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Arboricultural Report

Arboricultural Method Statement

As required by LB Richmond under Condition U0194981 of Planning Approval 24/1642/VRC

For
PHASE 1
Approved Works

at
Twickenham Film Studios
The Barons
Twickenham
TW1 2AW

Client
Twickenham Properties LLP

by
Curtis Barkel
RCArborA, DipArb (RFS), F.Arbor.A

Ref: SA/2310/24 Date: 18 December 2024

Contents

1.0 Instructions

1.1 Sylvanarb has received instructions to provide the following arboricultural details for Phase 1 of the proposed works, as required under Condition U0194981 of the LB Richmond planning approval, Ref: 24/1642/VRC.

- Arboricultural Method Statement
- Tree Protection Plan and Specification
- Tree Work Specification
- Arboricultural Monitoring Programme

2.0 Documents Supplied

- LB Richmond, notification of planning approval. Ref: 24/1642/VRC
- Holloway Studio, Proposed Site Plan. Ref: 18.141.100.04
- Holloway Studio, Construction Phasing Plan. Ref: 18.141
- Logic PM, Construction Method Statement. Dated: 24 October 2024
- ACD, Arboricultural Report. Ref: PRI23128aia_ams. Dated 06 January 2021
- ACD, Tree Survey. Ref: PRI23128ts. Dated 17 December 2020

3.0 Aim of Report

3.1 To ensure adequate protection of retained trees is provided and maintained whilst carrying out the approved development works proposed under Phase 1 of the project.

3.2 To provide details of working methods and restrictions whilst carrying out works within Root Protection Areas and close to tree canopies.

3.3 To provide a specification for tree protection measures required to protect trees identified for retention throughout the works programme.

3.4 To advise on tree work requirements and provide a specification for tree works required to accommodate the approved development.

3.5 The information within this report has been provided to satisfy and discharge Condition U0194981 of the extant LB Richmond planning approval.

4.0 Scope of Report

4.1 The BS5837 tree survey used to inform this method statement was originally carried out by ACD Environmental in November 2020 (ACD, Ref: PRI23128ts).

4.2 The survey was used to provide an Arboricultural Impact Assessment, Tree Protection Specification and a preliminary Arboricultural Method Statement (ACD, Ref: PRI23128aia_ams); with these details submitted to accompany the original planning submission for the project (LB Richmond, Ref: 21/0094/FUL).

4.3 The submitted ACD arboricultural report was intended to provide sufficient information required to inform the planning decision, in accordance with the *'Feasibility and Planning'* stage recommended in BS5837:2012.

4.4 This report provides further clarification of the tree protection requirements to be complied with by the appointed contractor, in accordance with the *'Detailed/Technical Design'* stage of BS5837 and as required under Condition U0194981 of the latest planning approval.

4.5 This considers and includes all elements of the original arboricultural report, whilst also incorporating the recently approved Construction Method Statement (CMS) (Logic PM, Dated: 24 Oct 2024)

4.6 The arboricultural impact of the proposed development, in terms of impact on retained trees, remains as detailed in the submitted ACD Arboricultural Impact Assessment.

5.0 Survey Method

5.1 The tree survey was carried out by ACD Environmental in November 2020.

5.2 For reference, the ACD survey data is provided at Appendix A of this report.

5.3 No subsequent survey or assessment of the subject trees has been carried out by Sylvanarb.

5.4 All survey data is assumed to be accurate and sufficiently reliable to inform the tree protection requirements for the site.

6.0 Planning Approval

6.1 Under Planning Ref: 21/0094/FUL, LB Richmond approved various improvements to the property; these include renovations to existing buildings, extensions and new development.

6.2 A subsequent application for the phased delivery of the approved development has recently been approved by LB Richmond, under Planning Ref: 24/1642/VRC. This application is described as:

'Variation of condition nos: U0117515 (Approved Plans), U0117516 (Construction Method Statement), U0117517 (Ecological Construction Management Plan), U0117518 (Arboricultural Method Statement) and U0117520 (Sustainable Drainage Strategy) attached to planning permission ref: 21/0094/FUL dated 14.01.2022 to allow the phased delivery of the approved development.'

6.3 The application was approved, subject to conditions, in December 2024.

6.4 The conditions include the following pre-commencement requiremnbt for Phase 1 of the project:

Condition U0194981: Arboricultural Method Statement (AMS) 1
Prior to the commencement of development within Phase 1, an Arboricultural Method Statement (AMS) informed by the results of root investigations to the Horse Chestnut, shall be submitted to and approved in writing by the Local Planning Authority.

The AMS shall relate to all works within Phase 1 and must:

(A) Be written in accordance with and address sections 5.5, 6.1, 6.2, 6.3 and 7 of British Standard 5837:2012 Trees in relation to design, demolition and construction - recommendations

(B) Be written in conjunction with the schemes specific method of construction (where applicable)

(C) Outline any tree constraints and explain any impacts for both above and below ground.

(D) Detail all tree protection (including plans)

(E) Detail any special engineering for construction within the Root Protection Area.

(F) Detail any facilitation pruning that may be required. The specification for tying back and/or pruning must be measurable and prepared by a suitably qualified Arboriculturalist or Arboricultural Contractor. All tree work must be undertaken in accordance with BS3998:2010 Tree work - Recommendations unless approved by the Councils Arboricultural Officer

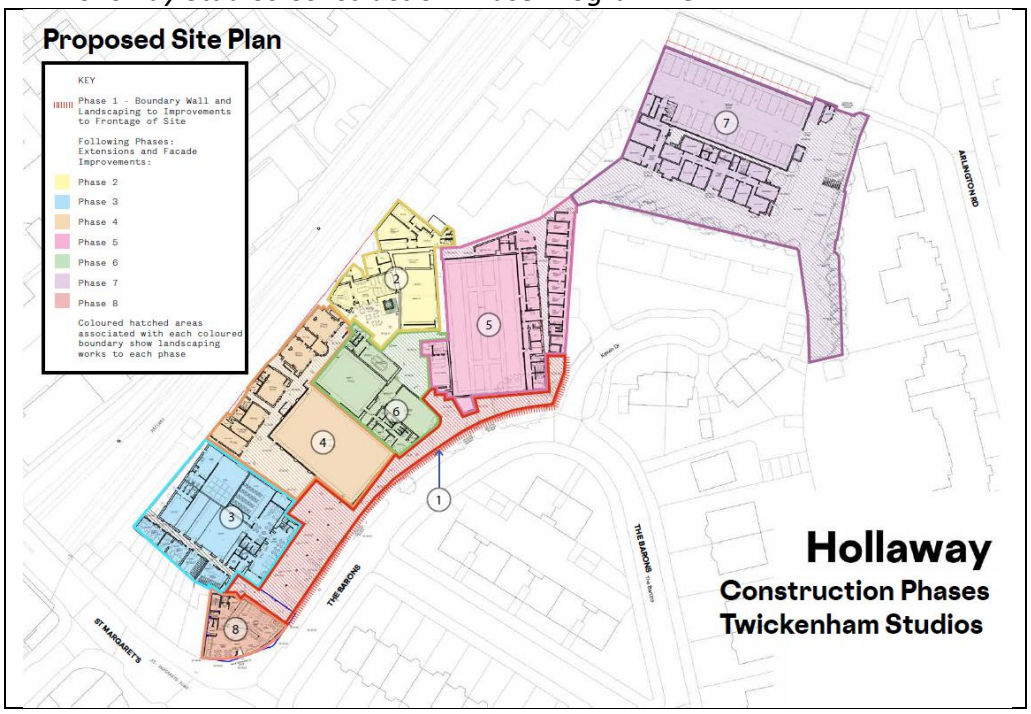
(G) Provide confirmation of the appointment of an Arboricultural Consultant for the duration of the development and a schedule of inspections to achieve an auditable monitoring and supervision programme, and a timetable for submission to the Local Planning Authority. The development shall not be implemented other than in accordance with the approved AMS.

6.5 This report provides the above details as required under Condition U0194981 of the planning approval.

7.0 Phase 1: Works Programme

7.1 Phase 1 is the initial stage of an eight phase project, the phases are shown on the following extract from the Holloway Studios Construction Phase Programme:

Fig. 1: Holloway Studios Construction Phase Programme



7.2 The works proposed under Phase 1 are comprised of the renovation of the existing wall lining the site boundary with The Barons.

7.3 This is currently a pebble-dashed wall with concrete coping, the renovation works will involve structural repair where required, re-rendering and new coping stones.

7.4 The wall is divided into several sections by five site access points. Trial pit excavations are to be carried out at the base of each section of wall in order to determine footing depth and condition.

7.5 Should the footings be found to be insufficient, in terms of condition/depth/current standards, additional repair works may be required such as upgrading existing footings or introducing buttress supports.

7.6 If required, the details of any such additional works are to be specified by a structural engineer under arboricultural advice provided by the appointed monitoring arboriculturist. Once a specification has been finalised the details are to then be submitted for the approval of the Local Authority Tree Officer prior to commencing the works.

7.7 No other works are proposed under Phase 1 of the scheme.

8.0 Primary Tree Protection Risks & Considerations

8.1 Three trees are located within the Phase 1 area of works (T1, T2, T3); whilst one highway tree is located on The Barons, within the footpath adjacent to the site boundary wall (T28).

8.2 Trees T1 and T2 are protected by the LB Richmond Tree Preservation Order (TPO) Ref: T0130. Tree T3 is protected under the planning approval and T28 is a Highway Authority tree. All of these trees will require protection and consideration during the works programme, with any damage to the trees likely to result in planning enforcement action.

8.3 The root zones of these trees are entirely covered by existing buildings and impermeable hard surfacing, as such there is no risk of root damage from general wall repair works and contractor movements.

8.4 Impact damage to tree stems is a potential risk that is to be addressed by the installation of stem hoarding.

8.5 The risk of branch/canopy damage is low as no work at height is proposed, no scaffolding is required and contractor vehicles will be limited to the use of one van (as specified in the CMS), with adequate space for deliveries/storage of materials beyond the canopy spread of the subject trees.

8.6 Trial pit excavations at the base of each section of wall between T28 and T3 present a risk of root damage. Excavations here are to be carried out using hand tools only and under arboricultural supervision.

8.7 The specification of any required additional foundation upgrade work that may be required as a result of the trial pit investigations is to first be agreed between the project structural engineer and the monitoring arboriculturist and then approved by the Local Authority Tree Officer prior to proceeding with any such works.

Fig. 2: Potential Arboricultural Risks and Controls

Risk		Control
1	Potential damage to protected trees	• Working methods and tree protection requirements to be fully complied with
2	Root zone damage	• All existing hard surfacing to be retained. • No excavations to be carried out other than approved trial pits for wall foundation assessment.
3	Impact damage to tree stems	• Stem hoarding to be installed prior to the commencement of any other works on site.
4	Impact damage to branches	• All deliveries and storage of materials to be restricted from the extent of tree canopy spread. • No plant or vehicles permitted within canopy spread.
5	Root damage resulting from trial pits	• Trial pit excavations alongside boundary wall between T28 and the outer canopy extent of T3 are to be carried out using hand tools only.

8.8 The tree protection measures specified within this report are to be fully complied with for the duration of the works contract.

8.9 An individual, such as the Contract Manager, is to be identified as a point of contact for all day to day arboricultural affairs during works. This individual is to be fully aware of the arboricultural requirements set out within this report and is to be responsible for the monitoring and enforcement of tree protection measures on a daily basis.

8.10 Should any changes to tree protection be required or compliance with work restrictions not be possible, the Contract Manager is to consult with the monitoring arboriculturist to agree changes and alternative methods of protection.

8.11 The Contract Manager is to ensure that all contractors and operatives involved with the works are aware of the restrictions to working practices prior to commencing any works on site.

8.12 Condition U0194981 Part G) additionally requires that a Project Arboriculturist be retained to ensure tree protection requirements are complied with and to monitor works that have the potential to cause damage to retained trees.

9.0 Operations Resulting in Damage to Trees

9.1 The following operations are likely to result in significant damage to trees. Damage resulting from these operations may take immediate effect resulting in the rapid death of a tree, or alternatively may result in years or even decades of gradual decline and ultimate early death.

9.2 ***Compaction of Soil***

Whether from repeated pedestrian passage or due to just a single passing of a vehicle, soil compaction within a Root Protection Area will inevitably lead to root death and may ultimately greatly reduce the longevity of a tree.

9.3 ***Storage or Spillage of Toxic Materials***

The following materials commonly used on development sites are toxic to trees:

- Builders Sand (due to salt content)
- Cement
- Fuels
- Tarmac

The uncontrolled storage or use of such materials on unsealed surfaces within 10 metres of trees is likely to be detrimental to their long-term health.

9.4 ***Excavations / Soil Grading / Lowering of Levels***

Contrary to popular belief nearly all of a tree root system is located within the top one metre of soil, often with the majority of roots found within 600mm of the soil surface. The Root Protection Area is the area of protection required to retain a tree. The full root system will extend beyond this, usually to a distance at least equivalent to the height of the tree.

9.5 ***Raising of Levels***

Roots absorb both oxygen and water from the soil and therefore develop in free-draining, aerated conditions. Where levels are raised over tree roots the availability of oxygen is reduced and moisture filtration hindered, tree roots will subsequently be starved of oxygen and water leading to root death, potential disease and reduced longevity.

10.0 Tree Protection Measures

10.1 *Monitoring and Maintenance*

10.1.1 All trees identified for retention on the approved plans are protected under the planning approval, as well as trees T1 and T2 being protected by Tree Preservation Order. It is therefore imperative that the specified tree protection requirements are fully complied with for the duration of the works contract.

10.1.2 Part G) of the Planning Condition requires that an arboricultural consultant be retained to provide a monitoring service during the works phase, stating that the AMS must:

'Provide confirmation of the appointment of an Arboricultural Consultant for the duration of the development and a schedule of inspections to achieve an auditable monitoring and supervision programme, and a timetable for submission to the Local Planning Authority.'

10.1.3 Arboricultural monitoring is recommended at the following stages:

- Prior to commencement to approve the installation of tree protection measures and to discuss and agree all work proposals with the appointed contractor.
- During all trial pit excavations (and any other excavations) carried out between T28 and T3, to ensure the work is carried out by hand and in accordance with BS5837 7.2.
- Periodically throughout the works contract as required by the Contract Manager to advise on any unforeseen circumstances/conflicts with trees that may arise.
- Prior to completion to approve the removal of tree protection measures.

10.1.4 As required under the condition, upon completion of each monitoring visit, a report will be produced and issued to the client for submission to the Local Authority.

10.1.5 As required under Part G), a draft monitoring programme is provided at Appendix C for consideration by the Local Authority; upon discharge of Condition U0194981 the suggested monitoring programme will be assumed to be acceptable.

10.1.6 The Contract Manager is to make all necessary arrangements with the appointed arboriculturist prior to the commencement of any works on site, as part of the *'Pre-Construction Activities'* set out at S.3.5 of the Construction Method Statement.

10.2 ***Tree Protection Fencing***

10.2.1 As specified at S. 6.2.2.1 of BS5837 tree protection fencing is to be '*fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work...'*.

10.2.2 A tree protection plan and specification was previously provided by ACD Environmental and submitted with the original planning application. The physical protection proposed comprised of timber hoarding installed around the retained tree stems in order to avoid impact damage during works.

10.2.3 No wider tree protection fencing was proposed due to the root zone of all subject trees currently being hard surfaced.

10.2.4 I confirm that this specification is acceptable and will provide adequate protection for the on-site subject trees. Hoarding is not considered to be required for the adjacent highway tree.

10.2.5 The tree protection hoarding is to be installed prior to the commencement of any other works on site and as part of the *'Site Security/Working Area'* fencing works set out at S.3.4 of the Construction Method Statement.

10.2.6 Informative signs (model sign provided at Appendix B) are to be laminated and attached to the hoarding.

10.2.7 The hoarding is to be maintained through to completion of Phase 1 and may be retained as installed for the future phases of the project if required.

10.2.8 A revised tree protection plan, reflecting the protection measures detailed within this report, is provided at Appendix B.

10.3 ***Temporary Ground Protection Measures***

10.3.1 Contractor access will be required through the Root Protection Areas of the retained trees.

10.3.2 These areas are currently hard surfaced with impermeable surfacing.

10.3.3 All existing hard surfacing is to be retained to serve as ground protection for the underlying root zone.

10.3.4 Other than for approved trial pit excavation alongside the boundary wall, no excavations or removal of the existing hard surfacing between T28 and T3 is to be carried out without seeking further arboricultural advice and the approval of the Local Authority Tree Officer.

11.0 Excavations Within Root Protection Areas

11.1 *Trial Pits for Wall Foundations*

11.1.1 Trial pits are to be opened up at the base of each section of wall to determine the depth, type and condition of the wall footings.

11.1.2 This will require minor excavation within the Root Protection Zone of the retained trees, this is considered to be the entire length of the wall between tree T28 and T3 (as shown on the Tree Protection Plan at Appendix B).

11.1.3 Trial pit excavation within the protected area is to be carried out by hand and under arboricultural supervision.

11.1.4 The trial pits are to be limited to a maximum size of 600mm x 600mm, unless otherwise approved by the monitoring arboriculturist.

11.1.5 The pits are to be excavated using hand tools only.

11.1.6 As required under BS5837 guidelines, particular care is required to ensure that any roots of 25mm diameter or greater are not removed or damaged without first seeking further arboricultural advice and the approval of the Local Authority Tree Officer.

11.1.7 Should such roots be encountered, the location of the trial pit is to be relocated so as to avoid the need to damage any such roots.

11.1.8 Root damage associated with excavations may be considered a breach of TPO and may also result in the longevity of trees being greatly reduced, or trees being left in an unsafe condition.

11.2 *Slab/Foundation Excavations*

11.2.1 As set out at 3.8.1 of the Construction Method Statement, no excavations for floor slabs or foundations are proposed under Phase 1.

11.2.2 Should any such works be proposed/required as the project progresses further arboricultural advice is to be sought prior to commencement.

11.3 *Sub-structure Works*

11.3.1 As set out at 3.8.2 of the Construction Method Statement, no excavations for sub-structure works are proposed under Phase 1.

11.3.2 Should any such works be proposed/required as the project progresses further arboricultural advice is to be sought prior to commencement.

12.0 Proposed Services and Drainage

12.1 Other than temporary services/drainage for contractor office and welfare facilities, no services or drainage are proposed for Phase 1 of the project.

12.2 The suggested locations for the contractor office and welfare facilities are shown on the Tree Protection Plan at Appendix B. As stated at S.3.6 and under S.3.8 of the Construction Method Statement, these will be connected to the existing on site facilities.

12.3 Assuming these facilities are not installed within the protected zone (between T28 and T3), there will be no restrictions to installation. If installation within the allocated protected zone is for any reason unavoidable, further arboricultural advice is to be sought from the monitoring arboriculturist prior to installation.

12.4 Other than approved trial pits for the wall foundation investigations, no trenching or excavations are to be carried out within the protected area.

13.0 Toxic Materials, Fuels and Cement

13.1 Materials that are likely to have an adverse effect on tree health, such as: fuels and cement must not be stored or discharged on unsealed surfaces within 10 metres of the trunk of a retained tree. Consideration for the slope of the ground is to be given when discharging or storing materials that are potentially harmful to trees.

13.2 The use and storage of such materials is to be restricted to the existing areas of hard surfacing, ensuring run-off does not fall towards the tree stems.

13.3 The monitoring arboriculturist is to discuss and agree the required locations for the storage and use of such materials at the pre-commencement site meeting.

13.4 Should the storage or use of such materials require repositioning at any time during the project, the Contract Manager is to consult and agree a revised location with the monitoring arboriculturist or the Local Authority Tree Officer.

14.0 Site Office, Storage, Welfare and Parking

14.1 Adequate space is available on site for contractor parking, site office, storage area and welfare facilities without conflicting with tree protection requirements. Suggested locations are provided on the Tree Protection Plan at Appdx. B.

14.2 The location of these facilities are to be agreed with the project arboriculturist during the pre-commencement site visit.

14.3 Should containers/cabins need to be installed within protected area defined on the Tree Protection Plan, the specification and method of installation is to be agreed with the arboriculturist prior to commencement.

15.0 Required Tree Works

15.1 No tree work is required to accommodate the proposed works under Phase 1 of the project.

15.2 All subject trees have been maintained to provide adequate clearance from the boundary wall.

15.3 Should any tree work be required as the works progress, the Contract Manager is to consult with the monitoring arboriculturist and ensure that the prior approval of the Local Authority Tree Officer is gained before carrying out any such work.

15.4 Any tree work required is to only be carried out by a competent tree surgeon and in accordance with the British Standard for tree work BS3998: 2010 'Recommendations for Tree Work'.

16.0 Application of the Arboricultural Method Statement

16.1 This method statement is required to be submitted for Local Authority approval prior to commencement of works on site under Condition U0194981 of the LB Richmond planning approval Ref: 24/1642/VRC.

16.2 It is important to note that the Construction Method Statement states at S.3.1:

'This method statement has been prepared on the basis of the initial information and following appointment of the contractor, they will prepare a more detailed method statement as required under the CDM Regulations 2015 when further details are available. Under the contractors company procedures they will generally require the sub contract method statements two weeks before their works start on site for approval. Once approved, these will be incorporated into the project management plan, before any works start on site.'

16.3 This also applies to the content of this Arboricultural Method Statement. The tree protection requirements and restrictions to working operations are to be carefully considered by the appointed contractor and all elements are to be included in their own project method statement.

16.4 Of particular note is the requirement of the Local Authority for an Arboricultural Monitoring Programme to be agreed and put in place for the duration of the works contract. The draft programme is provided at Appendix C for the agreement of the contractor and the approval of the Local Authority.

17.0 Sequence of Operations

1. Discharge of relevant pre-commencement conditions.

2. Prior to the commencement of any works associated with the development, install Stem Protection Hoarding for trees T1-T3, as shown on the Tree Protection Plan at Appendix B.

3. Prior to the commencement of any works associated with the development, hold site meeting between project arboriculturist and contract manager to agree all working methods; to approve the installation of the stem hoarding; and to agree site office/storage/cement mixing/fuel storage locations.

4. LPA Tree Officer to be informed that tree protection has been adequately installed and works are about to commence.

5. As part of their induction and prior to carrying out works on the site, all contractors associated with the works are to be informed of the tree protection precautions and restrictions to working practices set out within the Arboricultural Method Statement.

6. Proposed works to commence.

7. The Contract Manager is to organise and arrange the arboricultural monitoring visits required during trial pit excavations.

8. After each monitoring visit the arboriculturist is to issue a monitoring report to the Contract Manager for submission to the Local Authority, as required under Condition U0194981.

9. Upon the completion of all works, the Contract Manager is to arrange a final inspection visit from the project arboriculturist to gain approval for the removal of the stem protection hoarding and to inspect the condition of retained trees.

10. Completion.

Appendix A

ACD Environmental
Tree Survey Data

CLIENT: Twickenham Studios

DATE: 17.12.2020

SURVEYOR: R. Anderson

TAGGED? No

Tree Survey Schedule

No.	Name	Ht (crown)	Dia (stems)	Crown spread (NESW)	Life stage	ERC	Comments & preliminary recommendations	BS Cat
T1	Aesculus hippocastanum (Horse Chestnut)	19(5)	1210(1)	6, 5, 7, 9	M	20+	Growing in brick planter. Small cavity between buttresses. been reduced lightly	B2
T2	Aesculus hippocastanum (Horse Chestnut)	18(5)	900(1)	3, 9, 9, 7	M	20+	Growing on edge on wall in close proximity to building. been reduced on north side.	B2
T3	Prunus avium (Wild Cherry)	4(1)	180(1)	3.5, 3.5, 3.5, 3.5	EM	10+	Growing in raised planter	C2
T4	Chamaecyparis lawsoniana (Lawson Cypress)	8(2)	290(1)	2.5, 2, 2.5, 2.5	M	10+	Sparse crown.	C2
T5	Chamaecyparis lawsoniana (Lawson Cypress)	8(2)	280(1)	2.5, 3.5, 2.5, 2.5	M	10+	Been lightly topped	C2
T6	Unknown spp	2.5(1)	75(6)	3, 3, 3, 3	EM	10+	Multiple stems at ground level.	C2
T7	Prunus padus (Bird Cherry)	8(2)	310(1)	6, 4, 6, 4	M	10+	large surface root. large pruning wound on main stem	C2
T8	Chamaecyparis lawsoniana (Lawson Cypress)	8(2)	380(1)	3, 3, 3, 3	M	10+	lightly topped.	C2
T9	X Cupressocyparis leylandii (Leyland Cypress)	9(2)	570(1)	3.5, 5, 4, 3	M	10+	Been reduced	C2
T10	Chamaecyparis lawsoniana (Lawson Cypress)	7(3)	170(1)	1, 0.5, 2, 0.5	M	<10	Declining in health and condition.	U
T11	Chamaecyparis lawsoniana (Lawson Cypress)	9(2)	200(1)	3, 3, 3, 1	M	10+	One sided crown: supressed by adjacent specimen.	C2
T12	Chamaecyparis lawsoniana (Lawson Cypress)	9(2)	230(1)	3, 3, 1, 3	M	10+	One sided crown: supressed by adjacent specimen.	C2
T13	Quercus ilex (Holm Oak)	9(2)	210(3)	3.5, 3.5, 3.5, 3.5	M	10+	Plotted by eye on plan. Diameter is an estimated maximum. growing on other side of retaining wall	C2
T14	Thuja plicata (Western Red Cedar)	9(1.5)	300(1)	1.5, 1.5, 3, 2	M	10+	Lightly pruned and reduced in height	C2
T15	Thuja plicata (Western Red Cedar)	9(1.5)	310(1)	2, 2, 2, 2	M	10+	Lightly pruned. root damage to kerb	C2

Notes: Dia (stems): trunk diameter in mm at 1.5m above ground level (number of stems) | **HT (crown):** Tree height (crown clearance) | **Life stage: Y:** Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)). **SM:** Semi mature (recently planted and yet to attain mature stature; up to 25% of attainable age.). **EM:** Early mature (almost full height, crown still developing and seed bearing; up to 50% of attainable age.). **M:** Mature (full height, crown spread, seed bearing; over 50% of attainable age.). **OM:** Over mature (full size, die-back, small leaf size, poor growth extension.).| **FSB:** First significant branch (& compass bearing) | **ERC:** Expected remaining contribution in years- <10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment.| **BS Category:** Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed descriptions.

SITE: Twickenham Studios, The Barons, Twickenham **SURVEYOR:** R. Anderson
CLIENT: Twickenham Studios
DATE: 17.12.2020 **TAGGED?** No

No.	Name	Ht (crown)	Dia (stems)	Crown spread (NESW)	Life stage	ERC	Comments & preliminary recommendations	BS Cat
T16	Tilia sp. (Lime)	12(4)	320(1)	4, 4, 4, 4	M	10+	Plotted by eye on plan. Off-site and inaccessible: diameter estimated. pollarded at 4m die back in crown	C2
T17	Robinia pseudoacacia (Locust Tree)	16(2)	490(1)	5.5, 5.5, 5.5, 5.5	M	20+	Moderate quality, but of reduced value due to small size.	B2
T18	Tilia sp. (Lime)	18(2)	550(1)	3, 4.5, 4.5, 4.5	M	20+	Dense basal suckers, slightly one sided crown	B2
T19	Tilia sp. (Lime)	18(2)	600(1)	3, 4.5, 4.5, 4.5	M	20+	Off-site and inaccessible: diameter estimated. been regularly pruned. off site	B2
T20	Prunus padus (Bird Cherry)	4(1.5)	270(1)	3, 0, 2, 4.5	M	10+	One sided crown	C2
T21	Prunus padus (Bird Cherry)	4(1)	250(1)	3, 3, 3, 3	EM	10+	Decay in stem	C2
T22	Laburnum anagyroides (Laburnum)	6(2)	230(1)	1, 2, 2, 2	M	<10	Die back in crown	U
T23	Chamaecyparis lawsoniana (Lawson Cypress)	9(3)	320(1)	2.5, 2.5, 2.5, 2.5	M	10+	Growing within 5cm of wall	C2
G24	Chamaecyparis lawsoniana (Lawson Cypress),Fraxinus excelsior (Ash)	14(3)	300(1)	4, 4, 4, 4	M	10+	Plotted by eye on plan. Diameter is estimated average. offsite li e of conifers with several ash interspersed. dense ivy in crowns. trees look to be in poor condition	C2
G25	Acer pseudoplatanus (Sycamore),Quercus cerris (Turkey Oak)	13(3)	150(1)	2, 2, 2, 2	EM	10+	Diameter is estimated average. linear group growing on railway lines embankment. dense ivy within in crown	C2
T26	Fraxinus ornus (Manna Ash)	10(2)	220(1)	3, 4, 4, 4	EM	20+	Street tree on Highways/LA land. Tree located within hard surface area.	B2
T27	Fraxinus ornus (Manna Ash)	10(2)	210(1)	3, 3, 4, 2	EM	20+	Street tree on Highways/LA land. Tree located within hard surface area.	B2
T28	Acer platanoides (Norway Maple)	8(2)	230(1)	3, 3, 1.5, 2	M	10+	Street tree on Highways/LA land. Tree located within hard surface area. large mechanical wounds on stem and scaffold limbs	C2

Notes: Dia (stems): trunk diameter in mm at 1.5m above ground level (number of stems) | **HT (crown):** Tree height (crown clearance) | **Life stage: Y:** Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)). **SM:** Semi mature (recently planted and yet to attain mature stature; up to 25% of attainable age.). **EM:** Early mature (almost full height, crown still developing and seed bearing; up to 50% of attainable age.). **M:** Mature (full height, crown spread, seed bearing; over 50% of attainable age.). **OM:** Over mature (full size, die-back, small leaf size, poor growth extension.).| **FSB:** First significant branch (& compass bearing) | **ERC:** Expected remaining contribution in years- <10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment.| **BS Category:** Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed descriptions.

Table 1 (BS5837:2012) – Cascade Chart for Tree Quality Assessment.

Category & 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 (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby or very low quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category & Definition	**Criteria — Subcategories**			
	1 Mainly arboricultural values	**2 Mainly landscape values**	**3 Mainly cultural values, including conservation**	
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 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 the high category, 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 collective landscape value, and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY

Appendix B

- Tree Protection Plan -

- Tree Protection Warning Sign -

!KEEP OUT!

Protected Trees

No Contractor Access Without Local Authority Permission

REPORT ANY DAMAGE
TO TREES OR FENCING IMMEDIATELY TO
LB RICHMOND TREE OFFICER
Tel: 020 8891 1411

Sylvanarb
Arboricultural Consultants

Sylvanarb Arboricultural Consultants
Tel:01634 724023 / Email: info@sylvanarb.co.uk

Appendix C

Draft Arboricultural Monitoring Programme

Sylvanarb Arboricultural Consultants

Draft Programme of Arboricultural Monitoring
To be approved by LB Richmond under Condition U0194981

REASON FOR VISIT	PERSONS TO ATTEND	TIMING	No. of Visits	COMMENTS
1) To approve the installation of stem hoarding. To agree working methods. To agree site office/storage/cement mixing/fuel storage locations.	- Project Arboriculturist - Contract Manager	Upon completion of site boundary set-up and prior to any other works on the site.	1	
2) To monitor the excavation of trial pits within the protected root zone as shown on the Tree Protection Plan.	- Project Arboriculturist - Contract Manager	During contract, prior to any excavations being carried out.	1	
3) Periodic site visits as required by the Contract Manager should any changes to tree protection be required or any unforeseen conflicts between tree protection and development activities arise.	- Project Arboriculturist - Contract Manager	As required.	As required	
6) COMPLETION Site visit to assess the condition of retained trees and to agree the removal of tree protection measures.	- Project Arboriculturist - Contract Manager	Upon completion of works, prior to removal of Stem Protection Hoarding.	1	