

Weddle Landscape Design

LANDSCAPE ARCHITECTURE

ENVIRONMENTAL PLANNING

Mews Studio, Charnwood House
8 Kenwood Bank, Sheffield S7 1NU
Tel (0114) 250 1181 Fax (0114) 250 1188
E-mail mail@weddles.co.uk
Web site <http://www.weddles.co.uk>

THE WHITE HOUSE, BARNSELY

Arboricultural Impact Assessment and Arboricultural Method Statement

July 2022

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1 INTRODUCTION

1.1 Introduction

Coda Bespoke have asked Weddle Landscape Design (WLD) to inspect the trees onsite and prepare an Arboricultural Impact Assessment and Arboricultural Method Statement report. This report has been prepared to support a planning application which is currently being considered for the site at Keresforth Hill Road, Barnsley.

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 15 years experience of arboricultural consultancy.

This report considers the impact of development on the trees and refers to drawing 1442-001 Tree Survey and Tree Constraints Plan and 1442-002 Tree Protection Plan.

1.2 Background

A search of Barnsley Metropolitan Borough Council's interactive map show that the site does not lie within a Conservation Area (CA). However the site is subject to an Area Tree Preservation Order (TPO) 1/1976.

A prior application (2022/0318) for consent to remove 7 Ash trees on site, due to advance signs of Ash Dieback, within TPO 1/1976 was submitted on 1st April 2022.

Barnsley Metropolitan Borough Council granted consent on 19th May 2022, with the following condition:

"Within the first planting season after removal, the seven Ash trees to be removed shall be replaced by three new Oak trees (Quercus robur), two new Beech trees (Fagus sylvatica) and two new Lime trees (Tilia cordata). The new trees shall be planted within 2m of each of the locations of the trees to be removed unless otherwise agreed by the Local Planning Authority and shall be standard trees (stem girth 10-12cm), shall be planted and affixed (with flexible tree ties) to a tanalised tree stake (minimum diameter 75mm) at a height of no more than 1m above ground level. In order to aid establishment a suitable mulch shall be applied (e.g. semi-composted woodchip to a minimum depth of 75mm) around the tree to a radius of 1m. The tree shall be watered immediately after planting then whenever required to ensure successful establishment. Within two weeks of planting the Local Authority Tree officer shall be informed and invited to inspect the new tree. The new tree shall be subjected to a Tree Preservation Order in replacement of the felled tree. Any tree which fails to become established within 5 years from planting shall be replaced with another tree of the same original specification.."

The Officers report also contains the following statement:

This application relates to the seven worst trees at present and as such (due to the nature of the disease) their removal is regrettably required. Unfortunately it also means that over the next few years the remaining Ash trees are highly likely to have to be removed as well

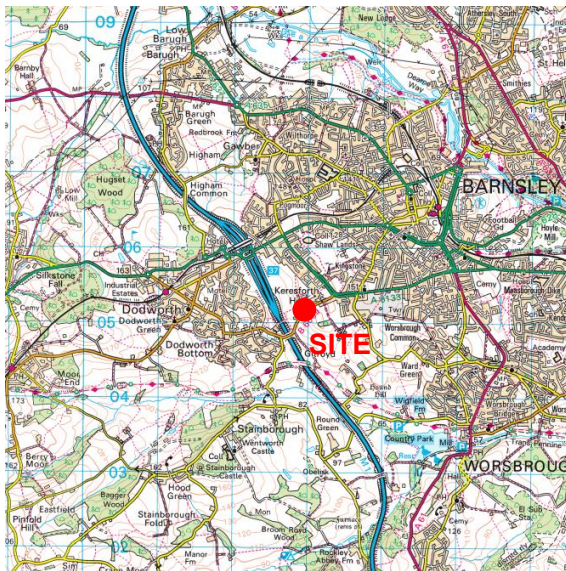
Following on from the approved TPO tree removal application, a fresh survey of the site and trees has been undertaken by WLD as detailed within this report. WLD have then worked with the Architect to develop the proposed building footprint and design.

1.3 General Site Description

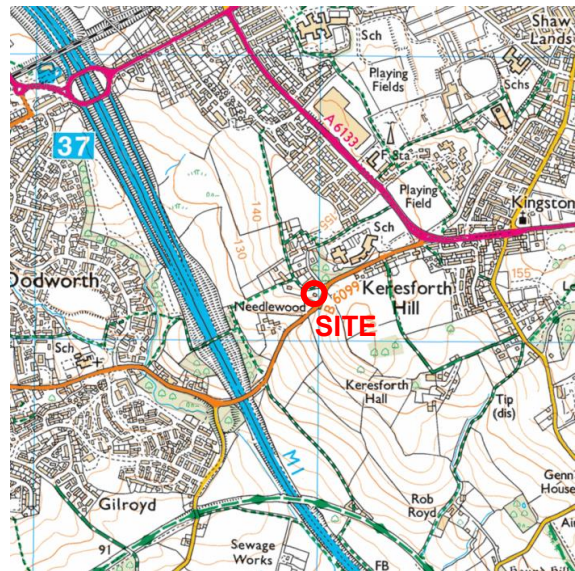
The site is located on the outskirts of Barnsley, approximately 2km south-west from the centre. The site is a parcel of land formed by the junction of Keresforth Hill Road to the south-east and Dark Lane to the north. There is open agricultural land to the south-west and a neighbouring property to the west.

The site currently contains a single detached property, with vehicle access of Keresforth Hill Road. Mature trees, hedging and fencing line the boundary with Dark Lane and Keresforth Hill Road.

There are 16 trees on site, including Ash, Horse Chestnut, Sycamore and Corsican Pine.



Site Location



Site Location – Satellite Imagery



Tree Preservation Order 1/1976 (black) and site boundary (red)

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. This information is presented in the tree schedule on drawing 1442-001.

The survey included 16no. trees.

- Ash T1 has an ivy-covered stem, a slight lean, some dead wood and is showing slight signs of decay. It has a low life expectancy and is considered to be of medium quality (category B).
- Horse Chestnut T2 is slightly suppressed. It has a moderate life expectancy and is considered to be of low quality. (category C).
- Horse Chestnut's T3, T4, T5 and T6 all have moderate life expectancy and are considered to be of low quality (category C).
- Horse Chestnut T7 has bleeding canker and an ivy covered stem. It has a moderate life expectancy and is considered to be of low quality (category C).
- Horse Chestnut T8 is suppressed with a lean and has an ivy covered stem. It has a moderate life expectancy and is considered to be of low quality (category C).
- Ash T9 has dead wood and some slight signs of dieback. It has a low life expectancy and is considered to be of low quality (category C).
- Sycamore T10 is slightly suppressed. It has a moderate life expectancy and is considered to be of low quality (category C).
- Ash T11 has significant signs of dieback with some dead wood. It has a very low life expectancy and is considered unsuitable for retention (category U).
Ash T12 has significant signs of dieback, with some dead wood and an ivy covered stem. It has a very low life expectancy and is considered unsuitable for retention (category U).
- Sycamore T13 is suppressed with an ivy covered stem. It has a moderate life expectancy and is considered to be of low quality (category C).
- Ash T14 and T15 have significant signs of dieback, some dead wood and ivy covered stems. The roots are constrained to the south-east by the building. They have a very low life expectancy and are considered unsuitable for retention (category U).
- Corsican Pine T16 is rooted above a retaining wall and constrained, with a slight lean south-eastward towards the existing property. It has a moderate life expectancy and is considered to be of low quality (category C).

c) Only 4 trees of the approved works to TPO tree application 2022/0318 have been felled. A further 2 onsite trees are to be felled as approved, and correspond to the following WLD surveyed trees:

- Ash T9 (*T13 under the approved application*).
- Ash T14 (*T3 under the approved application*).

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 1442-002 Tree Protection Plan.

4.2.3 Mitigation

The removal of the low quality tree T16 can be mitigated through the planting of 2no. replacement trees, 1no Rowan (*Sorbus aucuparia*) and 1no. Crab Apple (*Malus sylvestris*).

The removal of the 3 Ash trees T11, T12 and T15 for arboricultural reasons can be mitigation be the planting of 3no. alternative species, 2no. Beech (*Fagus sylvatica*) and 1no Lime (*Tilia cordata*).

The mitigation for the approved felling of Ash trees T9 and T14 under application 2022/0318 is stipulated as 2 replacement trees of either Oak (*Quercus robur*), Beech (*Fagus sylvatica*) or Lime (*Tilia cordata*), located within 2m of the felled tree.

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 Utility or Service runs within the Root Protection Area

Ideally no service runs should pass through protected areas. If unavoidable, all hand dug trenching should be carried out in accordance with NJUG 10/Volume 4 (Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees published by the National Joint Utilities Group April 2007).

Particularly a hand-dug method of trenching should be used and if any roots of 25mm size and above are encountered must be retained spanning the trench, and services are to be inserted carefully beneath them.

Alternative trenchless insertion methods may also be possible in accordance with Clause 7.7 of BS5837:2012.

5.5 Landscaping within the Root Protection Area

All work within the RPA is to be carried out by hand and no adjustments to soil levels unless otherwise agreed with the arboriculturalist. No mechanical rotovations.

5.6 Permanent Hard Surfacing within the Root Protection Area

Where permanent hard surfacing is to be installed within the Root Protection Area it will be designed to provide a no-dig and permeable buildup in accordance with Clause 7.4 of BS5837:2012 and agreed with the arboriculturalist.

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

6.1 Prior to development

Trees T9, T11, T12, T14, T15 and T16 should be removed as a first site operation.

Protective fencing and ground protection should be erected immediately prior to demolition as shown on drawing 1442-002.

6.2 During Construction

Fence lines and ground protection will be maintained as shown on drawing 1442-002 and no construction activities to take place within the CEZ.

6.3 Mitigating Planting

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

6.4 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

