

Arboricultural Impact Assessment

Document Control Sheet

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Executive Summary

- This report provides an assessment of trees and the impact of the proposed works on the site, which is for the construction of a garage building extension to the existing property. The report makes recommendations for mitigating any negative impacts and is suitable for submission in support of a planning application.
- The design has been developed with careful consideration to minimise the impact on the most important trees across the site. 5 Trees were surveyed across the site. The data for each is presented within the Tree Schedule at Appendix A.
- The existing tree features will be retained and integrated into the development. Sufficient space and adequate protection measures have been set out to ensure that retained trees are not damaged during the pre-construction and construction phase and to enable their successful development post-construction. Retained tree protection measures are discussed throughout this report and illustrated on the Tree Protection Plan at Appendix B.
- The proposed works on site both above and below ground (excavation of foundations etc.) sit outside of the Root Protection Area (RPA) and Crown Spread of all trees. This is discussed in more detail in section 3 of this report and illustrated on the tree Protection Plan at Appendix B.
- The existing hard standing driveway provides adequate protection to the RPA of T1 for Construction Machinery/Vehicular access. This is discussed in more detail in section 3 of this report and illustrated on the tree Protection Plan at Appendix B.
- It is not expected that any trees will require remedial tree work to facilitate development.

1 Introduction

1.0 Brief and Context

1.0.1 ABH Forestry was instructed by Kenneth Souter in May 2026 to provide an Arboricultural Impact Assessment, in accordance with British Standard BS5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations of the effect of development proposals on trees at 96 Intake Lane, Barnsley.

1.0.2 Trees are a material consideration for a Local Planning Authority when determining planning applications, whether or not they are afforded the statutory protection of a Tree Preservation Order or Conservation Area. British Standard BS 5837:2012 Trees in Relation to Design, Demolition and Construction sets out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and new developments. The standard recommends a sequence of activities that starts in the initial feasibility and design phase (RIBA Stage 2 'Concept Design') with a survey to qualify and quantify the trees on site and establish the arboricultural constraints to development (above and below-ground) to inform the design in an iterative process, and continues with an assessment of the arboricultural impacts of the final design and measures to mitigate such impacts should they be negative. Detailed technical specifications for mitigation and protection measures are devised in the design phase that follows (RIBA Stage 3-4 'Developed and Technical design'), and the sequence ends with the Implementation and Aftercare phase (RIBA Stages 5-7) with the implementation of those measures once planning permission is granted, guided by Arboricultural Method Statements (RIBA Stage 4-5, 'Technical Design and Construction) and professional guidance where appropriate.

1.0.3 This Arboricultural Impact Assessment (AIA) reports on the direct and indirect impacts of the proposed development on trees in terms of both the build-ability of the proposals and the long-term impact of the finished scheme, and where necessary presents mitigation for these impacts.

1.1 Purpose of this Report

1.1.1 This AIA, and accompanying Tree Schedule and Tree Protection Plan, is provided to support a Planning application for the proposed development. It sets out the arboricultural impacts of the proposals using the following considerations as a framework:

- Trees to be removed and trees to be retained.
- Remedial tree work to retained trees to allow development and ensure retained trees will form a harmoniously integrated component of the proposed development.
- Suitable measures to protect retained trees.
- Special construction or engineering measures required to enable trees to be harmoniously integrated into the proposed development.

1.2 The Development

1.2.1 The proposed development is for the construction of a garage extension to an existing domestic building (Bungalow), the location of the proposed works can be identified in Fig 1. Appendix B.

2 Existing Tree Population and Constraints

2.0.1 A survey covering trees on site, that are subject to a TPO, was undertaken in April 2026. The full survey results are presented in the Tree Schedule at Appendix A.

2.0.2 The survey was undertaken based on trees plotted using an outline base map as reference in specialist land management software – MyForest. The map contains the OS map data and trees were plotted on the map using the topographical survey as reference.

2.0.3 The proposed construction has been sited such that it has minimal impact on the existing garden, and virtually no impact on the existing TPO area, which has a mixture of trees and shrubs of various species and age, adjacent to a concrete driveway which will provide adequate access to facilitate the construction project.

2.0.4 BS 5837:2012 recommends classifying trees into four quality and value categories to determine their relative retentive worth. A summary of the relative retentive worth of the trees on site as recorded during the tree survey and expressed by their categories is given in Table 1. Appendix A explains the BS 5837:2012 tree categorisation process.

Table 1: Trees/Groups in each Retention Category

BS Catagory	No. Trees (T)	No. Groups (G)	No. Hedges (H)	Total
A	2			
B	3			
C				
U				
Total	5			5

2.0.5 Trees present constraints to development both above and below ground. The above ground constraints comprise the physical extent of tree crowns. The below ground constraints comprise the roots and are expressed in terms of the root protection area (RPA), which is the minimum rooting area that a tree needs to sustain itself in reasonable health. These constraints, as established by the tree survey, inform this assessment of the impact of the development proposals.

2.0.6 The full results of the tree survey on which this report is based are given in the Tree Schedule at Appendix A, and the above and below ground constraints are illustrated on the Tree Constraints Plan at Appendix C. Each tree (T), tree group (G), and hedge (H) has been allocated an individual number to which it is referred in this report and all associated documents. The survey method and limitations are set out in Appendix E.

3 Arboricultural Impact of the Proposals

3.0 Tree Removal and Retention

3.0.1 All trees have identified and will be retained, no trees have been found to be in conflict with the proposed design.

3.1 Facilitative Tree Works

3.1.1 All trees have been identified and no facultative tree works are required.

3.2 Underground Service Routes

3.2.1 Proposed drainage arrangements and underground service routes sit outside the RPA of all trees and is not considered to be an impact these trees.

3.3 Footing and foundations Excavation

3.3.1 Traditional strip foundations are permitted as the development sits outside the RPA of the all trees included in the report.

3.4 Tree Protection

3.4.1 Root Protection Areas and Construction Exclusion Zones - Retained trees will be protected during development by establishing a Construction Exclusion Zone (CEZ) around their Root Protection Areas (RPAs). RPAs are a layout design tool, indicating the minimum area around a tree deemed to contain sufficient roots and soil to maintain the tree's viability. RPAs should be treated as a precautionary area within which activities such as ground compaction, excavation, the storing of materials, ground level changes and other construction activity are likely to cause damage to trees and should therefore be excluded.

This CEZ can be achieved by indicating the boundary with hazard marking paint and signposting, which I feel is sufficient given the scale of the project, at the (CEZ) location shown on the Tree Protection Plan at Appendix B.

However, if it is deemed necessary that tree protection barriers and or trackway must be installed ad-hoc (Possible in the northwest corner to restrict incidental access over T4 RPA), then they must be erected before any demolition or construction works start, and unless approved by the Local Planning Authority or by an arboriculturist approved by them, should remain in place until all construction activity has been completed.

3.4.2 The type of indication should match the level of activity around the retained trees. Where a high level of construction activity is expected, and if fencing is required it must be braced to be robust to vehicular impact and to prevent it from being easily repositioned; a specification similar to drawing 3 in BS 5837:2012 will be suitable (reproduced Appendix D). In areas away from the main construction activity and vehicle movement, it may be appropriate to install a lower specification fencing, examples of which are given at Appendix D.

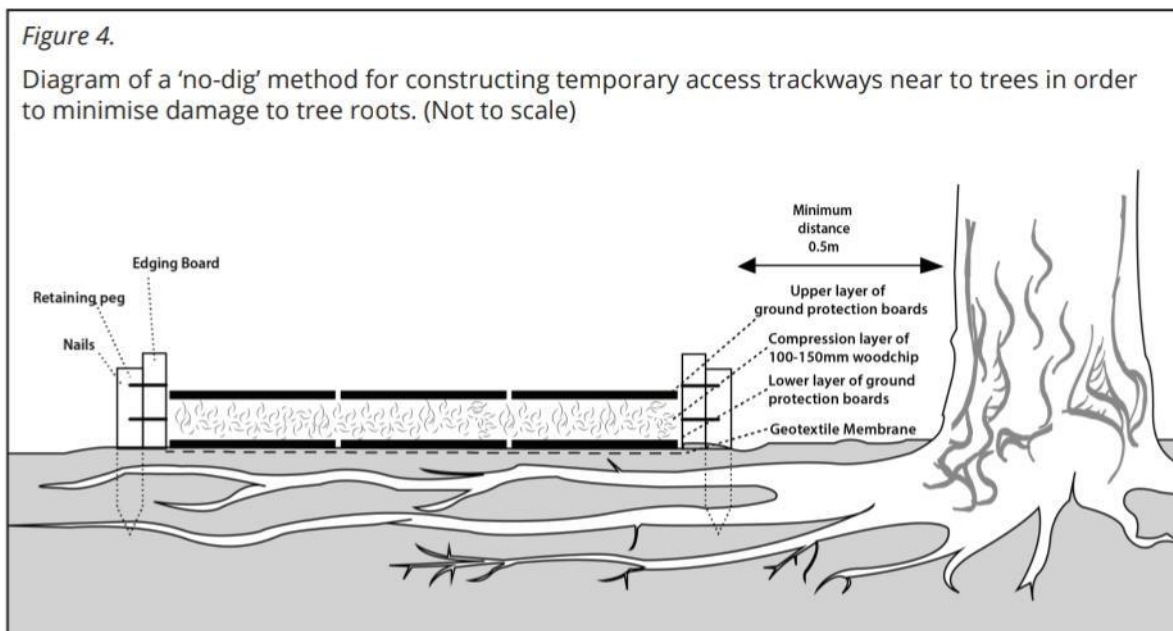
3.4.3 All protection fencing should carry identifying signs that state its purpose and proscribe its removal until all demolition and construction work is complete. Example sign is given at Appendix D.

3.5 Additional Precautions

3.5.1 Earthworks - Any earthworks associated with the project should only be undertaken once all tree protection measures have been conveyed and made clear to personnel.

3.5.2 Soft Landscaping - The Arboricultural Consultant should review any landscape operations, if at any point although not anticipated, that involve any work within the RPAs of retained trees and input additional site specific methodology where necessary.

3.5.3 Access or operating machinery in an RPA - For pedestrian-operated plant up to a gross weight of 2000kg, a single thickness of 13mm thick inter-linked HDPE ground protection boards (GroundGuards MultiTrack), placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane, Fig 4.



Appendix A – Tree Schedule

	<u>SPECIES</u>	<u>DBH</u> (cm)	<u>SPREAD</u> (m)	<u>RPA</u> (m) <u>Radius</u>	<u>FIRST</u> <u>BRANCH</u> <u>HEIGHT</u> (M)/ <u>DIRECTION</u>	<u>HEIGHT</u> <u>CANOPY</u> (M)	<u>AGE</u> <u>CLASS</u>	<u>STEM</u>	<u>MANAGEMENT</u> (Re(quired / Recommended works) <u>CONDITION</u>	<u>Estimated</u> <u>Remaining</u> <u>Contribution</u> (Years)	<u>BS CAT.</u>
T1	PURPLE Plumb cherry	37	N 3 E 5 S 3 W 2	4.45	3/N	9	Mature	Single	N/A GOOD	20> (Greater than 20 years)	B1
T2	BEECH Fagus sylvatica	38	N 4 E 7 S 5 W 3	5	5/S	18	Young Mture	Single	N/A GOOD	30> (Greater than 30 years)	B12
T3	SYCAMORE Acer pseudoplatanus	47 52	N 6 E 7 S 5 W 4	8.4	5/W	22	Mature	Twin	N/A GOOD	30> (Greater than 30 years)	A2
T4	SYCAMORE Acer pseudoplatanus	55 53	N 6 E 5 S 6 W 7	9	3/W	22	Mature	Twin	N/A GOOD	30> (Greater than 30 years)	A2
T5	CRAB APPLE Malus sylvestris	19	N 2 E 3 S 3 W 4	3	1/W	6	Mature	Single	N / A GOOD	30> (Greater than 30 years)	B1

Appendix B – Tree Protection Plan

Fig. 1



Appendix C – Tree Constraints Plan



Appendix D – Tree Protection Specifications

Technical Measures to Prevent Tree Damage

Tree Pruning

Tree pruning will be carried out where the design and/or planned site operations encroach into the crowns of trees and where these encroachments can be accommodated through facilitation pruning without significantly reducing the landscape value and/or viability of the tree.

Tree pruning operations will:

- be specified by the arboricultural consultant
- be in accordance with current best practice
- be carried out by a suitably experienced and qualified arborist.

Tree Protection Fencing

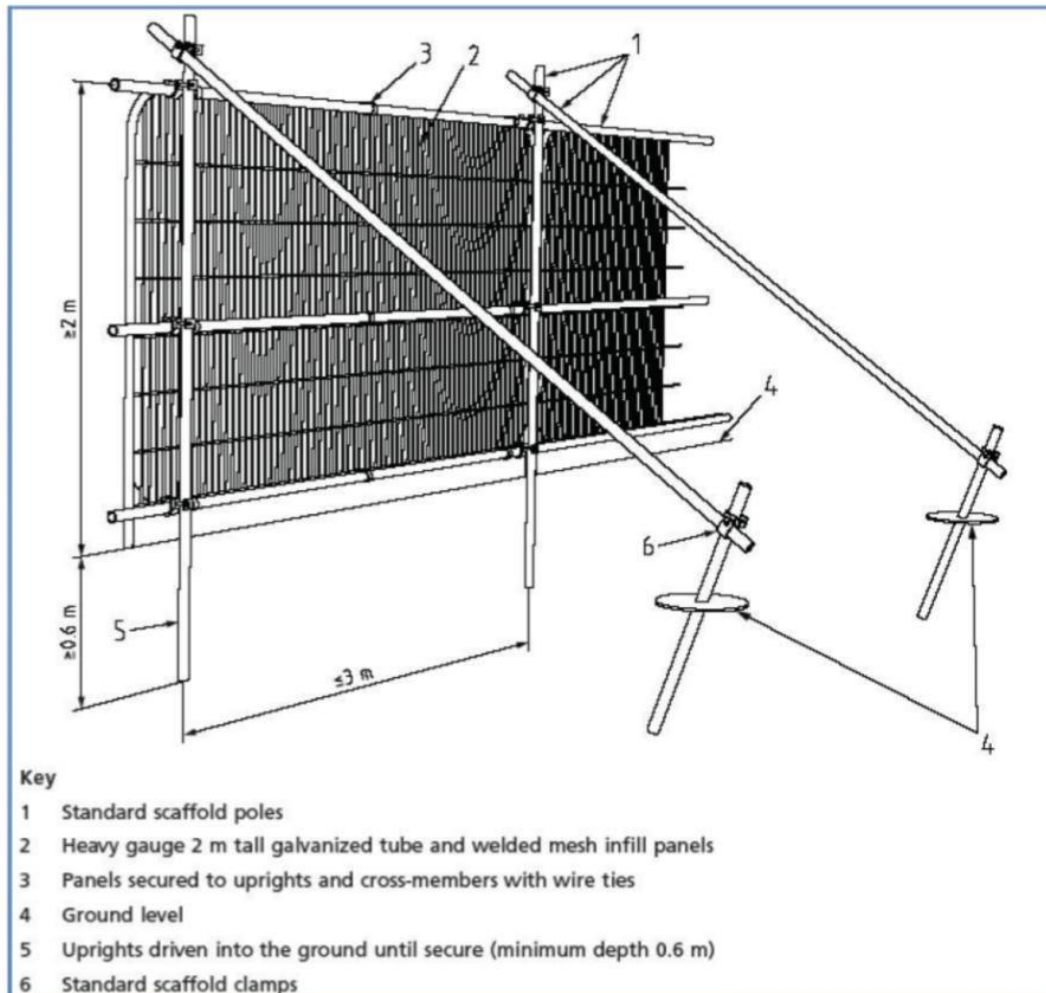
- Tree protection fencing will be located at the edge of the Construction Exclusion Zone (CEZ) and will be suitably robust to provide sufficient protection for trees. The performance requirement for fencing will be determined by the type of activity that will take place in the area around the CEZ.

Typically the performance requirement for the Tree Protection Fencing will be:

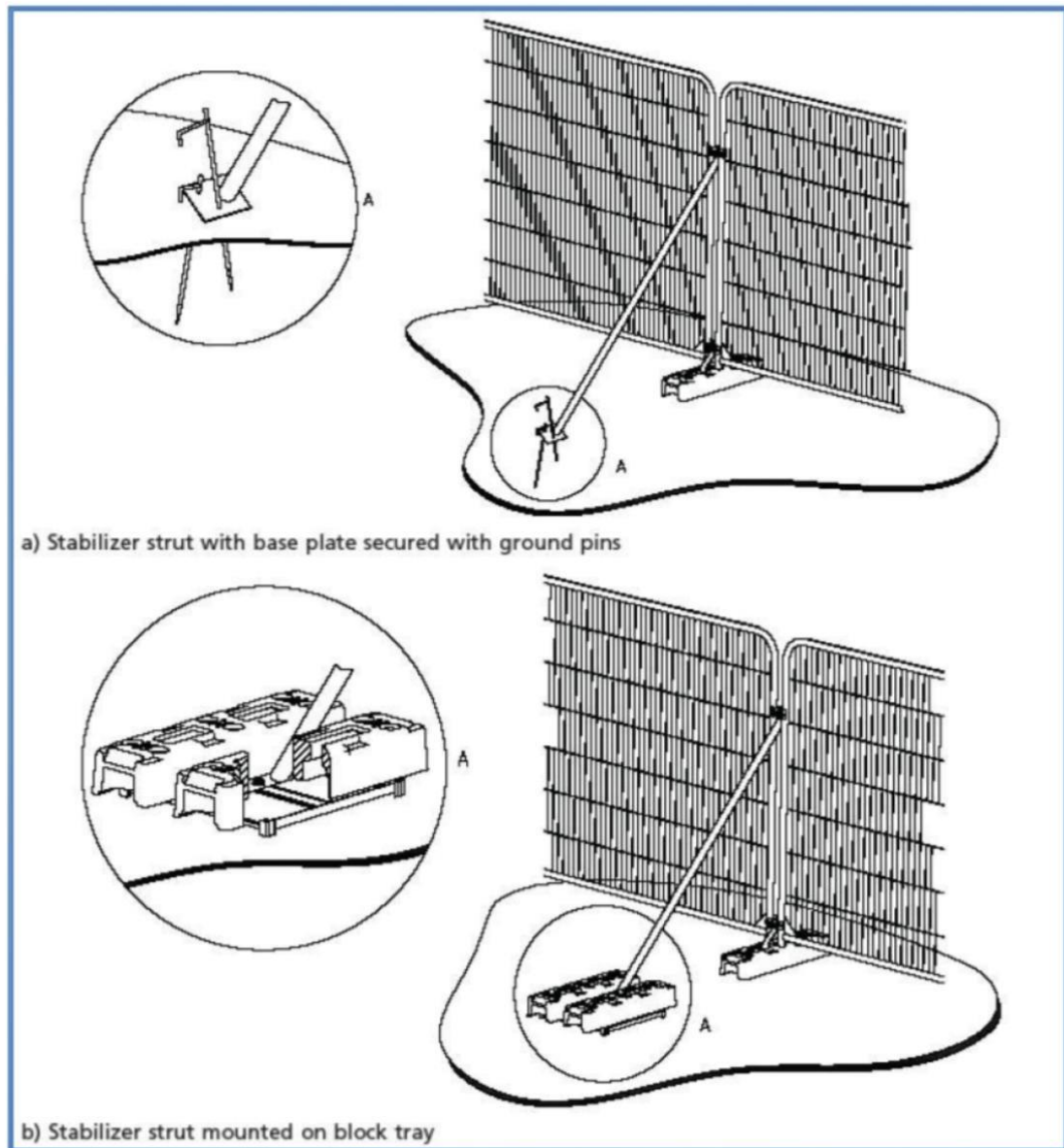
- Tree Protection Fencing will be installed prior to commencement of activity on the site.
- Tree Protection Fencing will only be removed once all works associated with the development have been completed.
- The Tree Protection Fencing will be installed and removed without causing damage to retained trees.
- Installation, removal and, where required, replacement of Tree Protection Fencing will be supervised and signed off by the Arboricultural Consultant. o The Tree Protection Fencing) will be stable and robust (typical construction method, in accordance with BS5837: 2012, see below).
- The area between the Tree Protection Fencing and the tree will be a Construction Exclusion Zone (CEZ).
- Fence panels will be made of mesh (e.g.: Heras fencing) or, if solid, will have 30cm windows cut into enough panels to enable conditions within the CEZ to be viewed.
- The CEZ will be clearly identified (see Construction Exclusion Zone sign example below).



Example Tree Protection Fencing Sign



BS5837: 2012 - Figure 2 – Tree Protective Barrier



BS5837: 2012 - Figure 3 – Examples of Above Ground Stabilisation Systems

Appendix E – Tree Survey Method and Limitations

Tree Survey Method

1. The tree survey was conducted from ground level in accordance with BS5837: 2012.
2. All trees on the site with a stem diameter of over 75 mm (measured at 1.5 m above ground) were included in the survey.
3. Offsite trees within influencing distance of the site (typically those located within a distance of upto 12 times their stem diameter away from the site) were included in the survey.
4. Data collected included:
 - a designated tree number
 - type of feature (trees, group, woodland, hedge)
 - number of trees in group
 - tree species
 - height (metres)
 - number of stems stem diameter (in cm, as measured at 1.5 m above ground)
 - crown clearance (height of periphery of crown spread above ground level in metres)
 - height of lowest branch (metres)
 - branch spread (to N, S, E and W)
 - age class
 - physiological condition
 - useful life expectancy
 - structural condition
 - BS5837 retention category (A, B, C or U)
 - site notes (where this has a bearing on the present or future health or structural condition of the tree)
 - preliminary management recommendations.
5. All measurements were made in metric using measuring devices where applicable. Estimated stem diameters (e.g., due to lack of access or dense undergrowth) were recorded as such and are shown in the Tree Schedule.
6. While the appraisals of the surveyed trees are not tree risk assessments, they nonetheless take into account observed structural defects in drawing conclusions about the trees' retentive worth.

Survey Limitations

1. The survey was a preliminary assessment from ground level and observations were made solely from visual inspection for the purposes of an assessment relevant to planning and development. Only binoculars, trowel, mallet and fine manual metal probe were used to aid tree assessment, where necessary. No invasive or other detailed internal decay detection devices were used in assessing trunk condition.
2. The conclusions relate to conditions found at the time of survey. Any significant alteration to the site that may affect the trees that are present or have a bearing on the planning implications (including level changes, hydrological changes, extreme climatic events or other site works) will require a re-assessment of the trees and the site.
3. This survey is not a tree safety inspection. It is carried out in order to inform the planning process. Where clear and obvious hazards have been observed, these have been addressed in the recommendations (see Appendix A - Tree Schedule). A full assessment of the levels of risk posed by trees would need to consider site use together with tree hazards.