

PARK ROAD, WORSBOROUGH

ARBORICULTURAL METHOD STATEMENT

February 2025

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TABLE OF CONTENTS

1	INTRODUCTION.....	3
1.1	Background.....	3
1.2	The Proposals.....	3
1.3	General Site Description.....	3
2	TREE SURVEY.....	5
2.1	Approach to tree protection.....	5
3	TREE CONDITION.....	8
4	ARBORICULTURAL IMPACT ASSESSMENT.....	9
4.1	Description of proposed development.....	9
4.2	Implications of proposed development.....	9
5	METHOD STATEMENT FOR CONSTRUCTION.....	11
5.1	Introduction.....	11
5.2	Tree Protection Fencing and Construction Exclusion Zone.....	11
5.3	Utility or Service runs within the Root Protection Area.....	11
5.4	No Dig Construction of Permanent Hardstanding within the RPA.....	11
5.5	Boundary fencing within the RPA.....	12
5.6	Soft-Landscaping within the RPA.....	13
5.7	Additional precautions outside of CEZ fenced areas.....	13
6	PROGRAMME.....	14
6.1	Prior to Tree Works.....	14
6.2	Prior to Development.....	14
6.3	During Construction Phase.....	14
6.4	Mitigating Planting.....	14
6.5	After Development.....	14

1 INTRODUCTION

1.1 Background

A previous application (ref 2020/0992) for the Erection of 8no dwellings and associated works on Land at Park Road, Worsbrough, Barnsley, S70 5BA was approved in May 2022, subject to a number of planning conditions. Conditions relating to arboriculture are as follows:

“7. Not less than five working days’ notice of the date of the proposed work shall be given in writing to the Local Planning Authority and the tree surgery shall be carried out to the standards set out in BS3998

18. No development or other operations being undertaken on site shall take place until the following documents in accordance with British Standard 5837:2012 Trees in relation to design, demolition and construction - Recommendations have been submitted to and approved in writing by the Local Planning Authority:

- *Tree protective barrier details*
- *Tree protection plan*
- *Arboricultural method statement”*

Oak and Prosper has asked Weddles to inspect the trees onsite and prepare an Arboricultural Impact Assessment and Arboricultural Method Statement report to support the discharge of these conditions.

This report has been prepared by Neil Northrop BA DipLD MCIHort MARborA CMLI of Weddle Landscape Design. Neil is a Chartered Landscape Architect and professional member of the Arboricultural Association, registered user of Quantified Tree Risk Assessment with over 17 years experience of arboricultural consultancy.

This report considers the impact of development on the trees and refers to drawing 1887-001 Tree Survey, 1887-002 Tree Constraints Plan and 1887-003 Tree Protection Plan

1.2 The Proposals

The proposals are for the construction of an upgraded access road at the north-west corner of the site to serve eight new residential dwellings.

1.3 General Site Description

The site is located on the eastern side of Park Road, Worsborough. The site is a small parcel of previously developed land with previous buildings having been demolished. The car park and foundations are present in a number of places, although these are starting to vegetate over.

A search of Barnsley Metropolitan Borough Council’s interactive map shows that the site does not lie within a Conservation Area (CA). However the site is subject to Tree Preservation Order (TPO) 4/2007, which individually covers Oak T1, and as a group the Limes T2-T13 along Park Road.

There are 18 trees on site and 1 Hedgerow. The trees onsite are a mix of native species and cultivars including Small-leaved Lime, Hawthorn, Birch, Sycamore, Ash and Oak.

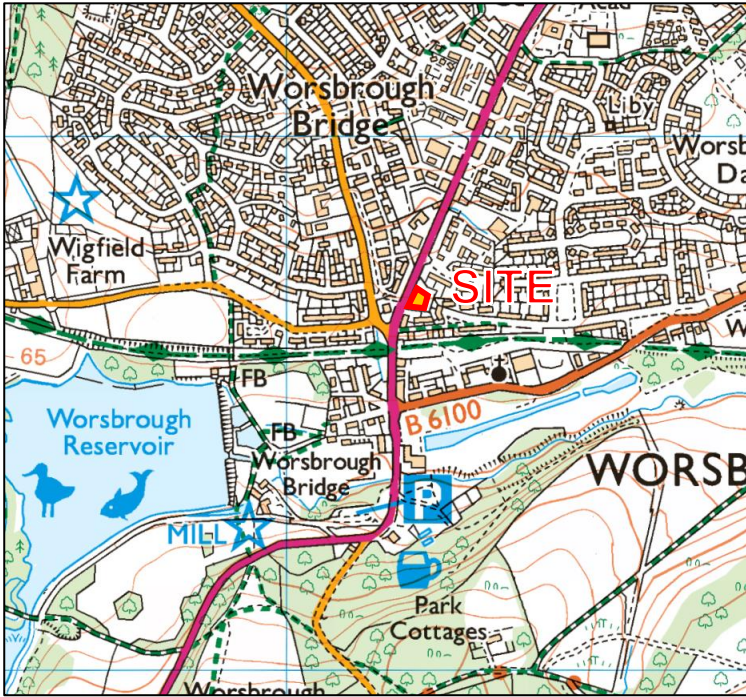


Figure 1: OS Map showing site location

2 TREE SURVEY

A Tree Survey to BS 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations' was originally carried out by Weddles in October 2020 to support the original planning application. Due to the intervening period a fresh survey has been carried out in February 2025, as shown on drawing 1887-001 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.

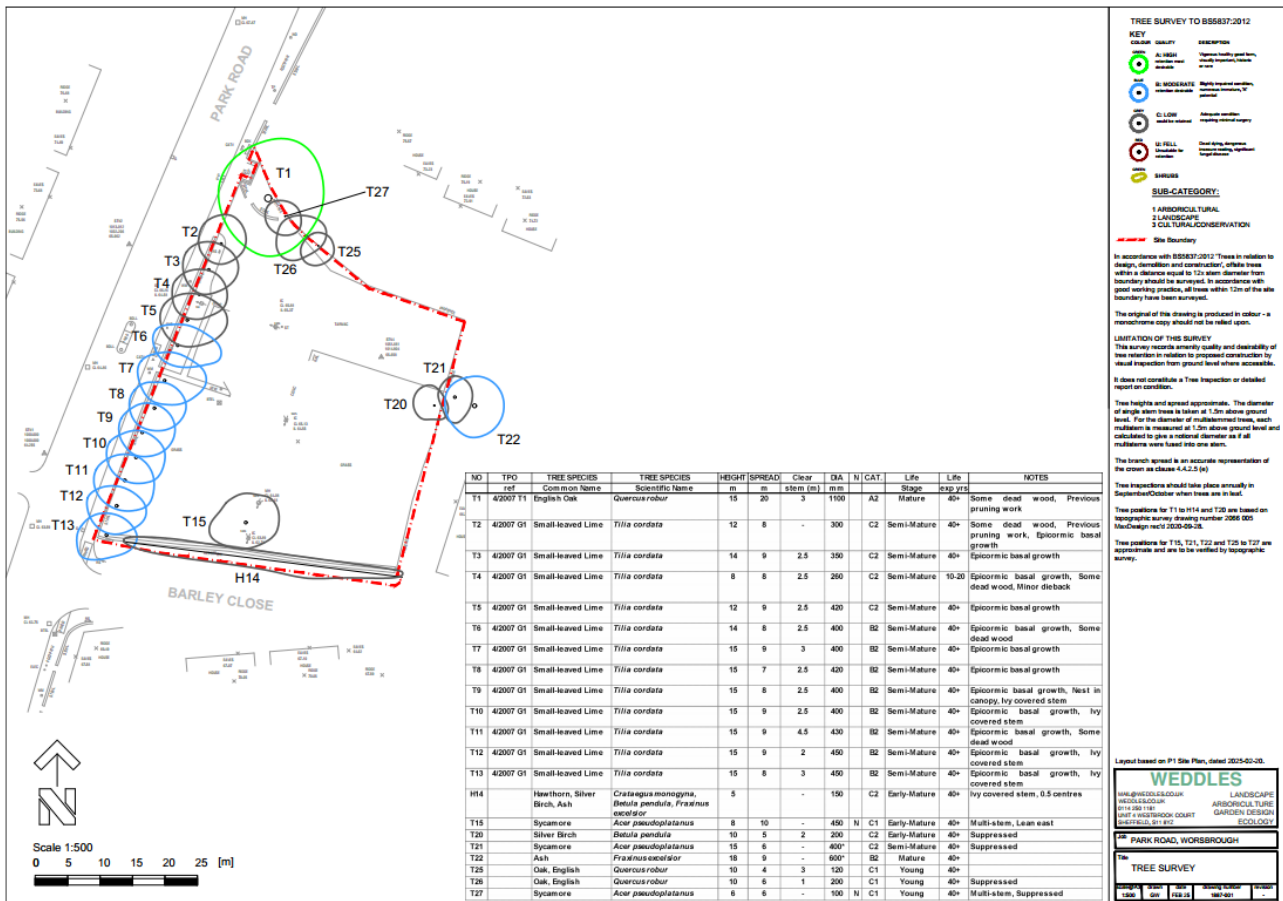


Figure 2: Tree Survey 1887-001

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 1887-002). This is the zone of roots which should be protected against damage during construction.

Due to the proximity of T1 to the existing and proposed access road, an investigatory trench was dug along the proposed kerb alignment (see blue line on figure 3) to understand if T1's roots had been constrained by previous works and the existing retaining structures.

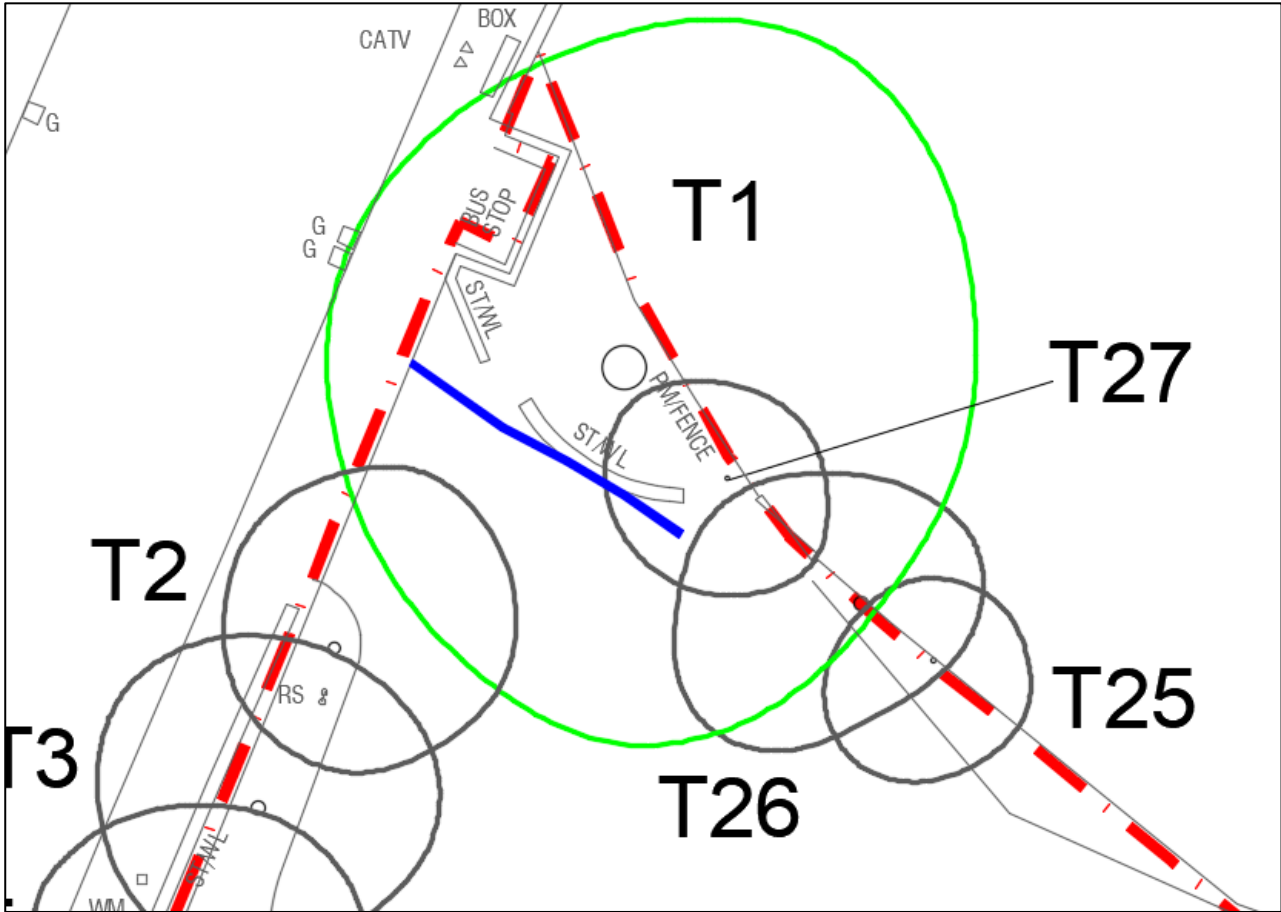


Figure 3: Alignment of Investigatory trench in Blue.

The trench revealed that the existing tarmac buildup is approximately 360mm thick, below which is solid clay which continued down to approximately 800mm depth.



Figure 4: Investigatory Trench Inspection

No roots were identified extending into the trench, as clearly the tarmac and solid clay beneath do not provide an environment suitable for root growth for T1. As the roots of T1 are constricted the RPA of this tree has been plotted as BS 5837:2012 clause 4.6.2.

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.

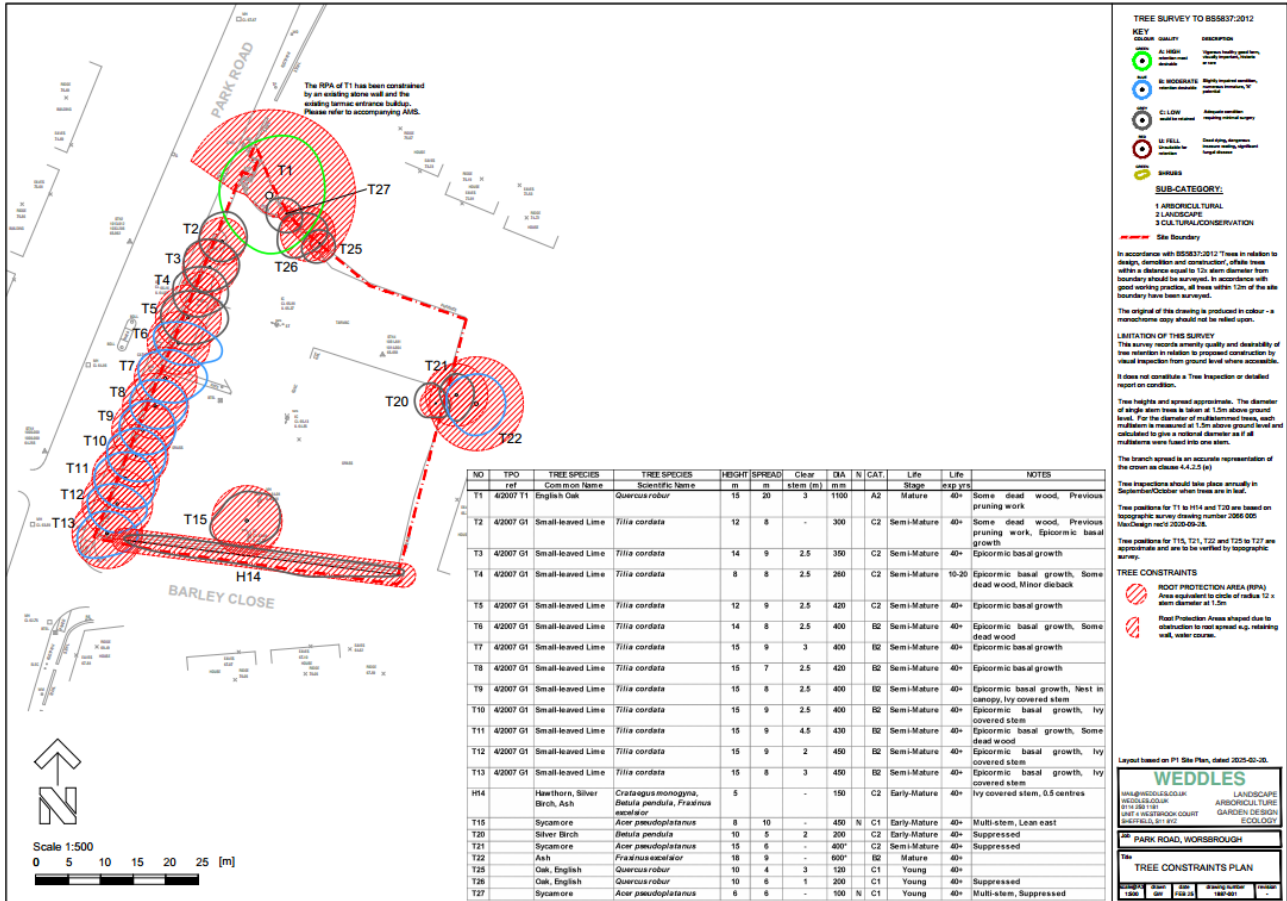


Figure 5: Tree Constraints Plan 1887-002

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.

Lime T4 on the Park Road frontage was noted to have some dieback and dead wood and has much reduced vigour in comparison to the rest of the row, with a reduced life expectancy.



Figure 6: T4 (centre) showing dieback and reduced vigour

4 ARBORICULTURAL IMPACT ASSESSMENT

4.1 Description of proposed development

The proposal is for eight new residential dwellings, access road and associated parking, and gardens. The proposed layout is shown on drawing 1887-003. The Tree Protection Plan also indicates the position for protective barriers and specific sensitive construction methods.

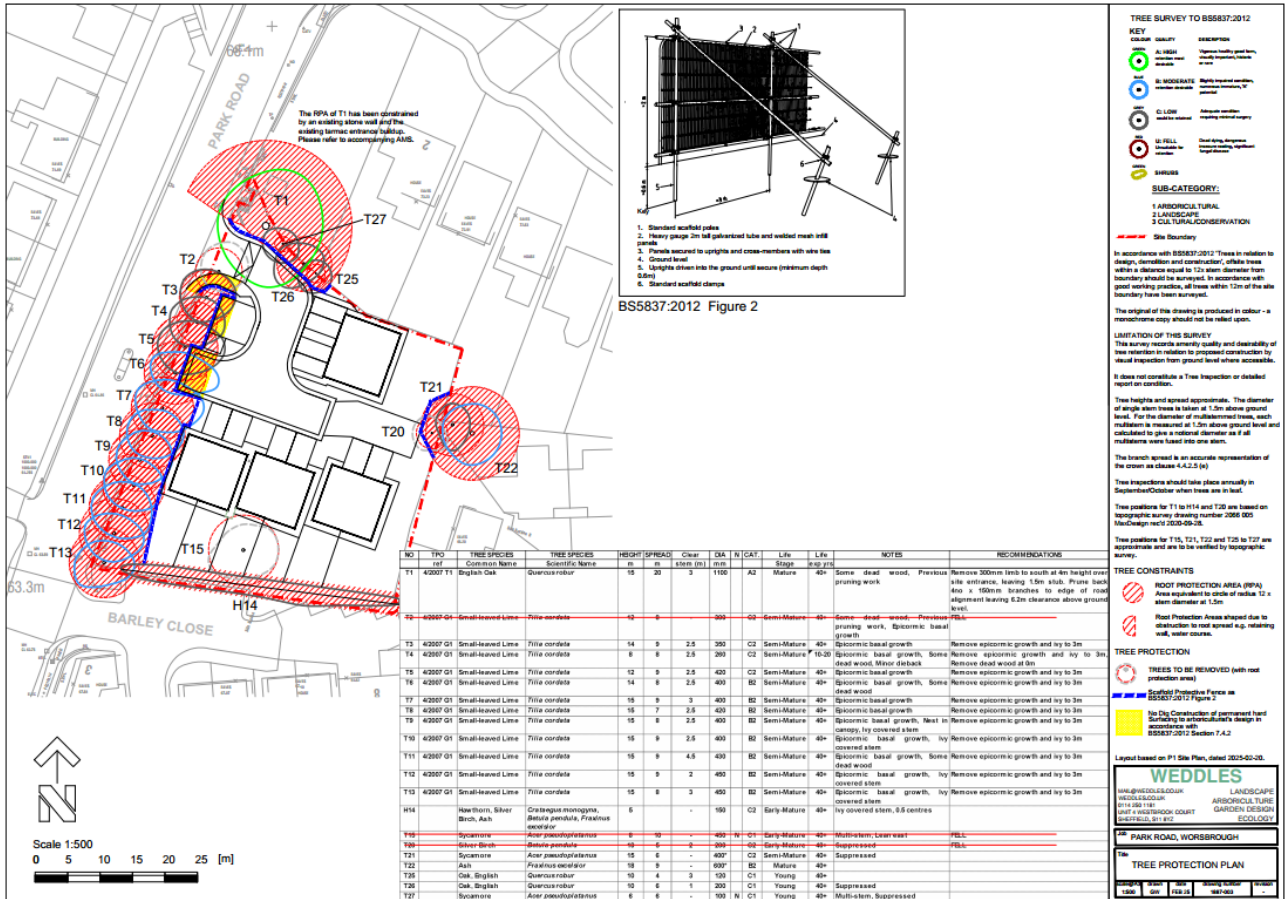


Figure 7: Tree Protection Plan 1887-003

4.2 Implications of proposed development

4.2.1 Trees to be removed

2 No. trees will be removed as part of the development.

- a) The layout was developed considering a number of factors including engineering levels, access roads, connection to highway, parking provision, architectural massing, service easements and tree constraints etc. To achieve a viable layout will require the removal of 2 No Trees, both of which are graded low quality (category C):

- Lime T2 will be removed to facilitate the new access road
- Sycamore T15 will be removed to allow ample unshaded garden area for the new dwellings.
- Birch T20 will be removed to facilitate the access road

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 1887-003 Tree Protection Plan.

Retained trees T3-T7 are in close proximity to the proposals and new proposed hard standing within the RPA's of these trees will be constructed using a no-dig methodology.

It is considered that with the fencing and methods proposed during construction any impacts on retained trees will be satisfactorily mitigated, ensuring their long term health.

4.2.3 Mitigation

The removal of the trees can be mitigated through the planting of 4No. replacement trees.

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 Utility or Service runs within the Root Protection Area

No service runs should pass through protected areas.

5.4 No Dig Construction of Permanent Hardstanding within the RPA

In areas specified on drawing 1887-003 Tree Protection Plan as requiring new surfacing to be No Dig Construction of permanent hard surfacing to arboriculturist's design in accordance with BS5837:2012 Section 7.4.2 the following method should be followed:

- Hard surfacing should be designed by a structural engineer and agreed with the arboriculturalist.

- Hard surfacing should utilise a sub-base formed from a three-dimensional cellular confinement system. For Block paving an appropriate specification may be 300g/m geotextile to ground, then 150mm HDPE geocell (Tarram Geocell 25/15, or similar) with 4/20 or 20/40 aggregate fill, then 100-300g/m geotextile with permeable bedding layer and permeable block paving surface.
- Excavations associated with the installation of kerbs and edging should be avoided. Above ground products which can be pinned in place should be used in preference to those which require foundations and haunches. Examples include pegs and boards, sleepers and gabion baskets. Kerb may be installed to edge on top of concrete-filled geocell. Further stabilised by wooden pegs or pinning.
- Avoid any excavation or lowering of soil levels other than the removal, using hand tools only, of any turf, surface vegetation or organic matter. Levels may be raised using a granular fill which will remain gas and water permeable for the duration of its design life.
- Avoid any localised compaction of the underlying soil by evenly distributing any anticipated loading over a suitably large area.
- Utilise a sub-base and wearing course that is permeable to air and water (this includes and separation membranes that may be required).
- Avoid the need for the use of de-icing salt or, if undesirable, should include a system whereby contaminated run-off is directed outside of the RPA.
- Compaction of soil surrounding and beneath any new hard surfacing shall be prevented. This may be achieved through the use of temporary ground protection or by constructing the new surface with machinery working forward from the surface as it is constructed (i.e. “rolling out”).
- If uncured concrete is to be used, then an impermeable membrane will be required in order to prevent leachate from entering the surrounding soil.

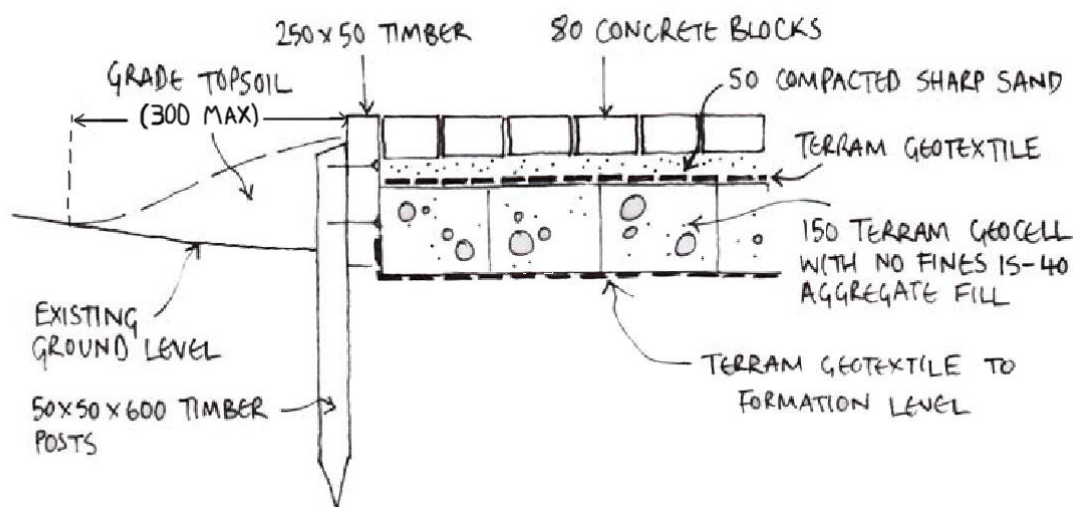


Figure 8: Typical No Dig Construction Detail

5.5 Boundary fencing within the RPA

- Foundations should be design with minimum depth and width. If a specific volume of foundation is required, then it is preferable to include greater depth whilst minimising the overall width.
- Mechanical excavation should be avoided. Excavation should be undertaken either using hand tools or through the use of compressed air or water.
- The location of any fencing posts should retain sufficient flexibility for them to be relocated should excavations reveal important roots that can't be cut. This includes roots over >25mm Ø, or substantial numbers of roots < 25 mm Ø.

- The use of poured concrete must be avoided. Concrete foundations must use a dry mix to avoid leachate entering the soil and damaging tree roots.

5.6 Soft-Landscaping within the RPA

- No works will be carried out if the soil moisture is of a level likely to allow compaction to occur (i.e. soil shall not be waterlogged but shall be firm and friable).
- Only pedestrian operated machinery shall be used. All pedestrian operated machinery shall utilise low ground pressure tyres.
- Herbicide applications shall be restricted to the use of translocated products such as glyphosate. These will be applied according to the manufacturer's instructions and drift onto non-target plants avoided.
- Existing vegetation will be removed by hand. Turf may be removed using a mechanical turf stripper where necessary.
- Compacted areas of soil will be broken up by using hand tools only.
- There shall be no excavation or lowering of soil levels.
- Depressions may be levelled through infilling with a maximum depth of 150mm of loosely compressed good quality topsoil or other porous material.
- For grass sowing and turfing the soil shall be cultivated to a depth of no more than 25mm.
- Bare root seedlings, transplants, whips and feathered trees shall be notch planted.
- Container grown shrubs, feathered trees, and standard trees shall be planted into individual pits. In no circumstances shall planting take place into cultivated beds or trenches.
- All planting pits shall be excavated with due care for underlying tree roots and using hand tools only.
- In instances where tree roots are found within the planting pit then roots less than 25mm in diameter may be severed using a sharp tool such as a saw or pair of secateurs. The cut should be as small as possible and must avoid leaving a ragged end. Roots over 25mm diameter may only be cut on the advice of an arboriculturist. If roots over 50mm are encountered, or groups of roots over 25mm, then the planting pit will be backfilled and moved to an alternative location.

5.7 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 contractor will maintain a record of all positions of the arboricultural fencing and special construction methods undertaken and provide these as requested by the local authority tree officer.

6.1 Prior to Tree Works

In accordance with planning condition 7 '*Not less than five working days' notice of the date of the proposed work shall be given in writing to the Local Planning Authority*'.

6.2 Prior to Development

Trees T2, T15 and T20 should be removed, and pruning and cleaning works undertaken as an enabling operation.

Once completed protective fencing should be erected immediately as shown on drawing 1887-003..

6.3 During Construction Phase

Fence lines and ground protection should be maintained. No construction activities should take place within the CEZ.

Construction of the access road and areas of Permanent Hardstanding within the RPA's will be undertaken as a first site operation.

The remainder of building construction will then continue with fence lines and ground protection maintained and no construction activities to take place within the CEZ.

6.4 Mitigating Planting

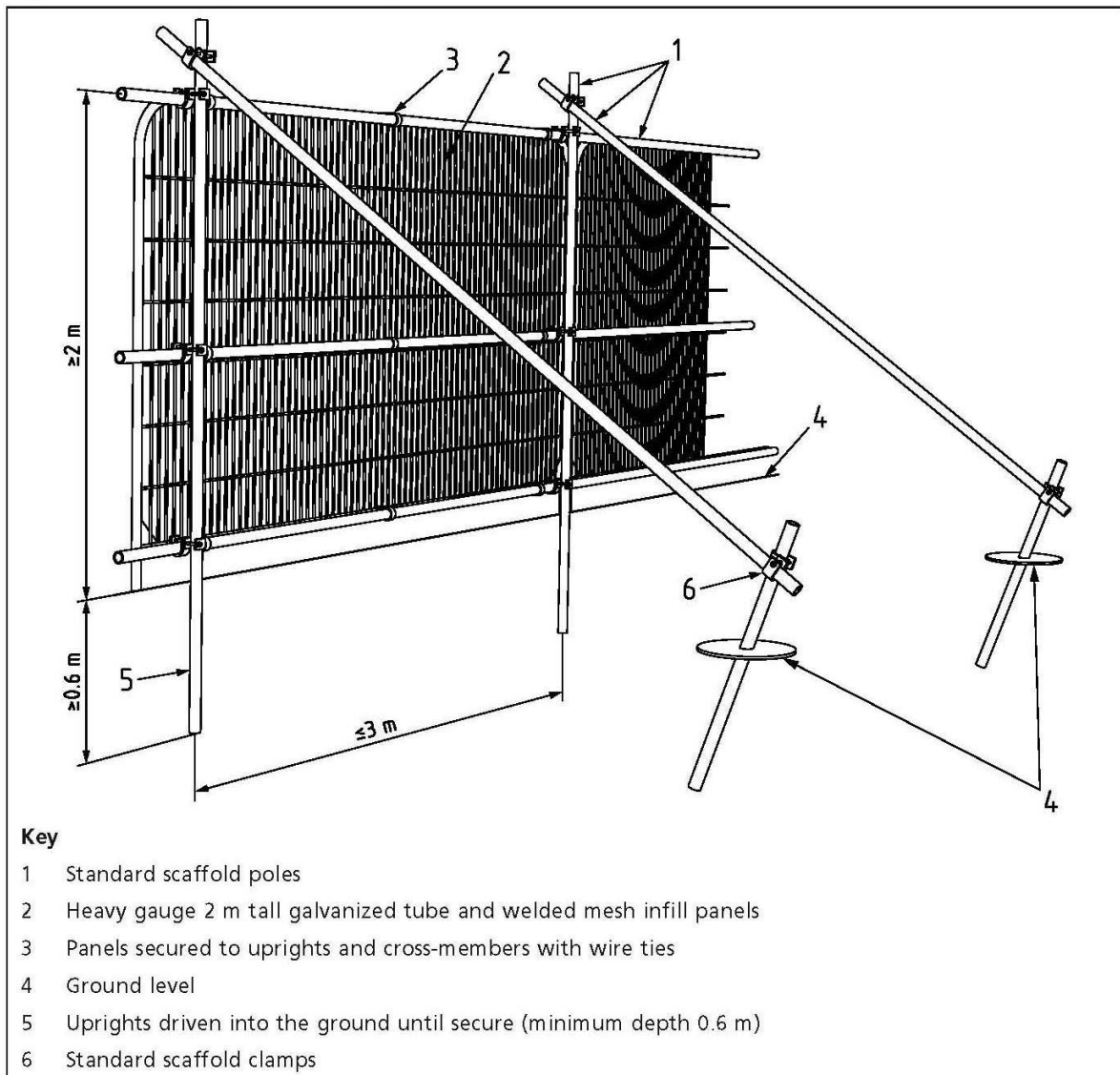
Replacement tree planting should be implemented to replace trees removed to allow for the development.

6.5 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





The image shows a template for a tree protection area sign. It features a yellow background with a black border. At the top, there are two square icons, each containing a black silhouette of a tree. Below these icons, the word "ATTENTION" is written in large, bold, black, sans-serif capital letters, underlined. To the right of "ATTENTION", the words "TREE PROTECTION AREA" are written in a smaller, bold, black, sans-serif font. Below "TREE PROTECTION AREA", the words "KEEP OUT!" are written in a bold, black, sans-serif font. In the center of the sign, there is a large, black-outlined triangle with a yellow interior, containing a large black exclamation mark. Below the triangle, there are three lines of text in a bold, black, sans-serif font: "YOU MAY NOT ENTER THIS AREA OR USE IT FOR STORAGE", "YOU MUST NOT MOVE OR DAMAGE THIS PROTECTION FENCING", and "IF YOU REQUIRE ACCESS TO THE TREE PROTECTION AREA CONTACT THE SITE MANAGER".