



Wellingtonia within front garden

ARBORICULTURAL IMPLICATIONS ASSESSMENT

Site: Thatched Cottage, Sonning
Postcode: RG4 6ST
Client: Mrs S Au

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Plans and Schedules to be read in conjunction with this report:

Type	Reference	Version
Tree Schedule	103-THA-INF-SCH	1
Tree Constraints Plan	103-THA-DRW-TCP	1
Arboricultural Implications Plan	103-THA-DRW-AIP	2
Draft Tree Protection Plan	103-THA-DRW-TPP	2

EXECUTIVE SUMMARY

I have been instructed to provide an assessment of the impact on the existing tree stock from a development proposal at Thatched Cottage in Sonning.

A tree survey has been completed following the guidance provided by BS5837 (2012) *Trees in relation to design, demolition and construction – Recommendations*. The survey encompassed the entire ownership boundary, but a total of 63 trees, groups of trees, hedgerows and woodlands have been recorded within the application boundary, and all have been categorised as part of a quality assessment to determine the extent of the tree related constraints on site.

- 6 have been assessed as being of high quality and condition (Category A)
- 10 have been assessed as being of moderate quality and condition (Category B)
- 45 have been assessed as being of low quality and condition (Category C)
- 2 have been assessed as being of poor quality and condition (Category U)

One tree (T57) has been identified as a veteran specimen.

An online search confirms that the site is within Sonning Conservation Area and a total of 24 trees, groups of trees or woodlands are subject to a Tree Preservation Order (Ref: TPO/0002/1951/G2).

An online search confirms that priority habitats in the form of deciduous woodland and traditional orchard are present within the site.

The proposed development is for the renovation of the existing site, including provision of new ancillary buildings and landscaping.

This development will require the removal of 14 trees, groups of trees or hedgerows. These are proposed for removal as they are within the footprint of either new buildings or proposed landscaping works. These trees are all of low arboricultural quality and are located internally to the site, with all boundary trees being retained.

The scheme will result in the retention of 76% of trees (including the veteran specimen) within the application boundary.

A total of 5 trees or groups of trees will require facilitation pruning. This principally relates to providing sufficient space for construction access and avoiding conflicts during landscaping works. The proposed pruning works are within the realms of good arboricultural practice.

The loss of trees to accommodate this proposal will be compensated for by planting across the site, as well as enhancement to the existing orchard.

All retained trees will be protected throughout the development phase. This will primarily consist of tree protective fencing, but will also include temporary ground protection measures.

National and Local Planning Policy emphasises the retention and incorporation of trees within development proposals. Those trees that are being removed have not been classified as either ancient or veteran specimens, nor are they critical heritage, green infrastructure or biodiversity features. In addition, protection measures have been recommended to ensure that retained trees remain free from harm, and therefore this application is considered compliant with planning policy, insofar as it relates to trees.

1. INTRODUCTION

Instruction

- 1.1 Written instruction was received from Jinny Blom on behalf of Mrs Au on 7th February 2022 to undertake a tree survey to assist in redevelopment of the grounds at Thatched Cottage in Sonning. The instruction also included a condition assessment of trees within the curtilage of the property.

Scope

- 1.2 The scope of the instruction was to:
- Complete a tree survey (including condition assessment) of all trees within the development area and trees that are within 15m of the development boundary that could be affected by any works associated with the proposal. The tree survey is to be carried out in accordance with the recommendations laid down by BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations* ('BS5837').
 - Prepare a schedule of all recorded trees and a plan of tree constraints to assist the design team understand constraints arising from trees to any development scheme.
 - Provide advice to the design team on tree related issues including avoidance, mitigation and compensation measures.
 - Prepare the required reports to accompany a full planning application for the proposed development.

Site Description

- 1.3 Thatched Cottage ('the Site') is located centrally to Sonning. The property is to the east of Sonning Lane (B446) and to the south of Pearson Road. A Local Nature Reserve is situated to the south of the Site. The site is centred at SU756753 and around postcode RG4 6ST (see Plate 1).



Plate 1: Site location (Ownership boundary in blue and indicative site boundary shown in red) (source: Google Maps accessed 15.07.22)

- 1.4 The Site consists of a residential property with associated access, outbuildings and garden. The garden is well maintained and includes a tennis court and lake to the south of the property. The Site is bounded by trees on all boundaries and also includes a small woodland shelterbelt to the west with an informal central path that runs north to south.

Caveats and Limitations

- 1.5 This survey has been undertaken in accordance with industry best practice recommendations and guidance. The recorded information for each tree is a snapshot of the tree at the time of the survey. The assessments have been made to assist in the design of the site for a planning application and includes a condition survey for health and safety purposes. Where obvious defects have been observed these are recorded and recommendations may be made for mitigation.
- 1.6 The comments and observations made within this report will cease to be valid either within two years of the date of the survey (unless specifically stated elsewhere within the report), or when site conditions change or any works to trees take place that have not been specified within this report, whichever is the sooner.
- 1.7 Unless stated differently in captions, all photographs used in this report have been taken by the author at the time of the site visit.

- 1.8 The survey has been undertaken with the benefit of a topographical survey (Ref: 39631-T-Rev0) undertaken by Greenhatch in March 2021. The location of all trees and groups detailed in this report have been taken from the topographical survey and no warranty is given as to the accuracy of this data. Where features were not present on the topographical survey, these have been plotted using a handheld GPS tablet. This is not as accurate as professional grade surveying equipment and the locations are indicative only. These are identified in the accompanying Schedule and on the TCP with a '#'.
- 1.9 This survey has been limited to identifying arboricultural features within the site. It therefore does not include any ecological assessment or landscape appraisal of trees, groups, woodlands or hedges beyond the scope of BS5837: 2012 *Trees in relation to design, demolition and construction* ('BS5837').
- 1.10 This feasibility assessment has been prepared to assist in the design of the Site and is not intended as a planning document.
- 1.11 Although I am occasionally involved in landscape, ecological and planning issues, I have no formal qualifications in these areas and any comments made in this report to such matters are limited to the general context in view of my familiarity through my day-to-day work, and professional advice should be obtained on these matters where required.

2. TREE SURVEY AND CONSTRAINTS

- 2.1 I completed the tree survey on 29-30th March 2022. The weather conditions at the time of the survey were cold and overcast, which marginally impaired visibility.

Tree Survey Methodology

- 2.2 The survey has been carried out in accordance with the recommendations laid down by BS5837. Observations were conducted from ground level, and have been limited to a visual assessment of the trees.
- 2.3 The information collected during the survey should be used to assist in the design of the site. This report includes:
 - A schedule of the relevant trees to include base line data and quality assessment; and
 - A plan showing the extent of constraints presented by the existing tree stock (herein after referred to as a Tree Constraints Plan (TCP)).
- 2.4 The purpose of the tree survey has been to provide an assessment as to the quality and non-fiscal value of the trees on Site. This then allows guidance to be given to the design team to inform the site design and layout.

General Data Capture

- 2.5 For reference, individual trees are identified with the letter T and associated number on the Tree Schedules and on a plan showing the extent of tree constraints. The stem diameter of the trees on Site was recorded using a rounded down diameter tape at 1.5m above ground level. Measurements were taken in millimetres. The height of the subject trees was estimated in meters.

- 2.6 Maximum crown spread of the subject tree was measured from the edge of the trunk to the tips of the live lateral branches taken at four compass points (N-E-S-W). Crown spread measurements were estimated and taken in metres.
- 2.7 Tree age was estimated from visual indicators (such as tree size and appearance of bark) which is provided as a provisional guide.
- 2.8 Groups of trees were identified with the letter G and number on the associated schedules and plans. Crown spread was assessed using topographical data to position the extents. Stem diameter of groups of trees was set as an average stem diameter of the trees within these individual groups and a maximum height of the tallest tree within the group.
- 2.9 Hedgerows were identified with the letter H and number on the associated schedules and plans. For each hedgerow, the survey recorded the number of species, average stem diameter, and the maximum height. Any individual trees present within the hedgerow were recorded as individual trees.
- 2.10 Woodlands and woodland groups were identified with the letter W and number on the associated schedules and plans.
- 2.11 If direct access to a tree was not possible, estimations from appropriate vantage points were taken. Any limitations or estimations are presented within the survey limitations section and noted in the associated schedules.

Categorisation

- 2.12 In compliance with Table 1 of BS5837 the trees surveyed have been categorised according to their arboricultural quality and non-fiscal value which is summarised in Table 1.

Table 1 - Summary of BS5837 categorisation colours

Category	Colour	Description
A	Green	Trees of high quality with an estimated remaining life expectancy of at least 40 years
B	Blue	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years
C	Grey	Trees of low quality with an estimated remaining life expectancy of at least 10 years
U	Red	Those trees 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

Above Ground Tree Constraints

- 2.13 The above ground constraints posed by canopy spread are plotted as a continuous line around the tree, with the extent of the canopy spread hatched in the corresponding BS5837 retention category colour.

Root Protection Area

- 2.14 The Root Protection Area (RPA) is defined in BS5837 as being a “layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure is treated as a priority”. It is an estimation of the minimum area of the root system that would need to be retained to sustain the current and future condition of the tree if all the other roots outside it were to be severed.
- 2.15 This does not account for the actual depth of the soil within the area, nor does it account for any requirement for working space during development.
- 2.16 The RPA of each tree has been calculated in accordance with Section 4.6.1 in BS5837. This is determined through multiplying the stem diameter of each tree, measured at 1.5m above ground level, by a factor of 12. from the measurement of the stem diameter as recorded in the tree schedule attached to this report. The RPA is initially plotted as a circle with the tree in the centre. Where site conditions may influence the shape and size of the RPA (e.g. the presence of roads, buildings or other structures), the shape and size of the RPA can be amended in accordance with Section 4.6.3 in BS5837.
- 2.17 Seven trees (T2, T3, T4, T6, T7, T35 and T130) have had the RPA adjusted to account for built structures within the rooting area that are likely to have affected the disposition of the rooting systems.
- 2.18 The below ground constraints posed by the RPA have been plotted on the TCP as a magenta line with the text RPA inscribed.

Quality Assessment

- 2.19 A summary of my assessment on the quality of the trees within the ownership boundary is presented in Table 2.

Table 2 - Summary of tree quality on site

	Category A	Category B	Category C	Category U	Total
Hedges	0	0	8	0	8
Groups	1	4	17	1	23
Trees	7	28	64	14	113
Woodland	0	1	0	0	1
Total	8	33	89	15	145

- 2.20 One of these trees (T57) has been identified as a veteran specimen. This tree can be identified on the attached TCP with a yellow border around the reference number and RPA line coloured yellow.
- 2.21 A summary of the trees within the application boundary, or within influencing distance (i.e. 15m) is presented in Table 3.

Table 3 - Summary of trees within application boundary

	Category A	Category B	Category C	Category U	Total
Hedges	-	-	H32, H33, H118	-	3
Groups	G117	G16	G1, G11, G21, G23, G120, G129, G132, G142	-	10
Trees	T6, T10, T14, T15, T57	T7, T13, T17, T19, T20, T29, T36, T133, T140	T2, T3, T4, T5, T8, T9, T18, T22, T24, T25, T26, T28, T30, T31, T34, T35, T37, T39, T123, T124, T125, T126, T127, T128, T130, T131, T134, T135, T136, T137, T138, T139, T141, T143	T27, T144	50
Total	6	10	45	2	63

2.22 The trees identified in Table 3 will form the basis of this assessment as all other trees within the ownership boundary are remote from the redline and outside of influencing distance. For completeness, those trees outside of the application boundary will still be illustrated on the attached plans.

3. OTHER CONSTRAINTS

Soils

3.1 Paragraph 4.3 of BS5837 recommends that a soil assessment be completed by a competent person to inform decisions relating to the RPA, tree protection, new planting design and foundation design. I am not able to provide this assessment as I have no formal qualifications in this area, and professional advice should be taken to provide any detailed reports.

3.2 However, generic soil data is freely available from online sources such as the Geology of Britain viewer¹ which can provide a broad indication of the underlying geology of a site. The results of a search for this Site describes the geology as being Lambeth Group – Clay, silt and sand. This could weather to produce a shrinkable clay soil and therefore guidance on foundation design in relation to trees, such as NHBC Chapter 4.2, might need to be consulted if site specific soil tests confirm the presence of shrinkable clay. The soil type may also influence species choice for replanting.

Statutory Considerations

3.3 The Site is located within the boundary of Wokingham Borough Council (WBC), the Local Planning Authority (LPA). A search has been undertaken on the LPA website to determine the presence or otherwise of Tree Preservation Orders (TPO) or Conservation Areas.

3.4 The results of the search show the Site is located in the Sonning Conservation Area and the woodland shelterbelt to the west of the property is subject to a Group TPO (Ref: TPO/0002/1951/G2) (See Plate 2).

¹ <http://mapapps.bgs.ac.uk/geologyofbritain/home.html?>

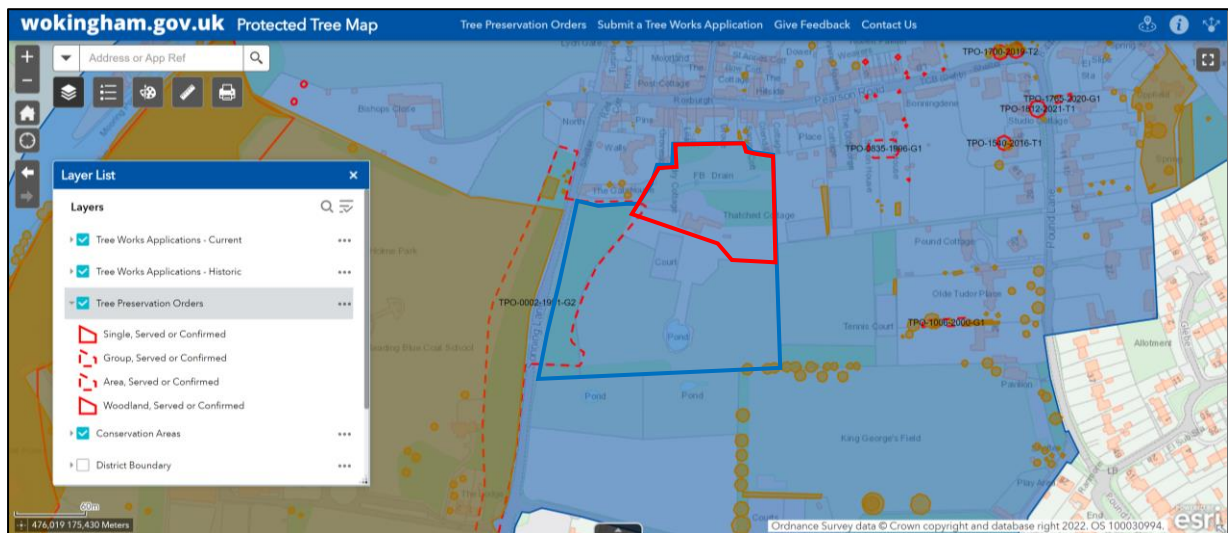


Plate 2: Extract from WBC interactive map with the ownership boundary indicatively in blue and site boundary in red (accessed 15.07.22)

- 3.5 For ease of reference, the following trees recorded during the survey are subject to the TPO: T95, T96, T97, T98, T99, T100, T101, T102, T103, T104, G105, W106, G107, T108, T109, T110, T111, T112, T113, G115, T116, G117, T119 & G120.
- 3.6 Those trees that are within the TPO Group have been identified on the attached TCP with a light-blue dashed outline.
- 3.7 A search has also been undertaken on the DEFRA MAGIC GIS mapping system to determine if the woodland on or in proximity to the Site has been designated as ancient woodland. The results indicate that this woodland does not meet the criteria for this designation.
- 3.8 The woodland on the western boundary is identified as Priority Habitat – Deciduous Woodland and the small cluster of fruit trees to the northeast of the property is identified as Priority Habitat – Traditional Orchards. For ease of reference, the following trees recorded during the are within the following designations:
 - Priority Habitat – Traditional Orchard (T133 – T139)

- Priority Habitat – Deciduous Woodland (T95 – T119)

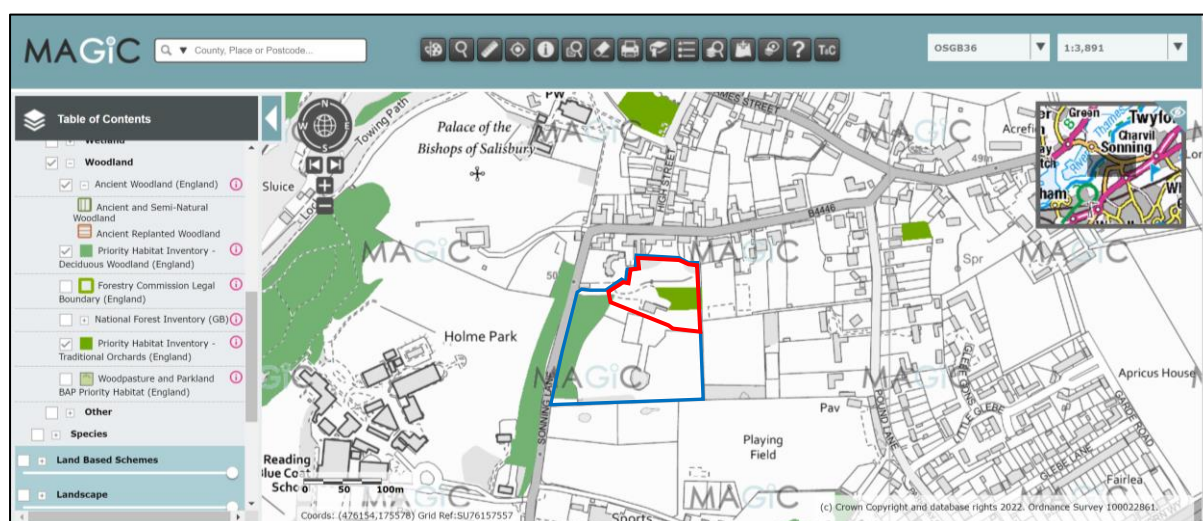


Plate 3: Extract from MAGIC with ownership boundary in blue and site indicatively in red (accessed 15.07.22)

- 3.9 These designations provide no specific protection but may be a material consideration as part of any planning submission.

National and Local Planning Policies

National Planning Policy Framework 2021

- 3.10 National Planning Policy is currently defined by the National Planning Policy Framework (NPPF). This provides the most current and up to date planning guidance.
- 3.11 At the heart of the NPPF is a presumption in favour of sustainable development, and specifically states that for decision making, the LPA should be approving development proposals that accord with the development plan without delay.
- 3.12 Section 12 of the NPPF recognises the importance of integrating trees into urban environments as part of achieving well-designed places. While the primary focus is on new tree planting, the importance of retaining existing trees and incorporation into proposals is a driving factor, stating that:

“Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users.” (Paragraph 131)

- 3.13 In addition, Section 15 of the NPPF recognises the importance of conserving and enhancing the natural environment, and specifically acknowledges the role of trees and woodland in the provision of natural capital and ecosystem services.

“Planning policies and decisions should contribute to and enhance the natural and local environment by:

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;” (Paragraph 174)

- 3.14 It further acknowledges the importance of ancient woodlands and veteran trees for habitats and biodiversity and requires that planning consent should be refused where development schemes require the removal of such features unless there are wholly exceptional reasons, stating that:

“development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.” (Paragraph 180, c)

Forestry Commission Standing Advice

- 3.15 Standing Advice (updated January 2022) provided by Natural England and Forestry Commission provides additional clarification for decision makers in relation to impacts to ancient/veteran or ancient woodland. This states:

“When making planning decisions, you should consider:

Conserving and enhancing biodiversity

Avoiding and reducing the level of impact of the proposed development on ancient woodland and ancient and veteran trees

You should refuse planning permission if development will result in the loss or deterioration of ancient woodland, ancient trees and veteran trees unless both of the following applies: there are wholly exceptional reasons

there’s a suitable compensation strategy in place (this must not be a part of considerations of wholly exceptional reasons) - see paragraphs 33 and 34 of the [planning practice guidance](#) on compensation guidance”

Local Planning Policy

- 3.16 Wokingham Borough Council (WBC) has prepared local planning policies that are presented in the Wokingham Borough Local Development Framework – Adopted Core Strategy Development Plan Document (January 2010). WBC have also produced the Wokingham Borough Development Plan – Adopted Managing Development Delivery Local Plan (February 2014) to supplement the Core Strategy.
- 3.17 The policies that need to be met in relation to trees are detailed in Table 4.

Table 4 - Local Planning Policies in relation to trees

Policy	Name	Description
Core Strategy		
CP7	Biodiversity	Sites designated as of importance for nature conservation at an international or national level will be conserved and enhanced and inappropriate development will be resisted. The degree of protection given will be appropriate to the status of the site in terms of its international or national importance. Development: A) Which may harm county designated sites (Local Wildlife Sites in Berkshire), whether directly or indirectly, or B) Which may harm habitats or, species of principle importance in England for nature conservation, veteran trees or features of the landscape that are of major importance for wild flora and fauna (including wildlife and river corridors), whether directly or indirectly, or C) That comprises the implementation of the national, regional, county and local biodiversity actions plans Will be only permitted if it has been clearly demonstrated that the need for the proposal outweighs the need to safeguard the nature conservation importance, that no alternative site that would result in less or no harm is available which will meet the need, and: i) Mitigation measures can be put in place to prevent damaging impacts; or ii) Appropriate compensation measures to offset the scale and kind of losses are provided.

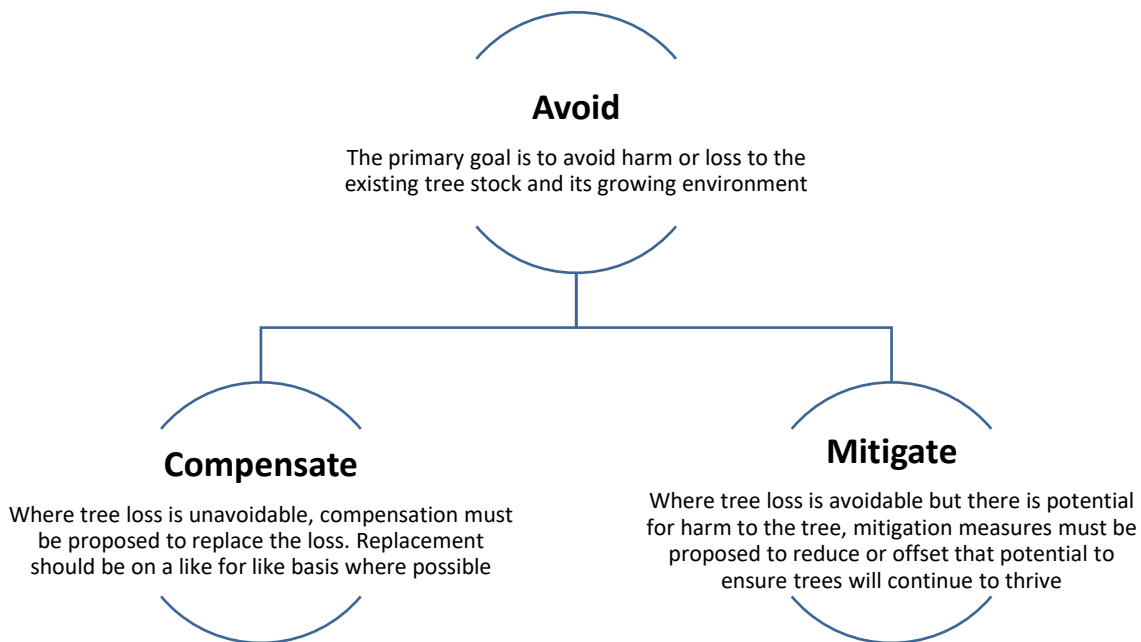
Policy	Name	Description
Managing Development Delivery		
Policy CC03	Green Infrastructure, Trees and Landscaping	[text omitted] 2. Development proposals should demonstrate how they have considered and achieved the following criteria within scheme proposals: a) Provide new or protect and enhance the Borough's Green Infrastructure networks, including the need to mitigate potential impacts of new development b) Promote accessibility, linkages and permeability between and within existing green corridors including public rights of way such as footpaths, cycleways and bridleways c) Promote the integration of the scheme with any adjoining public open space or countryside d) Protect and retain existing trees, hedges and other landscape features e) Incorporate high quality, ideally, native planting and landscaping as an integral part of scheme 3> Development proposals which would result in the loss, fragmentation or isolation of areas of green infrastructure will not be acceptable. [text omitted]
Policy TB24	Designated Heritage Assets (Listed Buildings, Historic Parks and Gardens, Scheduled Ancient Monuments and Conservation Areas)	[text omitted] 2. The Borough Council will conserve and seek the enhancement of designated heritage assets in the Borough and their settings by: a. Requiring works to or affecting heritage assets or their setting to demonstrate that the proposals would at least conserve and, where possible enhance the important character and special architectural or historic interest of the building, Conservation Area, monument or park and garden including its setting and views. b. Supporting development proposals or other initiatives that will conserve and, where possible, enhance the local character, setting, management and historic significant of designated heritage assets, with particular support for initiatives that would improve any assets that are recognised as being in poor condition or at risk. [text omitted]

4. DEVELOPMENT PROPOSAL

- 4.1 The proposed development is for the renovation of the existing site, including provision of new ancillary buildings and landscaping.

5. ARBORICULTURAL IMPACT ASSESSMENT

- 5.1 Development can have an adverse impact on trees and other woody vegetation within a site, which can result in:
- i. Immediate tree removal to facilitate the footprint of a new development;
 - ii. Potential future tree loss through the early decline of trees due to soil compaction or damage;
 - iii. Root disturbance and damage within a tree's rooting area; and
 - iv. Canopy removal or damage due to plant movement.
- 5.2 Best practice guidance proposed by the arboricultural sector seeks to ensure that there is a harmonious relationship between trees and development that will ensure that both trees and structures can be retained in the long term².
- 5.3 Where practical, development should seek to work with the natural environment, and development schemes that might result in harm should follow a mitigation hierarchy to ensure harm is minimised.
- 5.4 To assist the planning decision makers, this scheme should use the following mitigation hierarchy to consider the influence that trees might have on site design while also continuing to make a positive contribution to the site and local character of the area, both during and post development:



² BS5837 (2012) Page 1

- 5.5 The impact of any tree loss is assessed against a criterion in relation to the arboricultural significance of the loss, the detail of which is provided in Table 5. This table is not related to the quality categories provided in BS5837 but has a closer relationship to the sub-categories through assessing the impact that tree loss may have at the Site and its setting in the wider locality. This assessment is also useful in considering the impact of any potential loss against planning policy.

Table 5 - Impact Assessment definitions

Scale of Impact	Definition
Major	Total loss or major/substantial alteration to key trees/features of the baseline (pre-development) conditions such that the post development character or composition will be fundamentally changed. This would generally apply to tree(s) that are of exceptional or high quality and condition and their loss would be irreplaceable. This would also include trees that have been categorised as being Ancient or Veteran, trees are rare examples of their species and or trees that offer significant amenity value to the character and setting of the area.
Moderate	Loss or alteration to one or more key trees/features of the baseline conditions such that post development character or composition of the baseline will be materially changed. This would generally apply to tree(s) that are of good quality and condition and make a notable contribution to the setting or character of the locality (visual amenity). This may include trees that would be hard to replace but for which there could be some mitigation over a medium timeframe (20-40 years).
Minor	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying character or composition of the baseline condition will be similar to the pre-development circumstances/situation. This would generally apply to tree(s) that are of low quality and condition and/or their loss would have low impact on the locality. These trees would be relatively easy to replace within a short timeframe (10-20 years).
Negligible	Very little change from baseline conditions with any change barely distinguishable. This would generally apply to tree(s) that are of low quality and condition, and/or their loss would barely be noticeable. Any replacement planting would offer an improvement to the setting of the site in a very short time frame (1-10 years)
No Change	There is no change to the baseline conditions to trees from the development proposal.

Tree Loss & Retention

5.6 The proposed development will result in the removal of 14 trees, groups of trees and hedgerows. For ease of reference these are detailed in Table 6 below and reference numbers colour coded in accordance with the BS5837 category.

Table 6 - Summary of Tree Removals

Tree Number	Reason for Removal	Scale of Impact
T30 & T31	These trees are proposed for removal as they are within the footprint of the new swimming pool.	Minor
H32, H33, T34, T35, T131, G132, T134, T135 & T136	These trees are proposed for removal to facilitate hard and soft landscaping associated with the new pool and kitchen garden.	Minor
T139	This tree is proposed for removal as it is within the footprint of a new garage.	Minor
T130	This tree is proposed for removal to facilitate the hard landscaping to the rear of the existing property.	Minor
G142	This group of trees is proposed for removal to facilitate soft landscaping works in front of the existing property.	Minor

5.7 The remaining 49 trees within the Site will all be retained through the development. A summary of tree retention and loss is provided in Figure 1 below.

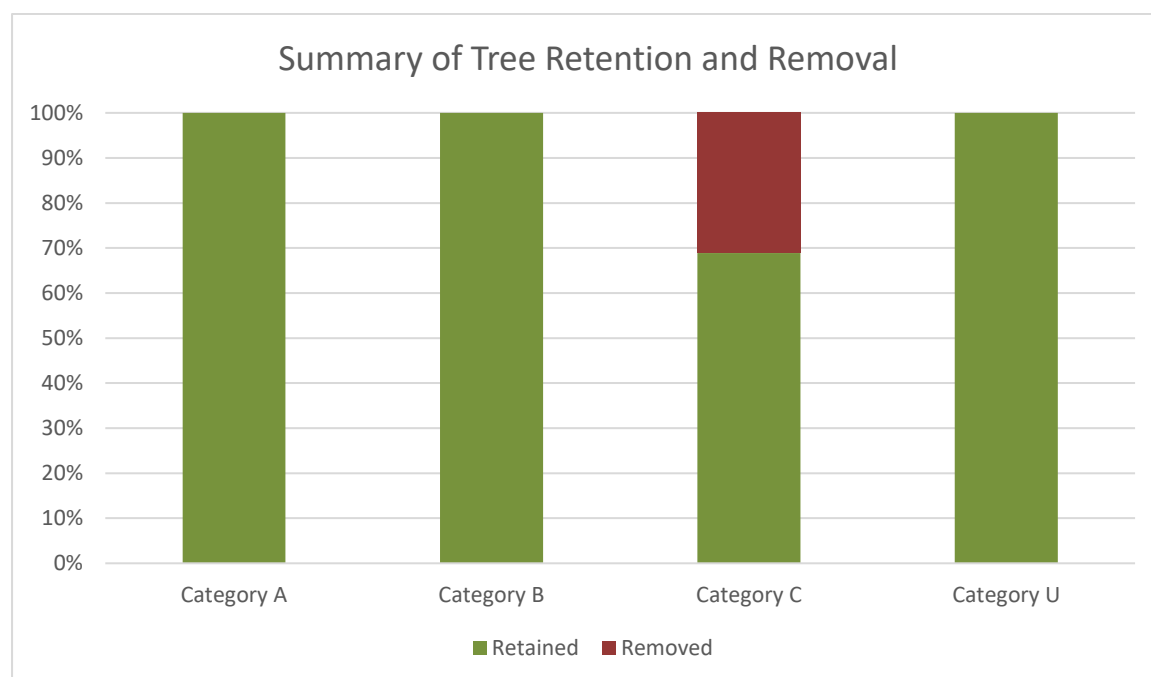


Figure 1 - Summary of Tree Retention and Removal

- 5.8 The scheme will result in the retention of 76% of recorded arboricultural features (including one veteran specimen).

Tree Pruning

- 5.9 A total of 5 trees or groups of trees require facilitation pruning to enable the development proposal to proceed. For ease of reference these are detailed in Table 7 below and reference numbers colour coded in accordance with the BS5837 category.

Table 7 - Summary of Tree Pruning

Tree Number	Proposed Pruning Works	Reason for Pruning
T28	A lateral crown reduction of 2m to the western canopy.	To facilitate space for construction traffic and construction of compost bays.
T29	A lateral crown reduction of 2m to the western canopy.	
T36	A crown lift to 3m above ground level to circumference of canopy.	
G117	Crown lift to 3.5m above ground level to canopy that overhangs existing driveway.	To facilitate construction access.
T141	A crown lift to 3m above ground level to the southern canopy.	To alleviate nuisance post-construction.

- 5.10 The site is within a Conservation Area and for the purpose of this assessment the tree works detailed in the table above should be treated as an application under Section 211 of the Town and Country Planning Act (1990) (Tree Preservation) (England) Regulations 2012, and in accordance with Planning System Guidance (PSG) in relation to 'Tree Preservation Orders and trees in conservation areas' ([Paragraph 134](#)).
- 5.11 Should any additional tree pruning be required a separate application will be submitted.
- 5.12 All pruning work will be undertaken in accordance with industry best practice and standards (*BS3998:2010 – Tree Works: Recommendations*).

Tree Replacement

- 5.13 A landscape scheme has been prepared for the Site (Jinny Blom Ref: 524.PL.001) which will more than compensate for the loss of 14 low quality arboricultural features.
- 5.14 The replacement planting scheme proposes planting associated with the orchard and kitchen garden and includes (but is not limited to) the following species:
- Lime
 - Beech
 - Maple
 - Sweet Gum
 - Tulip

- Handkerchief
- Cherry
- Apple
- Sorbus

5.15 The species selection has been based upon existing specimens as well as those that will supplement site features (such as the existing orchard), as well as complement the overall vision for the redevelopment of the site. In addition, tree species selection is mindful of securing resilience in relation to climate change predictions and future pest and disease risks to ensure a sustainable tree stock for the future which will achieve a net gain in site green infrastructure.

Development Impacts within the RPAs of Retained Trees

Impact of Buildings

5.16 A total of two trees (T29 and T36) will have their RPAs encroached by the new Potting Shed (see Plate 4 below).

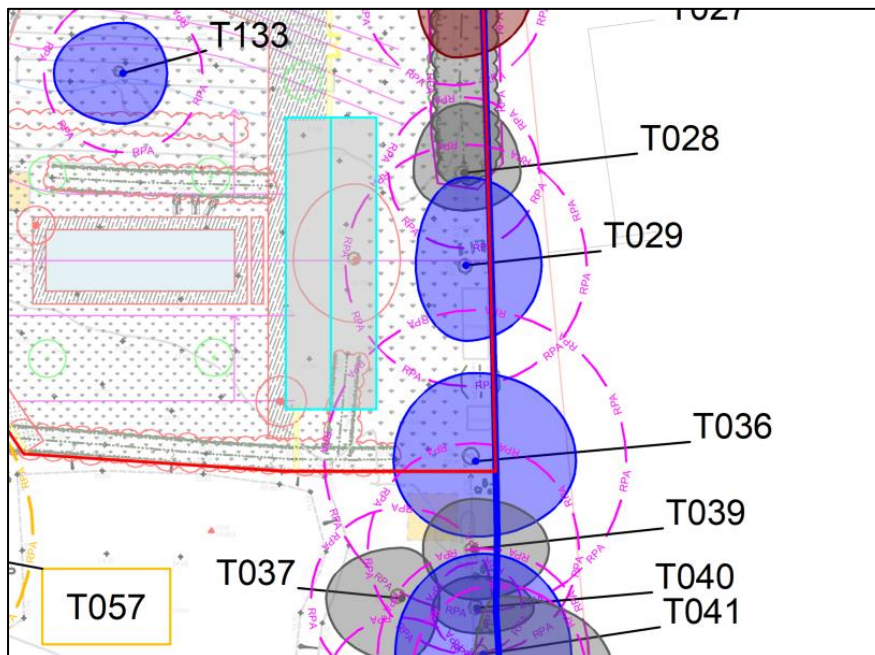


Plate 4 – Minor encroachment of T29 and T36 RPAs from Potting Shed (Source: Extract from AIP)

5.17 This encroachment is as follows:

- T29 – Approximately 17m². This equates to 6% of the total RPA.
- T36 – Approximately 8m². This equates to 2% of the total RPA.

5.18 Both trees have sufficient space contiguous with their RPAs to accommodate minor disruption or damage to the rooting environment from these works.

5.19 The cost and effort of implementing specific foundation design (i.e. pile and raft foundations) outweighs the potential harm to these trees. As such, no specific mitigation measures have been proposed and the long-term impact to these trees is deemed minor negative.

Impact of Surfaces (permanent and temporary)

Permanent

- 5.20 There are no new permanent surfaces proposed within the RPAs of retained trees.

Temporary

- 5.21 A total of four trees (T27, T28, T29 and T36) have the potential to be impact through encroachment into the RPAs from construction traffic during the construction of the pool house, potting shed and tennis court.
- 5.22 In order to ensure that the temporary encroachment does not adversely affect the longevity of these trees a temporary ground protection solution will be required. Details on this protection measure are provided further within this report.
- 5.23 Provided that the protection measures are installed in accordance with industry best practice and standards, the overall impact to these trees will be minor.
- 5.24 It may be possible to have construction activity remote from these trees, but due to the proposed layout and uncertainty of construction details a suitable solution for construction access has been assessed.

Impact of Underground Services

- 5.25 No specific information has been provided for the provision of new underground services.
- 5.26 There is sufficient space remote from retained trees to facilitate the installation of new services. Should these be required within the RPAs of retained trees then an additional assessment will be required.

Principles of Tree Protection

- 5.27 All construction activities have the potential to cause harm to the retained trees on site. It is therefore necessary that measures are employed across the site to limit the potential for such harm and prevent any long-term negative impacts on the trees.
- 5.28 A Preliminary Arboricultural Method Statement is included at Appendix 1 of this report which provides details on what protective measures are required, how they will be implemented and what supervision is required to ensure that the measures remain in place and fit for purpose. It has been prepared to inform the planning and the construction/ development process.
- 5.29 The following principles for the protection of retained trees will be adopted across the site for the duration of the project:
- All retained trees will be protected by fencing that will form the CEZ.
 - Where fencing cannot provide the necessary protection measures, alternative systems will be installed that will ensure retained trees are protected. This may include the use of either temporary or permanent ground protection.
 - There will be no storage of materials, or access for construction workers or machinery within any CEZ.

- There will be no excavation within a CEZ. All utilities and underground services will be located outside the CEZ or tap into existing service routes.
- Any storage or mixing station located outside of a CEZ will be located in a place that minimises the risk of contaminated runoff entering the CEZ and damaging the rooting environment. This may be achieved by using a non-permeable membrane on the ground, surrounded by sandbags to contain any spillage.
- There will be no fires within a CEZ.
- There will be no use of herbicides within a CEZ.

6. PLANNING POLICY ASSESSMENT

6.1 A review of impact of tree loss in relation to national and local planning policy is provided in Table 8.

Table 8: Review of planning policy

Policy	Summary	Review
National Planning Policy		
Para 131	Street tree planting and choosing the right tree for the right place	The scheme does not include the provision of any new adoptable streets. However, replacement planting has been detailed on proposed plans and shows species selection cognisant of the wider area, as well as those already present on site.
Para 174	Ecosystems services, recognising the importance contribution trees make to the natural and local environment	Tree removals have only been recommended where it is necessary to facilitate development. None of the trees are of high arboricultural quality or condition.
Para 180	Protection of ancient/veteran trees and ancient woodland	The individual veteran specimen has been retained and protected as part of this development proposal.
Local Planning Policy		
CP7	Protection of natural features where they provide important nature conservation value (i.e. veteran trees)	The individual veteran specimen has been retained and protected as part of this development proposal.
CC03	Protect and retain existing trees, hedges and landscape features and avoid fragmentation of green infrastructure.	Wherever possible trees have been retained, with loss only associated where trees require removal as direct result of the proposal. The existing site boundaries, which consist of dense tree cover, will be retained and supplementary planting elsewhere within the site will help achieve a net gain in green infrastructure.

Policy	Summary	Review
TB24	Protect and enhance importance heritage assets (i.e. Conservation Areas)	Tree cover will be increased as a result of the development scheme. Replacement tree species selection is cognisant of existing site features as well as resilience for climate change predictions and future pest and disease risks to ensure a sustainable tree stock for the future.

7. CONCLUSION

- 7.1 This development proposal has been guided by the principles of national and local planning policy, and by industry best practice guidance with particular reference to BS5837. Wherever possible trees have been retained and incorporated within the design scheme.
- 7.2 The proposed development will require the removal of 14 trees, groups of trees or hedgerows. All of these features are of low arboricultural quality.
- 7.3 The scheme will result in the retention of 76% of recorded arboricultural features (including one veteran specimen).
- 7.4 The proposal will require facilitation pruning of 5 trees and groups of trees. This pruning is required to facilitate construction access and to enable the proposed landscaping works.
- 7.5 Replacement planting has been proposed to ensure a net gain in green infrastructure is achieved as a result of the design scheme. This includes enhancing the existing orchard.
- 7.6 Retained trees will be protected throughout the construction process. This will primarily consist of tree protective fencing, but will also include temporary ground protection measures.
- 7.7 This application is considered to be compliant with both national and local planning policy insofar as it relates to trees.

8. ABOUT THE AUTHOR

- 8.1 I am Steve Westmore, a Director and arboricultural consultant of Tree Frontiers Ltd.
- 8.2 As an arboriculturist, I have nine years' experience working in the sector. I am a chartered member of the Institute of Chartered Foresters and a professional member of the Arboricultural Association. I have a masters degree in Urban Forestry and Arboricultural from Myerscough College, accredited by the University of Lancaster.
- 8.3 I undertake regular continuous professional development as required by my membership of professional bodies.

9. REFERENCES

- 9.1 This report has relied upon the following external reference sources:
- British Standards Institution (2012) BS5837: *Trees in relation to design, demolition and construction – recommendations*. London: BSI
 - Gov.uk (2021) National Planning Policy Framework. [Available online: <https://www.gov.uk/government/publications/national-planning-policy-framework-2>]
 - Wokingham Borough Council (2010) *Wokingham Borough Local Development Framework – Adopted Core Strategy Development Plan Document*. [Available online: <https://www.wokingham.gov.uk/planning-policy/planning-policy-information/local-plan-and-planning-policies/> / (Accessed 15.07.22)
 - Wokingham Borough Council (2022) *Conservation Area and Tree Preservation Order Search* [Available online: <https://wokingham.maps.arcgis.com/apps/webappviewer/index.html?id=19b3599d951e42dfaf32aa09568f5fcd>] (Accessed 15.07.22)
 - British Geological Society (2022) *Geology of Britain Viewer*. [Available online: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html?> (Accessed: 15.07.22)
 - DEFRA (2022) *MAGIC Interactive GIS*. [Available online: <https://magic.defra.gov.uk/MagicMap.aspx>] (Accessed 15.07.22)
 - Forestry Commission (2022) *Ancient woodland, ancient trees and veteran trees: advice for making planning decisions* [Available online: <https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions> (Accessed 15.07.22)

10. APPENDIX 1 – PRELIMINARY ARBORICULTURAL METHOD STATEMENT

Overview

- 10.1 This Preliminary Arboricultural Method Statement (AMS) provides best practice measures to be adopted protect retained trees during the development process. It has been prepared to inform the planning and the construction/ development process.
- 10.2 The document also provides details of general measures required to protect retained trees from potentially harmful activities such as the construction of hard surfaces within the RPA.

Supervision

- 10.3 Prior to the commencement of any tree works, installation of protection measures or the mobilisation of construction machinery and materials, a qualified and independent arboricultural consultant shall be appointed as the Project Arboriculturist to provide advice to the construction team and to supervise any works that have the potential to cause harm to retained trees.
- 10.4 The retained Project Arboriculturist shall be the principle point of contract for the main works contractor on all matters relating to trees and shall liaise as required with the LPA tree officer.

Tree Removals

- 10.5 Trees for removal have been noted on the AIP with a red dashed circle and red hatched canopy spread.
- 10.6 Great care should be taken during the tree removal process to ensure that retained trees are not adversely impacted. The following methodology should be adhered to at all times:
- Any machinery used during the tree removal process be sited outside the RPA of retained trees.
 - The felling of trees will be undertaken to avoid damaging retained trees.
 - Where the removal of stumps of felled trees is required, great care will be taken to ensure any retained trees in close proximity remain free from harm.
- 10.7 All works will be conducted by a suitably qualified arborist working in accordance with BS3998:2010 *Tree Work – Recommendations*.

Remedial Tree Works

- 10.8 The trees requiring remedial works to facilitate development will be carried out by a suitably qualified arborist working in accordance with BS3998:2010 *Tree Work – Recommendations*.

Protection of Retained Trees

- 10.9 Where practical all retained trees will be protected through the construction phase using barriers to limit the potential for harm from machinery, materials or personnel.
- 10.10 The primary form of protection is the use of fencing around the trees to prevent access within a protected buffer zone. This buffer zone is a Construction Exclusion Zone (CEZ) and there will be no access within it during the construction phase.

Tree Protection Fencing

- 10.11 Protective fencing will be erected around retained trees prior to the commencement of any site works including mobilisation of machinery and materials.
- 10.12 The location of the fencing has been marked on the TPP prepared for this AMS and can be identified by a dashed black line.
- 10.13 The CEZ has been highlighted as orange hatching behind the fencing.
- 10.14 The TPF may require amending to facilitate hard and soft landscaping works. Where this is required, the ACoW will be contacted before any works are undertaken.
- 10.15 The appropriate form of fencing for this project will be wire mesh panels that will be supported on the ground by a rubberised foot that will in turn be pinned to the ground using metal stakes driven a minimum of 500mm into the ground. An example of the fencing panel construction is provided in Plate 5 below.

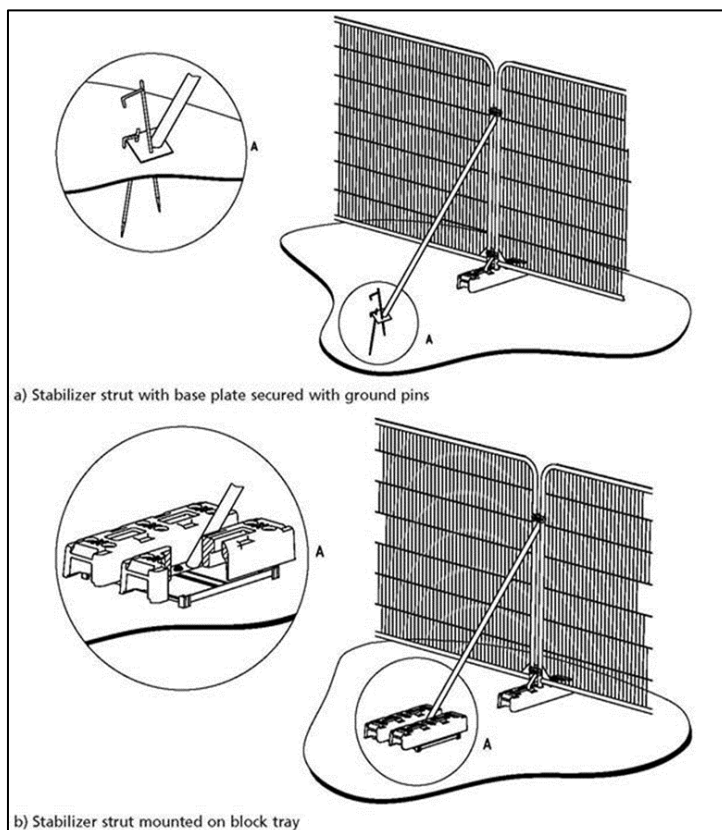


Plate 5 Tree protection fencing specification (extract from BS 5837: 2012)

- 10.16 Weather-proof notices shall be attached to any protective fencing located adjacent to retained trees displaying the words “Construction Exclusion Zone” and listing restrictions which apply. All personnel must be made aware of these restrictions. An example of a suitable sign for the fencing is provided in Plate 6.



Plate 6: Example of Tree Protective Fencing sign

Construction Exclusion Zone (CEZ)

10.17 The CEZ is the area identified by the Project Arboriculturist as the area to be protected during development from Site clearance and construction work through the use of barriers and/or ground protection to ensure the successful long-term retention of a tree. Fencing or ground protection shall not be taken down or relocated at any time without prior agreement and/or Site supervision as recommended by the Project Arboriculturist.

10.18 All areas excluded by protective tree fencing shall be treated as CEZs and the following restrictions shall apply:

- No construction activity can occur within these areas.
- No works on trees unless agreed by the Project Arboriculturist.
- No alterations of ground levels or conditions.
- No chemicals or cement washings.
- No excavation.
- No temporary structures.*
- No storage of soil, rubble or other materials.
- No vehicles or machinery to be used or parked without appropriate ground protection measures as per BS5837 recommendations. This will require the use of a proprietary system of reinforced concrete slabs/steel road plates on a compressible layer, or side butting scaffold boards/ 18mm plywood sheets on a compressible layer. The type of ground protection used shall be appropriate for the potential loading applied.
- No fixtures (*lighting, signs etc.*) to be attached to trees.
- No fires within 10 metres of the canopies of any tree or hedgerow.

*Site huts, provided they are of the “Jack Leg” type, can be sited to act as ground protection for the duration of the construction.

Temporary Ground Protection

10.19 New temporary ground protection should be capable of supporting any traffic entering or using the Site without being distorted or causing compaction of underlying soil. The ground protection might comprise one of the following:

- **For pedestrian movements only** a single thickness of scaffold boards placed either on top of a driven scaffold frame so as to form a suspended walkway or on top of a compression-resistant layer (*e.g. 100 mm depth of woodchip*) laid onto a geotextile membrane;
- **For pedestrian-operated plant up to a gross weight of 2t** proprietary inter-linked ground protection boards placed on top of a compression-resistant layer (*e.g. 150 mm depth of woodchip*), laid onto a geotextile membrane;
- **For wheeled or tracked construction traffic exceeding 2t gross weight**, an alternative system (*e.g. proprietary systems or pre-cast reinforced concrete slabs*) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the potential loading to which it will be subjected.

10.20 Where temporary ground protection is required, this has been marked on the TPP with a yellow hatching.

General Canopy Protection

10.21 Since the canopies of retained trees may be in close proximity to areas of plant operation, the following restrictions will apply:

- All plant will be sited outside the defined RPAs of retained trees / groups, and the appointed contractor will ensure all relevant personnel shall be made aware of the location of branches and the need to avoid causing damage to them.
- Prior to the implementation of lifting operations, a representative from the equipment supply company shall visit the Site and ensure all operations can be completed without causing damage to retained trees. A lifting plan will be prepared and submitted for approval prior to all lifting operations. The lifting plan will make provision for the potential for damage of retained trees.
- All lifting operations will be completed under the close direction of a qualified banksman, who will be briefed by the appointed contractor as to the need to avoid damage the stems and branches of retained trees.

10.22 Should additional tree removal or pruning be required the LPA Tree Officer shall be contacted and the scope of works agreed in writing.

Hazardous Materials

10.23 Any mixing of cement-based materials is to take place outside the RPAs of all trees. Provision shall be made to ensure that the mixing area is contained so that no water runoff enters the RPA of any trees. All mixers and barrows shall be cleaned within this dedicated mixing area.

10.24 All other chemicals hazardous to tree health, including petrol and diesel, are to be stored in suitable containers as specified by the Control of Substances Hazardous to Health (COSHH) Regulations (HMSO, 2002: *The Control of Substances Hazardous to Health Regulations 2002*), and kept away from the RPAs.

Demolition

10.25 Any demolition works within the RPA of retained trees will be undertaken in accordance with the following methodology:

- Demolition works will be undertaken using a 'top down, pull back' technique. This will minimise the potential of physical harm to retained trees.
- Care must be taken to avoid physical contact with the canopies of offsite trees during the demolition works. A banksman will be used where such conflicts could occur.
- If localised pruning is required the LPA Tree Officer shall be contacted and the scope of works agreed in writing.
- All machinery used to undertake demolition works will be sited outside the RPAs of existing trees or working from on top of existing hard standing.
- Debris may be removed from the RPAs of retained trees by using machinery with a long reach or through pedestrian access. Care must be taken to avoid damage to the existing ground surface to ensure the rooting environment remains sustainable post demolition.
- The removal of existing hardstanding or foundations within the RPAs of retained trees will be undertaken using hand tools only. Appropriate tools for manually removing debris may include a pneumatic breaker, crow bar, sledgehammer, pick, mattock, shovel, trowel and fork.
- Severance of roots over 25mm diameter should be avoided unless advised by the retained Project Arboriculturist. Secateurs and a handsaw must be available to deal with any roots that are exposed. Where roots will remain exposed for any period of time the roots must be wrapped in hessian sacking for protection.

Contractor compound, site huts and welfare units.

10.26 The contractor's compound, including all site huts, storage and welfare units, will be located outside the CEZ of retained trees.

Service installation overhead and underground

10.27 The following hierarchy shall be applied to the design and installation of underground services:

- 1) All service trenches shall be located outside the RPA of retained trees.

- 2) Where it is not feasible to avoid the RPA, trenchless technology shall be utilised to minimise the impact on the rooting environment.
- 3) Where trenchless technology cannot be applied, excavation shall be undertaken using the less harmful methodology including hand digging or use of an airspade to dislodge soil without severing roots. All excavation must be carried out carefully using spades, forks and trowels, taking care not to damage the bark and wood of any roots. Specialist tools for removing soil around roots using compressed air may be an appropriate alternative to hand digging, if available. All soil removal must be undertaken with care to minimise the disturbance of roots beyond the immediate area of excavation. Where possible, flexible clumps of small roots, including fibrous roots, should be retained if they can be displaced temporarily or permanently beyond the excavation without damage.
- 4) Where it is not possible to hand dig a trench, an excavator may be used, located if possible outside the RPA, or sat on a load spreading surface that will minimise the potential for further harm to the rooting environment. Any operation for excavation shall be supervised by the retained Project Arboriculturist.

Landscaping

- 10.28 Wherever possible the tree protective fencing should remain *in situ*. Where this is not possible the retained project arboriculturist should be consulted before the fencing is set back to enable the landscaping works to proceed.
- 10.29 Should machinery be utilised these will need to work remotely from the Root Protection Areas or work from on top of temporary ground protection measures.
- 10.30 Where excavations are required within the RPAs of retained trees, these will be undertaken using the following methodology:
- All excavation must be carried out carefully using spades, forks and trowels, taking care not to damage the bark and wood of any roots.
 - Post/pier locations to be sufficient flexible to enable the retention of structural tree roots (>50mm diameter).
 - Severance of roots over 25mm diameter should be avoided unless advised by the retained Project Arboriculturist. Secateurs and a handsaw must be available to deal with any roots that are exposed. Where roots will remain exposed for any period of time the roots must be wrapped in hessian sacking for protection.
- 10.31 Should new walls be required within the RPAs of retained trees, strip foundations should be avoided and pile and lintels be utilised. The lintel should be as low to finished ground levels as physically possible, but not below the soil surface.

Project Supervision and Reporting

- 10.32 All tree protection measures will remain in place throughout the development phase.

10.33 The retained Project Arboriculturist will complete site inspections through this period to ensure that protective fencing and other measures remain fit for purpose and that the sanctity of the CEZ is being maintained.

10.34 A post-inspection report will be prepared after every site visit detailing observations and any recommendations for specific measures that may be required in the forthcoming period. A copy of this report will be sent to the LPA tree officer and circulated to the project team including the site manager for the main works contractor.

Post Development

10.35 No fencing or other protective measures will be moved, dismantled or taken off site until the Project Arboriculturist has confirmed that all machinery has been removed from the site and any construction activity that could cause harm to retained trees has been completed.