



Arboricultural Report

Impact assessment and method statement

Fieldview West Lodge Drive Gloucester

25th July 2022

Compiled for:

Homeleigh Care Ltd

Ref: WTC_943.01

Wotton Tree Consultancy 24 Haw Street Wotton-under-Edge Gloucestershire









Validation statement for LPA registration

This report is submitted to Gloucester City Council to accompany a planning application. The report contains tree information relating to the proposal For an office building, sensory room and 2 new parking spaces.

For local planning authority (LPA) validation purposes, this report contains the following:

- A full tree survey compliant to the requirements of BS5837:2012 'Trees in relation to design, demolition and construction – recommendations' undertaken by a competent and qualified arboriculturist.
- A suitably scaled plan with a north point showing the site boundaries and the tree survey information.
- An assessment of the impacts of the proposed development on the existing trees.
 This includes recommendations of which trees should be removed/retained and the proposed protection measures.
- An arboricultural method statement outlining appropriate methods of tree
 protection and any specific technical construction methods needed to implement
 the design proposals with minimal detriment to retained trees.

Summary

As the proposed office encroaches slightly into the RPAs of 3 B category field maples an arboricultural watching brief will be present for the excavation of foundations to ensure root disruption is minimised. Full protection is afforded to the remaining trees on site. With works being carried out in accordance with this tree report the overall impact on the trees is considered to be low.

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1.0 INTRODUCTION

- 1.1 Instruction: I am instructed by Homeleigh Care Ltd, to inspect the trees that could affect or be affected by the development proposal at the land known as Fieldview. This report, in compliance with BS5837:2012 'Trees in relation to design, demolition and construction recommendations' is required to accompany the submission of a planning application for the proposal For an office building, sensory room and 2 new parking spaces. My instruction is to prepare the following information:
 - A schedule of the relevant trees including tree data and condition assessment.
 - A tree constraints plan.
 - An arboricultural impact appraisal.
 - An arboricultural method statement.
 - A tree protection plan.
- **1.2 Documents provided:** Drawings WTC_943.02 (tree constraints plan), WTC_943.03 (tree retention/removal plan) and WTC_943.04 (tree protection plan) are derived from the following drawings which were supplied to me by Alan Steele:
 - AGS Drawing Existing Site Plan with New Sensory/Office Buildings Dwg No. 646/29 – Dated: March 2022
- 1.3 I am a consulting arboriculturist with Wotton Tree Consultancy Ltd. I have a BSc (hons) Arboriculture and the AA Technicians Certificate in Arboriculture (Cert Arb L4 (ABC)). I am a LANTRA qualified Professional Tree Inspector. I am a professional member of the Consulting Arborists Society, a professional member of the Arboricultural Association and a licensed user of Quantified Tree Risk Assessment (QTRA) license no. 2278. I am trained in valuing amenity trees using the Capital Asset Value for Amenity Trees (CAVAT) system. I have been a consulting arborist since 2006.



1.4 Limitations:

- **1.4.1** My survey was a preliminary assessment undertaken from ground level and observations have been made solely from visual inspections for the purposes of assessment in terms relevant to planning and development. Only binoculars, mallet and a probe have been used to aid tree assessment. No invasive or non-invasive internal decay detection devices have been used in assessing tree condition.
- 1.4.2 The recommendations and conclusions in this report relate only to the conditions found on this site at the time of the site visit and inspection. The recommendations contained within this report are valid for a period of 12 months from the date of this report. Any significant alteration to the site that may affect the trees that are present or have planning implications (level changes, additional tree works, post extreme weather events, hydrological changes) and will necessitate a reassessment of the trees and the site.
- 1.4.3 The tree survey that forms part of this report is not a tree safety inspection. The survey has been carried out in order to inform the planning process. Where obvious risks have been observed, they have been addressed in the 'preliminary management recommendations' (see Appendix 1 Tree Schedule). Potential hazards and levels of risk are likely to change as the site usage changes during and post development.
- 1.5 Ecological Constraints: The Wildlife and Countryside Act 1981 and amendments made within and subsequent to the Countryside and Rights of Way act 2000 provides statutory protection to bats, birds and other species that inhabit or use trees. The protection afforded to these species could impose significant constraints on the use of a particular site as well as significantly restrict the timing of any works that may be necessary. Any restrictions are in addition to the tree restriction highlighted in this report. Whilst I have some working knowledge of these potential issues they are outside my area of expertise and you must seek advice from a qualified ecologist to ascertain if any further restrictions apply.

1.6 Tree preservation orders and/or conservation area protection:

A full planning permission is granted and this report constitutes an approved document with the main planning application.

2.0 SITE VISIT AND DATA COLLECTION

2.1 Site Visit: I visited the site on 23rd June 2022. All observations were made from ground level (aided by the Visual Tree Assessment method – Mattheck and Breloer, 1994) and all measurements except stem diameter were estimated unless



otherwise stated in the tree schedules. The weather at the time of the visit was cool and overcast; these conditions in no way hindered my ability to view the trees.

2.2 Site Description:

The site comprises of two patioed areas to the west of Bungalow 1 and Bungalow 3 at Fieldview.

- **2.3 Data collection:** Each tree or group was inspected and allocated an identification number as indicated in the tree schedule (appendix 1) and tree survey plan. For each tree the following information was collected:
 - species
 - height (m)
 - stem diameter (mm)
 - average radius of crown to 4 cardinal points (m)
 - height and orientation of first significant branch
 - average height of canopy clearance
 - life stage
 - observations regarding condition
 - preliminary management recommendations
 - safe useful life expectancy

As encouraged in BS5837:2012, each tree or group was allocated to one of four categories (A,B,C or U), which reflects its suitability for retention in context of the development. Please see table 1 for explanation of the criteria for tree categorisation.



Table 1: cascade chart for tree assessment, adapted from Table 1 of BS5837:2012

Category & definition	Criteria (including subcategories where a	appropriate)		Identification on plan
Trees unsuitable for retention Category U Trees in such a condition that they cannot realistically be retained as living trees in the context of current land use for >10 yrs	including those that will becom Trees that are dead or showing	sible decline y low quality trees suppressing trees of	DARK RED	
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values incl conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of >40 yrs	Particularly good examples of their species, esp if rare or unusual. Those that are essential components of groups or formal or semi-formal arboricultural features	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	LIGHT GREEN
Category B Trees of moderate quality with an estimated remaining life expectancy of >20 yrs	Trees that might be included in category A but are downgraded because of impaired condition such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit category A designation.	Trees present in numbers, usually growing as groups or woodlands such that they attract a higher collective rating that they might as individuals. Trees occurring as collectives but situated so as to make little visual contribution to the area.	Trees with material conservation or other cultural value	MID BLUE
Category C Trees of low quality with an estimated remaining life expectancy of >10 years, or young trees with a stem diameter <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 landscape benefits.	Trees with no material conservation or other cultural value.	GREY

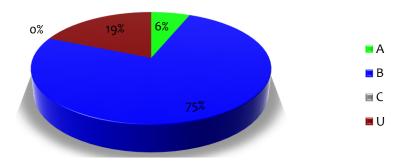


2.4 Interpretation of data: Section 4.6 of BS5837:2012 recommends that the trunk diameter measurement is used to calculate the RPA which can then be interpreted to identify the design constraints of a particular site. Once the design principal has been established the construction exclusion zone and location of protective measures can be identified.

3.0 ARBORICULTURAL OVERVIEW

3.1.1 A total of 16 items were surveyed within and adjacent to the development site. These items comprised 14 individual trees and 2 hedges. The chart below shows the ratio of tree retention categories on the site.

Tree retention category ratios



3.1.2 T6-T8 are B category field maples growing to the west of the proposed office building. Minor encroachments into their RPAs are required at 5.6%, 3% and 9.7% of their total RPAs respectively. Whilst this is consider low impact, a method statement is provided to minimise root disruption.



Plate 1: T6-T8 - B category field maples





Plate 2: Proposed site of the new office building.

3.1.3 T10 and T11 are U category ash trees with stage 2 ash dieback. Given their prominent location, these should be removed irrespective of planning.



Plate 3: T10 – U category ash with dieback.



3.1.4 T13 and T14 are a B category snakebark maple and silver birch respectively. These will be retained and fully protected throughout the build.



Plate 4: T13 and T14 - B category snakebark maple (right) and silver birch

3.1.5 T2 and T9 are an A category and B category horse chestnut respectively. These are off-site trees and are growing from highway verge either side of the entrance. Their RPAs do not encroach onto the site and the areas around the trees are not within the jurisdiction of Fieldview and will not be used. For this reason, no tree protection is required.





Plate 5: T2 (left) 'A' category horse chestnut and T9 – B category horse chestnut. Both off-site trees.



4.0 ARICULTURAL IMPACT ASSESSMENT

4.1 Below ground constraints

- 4.1.1 Below ground constraints refer to tree roots. These are easily overlooked during construction operations as they are unseen and often little is understood about their importance. It is essential to ensure that roots are not damaged during building operations as they are the life blood of each tree, providing structural stability by anchoring the tree to the ground and providing transportation of water and nutrients from the soil to the foliage.
- 4.1.2 In reality the spread of roots for trees in an urban environment will rarely be distributed in a perfect circle as the environment below ground level is highly variable. The presence of structural foundations, pipes, impermeable surface coverings and differing soil conditions mean that tree roots will extend in to areas that offer a preferential environment; where water is most available and the soil is least compacted.
- 4.1.3 Root protection areas (RPAs) are shown as a circle centred on the base of the stem unless site conditions such as nearby structures indicate that the shape of the rooting area deviates from this format.
- 4.1.4 T6-T8 have minor RPA conflicts with the proposed office building. A method statement is attached.

4.2 Above ground constraints

- 4.2.1 Trees in close proximity to buildings can provide some constraints, both actual and perceived. Actual constraints may be where low branches conflict with new elevations either at the time of building or in the future. Future growth of young trees should be accommodated in building design. Other constraints include shade, leaf litter and damage from falling branches.
- 4.2.2 Large tree canopies close to buildings can also cause 'post-development pressure' by way of requests for tree removal or pruning as a result of resident anxiety.
- 4.2.3 Shading from the adjacent trees is likely for the office building. However, as these are not residential the significance is low.
- 4.2.4 It is possible that leaf fall could block gutters and downpipes. This can be mitigated through regular maintenance of the guttering or by installing a proprietary gutter guard.



4.3 ARBORICULTURAL IMPACT CASCADE CHART

4.3.1 Tree Values are taken from BS: 5837 and comprise of the following:



4.3.2 The **Impacts** comprise of 6 elements:













- 4.3.3 Causes of impacts comprise of 6 factors: 'None', 'To facilitate development', 'Due to poor condition', 'Direct disturbance to roots', 'Pruning required' and 'Possible future pruning pressure due to shade and other factors'.
- 4.3.4 Comments are also included providing more information where necessary.

	REMOVAL	PARTIAL	HIGH	MODERATE	LOW
	REIVIOVAL	REMOVAL	півн	WIODERATE	LOW
TO FACILTATE DEVELOPMENT	Tree / group requires removal.	Partial removal of group is required. I.e., 'a section of hedge may require removal to allow a new access road'.	N/A	N/A	N/A
DUE TO POOR CONDITION	Tree or group require removal due to poor structural and / or physiological condition.	Part of group require removal due to poor structural and / or physiological condition.	N/A	N/A	N/A
DIRECT DISTURBANCE TO ROOTS	N/A	N/A	In many case this will result in the loss of tree/s - refer to 'TO FACILITATE DEVELOPMENT'. In rare cases a Tree/s may be retained but damage will occur to the roots. Up to 30% of total RPA area affected.	Disturbance will be caused to roots of a tree/s that are likely to result in some physiological and structural dysfunction. The extent of damage does not require trees to be felled. Remedial actions may be taken in some cases that would help mitigate against damage but site topography, tree age, condition and species condition may result in disturbance being considered MODERATE as opposed to LOW. Up to 20% of total RPA area affected.	Activity will occur within the root protection area of trees which will have a low impact, or can be mitigated by special measures. Up to 10% of total RPA area affected.
PRUNING REQUIRED	N/A	N/A	Pruning that may retain a tree but will have a potential impact on the tree condition and visual appearance	Pruning is required that is acceptable within recommendations within BS3008:2010, but would require a material alteration to the tree/group affected.	Pruning is required that will have little impact to the structural, physiological and visual amenity of a tree or group.
POSSIBLE FUTURE PRUNING PRESSURE DUE TO SHADE OR OTHER FACTORS	Removal of tree/s required as retention is unsustainable and/or undesirable within the context of development. i.e. fast growing tree in small garden.	Partial removal of tree/s required as retention is unsustainable and/or undesirable within the context of development. i.e. fast growing tree in small garden.	Tree/s likely to cause significant shading. i.e. small garden areas with dense mature trees to south.	Some level of shade or other inconvenience will occur. Not highly oppressive, but some residents may seek management of trees in long term.	Some level of shading / overhang will occur.
Table and cascade chart	courtesy of Mike Gre	gory (2021)	-	-	



				Arboricultural	Impact Table	
Ref No.	Species	Value	Impact	Impact Cause	Management Options / Comments	Other
T1	Lawson cypress	B (Moderate)	None	None	Off site tree. No tree protection required	n/a
T2	Horse chestnut	A (High)	None	None	None Off site tree. No tree protection required	
Т3	Cherry	B (Moderate)	None	None	Off site tree. No tree protection required	n/a
T4	Cherry	B (Moderate)	None	None	Off site tree. No tree protection required	n/a
T5	Cherry	B (Moderate)	None	None	Off site tree. No tree protection required	n/a
Т6	Field maple	B (Moderate)	Low	Direct disturbance to roots	The proposed office encroaches by 5.6% of the total RPA. A method statement is attached in section 5 to minimise root disruption during construction.	Tree protection required. See WTC_943.04



Ref No.	Species	Value	Impact	Impact Cause	Management Options / Comments	Other	
Т7	Field maple	B (Moderate)	Low	Direct disturbance to roots	The proposed office encroaches by 3% of the total RPA. A method statement is attached in section 5 to minimise root disruption during construction.	Tree protection required. See WTC_943.04	
Т8	Field maple	B (Moderate)	Low	Direct disturbance to roots	The proposed office encroaches by 9.7% of the total RPA. A method statement is attached in section 5 to minimise root disruption during construction.	Tree protection required. See WTC_943.04	
H1	Beech	B (Moderate)	None	e None Tree protection required. See WTC_943.		n/a	
Т9	Horse chestnut	B (Moderate)	None	None	Off site tree. No tree protection required	n/a	
T10	Ash	U (Poor)	Removal	Due to poor condition	Stage 2 ash dieback present. Tree should be removed irrespective of fplanning due to its location.	n/a	
T11	Ash	U (Poor)	Removal	Due to poor condition	Stage 2 ash dieback present. Tree should be removed irrespective of fplanning due to its location.	n/a	
H2	Beech	B (Moderate)	None	None	Trees already afforded adequate protection from the proposals due to the topography of the site. No additional tree protection required.	n/a	



Ref No.	Species	Value	Impact	Impact Cause	Management Options / Comments	Other	
T12	Ash	U (Poor)	None	None	Stage 2 ash dieback present. Target level currently low and so no urgency for removal.	No protective fencing required.	
T13	Snakebark maple	B (Moderate)	None	None	Tree protection required. See WTC_943.04	n/a	
T14	Silver birch	B (Moderate)	None	None	Tree protection required. See WTC_943.04	n/a	



4.4 Trees to be retained

Of the 14 trees and 2 hedges surveyed, 12 trees, and 2 hedges are proposed to be retained.

4.4.1 Tree protection on development sites is of paramount importance if trees are to be retained successfully. The inevitable stress caused by development near an existing tree can, if provision for adequate protection is not made, be a strain that can severely damage the trees or even result in their death. Although the trees appear healthy during and on completion of the development, the full effects may not come apparent for up to five or more years after works have finished.

4.5 Trees to be removed

4.5.1 2 trees are proposed for removal as a result of this development.

Retention category	Proposed for removal due to development	Proposed for removal due to poor condition	Total number of removals		
А	-	-	0		
В	-	-	0		
С	-	-	0		
U	-	T10, T11	2		
Totals	0	2	2		



5.0 ARBORICULTURAL METHOD STATEMENT

5.1.1 Control measures for construction works in or near to the root protection zone are detailed in this chapter. This will form the method statement of works and will be the exact principle/methodology utilized during construction periods.

5.2 Tree works prior to construction

5.2.1 Following the approval of Gloucester City Council's appointed Tree officer, all tree works will be carried out to BS 3998 "Recommendations for Tree Work" (2010) or BS 5837 "Trees in relation to design, demolition and construction - Recommendations" (2012) or as modified by more recent research. Tree works will be undertaken before commencement of other site operations.

5.3 Protective fencing

- 5.3.1 <u>Before the commencement of any works on site</u> protective fencing shall be erected to the dimensions shown on the accompanying drawing 'tree protection plan'. Individual root protection areas at the measured m² will be erected for the duration of the development around retained trees. Although these protection measures will be in place for the duration of the development on site monitoring will allow for the successful retention of the subject trees.
- 5.3.2 Tree protection fencing will be constructed to the specification as set out in Appendix 5 of this report. It is imperative that the fencing is constructed in such a way that it cannot be easily moved or opened during construction work.
- 5.3.3 Signs will be affixed to the fencing to inform on-site contractors of the importance of the fencing barriers (Appendix 6).
- 5.3.4 The construction exclusion zones (CEZs) are to be treated as sacrosanct and the following guidelines must be followed:
 - NO mechanised excavations
 - NO movement of construction traffic or parking of vehicles
 - NO storage of building materials
 - NO storage of chemicals or fuels
 - NO fires to be lit in close proximity to trees
- 5.3.5 Fences must only be removed following a site visit from the Local Authority officer to confirm on-site construction activity has been completed.

5.4 Site access

5.4.1 The site shall be accessed via West Lodge Drive.



5.5 Contractors car parking

5.5.1 No vehicles shall be parked on un-surfaced ground within the RPA of retained trees.

5.6 Site huts and storage

5.6.1 Any storage required for materials, spoil, plant or welfare facilities shall be positioned outside the RPA of retained trees. Mixing of cement shall be in a designated area where runoff will not enter the RPAs of retained trees. Ground protection in the form of a geotextile membrane will ensure no leaching of mixings enters the soil and kick boards around the perimeter will ensure that runoff is contained.

5.7 Service installation

5.7.1 I have not been supplied with details of the routing of underground services that may affect the trees on site. The provision of underground services must be led by the site's tree constraints. Should the routing of services cause conflict with the specified RPAs, a detailed and specific method of work will be provided in writing to the LPA for approval prior to installation of services.

5.8 Ground level changes

5.8.1 There shall be no changes in ground levels within the RPAs of retained trees during the construction.

5.9 Foundations within Root Protection Areas

- 5.9.1 The proposed office sits within the margins of the RPAs of T6-T8 and so the following methodology shall be followed to ensure minimal disruption to the rooting areas:
- 5.9.2 All plant machinery to be stationed outside the root protection areas of the retained trees.
- 5.9.3 Using a toothless digging bucket the soil is to be carefully scraped away in shallow layers under an arboricultural watching brief.
- 5.9.4 Any roots encountered to be pruned back by the project arboriculturist and covered with parent soil to minimise risk of desiccation.
- 5.9.5 A non permeable membrane to line the west face of the trench prior to the pouring of concrete to prevent sideways leaching into the rooting zone.



5.10 Hard surfaces within Root Protection Areas

5.10.1 There shall be no hard surfaces within RPAs of retained trees.

5.11 Soft landscaping within exclusion zones

- 5.11.1 Soft landscaping must respect the rooting areas of retained trees. Removal of spoil and the import of materials must be outside the specified RPAs.
- 5.11.2 No level changes or disturbance to the soil will take place within RPAs of retained trees. This includes in particular any rotavating of the ground. Should the soils require cultivating, the use of an airspade can be employed under an arboricultural watching brief.

5.12 Responsibilities

- 5.12.1 It will be the responsibility of the main contractor to ensure that any planning conditions attached to planning consent are adhered to at all times and that a monitoring regime in regards to tree protection is adopted on site.
- 5.12.2 The main contractor will be responsible for contacting the Local Planning Authority at any time issues are raised related to the trees on site.
- 5.12.3 If at any time pruning works are required permission must be sought from the Local Planning Authority first and then carried out in accordance with BS 3998 Recommendations for Tree Works 2010.
- 5.12.4 The main contractor will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective fences will remain in position until completion of ALL construction works on the site.
- 5.12.5 The fencing and signs must be maintained in position at all times and checked on a regular basis by an onsite person designated that responsibility.

5.13 Arboricultural supervision

- 5.13.1 It is recommended a number of short inspections of the subject trees should be undertaken by the project arboriculturist familiar with BS5837:2012 operations during the extent of the project to ensure that methods of works are in accordance with this method statement.
- 5.13.2 Any works required within the RPA of retained trees that is not covered in this document can only be done so with the written permission of the Local Planning Authority, in accordance with a detailed arboricultural method statement and under an arboricultural watching brief.





Phil Dye - BSc (hons) Arb, Cert Arb L4 (ABC), BA (Hons), MArborA

25th July 2022



Phasing of arboricultural works

Phase	Requirements	Method
Prior to any construction works on site	Undertake tree felling. Removal of T10 and T11 and small sections of H1 and H2	Refer to section 3.5 of this report. All tree works to be carried out to BS3998: 2010: by suitably qualified and insured professional tree surgeons. All items requiring felling are marked in red on the Tree Retention/Removal Plan
		T10 Fieldview T13 T13 Bungalow
Prior to any construction works on site	Erection of protective fencing:	Protective fencing is to be erected in accordance with 4.2 of this report. The fencing must comply with the positions shown in the Tree Protection Plan and agreed at the pre-commencement site meeting.
	Tennes res news 1 12 Level and 1 12 Level an	No works, no storage of materials, no access, or any ground disturbance is to take place within the Tree Protection Barrier Fencing. Fenced areas are to be treated as Construction Exclusion Zones. Warning signs to be placed on all protective fencing. For large sections of fencing the signs must be placed at 15m intervals. Signs must be laminated and securely attached at all corners. Two signs are to be placed side by side; copies of which are attached within Appendix 6.



Phase	Requirements	Method
Start of development	Commencement of development	Protective fencing to remain in situ during development phase.
Completion of main construction and undertaking of landscaping	Landscaping and Dismantling of tree barrier protective fencing.	It is essential that ground levels within the root protection areas are not altered, either by raising or lowering soil levels; even at the landscaping stage. Landscaping operations must be undertaken in a manner that will not impact trees. Landscaping within the root protection area of trees must be undertaken using hand tools only in line with any approved Landscaping management plans



APPENDIX 1: Tree schedule

Tree ID	Species	Ht (m)	Stem Dia. (mm)	Spread (m)				Avg. Canopy Height (m)	Stage	Health & vitality	Struct. cond.	General Observations	Preliminary Recommendations	Estimated safe useful life expectancy (Years)	BS5837: 2012 Category	RPA Radius (m)	RPA m²
				Ν	Ε	S	W							(Tears)			
T1	Lawson cypress	11	610	2	4	3	3	1	Mature	Good	Good	On Highway verge	-	20+	B2	7.3	168
T2	Horse chestnut	11	710	6	7	6	7	1	Mature	Good	Good	Leaf miner present	-	40+	A2	8.5	228
Т3	Cherry	12	320	3	3	4	4	1	Early- mature	Fair	Fair	-	-	20+	B2	3.8	46
T4	Cherry	12	270	3	3	3	4	2	Semi- mature	Fair	Fair	-	-	20+	B2	3.2	33
T5	Cherry	12	420	3	4	4	4	1	Mature	Fair	Fair	-	-	20+	B2	5.0	80
Т6	Field maple	11	370	5	4	3	4	1	Mature	Good	Fair	-	-	20+	B2	4.4	62
Т7	Field maple	9	260	2	4	2	2	2	Early- mature	Good	Fair	-	-	20+	B2	3.1	31



Tree ID	Species	Ht (m)	Stem Dia. (mm)	SI	prea	ad (n		Avg. Canopy Height (m)	Life Stage	Health & vitality	Struct. cond.	General Observations	Preliminary Recommendations	Estimated safe useful life expectancy (Years)	BS5837: 2012 Category	RPA Radius (m)	RPA m²
				Ν	Ε	S	W							(TCars)			
Т8	Field maple	11	370	2	4	5	2	2	Mature	Good	Fair	-	-	20+	B2	4.4	62
H1	Beech	1	40	1	1	-	1	0	Early- mature	Good	Good	-	-	20+	В3	0.6	1
Т9	Horse chestnut	11	750	7	7	7	7	1	Mature	Fair	Good	Leaf miner present	-	20+	B2	9.0	255
T10	Ash	9	260	3	3	3	3	1	Semi- mature	Poor	Poor	Ash dieback present	Remove	<10	C	3.1	31
T11	Ash	9)	270	2	3	3	3	2	Semi- mature	Poor	Poor	Ash dieback present	Remove	<10	U	3.2	33
H2	Beech	2	40	1	ı	-	1	0	Early- mature	Good	Good	-	-	20+	B3	0.6	1
T12	Ash	9	250	3	4	3	2	1	Semi- mature	Poor	Poor	Ash dieback present.	Remove	<10	C	3.0	28
T13	Snakebark maple	4	220	4	4	4	4	2	Early- mature	Good	Good	-	-	20+	B2	2.6	22

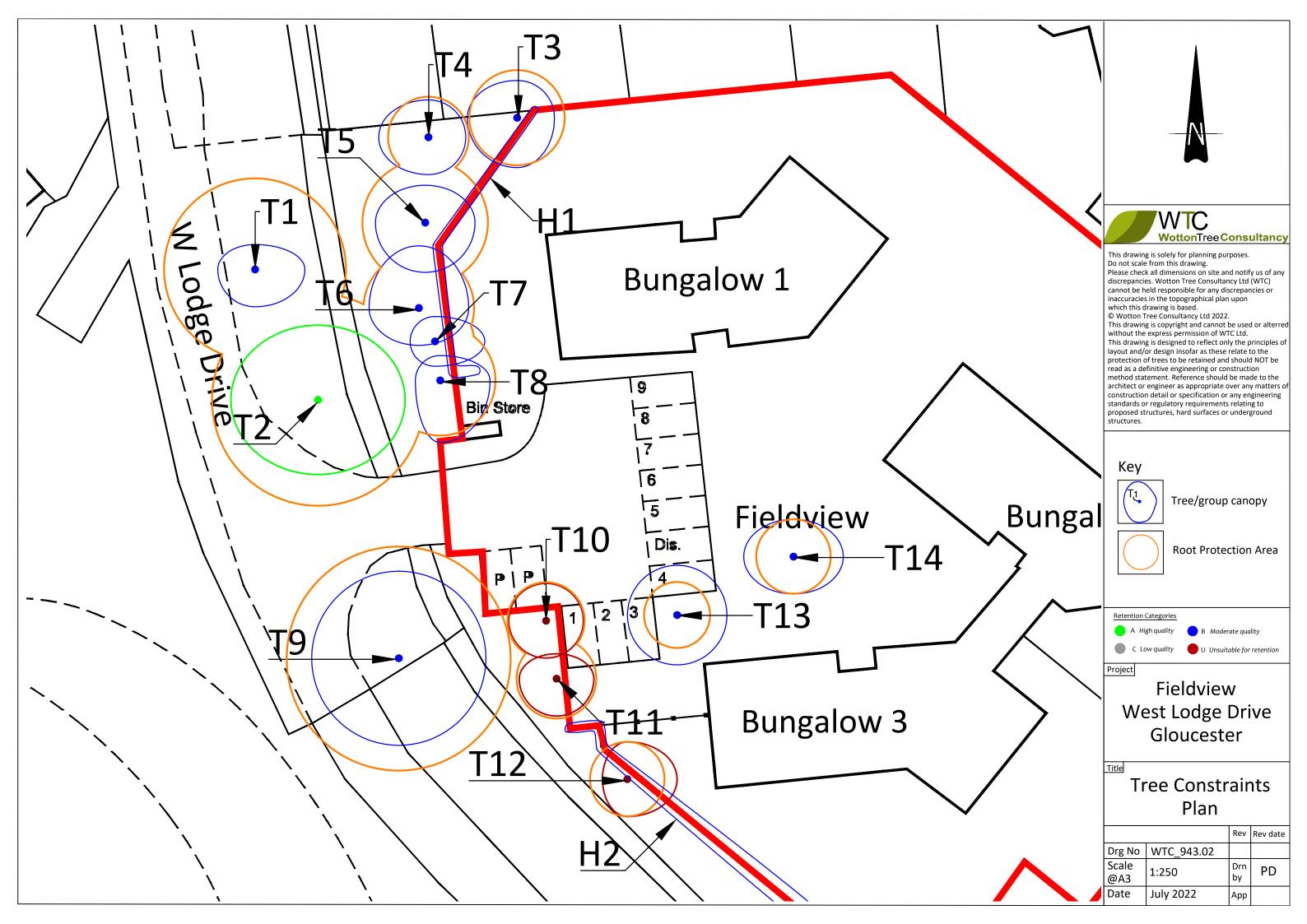


Tree ID	Species	Ht (m)	Stem Dia. (mm)	S ₁		d (m		Avg. Canopy Height (m)	Stage	Health & vitality	Struct. cond.	General Observations	Preliminary Recommendations	Estimated safe useful life expectancy (Years)	BS5837: 2012 Category	RPA Radius (m)	RPA m²
T14	Silver birch	6	250	3	4	3	4	1	Early- mature	Good	Good	-	-	20+	B2	3.0	28



APPENDIX 2: Tree constraints plan

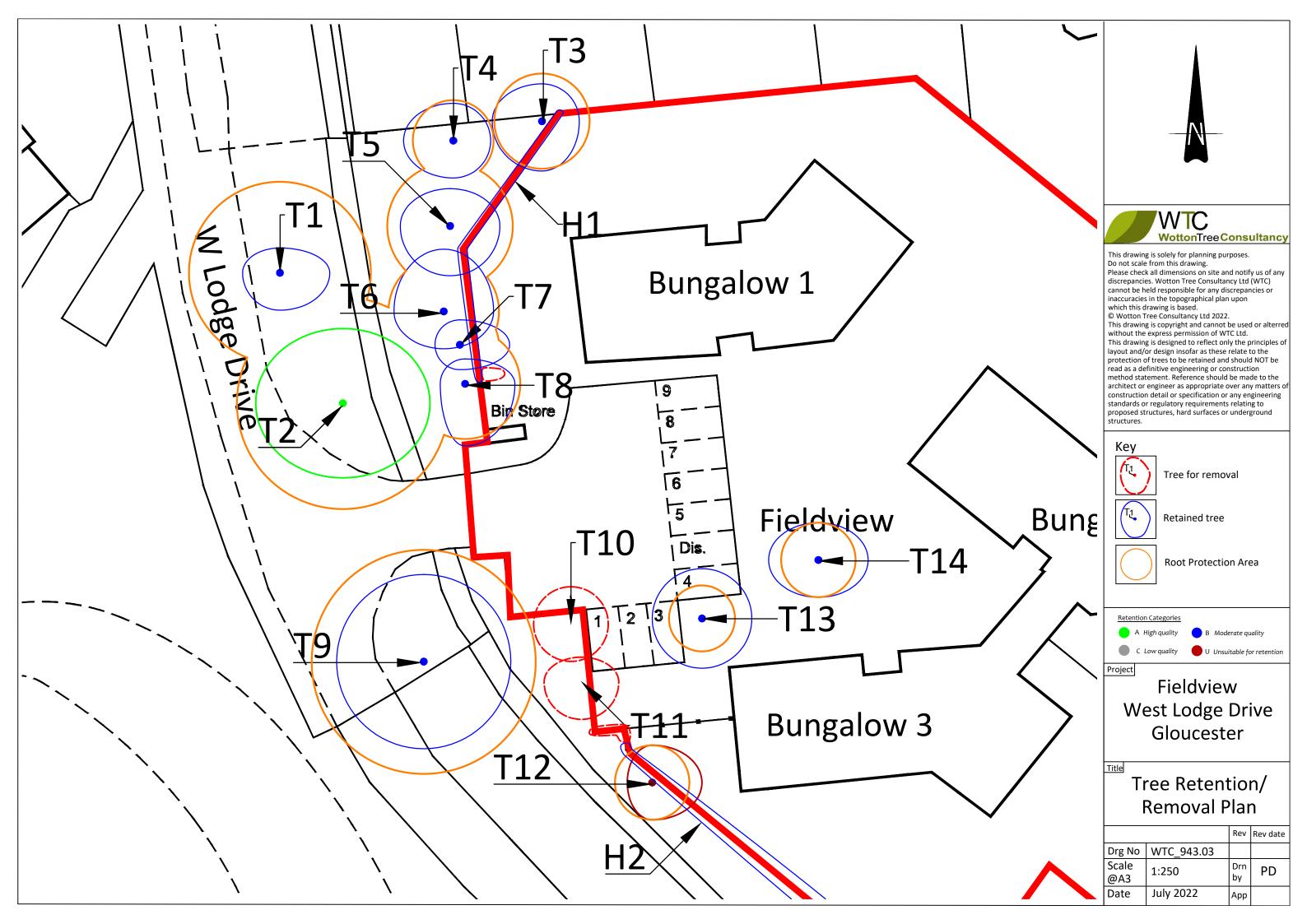
WTC_943.02





APPENDIX 3: Tree retention/removal plan

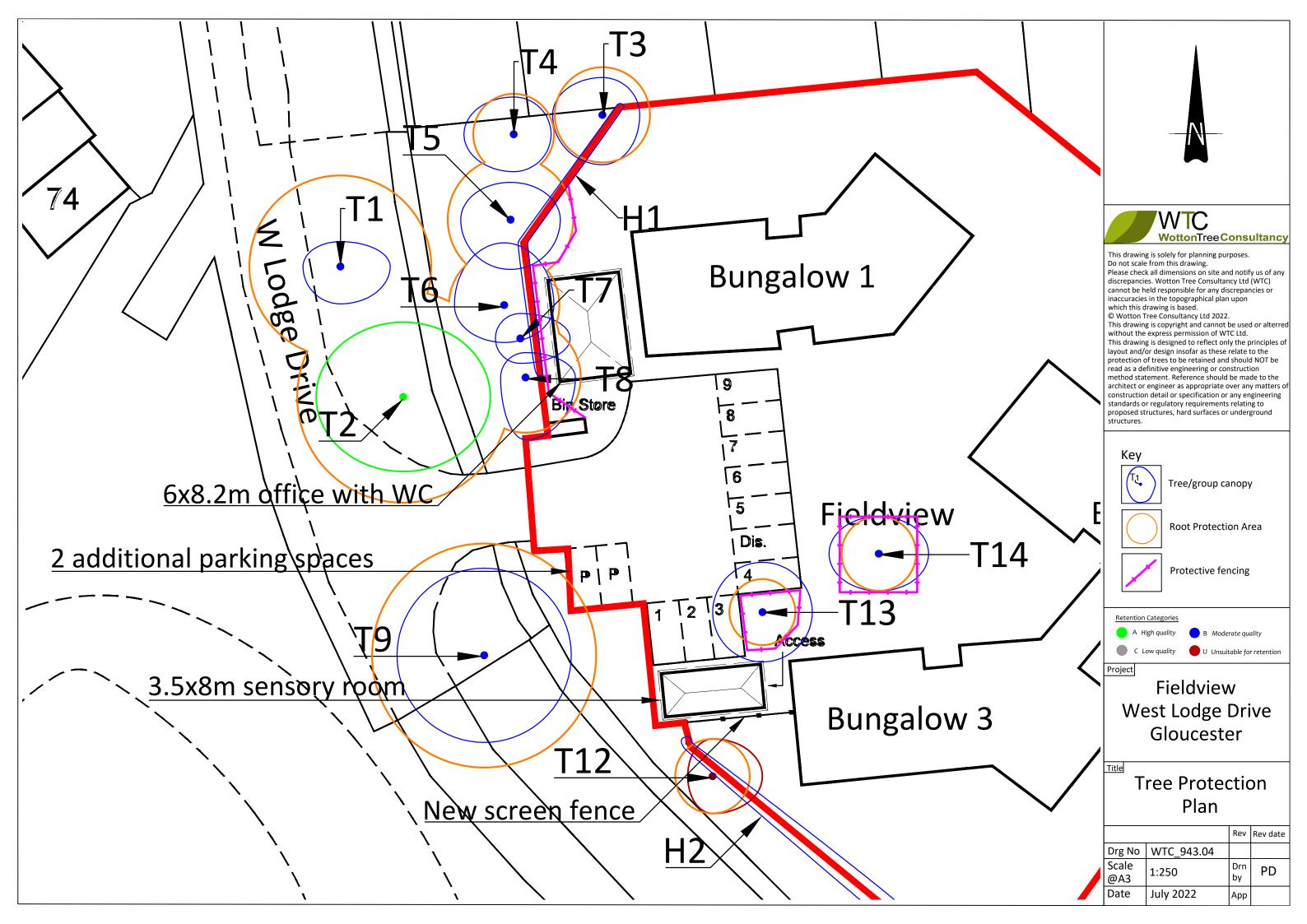
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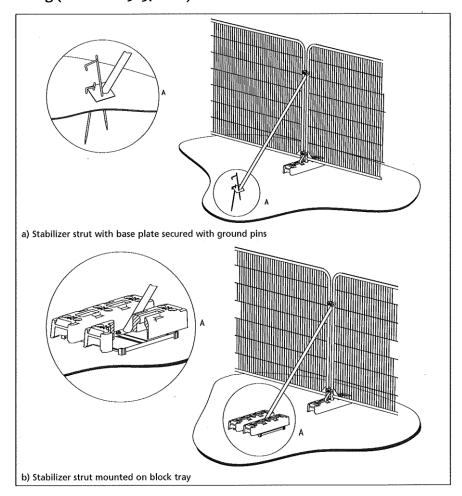
APPENDIX 4: Tree protection plan

WTC_943.04





APPENDIX 5: Tree protection fencing (source: BS5837:2012)





APPENDIX 6: Tree protection fencing signs







References

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