

LAND TO THE REAR OF 2 SANDY MEADOWS LIVERPOOL L36 5UT

Report Prepared by

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Summary

The purpose of this report is to provide a survey of the trees within and adjacent to land to the rear of 2 Sandy Meadows, Liverpool, L36 5UT. The survey will be the basis of a report based on BS5837 Trees in Relation to Demolition, Design and Construction (2012) and concludes that development of the site is possible without the removal of trees.

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1 INTRODUCTION

- 1.1 **Brief:** I am instructed by Mr G Powell of KPD D& I Ltd to survey the trees on land to the rear of 2 Sandy Meadows, Liverpool, L36 5UT in relation to a planning proposal there. The survey will form the basis for an arboricultural report on them to fulfil the requirements of BS5837 Trees in Relation to Demolition, Design and Construction (2012) -Recommendations.
- 1.2 **Qualifications and experience:** I have based this report on my site observations and the provided information, and I have come to conclusions in the light of my experience. I have experience and qualifications in arboriculture and include a summary in Appendix 1.
- 1.3 **Documents and information provided:** I was supplied the following information and documents by Mr Powell.
- Site Location Plan
 - Proposal Plan with indicative tree locations
- 1.4 **Scope of this report:** This report is only concerned with surveying the trees on site and within influencing distance of the proposal to BS5837. It includes a preliminary assessment based on the site visit and the documents provided, listed in 1.3 above.

2 SITE VISIT AND OBSERVATIONS

- 2.1 **Site visit:** All my observations were from ground level without detailed investigations and I estimated all dimensions unless otherwise indicated. I only surveyed trees that were within influencing distance of the site. The weather at the time of inspection was clear and dry.

- 2.2 **Brief site description:** The site is the rear garden area of 2 Sandy Meadows. The garden area contains a cricket net and the remainder is laid to grass. To the south of the site is a wooded embankment leading onto the M62 motorway. The remaining boundaries are with other residential properties. The site is broadly level and not considered to be exposed.
- 2.3 **Identification and location of the trees:** The trees in question are located outside the boundaries of the site. I have indicated the trees on a location plan to show their approximate locations at Appendix 3 to this report. These plans are for illustrative purposes only and should not be used for directly scaling measurements. All the relevant information on them is contained within this report and the provided documents.
- 2.4 **Collection of basic data:** I inspected the trees and have indicated the numbering on the site plan extract enclosed as Fig 1 in Appendix 3. I identified obvious hedges and groups where appropriate. For each individual tree and group, I collected information on species, height, diameter, maturity and potential for contribution to amenity in a development context. I have recorded this information in the tree schedule at Appendix 2 to this report. I stress that my inspection was of a preliminary nature and did not involve any climbing or detailed investigation beyond what was visible from accessible points at ground level. I only surveyed trees which were in influencing distance of the potential development area and over 75mm is stem diameter.
- 2.5 **Tree Preservation Orders, Conservation Areas:** No enquiry was made regarding the status of the site in relation to Tree Preservation Orders or whether it was within a conservation Area.

3 APPRAISAL

- 3.1 **Relevant references:** I have based the Tree Protection Zone measurements listed in Appendix 3 on BS5837 Trees in Relation to Demolition, Design and Construction (2012).
- 3.2 **Trees on site:** There are two trees within the red line plan supplied, these are located at the front of the property and are both Sycamores. T1 nearest the house

overhangs the property and is twin stemmed from near ground level. T2 is also a Sycamore and has a co-formed crown with T1.

- 3.3 T1 is in an unsustainable location given its proximity to the house and should have been removed when the house was constructed. T2 is a poorly formed tree with little to recommend its retention once T1 is removed.
- 3.4 **Trees off site:** There is a wooded embankment to the south of the site leading onto the motorway. The species mix in the area is typical native woodland consisting of Ash, Field Maple, Alder, Hawthorn and Oak. There may be other species present but not noted.
- 3.5 The trees appear to be at their original planting spaces and have not been thinned at this time. There is minimal overhang from the trees into the site. The trees are set some 2m back from the fence line.
- 3.6 **The proposal:** It is proposed to construct a new dwelling within the site. The dwelling will be constructed on a piled foundation because of local ground conditions. Minimal incursion into the Root Protection Areas of the trees will occur. Based on the age of the trees and the topography of the site, limited tree root damage is expected.
- 3.7 Based on an engineer designed system there will be 150mm diameter piles at 3m centres with a floating concrete ground beam spanning across the top of the garden.
- 3.8 T1 and T2 will need to be removed to allow the driveway to be constructed. T1 has been recommended for removal based on arboricultural grounds and T2 has been recommended for removal based on development needs.

4 CONCLUSIONS

4.1 On the basis of the above information and discussions, I summarise my conclusions as follows: -

- T1 and T2 will need to be removed to allow the driveway to be constructed. T1 would have been recommended for removal based on its location and poor form.
- T2 if left would be a very poorly formed tree of little arboricultural merit or visual amenity.
- The distance between the trees in W1 and the proposal site are enough for them not to exert a significant influence on the site.
- The use of piled foundations will minimise any potential damage to the nearby trees

5 RECOMMENDATIONS

5.1 **Present requirements:** Tree works listed within the data sheets are based on arboricultural needs alone and do not take into consideration development proposals. I have identified development works separately.

5.2 **Implementation of works:** All tree works should be carried out to BS 3998 2010 *Recommendations for Tree Work* or as modified by more recent research. It is advisable to select a contractor from the local authority list and preferably one approved by the Arboricultural Association. Their Register of Contractors is available free from The Malthouse, Stroud Green, Standish, Stonehouse, Gloucestershire GL10 3DL website www.trees.org.uk/contractors.htm

5.3 **Statutory wildlife obligations:** The Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000 provide statutory protection to birds, bats and other species that inhabit trees. All tree work operations are covered by these provisions and advice from an ecologist must be obtained before undertaking any works that might constitute an offence.

5.4 **Arboricultural Impact Assessment Statement:** I consider that there will be minimal impact on the nearby trees from the proposal. The proposal will be constructed on piles to avoid strip foundations. Given the age and size of the trees any minor root damage caused to the trees will not lead to future tree failure. The loss of the trees to the front of the property that are of low value can be mitigated for with a suitable replanting of two feature trees. The trees to be lost are of limited future visual amenity value. The proximity of T1 to the house makes it unsustainable and T2 is a poorly formed tree. For this assessment I have considered the impact the trees will have on the development and vice versa, detail below

5.5 Arboricultural Impact Assessment Detail:

5.6.1 Impact of the proposal on the existing trees

- a) The trees to be removed are low quality trees in unsustainable locations
- b) Services can be routed outside of all RPA's
- c) The existing motorway fence will serve to protect against any direct damage to the trees in W1 and ground protection boards can be laid between the fence and the development.
- d) Storage and mixing of materials can be carried out to the north of the build area away from the trees

5.6.2 Impact of the trees on the proposal

- a) The impact of the trees on the foundations can be designed out at the planning stage. This is likely to be a piled construction whereby minimal excavation will be required.
- b) The likelihood of subsidence occurring due to soil desiccation will be addressed in the design stage
- c) The trees are to the north of the proposal therefore limited shading will occur.
- d) There will be a degree of seasonal nuisance because of leaf fall. This can be mitigated for with protected guttering or a gutter hedgehog to prevent leaf build up in gutters.

A. L. Smith M. Arb. CEnv. MICFor. F. Arbor A
Chartered Arboriculturist.

Appendix 1

Qualifications and experience of Andrew L Smith

1. Qualifications:

Certificate in Arboriculture Royal Forestry Society 1985
Technicians Certificate Arboricultural Association 1988
Master of Arboriculture Royal Forestry Society 1989
Advanced Diploma in Arboriculture and Community Forestry 2001
Cardiff University Accredited Expert Witness 2006
Licensed Practitioner of Quantified Tree Risk Assessment 2006
Professional Tree Inspection, Arboricultural Association / Lantra 2007

2. Professional Body memberships

Fellow of the Arboricultural Association
Chartered Forester, Institute of Chartered Foresters
Chartered Environmentalist, Society of the Environment
Professional Member of the International Society of Arboriculture

3. Practical experience: I have been involved in arboriculture for 48 years and have experience of private and local authority work practices.

4. Continuing Professional Development: This is collated and monitored by the professional associations to which I belong and reaches an agreed amount of hours per year.

Appendix 2 Tree Data and Works Required

Table 1 Tree Data

Tree No	Species	Crown Spread as radii from Trunk (M)				Height (M)	Age Class	Stem Diameter (mm)	Lowest Branch	Life Estimate	Condition
		N	S	E	W						
1	Sycamore	1	2	2	2	8	EM	300 x 2	4	20	F
2	Sycamore	2	1	2	2	9	EM	320	3	20	F
W1	Ash, Hawthorn, Alder, Oak	2	2	2	2	8	M	350	2	30	F

Table 2 Comments and Works Required

Tree No	Species	Remarks	BS 5837 Classification	Works Required	Radius of RPA (M)	Area of RPA (m²)
1	Sycamore	Two stems from ground level, overhanging house, poor form	C1	Fell for development		
2	Sycamore	Poorly formed tree, co-formed crown with T1	C1	Fell for development		
1	Ash, Hawthorn, Alder, Oak	Motorway embankment planting, minimal overhang into site	B1	No tree works required	55	4.2

Explanatory Notes

- **Measurements/estimates:** All dimensions are estimates unless otherwise indicated.
- **Species:** The species identification is based on visual observations and the common English name of what the tree appeared to be is listed first. In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigations. Where there is some doubt of the precise species of tree, it is indicated with a '?' after the name in order to avoid delay in the production of the report. The species listed for groups and hedges represent the main component and there may be other minor species not listed.
- **Mathematical abbreviations:** > = Greater than; < = Less than
- **Height:** Height is estimate height to the nearest metre.
- **Spread:** The maximum crown spread is visually estimate to the nearest metre from the centre of the trunk to the tips of the live lateral branches.
- **Diameter:** These figures relate to 1.5m above ground level and are recorded in centimetres. If appropriate, diameter is measure with a diameter tape. 'M' indicates trees or shrubs with multiple stems.
- **Estimated Age:** Age is estimated from visual indicators and it should only be taken as a provisional guide. Age estimates often need to be modified based on further information such as historical records or local knowledge. Y= < 20Yrs, SM = Half the expected mature age, EM = Two Thirds the expected mature age, M = Mature age, OM = Over mature going into senescence, V = Veteran
- **Distance to Structures:** This is estimated to the nearest metre and intended it as an indication rather than a precise measurement.
- **BS 5837** Trees in Relation to Construction- Recommendations 2012 lists 4 categories that trees should be placed into to aid in the Design, Planning and Implementation of Construction works near trees, these categories are as follows
- **Category U Trees (less than 10 Years)**
- Those trees that are in such a condition that any existing value would be lost within 10 years and which should, in the current context be removed for reasons of sound arboricultural management
- **Category A Trees (More than 40 Years)** Those of such high quality and value, that they are able to make a substantial contribution to the finished development.
- **Category B Trees (minimum of 20 years)** Those of moderate quality and value and that are able to make a significant contribution to the finished development.
- **Category C Trees (Minimum of 10 years)** Those of low quality and value and can remain until new planting can be established or young trees below 150mm diameter.
- Categories A B and C have 3 sub categories to cover either Arboricultural (1) Landscape (2) or Conservation (3) values
- **Condition** P = Poor F = Fair G = Good

- **Tree Protection Zone (TPZ) M²** The area needed surrounding a tree that contains sufficient rooting volume to ensure its survival.
- **Radius of Tree Protection Zone (M)** Suggested minimum radius of a circular enclosure that ensures the tree has sufficient rooting volume left undisturbed.
- **Works Required**
 - Formative prune generally entails cleaning through the canopy to remove dead, dying, crossing and rubbing branches. It also includes the removal of epicormic and basal growth, the removal of any unbalanced or misshapen limbs, this will leave the tree in a safe attractive and desirable form
 - Crown lift to a specified height is when lower branches are removed to allow either highway access or pedestrian access. This work is specified where the author has felt that damage may occur to the tree if lower branches are left as they are.
 - Remove ivy instructions mean that at least 300mm should be removed from the base of any ivy growing into a trees canopy; the ivy should be allowed to dieback and then be removed from the tree.
 - Monitor refers to an annual check on the condition of a fork that may be prone to movement within it.

Appendix 3 Plan

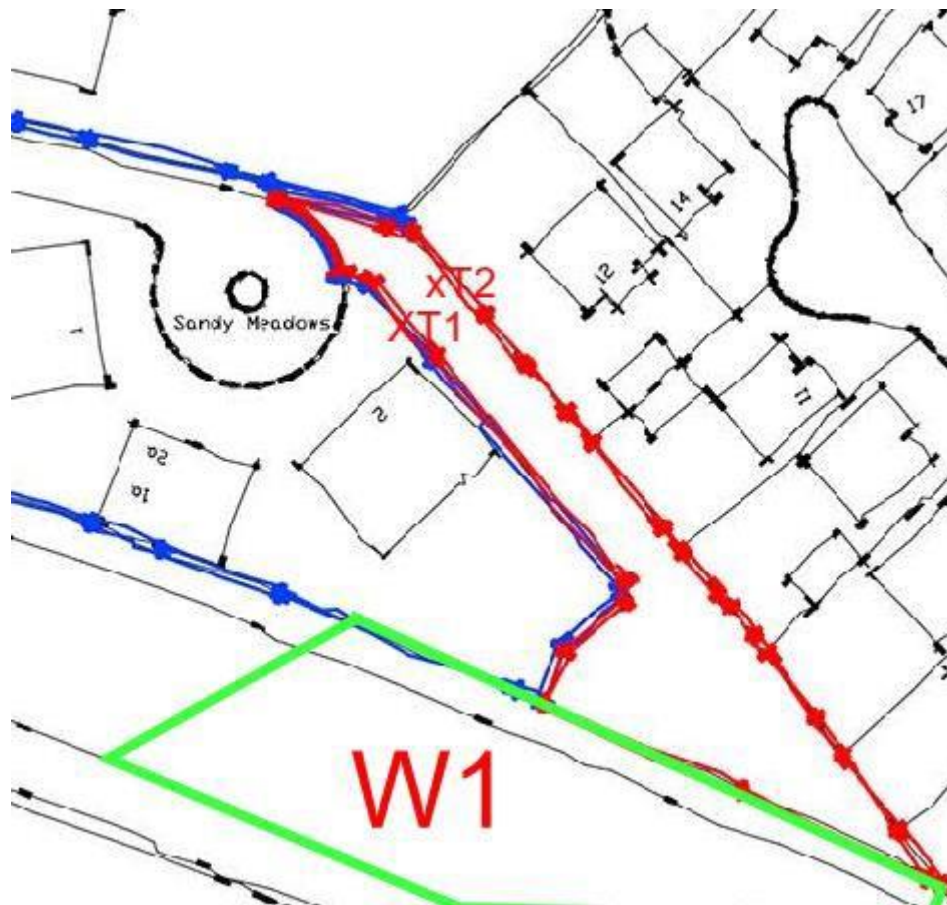


Fig 1 Tree Locations

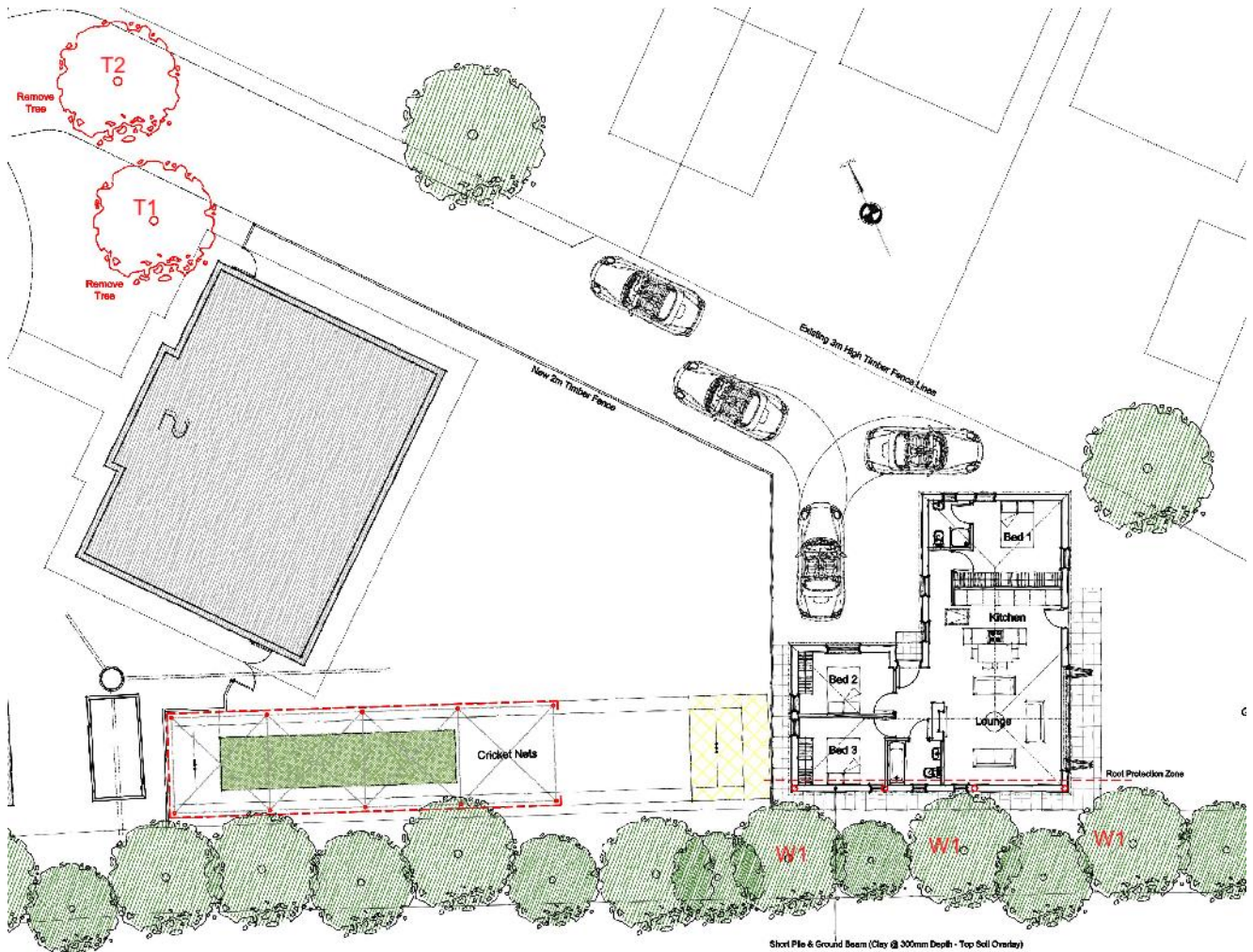


Fig 2 Arboricultural Implications Plan*

*indicative tree locations

Appendix 4 Method Statement

Arboricultural Method Statement **2 Sandy Meadow, Liverpool, L36 5UT**

From commencement of the above development, the following methodology shall be implemented in the manner and sequence described below, I have expanded on these points where necessary in the following text.

1. Pre-contract site meeting to disseminate information between all parties active on site
2. Pre-construction tree works, including access facilitation pruning and felling as identified at Appendix 4.
3. Main construction phase including any ground works and installation of services as per approved plan
4. Completion and removal of construction equipment
5. Landscaping works outside protective fences using machinery where required
6. Final landscaping works inside Root Protection Areas of trees to be carried out by hand

1. Pre-contract site meeting

To outline working methods in relation to trees prior to any construction activity on site, a site meeting of the following shall take place:

- (a) Client
- (b) Architect/Planning Consultant
- (c) Structural Engineer
- (d) Main Contractor
- (e) Arboriculturist
- (f) Site Agent

2. Arboricultural Works

- 2.1 All work will be carried out in accordance with BS 3998 Recommendations for Tree Work 2010 industry best practice and in line with any works already agreed with the Council. Schedule of works at Appendix 4 to this report
- 2.2 The Tree Surgeon shall ideally be chosen from The Arboricultural Association's Approved Contractor list. Proof of experience and insurance provision will be required. All work shall be undertaken at the appropriate time and with the consent and approval of the Site Agent.
- 2.3 The statutory protection afforded by the Wildlife and Countryside Act and Countryside and Rights of Way will be adhered to. If further advice is required, particularly if bats are discovered during tree work, it will be obtained from Natural England or other competent persons and recommendations adhered to.

- 2.4 The stumps of any trees removed from within the Construction Exclusion Zone (CEZ) or the Root Protection Areas (RPA) of retained trees will be either; cut flush to ground level and left in situ or ground out using a stump grinder. They will not be winched out or excavated with a back hoe
- 2.5 All operations shall be carefully carried out to avoid damage to the trees being treated or neighbouring trees. No trees to be retained shall be used for anchorage or winching purposes.

3. Main Construction Phase

3.1 Tree Protection Measures

- 3.1.1 The existing fence on site will serve to protect the trees in W1, ground protection boards laid between the fence and the house foundations will serve to prevent compaction here.
- 3.1.2 There shall be no storage of construction materials, site parking, site accommodation or equipment in any area designated as a Root Protection Area (RPA)
- 3.1.3 No fires shall be lit within 15m of any tree
- 3.1.4 The Site Agent shall supervise deliveries by self-loading crane, with vehicles positioned in such a manner that retained trees and/or hedgerows are not at risk of damage.
- 3.1.5 Care shall be taken when planning site operations in proximity of retained trees to ensure that wide or tall loads, or plant with booms, jibs and counterweights, can operate without coming into contact with retained trees. Such contact can result in serious injury to them and might make their safe retention impossible.
- 3.1.6 Consequently, any transit or traverse of plant in proximity of trees shall be conducted under the supervision of a 'banksman', to ensure that adequate clearance from trees is at all times maintained. In some circumstances, it may be impossible to achieve this without pruning works known as 'access facilitation pruning'.

3.2 Site storage, parking, welfare facilities etc.

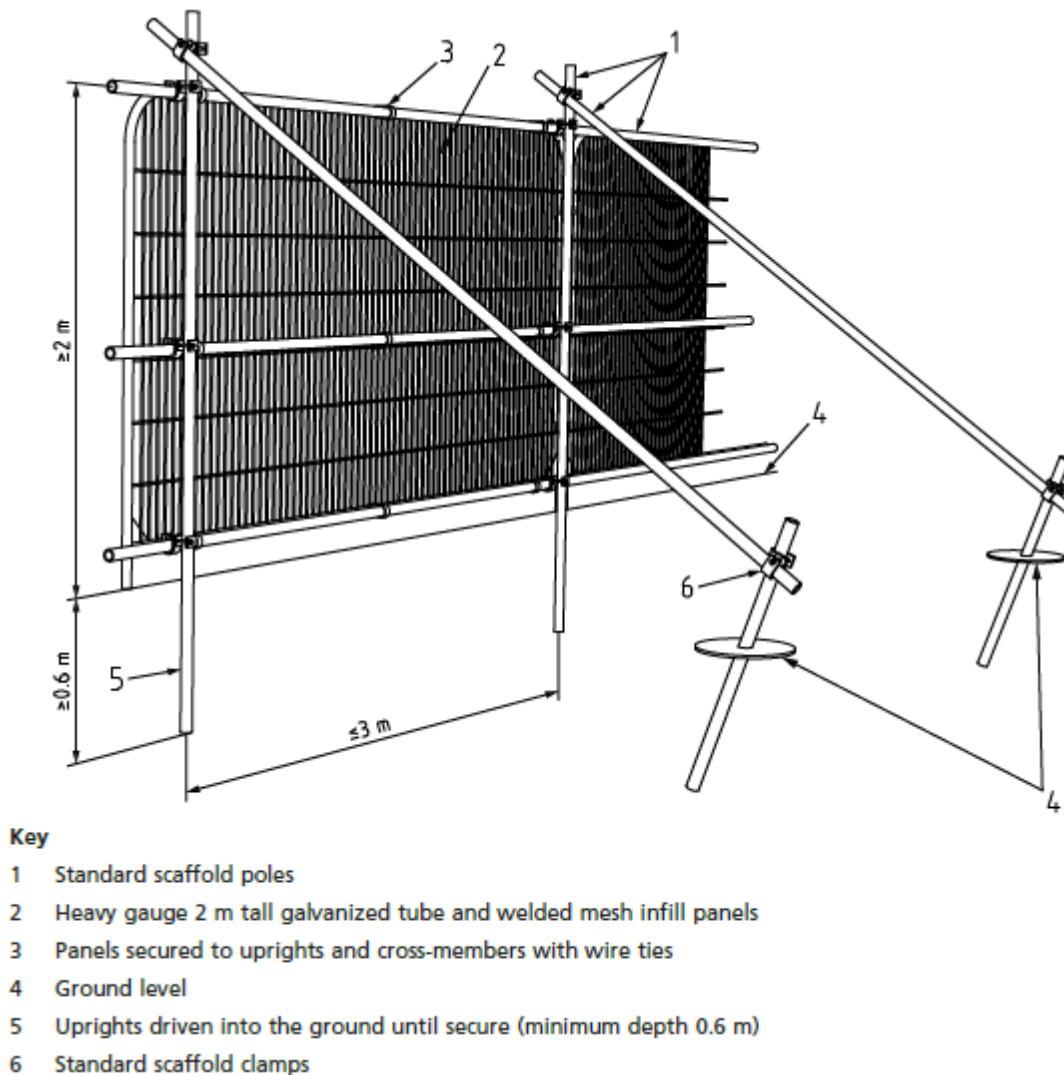
- 3.2.1 The site will require provision for; site storage, contractor parking, welfare facilities, temporary services/drainage, material drop off points etc.
- 3.2.2 None of the above provisions will be sited within the Root Protection Areas of retained trees without the input of the Project Arboriculturist and the consent of the Local Planning Authority.

4. Underground Services

- 4.1 Although every effort has been made to ensure the routing of services does not encroach into Root Protection Areas, if for whatever reason installation within Root Protection Areas is required the project Arboriculturist and local authority must be notified prior to any tree protection barrier removal and the following details adhered to.

- 4.2 Trenching for the installation of underground services severs any roots present and may change the local soil hydrology in a way that adversely affects the health of the trees. For this reason particular care will be taken in the routing and methods of installing underground services. Wherever possible, they will be kept together and arboriculturally sensitive methods of excavation used. At all times where services are to pass within the Root Protection Area, detailed plans showing the proposed routing will be drawn up in conjunction with an Arboriculturist. Such plans will also show the levels and access space needed for installing the services.
- 4.3 The preferable method for trenching within Root Protection Areas to avoid damage is via excavation using an 'air spade' or similar. This tool utilises compressed air to remove soil from around tree roots causing minimal damage. This approach will be utilised whenever possible.
- 4.4 Reference can be made to National Joint Utilities Group publication Volume 4 (NJUG Vol. 4) for guidance, but any approach must be approved by the Project Arboriculturist and brought to the attention of the Local Authority Tree Officer. Unless an emergency arises, there shall be no new excavation for the installation, renewal, or repair of underground services within any area designated as a Root Protection Area and Construction Exclusion Zone and enclosed by Temporary Protective Fencing (unless very low root volume is established beforehand).
- 5.0 Landscaping works inside Root Protection Areas**
- 5.01 All landscaping work including levelling, cultivation and vegetation control shall be carried out by hand within the Root Protection Areas of the trees. No herbicides shall be used to control weed growth.
- 5.02 Cultivation depths shall be the minimum required to establish shrubs and trees to be planted inside the RPA's of the trees. No mechanical pit excavation shall be carried out.

Appendix 1 Fence Design



1) Suggested design of protective fence (BS5837 2012)

Appendix 2 Sign Design



**TREE PROTECTION AREA
KEEP OUT !**

**(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS 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**

LIMITING CONDITIONS/DISCLAIMERS

Unless stated otherwise

1. The Service

1.1 Tree Health Consulting Ltd agrees to supply arboricultural consulting services of a preliminary nature or a more thorough service as advised or as commissioned.

2. Fees

2.1 The client(s) will settle the agreed fee in full, within 14 days of receiving the invoice. Reports will remain the property of Tree Health Consulting Ltd until full payment has been received. No liability is accepted for the contents of a report that is not paid in full. Any queries should be notified to Tree Health Consulting Ltd within 7 days of the invoice date.

2.2 If the client(s) fails to pay within the time specified in 2.1 then Tree Health Consulting Ltd shall charge the client(s) interest on the outstanding fee, both before and after any judgment, at the rate of 4% above the HSBC base rate, until payment is made in full (A part of a month being treated as a full month for the purposes of calculating interest).

2.3 In the event that it is necessary to recover any outstanding fees from the client(s), the client(s) will fully reimburse any costs and expenses incurred during the recovery period, including court costs. Tree Health Consulting Ltd reserves the right to make a charge for every letter sent and telephone/fax call made, in connection with the recovery.

2.4 Should the arboriculturist be unable to complete the site investigation as a result of conditions outlined in 3.5, then Tree Health Consulting Ltd will charge the client(s) the costs of travel and time spent.

3. Site Investigation

3.1 The scope of the site investigation is preliminary in nature, unless otherwise agreed with the client(s). Where a more detailed investigation is required, the client(s) will be advised accordingly.

3.2 No investigation will be made of any covered, inaccessible, or underground structures (unless specifically stated).

3.3 Investigation of Private Covenants is to be the responsibility of the client/landowner or agent.

3.4 Site investigations are undertaken by experienced and suitably qualified arboriculturists. Observations are taken from ground level only, within the curtilage of the site and public accessible areas, where this can be done safely and without undue difficulty. Binoculars are used where necessary. Tree heights, age range and future growth potential are approximate. Unless stated otherwise: 1) information contained within our reports covers only those trees that were examined and reflects the condition of those trees at the time of the inspection: and 2) the inspection is limited to visual examination of the subject trees from ground level only and without dissection, excavation, probing or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future.

3.5 During the site investigation if the arboriculturist considers their personal safety is at risk, or that they would breach the conditions of the Health and Safety at Work Act (1974), then they are entitled to abandon the investigation and advise the client(s) accordingly.

3.6 The inspection may require on-site soil profile analysis and excavation and we cannot be held responsible for damage to any underground services not made known to us by the client/landowner or agent.

3.7 Identification of fungi, insects, or tree disorders is based on field observations and does not include a laboratory analysis (unless specifically stated).

3.8 Soil profile samples are extracted using a hand auger. The identification of soil profile types and soil conditions is based on field observations. No samples are taken for laboratory analysis (unless specifically stated).

4. The Report

4.1 If any part of the report is lost, or altered without the written consent of Tree Health Consulting Ltd, then the entire report becomes invalid.

4.2 The general format of reports is a licensed/certified product and cannot be shown, copied or distributed to third parties without the permission of Tree Health Consulting Ltd. No liability is accepted for the contents of the report, other than to that of the client(s).

4.3 The report will purport not to express any opinion or comment as to the condition or structural integrity of any building and no reliance should be made on any such comments.

4.4 The report does not represent legal advice and no reliance should be placed on any such comments.

4.5 If tree/s are on neighbouring land, the tree owner is ultimately responsible and therefore we would advise that the neighbouring tree owner check with his/her insurance company in order to ascertain if adequate building insurance cover is available in the event of any claims arising from the action of the tree/s.

4.6. Trees are dynamic living organisms and constantly change; therefore, all trees to be retained on site should be further inspected every two years by a qualified Consulting Arboriculturist.

4.7. Scale drawings, technical land surveys and accurate tree plotting data will be supplied if necessary and at extra cost. Non-scale sketch plan drawings may be included as part of the report.

5. Insurance Cover

5.1 All work carried out by Tree Health Consulting Ltd is covered by a £5,000,000 Third Party, Public Liability insurance and a £500,000 professional Indemnity insurance.

6. Quality of Craftsmanship

6.1 When appointing a Tree Contractor, please use only suitably qualified and experienced companies (The Local Authority Tree Officer may be able to provide a select list of such companies) and always check that they carry Public and Products Liability Insurance with a minimum of £2 million cover and the relevant Employers Liability Insurance. All tree works must conform rigorously to BS 3998 (2010) 'Recommendations for Tree Work' and as modified by research more recent. Any stump treatment (poisons) must be carried out by a licensed chemical operative.

6.2 Tree Health Consulting Ltd will not accept liability for any works undertaken by any other companies, or contractors.

7. Statutory Provisions

7.1 Before authorising these, or any other tree works, you should contact your Local Planning Authority to ascertain if the trees are the subjects of any Tree Preservation Order or if they are within a Conservation Area, as if either applies, statutory permission will be required before any works can take place