

# Weddle Landscape Design

LANDSCAPE ARCHITECTURE

ENVIRONMENTAL PLANNING

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## GYPSY LANE, WOMBWELL

### Arboricultural Impact Assessment and Arboricultural Method Statement

February 2019

#### 1.0 INTRODUCTION

##### 1.1 Introduction

Premier Group have asked Weddle Landscape Design to inspect the trees and prepare a Tree Survey to BS 5837:2012 and an Arboricultural Impact Assessment and Arboricultural Method Statement report. This information is to aid decision making for a new planning application for the site at Gypsy Lane, Wombwell, 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 12 years experience of arboricultural consultancy.

This report considers the impact of development on the trees and refers to Tree Survey drawings GLW 01, GLW 02, GLW 03, Tree Constraints Plan (TCP) drawings GLW 04, GLW 05, GLW 06 and Tree Protection Plan (TPP) drawings GLW 07, GLW 08 and GLW 09.

##### 1.2 General Site Description

The site is located off Gypsy Lane which can be accessed from Lundhill Road.

There is one bungalow on site which is proposed to be demolished to create an access road.

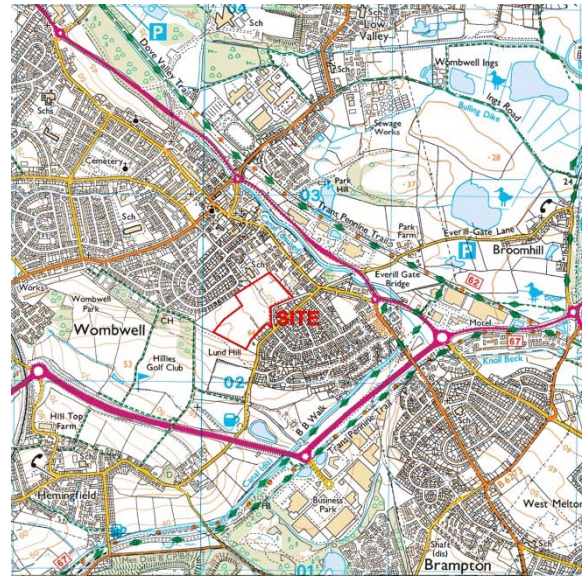
A search of Barnsley Metropolitan Borough Council's interactive map show that the site does not lie within a Conservation Area (CA). The land is proposed for mixed use development.

There are 73 no. trees on the site, 12 no. groups and 5 no. woodlands. None are protected by a Tree Preservation Order (TPO)

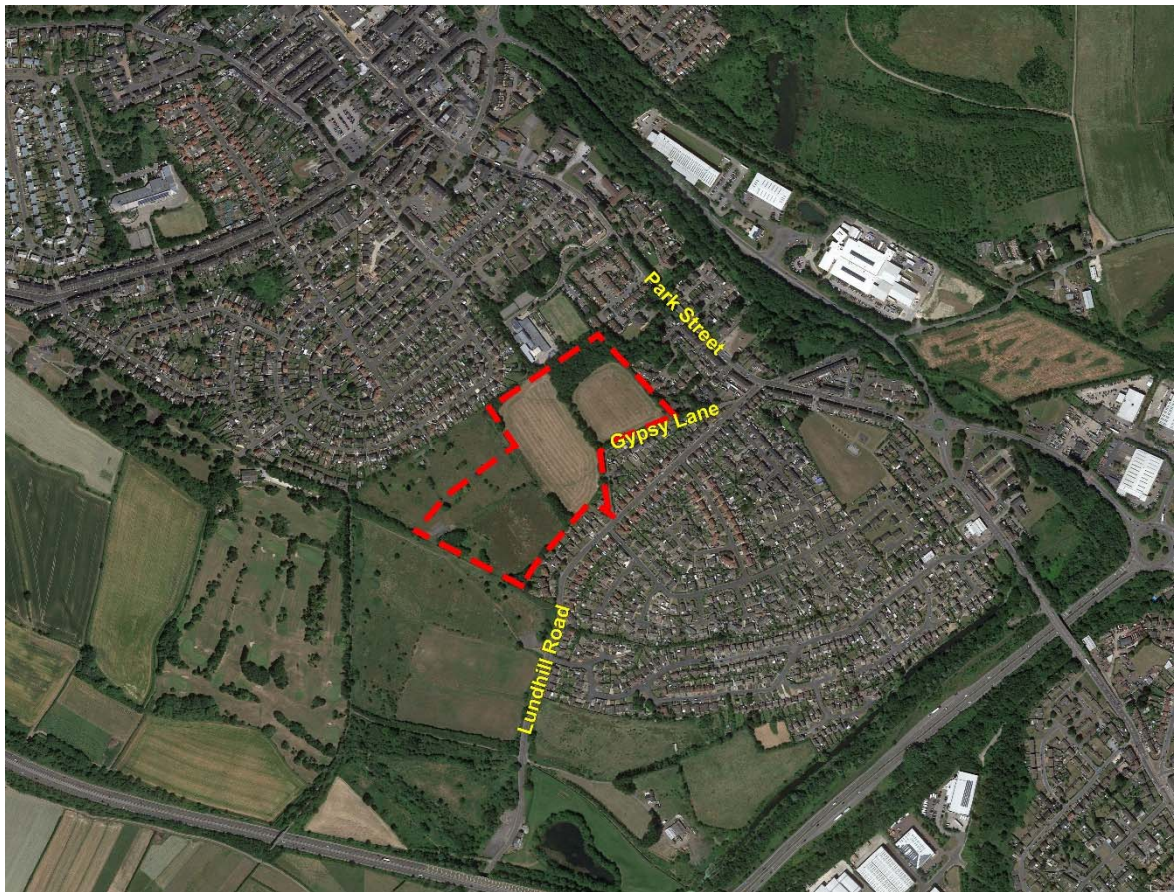
There are a variety of trees including, Silver Birch, Swedish Whitebeam, Prunus species, Goat Willow, Crack Willow, White Willow Sycamore, English Oak, Ash, Hawthorn, Alder, Hazel, Horse Chestnut, Sweet Chestnut, Apple, Field Maple, Norway Maple, Silver Maple, Lime, Hornbeam and Beech.

The majority of trees are semi and early mature and were previously planted as shelter belts along the sports pitch embankments. A large area of early-mature woodland is located to the north east corner of the site.

A line of mature trees is found along the southern end of the eastern boundary.



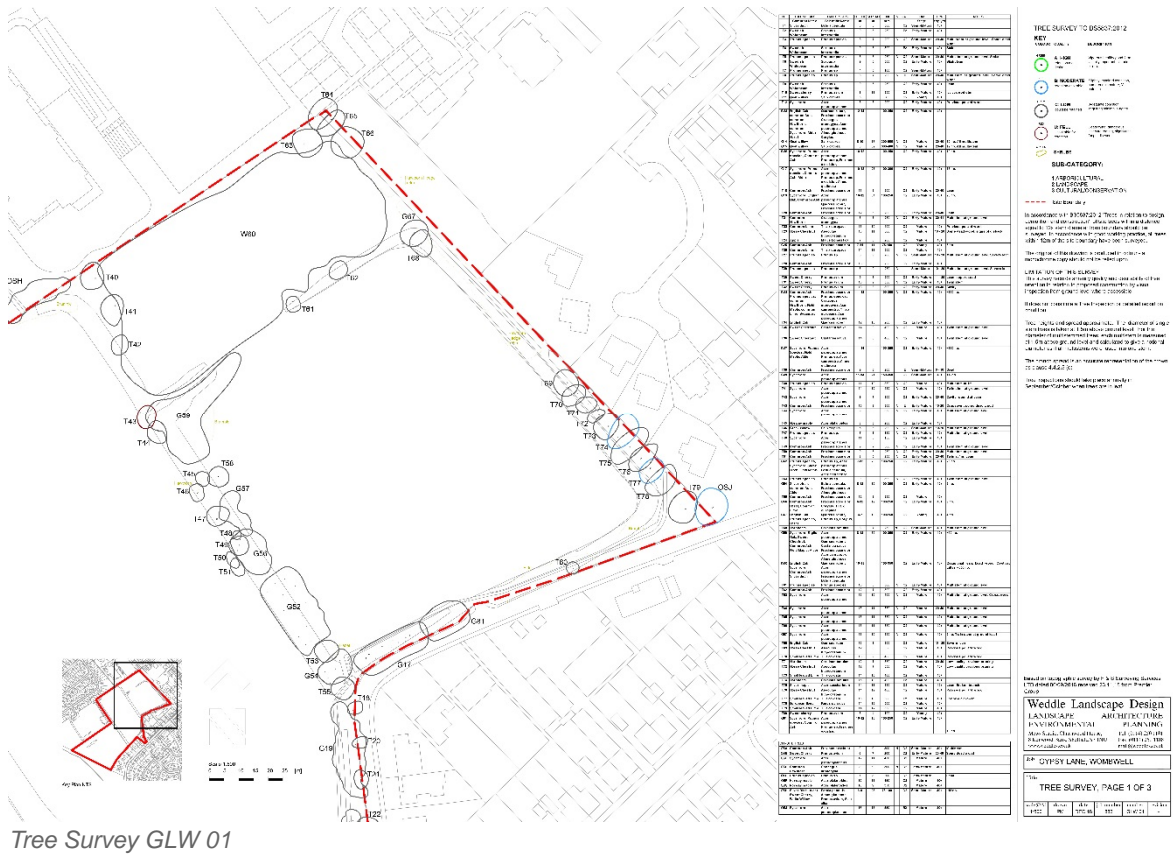
Site Location



Site Location – Aerial Photo

## 2.0 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 December 2018 as shown on drawings GLW 01, GLW 02 and GLW 03. The Tree Survey is based on Topographic survey drawing, FS10001 Level and Boundary Survey by F & S Surveying services dated September 2016.

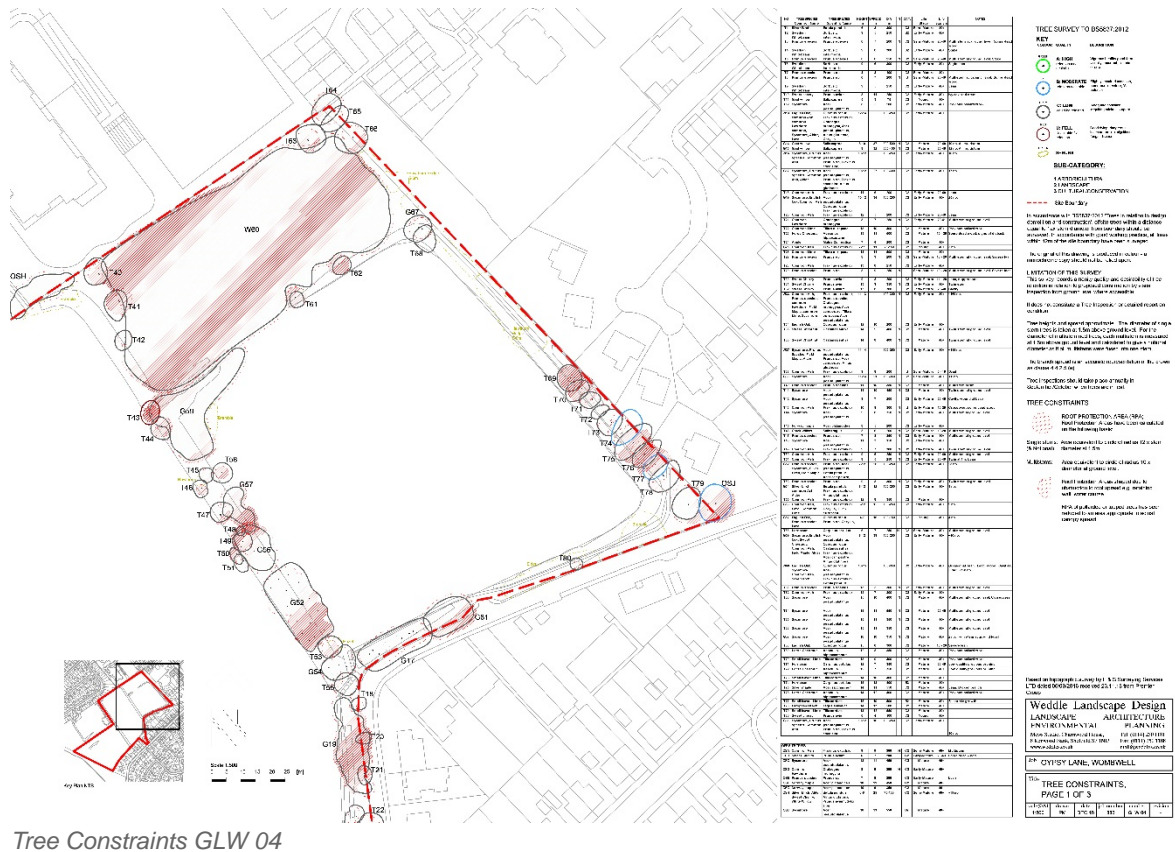


Tree Survey GLW 01



## 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 Plans (see drawings GLW 04, GLW 05 and GLW 06). This is the zone of roots which should be protected against damage during construction.





Tree Constraints GLW 05



Tree Constraints GLW 06

### 3.0 TREE CONDITION

The tree survey revealed that:

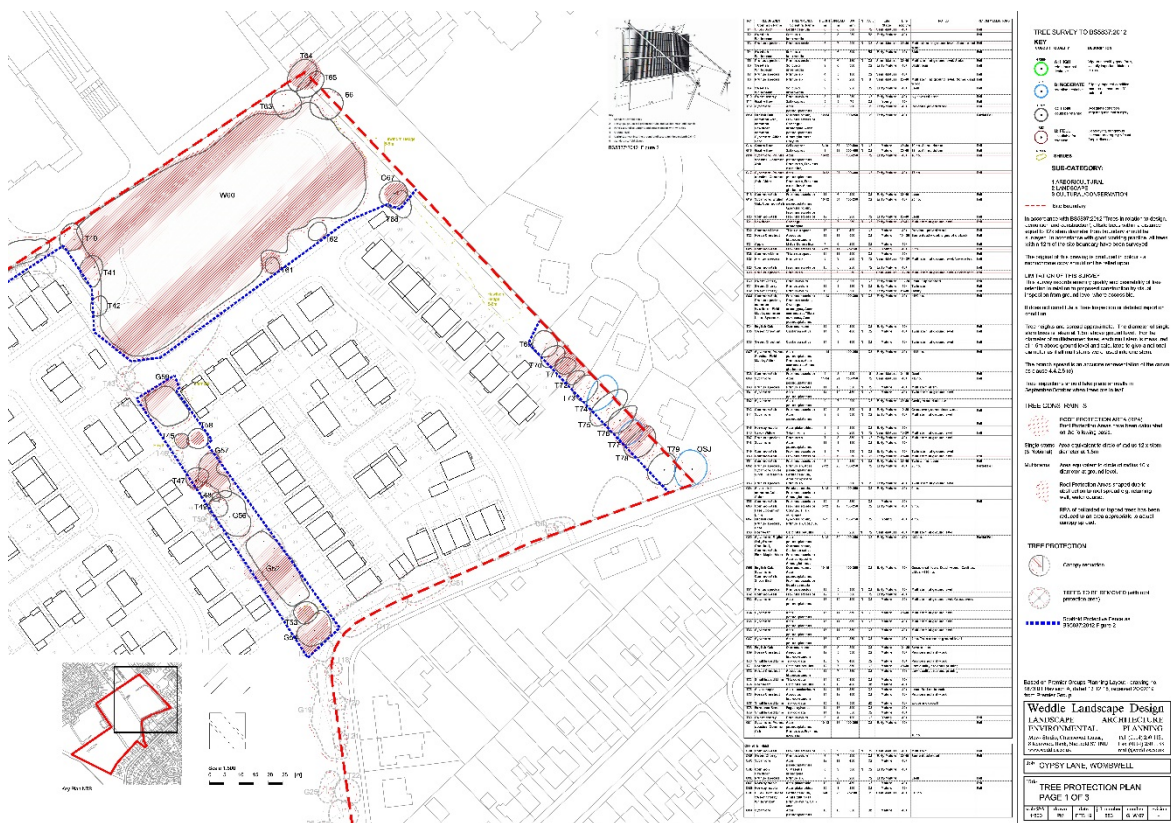
- Swedish Whitebeams T2 and T4 are considered to be of moderate quality (category B) with a long life expectancy
- Prunus T3 and T5 are considered to have a reduced life expectancy and are considered to be low quality (category C)
- Prunus T8 while having a moderate life expectancy should be felled (category U)
- Goat Willow groups G12 and G15 due to the species have a reduced life expectancy and are considered to be low quality (category C)
- Ash trees T18 and T20 are leaning with a reduced life expectancy and are of low quality
- Hawthorn T21 has a reduced life expectancy
- Horse Chestnut T23 has dead wood and signs of dieback with a low life expectancy and are of low quality
- Cherries T27 and T29 have severe leans with a low life expectancy and is of low quality
- Cherry T30 is leaning and suppressed and has a low life expectancy and is of low quality
- Cherry T32 has a stem cavity and reduced life expectancy and is of low quality
- Ash T38 is dead with a very short life expectancy and should be felled
- Ash T43 has a short life expectancy with poor form caused by a significant crossover and should be felled
- Crack Willow T46 is multi-stemmed and this species is prone to collapse and therefore has a low life expectancy.
- Ash trees T50 and T51 are of low quality with a moderate life expectancy
- Sycamore T64 is of low quality with a moderate life expectancy
- English Oak T68 is of low quality with a severe lean and a short life expectancy
- Trees T69 – T72 have be subject to previous pruning work, some of which does not conform to BS3998:2010. These trees are of a low quality as a result.
- Hornbeam T74 is of moderate quality with a long life expectancy
- Lime T77 is of moderate quality with a long life expectancy and has epicormic growth to its base
- Woodland W60 is of low quality as there are a number of trees which are leaning or have dead wood or cavities and some thinning to improve the structure is required
- Offsite Sycamore OSJ is of moderate quality with a long life expectancy
- The remaining trees are considered to be of low quality (category C), the majority of which are located within densely spaced groups and woodlands and these have been left unmanaged and un-thinned since planting.

## 4.0 DEVELOPMENT IMPACT

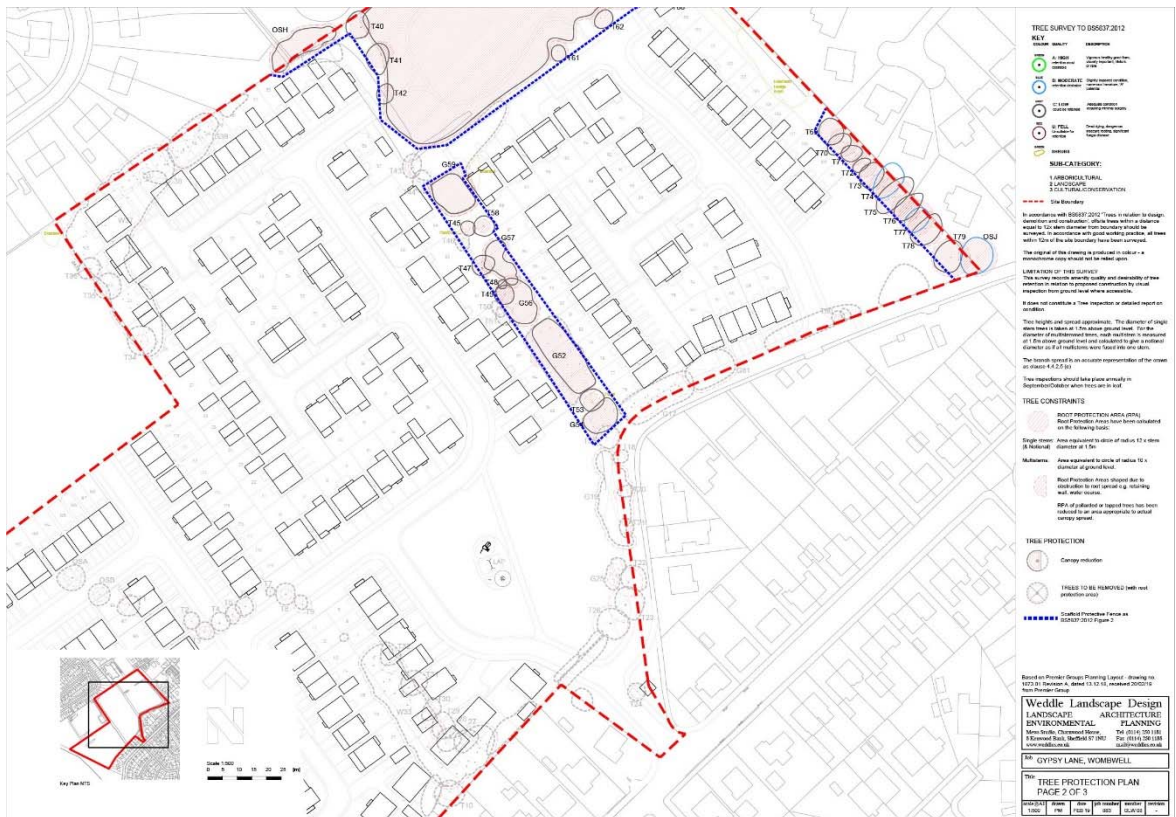
### 4.1 Description of proposed development

The development proposes 229 new dwellings including new access from Lundhill Road, car parking and public open space. This will require the demolition of an existing bungalow.

The proposed layout is shown on drawings GLW 07, GLW 08 and GLW 09 Tree Protection Plan. The Tree Protecting Plan also indicates the position for protective barriers.



Tree Protection Plan GLW 07



Tree Protection Plan GLW 08



Tree Protection Plan GLW 09

## 4.2 Implications of proposed development

### 4.2.1 Trees to be removed

55 No. Trees, Groups or Woodlands will be removed as part of the development. 1 No. Woodland and 2 No. Groups will be partially reduced or felled.

a) Of these 3 No. will be removed for arboricultural reasons:

- T8 Prunus species and T43 Ash – Trees have dead wood and is fall into category U and are unsuitable for retention
- T38 Ash is dead

b) The infrastructure, roads, pathways and footprints of the proposed development will require the removal or partial removal of 47 No. Trees, Groups or Woodlands.

2 No. of these are graded as moderate quality (B):

- Swedish Whitebeam T2
- Swedish Whitebeam T4

43 No. of these are graded as low quality (C):

- Silver Birch T1
- Prunus species T3, T5, T7, T8, T27, T29, OSE
- Swedish Whitebeam T6, T9
- Goat Willow T11, G14, G15
- Sycamore T12, G39, T44
- Ash T18, T20, G25, T28, T43, T50, T51, T55, OSA
- Hawthorn T21
- Lime T22, T26
- Horse Chestnut T23
- Apple T24
- English Oak T34
- Sweet Chestnut T35, T36
- Sweet Cherry T10, T30, T31, T32, T80, OSB
- Crack Willow T46
- Norway Maple OSF, OSG
- Mixed Woodland W16
- Mixed Group G17
- Mixed Group G19
- Mixed Woodland W33
- Mixed Woodland W37
- Mixed Group G52
- Mixed Group G59
- Mixed Group G81

The majority of trees on the site are located within densely spaced groups and woodlands and these have been left unmanaged and un-thinned since planting which has resulted in a low quality of tree cover. While remove of a large number of these low quality trees is required there is an opportunity to provide a significant number of new trees as part of the development. It is considered that the overall impact of the loss of trees can be satisfactorily mitigated by the replanting scheme.

#### **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 drawings GLW 07, GLW 08 and GLW 09 Tree Protection Plan.

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

### **5.0 TREE CONSERVATION**

#### **5.1 Tree protection from compaction**

The general principle of avoiding compaction of soil within the trees protected 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 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.

Protective fencing will be erected as a first site operation. No construction activities, soil removal or adjustment, material storage, or utility trenching will take place within the fenced area.

#### **5.2 Prevention of damage to trees during construction**

Consideration must be given to all construction operations which will be undertaken in proximity to trees:-

**a) Location and space needed for service runs including surface water and foul drains, land drains, water, gas, electric, telecoms.**

No service runs should pass through protected areas. If unavoidable, all trenching should be carried out in accordance with NJUG 10 (Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees published by the National Joint Utilities Group April 1995).

**b) Changes in ground level, location of retaining walls**

No change in level should take place within protected areas.

**c) Working space and access for machinery**

Protective fencing will be based on the RPA recommended in Clause 4.6 of BS5837:2012.

Where it is essential for scaffolding to be erected within the protected area of trees, construction shall be in accordance with Clause 7 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 sand 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.

**d) Space for site huts and other temporary structures**

None within protected areas. Scaffolding only in accordance with Clause 7 of BS5837:2012.

**e) Type and extent of landscape works within the fenced areas.**

Soft landscape only, with no adjustment of topsoil levels.

**6.0 TREE CONSERVATION**

**6.1 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.

**6.2 Protection of roots against compaction and asphyxiation**

Roots 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.

Within protected areas defined by protective fencing, site construction activities will be controlled to prevent:-

Movement of heavy vehicles, and storage of heavy materials.

Raising of soil levels

Covering root areas with impervious materials

Rise in water table

Increase in organic matter

Spillage of chemicals including diesel, cement and construction materials

**6.3 Prevention of damage to roots by soil stripping or excavations**

The majority of roots are within the top 600mm of soil. No stripping of topsoil will take place within protected areas.

Excavation for foundations will be outside of protected areas. This will be sufficiently deep to sever any roots. Any roots in excess of 25mm encountered will be cleanly cut back to the face of existing soil.

Foundation design should be in accordance with NHBC Chapter 4.2 "Building near Trees" standards.

Construction of services within the protected areas of trees to be retained will be carried out in accordance with NJUG10 (Guidelines for the Planning, Installation and

Maintenance of Utility Services in Proximity to Trees published by the National Joint Utilities Group April 1995).

The protected area is defined as a radius of 12 times stem girth at 1.5 metres height. All work within the protected area is to be carried out by hand. Where roots of 25mm size and above are encountered these are to be retained spanning the trench, and services are to be inserted carefully beneath them.

In the event that roots are accidentally damaged or require cutting, the Landscape Consultant should be asked to advise on any necessary work to the tree.

#### **6.4 Essential work within protected area**

The protective fencing defines the protected area and will be considered sacrosanct. It should not be removed, moved or breached without the advice of the Landscape Consultant.

#### **6.5 Additional precautions outside fenced areas**

Oil, bitumen, cement or other material likely to be injurious to trees will not be stacked or discharged within 10 metres of a tree stem.

Materials will not be stacked or discharged within 5 metres of a stem.

Fires will not be lit.

Trees will not be used as anchorages for any equipment.

### **7.0 PROGRAMME**

#### **7.1 Prior to development**

Trees to be felled should be removed immediately prior to development.

Dead wood and Ivy removal should be undertaken on all trees to be retained including Woodland W60.

Protective fencing should then be erected immediately prior to development.

#### **7.2 During development**

Fence lines should be maintained and no demolition or construction activities should take place within the protected area.

#### **7.3 Mitigating planting**

Replacement tree planting will be included as part of the proposals.

#### **7.4 After development**

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

## **8.0 LONG TERM MANAGEMENT**

Long term management should continue to monitor tree conditions and remove any dead wood.