ARBOR VITAE
TREE CONSULTANCY

BS5837 Tree Surveys - Useful Information for Developers and Architects

1. What is a BS5837 tree survey?

This is the British Standard titled 'Trees in relation to design, demolition and construction'. It contains recommendations on how to survey trees on development sites and how to protect trees that are retained.

2. Why do I need to get a tree survey?

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.

It can be possible to integrate a development close to trees. However this takes good planning and design, as well as a knowledgeable tree consultant who understands the potential issues and methods of overcoming them.

Getting the tree survey early in the process can save a lot of time, money and frustration.

3. When should I get a tree survey?

The tree survey should be commissioned at the feasibility stage (RIBA Stage 0: Strategic Definition). The tree survey will help developers and architects understand the constraints posed by trees, and will enable them to design around trees that are to be retained.

4. What information does the tree surveyor need?

For the quote, we would need to understand how many trees, groups and woodlands are to be surveyed. Other important information includes:

- Site location.
- Access restrictions & site constraints.
- Site features including steep terrain, dense undergrowth and ivy on trees.

© Arbor Vitae Arboriculture Ltd

For the survey, we would need:

- A topographical drawing in (CAD format) with the trees accurately located (appendix 2). For smaller sites, it may be possible to do the tree survey without a topographical drawing.

5. What can I expect to get back from the tree surveyor?

The tree survey records many details about the trees, including the retention category and several dimensions. These are tabulated and included in a written tree survey report.

Relevant details of the trees are plotted onto the topographical drawing to produce the Tree Constraints Plan (TCP). The developer and architect can use the TCP to design around retained trees (RIBA Stage 1: Preparation & Briefing).

We provide all plans in PDF, DXF and DWG format. Reports are provided as PDFs. Tree Schedules are provided as PDFs, but can also be provided as CSV files, on request.

6. Do I need to retain every tree?

Low quality trees (category U) can usually be removed. Other trees are categorised from C to A, with A being the highest quality and the most protected. It is possible to request the removal of higher quality trees, however it is the local planning authority - not the tree consultant - who will make the final decision.

7. What happens after the tree survey?

Where the design has an impact on retained trees, there may be a requirement for further documents, i.e. an Arboricultural Impact Assessment (AIA) and/or an Arboricultural Method Statement (AMS). Both of these would be accompanied by a Tree Protection Plan (TPP).

Arboricultural Impact Assessment (AIA)

This report analyses the interaction of the design and the trees. Guidance would be provided regarding possible mitigation measures for anticipated conflicts with retained trees. This would be accompanied by a plan showing the predicted status of the trees: Retained; Removed; Pruned. This fits into RIBA Stage 2: Concept.

Arboricultural Method Statement (AMS)

This is a technical document that details how the development can be carried out with minimal harm to retained trees. It relies on a finalised design, and detailed design information.

This fits into RIBA Stages 3 & 4: Spatial Coordination, and Technical Design.

The AMS relies on being given accurate and detailed information regarding the design features, especially those that could impact retained trees (see Appendix 3).

Tree Protection Plan (TPP)

This is an accurate drawing showing trees and their constraints alongside the development design. It would show which trees are to be removed or retained, as well as any tree-protection measures, such as barriers, ground-protection and special engineering methods. This accompanies the Arboricultural Method Statement (AMS).

Arboricultural Supervision

The local planning department may make a condition to have the site and works monitored by a tree consultant; this would be to ensure that any conflicts between the construction processes and the trees can be resolved in an efficient and satisfactory manner.

This fits into RIBA Stages 5 & 6: Manufacturing and Construction, and Handover.

8. Will this ensure my planning application is approved?

A tree survey is often required by the local planning authority, but it does not ensure that your application will be approved. We will always offer our advice on how to improve the design, so as to increase the likelihood of the application's success.

Ultimately, it is for the planning officers and planning committee to decide on each development. If you are able to arrange an early meeting with a planning officer to discuss your project, then you may be able to gain some valuable insight into what might be approved.

Appendices

1. References

British Standards Institute (2012), BS 5837 'Trees in Relation to Design, Demolition and Construction - Recommendations', BSI, London.

RIBA (2020), 'Plan of Work 2020 - Overview', London.

2. Guidance for Topographical Surveyors (from BS5837, section 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.

© Arbor Vitae Arboriculture Ltd

3. Design features that could impact trees (adapted from BS5837, section 5.5.6)

This list is not exhaustive:

- Demolition
- Excavations
- New services
- Foundation extents
- Ground level changes
- Surface changes
- Building heights
- Contractor facilities area
- Site access & egress routes
- Landscaping

© Arbor Vitae Arboriculture Ltd