



BS5837:2012

**Trees in relation to design, demolition and construction –
Recommendations**

**Arboricultural Method Statement
(Demolition Phase)**

London Borough of Southwark

Beormund Primary School,

Former Bellenden School,

Reedham Street,

London

SE15 4PF

15 July 2021

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If this report has been released electronically the appendices referred to herein can be found in the annexed zip folder/s as .pdf files. If this report has been released in hard copy the appendices will be bound into the back of this report. Plans are annexed separately as A0, A1, A2 or A3 as appropriate.

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1. Introduction

Arbtech Consulting Limited (Arbtech) received written instruction on 20 May 2021 from London Borough of Southwark to attend the former Bellenden School, Reedham Street, SE15 4PF; grid reference, TQ 34103 75952 (site) to undertake an arboricultural survey a to BS5837:2012 guidance to assess trees, hedges and major shrub groups growing on and within influencing distance of the site and to produce a Schedule of trees, Tree Constraints Plan, and provide a Tree Protection Plan and Arboricultural Method Statement to discharge condition 5 of the approved planning permission reference number 18/AP/1788.

2. Executive Summary

This report describes the extent and effect of the proposed development at Beormund Primary School, Former Bellenden School, Reedham Street, SE15 4PF (“site”) on individual trees and groups of trees within and adjacent to the site.

Trees within the site were surveyed; using a methodology guided by British Standard 5837:2012 ‘Trees in relation to design, demolition and construction – Recommendations’ (“BS5837”).

Subsequently, this report has been produced, balancing the layout of the proposed development against the competing needs of trees. This report comprises all of the requisite elements of an arboricultural implications assessment, method statement and supporting plans.

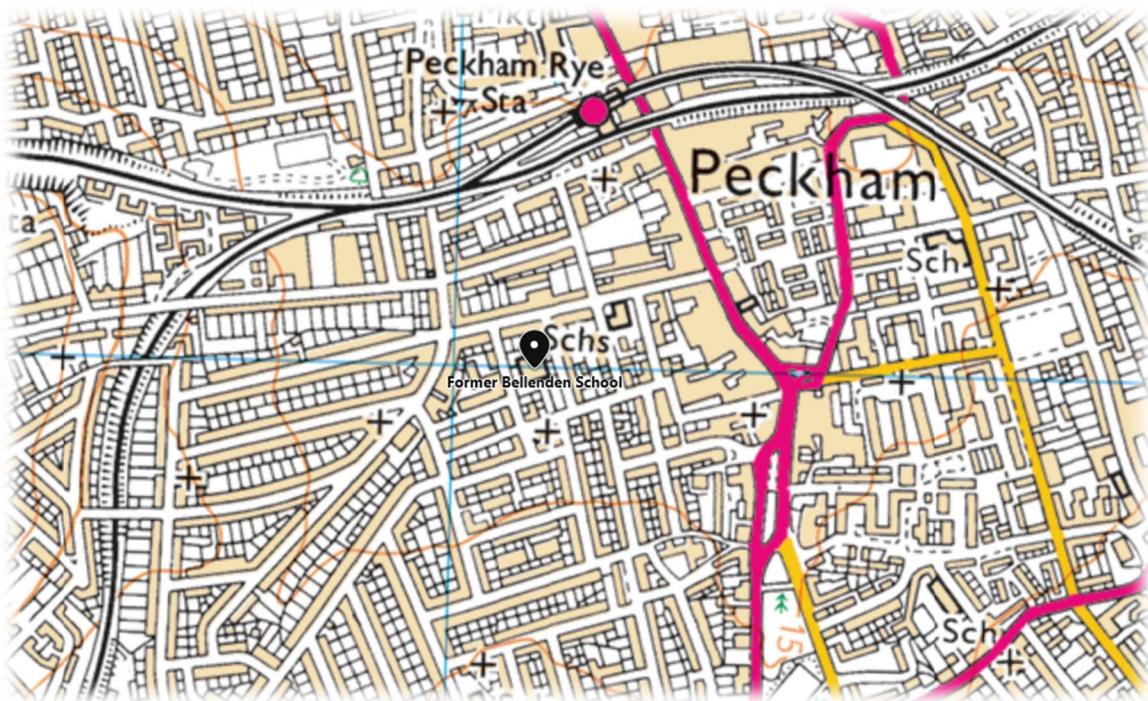


Figure 1: OS Map (Bing Maps)

Checklist for Submission to Local Planning Authority

Tree survey	✓
Tree constraints plan	✓
Arboricultural method statement	✓
Tree protection plan	✓

This report and its appendices follow precisely the strategy for arboricultural appraisal intended to provide local planning authorities with evidence that trees have been properly considered throughout the development process.

It is the conclusion of this report that the overall quality and longevity of the amenity contribution provided for by the trees and groups of trees within and adjacent to the site will not be adversely affected as a result of the local planning authority consenting to the proposed development. It is considered that any issues raised in this report, or beyond the scope of it can be dealt with by planning conditions.

3. General Information

Client: London Borough of Southwark

Site: Beormund Primary School, Former Bellenden School, Reedham Street, SE15 4PF.

Brief proposal description: Demolition of the existing school building.

Planning application reference: 18/AP/1788

Table 1: Documents referred to.

Document	Reference No.
Topographical / Site survey drawing	B06-TOPO
British Standard 5837:2012	“BS5837”
Tree Protection Plan	Arbtech TPP 01 (Demolition)

4. Tree Survey

Survey: An arboricultural survey to BS5837 of all trees within impacting distance of the site was undertaken by Michal Mixa 20th April 2021 and amended by Debbie Reed 24th June 2021.

A total of twenty four (24) individual trees and one (1) group of trees were surveyed. Details for each of the trees surveyed are provided in the Schedule of Trees (see Appendix 1)

Table 2: Documents upon which this tree survey has been based.

Document	Originator	Reference Number	Title
Db1523-TOPO	Design stage	Db1523-TOPO	Topographical Survey

Limitations: The survey was made at ground level using visual observation only. Detailed examinations, such as climbing inspections and decay detection equipment were not employed, though may form part of the survey's management recommendations. Measurements were taken using specialist tapes, laser and GPS devices. Where this was not possible, measurements are estimated.

Scope: Pre-development tree surveys make arboricultural management recommendations based exclusively upon the individual tree or group of trees condition relative to their present context (*i.e. not in relation to the proposed development*).

Legal Status: No statutory protection check has been performed. BS5837 does not draw any distinction between trees subject to statutory protection, such as a Tree Preservation Order ("TPO"), and those trees without. This is principally because a detailed planning consent overrides any TPO protection. Consequently, we do not seek to offer any comparison between or infer any difference in the quality or importance of TPO trees and other trees.

* For more information on the surveyed trees please see Arbtch Consulting Ltd, Tree Survey Schedule (Appendix 1), Tree Survey Report and Tree Constraints Plan.

5. Arboricultural Method Statement

The purpose of this method statement is to demonstrate how any aspect of the development that has potential to result in loss or damage to a tree may be implemented and provide an adequate level of protection for those trees that are to be retained during the proposed works.

Details of key site personnel, including site / project manager will be submitted to the Council's Tree Officer prior to the commencement of site works.

This method statement is to be approved and agreed to in writing by all key personnel prior to the commencement of site works.

No site personnel are to be present and no demolition, site clearance, building work or delivery of materials is to occur until the protective measures are in accordance with this method statement and the Tree Protection Plan drawing number Arbtech TPP 01 (Demolition).

Protective measures should be in accordance with this method statement and the Tree Protection Plan; drawing number Arbtech TPP 01 Demolition) will remain unaltered and in situ, unless otherwise specified, for the entire duration of the construction.

Table 3: Documents upon which this assessment has been based.

Document	Originator	Reference Number	Title
Db1523-TOPO	Design stage	Db1523-TOPO	Topographical Survey

Tree Works

For reasons of public safety, all tree works referred to herein must be carried out prior to any site personnel commencing works or any building materials being delivered.

Table 4: Summary of Tree Works.

No.	Species	Works	Category
1	Sycamore	Fell to ground level; grind out stump	C
2	Sycamore	Fell to ground level; grind out stump	C
4	Narrow-leaved ash	Fell to ground level; grind out stump	C
6	Apple	Fell to ground level; grind out stump	C
7	Apple	Fell to ground level; grind out stump	C
8	Apple	Fell to ground level; grind out stump	C
9	Sycamore	Fell to ground level; grind out stump	C
10	Sycamore	Fell to ground level; grind out stump	C
11	Sycamore	Fell to ground level; grind out stump	C
12	Sycamore	Fell to ground level; grind out stump	U
17	Elder	Fell to ground level; grind out stump	C
18	Cherry	Fell to ground level; grind out stump	C

Notes

All tree work is to be undertaken in accordance with British Standard BS 3998:2010, Recommendations for tree work. All arising's are to be removed and the site is to be left as found. Care is to be taken of the ground around retained trees to make sure that it does not become compacted as a result of tree surgery operations. No equipment or vehicles such as timber Lorries, tractors, excavators or cranes shall be parked or driven beneath the crowns of any retained trees, to prevent subsequent compaction and root death.

Tree removal

A tree should be felled in one piece only when there is no significant risk of damage to people, property or protected species (see Annex A).

Where restrictions (e.g. lack of space, buildings, other features, land ownership or use, or other trees which are to be retained) cannot be overcome, trees should be dismantled in sections.

This also applies where a tall stump is being retained but where branches are to be removed/pruned.

Extensively decayed trees can be unpredictable when they are being felled, and special precautions should therefore be taken, such as the use of a winch to guide the direction of fall.

Stump removal – stump grinding

Stump grinding should be to a minimum of 300mm deep or to extend through the base of the stump leaving the major roots disconnected if the intention is to reduce the potential for the spread of Honey fungus.

The grinding residue should be treated as arising's and removed from site.

NOTE Mechanical destruction of a stump by stump grinding is less disruptive to the site than digging out.

The hole left by stump removal, should be filled with soil or other material. The filling should be appropriate for future site usage, and for any surface treatment that is to be installed.

Where future plant growth is desired, the backfill material should be firmed in 150 mm layers by treading, avoiding excessive compaction and destruction of the soil structure.

After stump removal

The hole left by stump removal, whether by digging out or grinding, should be filled with soil or other material. The filling should be appropriate for future site usage and for any surface treatment that is to be installed.

Where future plant growth is desired, the back fill material should be firmed in 150mm layers by treading, avoiding excessive compaction and destruction of the soil structure.

Protected Species

Conservation Status of British Bats

The general consensus in Britain and Europe is that virtually all bat species are declining and vulnerable. Our understanding of population status is poor as there is very little historical data for most bat species. Certain species, such as the horseshoe bats, are better understood and have well documented contractions in range and population size.

Given this general picture of decline in UK Government within the UK Biodiversity Action Plan has designated five species of bats as priority species (greater and lesser horseshoe bats, barbastelle, Bechstein's and pipistrelle). These plans provide an action pathway whereby the maintenance and restoration of the former populations levels are investigated.

Legal Status of British Bats

Given the above position all British bats as well as their breeding sites and resting places enjoy national and international protection.

All bat species in the UK are fully protected under the Wildlife and Countryside Act 1981 (as amended) through inclusion in Schedule 5. All bats are also listed on Annex IV (and some on Annex II) of the EC Habitats Directive giving further, European protection. Taken together the act and Conservation of Habitats and Species Regulations 2012 (as amended)* make it an offence to; intentionally or deliberately kill, injure or capture (take) bats;

- Deliberately disturb bats (whether in a roost or not);
- Damage, destroy or obstruct access to bat roosts;
- Possess or transport a bat or any part of a bat, unless acquired legally;
- Sell, barter or exchange bats, or parts of bats

The legislation although not strictly affording protection to foraging grounds does protect roost sites. Bat roosts are protected at all times of the year whether or not bats are present. Any disturbance of a roost due to development must be licenced.

**the regulations that delivered by the UK's commitments to the Habitats Directive.*

Breeding birds

All nesting birds are protected under the Wildlife and Countryside Act (as amended) 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. Furthermore a number of birds enjoy further protection under that Act and are listed on Schedule 1 of the Act. These further protected birds are also protected from disturbance and it may be necessary to operate “no-go” buffer zones around such nests – typically out to 100m.

Planning policy guidance on the treatment of species identified as priorities under the biodiversity action programme suggests that local authorities should take measures to protect the habitats of these species from further decline through policies in local development documents and should ensure that they are protected from the adverse effects of development, where appropriate, by using planning conditions or obligations. The conservation of these species should be promoted through the incorporation of beneficial biodiversity designs within developments.

Sequencing of works

A logical sequence of events is to be observed and shall be phased as follows.

Table 5: Sequence of Events

Stage	Event
Stage 1	Carry out tree works as specified within the summary of tree works
Stage 2	Installation of protective measures in accordance with the approved tree protection plan (demolition phase)
Stage 3	Pre-commencement site meeting
Stage 4	Installation of site set up
Stage 5	Undertake and complete demolition
Stage 6	Removal of all machinery and materials form site
Stage 7	Arboricultural approval to dismantle and remove tree protection measures
Stage 8	Dismantle and removal of protective measures
Stage 9	Sign off of completion of the demolition phase from project arboriculturist

Protective Measures

Protective measures are to be installed immediately following the completion of the tree works, and are to be sited and aligned in accordance with the tree protection plan, drawing number Arbtech TPP 01 (Demolition) prior to the commencement of any works or the introduction of any machinery or material to site.

Upon installation of the protective measures around the retained trees the project arboriculturist will visit the site to inspect and document the position and specifications of the protective measures.

In the event that the protective measures and their positions do not comply with this arboricultural method statement document number Arbtech AMS 01 (15 July 2021) and tree protection plan drawing number Arbtech TPP 01, the project arboriculturist shall inform the client and fencing contractor so adjustments can be made.

When the protective measures comply with document number Arbtech AMS 01 (15 July 2021) and tree protection plan drawing number Arbtech TPP 01 (Demolition), the project arboriculturist will sign off the protective measures in writing to the client and will send a copy to the fencing contractor, site agent and local authority tree officer.

If the protective measures become damaged or there is any accident or emergencies involving trees, these areas are to be cordoned off immediately with high visibility plastic mesh fencing. The site agent is to photograph and document the damage and inform the project arboriculturist immediately after the incident and all work within in this area is to cease until the project arboriculturist has made a visit to the site. Any and all damaged sections of protective measures shall be replaced within 48 hours of the initial incident.

The protected area is sacrosanct and will not be invaded by the storage of materials, mixing of concrete or other products, accessed by machinery, equipment or pedestrians or in any other way disturbed by construction activity.

The protective measures will remain in place until the completion of stage 7 (see Sequencing of Works), there after they will be carefully dismantled only with the agreement of the project arboriculturist and or the local authority tree officer.

The existing site boundary measures are to be retained for the duration of the development. If for any reason the existing boundary measures are not to be used protective barrier fencing is to be installed along the line of the boundaries and is only to be removed upon the written permission of the project arboriculturist or LPA tree officer upon the completion of the development or immediately prior to the installation of the permanent boundary measures.

Existing hard surfacing is to be for as long as possible to act as ground protection, where it is decided that this is not a viable option and o the existing hard surfacing appears to be distorting or becomes damaged these areas are to be covered immediately by ground boarding as designed by the project engineer to cope with any likely loading that will be placed upon it.

No equipment, vehicles or plant shall operate beyond the tree protection fencing. Booms, hoists and rigs should be kept as far away from the canopies of retained trees at all times. Where it is necessary to operate within 5m of a tree canopy, it will be done with the utmost caution and under the control of a banks man. Damage to trees will be considered a breach of this tree protection plan, which in turn could be a breach of planning permission.

Protective Barrier Fencing

Protective barrier fencing should be appropriate for the intensity and proximity of the development to protect trees where development activity is in close proximity.

Default specification: To comprise either 2.4m wooden site hoarding; or a 2.3m high scaffold framework, well braced to resist impacts, with uprights to be spaced at a maximum of 3.0m intervals and driven into the ground by a minimum of 600mm. On to this, standard anti-climb welded mesh panels are to be securely fixed to each other with at least two scaffold clamps and to the scaffold frame work with wire.

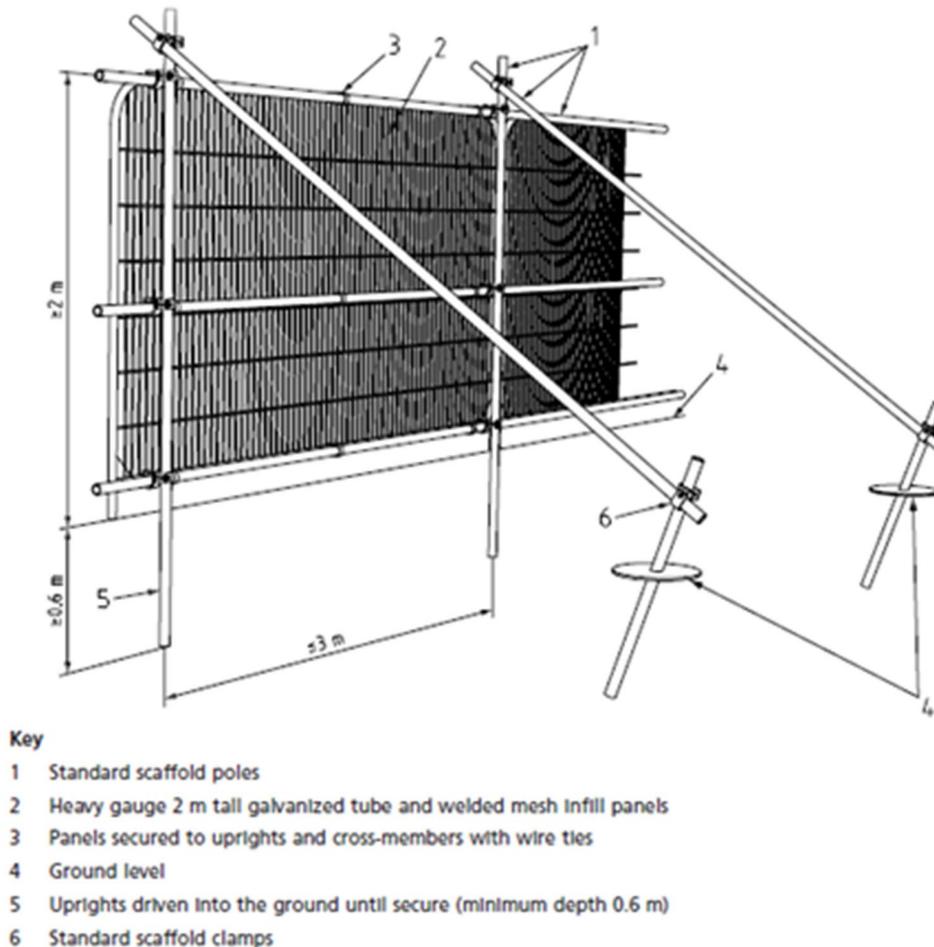


Figure 2: BS5837:2012 - Figure 2, Default specification for protective barriers.

Secondary specification: To comprise of 2m tall welded mesh panels on rubber or concrete feet. Panels are to be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The panels should be supported on the inner side by stabiliser struts, which should be attached to a base plate and secured with ground pins.

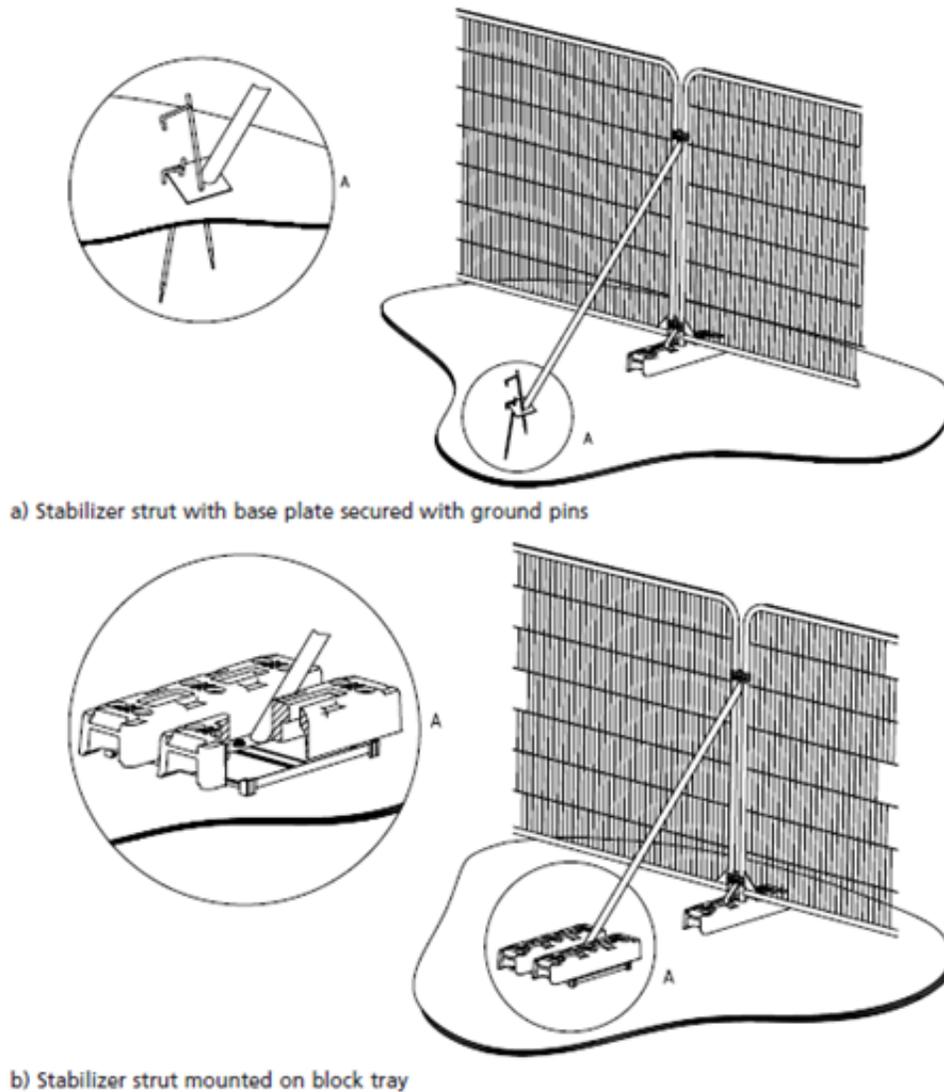


Figure 3: BS5837:2012 - Figure 3, Examples of above-ground stabilising systems.

Signage denoting the words “*tree protection area*” at 5.0m intervals should be fixed to the protective barrier fencing (See Appendix 2).

Protective fencing is to be removed **ONLY** with the written permission of the arboricultural consultant and approval of the local planning authority (LPA).

Goalposts

Goal posts are to be situated at the access point beneath the canopy of tree number 3 to restrict access to high sided vehicles and allow only vehicles with a maximum height of 4.5m to enter the area between the canopies of these two trees.

Goalposts need to be highly visible. They are to be made out of a rigid material such as timber and they are to be painted with red and white stripes.

The uprights are to be either fixed to the tree protection fencing or to be able to stand freely, there is to be no excavation with the RPAs of retained trees for the installation of the goalposts.

Warning signs are to be placed upon the goal posts where they will be easy for vehicles drivers to see. These should provide the height of the cross bar and instruct drivers that they are entering a tree protection area.

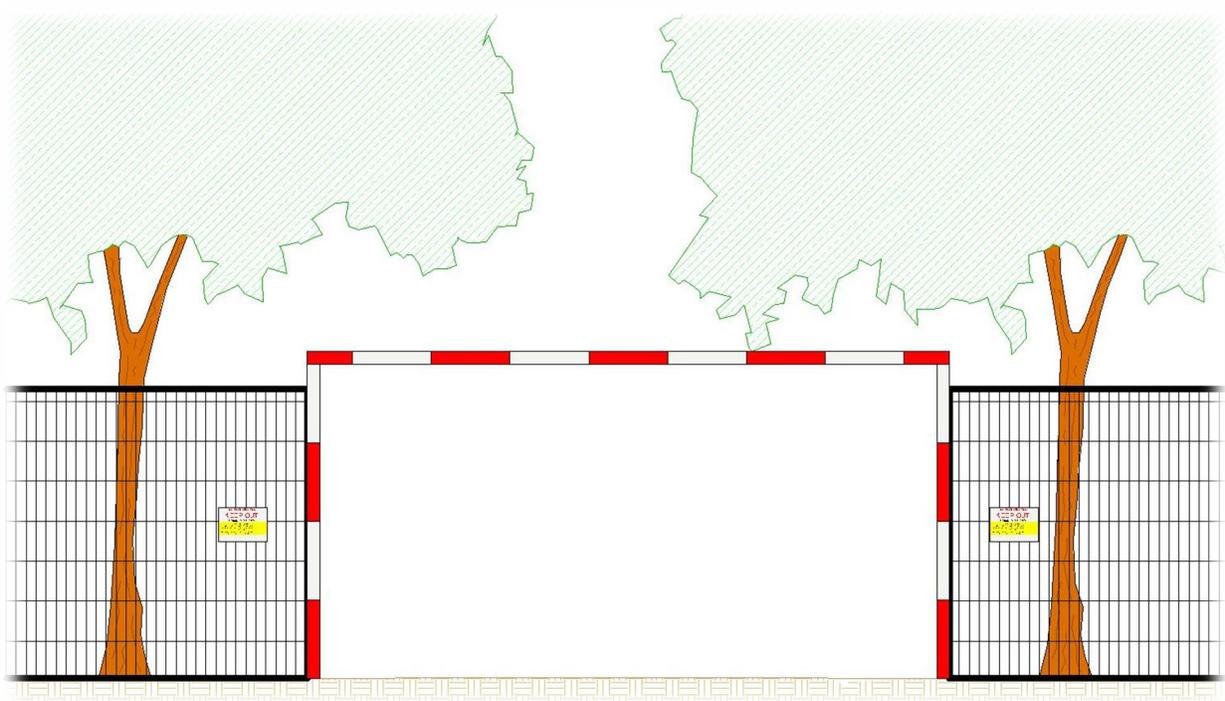


Figure 4: Example image of a goal post

Ground boarding

New temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.

Where it is determined by the project engineer that the any hard surfacing is not adequate protection from any expected loading, ground boarding is to be installed to the engineer's specification on top of the hard surfacing within the root protection areas of retained trees.

Where machinery will be stored or used from the ground boarding within the RPAs of the retained trees an impervious barrier and or bunding to prevent oils, fuel or chemicals is to be installed to prevent leaching into the soil within or adjacent to the RPAs.

Note The ground protection might comprise of one of the following:

- a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100mm depth of woodchip), laid onto a geotextile membrane;
- b) for pedestrian-operated plant up to a gross weight of 2t, proprietary inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150mm depth of woodchip), laid onto a geotextile membrane;
- c) for wheeled or tracked construction traffic exceeding 2t gross weight, an alternative system (e.g. proprietary system or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

For any situations other than those described in a) or b) (as above), the ground boarding is to be designed by a suitably qualified person to an engineering specification in conjunction with arboricultural advice, to be suitable of supporting the expected loading to be placed upon it.

In all cases, the objective of the ground boarding is to avoid compaction of the soil beneath, so that tree root functions remain unimpaired.

At this stage no contractors have been approached so it is not possible to know exactly what equipment they have available and will be using.

Due to the various sizes of demolition and construction plant available and the potential requirements for material storage within the site the final specifications for the ground boarding is to be designed and supplied to the LPA tree officer for their approval by the project engineer a minimum of ten (10) working days before its installation.

Demolition

Prior to the demolition of the existing site features, all tree works are to have been completed, tree protection measures are to be in place as per Arbtech Consulting Ltd. tree protection plan document number Arbtech TPP 01 (Demolition) and have been signed off and a copy of the demolition method statement has been submitted and approved by the project arboriculturist and LPA tree officer, to ensure that there is no conflict with this method statement.

All demolition work within or immediately adjacent to RPAs or canopies of retained trees is to be undertaken under the direct on-site supervision of an arboriculturist.

Demolition of the existing site features (walls and hard surfacing) beneath the canopies and within and adjacent to the RPAs retained tree numbers 3, 5, 9, 13, 14, 19, 23 and 24 as show on Arbtech TPP 01 (Demolition) by a turquoise 'Cross' hatching are to be undertaken carefully under direct on-site arboricultural supervision.

Walls

The walls are to be taken down so that all debris and materials are to fall outside of the RPAs and away from the canopies of all retained trees.

Foundations within and adjacent to the RPAs of retained trees are to be left in situ where ever possible. Where this is not possible demolition of the existing foundations are to be undertaken to the minimum depth required to allow for the installation of the new soft and hard landscaping.

The removal of the existing foundations within the RPA of retained trees are to be undertaken using a hand held pneumatic breaker, hand tools and wheel barrows to break up and remove the debris out of the RPA. In some situations and only at the discretion of the arborist it may be possibly to use an excavator using a hydraulic breaker and a suitably sized toothless grading bucket.

It may be permitted by the project arboriculturist for an excavator to undertake the demolition and removal of the foundation but it must be situated outside of the RPA, on top of the hard surfacing working away from the RPAs or from suitable ground boarding capable of handling the expected loading.

If it is likely that there will be any soil collapse or the trench begins to collapse within the RPAs of retained trees which will lead to the loss of rooting environment, excavations are to be stopped immediately and the trench is to be shored up to prevent further soil collapse.

Where the removal of foundations occurs within the RPAs of retained trees these voids are to be back filled with clean top soil.

Hard Surfacing

Where it is required for hard surfacing is to be removed and or re-surfaced within the RPAs of retained trees it is to be undertaken under direct on-site arboricultural supervision, during the landscaping phase of the development.

The wearing course will be broken up using a hand held pneumatic breaker, hand tools and wheel barrows to break up and remove the surfacing. Where is necessary to remove the sub base this is to be undertaken using a fork to loosen the material and moved using shovels and wheel barrows.

In some situations and at the discretion of the arborist it may be possibly to use an excavator using a hydraulic breaker and a suitably sized toothless grading bucket. If an excavator is to be used it must be situated outside of the RPAs, on top of the hard surfacing working away from the RPAs or from ground boarding.

Whichever system is used there is to be **NO** disturbance of the soil beneath. If roots are found they are to be covered over with damp hessian and a layer of either sharp sand, wood chip or top soil will be applied as soon as practicably possible to prevent desiccation.

Existing Underground Services

Existing services within the site should be retained where ever possible. Where existing services within RPAs require upgrading, the upmost care must be taken to minimise disturbance, and where feasible trenchless techniques are to be employed, and only where necessary should open excavations be considered.

Prohibition

- Mechanical digging or scraping is not permitted within a defined root protection area or within areas cordoned off by protective barrier fencing.
- No access will be permitted within the protected areas;
- No materials, equipment or debris will be stored within any of the fenced areas, or against the fencing;
- Fires are not permitted within 10m of any vegetation.
- Leaning objects against or attaching of objects to a tree is not permitted.
- Machinery, plant and vehicles are not permitted to be washed down within 10m of vegetation.
- Chemicals and materials are not to be transported, stored, used or mixed within a root protection area or within areas cordoned off by protective barrier fencing.
- Cement silos, mixing site to be situated within a bunded area to prevent pillage/leaking of chemicals harmful to trees. These areas are to be sited well clear of protected trees.
- Refuelling of plant or machinery is prohibited within 10m of the construction exclusion zones.
- It is essential that allowance should be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards trees.
- Where machinery is to be used within 5m of retained tree canopies a banks man will be required at all times whilst setting up, moving or operating within this distance of retained trees canopies.
- Storage of all caustic material and chemicals are to be situated well clear of protected areas and preferably on lower ground if slopes are present, or to be situated within a bonded area to prevent any spills or leaks entering the ground.

Site Management

The site manager will be responsible for briefing and inducting all personnel who will be working on any stage of this development and especially those who will be working within or adjacent to the canopies or RPAs of retained trees; and will make them aware of, and provide a copy of this method statement and tree protection plan drawing number Arbtech TPP 01 (Demolition); this is to include but not exclusively the movement and or operation of plant, excavations, unloading deliveries, mixing and or pouring of cement and concrete.

The site manager will be responsible for the day to day running and protection of all retained trees and for liaising with the project arborist about any tree related matters and prior to any works that may or will affect the RPAs or canopies of retained trees; this is to include but not exclusively the movement and or operation of plant, excavations, unloading deliveries, mixing, pouring and storage of all caustic materials that may cause harm to retained trees.

Any incidents of damage to retained trees or of tree protection measures will be documented by the site manager who will then report these incidents to the project arboriculturist immediately and make sure that works within this area cease until the project arborist has had an opportunity to inspect the damage and where appropriate, agree a mitigation plan with the local planning authority tree officer.

The site manager may designate another person to take charge of briefing and inducting process of new site personnel or visitors in his absence.

If the site manager is replaced or is absent from site for more than three consecutive working days the project arborist will be informed and a pre start meeting will be held with the new or acting site manager.

It is the responsibility of the site manager to ensure that the planning conditions attached to the planning consent are adhered to at all times and that a monitoring regime and supervision of any works within or adjacent to the RPAs are adopted.

If at any time pruning works are required other than those previously approved, permission must be sought from the LPA tree officer and once permission is granted they are to be carried out by a suitably qualified person in accordance with BS3998:2010 Tree work – Recommendations.

Monitoring and Supervision

Where trees have been identified within this method statement and tree protection plan drawing number Arbtech TPP 01 (Demolition) for retention, there should be an auditable system of arboricultural monitoring. This is to extend to arboricultural supervision whenever demolition or construction activity is to take place within or adjacent to any canopy or RPA.

The development's tree protection measures are to be monitored and all demolition and construction works to be undertaken within or adjacent to the RPAs of retained trees are to be supervised by project arboriculturist, who should be retained to record and report observations to the council at appropriate intervals.

Pre-commencement site meeting

Prior to the commencement of any works or machinery and materials arriving on site a pre-commencement site meeting involving the project arborist, land owner or agent, site manager, contractors and engineer (as appropriate) and the relevant LPA officers will be held to ensure that all aspects of the arboricultural method statement and tree protection are understood and for all parties to swap contact details (see Appendix 3).

Monitoring and supervision schedule

The initial monitoring visit will be to check that the tree protective measures are in the correct location and as specified within the approved method statement; if so to sign off their installation.

There after monitoring visits are to take place at regular intervals, to ensure that tree protection measures are in place and are functioning as designed or whenever necessary to undertake works to be carried out under arboricultural supervision. The frequency of the monitoring visits is to be determined with the LPA tree officer at the pre-commencement site meeting.

A record of all arboricultural monitoring and supervision visits will be kept and any faults will be logged, this will then be copied to the site agent, developer and local planning authority in a digital format.

If during the course of the development it is necessary for areas to be re-designed so that they would require changes to the approved arboricultural method statement or tree protection plan and so affecting retained trees the project arborist and LPA tree officer will be invited to attend a site meeting with all relevant parties. Prior to any changes being implemented these must have been approved in writing by the LPA tree officer.

Supervision

The arboricultural consultant will be required to attend site to directly supervise all demolition and construction works that are to be undertaken within or adjacent to the RPAs of all retained trees and will be advised a minimum of 72 hours prior to the commencement of any works that require his attendance, these will include:

1. Pre-commencement site meeting;
2. Location of protective measures;
3. Supervised demolition of retaining walls, hard surfacing, kerb edging and all associated foundations within and adjacent to the RPAs of tree numbers 3, 5, 13, 14, 19, 23 and 24;
4. Any demolition and or excavations within or adjacent to RPAs, including foundations, hard surfacing or underground services (a non-exhaustive list).
5. Arboricultural sign off and removal of protective measures.

Completion meeting

Once all construction works have been completed all materials and machinery has been removed from site the project arborist shall be informed and will invite the LPA tree officer to meet on site to discuss the process and discuss any final remedial works that may be required and to sign the development off so that the protective measures may be removed.

Arboricultural Monitoring and Supervision Sign Off Checklist

Beormund Primary School, Former Bellenden School, Reedham Street, SE15 4PF

Tree Number	Task	Date Completed	Signed (Project arboriculturist)	Signed (Site Manager)
All	Pre-commencement site meeting			
All	Sign off of the location and specification of the protective measures			
3 & 5	Supervised demolition of the walls and associated foundations			
9, 23 & 24	Supervised demolition of the walls and associated foundations			
3	Supervised demolition of the hard surfacing, kerb edging and associated foundations			
14	Supervised demolition of the hard surfacing, kerb edging and associated foundations			
19	Supervised demolition of the hard surfacing, kerb edging and associated foundations			
	Additional demolition (as required)			
All	Completion of demolition			
All	Removal of machinery and materials from site			
All	Dismantle & removal of protective measures			
All	Sign off from project arboriculturist			

Appendix 1: Tree Survey Schedule

Tree Survey Schedule

Beormund Primary School, Crosby Row, London SE1 3PS

Client	London Borough of Southwark
Survey Date	01/05/2020 & 24/06/21
Weather Conditions	Bright and sunny
Surveyor	Michal Mixa and Debbie Reed

Key:

Tree Number	A unique number or reference to identify trees or groups as shown on associated plans.
Species	Common and or taxonomic names.
Height	The height of the tree in meters (m).
Trunk Diameter	The stem diameter in millimetres (mm) taken at 1.5m above ground level unless otherwise specified.
Canopy Spread	The extent of the canopy taken in meters (m) to the principle points of the compass, North (N), North East (NE), East (E), South East (SE), South (S), South West (SW), West (W) and North West (NW).
Crown Clearance	The height of canopy clearance above ground level to the lowest point of the canopy, taken in meters (m).
Age Class	Age classification; Young (Y); Semi-mature (SM); Early Mature (EM); Mature (M); Over Mature (OM).
Physiological Condition	The general physiological condition of the tree; Good; Fair; Poor; Decline; Dead.
Structural Condition	The general structural condition of the tree; Good, Fair, Poor, Hazardous.
Comments	Notes and general comments on the structural condition of the tree, its environment and it estimated remaining contribution.
Category	The retention category referring to the quality and useful contribution in years; U = <10yrs; A = >40yrs; B = >20yrs; C = >10yrs. The retention sub category referring to the type of amenity; 1 = Arboricultural; 2 = Landscape; 3 = Cultural including conservation.

Tree No.	Species	Height (m)	Trunk Diameter (mm)	Canopy Spread (m)	Crown Clearance (m)	Age Class	Physiological Condition	Structural Condition	Comments	Category
1	Sycamore	14	340	4	1	Early Mature	Good	Fair	Weak union, low branches	C1
2	Sycamore	12	140	3	0	Early Mature	Fair	Fair	Multi-stemmed, raise bed	C1
3	Narrow-leaved ash	14	520	5.5	2	Middle aged	Fair	Fair	Major deadwood, spreading crown	C1
4	Sycamore	12	160	3	0	Early Mature	Fair	Fair	Crown conflict with the structure, multi-stemmed	C1
5	Sycamore	14	450	5	3	Mature	Fair	Fair	On the neighbouring property behind perimeter fence, Access restricted data estimated, multi-stemmed, codominant	C1
6	Apple	5	150	2.5	2	Early Mature	Fair	Fair	Bark wounds, weak union	C1
7	Apple	5	170	3.5	1.5	Early Mature	Fair	Fair	No Significant defect found	C1
8	Apple	5	80	1.5	1	Young	Good	Good	Supressed crown	C1

Tree No.	Species	Height (m)	Trunk Diameter (mm)	Canopy Spread (m)	Crown Clearance (m)	Age Class	Physiological Condition	Structural Condition	Comments	Category
9	Sycamore	12	460	N5 E4 S4 W6		Mature	Fair	Fair	In the raised bed, Supressed crown, weak union, codominant	C1
10	Sycamore	14	380	N4 E3 S5 W4	2	Early Mature	Fair	Fair	In the raised bed, Supressed crown, weak union, codominant	C1
11	Sycamore	14	320	N5 E4 S2 W6	2	Early Mature	Fair	Fair	In the raised bed, Supressed crown, weak union, codominant	C1
12	Sycamore	12	410 430 450	5	3	Early mature	Fair	Poor	In the raised bed, Supressed crown; three Stemmed from base; evidence of mechanical damage to surface roots; evidence of included bark at unions; N & E stems have wounds with exposed wood on the S side of the stems; up to 1.5m long X 300mm wide X 150mm deep; cavities extend up internally trunk beyond reach; slightly sparsely foliated	U
13	Sycamore	14	310	N5 E2 S5 W3	3	Mature	Fair	Fair	In the raised bed, Supressed crown, weak union, codominant	C1
14	Wild cherry	12	390	N5 E5 S5 W2	3	Mature	Fair	Fair	In the raised bed, Supressed crown, weak union, codominant	C1
15	Chusan palm	3	200	2	3	Early Mature	Good	Fair	In the raised bed, ivy on the stem	C1

Tree No.	Species	Height (m)	Trunk Diameter (mm)	Canopy Spread (m)	Crown Clearance (m)	Age Class	Physiological Condition	Structural Condition	Comments	Category
16	Sycamore	12	170	N3 E1 S3 W3	0	Early Mature	Good	Fair	Leaning stem	C1
17	Elder	5	320	4	1	Mature	Fair	Fair	Multi-stemmed, rubbing branches, minor deadwood	C1
18	Cherry <i>sp.</i>	12	220	3.5	2	Early Mature	Fair	Fair	Crown conflict with the structure, rubbing branches	C1
19	Bird cherry	9	230	4	2	Early Mature	Fair	Fair	Rubbing branches	C1
20	Sycamore	14	500	5	2	Mature	Fair	Fair	On the neighbouring property behind perimeter fence, access restricted data estimated,	B2
21	Sycamore	12	400	N2 E5 S5 W5	2	Mature	Fair	Fair	On the neighbouring property behind perimeter fence, access restricted data estimated, supressed crown	C1
22	Sycamore	14	640	6	2	Mature	Fair	Fair	On the neighbouring property behind perimeter fence, access restricted data estimated, codominant	B12
23	Sycamore	12	730	N4 E5 S6 W6	2	Mature	Fair	Fair	On the neighbouring property behind perimeter fence, access restricted data estimated, supressed crown, weak union, codominant	B12

Tree No.	Species	Height (m)	Trunk Diameter (mm)	Canopy Spread (m)	Crown Clearance (m)	Age Class	Physiological Condition	Structural Condition	Comments	Category
24	Sycamore	14	500	N5 E5 S3 W5	2	Mature	Fair	Fair	On the neighbouring property behind perimeter fence, access restricted data estimated, supressed crown, weak union, codominant	C1
G1	Sycamore	14	160	2	0	Semi Mature	Fair	Fair	Self-set trees and shrubs	C1

Appendix 2: Tree Protection Notice

(To be printed at A3 or larger)

Tree Protection Area

KEEP OUT

Do not move this fence

(TOWN & COUNTRY PLANNING ACT 1990)

**TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS
AND/OR ARE THE SUBJECT OF A TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL
PROSECUTION**

**ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN
PERMISSION OF THE LOCAL PLANNING AUTHORITY**

ARBTECH

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Appendix 3: Contact Details

Name	Position	Company	Contact
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	Tree Officer		
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	Demolition contractor		

Document Production Record

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