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BS5837:2012 Trees in relation to demolition, design and construction report

Salisbury Marketplace.

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Survey Address:	Salisbury Market Square Blue Boar Row Salisbury SP1
Prepared by:	Luke Maylin
Date:	24/04/2026
Reference:	2026-5121

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Revisions

1st Revision

Revisions made to document:
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1. Introduction

1.1 On receiving instructions from Chloe Bickerstaffe of Paul Stevens Architecture, Luke Maylin, Arboricultural Surveyor for Bawden Tree Care, undertook a ground level visual assessment of all trees that could be affected by the proposed development in accordance with BS5837:2012.

1.2 This assessment includes collecting data on the trees to prepare;

- A schedule of the relevant trees and their values and benefits.
- An appraisal of the constraints imposed by the trees in the form of an Arboricultural Impact Assessment, accompanied by a Constraints Plan (appendix B).
- An Arboricultural Method Statement and a Tree Protection Plan (appendix C) to accompany the planning submission.

2. Report Summary

2.1 The report has been written following the recommendations and guidance given within British Standard 5837: 2012, Trees in relation to design, demolition, and construction, to provide a reasoned assessment of the potential impact to trees by the proposed development at Salisbury Marketplace in relation to the accessible toilet block extension.

2.2 Following a site survey and assessment, 10 trees were included within this survey, with 2 of these trees potentially being adversely affected by the proposed development.

3. Site Detail

3.1 Site Overview

3.1.1 The site comprises an open square located in close proximity to the Guildhall in Salisbury, specifically the area adjacent to the existing accessible toilet. The square is surfaced with hard paving and is used for pedestrian access and circulation.

The site contains ornamental trees and shrubs, along with associated street furniture including benches and cycle stands.

3.2 Site Photo

3.2.1 The image below is supplied courtesy of Google and shows an overview of the site. The red line shows the approximate site boundary.

3.3 Tree stock

3.3.1 The majority of the tree stock is located around the perimeter of Market Square. These trees have been planted as ornamental features within the landscape.

Only those trees near the toilet block have been measured and recorded. The species comprise a mix of London plane and lime trees. The toilet block

is situated between two London plane trees, identified as T01 and T02.

3.4 Soil assessment

3.4.1 BS5837:2012 advises the consideration of soil within the report due to its potential impact on structures. Structures located on shrinkable clay soils—soils that change volume with variations in moisture content—can be affected by tree-related subsidence, as tree water uptake can contribute to soil movement. To mitigate this risk, foundations on such soils should be designed accordingly, following the National House Building Council's Standards Chapter 4.2: Building Near Trees.

3.4.2 The soil on site is classified as Soilscape 20, described as loamy and clayey floodplain soils with naturally high groundwater. This was found using the Landis Soilscapes Viewer.

4. The Proposal

4.1 Project details

4.1.1 The proposal involves the expansion of the existing accessible toilet provision from a single cubicle to two cubicles. This will require the removal of existing walls and the construction of new walls, using materials to match the existing structure.

4.1.2 The proposed expansion encroaches into the Root Protection Area (RPA) of T02 and results in a very minor overlap with the RPA of T01.

5. Arboricultural Survey Summary

5.1 Date of survey and weather conditions

5.1.1 The survey was carried out by Luke Maylin on the 7th of April 2026.

5.1.2 The weather was bright and sunny, with no adverse impact on the survey.

5.2 Methodology

5.2.1 For the purposes of this survey, a drawing of the site, adapted from the existing site plan, supplied by Paul Stevens Architecture, has been included to show tree locations, IDs, categories, and locations of required protective measures, (see Appendix B).

5.2.2 All trees that were identified as potentially posing a constraint to development have been plotted. This includes trees located within the development area as well as those in close proximity to it.

5.2.3 The BS5837:2012 makes provision for trees to be categorised for both quality (A, B, C or U) and a sub-category for each of 1, 2 or 3.

5.2.4 Trees are categorised in line with BS5837:2012 Trees in relation to design, demolition and construction as follows:

Table 1:Tree categories in line with BS5837:2012

A	Trees of high arboricultural value that should be retained and protected throughout the development. Veteran trees are automatically awarded 'A' status.
B	Retention preferable. Trees of good condition and character which are appropriate for the location and in good physiological and structural condition. These trees should be retained unless they will be a severe impediment to the proposal or there is an overriding public interest that warrants their removal.
C	Trees of generally lower arboricultural value by dint of character or condition. 'C' trees should not be a constraint on development.
U	Trees that should be removed on arboricultural grounds. Often trees in poor condition can be left 'in situ' until a proposal means the potential target increases, making their removal more urgent or necessary.

Trees are further categorised into sub-categories, using a numerical suffix to denote the following perceived values:

Table 2 Tree sub-categories in line with BS5837:2012

1.	Trees of primarily arboricultural qualities. High value trees might be because they are particularly good examples of their species, because they are rare of unusual or because they are important components of a group feature such as an avenue.
2.	Trees of landscape importance – for example, trees of particular visible importance in a setting or view.
3.	Trees of cultural value. This may be due to historic links or conservation value – such as veteran trees or commemorative trees.

For example, a veteran tree of landscape importance would be categorised as A2, A3.

5.2.5 A full description of the trees found, and their categories, is included in the tree survey data provided in Appendix A. The data table includes stem diameter measured from 1.5 metres above ground level, height, crown spread, age class, and physiological and structural condition. A tree quality assessment using the data is then formulated to categorise trees for removal or retention.

5.2.6 Stem diameters are used to calculate the root protection areas (RPAs), which have been plotted and adjusted for site features, (see Appendix B). The RPA is the area in which most tree roots are anticipated to be growing. As root damage is a common cause of tree loss, the RPA is an area of provisional exclusion for construction activity.

5.2.7 Trees are a material consideration in the planning process and, as such, must be included as part of the decision-making process.

5.3 Caveats and Limitations

5.3.1 The purpose of this report is to determine any constraints that need to be considered in relation to trees – both above and below ground – during the development design, to assess the potential impact of the development to the amenity value of trees, and to provide an Arboricultural Method Statement (AMS) with Tree Protection Plan (TPP) in order to minimise, as far as is practical, damage to trees and their rooting systems.

5.3.2 Only trees with diameters greater than 75mm are included in the survey, unless there is deemed a valid reason for their inclusion.

5.3.3 Root protection areas are calculated in line with BS5837:2012 and are adjusted to reflect topographical constraints on site. This is based on professional experience

and has not been confirmed by trial pitting. There is a level of unpredictability in calculating exact tree root locations and therefore, where there is a possibility of obstruction or damage to roots, trial holes are recommended prior to construction.

5.3.4 This inspection was carried out for the purposes of creating a BS5837 report in relation to demolition, design and construction to accompany a planning application. The survey is not a full tree condition assessment and as such the trees were not specifically inspected for their overall health and condition. Any suggested works within the report should not be taken as a full specification for tree works.

5.3.5 Visual inspection of the trees was taken from ground level only, and did not include any further in depth investigations nor involve any climbing or observations from higher elevations.

5.3.6 Access to certain trees may be restricted, limiting the ability to detect potential defects or other notable features. As a result, a full evaluation of the tree's overall condition and risk may not be possible, and comprehensive management recommendations cannot be provided. Measurements will be estimated, and categorisation and work requirements will be based on the assessments that were possible at the time.

5.3.7 The AMS outlined in this report must be agreed with planning before the commencement of any works.

5.3.8 Trees are living organisms whose health and overall condition can change rapidly. The conclusions and recommendations contained within this report are valid for a period of twelve months. The period of validity may be reduced if significant changes occur to either the trees or to the landscape within the immediate proximity of the trees.

6. Arboricultural Impact Assessment

6.1 Tree constraints summary table

6.1.1 The following trees were identified to pose a constraint to the development, and the proposal has the potential to damage the following trees and groups, either directly or indirectly:

Impact	Reason	High Value A Class Trees	Moderate Value B Class Trees	Low Value C Class Trees	Trees for Removal/ U Class Trees
Trees to be removed	To facilitate development	-	-	-	-
Retained trees that may be damaged through disturbance to RPAs	Removal of existing surfacing/structures/ landscaping services Installation of new surfacing/structures/ landscaping/services	-	T01, T02	-	-
Retained trees to be pruned	Remediation of defects, Raise low branches	-	-	-	-

6.2 Impact assessment

6.2.1 This impact assessment evaluates the direct and indirect risks and threats associated with the proposed construction to trees both within and near to the proposed development site and seeks to mitigate those risks through the implementation of a sound and recognised methodology set out within the AMS.

6.3 Tree Preservation Orders (TPOs) and Other Legal Restrictions

6.3.1 The site is within the Salisbury Conservation Area and there are no TPOs on site. This has been confirmed by Wiltshire Council's online Planning Explorer.

6.3.2 However, as planning consent overrides TPO protection, no differences to the value or importance of the trees depending on TPO status is made in this report, and all care must be taken to protect the trees that are to be retained.

6.4 Tree removals

6.4.1 The proposal does not involve the removal of any trees.

6.5 Tree pruning

6.5.1 No tree pruning is anticipated, but if some tree work is desired to provide access or clearance, it is expected to be minimal and not cause a detrimental impact to the trees.

6.6 Above-ground considerations

6.6.1 The proposal involves the extension of the toilet cubicles within the canopy spread of T01 and T02. As such, appropriate above-ground protection measures will be required. Protective fencing will ensure adequate separation between the tree stems and construction activities.

6.7 Encroachment into Root Protection Areas (RPAs).

6.7.1 The RPA of trees T01 and T02 overlap with the proposed demolition and construction activities.

It will be necessary to plan and assess access routes, working locations and methods, in order to avoid impacting on trees to be retained. If this is not considered, there is a high risk of trees being damaged both root severance for foundation construction.

6.7.2 Alternative designs and locations for the cubicles have been considered but are not deemed suitable, due to the presence of existing below-ground service infrastructure, the constraints imposed by the existing building, and the functional use of the surrounding area. Accordingly, the proposed design is considered to represent the most cost-effective and practical solution in terms of both time and resources.

6.7.3 The use of sensitive foundation installation methods, such as ground screws, will minimise impact on the rooting environment and enable the works to proceed whilst reducing potential harm to the trees. Ground screws are to be installed at each corner of the proposed building footprint, with concrete slabs laid above to form the foundation.

6.7.4 During installation, all practicable measures shall be taken to avoid significant roots. Any root pruning shall only be undertaken under arboricultural supervision to ensure that it does not adversely affect the long-term health of the trees.

The trees currently exhibit good overall health and vitality and are expected to tolerate and recover from any minor root pruning that may be required.

6.7.5 The proposed expansion will increase the structural footprint within the RPA of T02 to approximately 4.13% of the total RPA, which is within the generally accepted threshold of 20% encroachment.

As the existing surface comprises hardstanding, the development is unlikely to result in any significant additional impact on soil aeration or moisture exchange, which are likely to be already reduced.

6.8 Ground level changes

6.8.1 The proposal does not involve any changes to the existing ground level.

6.9 Shading

6.9.1 Shading is not anticipated to be a cause of concern for the proposed development.

6.10 New tree planting

6.10.1 The proposal does not involve any new planting.

6.11 Post development considerations

6.11.1 The proposal is not anticipated to have any adverse impacts on the retained trees once the development has been completed.

6.12 Upgrading existing services or installing new services

6.12.1 The installation of new plumbing for the additional toilet and sink will connect to the existing infrastructure and is therefore expected to involve minimal disturbance. Works are potentially to include exposing the existing pipework, removing a section of pipe, and installing the new connection.

Where practicable, connections will be made above ground to avoid encroachment into the RPA. Should below-ground works be required, these will be limited in extent and undertaken with minimal ground disturbance.

6.12.2 Any excavation required to expose existing services shall be carried out by hand tools under arboricultural supervision only to avoid damage to roots, and uncover the required area only. Roots of 25 mm diameter or greater (or as otherwise specified by the arboriculturist on site) shall be retained where possible. Where retention is not feasible due to engineering constraints, roots shall be cleanly and carefully pruned using sharp, sterilised tools and all exposed roots shall be immediately protected to prevent desiccation and physical damage.

6.13 Summary of impact

6.13.1 In conclusion, as long as the Arboricultural Method Statement is followed, the proposed development is not considered to have an adverse impact on the trees to be retained.

7. Arboricultural Method Statement (AMS)

Site Monitoring and responsibilities.

1. A copy of this AMS and the related TPP is to be retained on site at all times and all personnel associated with the construction process will be made familiar with the principles within.

2. Site activity will be supervised by an appointed project arboriculturist to coordinate with the following events and activities:
   • Pre-commencement meeting.
   • Tree protection installation.
   • Installation of the screw pile foundations.
   • Any digging for drainage/pipe installation that is below ground.

   A monitoring record sheet is included at the end of this method statement.

3. The Project Arboriculturist will be available as the first point of contact to attend site and advise on matters if required, outside of the site monitoring visits.

4. The designated main contractor will be responsible for ensuring that the planning conditions are adhered to and for ensuring that no damage occurs to the trees during the construction processes.

5. The designated main contractor will be responsible ensuring that this Method Statement and the Tree Protection Plan are followed.

Site Access and movement

6. All access for construction vehicles will be from the access point from Blue Boar Row.

7. The existing paving is sufficient ground protection for the passage of goods, materials and machinery within the RPA; however, additional ground protection will be needed in the vicinity of prolonged activities in the areas where the hard surfacing is removed.

Tree Works

8. No tree work is anticipated, but if some are required, all tree works, including those to facilitate the development are to be undertaken by a qualified arborist and will be conducted in accordance with BS 3998 2010: Tree Work – Recommendations.

Protection Measures

9. To protect the trees on site and off site and their relevant RPA's a construction exclusion zone has been marked out on the tree protection plan. This is to be fenced off using Heras fencing on rubber blocks as marked out in the tree protection plan.

10. The fencing may only be removed once all works have been completed and all materials have been removed from site. Fencing should contain appropriate information and warnings regarding the protection of trees. An example of acceptable signage is given in Figure 3.

11. Protective surfacing will be used over areas where the existing hard surfacing is to be removed to facilitate the construction. Plywood boards laid on a geotextile membrane for pedestrian movement and access will be sufficient to protect the ground prior to new permanent surfacing being installed.

12. Protective measures will be installed prior to the commencement of any construction activity and maintained for the duration, they may only be removed once all works have been completed and all materials have been removed from site.

Methodology for Activities

13. Any excavation within an RPA must be carried out by hand tools only, under arboricultural supervision.

14. To avoid damage to trees from the demolition of the walls of the existing cubicle to allow for the expansion, machinery will operate from outside of the RPA. For T02, the demolition will remove the wall sections from outside in, away from the RPA.

15. The removal of the existing ground paving within the RPA will be conducted using hand tools only.

16. Ground screws will be installed in each corner of the new structure, with concrete slabs as foundations to sit on the surface.

17. The location of each screw will first be hand dug to a depth of 600mm, to check for any major roots (roots over 250mm). Only once locations for all the screws have been agreed by both an arboriculturist and an engineer, then they can be installed. protective surfacing must be in place to protect the exposed areas of RPA during this process. Protective surfacing is to be removed before the concrete slab is cast. No concrete is to be poured in or onto the soil.

18. No wet concrete is to be poured inside an RPA unless the excavated area has been lined with an impermeable liner.

Root Protection and Pruning

19. Any roots smaller than 25mm in diameter, can be pruned back, preferably to a side branch, with suitable sharp pruning tools to ensure a smooth cut surface, and minimise tissue damage. Roots occurring in clumps or of 25 mm diameter and over should be severed only following consultation with the Project Arboriculturist.

20. Following exposure and any required pruning, all exposed roots shall be immediately protected to prevent desiccation and physical damage. Protection measures shall include wrapping in hessian or similar breathable material, and covering with damp sand, topsoil, or proprietary root protection products as appropriate. The wrapping shall be kept continuously moist until backfilling is undertaken.

21. If significant roots are uncovered that cannot be pruned without a detrimental effect to the tree, works in this area should cease and a new design and method statement should be agreed with planning before works may continue in this area.

Mixing and Storage

22. The extents of any site storage and mixing areas must not be near any Root Protection Area to prevent the risk of tree roots being damaged from the storage of materials, runoff/spillages etc. during the building process. Proposed areas on site for acceptable site storage have been identified on the tree protection plan.

Services

23. New pipes and plumbing to connect the new toilet and sink will be ahoined to existing infrastructure and will be located above ground where possible. If any below-ground work is required within the RPA, the section of pipe to be accessed will be exposed using hand tools only, and any exposed roots will be covered with hessian wrap to avoid desiccation.

Examples of barriers and signage

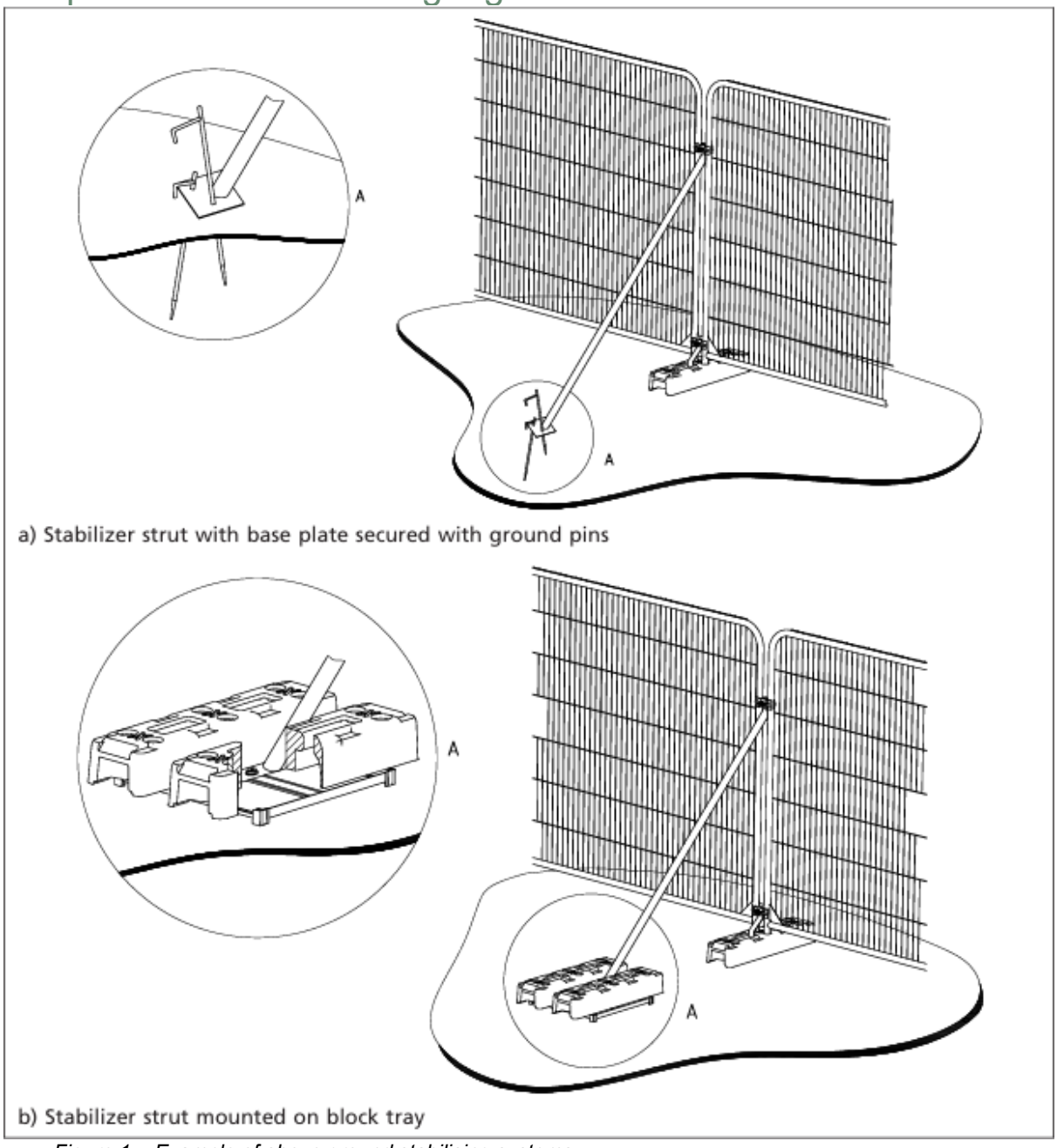
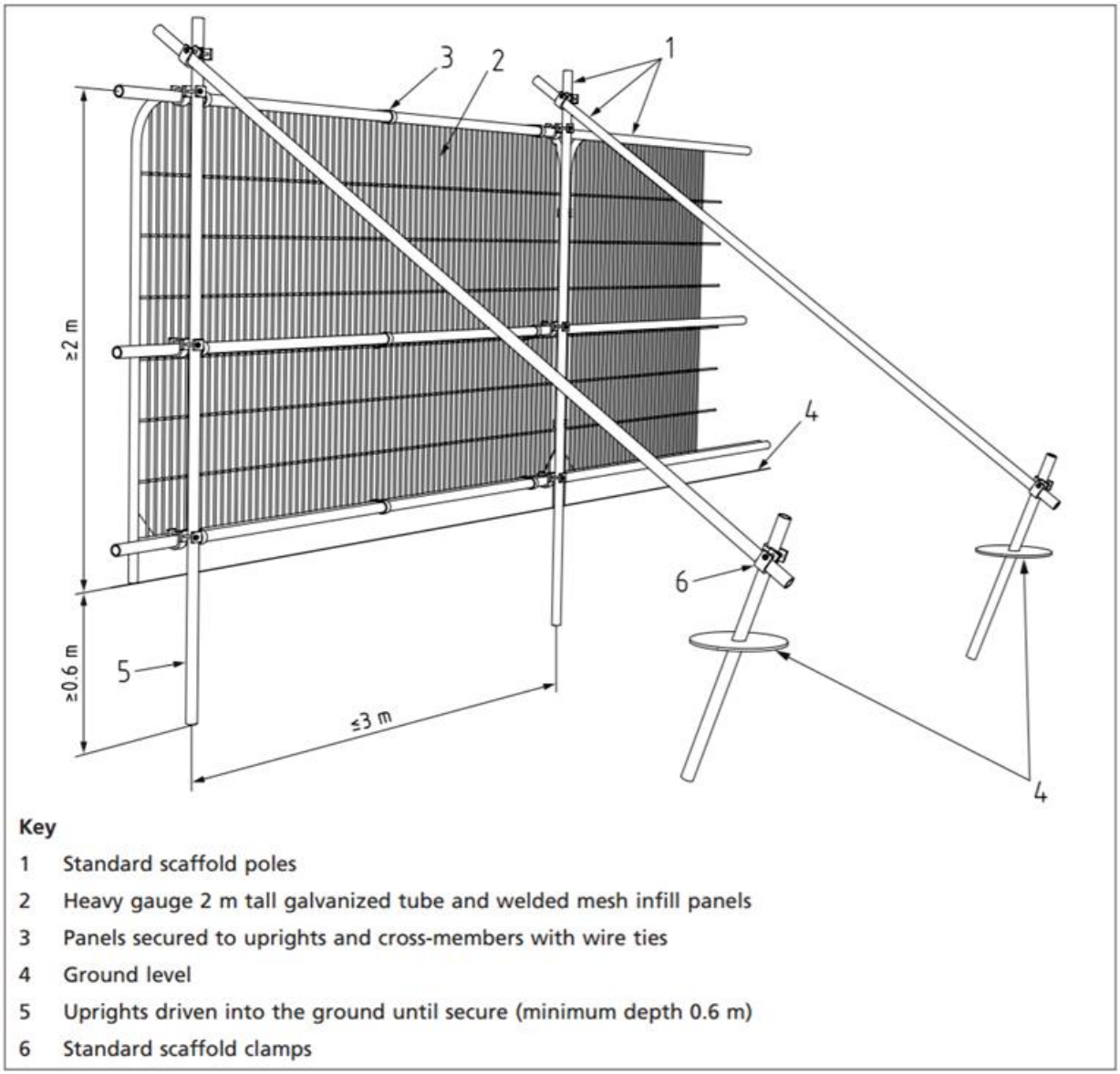


Figure 1 – Example of above ground stabilising systems.



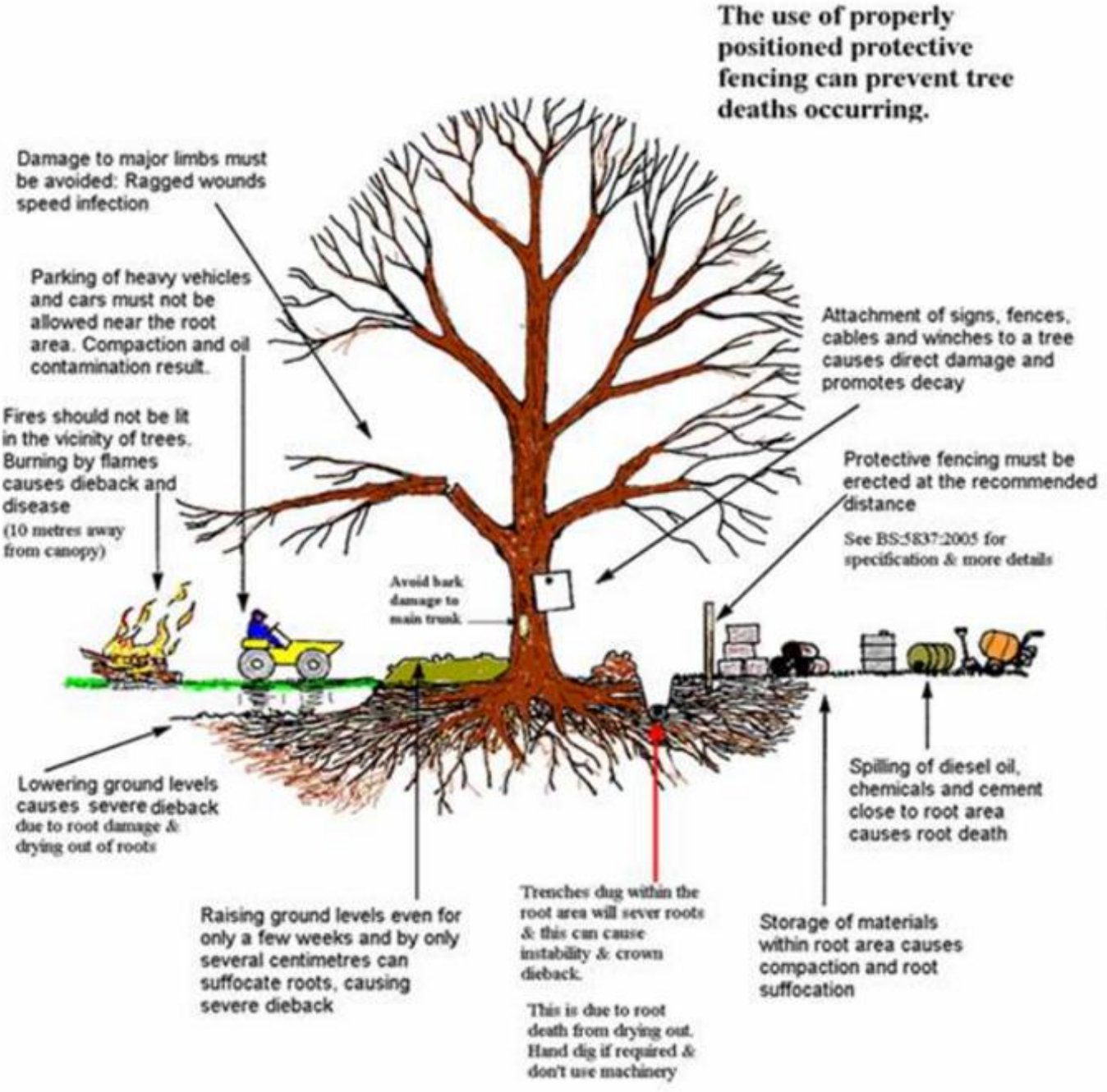
Key

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

Figure 2 – Example of acceptable protective barrier specification

Figure 3 – Example of protective barrier signage

Common causes of Tree Death



Protected Species (general information for tree works)

There are legislative acts which provide protection for wildlife, plants in Britain. The Wildlife and Countryside Act 1981 was introduced to protect the following:

- All wild birds, their eggs and nests.
- Shooting birds – limitation on shooting season so they can only be shot outside of the breeding season.
- Selling birds – the sale of some species of birds that have been bred in captivity and fitted with identification rings.
- Injured birds – can be treated as long as they are released afterwards. If they are seriously injured, they must be humanely put down.
- Endangered species – There are various species i.e.. red squirrel, hazel dormouse, bats, voles that are on the endangered species list.
- Common animals – Foxes and Rabbits, are not protected but some methods of killing them are prohibited i.e.. self-locking snares.
- Non-native animals – It is illegal to release or allow to escape, animals that are non-native i.e. mink.

Bats and nesting birds should be considered when undertaking tree works.

Conservation Status of British Bats

Virtually all bat species are declining and vulnerable. There is little historic data in relation to the various bat species and their numbers. The UK Government has drawn up the UK Biodiversity Action Plan and has designated five species of bats as priority species (greater and lesser horseshoe bats, barbastelle, Bechstein's and pipistrelle). These plans provide a plan for the maintenance and restoration of the former populations levels to be investigated.

Legal Status of British Bats

All British bats, their breeding sites and resting places are nationally and internationally protected.
All bat species in the UK are fully protected under the Wildlife and Countryside Act 1981 (as amended) through inclusion in Schedule S. All bats are also listed on Annex IV (and some on Annex II) of the EC Habitats Directive. The Conservation of Habitats and Species Regulations 2012 (as amended) make it an offence to; intentionally or deliberately kill, injure or capture (take) bats;

- Deliberately disturb bats (whether in a roost or not);
- Damage, destroy or obstruct access to bat roosts;
- Possess or transport a bat or any part of a bat, unless acquired legally;
- Sell, barter or exchange bats, or parts of bats

The legislation does not protect bat's foraging grounds but does protect their roost sites. Bat roosts are protected at all times of the year regardless of whether there are any bats present. Any disturbance of a roost due to development must be licenced.

Breeding birds

All nesting birds are protected under the Wildlife and Countryside Act (as amended) 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs.
Some birds are listed on Schedule 1 of the Act which also protects them from disturbance and it may be necessary to operate “no-go” buffer zones around such nests — typically out to 100m.

Planning policy guidance on the treatment of species identified as priorities under the biodiversity action programme suggests that local authorities should take measures to protect the habitats of these species from further decline through policies in local development documents and should ensure that they are protected from the adverse effects of development, where appropriate, by using planning conditions or obligations. The conservation of these species should be promoted through the incorporation of beneficial biodiversity designs within developments.

Glossary

Term	Meaning
RPA	Root Protection Area
CEZ	Construction Exclusion Zone
BS5837:2012	British Standard for trees in relation to demolition, design, and construction
BS3998:2010	British Standard: tree work recommendations
AIA	Arboricultural Impact Assessment
AMS	Arboricultural Method Statement
TPP	Tree Protection Plan

References and Resources

1. BS 5837:2012. Trees in relation to design, demolition and construction – Recommendations
2. BS 8545, Young trees: from nursery through to independence in the landscape Recommendations
3. BS 3998:2010 Tree work – Recommendations
4. BS 1722-18, Fences – Specification for steel mesh site perimeter temporary fencing systems
5. BS 4428:1989, Code of practice for general landscape operations (excluding hard surfaces)
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ARBORICULTURAL SITE MONITORING RECORD
Salisbury Marketplace

PURPOSE OF VISIT	TIMING	PERSONNEL PRESENT	OBSERVATIONS AND RECOMMENDATIONS	COMPLETE Y/N
1. Check Tree Protection is installed as AMS prior to the commencement of works	Pre-commencement			
2. Monitoring site visits by approved Arboriculturist to ensure continued compliance with AMS.	During Construction			
3. Final completion inspection and identification of any remedial actions	Completion of scheme			

Contacts			
Council Tree Officer:	[Name]	[Telephone]	[Email]
Site Manager:			
Arboriculturist:			
Project Agent:			

Notes:
[Inspector's comments and relevant information]