

Tree No.	Species	Reason for works	Tree Works
Tree Removal & Facilitative Pruning			
2	Silver Birch	Removal approved as part of planning consent	Fell to ground level, grind out stump
3	Silver Birch	Removal approved as part of planning consent	Fell to ground level, grind out stump
4	Lime	Removal approved as part of planning consent	Fell to ground level, grind out stump
5	Sycamore	Removal approved as part of planning consent	Fell to ground level, grind out stump
6	Robinia	Removal approved as part of planning consent	Fell to ground level, grind out stump
9	Raywood Ash	Facilitative pruning to provide clearance to proposed building	Tip reduce laterals on north profile to provide 1.5m clearance from proposed building
10	Raywood Ash	Facilitative pruning to provide clearance to proposed building	Tip reduce laterals on north profile to provide 1.5m clearance from proposed building
11	Raywood Ash	Facilitative pruning to provide clearance to proposed building	Tip reduce laterals on north profile to provide 1.5m clearance from proposed building
12	Raywood Ash	Facilitative pruning to provide clearance to proposed building	Tip reduce laterals on north and east profile to provide 1.5m clearance from proposed building
13	Sycamore	Removal approved as part of planning consent	Fell to ground level, grind out stump
14	Raywood Ash	Removal approved as part of planning consent	Fell to ground level, grind out stump
15	Sycamore	Removal approved as part of planning consent	Fell to ground level, grind out stump
16	Sycamore	Removal approved as part of planning consent	Fell to ground level, grind out stump
19	Fig	Removal approved as part of planning consent	Fell to ground level, grind out stump
20	Tree Of Heaven	Removal approved as part of planning consent	Fell to ground level, grind out stump
21	Norway Maple	Removal approved as part of planning consent	Fell to ground level, grind out stump
29	Eucalyptus	Removal approved as part of planning consent	Fell to ground level, grind out stump
G30	Sycamore	Removal approved as part of planning consent	Fell to ground level, grind out stump

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General
This illustrative plan is submitted in respect of Condition 43 of Planning Consent 2012/4628/P and intended to identify the location of trees for retention, trees for removal and preliminary tree work, the location of protective barriers, other relevant physical protection and highlight precautionary areas for retained trees. This plan should be read in association with the Construction Management Plan submitted under separate cover and incorporated into subsequent drawings and contractors method statements for issue on site, to ensure that all parties are fully aware of the areas in which access and works may and may not take place.

Planning Conditions (trees)
Condition 43 of Planning Consent 2012/4628/P states: All trees on the site, or parts of trees growing from adjoining sites, unless shown on the permitted drawings as being removed, shall be retained and protected from damage to the satisfaction of the Council. Details shall be submitted to and approved in writing by the Council before works commence on site (save for the demolition of 8-11 Hawley Road and any works to facilitate or in consequence of the delivery of the school on Site B, including the bridging or knocking through of railway arches and any temporary works and arrangements) to demonstrate how trees to be retained shall be protected during construction work; such details shall follow guidelines and standards set out in British Standard 3998:2012 (Recommendation for Tree Work).

Statutory Designations (trees)
Hawley Wharf lies within a Conservation Area and as such all trees over 75mm diameter (measured at 1.5m a.g.l.) are subject to statutory protection. Six weeks written notification must be given to the LPA in writing prior to carrying out tree works. During this period the LPA may initiate a TPO in respect of the trees or make no comment and allow the works to proceed.

Site Boundary
Indicative main site boundary (Red dashed line)
Indicative school boundary (Blue dashed line)

Tree Removal and Retention
Tree No. to be retained (Green circle)
Tree No. to be removed (Red circle)

Demolition
Demolition (structure) (Blue hatched area)

Tree Protection Measures
Preliminary root protection area (Pink hatched area)
Precautionary Area 1 (single hatch) (Green hatched area)
Precautionary Area 2 (cross hatch) (Purple hatched area)
Precautionary Area 3 (Blue hatched area)

Tree Protection Barriers Type 1
Tree Protection Barriers Type 1 (Black and white hatched area)

Arboricultural Method Statement
The primary purpose of this plan is to aid the preservation of retained trees through setting out the appropriate working practices, demolition techniques and tree protection measures that are to be adopted when demolition works are undertaken in the proximity of trees 9, 10, 11 & 12. The methodology of this Tree Protection Strategy follows a logical sequence of events. Variations to the sequence could significantly reduce the efficiency of the tree protection measures.

This plan should be incorporated into subsequent drawings and method statements used for design purposes or issued for use on site, to ensure that all parties are fully aware of the areas in which access and works may and may not take place.

A summary of tree protection will be provided to all personnel through the Site Induction. This summarises the key precautionary measures and responsibilities of all site personnel to ensure an awareness of trees during site works and that they are successfully protected throughout the demolition and land remediation works. Demolition Contractor - It is the responsibility of the Demolition Contractor to ensure that the Tree Protection Plans are implemented on site, maintained during the development process and understood by all site personnel and contractors prior to commencement of works.

Pre-commencement meeting - A pre-commencement meeting shall be held on site prior to commencement of enabling or demolition works. This shall be attended by the Client's Representative, Demolition Contractor and Project Arboriculturist. The Local Authority Tree Officer will be notified and invited to attend. The methods of tree protection outlined within this statement and revisions for the particular phase shall be fully discussed at the meeting, so that all aspects of their implementation and sequencing are made clear to all parties. Any clarifications or modifications to this statement shall be recorded and circulated to all parties in writing.

Tree Roots - The majority of tree roots are typically concentrated within the top 600mm of soil. Repeat tracking by vehicles, excavation or cement (including gravel) near trees is likely to cause root damage. This may have an adverse impact on the trees health and stability. Any tree roots exposed during operations should be treated at once. Exposed roots smaller than 25mm diameter may be pruned back, preferably to a side branch, using proprietary cutting tools. In the event that the roots are required to be pruned, sharp cutting tools are to be used to ensure the minimum damage is caused. Clean cuts can result in the redevelopment of fine roots. Poor unruly cuts can, however, result in root die back and decay. No roots greater than diameters of 25mm are to be pruned without prior agreement with the Project Arboriculturist in consultation with the Local Authority Tree Officer.

Tree Works - All tree works are to be carried out in accordance with BS 3998 Tree Works - Recommendations (2010). Trees identified for removal or remedial works within this plan are to be completed prior to commencement of enabling, demolition or ground works. Prior to commencement of tree works, all responsibilities under the Wildlife & Countryside Act (1981), as amended by the Countryside and Rights of Way Act 2000 must be observed. All recommendations or precautionary measures made by the Project Ecologist will be adopted by the tree contractor. Any trees to be felled shall be cut felled as a precautionary measure. No tree works are to take place within the bird nesting season (March to August) unless a survey undertaken by a suitably experienced person establishes that active nests are absent.

All arisings will be removed from site by the tree contractor unless otherwise agreed in writing by the client.

Tree Removal - felling in one piece should only be carried out where there is no significant risk of damage to people, property or protected species. Where trunks or branches display features such as small rot holes, which bats could use for roosting trees will be removed in sections and lowered to the ground. Once felled any features should be checked for bats. If a bat or evidence of bats is found or suspected at any point during the tree work, all work to the tree must stop immediately and the local Natural England team and/or a suitable ecologist must be contacted for advice. Where the work is undertaken during the summer, the tree should remain on the ground and undisturbed overnight to allow any undetected bats to leave. If carried out during the winter months (November to March inclusive), the tree should be undisturbed for a minimum of five nights, during which at least one night the temperature should be above 7 degrees Celsius as recommended by an Ecologist.

Remove stump - the stump is to be ground out to the base of the stump and the resultant hole backfilled with good quality topsoil and capped to match surrounding material as specified by an engineer.

Crown LR - pruning to achieve a desired vertical clearance above ground level (expressed in meters).

Directional pruning - to reduce laterals on specified cardinal point to achieve desired clearance from structure or infrastructure.

Arisings - parts of a tree, including stem roots, branches, bark, other woody material and foliage, derived from the tree during tree work operations.

Tree Protection Barriers - All barriers are to be erected prior to commencement of any external works on site (including site enablement) and are to be retained throughout the demolition process. All barriers are to be fit for purpose. The area between the tree and the protection barriers forms the Construction Exclusion Zone. The construction exclusion zone is to remain sacrosanct with storage of materials, machinery or equipment prohibited. No excavation or changes to land levels are to occur within this area unless agreed in writing by the Local Planning Authority. All damage to protective barriers or accidental damage to trees must be reported to the Client's Representative immediately. Works occurring within the vicinity will cease immediately until adequate tree protection measures are rectified. Where appropriate the protection barriers will be aligned with the site hoarding.

Type 1 Barriers - should consist of a scaffold framework comprising of a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum of 3m and driven into the ground. Onto this, weldmesh panels should be securely fixed with wire or scaffold dampers unless similar fencing is agreed with the Local Planning Authority. See Tree Protection Barriers - Type 1 (extract of Fig 2 BS3987 2012 - Default specification for protective barrier).

Once the barriers have been properly installed and erected in position, the fenced area is to be considered sacrosanct and must not be removed or altered in any way without prior approval from the Project Arboriculturist.

All weather tree protection notices are to be fixed to the outside of all tree protection barriers.

Precautionary Areas
Within the precautionary areas, measures must be observed to minimise potential root disturbance. All works within the precautionary area shall be carried out under a watching brief by the Project Arboriculturist and in accordance with the agreed methodology. Existing hard surfacing will remain in place to provide ground protection to vehicular traffic during the demolition process or until such time agreed with the Project Arboriculturist. Tracking by vehicles is prohibited within soft ground areas. All plant and vehicles will be appropriate to the operation in hand in order to minimise damage/disturbance to the above and below ground constraints formed by trees.

Precautionary Area 1 - area hatched (single)
Trees within Precautionary Area 1 are set at a lower level to the site and therefore it is not anticipated that proposed works will impact on tree roots. However, a precautionary approach must be adopted within the area illustrated. If unforeseen works or excavation is required within the precautionary area, the scope of works and methodology will be agreed in consultation with the Project Arboriculturist.

Precautionary Area 2 - area hatched (cross)
Within Precautionary Area 2, demolition and construction works are required within the RPA. All works within the precautionary area shall be carried out under a watching brief by the Project Arboriculturist and in accordance with the agreed methodology.

All plant and vehicles engaged in demolition work must operate from the site side only. Where it is necessary to carry out works from the canal side adequate precautions must be taken to protect the soft ground and provide adequate physical protection from accidental damage to retained trees.

All plant and vehicles will be appropriate to the demolition in hand and site constraints in order to minimise damage/disturbance to trees. Precautionary measures must be observed to avoid contact with the crown of any retained trees from tall loads, plant with booms, plant & counterweights.

Protection and precautionary measures shall be considered by the Demolition Contractor and provision made within the contractor's Method Statement for tree protection and any physical impact from demolition material. A copy of the protection and precautionary measures contained within the contractor's Method Statement will be provided to the Client's Representative for checking.

Demolition of standing structures shall be carried out using a 'top down and pulled back' methodology within the footprint of the site. Following demolition and removal of demolition debris and prior to commencement of removal of the wall and foundation base, areas of potential conflict will be marked out on site by the Site Manager and Project Arboriculturist to indicate precautionary areas.

All works must be carefully carried out in order not to disturb tree roots that may be present below them. Appropriate machinery under arboricultural monitoring will be used to break-up and remove the existing surface and sub-base ensuring that excavation does not encroach within the soft ground below. When the foundation is close to the soil level, hand tools or appropriate machinery is to be used to prevent unnecessary damage to the tree roots. All surfacing should be pulled tangentially away from the RPAs.

Precautionary Area 3 - Thick Line (Purple)
Immediately following demolition of the wall and sub-base, a trench will be excavated along the line of the proposed foundation using hand held tools and any roots found during excavation will be recorded. Roots will then be severed by a qualified Arboriculturist ensuring that the roots are not ripped or torn. Clean cuts will minimise decay and promote healthy regeneration of the truncated roots should severance be required.

If significant roots are present and the Arboriculturist considers that the tree may become de-stabilised by root removal or have an adverse impact on the tree, appropriate remedial works or removal/replacement will be recommended in agreement with the Council's Tree Officer.

Immediately following demolition of foundations, the underlying soil structure must be protected by installation of ground protection.

Arboricultural Monitoring & Recording
In order for tree and root protection measures to work effectively all personnel associated with the demolition/construction process should be familiar with the tree protection and precautionary measures to be observed. However, it is recommended that the following works within the Construction Exclusion Zone or RPA are carried out under arboricultural supervision. It is the responsibility of the demolition contractor to inform the Client's Representative of works within the RPA at least 48hrs prior to commencement.

Work Stage	Scope of watching brief
Pre-commencement meeting	Afford site, discuss and agree method statement and tree protection strategy with Site Manager. Circulate written minutes of meeting including any modifications or clarifications.
Tree Protection Barriers and Ground Protection	On installation of tree protection barriers inspect identifying any outstanding works or action on completion. On completion of any outstanding actions sign off on completion. Report breaches to Site Manager for action. Circulate report to all parties.
Demolition of existing wall within RPA of T12	Afford site, discuss and agree method statement and provide arboricultural monitoring during demolition.
Pre-emptive root pruning	Afford site, discuss and agree method statement and provide arboricultural monitoring during demolition.

Storage of materials - All materials for demolition purposes should be carefully stored outside the enforced Construction Exclusion Zone.

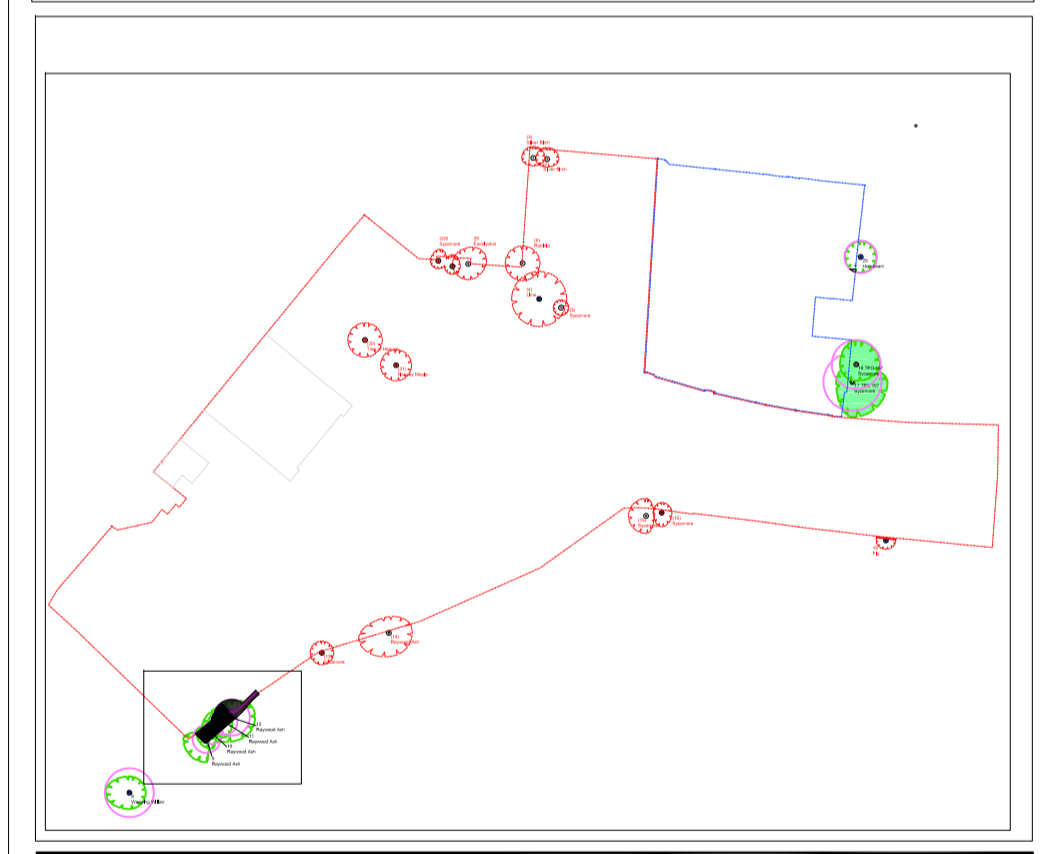
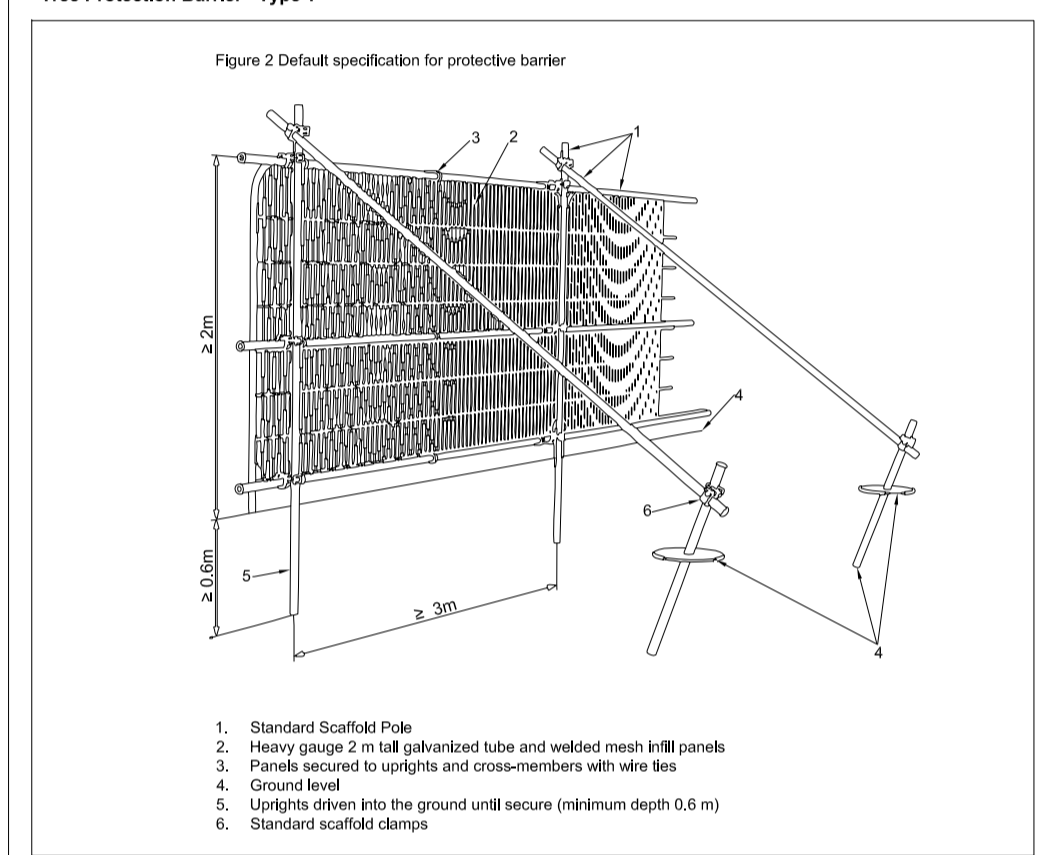
Cranes, Rigs and Booms - Where enabling works or construction is to occur within 2m of the crown extent of any retained tree, protection and precautionary measures must be observed. In addition to the site induction, all vehicles will operate with a banksmen to ensure the limit of travel is observed. Where a tower crane is in operation, the exclusion zone formed by the tree constraints will be programmed into the crane's onboard limiter. These precautionary measures are to be adopted by the contractor and provision made within the contractors method statement.

Breaches of Tree Protection & Unforeseen Events - All damage to protective barriers or accidental damage to trees must be reported to the Site Manager immediately. Works occurring within the vicinity will cease immediately until adequate tree protection measures are rectified. A record of the damage will be made by the Site Manager and, if appropriate in consultation with the appointed Project Arboriculturist, remediation measures carried out.

In the event of spillage the area is to be secured with sandbags on the line of the tree protection area and measures taken to drain/soak any spillage away from the protected area.

Tree Protection and Dismantling Protective Barriers - In order to implement final surface treatments and landscaping works it will be necessary to dismantle the protective barriers. Within tree protection distances, all works will conform to the principles set out within this Arboricultural Method Statement and be carried out under arboricultural monitoring by the Project Arboriculturist.

Tree Protection Barrier - Type 1



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Project
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Drawing
ARBORICULTURAL METHOD STATEMENT
& TREE PROTECTION PLAN

Scale: 1:125 Date: AUG '14 Drawn: AR

Drawing No. tf 752/TPP/301 Revision

