

LIVERPOOL INSTITUTE FOR PERFORMING ARTS

PLANNING APPLICATION: 12F/2159

ARBORICULTURAL METHOD STATEMENT

REVISION A

DECEMBER 2015

1.0 Introduction

This Arboricultural Method Statement has been prepared by Cass Associates to discharge pre-commencement Planning Conditions 15 & 16 related to Planning Permission 15F/2159 dated 18th November 2015. The statement has been informed by the guidance and methodology contained within Arboricultural Practice Note 12, 'Through the trees to development' and the recommendations set out within British Standard 5837:2012, 'Trees in relation to design, demolition and construction'.

The statement provides the following information;

- Details of the position and construction specification of the protective fencing (Construction Exclusion Zone) around the retained trees and areas of future planting and soft landscaping on site
- Details of proposed tree works
- Details of the construction methods and materials employed for hard surfacing or resurfacing within the construction exclusion zone around retained trees on site
- Details of any new services

This Arboricultural Method Statement should be read in conjunction with the following plans and reports;

- Liverpool Institute for Performing Arts - Arboricultural Impact Assessment, prepared by TEP. Report Reference: TEP.5284.02, July 2015.
- Liverpool Institute for Performing Arts - Tree Constraints Plan, prepared by TEP. Drawing Reference: D5284.001, July 2015.
- Liverpool Institute for Performing Arts - Tree Removal and Protection Plan, prepared by TEP. Drawing Reference: D5284.002, July 2015.
- TEP Standard Detail 'Temporary Tree Protection Fencing', prepared by TEP. Drawing Reference: D.TREE_FENCING.001, 30/04/12.
- TEP Standard Detail 'Scaffolding and ground protection measures in or close to the Root Protection Area (RPA)', prepared by TEP. Drawing Reference: D.SCAFFOLD.001, 01/05/12.

2.0 Tree Constraints

The Arboricultural Impact Assessment and Tree Constraints Plan identify the Root Protection Area (RPA) for all existing trees on site. The RPA is used to determine the extent of the Construction Exclusion Zone, within which no development should take place. Existing hard surfaces, walls or building foundations can restrict tree root growth; however conditions under existing hard surfacing can also be more favourable for root growth than those experienced by deeper roots.

- For Trees T2-T13 which have been planted in tree pits within the existing car park the maximum Root Protection Areas have been assumed.
- For Trees T15-T18 it is considered that the change in ground levels along the stone boundary wall between the site and Upper Duke Street is likely to have impeded root growth, therefore Root Protection Areas have been modified to omit areas beyond the wall.

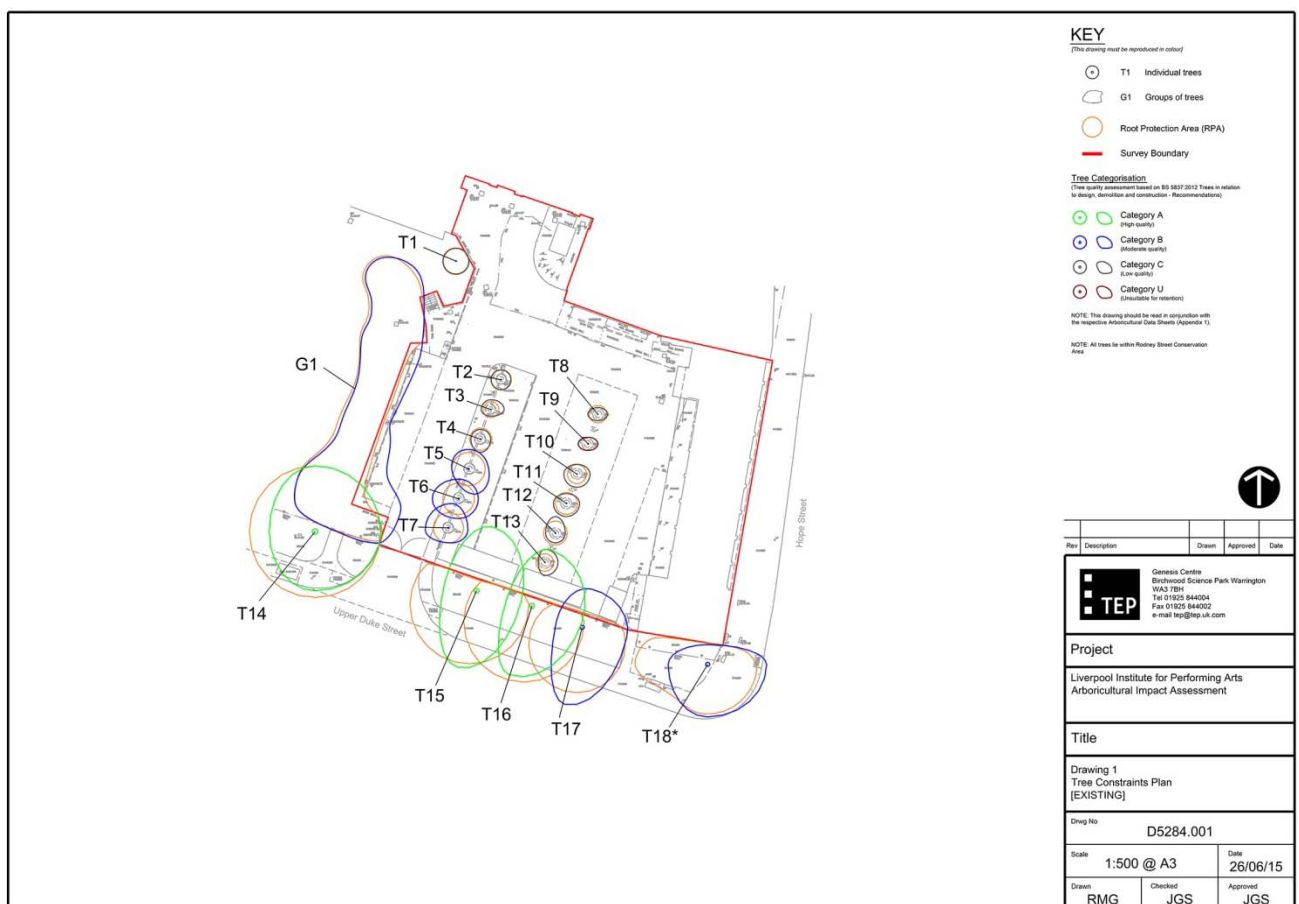


Figure 1 : Tree Constraints Plan D5284.001, prepared by TEP

3.0 Tree Removal and Protection

The Arboricultural Impact Assessment and Tree Removal and Protection Plan identify six trees for removal, Trees T8-T13.

Of the remaining trees, T1 and Group G1 do not fall within the proposed development site and are located behind an existing brick wall. Their Root Protection Areas are not deemed to extend into the adjacent site and as no construction works are to take place in the vicinity no additional tree protection measures have been identified. Trees T14-T18 also lie outside the site boundary beyond an existing stone retaining wall; their Root Protection Areas do not extend within the red line boundary and no additional measures are proposed, although Temporary Ground Protection Measures have been identified for T18.

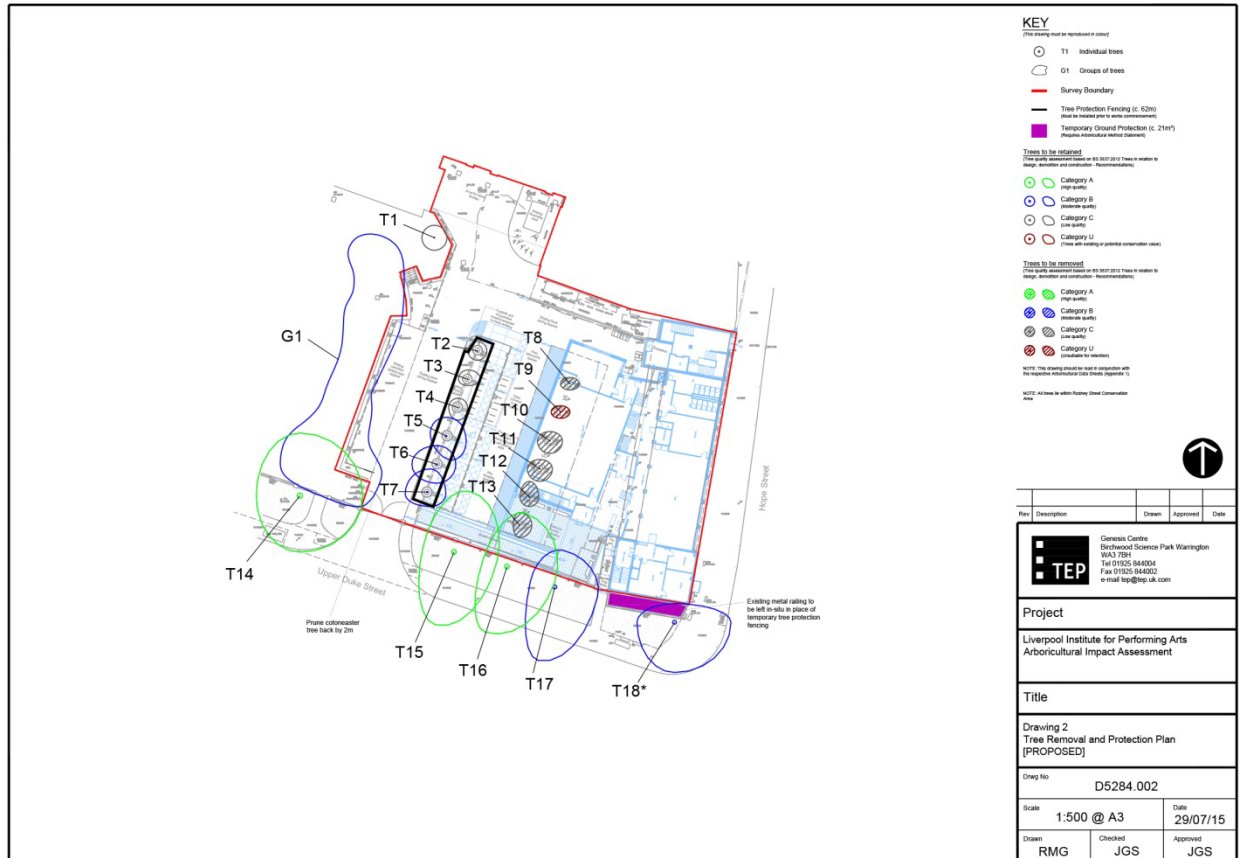


Figure 2 : Tree Removal and Protection Plan D5284.002, prepared by TEP

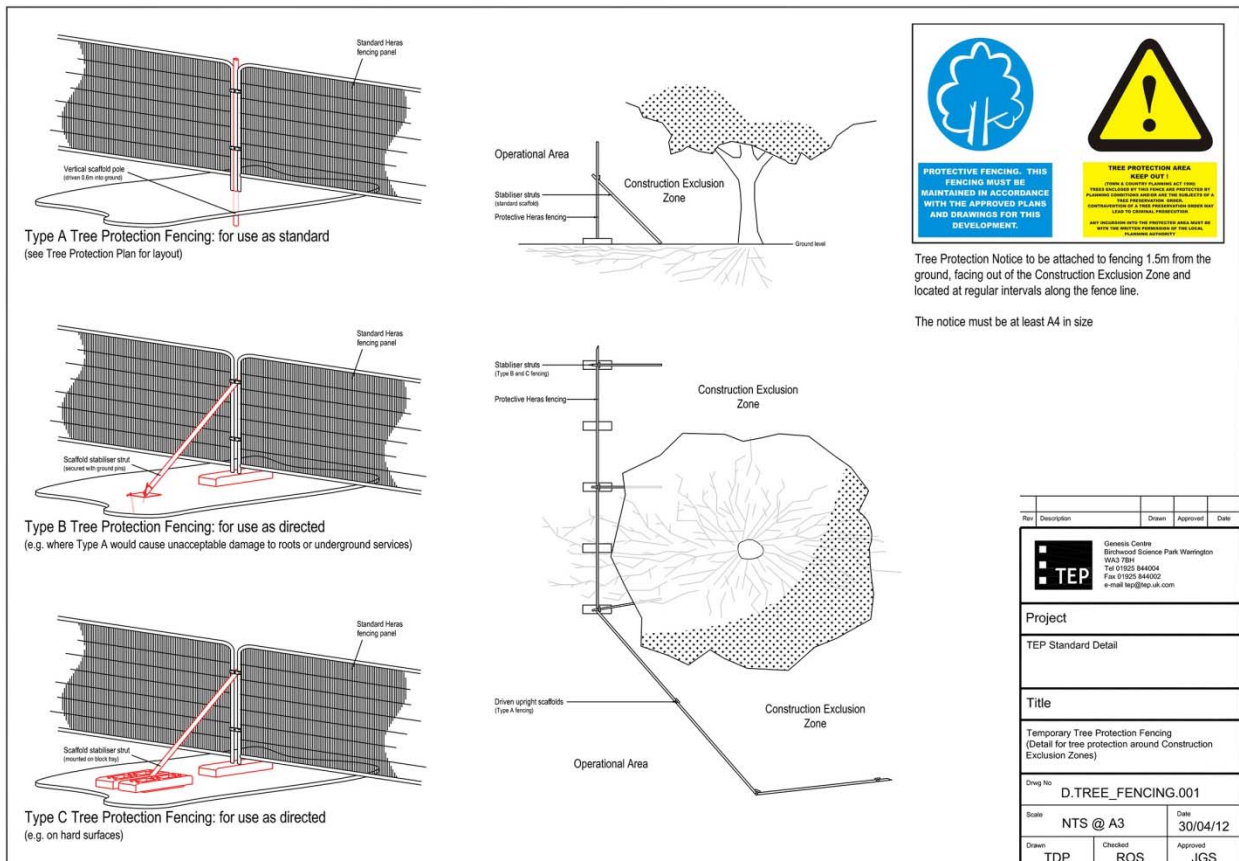


Figure 3 : Temporary Tree Protection Fencing Detail , prepared by TEP

Trees T2-T7 are located within the proposed development area, with Root Protection Areas that extend into the surrounding footpath and car parking areas. A 62m length of Tree Protection Fencing is to be installed to the edge of the RPAs, to the extents shown on drawing D5284.002. This fencing is to be installed within areas of existing hard surfacing therefore 'Type C' fencing with stabiliser struts mounted on block trays is to be used, as detailed on drawing D.TREE_FENCING.001.

Where temporary access is to be permitted within a Construction Exclusion Zone, the extent of the set back of the Tree Protection Fencing should be clearly indicated, and temporary ground protection measures adopted for the duration of the works within the RPA. On completion of the hard surfacing the Tree Protection Fencing must be relocated back to the position shown on the Tree Protection and Removals Plan for the remainder of the Construction period

4.0 Tree Works

Crown reduction works are required to the northern side of Tree T18 to allow erection of scaffolding to the southern end of 70 Hope Street. As the tree is located within a Conservation Area a separate Section 211 Notice has been submitted to LCC, which was validated on 2nd November 2015. The description of the proposed pruning works is as follows;

'The proposed works involve the crown reduction on the northern side of tree T18. The works include pruning vertically generally in line with the existing wrought iron railing fenceline, subject to appropriate pruning points in accordance with BS3998:2010. The reduction is to be a minimum of 2m from the gable end concrete picture frame surround to the façade glazing and is to include pruning outside of the fenceline if necessary to co-ordinate with appropriate pruning points and to achieve the minimum 2m clearance requirement. This is to enable the erection of a scaffold for façade replacement.'

Subject to agreement to the works (due 14th December 2015) the tree works will be contracted to Enterprise Liverpool and undertaken prior to the bird nesting season.

5.0 Works within the Construction Exclusion Zone

The hard landscape works within the site are limited to the areas immediately adjacent to the new 6th Form extension which limits the potential impact on the Root Protection Areas of retained trees. Figure 4 identifies four areas where works are proposed within the Construction Exclusions Zones to retained trees;

- Extension of an existing uncontrolled crossing to a footpath within the CEZ of Tree T2
- Raising of existing car park surfacing within the CEZ of Tree T6
- Removal of hard surfacing and construction of a planting bed within the CEZ of Tree T7
- Installation of temporary scaffolding to allow maintenance works to the southern elevation of 70 Hope Street within the CEZ of Tree T18 and new planting.

Works within Construction Exclusion Zone to T2

The proposed works are limited, comprising the dropping of a small section of kerb and lowering of the paved footpath to widen an existing uncontrolled crossing. The detail and extent of works is shown in Figure 5 below. It is estimated that less than 4% of the RPA will be affected by the works. The removal of the hard surface will employ the following measures;

- Hand-held tools or appropriate machinery (compressed-air treatment) to be used to remove the surface, working backwards over the area so that machinery is not moving over the exposed ground. Where a new hard surface is to be laid it may be preferable to leave any sub-base in situ, augmenting it where required.
- Exposed roots should be immediately wrapped to avoid desiccation and to protect from rapid temperature changes. Backfilling should take place as soon as possible

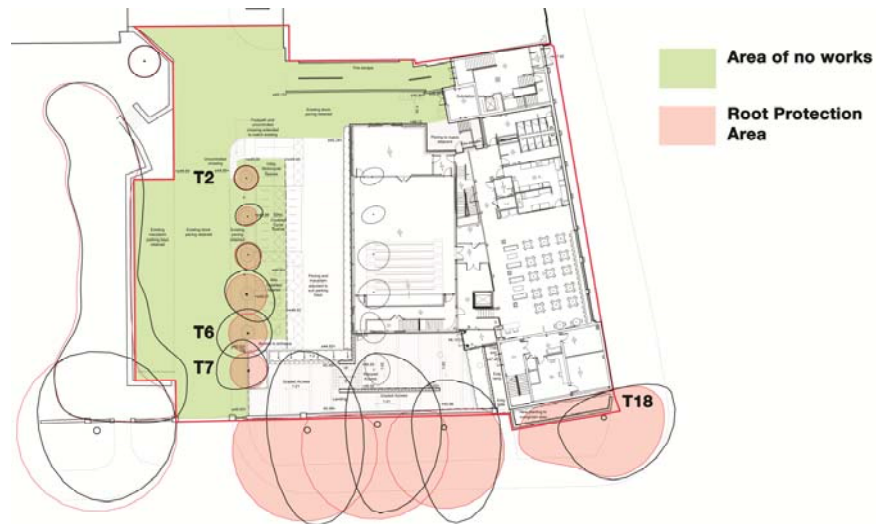


Figure 4 : Works within the Construction Exclusion Zone

- Roots smaller than 25mm diameter may be pruned back, making a clean cut with a suitable sharp tool, except where they occur in clumps. Roots occurring in clumps or over 25mm diameter should only be severed following consultation with an arboriculturist.
- Prior to backfilling the retained roots should be surrounded by topsoil, uncompacted sharp sand (Not builder's sand) or other loose inert granular fill before soil or other suitable material is replaced. This material should be free of contaminants and other foreign objects potentially injurious to tree roots.

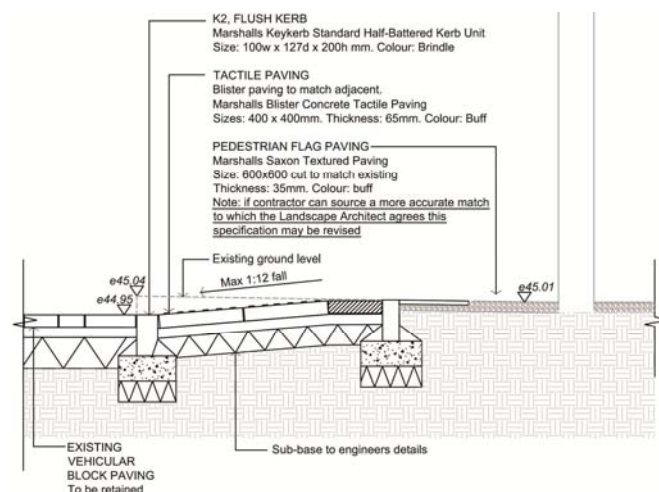


Figure 5 : Detail through uncontrolled crossing within RPA of Tree T2

Works within Construction Exclusion Zone to Tree T6

The proposed works within the Construction Exclusion Zone to Tree T6 are also limited, comprising the raising of the existing macadam car park surface by approximately 30mm to allow wheelchair access from the disabled parking bays to the adjacent footpath. As the minor change in level will be achieved by overlaying the existing surface the impact on the RPA is considered to be Negligible. The detail is shown in Figure 6 overleaf.

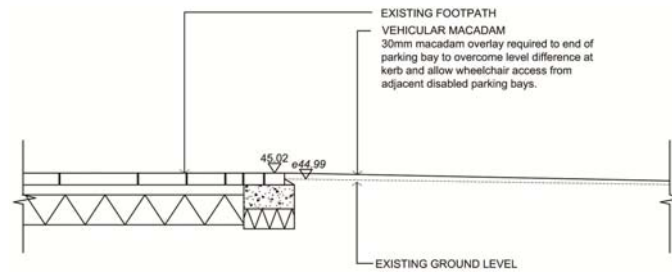


Figure 6 : Detail through disabled parking access within RPA to Tree T6

Works within Construction Exclusion Zone to Tree T7

The proposed works within the RPA to Tree T7 entail the removal of an area of existing macadam and a bollard within the car park and construction of a new planting bed, approximately 0.71m away from the trunk. The existing tree pit construction is shown in Figure 7 overleaf. Trees within the car park have been planted in raised planters approximately 1.7m in diameter, constructed from a Tegula clay kerb unit with a gravel-filled circular steel tree grille surrounding the tree. The planter to Tree T7 is set almost flush with the adjoining footpath to the west and approximately 30mm above the macadam car park surface to the east.

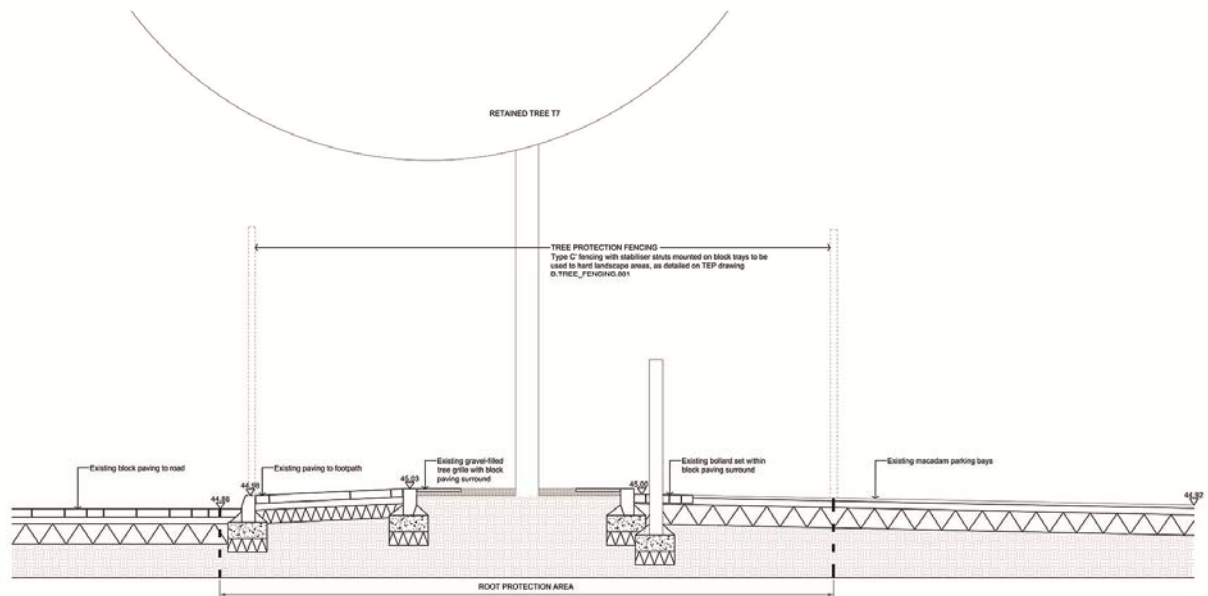
To avoid disturbance to T7 the existing planter and grille will be retained. The existing macadam and bollard within the car park will be removed and any exposed roots protected utilising the methods outlined for Tree T2. To limit severance of roots by any new excavation the new kerb line will be constructed outside the Root Protection Areas, however if any roots are discovered outside of this zone the kerbline will be moved further back to suit.

Any compacted areas found beneath the hardstanding will be cultivated to a depth of 300mm by hand to avoid damage to exposed tree routes and the new planter backfilled with topsoil. Ground cover planting is proposed within the new planter comprising low-growing shade tolerant species. A 75mm layer of medium-grade amenity bark mulch will be installed to the planter surface to aid water retention and suppress weeds.

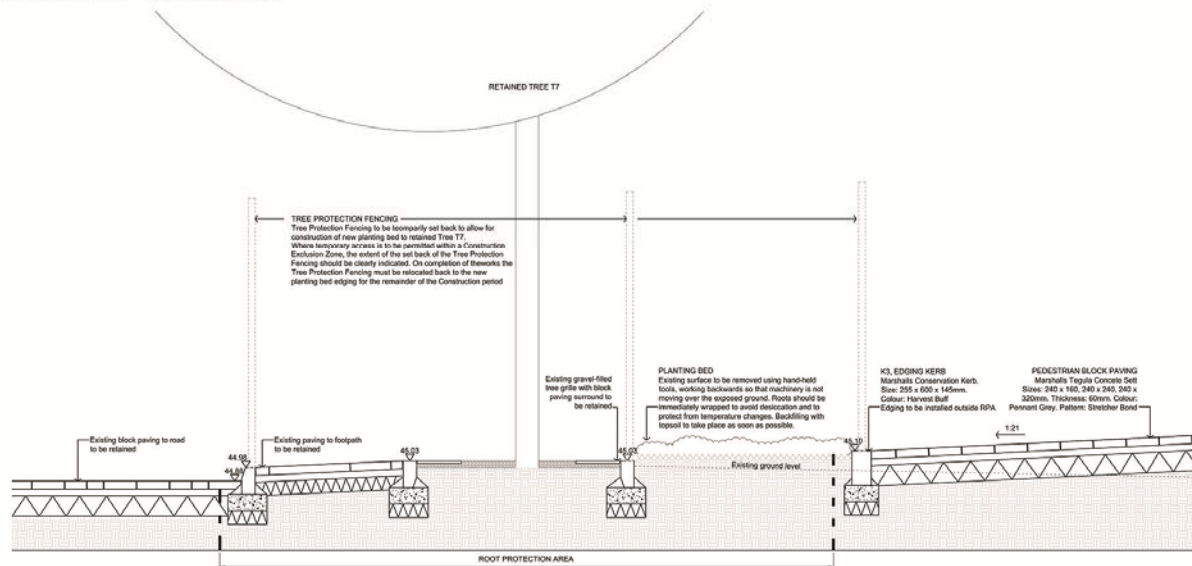
The proposed detail is shown in Figure 7 overleaf.

Figure 7: Existing setting and proposed setting for Tree T7

01. RETAINED TREE T7 - EXISTING SETTING



02. RETAINED TREE T7 - PROPOSED SETTING



Works within Construction Exclusion Zone to Tree T18

The proposed works within the Construction Exclusion Zone to Tree T18 include the crown pruning measures described in Section 4.0 and the temporary erection of a scaffold to enable maintenance works to the southern elevation of 70 Hope Street. The Tree Removal and Protection Plan, Drawing D5284.002, indicates an area of approximately 21m² requiring Temporary Ground Protection measures to the end of the building. An accompanying detail, D.SCAFFOLD.001, shows the Temporary Ground Protection for scaffolding achieved by placing the scaffolding boards on a 100mm thick compressible layer of woodchips over a suitable geotextile.

Subsequent discussions between Kier and their scaffolding team have raised concerns about the stability of installation of scaffolding on top of such a surface therefore the alternative detail shown in Figure 8 has been developed, in consultation with Robin Grimes Arboriculturalist at TEP.

The proposed landscape works in the vicinity of Tree T18 entail the replanting of the existing planting bed with low-growing plant species. If any tree roots are uncovered during the vegetation clearance, cultivation or replanting works the following measures must be followed;

- Roots, while exposed, should be immediately wrapped or covered to avoid desiccation and to protect them from rapid temperature changes. Any wrapping should be removed prior to backfilling, which should take place as soon as possible
- Roots smaller than 25mm diameter may be pruned back, making a clean cut with a suitable sharp tool, except where they occur in clumps.
- Roots occurring in clumps or over 25mm diameter should only be severed following consultation with an arboriculturist as such roots may be essential to the tree's health and stability.
- Prior to backfilling the retained roots should be surrounded by topsoil. This material should be free of contaminants and other foreign objects potentially injurious to tree roots.



Figure 8 : Temporary Ground Protection Measures to allow scaffold erection within CEZ to Tree T18

6.0 Works outside the Construction Exclusion Zone

As noted within Section 2.0, the root systems of Trees T15-T18 are not considered to extend into the site due to the barrier provided by the existing stone boundary wall and also the change in level between the Upper Duke Street verge and the LIPA car parking areas. The landscape proposals in the vicinity of the wall seek to slightly raise the levels of the car park to create a graded pedestrian route to the new extension entrance. Figure 4 illustrated the extent of works within the canopy spread of these trees.

Although the RPA is not considered to extend beyond the wall, in the event that tree roots from Trees 15-17 are discovered during the construction works the following measures should be taken;

- Hand-held tools or appropriate machinery (preferably compressed air soil displacement) should be used to remove the existing macadam surface of the car park, working backwards over the area so that machinery is not moving over the exposed ground. Where a new hard surface is to be laid it may be preferable to leave any sub-base in situ, augmenting it where required.
- Roots, while exposed, should be immediately wrapped or covered to avoid desiccation and to protect them from rapid temperature changes. Any wrapping should be removed prior to backfilling, which should take place as soon as possible
- Roots smaller than 25mm diameter may be pruned back, making a clean cut with a suitable sharp tool, except where they occur in clumps.
- Roots occurring in clumps or over 25mm diameter should only be severed following consultation with an arboriculturist as such roots may be essential to the tree's health and stability.
- Prior to backfilling the retained roots should be surrounded by topsoil or uncompacted sharp sand (builders sand should not be used because of its high salt content which is toxic to tree roots), or other loose inert granular fill before soil or other suitable material is replaced. This material should be free of contaminants and other foreign objects potentially injurious to tree roots.

Details of New Services

Drainage

Figure 9 below provides details of the proposed drainage works. No new drainage runs are proposed within Root Protection Areas to retained trees, although existing drainage runs (indicated by solid lines) are located within the RPAs to Trees T18, T17, T3 and T2. The drawing highlights an area of existing drainage within the RPA of Tree T3 that has been damaged by tree roots and suggested remedial works are to lay a section of new pipe, encased in concrete and wrapped in a root protection barrier. It has been confirmed however that works to remove the roots from the drainage pipe were undertaken in August 2015 by SEP on behalf of the client, LIPA. These works were taken at the same time as a CCTV survey, using an internal cutter within the drainage pipe to trim the roots within the pipe to avoid excavation within the hard landscape areas. Internal sleeving of the pipe to prevent further root intrusion was recommended but has not yet been undertaken.

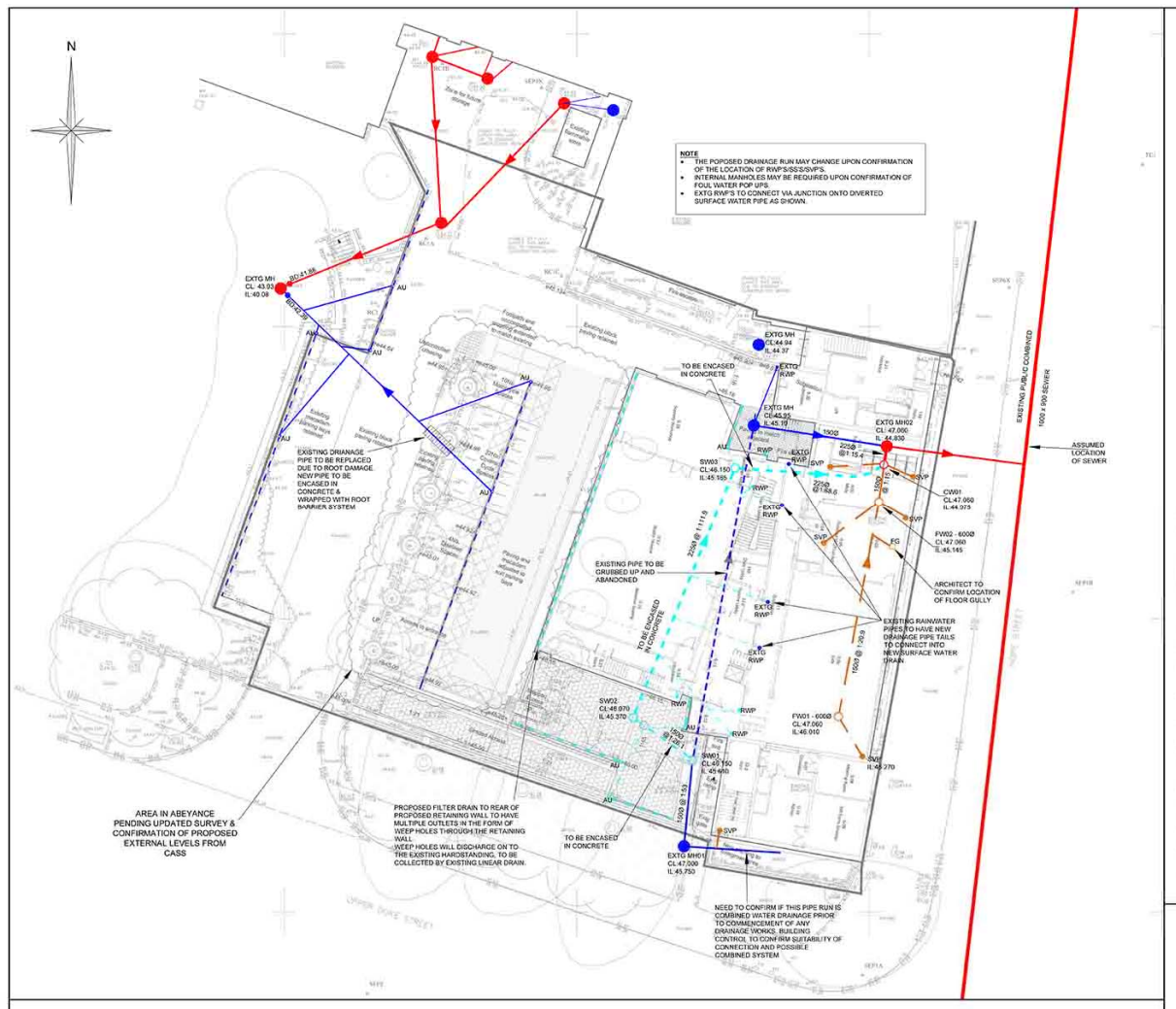


Figure 9 : Extract from Curtins' 'Proposed Drainage General Arrangement', Li1392A-CUR-CI-00-00-XX-D01, Rev P08

Incoming Water, Electricity and Gas

Figure 10 below provides details of the proposed routes for incoming water, electricity and gas. These services all enter the existing building from Hope Street and no additional connections are proposed that would affect retained trees on site.



Figure 10 : Extract from BCM' 'Utility Connection Plan', ME-001, Rev T1

External Distribution Routes

Figure 11 below provides details of the external distribution routes for electricity, security and fire alarms. The plan shows that two existing distribution routes (shown as Magenta and Green dashed lines) cross through Root Protection Areas to Trees T2-T7, however no new routes are proposed that would affect retained trees.

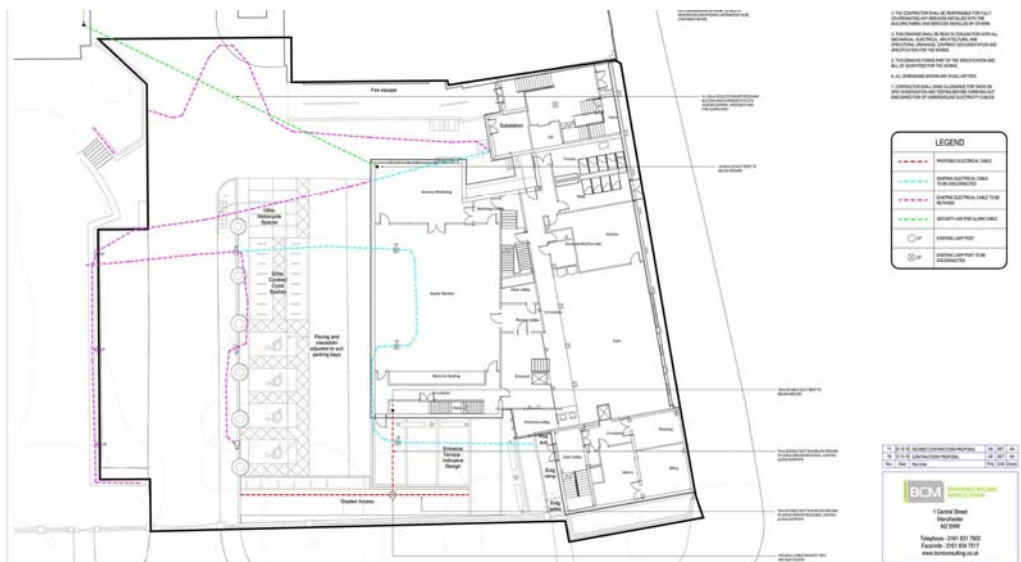


Figure 11 : Extract from BCM' 'External Distribution Routes', ME-002, Rev T1