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

GYPSY LANE, WOMBWELL
Tree Survey, Arboricultural Impact Assessment and Method Statement
February 2019 (Revision D - January 2020)

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 01B, GLW 02B, GLW 03B, Tree Constraints Plan (TCP) drawings GLW 04B, GLW 05B, GLW 06B and Tree Protection Plan (TPP) drawings GLW 07D, GLW 08D and GLW 09D.

Following a request from Ed Jowett, Barnsley Tree Officer this report has been revised as Revision A with additional information added at section 3.0 in regards to tree condition and categorisation.

This report has been revised as Revision B to incorporate a larger site area and changes to the proposed layout.

This report has been revised as Revision C to reference the updated drawings.

This report has been revised as Revision D to reference the updated drawings.

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.

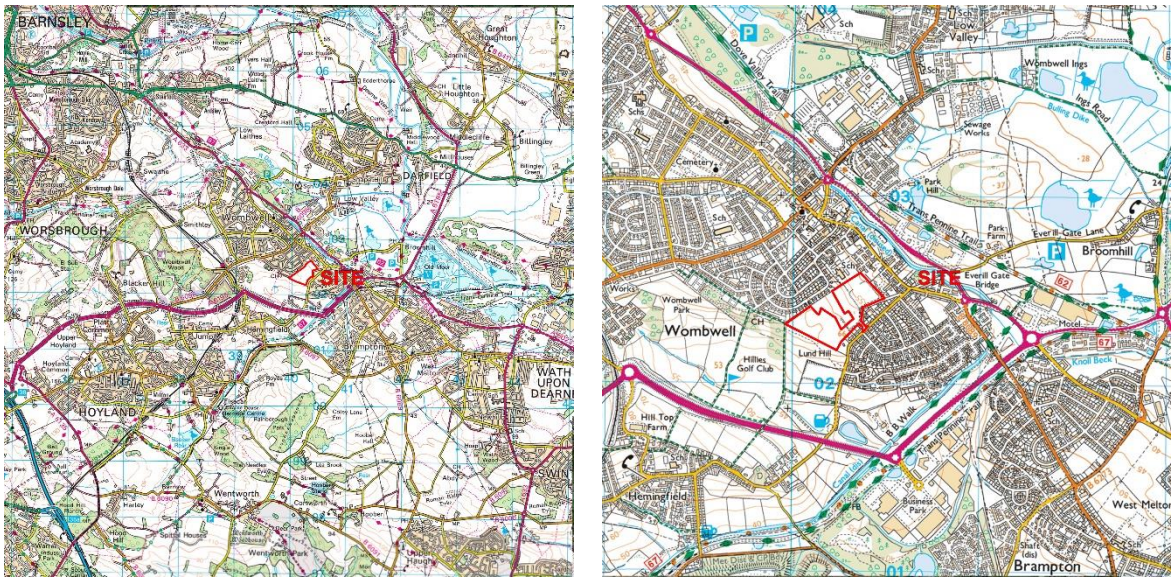
A search of Barnsley Metropolitan Borough Council's interactive map show that the site does not lie within a Conservation Area (CA). The land is proposed for mixed use development.

There are 92 no. trees on the site,18 no. groups and 6 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.

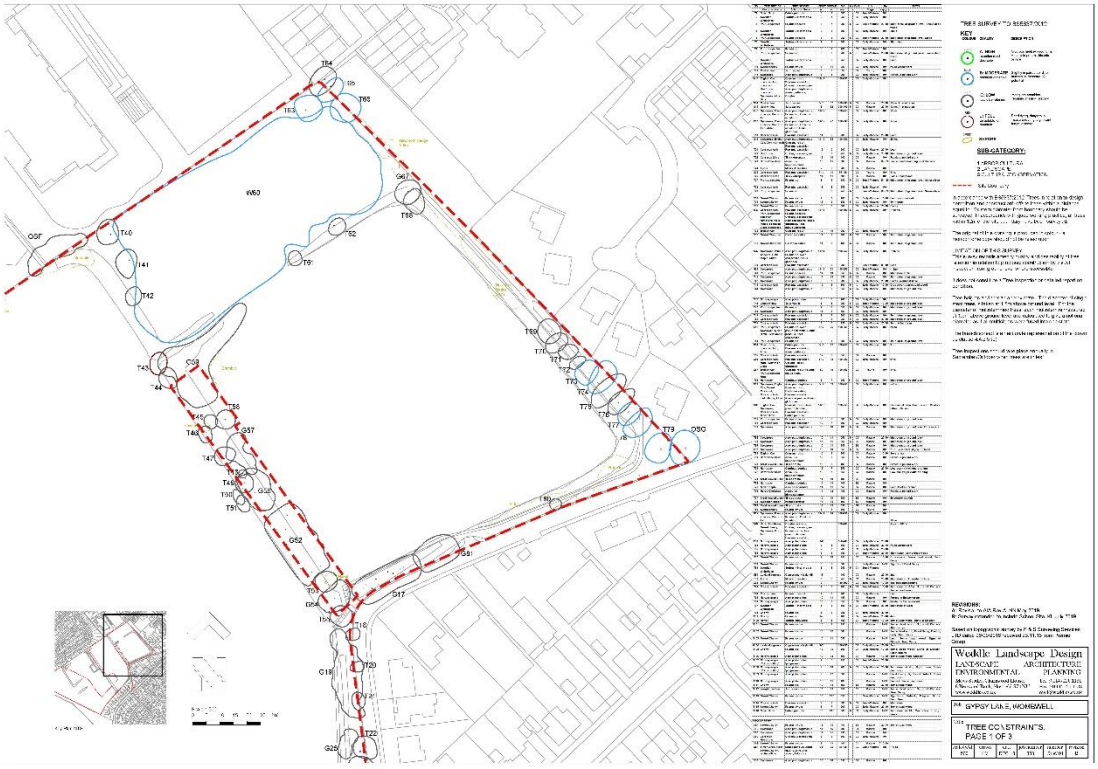


Site Location

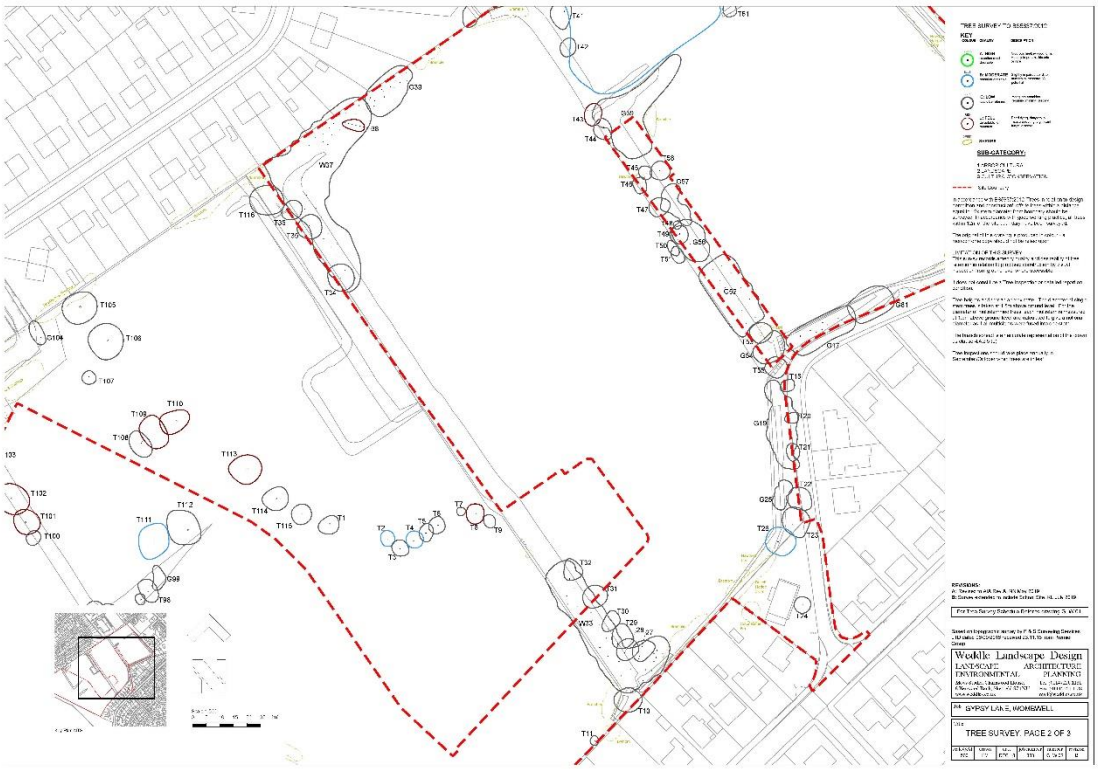
Site Location – Aerial Photo

2.0 TREE SURVEY

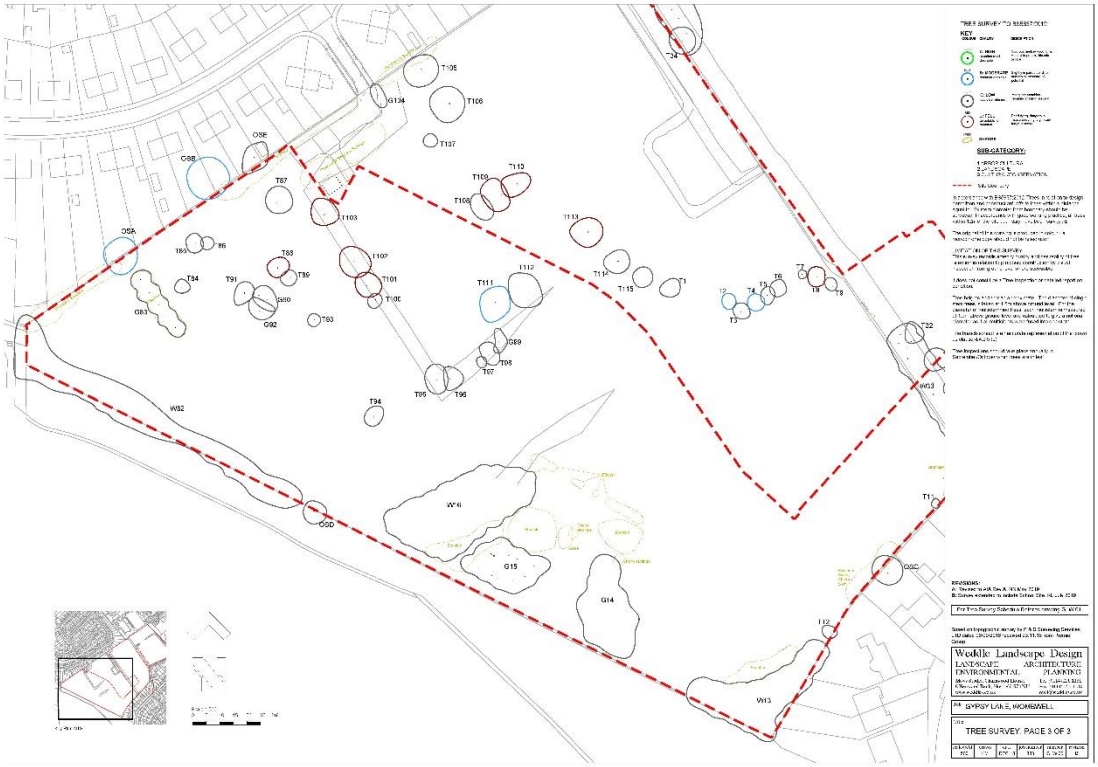
A Tree Survey to BS 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations' was carried out by Weddle Landscape Design in December 2018 as shown on drawings GLW 01B, GLW 02B and GLW 03B. The Tree Survey is based on Topographic survey drawing, FS10001 Level and Boundary Survey by F & S Surveying services dated September 2016.



Tree Survey GLW 01B



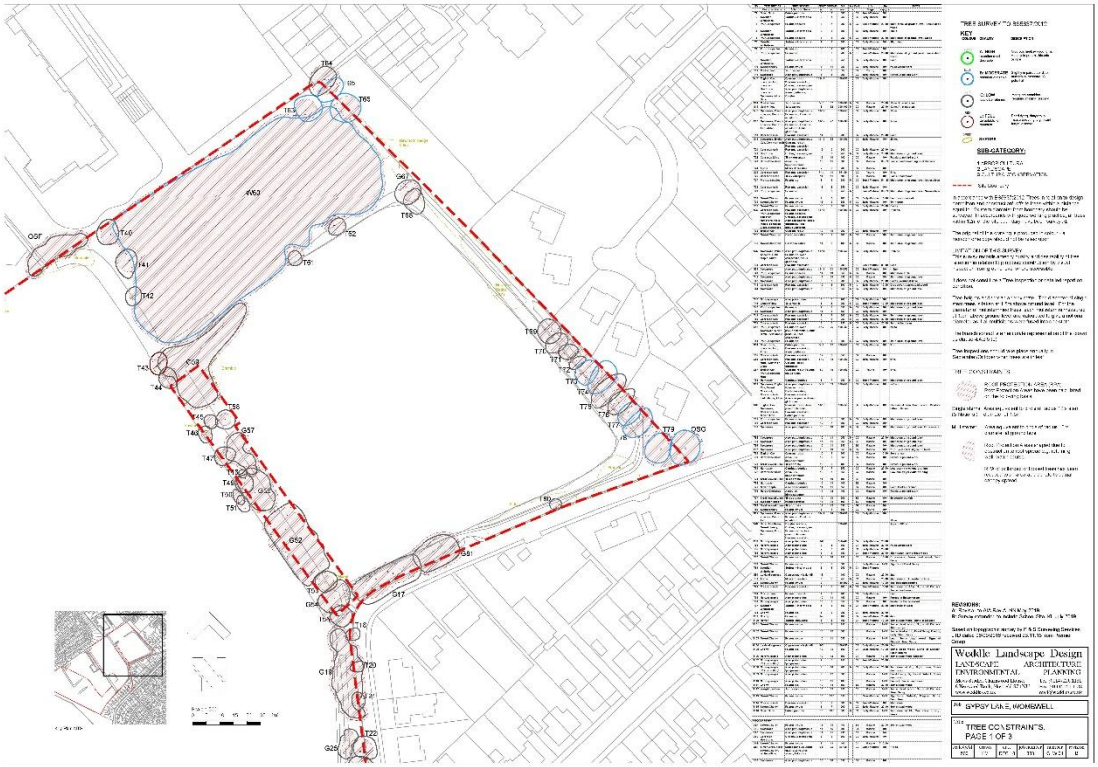
Tree Survey GLW 02B



Tree Survey GLW 03B

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 04B, GLW 05B and GLW 06B). This is the zone of roots which should be protected against damage during construction.



Tree Constraints GLW 04B

Tree Constraints GLW 05B

Tree Constraints GLW 06B

3.0 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 GLW 01B.

The survey revealed that there are 92 no. trees on the site,18 no. groups and 6 no. woodlands.

The majority of the trees on the site were planted as part of the school and sports field in the mid 1990's. There appears to have been very little management of trees throughout the site, particularly within the sports field shelterbelts which has resulted in suppressed and leaning stems.

The majority of the trees are low quality and unremarkable, with the best arboricultural features being the woodland block at the north of the site and the belt of mature trees on the eastern boundary.

There are 12 no. trees and 1 no. woodland which are considered to be or moderate quality (category B).

Further notes in respect to tree condition and categorisation are presented below:

- Trees T1 to T9 are remnants of the previous school site and demolition of the buildings has been carried out around them in an attempt to retain them. The majority were located adjacent to buildings and tennis courts and high sports fencing which would have both constrained root growth and supported and/or protected trees from prevailing winds.
- Silver Birch T1 was previously located close up to a teaching block. It has a reduced vigour and is considered to be a low quality tree (category C).
- Swedish Whitebeams T2 and T4 are the best of this line of trees and 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 is a very low quality tree and has a reduced life expectancy. The pragmatic approach would be to fell this tree and replant as part of the development. It is considered to be a category U tree.
- Swedish Whitebeams T6 and T9 are leaning and while they have a long life expectancy their future growth will be limited due to previous rooting constraints. These are therefore considered to be low quality (category c).
- Prunus T7 has a stem diameter below 150mm and is considered to be low quality (category C).
- Cherry T10 has an Ivy covered stem and is rooted in a sports field embankment. While having a long life expectancy it forms part of the shelterbelt with W33 noted below and is considered to be of low quality (category C).
- Goat Willow T11 is young with a very small stem diameter and is considered to be low quality (category C).
- T12, W13, W16 and W82 form an unmanaged and overgrown shelterbelts / copses planted at the corners of the sports field. A lack of thinning and management has left a significant number of leaning and suppressed stems. Collectively they only provide little landscape value to a small number of general public passing to the south west of the site (category C).
- Goat Willow groups G14 and G15 were planted as part of the school gardens in early 2000's. Due to the species they have a reduced life expectancy and are considered to be low quality (category C).
- W16 form an unmanaged and overgrown shelterbelts / copses planted at the corners of the sports field. A lack of thinning and management has left a significant number of leaning and suppressed stems. Collectively they only provide little landscape value to a small number of general public passing to the south west of the site (category C).
- Groups G17 and G81 form an unmanaged and overgrown shelterbelt planted along the sports field and Gypsy Lane. Collectively they are considered to be of low quality (category C).
- Ash trees T18 and T20 are leaning towards the highway with a reduced life expectancy and are considered to be of low quality (category C).
- Hawthorn T21 has a reduced life expectancy and is considered to be of low quality (category C).
- Lime T22 has been previously pollarded and is predominantly overhanging the highway. It has a reduced quality which is considered to be low (category C).
- Horse Chestnut T23 has dead wood and signs of dieback with a low life expectancy and is considered to be of low quality (category C).
- Ash group G25 are young with a very small stem diameter and are considered to be low quality (category C).
- Lime T26 had a long life expectancy and is considered to be of moderate quality (category B).

- Cherries T27 and T29 have severe leans with a low life expectancy and are therefore considered to be of low quality (category C).
- Ash T28 is slightly suppressed and leaning and is considered to be of low quality (category C).
- Cherry T30 is leaning and suppressed with a low life expectancy and is considered to be of low quality (category C).
- Cherry T 31 is twin stemmed, with poor for and considered to be of low quality (category C).
- Cherry T32 has a stem cavity and reduced life expectancy and is considered to be of low quality (category C).
- T27-T32 and W33 form an unmanaged and overgrown shelterbelt planted along the embankment of the sport field. A lack of thinning and management has left a significant number of leaning and suppressed stems. Collectively they only provide low landscape value to a small number of general public using the field for walking (category C).
- Oak T34 and Sweet Chestnuts T35 and T36 are the larger individual trees within woodland belt formed of W37 and G39. This is an unmanaged and overgrown shelterbelt planted at the corner of the sports field. A lack of thinning and management has left a significant number of leaning and suppressed stems. Collectively they only provide little landscape value to a small number of the general public using the field for walking (category C).
- Ash T38 is dead with a very short life expectancy and should be felled. (category U).
- Cherry T40, Sycamores T41 and T42 are the larger individual trees at the edge of woodland W60 and are considered to be of low quality (category C).
- Ash T43 has a short life expectancy with poor form caused by a significant crossover and should be felled (category U).
- T43 – G59 inclusive form an unmanaged and in places overgrown shelterbelt planted along the sports field embankment. A lack of management has resulted in a number of suppressed stems Trees have been surveyed to pick out obvious individuals but have been graded as a collective and they provide little landscape value to a small number of general public using the field for walking (category C).
- Crack Willow T46 is multi-stemmed and this species is prone to collapse and has a low life expectancy. This is considered to be of low quality (category C).
- Ash T55 is located on the embankment and very close to a set of concrete steps which are likely to have constrained root growth. While having a long life expectancy the tree is considered to be of low quality (category C).
- W60 is made up of low quality individuals. There are a number of trees which are leaning or have dead wood or cavities and some thinning to improve the structure and improve age diversity is required. Collectively the woodland attracts a higher rating and is considered to be of moderate quality (category B).
- Sycamores T63, T65 and T66 are all large mature trees forming part of the woodland and are considered to be of moderate quality (category B).
- Sycamore T64 has a reduced life expectancy and is considered to be low quality (category C).
- Sycamore G67 is twin stemmed and is competing with the adjacent Oak T68. It is considered to be low quality (category C).
- English Oak T68 is of low quality with a severe lean due to competition with the adjacent sycamore G67 and has a short life expectancy and is considered to be low quality (category C).
- Trees T69 – T72 have be subject to previous pruning work, the majority of which does not conform to BS3998:2010. While having long and moderate life

expectancy these trees are considered to be of low quality as a result (category C).

- Lime T73 has a long life expectancy and is considered to be of moderate quality (category B).
- Hornbeam T74 has a long life expectancy and is considered to be of moderate quality (category B).
- Sliver Maple T75 is leaning with a significant broken branch. This is considered to be of low quality (category C).
- Trees T76 has been subject to previous pruning work which has reduced its quality to low (category C).
- Limes and Beech T77, T78 and T79 are mature with a long-life expectancy and considered to be of moderate quality (category B).
- Cherry T80 is young with a small stem diameter and is considered to be low quality (category C).
- Norway Maples T95 and T96 are located on a steep embankment resulting in an angled root plate. They are competing and suppressing each other and considered to be low quality (category C).
- Norway Maples G83, T84, T85 and T86 are all early mature. Some are slightly leaning and have dead wood. They are considered to be low quality (category C).
- Cherry T87 has some dead wood, crossovers and basal decay. This is considered to be low quality (Category C).
- Cherry T88 has significant basal decay and should be felled (category U).
- Group G90 and G92 have insecure rooting and considered low quality (category C).
- Apple Tree T91 is multistem and rooted in depression. This is considered low quality (category C).
- Ash T93 is multistem at 0.5m and has some dead wood. It shows signs of dieback and considered low quality (category C).
- Cherry T94 is leaning and considered low quality (category C).
- Norway maple T95 and T96 are rooted in embankment and considered low quality (Category C).
- Whitebeams T89 and T97 are low quality (category C).
- Rowan T100 has some dead wood and signs of dieback. It is low quality (category C).
- Cherry T101, 102 and T103 have some dead wood and signs of dieback. Some have basal and stem decay. They all in bad condition and considered as fell (Category U).
- Cypress G104 are small early mature group and considered low quality (category C).
- Cherry T105 is over mature and have some dead wood, signs of dieback. This reduce the quality to low (category C).
- Norway maple T106 and 107 has some dead wood and signs of dieback. This is considered low quality (category C).
- Norway maple T108 is slightly leaning and has some dead wood. This is considered low quality (category C).
- Norway maple T109 and T110 have basal cavity and significant dieback, some dead wood. Quality reduced due to short life expectancy (category C).
- Cherry T111 is large mature and has long life expectancy. It is considered of moderate quality (category C).
- Weeping willow T112 has some dead wood and signs of dieback. It is over mature and considered to have a short life expectancy. Its quality is therefore reduced to low (category C).

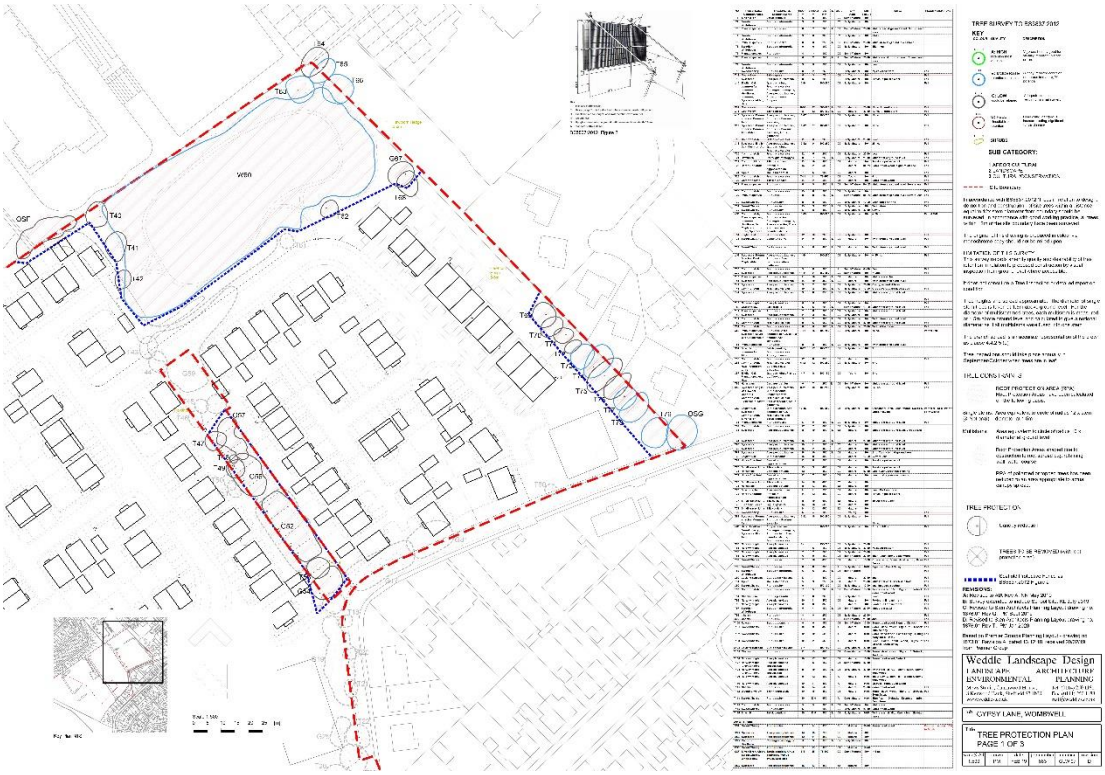
- Cherry T113 has significant dieback, dead stem and dropped limbs. This is dangerous and should be felled (category U)
- Offsite Sycamore OSG has a long life expectancy and is of moderate quality (category B).

4.0 DEVELOPMENT IMPACT

4.1 Description of proposed development

The development proposes 239 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 show on drawings GLW 07D, GLW 08D and GLW 09D Tree Protection Plan. The Tree Protecting Plan also indicates the position for protective barriers.



Tree Protection Plan GLW 07D

Tree Protection Plan GLW 08D

Tree Protection Plan GLW 09D

4.2 Implications of proposed development

4.2.1 Trees to be removed

60 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 10 No. will be removed for arboricultural reasons:

- T8 Prunus species, T43 Ash, T109, T110 Norway Maples and T113 Cherry – Trees have dead wood or significant dieback and fall into category U and are unsuitable for retention
- T38 Ash and T88, T101, T102, T103 Cherry are dead

b) The layout has been developed considering a number of factors including engineering levels, access roads, improvement of highways, parking provision, architectural massing, service easements etc. For a viable layout the roads and pathway infrastructure and the 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):

- Lime T26
- Cherry T111

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

- Prunus species T27, T29, T94
- Swedish Whitebeam T89, T97
- Goat Willow T11, G14, G15
- Sycamore T12, G39, T44
- Ash T18, T20, G25, T28, T43, T50, T51, T55, T93
- Hawthorn T21
- Lime T22
- Horse Chestnut T23
- Apple T24, T91
- English Oak T34
- Sweet Chestnut T35, T36
- Sweet Cherry T10, T30, T31, T80, T87, G92, T98, G99
- Crack Willow T46
- Norway Maple G83, T84, T85, T86, T95, T96, T106, T107
- Leyland cypress G90, G104
- Cherry plum T94
- Rowan T100
- Mixed Woodland W13, W16, W33, W82
- 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 to be removed are located within densely spaced belts around the sports fields and these have been left unmanaged and un-thinned since planting which has resulted in a low quality of tree cover. While removal 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 07D, GLW 08D and GLW 09D 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.

4.2.3 Mitigation

The removal of the low quality trees can be mitigated through planting of roadside and back garden trees throughout the development as demonstrated by the accompanying Landscape Masterplan.

Furthermore if permission were to be granted then a long term management plan for the retained trees and woodland should be prepared.

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 metres 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.