



DUCKWORTHS  
ARBORICULTURE LTD.

## ARBORICULTURAL REPORT

TREE CONDITION SURVEY & MITIGATION STRATEGY

WATERLOO COTTAGE  
BATH ROAD  
KNOWL HILL  
WOKINGHAM  
BERKSHIRE  
RG10 9UP

CLIENT: MR. S. ALHUWALIA

JULY 2024

Ref: 06408/2024 0.3

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## EXECUTIVE SUMMARY

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Following a site visit on Friday 19th April 2024, Wokingham Borough Council Planning Enforcement have raised concerns that works have been done to, or affected trees that are protected by a Preservation Order (TPO) 1639/2018.

The alleged works consist of tree clearance, pruning, damage to tree roots during the erection of concrete fence posts, excavation and laying of concrete at the base of fences adjacent to the roots of trees and digging ditches.

Wokingham Borough Council has raised concerns that the ground works undertaken may have damaged and harmed the protected trees growing on / adjacent to Waterloo Cottage.

I have been instructed by the property owner to visit Waterloo Cottage and to carry out an independent arboricultural survey on the condition of trees around the property. This report is a summary of my findings. In it I have made an assessment of the impact the recent ground works on the trees, and I have provided a means by which damage can be managed / mitigated as appropriate.

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# 1. INTRODUCTION

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## 1.1 INSTRUCTION

This Arboricultural report has been prepared by Sarah Duckworth, Arboricultural Consultant and provides a review of the general condition of trees on/adjacent to Waterloo Cottage.

I have been instructed to survey relevant trees to identify whether recent ground works have caused harm to trees on or directly adjacent to the property.

The report will outline any damage which has occurred and provide a means of any sensible mitigation which might be appropriate to mitigate the impact of the ground works on trees.

The property owner has expressed a wish to retain trees on site where possible. He is also committed to carrying out additional tree planting on site to enhance tree canopy cover around the property.

## 1.2 SCOPE

The report is for the sole use of the client and its reproduction or use by anyone else is forbidden unless written consent is given by the author.

## 1.3 DOCUMENTS

The positions of trees within the tree plan have been taken from a topographical survey provided by the client and is a good representation of their locations in relation to the property.

## 1.4 CAVEATS

The report is valid for a period of two years from the date of issue being 13<sup>th</sup> June 2024 and will expire on 13<sup>th</sup> June 2026.

The report is not a Tree Risk Management Report or a Hazard Analysis Report and its use as such is invalid.

The survey refers to the condition of tree(s) and an assessment of the site on the day the evaluation was undertaken. The trees were assessed from ground level only and not climbed.

DISCLAIMER: This is an independently produced Arboricultural Report. I have no connection with any of the parties involved in this site or application that could influence or bias the opinions expressed in this report.

## 2. BACKGROUND

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### 2.1 BACKGROUND

In early 2024, Mr. Ahluwalia undertook urgent remedial measures to improve drainage around Waterloo Cottage following the devastating flooding of the newly renovated property.

This flooding occurred due to lack of maintenance to highway drains along Bath Road. Following the flood, Wokingham Borough Council as the Local Highways Authority undertook a series of improvements replacing / enhancing existing culverts and cleaning the gullies.

Subsequently, steps were taken to improve the existing drainage around Waterloo Cottage by the owner, by clearing ditches and upgrading culverts along the adjacent access drive. A ditch around Waterloo Cottage was moved away from the property to allow it to drain past the new brick wall which was built by council when upgrading / repairing their drainage along Bath Road. New fencing was sat on a bed of concrete to prevent surface water getting under the boundary fence.

### 2.2 WOKINGHAM BOROUGH COUNCIL ENFORCEMENT

Marcus Hillman, Wokingham Borough Council Planning Officer – Development Management & Compliance (Specialist) visited Waterloo Cottage on 19<sup>th</sup> April 2024.

On 3<sup>rd</sup> May 2024, Mr. Hillman formally wrote to the owner regarding works that 'have been done to, or affected, trees that are protected by a Preservation Order (TPO) 1639/2018'.

The alleged works consist of:

- tree clearance,
- pruning,
- damage to tree roots during the erection of concrete fence posts,
- excavation and laying of concrete at the base of fences adjacent to the roots of trees and
- digging ditches shown within Area A1 on the attached Tree Preservation Order Plan.

Each of these concerns has been assessed separately within this tree report.

### 3. PROTECTED TREE STATUS

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#### 3.1 TREE PRESERVATION ORDERS

I have confirmed on the Wokingham Borough Council online Tree Preservation Order Map that trees at Waterloo Cottage are protected under Area Tree Preservation Order ref TPO-1639-2018.

The area category is a means of protecting individual trees dispersed over an area. Authorities may either protect all trees within an area defined on the Order's map or only those species which it is expedient to protect in the interests of amenity.

An Area TPO only protects those trees standing at the time the Order was served - which in this case is 2018.

A Tree Preservation Order is an order made by a local planning authority in England to protect specific trees, groups of trees or woodlands in the interests of amenity.

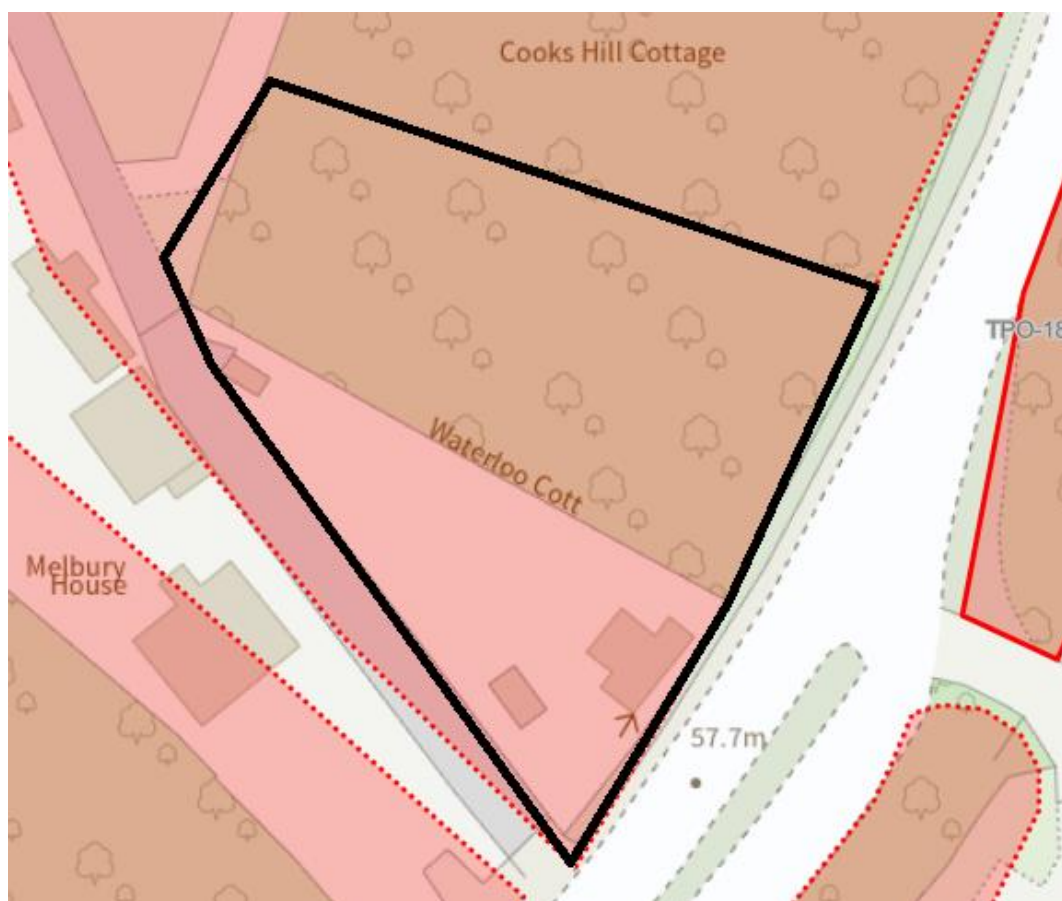


Figure 1 - Wokingham Borough Council TPO Map with (approximate) annotated survey boundary in black.

#### 3.2 CONSERVATION AREA

Waterloo Cottage is not within a Conservation Area.

## 4. SITE WORKS

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### 4.1 TREE CLEARANCE / PRUNING

The property owner has confirmed that he instructed contractors to remove some trees from the site prior to August 2018 – the date the Tree Preservation Order was served. It was in response to this tree work that Wokingham Borough Council considered it expedient to include trees at Waterloo Cottage and the surrounding area in an Area Tree Preservation Order.

He has also confirmed that no tree work has been carried out since the Tree Preservation Order was served on 18<sup>th</sup> August 2018.

A comparison of aerial photographs taken in June 2018 and June 2024 confirms the same trees as being present. During my recent visit I did not find any visible evidence of recent tree pruning work having been undertaken. I am therefore satisfied that no trees have been removed or pruned since the Tree Preservation Order was served.



Fig. 2 – Aerial Photos (Google Earth Pro) from 06/2018



Fig. 3 – Aerial Photos (Google) from 2024

## 4.2 CONCRETE AT THE BASE OF FENCES ADJACENT TO THE ROOTS OF TREES

A bed of concrete has been laid under the base board of the new boundary fence. I have been advised that this concrete was laid directly onto the soil without any excavation. The concrete is intended to prevent water running under the fence towards Waterloo Cottage and to direct it back into the new ditch.

The leachate from poured wet concrete is toxic to plants. However, the concrete under the fence was trowelled in place in a semi-set state and this will have reduced leachate from the mix. The concrete, being placed in a narrow line along the fence covers a very small area of the tree's overall rooting area. The impact on the adjacent trees is negligible.



Fig. 4 – Concrete laid on existing soil level directly under fence kickboard

## 4.3 ERECTION OF CONCRETE FENCE POSTS

At the time of my visit, the new boundary fencing was installed. It has been confirmed that the post holes were excavated by hand and posts have been set in concrete.

Postholes next to T003 (Ash), T004 (Beech) and T005(Ash) are close to the trees and are likely to have severed some woody roots.

Cut marks at the base of T003 (Ash), show one buttress root has been cut through to accommodate the fence.

#### 4.4 EXCAVATION OF DITCH

The new ditch around the outer boundary of Waterloo Cottage is close to trees and has severed roots of three trees (T003, T004 & T005) growing outside the boundary of the property. These trees are two low-grade Ash which are already in a poor state due to Ash Dieback. The third tree is a large Beech, the structural form of which is undermined by a weak fork on the lower trunk with a significant area of bark inclusion.

Trees tend to have shallow roots which are in the top 60cm of soil. The excavation for the ditch is therefore likely to cut all main roots on the affected side of the tree. In all three cases, up to 30-40% of the overall rooting area of the trees may have been severed.

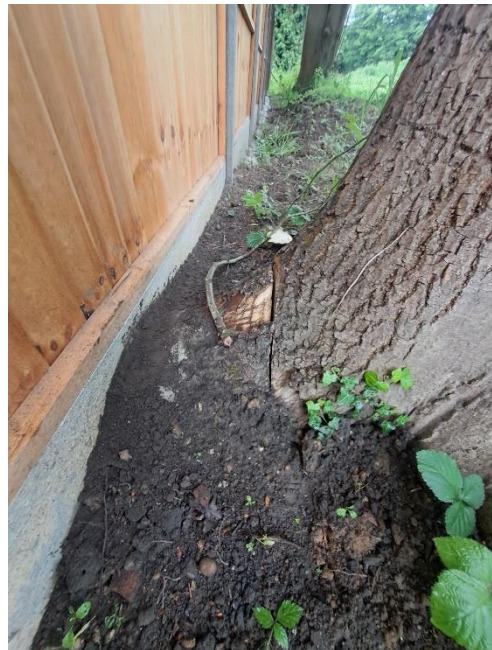
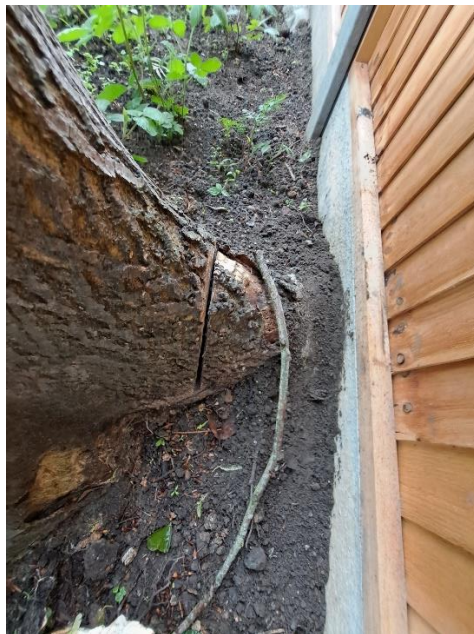
##### T003 – Ash

Large root over 100mm diameter cut 1.5m from base with recent ditch works. Plunger roots from main root visible but intact. Twin stem from 4m. Union satisfactory. 35% defoliated. Buttress root cut on southwest side at base mechanically cut through for installation of fence.

Major dead branches throughout asymmetrical crown. Tree in decline and undermined by root severance.

Ash Dieback Infection Level 2: 25% to 50%

**Recommended works: Fell and replace**



## T004 – Beech

Woody and fibrous roots cut 1m from base with recent ditch works. 30% of roots lost. Twin stem from 0.5m. Long area of included bark in fork to 2m. Ruptured bark on east side at 1m. Rapid bark growth scars suggest major defect /decay. Stability of tree cannot be guaranteed. Light ivy growth. Foliage dense and even. Good vitality.

**Recommended works: Fell and replace**



## T005 – Ash

Large roots x4 over 100mm diameter and other smaller woody roots cut 1m from base with recent ditch works. Deadwood throughout asymmetrical crown. 30% defoliated. Major deadwood in crown. Foliage sparse. Stability of tree cannot be guaranteed.

Ash Dieback Infection Level 2: 25% to 50%

**Recommended works: Fell and replace**



All other trees are set away from the new ditch and although some fine feeder roots may have been severed, the trees are sufficiently far from the ditch and postholes. As a result, although there may be a short-term impact on the physiological health for trees T009, T010, T011, T012 & T017, I am satisfied that this will not affect the stability and long-term health of the trees.

### 4.5 T008 (Hazel)

T008 (Hazel) is an over-mature coppice stool with extensive decay and dieback in the tree's canopy. The poor condition of the tree is due to its age and the decay and dieback predates the recent ground works. T008 is in terminal decline and is not expected to recover. There is a foreseeable risk of branch breakages, and the tree causes an unacceptable risk to future occupants of Waterloo Cottage.

In view of this my recommendation is that an application be submitted to fell the tree, and a replacement planted.



Fig. 5 – Extensive decay on stems of T008 (Hazel)



Fig. 6 – Dieback in crown of T008 (Hazel)

## 5. MITIGATION

### 5.1 REMEDIAL TREE WORKS

The following tree work is recommended subject to Local Authority approval under the TPO.

| Ref: | Species                              | Works                | Priority       |
|------|--------------------------------------|----------------------|----------------|
| T001 | Hazel<br>( <i>Corylus avellana</i> ) | Fell to ground level | Within 8 weeks |
| T003 | Ash<br>( <i>Fraxinus excelsior</i> ) | Fell to ground level | Within 8 weeks |
| T004 | Beech<br>( <i>Fagus sylvatica</i> )  | Fell to ground level | Within 8 weeks |
| T005 | Ash<br>( <i>Fraxinus excelsior</i> ) | Fell to ground level | Within 8 weeks |

Fig. 7 – Schedule for tree works

### 5.2 TREE WORKS BEST PRACTICE

All tree works shall be undertaken in accordance with BS:3998 2010 'Tree Work Recommendations'.

No vehicles will be driven beyond the existing driveway onto unprotected ground during the course of the tree work operations.

Chippings arising from the work will not be piled around the bases of trees on or off the site. Wood and any other arisings from the tree work will not be burnt on site.

### 5.3 PROTECTED SPECIES

In accordance with the Wildlife and Countryside Act - 1981, Conservation - Natural Habitats -Regulations 1994 and Countryside Rights of Way Act - 2000, the site owner will consider the timing and type of tree work operations to avoid causing disturbance to any nesting or breeding birds or bat roosts that may be present within trees.

It is an offence (subject to exceptions) to intentionally kill, injure, or take, possess, or trade in any wild animal listed, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places.

Non-urgent major tree work involving tree removal or reduction and hedge cutting operations should not be undertaken during the bird nesting or breeding season, which is considered to be from 1 March to 31 July. However, depending on seasonal temperatures, some birds continue breeding into August and September.

All wild birds, their young, their eggs and active nests are protected under law. It is an offence to damage a nest intentionally while it is in use or being built and hedge cutting is highly likely to damage nests or cause them to be deserted.

## 5.4 TREE PLANTING

New planting is recommended with 7 new trees planted to mitigate the anticipated loss of T003 (Ash), T004 (Beech), T005 (Ash) & T008 (Hazel).

The new trees will enhance the setting of Waterloo Cottage and provide the next generation of mature trees on site. The trees will enhance the quality of existing planting within the property by introducing new younger trees to improve the sustainability of the tree canopy cover.

The following trees are proposed from Chew Valley Trees, a reputable supplier of quality container-grown tree stock and can be reserved for delivery in November 2024 pending approval of the scheme by the Local Authority.

|                                                                                     |                                                                                                                        |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
|    | <b>Pinus Sylvestris (Scots Pine)</b><br>Container Grown - 10L pot / 1.0-1.25m<br>QTY <input type="text" value="2"/>    |
|  | <b>Tilia cordata (Small Leaved Lime)</b><br>Container Grown - 10L pot / 1.5-2.0m<br>QTY <input type="text" value="1"/> |
|  | <b>Fagus sylvatica (Common Beech)</b><br>Container Grown - 15L pot / 1.75-2.75m<br>QTY <input type="text" value="1"/>  |
|  | <b>Quercus Robur (English Oak)</b><br>Container Grown - 10L pot / 1.75-2.75m<br>QTY <input type="text" value="2"/>     |
|  | <b>Quercus Ilex (Holm Oak)</b><br>Container Grown - 15L pot - tree / 1.75-2<br>QTY <input type="text" value="1"/>      |

Fig. 8 - Chew Valley Trees Planting List

I have opted for replacement planting of the damaged trees with 2:1 smaller trees rather than 1:1 with larger standard trees. Smaller trees establish more quickly and require less post planting maintenance. It will give the new trees the best possible chance to establish and thrive and provide a surplus of net trees in the event that any of the trees die or fail to thrive.

## 5.5 HEDGE PLANTING

In addition to the standard trees, native 'whip' planting trees and hedgerows will be planted to screen the boundary fence along Bath Road and infill the existing hedgerow trees along the side access driveway to Cooks Hill Farm. When mature, the new hedgerow will screen the new boundary fence and enhance the amenity and biodiversity of the site.

Hedgerows are an extremely valuable habitat for wildlife as well as providing a natural barrier or boundary. Many species of bird depend on hedgerows and their margins for survival. Hedges, together with their associated habitats, such as ditches and banks, also provide a haven for many insects, wildflowers, small mammals, reptiles and amphibians. The new hedge will create a natural 'corridor' along which wildlife can travel.

The new hedging plants will be a mix of native trees and shrubs selected for wildlife, which provide flowers and berries for insects and birds. The proposed mix of shrubs is: 50% hawthorn, 25% blackthorn, 15% field maple, 2% holly, 2% wild privet, 2% guelder rose, 2% dog rose, 2% buckthorn.

The hedge will be planted as a double row of trees and shrubs at a spacing of 30cm. This means about six plants for every metre of the hedge. Trees and shrubs will be planted as 60—90cm high 'whips' which have a better survival rate and will grow more quickly.

Fencing or tree guards will be installed if rabbits / deer are likely to damage young trees.

## 6. CONCLUSIONS

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I have compared historical aerial photographs as well as the detailed inspection on my site visit and I have not found any evidence of tree removal having taken place within Waterloo Cottage since the TPO was served therefore concerns raised by Wokingham Borough Council in this respect are therefore unfounded.

Concrete laid under the new fencing panels has been placed directly onto the existing surface and will not have damaged trees or tree roots.

Recent ground works to install a new ditch and the excavation of the post holes for the boundary fence has caused severance of tree roots on the eastern side of three mature trees (T003, T004 & T005).

T003 & T005 are two Ash which were in decline because of Ash Dieback Disease even before the recent ground works. In my opinion, the decline of the trees is terminal and their stability undermined therefore, my recommendation is that an application be submitted to Wokingham Borough Council to fell both trees.

T004 is a large Beech which is undermined by a weak fork on the lower trunk. The tree has an inherently weak structural form but has also been further undermined by root severance with the adjacent ground works. My recommendation is that T004 (Beech) also be felled and replaced.

This report includes a robust scheme of tree and landscape planting in order to mitigate the damage to the protected trees and to provide continuity of tree canopy cover on site.

Any trees or shrubs which die, fail to thrive, are removed, become seriously diseased or irreparably damaged within 5 years of the completion of the landscaping works will be replaced by another of a similar size and species within the next planting season (November to March) following their removal and will be subject to the same post-planting maintenance as the original landscape scheme.

## APPENDICES

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- A. PLANTING STANDARDS AND MAINTENANCE
- B. TREE SURVEY DATA
- C. TREE PLAN
- D. TREE PLANTING PLAN
- E. CONTACTS
- F. QUALIFICATIONS

## APPENDIX A - PLANTING STANDARDS AND MAINTENANCE

### TREE PLANTING

The following guidelines will be followed to ensure successful tree establishment:

Trees will be grown specimen trees and planted in November / December on completion of the railings when soils are moist and free from frost.

Planting trees too deep is a major cause for premature decline. Tree planting pits will be dug to the same depth as the container to prevent settlement and sinking post planting.

The width of the planting pit will be a minimum of one and a half times as large as the root-ball/container and up to a maximum of two times as wide, if the soil is very compacted. This means that a root-ball of 40cm wide will be planted in a hole at least 60cm wide. The soil backfilled into the planting pit will consist of 1/3 organic matter (well rooted manure or other compost) with 2/3 existing soil.

#### TREE PLANTING PIT DESIGN

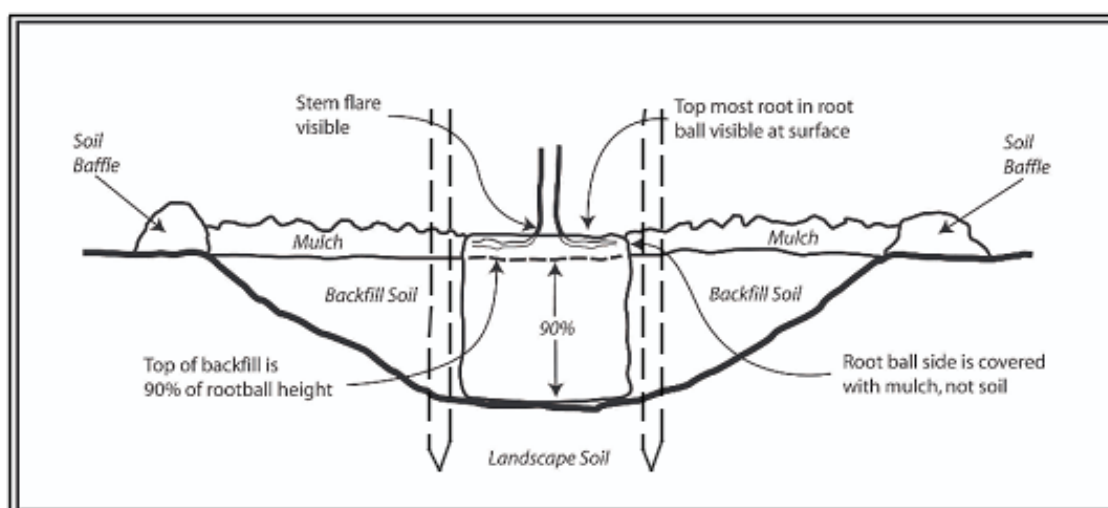


Figure 8. Tree Planting Pit specification

The standard trees (with a clear stem to 2m) will be staked with two stakes and a cross bar set as low down the tree as possible to allow for canopy and stem movement whilst supporting the structural function of the root system.

Tree stakes will be driven into the ground to a sufficient depth to provide full support before the tree is planted. Supporting straps around the stem will allow for the radial expansion of the stem. A rubber bung will prevent the tree from coming into direct contact with the tree stake.

Strimmers can cause irreparable damage to the stems of young trees and plants and should not be used anywhere near trees. To ensure their protection, strimmer guards will be installed around the bases of the new trees.

The health and development of young trees should be assessed annually and on an ad hoc basis as required during the year to inform maintenance operations and any required

actions. Assessment to include - foliage appearance, leaf size, leaf canopy density, extension growth and girth development.

Tree stakes and ties should be inspected at least annually for stability and firmness, ensuring that ties are performing effectively and not causing damage to the tree through chaffing or rubbing of the tree against the stake. Ties must be fitted correctly so that they provide the necessary support to the tree but not be so tight that they constrict and inhibit the natural growth of the tree.

Within the first three years, any trees found to be leaning are to be re-straightened. At the end of the second and third season assess tree establishment and remove old stakes and ties where trees have established well enough to longer require supporting or protecting.

Side shoots and epicormic growth will be pruned out to maintain a clear stem during June and again in October each year. At the same time any crossing or damaged wood will be removed along with any dead or diseased branches.

Areas around the base of trees are to be kept free from weeds maintaining a 0.5 metre diameter mulch ring at the base of each tree. This area will be kept free from grass, weeds and rubbish.

Any new trees which, within a period of five year's following planting; die, are removed, fail to thrive or become seriously damaged or diseased; should be replaced with another in of a similar size and species.

## **HEDGE PLANTING**

Approximately 30m of mixed native hedging will be planted along the front boundary to provide privacy and screening. Young plants will be 60-90cm high and double planted at 0.3m spacings.

All plants are to be re-firmed after frost to ensure they are not leaning and that the soil level around the plants remains at the level they grew at in the nursery. All thinning and pruning works to be carried out in late autumn/winter, or otherwise avoiding the bird nesting season.

Beating up will be carried out within two years after the initial planting to replace any young plants which have died.

As the plants develop, sides of hedge are to be faced up to encourage plants to knit together and produce a dense structure.

Once the desired height of 2m is reached, the hedge will be topped and can be maintained at that height. Annual maintenance will involve hedge trimming once a year to maintain a tight, clipped form.

## POST PLANTING IRRIGATION

To ensure successful establishment of trees and hedges, twice weekly watering will be undertaken during the first two growing seasons (April to October) following planting to ensure successful establishment. During periods of prolonged hot weather, the frequency of any watering visits may need to be increased.

The volume of water applied to the base of each plant is to be determined by inspection on each occasion. Rainwater and precipitation alone are not sufficient to irrigate containerised trees therefore irrigation is likely to be necessary in all but the most prolonged periods of wet weather. All watering must be sufficient to wet the entire root ball, including the lower levels of soil.

During the third year the new plants will continue to be monitored, with irrigation resumed during periods of drought or where plants are showing signs of drought stress such as foliage wilting and defoliation. In such circumstances the soil must be checked prior to watering to ensure waterlogging is not the cause of the symptoms.

## APPENDIX B - TREE SURVEY DATA

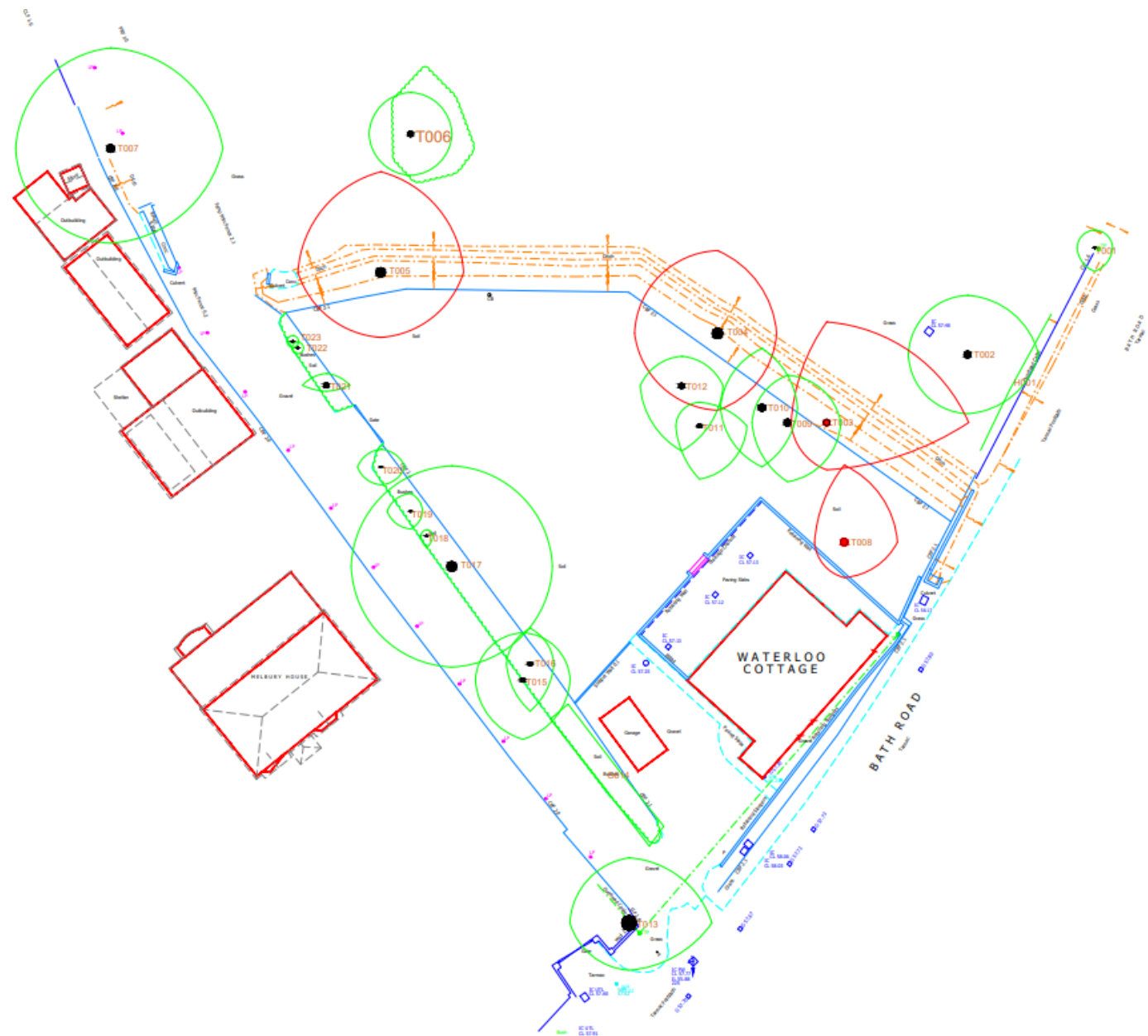
| Ref. | Species                                                    | Measurements                                                                                                           | Canopy Spread                    | General Observations                                                                                                                                                                                                                                                                                                                                                                                  | Condition                                                                                                                                    | General Assessment                                                                                                                                                      | Recommended tree work            |
|------|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| H001 | Monterey cypress<br>x11<br>( <i>Cupressus macrocarpa</i> ) | Height (m): 3<br>11 stems, avg.(mm): 100<br>Crown Clearance (m): 1.5<br>Life Stage: Mature<br>Rem. Contrib.: 20+ Years | N:1.5<br>E:1.5<br>S:1.5<br>W:1.5 | Topped hedgerow trees. Irregular, poor form.<br>Some trees dead.                                                                                                                                                                                                                                                                                                                                      | Physiological Condition: Poor<br>Structural Condition: Poor<br>Public Amenity Value: Low                                                     | Small group – not impacted by ground works                                                                                                                              | No pruning works required        |
| T001 | Common ash<br>( <i>Fraxinus excelsior</i> )                | Height (m): 6<br>3 stems, avg.(mm): 50<br>Crown Clearance (m): 2.5<br>Life Stage: Young<br>Rem. Contrib.: 10+ Years    | N:1.5<br>E:1.5<br>S:2<br>W:1.5   | Small tree, three-way stem fork at 1m. Canker on trunks.<br>Pests and Diseases:<br>Ash Dieback Infection Level 1: 0% to 25%                                                                                                                                                                                                                                                                           | Physiological Condition: Fair<br>Structural Condition: Fair<br>Public Amenity Value: Low<br>Inspection Limitations: Ivy and dense vegetation | Small tree not impacted by ground works. Short like expectancy due to Ash Dieback Disease.                                                                              | No pruning works required        |
| T002 | Pedunculate oak<br>( <i>Quercus robur</i> )                | Height (m): 14<br>Stem Diam(mm): 570<br>Crown Clearance (m): 3<br>Life Stage: Mature<br>Rem. Contrib.: 40+ Years       | N:5<br>E:6<br>S:5<br>W:5         | Swept stem, ivy clad. Raised soil / mound at base. Foliage dense and even. Good vitality.                                                                                                                                                                                                                                                                                                             | Physiological Condition: Good<br>Structural Condition: Fair<br>Public Amenity Value: Good<br>Inspection Limitations: Ivy                     | Set back from the ditch. Healthy tree not impacted by ground works.                                                                                                     | No pruning works required        |
| T003 | Common ash<br>( <i>Fraxinus excelsior</i> )                | Height (m): 17<br>Stem Diam(mm): 520<br>Crown Clearance (m): 5<br>Life Stage: Mature<br>Rem. Contrib.: 10+ Years       | N:8.5<br>E:12<br>S:4<br>W:3      | Large root over 100mm diameter cut 1.5m from base with recent ditch works. Plunger roots from main root visible but intact. Twin stem from 4m. Union satisfactory. Deadwood throughout asymmetrical crown. 35% defoliated. Buttress root cut on southwest side at base for installation of fence. Ash Dieback Infection Level 2: 25% to 50%                                                           | Physiological Condition: Poor<br>Structural Condition: Physical Defect<br>Public Amenity Value: Moderate                                     | Tree leans over low occupancy area. Short like expectancy due to Ash Dieback Disease. Stability of tree greatly undermined by root severance. Tree canopy is in decline | Fell to ground level and replace |
| T004 | Common beech<br>( <i>Fagus sylvatica</i> )                 | Height (m): 19<br>2 stems, avg.(mm): 600<br>Crown Clearance (m): 3<br>Life Stage: Mature<br>Rem. Contrib.: 10+ Years   | N:7<br>E:5<br>S:6.5<br>W:7       | Large number of woody and fibrous roots cut 1m from base with recent ditch works. 30%of roots lost. Twin stem from 0.5m. Long area of included bark in fork to 2m. Ruptured bark on east side at 1m. Rapid bark growth scars suggest major defect /decay.<br>Due to root severance and poor form the stability of tree cannot be guaranteed. Light ivy growth. Foliage dense and even. Good vitality. | Physiological Condition: Poor<br>Structural Condition: Physical Defect<br>Public Amenity Value: Moderate                                     | Tree structure undermined by weak fork on lower stem. Stability of tree undermined by root severance for ditch and post hole. Tree canopy healthy.                      | Fell to ground level and replace |

| Ref. | Species                                       | Measurements                                                                                                        | Canopy Spread                    | General Observations                                                                                                                                                                                                                                                                             | Condition                                                                                                                                 | General Assessment                                                                                                             | Recommended tree work            |
|------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| T005 | Common ash<br>( <i>Fraxinus excelsior</i> )   | Height (m): 17<br>Stem Diam(mm): 760<br>Crown Clearance (m): 5<br>Life Stage: Mature<br>Rem. Contrib.: 10+ Years    | N:8.5<br>E:7<br>S:5.5<br>W:7     | Large roots x4 over 100mm diameter and other smaller woody roots cut 1m from base with recent ditch works. Deadwood throughout asymmetrical crown. 30% defoliated. Major deadwood in crown. Foliage sparse. Stability of tree cannot be guaranteed.<br>Ash Dieback Infection Level 2: 25% to 50% | Physiological Condition: Poor<br>Structural Condition: Physical Defect<br>Public Amenity Value: Moderate                                  | Stability of tree greatly undermined by root severance. Tree canopy is in decline                                              | Fell to ground level and replace |
| T006 | Western red cedar<br>( <i>Thuja plicata</i> ) | Height (m): 16<br>Stem Diam(mm): 450<br>Crown Clearance (m): 0<br>Life Stage: Mature<br>Rem. Contrib.: 10+ Years    | N:3.5<br>E:3.5<br>S:3.5<br>W:3.5 | Low layering lateral branches. Significant Dieback /deadwood in upper crown. Tree in decline.                                                                                                                                                                                                    | Physiological Condition: Poor<br>Structural Condition: Fair<br>Public Amenity Value: Moderate<br>Inspection Limitations: Dense low crown. | Dieback in canopy visible in 2018 photos. Tree set back and not impacted by ground works.                                      | No pruning works required        |
| T007 | Pedunculate oak<br>( <i>Quercus robur</i> )   | Height (m): 12<br>Stem Diam(mm): 640<br>Crown Clearance (m): 2<br>Life Stage: Mature<br>Rem. Contrib.: 40+ Years    | N:8.5<br>E:9.5<br>S:8<br>W:8     | Ditch edge tree. Ditch lining with concrete 5.6m from tree. No visible evidence of tree root damage. Adjacent drive on far side of ditch resurfaced with hardcore and gravel. Broad canopy. Foliage density normal.                                                                              | Physiological Condition: Good<br>Structural Condition: Good<br>Public Amenity Value: Moderate<br>Inspection Limitations: Access           | No visible evidence of tree root damage                                                                                        | No pruning works required        |
| T008 | Hazel<br>( <i>Corylus avellana</i> )          | Height (m): 7<br>4 stems, avg.(mm): 300<br>Crown Clearance (m): 3<br>Life Stage: Mature<br>Rem. Contrib.: <10 years | N:6.5<br>E:4.5<br>S:3<br>W:2.5   | Over mature coppiced stool. Asymmetrical canopy. Extensive decay on stems and major deadwood in crown. Future stem failure likely.                                                                                                                                                               | Physiological Condition: Poor<br>Structural Condition: Physical Defect<br>Public Amenity Value: Moderate                                  | Old coppice. Decay in trunk is historic and predates ground works. Branch failure foreseeable.                                 | Fell to ground level and replace |
| T009 | Lime<br>( <i>Tilia</i> sp.)                   | Height (m): 16<br>Stem Diam(mm): 570<br>Crown Clearance (m): 4<br>Life Stage: Mature<br>Rem. Contrib.: 20+ Years    | N:4<br>E:4.5<br>S:5<br>W:3       | Twin stem from 2m. Cup union. Trenching for services 3.7m from base. Foliage dense. Good vitality.                                                                                                                                                                                               | Physiological Condition: Good<br>Structural Condition: Fair<br>Public Amenity Value: Moderate                                             | Canopy in good health. Set back from new ditch. Tree likely to tolerate any minor root severance caused by ditch construction. | No pruning works required        |
| T010 | Lime<br>( <i>Tilia</i> sp.)                   | Height (m): 16<br>Stem Diam(mm): 550<br>Crown Clearance (m): 4<br>Life Stage: Mature<br>Rem. Contrib.: 20+ Years    | N:5<br>E:3<br>S:5<br>W:3.5       | Twin stem from 2.5m. Cup union. Ivy clad. Trenching for services 3.5m from base. Foliage dense. Good vitality.                                                                                                                                                                                   | Physiological Condition: Good<br>Structural Condition: Fair<br>Public Amenity Value: Moderate                                             | Canopy in good health. Set back from new ditch. Tree likely to tolerate any minor root severance caused by ditch construction. | No pruning works required        |
| T011 | Common beech<br>( <i>Fagus sylvatica</i> )    | Height (m): 16<br>Stem Diam(mm): 300<br>Crown Clearance (m): 3<br>Life Stage: Mature<br>Rem. Contrib.: 20+ Years    | N:2<br>E:4<br>S:4.5<br>W:2       | Slender tree, superficial bark wounds on trunk.                                                                                                                                                                                                                                                  | Physiological Condition: Fair<br>Structural Condition: Fair<br>Public Amenity Value: Good                                                 | Canopy in good health. Set back from new ditch. Tree likely to tolerate any minor root severance caused by ditch construction. | No pruning works required        |

| Ref. | Species                                    | Measurements                                                                                                         | Canopy Spread                    | General Observations                                                                                                                                                                                                                                                                                                                                                                  | Condition                                                                                                                       | General Assessment                                                                                                                                                                               | Recommended tree work                                          |
|------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| T012 | Horse chestnut<br>(Aesculus hippocastanum) | Height (m): 16<br>Stem Diam(mm): 420<br>Crown Clearance (m): 3<br>Life Stage: Mature<br>Rem. Contrib.: 20+ Years     | N:2.5<br>E:3.5<br>S:5.5<br>W:3.5 | Slender tree, heavily suppressed by off-site Beech                                                                                                                                                                                                                                                                                                                                    | Physiological Condition: Fair<br>Structural Condition: Fair<br>Public Amenity Value: Good                                       | Canopy in good health. Set back from new ditch. Tree likely to tolerate any minor root severance caused by ditch construction.                                                                   | No pruning works required                                      |
| T013 | Lombardy poplar<br>(Populus nigra italica) | Height (m): 22<br>Stem Diam(mm): 1200<br>Crown Clearance (m): 5<br>Life Stage: Mature<br>Rem. Contrib.: 10+ Years    | N:5.5<br>E:7<br>S:4<br>W:5       | Fencing close to trunk. Old metal railing occluded into lower trunk. Superficial bark wounds on trunk. Possible ground level changes -100mm at base. Only 30% of trunk accessible. Twin stem from 2m with area of bark inclusion. Signs of canopy separation in upper crown. Topped crown around 14m mature regrowth. Foliage density normal. Stability of tree cannot be guaranteed. | Physiological Condition: Poor<br>Structural Condition: Unknown<br>Public Amenity Value: Moderate                                | More detailed assessment of tree base recommended due to fork and separation in canopy. Species structurally weak. Defects present relate to age and species rather than associated ground works | More detailed assessment of tree base recommended due to fork. |
| G014 | Mixed hedge                                | Height (m): 5.5<br>Stem Diam(mm): 150<br>Crown Clearance (m): 0.5<br>Life Stage: Mature<br>Rem. Contrib.: 20+ Years  | N:2.5<br>E:2.5<br>S:2.5<br>W:2.5 | Over-mature hedgerow, Hazel and Blackthorn. Cut back to edge of driveway. Ground level changes at base -100/150mm                                                                                                                                                                                                                                                                     | Physiological Condition: Fair<br>Structural Condition: Poor<br>Public Amenity Value: Low                                        | Gappy hedgerow – lapsed into individual trees. Opportunity to enhance / restore with infill planting.                                                                                            | No pruning works required                                      |
| T015 | Elm<br>(Ulmus sp.)                         | Height (m): 12<br>Stem Diam(mm): 310<br>Crown Clearance (m): 4.5<br>Life Stage: Mature<br>Rem. Contrib.: 20+ Years   | N:4<br>E:4<br>S:5<br>W:4         | Ivy clad tree in dense tree group.                                                                                                                                                                                                                                                                                                                                                    | Physiological Condition: Fair<br>Structural Condition: Unknown<br>Public Amenity Value: Moderate<br>Inspection Limitations: Ivy | No evidence of damage to tree.                                                                                                                                                                   | No pruning works required                                      |
| T016 | Common ash<br>(Fraxinus excelsior)         | Height (m): 12<br>Stem Diam(mm): 300<br>Crown Clearance (m): 4.5<br>Life Stage: Mature<br>Rem. Contrib.: 20+ Years   | N:3<br>E:2<br>S:4<br>W:2         | Ivy clad tree in dense tree group. Foliage dense. Asymmetrical canopy.                                                                                                                                                                                                                                                                                                                | Physiological Condition: Fair<br>Structural Condition: Unknown<br>Public Amenity Value: Moderate<br>Inspection Limitations: Ivy | No evidence of damage to tree.                                                                                                                                                                   | No pruning works required                                      |
| T017 | Common ash<br>(Fraxinus excelsior)         | Height (m): 17<br>3 stems, avg.(mm): 460<br>Crown Clearance (m): 5<br>Life Stage: Mature<br>Rem. Contrib.: 10+ Years | N:8.5<br>E:8.5<br>S:8.5<br>W:8.5 | Three stems from ground level. Ivy clad. Foliage uneven. Some deadwood in crown. Pests and Diseases: Ash Dieback Infection Level 1: 0% to 25%                                                                                                                                                                                                                                         | Physiological Condition: Fair<br>Structural Condition: Fair<br>Public Amenity Value: Moderate<br>Inspection Limitations: Ivy    | No evidence of damage to tree.                                                                                                                                                                   | No pruning works required                                      |

| Ref. | Species                          | Measurements                                                                                                        | Canopy Spread                    | General Observations                                   | Condition                                                                                | General Assessment                                                                      | Recommended tree work     |
|------|----------------------------------|---------------------------------------------------------------------------------------------------------------------|----------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------|
| T018 | Hawthorn<br>(Crataegus monogyna) | Height (m): 2.5<br>Stem Diam(mm): 100<br>Crown Clearance (m): 0.5<br>Life Stage: Mature<br>Rem. Contrib.: 10+ Years | N:0.5<br>E:0.5<br>S:1<br>W:0.5   | Small tree, topped. Poor form. Lacking vitality.       | Physiological Condition: Fair<br>Structural Condition: Fair<br>Public Amenity Value: Low | Old tree forming gappy hedgerow. Opportunity to enhance / restore with infill planting. | No pruning works required |
| T019 | Hawthorn<br>(Crataegus monogyna) | Height (m): 4<br>Stem Diam(mm): 100<br>Crown Clearance (m): 2<br>Life Stage: Mature<br>Rem. Contrib.: 10+ Years     | N:1.5<br>E:1<br>S:1.5<br>W:2     | Small multi-stem tree. Fair form and vitality.         | Physiological Condition: Good<br>Structural Condition: Fair<br>Public Amenity Value: Low | Old tree forming gappy hedgerow. Opportunity to enhance / restore with infill planting. | No pruning works required |
| T020 | Hawthorn<br>(Crataegus monogyna) | Height (m): 3.5<br>Stem Diam(mm): 100<br>Crown Clearance (m): 2<br>Life Stage: Mature<br>Rem. Contrib.: 10+ Years   | N:1.5<br>E:2<br>S:1.5<br>W:2     | Small tree, multiple branching from 1m. Good vitality. | Physiological Condition: Good<br>Structural Condition: Fair<br>Public Amenity Value: Low | Old tree forming gappy hedgerow. Opportunity to enhance / restore with infill planting. | No pruning works required |
| T021 | Hazel<br>(Corylus avellana)      | Height (m): 5<br>Stem Diam(mm): 400<br>Crown Clearance (m): 1.5<br>Life Stage: Mature<br>Rem. Contrib.: 20+ Years   | N:1<br>E:2<br>S:0.5<br>W:2       | Large coppice stool. Cut back to edge of driveway.     | Physiological Condition: Good<br>Structural Condition: Fair<br>Public Amenity Value: Low | Old tree forming gappy hedgerow. Opportunity to enhance / restore with infill planting. | No pruning works required |
| T022 | Hawthorn<br>(Crataegus monogyna) | Height (m): 5<br>Stem Diam(mm): 80<br>Crown Clearance (m): 1.5<br>Life Stage: Mature<br>Rem. Contrib.: 10+ Years    | N:0.5<br>E:0.5<br>S:0.5<br>W:0.5 | Small tree, multiple branching from 1m. Good vitality. | Physiological Condition: Good<br>Structural Condition: Fair<br>Public Amenity Value: Low | Old tree forming gappy hedgerow. Opportunity to enhance / restore with infill planting. | No pruning works required |
| T023 | Hawthorn<br>(Crataegus monogyna) | Height (m): 5<br>Stem Diam(mm): 80<br>Crown Clearance (m): 1.5<br>Life Stage: Mature<br>Rem. Contrib.: 10+ Years    | N:0.5<br>E:0.5<br>S:0.5<br>W:0.5 | Small tree, multiple branching from 1m. Good vitality. | Physiological Condition: Good<br>Structural Condition: Fair<br>Public Amenity Value: Low | Old tree forming gappy hedgerow. Opportunity to enhance / restore with infill planting. | No pruning works required |

## APPENDIX C – TREE PLAN



APPENDIX D – TREE PLANTING PLAN



## APPENDIX E – CONTACTS

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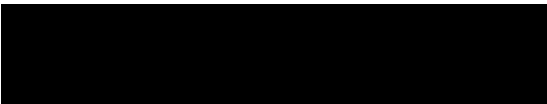
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### Client

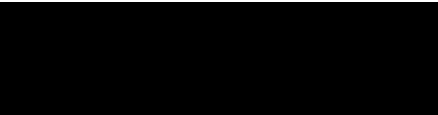
Sats Ahluwalia



### Agent



HIVES Architects LLP



### Local Planning Authority

Wokingham Borough Council

T: 0118 974 6000

## APPENDIX F - QUALIFICATIONS

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This Arboricultural report has been prepared by Sarah Duckworth, Independent Arboricultural Consultant, trading as Duckworth's Arboriculture Limited.

I have over 19 years' experience working in the field of Arboriculture and for the past 16 years I have worked as a Local Authority Tree Officer both directly and independently providing contracted support. Since 2010 I have worked as a private consultant carrying out a range of Arboricultural Reports and Assessments for private clients.

I hold the Royal Forestry Society's Professional Diploma (Level 6) for which I received the Lockhart Garrett Award commendation.

I also hold the Arboricultural Association's Technicians Certificate (with Distinction) and am a LANTRA qualified Professional Tree Inspector.

I am a Professional Member of the Arboricultural Association.