

BS5837:2012 TREE SURVEY / Arboricultural Impact Assessment

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Site Address:
FS378 - Thames Valley, Caversham Road,
Reading. RG4 8DH

Client:

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Site

Site: FS378 - Thames Valley, Caversham Road, Reading. RG4 8DH

Inspection date: 14th March 2026

Inspected by: Steve Launchbury

1.0 Terms of Reference

I am instructed by Frowsbury Projects Ltd to carry out a BS5837:2012 Tree Constraints Survey and Arboricultural Implication Assessment at the above address.

This report contains survey information in accordance with BS 5837:2012 Trees in Relation to design, demolition and construction – Recommendations.

It details the quality and the value of the trees on site or immediately adjacent to the proposed development site.

A proposed development is to be considered in terms of an Arboricultural Impact assessment.

Remedial or other works may also be recommended along with Tree Protection measures as required.

A site visit was carried out on 14th March 2026 to survey the site and immediately adjacent to prepare a Tree Constraints report and Arboricultural Impact Assessment of the proposed development using the provided proposed site development plan. Preliminary detail for Tree Protection and other operations is included.

46 trees were recorded outside the wooden fencing, most of which are within the site boundary. The majority are Category B, while a few are Category C and one off site tree is Category A.

Any trees or groups of trees that are categorized A or B should generally be considered as constraints to development and every effort should be made to keep them within the design. Trees categorized C will not usually be seen as a constraint unless by virtue of for example grouping, they attain a higher categorization. Trees categorized U are rarely a constraint to development and may generally be felled, occasionally, retention in a safe form is recommended for ecology.

Trees removed, whatever their Category will often be required to be replaced. The numbers or multiples will depend on the individual LPA and any mitigating factors or possibly a Section 106 agreement.

From April 2024, there is a requirement for an increase in Biodiversity Net Gain (BNG) on developments. A 'competent' person is required to complete the BNG metric to assess the impact of the development.

As a result of the BNG requirement, it is important to understand how losses of existing trees will require not just replacement, but even more and better-quality habitat.

The Landscape assessment will use the retrospective date of January 30th 2020 to establish the habitat value baseline.

If the site has been cleared, destroyed or degraded since the retroactive date, the BNG baseline assessment should use data from before January 30th 2020, from records such as photos or aerial or satellite imagery.

There are exemptions from the BNG requirement.

The de minimis threshold exemption applies to development that does not impact a priority habitat and impacts less than 25 square metres of non-priority modified grassland or 5m linear habitats (such as native hedgerows).

If any priority habitat within the red line boundary of the development is impacted, the exemption will not apply and all habitats will be subject to BNG.

Existing sealed surfaces such as tarmac or buildings are assigned a zero score in the statutory biodiversity metric, therefore exempted from the 10% net gain requirement.

The above is a minimal guide for smaller areas. Developers will need to assess the size of the development within the red line area and habitat score to confirm whether the development requires the 10% uplift or may be exempt.

Steve Launchbury of Alltree Consultancy Ltd trained at Kew Gardens in Horticulture in the early 80's and specialised in Arboriculture.

Since then he has worked in the tree industry for approximately 40 years, including as an Arboricultural Association Approved Contractor, gaining further professional qualifications including passing and further refreshing the Professional Tree Inspection course by Lantra.

2.0 General Information

2.1 The Brief

Visit site and assess Tree Constraints in relation to a proposed redevelopment of the Service Station site,

The site will have 3 new Covered and 1 open Jetwash Bays and Plant Room.

These will be on reduced ground level with a retaining wall to the rear and side (south and east of the bays).

Also to be provided are 3 service bays with Air/water units, lights etc.

Prepare an Arboricultural Impact Assessment of the proposed design in relation to the Tree Constraints.

2.2 Scope of Report

This report is a preliminary report and as such did not entail an examination of the root system, did not ascend the tree or use internal decay detection equipment.

Further inspections may be required as a result of these preliminary findings.

2.3 References

The British Standard Institute publication BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' is the basis for this report.

2.4 List of relevant documents provided by the client:

Thames Valley-TH-VAL-FPS-MFG-000-PLG-07A Proposed Block Plan

Thames Valley-TH-VAL-FPS-MFG-000-PLG-03A Proposed Site Layout 1

2.5 Limitations

The information contained in this report is for the use of the client for whom it was prepared.

The contents are copyright and may not be used by third parties without written consent from Alltree Consultancy Ltd

This document is a report identifying trees, their locations and their condition in respect of planning, together with an Arboricultural Impact Assessment.

The precise location of the trees should be checked on site to inform decision making for design or construction.

The trees have been located using GPS which may have an element of inaccuracy and thus the locations should be classed as approximate.

It is not a tree health or safety report, it has not been prepared for use in a mortgage application or for insurance claims.

Detailed inspection, aerial access, drillings and soundings were not done for this report.

A tree owner is advised to have their trees regularly inspected, and again after strong winds or other severe weather.

If there are no changes to the site or significant changes to the trees, this report is valid for one year from the Survey date.

After one year, if the survey is to be relied on, eg for different proposed designs, it is advisable to reassess the survey on site.

If previous survey data is used again by request, the validity cannot be assumed.

No liability will be accepted for changes, eg by third parties or other changes outside of my control.

A Bat survey may be required in addition to the Tree Constraints and the Arboricultural Impact Assessment. I am not qualified to make an assessment as to whether bats may be in or use the trees.

Drawings are made using the best current data and expectations based on the author's current knowledge at the time of the report.

Corrections and changes may be made should new or updated information be available.

Information derived from the drawings or this report must not be relied on unless confirmed from other sources.

2.6 Tree Preservation Orders

A visit to <https://www.reading.gov.uk/planning-and-building-control/trees-hedges-and-environment/trees/> gave a link to a street list. The site and immediately adjacent does not have Tree Preservation Orders.

Due to the planning process being under way, trees are effectively protected while the impact of the proposed development is determined. It is therefore prudent to liaise with the Reading Borough Council Local Planning Authority before any tree-works are carried out.

If trees in (with certain exceptions) excess of 5m³ timber are to be felled in any quarter outside the planning process, in addition to potential TPO or Conservation Area permission, a Forestry Commission License may be required. Details may be found at <https://www.gov.uk/guidance/tree-felling-licence-when-you-need-to-apply>

2.7 Disclaimer

This report was prepared for the named client and the Local Authority Planning Department.

This report does not constitute advice to any third party not directly involved. No liability for any loss or damage will be accepted from any third party reliant on this report who is able to access the content by any means.

3.0 The Tree Survey

Methodology

Data is collected in accordance with BS5837 requirements.

All data is collected from ground level without climbing or other potentially invasive methods including digging to expose the root system.

Tools normally used are a diameter tape, laser measure and a handheld GPS data capture device.

Heights may also be estimated by using a surveyor's pole next to the tree.

Measurements

Where there is no access into the next door property, measurements are estimated where 'hands on' measuring is not possible.

Complete accurate tree data is therefore not possible for trees on adjoining properties unless there is access granted and no reliance should therefore be made on the limited data possible.

Parts of the tree obscured by ivy or other climbing plants or materials cannot be assessed accurately and no reliance must be made without further inspection.

Data is plotted using PT-Mapper Professional from Pear Technology.

Where tree canopies are symmetrical, one measurement is taken of the radius. Where the crown is asymmetrical, readings are taken at North, East and South. These will give a general idea of the shape as a representation.

Tree stems are measured at 1.5m above ground level.

A Root Protection Zone figure is derived from this reading with variations for multiple stems.

Rooting Zone

Ground features or obstructions may limit or encourage root spread into an asymmetrical area rather than the plotted area.

The plotted data will show the Root Protection Area as an idealized area and must be subject to confirmation or otherwise by hand dug trial pits if required.

For the Constraints survey the trees are recorded as at the present with no reference to any proposed plan or development.

For the Arboricultural Impact Assessment, the tree data is used where applicable in conjunction with the proposed construction layout to establish Tree Protection requirements.

The survey data will detail the recorded measurements.

Note that only trees around the area of the proposed development are recorded for the purposes of Constraints and Arboricultural Impact Assessment.

Survey findings are shown in the appendix.

4.0 Observations and Discussion

Category A and B trees should normally be retained and be a constraint to development. Category C trees should not normally be a significant barrier to development by that may depend on other controls and the LPA policy. Category U trees can normally be removed as good Arboricultural practice. Any trees within neighbouring properties that affect or are affected by a proposed development may then be subject to negotiation.

Root Protection Areas are recommendations due to the difficulty of mapping the extent of the root system. Hand digging is recommended to locate the main roots if required.

Ideally any conflicts with trees (roots, canopies, and trunks) should be designed out with careful consideration of building location and size and special design arrangements where required. Trees that overhang or are close to a new building are often subject to excessive pruning over time or even removal.

Surgery may be required to trees adjacent to new structures, but this should be kept to a minimum due to the potential adverse long term health impact and retention of the tree. All surgery works must be agreed beforehand and must conform to BS3998:2010

Before any works (including demolition) commence on site, storage of materials, or changes of levels, a plan must be submitted to and approved by the Planning Authority.

Protective fencing that is required must be set up and remain operational and not repositioned without the advice of the Arboricultural Consultant.

Consent for any works to protected trees (either Conservation Area, Tree Preservation Order or Planning Conditions) must be obtained prior to being carried out. If the trees are in adjoining properties under third party ownership, permission must be obtained in writing from the tree owner in addition.

5.0 Arboricultural Impact Assessment

Assesses how the development will affect local character from a tree perspective

The Constraints

The PFS is surrounded by mainly groups of Leylandii and Western Red Cedar, with occasional Sycamore and Maple.

The trees for the most part, form an effective hedge of trees around the site.

The trees form a group that, while a few trees are lower quality, the whole is classified as Category B.

To the rear (the east) the ground drops away by up to approx 1m or so to what may be the site boundary. The fencing on site would appear to be internal fencing.

To the south, the ground drops sharply away by approx up to 2m or so and the stream below.

To the rear of the stream is a park / open space / The Meadows area, expected to be under council control, having a large number of mature trees.

The closest tree to the PFS is a large good quality Lombardy Poplar, likely to have a Root Protection Area extending just into the PFS.

There would appear to be no Tree Preservations on site or immediately adjacent, as per the online list on the Council web site. Information about Conservation Areas was not found online.

The Proposal

The document Thames Valley-TH-VAL-FPS-MFG-000-PLG-03A Proposed Site Layout 1 shows the location of the proposed development of Jet Wash bays (3 covered and one open with Service Bays nearby).

Implications of the proposal

The hardstanding to the rear of the site behind the fuel infill area, in the location of the previous Car Sales area is at a higher level, some 400mm, than the main area around the pumps, sales area and current Jetwash Bay. The differences in levels are separated by a low brick wall.

The Root Protection Area of the line of mainly Leylandii across the rear of the site occupies (in general terms) a strip 6m wide from the rear fence across the length of the fence.

Any works within this 6m deep strip across the rear of the PFS site that involves excavation, trenching or level change is going to have a significant and damaging effect on the health of the trees.

Trees potentially affected:

Tree	Arboricultural Impact
Leylandii Groups to the north of the site	These trees are the other side of a gated and locked footpath between the rear gardens and the PFS. The trees are located in the end of the rear gardens, and while they overhang the PFS and are expected to have Root Protection Areas into site, they do not form a constraint to the current proposed design. The trees were not accurately measured due to not being a constraint, and no access being available.
T1 to T31, Mainly Leylandiis, and occasional Sycamore and Maple. Excluding T27	The current fencing is to be retained or upgraded. The site is to have a level change (lowering), installation of a retaining wall to accommodate the Jetwash Bays. The lowering of the ground level and the trenching to build the retaining wall is within the 6m strip across the rear of the site with a significant part of the Root Protection Area of the Leylandii trees. The roots will be under the tarmac surface and are required not only for the uptake of water and nutrient, but also for the stability of the trees. Damaging the roots (the majority will be in the top 600mm under the tarmac will be seriously detrimental to the long term health of the trees. Trenching requirements and locations have not been supplied but are expected to the rear of the Jetwash Bays, which if so, will compound the damage to the RPA of the trees. The Service Bays and associated alterations including the machinery adjacent to T1 to T5 include works and damage to the RPA of these trees. The area that is in conflict with the tree roots and their RPA is shown in Survey Map – Conflict Area in the Appendix.
T27 Sycamore	This tree (while inaccessible for the Tree Constraints Survey), would appear to be just outside what is thought to be the boundary line of another property. This may require clarification as to whether the tree is under the PFS Ownership or a Third Party. Part of the RPA will be affected by the Service Bays and the Plant Room. The trenching requirements and locations have not been supplied but are expected to the rear of the Jetwash Bays, which if so, will compound the damage to the RPA of the trees.
T46 Poplar	A tall, highly prominent tree on the far side of the stream to the south of the PFS, under third Party Ownership, - likely to be the Council. The Root Protection Area is large, (408m² as calculated according to BS5837:2012), due to the diameter of the stem. There is no impact for the current Proposed design.

Potential Conflict areas

The conflict areas as shown in the survey maps are incompatible with the retention of the trees.

It is understood that a previous design proposal that required the removal of the Leylandiis was refused on the grounds that the trees formed an important screen and their loss could not be mitigated on site.

The current proposal, - Thames Valley-TH-VAL-FPS-MFG-000-PLG-03A Proposed Site Layout 1 shows a serious conflict to the detriment of the trees, their long term retention and their health.

The current proposed design is therefore currently incompatible with the retention of the trees.

Potential solutions

Retaining the current proposed design - Thames Valley-TH-VAL-FPS-MFG-000-PLG-03A Proposed Site Layout 1 is unlikely to receive a favourable LPA verdict.

A new potential Proposal that does not enter the 6m RPA strip across the rear of the site and also avoids any other RPA is required.

Mitigation, eg planting replacement trees

No trees are to be removed, so no Mitigation Planting is proposed.

Summary

The current proposal, - Thames Valley-TH-VAL-FPS-MFG-000-PLG-03A Proposed Site Layout 1 is not compatible with the retention of the trees around the site.

Lowering the ground level, installing a retaining wall and other excavations that enter the RPA as shown in the Survey Map - Tree Constraints will cause damage and compromise the health and stability of the Leylandii to the rear of the site.

The LPA are most likely to refuse the proposal.

Appendix

Contains

BS 5837:2012 Chart for Tree Quality Assessment

Photos

The survey data table

Survey maps

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>			Dark Red RGB 127-000-000
	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)	Light Green RGB 000-255-000
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	Mid Blue RGB 000-000-255
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 150 mm	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	Grey RGB 091-091-091

Photos







Survey Data

Tree ID	Common Name	Maturity	Height (m)	Number of Stems	Stem 1 2 3 (mm)	Spread N E S W (m)	Crown	Stem	Basal Area	Category	Life Expectancy	Phys Condition	Comment
3 Groups	Leylandii	Mature	15	Multi	200 - 450	6 6 6 6	Good	Good	Not Seen	B	20 to 40 yrs	Good	Groups of trees in the rear gardens across a gated and locked footpath. Trees not a constraint for the current proposed works
1 to 4	Leyland Cypress	Mature	16	1	550	6.5 6.5 6.5 6.5	Good	Fair	Not seen	B	20 to 40 yrs	Fair	Mature Leylandiis, bases not seen, buried in debris and also out of site. Also present in the line of trees are smaller Category C conifers inaccessible, but will be treated as part of the line for Constraints.
5 to 25	Leyland Cypress	Mature	16	1	450	6.5 6.5 6.5 6.5	Good	Fair	Most not seen	B	20 to 40 yrs	Fair	Line of Mature trees, crowns raised to approx 4.5m over the PFS area. Inaccessible to see most of the bases. Ground slopes away the other side of the fence.
5 to 25	Leyland Cypress	Mature	16	1	450	6.5 6.5 6.5 6.5	Good	Fair	Most not seen	C	10 to 20 yrs	Fair to poor	End tree of line of Mature trees, crowns raised to approx 4.5m over the PFS area. Large portion of the rear of the crown broken and fallen. May have further failures possible.

Tree ID	Common Name	Maturity	Height (m)	Number of Stems	Stem 1 2 3 (mm)	Spread N E S W (m)	Crown	Stem	Basal Area	Category	Life Expectancy	Phys Condition	Comment
27	Sycamore	Mature	17	4	350 350 350 350	6 6 6 6	Fair	Fair	Not seen	C	10 to 20 yrs	Fair	Mature deciduous tree on the south current boundary line. Inaccessible to properly survey. These trees fill in the large evergreen tree screen around the pfs.
28	Field Maple	Mature	16	3	100 220 230	4.5 3 4.5 3	Fair	Fair	Fair	C	10 to 20 yrs	Fair	Mature deciduous tree on the south current boundary line. Inaccessible to properly survey. These trees fill in the large evergreen tree screen around the pfs.
29	Norway Maple	Mature	16	1	480	5.8 5 5.8 5.8	Good	Ivy	Not seen	B	20 to 40 yrs	Good	Mature deciduous tree on the south current boundary line. Inaccessible to properly survey. These trees fill in the large evergreen tree screen around the pfs.
30	Western Red Cedar	Mature	15	2	180 180	3 3 3 3	Good	Good	Fair	C	10 to 20 yrs	Good	Almost hidden tree behind the Maples. Part of the line of Thuja trees T30 – T40
31 to 43	Western Red Cedar	Mature	16	1	400	3 3 3 3	Good	Fair	Good	B	20 to 40 yrs	Good	Line of mature trees just behind the fence at the top of approx 2m slope down to the stream nearby.

Tree ID	Common Name	Maturity	Height (m)	Number of Stems	Stem 1 2 3 (mm)	Spread N E S W (m)	Crown	Stem	Basal Area	Category	Life Expectancy	Phys Condition	Comment
44	Sycamore	Mature	16	2	430 200	4 3 4 3	Good	Ivy	Not Seen	B	20 to 40 yrs	Good	Two trees, multistem, bases clad with ivy. Close to the site exit and behind the illuminated sign
45	Sycamore		14	3	400 350 330	4.5 4.5 4.5 4.5	Good	Ivy	Good	B	20 to 40 yrs	Good	
46	Lombardy Poplar	Mature	31	1	950	3.5 3.5 3.5 3.5	Good	Good	Good	A	>40 yrs	Good	Large prominent tree in possible Council Ownership. RPA 408m2 extends into the PFS Area
47	Ash Group	Mature	18	various	250 - 450	5 5 5 5 est	Fair	Good	Good	B	20 to 40 yrs	Good	Part of the tree cover into the Meadows, not accurately surveyed, but estimated.

TPO Map – screenshot from LPA website

<https://www.reading.gov.uk/planning-and-building-control/trees-hedges-and-environment/trees/> and follow the link

CASTLE STREET	15/19	(T1)	7
CASTLE STREET	57/002	(T6)	87 Advantage (~~Avco~~ House - The Associates)
CAVERSHAM HILL	52/05	(T22)	(at 91 ~~Peppard~~ Road) now 1-3 ~~Nottley~~ Place
CAVERSHAM LOCK	101/06	(T3)	
CAVERSHAM PARK ROAD	246/07	(W1)	Land Between Milestone Wood and Cav Park Rd
CAVERSHAM PARK ROAD	82/05	(W1)	South eastern section
CAVERSHAM PLACE	19/10	(T17)	(Previously Trafalgar House)
CAVERSHAM ROAD	3/06	(T7)	~~Vastern~~ Court
CAVERSHAM ROAD	80/05	(T22)	Great ~~Brighams~~ Mead
CAVERSHAM ROAD	125/08	(T5)	206 (Riverside Restaurant) and Council Land Adjacent
CEDAR WOOD CRESCENT	13/12	(T1)	2
CEDAR WOOD CRESCENT	87/003	(T2)	6 & 15
CEDARS, THE	7/06	(T1)	15 (formerly land r/o 7 Armour Hill) (Variation for TPO 192)
CHALGROVE WAY	156/01	(T2) (G5)	4-11
CHALGROVE WAY	216/06	(W1)	Was r/o 9 (now part of 12 ~~St Benets~~ Way)
CHANCERY MEWS	20/06	(T2)	Rear garden (Variation for TPO 220)

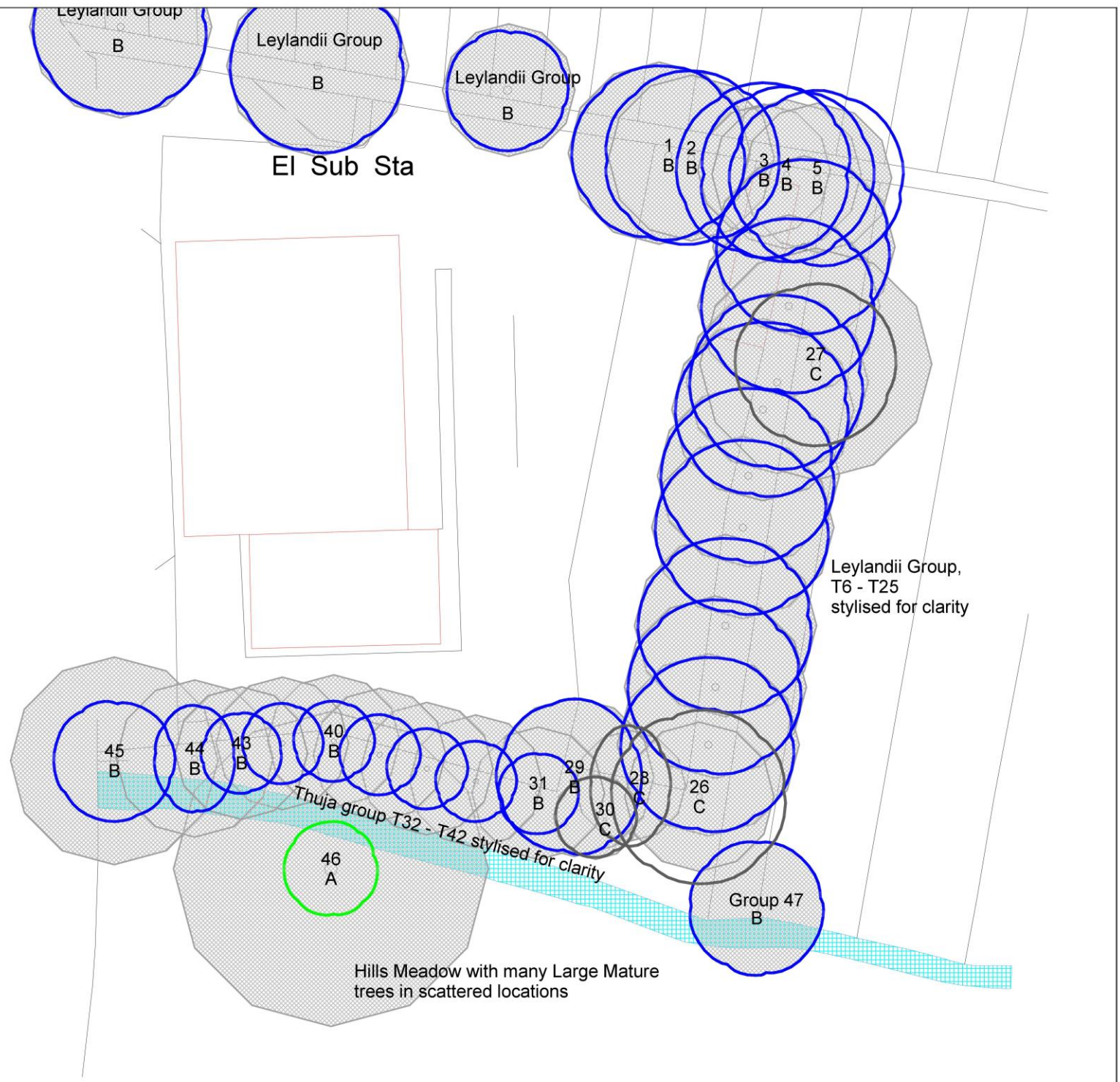
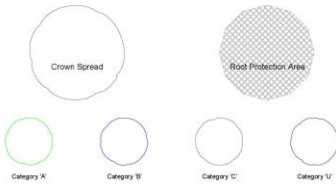
**FS378 - Thames Valley Service Station,
 George Street, Reading, Berkshire, RG4 8DH**

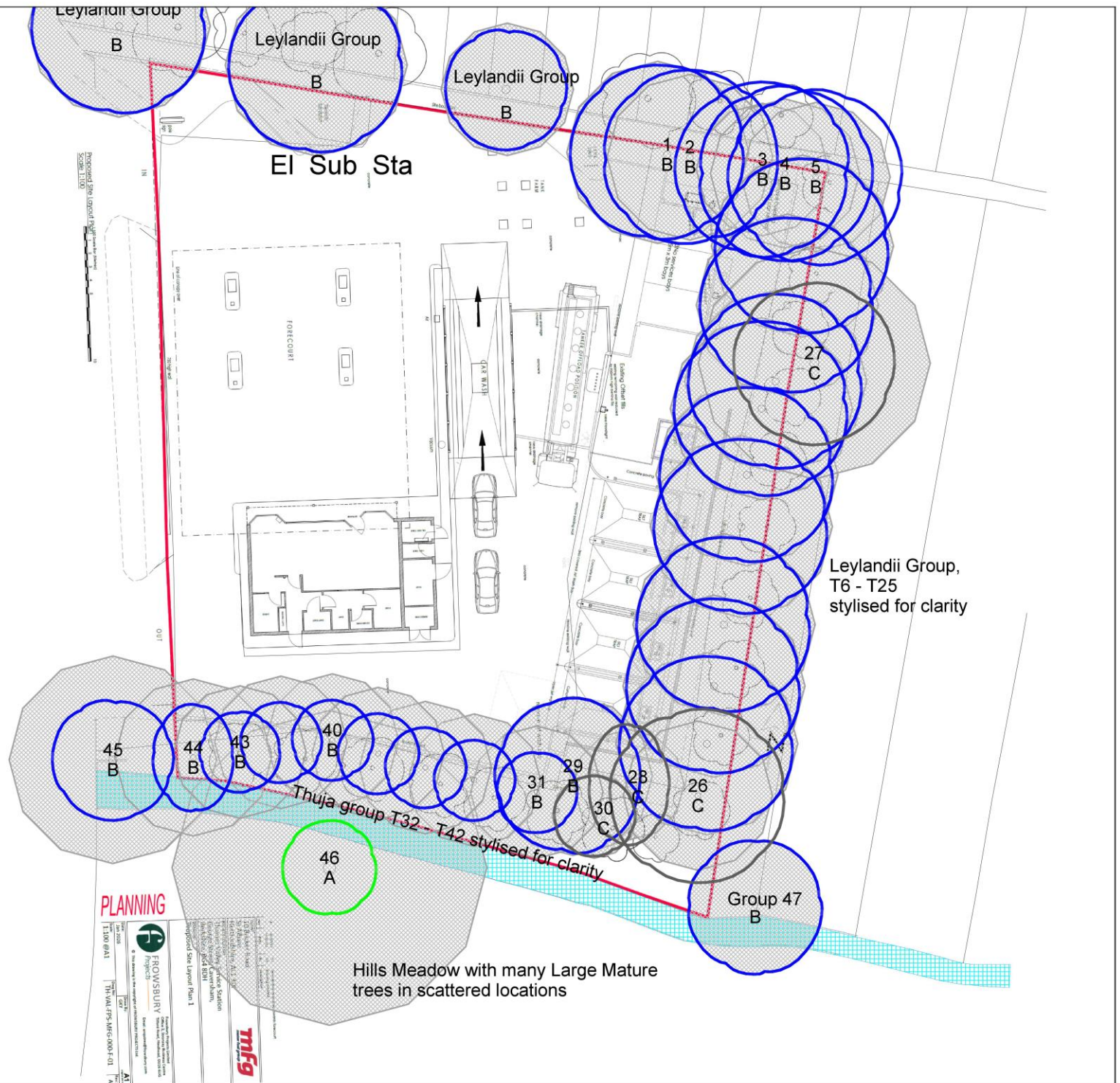
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Tree Constraints

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**FS378 - Thames Valley Service Station,
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Conflict Areas

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