

Teesdale • Heritage • Trees

Arboricultural Impact Assessment for Proposals at
27 Main Road, Gainford, Co. Durham, DL2 3BE



14 May 2021



Report 917

Instructions and Introduction

1. I am instructed by Mr. David Hardy to carry out an Arboricultural Impact Assessment (AIA) for trees within and adjacent the property that might be affected by additional dwelling proposals. I should determine the likelihood of structural failure of trees on site, their condition, the impact of the proposed development on the tree stock and identify any mitigation measures. Such advice will help the client discharge their duties under the Occupiers Liability Acts 1957 and 1984 but is primarily commissioned to support a planning application.
2. An AIA would be required to support a planning application for any renovations in proximity to significant trees on and adjacent the site. The AIA is primarily a document to be read by Architects and Planners to inform the design process and satisfy adherence to Local Authority policies. An Arboricultural Method Statement is primarily for site managers once planning consent has been agreed and may be required by condition if one has not been produced at the submission of the planning application.

Scope of the report

3. Architect plans have been used for the drawings and the positions of the trees are considered reasonably accurate. Their position was fixed by triangulation using the façades of the dwelling and associated hard landscaping features.
4. The condition of each tree is based on the visual assessment of the tree using the Visual Tree Assessment (VTA) methodology, as devised by Mattheck (1991) and accords with BS5837;2012. See Appendix B. This report also satisfies the design processes A-G outlined in the BS5837;2012 Flow Chart for Development near trees. (See Appendix C)
5. The inspection of each tree was confined to ground observations only and excluded any aerial assessment of the canopy.

Limitations of the survey

6. Survey details are based on the condition of the tree at the time of the site visit. This may mean that certain signs of pests or diseases may evade detection due to the season in which the site visit took place. Some decay fungi only exhibit fruiting bodies annually and for a very limited period or may not reveal external signs, until decay is advanced. Trees are living organisms and change over time. They may also be affected by changes in their environment, and physical damage. The survey details are therefore a mere snap shot of the condition of the tree on

the day that it was visited. Further aerial inspections, invasive investigation or electronic assessment may form part of a works prescription.

Site visit

7. One site visit was carried out by Rodger Lowe on 14 May 2021.
8. Weather conditions on the day were dull, with light drizzle and with a little breeze.



Image 1 The site is illustrated by the position of the red line boundary

Lat./Long. 54°32'46"N , 01°43'53"W

Tree Constraints Assessment

Property/Site History

9. The dwelling is a detached residential dwelling with a large garden to the north. There are two garages, one which is free standing, and a number of larger sheds in the garden.

Status of the Tree Stock

10. The property does not lie within a Conservation Area and no Tree Preservation Orders apply to the site, therefore no prior consents are required to carry out tree works.

General Condition of the Tree Stock

11. The tree stock is low in quality and consists of a mix of fruit trees and conifers.

12. Root protection Areas (RPA's) have been annotated on the plan as red circles with a radius centred on the trunk of each tree. This type of annotation is the standard calculation and assumes that the tree is 'open grown' and has a uniform radial spread of roots unimpeded by the built or natural environment. Where features such as kerbs, large water courses or buildings have influenced root spread the RPA's have been modified (MRPA). The modified RPA's are no smaller than the nominal red circles, just a different shape.

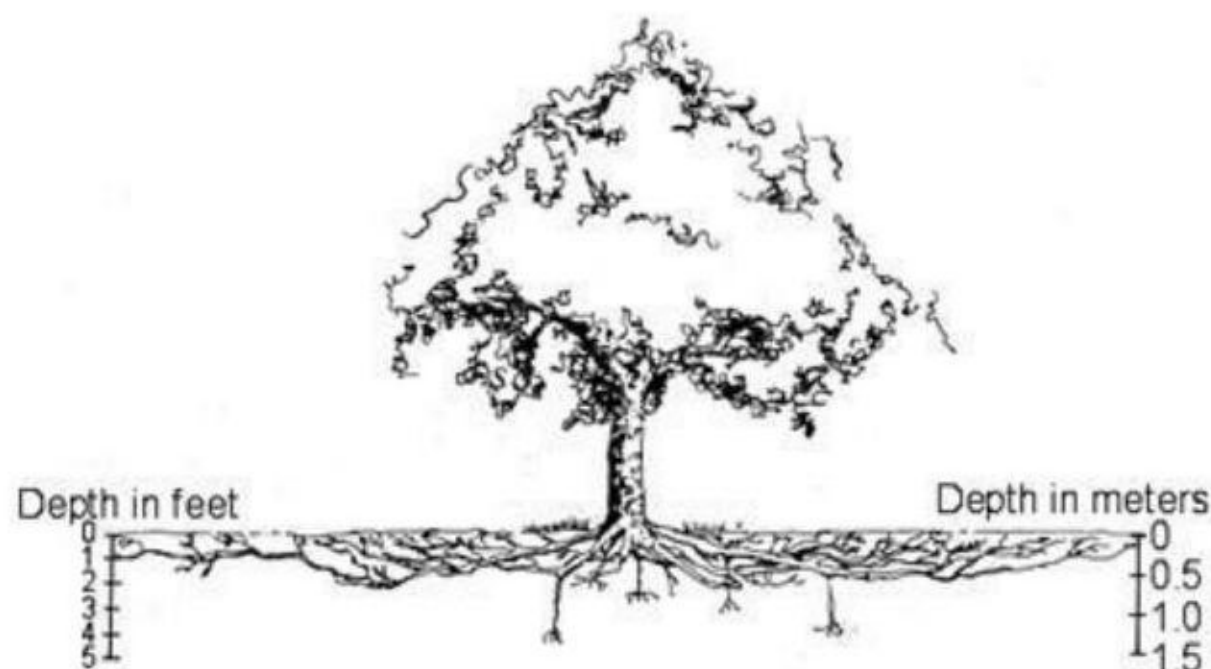


Image 2 – Typical root architecture of an open grown tree (RPA)



Image 3- Rooting architecture modified by River Swale (MRPA)

13. T2 has had the rooting area modified due to the influence of the stand alone garage.

Habitats

14. The likelihood of bats using the trees on site as roosts is low.
15. In the UK all wild birds, their nests and eggs are protected and all bat roosts and bats are protected by European Law. All contractors and land owners have an obligation towards wildlife and it is recommended that tree works are carried out outside the bird nesting season (Nov-March) to minimise any encounter with nesting birds. If this is not possible a competent person must inspect all trees and

hedge immediately prior to their removal. If any active nests are observed all tree removal must wait until the young have flown the nest. Some species may have two broods per season.

Impact Assessment

Implications of the Development Proposals on the Tree Cover

16. The following vegetation would need to be removed because the development footprint eclipses the tree location or requires unacceptable amounts of the root system to be removed or damaged;

Trees	T2 to T8
Groups	None

Table 4 – Tree Removals

Tree Protection Plan

Protective barriers

17. The most effective, and cost effective, way to protect trees is by the use of protective barriers. As a default position, the retained trees are to be protected, by 'Heras' type fencing on a scaffold frame erected in a location indicated by the blue line on the drawing. The construction detail (5a) is shown below, with a photograph of the erection taking place (5b), to illustrate how robust this barrier ought to be. Heras type fencing can be hired on a weekly basis from building merchants.

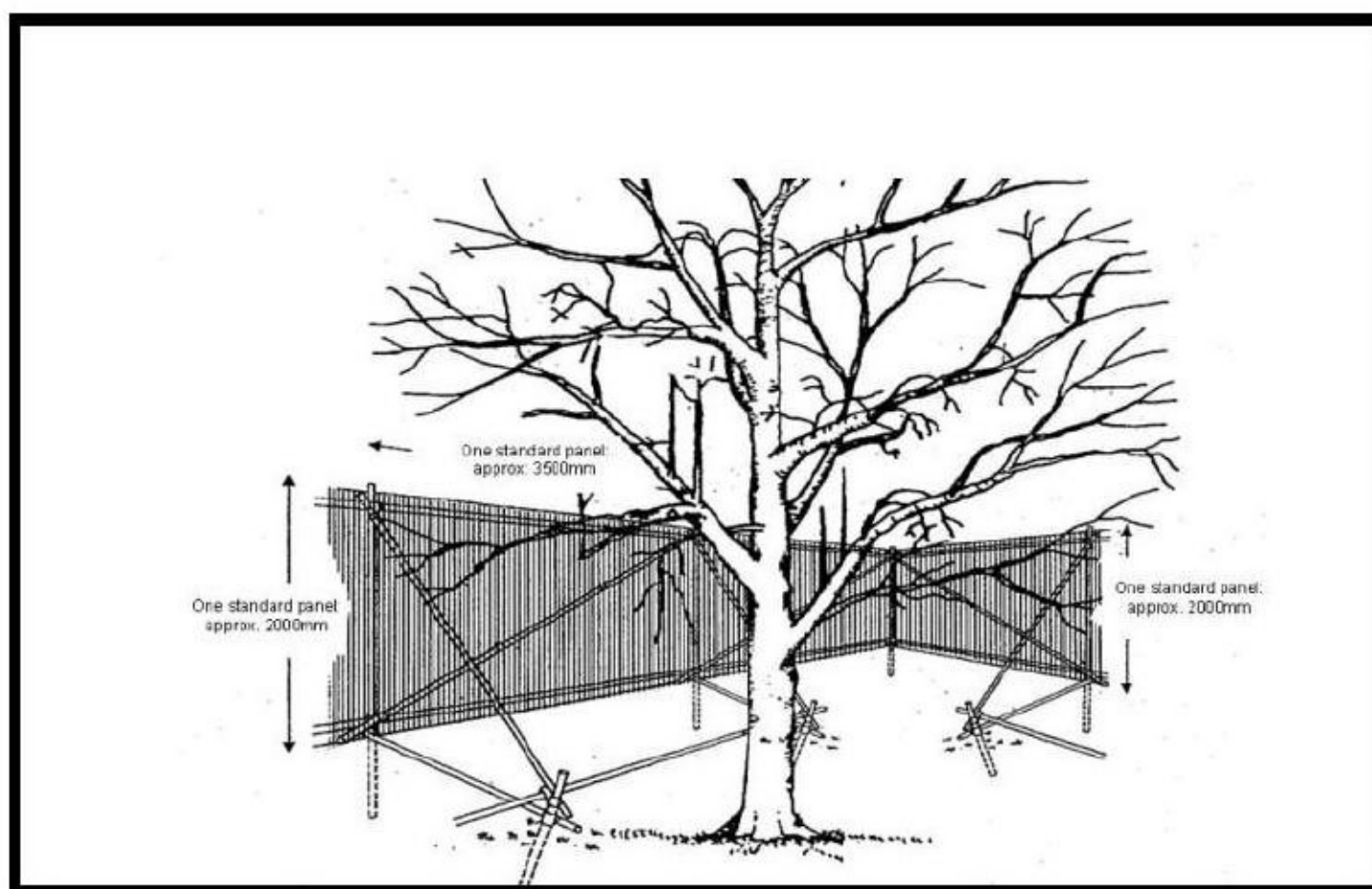


Image 5a



Figure 5b

18. Where it is not possible to drive stakes into soft surfaces and the fencing is to be erected on, for example, tarmac, rubber feet may be used instead

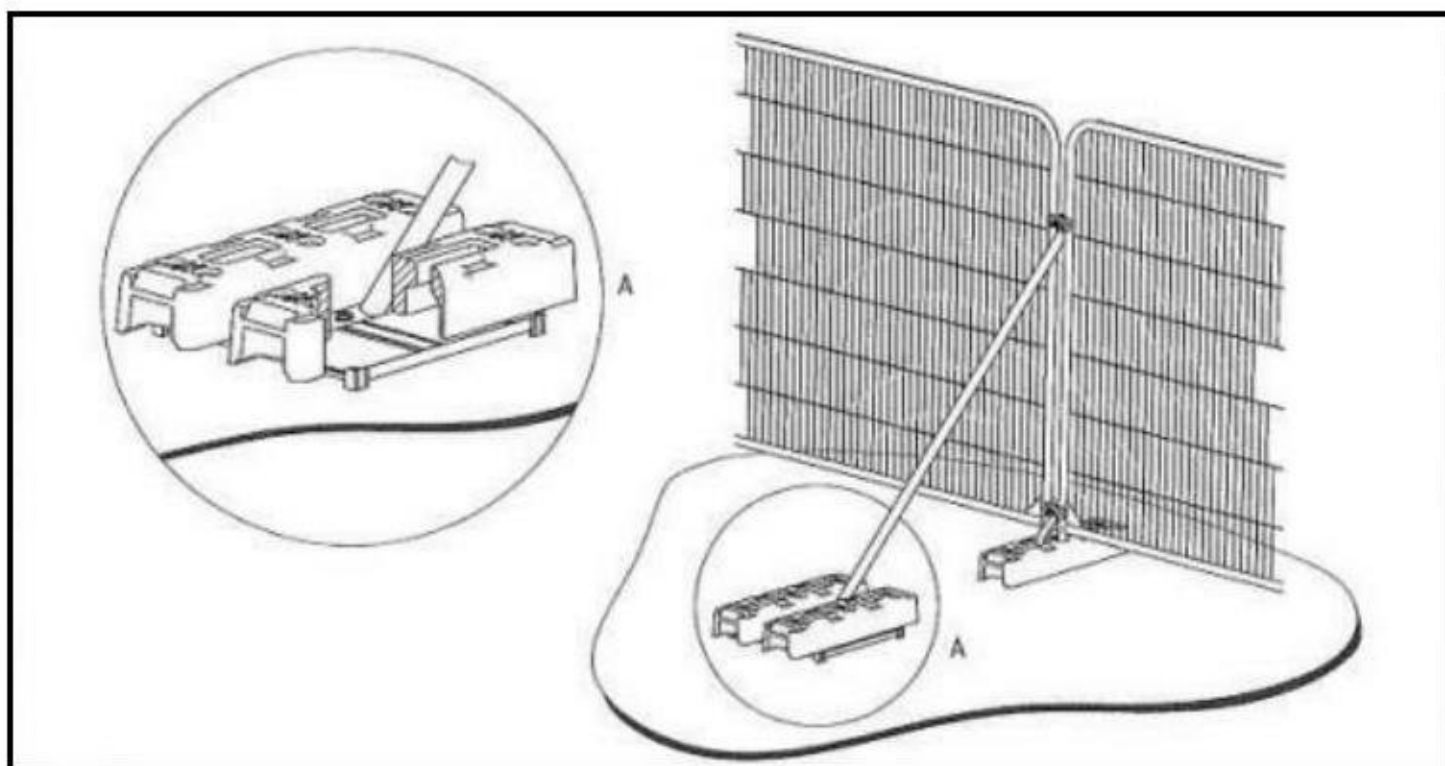


Figure 5c- Rubber feet option on hard surfacing

19. It is imperative that the fencing is erected PRIOR to any demolition or construction activities and that the fencing remains erected for the entire duration of the project. The fencing should only be removed once the extension is occupied on a full time basis. Removal of the fencing may not only endanger protected trees and expose the owner to prosecution but may breach planning conditions and lead to a Stop Notice being issued by the local planning authority.
20. Additional threats to the trees would be from stacking materials, particularly cement and fuels, within the rooting area. The protective barriers are therefore also to stop the root protection area from being used for materials storage.

21. A notice on the fencing '**Protected Trees-Do Not Remove this Fencing**' could alert visiting tradesmen to the importance of the trees. A notice is reproduced in Appendix E.

Utilities Installation

Service runs and utility installation

22. If soakaways are required the service trenches and the chambers must be positioned outside the Root Protection Area (RPA/MRPA).
23. If excavation is unavoidable it should comply with guidelines in NJUG 10 – National Joint Utilities Group. Acceptable techniques are listed in preferential sequence;

Trenchless – thrust or ram boring

Broken Trench – dug manually and in conjunction with an Air Spade where appropriate, and observed by an arborist

Continuous Trenching– dug manually and in conjunction with an Air Spade where appropriate, and observed by an arborist.



Image 6 -Air Spade excavation (Sandy/Loamy soils only. Vacuum excavation of loosened soil in recommended)



Image 7 – Mini soil vacuum

Site compound and storage areas

24. Contractor parking, materials delivery, welfare units, cement mixing facilities and fuel store must be positioned outside the defined Root Protection Areas.

Conclusion

25. The value of trees to the environment is beyond question as they store carbon, filter air pollution and reduce flooding, to name but a few services they provide. As we move towards a low carbon economy the need socially, environmentally and politically becomes ever more pressing. It is likely the Local Planning Authority will require compensatory planting for trees lost through development, driven by policies of No Net Biodiversity Loss. A Landscaping scheme may be required and some LPAs are issuing guidance on compensatory planting volumes.



Appendices

Appendix A - Tree Data

Appendix B - BS5837;2012 Category Chart

Appendix C- BS5837;2012 Flow Chart

Appendix D - Arboricultural Impact Assessment -Tree Protection Plan (separate pdf /dwg. document)

Appendix E - Photographs

Appendix F – Site Notice



Signature Protection

A handwritten signature in black ink, appearing as a single horizontal stroke.

Rodger Vernon Lowe M.Arb.A

Appendix A – Tree Data

Tree No.	Species Common Name <i>Genus species</i>	Height (M)	Crown Spread (M)				Trunk Dia. (MM)	Stem Count	Root Protection Area (m2)	Root Protection Area as Radii (M)	Age	Physiological Condition	Structural Condition	Estimated Remaining Contribution (Years)	Tree Quality Assessment	Observations	Suggested works	Bat Roost Potential	Bird Nesting	Ultimate Size For Species (M)		Works Priority
			N	S	E	W														Height	Spread	
T1	Lilac (<i>Syringa vulgaris</i>)	3	3.5	1	2	3	180, 160, 150	3	36	3.4	Mature	Fair	Moderate	10+	C1	Stem divides at ground level.	No works required at this time	Low	Not evident	6	6	-
T2	Western Red Cedar (<i>Thuja plicata</i>)	7	1.5	1.5	1.5	1.5	230	1	25	2.8	Semi Mature	Fair	Moderate	20+	B1	Branches encroaching upon building.	Fell and grind out stump to allow construction	Low	Not evident	20	12	A
T3	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	7.5	2	2	2	2	100, 100, 100, 100	4	18	2.4	Mature	Fair	Moderate	20+	B1	Multiple stems below 1.5m.	Fell and grind out stump to allow construction	Low	Evident	12	12	A

Tree No.	Species Common Name <i>Genus species</i>	Height (M)	Crown Spread (M)				Trunk Dia. (MM)	Stem Count	Root Protection Area (m2)	Root Protection Area as Radii (M)	Age	Physiological Condition	Structural Condition	Estimated Remaining Contribution (Years)	Tree Quality Assessment	Observations	Suggested works	Bat Roost Potential	Bird Nesting	Ultimate Size For Species (M)		Works Priority
			N	S	E	W														Height	Spread	
T4	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	6	1.5	1.5	1.5	1.5	100, 100, 100, 100	4	18	2.4	Mature	Fair	Moderate	20+	B1	Multiple stems below 1.5m.	Fell and grind out stump to allow construction	Low	Not evident	12	12	A
T5	Plum (<i>Prunus domestica</i>)	3	1.5	1.5	1.5	1.5	100	1	5	1.2	Semi Mature	Fair	Moderate	20+	B1	Multiple stems above 1.5m.	Fell and grind out stump to allow construction	Low	Not evident	10	8	A
T6	Plum (<i>Prunus domestica</i>)	3	1	1.5	2	1	170	1	13	2	Mature	Poor	Hazardous	0	U	Decay present on stem. Unbalanced crown shape.	Fell and grind out stump to allow construction	Low	Not evident	10	8	A

Tree No.	Species Common Name <i>Genus species</i>	Height (M)	Crown Spread (M)				Trunk Dia. (MM)	Stem Count	Root Protection Area (m2)	Root Protection Area as Radii (M)	Age	Physiological Condition	Structural Condition	Estimated Remaining Contribution (Years)	Tree Quality Assessment	Observations	Suggested works	Bat Roost Potential	Bird Nesting	Ultimate Size For Species (M)		Works Priority
			N	S	E	W														Height	Spread	
T7	Apple (Malus)	3.5	1.5	1.5	1.5	1.5	160	1	11	1.9	Semi Mature	Fair	Moderate	40+	A1	Low canopy.	Fell and grind out stump to allow construction	Low	Not evident	10	12	A
T8	Norway Spruce (Picea abies)	7	2	2	2	2	210	1	20	2.5	Semi Mature	Fair	Moderate	20+	B1	Leader removed in past. Crown lifted to 2 metres	Fell and grind out stump to allow construction	Low	Not evident	20	12	A
Groups																						
G1	Dwarf Lawson, Cherry Laurel (Prunus laurocerasus) Forsythia, Bay (Laurus nobilis)	2	1	1	1	1	50	1	1	0.6	Semi Mature	Fair	Moderate	20+	C1	Trimmed	No works required at this time	Low	Not evident	12	8	-

Appendix B- BS5837 Cascade Chart

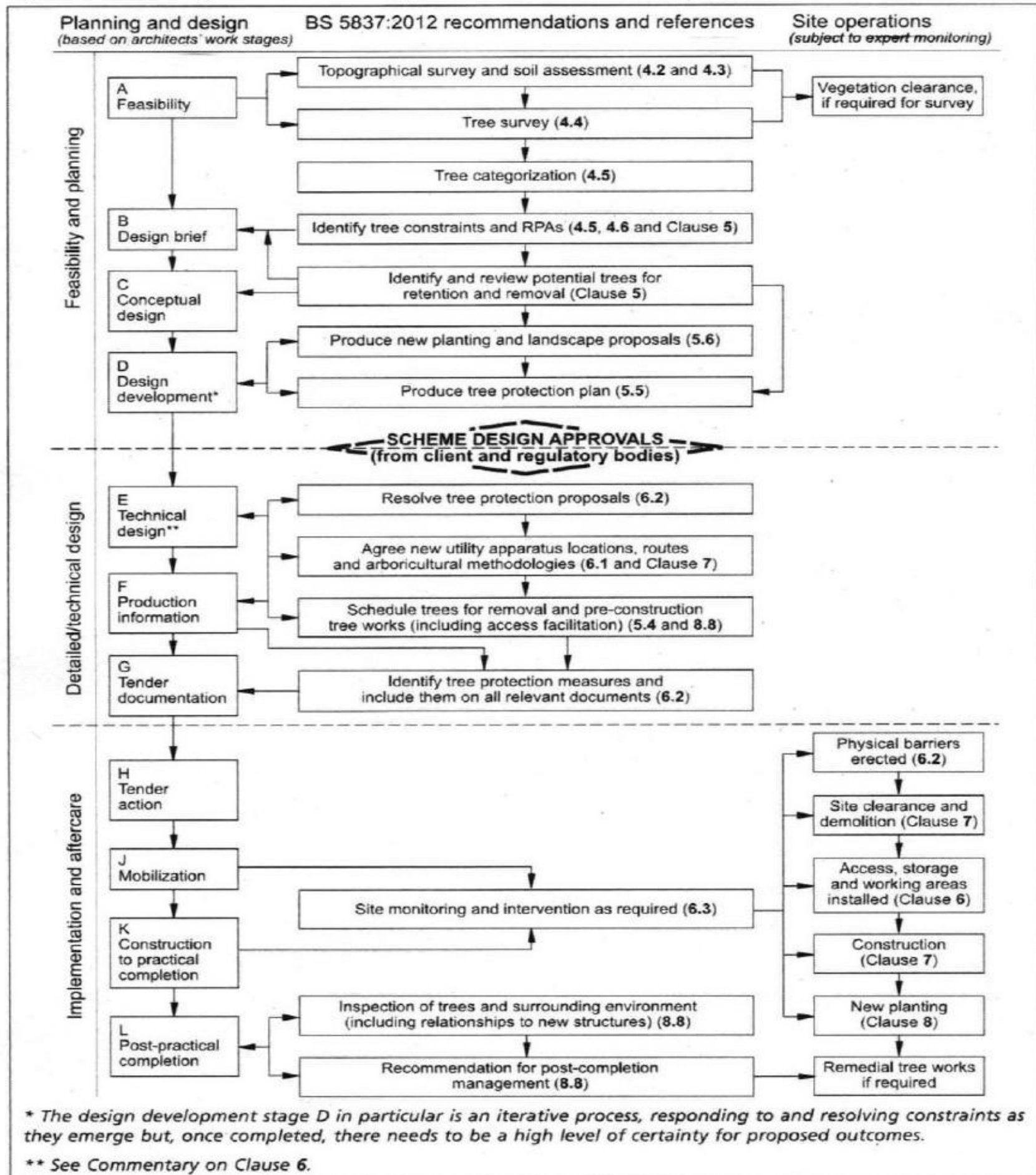
Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see note)			
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	<ul style="list-style-type: none"> Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other U category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality <p><i>Note – Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p>		
	1 Mainly arboriculture qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation
Trees to be considered for retention			
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual, or those that are essential components of groups or formal or semi-formal arboriculture features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood pasture)
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and minor storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Tree with no material conservation or other cultural value

Appendix C- BS5837 Flow Chart

BS 5837:2012

BRITISH STANDARD

Figure 1 The design and construction process and tree care



Appendix D- Tree Protection Plan (Separate document in dwg and pdf formats)

Appendix E- Photographs



Photo 1 -Trees 3, 5 and 6

Rodger V. Lowe · 9 Sudburn Avenue · Staindrop · Darlington · DL2 3JX
tel: 01833 660145 / [REDACTED] web: www.thtrees.org.uk.



Photo 2- Site seen from the north

Rodger V. Lowe · 9 Sudburn Avenue · Staindrop · Darlington · DL2 3JX
tel: 01833 660145 / 0781 4570572 · email: rodger@rvlarb.co.uk · web: www.thtrees.org.uk.



Photo 3- T7

Rodger V. Lowe · 9 Sudburn Avenue · Staindrop · Darlington · DL2 3JX
tel: 01833 660145 / [REDACTED] web: www.thtrees.org.uk.



Photo 4 –T8

Appendix E – Tree Protection Sign

