

Guidance Note 3: Guidance for Trees and Development





3.3 Guidance Note 3: Guidance for Trees and Development

1 Introduction

Trees are a vital component of the built environment, adding variety and creating a more healthy and enjoyable living environment. Trees enrich our surroundings and are instrumental in enhancing quality of life. Apart from their visual amenity value, trees provide shade, help to absorb noise and provide a habitat for wildlife. The more general environmental benefits of trees include the filtering of air-borne pollutants, intercepting and reducing storm water run off, and the net production of oxygen. They also help to offset the urban heat island effect (an urban area that is significantly warmer than its surrounding rural areas due to human activities) by creating valuable shaded areas, and their presence has the potential to increase property values.

When considering proposals for development, it is important to take into account the effect they may have on existing trees, and to explore the opportunities for new planting.

This note sets out best practice for pre-application discussion, progressing the application, and subsequent construction phases. It is recommended that this document is read prior to contact with the Huntingdonshire Planning Service.

A partnership approach is required between the Huntingdonshire District Council (HDC) and the applicant's development team. A flexible approach by both parties within a clearly defined framework will lead to an efficient planning and implementation process resulting in a higher quality of built environment. The Council aims to develop sound working relationships with applicants and their agents when dealing with matters relating to trees on development sites.

Trees are at risk from the pressures of development. Damage can be sustained to both the above ground and below ground parts of trees.

Any failure to evaluate fully the impact of development at the earliest opportunity could lead to the loss of tree cover, which would inevitably create a poorer living environment.

Protecting the tree root systems is a key issue when dealing with trees and development. To try and ensure that damage does not occur, the British Standard (BS) Institute has introduced the concept of a Root Protection Area (RPA). The RPA is an area surrounding a tree that contains sufficient rooting volume to ensure the tree's survival. RPA dimensions will need to be agreed with the Council.

Diagrammatic shape and extent of a typical tree root system (at this scale, most of the root system would be too fine to depict)

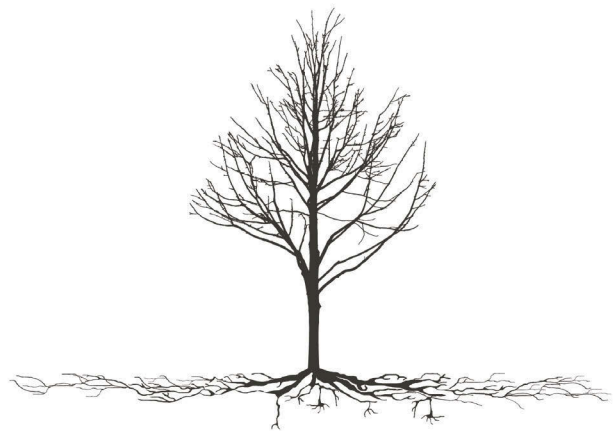


Figure 9: Typical root pattern



It is a common misconception that trees have deep tap roots. Most roots will be found in the first 1 metre (40 inches) of soil and may spread well beyond the canopy line. Works within the RPA are generally prohibited. Even a small trench 0.5 metres (20 inches) deep to accommodate a cable or drain may lead to the loss of the tree.

How can trees be damaged?

Damage to trees can occur during the demolition, construction and landscaping phases of a development. Examples of the most common ways damage is caused are as follows:

- Bark wounds or broken branches caused by machinery.
- Compaction of the soil from movement of heavy machinery.
- Root bark damage from site stripping or grading.
- Cutting of roots during excavation for foundations and services.
- Raising or lowering soil levels around trees.
- Raising the water table.
- The spillage of petrol or diesel, mixing of cement and the storage of materials which are toxic to trees, or machinery placed or operating beneath the canopy of a tree or within the tree's RPA.
- Burning waste materials close to the tree.
- Removal of branches to create space for scaffolding or access of heavy plant.

To integrate existing trees into a proposed development successfully, it will be a planning

requirement to allow enough space in the design to enable trees to mature and flourish without outgrowing their surroundings and will not dominate adjacent new structures or create apprehension to new residents. Protection measures during the entire construction phase, including demolition, will also be required. Trees should be considered at the earliest design stage

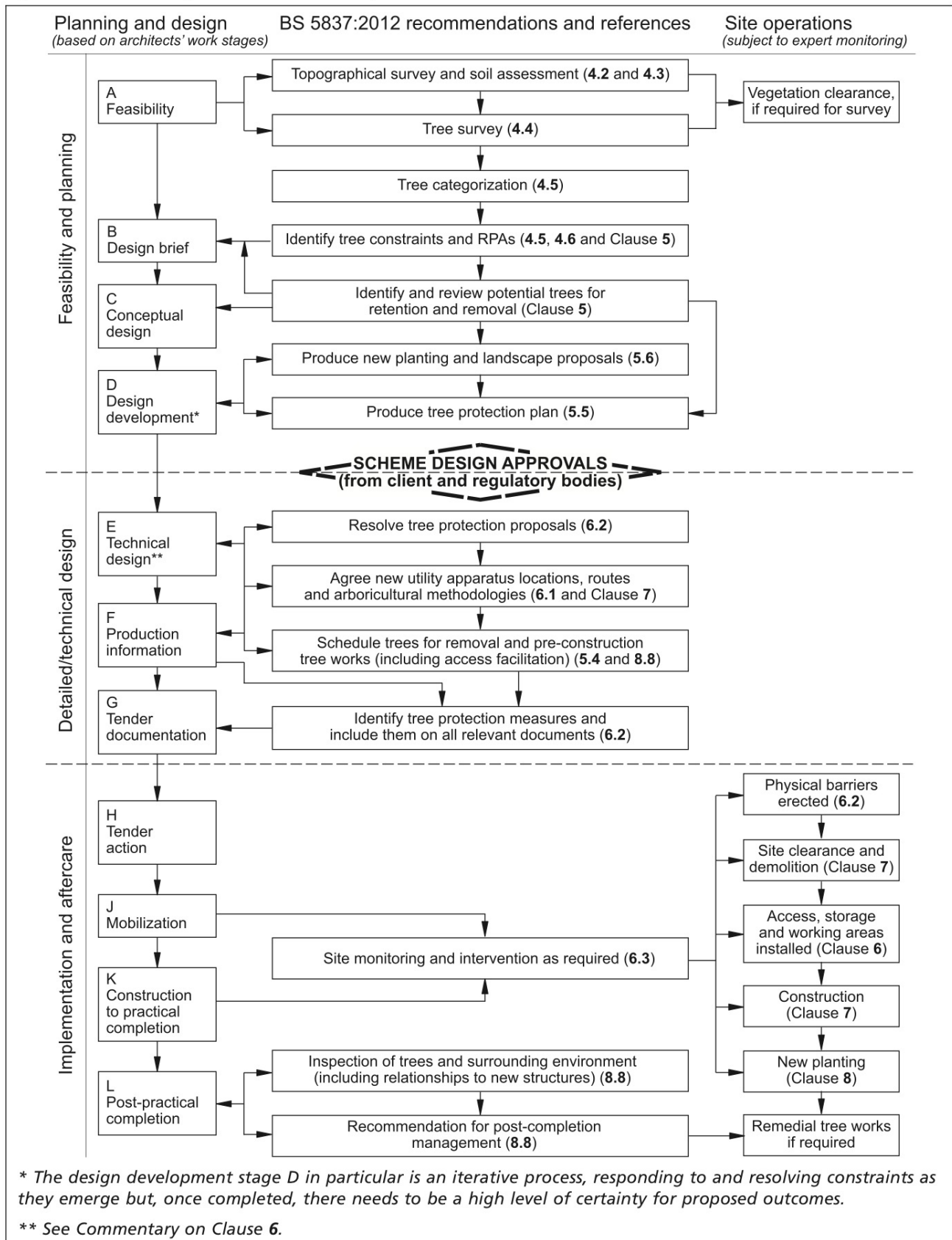
to allow them to be successfully integrated into new development. A survey of trees on and adjacent to the site should be the first step in the design process.

The diagram, Figure 1, summarises the framework within the document British Standard 5837: 2012 'Trees in relation to construction – Recommendations'. This should be the principal reference document when considering new and existing trees on proposed development sites.





Figure 1 The design and construction process and tree care



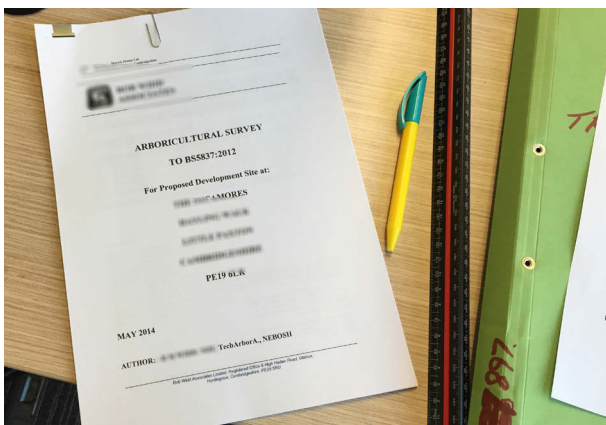


2 The pre-application stage

2.1 Initial considerations

It is desirable for contact to be made with HDC at the earliest opportunity so that proposals regarding development may be discussed. It is often productive for a pre application consultation to take place with Council Officers at this stage, with an initial idea of the nature of the development in order to assess the possible impact on trees. The proposals for the site should not be fully developed at this stage. The presence of trees, and their possible retention, should be an important factor in influencing the layout of any development.

At this stage it is beneficial for the applicant to have already completed a Land Survey, Tree Survey and Tree Constraints Plan, and also to have an understanding of the ecological impact of the proposed development. This information will enable the Council to provide more accurate advice and guidance regarding acceptable development parameters.



2.2 Incorporating trees into the development

Adequate consideration should be given to trees that are present on or adjacent to a site. The Council can require existing trees to be protected and retained, through the use of a planning condition, even when they are not the subject of a Tree Preservation Order. Development layouts should be designed to ensure that retained trees are able to grow and mature in the space provided. This will avoid future problems arising due to the trees' proximity to buildings, which would necessitate heavy and ongoing pruning that would be detrimental to their landscape value. Retained trees that are poorly positioned in relation to buildings can cause structural problems, distress or financial loss to occupants. Even if not affecting trees directly, development layouts will not be acceptable if they would result in undue pressure for future felling or unsightly heavy pruning.

New tree and shrub planting should be recognised from the outset as an integral part of any development, and should have regard to the national, regional and local Biodiversity Action Plans and Landscape Character guidelines. New planting should be purposefully designed to complement the proposed features of the development and existing features intended for retention. It is equally important to plan for the planting of trees on development sites that have no existing trees.



2.3 Arboricultural advice

Careful planning is essential to achieve a high quality development that fully considers all Arboricultural requirements. The inclusion of a suitably qualified Arboricultural Consultant on the design team and throughout the development process (i.e. from the survey phase to first occupancy) will help ensure that:

- Only trees suitable for retention are kept in accordance with the British Standard document BS 5837:2012 'Trees in relation to construction – Recommendations'.
- The juxtaposition of retained trees and proposed/existing buildings will not result in conflict.
- An appropriate level of information is submitted with a planning application.
- Retained trees are properly protected throughout the construction phase.
- Only trees of suitable species are incorporated in the landscape scheme.

The Arboricultural Association maintains a list of Registered Consultants (contact details at section 6 below).

2.4 Land surveys

Land surveys should be precise and show all relevant site features, including accurate location and identification of all trees, hedgerows and shrubs over 2 metres in height and/or with a stem diameter of 7.5cm measured at 1.5 metres above ground level. This survey should be made available as scale drawings (preferably 1:100 or 1:200) and in a commonly agreed digital format, if available, before any application for planning permission is submitted.

The survey should also include:

- Spot heights of ground level throughout the site.
- Location of trees on adjoining land less than half a tree height from the site boundary.
- The accurate canopy spread. If this is irregular it should be shown as such on the Land Survey plans.





2.5 Tree Surveys

Where developments are likely to affect existing trees on and off the site within 15m of the boundary where construction is likely to be proposed the Council will require the submission of a detailed tree survey, drawn up in conjunction with the land survey.

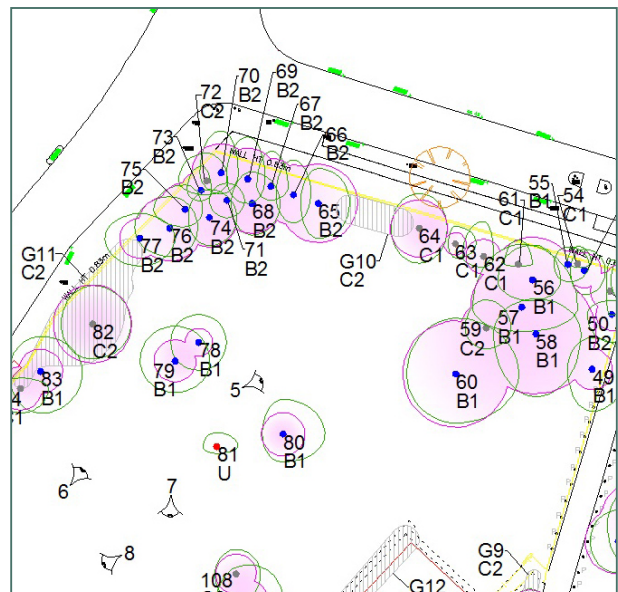
The recommendations of the tree survey should be based on the condition and value of the trees as they are, and NOT on a preconceived layout for the site.

All trees should be numbered on the land survey plan. Where appropriate, due to dense tree cover, tags with a corresponding number should be attached to all trees.

A tree survey should only be undertaken by a suitably qualified Arboriculturist with experience of trees on development sites and will be expected to meet the requirements of sections 4.2 to 4.4 of British Standard 5837: 2012 'Trees in relation to design, demolition and construction – Recommendations', (or the current revision of this document). It should assess all existing trees, including those on neighbouring land that may be affected by the development, and should include at least the following information:

- Species of tree
- Height (in metres)
- Diameter of the trunk (measured at 1.5m above ground level on single stem trees and immediately above the root flare on multi-stemmed trees)
- Canopy spread in metres in relation to all four compass points (to be recorded on tree survey plan)

- Height of crown base (i.e. clearance above ground of lowest branches; in metres)
- Age class (young, middle age, mature, over mature, veteran)
- Assessment of condition (physiological and structural)
- Tree management recommendations (e.g. Remove deadwood, crown lift etc)
- Desirability for retention in accordance with Table 1 of BS 5837: 2012. Retention categories should be clearly differentiated on plans





2.6 Identifying trees suitable for retention (BS 5837:2012 Tree Categorisation)

Table 1 within BS 5837:2012 explains how trees should be categorised. Section 4.3 of the Standard describes how the cascade chart should be used. Category A and B trees should be retained. Category C trees should be considered for retention where they would not impose a significant restraint on development

There is often a misconception that category 'C' trees, being those of lower quality and value, are dispensable. However, in certain situations it may be a requirement that category 'C' trees should be retained until new planting has established.

2.7 Tree Constraints Plan (TCP)

Correct interpretation of the information from the land survey and tree survey is essential for the proper selection of trees suitable for retention and for identifying the constraints that these trees impose on the site now and in the future. The TCP is a design tool that illustrates the constraints imposed by trees both above and below the ground, and should be used to inform the design process.

The TCP should illustrate the Root Protection Area and Buffer Zones.

2.8 Root Protection Area (RPA)

This is the area identified around a tree where no development is allowed. This area is vital to avoid damage to the roots or rooting environment of retained trees. Section 5.2 of BS 5837: 2012 should be referred to for detailed guidance on the calculation of this area.

It should not be assumed that building/ excavating may take place up to the edge of the RPA. Adequate working space between proposed buildings and the RPA should always be incorporated into the design.

Arboriculturalists should acknowledge that many trees that have grown within a built and developed environment will not have a regular rooting area, as a consequence of surface and sub-surface obstructions and constraints. In such circumstances the RPA may often need to be significantly altered and presented asymmetrically to account for unusual root system layouts. It may be necessary to quantitatively assess the extent of root spread by tree root sensitive excavations.

The RPA should be calculated by referring to the criteria in Section 5.2 of BS 5837: 2012, in particular Table 2.

2.9 Buffer Zones

A Buffer Zone is an area identified where it would be unreasonable to locate inhabited buildings. This should be established with regard to the ultimate size of trees in relation to proposed buildings. This Zone will allow trees to grow and mature naturally without unreasonably dominating buildings or gardens either now or in the future and should also take account of reasonable daylight requirements. It may be acceptable to locate uninhabited buildings (e.g. garages) or lightly loaded structures such as driveways, paths or hard standing within the buffer zone.

Not only the current but also the ultimate height and spread of a tree is a constraint due to its size, shading, dominance and movement potential in high winds. Therefore, the ultimate height and spread of all trees to be retained should be annotated on the TCP.



3 Planning the development – the design stage

3.1 Initial Consideration

All survey information and the Tree Constraints Plan should be given to the developer's design team who can then logically design the development in relation to the existing tree cover.

3.2 Subterranean development

Whilst perhaps not yet a common proposal within Huntingdonshire, pressure to maximise the development potential on valuable town centre sites often means building elements are constructed below ground which often involves excavations from the side of the basement below the main footprint of the building. This can place the proposed structure close to retained trees both on site and within the adjacent third party land.

When considering the impact of such a proposal the principles outlined in BS 5837 2012 and set out above should be applied at the design stage and when assessing the likely impact of the proposal on the health and safety of the affected trees. Additional issues including ground moisture dynamics and the availability of water to the tree's root system and the stability of the excavation will need to be considered and included within a detailed arboricultural management plan to ensure that the retained trees are not damaged.

Whilst many things are possible the likely cost increase in terms of the development may be better spent on substantial new trees if the existing trees are of low quality.





3.3 New Tree Planting

Section 197 of the Town and Country Planning Act 1990 places a duty on the Local Planning Authority to secure the planting of new trees. HDC will secure the planting of new trees in locations where they will complement the surrounding local landscape and architecture. We will seek to ensure that the species of tree planted is suitable for each location.

The following factors should be considered when planning a tree planting scheme:

- Adequate space should be allowed for planted trees to reach their mature height and spread without causing nuisance to built structures and their occupants
- Predicted mature height and spread, crown density, propensity to shed honeydew, seeds or fruit etc. Wherever possible, large forest canopy tree species should be specified
- Suitability of planting positions in proximity to adjacent constructions, such as walls and buildings, to avoid the risk of structural damage occurring as trees grow and mature
- Suitability of new trees within the built environment. They should complement the surrounding architecture, the historic environment and the local landscape in the long term. For example, formal terraced buildings require suitable formal planting; more irregular and varied planting may be more appropriate in a less formal built environment

Criteria other than potential size should be taken into consideration when choosing species – for example, colour of backdrop. A silver birch would not be clearly visible against a light background.

Suitability of tree species in relation to potential changes in climate, such as drought and predicted future increases in temperature should also be considered.

To enable trees to reach their optimum size, a sufficient soil volume should be available to the root system. The soil type, including drainage, should be such that tree roots are able to grow and function adequately.





3.4 Tree Protection Plan

Production of an accurate Land and Tree Survey and Tree Constraints Plan will enable the production of a Tree Protection Plan (TPP) for trees on or adjacent to the proposed development site.

The physical protection of trees during the construction process is the best way to ensure successful retention. This will impact on the available space for construction work and, consequently, on the siting of buildings. A Tree Protection Plan should be developed at an early stage and should contain the following information:

- Trees to be retained, clearly identified (e.g. by tree survey number) and marked with a continuous outline.
- Trees to be removed, clearly identified (e.g. by tree survey number) and marked with a broken outline.
- The precise location for the erection of protective barriers. This should enclose at least the area of the minimum Root Protection Area as identified in the Tree Constraints Plan, and should be marked on the plan as a construction exclusion zone.

- The precise location of other physical protection measures, (for example, temporary ground protection to prevent soil compaction).
- Specification details of the proposed protective fencing around the tree Root Protection Areas.

Tree protective fencing that can be easily moved (e.g. Heras panels mounted on rubber/concrete feet) is not acceptable.

See Figure 2, which provides an example of acceptable RPA protective fencing, in line with BS5837:2012. In certain instances on congested development sites it may be acceptable to position protective fencing within the RPA to allow the erection of scaffolding. See Figure 3.

- A schedule of pruning work identified in the tree survey either in accordance with good tree management, or precautionary, to prevent accidental damage during construction.
- Locations of areas proposed for positioning site huts, temporary toilet facilities and for the storage of building materials.



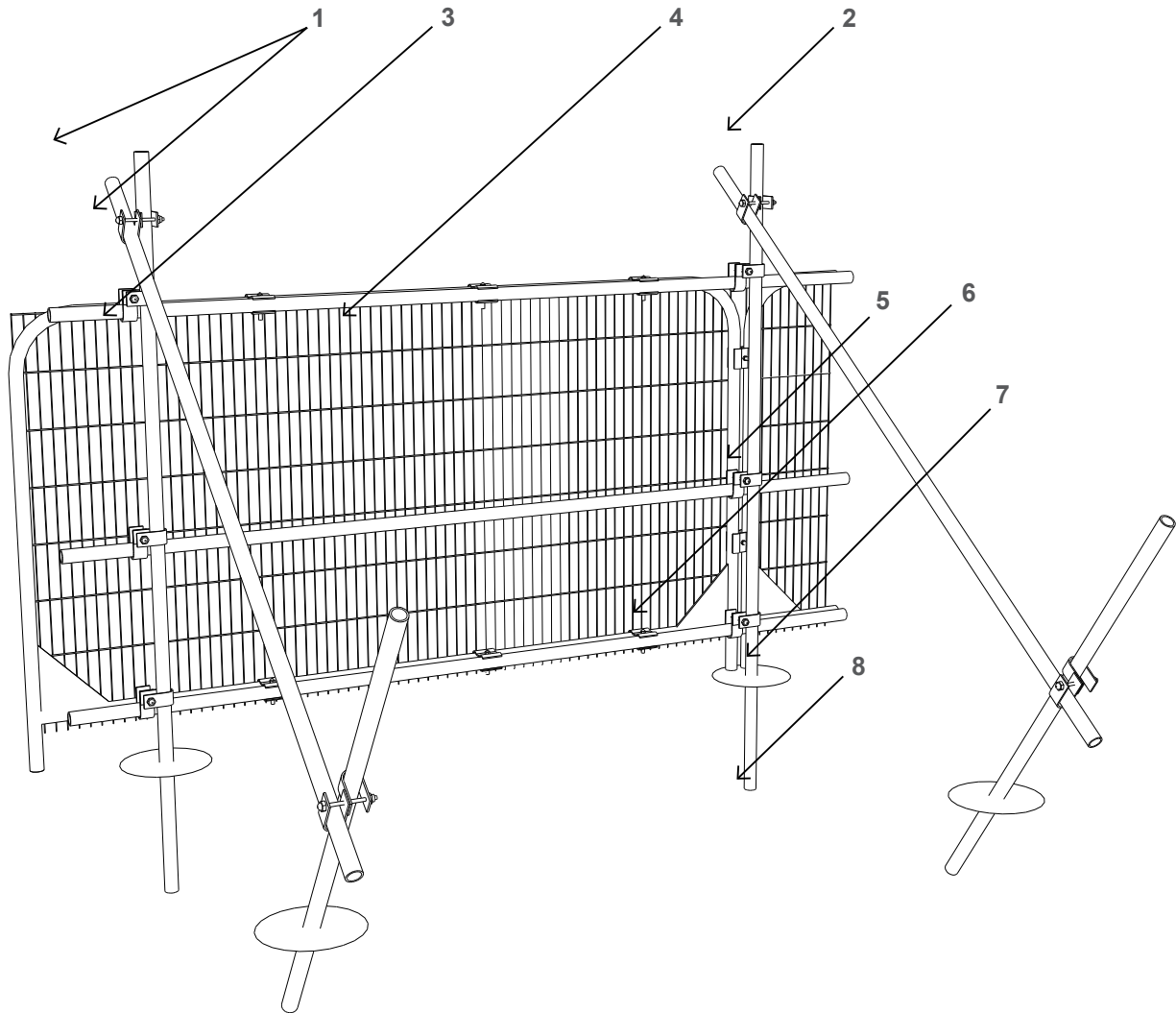


Figure 10: Protective barrier

- 1 Standard scaffold poles
- 2 Uprights to be driven into the ground
- 3 Panels secured to uprights with wire ties and where necessary standard scaffold clamps
- 4 Weldmesh wired to the uprights and horizontals
- 5 Standard clamps
- 6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
- 7 Ground level
- 8 Approx 0.6m driven into the ground

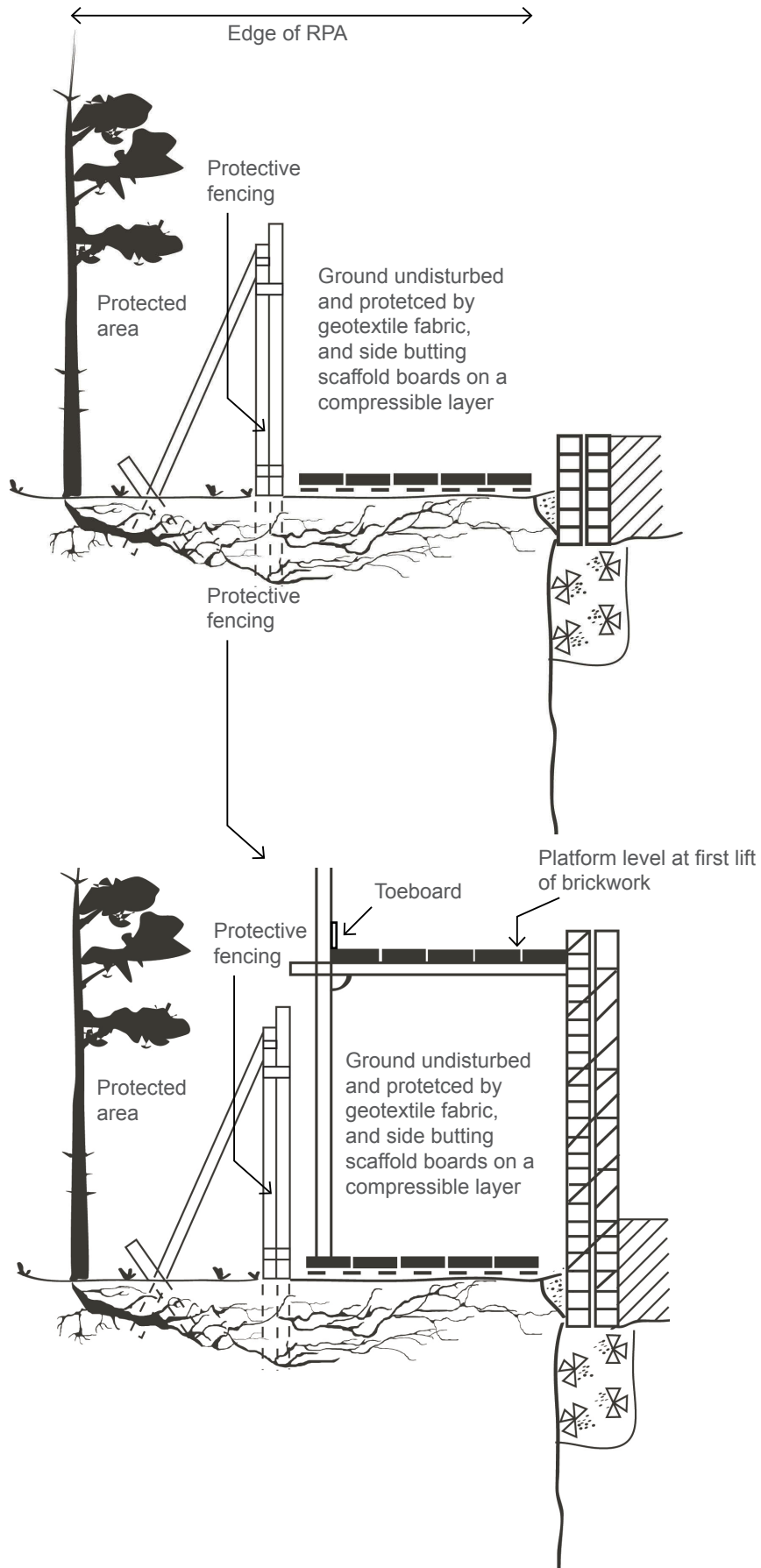


Figure 11: scaffolding within the RPA



3.5 Arboricultural Method Statement

On sites where trees are likely to be particularly vulnerable to damage the submission and approval of a detailed method statement for works near trees may be required. This is a particularly common requirement on congested development sites where working/storage space is very limited.

A method statement is likely to be required when one or more of the following aspects are a consideration at the time a planning application is submitted:

- Site construction access.
- Demolition of existing structures.
- Removal or replacement of existing surfacing.
- Groundworks directly adjacent to trees designated for retention.
- Positioning site huts and temporary toilets for use during the demolition/construction phase (including their drainage requirements).
- Space requirements for storing materials, spoil and fuel and the mixing of cement/concrete.
- Construction of underground services runs, bike sheds, bin storage areas.
- Specification and installation of temporary and permanent access paths/driveways near trees.
- Landscape operations (e.g. soil preparation within the RPA).

- Space requirements for piling rigs, foundation excavations and construction works.
 - All changes in ground level, including the location of retaining walls, steps etc.
- HDC will be guided by the recommendations contained within BS 5837 2012: Trees in relation to design, demolition and construction - Recommendations. This document provides essential advice. However, the Council will consider new methods or processes where these can be shown to improve the likelihood of tree retention on the site.





4 Planning permission – submission requirements

4.1 Important pre-application information

The following applies to all applications where there are trees on or adjacent to the proposed development site. Failure to submit the required information will prevent the application from being registered, or lead to a delay in determining an application.

Note: It may not always be necessary in all cases to provide all the information listed below, as the requirements of each individual development will vary. You are advised to seek pre-application advice if you are in doubt as to what may be required. If pre-application advice is not sought from the Local Planning Authority, applicants will usually be required to submit a Land Survey, Tree Survey and Tree Protection Plan with their planning application. If this information is not submitted it may delay the registration or determination of the application.



4.2 Submission Requirements

The following information should be submitted as part of the planning application:

- Land Survey (See section 2.4 above for guidance)
- Tree Survey (See section 2.5 above for guidance)
- Tree Protection Plan and Arboricultural Method Statement (AMS) (The content or necessity of an AMS will be dependent on the requirements of each individual application. See section 3.4 above for guidance.)
- Landscaping/tree planting scheme. (Tree planting proposals should include species and size of each tree measured by girth in cm, as should any proposed changes in ground levels)

The Council may request additional information before determining an application. Once an application has been received by the Planning Department it will be necessary for a Council Arboricultural Officer to visit the proposed development site.



5 Implementation of planning controls

5.1 Planning Conditions

Experience has shown that a tree protection scheme is more likely to be successfully implemented if submitted and approved as part of the planning application.

Conditions will be attached to a planning permission, for example to ensure that the Root Protection Areas of retained trees are adequately protected with tree protection barriers for the duration of the demolition/construction phase of the development.

Developers will be required to notify the Council's Planning Service prior to commencement of any works on site, including demolition. At this stage Council Officers will inspect the measures that have been put in place to protect trees during construction. Ad-hoc visits will be made throughout the construction phase to check that tree protection measures are still in place. The Council will exercise their powers of enforcement, where necessary, to ensure compliance.

The Council will not only expect developers to obtain the appropriate professional advice during the application stage but may attach a condition to ensure adequate supervision of the construction phase by the developer's own Arboriculturist.

If difficulties are experienced at any time during the construction process in complying with conditions relating to trees (e.g. in maintaining the distances for protective fencing in accordance with the Tree Protection Plan) and it is desired that the terms of any conditions be modified, it will be necessary to obtain the written agreement of the Council.

5.2 Failure to comply with planning conditions

Where a breach of any tree protection related planning condition is identified, the Council will take appropriate enforcement action. This may include serving a 'Stop Work Notice' on a construction site where a contravention has occurred, or the instigation of legal proceedings under Section 210 of The Town & Country Planning Act 1990.



5.3 Commencement of site works

All operatives should be aware of all tree protection measures, and a copy of the approved Tree Protection Plan, any Arboricultural Method Statements and a copy of the planning consent with conditions should be available for inspection on the site. The following simple rules MUST be adhered to throughout the demolition and construction phases of the development:

Do not remove the protective fencing for any reason without prior approval.

- Repair any damage to the protective fencing immediately.
- Do not park or operate machinery and equipment near trees.
- Do not store materials within the RPA.
- Contaminants (fuel, oil and chemicals) must be stored at least 10m away from the protected area.
- Do not mix cement near trees.
- Do not light fires within 10m of any tree and beware of flames drifting towards branches.
- Do not secure temporary overhead cables or floodlights to trees.
- Do not change the ground level or excavate within the branch spread.
- If a retained tree is damaged in any way, the contractor should inform the Council's Arboricultural Officer or appointed Arboricultural Consultant immediately.

5.4 Removal of tree protection

No tree protection should be removed until the supervising Arboricultural Officer or developer's appointed Arboricultural Consultant has inspected the site. Failure to comply could prevent the full discharge of tree protection conditions.



6 More information

For further advice contact:

Planning Department

Huntingdonshire District Council
Pathfinder House
St Mary's Street
Huntingdon
PE29 3TN
Tel: 01480 388388

Building Regulations

Contact: Building Control
Tel: 01480 388388

Other useful contacts

Arboricultural Association

Tel: 01794 368717
Web: www.trees.org.uk

Department of Communities and Local Government

Web: www.communities.gov.uk

Department for Environment Food and Rural Affairs

Web: www.defra.gov.uk

Forestry Commission

Web: www.forestry.gov.uk/ltwf

Useful documents

British Standard BS3998: 2010 Tree Work Recommendations.

British Standard BS5837: 2012 Trees in Relation to design, demolition and construction – Recommendations.

British Standard BS8206: Part 2: 1992 Code of Practice for Daylighting.

Building Research Establishment (1998). Site Layout Planning for Daylight and Sunlight; A Guide to Good Practice.

National House Building Council Standards Chapter 4.2 (as amended): Building Near Trees.

National Joint Utilities Group Publication: Volume 4 (as amended): Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.

Huntingdonshire District Council Tree Strategy.



Appendix 1: The Legal Framework

Section 197 of the Town & Country Planning Act 1990 (“the Act”) places a duty on any Local Planning Authority:

(a) To ensure whenever it is appropriate that in granting planning permission for any development adequate provision is made, by the imposition of conditions, for the preservation or planting of trees; and

(b) To make such Orders (Tree Preservation Orders, “TPO’s”) under Section 198 as appear to the Authority to be necessary in connection with the grant of such permission, whether for giving effect to such conditions or otherwise.

In addition to the Act Huntingdonshire District Council is also guided by current national Planning Practice Guidance for Tree Preservation Orders and trees in conservation areas.

Many trees in the District are already protected by TPO’s or by merit of their location within a Conservation Area. Under the Town and Country Planning Act 1990 (as amended) it is an offence to cut down, uproot or wilfully destroy/damage a protected tree, or to top or lop it in a manner which is likely to destroy it without the consent of the Local Planning Authority.

The Council regards unauthorised removal of or damage to protected trees very seriously and will not hesitate to prosecute whenever the circumstances warrant it.

Appendix 2: Planning Policy and Guidance

The preservation of existing trees is a material consideration in the planning process, whether they are subject to existing statutory protection or not. Whilst trees may affect the development

potential of some sites, in many cases they can be successfully integrated into new development schemes, adding to the overall value of a development.

The Huntingdonshire Tree Strategy highlights the importance of having an SPD for Trees and Development. This is documented as action plan point 2.4: Guidance Note 3: Guidance for Trees and Development to be adopted within the LDF as SPD (Supplementary Planning Document) which is “To produce a Supplementary Planning Document to ensure the protection of trees to be retained on development sites and to require high standards of replacement tree planting and landscaping.”

The Huntingdonshire Core Strategy (Huntingdonshire District Council, adopted 2009) documents contain a number of key policies and recommendations relating to trees which are a material consideration when determining planning applications. Council policy in respect of trees and development sites is set out in the ‘saved’ policies contained in Huntingdonshire Local Plan; some of the most relevant policies are summarised below:

- En5 Conservation Areas character
- En6 Design standards in Conservation Areas
- En9 Open spaces, trees and street scenes in Conservation Areas
- En18 Protection of countryside features
- En19 Tree Preservation Orders
- En20 Landscaping schemes for new development
- En22 Nature and wildlife conservation