WADEY TREES
CHARTERED CONSULTANCY

Arboricultural Method Statement

for Development Proposals at:

Land to rear of Regal House
Shripney Road
Bognor Regis
PO22 9NP

Proposal: Erection of 7 No. residential dwellings and associated works including new access.

Prepared for: Mr J Brooks

Report Ref: WT 023-22 AMS
Report Date: 12 November 2024

Prepared by:
Mark Wadey NDArb CUEW MArborA RCArborA MICFor
Arboricultural Consultant

Institute of Chartered Foresters
Registered Consultant

Table of Contents

SUMMARY OF TREE WORKS AND PROTECTION

Tree works and protection requirements

Impact	Reason	Tree Nos
Trees to be removed	Construction activities	T001, G002 (part), T003, T004, T005
Changes within RPAs	Construction activities	None
Retained trees to be pruned	Space for development	G006

Timetabling for tree protection on this site

In general terms, no construction, excavation or other site operations should commence until tree protection measures are in place and have been agreed in writing as acceptable by the local planning authority (LPA). More specifically, the table below details individual operations where special arboricultural consideration is required on this site.

Timetabling	Operation	Summary of requirements
Before any demolition or construction equipment arrives on site	Pre-commencement site meeting with site manager, developer, developer's arboriculturist and LPA's arboriculturist	To confirm the timing and implementation of the agreed tree protective measures
	Installation of protective fencing	Barriers must be installed as detailed in this document and confirmed in writing as satisfactory by LPA
	Tree works	Tree works must be carried out as detailed in this document and confirmed in writing as satisfactory by the LPA
During construction	Retention of protective fencing	Agreed fencing must be retained as installed for the duration of the development until it has been agreed in writing by LPA that it can be removed
After all construction activity completed	Removal of protective fencing	Consent required from the LPA or developer's arboriculturist before removal
	Landscaping	All landscaping within tree protective zones must be supervised by the developer's arboriculturist

1. INTRODUCTION

1.1 **Instruction:** This report was instructed by Mr J Brooks to prepare information that will comply with the consultee response and recommendations for Condition 1, received from Arun District's Tree Officer (reference BE/86/24/PL, dated 29th October 2024), extract found in Appendix 1. The report details all trees that are relevant to the siting of the proposed development and their positions along with suggested mitigation.

1.2 **Purpose of this Arboricultural Method Statement:** This Arboricultural Method Statement (AMS) has been produced in line with *BS 5837 2012: Trees in relation to design, demolition and construction-Recommendations* to aid the successful retention of the trees adjacent to the proposed development at Land to rear of Regal House, Shripney Road, Bognor Regis, PO22 9NP. No development shall take place on the site until this part of the document has been submitted to and approved in writing by the LPA.

1.3 **Scope of statement:** This document sets out the methodology for all proposed works that affect trees on and adjacent to the site. Compliance with this method statement will be a requirement of all relevant contracts associated with the development proposals. Copies of this document will be available on site for inspection.

1.4 **Relevant plan information:** For details of the trees to be retained and location and types of special protection methods, reference should be made to the tree protection plan WTP3 in Appendix 2. A copy of which should be displayed prominently on site.

1.5 **Statutory tree protection:** In this case, one oak and six hybrid black poplars along the eastern boundary are protected by the Arun District Council (ADC) tree preservation order TPO/BE/2/18 (trees identified on ADC plan as oak T1 and poplars G2). Therefore, it will be necessary to consult with them before any works other than certain exemptions can be carried out.

1.6 **Limitations of this report:** The following limitations apply to this report:

1.6.1 **Archaeology:** Although trees can grow in archaeologically sensitive locations, I have no specialist expertise in this discipline and this report does not consider this aspect.

1.6.2 **Ecology:** The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000, provides statutory protection to birds, bats and other species that inhabit trees. These could impose significant constraints on the use and timing of access to the site in addition to any of the tree constraints set out in this report. These issues are beyond my area of expertise, and I advise that you seek the advice from an ecologist on whether any such constraints apply to this site.

1.6.3 **Tree assessment and management advice:** The comments made about the health and stability of the trees within this report were correct at the time of inspection. It should be recognized that trees are dynamic structures that can never be completely predictable and may become unstable or partially unstable even in average weather conditions. Changes can occur not only to environmental triggers but also in response to biological or mechanical events. My inspection of the trees is made on the basis that they will be

annually inspected in the future to identify any changes in condition and review the original recommendations. For these reasons, the tree assessment advice only remains valid for one year from the date that the trees were last inspected. No tree is ever safe due to the unpredictable laws and forces of nature.

The inspection was carried out from ground level. Where there was restricted access to the base of a tree, its attributes were assessed from the nearest point of access. Binoculars were used to observe features higher in the canopies such as foliage, extension growth and/or bud proliferation. No soil or tissue samples were taken during this inspection and no invasive diagnostic equipment was used to detect decay. If ivy covered, I probed and tapped the wood from ground level to establish if there were any obscured features that were relevant to the assessment. This did not extend to removing all the ivy or probing beyond what could be reached from ground level. Where trees have thick ivy, it would be impractical in every case to remove it or climb into the crown to have a closer look.

1.6.4 **Soil assessment:** British Standard (BS) 5837:2012 Trees in relation to design, demolition and construction – Recommendations advocates that a soil assessment should be carried out to inform decisions relating to Root Protection Areas (RPAs), tree protection, new planting and foundation design. I have consulted the British Geological Survey (BGS) website and their Geology Viewer, and this advises that the bedrock geology for the site is **chalk (Lewes Nodular Chalk, Seaford Chalk, Newhaven Chalk, Culver Chalk and Portsdown Chalk Formations)**. I did not undertake any excavations on site to confirm this and a full geotechnical site investigation may need to be undertaken to provide a more in-depth level of information regarding soil type for the site.

1.7 **Technical references:** This arboricultural impact assessment and arboricultural method statement is based on the following primary technical references:

- British Standards Institution (2012) BS 5837: Trees in relation to design, demolition and construction – Recommendations
- National Planning Policy Framework (NPPF) revised in 2023 setting out the Governments planning policies for England and how these should be applied.

1.8 **Drawings and documents provided:** Several plans and documents were provided as part of the current planning proposal. My drawings and reports have been developed in context with the following provided information:

- Land survey reference S1635 Regal House TOPO_23 03 22, received by email on 30th March 2022
- Layout, reference Shripney Road 2024 – Rev05 bound, received by email on 4th November 2024
- Consultee response reference BE/86/24/PL received by email on 29th October 2024.

1.9 **Qualifications and experience:** This report is based on my site observations and the provided information, interpreted in the context of my experience. I have experience and qualifications in arboriculture that can be reviewed at https://wadeytrees.co.uk/wp-content/uploads/2020/03/CV-Mark-J-Wadey-2.pdf.

2. SITE VISIT AND COLLECTION OF DATA

2.1 **Site visit:** The site visit was undertaken on 1st April 2022. The trees were surveyed visually, externally and from ground level only. No detailed investigations were undertaken, samples, or internal decay detection readings taken for further analysis. All dimensions have been estimated unless stated otherwise. Weather conditions at the time of the survey were clear, still and dry, with good visibility.

2.2 **Tree assessment method:** The existing tree stock has been identified and graded in line with the current British Standard BS 5837 2012: Trees in relation to design, demolition and construction - Recommendations to enable informed decisions to be made regarding tree retention. The report also details methods of protection to be implemented to safeguard the retained trees.

2.3 **Independent assessment of trees:** I inspected each tree and have indicated the numbering on the tree protection plan (WTP3) in Appendix 2. I identified obvious 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. As advocated in BS 5837, each tree was then allocated to one of four categories which reflected its suitability as a material constraint on development:

- Category A: Trees of high quality and value
- Category B: Trees of moderate quality and value
- Category C: Trees of low quality and value
- Category U: Trees unsuitable for retention, usually to be removed

This information is recorded in the tree schedule included as Appendix 3, with further explanatory notes.

2.4 **The root protection areas and location of tree protection:** BS5837:2012 paragraph 4.6.1 gives recommendations for the areas of root protection to be the equivalent to the area of a circle centred on the single stem tree with a radius of at least 12 times the trunk diameter. For trees with more than one stem, the recommended formulas were used to arrive at the combined stem diameter calculation. The calculated root protection area (RPA) for each tree was capped to 707m². This distance is given for guidance to each tree or group in the schedule. In practice, the siting of the specific protection measures may be different. The implication of this notional RPA is that no significant disturbance should occur within it if the trees are to be successfully retained. As advocated in paragraph 4.6.3 of that document, where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon or equivalent area has been produced. Any modifications to the shape of the RPA have reflected our interpretation of a reasonable and likely root distribution.

3. SPECIFIC TREE WORKS AND PROTECTION REQUIREMENTS ON THIS SITE

3.1 **Supervision and monitoring responsibilities:** It will be the project manager/builder's responsibility to ensure that the details of this method statement are known and understood by all site personnel. A copy must be always kept on site and the project manager must brief all personnel who could have an impact on the specific tree protection requirements. This should be a part of the site induction procedures and written into appropriate site management documents. If appropriate, the builder should instruct an arboriculturist to comply with any necessary planning conditions relating to pre-commencement meetings and/or agree protection with ongoing supervision requirements sanctioned by the LPA.

3.2 **Phase 1 (Establishment of tree protection measures):** A pre-commencement meeting must be held on site before any of the site clearance or construction works start. This should be attended by the contractor's site manager or agent, the project arboriculturist and (if available) the tree officer. The methods of tree protection outlined in this report must be fully discussed at this meeting so that all aspects of their implementation and sequencing are made clear to all parties. Any clarifications or modifications must be recorded and circulated to all parties in writing (see section 4.2 below).

The table below summarises the important elements of this supervision:-

Initial site visit	• The developer, the site manager, the developer's arboriculturist and the LPA arboriculturist must meet on site before any development activity starts to confirm the timing and implementation of the agreed tree protective measures
Arboriculturist's role	• Liaise with developer and council to ensure that appropriate protective measures are in place before any works start on site • Inspect the site to check that the arboricultural conditions have been complied with and advise where day to day tree problems arise • Advise on the issue of work instructions relating to arboricultural matters
Reporting	• The site manager will be advised in writing at the time of the visit of any relevant points to be followed up with a formal letter of confirmation
Communication	• LPA and developer to be copied relevant correspondence

3.3 **Phase 2 (Precautions during construction):** All the retained trees will be protected from damage using barriers (fencing). All these protective measures are shown on the plan WTP3 and explained within the site guidance specifications provided at Appendix 4.

3.4 **Tree pruning or removals:** All works to trees identified to facilitate the development proposal (as set out in Appendix 3 of the tree schedule) will be undertaken before the construction works commence on site.

3.5 **Protective fencing:** Temporary tree protective fencing is proposed for the retained trees. It will be to the BS5837:2012 section 6.2 recommendations i.e. braced preformed galvanised steel mesh panels (Heras' or similar). It will be installed prior to the commencement of any development related activity and retained at the locations shown on plan WTP3 until construction is completed. It may only be moved or removed with consent from the LPA or project arboriculturist. Provided that the fencing is properly specified, installed and maintained, there is unlikely to be any significant adverse effects on the health or amenity value of these trees.

3.6 **Storage areas outside the RPA:** Before construction begins on site, it is important to identify the exact areas outside the RPAs that minimise chemical pollution and damage from construction materials. Materials should not be handled or stored within the RPAs of retained trees; the load exerted can result in soil compaction and leachate from spill can be toxic to trees.

3.7 **Services:** Any new service installation works are anticipated outside the RPAs of retained trees. However, if minor encroachment is required, the works must be undertaken following the guidance notes below. If this changes for any reason, I advise that these matters are considered at an early stage and agreed with the LPA prior to the work commencing.

3.8 **Reinstatement/landscaping works:** No heavy machinery should be driven over unprotected ground and materials must be stored outside RPAs. The tree protective fencing can only be removed with the agreement of the project arboriculturist and may have to be reinstalled during a break in operations. Any soil removal or replacement, excavations for hard landscaping or installation of any structures including lighting, water, electric gates etc must be approved by the project arboriculturist. Unwanted vegetation can be removed using handheld tools to avoid damage to the stems of retained trees. Planting holes for new trees or shrubs shall be dug by hand and will be repositioned if woody roots are encountered. For further advice, refer to the tree protection guidance notes in Appendix 4.

3.9 **Summary of main requirements:** The following general responsibilities should be known to all parties involved with working on site to ensure that important retained trees on site are sufficiently protected:

- All tree protection details set out on the approved tree protection plan should be agreed at the pre-commencement meeting and recorded by the project arboriculturist for all parties to consider.
- Protective barriers must be regarded as sacrosanct and must only be moved under direct supervision of the LPA or project arboriculturist to enable the undertaking of works within the RPA of the trees, as set out in this AMS, and approved in writing by the LPA. It is of paramount importance the fencing is repositioned correctly after any agreed operations.
- All construction machinery engaged in site clearance work should work from outside the RPAs.
- No materials, chemicals, machinery or vehicles must be stored within the RPAs as defined on the tree protection plan WTP3 and identified on site by protective fencing.

- Damage caused to protective fencing must be reported to the site supervisor and the project arboriculturist to ensure appropriate repair.
- Any damage to retained trees must be reported without delay to the site supervisor, the LPA and the project arboriculturist so appropriate remedial work can take place without delay.
- No fires will be lit on site.
- Notice boards, telephone cables or any other signage or services are not to be attached to any part of retained trees.

3.10 **Site monitoring checklist:** The recommendation in BS5837:2012 is that wherever trees on or adjacent to a site have been identified within the tree protection plan for protective measures, there should be an auditable system of arboricultural monitoring. This should extend to arboricultural supervision whenever construction and development is to take place within or adjacent to any RPA. On this basis, a site monitoring checklist is available in Appendix 4 to use for all pre-commencement and site supervision visits. After each visit, it should be circulated to all relevant parties and kept as a record to demonstrate that all site operations have been compliant with the approved tree protection requirements, and to satisfy the discharge of planning conditions.

3.11 **Tree protective guidance notes:** The specific tree protection requirements set out below are necessary to minimise harm to retained trees. These must be informed by the following tree protection guidance notes below if tree harm is to be minimised.

4. FUTURE TREE PLANTING OPPORTUNITIES

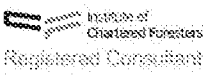
4.1 **New tree planting strategy and enhancement landscaping opportunities:** Having considered the potential this site has to offer for new tree planting/landscaping opportunities, and whilst there will be some tree loss required to make way for buildings and access routes, some new tree planting has been provided that will improve the overall canopy cover and offer more future landscape enhancements to the site (see plan WTP3). It is proposed that the detail of the locations, species and sizes are agreed with the LPA through a condition to ensure that the final scheme optimises the potential of the space available. Any trees that die or progressively decline within five years will be replaced and maintained until successfully established

4.2 **New trees – size at planting and other detailed specifications:** If instant impact on landscaping is required, the new trees will be as large as possible for the planting space available. The supply, planting and maintenance of all new trees will need to be in accordance with BS 8545, with an expectation that any planning conditions will secure the provision of appropriate maintenance and replacement in the event of any trees not surviving to independence in the landscape.

4.3 **Tree establishment and care:** For further advice on young tree establishment, a useful introductory guide has been produced by the Arboricultural Association which can be found at https://www.trees.org.uk/Help-Advice/Guide-to-Young-Tree-Establishment. This sets out the principles of good tree choice, planting practice and aftercare.

Mark Wadey NDArb CUEW MArborA RCArborA MICFor

Arboricultural Consultant



Appendices:

1 Tree Officer Consultee Response: Dated 29th October 2024

2 The tree protection plan and planting WTP3

3 Data collection – Tree schedule & explanatory notes

4 Site Guidance Specifications

CONSULTEE RESPONSE (Council's Arboriculturist)

Date of report: 29th October 2024

Reference: BE/86/24/PL

Proposal: Erection of 7No. residential dwellings and associated works including new access. This application is in CIL zone 3 and is CIL liable as new dwellings. This application is a departure from the Development Plan.

Location: Rear of Regal House and Wayside, Shripney Road, Bognor Regis, PO22 9NP

Case Officer: Amber Willard

Comments on application:

I have considered this application by means of a desktop review, using the information and plans submitted as well as online resources. Previous consideration from site and familiarity with surrounding areas provide further insight to the proposal.

The applicants have submitted an Arboricultural Impact and Mitigation Statement (Report) inclusive of a Tree Protection Plan (TPP) from Wadey Trees, for this project. The report and plan were for a previous application (nine dwellings) and do not complement this proposal.

Both documents will need to be revised and submitted for our approval, prior to any commencement of development activity on site. In addition to all the usual information and that which has been provided previously and remains relevant, those must specify use of the BS5837:2012 default specification (Figure 2) for tree protective fencing at the east of the site and state all protection apparatus must be installed pre-commencement.

Trees of low quality and negligible landscape value are to be removed. This is reasonable and of itself would not incur undue detriment to the visual amenity of surrounding area.

High value trees to the east of the applicant's site are outside of the developable area, with their nominal root protection areas influencing the line of demarcation. Robust protective fencing will need to be installed along this line to form a construction exclusion zone.

Surface water drainage (generic)

This fundamental element of the design ought to be addressed to our satisfaction in association with layout proposals, so that we are not subsequently held hostage to flood mitigation measures which could then impact heavily on retained trees.

I draw attention to the nominal RPA of retained trees and their growth potential as obvious constraints to the siting of any SUDS feature, soakaway or introduction of subterranean utility apparatus. The provision of appropriate buffer/easement around such features must also take into account tree growth potential (roots) to ensure long-term integrity of apparatus and permit their future maintenance.

Any improvements to existing drains within the RPA of preserved trees to be fully considered, details provided in advance and to our satisfaction. Where there is a significant risk of damage to those trees arising from such operations, then an alternative strategy should be proposed.

Surface water drainage (site specific)

The proposed SWD strategy relies on infiltration across the site and incurs no significant arboricultural impact.

If our Drainage Engineer does not support the proposed SWDS and favours a discharge to existing watercourse due east of the site, please seek my further comments so that I may advise on potential impacts to high value trees (TPO).

Should a facility for diversion of surface water to the drain east of the site be an essential component of the SWDS, then a route should be found which does not involve higher-value (Category A/B) tree removal or significant damage. Any essential RPA incursion is likely to require a trenchless solution to instal subterranean pipework.

Other utility apparatus

Service-runs in and out of site have not been shown but it seems likely that connections can be made due west of dwellings and avoid any RPA incursion.

Conclusions:

Essential arboricultural information is absent from this application, which appears to be an administrative oversight and easily resolved with the submission of a revised report and plan.

Fundamentally the proposed layout satisfactorily accommodates higher value trees and incurs no significant arboricultural impact.

Recommendation:

I recommend the above scheme for **APPROVAL,** subject to the following condition being applied:

Condition 1

The applicant must submit an Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) to the local planning authority for approval. Written confirmation of acceptance of both AMS and TPP must be issued before any enabling, demolition or construction works are commenced on site.

Reasons: To comply with BS5837:2012 and ensure the retention and protection of trees and vegetation which are an important feature of the area, in accordance with Policy D DM1 of the Arun Local Plan. It is considered necessary for this to be a pre-commencement condition as the protection and retention of trees goes to the heart of the planning permission.

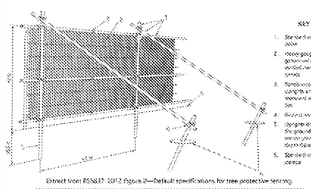
Mark Warwick
Tree Officer
Environment and Climate Change

Appendix 2 – The Tree Protection Plan: Illustrating tree protection proposals – WTP3

Content: 1 x A2 plan @ scale 1:500

Tree Protection Guidance Example of Fencing Barrier

Protective barriers are not to be moved without written consent from the Local Planning Authority (LPA) and any adjustments should be under direct supervision of the project Arboriculturist to maintain the Root Protection Area (RPA) of each tree. No materials, chemicals, machinery or vehicles must be stored within the protected area as defined on the Tree Protection Plan.



Extract from BS5837: 2012 Figure 2—Default specifications for tree protective fencing

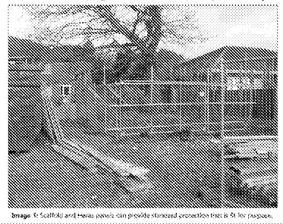


Image: 9: Scaffold and Heras panels can provide standard protection that is fit for purpose.

Key:

- T001 — Trees - colour coded by BS 5837category
- BS category A: Trees of high quality
- BS category B: Trees of moderate quality
- BS category C: Trees of low quality
- BS category U: Trees unsuitable for retention
- RPA boundaries
- Trees to be removed
- Tree canopies
- Existing layout
- Proposed layout
- Site boundary
- Construction exclusion zone (CEZ) to be protected by fencing
- New planting

For further information, refer to the WT tree schedule. Do not scale from this drawing (unless for planning purposes), please check all dimensions on site, and notify us of any discrepancies. Wadey Trees Ltd cannot be held responsible for inaccuracies in the topographical plan on which this drawing is based. © Wadey Trees Ltd 2020.
This drawing is designed to reflect only the principles of layout and/or design insofar as these relate to the protection of trees to be retained, and should NOT be read as a definitive engineering or construction method statement. Reference should be made to the architect or structural engineer, as appropriate, over any matters of construction detail or specification, or any engineering standards or regulatory requirements relating to proposed structures, hard surfaces or underground services.

Wadey Trees Ltd
Plum Tree Cottage
50 Durweston
Blandford DT11 0QA
07544 375950
www.wadeytrees.co.uk

CLIENT:
Manhire LLP
Chartered Surveyors

ARCHITECT:

DRAWN:	CHECKED:	DATE:	REVISION:
EJS	MJW	7 Nov 24	

LOCATION OF TREES, CATEGORISATION & DEVELOPMENT AT:
Land to rear of Regal House, Shripney Rd, Bognor Regis, PO22 9NP

DRAWING TITLE & NO:
WTP3

SCALE:	SHEET SIZE:	SHEET NO:
1:500	A2	

WT PROJECT NO:	STATUS:
WT 023-22	PUBLISHED

CLIENT PROVIDED PLAN REF:
Shripney Road 2024 - Rev05 bound

Appendix 3 – Data Collection: (In accordance with BS 5837 (2012), all tree schedule data has been collected based on the recommendations set out in subsection 4.4 of BS 5837)

NOTE: Colour annotation is A trees green background; B trees blue background; C trees grey background; U trees red background

Ref.	Species	Height (m)	Stem Diam (mm)	Spread	Physiological Cond	Structural Cond	Life Stage	General Observations	Rem. Contrib.	Retention Category	RPA	Recommendations
T001	Common Ash *(Fraxinus excelsior)*	6	250		Fair	Fair	Young	Grows against telegraph pole	10+ Years	C1	Radius: 3.0m. Area: 28 sq m.	Fell to facilitate access
G002	Mixed species x30 *(Mixed species)*	4	30 stems: 150(avg)		Fair	Fair	Semi Mature	Regularly clipped hedge	10+ Years	C1,2	Area: 110 sq m, plus a 1m buffer.	Fell (part) to facilitate access
T003	Norway Maple *(Acer platanoides)*	7	200		Good	Good	Newly planted	Small insignificant tree	30+ Years	C1,2	Radius: 2.4m. Area: 18 sq m.	Fell to facilitate new building
T004	Cypress *(Chamaecyparis sp.)*	3	200		Good	Good	Newly planted	Small insignificant tree	20+ Years	C1,2	Radius: 2.4m. Area: 18 sq m.	Fell to facilitate construction
T005	Cypress *(Chamaecyparis sp.)*	3	200		Good	Good	Newly planted	Small insignificant tree	20+ Years	C1,2	Radius: 2.4m. Area: 18 sq m.	Fell to facilitate construction
G006	Privet x20 *(Ligustrum vulgare)*	8	20 stems: 200(avg)		Fair	Fair	Semi Mature	Provides some useful boundary screen	10+ Years	C1,2	Area: 214 sq m, plus a 1m buffer.	Prune back lateral branches by 1-2m to provide adequate working space
T007	Plum *(Prunus domestica)*	9	300	N:3 E:3 S:3 W:3	Fair	Fair	Early Mature	Storm damaged limbs and sparse crown	20+ Years	C1,2	Radius: 3.6m. Area: 41 sq m.	
T008	Black Hybrid Poplar *(Populus x canadensis)*	20	1100	N:5 E:10 S:8 W:10	Good	Good	Mature	Deadwood > 30mm diameter overhanging the site. Ivy over trunk.	40+ Years	B1,2	Radius: 13.2m. Area: 547 sq m.	

Appendix 3 – Data Collection: (In accordance with BS 5837 (2012), all tree schedule data has been collected based on the recommendations set out in subsection 4.4 of BS 5837)

Ref.	Species	Height (m)	Stem Diam (mm)	Spread	Physiological Cond	Structural Cond	Life Stage	General Observations	Rem. Contrib.	Retention Category	RPA	Recommendations
T009	Black Hybrid Poplar *(Populus x canadensis)*	20	950	N:3 E:9 S:7 W:9	Good	Good	Mature	Deadwood > 30mm diameter overhanging the site. Ivy over trunk. Historic stem failures visible.	40+ Years	B1,2	Radius: 11.4m. Area: 408 sq m.	
T010	Black Hybrid Poplar *(Populus x canadensis)*	25	1150	N:5 E:10 S:7 W:16	Good	Good	Mature	Deadwood > 30mm diameter overhanging the site. Large over-extended branches over the site. Restrictions to access: Dense ivy present.	40+ Years	B1,2	Radius: 13.8m. Area: 598 sq m.	
T011	Black Hybrid Poplar *(Populus x canadensis)*	25	1000	N:5 E:14 S:5 W:14	Good	Good	Mature	Deadwood > 30mm diameter overhanging the site. Ivy over trunk. Large over-extended branches over the site. Stem cavity visible at 15m with good occluding wound wood.	40+ Years	B1,2	Radius: 12.0m. Area: 452 sq m.	
T012	Black Hybrid Poplar *(Populus x canadensis)*	25	1150	N:8 E:11 S:7 W:11	Good	Good	Mature	Deadwood > 30mm diameter overhanging the site. History of stem failures evident. Ivy over trunk.	40+ Years	B1,2	Radius: 13.8m. Area: 598 sq m.	
T013	Black Hybrid Poplar *(Populus x canadensis)*	25	1300	N:10 E:10 S:8 W:12	Good	Good	Mature	Deadwood > 30mm diameter overhanging the site. Ivy over trunk. Large over-extended branches over the site.	40+ Years	B1,2	Radius: 15.0m. Area: 707 sq m.	
T014	Pedunculate Oak *(Quercus robur)*	15	800	N:6 E:6 S:6 W:6	Good	Good	Mature	Ivy over the trunk	40+ Years	B1,2	Radius: 9.6m. Area: 290 sq m.	

Appendix 3 – Data Collection: (In accordance with BS 5837 (2012), all tree schedule data has been collected based on the recommendations set out in subsection 4.4 of BS 5837)

Ref.	Species	Height (m)	Stem Diam (mm)	Spread	Physiological Cond	Structural Cond	Life Stage	General Observations	Rem. Contrib.	Retention Category	RPA	Recommendations
T015	Common Ash *(Fraxinus excelsior)*	10	450	N:3 E:6 S:3 W:2	Fair	Fair	Early Mature	Suppressed by adjacent trees.	20+ Years	C1,2	Radius: 5.4m. Area: 92 sq m.	
T016	Common Hawthorn *(Crataegus monogyna)*	8	550	N:4 E:6 S:3 W:3	Good	Fair	Mature		20+ Years	C1,2	Radius: 6.6m. Area: 137 sq m.	
T017	Norway Maple *(Acer platanoides)*	5	150		Good	Good	Newly planted	Small insignificant tree	30+ Years	C1,2	Radius: 1.8m. Area: 10 sq m.	
G018	Holly x10 *(Ilex sp.)*	4	10 stems: 100(avg)		Fair	Fair	Young		20+ Years	C1,2	Area: 74 sq m, plus a 1m buffer.	
T019	Norway Maple *(Acer platanoides)*	6	150		Good	Good	Newly planted	Small insignificant tree	30+ Years	C1,2	Radius: 1.8m. Area: 10 sq m.	
T020	Field Maple *(Acer campestre)*	4	100	N:1 E:1 S:1 W:1	Good	Good	Newly planted	Small insignificant tree	30+ Years	C1,2	Radius: 1.2m. Area: 5 sq m.	
G021	Mixed Species Group x30 *(Group, mixed species)*	6	30 stems: 100(avg)		Fair	Fair	Semi Mature	Provides useful boundary cover.	20+ Years	C1,2	Area: 96 sq m, plus a 1m buffer.	
T022	Monterey Cypress *(Cupressus macrocarpa)*	16	800	N:5 E:5 S:5 W:5	Fair	Fair	Mature	Significant crown and/or tip die-back. Broken/Hangers over the target area. Pruning history - reduced in the past.	20+ Years	C1,2	Radius: 9.6m. Area: 290 sq m.	

Appendix 3 – Data Collection: (In accordance with BS 5837 (2012), all tree schedule data has been collected based on the recommendations set out in subsection 4.4 of BS 5837)

Ref.	Species	Height (m)	Stem Diam (mm)	Spread	Physiological Cond	Structural Cond	Life Stage	General Observations	Rem. Contrib.	Retention Category	RPA	Recommendations
T023	Monterey Cypress *(Cupressus macrocarpa)*	16	800	N:5 E:5 S:5 W:5	Fair	Fair	Mature	Significant crown and/or tip die-back. Broken/Hangers over the target area. Pruning history - reduced in the past.	20+ Years	C1,2	Radius: 9.6m. Area: 290 sq m.	

The site data columns and abbreviations: The relevant tree data was collected and recorded as described in the table below:

Structure: The following categories are assigned appropriately to each landscape feature: T=(tree); G=(group); H=(hedge); C=(coppiced); M=(multi-stemmed); P=(pollard); Sh=(shrubs); S=(stump) or W=(woodland).

Species: Species identification is based on visual observations. Where there is some doubt over tree identity, sp is noted after the genus name in the botanical names section to indicate that the species cannot be reliably identified at the time of the survey. Where there is more than one species in a group, only the most frequent are noted and not all the species present may be listed. The tree botanical names surveyed on this site are listed in column 2.

Height: Height is estimated to provide an indication of the size of the tree.

Stem diameter: Stem or trunk diameter is estimated or measured and recorded in 2.5cm increments as advised in BS 5837 Table D1. It is measured with a diameter tape unless access is restricted, direct measurement is not possible because of ivy on the trunk or the tree is assessed as poor quality. The point of measurement and the adjustments for stem variations are as advised in Figure C1 of BS 5837. The RPAs given below have been used for single stem trees and the equivalent resultant combined stem diameter for multi-stemmed trees.

Branch height and crown spreads: Where crown accuracy varies from site observations and the original topographical survey, new measurements of the crown may be taken and illustrated on the plan as a crown amendment. These are taken in the context of the development proposal where it is considered there may be encroachment from the development. For example, it may only be necessary to record the measurement of one side of the canopy where it overhangs the site, or where there is likely to be some kind of impact to branches/crown of the tree from development proposals. If there are any significant trees missing from the original topographical survey, their positions are estimated and branch spread is taken as a minimum at the four cardinal points, to derive a representation of the crown. Also, where it is considered appropriate, existing height above ground level of: 1) first significant branch and direction of growth (e.g. 2.4-N); 2) canopy will be recorded to inform on ground clearance where access issues may be a concern.

Tree condition: The tree condition is represented by the surveyor's initial visual observations of its health and/or structural integrity. These are separated into the following subcategories:

Physiological condition (P)	**Description**
Good	Appears to be healthy and have good vitality.
Fair	Generally, in good health but with visible signs of decline or reduced vitality.
Poor	Obviously in poor health and significant decline.
Dead	Dead, or very little live growth.

Structural condition (S)	**Description**
Good	No significant structural defects/weaknesses.
Fair	Some visible defects but no significant hazards/weaknesses.
Poor	Significant defects/weaknesses or dangerous/potentially dangerous condition.

Life stage: For the purposes of this report the following life stages are recorded as one of seven categories below. Age class is indicative and will vary between species:

LIFE STAGE	DEFINITION
Newly planted	Very young, newly planted trees at least within the last 5 years.
Young	Small establishing tree in its youngest years that could be transplanted with specialist equipment, i.e. less than 150mm in diameter at 1.5m.
Semi-mature	An established tree, but with some growth to make before reaching its potential maximum size. A tree within its first third of lifespan.
Early mature	A tree that is reaching its ultimate potential height, whose growth rate is slowing down but if healthy, will still increase in stem diameter and crown spread. A tree in the second third of life span.
Mature	A mature specimen with limited potential for any significant increase in size, even if healthy. A tree within its final third of expected lifespan.
Over mature	A senescent (declining/degradation) or moribund specimen of low vigour within its final third of expected lifespan. Possibly also containing sufficient structural defects with safety and/or duty of care implications.
Veteran	Specimens exhibiting features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.
Ancient	A tree which is remarkably old for its species.

General observations: Only relevant features such as tree physiology, structural condition, decay and crown or branch structure that may impact on the proposed development are recorded. If there are no notes, then the presumption should be that no relevant features were observed.

Remaining contribution: This is broadly interpreted as <10 years, 10+ years, 20+ years, or 40+ years to provide some indication of a tree's potential for future contribution to its locality.

BS category: Each tree is placed into a relevant coloured category based on their quality and contribution they offer in terms of their arboricultural, landscape or cultural values. This assessment is based on the BS5837 Table 1 cascade chart for tree quality assessment found at the beginning of Appendix 2 in this report.

RPA measurements: For single stem trees, the RPA is calculated as an area equivalent to a circle with a radius 12 times the stem diameter. For trees with more than one stem, one of the two calculation methods set out in paragraph 4.6 of BS5837 recommendations will be used. In all cases, the stem diameter(s) will be measured in accordance with Annex C and Annex D of that document. The calculated RPA for each tree will be capped to 707 m2.

Future tree safety inspections: My assessment of the trees was carried out on the basis that a re-inspection would be carried out within a year of the assessment visit and my advice on tree condition must be reviewed annually from the date of that visit.

Pre-commencement checklist/supervision visits			
Site address		Date	
		Planning reference	
PRESENT		REPRESENTING	

Pre-commencement	Compliant Y/N	Action (If appropriate refer to additional notes)
Acceptable demolition/site clearance works		
Tree works undertaken/additional requirements		
Method statement/tree protection plan available on site		
Suitable locations for welfare and material storage etc		
Suitable space available for vehicle access etc		
Services/soakaway locations agreed		
Tree protection/precautions	**Compliant Y/N**	**Action** (If appropriate refer to additional notes)
Protective fencing		
Ground protection		
Temporary surfacing		
New surfacing/reinstatement of existing		
Structures in RPAs		
Excavations/level changes in RPAs		
Soft/hard landscaping		
Soil amelioration requirements		

Outcome of meeting	Y/N	Action (If appropriate refer to additional notes)
Can the development lawfully start/continue?		
Are changes required on site to comply with approved tree protection plan?		

	Name	Signature	Position
Date: / /			

Additional notes	Agreed actions

Tree protection guidance

Objective: This guidance sets out the general principles that must be followed when working in Root Protection Areas (RPAs). Before work starts on site, the purpose of this guidance is to demonstrate to the LPA that tree protection issues have been properly considered and to provide a written record of how they will be implemented. Once the site works start, this guidance is specifically for the site personnel to help them understand what has been agreed and explain what is required to fully meet their obligations to protect trees. All personnel working in RPAs must be properly briefed about their responsibilities towards important trees based on this guidance.

RPA description: RPAs are the areas surrounding important trees where disturbance must be minimised if they are to be successfully retained. All RPAs close to the construction area are illustrated on the tree protection plans accompanying this advice. Damage to roots or degradation of the soil through compaction and/or excavation within RPAs is likely to cause serious damage. Any work operations within RPAs must be carried out with great care if trees are to be successfully retained.

Use of this guidance: Anyone working within an RPA must follow this guidance if important trees are to remain unharmed. They must take care to minimise excavation into existing soil levels and limit any fill or covering that may affect soil permeability.

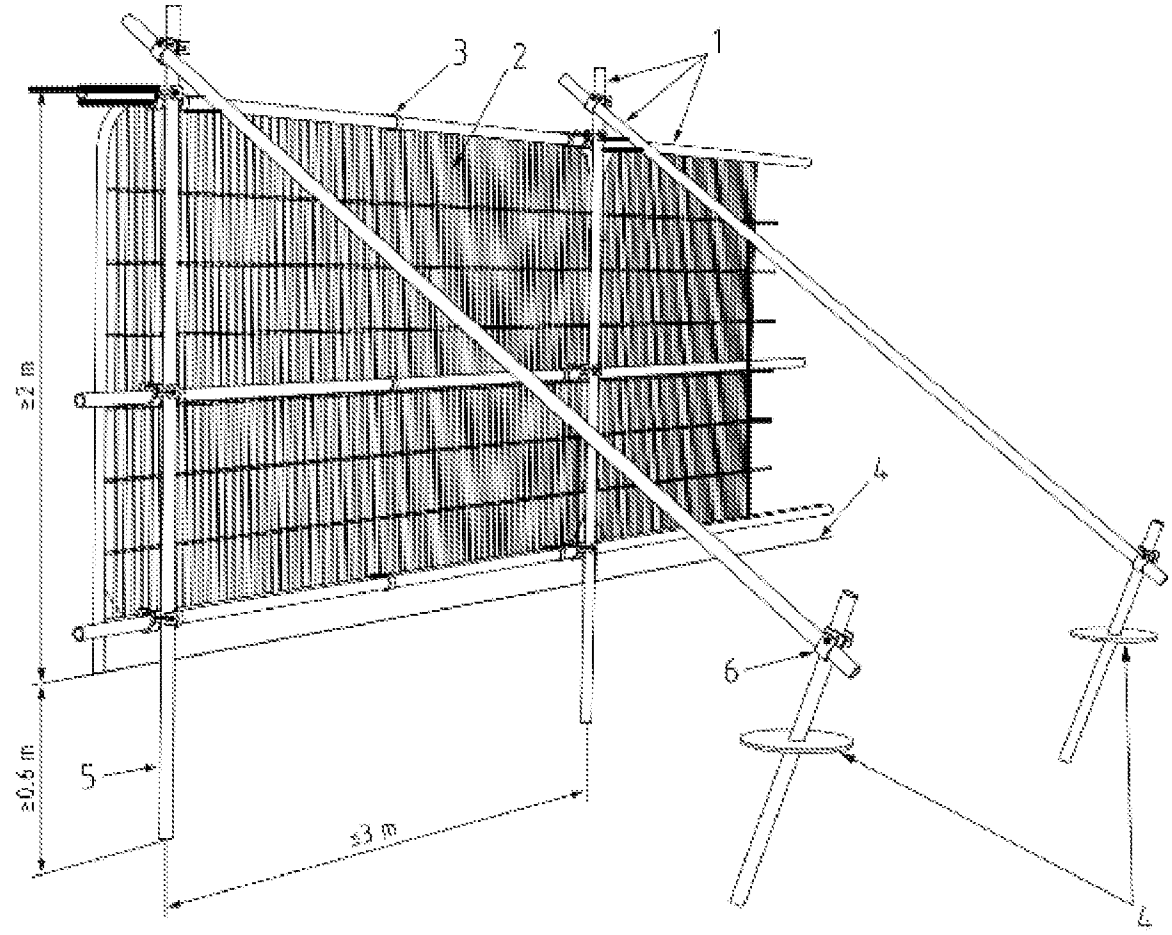
This advice should always be read in conjunction with the tree protection plan (TPP) illustrating the areas where specific precautions are necessary. Each area where precautions are required is annotated on the plans as identified on their keys. All plans are illustrative and intended to be interpreted in the context of the site conditions when the work is started. All protective measures should be installed according to the prevailing site conditions and agreed as satisfactory by the appropriate supervising officer before any demolition or construction work starts.

Preventing adverse impact to the RPA: Any part of the RPA beyond the agreed work area must be isolated from the work operations by protective barriers or ground protection to at least the minimum standard described in BS 5837 for the duration of the work. Any further precautions required to minimise harm to trees should be undertaken using the relevant tree protection guidance in the following pages.

Arboricultural supervision: Qualified arboricultural supervision is essential to minimise the risk of harm to trees. Ongoing work must be inspected regularly and, on completion, must be signed off by the arboriculturist to confirm compliance by the contractor and to sign of relevant Planning Conditions. In the context of this guidance, an appropriate supervising officer would normally be an arboriculturist. the following site monitoring checklist has been produced and is available to use for all pre-commencement and site supervision visits. After each visit, it should be circulated to all relevant parties and kept as a record to demonstrate that all site operations have been compliant with the approved tree protection requirements, and to satisfy the discharge of planning conditions.

Tree protective barriers

Installing Barriers: Tree Protective barriers must be fit for purpose, and once installed must not be moved or removed without consent from the LPA or project arboriculturist. If it is absolutely necessary for any adjustments, they should be under direct supervision of the project Arboriculturist to maintain the Root Protection Area (RPA) of each tree. No materials, chemicals, machinery or vehicles must be stored within the protected area as defined on the Tree Protection Plan. On this site, all exposed rooting areas should be protected by barriers (while vulnerable to damage), in accordance with BS 5837 figures 2 and 3 below until there is no risk of damage from the development activity. This work should be subject to arboricultural supervision.



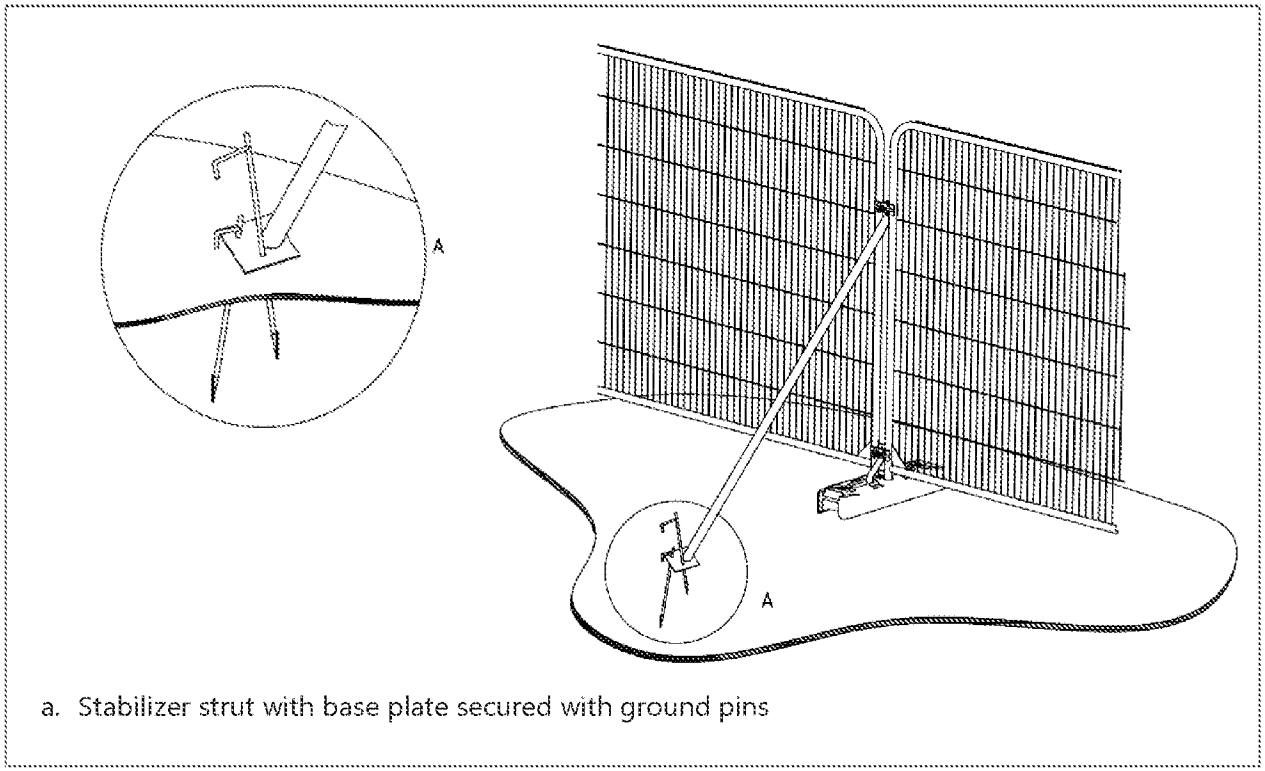
Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized 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 0.6 m)
6 Standard scaffold clamps

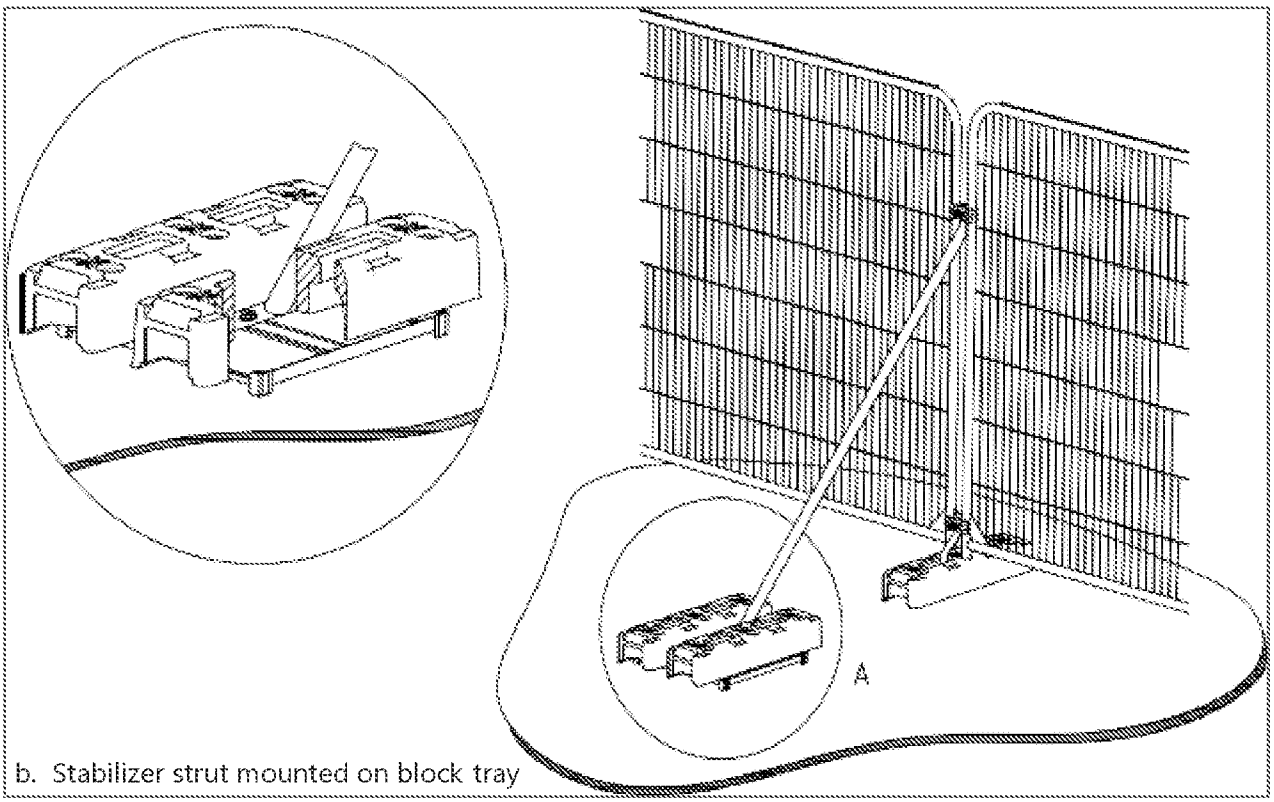
Extract from BS5837: 2012 Figure 2: Example of above-ground stabilizing systems

Examples of tailored protective barriers: A range of methods can be used to protect the trunks and underlying soil bit whatever the choice of method, the end result must be fit for purpose to prevent the protected area from being breached by the construction activities.

Extract from BS5837: 2012 Figure 3: Example of above-ground stabilizing systems



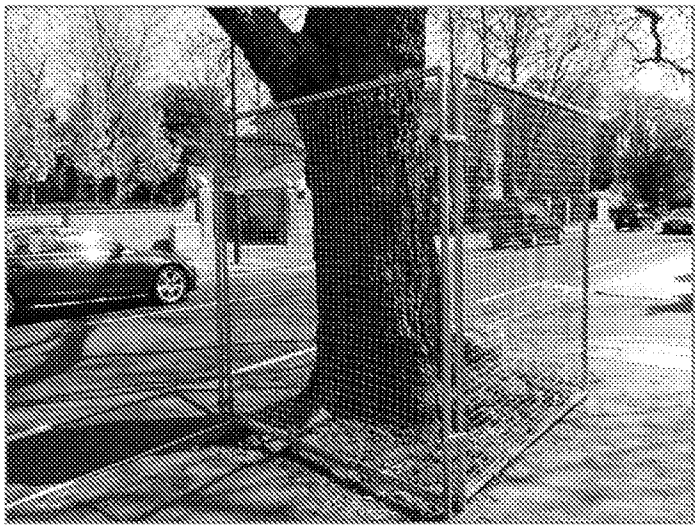
a. Stabilizer strut with base plate secured with ground pins



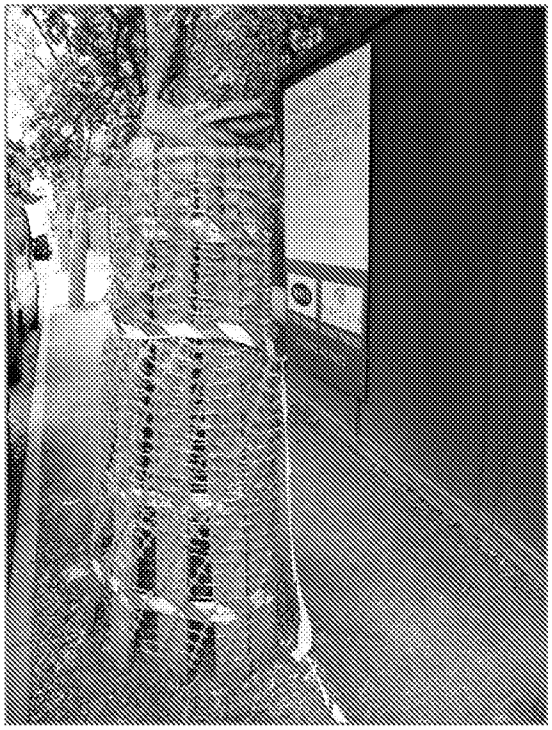
b. Stabilizer strut mounted on block tray

Picture 1: All barriers should be labelled to keep working activities outside the Construction Exclusion Zones (CEZs).

Picture 2: Scaffolding supports and board coverings erected around the trunks of trees can provide suitable protection against traffic turning into the site.



Picture 3: Temporary barriers are useful around individual trees where construction activities only occur during a short period.



Pictures 4 & 5: Wooden boards carefully secured around the trunks can provide good protection where access is limited.

Picture 6: Where trees are off site, or public access is required through the work zone, boxing around the tree may be feasible.

Hand digging operations

Excavations within RPAs: All excavation must be carried out carefully using hand tools, taking care not to damage the bark and wood of any roots. Specialist tools for removing soil around roots using compressed air may be an appropriate alternative to hand digging, such as an air spade excavator (Image below), if available.

All soil removal must be undertaken with care to minimise the disturbance of roots beyond the immediate area of excavation. Where possible, fibrous roots should be retained or displaced temporarily beyond the excavation without damage.

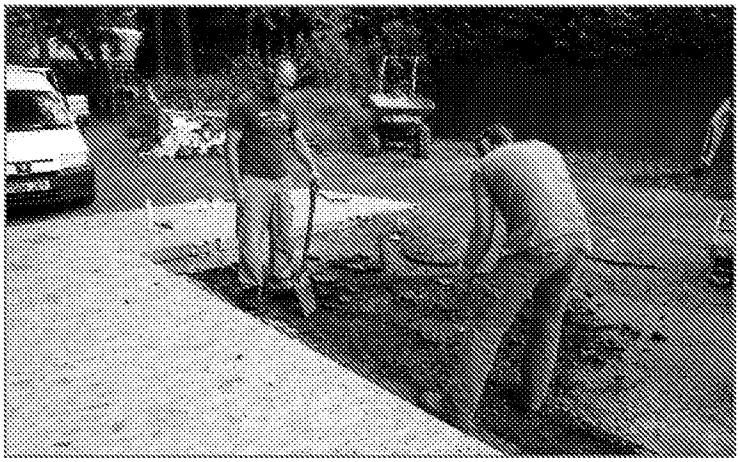
Where excavations are required within RPAs, the advice below **must** be followed:

Advice for digging trenches

a. All work within RPAs must be carried out by hand under close and recorded arboricultural supervision.

b. Machines should not enter protective zones unless there is a suitable existing hard standing.

c. Excavation of open trenches by machine is unacceptable within the protective zone. Wherever possible, trenchless techniques should be used.



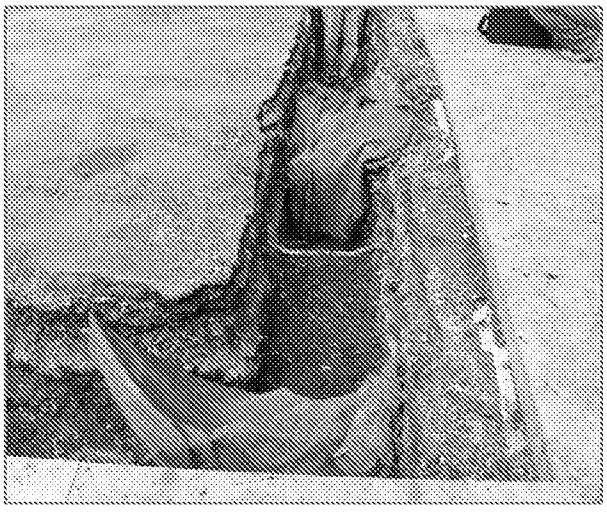
d. For trenchless installation of services, the pit excavations for starting and receiving machinery should be located outside the protective zone. The depth of run should be below 600mm. Techniques involving external mole lubrication with materials other than water should be avoided unless precautions are taken to ensure that there is no soil contamination within 600mm of the surface.

e. The broken trench technique combines hand dug sections of trench with trenchless techniques. The open trench is dug by hand with the same precautions as for continuous trenching described below. Open sections of trench should be kept as short as possible and only long enough to allow access for linking to the next section.

f. Continuous trenches should only be used where it is not possible to use either of the above techniques. The objective is to dig by hand and to retain as many roots as possible. Hand digging must be undertaken with great care to retain all roots greater than 25mm and to prevent damage to those retained.

g. Hand tools such as a fork should be used to loosen the soil and help locate any substantial roots. Once roots have been located, a trowel and brush should be used to clear the soil away from them without damaging the bark. Any roots that need to be removed should be cut cleanly with sharp saw or secateurs 100–200mm behind the final face of the excavation

h. Backfilling should be carried out carefully to avoid direct damage to roots and excessive compaction of the soil around them. Where the finished surface will be hard standing, the backfill material around roots should be a mixture of top soil and a granular fill such as sharp sand to reduce excessive compaction and to secure a local aerated zone. On sites away from hard standing, backfill only with excavated soil.



i. Exposed roots should remain protected from drying out and extremes of temperature by insulating covering such as sacking.

Services: Excavation to upgrade existing services or install new services in RPAs may damage retained trees and should only be chosen as a last resort. In the event that excavation emerges as the preferred option, the decision should be reviewed by the supervising officer before any work is carried out. If excavation is agreed, all digging should be done carefully and follow the guidance set out above.

Advice for hand digging post holes

a. All excavation in RPAs must be carried out carefully using hand tools, taking care not to damage the bark and wood of any roots. Specialist tools for removing soil around roots using compressed air may be an appropriate alternative to hand digging, if available.

b. All soil removal must be undertaken with care to minimise the disturbance of roots beyond the immediate area of excavation. Where possible, flexible clumps of smaller roots, including fibrous roots, should be retained if they can be displaced temporarily or permanently beyond the excavation without damage.

c. If digging by hand, a fork should be used to loosen the soil and help locate any substantial roots. Once roots have been located, the trowel should be used to clear the soil away from them without damaging the bark.

d. Exposed roots to be removed should be cut cleanly with a sharp saw or secateurs 10–20cm behind the final face of the excavation.

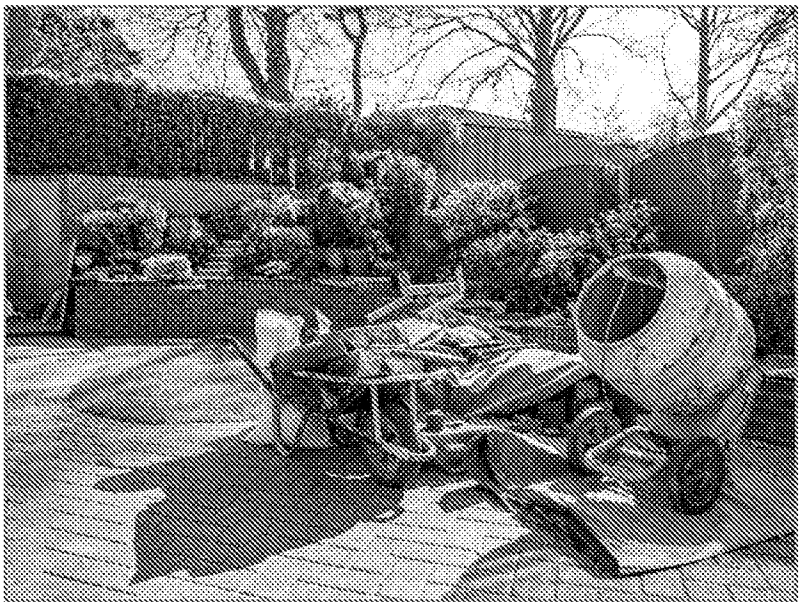
e. Roots temporarily exposed must be protected from direct sunlight, drying out and extremes of temperature by appropriate covering such as hessian sacking or boards.

f. Roots greater than 2.5cm in diameter should be retained where possible. Roots 2.5–10cm in diameter should only be cut in exceptional circumstances. Roots greater than 10cm in diameter should only be cut after consultation with the appropriate supervisory officer.

g. The design should be sufficiently flexible to allow the hole-locations to be moved slightly if roots greater than 2.5cm in diameter are found in the preferred locations.

Material storage and pollution control

Loose building materials, chemicals and other pollutants that can contaminate the soil must be stored in locations outside the RPAs. If space around the site is limited, materials must be ordered in smaller/less frequent amounts to minimise excessive build-up of unused building materials. Where liquids or powder/granule products are required, precautionary measures of bunding or sealed frameworks should be sufficient to prevent contamination and must be designed so they are fit for purpose. If spillage or leakage occurs, there should be immediate procedures put in place to reduce further risk to the surrounding RPAs. All contributing contaminants must be moved away from the affected RPAs in a way that minimises harm to tree roots and the surrounding soil.



The following points must be adhered to:

Minimising harm from storage of pollutants

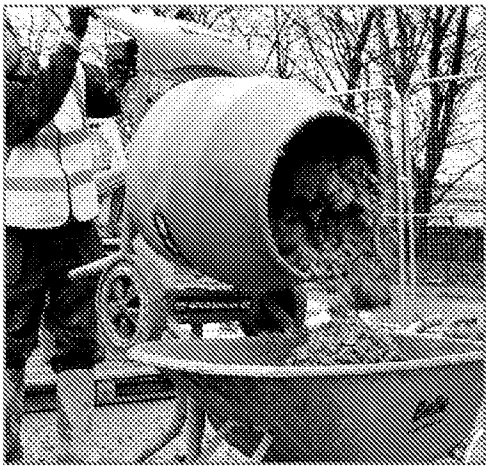
a. The storage of fuels or toxic materials must be kept outside RPAs

b. Emergency spillage kits must be available on site at all times to reduce the risk of accidents to the environment

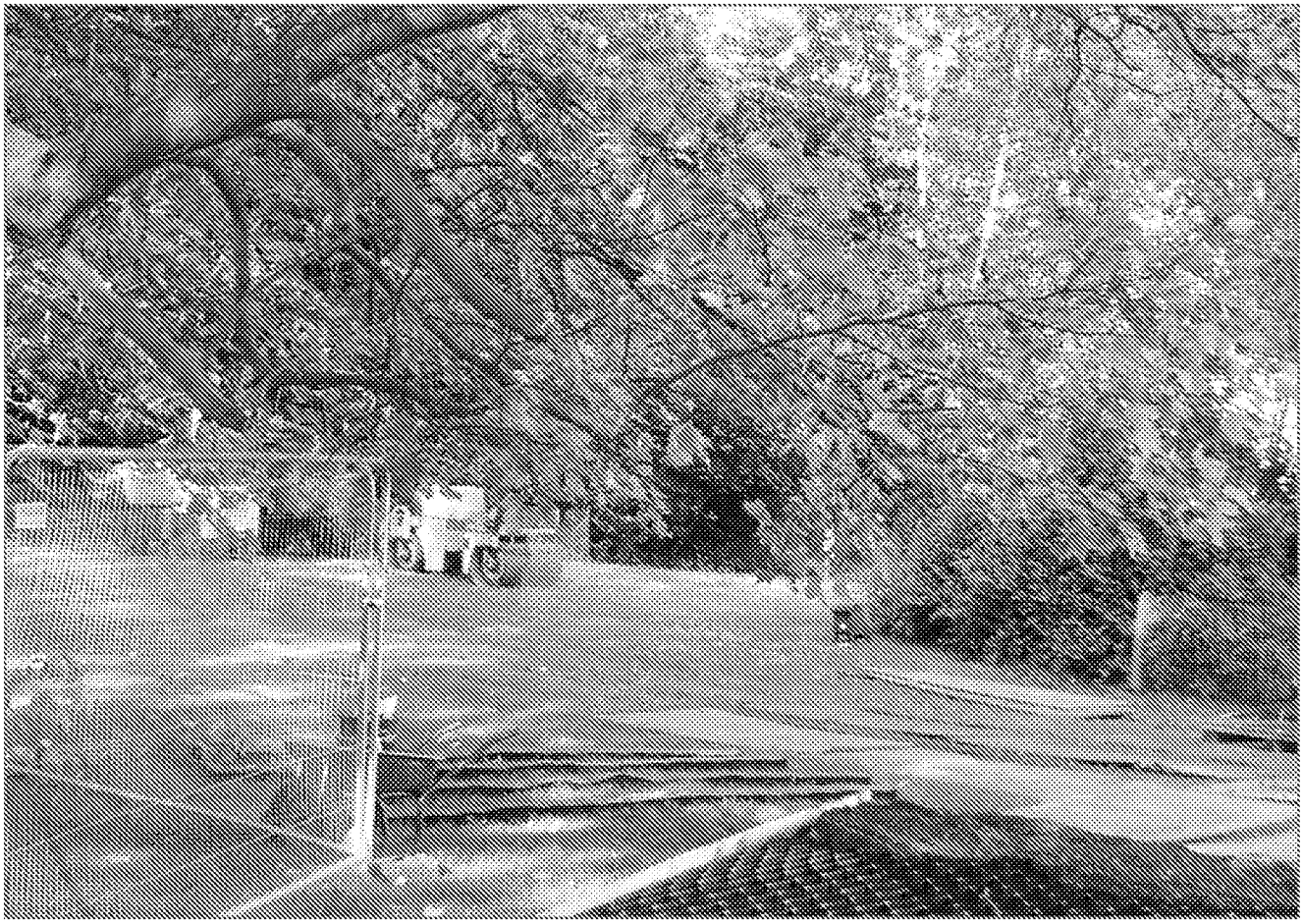
c. Where space is limited, contaminants must be kept safe using tailored containment systems fit for purpose.

d. Cement washings must be contained to prevent leaching into the soil within RPAs

e. Concrete pouring must be done in a way that ensures all RPAs within influencing distance are adequately protected. Liners should also be used where possible to prevent contamination.



Reinstatement works or landscaping around trees



Reinstatement works or landscaping in RPAs: Reinstatement works, or landscaping is usually the last stage of works and often the most important to minimise harm within RPAs. The re-profiling of existing soil levels and covering the soil surface with new plants or an organic covering (mulch). It does not include the installation of solid structures or compacted surfacing. Soft landscaping activity after construction can be extremely damaging to trees.

Minimising harm from works

a. No significant excavation or cultivation, especially by rotovators, should occur within RPAs.

b. Where new designs require levels to be increased to tie in with new structures or the removal of an existing structure has left a void below the surrounding ground level, good quality and relatively permeable top soil should be used for the fill.

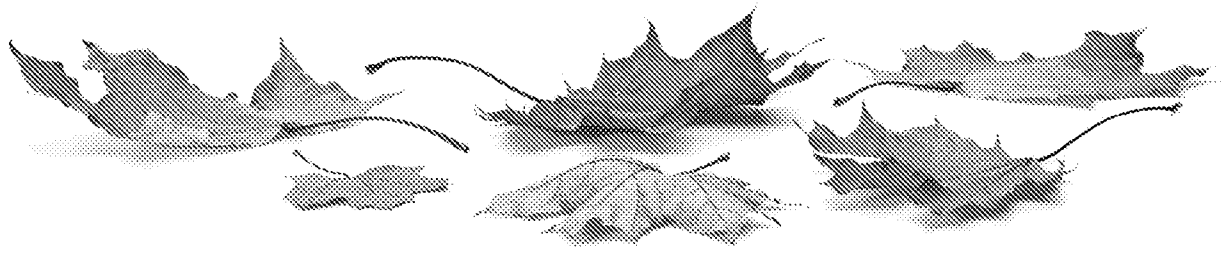
c. It should be firmed into place but not over compacted in preparation for turfing or careful shrub planting.

d. Ideally, all areas close to tree trunks should be kept at the original ground level and have a mulched finish rather than grass to reduce the risk of mowing damage.

e. All installations of light systems or other garden improvements that involve trenching works must be undertaken following the hand digging guidance above.

WADEY TREES

CHARTERED CONSULTANCY



Plum Tree Cottage, 50 Milton Lane, Durweston, Blandford, DT11 0QA

Wadey Trees is a Private Limited Company registered and incorporated in England and Wales
Registered Company No. 12436017