

BS5837:2012 -Trees in relation to design, demolition and construction. Arboricultural matters in relation to land at Dembleby.

Prepared by: East Midlands Tree Surveys Ltd.

Date: 09/11/2021

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1. Instructions

This report was commissioned by Shelly Anderson with instruction to carry out an inspection of trees located at the former Dembleby Plant Centre in line with *BS5837:2012 Trees in relation to design, demolition and construction - Recommendations*.

The objectives of this report are as follows:

- To make an assessment of the trees' condition and identify any faults.
- To provide Tree Constraints along with recommendations in line with BS5837:2012.
- To provide an Arb Impact Assessment with tree protection measures and an Arb Method Statement in line with BS5837:2012.

2. Information supplied

Our plans are based on the above DWG files which were imported to our mapping software for revision.

3. Introduction

This document has been prepared to fulfil the requirements for the proposal in accordance with the Department for Communities and Local Government guidance on information requirements and validation and is set out in compliance with British Standard 5837 Trees in relation to design, demolition and construction recommendations 2012.

The initial tree survey is considered to be compliant with BS5837:2012.

All trees considered likely to be affected by the proposal were surveyed and the details are given in Appendix 1 Table.

A topographical survey was provided.

The tree numbers referred to in this report are the same as shown on the tree survey schedule and plan, tags have been affixed.

The proposed indicative development is for a single dwelling and associated parking.

This report addresses the arboricultural issues relating to the proposed development at the above site and identifies the arboricultural implications of the proposed development with a view to protecting the trees during the construction works by setting out the tree protection methods, construction techniques and working practices that are to be adopted on this site.

If all the guidelines and principles outlined in this report are not adhered to, as with all development sites, there is a risk that the construction activities will result in damage to



and potentially the death of the retained trees. Damage to the trees will significantly increase the risk of their health declining and may increase the risk of their complete or partial failure.

The success of the recommendations set out in this report are dependent on the development adhering to the principles set out within, which are to be approved and enforced by the Local Planning Authority (LPA). If the recommendations contained within this document are acceptable to the LPA then it is suggested that they be controlled by standard planning conditions.

4. Site description

The site is accessed via a five bar wooden gate from the main road through the village.

There are small numbers of established trees and hedge either side of the entrance.

Within the site most of the area is dominated by the remains of the greenhouses although within a grassed area to the north there are scattered younger trees.

5. Tree survey findings

The tree details can be found at Appendix 1.

The trees overall are considered to be reasonable specimens with no significant defects noted.

The only caveat to this is NT4 Cherry Plum which has a Gannoderma sp bracket at the base. This tree should be removed and replaced within the context of development but equally from a liability perspective in terms of the main road.

This pathogen causes causes white heart rot to the base of the stem and roots of broadleaved trees. Wood becomes soft after decay and causes ductile fractures. Damage to the roots can cause fracturing and subsequent windthrow. Even if the fruiting bodies are not present the host tree can often show signs of ill health from the fungus, such as thin crown and associated die-back, smaller leaves, reduced growth rate, late leaf flush and early leaf fall.

The road frontage trees appear to be older plantings with the majority of trees within site being smaller and younger specimens.

The roadside trees are assessed as providing positive public visual amenity whereas at present, those within site less so however these trees do have the potential to become part of the landscape given their relatively young age and size.

6. Constraints

The tree constraints plan can be found at Appendix 2.



7. Arboricultural Impact Assessment & Tree Protection detail.

See Appendix 3 for the Impact Assessment plan.

a. **Above and below ground constraints and conflicts**

i. Construction

1. Building footprints: are clear of all tree RPA's (Root Protection Area)
2. Access: the existing access will be unchanged.

ii. Tree crown structure – a lateral prune of T618 by 1m will provide necessary clearances for the construction phase.

b. **Evaluation of the impact of proposed tree losses:** only NT4 is proposed for removal due to the presence of a known wood decayer; it provides amenity primarily to the adjacent landowners/immediately local area.

c. **Working and access space (including access facilitation pruning, extended canopy protection, height restriction bars):** adequate following proposed tree removals and pruning works.

d. **Infrastructure requirements:** any new services will be routed in trenches to be dug by hand if within any tree RPA's (root protection areas).

e. **Shading of buildings and open space:** there will be no direct shading to the proposed build and the small amount of shading from the off-site Bird Cherry (NT2) is considered to be minor.

f. **Future pressure for removal:** there are no conflicts.

g. **Seasonal nuisance:** autumn leaf fall will require clearance, predominantly from the rear gardens of all plots, though this should be viewed as normal annual maintenance.



7.1 Sequenced Methods of Demolition, Construction and Tree Protection

With reference to relevant published guidance, the methodology of this statement follows a logical sequence essential to the efficacy of the protection measures. Reference may include: British Standard BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations; British Standard BS3998:2010 Tree Work. It is essential to the successful implementation of the principles set out in this document that effective supervision and enforcement are put in place from the outset.

7.2 Phase 1 - Undertake Arboricultural Works

Remove NT4.

Laterally prune T618 by 1m over the drive.

Tree work requires skilled operators to perform pruning tasks in order to maintain the health and safe useful life expectancy of the trees, it is strongly recommended that construction staff DO NOT carry out any tree works.

Additional to this, a legal Duty of Care requires that all works specified should be carried out by qualified arboricultural contractors who have been competency tested to determine their suitability for such works in line with Health and Safety Executive guidelines. All works should be carried out in accordance with British Standard BS3998:2010 Recommendations for Tree Work.

Particular care needs to be addressed in dealing with legally protected species such as nesting birds and roosting bats which are protected under the Wildlife and Countryside Act 1981 (as amended) from intentional harm and killing and applies to roosting and hibernating bats and active bird nests. The protection of bird nests applies between mid-February to August inclusive.

7.3 Phase 2 - Tree Protection Fencing & ground protection measures.

The Tree Protection Plan can be found at Appendix 4.

Essentially, the RPAs of T618, T619, T620, T625 & NT3 are to be marked out on the ground to inform the fence runs as per the TPP as per the linear measurements identified in the survey data tables.

The fencing shall remain in place throughout construction and be removed only after completion of each phase.

The default specification as per figure 2 of BS 5837:2012 will be used (see Appendix 5) in order to minimise the risk of damage to roots.



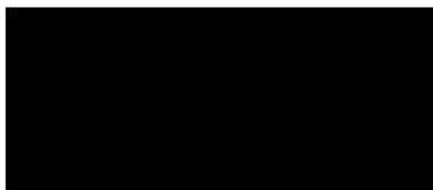
Within the fenced zone, no materials or chemicals should be stored at any time, no fires should be lit, no pedestrian or vehicle traffic, and level changes within these areas should be kept to an absolute minimum. Every effort should be taken to protect a maximum possible area of the root system.

Clear notices are to be fixed to the outside of the fencing with words such as

'TREE PROTECTION AREA – NO ACCESS OR WORKING WITHIN THIS AREA'.

See Appendix 6. These notices shall be A3 in size, laminated and fixed to the fencing using suitable aids such as tie wires.

The site agent, all contractors and other relevant personnel are to be informed of the role of the Tree Protection Fencing and their importance. A copy of the Tree Protection Plan will be displayed on site at all times during construction.



09/11/21

John Wilcockson – Director, East Midlands Tree Surveys LTD.

Tech Cert (Arbor A), NDF For



Appendix 1 - Tree Survey Data

BS5837 Report

Shelly Anderson
master topo (16-206-01)

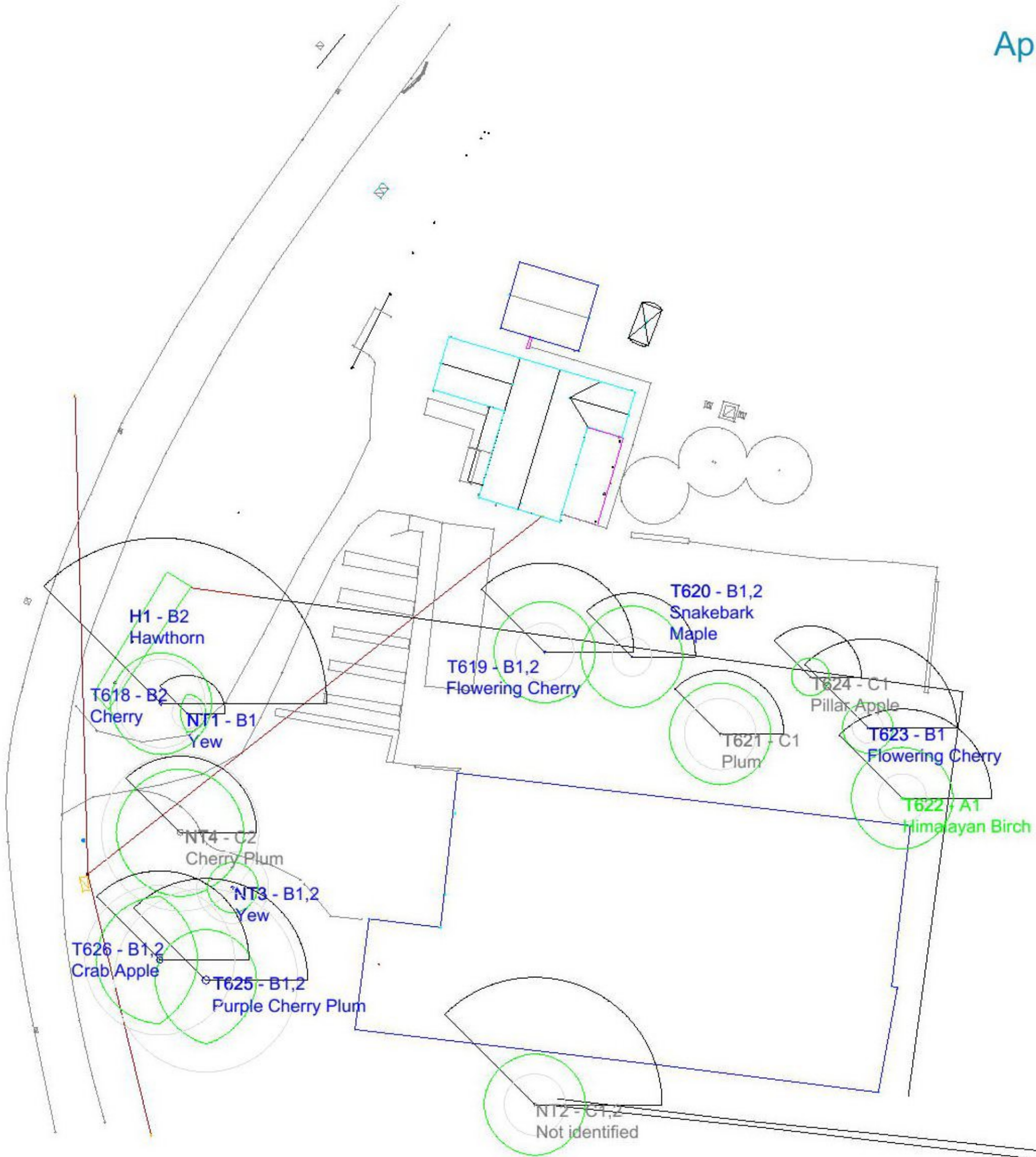


Retention Category	No. trees	Life Stage	No. trees	Rem. Contrib.	No. trees
A	1	Early Mature	2	20+ Years	1
B	9	Mature	3	30+ Years	1
C	4	Semi Mature	6	40+ Years	12
		Young	2		
		Not Recorded	1		
Total			14		

Ref.	Species	Full Structure	Measurements	Spread	General Observations	Retention Category	RPA	Condition	Recommendations
H1	Hawthorn (<i>Crataegus sp.</i>)	Group	Height (m): 3 Stem Diam (mm): 100 Spread (m): 1.5N, 1.5E, 1.5S, 1.5W Crown Clearance (m): 0 Life Stage: Semi Mature Rem. Contrib.: 40+ Years	N:1.5 E:1.5 S:1.5 W:1.5	Lapsed hedge, mainly Hawthorn with some wild rose, moderate ivy.	B2	Area: 59 sq m.	Physiological Cond: Good Structural Cond: Good	Bring back into management.
NT1	Yew (<i>Taxus sp.</i>)	Tree	Height (m): 3 Stem Diam (mm): 100 Spread (m): 1.5N, 1.5E, 1.5S, 0.5W Crown Clearance (m): 0 Life Stage: Young Rem. Contrib.: 40+ Years	N:1.5 E:1.5 S:1.5 W:0.5	Self set, no significant defects.	B1	Radius: 1.2m. Area: 5 sq m.	Physiological Cond: Good Structural Cond: Good	No action required.
NT2	Bird Cherry (<i>Prunus padus</i>)	Tree	Height (m): 10 Stem Diam (mm): 200 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 1 Life Stage: Early Mature Rem. Contrib.: 40+ Years	N:4 E:4 S:4 W:4	Off site, unable to assess effectively. Diameter estimated.	C1,2	Radius: 2.4m. Area: 18 sq m.	Physiological Cond: Fair Structural Cond: Fair	No action required.
NT3	Yew (<i>Taxus sp.</i>)	Tree 3 stems	3 stems, diam(mm): 150, 150, 100 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 0 Rem. Contrib.: 40+ Years	N:2 E:2 S:2 W:2	No significant defects.	B1,2	Radius: 2.8m. Area: 25 sq m.	Physiological Cond: Good Structural Cond: Good	No action required.

Ref.	Species	Full Structure	Measurements	Spread	General Observations	Retention Category	RPA	Condition	Recommendations
NT4	Cherry Plum (<i>Prunus cerasifera</i>)	Tree 4 stems	Height (m): 6 4 stems, diam(mm): 330, 260, 200, 220 Spread (m): 5N, 5E, 5S, 5W Crown Clearance (m): 0 Life Stage: Mature Rem. Contrib.: 20+ Years	N:5 E:5 S:5 W:5	Moderate ivy, congested crown, weak unions. Ganoderma sp bracket at 0.1m. Telecoms cables above.	C2	Radius: 6.2m. Area: 121 sq m.	Physiological Cond: Fair Structural Cond: Fair	Remove tree
T618	Cherry (<i>Prunus sp.</i> 'Cherry')	Tree	Height (m): 13 Stem Diam (mm): 290 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 1.5 Life Stage: Semi Mature Rem. Contrib.: 40+ Years	N:4 E:4 S:4 W:4	Co dominant at 2m, included union.	B2	Radius: 3.5m. Area: 38 sq m.	Physiological Cond: Good Structural Cond: Fair	No action required.
T619	Flowering Cherry (<i>Prunus Serrulata</i>)	Tree	Height (m): 7 Stem Diam (mm): 190 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 1 Life Stage: Semi Mature Rem. Contrib.: 40+ Years	N:4 E:4 S:4 W:4	No significant defects.	B1,2	Radius: 2.3m. Area: 17 sq m.	Physiological Cond: Good Structural Cond: Good	No action required.
T620	Snakebark Maple (<i>Acer davidii</i>)	Tree	Height (m): 5 Stem Diam (mm): 130 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 1 Life Stage: Semi Mature Rem. Contrib.: 40+ Years	N:4 E:4 S:4 W:4	Included union at 1.2m.	B1,2	Radius: 1.6m. Area: 8 sq m.	Physiological Cond: Good Structural Cond: Good	No action required.
T621	Plum (<i>Prunus domestica</i>)	Tree 3 stems	Height (m): 5 3 stems, diam(mm): 140, 110, 150 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 1 Life Stage: Early Mature Rem. Contrib.: 30+ Years	N:4 E:4 S:4 W:4	Graft, main trunk splits at 0.6m, included unions.	C1	Radius: 2.8m. Area: 25 sq m.	Physiological Cond: Fair Structural Cond: Fair	No action required.
T622	Himalayan Birch (<i>Betula utilis</i>)	Tree	Height (m): 7 Stem Diam (mm): 160 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 0 Life Stage: Young Rem. Contrib.: 40+ Years	N:4 E:4 S:4 W:4	No significant defects	A1	Radius: 1.9m. Area: 11 sq m.	Physiological Cond: Good Structural Cond: Good	No action required.
T623	Flowering Cherry (<i>Prunus Serrulata</i>)	Tree	Height (m): 7 Stem Diam (mm): 100 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 1 Life Stage: Semi Mature Rem. Contrib.: 40+ Years	N:2 E:2 S:2 W:2	No significant defects. Poor form as no apical leader.	B1	Radius: 1.2m. Area: 5 sq m.	Physiological Cond: Good Structural Cond: Good	No action required.

Ref.	Species	Full Structure	Measurements	Spread	General Observations	Retention Category	RPA	Condition	Recommendations
T624	Pillar Apple (<i>Malus tschonoskii</i>)	Tree 2 stems	Height (m): 4 2 stems, diam(mm): 90, 90 Spread (m): 1.5N, 1.5E, 1.5S, 1.5W Crown Clearance (m): 1 Life Stage: Semi Mature Rem. Contrib.: 40+ Years	N:1.5 E:1.5 S:1.5 W:1.5	Twin stem at 0.2m, included union with old part occluded pruning wound.	C1	Radius: 1.5m. Area: 7 sq m.	Physiological Cond: Fair Structural Cond: Fair	No action required.
T625	Purple Cherry Plum (<i>Prunus cerasifera</i> 'Pissardi')	Tree	Height (m): 8 Stem Diam (mm): 600 Spread (m): 4N, 4E, 5S, 4W Crown Clearance (m): 0 Life Stage: Mature Rem. Contrib.: 40+ Years	N:4 E:4 S:5 W:4	Heavy Ivy infestation, congested crown.	B1,2	Radius: 7.2m. Area: 163 sq m.	Physiological Cond: Fair Structural Cond: Fair	Sever ivy at base.
T626	Crab Apple (<i>Malus sylvestris</i>)	Tree	Height (m): 7 Stem Diam (mm): 490 Spread (m): 5N, 3E, 5S, 5W Crown Clearance (m): 1 Life Stage: Mature Rem. Contrib.: 40+ Years	N:5 E:3 S:5 W:5	Heavy ivy infestation. Part suppressed by T625.	B1,2	Radius: 5.9m. Area: 109 sq m.	Physiological Cond: Fair Structural Cond: Fair	Sever ivy at base.




KEY

- Grade A Trees
- Grade B Trees
- Grade C Trees
- Grade U Trees
- Extent of Root Protection Area
- Extent of Canopy
- Extent of Canopy - Groups
- Trees to be Felled and Replaced
- ▭ Shade Footprint

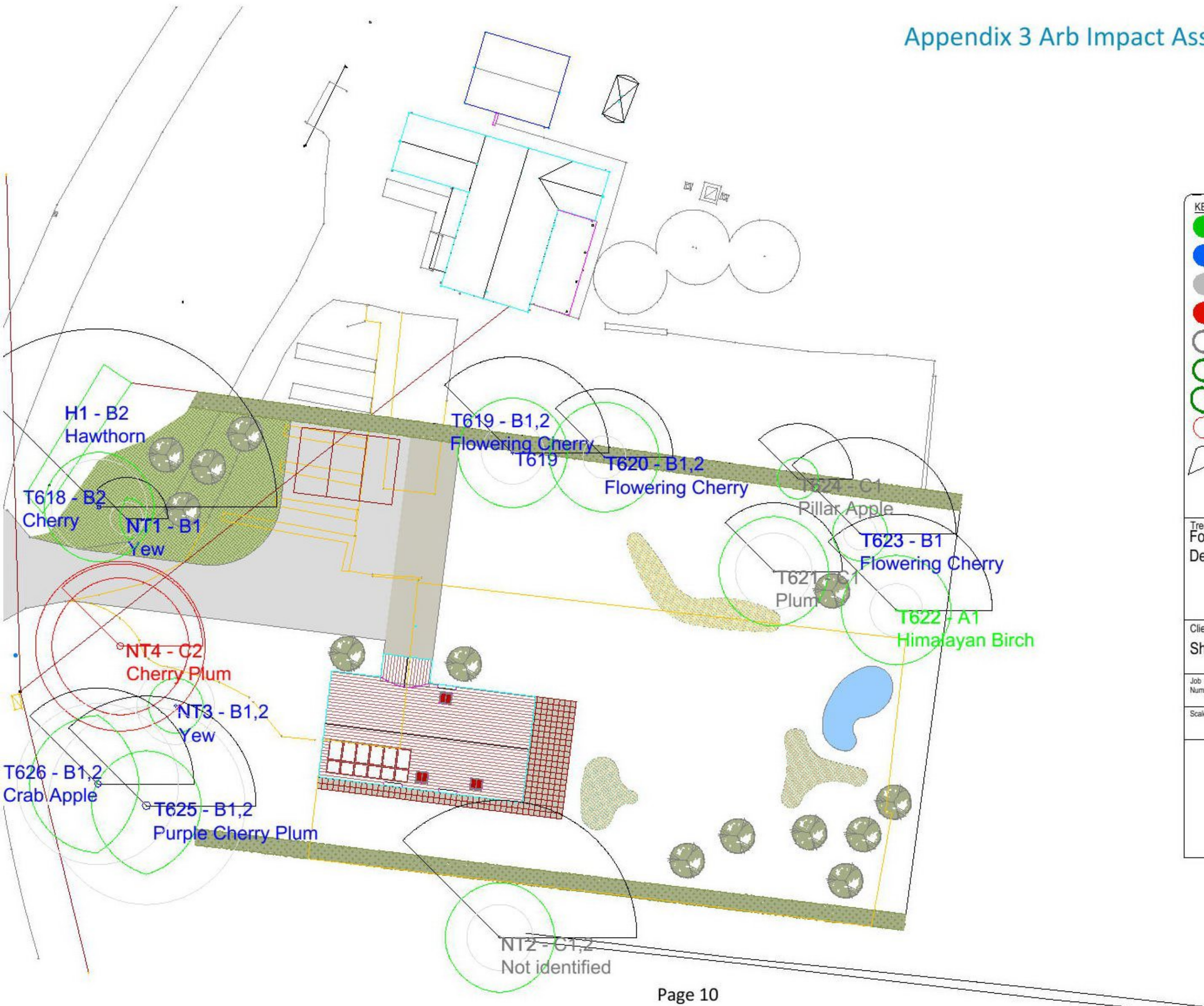
Tree Constraints Plan
Former Dembleby Plant Centre,
Dembleby

Client:
Shelly Anderson

Job Number:	Sheet Number:	Revision:
Scale:	Date: 06/07/21	Drawn:



**East Midlands
Tree Surveys**




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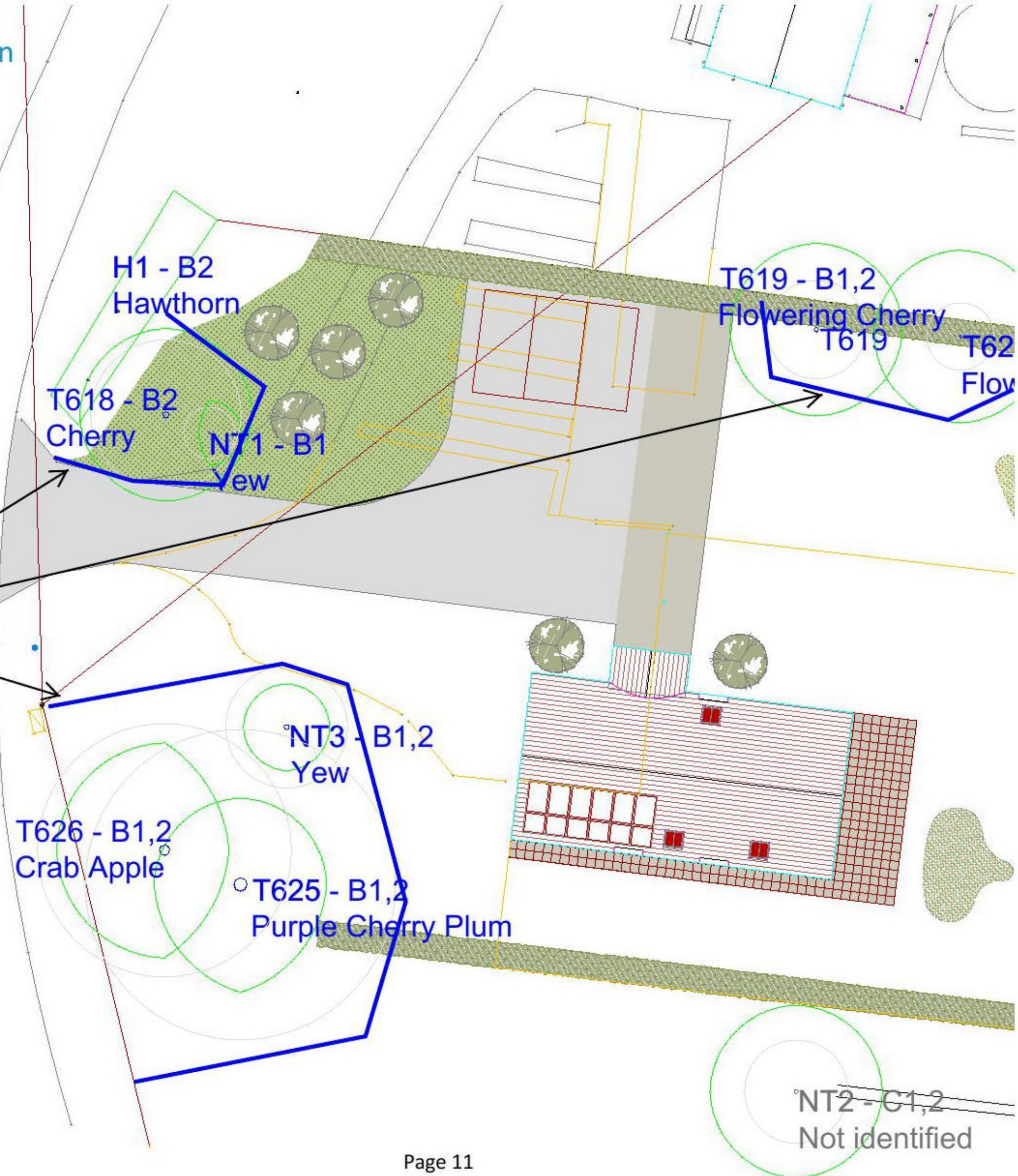
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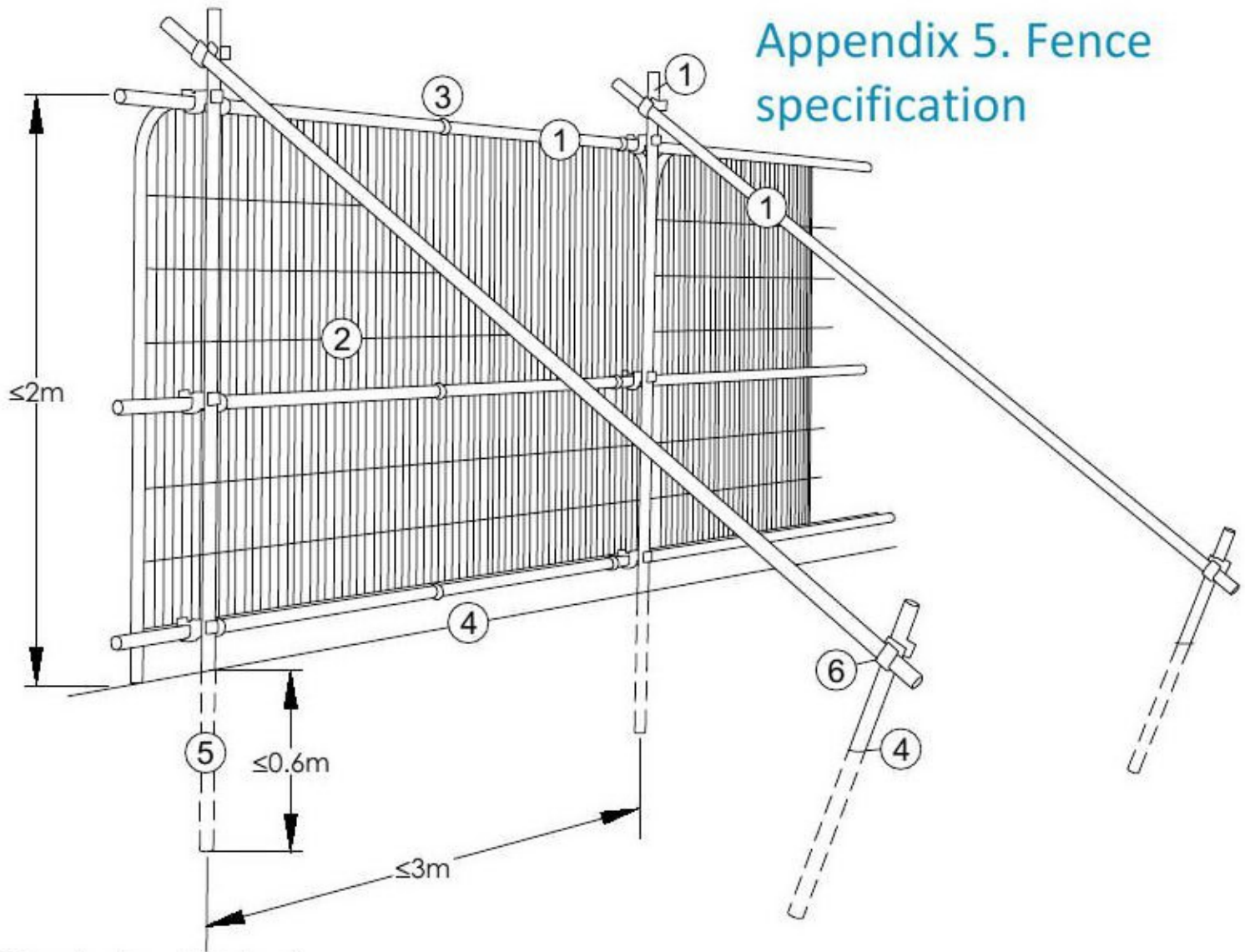
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Appendix 4 Tree protection plan

Fence positions



Appendix 5. Fence specification



1. Standard scaffold poles
2. Heavy gauge 2m tall galvanised tube and weld mesh infill panels
3. Panels secured to uprights and cross members with wire ties
4. Ground Level
5. Uprights driven into ground until secure (minimum depth 0.6m)
6. Standard scaffold clamps

Appendix 6. Signs



**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



**TREE PROTECTION AREA
KEEP OUT !**

Appendix 7. Tree survey

The trees were assessed objectively using 'Visual Tree Assessment' (VTA) techniques from the ground. VTA is a methodology, employed by arboriculturists, to evaluate the structural integrity of a tree, relying on observation of a tree's biomechanical and physiological features; this is the method generally adopted and is appropriate in this instance. The survey includes an individual tree number listed sequentially, tree Species in both its common and botanical name, its height, stem diameter measured at 1.5m from ground level, spread of the radius of the crown by cardinal points, height of the crown above ground level, age classification its general condition and any general conditions structural or biological defects noted during the survey. An estimate of the remaining safe life expectancy (SLE) and the category as defined in BS 5837:2012 Recommendations cascade chart for tree quality assessment.

The root protection area (RPA) will be calculated from the stem diameter and this will identify the area which will require special protection during the works.

Trees on the site have been divided into one of four categories (based on the cascade chart for tree quality assessment). These are classed as A, B, C or U (Section 4 of BS 5837) within the table in Appendix 1, Table 2. This gives an indication as to the tree's importance in relation to the site, the local landscape and, also, the value and quality of the existing trees on site. This assists informal decisions concerning which trees should be removed or retained should development occur. For a tree to qualify under any given category it should fall within the scope of that category's definition (see below).

Categories A, B and C cover trees that should be a material consideration in the development process, each with three further sub-categories (i, ii, iii) which are intended to reflect arboricultural, landscape and cultural (nature conservation) values. Category U trees may have no significant landscape value, but it is not presumed that there is any overriding need to remove these unless stated otherwise in the description and recommendations. They are for this reason not considered as being significant within the planning process. In assigning trees to the A, B or C categories, and the presence of any serious disease or tree-related hazard is taken into account. If the disease is considered fatal and/or irremediable, or likely to require sanitation for the protection of other trees it may be categorised as U with a recommendation for work or even removal, even if they are otherwise of considerable value.

Category (A): Trees whose retention is most desirable and are of high quality and value. These trees are considered to be in such a condition as to be able to make a lasting contribution (a minimum of 40 years) and may comprise:

- (i) Trees which are particularly good examples of their species especially rare or unusual, or essential components of groups or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue);



(ii) Trees, or groups of trees which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups);

(iii) Trees or groups of significant conservation, historical, commemorative or other value (e.g. Veteran or wood-pasture trees).

Category (B): Trees whose retention is considered desirable and are of moderate quality and value. These trees are considered to be in such a condition as to make a significant contribution (a minimum of 20 years) and may comprise:

(i) Trees that might be included in the high category but because of their numbers or slightly impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage), are downgraded in favour of the best individuals;

(ii) Trees present in numbers such that they form distinct landscape features and attract a higher collective rating than they would as individuals. Individually these trees are not essential components of formal or semi-formal arboricultural features, or trees situated mainly internally to the site and have little visual impact beyond the site;

(iii) Trees with clearly identifiable conservation or other cultural benefits.

Category (C): Trees that could be retained and are considered to be of low quality and value. These trees are in an adequate condition to remain until new planting could be established (a minimum of ten years) or are young trees with a stem diameter below 150 mm and may comprise:

(i) Trees not qualifying in higher categories;

(ii) Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value and or trees offering low or only temporary screening benefit;

(iii) Trees with very limited conservation or other cultural benefits.

Category (U): Trees that are considered to have no significant landscape value, but it is not presumed that there is any overriding need to remove these unless stated otherwise in the description and recommendations. They are for this reason not considered as being significant within the planning process. These trees will be in such a condition that any existing value would be lost within 10 years and which should in the current context be ignored or removed for reasons of sound arboricultural management. Trees within this category are:

(i) Trees that have a serious irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees;

(ii) Trees that are dead or are showing signs of significant, immediate or irreversible overall decline;



(iii) Trees infected with pathogens of significance to the health and or/safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality.

The Soil type was not assessed.

This report is valid for two years from the date of site inspection. The condition of trees can change following severe weather conditions, the effects of diseases and pests, and other abiotic factors.

Appendix 8. Legal Constraints

Where Local Planning Authorities can assess trees as beneficial to the wider community in terms of their amenity value, they may be protected by a Tree Preservation Order (TPO).

In certain areas classified as Conservation Areas, all trees with a stem diameter of 75mm (measured at 1.5m above ground) are protected by Conservation Area legislation. The LPA must be given notice of any work intended so they can visit the site and then either protect the tree(s) with a TPO or allow the works to go ahead. Their decision must be made within a six-week period. If no decision is made within the six-week period, the work may be carried out, providing it is done within a two-year period.

If trees protected by a TPO or within conservation areas are cut-down, topped, lopped, uprooted or wilfully damaged or destroyed, the owner of the tree(s) and the contractor responsible for the work can both be legally prosecuted. The current maximum fine is £20,000 per tree at the Magistrates Court or unlimited fine at the Crown Court.

Trees that are dead or dangerous are exempt from legislation. It is common good practice to notify the LPA of intention to carry out work to trees that fall into these categories, preferably with some notice (e.g. one working week).

A leaflet produced by the DTLR (Protected Trees), covers the issues raised by this legislation.

Any works prescriptions for protected trees can be dealt with by way of inclusion into a Planning Application for development purposes; this avoids the need to make a separate tree application.

A check with the Local Planning Authority has not been carried out.

Statutory wildlife obligations: The Wildlife and Countryside Act 1981 as amended by the Countryside and The Habitat Regulations 2012 and The Conservation of Habitats and Species Regulations 2017 provide statutory protection to birds, bats and other species that inhabit trees. All tree work operations are covered by these provisions and advice from an ecologist should be obtained before undertaking any works that might constitute an offence.



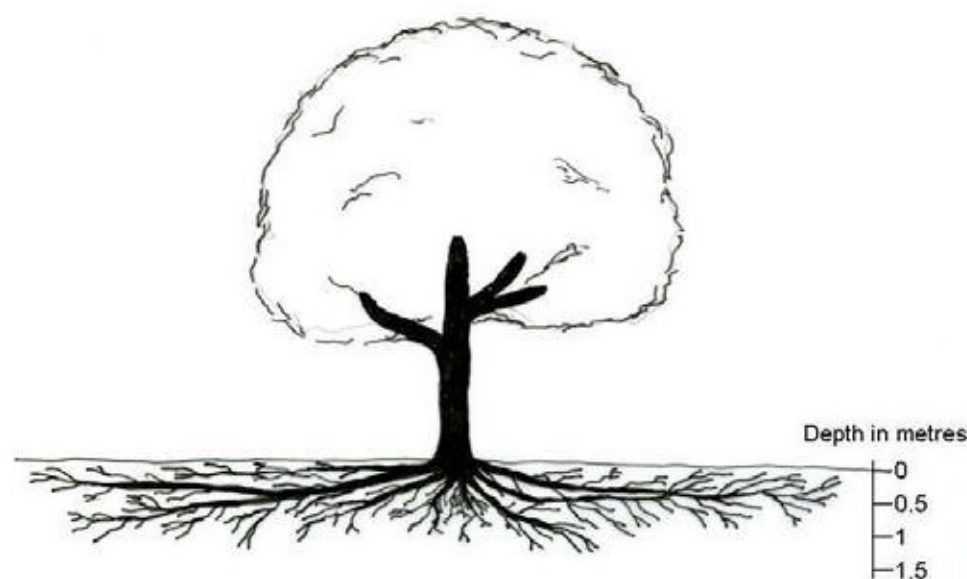
Appendix 9. Arboricultural considerations in relation to development.

Rooting structure

Rooting structure is a key issue when dealing with trees and development. To ensure the survival of trees the British Standard Institute has introduced the concept of a Root Protection Area (RPA). The RPA is an area surrounding a tree that contains sufficient rooting volume to ensure the tree's survival and is represented in square metres. (BS5837 2012 discusses the extent and form of a tree's root system.)

The following diagram represents the typical rooting pattern of a tree. Note that 90% of the tree's roots are usually located within the top 1m of soil and that roots may spread well beyond the canopy. Therefore, no works are allowed within the RPA. Even a small trench 0.5 metres deep to accommodate a cable or drain may lead to the loss of the tree. When work is proposed or is absolutely necessary within the RPAs of retained trees the proposals will only be considered if supported by an agreed robust and realistic Arboricultural Method Statement, following recommendations within BS 5837 2012.

Typical rooting structure of a tree



To successfully integrate trees into a development it will be necessary to allow enough space in the design to allow trees to mature and flourish and to agree protection measures during the entire construction phase. Trees should be considered at the earliest design stage to allow them to be successfully integrated into new development, a survey of trees on and adjacent to the site should be one of the first steps in the design process.



How can trees be damaged?

Compaction of the soil

When soil is compacted, the soil structure is damaged by removing the spaces between soil particles preventing the exchange of gases and uptake of nutrients by trees. The storage of materials, including bricks, soil, gravel and cement, and the movement of vehicles can cause compaction. One vehicle movement can cause sufficient compaction to damage a tree. Compacted ground may alter soil drainage, resulting in the ground becoming waterlogged. The storage of materials and the movement of vehicles within RPAs will only be permitted when it is shown to be absolutely necessary and supported by an agreed robust and realistic Arboricultural Method Statement.

Excavations

Excavations within the RPA are likely to cause root severance. This may lead to loss of vigor, reduced uptake of water and nutrients, allow access for decay organisms and may compromise the tree's stability. Under exceptional circumstances, where excavation may be justified, hand digging will be required and the presence of an arboricultural consultant to supervise the works will be required on site.

Ground level changes

Both reduction and raising of soil levels can be detrimental even if this is only by a few centimeters. Reducing ground levels may sever roots and can increase the drainage of a site thereby reducing water availability. Raising ground levels can cause compaction and suffocate roots. There will be a presumption against the changing of ground levels within RPAs. Changing of ground levels within RPAs will only be permitted when it is shown to be absolutely necessary and supported by an agreed robust and realistic Arboricultural Method Statement.

Impact damage

This can be caused by machinery and includes torn branches, and damage to bark and trunk. Damaged areas of trees can allow the entry of decay organisms and reduced vigour. There will be a presumption against the movement of machinery and equipment within RPAs. The movement of machinery and equipment will only be permitted when it is shown to be absolutely necessary and supported by an agreed robust and realistic Arboricultural Method Statement.

Soil contamination

This can be caused by the spillage of oil, fuel and chemicals, mixing cement or other materials. To prevent leaching through the soil where significant tree roots can be found, all chemicals should be kept in a safe storage area downhill from trees at least 10m from the RPA. There will be a presumption against the storage of chemicals within 10m of the RPAs of retained trees and storage will only be permitted when it is shown to be absolutely necessary and supported by an agreed robust and realistic Arboricultural Method Statement.



Fires

Conducted and radiated heat as well as flames will damage trees resulting in the loss and damage to both major and fibrous roots, and damage to the trees vascular system under the bark even if the bark does not appear burnt. Keep fires a minimum of 10m from the outer crown spread of any retained trees or vegetation. If this clearance is not achievable, all waste must be disposed of off-site.

Appendix 10. Biosecurity advice

Please see the Forestry Commission's latest guidance in relation to biosecurity.

Biosecurity measures are a series of precautionary steps designed to reduce the risk of transmission of harmful organisms and must address 'movement pathways' for such organisms. In the context of the following guidance, good biosecurity practice refers to ways of working that minimise the risk of contamination and the spread of pests and invasive plants. Unless stated otherwise, the term "pest" should be taken to include all invertebrate, bacterial or fungal organisms that are harmful to trees. The term does not refer to other threats to trees such as deer or grey squirrels.

https://www.forestresearch.gov.uk/documents/5498/FC_Biosecurity_Guidance_Y6HQJHZ.pdf

