Invicta Arboriculture

Tree and Woodland Consultancy

Pre-development Tree Survey and Report

Land at Darlands Farm
Old Pear Tree Lane
Gillingham
Kent
ME7 3PP

16th May 2016

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Table of Contents

Appendices

1 INTRODUCTION

1.1 **Brief:** I am instructed by Karen Banks, Senior Development Planner at Hume Planning Consultancy Ltd to provide a pre-development tree report in accordance with British Standard 5837:2012 *Trees in relation to Design, Demolition and Construction – Recommendations*; in respect of land at Darlands Farm, Old Pear Tree Lane, Gillingham, Kent to accompany a planning application for a proposed residential development.

1.2 **Qualifications and experience:** I have based this report on my site observations and the information provided, and I have come to conclusions in the light of my experience as an arboriculturist.

I am a professional member of the Consulting Arborist Society.

1.3 **Documents and information provided:** Karen Banks provided me with copies of the following documents…

- A topographical plan of the site as existing.

1.4 **Report limitations:** This report is only concerned with the ninety five trees trees and two tree groups located adjacent to the application site as shown on the site plan**.** It takes no account of any other trees. It takes no account of the planning status of the trees present. It includes a detailed assessment based on the site visit and the documents provided, listed in 1.3 above.

This report has been prepared on the basis of the proposed development and should not be interpreted as a report on tree health and safety. Whilst reasonable effort has been made to identify visible structural and physiological defects whilst undertaking the survey, trees and shrubs are living organisms; the health and stability of which can change rapidly; especially in the event of extreme weather conditions, therefore all recommendations given are valid for a period of twelve months from the date of this report.

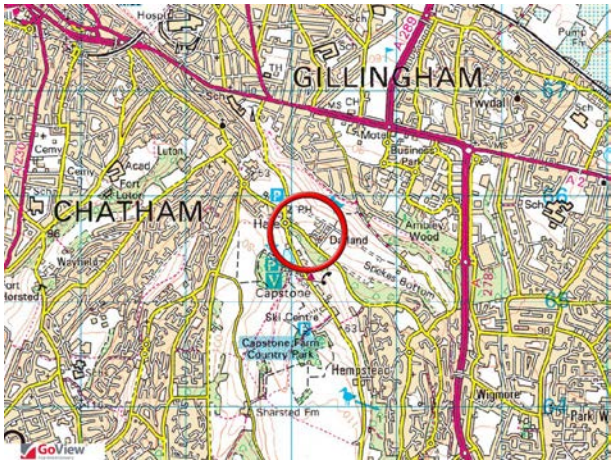
1.5 **Collection of data:** The survey was carried out using the following inspection aids:

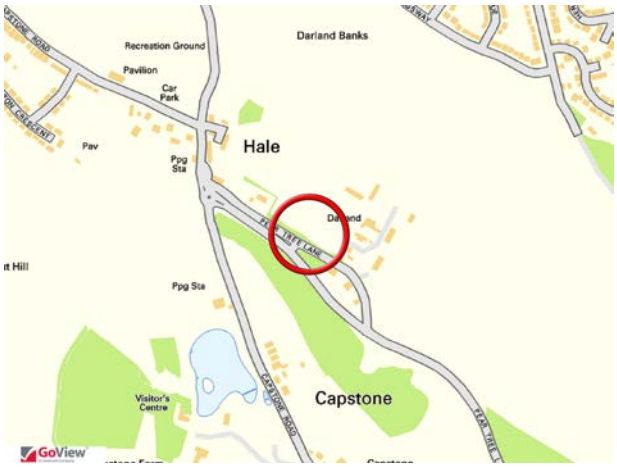
- Digital clinometer- To calculate the height of the trees
- Girthing tape- To measure stem diameter
- Sounding mallet- To test for hollowness
- 400mm stainless steel probe- To determine the depth of cavities
- Binoculars- For inspection of the upper crown

2 SITE VISIT AND OBSERVATIONS

2.1 **Site visit:** I carried out an unaccompanied site visit on 16th May 2016. All of my observations were from ground level and I estimated all dimensions unless otherwise indicated. The weather at the time of inspection was sunny and bright with good visibility.

2.2 **Brief site description:** The application site is located within the Hempstead Valley, between Chatham and Gillingham in the Medway Towns. The application site is currently cultivated farmland with arable crops. The surrounding topography slopes steeply downwards from south to north. The site is not particularly exposed.





2.3 **Identification and location of the trees:** The ninety five trees and two groups subject to this report are located predominantly along the southern boundary of the site. I have illustrated the approximate location of all of the trees on the tree constraints plan included at appendix B. This plan is for illustrative purposes only and it should not be used for directly scaling measurements. All the relevant information on it is contained within this report and the provided documents.

2.4 **Collection of basic data:** I collected information on species, height, diameter, maturity and potential for contribution to amenity in a development context. I have recorded this information in the tree schedule included at Appendix A. I stress that my inspection was of a preliminary nature and did not involve any climbing or detailed investigation beyond what was visible from accessible points at ground level.

3 APPRAISAL

3.1 **Relevant references:** This inspection was undertaken in accordance with *B.S.5837:2012 Trees in relation to design, demolition and construction - Recommendations*. The trees were inspected using the Visual Tree Assessment method as documented by Mattheck and Breloer in *'The Body Language of trees'*, ODPM Research for Amenity Trees number 4, 1994.

3.2 **British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations:** This report is set out according to the recommendations within B.S. 5837:2012 and contains the following information relating to the trees adjacent the application site.

- Tree survey schedule (included at appendix A)
- Tree Constraints Plan (included at appendix B)
- Arboricultural Implication Assessment
- Arboricultural Method Statement
- Tree Protection Plan (included at appendix C)

3.3 The trees subject to this report are located predominantly along the southern boundary of the site.

3.4 Only the largest trees that stand within the wooded boundary immediately adjacent the application site and those considered to be the most important have been recorded, as these are deemed to pose the greatest constraints on the application site in terms of their root protection areas and the effects of light and shade.

All of the trees within the wooded boundary are large, mature specimens that display good vitality with no significant visible defects. The dominant species recorded are Sycamore and Ash.

The wooded boundary varies in depth from two the three metres along its western edge to approximately ten metres along the majority of its southern boundary. The area has been used extensively for fly tipping along much of its length.

3.5 The large group of small diameter (<75mm) trees (Hawthorn, Field Maple and Elder) that runs along the western boundary of the site has not been recorded individually due to their small size. The group is recorded as G9 in the tree survey schedule.

A further group of trees comprising predominantly of Ash has been recorded as G35, and is located along the field edge to the south of a neighbouring property, 'The Gleanings'. The largest recorded stem diameter within this group was measured at 200mm, however the trees that stand immediately to the rear of the group are considerably larger and pose significantly more constraints on the application site in terms of their RPA radii and height/ canopy spread.

3.6 A number of significant off-site trees have been recorded within the rear gardens of the properties that adjoin the site along the western boundary and within the garden of 'The Gleanings. These are recorded as T1, T8, T10, T11, T13, T14, T16, T18 and T19. I

must stress that I did not have access in to any of the rear gardens of the properties and therefore all observations were taken from within the application site from accessible points at ground level.

3.7 A break in the wooded boundary occurs between tree numbers T61 (Ash) and T62 (Sycamore) where the existing access in to the application site is located. The existing access measures approximately twelve metres across and is used regularly by tractors and other large agricultural vehicles and equipment to cultivate the field. The proposed site access will utilise this existing access point albeit at a significantly narrower width of 5.5 metres.

Depending on the design and space needed to construct the proposed access road, a need may arise for the removal of T61 (Ash) in order to accommodate an adequate visibility splay along Old Pear Tree Lane. This will only become apparent once a final layout design has been agreed.

3.8 The wooded boundary continues eastwards from T62 (Sycamore) and is set at a height much higher than that of the application site. The change in level occurs gradually at first until T72 (Sycamore) where the application site drops away leaving the trees perched on top of a steep embankment approximately 2.5 metres above the site.

3.9 There is evidence of recent slippage along the embankment in the vicinity of T81, T82 and T83 (Sycamores). Although appearing stable at the time of inspection, further movement and slippage of the soil cannot be ruled out. The height of the three trees that stand around the edge of the slip and the effects of wind rock on the soil in which they stand increases the risk of further slippage. Whilst not an immediate concern given current land usage, following development of the site from agricultural to residential usage the risk becomes far greater and as such a recommendation is made to reduce the overall height of T81, T82 and T83 by approximately seven metres in order to reduce the effects of wind loading on their root systems.

4 TREE CONSTRAINTS PLAN

4.1 The tree constraints plan is primarily a design tool which shows the below ground constraints represented by the calculated root protection area and the above ground constraints represented by the current and ultimate heights of the trees and the potential effects of shade on any proposed development. The tree constraints plan is included at appendix B.

4.2 Below ground constraints:

- The root protection area (RPA) is the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the trees viability and where the protection of the roots and soil structure is treated as a priority. The RPA is measured in m^2. The RPA is shown as a red circle on the tree constraints plan.

- The root protection area relates to the stem diameter of each tree when measured at a height of 1.5m from ground level. For single stem trees the RPA is calculated as an area equivalent to a circle with a radius of twelve times the stem diameter or the mean diameter of the total number of stems in the case of multi-stemmed trees.

- Whilst the proposed development is to be constructed outside of all calculated RPA's, it is worth noting that physical barriers such as existing site features, significant changes in levels and land management methods such as ploughing etc. will all affect the lateral distribution of root systems and despite the trees being large mature specimens it is likely that the lateral root spread of those trees immediately adjacent the application site may not extend out as far as the calculated RPA radii would suggest.

  There is clear evidence of root severance along the full length of the northern edge of the wooded boundary as a direct result of deep ploughing. Diameters of severed roots range from less than 10mm to in excess of 50mm.

  The roots of the trees from T72 onwards extend vertically downwards, following the sheer face of the embankment on top of which they stand and southwards in to the wooded boundary. It is unlikely that any lateral growth would have extended northwards in to the application site given the height at which they stand above it and as such their RPA's have been adjusted to reflect this.

4.3 Above ground constraints:

- The current height of the trees as recorded on the tree survey schedule is an important factor that needs to be taken in to account when deciding on the layout of the proposed development. Shade cast by neighbouring trees on to new developments and the sheer size of some of the trees could cause anxiety and disproportionate pressure for tree pruning or even removal following first occupancy. Therefore a general rule should be applied that the proposed development should not be constructed any closer than half the current height of adjacent trees where space allows.

  For example, the majority of the trees recorded measure an average of twenty three meters in height; the closest property boundary therefore should be constructed no closer than twelve to fifteen meters from the nearest trees.

- The orientation of the trees to the proposed development is another factor that should be considered when planning the final layout.

  Shade cast by the trees will extend a good way across the southern section of the application site and therefore proposed buildings should be designed to take account of the existing trees, their ultimate size, density of foliage and the effect that these will have on the availability of light.

  Open spaces such as gardens and external communal area should be designed to meet the normal requirements for direct sunlight for at least a part of the day.

5 ARBORICULTURAL IMPLICATIONS ASSESSMENT

5.1 **Presence of TPOs or conservation area designations:** Medway Council TPO G85/1989 protects 19 individual trees at The Gleanings, Old Pear Tree Lane; five of which are recorded in this report as T13, T14, T16, T18 and T19. These five trees are located on the southern boundary of the property. The TPO shows eight trees along this boundary however only five are now evident.

A further TPO, Medway Council TPO G24/1973 protects a group of 12 Ash trees and 4 Elm trees on the north side of Pear Tree Lane, however these trees are not thought to border the application site and are considered to be located elsewhere.

A TPO map received from Medway Council indicates that a TPO is in place on the trees that form the wooded boundary of the application site but supplies no firm evidence in the form of a title such as those mentioned above.

The site is not located within a conservation area.

5.2 **Affects of new buildings on amenity value on or near the site:** The affects of the proposed development are not envisaged to have any detrimental effect on the amenity value of the trees surrounding the site.

5.3 **Above and below ground constraints:** The above and below ground constraints are discussed in section 4 above.

5.4 **Construction processes of the proposed development or demolition needs:** Development processes that lead to soil compaction in tree rooting zones and physical damage to trees can adversely affect long-term tree health. This can lead to unnecessary tree loss if not controlled properly on site during the demolition of the existing dwelling and subsequent construction phases.

It is highly unlikely that construction process will impact adversely on the retained trees on the application site or those that stand immediately adjacent to it due to the amount of space available for construction access.

A collection of redundant farm buildings located toward the north eastern corner of the application site will need to be demolished, however there are no trees in close proximity to these structures.

5.5 **Modifications proposed to accommodate trees – building design or tree pruning:** All details relating to building design have been discussed at paragraph 4.3 above.

Recommendations are made for the reduction in height by approximately seven metres of tree numbers T81, T82 and T83 in order to help stabilise the embankment on which they stand and has been discussed in paragraph 3.9 above.

5.6 **Infrastructure requirements – highway visibility, lighting, CCTV, services etc:** The installation of services within the rooting zones of trees can have a large detrimental impact on the long-term survival of retained trees leading to their unnecessary loss or root failure in high winds. No services are to be installed within any tree RPA.

The trees on this site do not have any impact on highway visibility.

Undisclosed siting of above ground services, CCTV cameras, electrical sub-stations, refuse stores, lighting and other infrastructure requirements can lead to unnecessary pruning of tree crowns or root loss during or post development.

5.7 **End use of space:** The proposed end use of the site is to be that of a residential development.

5.8 **Mitigating tree loss/ new planting:** A landscaping plan may be required by condition and should contain adequate provision for new tree and shrub planting across the development.

None of the existing trees are to be removed and as such no mitigation tree planting is required.

5.9 **Veteran trees:** None of the trees recorded are considered to be veterans.

5.10 **Impact of trees on buildings and vice versa and allowance for future growth:** The impact of the trees on the development and vice versa and allowance for future growth have all been considered. Tree size, future growth, light/shading, leaf and fruit nuisance etc. have received due attention and are not considered to be an issue providing advice given on separation distances and orientation and design of new buildings within this report are adhered to.

6 ARBORICULTURAL METHOD STATEMENT AND TREE PROTECTION PLAN

Arboricultural Method Statement (AMS) includes a Tree Protection Plan (TPP) to identify:

- Protective fence positions therefore the Construction Exclusion Zones (CEZ) shown as a blue line on the TPP at appendix C.
- Measurements to identify fence positioning in relation to centre of tree as recorded in the tree survey schedule at appendix A.
- The tree protection plan is included at appendix C

1.0 Construction Exclusion Zone

1.1 The Construction Exclusion Zone (CEZ) as required by the current edition (2012) BS 5837 relates to the stem diameter of each retained tree when measured at a height of 1.5m from ground level or the mean diameter of the total number of stems in the case of multi-stemmed trees. The CEZs are to be afforded protection at all times and will be protected by fencing. No works will be undertaken within any CEZ that causes compaction to the soil or severance of tree roots.

2.0 Protective Fencing

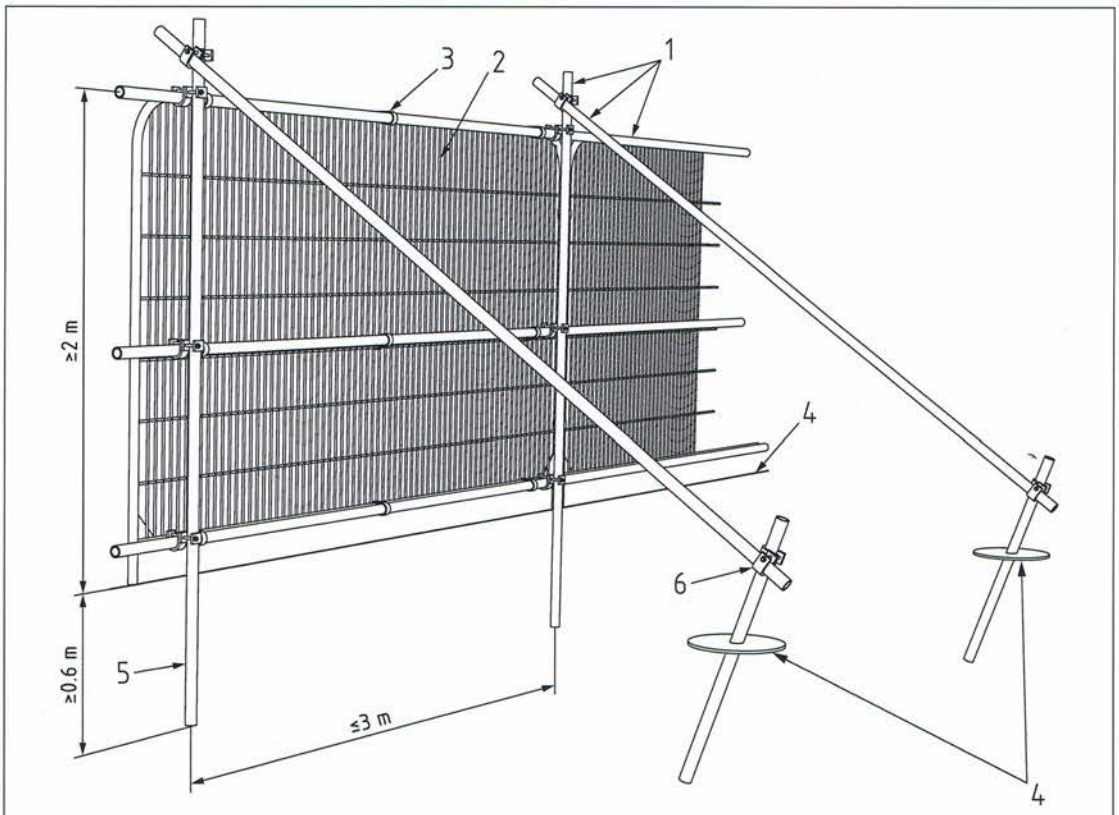
2.1 A protective fence will be erected around all retained trees prior to the commencement of any site works e.g. before any materials or machinery are brought on site, development or the stripping of soil commences. The fence should have signs attached to it stating that this is a Construction Exclusion Zone and that **NO WORKS are Permitted** within the fence. The protected fence may only be removed following completion of all construction works.

2.2 The fence is required to be sited in accordance with the Tree Protection Plan enclosed with this method statement at appendix C. They must ideally be constructed as per figure 2 in B.S.5837:2012 and be fit for the purpose of excluding any construction activity.

2.3 New areas for proposed planting should also be protected during the construction phase using the same methods.

2.4 Example of protective fencing: Figure 2, B.S.5837:2012, below...

Figure 2 **Default specification for protective barrier**



Key

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

3.0 Precautions in respect of temporary works

3.1 If temporary access is required to a CEZ then access may only be gained after consultation with the Local Planning Authority and following placement of materials such as concrete slabs or geo-textile fabrics that will spread the weight of any vehicular load and prevent compaction to the soil. For pedestrian movements within any CEZ then a single thickness scaffold board on top of a compressible layer laid onto a geotextile fabric may be acceptable.

4.0 Access Details

4.1 Construction vehicles will access the site via the existing site entrance from Old Pear Tree Lane to the south of the application site.

Due to the steepness of the site it will be necessary to raise the level of the ground over which the proposed access road passes. The access road will pass through the eastern extents of T61 (Ash) (if retained) and through the western extents of T62 and T63 (Sycamores).

The raising of the soil level in this area is not considered to be detrimental to the health or stability of the trees given the minimal encroachment that will occur. The design of the access road should ensure that adequate air and water could still percolate down in to the RPA's though which it passes.

All services coming into the site should be routed beneath the access road (within its 5.5 metre width) in order to avoid the need for any excavations within the RPA's of T61 (if retained), T62 and T63.

5.0 Contractors car parking

5.1 Adequate space will be created on site for all parking needs.

6.0 Site Huts and Toilets

6.1 There is adequate space available away from all retained trees for temporary buildings such a site huts and toilets.

7.0 Storage Space

7.1 There is adequate space available away from all retained trees for the storage of plant and materials.

8.0 Additional Precautions

8.1 The installation of services near any tree will be undertaken in accordance with the National Joint Utilities Group Guidance Note 4 (NJUG 4): Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees. A copy of this document can be provided on request.

8.2 No storage of materials, lighting of fires will take place within the CEZ. No mixing or storage of materials will take place up a slope where they may leak into a CEZ.

8.3 No fires should be lit within 20 metres of any tree stem and will take into account fire size and wind direction so that, no flames come within 5m of any foliage.

8.4 High-sided vehicles will have access to the site however their movement on and around the site is not considered to be an issue.

8.5 No notice boards, cables or other services will be attached to any tree.

8.6 Materials which may contaminate the soil should not be discharged within 10m of any tree stem. When undertaking the mixing of materials it is essential that any slope of the ground is taken in to consideration so that it does not allow contaminates to run towards a tree root area.

9.0 Site Gradients

9.1 Due to the steepness of the site it will be necessary to raise the level of the ground over which the proposed access road passes and has been discussed at paragraph 4.1 above.

10.0 Demolition

10.1 A collection of redundant farm buildings located toward the north eastern corner of the application site will need to be demolished however there are no trees in close proximity to these structures.

11.0 Hard Surfaces

11.1 Hard surfacing will be created throughout the site in order to form the infrastructure that will serve the proposed residential development. No hard surfacing will be placed within the RPA of any retained tree.

12.0 Soft landscaping

12.1 A landscaping plan may be required by condition and should contain adequate provision for new tree and shrub planting across the development. Full details of soft landscaping are outside the scope of this report.

13.0 Use of Herbicides

13.1 I am not aware of the need to use herbicides on the site.

14.0 On site Monitoring Regime

14.1 All operations will be monitored by the main contractor.

15.0 Use of subcontractors

15.1 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 or adjacent the application site.

16.0 Contingency Plan

16.1 Water should be made readily available on site and should be used to flush spilt materials through the soil and avoid contamination to tree roots. At the time of any spillage the main contractor will contact the project arboriculturist.

17.0 Remedial Tree Works

17.1 Tree works should be undertaken prior to any construction activity and the erection of protective fencing to form the CEZ. All tree works are to be carried out in accordance with BS 3998 (British Standard Recommendations for Tree Work 2010).

18.0 Responsibilities

18.1 It will be the responsibility of the main contractor to ensure that the planning conditions attached to planning consent are adhered to at all times and that a monitoring regime in regards to tree protection is adopted on site if required.

18.2 The main contractor will be responsible for contacting the project arboriculturist or Local Planning Authority (Medway Council) at any time issues are raised in relation to the trees on any other part of the site.

7 RECOMMENDATIONS

7.1 **Implementation of works:** All tree works should be carried out to BS 3998 *Recommendations for Tree Work* as modified by more recent research. It is advisable to select a contractor from the local authority list and preferably one approved by the Arboricultural Association. Their Register of Contractors is available free from The Malthouse, Stroud Green, Standish, Stonehouse, Gloucestershire GL10 3DL; Telephone 01242 577766; Website. http://www.trees.org.uk/find-a-professional/Directory-of-Tree-Surgeons

7.2 **Statutory wildlife obligations:** The Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000 provides 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 must be obtained before undertaking any works that might constitute an offence.

7.3 **Future considerations:** The remaining trees should be inspected on a regular basis by a qualified arboriculturist.

8 OTHER CONSIDERATIONS

8.1 **Trees subject to statutory controls:** If these trees are covered by a tree preservation order or located in a conservation area, it will be necessary to consult the relevant Local Planning Authority (Medway Council) before any pruning works other than certain exemptions can be carried out. The works specified above are necessary for reasonable management and should be acceptable to the Local Planning Authority. However, tree owners should appreciate that they may take an alternative point of view and have the option to refuse consent.

9 BIBLIOGRAPHY

9.1 Claus Mattheck and Helge Breloer, The Body Language of Trees. Office of the Deputy Prime Minister, Research for Amenity Trees No 4, 1994.

David Lonsdale, Principles of Tree Hazard Assessment and Management. Department for Transport, Local Government and the Regions, 1999.

British Standard 3998:2010 Recommendations for tree work

British Standard 5837:2012 Trees in relation to design, demolition and construction-Recommendations.

Mr David Sephton **Tech Cert (Arbor.A)**

Appendix A:

Tree Schedule and Explanatory Notes

- **Number:** Number of tree as shown on site plan.
- **Species:** Tree name is given using its commonly known English name.
- **Hgt:** Height is estimated using a clinometer and given to the nearest metre.
- **St Dia:** Stem Diameter. Estimated stem diameter, measured 1.5 metres above ground level and given in millimetres.
- **N-E-S-W:** Crown Spread, estimated by pacing and given in metres.
- **Cr Cl:** Crown Clearance above ground level, given in metres.
- **AC:** Age Class. young (Y), semi mature (SM), mature (M), over mature (OM), veteran(V).
- **PC:** Physiological Condition. Good (G), fair (F), poor (P), dead (D).
- **SC:** Structural Condition. Good (G), fair (F), poor (P).
- **Recommendations:** Preliminary management recommendations/ general comments.
- **ERCY:** Estimated remaining contribution in years (0-10, 10-20, 20-40, 40+).
- **Cat:** Retention Category. See table 2 below.
- **RPA Radius:** Root Protection Area Radius, given in meters.

Table 2: Retention Category's (as per cascade chart, Table 1, B.S. 5837:2012)

U	Those trees in such a condition that they cannot be realistically be retained as living trees in the context of the current land use for longer than ten years. Shaded Red on site plan.
A	High quality and value (40yrs +) 1: Mainly arboricultural values, 2: Mainly landscape values, 3: Mainly cultural values i.e. conservation. Shaded Green on site plan.
B	Moderate quality and value (20yrs +) 1: Mainly arboricultural values, 2: Mainly landscape values, 3: Mainly cultural values i.e. conservation. Shaded Blue on site plan.
C	Low quality and value (10yrs +) 1: Mainly arboricultural values, 2: Mainly landscape values, 3: Mainly cultural values i.e. conservation. Although category C trees would not be retained where they would pose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation. Shaded Grey on site plan.

Appendix A:

B.S. 5837:2012- Tree Schedule for Land at Darlands Farm, Old Pear Tree Lane, Gillingham, Kent.

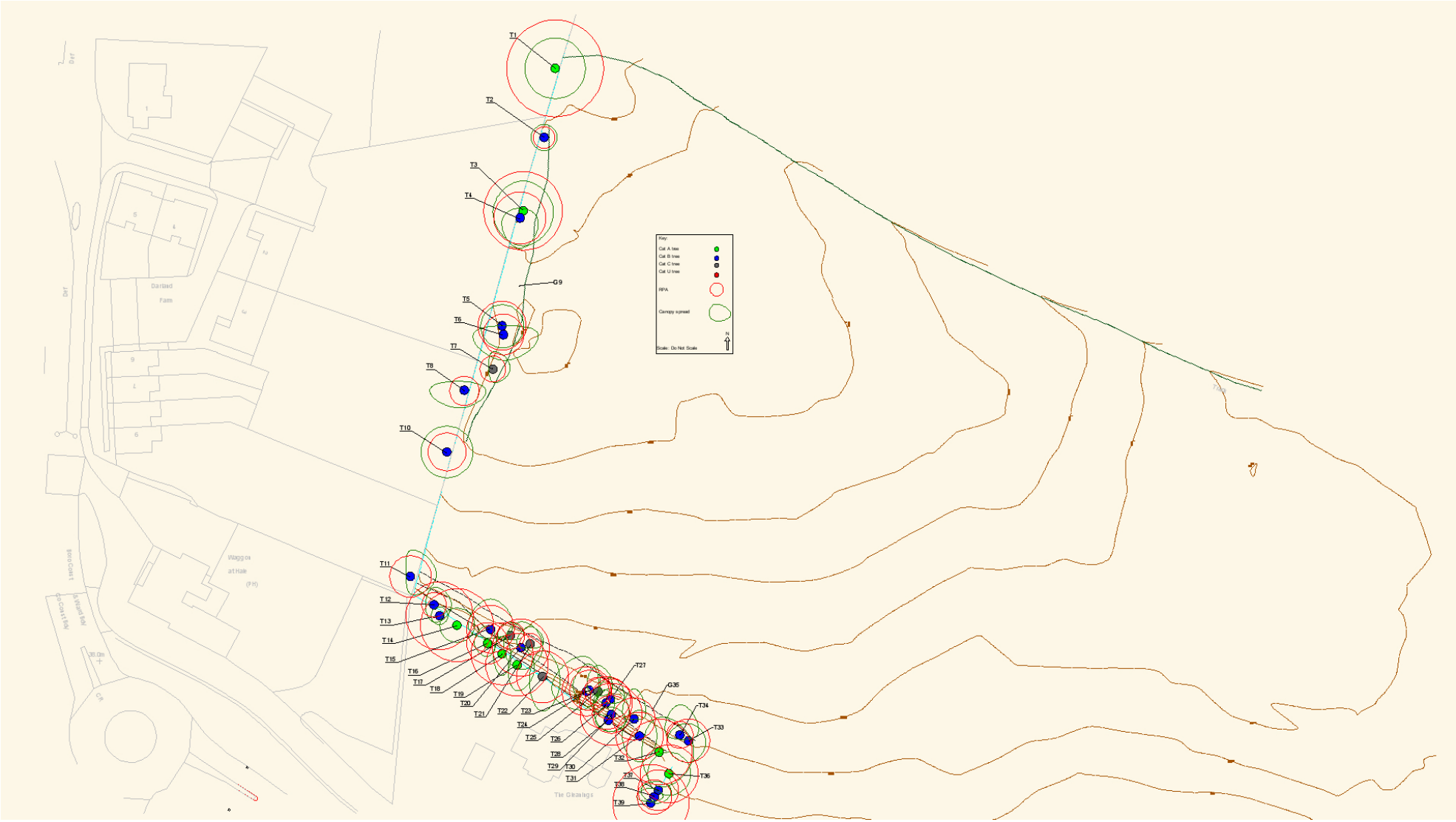
Number	Species	HGT	St Dia	N-S-E-W	CC	Age	PC	SC	Recommendations	E.R.C.Y	Cat	RPA Radius	RPA M^2
1	Sycamore	16	930	7-7-7-7	1.5	M	G	G	Off site tree not shown on topo- None	40+	A1	11.2	391.3
2	Hawthorn	6	210	3-3-3-3	1	M	G	G	Not shown on topo - None	20+	B1	2.5	20.0
3	Sycamore	16	760	7-8-7-7	0	M	G	G	None	40+	A1	9.1	261.3
4	Sycamore	16	496	2-7-4-4	2	M	G	F	None	20+	B1	6.0	111.3
5	Ash	14	468	7-7-7-7	3	M	F	G	None	20+	B1	5.6	99.1
6	Ash	14	395	2-6-8-7	6	M	F	G	None	20+	B1	4.7	70.6
7	Ash	13	250	4-3-4-1	6	M	F	F	None	10+	C1	3.0	28.3
8	Ash	15	280	2-4-5-8	5	M	F	G	Off site tree - None	20+	B1	3.4	35.5
G9	Hawthorn, Filed Maple, Elder	6	180	N/A	0	M	G	G	None	10+	C1	2.2	14.7
10	Ash	14	364	6-6-6-6	1.5	M	F	G	Off site tree - None	20+	B1	4.4	59.9
11	Ash	18	396	6-4-6-1	2	M	F	G	Off site tree - None	20+	B1	4.8	70.9
12	Ash	14	240	4-4-4-2	7	M	F	G	None	20+	B1	2.9	26.1
13	Lombardy Poplar	27	650	2-2-2-2	7	M	G	G	Off site tree not shown on topo - None	20+	B1	7.8	191.1
14	Corsican Pine	19	700	4-4-4-4	10	M	G	G	Off site tree - None	40+	A1	8.4	221.7
15	Ash	17	462	7-2-5-5	1.5	M	F	G	None	20+	B1	5.5	96.6
16	Corsican Pine	19	400	4-3-2-3	10	M	G	G	Off site tree - None	40+	A1	4.8	72.4
17	Ash	7	266	3-1-3-3	0	M	P	G	None	10+	C1	3.2	32.0
18	Corsican Pine	19	600	4-5-2-2	10	M	G	G	Off site tree - None	40+	A1	7.2	162.9
19	Corsican Pine	18	600	4-6-4-2	9	M	G	G	Off site tree - None	40+	A1	7.2	162.9
20	Sycamore	15	546	6-5-5-4	4	M	G	G	None	20+	B1	6.6	134.9
21	Ash	9	205	4-1-3-3	1	M	P	P	None	10+	C1	2.5	19.0
22	Ash	17	500	6-8-4-3	10	M	F	F	None	10+	C1	6.0	113.1
23	Ash	20	472	8-4-3-8	8	M	F	G	None	20+	B1	5.7	100.8
24	Ash	21	385	6-4-2-3	10	M	F	G	None	20+	B1	4.6	67.1
25	Ash	16	270	6-0-3-2	6	M	F	F	None	10+	C1	3.2	33.0
26	Sycamore	16	510	3-3-2-3	2	M	G	G	None	20+	B1	6.1	117.7
27	Ash	16	388	5-1-3-3	6	M	F	G	None	20+	B1	4.7	68.1

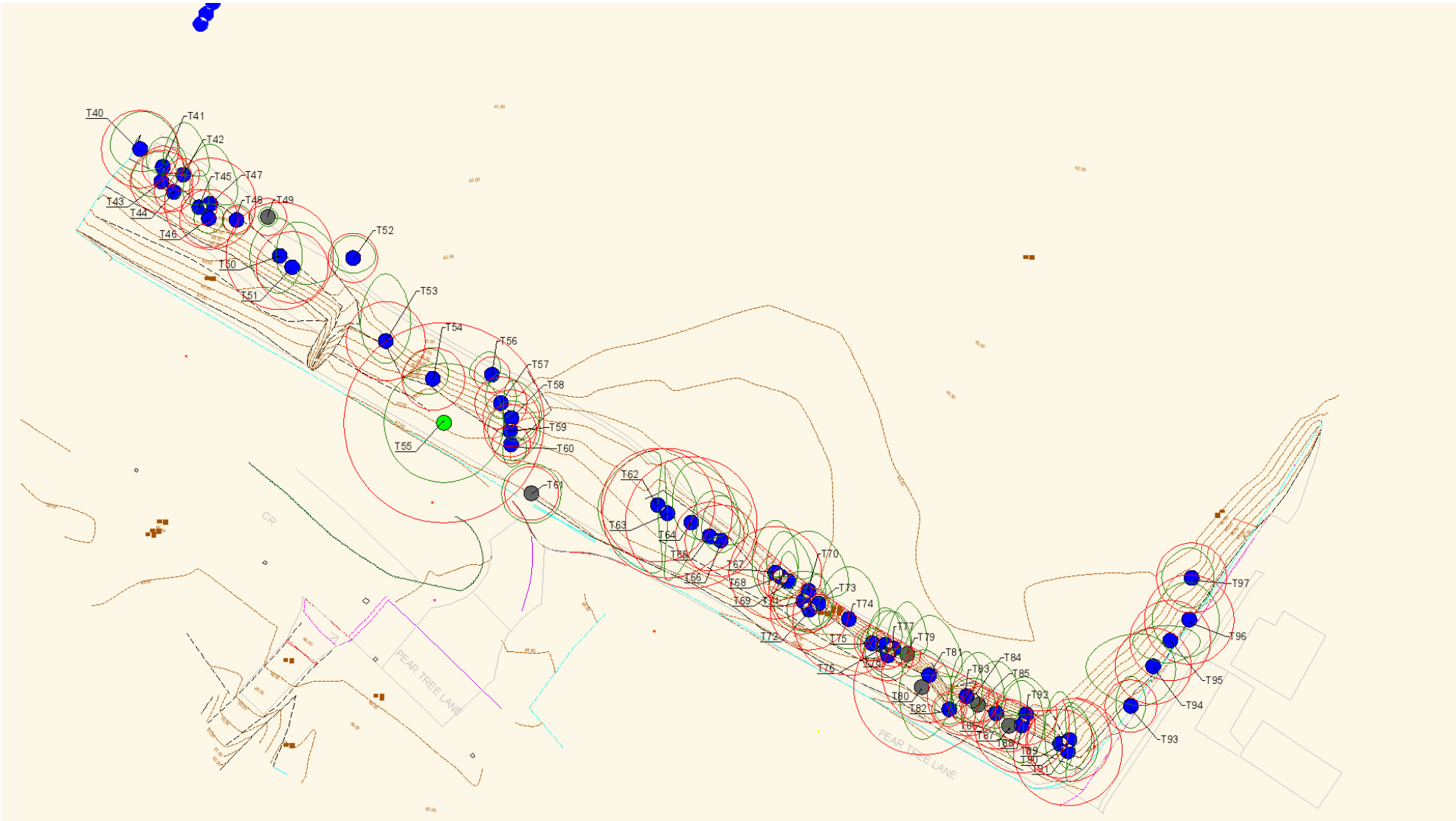
28	Sycamore	17	365	3-4-1-3	4	M	G	G	None	20+	B1	4.4	60.3
29	Sycamore	19	591	6-4-4-4	4	M	G	G	None	20+	B1	7.1	158.0
30	Ash	20	405	7-0-2-2	10	M	F	G	None	20+	B1	4.9	74.2
31	Sycamore	19	461	6-6-4-4	6	M	G	G	None	20+	B1	5.5	96.1
32	English Oak	16	630	8-8-8-4	5	M	G	G	None	40+	A1	7.6	179.6
33	Sycamore	15	420	4-5-4-5	2	M	G	G	None	20+	B1	5.0	79.8
34	Ash	14	260	7-1-4-3	9	M	F	G	Not shown on topo - None	20+	B1	3.1	30.6
G35	Hedgerow group of Ash	14	200	4-1-4-4	0	M	F	G	None	10+	C1	2.4	18.1
36	Sycamore	19	560	5-5-5-5	5	M	G	G	None	40+	A1	6.7	141.9
37	Sycamore	23	395	2-3-3-4	9	M	G	G	None	20+	B1	4.7	70.6
38	Sycamore	23	330	2-1-4-2	11	M	G	G	None	20+	B1	4.0	49.3
39	Sycamore	23	737	4-8-4-7	3	M	G	G	None	20+	B1	8.8	245.7
40	Sycamore	22	430	5-3-5-4	4	M	G	G	None	20+	B1	5.2	83.6
41	Sycamore	15	230	4-1-3-2	1.5	M	G	G	None	20+	B1	2.8	23.9
42	Ash	17	180	7-0-3-2	7	M	F	G	None	20+	B1	2.2	14.7
43	Sycamore	20	348	4-2-2-4	10	M	G	G	None	20+	B1	4.2	54.8
44	Sycamore	21	220	6-1-1-1	6	M	G	G	None	20+	B1	2.6	21.9
45	Sycamore	20	200	5-1-1-1	12	M	G	G	None	20+	B1	2.4	18.1
46	Sycamore	21	328	2-2-2-2	14	M	G	G	None	20+	B1	3.9	48.7
47	Sycamore	20	506	8-0-3-3	4	M	G	G	None	20+	B1	6.1	115.8
48	Sycamore	19	150	2-2-2-2	15	M	G	G	None	20+	B1	1.8	10.2
49	Ash	6	210	1-1-1-1	N/A	M	F	F	None	10+	C1	2.5	20.0
50	Sycamore	22	598	5-5-3-4	5	M	G	G	None	20+	B1	7.2	161.8
51	Sycamore	22	400	6-2-6-2	4	M	G	G	None	20+	B1	4.8	72.4
52	Field Maple	14	279	3-2-3-3	1	M	G	G	Not shown on topo - None	20+	B1	3.3	35.2
53	Ash	16	441	9-3-3-3	7	M	F	G	None	20+	B1	5.3	88.0
54	Ash	16	352	4-2-2-4	9	M	F	G	None	20+	B1	4.2	56.1
55	Sycamore	19	1115	8-8-8-8	4	M	G	G	None	40+	A1	13.4	562.4
56	Sycamore	18	200	3-1-1-3	4	M	G	G	Not shown on topo - None	20+	B1	2.4	18.1
57	Sycamore	19	290	4-2-2-2	6	M	G	G	Not shown on topo - None	20+	B1	3.5	38.0
58	Sycamore	18	320	5-3-4-1	2	M	G	G	None	20+	B1	3.8	46.3
59	Field Maple	16	290	4-4-4-3	1	M	G	G	None	20+	B1	3.5	38.0
60	Sycamore	16	220	1-3-2-1	9	M	G	G	None	20+	B1	2.6	21.9
61	Ash	16	300	4-4-4-4	4	M	F	G	None	10+	C1	3.6	40.7
62	Sycamore	24	630	7-9-0-8	6	M	G	G	None	20+	B1	7.6	179.6
63	Sycamore	24	724	7-9-4-0	2	M	G	G	None	20+	B1	8.7	237.1
64	Sycamore	24	730	8-2-6-2	6	M	G	G	None	20+	B1	8.8	241.1

65	Sycamore	22	380	6-1-5-2	4	M	G	G	None	20+	B1	4.6	65.3
66	Sycamore	22	400	6-2-2-2	7	M	G	G	None	20+	B1	4.8	72.4
67	Sycamore	21	514	7-4-3-3	6	M	G	G	None	20+	B1	6.2	119.5
68	Sycamore	21	255	6-0-4-1	10	M	G	G	None	20+	B1	3.1	29.4
69	Sycamore	16	287	4-1-1-1	8	M	G	G	None	20+	B1	3.4	37.3
70	Sycamore	22	445	8-1-5-5	2	M	G	G	None	20+	B1	5.3	89.6
71	Sycamore	22	367	4-4-4-4	10	M	G	G	None	20+	B1	4.4	60.9
72	Sycamore	23	440	3-3-3-3	12	M	G	G	None	20+	B1	5.3	87.6
73	Sycamore	19	110	4-1-3-2	4	M	G	G	None	20+	B1	1.3	5.5
74	Sycamore	22	628	7-4-4-4	7	M	G	G	None	20+	B1	7.5	178.4
75	Ash	24	200	2-2-2-2	20	M	G	G	None	20+	B1	2.4	18.1
76	Sycamore	23	276	5-1-2-2	14	M	G	G	None	20+	B1	3.3	34.5
77	Sycamore	22	200	5-0-2-2	10	M	G	G	None	20+	B1	2.4	18.1
78	Sycamore	22	285	6-3-3-3	12	M	G	G	None	20+	B1	3.4	36.7
79	Elm	9	150	7-0-2-2	6	M	G	G	Not shown on topo - None	10+	C1	1.8	10.2
80	Ash	24	760	5-7-4-3	6	M	G	G	Sever and remove Ivy - Re-inspect before first occupancy.	10+	C1	9.1	261.3
81	Sycamore	22	523	8-0-4-3	6	M	G	G	Reduce height by approximatley seven metres to ease wind loading on root system in order to prevent further slippage of embankment.	20+	B1	6.3	123.7
82	Sycamore	23	195	2-2-2-2	18	M	G	G	Reduce height by approximatley seven metres to ease wind loading on root system in order to prevent further slippage of embankment.	20+	B1	2.3	17.2
83	Sycamore	24	445	6-3-2-2	10	M	G	G	Reduce height by approximatley seven metres to ease wind loading on root system in order to prevent further slippage of embankment.	20+	B1	5.3	89.6
84	Sycamore	24	285	3-3-3-3	15	M	G	G	None	20+	B1	3.4	36.7
85	Ash	14	200	7-0-3-3	12	M	F	G	None	10+	C1	2.4	18.1

86	Sycamore	22	390	7-2-3-3	10	M	G	G	None	20+	B1	4.7	68.8
87	Sycamore	22	290	2-2-2-2	18	M	G	F	None	10+	C1	3.5	38.0
88	Sycamore	24	531	6-5-3-3	18	M	G	G	None	20+	B1	6.4	127.6
89	Sycamore	24	382	7-4-2-2	10	M	G	G	None	20+	B1	4.6	66.0
90	Sycamore	25	465	5-4-3-2	6	M	G	G	None	20+	B1	5.6	97.8
91	Sycamore	25	609	6-4-4-0	6	M	G	G	None	20+	B1	7.3	167.8
92	Sycamore	23	340	5-0-3-4	6	M	G	G	None	20+	B1	4.1	52.3
93	Ash	8	290	4-3-2-2	1.5	M	F	G	None	20+	B1	3.5	38.0
94	Sycamore	14	424	4-5-3-9	4	M	G	G	None	20+	B1	5.1	81.3
95	Sycamore	14	451	2-3-4-5	2	M	G	G	None	20+	B1	5.4	92.0
96	Ash	14	500	5-5-4-5	1.5	M	F	G	None	20+	B1	6.0	113.1
97	Yew	6	395	4-4-3-4	0	M	G	G	None	20+	B1	4.7	70.6

Appendix B: Tree Constraints Plan:

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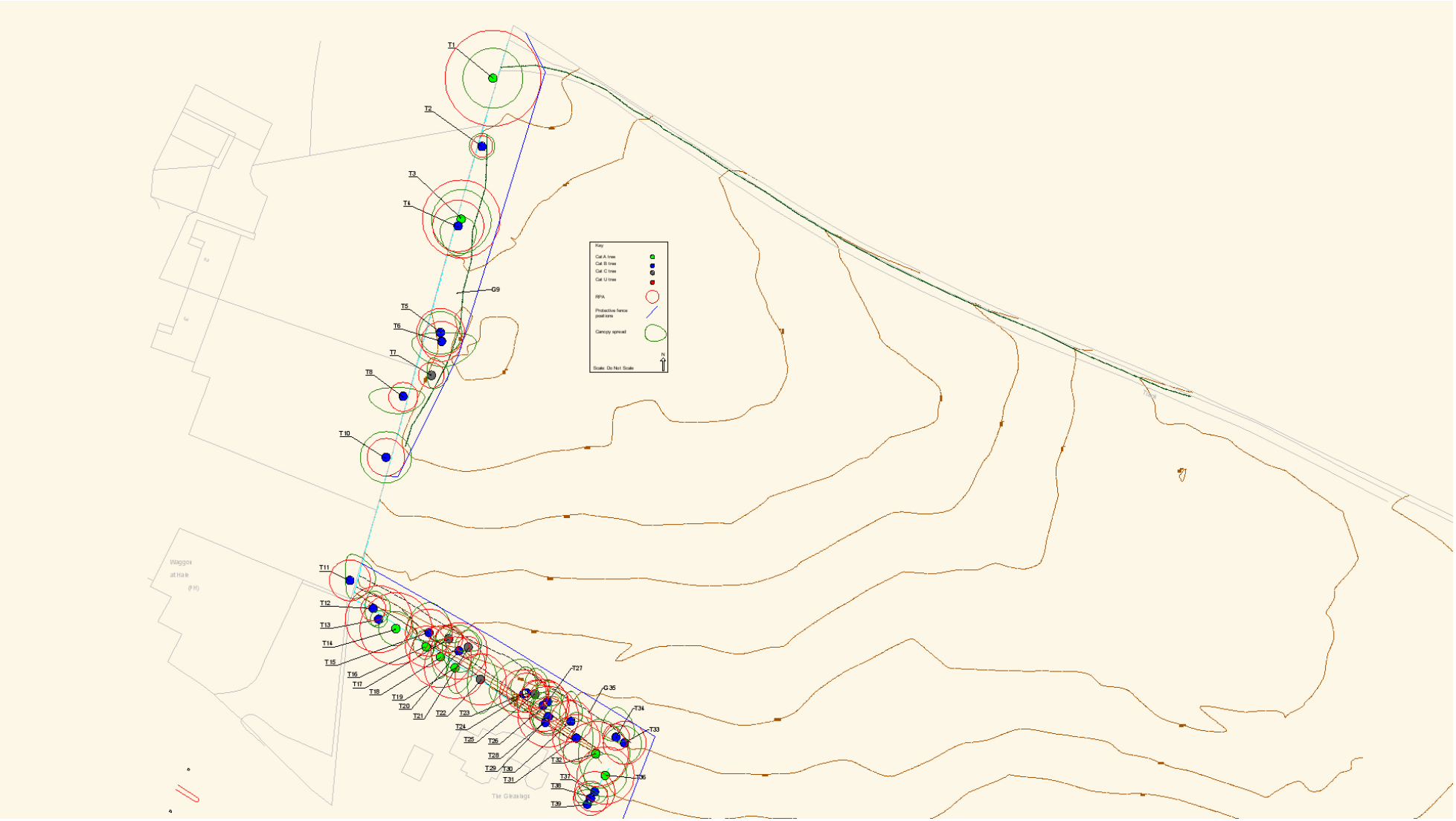
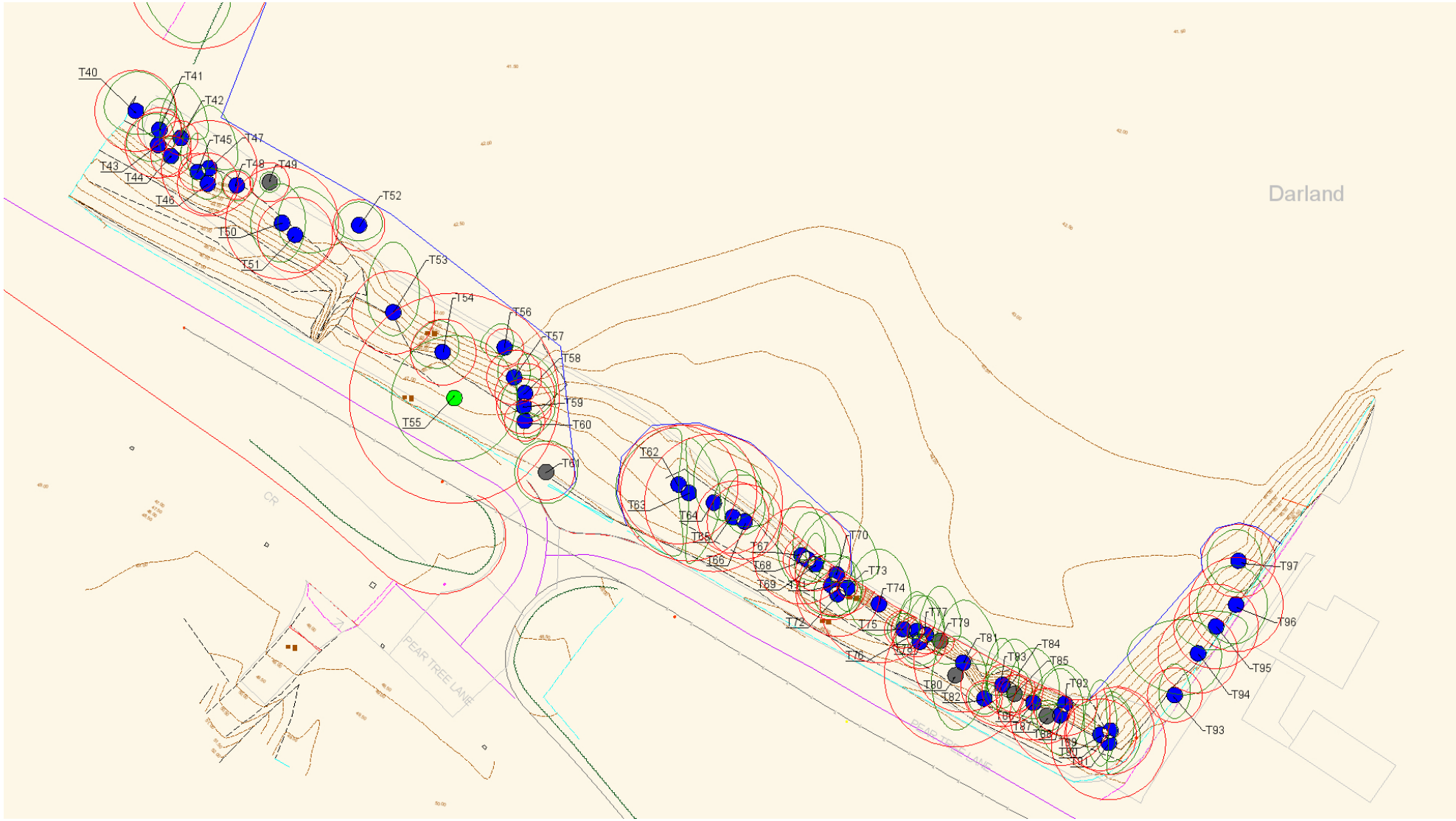
Appendix C: Tree Protection Plan:

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