



LAND REAR OF
LANGLEY COMMON
AND SOUTH OF
SCHOOL ROAD
BARKHAM

ARBORICULTURAL
IMPACT
ASSESSMENT &
METHOD
STATEMENT

for

MR WENMAN

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1. Executive Summary

- 1.1. This arboricultural report has been compiled to evaluate the direct and indirect effects of the proposed design on the trees on site, and where necessary recommends mitigation.
- 1.2. The site is found to the west of Barkham to the south of School Road. It comprises a large agricultural field divided into three parcels. The site is relatively flat in topography. Tree stock is found on all boundaries, being varied in both age and species. A number of high quality/value Common oak trees have been surveyed and recorded as category 'A'.



Figure 1 Overview of developable/survey area

- 1.3. The development proposals are in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. Adequate protection can be provided to ensure all trees identified for retention will be protected throughout development in the form of barriers and/or ground protection.
- 1.4. Trees identified for removal are to facilitate the construction of access arrangements on the northern boundary and internally. Two category 'B' trees and a category 'U' tree will be removed.
- 1.5. Where proposed new hard surfaces (roadway and footpath infrastructure) have been identified within the RPAs of retained trees, a sensitive 'no-dig' surface solution has been proposed. Detailed methodology and indicative designs are shown on the Tree Protection Plan and in the method statement element of this report.
- 1.6. Number of trees to be removed as a direct result of the submitted layout design (see section 4 for details):

Tree number	Species	Category	Design Impact
T28	Common oak	B	Access arrangement
T141	Common oak	B	Access arrangement
T142	Elm	U	Access arrangement

- 1.7. The relationship between the buildings and retained trees is sustainable and should not result in circumstances which may result in unreasonable pressure to prune. Potential buyers have the opportunity to
- 1.8. The Arboricultural Method Statement (AMS) has been compiled in conjunction with the Tree Protection Plan (TPP) for the purpose of feasibility and planning, as per Figure 1 of BS5837:2012. These detail any mitigation which will be necessary to ensure the protection of retained trees throughout the development.

2. Introduction

- 2.1. ACD Environmental was instructed in January 2025 to prepare the following Arboricultural Impact Assessment and Method Statement by Mr Wenman. For details of trees to be retained, and locations and types of special protection methods, reference should be made to the latest revision of Tree Protection Plan (ref: PRI24777-03), which should be displayed prominently on site for all staff to see.
- 2.2. This Arboricultural Report and Plans should be readily available onsite for reference of operatives on site during the construction process, so that they understand the scope and importance of the measures set out for tree protection. Implementation of the protection methods and other details within this report are integral to ensuring protection for the retained trees.
- 2.3. Online searches of Statutory and Non-Statutory protection records the following for subject trees;

Tree Preservation Orders (Wokingham Borough Council Online WebPortal) ~ Trees on or immediately adjacent to the site are the subject of TPO reference No: 1515/2016. The TPO comprises four separate groups and two woodland compartments.

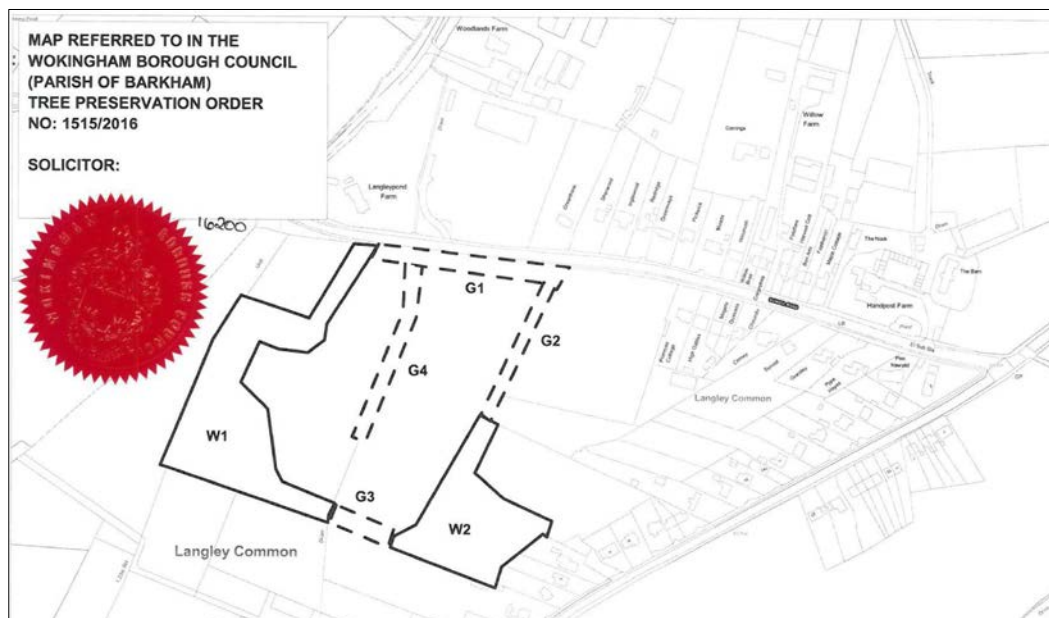


Figure 2 Detail from TPO ref No: 1515/2016

- 2.4. Ancient Woodland (MAGIC Gov. Online WebPortal) ~ There are no scheduled Ancient Woodland compartments on or adjacent to the site boundaries.

- 2.5. Veteran/Ancient Trees (WDVTA Online Mapping) ~ Eight individual trees are identified on the Wokingham District Veteran Tree Association tree survey webpage.



Figure 3 Detail from WDVTA Online Tree Survey

- 2.6. Veteran/Ancient Trees (WDVTA Online Mapping) ~ Eight individual trees are identified on the Wokingham District Veteran Tree Association tree survey webpage.
- 2.7. Several trees within the ACD tree survey have identified Veteran/Ancient tree indicators. Two (1no. Oak and 1no. Ash individuals) have been recorded as Veteran trees. The standing advice in the Woodland Trust publication Ancient and Other Veteran Trees: Further Guidance on Management, Section 1.2 Definition of Ancient and Veteran Trees has Figure 1.3 Chart of Girth in relation to age and developmental classification of trees captures classification based on girth. The historic data scheduled for the WDVTA trees do not match the girth criteria for Veteran tree classification. This data is old and it is observed that both Veterans identified by ACD were recorded within the WDVTA schedule.
- 2.8. This report is based on the recommendations given in BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. Adequate tree protection methodology has been proposed. To ensure accuracy the Tree Protection Fence should be set out by a surveyor using node points being marked clearly on site to work to. The AutoCAD version of the Tree Protection Plan is available on request.
- 2.9. The controlling authority is Wokingham Borough Council, who can be contacted at: Shute End, Wokingham, Berkshire, RG40 1BN, Tel: 0118 974 6000.
- 2.10. Any questions relating to the content of this report should be directed in the first instance to: ACD Environmental, Unit 7, Godalming Business Centre, Woolsack Way, Godalming, GU7 1XW, 01483 425714, quoting the site address and reference number.

3. Arboricultural Impact Assessment

- 3.1. The site is found to the west of Barkham to the south of School Road. It comprises a large agricultural field divided into three parcels. The site is relatively flat in topography. The design proposals are for an Outline application for the phased development of 27 dwellings including new access onto School Road, landscaping, infrastructure, 1 self-build plot and overflow parking for the benefit of the local area (with all matters reserved except access into the site).
- 3.2. This impact assessment is intended to evaluate the direct and indirect impacts on the trees on the site in relation to the proposed development. Any potential tree impacts are identified as per BS5837:2012 section 5.4, and details are given of proposed mitigation.
- 3.3. The development proposals are in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. Adequate protection can be provided to ensure all retained trees are protected throughout the development.
- 3.4. Any potentially damaging activities proposed in the vicinity of retained trees are identified, such that mitigation to significantly reduce or avoid this impact can be detailed in the Arboricultural Method Statement and Tree Protection Plan as recommended in BS5837:2012 section 5.4.2.
- 3.5. The tree survey for the site is at Appendix 2 of the Tree Report for the site ACD reference PRI24777ts.
- 3.6. **Evaluation of impact of proposed tree losses**
- 3.6.1. Those trees which are identified for removal are shown with a red dashed canopy outline, and a dashed cross on trunk position on the Tree Protection Plan ACD reference PRI24777-03.

BS Category	Number of individual trees	Tree Groups
U	1	~
A	~	~
B	2	~
C	~	~

Table 1: Trees to be removed as a direct consequence of development

- 3.6.2. **School Road Access Arrangement** ~ Trees numbered T141 (English elm ~ category 'U' irreversible decline) and T142 (Common oak ~ category 'B') are to be removed to implement the access roadway infrastructure from School Road into the site.
- 3.6.3. To avoid unacceptable impact to adjacent category 'A' trees and ensuring a Highway Authority compliant access arrangement the tabled entrance point is the most achievable with minimal impact. Construction Methodology ~ excavation work to be carried out sensitively under onsite supervision of the project arboriculturist. Neither trees are recorded within the WDVTA schedule. No Veteran tree indicators were recorded by ACD.

3.6.4. **Internal Roadway Access Arrangement** ~ Tree number T28 (Common oak ~ category 'B') is to be removed to implement the internal access roadway infrastructure. To avoid impact to the RPAs of adjacent category 'A' trees, the access gap has been designed to be equidistant between both trees. In addition the footpath has been accommodated on northern edge to avoid RPAs.

3.6.5. T28 has excessive buttress flare consistent with historic reduction in levels. At the eastern side from base to 1.5m there is a cavity with significant tissue dysfunction and incipient decay. This tree would be unsuitable for retention in an urban environment. The tree is recorded within the WDVTA schedule as Local tree no. 572 and Veteran tree no. 6585. The author recorded minimal Veteran tree indicators.

3.6.6. **Tree Removal Assessment** ~ To deliver a robust planning application within the limitations and guidance of County Highway guidance, the trees identified for removal are reasoned to be those whose removal will be of limited amenity impact. Replacement trees have been proposed within the wider landscape masterplan as mitigation, ensuring a continued diversity of both age and species.

3.7. **Trees to be pruned**

At the time of report writing no tree surgery works (excluding tree removals) are assessed as required to implement the development. Should tree surgery works become necessary, they should comply with BS3998:2010 Tree Work or more recently accepted arboricultural good practice and be approved by Wokingham Borough Council prior to any implementation.

3.8. **Protection for retained trees**

3.8.1. BS5837:2012 section 6.2.1. states: 'All trees that are being retained on site should be protected by barriers and/or ground protection (see 5.5) before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences. Where all activity can be excluded from the RPA, vertical barriers should be erected to create a construction exclusion zone.

3.8.2. A specification for protective fencing is given on the Tree Protection Plan. This consists of interlocking weld-mesh panels (e.g., Heras) well braced by attachment to scaffold pole uprights driven firmly into the ground. Should any alternative barrier construction be used, the design will be approved by Wokingham Borough Council.

3.9. **Construction Footprint & Permanent New Hard Surfaces within RPAs**

3.9.1. **Built Form** ~ BS5837:2012 states at section 5.3.1: 'The default position should be that structures (see 3.10) are located outside the RPAs of trees to be retained. However, where there is an overriding justification for construction within the RPA, technical solutions might be available that prevent damage to the tree(s) (see Clause 7). If operations within the RPA are proposed, the project arboriculturist should:

a) demonstrate that the tree(s) can remain viable, and that the area lost to encroachment can be compensated for elsewhere, contiguous with its RPA:

b) propose a series of mitigation measures to improve the soil environment that is used by the tree for growth.

3.9.2. The construction footprints of all built form have been designed to fall outside the RPAs of trees identified for retention.

- 3.9.3. **Permanent Hard Surfaces** ~ in order to minimise impact on the rooting environment of trees for the proposed access point and footpath links for frontage properties, sensitive surface construction will be required in the form of a 'no-dig' surface solution. It is reasoned that using an appropriate 'no-dig' permanent hard surface in this area will minimise any potential impact to the underlying rooting environment.
- 3.9.4. Some excavation works will be required within the RPAs of trees nos. T131 ~ T133 to match the existing levels of School Road with the proposed 'no-dig' access point surfacing. All works will be carried out under onsite supervision of the project arboriculturist.
- 3.9.5. As detailed in the recommendation of BS5837:2012 section 7.4.2.3, the new permanent hard surfacing areas do not exceed 20% of any existing unsurfaced ground within RPAs.
- 3.9.6. The use of a three-dimensional cellular confinement system, such as 'Cellweb' is an acceptable approach, which aims to fulfil the above design criteria. This system maintains the passage of oxygen and water to root systems; avoids root loss through severance or asphyxiation and minimises the potential for soil compaction. It is achieved by laying a Geotextile membrane directly onto unchanged soil levels, with a three-dimensional cellular confinement system ('Cellweb') laid on top filled with no fines granular fill, with a porous finishing surface. See specification on Tree Protection Plan (PRI24777-03).
- 3.9.7. The Arboricultural Method Statement details installation of a typical no-dig surface. This follows the recommendations set out in Section 7.4 of British Standard 5837:2012. The author of this report is not an engineer and therefore detailed engineering design, and analysis must be carried out by a suitably qualified engineer. However, any design must be approved for use by the project arboriculturist.
- 3.10. **Shade and future pressure to prune**
- The site layout has been assessed in terms of shading and future pressure to prune. Given the orientation of the site, and the relationship between the proposed buildings and the retained trees, the juxtaposition is viable for long-term tree retention, and it is considered that shading by trees is unlikely to be a concern to future residents. As a result, it is considered unlikely that there would be any undue pressure to remove trees, or excessively prune from any future occupants.
- 3.11. **Services**
- It is fundamental to tree protection that infrastructure design is sensitively approached, as trenching close to trees may damage roots and affect tree health and stability. Details of services have not been provided at the time of writing. The Tree Protection Plan, showing the constraints posed by retained trees will be passed to the infrastructure engineers to inform their design, ensuring that all services avoid areas of potential conflict. As per BS5837:2012 Figure 1, once further details become available as part of the detailed/technical design for the site, the TPP and AMS will be revised to incorporate these details for services for inclusion in the Tender documentation.

4. Arboricultural Method Statement

TO BE READ IN CONJUNCTION WITH THE APPENDED TREE PROTECTION PLAN REFERENCE: PRI24777-03

4.1. Phasing of operations for tree protection

4.1.1. Implementation of tree protection measures on the site must be carried out in the following order:

- 1) Tree removals and tree surgery.
- 2) Line of tree protection fence to be set out to node points by surveyor.
- 3) Accurate erection of tree protection fence and ground protection.
- 4) **Pre-commencement site meeting with project arboriculturist, Local Authority Tree Officer, site manager and groundworkers.**
- 5) Site accessible to construction/demolition traffic.
- 6) Site clearance.
- 7) Construction Phase ('no-dig' surface solution).
- 8) Removal of tree protection fencing.
- 9) Remedial tree surgery (if required).

4.1.2. The above phasing must not be changed without approval from the project arboriculturist and agreement with the Council.

4.2. Site supervision

4.2.1. The development process will be subject to arboricultural supervision where construction work inside the construction exclusion zone is required, and for the installation of any special detail (e.g., 'no-dig' surface).

4.2.2. Arboricultural supervision is to be carried out at all crucial stages throughout the development process to ensure detailed tasks are carried out as per the approved methodology, and during any other, unplanned incursions into protection areas, for whatever reason.

4.2.3. This supervision will require the arboriculturist to be present throughout the task, to ensure all the arboricultural objectives are met.

4.3. Restrictions within tree protection areas

4.3.1. Inside the exclusion area of the fencing, the following shall apply:

- No mechanical excavation whatsoever.
- No excavation by any other means without arboricultural site supervision.
- No hand digging without a written method statement having first been approved by the project arboriculturist.
- No lowering of levels for any purpose (except removal of grass sward using hand tools).
- No storage of plant or materials, or handling of any chemicals.
- No vehicular access.
- No fire lighting.

4.4. Avoiding damage to stems and branches

- 4.4.1. 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.
- 4.4.2. 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'.
- 4.4.3. Access facilitation pruning shall be kept to the barest minimum necessary to facilitate development and shall be carried out in strict accordance with the guidance below (Tree Surgery). Under no circumstances shall construction personnel undertake any tree pruning operations.

4.5. Tree protection fencing

- 4.5.1. The Tree Protection Plan (see the latest revision of: PRI24777-03) shows the alignment of Tree Protection Fencing (TPF), which is to be installed prior to any of the following taking place:
 - Demolition.
 - Plant and material delivery.
 - Soil stripping.
 - Utility installation.
 - Construction works.
 - Landscaping.
- 4.5.2. Stages for installation of TPF:
 - 1) Hand clearance of any vegetation to allow clear working access.
 - 2) Setting out of fencing points.
 - 3) Fencing erected.
 - 4) Site accessible to demolition/construction traffic.
- 4.5.3. To ensure accuracy and avoid future costly adjustments, the Tree Protection Fence must be set out by a surveyor with all node points being marked clearly on site for the fencing contractor to work to.
- 4.5.4. Once erected, all TPF will be regarded as sacrosanct, and will not be removed or altered without prior recommendation by the project arboriculturist and approval of the local planning authority.
- 4.5.5. The typical TPF construction is suitable for areas of high intensity development, and shall comprise of interlocking weld-mesh panels, well braced to resist impacts by attachment to a scaffold framework that is set firmly into the ground. A detailed specification can be found on the TPP.
- 4.5.6. Should any alternative method of barrier construction be proposed, consultation with the project arboriculturist will be obtained to clarify the efficacy of the revised design prior to informing the local planning authority and obtaining their consent.
- 4.5.7. Once the exclusion zone has been protected by barriers and/or ground protection, construction work can commence.

4.6. Site storage, parking, welfare facilities

- 4.6.1. The site will require provision for; site storage, contractor parking, welfare facilities, temporary services/drainage, material drop of points, etc.
- 4.6.2. No details of these provisions are available at the time of writing of this report.
- 4.6.3. None of the above provisions will be sited within RPAs of retained trees without the input or the project arboriculturist and the consent of the Local Authority.

4.7. Tree surgery and removal

- 4.7.1. Those trees which are to be removed are shown with a red dashed canopy outline, and a dashed trunk cross on the Tree Protection Plan ACD reference PRI24777-03.
- 4.7.2. If any further tree surgery works are required, a proposed specification will be submitted to, and approved by Wokingham Borough Council before any works are implemented.
- 4.7.3. All work will be carried out in accordance with BS 3998:2010 Recommendations for Tree Work, industry best practice and in line with any works already agreed with the LPA.
- 4.7.4. The tree surgery contractor is responsible for carrying out any relevant health and safety risk assessment, and insurance, prior to any work being carried out.
- 4.7.5. The statutory protection afforded by the Wildlife and Countryside Act and Countryside and Rights of Way Act 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.
- 4.7.6. The stumps of any trees removed from within the Construction Exclusion Zone or the RPAs 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.
- 4.7.7. 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.

4.8. Soft landscaping within RPA

- 4.8.1. All landscaping and associated ground preparation within exclusion zones will be carried out sensitively to ensure root damage is mitigated as much as is practicable. At no time is any heavy plant to be used within any protected area. Removal of existing vegetation will be carried out by hand; turf may be removed using a mechanical turf stripper or by hand.

Turfing

- 4.8.2. Stages for turfing gardens and open spaces:

No plant machinery¹ to be used in the area for whatever reason

- 1) Remove TPF to allow access to area.
- 2) Do not reduce any high spots or excavate in any way.
- 3) Existing poor-quality turf may be removed with a turf stripper.
- 4) Use good quality topsoil to level any low-lying areas and hollows and provide a fine tilth to lay turf on. This imported soil must not result in a level increase of more than 100mm in any area.
- 5) Import turves by hand in wheelbarrow.
- 6) Lay turves.

Planting

- 4.8.3. Should the soil be compacted or have a poor structure which may hinder the development of any new planting, soil decompaction techniques may be used upon consultation with the project arboriculturist.

- 4.8.4. Stages for planting within tree protection areas:

No plant machinery to be used in the area for whatever reason

- 1) Remove TPF to allow access to area.
 - 2) Remove existing vegetation by hand, turf may be removed using a mechanical turf stripper.
 - 3) Do not reduce any high spots or excavate in any way.
 - 4) Import good quality topsoil by hand (with wheelbarrow) into area.
 - 5) Level to a depth of no more than 100mm with hand tools.
 - 6) Dig individual planting pits for each plant by hand (including hedging which must not be trench planted).
 - 7) Any mulch should also be imported and spread by hand.
- 4.8.5. No works will be carried out within any protected areas if the soil moisture is of a level likely to allow compaction to occur.

¹ Including rotovators

4.9. Installation of underground services within RPAs

4.9.1. If for whatever reason installation within RPAs is required, the project arboriculturist and local authority must be notified prior to any tree protection barrier removal and the following details adhered to.

4.9.2. Stages for installing services within tree protection areas:

No plant machinery to be used in the area for whatever reason

- 1) Contact project arboriculturist to hold pre-start site meeting and 'toolbox' talk before starting work.
- 2) Remove just enough tree protection fencing to allow access to area and facilitate trenching.
- 3) Remove any surface vegetation or existing hard surfaces using hand tools.
- 4) Excavate the trench using hand tools only, keeping to minimum dimensions required.
- 5) Roots below 25mm should preferably be retained, however if required can be cut cleanly using secateurs or hand saw.
- 6) Roots over 25mm diameter will be retained and kept damp by covering with hessian (re-wetted as required).
- 7) Feed in services.
- 8) Back fill trench with 200-300mm depth of excavated soil, or a mixture of excavated and imported top-soil (to BS3882:2015), firming down with heels.
- 9) Repeat step 7 until trench is filled.
- 10) Re-erect tree protection fencing as per approved plan.

4.9.3. An alternative to the method of excavation above, for trenching within RPA's, is by using an 'air-spade' or similar. This tool utilises compressed air to remove soil from around tree roots causing minimal damage and can be run off a typical site compressor. ACD can provide details of contractors supplying air-spade services if required.

4.9.4. Alternatively, trenchless technology such as thrust boring can be used in some instances and is particularly effective as it can pass directly under the tree, at a depth which is likely to avoid almost all impact on roots of the subject tree. As no access/thrust pits will be located within the RPAs of the subject trees, the need for arboricultural supervision is limited.

4.9.5. 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.

4.10. Installation of no-dig road surface

- 4.10.1. To ensure that tree roots, within the ground under this proposed surface, continue to survive during and after construction a cellular system such as CellWeb (Geosynthetics Ltd, 01455 617139, www.geosyn.co.uk) of 150mm depth is to be used².

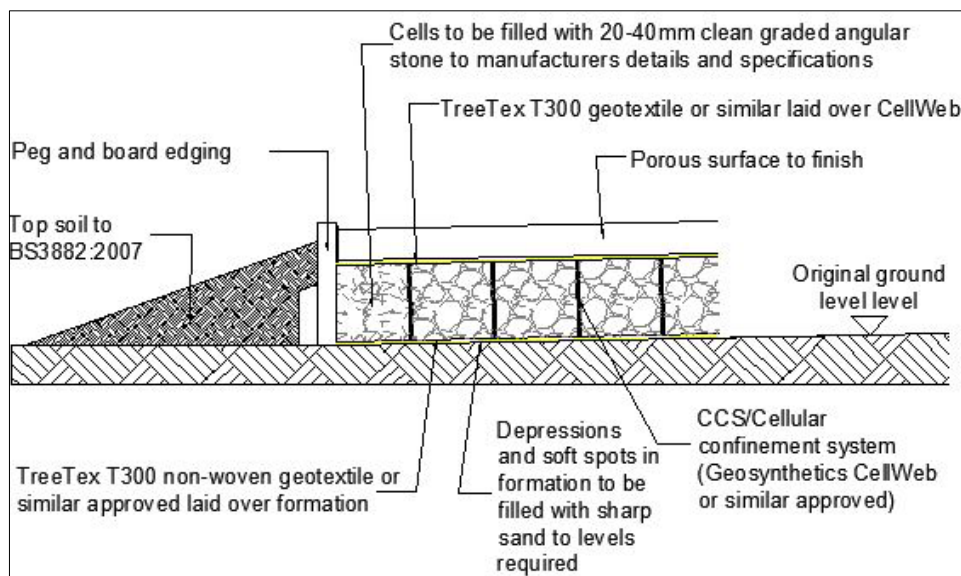


Figure 4: Indicative 'no-dig' surface system profile

4.10.2. Stages for Installation of the cellular confinement surface:

- 1) Contact project arboriculturist to hold pre-start site meeting and 'toolbox' talk before starting work.
- 2) Remove existing vegetation by using a specific herbicide (as advised by a specialist) or manual removal with hand tools only. Agreed removal of shrubs, saplings or trees, within the protected areas of retained trees are to be cut or ground out to just below ground level rather than grubbed or winched out, which can damage roots of retained trees.
- 3) Install a non-woven Geotextile (such as Fibretex F4M) directly over soil grade level (levelled where necessary, by non-compacted washed sand) and fix in place.
- 4) Lay the cellular system over the Geotextile, which is secured open under tension during the infill process with steel staples or wooden pegs.
- 5) Install kerbs and edgings directly on top of existing soil grade level. For light structures, a treated peg and board may be acceptable. For more substantial structures, railway sleepers, haunched concrete with road pins, drilled kerbstones, gabions or cast in situ kerbs will be appropriate.
- 6) Fill the cellular system ensuring any machinery works only on already filled areas. Typical infill consists of no-fines angular granular material 20-40mm, which will remain un-compacted.
- 7) Install porous wearing surface.

²This approach describes installation of a typical no-dig surface. The author of this report is not an engineer and therefore detailed engineering design and analysis must be carried out before installation.

4.10.3. Any variation to the above specification must meet the following design criteria for low-invasive surfaces to provide the conditions for continued tree survival and growth:

- Maintain oxygen diffusion through new surface to rooting area (5-12% by volume³).
- Maintain sufficient passage of water to the rooting area (12-40% by volume⁴).
- Maintain existing ground levels to avoid root damage (severance and/or asphyxiation).
- Avoid compaction by maintaining a soil structure sufficient to sustain root growth (soil bulk density below 1.4g/cc⁵).

4.10.4. Site analysis of the soil type and its structural characteristics will be required prior to determining the specific depth of products to be adopted for example, footpaths normally require a depth of 100mm and, 150mm to 200mm depths are used for residential driveways, while greater depths may be required for the passage of heavier traffic such as for construction access and delivery vehicles.

4.10.5. If ground levels are to be raised more than 150mm this should be achieved by the use of a granular material, which does not inhibit vertical gaseous diffusion. For example: no-fines gravel, washed aggregate, structural soil (min. 20% sand content) or cobbles.

4.11. 'No-dig' footpath construction

4.11.1. To ensure that tree roots, within the ground under this proposed surface, continue to survive during and after construction a cellular system such as CellWeb (Geosynthetics Ltd, 01455 617139, www.geosyn.co.uk) of 75mm depth is to be used⁶.

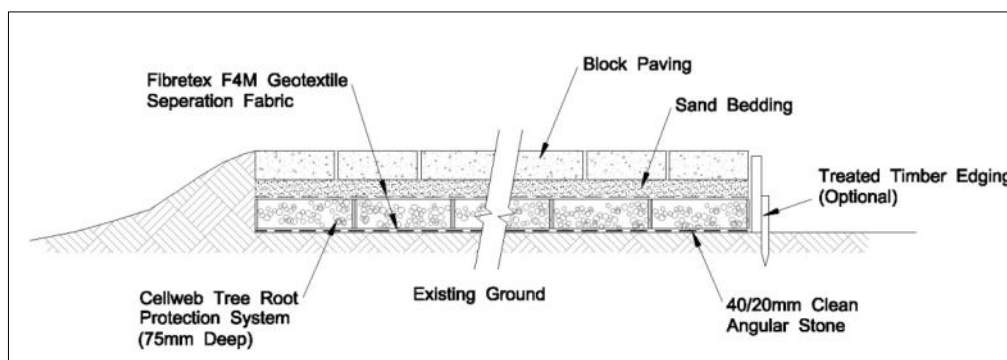


Figure 5 Cellular system profile

4.11.2. Stages for Installation of the cellular confinement surface:

- 1) Contact project arboriculturist to hold pre-start site meeting and 'toolbox' talk before starting work.
- 2) Dismantle TPF to allow access to work area.
- 3) Remove existing vegetation by using a specific herbicide (as advised by a specialist) or manual removal with hand tools only.

³ Tree Roots in the Built Environment 2006, Roberts Jackson Smith HSO

⁴ Tree Root Growth Requirements, Dr Kim. D. Coder, University of Georgia. July 2000

⁵ Arboriculture, Tree Management of Shade Trees and Vines 2004, Harris, Clarke, Matheny

⁶ This approach describes installation of a typical no-dig surface. The author of this report is not an engineer and therefore detailed engineering design, and analysis must be carried out before installation.

- 4) Retain all original ground levels after vegetation removal. No excavation whatsoever.
- 5) Install a non-woven Geotextile (such as Fibretex F4M) directly over soil grade level (levelled where necessary, by non-compacted washed sand) and fix in place.
- 6) Lay the cellular system over the Geotextile, which is secured open under tension during the infill process with steel staples or wooden pegs.
- 7) Install kerb and edging directly atop existing soil level. For light structures, a treated peg and board to be used, more substantial structures should use haunched concrete with pins, or cast in situ kerbs.
- 8) Fill the cellular system ensuring any plant machinery stands only on already filled areas. Infill to consist of uncompacted no-fines angular material 20-40mm.
- 9) Install porous wearing surface.

4.12. Remediation for planting areas

- 4.12.1. Planting areas to be clearly defined prior to remedial works.
- 4.12.2. Area to be assessed for compaction and other damage.
- 4.12.3. Trial pit to be excavated to assess current soil quality.
- 4.12.4. If current soil quality is acceptable but compacted, then decompaction methods are to be employed.
- 4.12.5. **Poor quality soil** ~ provide as necessary to make up any removed topsoil and to complete the work. Soil grade should be Premium as advised by BS3882 and compacted under foot.

4.13. Installation of boundary fencing within protected areas

- 4.13.1. Stages for installing wooden fence posts:

No plant machinery to be used in the area for whatever reason

- 1) Contact project arboriculturist to hold pre-start site meeting and 'toolbox' talk before starting work.
- 2) Dig post holes using hand tools, avoiding damage to the protective bark covering larger roots. Roots smaller than 25mm diameter may be pruned back using either secateurs or a hand saw, leaving a clean cut.
- 3) Severance of roots above 25mm diameter must be avoided. Roots of this size will necessitate hole relocation.
- 4) Line hole with non-porous lining, for example durable polythene bag.
- 5) Insert post and fill post hole with concrete to ground level.
- 6) Trim polythene to ground level.

Andrew Bigg *CertArb (RFS)*

Head of Arboriculture

19 September 2025

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Appendix 1: Tree Protection Plan
(PRI24777-03)

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