

Useful information: BS5837 (2012) pre-planning tree surveys

1. Introduction

Trees are a material consideration in the planning process, so it is essential - from the earliest stage - that they are considered as potential constraints to development. The British Standards Institute document titled 'Trees in Relation to Design, Demolition and Construction - Recommendations', is the relevant standard¹.

Trees can be designed around, and it is possible to integrate development close to trees. However this takes good planning and design, and a good tree consultant who understands the potential issues and methods of overcoming them. The starting point for this process is a clear and detailed tree report & constraints plan. Ideally the tree survey should precede any development designs: it is easier, and less costly, to design around tree constraints than it is to try and mitigate anticipated conflicts with trees.

In order to allow this collaboration to progress quickly and easily, it will be necessary to provide certain information and documents to appropriate specifications (see 'Survey Requirements' below). If this is not done then delays, inefficiencies and misunderstandings can occur, and they can lead to raised costs and - in the worst case - a sub-optimal tree report.

We remain objective throughout the process. Our job is to provide the information required by the designers to minimise any impact on trees, and for the local planning authority to be able to make decisions regarding the application.

2. Reports

Tree Survey

The tree survey records any potentially affected trees (over 75 millimetres in diameter at 1.5 metres height).

The accompanying tree constraints plan (TCP) shows the below- and above-ground constraints, i.e. the crown spread and root protection areas (RPAs).

Arboricultural Method Statement

The arboricultural method statement (AMS) presents the conflicts between the design and retained trees, and how to mitigate them.

It is accompanied by a tree protection plan (TPP) in CAD format (see sections 4.2 and 4.3 for details).

¹ For a brief summary of the significance of trees on development sites, it is worth having a read of section 3.5 (pages 113 - 114) of the [Edinburgh Design Guidance](#).

3. Trees in the Planning System - a summary

Note: See [BS5837 Figure 1](#) (page 4) for a detailed overview of the process.

1. Before the design, a tree survey and tree constraints plan (TCP) should be completed. These constraints should inform the design.
2. Develop the design, considering retained trees.
3. Where the design has an impact on retained trees, there may be a requirement for further documents, i.e. an arboricultural method statement (AMS) and tree protection plan (TPP).

4. Survey Requirements

4.1 Information Required

- Site location: e.g. street address, Google Maps location, What3Words, grid reference.
- Site access: e.g. restrictions, security-controlled, development site, induction required.
- Site features: e.g. difficult terrain, hazardous underfoot, other known hazards.
- Access to trees: e.g. features blocking access to trees, such as ivy, vegetation, debris, built features, natural features. If the trees cannot be fully seen or accessed then they cannot be fully assessed.
- The name, address and contact details of the payee.

4.2 Topographical Drawing Specification for the Tree Survey Software

A CAD drawing will be required to complete this work. In order for the drawing to work with our tree survey software, it should conform to these specifications:

- Trees within - and close to - the site should be accurately located on the drawing.*
- It must be an ASCII DXF (not a Binary one; I can convert it from a DWG if necessary).
- The drawing must be fully “exploded”.
- XREF’s should be removed (links to external files).
- It must be correctly oriented (north to the top).
- If possible, the drawing should be scaled and geo-referenced.

4.3 Topographical Drawing Requirements from BS5837:2012

“4.2.4 The survey should record:

- a) spot levels at the base of trees and throughout the site at an interval appropriate to meet design requirements, recorded as a grid and interpolated as contours, ensuring that any abrupt changes, embankments, ditch inverts and retaining features are recorded;
- b) the position of all trees within the site with a stem diameter of 75 mm or more (see NOTE), measured at 1.5 m above highest adjacent ground level;

- NOTE In the case of woodlands or substantial tree groups, only individual trees with stem diameters greater than 150 mm usually need be plotted. [The location of the stems of woodland or group edge-trees should be recorded].
- c) the position of trees with an estimated stem diameter of 75 mm or more that overhang the site or are located beyond the site boundaries within a distance of up to 12 times their estimated stem diameter;
- d) for individual trees, the crown spread taken at four cardinal points; for woodlands or substantial tree groups, the overall extent of the canopy;
- e) the extent, basal ground levels and height of shrub masses, hedges, hedgerows and stumps;
- f) other relevant landscape features and artefacts, such as streams, buildings and other structures, boundary features and means of enclosure, trenching scars near to trees, and overhead and underground utility apparatus, including drainage runs with manholes and invert levels.”

5. Further Reports

It is best to avoid the design coming into conflict with trees, however if this occurs then further reporting may be required by the local planning authority (LPA):

- Arboricultural Impact Assessment (AIA),
- Arboricultural Method Statement (AMS),
- Tree Protection Plan (TPP).

The AIA evaluates the direct and indirect effects of the proposed design, and where necessary, mitigation measures are outlined to prevent or limit damage to trees.

The AMS details how the proposed construction works can be undertaken with minimal risk of adverse impact on trees to be retained. These details are shown on the accompanying Tree Protection Plan (TPP).

The AMS is essentially an evolution of the AIA, so I normally suggest only producing the AMS and TPP. Where the conflicts are minimal and/or easy to mitigate, I will usually suggest just producing a detailed TPP, so long as I think it will satisfy the LPA. These measures help to reduce the costs to our clients.

These documents rely on information from the tree survey, tree constraints plan and the design, therefore they cannot normally be produced - nor accurately quoted for - early in the process.

Throughout the preparation of this report we may suggest amendments to the design that are aimed at reducing the conflicts, and increasing the likelihood of the planning application being granted.

Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP)

In order to produce a satisfactory AMS and TPP, we would need as much detail regarding the site and design as possible. This information should be on a detailed CAD drawing, and should be supported by site drawings and/or written information as appropriate.

Required details (if available and applicable):

- The design.
- The location of all new services, including foul and surface water drains, land drains, soak-aways, gas, oil, water, electricity, telephone, television and other cables.
- Changes in ground level.
- The location of retaining walls, steps and back filling.
- Anything that may affect the hydrology of the site.
- Soft- and hard-landscaping works.
- Surface changes.
- The location of all site huts, temporary latrines (including their drainage), cranes, plant and other temporary structures.
- The location of site construction access and egress.
- The location of storage areas for materials, spoil and fuel, cement and concrete mixing and any car parking.
- Any other factor that may affect a tree.

Terms and Conditions

Arbor Vitae's [terms and conditions](#) can be viewed on our website.

BS5837 Figure 1: Trees in the Planning Process

