BS 5837:2012 Tree Survey, Arboricultural Impact Assessment, Arboricultural Method Statement and Tree Protection Plan



Unit 1, Caxton Trading Estate
Printing House Lane
Hayes
UB3 1AP

Date: 06/01/2026

Contents Page

1. Instruction
   …… p1
2. Executive Summary
   …… p1
3. The site
   …… p1-2
4. Trees Survey Methodology
   …… p3-4
5. Tree Survey Data & Appraisal
   …… p5
6. Arboricultural Impact Assessment
   …… p6-8
7. Arboricultural Method Statement
   …… p9-11
8. Conclusion
   …… p11
9. Qualifications and Experience
   …… p11

Tables

1. Drawings and documents supplied…… p1
2. Tree species and their botanical names…… p5

Appendices

A. Tree Survey Schedule
B. Tree Survey Plan
C. Arboricultural Impact Plan
D. Tree Protection Plan
E. Protective Fencing Diagram
F. Site Supervision Example

The content and format of this report are for the exclusive use of the client or their agents It must not be sold, lent, hired out or divulged to any third party not directly involved in the subject matter without the written consent of Usherwood Arboriculture

1.Instruction

Usherwood Arboriculture have been instructed by Zongwise Limited to provide a tree survey, arboricultural impact assessment, arboricultural method statement and tree protection plan regarding the Refurbishment and subdivision of the existing trade counter warehouse with ancillary office accommodation to provide 6 no. trade counter units, together with the creation of 2 no. B2/B8 warehouse units (8 units in total), including the reconfiguration and upward extension of the existing office accommodation by one additional storey to form trade counter units over three floors, a vertical extension to part of the existing warehouse to create a separate warehouse unit with internal mezzanine and increase in overall height, and the erection of an additional warehouse building with internal mezzanine within the existing service yard, together with associated car parking, cycle parking, and ancillary refuse and recycling storage at Unit 1, Caxton Trading Estate, Printing House, Hayes, UB3 1AP. The document has been compiled in accordance with BS5837:2012, Trees in relation to design, demolition and construction-Recommendations.

Drawing/Document Ref.	Title	Drawn/Written by
2519 PL1 03	Existing Ground Floor Plan	WAMM
2519 PL1 07	Proposed Ground Floor Plan	WAMM

Table 1. Key drawings and documents supplied for consideration within this report

2.Executive Summary

This document considers the impact of proposed development upon 14 individual cherry trees forming a linear group on the site frontage.

The trees are in variable condition, some heavily Ivy-clad and others with minor to major structural defects.

Despite a number of trees being identified as having a category U quality rating (unsuitable for retention beyond 10 years), no trees are proposed for removal due to the proposed development.

The proposal is mainly confined to the warehouse building although the accessway to the front will be upgraded and slightly widened to allow for vehicular parking beneath the trees.

3.The Site

The application site comprises a large industrial unit with access roads on its north, south and west sides. The subject trees grow within a banked area of soft landscape between the site and Printing House Lane.

Soil conditions

The British Geological Survey, Geology of Britain viewer describes the local bedrock geology as London Clay Formation-Clay, silt and sand. Local superficial geology is described as Lynch Hill Gravel Member-Sand and gravel.

Legal Constraints

Trees can sometimes be the subject of a Tree Preservation Order (TPO) or a property may be situated within a designated conservation area. Both a TPO and conservation area designation require the owner/occupier or those wishing to work on trees to seek the Council's consent or provide written notice prior to carrying out any works. It is a criminal offence to carry out any works to protected trees without the Council's consent. The site is not situated within a Conservation Area, however, the linear group of Cherry trees are subject to a TPO.

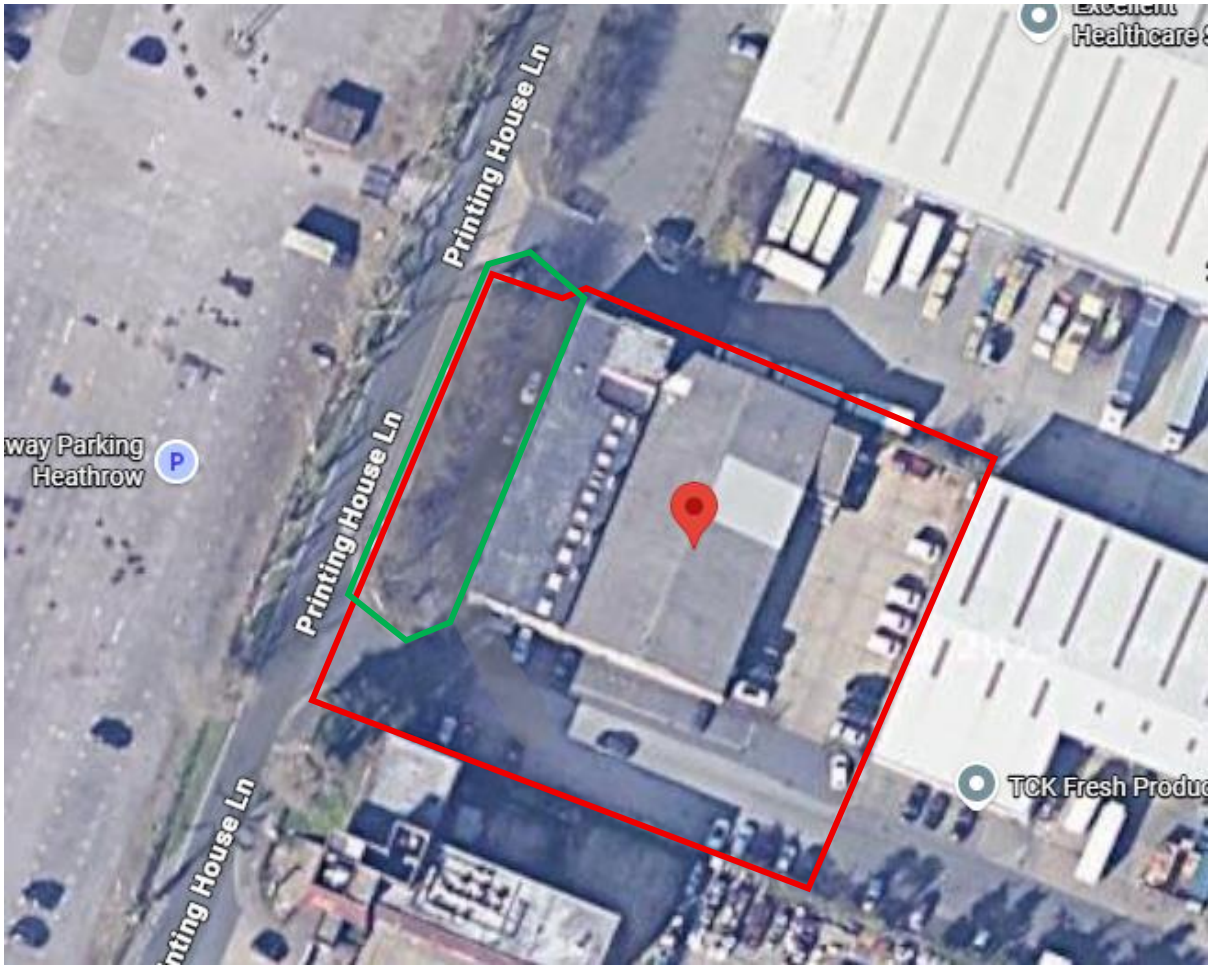


Image above, courtesy of Google Maps with the application site outlined in red and subject trees in green.

4. Tree Survey

The trees were assessed on 18/11/2025 in accordance with recommendations and guidelines contained within British Standard 5837:2012 - 'Trees in relation to design, demolition and construction-Recommendations' henceforth referred to as BS5837. The survey was carried out in relation to the condition and quality of trees growing either within or near the boundary of the site. Where details have been omitted including the heights of crown break and the direction of the first major lateral branch, these details were not seen as being relevant to this application. Where access allowed, tree heights were measured with a Haglof electronic clinometer and trunk diameters with a diameter tape measure. Crown spreads were measured with a tape measure or paced out at the four cardinal points.

All trees were assessed from the ground utilizing the Visual Tree Assessment method as developed by Mattheck and Breloer (The Body Language of Trees, Research for Amenity Trees No 4 Department of the Environment).

This tree survey should not be treated as a hazard assessment, it has been carried out to inform the planning process with regards to the appropriate retention and protection of trees as visual and ecological assets within the landscape. However, where clear and obvious defects are observed, the relevant parties would be informed.

Tree Assessment and Categorization

Tree quality ratings have been assessed in accordance with BS5837's Table 1, Cascade chart for tree quality assessment.

U= Trees in such a condition that any existing value would be lost within 10 years and which should in the current context, be removed for reasons of sound arboricultural management. (Trees that have serious, irremediable structural defects, such that their early loss is expected due to collapse or ill health including trees that will become at risk due to the loss of other U category trees).

A = Trees of high amenity quality and value in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested).
1) Trees that are particularly good examples of their species if rare, unusual or essential components of groups or formal or semi-formal arboricultural features.
2) Trees, groups of trees or woodland which provide a definite screening or softening effect to the locality in relation to views in or out of the site, or those of particular visual importance.
3) Trees groups or woodlands of significant conservation, historical, Commemorative or other value (e.g. veteran tree or wood pasture).

B = Trees of moderate quality and amenity value: those in such a condition as to be able to make a significant contribution (a minimum of 20 years is suggested).
1) Trees that might be included in the high category but are down-graded because of impaired condition (e.g. remediable defects).
2) Trees, groups of trees or woodland that form distinct landscape features but do not form essential components of the landscape.
3) Trees with clearly identifiable conservation or other cultural benefits.

C = Trees of low quality and amenity value currently in adequate condition to remain until new planting is established (a minimum of 10 years is suggested) or trees under 150 mm stem diameter.
1) Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.
2) Trees presenting groups or woodlands but not with a significantly higher landscape value and or offering low or temporary/transient screening benefit.
3) Trees with no conservation or other cultural benefits.
Note: Category C trees are the least suitable for retention, where they would impose a significant constraint on the development their removal for development purposes may be considered acceptable by the LPA.

5.Tree Survey Data & Appraisal

This survey concerns 14 individual trees, full details of the survey data can be found in the Tree Survey Schedule at **Appendix A**. An explanation of Tree Quality category ratings is set out on the previous page.

Category A individual trees and groups of trees.
No trees have been graded as category A (trees of high quality) as part of this survey.

Category B individual trees and groups of trees.
5 trees have been graded as category B (trees of moderate quality) as part of this survey.

Category C individual trees and groups of trees.
5 trees have been graded as category C (trees of low quality) as part of this survey.

Category U individual trees and groups of trees.
4 trees have been graded as category U (trees unsuitable for retention) as part of this survey.

A single tree species has been recorded as part of this survey, it's common and botanical names are set out within the table below.

Common Name	Botanical Name
Wild cherry	*Prunus avium*

Table 2. Tree species recorded on site and their botanical names.





Photos above of the subject trees viewed from within and outside of the site. The trees grow within a linear banked verge.

6.Arboricultural Impact Assessment

The Arboricultural Impact Assessment (AIA) sets out the potential risks and threats associated with proposed construction to trees both within and near to an application site and seeks to minimise those risks through the implementation of a sound and recognised methodology set out within an arboricultural method statement.

Construction and development in general can impact trees in a number of ways, the most notable being damage to the tree's root system leading to physiological decline and structural instability. BS5837 recognises this and sets out recommendations to minimise damage associated with the effects of soil compaction and root severance.

The AIA also considers the impacts of tree loss on the character of the immediate and wider landscape.

Tree Removals

Although 4 trees have been given a category U rating, reserved for trees unsuitable for retention beyond 10 years, no trees are to be removed as a result of the proposed development.

Retained trees

14 trees identified as **T1-T14** are to be retained despite their varying structural condition.

The trees will require the reduction of east facing limbs where they overhang the existing access road in order to provide approximately 3.5 metres height clearance for parking beneath.

A full pruning specification will be provided following general agreement of the application. In addition to lateral reduction works, Ivy will be cut at base and removed from all trees.

Wherever possible, works will be carried out in accordance with BS3998: 2010- Tree works, Recommendations.

The root protection areas (RPAs) of the subject trees have been shown in standard circular format, magenta dashed lines, and also as a continuous modified RPA, solid magenta line.

The modification is based on the location of the existing access road with pin kerb edge and the potential for the road's subbase to curtail any significant root growth beneath.

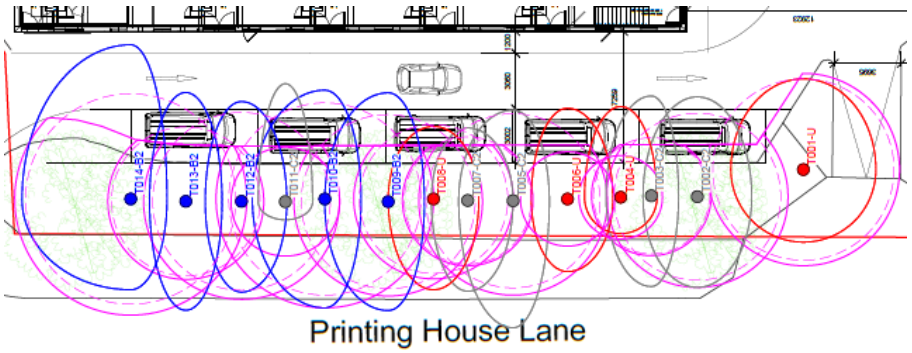


Figure 1 above is an extract from the arboricultural impact plan at appendix C. The canopy spreads are shown in diagrammatic form extending over the existing access road. The root protection areas (RPAs) have been modified in magenta and have been curtailed at the existing access road edge.



Image above courtesy of Google Street View showing the existing access road. A small incursion into the soft bank will be required in order to provide the necessary hardstanding width for parking.

Works within the RPAs of trees **T1**-**T14** will include a minor extension of the access road. The incursion is expected to be a maximum of 500mm in the western direction with all works carried out under arboricultural supervision.

Any exposed roots will be carefully cut back by the project arboriculturalist with the use of sharp secateurs, bypass loppers and pruning saw.

A precautionary approach

Not withstanding the previous information, we recommend a precautionary approach to construction.

Where excavation is required in proximity to RPAs, initial excavation will be carried out with the use of hand tools only to a depth of approximately 300mm. Excavation will also be carried out under arboricultural supervision.
Any exposed roots with a diameter below 25mm will be carefully cut back to the excavation edge. Roots of 25-50mm diameter may be cut back with approval from the LPA.

Root Protection Areas- General information.

BS 5837 describes the root protection area (RPA) as a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.

The **Root Protection Areas (RPA)** have been calculated in accordance with Table D1 of BS5837:2012. Notional RPA's are plotted on the arboricultural impact assessment plan at **appendix C**. The RPA is defined by the formula in paragraph 4.6 from the British standard and may be refined by considering current on-site constraints to root activity such as buildings, walls, earthworks, hard paving and services.

Root systems and compaction.

Root systems can easily be damaged during construction works, leading to the sometimes-rapid decline of valuable trees. The biggest problem for trees on or close to construction sites is the compaction of soil caused by inappropriate vehicular movement and storage of materials especially where the site is founded on a compressible clay.

Numerous surveys have shown that a significant proportion of a tree's roots proliferate in the top 600-1000mm of soil. There will of course be roots that may go down to depths of 3 metres or more although these will be in the minority. Roots in the upper soil surface find it far easier to intercept moisture, acquire oxygen and perform gaseous exchange. You also find that as soil depth increases so does its strength or compaction, making it harder for roots to exploit.
Root morphology differs from species to species and is largely dependent on the soil type and ground conditions, however the fine roots responsible for moisture and nutrient uptake can last anything from 10 days to over a year (Eissenstat and Yanai, 1997), with the tree producing new fine roots on a regular basis. The larger and more structural roots are a permanent feature of the tree and convey moisture and nutrients from the soil via the fine roots, into the trunk and canopy. The larger roots are of course responsible for the tree's stability as well as being areas of carbohydrate storage. Younger trees are more able to adapt to change and have more potential energy to explore alternative rooting environments whereas more mature trees are slower to react to a changing soil environment and are adapted to expend their energy on other important functions.

The National Geology of Britain Viewer advises that the local soil comprises a bedrock geology of clay with a superficial layer of sand and gravel. Therefore, we suggest that the risk of soil compaction is moderate.

Root severance

As mentioned above, the roots are responsible for a number of functions including stability and the transport of water and nutrients. Studies have shown that trees can withstand and recover from the loss of a proportion of their root systems, especially where those roots have been removed in a single direction. The proposal may expose roots from trees **T1-T14** growing in an easterly direction. However, a precautionary approach will be taken with supervised hand dig only for shallow excavation to increase the width of the access road.

7.Arboricultural Method Statement (AMS)

The arboricultural method statement sets out a precautionary approach towards tree protection. Any operations including access, proposed within the RPA (or crown spread where this is greater) will be described within an arboricultural method statement, to demonstrate that the operations can be undertaken with minimal risk of adverse impact to retained trees.

Phase 1-Access facilitation and pre-start tree works.

- Tree surgeon to carry out lateral reduction on lower east facing limbs of trees **T1-T14** in order to achieve a crown clearance of 3.5 metres.

- Building contractor to install tree protective fencing around the RPAs of trees **T1-T14** as described below.

- A site meeting will be held following the installation of tree protection measures, (see site supervision).

Phase 2- Installation of tree protective fencing.

- Erect protective barrier fencing in locations shown on the tree protection plan at **appendix D**. A protective fencing diagram can be found at **appendix E**. Barriers will consist of a heras type panel inserted into rubber blocks and reinforced with a stabiliser strut. Two clamps either end of each section will ensure the area within the fence (CEZ) remains out of bounds during all construction activities.





Images above show protective fencing installed as per BS5837:Fig 3A with rubber blocks and stabilizer struts driven into the ground.

Phase 3- Excavation of small section of bank.

- Once the tree protection measures have been implemented and signed off by the project arboriculturalist, construction may commence.

- The outer edge of the access road will be marked out and approximately 300mm depth dug out with the use of hand-held tools only. This exercise will take place under arboricultural supervision.

- We do not expect to encounter any substantial roots, however, if roots are exposed, they will be carefully pruned to the excavation edge with the use of sharp bypass loppers and secateurs.

- Root pruning wil be carried out by the project arboriculturalist and confined to roots of <25mm diameter.

- Roots will be cut with sharp secateurs or bypass loppers, perpendicular to their direction of travel.

- Exposed roots of 25mm-50mm will be retained and not cut, unless approved by the LPA tree officer.

- Roots of 50mm diameter and above will be retained and the construction methodology modified accordingly.

- Any exposed root ends will be covered with damp hessian sacking to be removed prior to the installation of a pin kerb edge.

- If any roots are present at the excavation edge, the outer edge of the excavation closest to the trees will be lined with an impermeable sheet such as DPM. This is to avoid toxic leachates associated with curing concrete from entering the surrounding soil and damaging fine root hairs.

- Once above ground, construction may commence without the requirement for specific arboricultural methodologies.

Pre-commencement meeting & Site supervision.

- A pre-commencement meeting will take place between the project arboriculturalist and building contractor, the LPA tree officer will also be invited to attend. This is for the project arboriculturalist to clarify that tree protection measures have been correctly implemented prior to the commencement of works and that any unforeseen issues may be dealt with in a timely manner.

- A single site supervision visits will be carried out to oversee the excavation of ground in proximity to trees **T1-T14**.

- Site supervision visits will be pictorially documented with findings shared with the client and LPA tree officer within 5 working days of the visit (**see appendix F**).

General measures to be adopted in proximity to trees.

- No further trees or vegetation are to be removed other than that described as being removed within approved arboricultutral and landscape documents.
- All tree protection measures will be set in place prior to commencement of any works relating to the approved planning consent.
- No bonfires on site.
- No storage of products or mixing of materials within the RPA's of trees.
- No materials are to be stored within the confines of the protective fencing (CEZ).
- Storage of materials on soft ground in proximity to any other trees and hedges away from construction is to be avoided.
- No discharging of any products associated with construction near trees or hedges
- No refueling/topping up of hydraulic fluids etc. on plant machinery within or close to the RPA of trees.
- There will be no lowering or raising of soil levels within the root protection areas of retained trees except where specified and agreed by the LPA.
- There will be no excavation or trenching for the installation of services within the root protection areas of retained trees except where specified and agreed by the LPA.

8. Conclusion

Provided the arboricultural method statement and tree protection plan are adhered to, there should be no impacts upon the existing cherry trees. We suggest that further road construction details in proximity to the subject trees can be dealt with via condition.

9. Qualifications & Experience

I have been involved in the horticultural and arboricultural industries for over 40 years, firstly as a contractor and for the last 20 years as a Local Authority tree officer and consultant. I hold the AA Tech cert arb, and ND Arb (RFS) as well as being a Lantra accredited Professional Tree Inspector.

Lawrence Usherwood
Usherwood Arboriculture

Phone: 07753 211306
email: lawrence@usherwoodarboriculture.co.uk
http://usherwoodarboriculture.co.uk/

Appendix A: Tree Survey Schedule

Trees have been listed on the schedule with both their common and scientific names.

Tree height is normally measured and rounded up to the nearest metre for trees above 10 metres in height using a Haglof electronic clinometer.

Stem or trunk diameters were measured using a diameter tape in mm at 1.5 metres above ground where access allowed, otherwise diameters have been estimated.

Crown spread has been measured in metres from the trunk to the tips of the live lateral branches taken at the four-cardinal points N-E-S-W using a ground tape.

Age Class
Young - Trees in the first fifth of full life expectancy
Semi-mature - Trees in the second fifth of full life expectancy
Early-mature - Trees in the third fifth of full life expectancy
Mature - Trees in the fourth fifth of full life expectancy
Post-mature – Trees having reached full life expectancy and trees in natural decline
Veteran - Trees of interest biologically, culturally and aesthetically due to certain features and/or age.

ERCY-The estimated remaining contribution in years calculated considering the tree's species, location, current age and physiological and structural condition at the time of the survey.

BS5837 Survey Data

Ref.	Species	Measurements	General Observations	Category	Recommendations
T001	Wild cherry (Prunus avium)	Height (m): 9 Stem Diam(mm): 420 Spread (m): 4N, 5E, 4S, 4W Life Stage: Early Mature Rem. Contrib.: <10 years	Lower limb torn out leaving hazardous stem. Torn branches over existing access.	U RPA Radius: 5.0m. Area: 79 sq m.	Pre construction: Reduce damage limbs to bring tree within safer parameters. During construction: Refer to the arboricultural method statement.
T002	Wild cherry (Prunus avium)	Height (m): 9 Stem Diam(mm): 380 Spread (m): 3N, 5.5E, 3S, 5W Life Stage: Early Mature Rem. Contrib.: 20+ Years	Bark wounds on main stem.	C2 RPA Radius: 4.6m. Area: 66 sq m.	Pre construction: Install tree protective fencing to protect majority of RPA. During construction: Refer to the Arboricultural Method Statement for further details.
T003	Wild cherry (Prunus avium)	Height (m): 9 Stem Diam(mm): 270 Spread (m): 2.5N, 5.5E, 1.5S, 5W Life Stage: Early Mature Rem. Contrib.: 20+ Years		C2 RPA Radius: 3.2m. Area: 32 sq m.	Pre construction: Install tree protective fencing to protect majority of RPA During construction: Refer to the Arboricultural Method Statement for further details.

Ref.	Species	Measurements	General Observations	Category	Recommendations
T004	Wild cherry (Prunus avium)	Height (m): 9 Stem Diam(mm): 190 Spread (m): 2N, 5E, 2S, 2W Life Stage: Early Mature Rem. Contrib.: <10 years	Major wound on west side of stem at 1-2m.	U RPA Radius: 2.3m. Area: 17 sq m.	Pre construction: Install tree protective fencing to protect majority of RPA During construction: Refer to the Arboricultural Method Statement for further details.
T005	Wild cherry (Prunus avium)	Height (m): 9 Stem Diam(mm): 400 Spread (m): 3N, 5E, 2S, 7W Life Stage: Early Mature Rem. Contrib.: 10+ Years	Heavily Ivy clad, unable to survey in greater detail. Cut Ivy at base for further inspection.	C2 RPA Radius: 4.8m. Area: 72 sq m.	Pre construction: Install tree protective fencing to protect majority of RPA During construction: Refer to the Arboricultural Method Statement for further details.
T006	Wild cherry (Prunus avium)	Height (m): 9 Stem Diam(mm): 220 Spread (m): 2N, 5E, 2.5S, 4W Life Stage: Early Mature Rem. Contrib.: <10 years	Large canker wound on west side at 2m height. Internal decay present.	U RPA Radius: 2.6m. Area: 21 sq m.	Pre construction: Install tree protective fencing to protect majority of RPA During construction: Refer to the Arboricultural Method Statement for further details.
T007	Wild cherry (Prunus avium)	Height (m): 9 Stem Diam(mm): 290 Spread (m): 2N, 4E, 2.5S, 5W Life Stage: Early Mature Rem. Contrib.: 20+ Years		C2 RPA Radius: 3.5m. Area: 38 sq m.	Pre construction: Install tree protective fencing to protect majority of RPA During construction: Refer to the Arboricultural Method Statement for further details.
T008	Wild cherry (Prunus avium)	Height (m): 10 Stem Diam(mm): 340 Spread (m): 2.5N, 4E, 2.5S, 5W Life Stage: Early Mature Rem. Contrib.: 10+ Years	Previously co-dominant tree, second stem torn out at base. Exposed injury on east side.	U RPA Radius: 4.1m. Area: 53 sq m.	Pre construction: Install tree protective fencing to protect majority of RPA During construction: Refer to the Arboricultural Method Statement for further details.

Ref.	Species	Measurements	General Observations	Category	Recommendations
T009	Wild cherry (Prunus avium)	Height (m): 10 Stem Diam(mm): 400 Spread (m): 3.5N, 6E, 2S, 6W Life Stage: Early Mature Rem. Contrib.: 20+ Years	Ivy-clad, 2 main stems from 3m.	B2 RPA Radius: 4.8m. Area: 72 sq m.	Pre construction: Install tree protective fencing to protect majority of RPA During construction: Refer to the Arboricultural Method Statement for further details.
T010	Wild cherry (Prunus avium)	Height (m): 11 Stem Diam(mm): 440 Spread (m): 4N, 6E, 2S, 6W Life Stage: Early Mature Rem. Contrib.: 20+ Years	Ivy-clad, conflicts with street lamp.	B2 RPA Radius: 5.3m. Area: 88 sq m.	Pre construction: Install tree protective fencing to protect majority of RPA During construction: Refer to the Arboricultural Method Statement for further details.
T011	Wild cherry (Prunus avium)	Height (m): 11 Stem Diam(mm): 250 Spread (m): 1.5N, 6.5E, 1.5S, 1W Life Stage: Early Mature Rem. Contrib.: 10+ Years	Previously Ivy-clad, partially removed. Smallest tree in linear group.	C2 RPA Radius: 3.0m. Area: 28 sq m.	Pre construction: Install tree protective fencing to protect majority of RPA During construction: Refer to the Arboricultural Method Statement for further details.
T012	Wild cherry (Prunus avium)	Height (m): 12 Stem Diam(mm): 410 Spread (m): 2N, 5.5E, 2.5S, 5W Life Stage: Early Mature Rem. Contrib.: 20+ Years	Previously Ivy-clad, s stems from 2m.	B2 RPA Radius: 4.9m. Area: 75 sq m.	Pre construction: Install tree protective fencing to protect majority of RPA During construction: Refer to the Arboricultural Method Statement for further details.
T013	Wild cherry (Prunus avium)	Height (m): 12 Stem Diam(mm): 340 Spread (m): 2N, 6E, 2S, 6W Life Stage: Early Mature Rem. Contrib.: 20+ Years	Ivy-clad, injury on east side of stem at 5m.	B2 RPA Radius: 4.1m. Area: 53 sq m.	Pre construction: Install tree protective fencing to protect majority of RPA During construction: Refer to the Arboricultural Method Statement for further details.

Ref.	Species	Measurements	General Observations	Category	Recommendations
T014	Wild cherry (Prunus avium)	Height (m): 11 Stem Diam(mm): 480 Spread (m): 6N, 8.5E, 2S, 5W Life Stage: Early Mature Rem. Contrib.: 20+ Years	Ivy-clad, tri-dominant stems from 2.5m, asymmetric lean to northeast.	B2 RPA Radius: 5.8m. Area: 106 sq m.	Pre construction: Install tree protective fencing to protect majority of RPA During construction: Refer to the Arboricultural Method Statement for further details.

Appendix B: Tree Constraints Plan

General Notes
Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements.
Depictions of tree canopies are based on measurements taken to four cardinal compass points.
No liability of any kind Is accepted for any omissions or inaccuracies in respect of this plan.
The original of this drawing was produced in colour; a monochrome copy should not be relied upon.
All rights reserved.

Caxton Trading Estate

PRINTINGHOUSE LANE

T014-B2
T013-B2
T012-B2
T011-C2
T010-B2
T009-B2
T008-U
T007-C2
T005-C2
T006-U
T004-U
T003-C2
T002-C2
T001-U

Existing Service Yard

sub station

Existing Car Parking

Key

- Trees (T1-B): Showing Canopy extents, category colour and tag number (with category).
- Category A: Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B: Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- Category C: Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.
- Category U: Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years.
- BS 5837:2012 Root Protection Area
- Modified BS 5837:2012 Root Protection Area

N

1:250
0 5 10m

Drawing Title: **Tree Constraints Plan**
Client: Zongwise Ltd
Site/Project: Unit 1, Caxton Trading Estate, Printing House Lane, Hayes, UB3 1AP

Scale/Sheet	Date		
1:250 - A3	8/1/2026		
Drawing No	**Rev**	**Drawn By**	**Chked By**
UA/TCP/1	1	CS	LU

© Copyright

USHERWOOD ARBORICULTURE
Lawrence Usherwood
Tel. 01883 340398
Mobile 07753 211306
Email. lawrence@usherwoodarboriculture.co.uk

Appendix C: Arboricultural Impact Plan

General Notes
Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements.
Depictions of tree canopies are based on measurements taken to four cardinal compass points.
No liability of any kind Is accepted for any omissions or inaccuracies in respect of this plan.
The original of this drawing was produced in colour; a monochrome copy should not be relied upon.
All rights reserved.

Printing House Lane

Exisiting site entry / exit unchanged

T014-B2
T013-B2
T012-B2
T011-C2
T010-B2
T009-B2
T008-U
T007-C2
T005-C2
T006-U
T004-U
T003-C2
T002-C2
T001-U

2500
3060
1200
6760
12923
7300

UNIT 6
Ground Floor 64sq.m / 689sq.m
First 64sq.m / 689sq.m
Second 64sq.m / 689sq.m
TOTAL 192sq.m / 2,067sq.ft

UNIT 5
Ground Floor 64sq.m / 689sq.m
First 64sq.m / 689sq.m
Second 64sq.m / 689sq.m
TOTAL 192sq.m / 2,067sq.ft

UNIT 4
Ground Floor 64sq.m / 689sq.m
First 64sq.m / 689sq.m
Second 64sq.m / 689sq.m
TOTAL 192sq.m / 2,067sq.ft

UNIT 3
Ground Floor 64sq.m / 689sq.m
First 64sq.m / 689sq.m
Second 64sq.m / 689sq.m
TOTAL 192sq.m / 2,067sq.ft

UNIT 2
Ground Floor 64sq.m / 689sq.m
First 64sq.m / 689sq.m
Second 64sq.m / 689sq.m
TOTAL 192sq.m / 2,067sq.ft

UNIT 1
Ground Floor 64sq.m / 689sq.m
First 64sq.m / 689sq.m
Second 64sq.m / 689sq.m
TOTAL 192sq.m / 2,067sq.ft

Existing Escape Door
New Escape Door
Infill existing loading door
Infill existing door
Line of mezzanine over

UNIT 7
Ground Floor 747sq.m / 8,040sq.ft
First 246sq.m / 2,648sq.m
TOTAL 993sq.m / 10,688sq.ft

UNIT 8
Ground Floor 562sq.m / 6,049sq.m
First 130sq.m / 1,400sq.m
TOTAL 692sq.m / 7,449sq.ft

service loading door
service loading door
service loading door
Escape
sub station
Side Loading
Side Loading
Van Turning
New ramped entrance
Existing Landscaping
Refuse & Recycle
Secure cycle store 12 spaces
Existing Car Parking Spaces

Key

- Trees (T1-B): Showing Canopy extents, category colour and tag number (with category).
- Category A: Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B: Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- Category C: Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.
- Category U: Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years.
- BS 5837:2012 Root Protection Area
- Modified BS 5837:2012 Root Protection Area

N

1:250
0 5 10m

Drawing Title
Arboricultural Implication Plan

Client
Zongwise Ltd

Site/Project
Unit 1, Caxton Trading Estate, Printing House Lane, Hayes, UB3 1AP

Scale/Sheet	Date
1:250 - A3	8/1/2026

Drawing No	Rev	Drawn By	Chked By
UA/AIP/1	1	CS	LU

USHERWOOD ARBORICULTURE
© Copyright
Lawrence Usherwood
Tel. 01883 340398
Mobile 07753 211306
Email. lawrence@usherwoodarboriculture.co.uk

Appendix D: Tree Protection Plan

General Notes
Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements.
Depictions of tree canopies are based on measurements taken to four cardinal compass points.
No liability of any kind Is accepted for any omissions or inaccuracies in respect of this plan.
The original of this drawing was produced in colour; a monochrome copy should not be relied upon.
All rights reserved.

Refer to the Arboricultural Method Statement for all works within the shaded area extending to the outer edge of RPAs.

Install tree protective fencing in accordance with BS5837:2012, Figure 3A. Fencing will be installed prior to the commencement of any works and will remain in place until development is complete.

TREE PRUNING WORKS
Pruning works will be carried out on all trees where they extend over the access road and vehicular parking bays.
Works will be restricted to the reduction of lateral branches to provide a minimum height clearance of 4 metres.
Tree works will be carried out in accordance with BS3998: 2010 unless otherwise stated.

Refer to the Arboricultural Method Statement for all works within the shaded area extending to the outer edge of RPAs.

Printing House Lane

CEZ
T014-B2
T013-B2
CEZ
T012-B2
T011-C2
T010-B2
CEZ
T009-B2
T008-U
T007-C2
CEZ
T005-C2
T006-U
T004-U
CEZ
T003-C2
T002-C2
CEZ
T001-U

2500
3060
1200
6760
12923
7300

New ramped entrance
Existing Landscaping

UNIT 6
Ground Floor 64sq.m / 689sq.m
First 64sq.m / 689sq.m
Second 64sq.m / 689sq.m
TOTAL 192sq.m / 2,067sq.ft

UNIT 5
Ground Floor 64sq.m / 689sq.m
First 64sq.m / 689sq.m
Second 64sq.m / 689sq.m
TOTAL 192sq.m / 2,067sq.ft

UNIT 4
Ground Floor 64sq.m / 689sq.m
First 64sq.m / 689sq.m
Second 64sq.m / 689sq.m
TOTAL 192sq.m / 2,067sq.ft

UNIT 3
Ground Floor 64sq.m / 689sq.m
First 64sq.m / 689sq.m
Second 64sq.m / 689sq.m
TOTAL 192sq.m / 2,067sq.ft

UNIT 2
Ground Floor 64sq.m / 689sq.m
First 64sq.m / 689sq.m
Second 64sq.m / 689sq.m
TOTAL 192sq.m / 2,067sq.ft

UNIT 1
Ground Floor 64sq.m / 689sq.m
First 64sq.m / 689sq.m
Second 64sq.m / 689sq.m
TOTAL 192sq.m / 2,067sq.ft

Existing Escape Door
New Escape Door
Infill existing loading door
Line of mezzanine over
service loading door
Escape
sub station
MC
Side Loading
Van Turning
Refuse & Recycle
Secure cycle store
12 spaces
Existing Car Parking Spaces

UNIT 7
Ground Floor 747sq.m / 8,040sq.ft
First 246sq.m / 2,648sq.m
TOTAL 993sq.m / 10,688sq.ft

UNIT 8
Ground Floor 562sq.m / 6,049sq.m
First 130sq.m / 1,400sq.m
TOTAL 692sq.m / 7,449sq.ft

Key

- Trees (T1-B) — Showing Canopy extents, category colour and tag number (with category).
- Category A — Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B — Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- Category C — Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.
- Category U — Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years.
- BS 5837:2012 Root Protection Area
- Modified BS 5837:2012 Root Protection Area
- Tree Protective Fencing
- Refer to the Arboricultural Method Statement for all works within the shaded area extending to the outer edge of RPAs.
- CEZ — Construction Exclusion Zone

N

1:250
0 5 10m

Drawing Title
Tree Protection Plan

Client
Zongwise Ltd

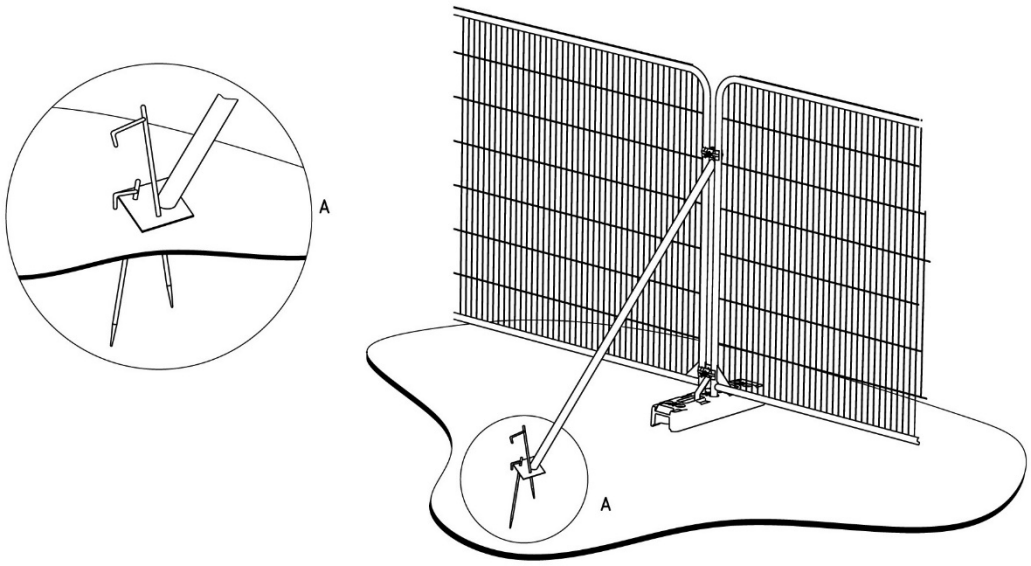
Site/Project
Unit 1, Caxton Trading Estate,
Printing House Lane,
Hayes, UB3 1AP

Scale/Sheet	Date		
1:250 - A3	8/1/2026		
Drawing No	**Rev**	**Drawn By**	**Chked By**
UA/TPP/1	1	CS	LU

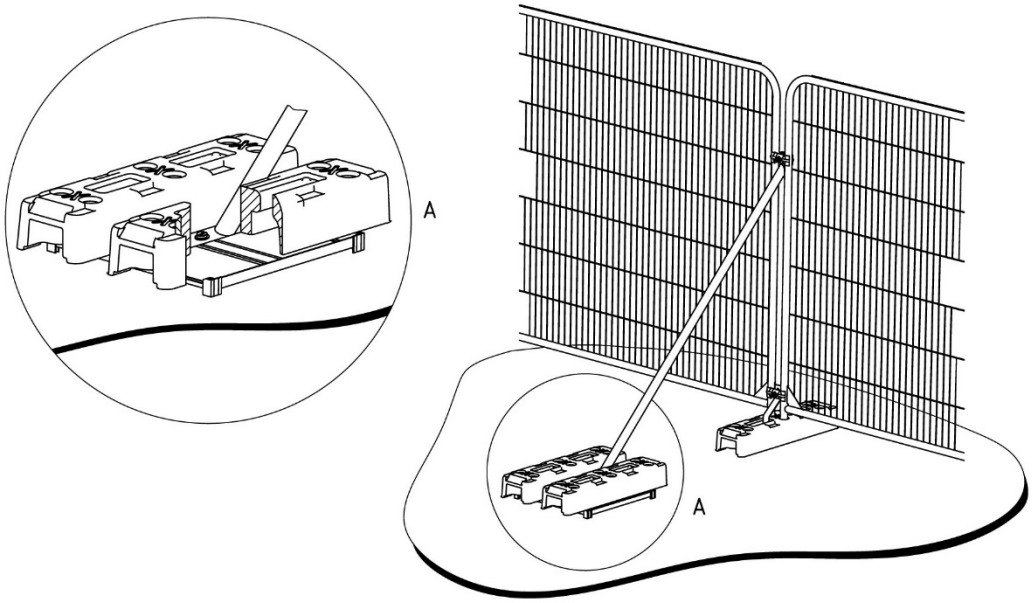
USHERWOOD ARBORICULTURE
© Copyright
Lawrence Usherwood
Tel. 01883 340398
Mobile 07753 211306
Email. lawrence@usherwoodarboriculture.co.uk

Appendix E: Tree Protective Fencing Example

Figure 3 **Examples of above-ground stabilizing systems**



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Appendix F: Site Supervision Example

Date: Time: Site: …… ……	Planning application reference:

Those present in addition to project arboriculturalist:

Client /Agent: ……

Project / Site manager: ……..

LPA arboricultural officer: ……

Other (specify): ……

	Yes	No	Action Required?
Tree Protection measures located in accordance with TPP?			
Any disturbance within construction exclusion zone?			
Any materials stored within construction exclusion zone?			
Any evidence of damage to tree roots, stems or canopies?			
Any works programmed before next planned site visit that may affect retained trees?			

Notes:

Signed: Date:

When is site supervision necessary-

Site supervision is normally specified where construction and development activity take place within or adjacent to the root protection area (RPA) of retained trees as calculated within the Arboricultural Impact Assessment (AIA) and described within the Arboricultural Method Statement (AMS).

The AMS will note where site supervision is recommended, and the local planning authority may require the provision of site supervision as a condition of planning consent.

Site supervision may cover several actions as set out below. The conclusions of each of the actions will be documented and shared with the client and local authority tree officer.

- Initial site meeting.
- Toolbox talk with all operatives having responsibility for works in proximity to trees.
- Correct installation of tree protection systems including fencing, ground protection, CCS, site huts etc.
- Technical supervision including excavation/trenching within RPAs, piling, installation of services, installation of lightweight structures such as bin and bike sheds, and installation of load bearing surfaces.

Reporting systems and site notes-

Additional notes taken during supervision of works within or close to the RPAs of retained trees.

Information will include the following-

- Date of works
- Description of works
- Operatives present
- Photographic records
- Scaled Section diagram and/or plan, showing location, size, and condition of any exposed roots.

Information will be shared with the client and local authority tree officer.