

PJ DEVELOPMENTS LTD

Tree Survey Report (BS5837:2012)

Proposed Residential Development on Former Lanes End House, West
Walberton Lane, Walberton, West Sussex.

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Executive Summary

The trees on the application site have been assessed in accordance with BS 5837:2012 "Trees in relation to design, demolition and construction - Recommendations".

The proposal is for the construction of six new six bedroom detached houses it detached double garages, associated gardens and private parking on land currently occupied by Lanes end House, West Walberton Lane, Walberton, West Sussex. The application site is currently an private detached dwelling with large private garden area to the rear.

The report includes a survey of 14 individual trees and 2 groups of trees.

The site comes under the planning jurisdiction of Arun District Council, and correspondence with the Planning Enquiries and GIS Officer confirms that there are seven trees within the site that are protected by Tree Preservation Orders ('TPOs'). The site itself is also not located within a conservation area. The closest conservation area to the site is the Walberton Green, located to the east of the site, covering the centre of the village.

The trees are spread around the site boundary, predominantly along the southern boundaries. Across the site there are a mix of species, predominantly comprising Oak, with other occurrences of Ash, Silver Birch, Honey Locust and YEW.

Seven of the trees within the application boundary are "unremarkable with limited merit", in accordance with BS5857 cascade chart for tree quality assessment, with 7 individual trees categorised as C2 - trees of low quality, as was the two groups of trees and the two coppices of, self-set trees (G1). The remaining 7 individual trees as category A1 And A2 trees of good quality offering visual amenity to the area and of high quality particular importance.

There are no individual category U trees on site which is dead, dying or with serious defects with no long-term merit for retention.

None of the 14 trees surveyed need to be removed to facilitate construction of the new development.

The proposed layout will generally have no impact on the existing trees and hedges with the exception of dwelling number 2. The footprint of the grange of this house extends within the Root Protection Area (RPA) of T1 which means any excavation for traditional strip footing foundations will detrimental impact upon the roots. To avoid damage occurring to the roots, the foundations should be constructed using mini piles and beams to span over the tree roots. This method of construction will require specialist engineering design to ensure the integrity of the building is not compromised as well as avoiding damage to the existing tree roots.

Recommendations have been made within the report to safeguard the trees and hedgerows within the application site which are to be retained and protected from any damage due to construction work including erection of protective fencing around them to separate from the construction activities.

The proposals also include extensive new tree planting and new hedgerows around the southern and western boundaries. Although no existing trees are to be removed and therefore no new planting required to mitigate any lost trees, the inclusion of new trees will benefit the visual amenity of the site.

1 Introduction

1.1 This tree survey report has been prepared in respect of the proposed development for six new 6-bedroom houses within a 1.3acre parcel of land at the corner of West Walberton Lane and Arundel Road, in order to:

- Assess the quality of the Trees in proximity to the proposed building work;
- Investigate any legal protection of the trees;
- Provide an Arboricultural Assessment with regard to the proposals; and
- Recommend measures which will suitably protect the trees during the construction process

1.2 The planning application is as follows: Construction of six 6-bedroom houses, each with a private driveway and garage, and gardens. There will be a new access road leading from Arundel Road that leads through the site. Proposed planting includes a hedgerow and trees around the site boundary, with further tree planting within the site along the private access road.

1.3 In accordance with recommended best practice, the Arboricultural information is provided within this report in accordance with BS5837:2012.

1.4 The report is based on the following drawing which has been supplied by the client's architect:

- Existing Site Plan drawing number 19-001 PL-01 by PJ Developments Ltd, dated January 2019.
- Proposed Site Plan drawing number 19-001 PL-02 by PJ Developments Ltd, dated January 2019.
- Proposed Block Plan drawing number 19-001 PL-03 by PJ Developments Ltd, dated January 2019.

2 Limitations & Methodology

- 2.1 The survey is concerned with the arboricultural aspects of the site only. The trees, on site have been surveyed and classified in accordance with BS 5837:2012 "Trees in relation to design, demolition and construction - Recommendations".
- 2.2 The survey was undertaken using the Visual Tree Assessment (VTA) methodology to conduct a preliminary assessment of the above ground portion of the tree.
- 2.3 Trees are large dynamic organisms whose health and condition can change rapidly, therefore due to their changing nature and other site considerations, this report and any recommendations made are valid for a 12 month period following the site survey which was conducted on 14rd May 2019. After a period of 5 years, the information in this survey should not be relied upon.

Third Party Liability

- 2.4 The limit of PJ Developments Limited indemnity over any matter arising out of this report extends only to the instructing client. PJ Developments Limited cannot be held liable for any third party claim that arises following this report.

Subsistence Risk

- 2.5 This report is primarily concerned with the condition of existing trees and the application of current guidance for their retention. Any discussion of soil characteristics is only presented where this may have a direct effect on tree growth. This report does not seek to address the specific area of subsidence risk assessment or damage to buildings or structures.

Survey Methodology

- 2.6 The survey was undertaken from ground level with the aid of binoculars where necessary.

- 2.7 No aerial inspection nor invasive probing or drilling has been undertaken. No excavations were carried out nor soil or root samples taken.
- 2.8 The height of each subject tree was measured on site using an electronic Disto measuring device.
- 2.9 The canopy spread of each subject tree was measured on four compass points using measuring tape.
- 2.10 The locations of the trees on the drawings are based on measurements taken during the site visit and not GPS locations from a topographical survey. Whilst the trees are shown as accurately as possible, we cannot guarantee the absolute accuracy of tree locations. PJ Developments Limited cannot be held responsible for any discrepancy in the position of the trees and recommend a topographical survey is carried out to verify their locations before commencing any work on site.
- 2.11 The information contained within includes the following for each surveyed tree:
- 1 **Tree reference number** - cross referenced with the Tree Survey Plan and Tree Constraints Plan.
 - 2 **Species** - have been given their common and botanical name where specifically known
 - 3 **Height** - measured on site using an electronic Disto measuring device
 - 4 **Stem diameter** - have been calculated by measuring the circumference at a height of 1.5m from ground level to determine the diameter
 - 5 **Branch spread** - the circles indicated on the tree survey plan are a representation of the overall spread of the crown in each compass direction
 - 6 **Height of crown clearance** - given in metres above adjacent ground level
 - 7 **Age class** - young (YNG) up to 10 years, semi-mature (SM) 1/3 life expectancy, early mature (EM) 2/3 life expectancy, mature (M) over 2/3 life expectancy, over mature (OM) declining/moribund, veteran (V) exceptionally old tree towards the end of its life, (D) dead
 - 8 **Condition & Comments** - good (G) sound tree needing little or no attention, fair (F) minor but rectifiable defects, poor (P) major structural and/or

physiological defects that would be inappropriate to retain and/or expensive, dead (D) no longer alive or those dying and unlikely to recover.

General observations on 'physiological/structural condition' and 'preliminary management' is also provided

- 9 **Estimated remaining contribution** - in years e.g. <10, 10+, 20+ and 40+
- 10 **Category grading** - have been given a grade to classify the quality of each tree based on the Condition Classes and subcategories given overleaf
- 11 **RPA** - Protective measures as per BS 5837 section 4.6 which states that an area based on a radius equal to 12 times the stem diameter should be protected against damage to roots known as the "Root Protection Area" (RPA) given in m². A radius has also been given shown around each tree on the drawing.

2.12 Category grading for the assessment of tree quality (in accordance with Table 1 "Cascade chart for tree quality assessment" within BS 5837:2012) is described below:

U Trees unsuitable for retention - Those in such a condition that they cannot be realistically be retained as living trees in the context of the current land use for longer than 10 years

A Trees of high quality - With an estimated remaining life expectancy of at least 40 years

B Trees of moderate quality - With an estimated remaining life expectancy of at least 20 years

C Trees of low quality - with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm

2.13 Subcategories grading for the assessment of tree quality (in accordance with Table 1 "Cascade chart for tree quality assessment" within BS 5837:2012) is described below:

1 Mainly arboricultural qualities - Trees that are a particularly good example of their species, especially if rare or unusual

2 Mainly landscape qualities - Trees, groups or woodlands of particular visual as arboricultural and/or landscape features

3 Mainly cultural values, including conservation - Trees, groups or woodlands of significant conservation, historical, commemorative or other value eg veteran trees or wood-pasture

For full description of subcategories, refer to Table 1, page 9 of the BS 5837:2012 document.

3 Project Requirements & Site Overview

Site Context

- 3.1 The redline boundary planning application extends to approximately 1.3 acres and is located at the corner of Arundel road and West Walberton Lane.
- 3.2 The existing site is currently a private dwelling known as Lanes end with a Large private garden to the North set to grass and ruderal species. The perimeter of the site is comprised by sporadic trees of varying maturity and quality.
- 3.3 The site slopes slightly in places of landscaping.
- 3.4 The site surroundings are as follows:
 - To the north is the A27, which connects ArundelRoad with the A27. The immediate landscape is characterized by built residential form to the East, West and South.
 - To the east, there are other properties located off West Walberton Lane. Followed by the outer reaches of the village of Walberton. West Walberton Lane leads south-east into the village.

- The land to the south is comprised of residential properties, The conservation area of Walberton is located to the south-east.
- The west is characterized by residential properties, leading to the village of Fontwell and local services.

3.5 Overall, the application site is not subject to any sensitivity in terms of surrounding land-uses; there are existing residential uses located in close proximity, and the proposals have been designed to conform to the rural nature of the surroundings by retaining some green space within the site and extensive planting of new trees.

Proposed Development

3.6 The planning application for proposes to develop six new 6-bedroom detached houses, with private garages and driveways, and front and rear gardens. The site will also include a new access road from Arundel Road that leads through the site. With additional tree and hedgerow planting around the site boundary.

4 Baseline Factors

Tree Preservation Orders (TPO) or Conservation Area (CA) Designation

4.1 The site comes under the planning jurisdiction of Arun District Council, and correspondence with the Planning Enquiries and GIS Officer confirms that there are Seven trees within the site that are protected by Tree Preservation Orders ('TPOs'). The site itself is also not located within a conservation area. The closest conservation area to the site is the Walberton Conservation Area, located to the south-east of the site, covering the centre of the village.

Existing Trees on Site

4.2 The existing individual trees on the application site are predominantly Oak, with other species including Silver Birch, Yew, Honey Locust and Ash. Two groups of trees was predominantly Ash.

- 4.3 The report includes a survey of 14 individual trees and 2 groups of trees, all located within the application site boundary.
- 4.4 7 individual trees have been classified as category C2 i.e. trees of low quality, The remaining 7 individual trees were classed as category A1 and A2 trees, i.e. trees of high Quality.
- 4.5 There are also no category U trees, i.e. trees which are dead, dying or with serious defects.
- 4.6 Details of the locations and Root Protection Areas (RPA) are provided on the Tree Constraints Plan (TCP) appended to this report.
- 4.7 A schedule of trees and their condition including their category grading and RPA radius is attached in Appendix B.

Root Protection Area (RPA)

- 4.8 The Root Protection Area (RPA) of a tree is defined in BS5837 as the area surrounding the trunk that contains sufficient rooting volume to ensure the survival of the tree and is calculated as an area based on the stem diameter of the tree.

- 4.9 The RPA's have been calculated in accordance with BS5837 and are detailed in the Tree Schedule located in Appendix A of this report. Where ground constraints have, or are likely to have, had an effect on tree root development, for example, where level changes or changes in rooting medium eg heavily compacted ground, areas of hard standing etc, have influenced tree root growth, the RPA is unlikely to follow an exact circle and will probably be more elliptical in shape.
- 4.10 Detailed analysis of the ground conditions has not been carried out, however a visual assessment concluded that a large number of the trees are growing unrestricted in landscaping areas around the perimeter of the site, whilst others around the southern boundary were in close proximity to paved areas including roads and footpaths, which may have influenced the morphology and disposition of the root system, being drawn deeper, or diverted away from compacted ground and paving subbases in those instances.
- 4.11 Tree root systems are typically concentrated within the uppermost 600mm of the soil, although it may be deeper within the dense mass of roots and soil closer to the base of the tree. The development of the root system is influenced by the availability of water, nutrients, oxygen and soil penetrability ie how compacted the ground is and therefore the root spread does not generally show the symmetry seen in the branch system. The roots of some of the trees are likely to have been influenced by their proximity to adjacent paving, although others appear to be well established trees offering valuable visual amenity to the area, particularly the larger trees around the perimeter.

5 Arboricultural Implications Assessment

- 5.1 This section considers the implications that the proposed development may have upon the existing trees adjacent to the site and provide advice on solutions to any issues to ensure the trees are safeguarded.

- 5.2 None of the 14 trees, or two groups of trees surveyed need to be removed to facilitate construction of the new development.
- 5.3 The proposed layout will generally have no impact on the existing trees and hedges with the exception of dwelling number 2. The footprint of the Garage of this house extends within the Root Protection Area (RPA) of T1 which means any excavation for traditional strip footing foundations will detrimental impact upon the roots.
- 5.4 To avoid damage occurring to the roots, the foundations should be constructed using mini piles and beams to span over the tree roots. This method of construction will require specialist engineering design to ensure the integrity of the building is not compromised as well as avoiding damage to the existing tree roots. Please refer to section 6.6 for further details.
- 5.5 Seven of the trees are covered by TPO's or located within a conservation area , meaning an application is required to carry out tree works and there is a legal requirement preventing them being removed by the land owner.
- 5.6 The proposals also include extensive new tree planting and new hedgerows around the southern and western boundaries. Although no existing trees are to be removed and therefore no new planting required to mitigate any lost trees, the inclusion of new trees will benefit the visual amenity of the site.

6 Tree Protection Method Statement

Protective Fencing Prior to Commencement of Work

- 6.1 The existing trees and hedges within the application boundary which are to be retained should be protected from damage during construction operations by fencing them off from machinery circulation routes and material storage areas. The distance from the trees to the construction activity is such that damage could occur and therefore construction vehicles should be prevented from unwittingly traveling too close to the trees and causing damage to overhanging branches or compaction of the root zone. Protective fencing as detailed in Appendix C of this report should be erected in front of the line of trees.

Tree Pruning

- 6.2 In general, the proposed houses are within a reasonable distance from the majority of remaining existing trees. However, the working and access space needed for the construction of the proposed development may require “access facilitation pruning” carried out to some of the trees in closer proximity to the works to prevent injurious contact between construction plant and the tree canopy. A one-off tree pruning operation, which is directly necessary to provide access for operations on site, is acceptable in accordance with BS5837 as long as “the nature and effects of the pruning are without significant adverse impact on the tree physiology or amenity value”.
- 6.3 As Seven of the trees are covered by a TPO's or located within a conservation area an application is required to carry out work to them.

6.4 All proposed tree works should be undertaken prior to the commencement of construction activities. Trees on site which have been identified to have their crowns lifted and/or formative pruning must be carried in accordance with BS3998 British Standard Tree Work - Recommendations 2010 by a competent tree surgeon to the following specification:

- Where practicable, pruning should be restricted to healthy, small diameter parts of the tree to minimize the size of resultant wounds and enable these to be occluded.
- Crownlift to achieve a clearance of at least 4m above ground level to include complete removal of the lowest primary branches and thereafter secondary and tertiary branches (not exceeding 50mm diameter cuts). When pruning branches back to the main stem or fork, the branch will be removed in small sections using the step cut method leaving a small stub before carrying out the final cut.
- Formative pruning to branches 20mm and less in diameter to be pruned cleanly back to its point of origin, avoiding damaging the bark of the tree and ensuring the canopy maintains a natural shape. Growth greater than 20mm is to be cut back to avoid damage to the branch bark ridge and collar if applicable. All pruning carried out using a sharp handsaw or secateurs. On no account will a chainsaw be used in this operation. All shoots will be removed back to, but not into the branch collar leaving no projections or exaggerating the size of the wound.

Construction of Foundations

6.6 BS5837 contains Special Engineering for Foundations within the RPA (7.5) where structures are proposed within the RPA of existing trees.

6.7 The use of traditional strip footings can result in extensive root loss and should be avoided. The insertion of specially engineered foundations enables structures to be

constructed where they encroach within the Root Protection Area. Designs for foundations that minimize adverse impact on trees are acceptable within the RPA as long as they include particular attention to existing levels, proposed finished levels and cross-sectional details to minimize root damage. Solutions include:

- a. Piles, using site investigation to determine the optimal location to avoid damage to roots by means of hand tools or compressed air soil displacement (air spade), to a minimum depth of 600mm.
- b. Beams, laid at or above ground level and cantilevered as necessary to avoid tree roots identified by site investigation.

6.8 Where a slab for a minor structure, such as shed base or laying paving slabs for a patio area is to be formed within the RPA, it should bear on the existing ground level and should not exceed an area greater than 20% of the existing unsurfaced ground.

6.9 Slabs for larger structures, such as house floor slabs, should be constructed with a ventilated air space between the underside of the slab and the existing soil surface, to enable gas exchange and tenting through the soil surface, in accordance with 7.5.4 within BS5837.

6.10 The proposed layout will generally have no impact on the existing trees and hedges with the exception of dwelling number 2. The footprint of the garage of this house extends within the Root Protection Area (RPA) of T1 which means any excavation for traditional strip footing foundations will detrimental impact upon the roots. To avoid damage occurring to the roots, the foundations should be constructed using mini piles and beams to span over the tree roots as described above. This method of construction will require specialist engineering design to ensure the integrity of the building is not compromised as well as avoiding damage to the existing tree roots.

Construction of New Surfacing

- 6.11 BS5837 contains Design Recommendations (7.4.2) where hard surfacing is proposed within the RPA of existing trees.
- 6.12 In accordance with BS5837, the part of a tree most susceptible to damage is the root system and therefore no excavations should be carried out with machinery which could damage or sever major roots. Damage can also be caused to the roots by building up material to raise existing levels within the RPA unless done so using a cellular confinement system such as Geocell. As far as we are aware, no changes in ground level are proposed within the new development.
- 6.13 Whilst it is unknown if any roots will actually be encountered, there is no encroachment into the RPA of the existing trees. Any roots encountered should not be damaged and any exposed should be wrapped in dry, clean hessian sacking to prevent desiccation and to protect from rapid temperature changes, until the new surfacing is constructed.
- 6.14 Roots smaller than 25mm diameter may be pruned back, preferably to a side branch, using a proprietary cutting tool, such as secateurs or handsaws and carried out by an experienced contractor with previous knowledge of working with trees. Roots larger than 25mm should not be severed as this will affect the health and stability of the tree. Prior to backfilling the excavation, the hessian wrapping should be removed, and the retained roots should be surrounded with sharp sand (builder's sand should not be used because of high salt content which is toxic to tree roots) or other loose granular fill, before soil or other material is replaced and the surfacing works carried out. The material must be free of contaminants and other foreign objects which may potentially injure the roots.

Installation of New Fencing

6.15 To ensure the existing trees are not damaged during the installation of any new boundary fencing between the dwellings, the following procedures are to be strictly adhered to:

- The dashed line around each tree indicates the Root Protection Area (RPA) as calculated within the Tree Survey Report and shown on the Tree Constraints plan.
- Prior to commencing any work on site, Heras type fencing is to be installed as per the detail appended to this report and in the position indicated on the Tree Constraints Plan
- No excavations using machinery is permitted
- Holes for fence posts are to be carefully dug by hand avoiding damage any roots which may be encountered
- No storage of materials or mixing of cement is to take place within RPA around each tree and should be done well away from the trees
- No machinery or vehicles to travel within the RPA around each tree
- Holes excavated for fence posts to be lined with polythene prior to pouring concrete to prevent cement coming into contact with any tree roots which may be present
- Extreme care to be taken when installing fence posts and panels to prevent damage to trunk or branches of the trees

7 Conclusions

7.1 The trees on the Lanes end application site have been assessed in accordance with BS 5837:2012 "Trees in relation to design, demolition and construction - Recommendations" with regards to the outline planning application for the construction of six new six bedroom houses with detached garages, with the following conclusion:

- There are 14 trees in total which have been assessed and 2 groups of trees which have also been included.
- There are Seven trees on the site that are protected by Tree Preservation Orders and the site itself is also not located within a conservation area.
- No trees need to be removed to facilitate the construction of the new residential development.
- The footprint of the garage of one dwelling encroaches within the RPA of one tree which could potentially damage the existing roots if traditional strip footings are used. It is therefore recommended to use specialist mini piles and beams to span over the roots to prevent damage.
- Recommendations have been made within the report to safeguard the existing trees within the application site which are to be retained and protected from any damage due to construction work including erection of protective fencing around them to separate from the construction activities.
- Tree planting has been proposed for the new development around the perimeter to the rear of the proposed gardens, as well as along the private access road despite no trees being removed. This will further enhance the visual amenity of the site.

7.2 As long as the recommendations within this report are fully adhered to there will be no detrimental impact on the existing tree population on and in proximity to the site.

Appendix A - Method Statement for Tree Protection

The following Arboricultural Method Statement should be followed by the contractor:

1.1 Root Protection Area (RPA)

The RPA required by the current edition of BS 5837:2012 relates to the stem diameter of each tree when measured at a height of 1.5m from ground level, adjusted where necessary to account for actual rooting patterns on site. The RPAs are to be afforded protection at all times and will be protected by fencing barriers. No works will be undertaken within any RPA that causes compaction to the soil or severance of tree roots.

2.0 Protective Fencing

A protective fence should be erected prior to the commencement of any site works e.g. before any materials or machinery are brought on site, any construction work starts or any stripping of soil commences. The barrier needs to have signs attached stating that this is a Tree Protection Area and that no works are permitted within the barrier. The barrier may only be removed following completion of all construction works.

- 2.1 The fence is required to be sited in accordance with the TCP. The fence must ideally be constructed as per figure 2 in BS 5837:2012 (see detail at the end of this section) and be fit for the purpose of excluding any construction activity. The construction on site should be excluded from the RPA with 'Heras' type Fencing construction, along with a formal briefing of any work person by the site manager with regards to the contents of this method statement.

3.0 Precautions in respect of Temporary Works

If temporary access is required to an RPA then access may only be gained after consultation with the Local Planning Authority and following placement of materials such as geo-textile fabrics that will spread the weight of any vehicular load and prevent compaction to the soil. For pedestrian movements within any RPA then a single thickness scaffold board on top of a compressible layer laid onto a geotextile fabric may be acceptable. Otherwise, there should be no access within the RPA at any time during the contract.

4.0 Access Details

There is no requirement for any special measures related to the retained trees if access for all construction vehicles is kept away from the trees to be retained and stay outside of the RPA.

5.0 Contractors Car Parking

This is likely to be within the existing car park area onsite. The area designated for parking needs to be away from the area around the trees to be retained.

6.0 Site Huts and Toilets

The area designated for site accommodation needs to be away from the area around the trees to be retained.

7.0 Storage Space

The storage of materials should ideally be on existing hard standing away from existing trees. The contractor should not store any materials on site within the RPA of an existing tree.

8.0 Additional Precautions

No storage of materials or lighting of fires should take place within the RPA. No mixing or storage of materials should take place up a slope where they may leak into an RPA.

8.1 No fires to be lit within 20 metres of any tree stem and the fire size and wind direction

should be taken into account so that, no flames come within 5.0m of any foliage.

8.2 No high-sided vehicles or cranes should access the site close to any trees to be retained and should not come into contact with any branches or travel within the RPA

8.3 No notice boards, cables or other services to be attached to any tree.

8.4 Materials which may contaminate the soil should not be discharged within 10m of any tree stem. When undertaking the mixing of materials it is essential that any slope of the ground does not allow contaminants to run towards a tree root area.

9.0 Site Gradients

No alterations of soil levels to take place within the RPA of the protected trees

10.0 Demolition Works

No demolition works to take place with the RPA of the protected trees

12.0 Soft landscaping

No new planting is scheduled for this project

13.0 Use of Herbicides

No herbicide use is predicted, however if used, it should be done so in strict accordance with the manufacturer's instructions and contact with any tree foliage should be avoided.

14.0 On Site Monitoring Regime

All operations to be monitored by the main contractor. The site manager shall contact the appointed specialist if there is a breach of the RPA and tree protection measures. The appointed specialist shall recommend an action plan to incorporate mitigation measures where necessary.

17.0 Remedial Tree Works

The recommended tree works should be undertaken prior to the commencement of construction activities. All tree works are to be carried out in accordance with BS 3998 British Standard Tree Work - Recommendations 2010. Permission must be granted by the local authority prior to working on any tree protected by a Tree Preservation Order. Failure to do so may result in prosecution.

18.0 Responsibilities

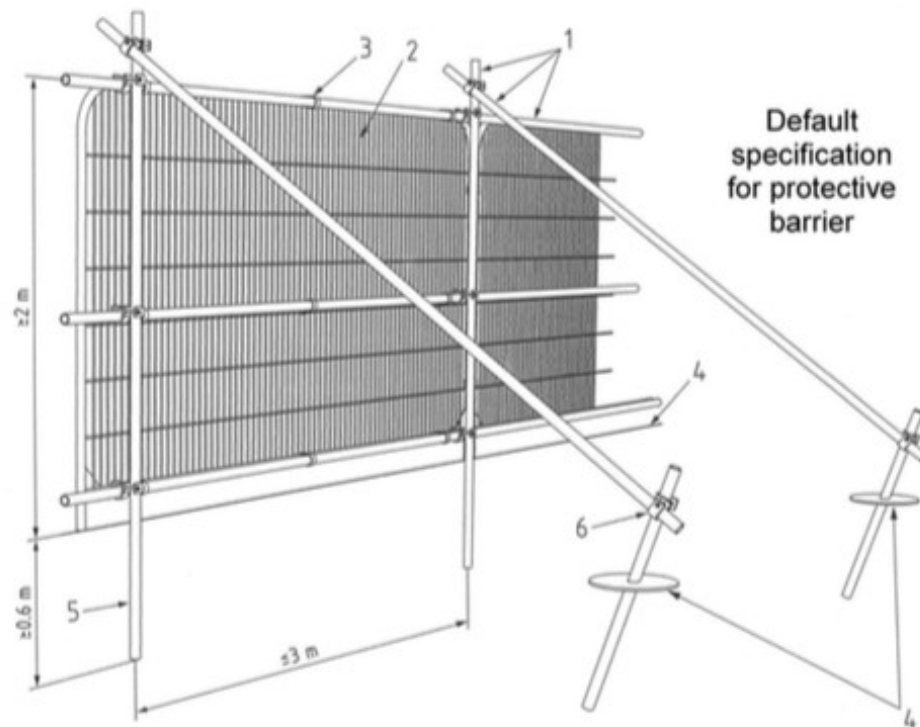
It will be the responsibility of the main contractor to ensure that the planning conditions are adhered to at all times and that a monitoring regime in regards to tree protection is adopted on site.

- 18.1 The main contractor will be responsible for contacting the Local Planning Authority at any time issues are raised related to the trees on site.

18.2 The main contractor will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective fences will remain in position until completion of ALL construction works on the site.

18.3 Protective fencing should be erected around all trees to be retained as per the

following specification:



Key

- 1 Standard scaffold pole
- 2 Heavy gauge 2m tall galvanised tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6m)
- 6 Standard scaffold clamps

- 18.4 Signs, in accordance with the following example, should be displayed to inform all personnel where the tree protection areas are and to warn them not to enter.

Example of “keep out” Sign

TREE PROTECTION ZONE

KEEP OUT!

No digging or trenching
No storage of plant or materials
No vehicular access
No fire lighting
No chemical handling
Avoid plant contact with tree canopy

Report any tree or fence damage to the Site Manager immediately

Appendix B - Photographic Record

Appendix C - Tree Preservation Order (TPO)