

BEN BANK ROAD, SILKSTONE COMMON**ARBORICULTURAL IMPACT ASSESSMENT AND ARBORICULTURAL
METHOD STATEMENT**

March 2025

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Final Check		
Issue Date		05/03/2025

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1 INTRODUCTION

1.1 Background

Penistone Developments Ltd. has asked Weddles to inspect the trees onsite and prepare an Arboricultural Impact Assessment and Arboricultural Method Statement report. This report has been prepared to assist decision making for a full planning application for a site located off Ben Bank Road, Silkstone.

This report considers the impact of development on the trees and refers to drawing 1926-001 Tree Survey, 1926-002 Tree Constraints Plan and 1926-003 Tree Protection Plan.

1.2 The Proposals

The proposals are for the development of two dwellings, with associated hard standing, garages and soft landscaping.

1.3 General Site Description

The site is located on the eastern edge of Silkstone Common. The site is a small parcel of land located off the existing access road and is directly behind the plots at 94, 96, and 98 Ben Bank Road. The site has previously been used as a general refuse area, and vegetation on site was recently cleared. Running adjacent to the northern boundary of the site is a deciduous woodland.

There are 12 trees on site, 2 groups and 2 hedges. Although the deciduous woodland to north is outside the site boundary, the edge of the woodland has been included as part of the survey. The trees onsite are mostly native species including Birch, Oak, Hawthorn, and some Elm.

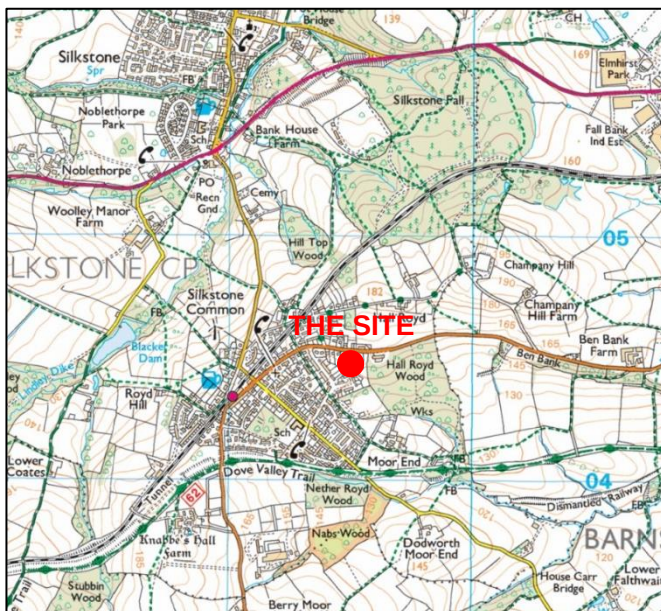


Figure 1: OS Map showing site location in red





Figure 2: Redline - development site boundary. Site ownership / survey boundary

2 TREE SURVEY

A Tree Survey to BS 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations' was carried out by Weddle Landscape Design in January 2025, as shown on drawing 1926-001 below.

The tree survey includes an assessment of life stage, life expectancy, general observations on condition and categorisation in accordance with BS 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations' Section 4.5 and Table 1.

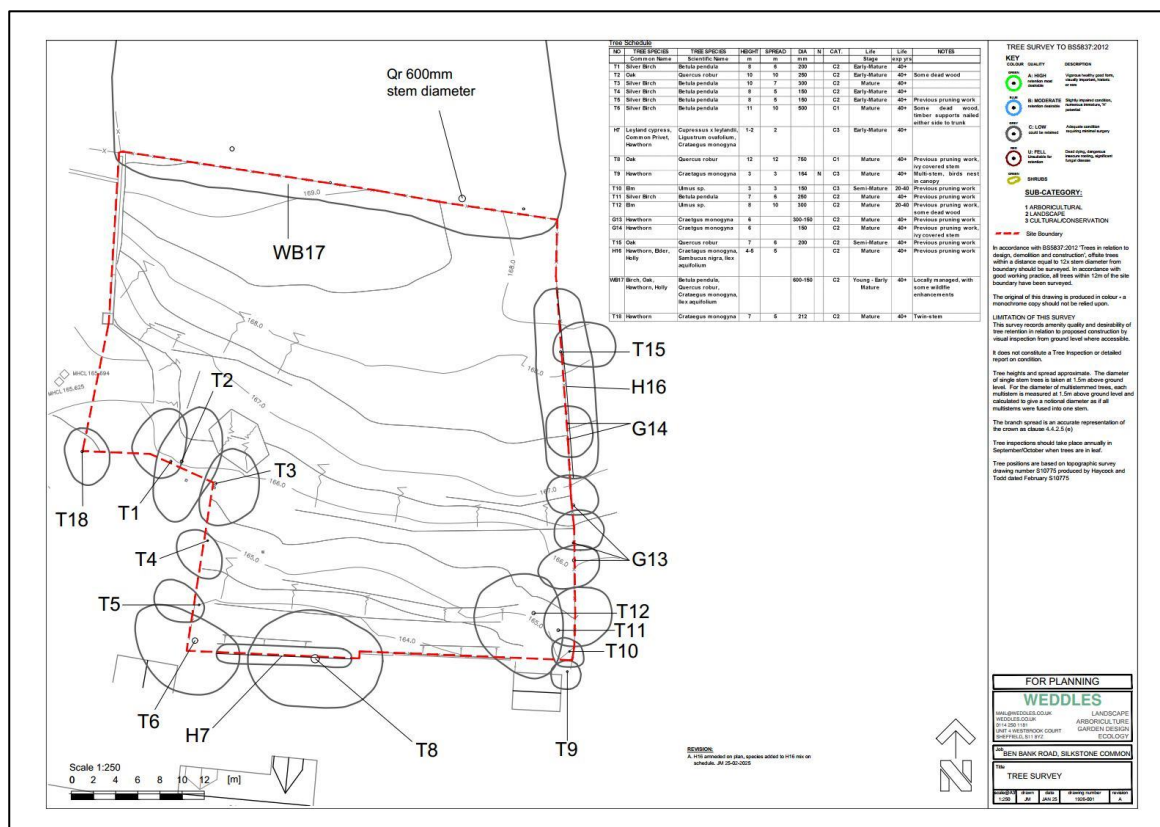


Figure 3: Tree Survey 1926-001

2.1 Approach to tree protection

The Root Protection Area (RPA) as defined by BS 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations' has been identified and shown on the Tree Constraints Plan (see drawing 1926-002). This is the zone of roots which should be protected against damage during construction.

Three phases are proposed for the development, a demolition phase, a construction phase and an external works phase. The Tree Protection Plans indicate the position for protective fencing barriers and ground protection methods during these phases.

A Method Statement for Construction has been included. This deals with general methodology of tree protection from compaction during construction and techniques to be adopted to minimise the impact of construction on tree roots.



3 TREE CONDITION

The tree survey includes an assessment of life stage, life expectancy, general observations on condition and categorisation in accordance with BS 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations' Section 4.5 and Table 1. Specific This information is presented in the tree schedule on drawing 1926-001.

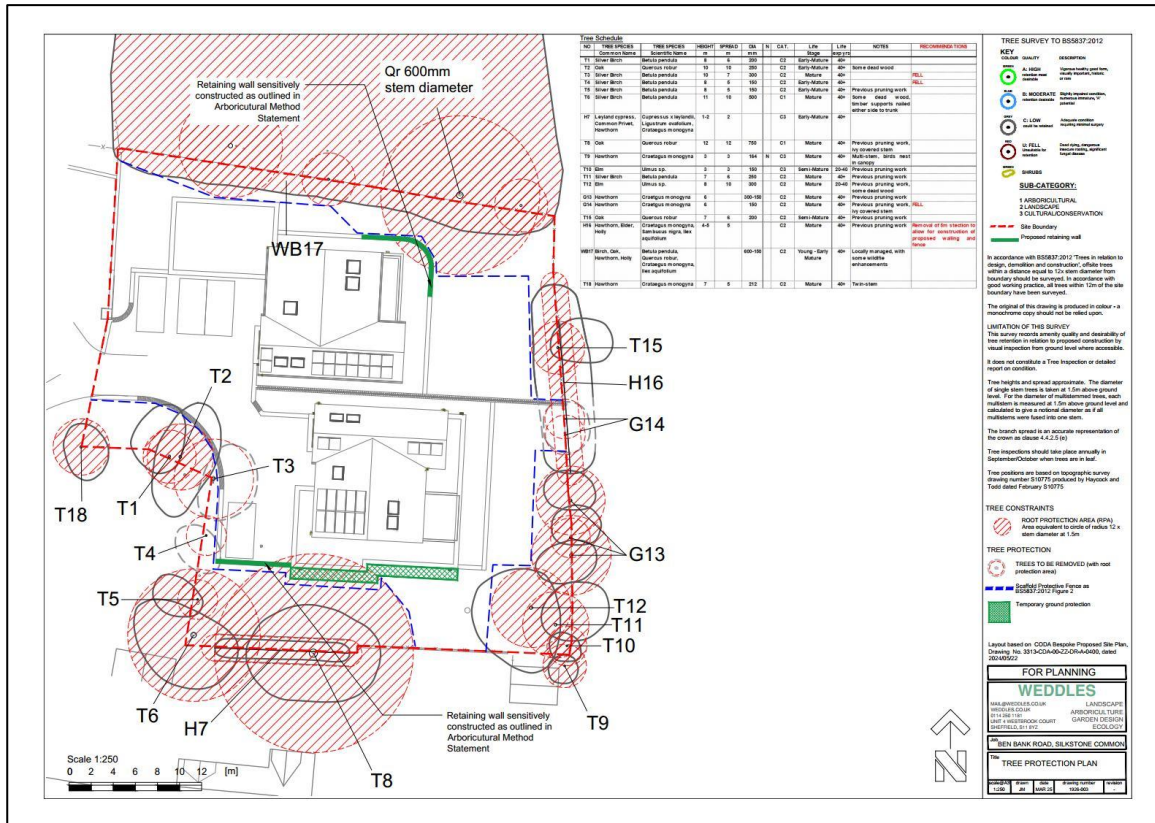
The survey included 12no. trees and 2no. groups, 2no. hedges and a woodland block.

- All trees and hedges on site that were survey are rated as category C.
- Many of the trees have undergone some pruning work, and T6 has been damaged by timber supports nailed directly into the trunk
- The woodland block neighbouring the northern site boundary

4 ARBORICULTURAL IMPACT ASSESSMENT

4.1 Description of proposed development

The proposals are for the development of two dwellings, with associated hard standing, garages and soft landscaping. The proposed layout is shown on drawing 1926-003. The Tree Protection Plan also indicates the position for protective barriers and temporary areas of ground protection.



Tree Protection Plan – 1926-003

4.2 Implications of proposed development

4.2.1 Trees to be removed

4 No. trees (T3, T4 and G14) and a 5m section of H16 will be removed as part of the development. This will be done to allow the construction of proposed walling that will separate the two plots.

4.2.2 Trees to be retained

All other trees will be retained. The proposed development has the potential to impact on the retained trees and protective fencing will be erected to surround all retained trees. The location of protective fencing is shown on drawing 1926 Tree Protection Plan.

The proposed development also has the potential to impact the RPA of T8 in the south and the RPA of woodland block to the north. To reduce this impact temporary ground protection and the sensitive construction of external works is recommended and outlined in the method section.

4.2.3 Mitigation

The removal of G14 and 5m section of H16 will be mitigated through the planting of new hedgerow and new tree planting.

5 METHOD STATEMENT FOR CONSTRUCTION

5.1 Introduction

The root system is the most susceptible part of a tree to damage, because it is not immediately visible. Damage of the root system will affect the health, growth, life expectancy and safety of the rest of the tree. The effects of below ground damage may only become evident several years later.

Damage to the trunk and branches of a tree may cause severe disfigurement although rarely kills the tree. Death of branches or their unplanned removal may adversely affect the balance of the tree and hence its safety.

Roots also need oxygen from the soil. Respiration by the roots and other soil organisms depletes this oxygen and increases carbon dioxide levels in the soil. Diffusion between the soil and the atmosphere maintains a correct balance of oxygen and carbon dioxide in the soil.

Anything which affects this balance will affect the condition of the root system. Compaction of the ground reduces space between soil particles and hence can upset this balance.

5.2 Tree Protection Fencing and Construction Exclusion Zone

The general principle of avoiding damage to trees or compaction of soil within the Root Protection Area is achieved by erecting protective fencing as recommended by BS 5837:2012, Trees in Relation to Design, Demolition and Construction - Recommendations (Clause 5.5), before site works commence. The fenced area is referred to as the construction exclusion zone (CEZ) and should be considered to be sacrosanct.

The Tree Protection Fence shall be a minimum 2 metre high vertical and horizontal scaffold framework well braced to resist impacts as Figure 2 in BS5837:2012 and be erected as a first site operation (See Appendix A). Waterproof signage labelled as 'Tree Protection Area' should be attached to fencing as provided in Appendix A.

Within the CEZ site no construction activities will take place including:

- Movement of vehicles or plant
- Raising, lowering or adjusting soil levels
- Storage of construction materials, chemicals, fuel or cement
- Site huts, cabins or other temporary structures
- Utility trenching
- Laying of impervious materials
- Changes to the water table

5.3 Scaffolding within the Root Protection Area

Where it is essential for scaffolding to be erected within the protected area of trees, construction shall be in accordance with Clause 6.2.3 of BS5837:2012. Underlying roots will be protected by a layer of geotextile fabric placed over undisturbed soil, covered by a minimum 50mm depth of woodchip overlain by scaffold boards.

If branches extend beyond the protective fencing in positions liable to impact, the branch may be shortened back to a fork in accordance with the recommendations of BS 3998.

5.4 Ground Protection

All areas outside of fenceline will have suitable ground protection to avoid damage to roots. Any specification for ground protection shall be reviewed by an arboriculturist prior to implementation onsite.

Areas of Unmade Ground

- For pedestrian only, access ground protection measures shall include a single thickness of scaffold boards placed on top of 100mm depth of compression resistant material (e.g. woodchip) laid onto a geotextile membrane.
- For plant up to 2 tons in weight proprietary interlinked ground protection boards will be used and placed on top of 150mm depth of compression resistant material (e.g. woodchip) laid onto a geotextile membrane.
- For wheeled or tracked equipment exceeding 2 tons in weight a structural engineer will design an alternative system. This may include the use of temporary cellular confinement systems, reinforced concrete slabs or track board systems details of which are to be approved before construction commences.

5.5 Retaining Wall Construction

T8 and WB17 are located in close proximity to the proposed construction of the new retaining wall. There will be a minor incursion into the RPAs with wall construction, therefore the following provisions will be made to ensure that the retained trees are sufficiently considered:

- Construction of the wall will only commence once the scaffold protection fence has been erected and positioned as shown.
- Excavation of soil will be undertaken with care from the north side of the tree protection fencing when working within the RPA T8, and from the southern side of the fencing when working with the RPA of the WB17 (please refer to drawing 1926-003).
- Soil shall be carefully removed using a non-toothed excavator bucket. The leading edge of the bucket shall be angled parallel to the soil surface and the soil removed in thin layers of approximately 25mm depth. An observer/banksman shall be present at all times and shall keep watch for the presence of roots.
- The soil surface shall be inspected in between each use of the bucket. Should evidence of tree roots be found then the area shall be carefully excavated by hand as a means of exposing any underlying roots without risk of damage.
- If tree roots are uncovered, then they shall be treated in the following manner:
- Roots <25mm Ø shall be cleanly cut back to the edge of the excavation using a sharp saw or pair of secateurs.
- Roots >25mm Ø shall only be severed following technical approval from an arboriculturist. If approval is given, then roots shall be cleanly cut back to the edge of the excavation using a sharp saw.
- Once excavation has reached the desired face and depth the final soil surface shall be inspected for the presence of roots which could become damaged during construction. The advice of an arboriculturist shall be sought regarding the most suitable means of protecting any roots which may have been identified.
- Exposed roots and soil closest to the tree shall be covered at the earliest opportunity to protect them from extremes of temperature and desiccation.
- Where uncured concrete is to be used then an impermeable membrane shall be installed to prevent leachate from contacting roots or entering the soil that surrounds them.
- Where excavations render soil at risk of collapse then bracing or other support measures shall be employed. These shall be sufficient to prevent any loosening or further loss of soil from within the rooting area of any nearby tree.

While considered unlikely, finished levels of the carpark area within the RPA to remain flexible and should significant roots to be discovered, finished surface level may need to be set higher and allowance for no construction as deemed necessary by the arboriculture consultant. Similarly a pile and bridge foundation rather than traditional strip footings maybe required for the retaining wall, designed in concrete in accordance with BS5837:2012 part 7.5.

5.6 Additional precautions outside of CEZ fenced areas

Chemicals, fuels, oils, bitumen and cement or other material likely to be injurious to trees should be stored well away from the root protection areas of trees. Positions of chemical toilets should also be considered.

Ideally fires should be avoided if possible. If unavoidable they should not be lit where the heat could affect tree foliage or bark. 15m is a suggested offset from any tree canopy.
Trees should not be used as anchorages for any equipment.

6 PROGRAMME

The proposed development requires effective arboricultural monitoring with an Arboricultural Clerk of Works (ACoW). This is to ensure that all works and protective measures are fit for purpose, are implemented correctly and to allow any previously unforeseen arboricultural issues to be promptly identified and suitably addressed.

Where the ACoW is required to confirm site conditions or provide supervision these milestones are identified in **Green**. The length of monitoring will depend on the individual operation and proximity of works to the tree.

The ACoW will maintain a record of all aspects of the arboricultural monitoring which has been undertaken. The ACoW will notify and coordinate with the local authority tree officer as arranged.

6.1 Prior to development

Trees T3, T4 and G14 should be removed as a first site operation.

Protective fencing and ground protection should be erected immediately prior to demolition as shown on drawing 1926-003.

Positions of fence lines and ground protection to be confirmed by the Arboricultural Consultant (AC).

6.2 During Demolition Phase

Fence lines and ground protection should be maintained.

No construction activities should take place within the CEZ.

6.3 During Construction Phase

On completion of demolition, fence lines and ground protection will be maintained as shown on drawing 1926-003.

6.4 During External Works Phase

On completion of the building construction, fence lines and ground protection will be maintained as shown on drawing 1926-003. If fence lines need to be repositioned an Arboriculturalist will be consulted.

Positions of fence lines be confirmed by the Arboricultural Consultant (AC).

6.5 Mitigating Planting

Replacement tree planting should be implemented to replace trees removed to allow for the development.

6.6 After Development

Protective fencing should be removed within one month of the development being completed.

APPENDIX A

BS 5837:2012 Standard Tree Protection Fence

Figure 2 Default specification for protective barrier

