

TWICKENHAM STUDIOS  
THE BARONS  
TWICKENHAM

ARBORICULTURAL  
IMPACT  
ASSESSMENT &  
METHOD STATEMENT

for

Twickenham Studios



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## 1. Executive Summary

- 1.1. For the Arboricultural Method Statement see section 4.
- 1.2. The site is currently an active film studio that has been on this site since 1913 and has been developed in the intervening years meaning the site is nearly completely consisting of built form. The proposed consists of the erection of a new block ("Block A") at the front corner of the site together with the partial demolition of Block C and the construction of a two storey extension, the construction of an additional storey and external stair and lift core access to Block E, the construction of an additional storey above Block H and the refurbishment and modernisation of all existing blocks within the site.
- 1.3. Only the proposed extension to block C is located within an RPA of an adjacent tree. The remainder of the works are located either substantially far away from the trees or the proposed consists of internal alterations only.
- 1.4. This impact assessment is intended to evaluate the direct and indirect effects of the proposed design on the trees on site, and where necessary recommends mitigation.
- 1.5. The development proposals are in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. Adequate protection can be provided to ensure all retained trees are protected throughout development in the form of barriers and/or ground protection.
- 1.6. Two Ash trees located within the public highway are proposed for removed to facilitate the development as agreed at the pre-app meeting with the local authority, subject to mitigation planting agreement.
- 1.7. The relationship between the buildings and retained trees is sustainable and does not result in any situations which may result in unreasonable pressure to prune requests from future occupants as the buildings set up is predominantly the same as the existing.
- 1.8. The Arboricultural Method Statement (AMS) has been compiled in conjunction with the Tree Protection Plan (TPP) for the purpose of feasibility and planning, as per Figure 1 of BS5837:2012. These detail any mitigation which will be necessary to ensure the protection of retained trees throughout the development.

## 2. Introduction

- 2.1. ACD Environmental was instructed in December 2020 to prepare the following Arboricultural Impact Assessment and Method Statement by Twickenham Studios. Reference should be made to the appended Tree Protection Plan (PRI23128-03).
- 2.2. The Method Statement is to be made available to all operatives on site during the construction process, so that they understand the scope and importance of the measures set out for tree protection. Implementation of the protection methods and other details within this report are integral to ensuring protection for the retained trees.
- 2.3. For details of trees to be retained, and locations and types of special protection methods, reference should be made to the latest revision of Tree Protection Plan (ref: PRI23128-03), which should be displayed prominently on site for all staff to see.
- 2.4. This report is based on the recommendations given in BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- 2.5. The Local Authority has been contacted to investigate the presence of any statutory protection that may affect the trees on this site. Richmond Borough Council confirmed that the two mature Horse chestnut trees shown as T1 and T2 on the appended plan are protected by a tree preservation order (TPO) ref; T0130
- 2.6. The controlling authority is London Borough of Richmond.
- 2.7. Any questions relating to the content of this report should be directed in the first instance to: ACD Environmental, 4 & 5 The Old Mill, Fry's Yard, Bridge Street, Godalming, Surrey GU7 1HP, 01483 425714, quoting the site address and report reference number.
- 2.8. The following abbreviations have been used throughout this document:
  - Root Protection Area – RPA
  - Construction Exclusion Zone- CEZ
  - Tree Protection Plan – TPP
  - Tree Protection Fencing – TPF

### **3. Arboricultural Impact Assessment**

- 3.1. The site is currently an active film studio that has been on this site since 1913 and has been developed in the intervening years resulting in a site that is near completely of built form. The proposed consists of the erection of a new block ("Block A") at the front corner of the site together with the partial demolition of Block C and the construction of a two storey extension, the construction of an additional storey and external stair and lift core access to Block E, the construction of an additional storey above Block H and the refurbishment and modernisation of all existing blocks within the site.
- 3.2. This impact assessment is intended to evaluate the direct and indirect impacts on the trees on the site in relation to the proposed development. Any potential tree impacts are identified as per BS5837:2012 section 5.4, and details are given of proposed mitigation.
- 3.3. Any potentially damaging activities proposed in the vicinity of retained trees are identified, such that mitigation to significantly reduce or avoid this impact can be detailed in the Arboricultural Method Statement and Tree Protection Plan as recommended in BS5837:2012 section 5.4.2.
- 3.4. The development proposals are in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. Adequate protection can be provided to ensure all retained trees are protected throughout the development.
- 3.5. The tree survey for the site is at Appendix 2 of the Tree Report for the site ACD reference PRI23128tr.
- 3.6. This assessment is based upon the Proposed Site Plan supplied by Hollaway, Ref 18.141 100.03 RO

### **4. Evaluation of impact of proposed tree losses**

- 4.1.1. Those trees which are to be removed are shown with a red dashed canopy outline, and a dashed emblem over the trunk on the Tree Protection Plan ACD reference PRI23128-03.
- 4.1.2. Trees T26 and T27 are to be removed as a result of development proposals for the construction of block A. These are two Manna ash trees growing within the public highway on the southern side of the site. The removal of these trees was agreed in principle with the local planning authority at the pre-application meeting subject to a mitigation planting agreement. This is likely to be a fund so new trees can be planted within the highway as there is limited space within the site for additional trees.
- 4.1.3. It is therefore deemed acceptable to remove the two trees subjectable suitable and sustainable replacements as and where appropriate within the neighbouring area.

#### **4.2. Trees to be pruned**

- 4.2.1. Horse Chestnut tree T1 will require pruning to provide a suitable clearance over the proposed extension of block C. The works will consist of reducing the two lowest branches on the northwest side by 2.5m.
- 4.2.2. No other pruning works are required to implement the development, and tree surgery works are not anticipated (excluding tree removals). Should any become necessary it should comply with BS3998:2010 Tree Work or more recently accepted arboricultural good practice and be approved by the LPA and project arboriculturist prior to any commencement.

#### **4.3. Protection for retained trees**

- 4.3.1. The site is nearly completely covered with built form of either existing buildings or hard surfacing with very little soft ground within RPA's. Other than the building of block A and the extension to block C all works will be limited to internal alterations or vertical construction, meaning the existing hard surfacing can be utilised in line with the current day-to-day usage without the need for tree protection fencing.
- 4.3.2. To protect tree T1 lower stem throughout the construction of block C box hording will be installed within the raised planter around T1. See the tree protection plan for type of protection proposed.

#### **4.4. Demolition & Groundworks**

The existing single story within the RPA of T1 is to be demolished to make way for the new extension to block C. This will be conducted in a sensitive manner with the building folded in of itself and where possible the existing foundation will be left in place

#### **4.5. Construction within RPAs**

- 4.5.1. Only the construction of Block C will be within the RPA of retained trees.
- 4.5.2. The extension to block C is located within the notional RPA of Horse chestnut tree T1. Except for a small, raised planter around the stem the whole RPA is covered in built form consisting of buildings, hard surfacing and other associated infrastructure typical of an urban environment. The proposed building will be located 1.8m closer to the tree than the current, resulting in a greater area of building within the theoretical RPA over the existing but given the extensive built form, it does not necessarily mean there will be a detrimental impact on the tree.
- 4.5.3. It is proposed that three trial pits are excavated with the use of hand tools along the foundation line at selected points as shown on the tree protection plan to investigate the numeracy, size and quality of roots within the proposed foundations. The results of these trial pits will dictate the type of foundation used. If a sufficient number of roots are found,

then a bespoke foundation such as a pile and beam may be required. If only a small number of roots are observed, then traditional construction may take place.

- 4.5.4. This approach is in line with BS5837:2012 Figure 1 'The design and construction process and tree care' table section E. Once the tile pits have been excavated the project arboriculturist will discuss the most appropriate foundation with the project engineer and the technical design will then be finalised.
- 4.5.5. The adopted design must be approved for use by the project arboriculturist, detailed in the arboricultural method statement, and installed under their supervision.

#### **4.6. Shade and future pressure to prune**

The site layout has been assessed in terms of shading and future pressure to prune. Given the land use of the site is not changing there will be no increase in future pressure to prune or shading issues.

#### **4.7. Services**

It is fundamental to tree protection that infrastructure design is sensitively approached, as trenching close to trees may damage roots and affect tree health and stability. Details of services have not been provided at the time of writing. 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. As per BS5837:2012 Figure 1, once further details become available as part of the detailed/technical design for the site, the TPP and AMS will be revised to incorporate these details for services for inclusion in the Tender documentation.

## 5. Arboricultural Method Statement

### **TO BE READ IN CONJUNCTION WITH THE APPENDED TREE PROTECTION PLAN REFERENCE: PRI23128-03**

#### 5.1. Phasing of operations for tree protection

- 5.1.1. Implementation of tree protection measures on the site must be carried out in the following order
- 1) Trial pits conducted and root information fed back to foundation engineer
  - 2) Tree removals and tree surgery
  - 3) Tree Box Hoarding installed
  - 4) Site accessible to construction/demolition traffic
  - 5) Demolition of existing building within RPA of T1
  - 6) Construction
  - 7) Removal of tree protection
- 5.1.2. The above phasing must not be changed without approval from the project arboriculturist and agreement with the Council.

#### 5.2. Trial Excavation within RPAs

- 5.2.1. Stages of excavation within RPAs:
- 5.2.2. Contact project arboriculturist who will supervise the operation.
- 1) Identify trial pit location.
  - 2) Brake up hard surface within handheld tools.
  - 3) Excavate with no-tines bucket, or by hand, under close supervision.
  - 4) If roots are found, clear by hand around them.
  - 5) If roots found are greater than 25mm diameter, then cover with damp hessian and keep moist until backfilled.
  - 6) Record what roots are found
  - 7) Backfill as soon as possible and install a temporary hard surface or cover over the whole
- 5.2.3. Once the excavations have been conducted, the project arboriculturist will discuss what foundation options are most appropriate with the project engineer.



### **5.3. Avoiding damage to stems and branches**

- 5.3.1. Care shall be taken when planning site operations in proximity of retained trees to ensure that wide or tall loads, or plant with booms, jibs and counterweights, can operate without coming into contact with retained trees. Such contact can result in serious injury to them and might make their safe retention impossible.
- 5.3.2. Consequently, any transit or traverse of plant in proximity of trees shall be conducted under the supervision of a banksman, to ensure that adequate clearance from trees is at all times maintained. In some circumstances, it may be impossible to achieve this without pruning works known as 'access facilitation pruning'.
- 5.3.3. Access facilitation pruning shall be kept to the barest minimum necessary to facilitate development and shall be carried out in strict accordance with the guidance below (Tree Surgery). Under no circumstances shall construction personnel undertake any tree pruning operations.

#### 5.4. Tree protection fencing (box hording)

- 5.4.1. The Tree Protection Plan (see the latest revision of: PRI23128-03) shows the alignment of Tree Protection Fencing (TPF), which is to be installed prior to any of the following taking place:
- Demolition
  - Plant and material delivery
  - Soil stripping
  - Utility installation
  - Construction works
  - Landscaping
- 5.4.2. Stages for installation of TPF:
- 1) Construction of a suitable framework around the tree as shown on the TPP.
  - 2) At no point will any part of the protection be attached the tree
  - 3) Installation boarding material such as ply or chipboard
  - 4) Site accessible to demolition/construction traffic
- 5.4.3. Once erected, all TPF will be regarded as sacrosanct, and will not be removed or altered without prior recommendation by the project arboriculturist and approval of the local planning authority.
- 5.4.4. Should any alternative method of barrier construction be proposed, consultation with the project arboriculturist will be obtained to clarify the efficacy of the revised design prior to informing the local planning authority and obtaining their consent.
- 5.4.5. Once the box hording has been built , construction work can commence.
- 5.4.6. All weather notices should be erected on the barriers (for example see figure below).



Figure 1: Tree Protection Sign (digital copies available for download at: [www.acdenvironmental.co.uk](http://www.acdenvironmental.co.uk))

## 5.5. Site storage, parking, welfare facilities

- 5.5.1. The site will require provision for; site storage, contractor parking, welfare facilities, temporary services/drainage, material drop of points, etc.
- 5.5.2. No details of these provisions are available at the time of writing of this report. However, the site frequently sees construction of large sets within its studios and it is anticipated that the proposed works will involve a similar number of deliveries, storage and construction traffic. Therefore, the existing hard surfaced parking areas should be sufficient to support the construction needs.
- 5.5.3. None of the above provisions will be sited within soft ground without the input or the project arboriculturist and the consent of the Local Authority.

## 5.6. Tree surgery and removal

5.6.1. Those trees which are to be removed are shown with a red dashed canopy outline, and a dashed emblem over the trunk on the Tree Protection Plan ACD reference PRI23128-03.

5.6.2. The following surgery works are to be carried out:

Tree number	Species	Operation
T1	Horse chestnut	Reduction of two lowest limbs on northwest side by 3m leaving a stem length of approximately 5m
T26	Manna Ash	Remove tree
T27	Manna Ash	Remove tree

5.6.3. All trees to be removed are indicated on the Tree Protection Plan.

5.6.4. If any further tree surgery works are required, a proposed specification will be submitted to, and approved by the Local Planning Authority before any works are carried out.

5.6.5. All work will be carried out in accordance with BS 3998:2010 Recommendations for Tree Work, industry best practice and in line with any works already agreed with the Council.

5.6.6. The tree surgery contractor is responsible for carrying out any relevant health and safety risk assessment, and insurance, prior to any work being carried out.

5.6.7. The statutory protection afforded by the Wildlife and Countryside Act and Countryside and Rights of Way Act will be adhered to. If further advice is required, particularly if bats are discovered during tree work, it will be obtained from Natural England or other competent persons and recommendations adhered to.

5.6.8. The stumps of any trees removed from within the Construction Exclusion Zone or the RPAs of retained trees will be either; cut flush to ground level and left in situ or ground out using a stump grinder. They will not be winched out.

5.6.9. All operations shall be carefully carried out to avoid damage to the trees being treated or neighbouring trees. No trees to be retained shall be used for anchorage or winching purposes.

### 5.7. Installation of underground services within RPAs (If needed)

5.7.1. If for whatever reason installation within RPAs is required the project arboriculturist and local authority must be notified prior to any tree protection barrier removal and the following details adhered to.

5.7.2. Stages for installing services within tree protection areas:

No plant machinery to be used in the area for whatever reason

- 1) Contact project arboriculturist to hold pre-start site meeting and 'toolbox' talk before starting work.
- 2) Remove any existing hard surfaces using hand tools.
- 3) Excavate the trench using hand tools only, keeping to minimum dimensions required.
- 4) Roots below 25mm should preferably be retained, however if required can be cut cleanly using secateurs or hand saw.
- 5) Roots over 25mm diameter will be retained and kept damp by covering with hessian (re-wetted as required).
- 6) Feed in services.
- 7) Back fill trench with 200-300mm depth of excavated soil, or a mixture of excavated and imported top-soil (to BS3882:2015), firming down with heels
- 8) Repeat step 7 until trench is filled.
- 9) Re-erect tree protection fencing as per approved plan.

5.7.3. An alternative to the method of excavation above, for trenching within RPA's, is by using an 'air-spade' or similar. This tool utilises compressed air to remove soil from around tree roots causing minimal damage and can be run off a typical site compressor. ACD can provide details of contractors supplying air-spade services if required.

5.7.4. Alternatively, trenchless technology such as thrust boring can be used in some instances and is particularly effective as it can pass directly under the tree, at a depth which is likely to avoid almost all impact on roots of the subject tree. As no access/thrust pits will be located within the RPAs of the subject trees, the need for arboricultural supervision is limited.

5.7.5. Reference can be made to National Joint Utilities Group publication Volume 4 (NJUG Vol4) for guidance, but any approach must be approved by the project arboriculturist.

## 5.8. Demolition close to trees

5.8.1. Box section to be installed prior to any plant arriving on site.

5.8.2. Stages for demolition within tree protection areas:

No plant machinery to be sited on any exposed rooting area

- 1) Contact project arboriculturist to hold a 'toolbox' talk before starting work
- 2) Buildings to be folded in on themselves
- 3) Removal debris by hand or with plant machinery not located on any exposed rooting area.
- 4) Floor to be broken up with hand held breaker and pieces removed by hand. Slab floor can be lifted carefully by machinery if appropriate
- 5) Underlying ground levels to be retained. No excavation to occur
- 6) Any exposed roots and surrounding newly exposed areas to be covered with up to 100mm of topsoil, from elsewhere on site, or imported top-soil (to BS3882:1984). Soil may be placed in area by plant but must be spread by hand.

5.8.3. No reduction in levels of the underlying soil surface will occur.

5.8.4. At no point are any heavy machinery permitted on soft ground within RPA's of trees.

5.8.5. Contamination of the soil by fuel and lubricant leaks must be avoided at all cost. If such a situation arises the project arboriculturist must be notified to assess the situation and prescribe remedial measures.

## 5.9. Resurfacing/repair of existing surfaces

- 5.9.1. Tree protection measures will remain in place until work commences and when removed all personnel to be working within the RPA's are to be made aware of the extent and nature of the area.
- 5.9.2. All work within protected areas to be supervised at all times by project arboriculturist.
- 5.9.3. Stages for repair/replacement of existing hard surface within tree protection areas:
- No plant machinery to be sited on any exposed rooting area
- 1) Contact project arboriculturist to hold pre-start site meeting and 'toolbox' talk before starting work
  - 2) Plant machinery to run only on existing tarmac surface
  - 3) Plant may be used to carefully peel up existing tarmac
  - 4) Other hard landscape features are to be removed by hand (paving etc.) or carefully lifted with plant
  - 5) Sub-base to be retained.
  - 6) Sub-base to be enhanced if required
  - 7) New surface to be installed
- 5.9.4. Should any roots over 25mm diameter be encountered during deconstruction of the old profile, their removal will only be carried out under arboricultural supervision and with the approval of the LPA.
- 5.9.5. Any new kerbing must be installed within the current hard construction profile.
- 5.9.6. No new excavation closer to the tree will be permitted.

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Arboriculturist

06 January 2021

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