AFA CONSULTING

Arboricultural Report – Thomas's College:

Tree Survey,

Arboricultural Impact Assessment,

Arboricultural Method Statement

& Tree Protection Plan

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Site Address:

Thomas's College, Queen's Rd, Richmond Hill, London. TW10 6JP.

BALI British Association of Landscape Industries
ROLO Register of Landbased Operatives
CSCS Construction Skills Certification Scheme
EFAW+F
Arboricultural Association Professional Member
LANTRA

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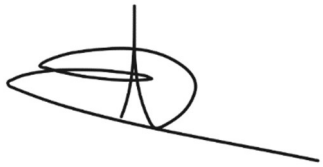
Tree Preservation Orders are not present at this site. The site is within a Conservation Area.			

Dear Sirs,

We write further to a recent visit to Thomas's College, Queen's Rd, Richmond Hill, London. TW10 6JP, where we conducted a full BS5837 arboricultural survey at the property.

Please find report overleaf.

Yours sincerely



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1. Report Summary

1.1 Site summary

1.1.1 The subject site is located at Thomas's College, Queen's Rd, Richmond Hill, London. TW10 6JP. The proposal is to renovate and construct a new roof on the existing MUGA.

1.2 Protected trees (Section 2.1)

1.2.1 None of the trees on the site are currently protected by a Tree Preservation Order.

1.2.2 The site is within a Conservation Area.

1.3 Existing trees (Section 4.2)

1.3.1 A total of 26 trees, 7 groups of trees, and 3 hedges were surveyed in September 2024.

1.3.2 These were surveyed and categorised in accordance with BS5837: Trees in relation to design, demolition and construction – Recommendations 2012.

1.3.3 These were categorised as follows:

A	B	C	U
3 trees	10 trees & 1 group	9 trees, 5 groups & 3 hedges	4 trees & 1 group

1.4 Consequences of development on trees (Section 5)

1.4.1 Three trees should be removed solely irrespective of the outcome of this proposal and just as good arboricultural practice.

1.4.2 One tree, one group and one hedge should be removed to facilitate this proposal. Removal of the tree and group would also be considered required work to discharge the landowner's duty of care responsibility.

1.4.3 The proposed scheme has been designed to accommodate the trees which will remain on and adjacent to the site.

1.5 Tree works (Section 6.2)

1.5.1 In addition to the tree removals there are some significant tree works recommended as a direct consequence of this proposal.

1.5.2 Reducing the height of one hedge.

1.5.3 Selective crown lifting of three mature trees.

1.6 Planting (Section 6.9)

1.6.1 To mitigate the tree losses and improve the arboricultural value and biodiversity of the site, tree planting is recommended.

1.6.2 At least 2 individual trees and 1 hedge are recommended for planting.

1.7 Tree protection (Section 6)

1.7.1 To protect the root systems of retained trees during the construction period, the following are recommended:

1.7.2 The installation of six Protective Barrier Fences – See section 6.3.

1.7.3 The installation of two areas of temporary ground protection – See section 6.4.

1.8 Conclusion

1.8.1 The primary objective of the initial site appraisal was to identify which trees could and should be retained at the site, to investigate any associated conflicts with existing trees (in relation to the development proposal), and to provide this formal report detailing any preliminary tree surgery requirements and recommendations.

1.8.2 If the recommended tree protection measures are installed and monitored, and the sensitive works are adequately supervised, it is considered that the proposal can be successfully implemented while protecting the retained trees to a level which complies with current arboricultural standards.

2. Introduction

2.1 Survey details

Site address:	Thomas's College, Queen's Rd, Richmond Hill, London. TW10 6JP
Local planning authority:	London borough of Richmond upon Thames Council.
Tree Preservation Orders:	No
Conservation Area:	Yes
Survey date:	04/09/2024
Weather conditions:	Clear skies
Leaf cover:	Deciduous trees were in full leaf.
Surveyors' names:	Andy Fulbrook, Martin Grew

2.2 Background and site information

2.2.1 The college campus is mid-sized, with landscaped grounds, footpaths, sports facilities including a fenced MUGA. There is a vehicular access road that circles the campus.

2.2.2 The site is the existing MUGA, immediate environs and access road within the Thomas's College campus.

2.2.3 The site is completely within the Richmond Conservation Area: CA5 Richmond Hill (see Appendix A).

2.2.4 There are no Tree Preservation Orders at the site (see Appendix A).

2.2.5 A F A Consulting Ltd have not been made aware of any relevant planning history at the site.

2.3 Instructions

2.3.1 A F A Consulting Ltd was instructed by Bidwells LLP to undertake a pre-application tree survey at Thomas's College, Queen's Rd, Richmond Hill, London. TW10 6JP. Details of the locations of the trees can be found in Figures 1 & 2 Appendix E.

2.3.2 The target areas and retention values of each tree were carefully considered during the inspection. In general, trees with high target areas which could affect residents, neighbours, footpaths, and road users should be inspected in order to fulfil the Duty of Care requirements of the landowner.

2.3.3 Any queries relating to this report or any of the content within should be directed to the author:

2.3.4 A F A Consulting Ltd, 105 Ambleside Road, Lightwater, Surrey. GU185UJ. The site address should be used as a reference.

2.3.5 This report includes a full BS5837 Tree Survey Schedule, Arboricultural Impact Assessment (AIA), Arboricultural Method statement (AMS), Tree Constraints Plan (TCP), Tree Protection Plan (TPP).

2.4 Documents supplied to arboriculturalist

2.4.1 PDF and DWG copies of topographical survey undertaken in October 2023 by Midland Survey Ltd.

2.4.2 PDF copies of an existing and proposed layout plans and elevations by IID Architects dated August 2024.

2.5 Details of site and surroundings

2.5.1 The MUGA currently has no vehicular access, and the existing pedestrian access route is not suitable for the development.

2.5.2 The MUGA is rectangular and has a relevant and distinct space to every cardinal aspect.

2.5.3 To the north of the MUGA, a shaded grassy space planted with large well-spaced single trees of varying quality. The northern fence of the MUGA is lined with a dense Western Red Cedar hedge except for the area behind the goal. This goal will become the main access point for the MUGA through the development following the removal of the fence.

2.5.4 To the east of the MUGA, a small, paved area, surrounded by trees and hard landscaped features, accessed through the existing MUGA gate.

2.5.5 An overgrown Leyland Cypress hedge and large Western Red Cedar fill the space to the south of the MUGA. Further south are the sprawling open campus gardens.

2.5.6 To the west of the MUGA, a low shrub hedge with a small group of declining Lilac trees lines the fence, beyond that an open grassy area with some concrete pads and small tree planting fills the area until the access road.

2.5.7 The access road is partly tree lined particularly close to the main campus entrance and the section to the north of the site.

2.5.8 The access road, paving, and MUGA are considered hardstanding. The MUGA may not be suitable for heavier vehicles.

2.5.9 Off site to the west and east are college buildings these are not affected by the development.

2.5.10 The ground is predominantly flat and level and there was no evidence of prolonged waterlogging at the time of the survey.

3. Survey Results

3.1 Tree classification

A	B	C	U
3 trees	10 trees & 1 group	9 trees, 5 groups & 3 hedges	4 trees & 1 group

3.1.1 Twenty-six individual trees, seven groups, and three hedges were surveyed in September 2024. The survey information is appended to this report. (See Appendix E)

3.1.2 All the trees were classed according to the classifications outlined within BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations.' (See Appendix D).

3.1.3 3 individual trees were classified as Category A. BS5837 considers that Category A trees are of high quality with an estimated remaining life expectancy of at least 40 years.

3.1.4 10 individual trees and 1 group were classified as Category B. BS5837 considers that Category B trees are of moderate quality with an estimated remaining life expectancy of at least 20 years.

3.1.5 9 individual trees, 5 groups and 3 hedges were classified as Category C. BS5837 considers that Category C trees are of low quality with an estimated remaining life expectancy of at least 10 years.

3.1.6 4 individual trees and 1 group were classified as Category U. BS5837 considers that Category U trees are 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 ten years.

3.2 Nesting birds and potential bat habitat

3.2.1 Most of the trees surveyed as part of this report contained good bird nesting habitat. It is worth noting that woodpecker holes were visible in some trees, and these could be utilised by birds and bats at varying times of the year.

4. Recommendations

4.1 Guidance for retaining trees through development

4.1.1 In accordance with BS 5837:2012 Trees in relation to design, demolition, and construction. Recommendations, category A and B trees should be retained by way of appropriate design as part of any development proposal unless absolutely unfeasible, and in such instances should be replaced with mitigation planting. Category C trees are not considered to be constraining and can be removed where appropriate, although mitigation planting is still required. Category U should not be retained regardless of the design and development.

4.2 Site recommendations

4.2.1 The most common conflict between retained trees and construction work is the protective measures required to adequately prevent any damage being caused to them or their respective Root Protection Area (RPA). In this instance the collective RPA (which would need to be fenced off) of any retained tree or tree group would **be** relatively large, as there are numerous, widely spaced, significantly sized trees at the site.

4.2.2 However, it should be noted that the access road provides amble storage for vehicles.

4.2.3 As site access is limited to one area through the north of the MUGA, careful programming will be required to ensure that materials are delivered when required rather than ahead of time to be stored and impeding the ongoing works.

4.2.4 The three Category A trees T13 (Dawn Redwood), T19 (Italian Alder) and T26 (Common Oak) located setback from but close enough to be within an influencing distance of the northwest, northeast and southeastern corners of the MUGA respectively, are worthy of retention. They are excellent examples of typical form for their species and removal of these trees would adversely affect the value of the local landscape.

4.2.5 The ten Category B trees T1 (Silver Wattle), T2 (Robinia), T6 (Deodar Cedar), T7 Cedar of Lebanon), T9 (Western Red Cedar), T16 (Austrian Pine), T17 (Common Oak), T21 (Holm Oak), T24 (Austrian Pine) and T25 (Holm Oak) partly lining the access road and the eastern edge of the MUGA and the group of trees G5 along the northern campus boundary are also in good condition and are positioned in conspicuous locations. Loss of these trees would also adversely affect the local landscape.

4.2.6 The nine individual trees, T3 (Sweetgum), T5 (Cherry), T8 (Leyland Cypress), T10-T12 (Cherry), T14 (Magnolia), T18 (Silver Birch), and T22 (Holly), five groups of trees, G1-G3 and G6-G7, scattered along the access road and three hedges adjacent to the MUGA are all Category C arboricultural features. Two of the overgrown hedges would be a serious constraint to any future development of the MUGA, removal of H3 and significant reduction works to H2 would be necessary if the MUGA is to be improved. Whilst the loss of this Category C feature will have an impact on the arboricultural value of the site, it will provide an opportunity to plant more suitable species with a longer useful life expectancy and appropriateness to the site. Over time, this will increase the arboricultural and landscape value of the site, and the impact of the hedge loss will be negated.

4.2.7 The four individual trees, T4 (Cherry), T15 (Crab Apple Tree), T20 (Wild Cherry), and T23 (Weeping Ash) and group of Lilacs, G4 are all Category U features. They are not suitable for retention and should be removed. Only T15 (Crab Apple) and the group of Lilacs are relevant to this development, the remaining Category U trees should be considered as part of the ongoing tree stock and risk management at the landholding, their removal is not recommended as part of this development proposal.

4.2.8 Maintained hedges on site represent an important feature in the landscape and consideration for their retention where possible should be made. It is recommended that they continue to be maintained through regular, cyclical clipping as this will benefit the landscape features of the site as well as providing valuable nesting habitat for birds.

4.2.9 As the site is within a Conservation Area, no tree works should be carried out until the appropriate consent is gained from the local Council Planning Department.

4.2.10 Replacement planting for the removed hedge should be of a more suitable species but a similar location to maintain the enclosed nature of the MUGA.

4.2.11 To mitigate the tree losses and improve the biodiversity and arboricultural value of the site new tree planting should be undertaken. The open grassy area to the west of the MUGA is most suitable for new trees.

4.2.12 Where appropriate, preliminary management recommendations have been made for each tree surveyed and are detailed in the Tree Schedule in Appendix E.

5. Arboricultural Impact Assessment

5.1 Tree removals and tree surgery works

5.1.1 The recommendations made here relating to tree retention, removal and planting are informed by current arboricultural, planning, and urban design best practice, primarily British Standard 5837:2012 ‘Trees in relation to design, demolition and construction – Recommendations,’ which advocates a pragmatic approach to tree removal and retention, based on sustainability.

5.2 Trees requiring removal ***irrespective*** of the proposal

5.2.1 It is considered that the following trees should be removed irrespective of the outcome of this proposal.

5.2.2 One tree and one group of trees should be removed irrespective of the proposal.

5.2.3 T5 – Crab Apple (*Malus sylvestris*) : Fell and grind out stump.

Reason: Health and Safety & Duty of Care. Also to facilitate construction access to the MUGA without impact to any retainable trees.

Impact: This is a midsized, suppressed tree in significant decline with minimal remaining live canopy. Some short-term impact to visual amenity, arboricultural and habitat value. However, due to the limited remaining contribution, a mid to long term positive gain in visual, landscape, arboricultural and habitat value is expected.

5.2.4 G4 – Group (*Syringa vulgaris*) : Fell to ground level.

Reason: To facilitate demolition of the MUGA fence and construction of the new MUGA structure.

Impact: This is a small group of 4 declining Lilac trees within a low shrub hedge. Multiple stems are leaning on the existing MUGA. Due to the poor quality of this group, there will be limited short-term impact to visual amenity. However, as mitigation planting is proposed on the same side of the MUGA as this group, a mid to long term positive gain in visual, landscape, arboricultural and habitat value is expected.

5.3 Trees requiring removal ***to facilitate*** the proposal

5.3.1 It is considered that the following trees should be removed to facilitate this proposal.

5.3.2 One hedge should be removed to facilitate the proposal.

5.3.3 H3 – Hedge (*Cupressus × leylandii*) : Fell and grind stumps.

Reason: To facilitate construction access to the southern end of the MUGA structure. This is a short run of closely planted overgrown hedge that has been shaded and lost the majority of its foliage below the fence height on its external face. Reducing this hedge to the previously managed fence height would leave an Insightly brown mess, this hedge should be removed and replaced with Western Red Cedar.

Impact: Due to the poor quality and unattractive nature of this hedge immediate improvement in amenity value is expected. At the new hedge matures a mid to long term positive gain in gain in visual, landscape, arboricultural and habitat value is expected.

5.4 Trees requiring remedial work ***to facilitate*** the proposal

5.4.1 Three trees and one require remedial work to facilitate the proposal. In addition, one tree requires safety critical work that should be undertaken to mitigate risk to the existing and/or proposed MUGA.

5.4.2 T9 – Western Red Cedar (*Thuja plicata*) : Remove secondary branches only, prune back the low canopy from the MUGA by 2m to a height of 4m.

Reason: To facilitate and provide construction access allowing a scissor lift style MEWP to access the roof structure of the south end of the MUGA.

Impact: The canopy of this tree is wide spreading with a dense multistem type crown typical of the species. Selective branch removal will only be visible from the MUGA and only until the new roof is constructed. Negligible impact on tree's amenity or arboricultural value, vitality or longevity is expected.

5.4.3 T14 – Cucumber Tree (*Magnolia acuminata*) : Removing secondary branches only, raise low canopy in the southeastern crown over the MUGA to a height of 5m.

Reason: To facilitate construction of the roof structure of the northwest corner of the MUGA.

Impact: There are only two small secondary branches that are low over the MUGA. Negligible impact on tree's amenity or arboricultural value, vitality or longevity is expected.

5.4.4 T16 – Austrian Pine (*Pinus nigra ssp. Nigra*) : Removing secondary branches only, raise low canopy in the southeastern crown over the MUGA to a height of 5m.

Reason: To facilitate construction of the roof structure of the northeast corner of the MUGA.

Impact: There is only one secondary branch that is low over the MUGA. Negligible impact on tree's amenity or arboricultural value, vitality or longevity is expected.

5.4.5 H1 – Hedge (*Thuja plicata*) : Maintenance hedge clipping and height reduction to previously managed hedge / fence height.

Reason: To improve amenity value, utility of the existing MUGA and facilitate construction of the northern end of the MUGA.

Impact: The management of this hedge has lapsed and the growth of the top half of hedge is untidy. The species recovers well from reduction pruning and positive gain in the hedge's amenity is expected. No measurable negative impact on the hedges overall vitality or longevity is expected. Reducing the size of the foliage will also limit the root growth and leading to a reduced likelihood of below ground damage to the MUGA.

5.4.6 Following internal investigation and an aerial inspection, the following works are recommended to mitigate the risk of tree failure close to the proposed MUGA.

5.4.7 T26 – Common Oak (*Quercus robur*) : 1-2m drop-crotch canopy reduction of 1 stem (central northwestern crown) and minor pruning to shape of newly exposed secondary growth. Also, a 2-3m drop-crotch end weight reduction of one low southwestern primary lateral limb at 6m. Major deadwood should also be removed.

Reason: To discharge duty of care as the landowner and responsible party for users of the campus and new MUGA.

Impact: Recommend works are specified to reduce the risk of tree, or partial tree failure and prolong the life of the tree.

5.5 Root Protection Areas (RPAs)

5.5.1 The identification of Root Protection Areas is the primary means by which retained trees are protected on construction sites. No unspecified activity should occur within any prescribed RPA. Access should only be permitted with prior approval of the local planning authority, and encroachment should normally only take place if the ground beneath is suitably protected.

5.5.2 BS 5837:2012 provides arboriculturists with a method to determine the extent to which excavations associated with construction works might have a damaging effect on the roots of adjacent trees. The Standard enables an RPA to be calculated from the diameter of each retained tree, and this is usually described as a circle with a radius at the prescribed distance from that tree.

5.6 RPAs and the subject site

5.6.1 The RPAs of the retained trees are calculated as recommended within BS 5837:2012. These areas are shown as shaded grey areas with a solid orange line on Figure 1 – TCP, and Figure 2 - TPP.

5.6.2 Following the tree removal works, there is still a requirement to work within the RPAs of several retained trees. The existing access road provides permanent root protection for all trees along its route, no further ground protection is required there. The subbase of the existing MUGA provides permanent root protection for the RPAs under the MUGA, this subbase will remain undisturbed with the exception of new fence post holes and roof supports throughout the development, no further ground protection or compaction control is required there, arboricultural supervision of the below ground works will be required. Access to the MUGA will be through the northern goal, and construction access to the south and west on the outside of the fence is required. Temporary ground protection, protective barrier fencing, and arboricultural supervision will all be needed to mitigate any likelihood of damage being caused to any arboricultural features. These are detailed in Figure 2 TPP.

5.7 Protective Barriers Fences (PBF)

5.7.1 BS 5837:2012 recommends that the RPAs of the subject trees should be protected by the erection of barriers, the preferred form of which consists of welded mesh 'Heras' type panels 2 metres high, mounted on a braced scaffolding frame as detailed in Figure 2 & 3 of BS 5837:2012 (example detail in Appendix F). The barriers should carry laminated signs stating: "Construction exclusion zone – No Access," or similar. It is recommended that gaps should be left beneath the bottom of any perimeter site fencing and the ground to allow for the passage of foraging mammals.

5.8 Shading

5.8.1 The proposed design is sympathetic to the retained trees and there will be no need for future pruning or removals to avoid conflict between the buildings and retained canopy cover.

5.9 Services

5.9.1 The Tree Protection Plan, showing the constraints posed by retained trees will be passed to the infrastructure engineers to inform their design, ensuring that all services avoid areas of potential conflict.

5.9.2 Provision had been made for placement of an attenuation tank to the west of the MUGA away from retained RPAs, connecting drainage runs will be required and are specified by others. Where drainage is required within through retained RPAs hand dug, sensitive excavation under arboricultural supervision must be undertaken to minimise root disturbance. The shortest run through RPAs should be sought by design.

6. Arboricultural Method Statement

6.1 Sequence of works

6.1.1 The sequence of works should be as follows, key points and relevant involvement by the project arboriculturalist are identified:

1. Tree removal and other facilitative works.
2. Site layout marking.
3. Supervised demolition of the fence panelling in the northern goal. – Project Arboriculturalist to attend and document.
4. Installation of fencing and temporary ground protection.
5. Pre commencement meeting (RPAs and material storage areas to be appraised and understood – Project Arboriculturalist to attend and document).
6. Building materials/plant deliveries.
7. Demolition/Construction works – Monthly inspections by Project Arboriculturalist to monitor tree protection. Supervised works as specified, Project Arboriculturalist to attend and document.
8. Mitigation planting.
9. Project sign off by Project Arboriculturalist

6.2 Tree works

6.2.1 Tree surgery works are to be completed before fencing is erected to avoid damage to fencing or unnecessary cost.

Tree Number	Species	Required Work
T9	Western Red Cedar	Prune to clear MUGA by 2m to a height of 4m
T14	Magnolia	Raise canopy to 5m over MUGA
T15	Crab Apple	Fell and grind out stump
T16	Austrian Pine	Raise canopy to 5m over MUGA
G4	Group of Lilacs	Fell to ground level
H1	Western Red Cedar hedge	Reduce height to existing fence height and clip back faces.
H3	Leyland Cypress hedge	Fell and grind out stumps

6.2.2 Tree and hedge removals are shown as dotted dark red outlines on the Tree Protection Plan: Figure 2 TPP.

6.2.3 Facilitative canopy pruning works are shown as shaded brown areas with a solid brown outline on the Tree Protection Plan: Figure 2 TPP.

6.2.4 Any future works that might be necessary should comply with the recommendations contained within British Standard 3998:2010 'Tree Work' and undertaken with the consent of the local planning authority if such consent is required.

6.3 Protective Barrier Fencing (PBF) on the subject site

6.3.1 Once installed and inspected at the pre-commencement meeting, no part of the protective barrier fencing shall be moved, altered or removed before project sign off. Where unforeseen conflicts arise during the development process the project arboriculturalist shall be consulted.

6.3.2 Due to the open nature of the campus grounds, and to avoid excessive fencing some areas beyond the east and south of the site will be designated out of bounds as construction exclusion zones but will not be fenced. This will be appraised in the pre-commencement meeting. This indicated area is identified as a pale-yellow area on the Tree Protection Plan: Figure 2 TPP. The wider campus has not been shaded for clarity of the documentation but remains beyond the development site and as such is also a construction exclusion zone.

6.3.3 Additional site safety fencing may be required for public safety but specification or placement of this is not within the remit of AFA consulting. Any conflict arising from further fencing will also be addresses in the pre-commencement meeting.

6.3.4 Careful laying out of the site, preferably with total station type equipment, is required to assure proper placement of the fences.

6.3.5 Six protective barrier fences are required.

6.3.6 PBF1 will run from the southern tip of the low existing fence around T7 (Cedar of Lebanon) along the eastern edge of the access road before turning east along the southern edge of the MUGA leaving a 2m working area (further temporary ground protection required) and finally abutting the southeastern corner of the existing MUGA fence. There is to be no construction access to the south or east of this fence at any time.

6.3.7 PBF2 will start from the southwest corner of the MUGA and run back toward the access road edge parallel to PBF1 leaving a 2m wide access before running round the RPA of T10 (Cherry – 3.4m radius) and terminating on the western face of the low shrub hedge approximately 4m from the corner of the MUGA. There is to be no construction access inside of this fence at any time.

6.3.8 PBF3 will be a small square enclosure (2.9m x 2.9m) around T11 (Cherry). There is to be no construction access inside of this fence at any time.

6.3.9 PBF4 start from the western face of the low shrub hedge approximately 18m from the northwest corner of the MUGA. It will run around the RPAs of T12 (Cherry – 3.96m radius) and T13 (Dawn Redwood – 11.28m radius) back to the access road edge, from there is will follow the kerb around to the north of the MUGA and turn south to line up with the western edge of the goal gap. There is to be no construction access inside of this fence at any time.

6.3.10 PBF5 will start from the western edge of the goal gap (north end of the MUGA) and run parallel to PBF4 back to the access road leaving a 3.2m wide access, further protected with trackway. The fence will continue to the east along the kerb line as far as is practical, the low canopy of T20 (Cherry) will prohibit installation of Heras style fencing. Access beyond this point is prohibited and will be addressed at the pre-commencement meeting. There is to be no construction access to the east of this fence at any time.

6.3.11 PBF6 is a triangular area outside the existing MUGA gate, it will start from the MUGA just south of the gate, follow the edge of the paving then turn northwest and run to the existing Leyland Cypress Hedge just inside the line of trees in planting pits (G6). There is to be no construction access to the east of this fence at any time.

6.3.12 PBF1 – PBF6 are plotted as solid purple lines on the Tree Protection Plan: Figure 2 TPP.

6.3.13 Construction exclusion zones (CEZ) are plotted as pale-yellow areas on the Tree Protection Plan: Figure 2 TPP.

6.4 Works within RPAs

6.4.1 All works within RPAs must be supervised by the Project Arboriculturalist (Section 6.7).

6.4.2 Several elements of the development require arboricultural supervision, these are listed the Tree Protection Plan: Figure 2 TPP, these are further detailed in the Supervision Schedule: Appendix B.

6.4.3 Temporary ground protection is required. The temporary ground protection should be installed prior to the fencing and be “rolled out” working from the previously installed section from the access road towards the end of each run. The temporary ground protection must be installed prior to the pre-commencement meeting.

6.4.4 Heavy duty ground guards or trackway must be used to form temporary ground protection. The maximum required weight of vehicle should be considered when specifying the suitable type of matting (specified by others, manufacturers recommendations must be followed).

6.4.5 Once installed and inspected at the pre-commencement meeting, no part of the ground protection shall be moved, altered or removed before project sign off. Where unforeseen conflicts arise during the development process the project arboriculturalist shall be consulted.

6.4.6 A 2m wide area of temporary ground protection is to be used to create a working zone outside and along the southern edge of the MUGA, between the fence line and the protective barrier fencing. This is to facilitate construction access to the ends of the roof and guttering.

6.4.7 A 3.2m (or suitable similar width based on available ground matt sizes) wide area of temporary ground protection is to be used to create a construction access to the northern goal gap which will be the only access to the inside of the MUGA.

6.4.8 The demolition of the existing fence must be carried out under arboricultural supervision. This type of fencing often utilises lugs or plates below ground which are then concreted in. The concrete must be broken up using hand tools before posts can be removed to avoid large lumps of concrete being lifted out of the ground by machine and damaging roots.

6.4.9 Excavation for the post holes for new fence and MUGA roof structure foundations within RPAs, must be dug by hand under arboricultural supervision.

6.4.10 Design for the fence and structure foundation must allow for relocation of posts if major roots are encountered, particularly in the vicinity of trees T9 (Western Red Cedar), T13 (Dawn Redwood), T16 (Austrian Pine), T24 (Austrian Pine), and T26 (Common Oak). Corner posts/foundations cannot be relocated, any roots encountered in the four corners should be carefully pruned using a sharp pruning saw or secateurs to reduce the risk of pathogen infection.

6.4.11 Temporary ground protection areas are shown as diagonal hatched pink areas with a solid pink outline on the Tree Protection Plan: Figure 2 TPP.

6.5 Other general activities

6.5.1 Many of the activities which occur on construction sites are potentially damaging to trees. These include the location of site huts, parking arrangements, the storage of materials, the storage of rubbish, and the movement and operation of plant. It is important to understand the range of potentially damaging activities that might occur on a particular site and ensure at an early stage that these possible conflicts are recognised and avoided. Therefore, areas designated for site huts, parking and storage of materials should be identified prior to the commencement of works.

6.6 The subject site

6.6.1 Provision must be made for the drainage of the new MUGA roof. Where below ground drains or pipe runs are required, further supervision and sensitive hand tool excavation will be required in RPAs.

6.6.2 There is adequate working and storage space within the site situated on the existing access road and MUGA. The limits of the site within the wider campus must be respected. Alternative access roads or carparks must not be utilised for storage or construction. All works and storage must be kept away from the RPAs of retained trees.

6.6.3 Use of the existing car parks to the south of the campus for construction staff parking is appropriate, pedestrians should follow the proposed access route identified on the Tree Protection Plan: Figure 2 TPP.

6.6.4 No hazardous materials, fuel or cement are to be stored or mixed where a risk of spillage could affect retained trees either on or off site.

6.7 Site monitoring and supervision

6.7.1 BS5837:2012 Trees in relation to design, demolition and construction – Recommendations states:

> Wherever trees on or adjacent to a site have been identified within the tree protection plan for protective measures, there should be an auditable system of arboricultural site monitoring. This should extend to arboricultural supervision whenever construction and development activity is to take place within or adjacent to any RPA. (BSI, 2012)

6.7.2 The pre-commencement meeting is held after all the above ground tree surgery works have been completed, and all the protective measures (fencing and temporary ground protection) are installed, but before any materials, plant or site office/facilities are delivered, and before any demolition, construction or ground works are started. In some instances, where demolition of fences or outbuilding is required to properly fence the site, this will be addressed with a combination of phased approach to fencing and supervised demolition within the AMS.

6.7.3 The pre-commencement meeting must be attended by representatives (with the authority to direct works), from the principal contractor, ground works contractor, project manager and the project arboricultural consultant, who will head the meeting and document proceedings.

6.7.4 The meeting provides an opportunity to discuss:

- Site layout, agreed entrance and egress routes, plant & material storage, and the storage and use of hazardous materials (fuel & cement, etc.)
- The tree protection measures.
- The relevant dos and don’ts to avoid any damage to retained trees and subsequent prosecution or failure to discharge planning conditions
- The programming of any phased works,
- The upcoming supervised works and site monitoring.

6.7.5 N.B. The local authority tree officer may request and or condition an invitation to the pre-commencement meeting.

6.7.6 Site supervision: In addition to the pre-commencement meeting and the final project sign off, there are several processes and instances throughout the proposed development that require arboricultural site supervision or attendance. An itemised schedule of supervision is appended to this report. See Appendix B.

6.7.7 Site monitoring: Due to the scale of the development and the close proximity of the retained trees on and off site, monthly inspections, to monitor the tree protection measures are required.

6.7.8 All elements of the protective measures shall be inspected and photographed by the Project Arboriculturalist. A record of inspection is appended to this report. See Appendix C.

6.7.9 Findings from site monitoring or supervision will be reported directly to the planning office of the local authority.

6.8 Replanting

6.8.1 Following the removal of several low-quality features (Category C & U) with limited amenity value but some arboricultural value, and to improve the arboricultural and landscape value and biodiversity of the site the replanting of two new trees and one hedge is recommended.

6.8.2 Two medium feature trees are suggested below:

One Standard – Service Tree (*Sorbus domestica*)

One Standard – Elm 'New Horizon' (*Ulmus* 'New Horizon')

Standard trees should have an 8-10cm girth and stand 250-300cm tall.

The new trees are to be staked.

No tree guards are required.

6.8.3 Recommended planting placement has been plotted on the Tree Protection Plan - Figure 2. Locations have been selected based on the species requirements and with a view to maintain and improve the overall arboricultural value and visual amenity of the site. Care has been taken to consider the various vistas both on and off site.

6.8.4 All planting is to be carried out in line with BS 8545: 2014 From Nursery to Independence.

6.8.5 Mulching – 1m radius annual mulching using well-rotted organic mulch to a max. depth of 100mm and kept clear from touching the stem. Mulching is to be repeated for a minimum of 5 years.

6.8.6 Weeding – The mulched area is to be kept free from weeds; this is to be carried out with hand tools only. No weedkillers to be used. Weeding is to be carried out for a minimum of 5 years.

6.8.7 Watering - Well water in at time of planting. No ongoing regular watering is required. Additional saturation watering may be required during drought conditions.

6.8.8 3 Year Pruning – Remove any dead, dying, or diseased branches. Formative pruning may be required to improve future structure, crossing, or rubbing branches can be pruned out.

6.8.9 Defect Replanting – The tree is to be replaced in the case of young tree failure within 5 years of planting.

7. Methodologies and limitations

7.1 Information recorded during the tree inspection

7.1.1 Data such as species, size, age, and canopy spread has been recorded. During the inspection, the following specific details were focused on:

- Tree condition (whether or not the vigour or safety of the tree is noteworthy).
- Additional remedial requirements.
- With specific regard to Ash trees, whether the onset of Ash Dieback is becoming prevalent and whether or not pre-emptive removal would be prudent.

7.2 Method of inspection

7.2.1 During the inspection, trees were subjected to a basic visual tree assessment (VTA). The approximate girth measurement (mm) and tree height (m) was recorded, and the overall condition and vitality of the tree was identified.

7.2.2 VTA (Mattheck and Breloer 1994) has been identified as the industry's standard method of tree surveying for several years. The method incorporates visual observation and a knowledge of tree biology and physiology to determine the stability and overall condition of a tree. The VTA system considers the frequency and speed of adjacent use or traffic and assesses the vulnerability of the target. An example of a high target could be a dwelling. An example of a high frequency of adjacent traffic could be a busy road.

7.2.3 The VTA system adopted for this tree inspection report did not include any internal investigation measures.

7.2.4 This tree inspection is appropriate for the requirements of BS5837: Trees in relation to design, demolition and construction – Recommendations. This document does not constitute a tree hazard inspection/assessment, nor does it discharge any duty of care applicable to the tree or landowners.

7.3 Limitations of this tree inspection report

7.3.1 The conclusions and recommendations in this report are valid for a period of one year from the date of survey or till the next warning level weather event. Trees are living organisms subject to change; this validity period may be reduced should changes in condition occur to the subject(s) of the report or surrounding area. All recommendations are given in the context of the site's current usage; any change would dictate a re-inspection.

7.4 Protected species – Nesting birds and bats

7.4.1 The bird nesting season is widely accepted as starting on March 1st and ending on September 1st. However, it should be noted that some species' (such as pigeons) may nest well into September, and it is therefore imperative that if any works are to be undertaken outside of the dormant winter months, the trees are first subjected to a full nesting bird inspection.

7.4.2 Remedial tree surgery works should be avoided during the bird nesting season.

7.4.3 European legislation identifies bats as a protected species and it is therefore a criminal offence to disturb them, or their roosts (without the correct authority from DEFRA or English Nature). The relevant legislation in England & Wales is the Wildlife and Countryside Act 1981 and Conservation of Habitats & Species Regulations 2017.

7.4.4 It is possible that some of the trees surveyed as part of this report will contain temporary or permanent bat roosts as the trees are located in woodland areas and display the attributes required by bats (listed beneath).

7.4.5 The timing of any works recommended by this report are of significant importance as works in the summer could disturb bats which are bringing up their young in maternity sites, whereas works in the winter could disturb bats which are hibernating.

7.4.6 It is the landowner's responsibility, in addition to those conducting the works, to ensure that protected species, such as bats, have been considered before any actions are conducted that could disturb those animals. This legislation is still applicable regardless of the presence of a TPO or Felling Licence.

7.4.7 If a roost has been confirmed and is likely to be lost as a result of the necessary work, a European Protected Species (EPS) derogation licence is likely to be required. The issuing of this licence follows on from conducted surveys (with mitigation plans where relevant) and allows the works to be undertaken lawfully (an ecologist would be required to fulfil this requirement). EPS licences are granted by the relevant Statutory Nature Conservation Organisation (SNCO) and any questions should be directed to the licencing team of that SNCO. Where it is confirmed that a bat roost is not present, the work can proceed as planned.

7.4.8 The author of this report has limited ecological knowledge. However, further to research being undertaken, it seems reasonable to assume that a small number of the trees surveyed could be providing habitat for several species of bat. These could include Pipistrelle, Brown long-eared bat, Noctule, Barbastelle, Bechstein's bat and Natterer's bat.

7.4.9 It is therefore strongly recommended that an adequate bat survey be employed prior to any works commencing.

7.4.10 The following must be considered potential bat habitat:

- Woodpecker holes
- Cavities

- Vertical and horizontal splits or cracks
- Hollow sections
- Loose ivy
- Beneath loose bark
- Bat or bird boxes

7.5 Specific management for veteran trees

7.5.1 Veteran tree management is a specialised system which includes careful consideration and appreciation for a range of different strategies applying to the varying nature or setting of a tree or trees. The overall management is likely to have to encompass a variety of different principals, ranging from wildlife and conservation to health and safety and education.

7.5.2 When managing a single tree or group of veteran trees within a park or amenity area there are many issues which need to be considered, so that the tree can fulfil its purpose whilst contributing to wildlife and conservation and providing amenity in a way that supports and ensures its future survival. These types of management strategy could often be conflicting in other situations, but with veteran trees they are amalgamated and there are many different management principals which help to contribute to enhancing their special aspects.

7.5.3 Such principals typically include retention of, or in some cases encouragement of deadwood throughout the canopy is an important aspect of veteran tree management as it increases the biodiversity and ecological value of the tree by providing habitat which is becoming increasingly scarce in urban environments or where trees and public areas are to coexist. Another management strategy which is often attributed to veteran trees is active encouragement of tear cutting and coronet cutting, which are exceptionally good ways of artificially mimicking the sort of damage usually caused by storms and branch failure. This helps to enhance the special aspects of veteran trees as it provides habitats which support fungal activity and in turn support an entire ecosystem within the tree in a symbiosis that is often beneficial to many different species. It is important that the risk of the deadwood failing and causing damage to property or injuring people is reduced and this can be achieved by yearly inspections and in some cases larger pieces of deadwood are even braced within the tree to prevent them from falling out. In most instances removal of deadwood should be avoided (if safe to do so) and dead limbs should instead be stabilised (shortened) and retained so that they can continue to provide a niche habitat for a wide range of living organisms.

7.6 Ash Dieback

7.6.1 There are an estimated two billion ash trees, including seedlings and saplings, across the UK and ash dieback will lead to the decline and death of the majority of these, with perhaps as many as 90% being infected. Four million of those trees are located within the urban environment, a further four million are adjacent to highways and nearly half a million large ash trees are growing next to the rail network. Over 125 million trees are growing in woodland areas.

7.6.2 Ash trees of all ages are affected by the disease, although it is easier to identify in young trees. Larger, mature trees, by their very size, present a much more dangerous situation and should therefore be surveyed by experienced and qualified tree experts so that any risk can be appropriately assessed, and suitable management recommendations prescribed.

7.6.3 Infected trees exhibit a number of symptoms including:

- The tips of shoots become black and shrivelled and side shoots on saplings die.
- Dead, blackened leaves can be seen, and veins and stalks of leaves turn brown.
- Dieback of branches, often with bushy, epicormic growth lower down in the crown, noticeable in mature trees.
- Long, thin, and diamond-shaped dark lesions appear on the trunk close to dead side shoots and may appear at the base of infected trees.
- In late summer and early autumn (July to October), small white fruiting bodies can be found on blackened leaf stalks.

7.6.4 As the fungus destroys the trees' vascular system, the lack of water and nutrient movement depletes energy reserves in the trees and makes them more susceptible to attack from secondary, root killing pathogens such as Honey Fungus (Armillaria spp.) which are widespread and common in soils. Another aggressive pathogen called Shaggy Bracket (Inonotus hispidus) also colonises Ash trees affected by Ash Dieback and can cause sudden catastrophic failure as both the cellulose and lignin within the trees' woody structure are depleted in equal measure. Both pathogens cause the tree to become brittle and lose branches eventually causing the death of the tree.

7.6.5 Harder to sport, legions at the base of the trees quickly develop into a butt or root rot and ultimately lead to the trees becoming unstable and dangerous. Worryingly, there may be no evidence of ash dieback in the canopy of these trees making them difficult to identify without a closer inspection. This is particularly true of Ivy-covered Ash trees.

8. Information Regarding Legal Constraints & Liabilities

8.1 Legislation

8.1.1 In accordance with the Health and Safety at Work etc. Act 1974, all occupiers have responsibilities to ensure the safety of those not in their employment. The "Occupier" is generally taken to mean any person occupying or having control of premises, in this case land.

8.1.2 Thus, there are clear legal responsibilities to assess risks that arise from trees and take suitable and sufficient steps to control such risks.

8.1.3 In addition, occupiers have duties under the Occupiers Liability Act 1984. This state (s2) that the occupier owes a "common law duty of care" to visitors and those who enter his land or premises, and this duty of care extends to trespassers. In Scotland there is no such distinction in the law.

8.1.4 Some of the tree stock surveyed is situated adjacent to roads. In accordance with the Highways Act 1980, the landowner has a duty of care over these trees and must ensure that they do not put road users at risk (by way of limb or tree failure). Where roadside trees are clearly dangerous (or could be deemed as a foreseeable nuisance) the landowner must be aware of their responsibilities in accordance with the aforementioned primary legislation. Section 154 of the Highways Act stipulates this requirement and empowers the relevant Local Authority to serve the landowner 'notice'. When this occurs, it is usually as a result of the dangerous trees having been picked up by a Local Authority or Highways Tree Inspector and once the notice is served the landowner must make arrangements for the specified trees to be removed or made safe as soon as possible. Failure to do so can result in this work being outsourced by the Local Authority, with all incurred costs being redirected to the owner.

8.1.5 It is therefore important to note that all roadside trees highlighted within this report as requiring attention should be regarded as extremely important in regard to priority, and indemnity, should one of them fail and cause damage, injury or loss of life.

8.2 Tree Preservation Orders & Conservation Areas

8.2.1 It is worth noting that tree protection status is subject to change, and it is therefore advisable that all relevant checks are made before any tree surgery works related to the recommendations outlined by this report are undertaken.

8.2.2 The recommendations outlined by this report such as pruning of roots and branches are subject to consent. Where statutory tree control measures such as Tree Preservation Orders (TPO) or Conservation Area status are applicable, the relevant application or notification process must be adhered to if tree surgery works are to be undertaken. For any tree surgery works to be undertaken the permission of the tree owner should also first be sought.

8.3 Ecological constraints associated with recommendations

8.3.1 Several acts and regulations such as The Wildlife and Countryside Act 1981, as amended, The Conservation of Species Regulations 2010 and the Rights of Way Act 2000 provide statutory protection of flora and fauna such as birds, bats and other species associated with trees. It is therefore advisable that a suitable contractor is used and ensures that no protected species are harmed whilst tree surgery works are being undertaken. The advice of an ecologist is advised prior to commencement.

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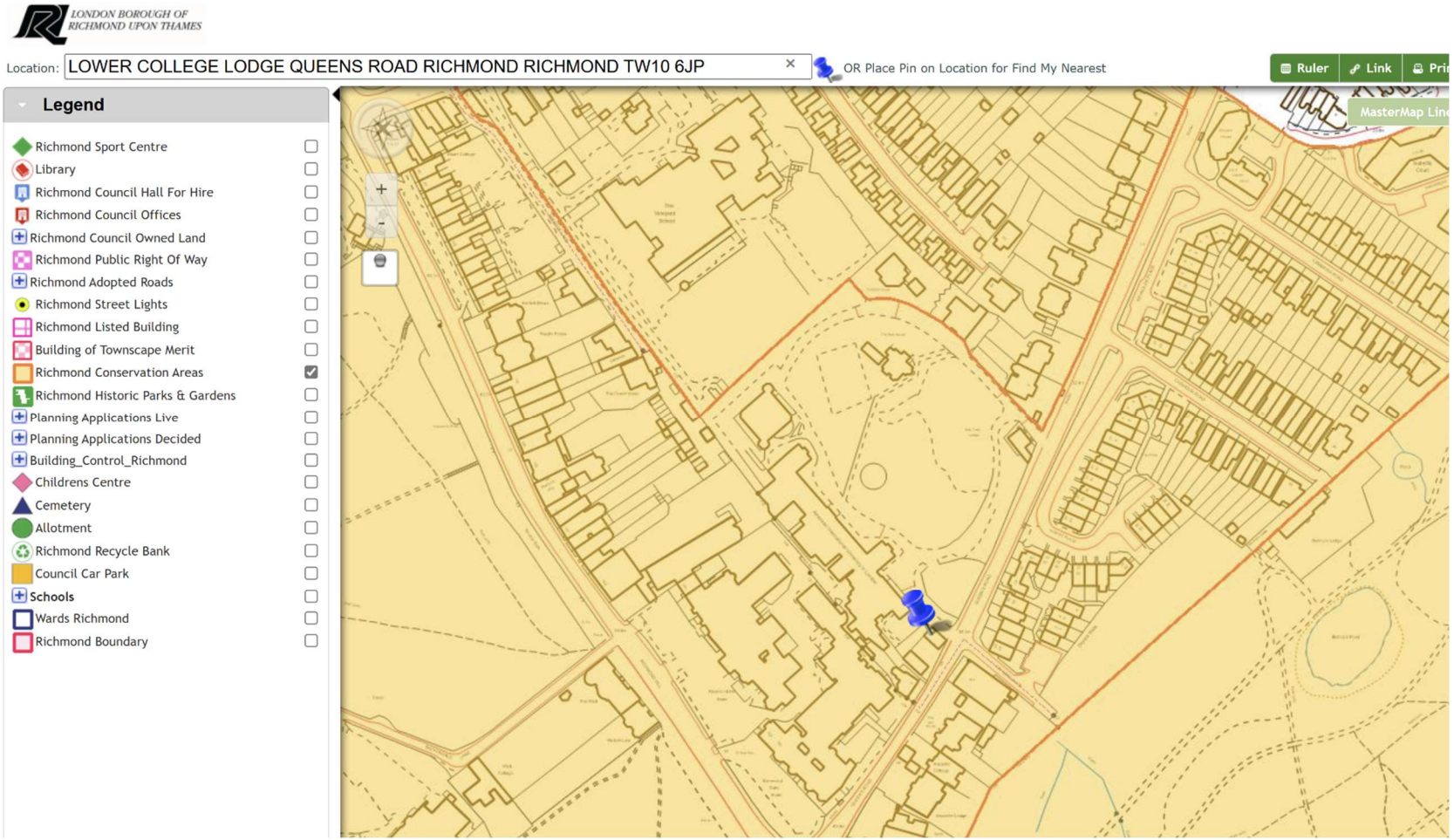
Screen grab from the London Borough of Richmond Upon Thames Council's Interactive Planning Map (22/10/2024)

There are no Tree Preservation Orders at the subject survey area. Confirmed via telecom with Richmond Council 12/9/24 - 14:44

The Site is within a Conservation Area. CA5 Richmond Hill.



Schedule of supervision

The stages of the proposal that require arboricultural supervision are listed below:

	Item	Date Complete	Signed
1	Demolition of fence and basketball post in northern goal (vicinity of T16)		
2	Pre-commencement meeting: • Site or project manager to attend. • Tree protection measures to be inspected and any phased approach and supervision discussed and programmed. Site layout, entrance & egress, plant & material storage and hazardous materials discussed.		
3	Demolition of existing fence, gate and basketball posts		
4	Hand dug post hole excavation (new fence)		
5	Hand dug post hole excavation (roof structure)		
6	Project sign off		

Tree protection monitoring - **Monthly** (from precommencement meeting)

Inspection record:

	Notes from site inspection	Date Complete	Signed
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Print duplicate pages if required.

AFA CONSULTING

BS 5837:2012 Table 1 – Cascade chart for tree quality assessment

APPENDIX D

Category and Definition	Criteria (including subcategories where 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 the current land use for longer than 10 years.	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve.			DARK RED
	1. Mainly arboricultural values	**2. Mainly landscape values**	**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 of 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
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
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value GREY	GREY

BS5837:2012 Tree Survey

Client: Thomas's College
Project: BS5837 Tree Survey
Survey Date: 04/09/2024
Surveyor: Andy Fulbrook & Martin Grew

AFA Consulting Ltd
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Lightwater
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Tree and Tag No / Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations / Survey Comment	Cat ERC
G1										Estimated Measurements	
A Group	9.5	1	150	N 3	0	M	A: 10.2	Fair	C: Fair	No action :: No works currently required	C.2
- -				E 3	0		R: 1.8		S: Fair		10 to 20 yrs
				S 3	0				B: Fair	A mixed shrub and small tree group adjacent to the drive and carpark. Some overhang of the driveway is noted but not sufficient to obstruct construction traffic and is being managed by grounds maintenance. This group offers good screening.	
				W 3	0						
G2										Estimated Measurements	
A Group	14	1	250	N 3	0	M	A: 28.3	Fair	C: Fair	No action :: No works currently required	C.2
- -				E 3	0		R: 3		S: Fair		10 to 20 yrs
				S 3	0				B: Fair	A mixed shrub and tree group adjacent to the drive and building. Some branches are close to and touching the building but do not affect this development, ideally they should be pruned to improve airflow and avoid problems of damp developing. This group offers some visual amenity and screening.	
				W 3	0						
G3										Estimated Measurements	
A Group	11	1	300	N 2.5	0	M	A: 40.7	Good	C: Fair	No action :: No works currently required	C.2
- -				E 2.5	0		R: 3.59		S: Poor		20 to 40 yrs
				S 2.5	0				B: Poor	A mixed group of trees over grown in border adjacent to the building and driveway. Being clipped and managed by grounds maintenance. Trees have out grown this setting but currently offer limited amenity value.	
				W 2.5	0						
G4										Estimated Measurements	
A Group	4.5	1	120	N 2	2	M	A: 6.5	Decline	C: Poor	Coppice :: To 1.5m stumps	U
- -				E 2	2		R: 1.43		S: Poor		<10 yrs
				S 2	2				B:	A group of 3 Lilac shrubs adjacent to the MUGA fence and within low shrub hedge. Declining trees offer some habitat value.	
				W 2	2						

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
G5										Estimated Measurements	
A Group - -	20	1	450	N 6 E 6 S 6 W 6	5 5 5 5	M	A: 91.6 R: 5.39	Good	C: Fair S: Fair B: Fair	No action :: No works currently required A mixed boundary group of trees with shrub understory. Set back from the driveway and with no clearance issues. This group offers good screening, landscape and arboricultural value.	B.2 20 to 40 yrs
G6										Estimated Measurements	
A Group - -	9	1	250	N 4 E 2.5 S 2 W 2.5	2 2 2 2	SM	A: 28.3 R: 3	Fair	C: Poor S: Fair B: Poor	No action :: No works currently required 4 suppressed trees in small planting pits. Overgrown their situation and of limited value. Trees offer some landscape and shading value.	C.2 10 to 20 yrs
G7										Estimated Measurements	
A Group - -	6	1	200	N 2.5 E 2.5 S 2.5 W 2.5	0 0 0 0	M	A: 18.1 R: 2.4	Good	C: Fair S: Fair B: Fair	No action :: No works currently required A mixed shrub and small tree group in a border adjacent to the MUGA and footpaths. Group offers some landscape and screening value.	C.2 10 to 20 yrs
H1										Estimated Measurements	
A Hedgerow - *Spp.*	12	1	150	N 3 E 3 S 3 W 3	0 0 0 0	SM	A: 10.2 R: 1.8	Good	C: Fair S: Fair B: Fair	Hedge management :: Rejuvenation pruning An overgrown Leyland Cypress hedge that surrounds the northern end of the MUGA. growing through and over the fence. Hedge offers good screening.	C.2 >40 yrs
H2										Estimated Measurements	
A Hedgerow - *Spp.*	1.8	6	24 (Eq)	N 1 E 1 S 1 W 1	0 0 0 0	SM	A: 0.3 R: 0.3	Fair	C: Fair S: Fair B: Fair	No action :: No works currently required A low shrub hedge.	C.2 10 to 20 yrs
H3										Estimated Measurements	
A Hedgerow - *Spp.*	12	1	150	N 3 E 3 S 3 W 3	0 0 0 0	SM	A: 10.2 R: 1.8	Good	C: Fair S: Fair B: Fair	Hedge management :: Rejuvenation pruning An overgrown Monterey Cypress hedge that surrounds the northern end of the MUGA. growing through and over the fence. Hedge offers good screening.	C.2 >40 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T1											
Silver Wattle *Acacia dealbata*	10.2	1	480	N 2.5 E 5.5 S 6.5 W 6.5	5.5 2.5 23 3.5	M	A: 104.2 R: 5.75	Fair	C: Fair S: Poor B: Poor	No action :: No works currently required A prominent spreading tree adjacent to the main gate. Tight unions with adaptive growth noted. Tree has been repeatedly crown lifted, leaving moderate inner canopy deadwood. Tree offers good visual amenity, screening and arboricultural value.	**B.1.2** 20 to 40 yrs
T2											
Robinia *Robinia pseudoacacia*	14.2	1	790	N 5 E 4.5 S 4 W 4	4 4 1.5 5	M	A: 282.4 R: 9.48	Fair	C: Poor S: Poor B: Fair	Further inspection :: Climb and inspect Raise low canopy :: To 2.5m A large and prominent tree adjacent to main driveway and pedestrian access. Previously topped tree with 4m of upright regenerative growth. Dead central stem with cracked burrwood and evidence of dysfunction at main union, this should be further investigated. Minor crown raising over pedestrian rout is required. Tree offers some amenity value, good screening and arboricultural value.	**B.2** 20 to 40 yrs
T3											
Sweetgum *Liquidamber styraciflua*	9.6	1	260	N 6 E 2.5 S 3 W 4	4 6 4.5 3.5	M	A: 30.6 R: 3.12	Good	C: Poor S: Poor B: Fair	Raise low canopy :: To 5.0m A one-sided unbalanced tree withing the shrub group, adjacent to the driveway. This tree has low canopy over the drive close to the area where skips and piles of loose waste are being stored, this is likely to be broken by large vehicles during collection, raise low canopy over the road. This tree offers good amenity, screening, and some arboricultural value	**C.2** 20 to 40 yrs
T4											
Wild Cherry *Prunus avium*	6.3	1	280	N 5 E 3.5 S 3.5 W 3.5	2 2 2.5 3.5	M	A: 35.5 R: 3.36	Fair	C: Fair S: Fair B: Poor	No action :: No works currently required A small stature spreading tree adjacent to the driveway in open grass of lawn. Small Ganoderma brackets at base. Tree offers good amenity and landscape value.	**U** <10 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m2) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T5											
Wild Cherry *Prunus avium*	5.8	1	180	N 3 E 2 S 3 W 3	2 2 2 2.5	SM	A: 14.7 R: 2.16	Fair	C: Fair S: Fair B: Fair	No action :: No works currently required A small stature tree adjacent to the driveway in open grass of lawn. Tree offers good amenity and landscape value.	C.2 20 to 40 yrs
T6											
Deodar Cedar *Cedrus deodara*	26.6	1	1030	N 8.5 E 8 S 8 W 8.5	1.5 0 1 0.5	M	A: 480 R: 12.36	Good	C: Poor S: Poor B: Fair	Further inspection :: Climb and inspect A very large and prominent tree in front of main building. In mulched area within lawn. Tree has multiple biomechanical defects and woodpecker feeding holes are noted on the stem. Historic lost leader and subsequently torn out regrown tops. Tree offers good amenity, landscape and arboricultural value.	B.1.2 20 to 40 yrs
T7											
Cedar of Lebanon *Cedrus libani*	14.8	1	890	N 7 E 7 S 7.5 W 9.5	1.5 2 2.5 2.5	M	A: 358.4 R: 10.68	Good	C: Fair S: Poor B: Fair	Raise low canopy :: Over target - See comment A large and prominent tree in fenced mulch area adjacent to footpath and bench, set back from main driveway. Low canopy over road is at risk of damage from construction archives with no scope to redirect traffic. Reduce secondary growth only, over the driveway to raise low canopy to 5.5m. Tree offers good amenity and landscape value.	B.2 20 to 40 yrs
T8											
Leyland Cypress *X Cupressocyparis leylandii*	8.1	1	240	N 1.5 E 1.5 S 1 W 1.5	1.5 1.5 1.5 1.5	SM	A: 26.1 R: 2.88	Good	C: Fair S: Fair B: Fair	No action :: No works currently required An upright tree in border and hedge adjacent to the building. Over grown it's situation. Tree offers some amenity and landscape value.	C.2 10 to 20 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T9											
Western Red Cedar *Thuja plicata*	17.4	3	1082 (Eq)	N 6 E 6 S 9 W 5.5	2 1.5 1.5 1.5	M	A: 529.5 R: 12.98	Good	C: Fair S: Poor B: Fair	Prune :: From buildings/structure/tree by1.5m Raise low canopy :: To 2.0m A large and sprawling tree with busy main union of large primary limbs and stems. Growing close to the MUGA and beginning to obstruct the basketball backboard. Some inner canopy deadwood at eye height should be removed under the canopy. Tree offers good amenity, landscape and shading value.	**B.2** 20 to 40 yrs
T10											
Prunus *Prunus Spp.*	8.4	2	283 (Eq)	N 2 E 3 S 3 W 2.5	2 2 2.5 2	M	A: 36.3 R: 3.39	Fair	C: Fair S: Poor B: Poor	No action :: No works currently required A small stature tree in lawn adjacent to small paving area. Tree offers some amenity and landscape value.	**C.2** 10 to 20 yrs
T11											
Prunus *Prunus Spp.*	4	1	60	N 1.5 E 1 S 1 W 1.5	2 2 2 2	Y	A: 1.6 R: 0.71	Good	C: Good S: Good B: Fair	No action :: No works currently required A small young tree in planting pit within lawn.	**C.2** 20 to 40 yrs
T12											
Prunus 'Kanzan' *Prunus 'Kanzan'*	5.4	1	330	N 4.5 E 4 S 4 W 4	2 2 2 2	M	A: 49.3 R: 3.96	Fair	C: Fair S: Fair B: Poor	No action :: No works currently required A small stature spreading tree adjacent to the MUGA fence in lawn area. Bacterial canker on root flare. Tree offers some amenity, landscape and screening value.	**C.2** 10 to 20 yrs
T13											
Dawn Redwood *Metasequoia glyptostroboides*	27.5	1	940	N 6 E 7 S 8 W 5	7 4.5 2.5 5	M	A: 399.8 R: 11.28	Good	C: Good S: Good B: Fair	Ground :: Mulch Remove :: Major deadwood over targets A very large and prominent tree between driveway and MUGA. Excellent example of species. Significant soil compaction around base of tree area should be mulched. Tree offers good amenity, landscape and arboricultural value.	**A.1.2** >40 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T14											
Cucumber Tree *Magnolia acuminata*	10.9	2	258 (Eq)	N 3.5 E 3.5 S 4 W 3	2.5 2.5 3.5 3.5	M	A: 30.1 R: 3.09	Fair	C: Fair S: Fair B: Fair	Ground :: Mulch Prune :: From buildings/structure/tree by 1.0m A small spreading tree between the driveway and MUGA. Overhanging branches are likely impeding basketball games and should be reduced. Tree has some arboricultural value.	C.2 10 to 20 yrs
T15											
Crab Apple *Malus sylvestris*	11.8	1	400	N 6 E 4.5 S 6.5 W 1	6 8 8 6.5	OM	A: 72.4 R: 4.8	Decline	C: Poor S: Poor B: Poor	Fell :: Fell to ground level A dying tree between driveway and MUGA. Significant honey fungus colonisation. No possibility of retention.	U <10 yrs
T16											
Austrian Pine *Pinus nigra ssp. Nigra*	12.1	1	670	N 6 E 7 S 5.5 W 3.5	9.5 6 6 7	M	A: 203.1 R: 8.04	Good	C: Fair S: Fair B: Fair	Raise low canopy :: Over target - See comment A large tree adjacent to MUGA. Low limbs of MUGA are likely impeding games and should be crown lifted by removing secondary growth only. Tree offers good amenity, landscape and arboricultural value.	B.1.2 20 to 40 yrs
T17											
Common Oak *Quercus robur*	16	1	380	N 7 E 6 S 3 W 5	6 6.5 1.5 3.5	SM	A: 65.3 R: 4.55	Good	C: Fair S: Fair B: Good	OPM :: Manage OPM infestation Remove :: Major deadwood An upright tree adjacent driveway. OPM noted on lowest northeastern primary limb close to branch collar. OPM management must be undertaken. Lower canopy deadwood should be removed. Tree offers good amenity, landscape and arboricultural value. Tree has good future potential.	B.2 >40 yrs
T18											
Silver Birch *Betula pendula*	10.5	1	110	N 2 E 2 S 2 W 2	3 3 3 3	SM	A: 5.5 R: 1.32	Fair	C: Fair S: Fair B: Fair	No action :: No works currently required A small understorey, low value tree.	C.2 20 to 40 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T19											
Italian Alder *Alnus cordata*	18.4	1	450	N 5 E 5 S 5 W 5	2 1.5 4 3	M	A: 91.6 R: 5.39	Good	C: Good S: Good B: Good	No action :: No works currently required A large and prominent tree adjacent to the MUGA. An excellent example of species. Tree offers good amenity, landscape and arboricultural value.	A.1.2 >40 yrs
T20											
Wild Cherry *Prunus avium*	7.7	1	530	N 4 E 3.5 S 5 W 3.5	2 2 1.5 2	OM	A: 127.1 R: 6.36	Fair	C: Poor S: Poor B: Poor	Fell :: Fell to safe height A small stature spending tree adjacent to the road. Significant stem and basal decay. Ganoderma noted on all sides. Tree offers some landscape value and good habitat value.	U <10 yrs
T21											
Holm Oak *Quercus ilex*	12.3	1	360	N 6 E 5.5 S 4.5 W 5	2 2 2 2	SM	A: 58.6 R: 4.31	Good	C: Fair S: Good B: Fair	No action :: No works currently required A large and prominent tree adjacent to the driveway. An good example of species. Tree offers good amenity, landscape and arboricultural value.	B.1.2 >40 yrs
T22											
Common Holly *Ilex aquifolium*	9.2	4	383 (Eq)	N 2.5 E 2.5 S 2.5 W 2.5	2 2 2 2	SM	A: 66.5 R: 4.6	Fair	C: Fair S: Poor B: Poor	No action :: No works currently required A large small upright tree adjacent to the driveway. Tree offers some, landscape value.	C.2 20 to 40 yrs
T23											
Weeping Ash *Fraxinus pendula*	7.4	1	900	N 5 E 4 S 1 W 1	2 2 2 2	OM	A: 366.5 R: 10.8	Decline	C: Poor S: Poor B: Poor	Fell :: Fell to safe height A declining failed pollard. Tree offers good habitat value.	U <10 yrs
T24											
Austrian Pine *Pinus nigra ssp. Nigra*	20.3	1	710	N 6 E 6 S 6 W 5	12 7.5 4.5 9	M	A: 228.1 R: 8.52	Good	C: Fair S: Fair B: Fair	No action :: No works currently required A large tree adjacent to MUGA. Tree offers good amenity, landscape and arboricultural value.	B.1.2 20 to 40 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T25											
Holm Oak *Quercus ilex*	14	1	580	N 8 E 8 S 8 W 8	2.5 2.5 2.5 2.5	M	A: 152.2 R: 6.96	Good	C: Fair S: Fair B: Good	Remove :: Major deadwood over targets A large and prominent tree adjacent to the MUGA. A good example of species. Tree offers good amenity, landscape and arboricultural value.	**B.1.2** >40 yrs
T26											
Common Oak *Quercus robur*	26.1	1	1240	N 9.5 E 10.5 S 13 W 10	5 6 2.5 5.5	M	A: 695.7 R: 14.88	Good	C: Fair S: Fair B: Poor	Reduce faulted stems :: By 1-2m Reduce faulted limbs :: By 2-3m Remove :: Major deadwood A very large and prominent tree in lawn close to footpaths around MUGA. Evidence of fungal brackets removed from southern basal stem. Large woodpecker hole in tension wood of large primary limb over footpath. Major deadwood throughout canopy. Picus internal tomography and aerial inspection were undertaken to inform the current prescribed works. Tree offers good amenity, landscape arboricultural, and habitat value.	**A.1.2** 20 to 40 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

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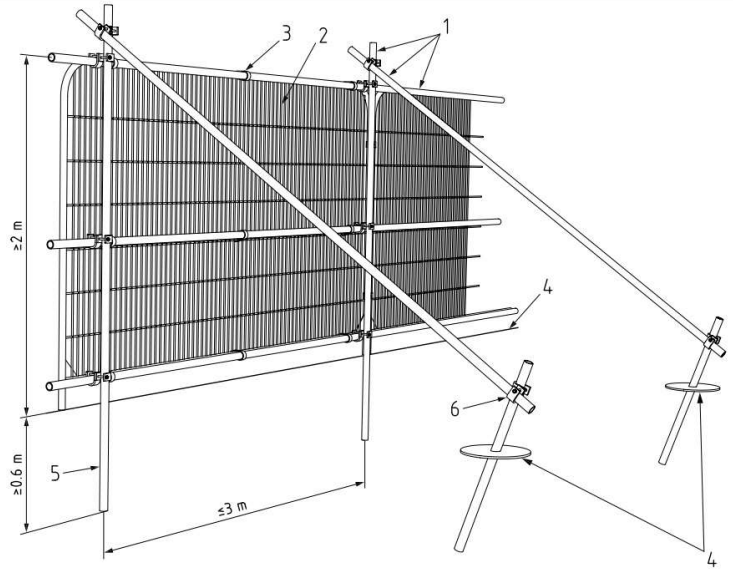
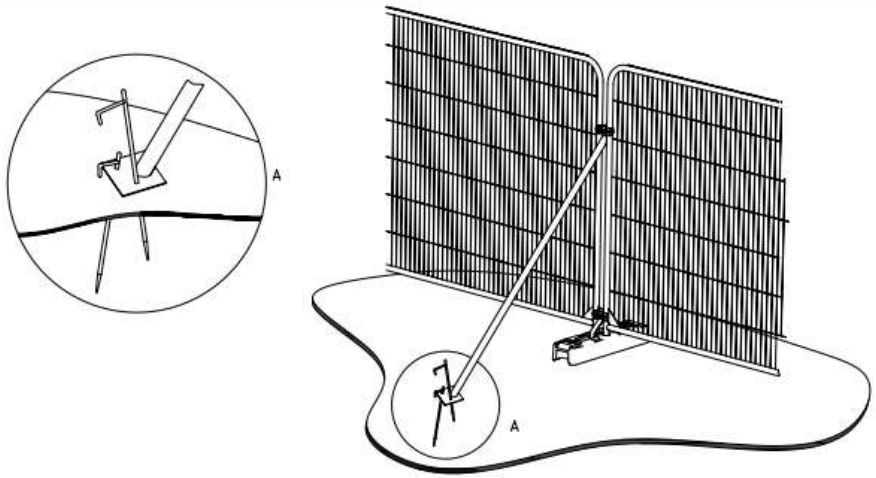
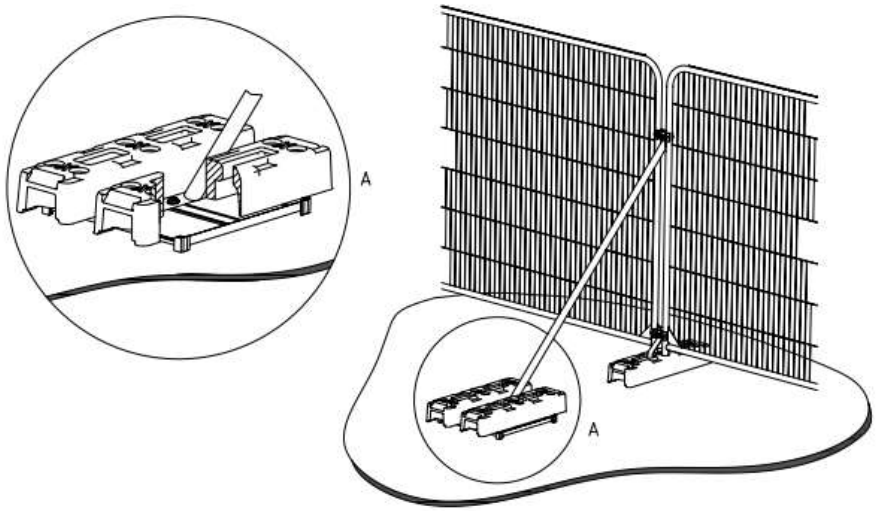


Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

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AFA CONSULTING

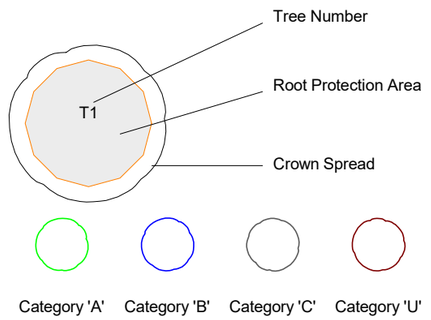
Tree Constraints Plan
Thomas's College

SCALE : 1 : 850 @ A3

DATE : 22/10/2024

N

MAP FILENAME :
Figure 1 - TCP Thomas-s College 2024



0 60m

Statutory protection checked on date above:

The site is within a Conservation Area:
Richmond Hill CA5

No Tree Preservation Orders are present on site.
Confirmed via telecom with Richmond Council 12/09/24 14:44

Further details can be found with London Borough of Richmond Upon Thames Council

Tree ID	Common Name	RPA Radius (m)	Category
T1	Silver Wattle	5.76	B
T2	Robinia	9.48	B
T3	Sweetgum	3.12	C
T4	Cherry	3.36	U
T5	Cherry	2.16	C
T6	Deodar Cedar	12.36	B
T7	Cedar of Lebanon	10.68	B
T8	Leyland Cypress	2.88	C
T9	Western Red Cedar	12.98	B
T10	Cherry	3.40	C
T11	Cherry	0.72	C
T12	Cherry	3.96	C
T13	Dawn Redwood	11.28	A
T14	Cucumber Tree	3.10	C
T15	Crab Apple	4.80	U
T16	Austrian Pine	8.04	B
T17	Oak	4.56	B
T18	Silver Birch	1.32	C
T19	Italian Alder	5.40	A
T20	Wild Cherry	6.36	U
T21	Holm Oak	4.32	B
T22	Holly	4.60	C
T23	Weeping Ash	10.80	U
T24	Austrian Pine	8.52	B
T25	Holm Oak	6.96	B
T26	Oak	14.88	A
G1	A Group	1.80	C
G2	A Group	3.00	C
G3	A Group	3.60	C
G4	A Group	1.44	U
G5	A Group	5.40	B
G6	A Group	3.00	C
G7	A Group	2.40	C
H1	A Hedgerow	1.80	C
H2	A Hedgerow	0.29	C
H3	A Hedgerow	1.80	C

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Email: info@afaconsultingltd.com

AFA CONSULTING

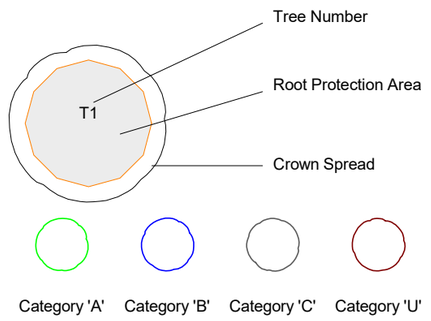
Tree Protection Plan
Thomas's College

SCALE : 1 : 850 @ A3

DATE : 25/10/2024

N

MAP FILENAME :
Figure 2 - TPP Thomas-s College 2024



0 60m

Statutory protection checked on date above:

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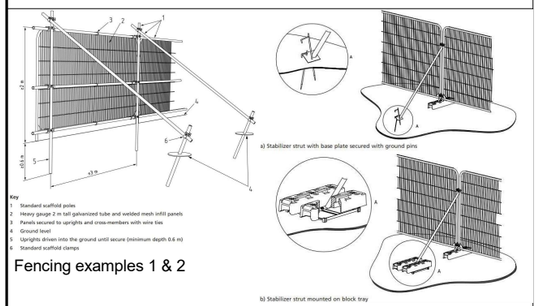
No Tree Preservation Orders are present on site.
Confirmed via telecom with Richmond Council 12/09/24 14:44

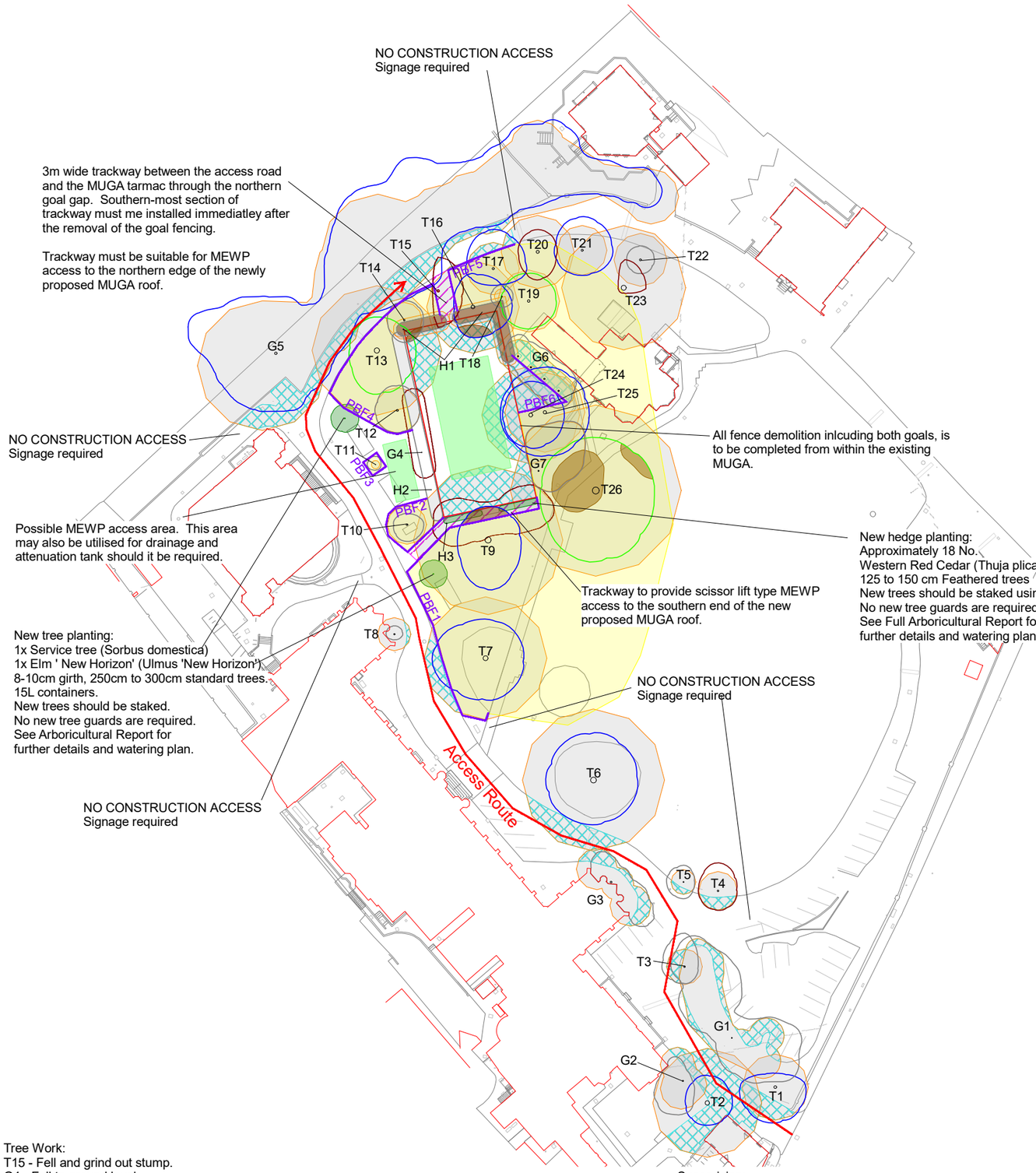
Further details can be found with London Borough of Richmond Upon Thames Council.

To be read in conjunction with Arb Report - Thomas's College.



Fencing examples 1 & 2

- Existing Hardstanding in RPAs
- Temporary Ground Protection
- New Planting
- Material / Plant Storage
- Canopy Pruning
- Construction Exclusion Zone
- Proposed Building
- Removed Trees/hedges
- Protective Barrier Fencing



Tree Work:
T15 - Fell and grind out stump.
G4 - Fell to ground level.
H3 - Fell and grind out stumps.

T9 - Secondary branch removal to raise canopy in northern crown.
T14 - Secondary branch removal to raise canopy in southeastern crown.
T16 - Secondary branch removal to raise canopy in southwestern crown.
H1 - Reduce height to existing fence level, and prune back overhanging branches.

Tree Planting:
2x Standard trees (Staked)
16m of Replacement hedge planting

Supervision:
Demolition of the existing fence and basketball post in the northern goal.
Pre-commencement meeting.
Demolition of existing fence, gate and basketball posts.
Hand dug post hole excavation for the new fence.
Hand dug post type foundations for roof structure.
Project sign off

Site Monitoring:
Monthly visits

IMPORTANT NOTE FOR RETAINED RPA's:

NO PLANT ACCESS.

NO UNSUPERVISIED CONSTRUCTION.

HAND TOOLS ONLY.

NO MATERIAL OR WASTE STORAGE.

Tree ID	Common Name	RPA Radius (m)	Category
T1	Silver Wattle	5.76	B
T2	Robinia	9.48	B
T3	Sweetgum	3.12	C
T4	Cherry	3.36	U
T5	Cherry	2.16	C
T6	Deodar Cedar	12.36	B
T7	Cedar of Lebanon	10.68	B
T8	Leyland Cypress	2.88	C
T9	Western Red Cedar	12.98	B
T10	Cherry	3.40	C
T11	Cherry	0.72	C
T12	Cherry	3.96	C
T13	Dawn Redwood	11.28	A
T14	Cucumber Tree	3.10	C
T15	Crab Apple	4.80	U
T16	Austrian Pine	8.04	B
T17	Oak	4.56	B
T18	Silver Birch	1.32	C
T19	Italian Alder	5.40	A
T20	Wild Cherry	6.36	U
T21	Holm Oak	4.32	B
T22	Holly	4.60	C
T23	Weeping Ash	10.80	U
T24	Austrian Pine	8.52	B
T25	Holm Oak	6.96	B
T26	Oak	14.88	A
G1	A Group	1.80	C
G2	A Group	3.00	C
G3	A Group	3.60	C
G4	A Group	1.44	U
G5	A Group	5.40	B
G6	A Group	3.00	C
G7	A Group	2.40	C
H1	A Hedgerow	1.80	C
H2	A Hedgerow	0.29	C
H3	A Hedgerow	1.80	C