	22/03/2024	1	A1
03	Chamaecyparis lawsoniana	Lawson cypress	17m	300mm/320mm	3.0/3.0/5.0	0m	Minor	Very poor Tapered	10 Years	22/03/2024	1	C
04	Pinus sylvestris	Scots pine	20m	410mm	3.0/5.0/5.0	0m	Minor	Fair overall physiological and structural condition	30 Years	22/03/2024	1	B1
05	Cornus verticillata	Round hornbeam	17m	300mm	4.0/3.0/4.0	3m	Early-Major	Fair overall physiological and structural condition. Suffered from wind	30 Years	22/03/2024	1	B1
06	Pinus sylvestris	Scots pine	20m	480mm	4.0/4.0/4.0	0m	Minor	Good overall physiological and structural condition	30 Years	22/03/2024	1	B1
07	Pinus sylvestris	Scots pine	20m	400mm	4.0/4.0/4.0	0m	Minor	Fair overall physiological and structural condition	30 Years	22/03/2024	1	B1
08	Pinus sylvestris	Scots pine	20m	470mm	4.0/4.0/4.0	0m	Minor	Fair overall physiological and structural condition	30 Years	22/03/2024	1	B1
09	Pinus sylvestris	Scots pine	19m	500mm	4.1/4.1/4.0	0m	Minor	Good overall physiological and structural condition. Minor compartment with synthetic resin	20 Years	22/03/2024	1	C1
10	Tilia europaea	European lime	22m	440mm	3.5/3.0/5.0/5.0	1m	Major	Good overall physiological and structural condition. Local leaf loss	40 Years	22/03/2024	1	B1
11	Prunella vulgaris	Douglas holly	25m	475mm	3.9/3.1/3.3	10m	Major	Fair overall physiological and structural condition	40 Years	22/03/2024	1	B1
12	Quercus robur	Pedunculate oak	15m	500mm	4.0/4.0/4.0	0m	Minor	Severely poor with decay of base (injected resin in compartment)	20 Years	22/03/2024	1	C1
13	Tilia europaea	European lime	13m	210mm	4.0/4.0/4.0	1m	Early-Major	Fair overall physiological and structural condition	40 Years	22/03/2024	1	C1
14	Fagus sylvatica	Common beech	14m	300mm	4.5/4.0/4.5/2.5	2m	Early-Major	Fair overall physiological and structural condition. (Winged) branch to south	40 Years	22/03/2024	1	B1
15	Quercus robur	Pedunculate oak	12m	520mm	3.0/5.0/5.0	2m	Major	Fair overall physiological and structural condition. (Winged) branch to south	20 Years	22/03/2024	1	B1
16	Quercus robur	Pedunculate oak	11m	480mm	3.9/3.6/3.6	0m	Minor	Low overall physiological and structural condition. (Winged) branch to south	20 Years	22/03/2024	1	B1
17	Pinus sylvestris	Scots pine	15m	620mm	4.0/3.0/4.0	0m	Major	Good overall physiological and structural condition	40 Years	22/03/2024	1	B1
18	Pinus sylvestris	Scots pine	17m	640mm	4.0/3.0/4.0	0m	Major	Fairly healthy overall but poor. Suffered from decay. Fair overall physiological and structural condition	40 Years	22/03/2024	1	B1
19	Pinus sylvestris	Scots pine	17m	450mm	3.0/3.0/3.0	10m	Major	Fair overall physiological and structural condition	40 Years	22/03/2024	1	B1
20	Pinus sylvestris	Scots pine	17m	500mm	3.0/3.0/3.0	10m	Major	Fair overall physiological and structural condition	40 Years	22/03/2024	1	B1
21	Cornus verticillata	Round hornbeam	10m	200mm/180mm	4.0/2.0/4.0	2m	Early-Major	Multiple stems. Low spreading form	10 Years	22/03/2024	1	C1
22	Pinus sylvestris	Scots pine	22m	600mm	8.0/6.0/6.0	10m	Major	Good overall physiological and structural condition	40 Years	22/03/2024	1	A1
23	Pinus sylvestris	Scots pine	22m	710mm	7.0/6.5/7.5	10m	Major	Good overall physiological and structural condition	40 Years	22/03/2024	1	A1
24	Quercus robur	Pedunculate oak	20m	800mm	8.0/7.0/6.0	0m	Major	Good overall physiological and structural condition	40 Years	22/03/2024	1	A1
25	Quercus robur	Pedunculate oak	19m	860mm	10.1/10.1/9.1	0m	Major	Good overall physiological and structural condition	40 Years	22/03/2024	1	A1
26	Betula pendula	Silver birch	9m	110mm	2.3/2.2/2.2/2.2	1m	Early-Major	Small tree with limited water value	20 Years	22/03/2024	1	C1
27	Quercus robur	Pedunculate oak	19m	1300mm	12.5/12.5/12.5/12.5	0m	Major	Good overall physiological and structural condition. Old bark and (concentric) chambers retained	40 Years	22/03/2024	1	A1
28	Cornus verticillata	Round hornbeam	22m	1110mm	10.0/10.0/5.0	1m	Major	Good overall physiological and structural condition. Suffered from water stress. Wound to base	40 Years	22/03/2024	1	A1
29	Quercus robur	Pedunculate oak	25m	860mm	11.8/10.1/10.1	1m	Major	Good overall physiological and structural condition	40 Years	22/03/2024	1	A1
30	Tilia sp.	Lime	25m	870mm	8.0/8.0/8.0	0m	Major	Group of three makes lime trees in this area	40 Years	22/03/2024	3	A1
31	Filix acaulis	Club moss	4m	330mm	3.5/3.5/3.5/3.5	1.5m	Early-Major	Fair overall physiological and structural condition	30 Years	22/03/2024	1	C1
32	Betula pendula	Silver birch	9m	100mm	2.1/2.1/2.1/2.1	1m	Early-Major	Small tree with limited water value	20 Years	22/03/2024	1	C1
33	Betula pubescens	Common birch	7m	130mm	2.5/2.5/2.5/2.5	0m	Early-Major	Small tree with little water value	20 Years	22/03/2024	1	C1
34	Betula pubescens	Lime	7m	150mm	2.5/2.5/2.5/2.5	0m	Early-Major	Small tree with little water value	20 Years	22/03/2024	1	C1
35	Betula pendula	Silver birch	13m	180mm/100mm	3.0/3.0/3.0	0m	Early-Major	Well-sited. Good condition. Limited water value. Suffered from water stress	20 Years	22/03/2024	1	B1
36	Mixed woodland	Mixed woodland	25m	600mm		0m	Major	Mixed boundary woodland composed predominantly sweet chestnut and aspen. Uncharacteristic of local. Healthy	40 Years	22/03/2024	1	A1
37	Quercus robur	Pedunculate oak	25m	810mm	9.0/8.0/8.0	2m	Major	Good overall physiological and structural condition	40 Years	22/03/2024	1	A1
38	Quercus robur	Pedunculate oak	19m	1020mm	10.1/10.1/9.1/9.1	2m	Major	Good overall physiological and structural condition. Early-Major stage values with yellow resin base and wood stain	40 Years	22/03/2024	1	A3
39	X Cupressus sempervirens	Levanted cypress	12m	400mm	3.5/3.5/3.5/3.5	0m	Early-Major	Fair overall physiological and structural condition	40 Years	22/03/2024	1	C1
40	Acer pseudoplatanus	Sycamore	7m	260mm	4.0/4.0/4.0	3.5m	Early-Major	Good overall physiological and structural condition. Boundary fence. Scaffolding. Inconspicuous	10 Years	22/03/2024	1	C1
41	Sedum sp.	Gold cholla	7m	100mm	1.0/0.5/1.2/0.5	2m	Early-Major	Good overall physiological and structural condition. Rapid spreading. Inconspicuous	20 Years	22/03/2024	1	C1
42	Mixed species	Mixed species	4m	200mm		0m	Early-Major	Good overall physiological and structural condition. Sprouting healthy bark and wood. The top part of the tree is linked between viable outside of the bole	20 Years	22/03/2024	1	C1
43	Quercus robur	Pedunculate oak	19m	660mm	8.0/8.0/6.0	1.5m	Major	Good overall physiological and structural condition	40 Years	22/03/2024	1	A1
44	Mixed species	Mixed species	25m	600mm		0m	Major	Good overall physiological and structural condition. Boundary fence. Scaffolding. Inconspicuous. No water stress. Limited of decay	40 Years	22/03/2024	1	A2
Total 46												

Survey by Mark Welby (DrArb@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)

[illegible][illegible]

hobic, woodchip and side-bulldozing scattered debris. —

For pedestrian movement, a single thickness of scuffall boards should be placed either on top of a driven scuffall frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchips), laid onto a compression-resistant layer.

For pedestrian operation plant up to a gross weight of 2, proprietary, inter-linked ground protection boards should be placed on top of a compression-resistant layer (e.g. 100 mm depth of woodchips) laid onto a compression-resistant layer.

For wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. pre-cast reinforced concrete slabs) should be employed in an engineering design, which is designed in conjunction with structural design to accommodate the heavy loading to which it will be subjected.

Construction Exclusion Zone

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

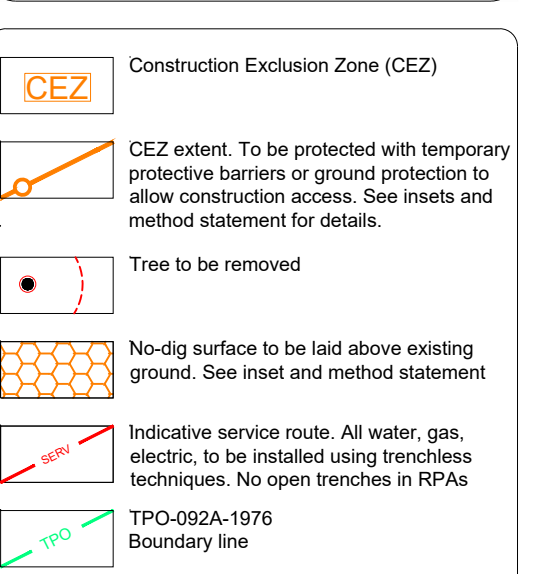
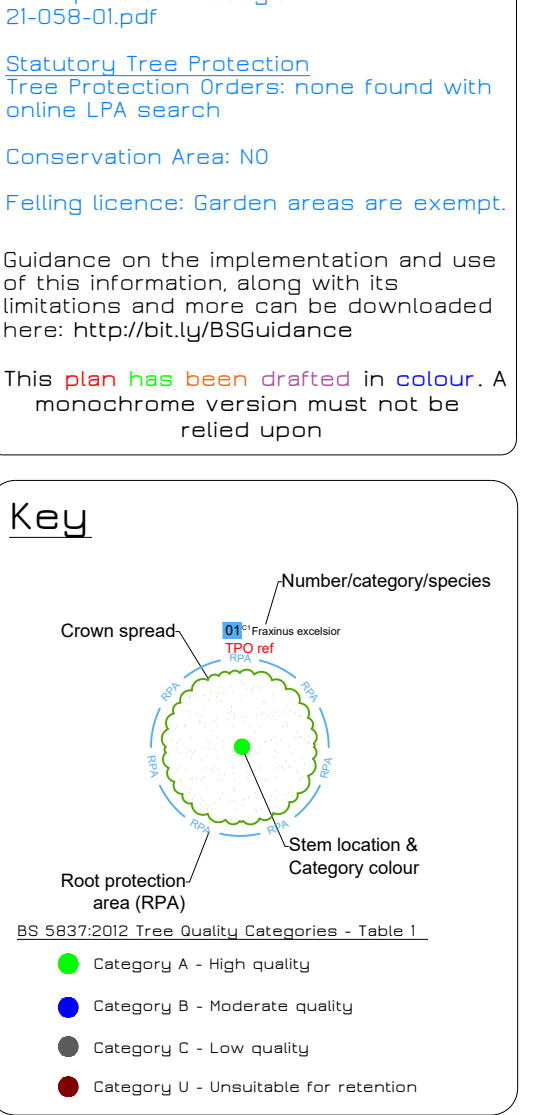
Inside the exclusion zone, the following shall apply:

- No mechanical excavation whatsoever
- No excavation by any other means without arboricultural site supervision
- No hand digging without a written method statement having been approved by the competent authority
- 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
- No vehicle access
- No fire lighting

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

- No substances injurious to tree health including fuels, oils, solvents, cement including concrete, lime, lime putty, builders sand, concrete mixing and other chemicals shall be stored or used within or directly adjacent to the tree protection zone of retained trees
- No material shall be so much that flames can burn within 5m of foliage.

All weather shields shall be erected at reasonable intervals on the barriers. See example sheet

[illegible]

Free Protection

Land west of Honey Hill,
Wokingham, Berkshire, RG40

Date: 07/08/2024 Scale: 1:200 @A0
DWG Ref: MW.2404.HHW.TPP



MARK WELBY
CONSULTING ARBORISTS




Mark Welby
 DipArd(RFS), TechCert(Arbos), FArbor
 Arboricultural Association Registered Consultant
 01730 238 482 | mark@mwelby.com
www.mwelby.com
 M Welby Ltd | Hampshire | UK
