

Arboricultural Impact Assessment & Draft Arboricultural Method Statement

Client: Invicta Universal

Site: 39 Station Road, Desford, New Bungalow.

Ref: AIA-25-01-001NB

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DISCLAIMER

While all reasonable efforts have been made to identify defects in the subject trees, the statements made in this report do not take into account the effects of extreme weather events, vandalism or accidents, or changes to the site that may affect trees that have taken place since the date of the survey. SP Tree Consultancy Limited does not accept any responsibility in connection with these factors. The comments and observations made within this report will cease to be valid either within two years of the date of the survey (unless specifically stated elsewhere within the report), or when site conditions change or any works to trees take place that have not been specified within this report, whichever is the sooner.

Purpose of Document

This report provides an assessment of the trees at 39 Station Road Desford in accordance with the guidelines provided by BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*.

It consists of:

- A **Tree Survey** that records all relevant information about the trees on or adjacent to the site that may be impacted by development of the site. This includes a **Tree Constraints Plan (TCP)** that shows the location of the trees on the site irrespective of any development considerations.
- An **Arboricultural Impact Assessment** to clarify the impact that the proposed development on the trees and includes an **Arboricultural Impact Plan (AIP)**. This shows the location of the trees in relation to the proposed development and the above and below ground constraints posed by retained trees and tree removals.
- An **Arboricultural Method Statement** to identify draft tree protection measures required. It will also show an illustration of the recommended tree protection measures on a **Tree Protection Plan (TPP)**.

The purpose is to demonstrate how the tree constraints have been considered in the design and layout of the site and the impact of the proposal. It also provides the local authority with the necessary information to assess the tree issues associated with the planning application.

It aims is to provide information in a manner that can easily be understood without specific knowledge of tree related matters.

Executive Summary

SP Tree Consultancy Limited was commissioned to provide an assessment of the potential impact on the existing tree stock, from a development proposal at 39 Station Road Desford.

The survey covered a wider site that has been split into two applications.
The proposal will use an existing access, that will provide access to both proposals.
This proposal is for the demolition of existing stables and construction of a new bungalow.

A tree survey was undertaken at the site in accordance with the guidelines provided in BS5837 (2012) Trees in relation to design, demolition and construction – Recommendations. This survey identified a total of 18 trees, 5 hedges and 5 groups These have been categorised as follows:

	Category A	Category B	Category C	Category U	Total
Trees	2	6	9	1	18
Groups	0	2	3	0	5
Hedge	0	0	5	0	5
Total	2	8	17	1	28

The proposal will require the removal of none of these features.

There is some encroachment into the root protection area (RPA) of trees T002-T005,T007, T008 and G001. However there is an existing historical track and hard standing adjacent the stables within some of these impacted areas.

The impact on trees T003 and T004, is minimal and no additional measures are required as the area affected can be easily offset.

If improvement is required to the access for the new bungalow in the RPA of G001 and T002 a no dig cellular construction must be used.

No dig cellular construction is required within the RPA of trees T005, T007, and T008 to provide new parking and turning space for the bungalow.

The retained features will be successfully protected during construction by tree protective fencing, and construction exclusion zones (CEZ). Along with the use of no dig surfacing over areas of RPA.

Proposed landscaping will be carried out as mitigation, this is not covered specifically in this report.

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INTRODUCTION

Instruction

- 1.1. Instruction was received from Mr G Warren of Invicta Universal to undertake a tree survey and to prepare an Arboricultural Impact Assessment to supplement a planning application for a proposed development at 39 Station Road Desford. (The site).
- 1.2. This proposal is for the demolition of existing stables and construction of a new bungalow.
- 1.3. The proposal will use an existing access.
- 1.4. The survey covered a wider site that has been split into two applications.

Scope

- 1.5. The survey has been carried out in accordance with the recommendations laid down by BS5837:2012 *Trees in relation to design, demolition and construction*.
- 1.6. The information collected during the survey has been used to assist in the preparation of a report to accompany a planning application. This report includes:
 - A schedule of the relevant trees to include basis data and condition assessment
 - An appraisal of the impact that the proposed development may have on the trees and the resulting impact this may have on the local amenity.

Limitations

- 1.7. The following limitations apply to this report:
 - **Ecology and Archaeology**: Although trees can be a valuable ecological habitat and can grow in archeologically sensitive areas, I have no specialist expertise in these disciplines and this report does not consider those aspects. Separate reports have been undertaken to assess the ecological impacts of the proposal.
 - **Tree Safety**: Whilst every effort has been made to ensure that comments relating to the tree surveyed are accurate, it must be noted that no tree have been climbed, no internal inspections carried out and no excavation of root areas has taken place. As such this report should not be taken to mean or imply that any of the inspected trees should be considered safe. No tree can be guaranteed to be 100% safe as some defects are not detectable by visual non-climbed, non-invasive inspection. Failure of an apparently healthy tree, either in part or totally may occur as a result of physical or physiological stress.

Statutory Considerations

- 1.8. The site has not been checked for protection by either a TPO or Conservation Area cover on the site. It is recommended that checks are undertaken before any works are tree works are carried out.

2. TREE SURVEY AND CONSTRAINTS

Tree Survey

- 2.1. A tree survey was undertaken on 30th August 2024 and a copy of the recorded data can be seen in the tree schedule in this report (appendix 2).
- 2.2. The tree survey considered all trees that have the potential to be impacted by any development proposals. This included trees that are outside the application boundary, but within influencing distance.
- 2.3. The survey covered the wider site that has been split into two applications.

Tree Constraints

- 2.4. The results of the tree survey are graphically presented on the TCP.
- 2.5. The above ground constraints posed by canopy spread are plotted as a continuous line around the tree, shown in the corresponding BS5837 retention category colour.
- 2.6. The below ground constraints posed by the root protection area (RPA) have been plotted as a magenta line.
- 2.7. A summary of my assessment of the quality of trees, hedges and woodlands that have been identified on the site is summarised in Table 1

Table 1 – An overview of tree quality in the surveyed area

	Category A	Category B	Category C	Category U	Total
Trees	0	1	7	3	11
Groups	0	0	6	2	8
Hedge	0	0	0	0	0
Total	0	1	13	5	19

- 2.8. Full details of the assessment criteria for the tree survey can be found in Appendix 1.

3. ARBORICULTURAL IMPACT ASSESSMENT

Impact Assessment

- 3.1. The impact assessment has been graphically presented by the Arboricultural Impact Plan (AIP) that is attached to this report (Appendix 4).
- 3.2. The purpose of the AIP is to identify:
 - Tree that are to be removed.
 - Trees that require facilitation pruning.

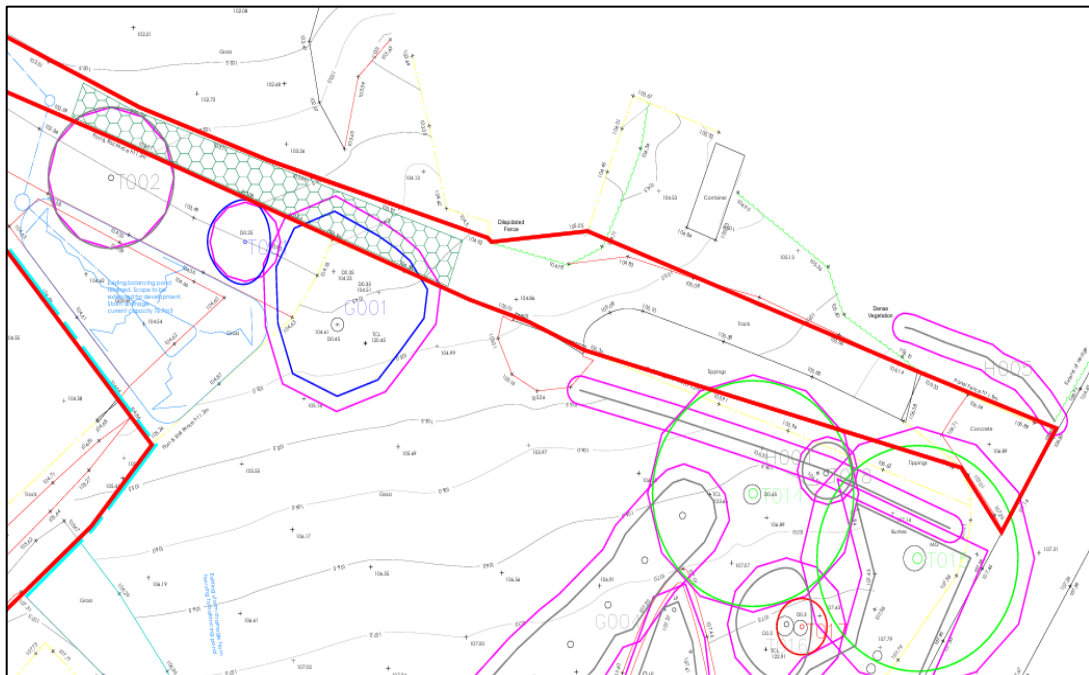
Arboricultural Impacts

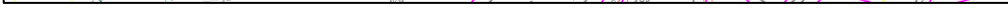
Tree Removals.

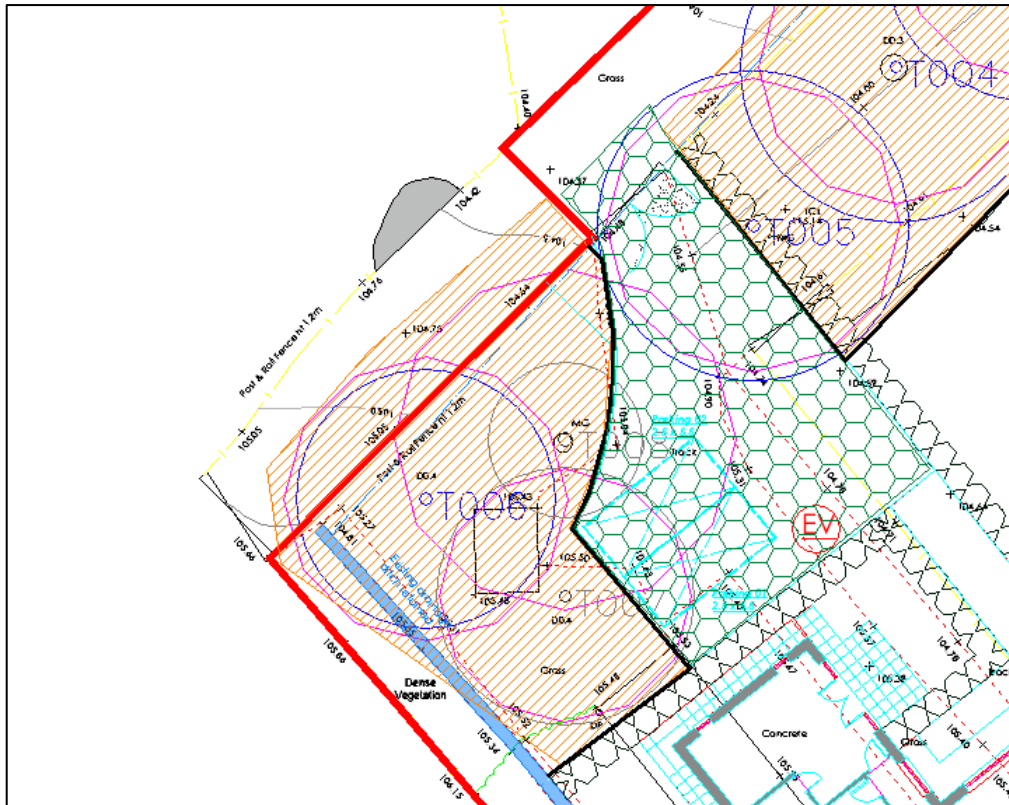
- 3.3. The proposal will require the none of these features.

Impacts on RPA's.

- 3.4. There is some encroachment into the root protection area of tree T002 and group G001 however there is an existing historical track in the location of the proposed access.
- 3.5. No dig construction must be used if improvement is required.
- 3.6. There is existing tarmac and gravel drive in the RPA of T014 and T015.



- 3.7. 
- 3.8. There is minor encroachment into the RPA of tree T003 and T004.
- 3.9. The impact on trees T003 and T004, is minimal and no additional measures are required as the area affected can be easily offset.
- 3.10. No dig cellular construction is required within the RPA of trees T005, T007, and T008 to provide new parking and turning space for the bungalow.



3.11.

Tree Pruning

- 3.12. Crown lifting to approximately 4-5m above ground level is required to trees T007 and T008.
- 3.13. Low branches over the access on trees T002 – T005 and G001 may also be required to prevent accidental damage from traffic.



3.14.

Trees T003 – T008 will require crown lifting.

- 3.15. All works must be in accordance to BS3998 Tree Work recommendation 2010.

4. DRAFT ARBORICULTURAL METHOD STATEMENT

Overview

- 4.1. The following explanations relate specifically to this site and they should be read in conjunction with the Tree Protection Plan (TPP) attached in this report (Appendix 5).
- 4.2. A copy of this report must be kept on site and be permanently available for the duration of the development. It can be:
 - Included in the tender documents to identify and quantify the tree protection and management requirements;
 - Used to plan the timing of site operations to minimise the impact of trees, and;
 - Referenced on site for practical guidance on how to protect trees.

5. ARBORICULTURAL SUPERVISION

- 5.1. An Arboricultural Clerk of Works (ACoW) will be appointed by the developer to advise on the tree management for the site and to attend:
- The pre-commencement meeting before any works start
 - Regular supervision visits; and
 - As needed to oversee specific works that could affect trees
- 5.2. Additionally the consultant will have a supervisor input into the following operations:
- Site preparation, including tree works
 - Installation, maintenance and removal of barriers
 - Installation, maintenance and removal of temporary ground protection
 - Installation of permanent ground protection
 - Installation of new structures
 - Replacement planting
- 5.3. If amendments to the proposal or working methods in this AMS are required Arboricultural advice must be sought, and any amended practices agreed with the LPA.
- 5.4. It is the project managers responsibility to ensure that details of this AMS and any agreed amendments are known and understood by all site contractors.

6. BARRIERS AND GROUND PROTECTION

The Construction Exclusion Zone

- 6.1. The primary means of protecting the RPA of trees is through the use of barriers formed by protective fencing. The enclosed area is the Construction Exclusion Zone (CEZ). The CEZ has been marked on the TPP by orange shading.
- 6.2. The CEZs are to be afforded protection at all times and will be protected by fencing. The type of fencing is detailed below.
- 6.3. No works will be undertaken within any CEZ that causes compaction to the soil, changes in levels, or severance of tree roots.

Tree Protection Fencing

- 6.4. A protective fence will be erected around the trees, prior to the commencement of any site works. This includes any materials or machinery brought onto site, development or the stripping of soil.
- 6.5. The fence is to be sited in accordance with the TPP enclosed with this method statement. This is shown as a black line with orange shading indicating the enclosed CEZ.
- 6.6. Measurements for the position of fencing must be taken on site.
- 6.7. The precise form of fencing can vary provided it is fit for purpose and prevents damaging activities within the CEZ. For a proposal of this nature, the Heras 151 system of fencing will provide the necessary protection to the CEZ. Details of this fencing can be seen in Appendix 6.
- 6.8. All Heras fence panels will be joined using a coupling system such as the Heraslock Anti-tamper coupler, using a minimum of two clamps per panel side. Each panel will be fitted securely to a rubberised foot that will in turn be pinned to the ground using metal stakes driven a minimum of 500mm into the ground.
- 6.9. The fence will have signs attached to it stating that it defines a CEZ and that no works are permitted within the fence. No notice boards, cables or other services will be attached to any tree. An example of a fencing sign is provided in Appendix 7.
- 6.10. After the protective fencing has been erected, the retained ACoW will visit the site. The purpose of the visit will be to check that the fencing has been correctly installed so as to provide protection to the trees. The LPA tree officer may also be invited to inspect the tree protection measures prior to any works commencing.
- 6.11. The retained ACoW will provide a written report confirming satisfactory completion of this task. A copy of this report will be sent to the LPA.
- 6.12. The protective fencing may only be removed following completion of all construction works.

7. SPECIFIC TREE PROTECTION MEASURES

- 7.1. No specific tree protection measures are required for any tree on this site other than those detailed in this AMS and defined on the DTPP.
- 7.2. It is not anticipated that any excavations will be required for the installation of services within the RPA of retained trees.
- 7.3. If excavations are required they must be completed as detailed below:
- 7.4. Any machinery used to conduct the excavations must be sited outside of the RPA and reach into the area. The machine is to work slowly under the guidance of the ACoW. A mini 360 excavator would be suitable for conducting such excavations.
- 7.5. Appropriate tools for manually removing debris may include a pneumatic breaker, crow bar, sledgehammer, pick, mattock, shovel, spade, trowel, fork and wheelbarrow. Secateurs and a handsaw must all be available to deal with any roots that are exposed.
- 7.6. Debris may be removed from the RPA manually, but it may be lifted out by machines provided this does not disturb the RPA.
- 7.7. Great care must be taken throughout these operations to ensure that there is limited damage to the root system.
- 7.8. Severance of roots over 25mm should be avoided unless advised by an Arboriculturalist. Where roots will remain exposed for any period of time wrapping of roots using hessian should be implemented.

8. DEMOLITION

- 8.1. Demolition works will take place within or close to the RPA of retained trees on this site.
- 8.2. Any machinery used to conduct the surface removal must be sited outside of the RPA and reach into the area. The machine is to work slowly under the guidance of a trained banksman. A mini 360 excavator would be suitable for conducting such works.
- 8.3. Appropriate tools for manually removing debris may include a pneumatic breaker, crow bar, sledgehammer, pick, mattock, shovel, spade, trowel, fork and wheelbarrow. Secateurs and a handsaw must all be available to deal with any roots that are exposed.
- 8.4. Debris may be removed from the RPA manually, but it also may be lifted out by machines provided this does not disturb the RPA.

9. NO-DIG HARD SURFACES WITHIN THE RPA

- 9.1. Where no-dig hard surfaces are required within the RPA, there must be no excavation into the soil, either through the lowering of levels and/or scraping, other than the removal of turf or other surface vegetation. All such works shall be carried out using hand tools only.
- 9.2. In order to protect the RPA of trees in G006 a three-dimensional cellular confinement system will be installed. This is a load bearing system which protects roots from the effects of compaction from regular vehicular movement. The recommended product for this solution is CellWeb but whatever system is used, the end result must be that the underlying soil (rooting environment) remains undisturbed and retains the capacity to support existing and new roots.
- 9.3. The dimensions for the area protected by the Cellweb have been marked on the TPP, which can be identified by the green honey comb hatch on the plan.
- 9.4. The CellWeb will be pinned in place and backfilled with Type 1 MOT and finished with a wearing surface of blinded crushed stone and gravel or pea shingle. The edgings of the drive are to be installed on top of the CellWeb and will comprise of timber boards staked in place and backfilled with the wearing layer as previously described.
- 9.5. Once the system has been installed and backfilled correctly machinery can work from on top of the system.
- 9.6. Details of Cellweb are included in Appendix 8, and a methodology for installation can be provided by the manufacturer and it will be the responsibility of the contractor to ensure that whatever system is used, it is installed in accordance with the latest guidelines provided by the manufacturer.

10. DEVELOPMENT

Once all tree works and protective fencing have been completed, the developer can commence the on-site preparation works and construction can begin.

Site Storage, Cement Mixing and Washing Points

- 10.1. No storage of materials will take place within a CEZ.
- 10.2. No mixing or storage of materials will take place up a slope where they may leak into a CEZ. Where contours of the site create a risk of polluted water running into RPAs, precautionary measures of using heavy duty plastic sheeting and sandbags with the ability to contain accidental spillage will be put in place to prevent contamination.

Contractors Parking

- 10.3. Contractors parking will not be within or in close proximity to a CEZ except where on existing hard standing.

Utility Services

- 10.4. There is no requirement for any service to be installed within a CEZ or RPA of any retained tree on this site.

Fires

- 10.5. No fires will be lit on this site.

Site Gradient

- 10.6. There will be no changes to any levels on this site within or in close proximity to the RPA of any retained tree on this site.

Use of Herbicides

- 10.7. There is no requirement of any herbicide to be used on this site.

Contingency planning

- 10.8. No mixing or storage of materials will take place up a slope where they may leak into a CEZ. Where contours of the site create a risk of polluted water running into RPAs, precautionary measures of using heavy duty plastic sheeting and sandbags with the ability to contain accidental spillage will be put in place to prevent contamination.
- 10.9. Water will be kept readily available on site and will be used to flush split materials through the soil and avoid contamination of tree roots.
- 10.10. At the time of any spillage the main contractor will contact an Arboriculturalist for advice.

11. RESPONSIBILITIES

- 11.1. It is the responsibility of the main contractor to ensure that the planning conditions attached to planning consent area adhered to at all times and that a monitoring regime in regards to tree protection is adopted on site.
- 11.2. The main contractor will be responsible for contacting the LPA at any time issues are raised related to the trees on site.
- 11.3. If at any time pruning works are required permission must be sought from the LPA first and then carried out in accordance with BS3998:2010 Tree Works – Recommendations and industry best practice.
- 11.4. The main contractor will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective fences will remain in position until completion of ALL construction works on the site.
- 11.5. The fencing and signs must be maintained in position at all times and checked on a regular basis by an on-site person designed that responsibility.
- 11.6. The main contractor will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any tree on site.

12. APPENDICES

Appendix 1: Tree Survey Criteria (BS5837:2012)

- 12.1. The assessment of the trees has been carried out in accordance with the guidance provided in Annexe C of BS5837. In summary this requires that any tree on the site with a stem diameter of over 75mm at 1.5m above ground level is recorded.
- 12.2. All observations were made from ground level, without detailed investigation with regard to the general condition of the tree.
- 12.3. Trees that are located outside of the site have been considered as part of this survey, and have been annotated on the accompanying plan as such.
- 12.4. Stem diameter measurements were taken using a girthing tape and in accordance with Annexe D of BS5837. Where access to the base of the tree was not possible for any reason, the diameter has been estimated.
- 12.5. Height, crown spread and canopy clearance measurements are recorded in accordance with the measurement convention detailed in paragraph 4.4.2.6 of BS5837.
- 12.6. The trees are categorised in an order defined in **Table 1** of BS5837, a copy of which can be seen below in **Figure 1**, but which can be summarised as:
 - **A Category** Trees of high quality and value in such a condition as to be able to make a substantial contribution for a minimum of 40 years.
 - **B Category** Trees of moderate quality and value in such a condition as to make a significant contribution for a minimum 20 years.
 - **C Category** Trees of low quality and value currently in adequate condition able to remain until new planting can be established. These trees are expected to remain for a minimum of 10 years. It also includes young trees with a stem diameter less than 150mm measured at 1.5 metres above ground level.
 - **U Category** 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 or forestry management.
- 12.7. Additionally, BS5837:2012 provides subcategories 1-3 within the category system outlined above which indicate the area(s) in which a tree or group retention value lies.
 - Mainly arboricultural.
 - Mainly landscape.
 - Mainly cultural, including conservation.

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)	Identification on plan
Trees unsuitable for retention (see Note)		
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unstable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - 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 NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.	See Table 2
Trees to be considered for retention		
1 Mainly arboricultural qualities 2 Mainly landscape qualities 3 Mainly cultural values, including conservation		
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees with material conservation or other cultural value
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	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees with no material conservation or other cultural value

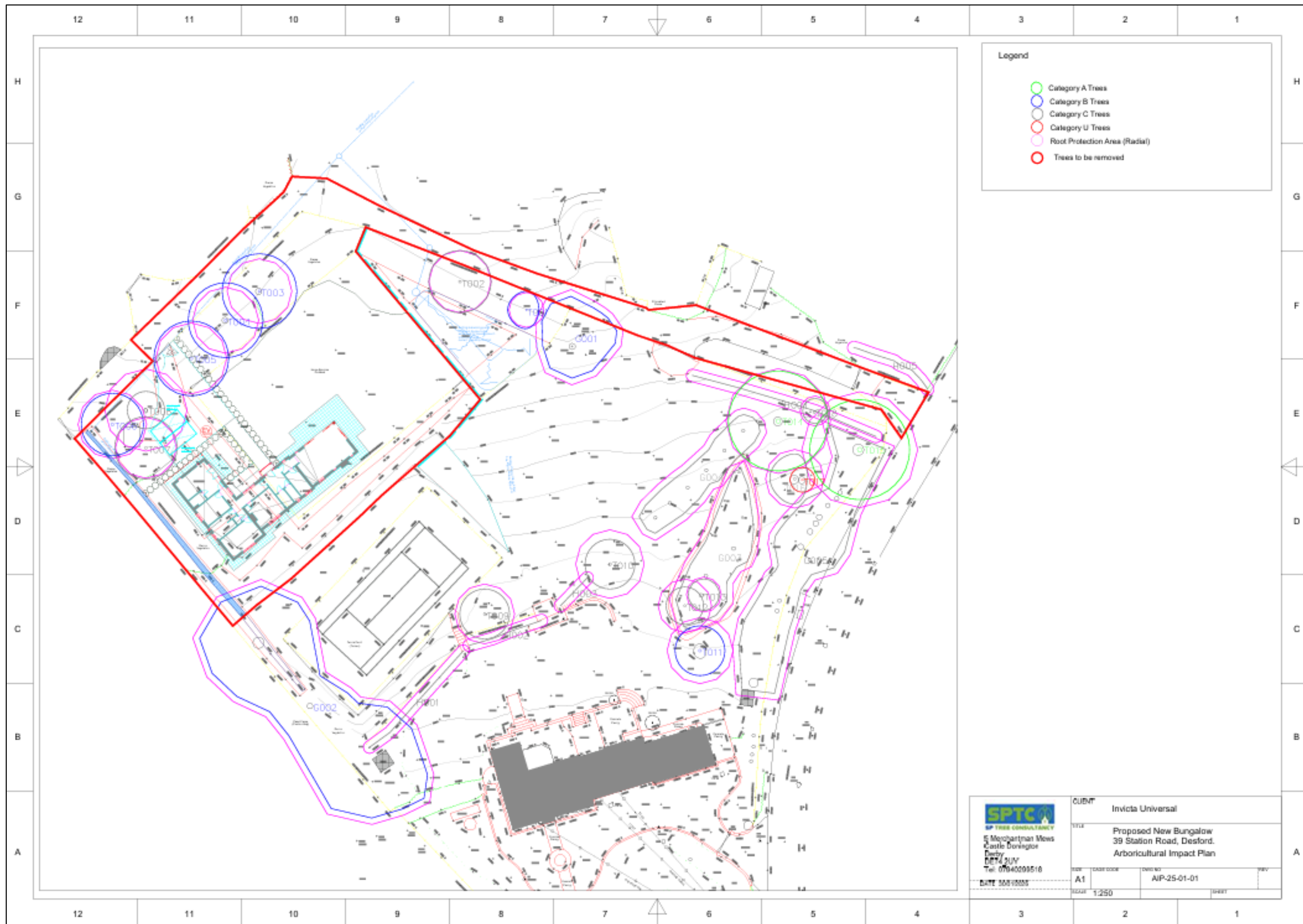
Figure 1 – BS5837 Cascade Chart

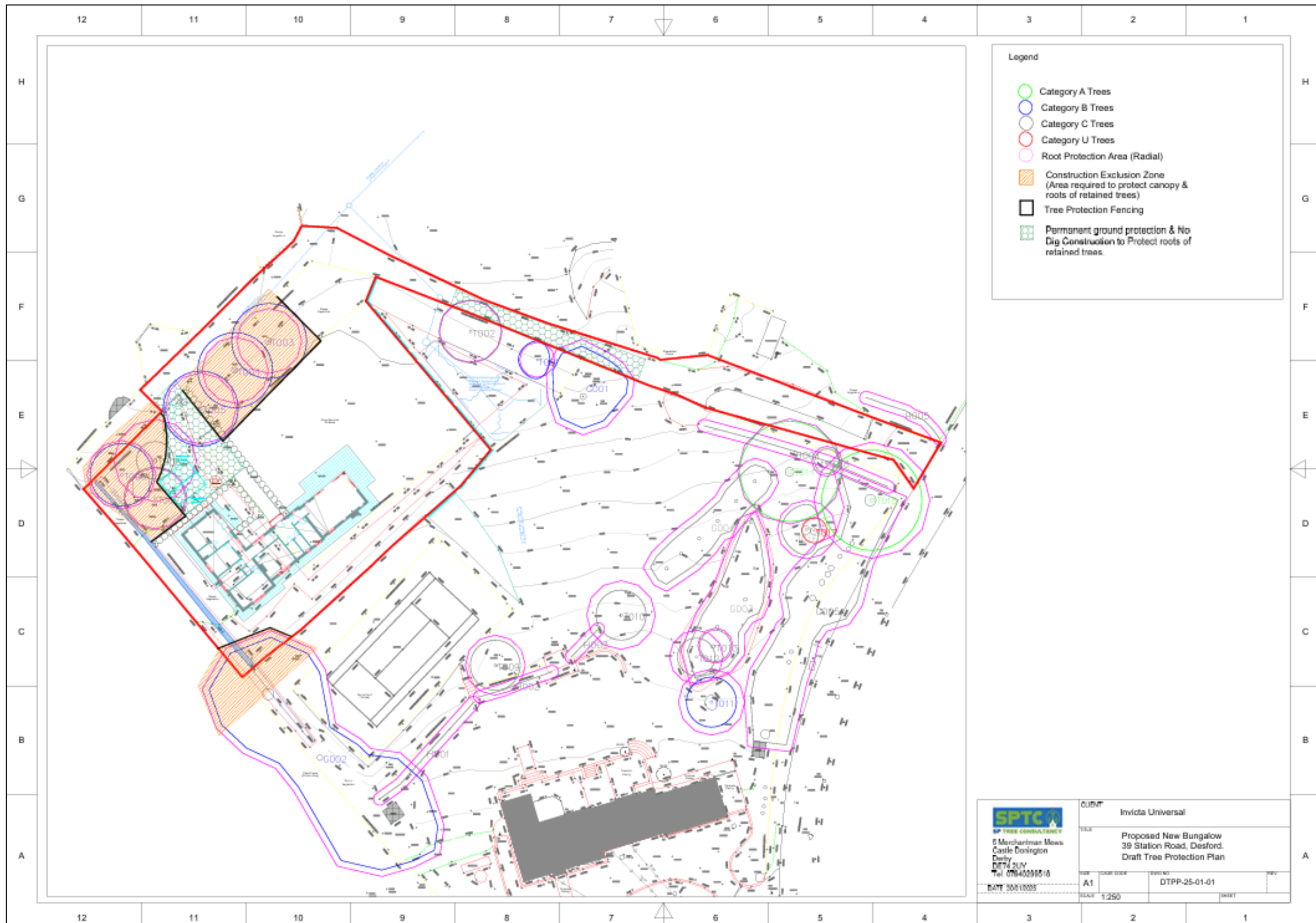


Appendix 2: Tree Survey

Client:	Invicta Universal															Reference:		TS-24-08-001										
Site:	39 Station Road, Desford										Surveyor:		Shaun Phillips										Date of survey:		30/08/2024			
Key to Notations																												
Stem Dia:	Stem diameter (mm) at 15m above ground level						Age Class		Definition				Category Grading															
C.C.	Height of crown clearance above ground level						Y		Young				Trees that have not yet reached 1/3 of their expected mature height				Category				ERC		Sub category					
L.B.	Lowest branch height in meters						EM		Early M ature				The stage in the life cycle of a tree between youth and maturity				A				High Quality & Value		1		Mainly arboricultural value			
D.L.B.	Direction of Lowest Branch						M		M ature				Close to full height and crown size				B				Moderate Quality & Value		2		Mainly landscape value			
E.R.C.	Estimated Remaining Contribution (in years)						OM		Over M ature				Close to full height and crown size while main-stem diameter increases				C				Low Quality & Value		3		Mainly cultural value			
Physiological condition							V		Veteran				A tree that has survived the rigours of life and shows signs of ancientness				U				Unsuitable for retention		<10					
Structural condition	Good						No significant health problems				Fair				Symptoms of health that can be remediated				Poor				Significant ill health					
	Good						No significant defects				Fair				Significant defects that can be remediated				Poor				Significant defects with no remedy					
Tree No	Ref No	Species	Botanical Name	H (m)	Stem Dia	No of Stem	Branch Spread (m)				CC (m)	LB (m)	Age	PC	SC	Comments	Recommendations	ERC	Ca	RPA (m ²)	RPA Radial distance (m)							
G001	Group	Silver birch x3	Betula pendula x3	16	420	1	4	4	4	4	2	2	Early Mature	Fair	Fair	None Noted	Protect during development.	40+ Years	B2	82	5							
G002	Group	Cypress x10 Mixed species Sycamore x4 Ash x3	Cupressus sp. x10 Mixed species Acer pseudoplatanus x4 Fraxinus sp. x3	18	900	1	7	7	7	7	2	2	Mature	Fair	Fair	Mixed age and species group.	Protect during development.	40+ Years	B2	366	11							
G003	Group	Mixed species Cherry plum 'Pissardii' Japanese maple Box Cypress x7 Yew Juniper	Mixed species Prunus cerasifera 'Pissardi' Acer palmatum Buxus sp. Cupressus sp. x7 Taxus sp. Juniperus sp.	7	250	1	2	2	2	2	-	-	Early Mature	Fair	Fair	Mixed age	Remove	-	C2	28	3							
G004	Group	Apple x6	Malus sp. x6	4	250	1	3	3	3	3	2	2	Mature	Fair	Fair	None Noted	Remove	10+ Years	C2	28	3							
G005	Group	Cherry plum 'Pissardii' Rhododendron Cherry Laurel Cypress	Prunus cerasifera 'Pissardi' Rhododendron ponticum Prunus sp. 'Cherry' Laurus sp. Cupressus sp.	15	350	1	3	3	3	3	-	-	Mature	Fair	Fair	None Noted	Protect during development.	-	C2	55	4							
H001	Hedge	Privet	Ligustrum vulgare	2	80	1	1	1	1	1	-	-	Early Mature	Fair	Fair	Maintained hedge	Protect during development.	10+ Years	C2	3	1							
H002	Hedge	Privet	Ligustrum vulgare	2	80	1	1	1	1	1	-	-	Early Mature	Fair	Fair	Maintained hedge	Protect during development.	10+ Years	C2	3	1							
H003	Hedge	Ivy Hawthorn	Hedera sp. Crataegus sp.	2	80	1	1	1	1	1	-	-	Early Mature	Fair	Fair	Maintained hedge	Protect during development.	10+ Years	C2	3	1							
H004	Hedge	Hawthorn	Crataegus sp.	4	80	1	2	2	2	2	-	-	Young	Fair	Fair	none Noted	Protect during development.	-	C2	3	1							
H005	Hedge	Cypress	Cupressus sp.	2.5	80	1	1	1	1	1	-	-	-	Fair	Fair	Not plotted on Topographical, indicative position. Planting on top of banking.	Protect during development.	-	C2	3	1							
T001	Tree	Sycamore	Acer pseudoplatanus	0	230	1	3	2	3	3	1	2	Young	Fair	Fair	At bottom of bank.	Protect during development.	40+ Years	B2	23	3							
T002	Tree	Ash	Fraxinus sp.	15	420	1	5	5	5	5	2	2	Early Mature	Fair	Fair	At bottom of bank. Declining condition. Sparse canopy possible ash dieback. Not on topo 12m from sycamore.	Protect during development.	10+ Years	C2	82	5							
T003	Tree	Ash	Fraxinus sp.	16	430	1	6	6	6	6	2	2	Early Mature	Fair	Fair	Part of group.	Protect during development.	20+ Years	B2	82	5							
T004	Tree	Ash	Fraxinus sp.	16	440	1	6	6	6	6	2	2	Early Mature	Fair	Fair	Part of group.	Protect during development.	20+ Years	B2	92	5							
T005	Tree	Ash	Fraxinus sp.	16	300370	1	6	6	6	6	2	2	Early Mature	Fair	Fair	Part of group.	Protect during development.	20+ Years	B2	40816892	3605							
T006	Tree	Ash	Fraxinus sp.	16	460	1	5	5	5	5	2	2	Early Mature	Fair	Fair	Part of group. Suppressed by adjacent conifer	Protect during development.	20+ Years	B2	92	5							
T007	Tree	Ash	Fraxinus sp.	16	410	1	5	5	5	5	2	2	Early Mature	Fair	Fair	Part of group. Suppressed by adjacent conifer and Ash	Protect during development.	20+ Years	C2	72	5							
T008	Tree	Cypress	Cupressus sp.	16	496	6	3	3	3	3	-	-	Mature	Fair	Fair	Part of group.	Protect during development.	20+ Years	C2	113	6							
T009	Tree	Crab apple	Malus sylvestris	8	400	1	4	4	4	4	2	2	Mature	Fair	Fair	Sparse canopy.	Protect during development.	10+ Years	C2	72	5							
T010	Tree	Cherry plum 'Pissardii'	Prunus cerasifera 'Pissardi'	6	460	1	4	4	4	4	2	2	Mature	Fair	Fair	Sparse canopy.	Protect during development.	10+ Years	C2	92	5							
T011	Tree	Silver birch	Betula pendula	0	440	1	4	4	4	4	2	3	Mature	Fair	Fair	None Noted	Protect during development.	20+ Years	B2	92	5							
T012	Tree	Cherry plum 'Pissardii'	Prunus cerasifera 'Pissardi'	5	360	1	3	3	3	3	1	2	Early Mature	Fair	Fair	Sparse canopy.	Protect during development.	10+ Years	C2	55	4							
T013	Tree	Silver birch	Betula pendula	13	230	1	3	3	3	3	3	3	Young	Fair	Fair	None Noted	Protect during development.	40+ Years	C2	23	3							
T014	Tree	Pin oak	Quercus palustris	18	700	1	8	8	8	8	3	4	Mature	Fair	Fair	Some deadwood throughout canopy.	Protect during development.	40+ Years	A2	222	8							
T015	Tree	Pin oak	Quercus palustris	18	772	3	8	8	8	8	3	4	Mature	Fair	Fair	Some deadwood throughout canopy.	Protect during development.	40+ Years	A2	272	9							
T016	Tree	Silver birch	Betula pendula	16	390	1	4	2	4	4	3	3	Mature	Poor	Fair	Suppressed by declining birch	Protect during development.	20+ Years	C2	72	5							
T017	Tree	Silver birch	Betula pendula	14	320	1	2	2	2	2	5	5	Over Mature	Fair	Fair	Declining condition	Remove	<10 years	U	48	4							
T018	Tree	Weeping willow	Salix babylonica	3	200	1	2	2	2	2	1	2	Young	Fair	Fair	None Noted	Protect during development.	20+ Years	C2	18	2							







Appendix 6: Tree Protection Fencing

heras® 151 and 151steadfast system

Having invented the original concept of temporary fencing back in the 80's, Heras is proud of its reputation as a true innovator.

Our latest solution for securing site perimeters and protecting the public has been phenomenally successful since its launch, and offers the ultimate market leading temporary fencing system.

Our safest, most stable and most secure system ever offers you total peace of mind, and unrivalled performance.

You can be sure that by installing the Heras® 151 Steadfast System (patent pending), you are conforming fully to the latest HSE Guidelines on "Protecting the Public" from the dangers of construction sites.

Heras has campaigned widely over recent years against falling product standards, and has consulted closely with senior figures across the construction industry to ensure our products meet and exceed your expectations. This latest innovative system means you should never again need to compromise on:

- Value for money
- Quality
- Performance
- Design
- Ease of installation.

All backed up with unbeatable service from our nationwide branch network – deal direct with Heras – your safety first fencing supplier.

Fully Tested and Certificated

- Extensive independent testing by Sheffield Hallam University has proved the performance of the system, resisting wind speeds well in excess of gale force.
- The HSE has confirmed that the system meets all of the guidelines in the HSG 151 Publication "Protecting the Public - Your next move".
- In turn, therefore, we can offer customers a certificate of compliance when they purchase this system from Heras.
- It is your responsibility to ensure the system is correctly installed and fixed. For help and advice, contact your nearest branch.

round top panel with anti-climb mesh
high visibility orange blocks
steadfast strut
anti-tamper coupler
fully tested and certificated
health and safety compliant (HSG 151)

151 system

The key components of the Heras 151 system are as listed.

Round Top Panel with Anti-Climb Mesh

- The strongest panel on the market, with 2 sides formed from a continuous length of tube, eliminating the top corner weld, often the weakest point in traditional panel design.

High Visibility Orange Block

- Permanently coloured with a durable UV stabilised "heavy" casing and filled with solid high density concrete.
- Effectively highlights any potential trip hazard.
- Secure of chip initiators – painted coatings will chip and peel.

Heraslock® Anti-Tamper Coupler

- Providing additional security, these couplers can only be removed with the use of the specialist tool.

151 steadfast system

The Heras 151 steadfast system incorporates all the benefits of the 151 system, with the addition of the patented...

Heras® Steadfast Strut

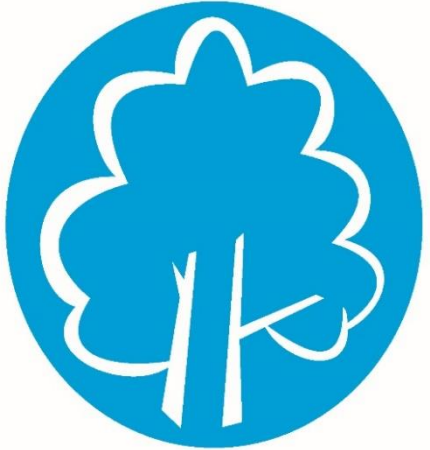
- The unique design of this clever strut dramatically increases the stability of the fence.
- The strut fits neatly within the high visibility block allowing a neat and compact solution, and acts as an integrated anti-lift device.
- 2 additional fixing bolts incorporated into the design allow for soil pins and thunderbolts, dependent on ground conditions.

Optional Extras

- Heras® Steadfast Safety Strips with reflective coating can be fitted in minutes to highlight site dangers.
- Front support brackets allow vastly improved performance on softer ground conditions and fit quickly and easily into the high visibility blocks.

Our latest solution for securing site perimeters and protecting the public has been phenomenally successful since its launch, and offers the ultimate market leading temporary fencing system.

Appendix 7: Example of Protective Fencing Signage



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



TREE PROTECTION AREA
KEEP OUT !

(TOWN & COUNTRY PLANNING ACT 1990)

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER.

CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

Appendix 8: Permanent Ground Protection

CellWeb™ Tree Root Protection System



The CellWeb™ TRP cellular confinement system protects tree roots from the damaging effects of compaction and desiccation, while creating a stable, load-bearing surface for vehicular traffic.

CellWeb™ offers an alternative to the traditional methods of constructing roadways and building foundations that involve excavation, which can result in tree root severance and soil compaction from the passage of vehicles. Such damage can severely influence tree health, and in extreme cases leads to death. CellWeb™ can be sensitively installed close to and under the canopies of trees without negative effects.

Trees are valuable landscape features and a vital environmental resource. Increasingly, contractors are being required to ensure the health and survival of trees during and beyond the construction period. Although this is enshrined in BS 5837: Trees in Relation to Construction: Recommendations (2005) and Tree Preservation Order legislation, it presents several issues when implementing construction projects near to trees:

- Root severance caused by excavation, leaving trees open to decay, less stable and with a diminished capacity to utilise soil water and nutrients.
- Destruction of soil structure and compaction due to the passage of heavy vehicles, restricting the flow of water and air to tree roots.
- Need for construction access, new roadways and hard surfaces that require engineering-standard load-bearing foundations that meet building regulations.
- Need for high-performance, cost-effective driveways and roadways in the vicinity of tree roots.



Potential loss of existing tree due to poor construction techniques.

The CellWeb™ system overcomes these issues and helps contractors to comply with tree health guidelines by creating a load-bearing base that is water-permeable, stable and durable.

With no need for excavation, the system is quick and easy to install, reducing construction time and saving costs and making it suitable for temporary and permanent solutions.



Glynebome Wood.

Pedestrian path in recreational wood and built using a CellWeb™ foundation which was covered with DuolBlock and then filled with woodchip to create a porous surface.

Product features



CellWeb™ comprises an expandable cellular mattress that is then filled with a clean stone sub-base and above a Treetex T300 Geotextile.

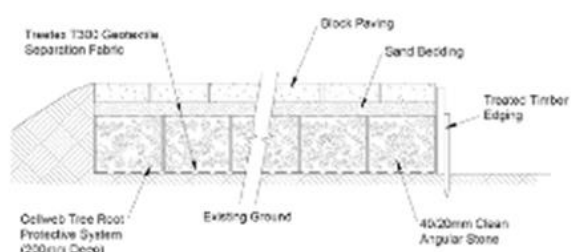
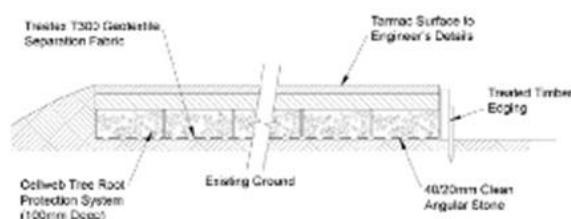
The honeycomb-like structure is made of robust high-density polyethylene (HDPE) that is simply stretched out and filled with clean angular material. Just like traditional roadways, the strength of the structure comes from the binding together of the infill, but with CellWeb™ this is achieved without compaction and without reduction in permeability.

Perforated cell walls allow the angular infill to bind with the contents of the adjacent cell, but with sufficient space for the movement of water and air to nearby tree roots. As the infill contains no fines and the geotextile layers prevent clogging from particles washing into the system, the structure remains permeable to water over time and protects the roots for the lifetime of the tree.

As well as being quick and easy to install, CellWeb™ also dramatically cuts down the depth of sub-base required, in most cases by as much as 50%, further reducing costs. CellWeb™ significantly reduces surface rutting, increasing the long-term performance of the finished surface and ensuring that tree roots remain protected from vertical loads.

CellWeb can be used as a permanent solution or alternatively the system can be used in a temporary situation. In a temporary application the system can be used for the required period of time, then removed for use on another site or recycled, thereby adding to CellWeb's green credentials.

- No excavation – Soil structure remains undisturbed; risk of root damage minimised.
- Porous infill – Allows tree roots to conduct moisture and gas exchange.
- No compaction – No need to compact the infill to achieve a load-bearing structure.
- Lateral stability – Structure remains rigid to vertical loads.



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Appendix 9: Authors Qualifications and Experience.

12.8. This report has been prepared by Shaun Phillips.

12.9. I have 30 years' arboricultural experience working in both the private and public sector. I have undertaken work on a variety of projects on behalf of local authorities, private and commercial clients.

12.10. I have a Post Graduate Certificate in Management Studies, a HND in Arboriculture and Urban Woodland Management and a ND in Countryside and Environmental Studies. I am also qualified as a tree risk assessor for the International Society of Arboriculture's Tree Risk Assessment Qualification (TRAQ).

12.11. I am a Professional member of the Arboricultural Association, and the Institute of Chartered Foresters. In accordance with the professional standards of both associations, I undertake regular Continuing Professional Development (CPD) in all areas of arboriculture as well as in wider business administration and other related disciplines.

Signed

A handwritten signature in blue ink that reads 'S Phillips'.

Date 30/1/2025

Shaun Phillips CMS, HNDArb, MArborA MICFor

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